GENERAL CONDITIONS
E.1 INTRODUCTION

The project's General Compliance Conditions of Certification, including Compliance Monitoring and Closure Plan (Compliance Plan) have been established as required by Public Resources Code section 25532. The plan provides a means for assuring that the facility is constructed, operated and closed in compliance with public health and safety, environmental and other applicable regulations, guidelines, and conditions adopted or established by the California Energy Commission and specified in the written decision on the Application for Certification or otherwise required by law. The Compliance Plan will be integrated with a U.S. Bureau of Land Management (BLM) Compliance Monitoring Plan (hereafter referred to as the Compliance Plan) to assure compliance with the terms and conditions of any approved Right-of-Way (ROW) grant including the approved Plan of Development (POD).

The Compliance Plan is composed of elements that:

- set forth the duties and responsibilities of BLM's Authorized Officer, the Compliance Project Manager (CPM), the project owner, delegate agencies, and others;
- set forth the requirements for handling confidential records and maintaining the compliance record;
- state procedures for settling disputes and making post-certification changes;
- state procedures for requesting and approving ROW Grant or POD changes;
- state the requirements for periodic compliance reports and other administrative procedures that are necessary to verify the compliance status for all BLM and Energy Commission approved conditions of certification/mitigation measures;
- establish requirements for modifications or amendments to facility Closure, Revegetation, and Restoration Plans; and
- specify conditions of certification for each technical area containing the measures required to mitigate any and all potential adverse project impacts associated with construction, operation and closure below a level of significance. Each specific condition of certification also includes a verification provision that describes the method of assuring that the condition has been satisfied.

Conditions of Certification referred to herein serve the purpose of both the Energy Commission’s Conditions of Certification for purposes of the California Environmental Quality Act (CEQA) and BLM’s Mitigation Measures for purposes of the National Environmental Policy Act (NEPA).
The following terms and definitions are used to establish when Conditions of Certification are implemented.

**BLM AUTHORIZED OFFICER:**
The BLM Authorized Officer for the Project is the BLM Needles Field Manager or his designated Compliance Inspector that is responsible for oversight and inspection of all construction and operational related activities on public land.

**PRE-CONSTRUCTION SITE MOBILIZATION**
Site mobilization is limited preconstruction activities at the site to allow for the installation of fencing, construction trailers, construction trailer utilities, and construction trailer parking at the site. Limited ground disturbance, grading, and trenching associated with the above mentioned pre-construction activities is considered part of site mobilization. Walking, driving or parking a passenger vehicle, pickup truck and light vehicles is allowable during site mobilization.

**CONSTRUCTION**
Onsite work to install permanent equipment or structures for any facility.

**Ground Disturbance**
Construction-related ground disturbance refers to activities that result in the removal of top soil or vegetation at the site beyond site mobilization needs, and for access roads and linear facilities.

**Grading, Boring, and Trenching**
Construction-related grading, boring, and trenching refers to activities that result in subsurface soil work at the site and for access roads and linear facilities, e.g., alteration of the topographical features such as leveling, removal of hills or high spots, moving of soil from one area to another, and removal of soil.

Notwithstanding the definitions of ground disturbance, grading, boring and trenching above, construction does not include the following:
1. the installation of environmental monitoring equipment;
2. a soil or geological investigation;
3. a topographical survey;
4. any other study or investigation to determine the environmental acceptability or feasibility of the use of the site for any particular facility; and
5. any work to provide access to the site for any of the purposes specified in “Construction” 1, 2, 3, or 4 above.
START OF COMMERCIAL OPERATION

For compliance monitoring purposes, “commercial operation” begins after the completion of start-up and commissioning, when each of the power plants has reached reliable steady-state production of electricity at the rated capacity. At the start of commercial operation, plant control is usually transferred from the construction manager to the plant operations manager.

E.3 BLM’S AUTHORIZED OFFICER AND COMPLIANCE PROJECT MANAGER RESPONSIBILITIES

BLM’s Authorized Officer (AO) and the Compliance Project Manager (CPM) shall oversee the compliance monitoring and is responsible for:

1. Ensuring that the design, construction, operation, and closure of the project facilities are in compliance with the terms and conditions of BLM’s ROW Grant and the Energy Commission Decision
2. Resolving complaints
3. Processing post-certification changes to the conditions of certification, project description (petition to amend), and ownership or operational control (petition for change of ownership) (See instructions for filing petitions)
4. Documenting and tracking compliance filings
5. Ensuring that compliance files are maintained and accessible

BLM’s AO is the contact person for BLM and will consult with appropriate responsible agencies, Energy Commission, and Energy Commission staff when handling disputes, complaints, and amendments. The CPM is the contact person for the Energy Commission and will consult with appropriate responsible agencies, BLM, Energy Commission, and Energy Commission staff when handling disputes, complaints, and amendments.

All project compliance submittals are submitted to BLM’s AO and the CPM for processing. Where a submittal required by a condition of certification requires BLM’s AO and/or CPM approval, the approval will involve all appropriate BLM personnel, Energy Commission staff and management. All submittals must include searchable electronic versions (pdf or word files).

E.4 CHIEF BUILDING OFFICIAL RESPONSIBILITIES

The Chief Building Official (CBO) shall serve as BLM’s and the Energy Commission’s delegate to assure the project is designed and constructed in accordance with BLM’s Right-of-Way Grant, the Energy Commission’s Decision including Conditions of Certification, California Building Standards Code, local building codes and applicable laws, ordinances, regulations and standards to ensure health and safety. The CBO is typically made-up of a team of specialists covering civil, structural, mechanical and electrical disciplines whose duties include the following:
1. Performing design review and plan checks of all drawings, specifications and procedures;
2. Conducting construction inspection;
3. Functioning as BLM’s and the Energy Commission’s delegate including reporting noncompliance issues or violations to the BLM Authorized Officer for action and taking any action allowed under the California Code of Regulations, including issuing a Stop Work Order, to ensure compliance;
4. Exercising access as needed to all project owner construction records, construction and inspection procedures, test equipment and test results; and
5. Providing weekly reports on the status of construction to BLM’s Authorized Officer and the CPM.

PRE-CONSTRUCTION AND PRE-OPERATION COMPLIANCE MEETING

BLM’s AO and the CPM shall schedule pre-construction and pre-operation compliance meetings prior to the projected start-dates of construction, plant operation, or both. The purpose of these meetings is to assemble BLM’s, the Energy Commission’s and project owner’s technical staff and construction contractor to review the status of all pre-construction or pre-operation requirements, contained in BLM’s and the Energy Commission’s conditions of certification. This is to confirm that all applicable conditions of certification have been met, or if they have not been met, to ensure that the proper action is taken. In addition, these meetings ensure, to the extent possible, that BLM and Energy Commission conditions will not delay the construction and operation of the plant due to oversight and to preclude any last minute, unforeseen issues from arising. Pre-construction meetings held during the certification process must be publicly noticed unless they are confined to administrative issues and processes.

BLM AND ENERGY COMMISSION RECORD

BLM and the Energy Commission shall maintain the following documents and information as a public record, in either the Energy Commission’s Compliance file or Dockets file, for the life of the project (or other period as required):

- All documents demonstrating compliance with any legal requirements relating to the construction and operation of the facility;
- All monthly and annual compliance reports filed by the project owner;
- All complaints of noncompliance filed with BLM and the Energy Commission; and
- All petitions/requests for project or condition of certification changes and the resulting BLM, Energy Commission staff or Energy Commission action.

E.5 PROJECT OWNER RESPONSIBILITIES

The project owner is responsible for ensuring that the compliance conditions of certification and all other conditions of certification that appear in BLM’s ROW Grant and the Energy Commission Decision are satisfied. The compliance conditions regarding post-certification changes specify measures that the project owner must take when requesting changes in the project design, conditions of certification, or ownership.
Failure to comply with any of the conditions of certification or the compliance conditions may result in reopening of the case and revocation of the Energy Commission certification; an administrative fine; or other action as appropriate. A summary of the Compliance Conditions of Certification is included as Compliance Table 1 at the conclusion of this section. The BLM ROW grant holder will comply with the terms, conditions, and special stipulations of the ROW grant. Failure to comply with applicable laws or regulations or any of the terms and conditions of a BLM ROW grant may result in the suspension or termination of the ROW grant (43 CFR 2807.17). Prior to suspending or terminating a ROW grant, BLM will provide written notice to the holder stating it intends to suspend or terminate and will provide reasonable opportunity to correct any noncompliance.

E.6 COMPLIANCE MITIGATION MEASURES/CONDITIONS OF CERTIFICATION

UNRESTRICTED ACCESS (COMPLIANCE-1)

BLM’s AO, responsible BLM staff, the CPM, responsible Energy Commission staff, and delegated agencies or consultants shall be guaranteed and granted unrestricted access to the power plant site, related facilities, project-related staff, and the records maintained on-site, for the purpose of conducting audits, surveys, inspections, or general site visits. Although BLM’s AO and the CPM will normally schedule site visits on dates and times agreeable to the project owner, BLM’s AO and the CPM reserve the right to make unannounced visits at any time.

COMPLIANCE RECORD (COMPLIANCE-2)

The project owner shall maintain project files on-site or at an alternative site approved by BLM’s AO and the CPM for the life of the project, unless a lesser period of time is specified by the conditions of certification. The files shall contain copies of all “as-built” drawings, documents submitted as verification for conditions, and other project-related documents. As-built drawings of all facilities including linear facilities shall be provided to the BLM AO for inclusion in the BLM administrative record within 90-days of completion of that portion of the facility or project.

BLM and Energy Commission staff and delegate agencies shall, upon request to the project owner, be given unrestricted access to the files maintained pursuant to this condition.

COMPLIANCE VERIFICATION SUBMITTALS (COMPLIANCE-3)

Each condition of certification is followed by a means of verification. The verification describes the Energy Commission’s procedure(s) to ensure post-certification compliance with adopted conditions. The verification procedures, unlike the conditions, may be modified as necessary by BLM’s AO and the CPM.

Verification of compliance with the conditions of certification can be accomplished by the following:
1. Monthly and/or annual compliance reports, filed by the project owner or authorized agent, reporting on work done and providing pertinent documentation, as required by the specific conditions of certification;
2. Appropriate letters from delegate agencies verifying compliance;
3. BLM and Energy Commission staff audits of project records; and/or
4. BLM and Energy Commission staff inspections of work, or other evidence that the requirements are satisfied.

Verification lead times associated with start of construction may require the project owner to file submittals during the certification process, particularly if construction is planned to commence shortly after certification.

A cover letter from the project owner or authorized agent is required for all compliance submittals and correspondence pertaining to compliance matters. The cover letter subject line shall identify the project by AFC number, the appropriate condition(s) of certification by condition number(s), and a brief description of the subject of the submittal. The project owner shall also identify those submittals not required by a condition of certification with a statement such as: “This submittal is for information only and is not required by a specific condition of certification.” When submitting supplementary or corrected information, the project owner shall reference the date of the previous submittal and BLM/CEC submittal number.

The project owner is responsible for the delivery and content of all verification submittals to the BLM’s AO and CPM, whether such condition was satisfied by work performed by the project owner or an agent of the project owner.

All hardcopy submittals shall be addressed to each of the following:

BLM’s Authorized Officer
(CACA-48668, 49502, 49503, and 49504)
U.S. Bureau of Land Management
ADDRESS
CITY, STATE ZIP

Mary Dyas
(08-AFC-5C)
California Energy Commission
1516 Ninth Street, MS-2000
Sacramento, CA 95814

Those submittals shall be accompanied by a searchable electronic copy, on a CD or by e-mail, as agreed upon by BLM’s AO and the CPM.

If the project owner desires BLM and/or Energy Commission staff action by a specific date, that request shall be made in the submittal cover letter and shall include a detailed explanation of the effects on the project if that date is not met.

PRE-CONSTRUCTION MATRIX AND TASKS PRIOR TO START OF CONSTRUCTION (COMPLIANCE-4)

Prior to commencing construction, a compliance matrix addressing only those conditions that must be fulfilled before the start of construction shall be submitted by the project owner to BLM’s AO and the CPM. This matrix will be included with the project
owner’s first compliance submittal or prior to the first pre-construction meeting, whichever comes first. It will be submitted in the same format as the compliance matrix described below. In order to begin any on-site mobilization or surface disturbing activities on public land, the BLM AO must approve a written Notice to Proceed (NTP). NTPs will be phased as appropriate to facilitate timely implementation of construction.

Construction shall not commence until the pre-construction matrix is submitted, all pre-construction conditions have been complied with, and BLM’s AO and the CPM has issued a letter and BLM has issues a NTP to the project owner authorizing construction. Various lead times for submittal of compliance verification documents to BLM’s AO and the CPM for conditions of certification are established to allow sufficient BLM and Energy Commission staff time to review and comment and, if necessary, allow the project owner to revise the submittal in a timely manner. This will ensure that project construction may proceed according to schedule.

Failure to submit compliance documents within the specified lead-time may result in delays in authorization to commence various stages of project development.

If the project owner anticipates commencing project construction as soon as the project is certified, it may be necessary for the project owner to file compliance submittals prior to project certification. Compliance submittals should be completed in advance where the necessary lead time for a required compliance event extends beyond the date anticipated for start of construction. The project owner must understand that the submittal of compliance documents prior to project certification is at the owner’s own risk. Any approval by Energy Commission staff is subject to change, based upon BLM’s ROW Grant and the Energy Commission Decision.

**Compliance Reporting**

There are two different compliance reports that the project owner must submit to assist BLM’s AO and the CPM in tracking activities and monitoring compliance with the terms and conditions of BLM’s ROW Grant and the Energy Commission Decision. During construction, the project owner or authorized agent will submit Monthly Compliance Reports. During operation, an Annual Compliance Report must be submitted. These reports, and the requirement for an accompanying compliance matrix, are described below. The majority of the conditions of certification require that compliance submittals be submitted to BLM’s AO and the CPM in the monthly or annual compliance reports.

**POSTING OF A SURETY BOND (COMPLIANCE-5)**

Prior to site disturbance and each increment of construction, the project owner shall post a surety bond adequate to cover the cost of decommissioning and restoration, including the removal of the project features that have been constructed for that that portion of the site and restoring the native topography and vegetation. An “increment of construction” shall mean a significant feature of construction, such as site grading, a building, a fluid storage tank, a water treatment facility, a hydrogen production facility, a switchyard, or a group of solar collectors connected to an electrical transformer (including that transformer). This Surety bond will apply to all site disturbance features.
The project owner shall provide the surety bond to the BLM AO for approval and to the CPM for review with written evidence indicating that the surety bond is adequate to cover the cost of decommissioning and removing the project features constructed, allowing for site restoration. The written evidence shall include a valid estimate showing that the amount of the bond is adequate to accomplish such work. The timing for the submittal of the surety bond and approval of this document shall be coordinated with the BLM AO and CPM. Over the life of the project, the surety bond will be updated as necessary to account for any changes to the project description and/or decommissioning costs.

COMPLIANCE MATRIX (COMPLIANCE-6)

A compliance matrix shall be submitted by the project owner to BLM’s AO and the CPM along with each monthly and annual compliance report. The compliance matrix is intended to provide BLM’s AO and the CPM with the current status of all conditions of certification in a spreadsheet format. The compliance matrix must identify:

1. the technical area;
2. the condition number;
3. a brief description of the verification action or submittal required by the condition;
4. the date the submittal is required (e.g., 60 days prior to construction, after final inspection, etc.);
5. the expected or actual submittal date;
6. the date a submittal or action was approved by the Chief Building Official (CBO), BLM’s AO, CPM, or delegate agency, if applicable; and
7. the compliance status of each condition, e.g., “not started,” “in progress” or “completed” (include the date).
8. if the condition was amended, the date of the amendment.

Satisfied conditions shall be placed at the end of the matrix.

MONTHLY COMPLIANCE REPORT (COMPLIANCE-7)

The first Monthly Compliance Report is due one month following the Energy Commission business meeting date upon which the project was approved, unless otherwise agreed to by BLM’s AO and the CPM. The first Monthly Compliance Report shall include the AFC number and an initial list of dates for each of the events identified on the Key Events List. The Key Events List Form is found at the end of this section.

During pre-construction and construction of each power plant, the project owner or authorized agent shall submit an original and an electronic searchable version of the Monthly Compliance Report within 10 working days after the end of each reporting month. Monthly Compliance Reports shall be clearly identified for the month being reported. The reports shall contain, at a minimum:

1. A summary of the current project construction status, a revised/updated schedule if there are significant delays, and an explanation of any significant changes to the schedule;
2. Documents required by specific conditions to be submitted along with the Monthly Compliance Report. Each of these items must be identified in the transmittal letter, as well as the conditions they satisfy and submitted as attachments to the Monthly Compliance Report;

3. An initial, and thereafter updated, compliance matrix showing the status of all conditions of certification (fully satisfied conditions do not need to be included in the matrix after they have been reported as completed);

4. A list of conditions that have been satisfied during the reporting period, and a description or reference to the actions that satisfied the condition;

5. A list of any submittal deadlines that were missed, accompanied by an explanation and an estimate of when the information will be provided;

6. A cumulative listing of any approved changes to conditions of certification;

7. A listing of any filings submitted to, or permits issued by, other governmental agencies during the month;

8. A projection of project compliance activities scheduled during the next two months. The project owner shall notify BLM’s AO and the CPM as soon as any changes are made to the project construction schedule that would affect compliance with conditions of certification;

9. A listing of the month’s additions to the on-site compliance file; and

10. A listing of complaints, notices of violation, official warnings, and citations received during the month, a description of the resolution of the resolved actions, and the status of any unresolved actions.

All sections, exhibits, or addendums shall be separated by tabbed dividers or as acceptable by BLM’s AO and the CPM.

ANNUAL COMPLIANCE REPORT (COMPLIANCE-8)

After construction of each power plant is complete or when a power plant goes into commercial operations, the project owner shall submit Annual Compliance Reports instead of Monthly Compliance Reports. The reports are for each year of commercial operation and are due to BLM’s AO and the CPM each year at a date agreed to by BLM’s AO and the CPM. Annual Compliance Reports shall be submitted over the life of the project unless otherwise specified by BLM’s AO and the CPM. Each Annual Compliance Report shall include the AFC number, identify the reporting period and shall contain the following:

1. An updated compliance matrix showing the status of all conditions of certification (fully satisfied conditions do not need to be included in the matrix after they have been reported as completed);

2. A summary of the current project operating status and an explanation of any significant changes to facility operations during the year;

3. Documents required by specific conditions to be submitted along with the Annual Compliance Report. Each of these items must be identified in the transmittal letter,
with the condition it satisfies, and submitted as attachments to the Annual Compliance Report;

4. A cumulative listing of all post-certification changes by the Energy Commission or changes to the BLM ROW grant or approved POD by BLM, or cleared by BLM’s AO and the CPM;

5. An explanation for any submittal deadlines that were missed, accompanied by an estimate of when the information will be provided;

6. A listing of filings submitted to, or permits issued by, other governmental agencies during the year;

7. A projection of project compliance activities scheduled during the next year;

8. A listing of the year’s additions to the on-site compliance file;

9. An evaluation of the on-site contingency plan for unplanned facility closure, including any suggestions necessary for bringing the plan up to date [see Compliance Conditions for Facility Closure addressed later in this section]; and

10. A listing of complaints, notices of violation, official warnings, and citations received during the year, a description of the resolution of any resolved matters, and the status of any unresolved matters.

CONFIDENTIAL INFORMATION (COMPLIANCE-9)

Any information that the project owner deems confidential shall be submitted to the Energy Commission’s Executive Director with an application for confidentiality pursuant to Title 20, California Code of Regulations, section 2505(a). Any information that is determined to be confidential shall be kept confidential as provided for in Title 20, California Code of Regulations, section 2501 et. seq.

Any information the ROW holder deems confidential shall be submitted to the BLM AO with a written request for said confidentiality along with a justification for the request. All confidential submissions to BLM should be clearly stamped “proprietary information” by the holder when submitted.

ANNUAL ENERGY FACILITY COMPLIANCE FEE (COMPLIANCE-10)

Pursuant to the provisions of Section 25806(b) of the Public Resources Code, the project owner is required to pay an annual compliance fee, which is adjusted annually. Current Compliance fee information is available on the Energy Commission’s website http://www.energy.ca.gov/siting/filing_fees.html. You may also contact the CPM for the current fee information. The initial payment is due on the date the Energy Commission adopts the final decision. All subsequent payments are due by July 1 of each year in which the facility retains its certification. The payment instrument shall be made payable to the California Energy Commission and mailed to: Accounting Office MS-02, California Energy Commission, 1516 9th St., Sacramento, CA 95814.
REPORTING OF COMPLAINTS, NOTICES, AND CITATIONS (COMPLIANCE-11)

Prior to the start of construction, the project owner must send a letter to property owners living within one mile of the project notifying them of a telephone number to contact project representatives with questions, complaints or concerns. If the telephone is not staffed 24 hours per day, it shall include automatic answering with date and time stamp recording. All recorded complaints shall be responded to within 24 hours. The telephone number shall be posted at the project site and made easily visible to passersby during construction and operation. The telephone number shall be provided to BLM’s AO and the CPM who will post it on the Energy Commission’s web page at:

http://www.energy.ca.gov/sitingcases/power_plants_contacts.html.

Any changes to the telephone number shall be submitted immediately to BLM’s AO and the CPM, who will update the web page.

In addition to the monthly and annual compliance reporting requirements described above, the project owner shall report and provide copies to BLM’s AO and the CPM of all complaint forms, including noise and lighting complaints, notices of violation, notices of fines, official warnings, and citations, within 10 days of receipt. Complaints shall be logged and numbered. Noise complaints shall be recorded on the form provided in the NOISE conditions of certification. All other complaints shall be recorded on the complaint form (Attachment A).

E.7 FACILITY CLOSURE

At some point in the future, the project will cease operation and close down. At that time, it will be necessary to implement the Closure, Revegetation and Restoration Plan to ensure that the closure occurs in such a way that public health and safety and the environment are protected from adverse impacts. Although the project setting for this project does not appear, at this time, to present any special or unusual closure problems, it is impossible to foresee what the situation will be in 30 years or more when the project ceases operation. Therefore, provisions must be made that provide the flexibility to deal with the specific situation and project setting that exist at the time of closure. Laws, Ordinances, Regulations and Standards (LORS) pertaining to facility closure are identified in the sections dealing with each technical area. Facility closure will be consistent with LORS in effect at the time of closure. Closure would be conducted in accordance with Condition of Certification BIO-14 that requires the project owner to develop and implement a Closure, Revegetation and Rehabilitation Plan.

There are at least three circumstances in which a facility closure can take place: planned closure, unplanned temporary closure and unplanned permanent closure.

CLOSURE DEFINITIONS

Planned Closure

A planned closure occurs when the facility is closed in an anticipated, orderly manner, at the end of its useful economic or mechanical life, or due to gradual obsolescence.
Unplanned Temporary Closure

An unplanned temporary closure occurs when the facility is closed suddenly and/or unexpectedly, on a short-term basis, due to unforeseen circumstances such as a natural disaster or an emergency. Short-term is defined as cessation of construction activities or operations of a power plant for a period less than 6-months long. Cessation of construction of operations for a period longer than 6 months is considered a permanent closure.

Unplanned Permanent Closure

An unplanned permanent closure occurs if the project owner closes the facility suddenly and/or unexpectedly, on a permanent basis. This includes unplanned closure where the owner implements the on-site contingency plan. It can also include unplanned closure where the project owner fails to implement the contingency plan, and the project is essentially abandoned.

E.8 COMPLIANCE CONDITIONS FOR FACILITY CLOSURE

PLANNED CLOSURE (COMPLIANCE-11)

In order to ensure that a planned facility closure does not create adverse impacts, a closure process that provides for careful consideration of available options and applicable laws, ordinances, regulations, standards, and local/regional plans in existence at the time of closure, will be undertaken. To ensure adequate review of a planned project closure, the project owner shall submit a revision or update to the approved Closure, Revegetation and Rehabilitation Plan to BLM and the Energy Commission for review and approval at least 12 months (or other period of time agreed to by BLM’s AO and the CPM) prior to commencement of closure activities. The project owner shall file 50 copies and 50 CDs with the Energy Commission and 10 copies and 10 CDs with BLM (or other number of copies agreed upon by BLM’s AO and the CPM) of a proposed facility closure plan/Closure, Revegetation and Rehabilitation Plan.

The plan shall:

1. identify and discuss any impacts and mitigation to address significant adverse impacts associated with proposed closure activities and to address facilities, equipment, or other project related materials that must be removed from the site;
2. identify a schedule of activities for closure of the power plant site, transmission line corridor, and all other appurtenant facilities constructed as part of the project;
3. address conformance of the plan with all applicable laws, ordinances, regulations, standards, and local/regional plans in existence at the time of facility closure, and applicable conditions of certification; and.
4. Address any changes to the site revegetation, rehabilitation, monitoring and long-term maintenance specified in the existing plan that are needed for site revegetation and rehabilitation to be successful.
Prior to submittal of an amended or revised Closure, Revegetation and Restoration Plan, a meeting shall be held between the project owner, BLM’s AO and the Energy Commission CPM for the purpose of discussing the specific contents of the plan.

In the event that there are significant issues associated with the proposed facility Closure, Revegetation and Restoration plan’s approval, or the desires of local officials or interested parties are inconsistent with the plan, BLM’s AO the CPM shall hold one or more workshops and/or BLM and the Energy Commission may hold public hearings as part of its approval procedure.

As necessary, prior to or during the closure plan process, the project owner shall take appropriate steps to eliminate any immediate threats to public health and safety and the environment, but shall not commence any other closure activities until BLM and the Energy Commission approves the facility Closure, Revegetation and Restoration plan.

UNPLANNED TEMPORARY CLOSURE/ON-SITE CONTINGENCY PLAN (COMPLIANCE-12)

In order to ensure that public health and safety and the environment are protected in the event of an unplanned temporary facility closure, it is essential to have an On-Site Contingency Plan in place. The On-Site Contingency Plan will help to ensure that all necessary steps to mitigate public health and safety impacts and environmental impacts are taken in a timely manner.

The project owner shall submit an On-Site Contingency Plan for BLM’s AO and CPM review and approval. The plan shall be submitted no less than 60 days (or other time agreed to by BLM’s AO and the CPM) after approval of any NTP or letter granting approval to commence construction for each phase of construction. A copy of the approved plan must be in place during commercial operation of the facility and shall be kept at the site at all times.

The project owner, in consultation with BLM’s AO and the CPM, will update the On-Site Contingency Plan as necessary. BLM’s AO and the CPM may require revisions to the On-Site Contingency Plan over the life of the project. In the annual compliance reports submitted to the Energy Commission, the project owner will review the On-Site Contingency Plan, and recommend changes to bring the plan up to date. Any changes to the plan must be approved by BLM’s AO and the CPM.

The On-Site Contingency Plan shall provide for taking immediate steps to secure the facility from trespassing or encroachment. In addition, for closures of more than 90 days, unless other arrangements are agreed to by BLM’s AO and the CPM, the plan shall provide for removal of hazardous materials and hazardous wastes, draining of all chemicals from storage tanks and other equipment, and the safe shutdown of all equipment. (Also see specific conditions of certification for the technical areas of Hazardous Materials Management and Waste Management.)

In addition, consistent with requirements under unplanned permanent closure addressed below, the nature and extent of insurance coverage, and major equipment warranties must also be included in the On-Site Contingency Plan. In addition, the
status of the insurance coverage and major equipment warranties must be updated in
the annual compliance reports.

In the event of an unplanned temporary closure, the project owner shall notify BLM’s AO
and the CPM, as well as other responsible agencies, by telephone, fax, or e-mail, within
24 hours and shall take all necessary steps to implement the On-Site Contingency Plan.
The project owner shall keep BLM’s AO and the CPM informed of the circumstances
and expected duration of the closure.

If BLM’s AO and the CPM determine that an unplanned temporary closure is likely to be
permanent, or for a duration of more than 6 months, a Closure Plan consistent with the
requirements for a planned closure shall be developed and submitted to BLM’s AO and
the CPM within 90 days of BLM’s AO and the CPM’s determination (or other period of
time agreed to by BLM’s AO and the CPM).

**UNPLANNED PERMANENT CLOSURE/ON-SITE CONTINGENCY PLAN**
**(COMPLIANCE-13)**

The On-Site Contingency Plan required for unplanned temporary closure shall also
cover unplanned permanent facility closure. All of the requirements specified for
unplanned temporary closure shall also apply to unplanned permanent closure.

In addition, the On-Site Contingency Plan shall address how the project owner will
ensure that all required closure steps will be successfully undertaken in the event of
abandonment.

In the event of an unplanned permanent closure, the project owner shall notify BLM’s
AO and the CPM, as well as other responsible agencies, by telephone, fax, or e-mail,
within 24 hours and shall take all necessary steps to implement the On-Site
Contingency Plan. The project owner shall keep BLM’s AO and the CPM informed of
the status of all closure activities.

To ensure that public health and safety and the environment are protected in the event
of an unplanned temporary closure, the project owner shall submit an On-Site
Contingency Plan no less than 60 days after a NTP is issued for each phase of
development.

**POST CERTIFICATION CHANGES TO BLM’S ROW GRANT AND/OR
THE ENERGY COMMISSION DECISION: AMENDMENTS, OWNERSHIP
CHANGES, STAFF APPROVED PROJECT MODIFICATIONS AND
VERIFICATION CHANGES**
**(COMPLIANCE-14)**

The project owner must petition the Energy Commission pursuant to Title 20, California
Code of Regulations, section 1769, in order to modify the project (including linear
facilities) design, operation or performance requirements, and to transfer ownership or
operational control of the facility. The BLM ROW holder must file a written requests in
the form an application to the BLM AO in order to change the terms and conditions of
their ROW grant or POD. Written requests will be in a manner prescribed by the
BLM AO.
It is the responsibility of the project owner to contact BLM’s AO and the CPM to determine if a proposed project change should be considered a project modification pursuant to section 1769. Implementation of a project modification without first securing BLM and either Energy Commission or Energy Commission staff approval, may result in enforcement action that could result in civil penalties in accordance with section 25534 of the Public Resources Code.

A petition is required for amendments and for staff approved project modifications as specified below. Both shall be filed as a "Petition to Amend." Staff will determine if the change is significant or insignificant. For verification changes, a letter from the project owner is sufficient. In all cases, the petition or letter requesting a change should be submitted to BLM’s AO and the CPM, who will file it with the Energy Commission’s Dockets Unit in accordance with Title 20, California Code of Regulations, section 1209.

The criteria that determine which type of approval and the process that applies are explained below. They reflect the provisions of Section 1769 at the time this condition was drafted. If the Commission’s rules regarding amendments are amended, the rules in effect at the time an amendment is requested shall apply.

**Amendment**

The project owner shall petition the Energy Commission, pursuant to Title 20, California Code of Regulations, Section 1769(a), when proposing modifications to the project (including linear facilities) design, operation, or performance requirements. If a proposed modification results in deletion or change of a condition of certification, or makes changes that would cause the project not to comply with any applicable laws, ordinances, regulations or standards, the petition will be processed as a formal amendment to the Energy Commission’s final decision, which requires public notice and review of the BLM-Energy Commission staff analysis, and approval by the full Energy Commission. The petition shall be in the form of a legal brief and fulfill the requirements of Section 1769(a). Upon request, the CPM will provide you with a sample petition to use as a template.

The ROW holder shall file an application to amend the BLM ROW grant for any substantial deviation or change in use. The requirements to amend a ROW grant are the same as when filing a new application including paying processing and monitoring fees and rent.

**Staff Approved Project Modification**

Modifications that do not result in deletions or changes to conditions of certification, and that are compliant with laws, ordinances, regulations and standards may be authorized by BLM’s AO and the CPM as a staff approved project modification (SAPM) pursuant to section 1769(a) (2). This process usually requires minimal time to complete, and it requires an Energy Commission 14-day public review of the Notice of SAPM that includes the BLM and Energy Commission staff’s intention to approve the modification unless substantive objections are filed. These requests must also be submitted in the form of a “petition to amend” as described above. BLM and the Energy Commission intend to integrate a process to jointly approve SAPMs to avoid duplication of approval processes and ensure appropriate documentation for the public record.
**Change of Ownership**

Change of ownership or operational control also requires that the project owner file a petition pursuant to section 1769(b). This process requires public notice and approval by the full Commission and BLM. The petition shall be in the form of a legal brief and fulfill the requirements of Section 1769(b). Upon request, the CPM will provide you with a sample petition to use as a template. The transfer of ownership of a BLM ROW grant must be through the filing of an application for assignment of the grant.

**Verification Change**

A verification may be modified by BLM’s AO and the CPM without requesting an amendment to the ROW Grant or Energy Commission decision if the change does not conflict with the conditions of certification and provides an effective alternate means of verification.

**E.9 CBO DELEGATION AND AGENCY COOPERATION**

In performing construction and operation monitoring of the project, BLM and Energy Commission staff act as, and have the authority of, the Chief Building Official (CBO). BLM and Energy Commission staff may delegate CBO responsibility to either an independent third party contractor or the local building official. BLM and the Energy Commission intend to avoid duplication by integrating the responsibilities of the CBO with those of a BLM compliance inspector and will work jointly in the selection of a CBO. BLM and Energy Commission staff retain CBO authority when selecting a delegate CBO, including enforcing and interpreting federal, state and local codes, and use of discretion, as necessary, in implementing the various codes and standards.

BLM and Energy Commission staff may also seek the cooperation of state, regional and local agencies that have an interest in environmental protection when conducting project monitoring.

**E.10 ENFORCEMENT**

BLM’s legal authority to enforce the terms and conditions of its ROW Grant is specified in 43 CFR 2807.16 to 2807.19. BLM may issue an immediate temporary suspension of activities if they determine a holder has violated one or more of the terms, conditions, or stipulation of the grant. BLM may also suspend or terminate a ROW grant if a holder does not comply with applicable laws and regulation or any terms, conditions, or special stipulations contained in the grant. Prior to suspending or terminating a ROW grant, BLM will provide written notice to the holder stating it intends to suspend or terminate and will provide reasonable opportunity to correct any noncompliance.

The Energy Commission’s legal authority to enforce the terms and conditions of its Decision is specified in Public Resources Code sections 25534 and 25900. The Energy Commission may amend or revoke the certification for any facility, and may impose a civil penalty for any significant failure to comply with the terms or conditions of the Energy Commission Decision. The specific action and amount of any fines the Energy Commission may impose would take into account the specific circumstances of the incident(s). This would include such factors as the previous compliance history, whether
the cause of the incident involves willful disregard of LORS, oversight, unforeseeable events, and other factors the Energy Commission may consider.

**ENERGY COMMISSION NONCOMPLIANCE COMPLAINT PROCEDURES**

Any person or agency may file a complaint alleging noncompliance with the conditions of certification. Such a complaint will be subject to review by the Energy Commission pursuant to Title 20, California Code of Regulations, section 1237, but in many instances the noncompliance can be resolved by using the informal dispute resolution process. Both the informal and formal complaint procedure, as described in current State law and regulations, are described below. They shall be followed unless superseded by future law or regulations.

The Energy Commission has established a toll free compliance telephone number of 1-800-858-0784 for the public to contact the Energy Commission about power plant construction or operation-related questions, complaints or concerns.

**Informal Dispute Resolution Process**

The following procedure is designed to informally resolve disputes concerning the interpretation of compliance with the requirements of this compliance plan. The project owner, the Energy Commission, or any other party, including members of the public, may initiate an informal dispute resolution process. Disputes may pertain to actions or decisions made by any party, including the Energy Commission’s delegate agents.

This process may precede the more formal complaint and investigation procedure specified in Title 20, California Code of Regulations, section 1237, but is not intended to be a substitute for, or prerequisite to it. This informal procedure may not be used to change the terms and conditions of certification as approved by the Energy Commission, although the agreed upon resolution may result in a project owner, or in some cases the Energy Commission staff, proposing an amendment.

The process encourages all parties involved in a dispute to discuss the matter and to reach an agreement resolving the dispute. If a dispute cannot be resolved, then the matter must be brought before the full Energy Commission for consideration via the complaint and investigation procedure.

**Request for Informal Investigation**

Any individual, group, or agency may request the Energy Commission to conduct an informal investigation of alleged noncompliance with the Energy Commission’s terms and conditions of certification. All requests for informal investigations shall be made to the designated CPM.

Upon receipt of a request for informal investigation, the CPM shall promptly notify the project owner of the allegation by telephone and letter. All known and relevant information of the alleged noncompliance shall be provided to the project owner, BLM and to the Energy Commission staff. The CPM will evaluate the request and the information to determine if further investigation is necessary. If the CPM find that further investigation is necessary, the project owner will be asked to promptly investigate the
matter. Within seven working days of the CPM’s request, provide a written report to the
CPM of the results of the investigation, including corrective measures proposed or
undertaken. Depending on the urgency of the noncompliance matter, the CPM may
conduct a site visit and/or request the project owner to also provide an initial verbal
report, within 48 hours.

Request for Informal Meeting

In the event that either the party requesting an investigation or the Energy Commission
staff is not satisfied with the project owner’s report, investigation of the event, or
corrective measures proposed or undertaken, either party may submit a written request
to the CPM for a meeting with the project owner. Such request shall be made within 14
days of the project owner’s filing of its written report. Upon receipt of such a request, the
CPM shall:

1. immediately schedule a meeting with the requesting party and the project owner, to
   be held at a mutually convenient time and place;
2. secure the attendance of appropriate Energy Commission staff and staff of any other
   agencies with expertise in the subject area of concern, as necessary;
3. conduct such meeting in an informal and objective manner so as to encourage the
   voluntary settlement of the dispute in a fair and equitable manner;
4. After the conclusion of such a meeting, promptly prepare and distribute copies to all
   in attendance and to the project file, a summary memorandum that fairly and
   accurately identifies the positions of all parties and any understandings reached. If
   an agreement has not been reached, the CPM shall inform the complainant of the
   formal complaint process and requirements provided under Title 20, California Code
   of Regulations, section 1230 et seq.

Formal Dispute Resolution Procedure-Complaints and Investigations

Any person may file a complaint with the Energy Commission’s Dockets Unit alleging
noncompliance with a Commission decision adopted pursuant to Public Resources
Code section 25500. Requirements for complaint filings and a description of how
complaints are processed are in Title 20, California Code of Regulations, section 1237.
# KEY EVENTS LIST

**PROJECT:**

**DOCKET #:**

**COMPLIANCE PROJECT MANAGER:**

**BLM AUTHORIZED OFFICER:**

<table>
<thead>
<tr>
<th>EVENT DESCRIPTION</th>
<th>DATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Certification Date</td>
<td></td>
</tr>
<tr>
<td>Obtain Site Control</td>
<td></td>
</tr>
<tr>
<td>Online Date</td>
<td></td>
</tr>
</tbody>
</table>

## POWER PLANT SITE ACTIVITIES

- Start Site Mobilization
- Start Ground Disturbance
- Start Grading
- Start Construction
- Begin Pouring Major Foundation Concrete
- Begin Installation of Major Equipment
- Completion of Installation of Major Equipment
- First Combustion of Gas Turbine
- Obtain Building Occupation Permit
- Start Commercial Operation
- Complete All Construction

## TRANSMISSION LINE ACTIVITIES

- Start T/L Construction
- Synchronization with Grid and Interconnection
- Complete T/L Construction

## FUEL SUPPLY LINE ACTIVITIES

- Start Gas Pipeline Construction and Interconnection
- Complete Gas Pipeline Construction

## WATER SUPPLY LINE ACTIVITIES

- Start Water Supply Line Construction
- Complete Water Supply Line Construction
### COMPLIANCE TABLE 1

**SUMMARY of COMPLIANCE CONDITIONS OF CERTIFICATION**

<table>
<thead>
<tr>
<th>CONDITION NUMBER</th>
<th>SUBJECT</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMPLIANCE-1</td>
<td>Unrestricted Access</td>
<td>The project owner shall grant BLM and Energy Commission staff and delegate agencies or consultants unrestricted access to the power plant site.</td>
</tr>
<tr>
<td>COMPLIANCE-2</td>
<td>Compliance Record</td>
<td>The project owner shall maintain project files on-site. BLM and Energy Commission staff and delegate agencies shall be given unrestricted access to the files.</td>
</tr>
<tr>
<td>COMPLIANCE-3</td>
<td>Compliance Verification Submittals</td>
<td>The project owner is responsible for the delivery and content of all verification submittals to BLM’s Authorized Officer and the CPM, whether such condition was satisfied by work performed or the project owner or his agent.</td>
</tr>
<tr>
<td>COMPLIANCE-4</td>
<td>Pre-construction Matrix and Tasks Prior to Start of Construction</td>
<td>• Construction shall not commence until the all of the following activities/submittals have been completed: property owners living within one mile of the project have been notified of a telephone number to contact for questions, complaints or concerns, a pre-construction matrix has been submitted identifying only those conditions that must be fulfilled before the start of construction, all pre-construction conditions have been complied with, BLM’s Authorized Officer and the CPM have issued a letter to the project owner authorizing construction.</td>
</tr>
<tr>
<td>COMPLIANCE-5</td>
<td>Compliance Matrix</td>
<td>The project owner shall submit a compliance matrix (in a spreadsheet format) with each monthly and annual compliance report which includes the status of all compliance conditions of certification.</td>
</tr>
<tr>
<td>CONDITION NUMBER</td>
<td>SUBJECT</td>
<td>DESCRIPTION</td>
</tr>
<tr>
<td>------------------</td>
<td>---------</td>
<td>-------------</td>
</tr>
<tr>
<td>COMPLIANCE-6</td>
<td>Monthly Compliance Report including a Key Events List</td>
<td>During construction, the project owner shall submit Monthly Compliance Reports (MCRs) which include specific information. The first MCR is due the month following the Energy Commission business meeting date on which the project was approved and shall include an initial list of dates for each of the events identified on the Key Events List.</td>
</tr>
<tr>
<td>COMPLIANCE-7</td>
<td>Annual Compliance Reports</td>
<td>After construction ends and throughout the life of the project, the project owner shall submit Annual Compliance Reports instead of Monthly Compliance Reports.</td>
</tr>
<tr>
<td>COMPLIANCE-8</td>
<td>Confidential Information</td>
<td>Any information the project owner deems confidential shall be submitted to BLM and the Energy Commission’s Dockets Unit with a request for confidentiality.</td>
</tr>
<tr>
<td>COMPLIANCE-9</td>
<td>Annual fees</td>
<td>Payment of Annual Energy Facility Compliance Fee to the Energy Commission;</td>
</tr>
<tr>
<td>COMPLIANCE-10</td>
<td>Reporting of Complaints, Notices and Citations</td>
<td>Within 10 days of receipt, the project owner shall report to BLM’s Authorized Officer and the CPM, all notices, complaints, and citations.</td>
</tr>
<tr>
<td>COMPLIANCE-11</td>
<td>Planned Facility Closure</td>
<td>The project owner shall submit any revisions or changes to the Closure, Revegetation and Restoration Plan to BLM’s Authorized Officer and the CPM at least 12 months prior to commencement of a planned closure.</td>
</tr>
<tr>
<td>COMPLIANCE-12</td>
<td>Unplanned Temporary Facility Closure</td>
<td>To ensure that public health and safety and the environment are protected in the event of an unplanned temporary closure, the project owner shall submit an On-Site Contingency Plan no less than 60 days after a NTP is issued for each power plant.</td>
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## COMPLIANCE TABLE 1

**SUMMARY of COMPLIANCE CONDITIONS OF CERTIFICATION**

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<tbody>
<tr>
<td>COMPLIANCE-13</td>
<td>Unplanned Permanent Facility Closure</td>
<td>To ensure that public health and safety and the environment are protected in the event of an unplanned temporary closure, the project owner shall submit an On-Site Contingency Plan no less than 60 days after a NTP is issued for each power plant.</td>
</tr>
<tr>
<td>COMPLIANCE-14</td>
<td>Post-certification changes to the ROW Grant and/or Decision</td>
<td>The project owner must petition the Energy Commission and file an application to amend the ROW grant to delete or change a condition of certification, modify the project design or operational requirements and/or transfer ownership of operational control of the facility.</td>
</tr>
</tbody>
</table>
ATTACHMENT 1
COMPLAINT REPORT / RESOLUTION FORM

Complaint Log Number: __________________________ Docket Number: ____

Project Name: ____

COMPLAINANT INFORMATION

Name: ______________________________________ Phone Number: ____

Address: ______________________________________

COMPLAINT

DATE COMPLAINT RECEIVED: ________________________ TIME COMPLAINT RECEIVED: ____

COMPLAINT RECEIVED BY: ☐ TELEPHONE ☐ IN WRITING (COPY ATTACHED)

DATE OF FIRST OCCURRENCE: ____

DESCRIPTION OF COMPLAINT (INCLUDING DATES, FREQUENCY, AND DURATION): ____

FINDINGS OF INVESTIGATION BY PLANT PERSONNEL: ____

DOES COMPLAINT RELATE TO VIOLATION OF BLM ROW GRANT? ☐ YES ☐ NO
ATTACHMENT 1
COMPLAINT REPORT / RESOLUTION FORM

DOES COMPLAINT RELATE TO VIOLATION OF A CEC REQUIREMENT? □ YES □ NO

DATE COMPLAINANT CONTACTED TO DISCUSS FINDINGS:_____

DESCRIPTION OF CORRECTIVE MEASURES TAKEN OR OTHER COMPLAINT RESOLUTION:_____

DOES COMPLAINANT AGREE WITH PROPOSED RESOLUTION? □ YES □ NO

IF NOT, EXPLAIN:_____

CORRECTIVE ACTION

IF CORRECTIVE ACTION NECESSARY, DATE COMPLETED:_____

DATE FIRST LETTER SENT TO COMPLAINANT (COPY ATTACHED):_____

DATE FINAL LETTER SENT TO COMPLAINANT (COPY ATTACHED):_____

OTHER RELEVANT INFORMATION:_____

“This information is certified to be correct.”

PLANT MANAGER SIGNATURE:__________________________ DATE:

JOINT AGENCY GENERAL CONDITIONS E.24 February 2010
LIST OF PREPARERS
STIRLING ENERGY SYSTEMS SOLAR TWO PROJECT
LIST OF PREPARERS

Executive Summary ................................................................. Christopher Meyer
Introduction .......................................................................................... Christopher Meyer
Project Description ............................................................................... Christopher Meyer
Air Quality ..................................................................................................... William Walters, P.E.
Biological Resources ....................................................................................... Joy Nishida
Cultural Resources ............................................................................. CEC and BLM Staff
Hazardous Materials Management......................................................... Rick Tyler
Land Use .............................................................................................. Susanne Huerta and Negar Vahidi
Noise and Vibration ........................................................................................... Erin Bright
Public Health ..................................................................................................... Alvin Greenberg
Socioeconomic Resources .................................................................... Amanda Stennick
Soils and Water Resources ................................................................................ Phil Lowe
Traffic and Transportation ........................................................................... Steven Brown
Transmission Line Safety and Nuisance ................................... Obed Odoemelam, Ph.D.
Visual Resources .......................................................................................... William Kanemoto
Waste Management .................................................................................. Susan Phinney
Worker Safety and Fire Protection ........................................................... Rick Tyler
Facility Design .............................................................................. Shahab Khoshmashrab
Geology and Paleontology ............................................................... Dal Hunter, Ph.D., C.E.G.
Power Plant Efficiency ........................................................................ Shakhab Khoshmashrab
Power Plant Reliability ........................................................................ Shakhab Khoshmashrab
Transmission System Engineering ....................................... Mark Hesters and Sudath Arachchige
Alternatives ...................................................................................................... Susan Lee
General Conditions Including Compliance Monitoring & Facility Closure ....... Mary Dyas
Project Secretary .................................................................................. Mineka Foggie and Maria Santourdjian
WITNESS QUALIFICATIONS AND DECLARATIONS
I, Christopher Meyer, declare as follows:

1. I am presently employed by Aspen Environmental Group, a contractor to the California Energy Commission, Siting, Transmission and Environmental Protection Division, as a Project Manager.

2. A copy of my professional qualifications and experience is attached hereto and incorporated by reference herein.

3. I prepared the staff testimony on Executive Summary, Introduction, and Project Description for the Stirling Energy Systems Solar Two Project based on my independent analysis of the Application for Certification and supplements hereto, data from reliable documents and sources, and my professional experience and knowledge.

4. It is my professional opinion that the prepared testimony is valid and accurate with respect to the issue addressed therein.

5. I am personally familiar with the facts and conclusions related in the testimony and if called as a witness could testify competently thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Dated: February 11, 2010    Signed:______________________________

At: Sacramento, California
CHRISTOPHER J. MEYER  
Senior Associate  
Energy and Infrastructure/Cultural Resources

ACADEMIC BACKGROUND
Energy and Infrastructure/Cultural Resources  
B.A., Biological Anthropology/Archaeology, California State University, Hayward, 1993

PROFESSIONAL EXPERIENCE
Mr. Meyer has over thirteen years with Aspen in support of CEQA/NEPA projects including EIR/EIS, IS/MND, and EA. His background combines strong experience in environmental inspection, compliance management, and project management on large-scale construction projects with a solid background in archaeological field investigations. With over 17 years experience as an archaeologist, Mr. Meyer is familiar with the cultural settings of California and Oregon and the regulatory requirements for cultural resource management under CEQA/NEPA. He has worked closely with construction contractors, agency representatives, and Native American tribal governments to ensure projects are built on time, within budget, and in compliance with all environmental requirements. In addition to field experience, he has worked as a project manager, produced reports, document, and permit applications, and has reviewed mitigation measures for federal, State, and local government agencies as well as corporations.

Aspen Environmental Group 1997 to present

- **California Energy Commission (CEC), Technical Assistance in Application for Certification Review, Siting Project Manager.** In response to California’s power shortage, Aspen is assisting the CEC in evaluating the environmental and engineering aspects of new power plant applications throughout the State. As part of this effort, Mr. Meyer serves as a Project Manager and supervises technical staff members, preparing the CEC’s CEQA-equivalent Preliminary Staff Assessments and Final Staff Assessments in response to applications for the construction of new power plants across the State. Responsibilities include: review of applications for new power plants; identifying potential issues with proposed power plants; preparation of conditions of certification for proposed power plants; review and editing of CEC technical staff’s analysis, scheduling and coordinating public workshops; tracking status of permitting process; coordinating with affected agencies to resolve potential concerns; detailed reporting; conflict resolution; and preparing briefings for the CEC Siting Committee.

- **El Casco System Project, Riverside, CA.** Mr. Meyer is assisting in the preparation of the cultural resources section of this EIR being prepared for the CPUC to evaluate SCE’s application for a Permit to Construct (PTC) the El Casco System Project. The Proposed Project would be located in a rapidly growing area of northern Riverside County, which includes the Cities of Beaumont, Banning, and Calimesa. A 115-kV subtransmission line begins at Banning Substation and extends westward toward the proposed El Casco Substation site within the existing Banning to Maraschino 115-kV subtransmission line and Maraschino-El Casco 115-kV subtransmission line ROWs. Major issues of concern include impacts to existing and residential land uses, which have led to the development of a partial underground alternative and a route alternative different than the project route proposed by SCE (the Applicant). The 1,200-page Draft EIR was released for a 45-day public review and
comment on December 12, 2007, and evaluates project alternatives at the same level of detail as the Proposed Project analysis.

- California Energy Commission (CEC), Technical Assistance in Application for Certification Review, Compliance Project Manager. In response to California’s power shortage, Aspen is assisting the CEC in evaluating the environmental and engineering aspects of new power plant applications throughout the State. As part of this effort, Mr. Meyer served as a Compliance Project Manager and supervised technical staff members, preparing the CEC’s Conditions of Certification for construction of power plants across the State as well as managing on-going operational issues with power plants currently under license with the CEC. Responsibilities included: preparation of amendments to conditions of certification for existing power plants; review of applications for new power plants; drafting of Memoranda of Understanding with Chief Building Officials; coordinating with affected agencies to resolve concerns with potential impacts to cultural resources or threatened or endangered species; maintaining contractor construction milestones, detailed reporting; development of mitigation measures; conflict resolution; and inspection for compliance with the Conditions of Certification.

- SDG&E Miguel-Mission 230 kV #2 Project Construction Monitoring and Supplemental Environmental Review Program, Lead Environmental Monitor. Under contract to the California Public Utilities Commission (CPUC), Mr. Meyer served as Lead Environmental Monitor and supervised one environmental monitor in the field, monitoring the implementation of the CPUC environmental impact report’s conditions of approval for construction of the overhead 230 kV electric transmission line and substations upgrades. The project included installing a new 230 kV circuit on existing towers along the 35-mile right-of-way, as well as relocating 69 kV and 138 kV circuits on approximately 80 steel pole structures. In addition, the Miguel Substation and Mission Substation was modified to accommodate the new 230 kV transmission circuit. Responsibilities included: supervision, guidance and development of environmental monitors in field monitoring as well as the compliance review of pre-construction plans and mitigation compliance documentation, review of variance requests and temporary extra work space (TEWS) requests; recommendations for CPUC issuance of Notices to Proceed with construction and variance approvals; approval of TEWS requests; and coordination with SDG&E, construction managers and subcontractors, and landowners, local municipalities, affected and interested agencies and the public.

- SCE Viejo Systems Project Construction Monitoring and Supplemental Environmental Review Program, Lead Environmental Monitor. Under contract to the California Public Utilities Commission (CPUC), Mr. Meyer served as Lead Environmental Monitor and supervises one environmental monitor in the field, monitoring the implementation of the CPUC negative declaration’s conditions of approval for construction of the overhead 66 kV and 220 kV electric transmission lines and substation upgrades and construction. This Southern California Edison (SCE) project involves the installation of a 220/66/12 kV substation and 3.1-mile 66 kV transmission line in southern Orange County, California. The transmission line will traverse residential and recreational areas in the City of Mission Viejo and the substation is located in a business park adjacent to a wilderness area in the City of Lake Forest. Responsibilities include: supervision, guidance and development of environmental monitors in field monitoring as well as the compliance review of pre-construction plans and mitigation compliance documentation, review of variance requests and temporary extra work space (TEWS) requests; recommendations for CPUC issuance of Notices to Proceed with construction and variance approvals; approval of TEWS requests; and coordination with SDG&E, construction managers and subcontractors, and landowners, local municipalities, affected and interested agencies and the public.

- U.S. Army Corps of Engineers Prado Dam and Reach 9 Project Construction Monitoring Program, Lead Environmental Monitor. Under contract to the U.S. Army Corps of Engineers (Corps), Mr. Meyer serves as Lead Environmental Monitor and supervises two environmental monitors in the field, monitoring the implementation of the Corps environmental regulations during expansion of the Prado Dam and associated downstream modifications in Riverside County. Respon-
abilities include: supervision, guidance and development of environmental monitoring in the field as well as the compliance review of pre-construction plans, such as the Storm Water Pollution Prevention Plan, and mitigation compliance documentation, variance requests; recommendations for Corps issuance of Notices to Proceed with construction and variance approvals; and coordination with construction managers and subcontractors, and landowners, local municipalities, affected and interested agencies and the public.

- **PG&E Tri-Valley 2002 Capacity Increase Project Construction Monitoring and Supplemental Environmental Review Program, Lead Environmental Monitor.** Under contract to the California Public Utilities Commission (CPUC), Mr. Meyer serves as Lead Environmental Monitor and supervises two environmental monitors in the field, monitoring the implementation of the CPUC environmental impact report’s conditions of approval for construction of this combination overhead and underground 230 kV electric transmission lines and substations. Construction involves underground installation of the double-circuit 230 kV transmission line conduit and construction of a substation and several transition stations as three separate phases. Responsibilities include: supervision, guidance and development of environmental monitors in field monitoring as well as the compliance review of pre-construction plans and mitigation compliance documentation, variance requests and temporary extra work space (TEWS) requests; recommendations for CPUC issuance of Notices to Proceed with construction and variance approvals; approval of TEWS requests; and coordination with PG&E, construction managers and subcontractors, and landowners, local municipalities, affected and interested agencies and the public.

- **PG&E Atlantic Del Mar Project, Lead Environmental Monitor.** Under Aspen’s environmental services contract with CPUC, Mr. Meyer serves as Lead Environmental Monitor and supervises one environmental monitor in the field for the mitigation monitoring, compliance, and reporting program for PG&E’s Atlantic Del Mar Project in the Cities of Rocklin and Roseville. This approximate four-mile transmission line involves both underground and overhead construction. The project right-of-way will traverse potential habitats for listed vernal species and areas containing historic resources.

- **PG&E Jefferson-Martin 230 kV Transmission Line Project, Lead Environmental Monitor.** Under contract to CPUC, Mr. Meyer served as Lead Environmental Monitor and supervised two environmental monitors in the field, monitoring the implementation of the CPUC compliance, and reporting program for the PG&E Jefferson-Martin Project. This project involved the installation of a 27-mile 230 kV transmission line through scenic San Mateo County in the Highway 280 corridor, urban Colma and Daly City, and across San Bruno Mountain. Responsibilities included: supervision, guidance and development of environmental monitors in field monitoring as well as the compliance review of pre-construction plans and mitigation compliance documentation, variance requests and temporary extra work space (TEWS) requests; recommendations for CPUC issuance of Notices to Proceed with construction and variance approvals; approval of TEWS requests; and coordination with PG&E, construction managers and subcontractors, and landowners, local municipalities, affected and interested agencies and the public.

- **U.S. Army Corps of Engineers Murrieta Creek Flood Control, Environmental Restoration, and Recreation Project Construction Monitoring Program, Lead Environmental Monitor.** Under contract to the U.S. Army Corps of Engineers (Corps), Mr. Meyer served as Lead Environmental Monitor in the field, monitoring the implementation of the Corps environmental regulations during Phase 1 of the project. Responsibilities included: pre-construction special status species surveys, protection of sensitive species habitat, guidance and development of environmental monitoring in the field as well as the compliance review of pre-construction plans, such as the Storm Water Pollution Prevention Plan, and mitigation compliance documentation, variance requests; and coordination with construction managers and subcontractors, and landowners, local municipalities, affected and interested agencies and the public. Mr. Meyer also assisted with sensitive wildlife surveys and the trapping and relocation of southwestern pond turtles from the project area.
- **Horsethief Creek Road Repairs Project, IS/MND and Biological Assessment, California Department of Water Resources (2005-2007), Archaeologist.** Under contract to the Department of Water Resources (DWR), Mr. Meyer conducted archaeological field reconnaissance and prepared information for the cultural resource section of the Initial Study for construction of an all weather road at Horsethief Creek located near Lake Silverwood in San Bernardino County. The proposed project is intended to provide an all-weather access to DWR facilities while avoiding impacts to federally endangered arroyo toads.

- **Littlerock Dam and Reservoir Restoration Project EIR/EIS-BE/BA, Palmdale Water District/U.S. Forest Service (2004-2007), Archaeologist.** Mr. Meyer is assisting with cultural resource management tasks for the sediment removal activities associated with the Littlerock Dam and Reservoir in the Angeles National Forest.

- **Creel Census Surveys, California Department of Water Resources (2004-2005), Fisheries Monitor.** In an effort to obtain information on species composition and angler usage on DWR waterways, Mr. Meyer performed creel census surveys at three locations in southern California. These included Castaic Lake, Pyramid, Lake and Piru Creek. Piru Creek is located in the Angeles National Forest and contains habitat for the endangered arroyo toad. Creel surveys are supporting analysis currently underway to restore natural flows on Middle Piru Creek to benefit populations of arroyo toad in the National Forest.

- **Ventura County Watershed Protection Division Los Padres National Forest Rain Gage Survey, Cultural Resources Lead.** Under contract to Ventura County, Mr. Meyer served as the Lead Archaeologist on literature search and field surveys for Ventura County’s application for a renewal of their Forest Service Use Permit. Mr. Meyer conducted literature searches in both the Forest Service’s archaeological records and at the California State University Fullerton Information Center. In addition, he conducted pedestrian surveys at the various rain gage locations and provided written reports on the findings.

- **Department of Water Resources Santa Ana Pipeline Project Construction Monitoring Program, Lead Environmental Monitor.** Under contract to the Department of Water Resources (DWR), Mr. Meyer served as Lead Environmental Monitor in the field, monitoring the implementation of the DWR environmental regulations during repairs of sections of the 10-foot in diameter pipeline in San Bernardino and Riverside Counties. Responsibilities included: guidance and development of environmental monitoring in the field as well as the compliance review of pre-construction plans, such as the Storm Water Pollution Prevention Plan, and mitigation compliance documentation, and coordination with construction managers and subcontractors, and landowners, local municipalities, affected and interested agencies and the public.

- **California Energy Commission Emergency Siting Team, Power Plant Development, Compliance Project Manager.** Under contract to the California Energy Commission (CEC), Mr. Meyer served as a Compliance Project Manager and supervised technical staff members, preparing the CEC’s Conditions of Certification for construction of emergency power plants across the State. Responsibilities included: review of applications for new emergency power plants; drafting of Memoranda of Understanding with Chief Building Officials; coordinating with affected agencies to resolve concerns with potential impacts to cultural resources or threatened or endangered species; maintaining contractor construction milestones, detailed reporting; development of mitigation measures; conflict resolution; and inspection for compliance with the Conditions of Certification.

- **California Energy Commission Coastal Power Plant Study, Archaeologist.** This research study undertaken by the California Energy Commission (CEC) examined the engineering and environmental issues associated with 24 coastal power plants. The purpose of the study was to identify, describe, and analyze issues with the potential to substantially delay or complicate the certification process for future applications to the Energy Commission for expansion or modernization of existing
coastal power plants. For this study, Mr. Meyer was responsible for performing site surveys and reviewing documentation for cultural resources for all 24 Coastal Power Plants.

**CEC Hydroelectric Power Plant Inventory Study, Natural Resources Analyst.** Mr. Meyer assisted in the collection of power and environmental data on over 200 hydroelectric power plants located in California. Physical power data included electrical output, system upgrades, water storage capacity and peaking availability. Environmental information included developing a data base addressing sensitive species issues, fish screens and ladders, monitoring parameters and a map of known hydroelectric facilities and barriers to anadromous fish passage.

**Mulholland Pumping Station and Lower Hollywood Reservoir Outlet Chlorination Station Project, Los Angeles, CA.** Under Aspen’s on-going environmental services contract with the City of Los Angeles Department of Water and Power (LADWP), Mr. Meyer served as archaeologist for preparation of CEQA documentation for this project and conducted field surveys, literature searches, and prepared the cultural resources sections for the Initial Study. LADWP proposed to replace the existing historic pumping/chlorination station building as well as the existing lavatory and unoccupied Water Quality Laboratory buildings with a new single structure pumping/chlorination station within the LADWP’s Hollywood Reservoir Complex located in the Hollywood Hills section of the City Los Angeles. These improvements were required due to the age and deterioration of the facility and the potential risk of seismic damage to existing structures. An Initial Study was prepared in support of a City of Los Angeles General Exemption.

**Devers-Palo Verde 500 kV Transmission Line Project EIS/EIR, southern California/western Arizona.** For this EIR/EIS prepared by U.S. Bureau of Land Management and CPUC, Mr. Meyer assisted in the review and development of construction mitigation measures for SCE’s proposed 250-mile transmission line project from the Palo Verde Nuclear power plant in Arizona to the northern Palm Springs area in California. Major issues of concern include EMF and visual impacts on property values, impacts on the area’s vast recreational resources and tribal lands, and the development and evaluation of several route alternatives, including the Devers-Valley No. 2 Route Alternative, which eventually was approved by the CPUC.

**Antelope-Pardee 500 kV Transmission Line Project EIS/EIR, Los Angeles County, CA.** For this EIR/EIS prepared by USFS, Angeles National Forest and CPUC, Mr. Meyer assisted in the review and development of construction mitigation measures for SCE’s proposed 25-mile transmission line project from the Antelope Substation in the City of Lancaster, through the ANF, and terminating at SCE’s Pardee Substation in Santa Clarita. Major issues of concern included impacts to biological, recreational, and cultural resources within Forest lands, EMF and visual impacts on property values, impacts on residences in the urbanized southern regions of the route, and the development and evaluation of several route alternatives.

**Antelope Transmission Project, Segments 2 & 3 EIR, Los Angeles and Kern Counties, CA.** For this EIR being prepared by the CPUC, Mr. Meyer assisted in the review and development of construction mitigation measures. The proposed Project includes both Segment 2 and Segment 3 of the Antelope Transmission Project, and involves construction of new transmission line infrastructure from the Tehachapi Wind Resource Area in southern Kern County, California, to SCE’s existing Vincent Substation in Los Angeles County, California. The Tehachapi Wind Resource Area is one of the State’s greatest potential sources for the generation of wind energy. A variety of wind energy projects are currently in development for this region. Major issues of concern include EMF and visual impacts on property values, impacts on residences and agricultural resources, and the development and evaluation of several substation and route alternatives.

**Tehachapi Renewable Transmission Project (TRTP) EIR/EIS, Kern, Los Angeles, and San Bernardino Counties, CA.** For this EIR/EIS prepared by USFS, Angeles National Forest, and CPUC, Mr. Meyer assisted in the review and development of construction mitigation measures for SCE’s proposal to construct, use, and maintain a series of new and upgraded high-voltage electric
transmission lines and substations to deliver electricity generated from new wind energy projects in eastern Kern County. Approximately 46 miles of the project would be located in a 200- to 400-foot right-of-way on National Forest System land (managed by the Angeles National Forest) and approximately three miles would require expanded right-of-way within the Angeles National Forest. The proposed transmission system upgrades of TRTP are separated into eight distinct segments: Segments 4 through 11. Segments 1 (Antelope-Pardee) and Segments 2 and 3 (Antelope Transmission Project) were evaluated in separated CEQA and NEPA documents as described above.

- **Looking Glass Networks, CPUC, Mitigation Review and Development.** Mr. Meyer’s duties included assisting in the review and development of mitigation measures for installation of a proposed fiber optic interconnects located across California. Technical areas addressed included biology, soil and water, air quality, and cultural resources.

- **PG&E Northeast San Jose Transmission Reinforcement Project Construction Monitoring and Supplemental Environmental Review Program, Lead Environmental Monitor.** Under contract to the California Public Utilities Commission (CPUC), Mr. Meyer served as Lead Environmental Monitor and supervised two environmental monitors in the field, monitoring the implementation of the CPUC environmental impact report’s conditions of approval for construction of this combination overhead and underground 230 kV electric transmission lines and substations in the Cities of San Jose, Milpitas, and Fremont. Construction of the dual 230 kV circuit involved underground construction, single-pole tower installation, and construction of the Los Esteros Substation. Given the proximity of the project to the Bay, sensitive biological resources were present, including the burrowing owl and wetland mitigation sites. Responsibilities included: supervision, guidance and development of environmental monitors in field monitoring as well as the compliance review of pre-construction plans and mitigation compliance documentation, variance requests and temporary extra work space (TEWS) requests; recommendations for CPUC issuance of Notices to Proceed with construction and variance approvals; approval of TEWS requests; and coordination with PG&E, construction managers and subcontractors, and landowners, local municipalities, affected and interested agencies and the public.

- **Lead Environmental Monitor, Level 3 Fiber Optics Network Construction Monitoring and Supplemental Environmental Review Program, Lead Environmental Monitor.** Under contract to the California Public Utilities Commission (CPUC), Mr. Meyer served as Lead Environmental Monitor and supervised up to five environmental monitors in the field, monitoring the implementation of the CPUC’s broad conditions of approval for construction of this 2,000-mile fiber optics network across the State. Responsibilities included: supervision, guidance and development of environmental monitors in field monitoring as well as the compliance review of pre-construction plans and mitigation compliance documentation, variance requests and temporary extra work space (TEWS) requests; recommendations for CPUC issuance of Notices to Proceed with construction and variance approvals; approval of TEWS requests; preparation of weekly reports for all monitoring activity; and extensive coordination with Level 3, construction managers and subcontractors, railroad managers and other landowners, local municipalities, affected and interested agencies and the public.

- **Kinder Morgan Santa Fe Pacific Pipeline (SFPP) Carson-Norwalk Pipeline MMCRP, Environmental Monitor.** Mr. Meyer monitored the pipeline company’s inspection team for compliance with CPUC conditions of approval during construction of 13 miles of petroleum products pipeline and four stations. Monitored for hazardous materials management, storm water pollution prevention, and biological and cultural resources. Maintained daily written documentation of compliance activities.

- **Spine Flower Survey, U.S. Army Corps of Engineers, GPS Field Technician.** Mr. Meyer conducted a survey for the slender-horned spine flower in the Santa Ana River Wash, below the Seven Oaks Dam in San Bernardino County, to assess species impact from changes in hydrology once the Seven Oaks Dam is operational. The pedestrian survey was conducted over several months and consisted of multiple consecutive transects, covering approximately 5,300 acres. Several populations of
spine flower were located and mapped. The survey and mapping required extensive use of GPS equipment for the mapping of transects surveyed and the location of spine flower populations.

- **Pacific Pipeline Project EIR/EIS for the U.S. Forest Service, Angeles National Forest, and California Public Utilities Commission, Environmental Monitor.** Served as an Environmental Monitor and supervised mitigation monitoring for all sensitive resources for a construction segment along a 132-mile crude oil pipeline within southern California. Coordinated construction activities with the applicant’s inspection team, archaeological specialists and Native American monitors through areas with sensitive cultural, biological, and visual resources. Monitored for hazardous materials management, storm water pollution prevention, and biological and cultural resources. Maintained daily written documentation of compliance activities.

**Essex Environmental 1995 to 1997**

- **TransCanada, Environmental Training Program, Associate.** Assisted in the development of an environmental training program for a major natural gas company with 8,700 miles of pipeline and associated energy facilities on three continents. Developed training exercises related to environmental compliance topics, including clearing and grading, trenching and backfilling, cultural resources, and hydrostatic testing. Interactive training strategies included small group exercises, demonstrations, quizzes, and scenarios.

- **Pacific Gas and Electric Company, Los Esteros 115/21 kV Project, Associate.** Assisted in the research, development and production of the Proponent’s Environmental Assessment (PEA) as part of a California Public Utilities Commission filing for a Permit To Construct. The Los Esteros Project includes construction of a substation and two 115/21 kilovolt power lines. Authored the project description, transportation section, utilities section, and socioeconomics section and coordinated and edited contributions prepared by PG&E and subcontractors.

- **Sierra Pacific Power Co., Alturas 345 kV Electric Transmission Project, Associate.** Assisted in the development of the environmental management program implementation plan for a 164-mile electric transmission line. Wrote the Storm Water Pollution Protection Plan (SWPPP) for the California and Nevada segments.

- **El Paso Energy Corporation, Trans Colorado Phase I, Environmental Inspector.** Inspected for environmental compliance on a Federal Energy Regulatory Commission (FERC)-regulated 22-mile natural gas pipeline in northern New Mexico and southern Colorado. Inspected for hazardous materials management, erosion control, fire prevention, topsoil handling, stream crossings, and biological and cultural resources. Inspected site-specific installation of temporary and permanent erosion control measures. Coordinated with construction and agency personnel on a daily basis and completed daily field logs and prepared reports as requested. Assisted with the presentation of an eight-hour kickoff environmental training program for agency personnel and construction management. Conducted environmental training classes for construction personnel.

- **Central Coast Water Authority, Mission Hills and Santa Ynez Extensions and Coastal Branch, Phase II, Environmental Monitor.** Monitored and inspected for environmental compliance during construction of 145 miles of water pipeline in Santa Barbara and San Luis Obispo Counties. Coordinated construction activities with the construction contractor, Native American monitors, landowners, and construction inspectors through areas with sensitive cultural, biological, and visual resources. Conducted field surveys immediately ahead of construction to identify potential problem areas and confirm proper flagging of sensitive resources. Captured and relocated wildlife from construction areas. Oversaw construction of sensitive stream crossings and conducted water quality testing in compliance with California Department of Fish and Game permit requirements. Inspected site-specific installation of temporary and permanent erosion control measures. Provided field assessment and documentation of a contractor compensation program. Designed to protect oak trees and min-
imize ground disturbance in sensitive habitats. Maintained daily written documentation of compliance activities. Provided on-site environmental training for construction crews.

- **Pacific Gas and Electric Company Regulatory Process and Environmental Review Training, Associate.** Assisted as an Associate in the development of a Regulatory Process and Environmental Review training session and course handbook. Conducted research on federal, State, and local agency regulatory and permitting requirement for utility construction projects. Provided technical overview for sections on cultural resource management and historic preservation law.

**Pacific Gas Transmission Company**

- **Pacific Gas Transmission Company Coyote Springs and Medford Extensions, Cultural Resources Coordinator.** Coordinated development and implementation of the cultural resources management program for construction of 100 miles of natural gas pipeline in Oregon. Worked with federal, State, and local agencies to determine appropriate treatment and mitigation for affected archaeological sites. Assisted in the development of project implementation plans and environmental assessments, including the development and submittal of the project’s Historic Properties Treatment Plan. Managed report preparation and field work by the archaeology subcontractor.

- **Pacific Gas Transmission Company, Medford Extensions, Environmental Inspector.** Monitored for compliance with project environmental requirements during construction of 89 miles of natural gas pipeline. Inspected for cultural and paleontological resources, erosion control, safety regulations, sensitive wildlife species, stream and wetland crossings, timber harvesting, dust control, fire protection, hazardous materials management, and post-construction restoration. Worked with local Native American tribal governments and monitors (Klamath and Siletz tribes) to ensure proper monitoring of culturally sensitive areas and treatment of unanticipated cultural discoveries. Responsible for all inspection responsibilities (craft, environmental, and cultural) during a two-month boring operation under a sensitive Native American site.

**INFOTEC Research, Inc.**

- **Pacific Gas Transmission Company Pipeline Expansion Project, Archaeologist.** Performed archaeological field work for segments of the PGT-PG&E Pipeline Expansion Project in Jefferson County, Oregon. Conducted Phase I surveys and Phase II testing of significant archaeological sites according to federal and State archaeological mitigation guidelines and evaluated eligibility for the National Register of Historic Places.

**TRAINING & CERTIFICATIONS**

- 2007 CEQA Training – Writing Legally Defensible Documents
- 2006 International Erosion Control Association Training
- 2001 Desert Tortoise Council Surveying, Monitoring and Handling Workshop
- 2001 Expert Witness Training
- 2001 Horizontal Directional Drilling Training
- 1999 Railroad Right-of-Way Safety Training (UPRR, BNSFRR)
- 1996 International Erosion Control Association Training
- 1995 Cultural Resources Presenter at FERC training for Pacific Gas Transmission projects in Oregon
- 1995 General Services Administration course on Section 106 of Historic Preservation Law
- 1994 U.S. Navy Maritime Academy Course on Global Positioning System (GPS)
- 1989 California State University, Northridge on San Clemente Islands
  Conducted field work in paleoindian archaeology (Chumash and Gabrieleno Indians).
- 1988 California State University, Hayward
  Conducted historic archaeology field work on the Ardenwood Historic Farm.
HONORS AND AWARDS
- 2001 Outstanding Performance Award from the State of California Energy Commission.

PROFESSIONAL ASSOCIATIONS
- Society of California Archaeologists (SCA)
- Association of Environmental Professionals (AEP)
DECLARATION OF  
Testimony of William Walters, P.E.

I, William Walters, declare as follows:

1. I am presently employed by Aspen Environmental Group, a contractor to the California Energy Commission, Systems Assessment and Facilities Siting Division, as a senior associate in engineering and physical sciences.

2. A copy of my professional qualifications and experience is attached hereto and incorporated by reference herein.

3. I helped prepare the staff testimony on Air Quality for the SES Solar Two project based on my independent analysis of the Application for Certification and supplements hereto, data from reliable documents and sources, and my professional experience and knowledge.

4. It is my professional opinion that the prepared testimony is valid and accurate with respect to the issue addressed therein.

5. I am personally familiar with the facts and conclusions related in the testimony and if called as a witness could testify competently thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Dated: February 8, 2010                Signed: ____________________________

At: Agoura Hills, California
PROFESSIONAL EXPERIENCE

Mr. Walters has over 20 years of technical and project management experience in environmental compliance work, including environmental impact reports, RCRA/CERCLA site assessment and closure, site inspection, source monitoring, emissions inventories, source permitting, and energy and pollution control research.

Aspen Environmental Group 2000 to present

Responsible as lead technical and/or project manager of environmental projects. Specific responsibilities and projects include the following:

- **Engineering and Environmental Technical Assistance to Conduct Application for Certification Review for the California Energy Commission:**
  - Preparation and project management of the air quality section of the Staff Assessment and/or Initial Study and the visual plume assessment for the following California Energy Commission (CEC) licensing projects: Hanford Energy Park; United Golden Gate, Phase I; Huntington Beach Modernization Project (including Expert Witness Testimony); Woodland Generating Station 2; Ocotillo Energy Project, Phase I; Magnolia Power Project; Colusa Power Project; Inland Empire Energy Center; Rio Linda/Elverta Power Plant Project; Roseville Energy Center; Henrietta Peaker Project; Tracy Peaking Power Plant Project (including Expert Witness Testimony); Avenal Energy Project; San Joaquin Valley Energy Center (including expert witness testimony); Salton Sea Unit 6 Project (including expert witness testimony); Modesto Irrigation District Electric Generation Station (including expert witness testimony). Walnut Energy Center (including expert witness testimony); Riverside Energy Resource Center (including expert witness testimony); Pastoria Energy Facility Expansion; Panchoe Energy Center (in progress); Starwood Power Plant (in progress); Bullard Energy Center (in progress).

- Preparation and project management of the visual plume assessment for the following California Energy Commission (Energy Commission) licensing projects: Metcalf Energy Center Power Project (including Expert Witness Testimony); Contra Costa Power Plant Project (including Expert Witness Testimony); Mountainview Power Project; Potrero Power Plant Project; El Segundo Modernization Project; Morro Bay Power Plant Project; Valero Cogeneration Project; East Alatamont Energy Center (including expert witness testimony); Russell City Energy Center; SMUD Cosumnes Power Plant Project (including expert witness testimony); Pico Power Project; Blythe Energy Project Phase II; City of Vernon Malburg Generating Station; San Francisco Electric Reliability Project; Los Esteros Critical Energy Facility Phase II; Roseville Energy Park; City of Vernon Power Plant (in progress); South Bay Replacement Project; Walnut Creek Energy Park; Sun Valley Energy Project; Highgrove Power Plant (in progress); Colusa Generating Station; and Russell City Energy Center (in progress).

- Assistance in the aircraft safety review of thermal plume turbulence for the Riverside Energy Resources Center; Russell City Energy Center Amendment (in progress); Eastshore Energy Power Plant; and the Blythe Energy Power Plant and Blythe Energy Project Phase II (including expert witness testimony) siting cases. Assistance in the aircraft safety review of thermal and visual plumes of the operating Blythe Energy Power Plant.
- Preparation of a white paper on methods for the determination of vertical plume velocity determination for aircraft safety analyses.
- Preparation and instruction of a visual water vapor plume modeling methodology class for the CEC.
- Preparation and project management of the public health section of the Initial Study for the Woodland Generating Station 2 Energy Commission licensing project.
- Preparation of project amendment or project compliance assessments, for air quality or visual plume impacts, for several licensed power plants, including: Metcalf Energy Center; Pastorla Power Plant; Elk Hills Power Plant; Henrietta Peaker Project; Tracy Peaker Project; Magnolia Power Project; Delta Energy Center; SMUD Cosumnes Power Plant; Walnut Energy Center; San Joaquin Valley Energy Center; City of Vernon Malburg Generating Station; Otay Mesa Power Plant; Los Esteros Critical Energy Facility; Pico Power Project; Riverside Energy Resource Center; Blythe Energy Project Phase II; Inland Empire Energy Center; and Salton Sea Unit 6 Project.
- Preparation of the air quality section of the staff paper “A Preliminary Environmental Profile of California’s Imported Electricity” for the Energy Commission and presentation of the findings before the Commission.
- Completion of an audit of power plant cost factors for integration into the Energy Commission Cost of Generation Model.

- For the **Los Angeles Department of Water and Power (LADWP):**
  - Preparation of the Air Quality Inventory for the LADWP River Supply Pipeline Project EIR.
  - Project management and preparation of the Air Quality Section for the LADWP Valley Generating Station Stack Removal IS/MND support project.

- For the **Department of Water Resources (DWR):**
  - Preparation of the Air Quality sections for two separate DWR Santa Ana Valley Pipeline Repairs Project CEQA Categorical Exemption Memorandums.
  - Preparation of the emission estimates used in the Air Quality Sections for the DWR Tehachapi Second Afterbay Project initial Study and EIR.

- For the **U.S. Army Corps of Engineers (Corps):**
  - Preparation of the Air Quality Section and General Conformity Analysis for the Matilija Dam Ecosystem Restoration Project EIS/R for the Corps.
  - Preparation of emission inventory and General Conformity Analysis of the Murrieta Creek Flood Control Project and the Joint Red Flag exercise to be conducted in the Nevada Test and Training Range.
  - Emission inventory for the construction activities forecast for the San Jose/Old San Jose Creeks Ecosystem Restoration project for the Corps.

- For **Los Angeles Unified School District (LAUSD):**
  - Preparation of the Air Quality Section of the LAUSD New School Construction Program EIR and provided traffic trip and VMT calculation support for the Traffic and Transportation Section.
  - Management and preparation of the Draft Air Quality Sections for the Reseda Senior High School Portable Addition IS/MND and Wonderland Elementary Addition IS/MND projects for LAUSD.

- Other Projects:
  - Preparation of the draft staff paper “Natural Gas Quality: Power Turbine Performance During Heat Content Surge”, and presentation of the preliminary findings at the California Air Resources Board Compressed Natural Gas Workshop and a SoCalGas Technical Advisory Committee meeting.
- Preparation of the Air Quality section of the PG&E Hydrodivestiture Draft EIR/EIS for the California Public Utilities Commission (CPUC).
- Preparation of the Air Quality Section of the Environmental Information Document in support of the Coastal Consistency Determinations for the suspension of operation requests for undeveloped units and leases off the Central California Coast.
- Preparation of comments on the Air Quality, Alternatives, Marine Traffic, Public Safety, and Noise section of the Cabrillo Port Liquefied Natural Gas Deepwater Port Draft EIS/EIR for the City of Oxnard.

Camp Dresser & McKee, Inc. 1998 to 2000

Mr. Walters was responsible as lead technical and/or project manager of environmental projects. Specific responsibilities and projects include the following:

- Preparation of emission inventories and dispersion modeling for criteria and air toxic pollutants for the Los Angeles International Airport Master Plan (LAXMP) EIS/EIR.
- Project Manager/Technical lead for the completion of air permit applications and air compliance audits for two Desa International fireplace accessory manufacturing facilities located in Santa Ana, California.
- Project manager/technical lead for the completion of Risk Management Plans (RMPs) for four J.R. Simplot food processing facilities in Oregon, Idaho, and Washington and the Consolidated Reprographics facility located in Irvine, California.

Planning Consultants Research 1997 to 1998

Mr. Walters was responsible as lead technical and/or project manager of environmental projects. Specific responsibilities and projects include the following:

- Project Manager for a stationary source emission audit of the entire Los Angeles International Airport complex for Los Angeles World Airports (LAWA) in support of the LAXMP.
- Review of the Emission Dispersion Modeling System (EDMS) and preparation of a report with findings to the Federal Aviation Administration for LAW A in support of the LAXMP.
- Project manager for the ambient air monitoring and deposition monitoring studies performed for LAW A in support of the LAXMP, including the selection of the monitoring sites and specialty subcontractor, and review of all monitoring data.

Aspen Environmental Group/Clean Air Solutions 1995 to 1996

Mr. Walters was responsible as lead technical and/or project manager of environmental projects. Specific responsibilities and projects include the following:

- Manager of the Portland, Oregon, office of Clean Air Solutions from March 1995 to December 1995, with responsibilities including Project Management, Business Development, and Administration.
- Control technology assessment, engineering support and Notice of Intent to construct preparation for J.R. Simplot's Hermiston, Oregon, food processing facility. Review and revision of an Air Contaminant Discharge Permit application, Title V permit application, and PSD modeling analysis for J.R. Simplot's Hermiston facility.
Air quality compliance report including an air emission inventory, regulation and permit compliance determination, and recommendations for compliance for Lumber Tech, Inc.'s Lebanon, Oregon, wood products facility.


Mr. Walters was responsible as lead technical or project manager for major environmental projects for both government and private clients. His projects included:

- Prepared several air permit applications for the ARCO Los Angeles Refinery Polypropylene Plant Project; Phase I environmental assessments for properties located in Southern California; and a site investigation and RCRA closure plan for a hazardous waste storage site in Vernon, California.

- Project manager of the Anaconda Smelter site for the U.S. Environmental Protection Agency's (EPA) Alternative Remedial Contract System (ARCS) project during the conclusion of technical activities and project closeout. Prepared a cost recovery report for the project.

- Performed environmental analysis for the Bonneville Power Authority, including air pollution BACT analysis, wastewater analysis, and evaluation of secondary environmental effects of electric power producing technologies.

Jacobs Engineering Group 1988 to 1990

Mr. Walters was responsible for a wide range of air pollution regulatory and testing projects, including the following:

- Project manager of air toxic emission inventory reports prepared for U.S. Borax's boron mining and refining facility and the Naval Aviation Depot (N. Island Naval Base, San Diego, California).

- Prepared air permit applications and regulatory correspondence for several facilities including the U.S. Department of Energy's Feed Material Production Center uranium processing facility in Fernald, Ohio; Evaluation of a sludge dewatering process at Unocal's Wilmington, California, Refinery; and United Airlines blade repair facility at the San Francisco Airport.

- Characterized and quantified air emissions for offshore oil and gas development activities associated with Federal oil and gas Lease Sale 95, offshore southern California, for the U.S. Minerals Management Service.

Certifications
- Chemical Engineer, California License 5973
- CARB, Fundamentals of Enforcement Seminar
- EPA Methods 1-8, 17; Training Seminar

Awards
- California Energy Commission Outstanding Performance Award 2001
DECLARATION OF
Joy Nishida

I, Joy Nishida declare as follows:

1. I am presently employed by the California Energy Commission in the Biological Resources Unit of the Siting, Transmission and Environmental Protection Division as a Planner II.

2. A copy of my professional qualifications and experience is attached hereto and incorporated by reference herein.

3. I helped prepare the staff testimony on Biological Resources for the Stirling Engine Systems Solar Two project based on my independent analysis of the Application for Certification and supplements hereto, data from reliable documents and sources, and my professional experience and knowledge.

4. It is my professional opinion that the prepared testimony is valid and accurate with respect to the issue addressed therein.

5. I am personally familiar with the facts and conclusions related in the testimony and if called as a witness could testify competently thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Dated: ________________________  Signed: ________________________

At:  Sacramento, California
JOY NISHIDA
Biologist

Experience Summary
Twenty-seven years experience in the biological field, including botanical consulting, curatorial management of vertebrate and herbarium collections, college-level instruction, and conducting biological resources impact analyses for inclusion in environmental documents.

Education

• California State Polytechnic University, Pomona—Master of Science, Biological Sciences
• California Polytechnic State University, San Luis Obispo—Bachelor of Science, Environmental & Systematic Biology and Natural Resources Management (Forestry Concentration)
• Certified Arborist — International Society of Arboriculture
  No. WE-8078A, expires 12/31/10

Professional Experience

July 2008 to Present—Planner II: Siting, Transmission & Environmental Protection Division – California Energy Commission, Sacramento

As a staff biologist, primary duties include conducting impact analyses to biological resources for power plant siting projects. Other duties include evaluating compliance with accepted Conditions of Certification related to biological resource technical areas for power plant facilities and coordinating with biological resource protection and management agencies, environmental organizations, universities, and special interest groups to assure their biological input into Commission programs.

January 2008 to July 2008—Environmental Scientist: Regional Programs Unit, Division of Financial Assistance – State Water Resources Control Board, Sacramento

Using scientific judgment, provided technical and administrative review of environmental documents for projects receiving financial assistance from the State Water Board. Reviewed and commented on environmental documents for wastewater treatment and water reclamation facilities, watershed protection, nonpoint source pollution control, and other local assistance projects to assure compliance with the California Environmental Quality Act and other Division’s environmental review process. Participated in applicant meetings, prepared Agenda and Resolution language for various projects seeking local funding assistance from the State Water Board, developed environmental review summaries of projects to be funded, initiated consultation with federal authorities, developed mitigation measures, and resolved environmental concerns related to proposed projects. Coordinated interagency review of environmental documents subject to crosscutting federal regulations, and organized and maintained the Environmental Services filing system, library, and database.
April 2005 to January 2008—Botanist, Wetland Ecologist, and Certified Arborist - Jones & Stokes, Sacramento

Organized and conducted general plant surveys and directed plant surveys for special-status plant species, vegetation mapping, arborist surveys, and wetland delineations extensively throughout California. Wrote wetland delineation reports, arborist reports, and biological resource sections for the following environmental documents: Environmental Impact Reports, Environmental Impact Statements, Natural Environment Studies, Initial Studies, and Biological Analyses for listed species. Dealt with the legal requirements regarding the protection of biological resources and developed mitigation to prevent significant impacts. Coordinated the efforts of sub-consultants, clients, and coworkers in the development of environmental documents.

1990-2005—Botanical Consultant – Nishida Botanical Consulting

Worked as an independent contractor to consulting firms, educational facilities, and federal agencies. Duties included organizing and conducting floral inventories, directed searches for special-status plant species, vegetation mapping, monitoring revegetation sites, assisting in wetland delineations, and analyzing impacts on botanical resources.

1990-1996—Instructional Support Technician– California State University, Northridge

As a collections manager for the Department of Biology Herbarium and Vertebrate Collections, responsibilities included the acquisition, preparation, curation, and reorganization of the teaching and research collections. Implemented a database for the vertebrate collections. Recruited and supervised volunteers to assist in the collections. Also supervised graduate students. Other duties included instructional assistance with Botany and Vertebrate classes in the lab and in the field.

1987-1989—Biological Sciences Department Part-time Lecturer– California State Polytechnic University, Pomona

Taught and prepared majors and non-majors freshman level Biology labs.
DECLARATION OF

I, Rick Tyler declare as follows:

1. I am presently employed by the California Energy Commission in the Engineering Office of the Siting, Transmission, and Environmental Protection Division as a Senior Mechanical Engineer.

2. A copy of my professional qualifications and experience is attached hereto and incorporated by reference herein.

3. I prepared the staff testimony Hazardous Materials Management and Worker Safety Fire Protection Sections for the SES Solar 2 Project based on my independent analysis of the Application for Certification and supplements thereto, data from reliable documents and sources, and my professional experience and knowledge.

4. It is my professional opinion that the prepared testimony and errata is valid and accurate with respect to the issue addressed therein.

5. I am personally familiar with the facts and conclusions related in the testimony and errata and if called as a witness could testify competently thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Dated: 2/9/09       Signed: __________________________

At: Sacramento, California
RESUME
RICK A. TYLER
Senior Mechanical Engineer
CALIFORNIA ENERGY COMMISSION

EXPERIENCE
Corporate President, Chairman, and CEO Professional Engineers in California Government (PECG) 2002, Section Director 2003-2004, 2008-2009 PECG Board of Directors

As President / CEO of the Professional Engineers in California Government, I served as the Chairman of the Board and Chief Executive Officer of this 13,000 member organization representing engineers employed by the State of California. In this capacity I was 1) the primary interface between the Corporate Board and the consultant organization that conducted most of the day to day business of the organization 2) the Chairman responsible for conducting quarterly board meetings and 3) responsible for ensuring that the member stake holders received good value for their investment. During my tenure on the corporate board we obtained the best contract negotiated in more than 20 years. This was achieved during a period of extreme economic constraints for, our employer, the State of California. I believe that this achievement was the direct result of my focus on the organization’s primary mission and my success in keeping the organization on task.

As Section Director I represented the interests of the stakeholders in one of the 17 local sections represented on the PECG Board. This experience gave me a keen understanding of corporate board dynamics and how interactions between individual directors having conflicting priorities affects board function.

My experiences on the PECG Board of Directors provided me with a clear understanding of corporate board structure, function, and leadership as well as extensive knowledge of labor relations functions. It also provided me with a first hand understanding of the need for a clear vision and strong corporate governance which I provided during my tenure.

June 2000- Present (Full Time) California Energy Commission – Senior Mechanical Engineer (energy facility permitting) Systems Assessment and Facilities Siting Division

Responsible for planning, organizing and directing the work of the Facility Safety Unit within the Systems Assessment and Facilities Siting Division’s, Engineering Office. This unit evaluates the adequacy of proposed and ongoing safety management practices associated with hazardous material handling, worker safety and fire protection at very large conventional and alternative/renewable energy power facilities certified by the California Energy Commission. Responsible for quality and timeliness of all work conducted by employees and contractors performing work for this unit, including engineering analysis, products such as expert witness testimonies, compliance verifications, and conducting accident evaluations and investigations.
California Energy Commission - **Associate Mechanical Engineer (energy facility siting)** Energy Facility Siting and Environmental Protection Division

Responsible for review of Applications for Certification (applications for permits) for large power plants including the review of handling practices associated with the use of hazardous and acutely hazardous materials, loss prevention, safety management practices, design of engineered equipment and safety systems associated with equipment involving hazardous materials use, evaluation of the potential for impacts associated with accidental releases and preparation and presentation of expert witness testimony and conditions of certification. Review of compliance submittals regarding conditions of certifications for hazardous materials handling, including Risk Management Plans Process Safety Management.

California Energy Commission - **Health and Safety Program Specialist (energy facility siting)**; Energy Facility Siting and Environmental Protection Division.

Responsible for review of Public Health Risk Assessments, air quality, noise, industrial safety, and hazardous materials handling of Environmental Impact Reports on large power generating and waste to energy facilities, evaluation of health effects data related to toxic substances, development of recommendations regarding safe levels of exposure, effectiveness of measures to control criteria and non-criteria pollutants, emission factors, multimedia exposure models. Preparation of testimony providing Staff's position regarding public health, noise, industrial safety, hazardous materials handling, and air quality issues associated with proposed power plants. Advise Commissioners, Management, other Staff and the public regarding issues related to health risk assessment of hazardous materials handling. Present expert witness testimony at regulatory hearings.

California Air Resources Board – **Mechanical Engineer (regulatory compliance)**

Responsible for testing to determine pollution emission levels at major industrial facilities; including planning, supervision of field personnel, report preparation and case development for litigation; evaluate, select and acceptance-test instruments prior to purchase; design of instrumentation systems and oversight of their repair and maintenance; conduct inspections of industrial facilities to determine compliance with applicable pollution control regulations; improved quality assurance measures; selected and programmed a computer system to automate data collection and reduction; developed regulatory procedures and the instrument system necessary to certify and audit independent testing companies; prepared regulatory proposals and other presentations to classes at professional symposia and directly to the Air Resources Board at public hearings. As a representative, of the State I coordinated efforts with federal, local, and industrial representatives.

**EDUCATION**

**B.S., Mechanical Engineering**, California State University, Sacramento.

**KNOWLEDGE OF** Knowledge of; corporate governance, Roberts Rules of Order, corporate
organization, structure and bylaws, business plan development, management supervision, organizational failure, contract management, process safety management, CEQA, statistics, instrumentation, technical writing, toxicology, risk assessment, loss prevention, environmental chemistry, hazardous materials management, technical management of chemical process safety, noise measurement, regulations and framework of toxic substances control and workplace safety, and presentation expert witness testimony.

PUBLICATIONS, PROFESSIONAL PRESENTATIONS, AND ACCOMPLISHMENTS

Authored staff reports published by the California Air Resource Board and presented papers regarding continuous emission monitoring at symposiums.


Authored a paper entitled "Risk Assessment A Tool For Decision Makers" at the Association of Environmental Professionals AEP Conference on Public Policy and Environmental Challenges.

Conducted a seminar at University of California, Los Angeles for the Doctoral programs in Environmental Science and Public Health on the subject of "Health Risk Assessment".


Presented a talk on off-site consequence analysis for extremely hazardous materials releases. Presented at the workshop for administering agencies conducted by the City of Los Angeles Fire Department.

Evaluated, provided analysis and testimony regarding public health and hazardous materials management issues associated with the permitting of more than 20 major power plants throughout California.

Developed Departmental policy, prepared policy documents, regulations, staff instruction, and other guidance documents and reference materials for use in evaluation of public health and hazardous materials management aspects of proposed power plants.

Project Manager, overseeing contract work totaling more than $500,000.
DECLARATION OF
Testimony of Negar Vahidi

I, Negar Vahidi, declare as follows:

1. I am presently employed by Aspen Environmental Group, a contractor to the California Energy Commission, Siting, Transmission and Environmental Protection Division, as a Senior Project Manager/Senior Land Use Technical Specialist.

2. A copy of my professional qualifications and experience is attached hereto and incorporated by reference herein.

3. I prepared the staff testimony on Land Use for the SES Solar Two Project based on my independent analysis of the Application for Certification and supplements hereto, data from reliable documents and sources, and my professional experience and knowledge.

4. It is my professional opinion that the prepared testimony is valid and accurate with respect to the issue addressed therein.

5. I am personally familiar with the facts and conclusions related in the testimony and if called as a witness could testify competently thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Dated: February 8, 2010 Signed: ____________________________

At: Agoura Hills, California
ACADEMIC BACKGROUND
Master of Public Administration, University of Southern California, 1993
B.A. (with Highest Honors), Political Science, University of California, Irvine, 1991

PROFESSIONAL EXPERIENCE
Ms. Vahidi is an environmental planner with over 15 years of experience managing and preparing a variety of federal and State of California environmental, planning, and analytical documents for large-scale infrastructure and development projects. Ms. Vahidi brings the experience of being both a public and private sector planner, specializing in the integration and completion of NEPA and CEQA documentation, joint documentation, land use, socioeconomic, and public policy analysis, environmental justice analysis, and public and community involvement programs. Her diversity and experience in preparing NEPA, CEQA, and NEPA/CEQA joint documentation can be shown through a sample of her projects.

Aspen Environmental Group 1992 to 1998 and 2001 to present
Ms. Vahidi has participated in CEQA and NEPA analyses of major utility development projects, providing public policy and land use expertise as well as managing Public Participation Programs. She has conducted land use analyses for major environmental assessments, including identification of ownership and land use types and identification of sensitive land uses and sensitive receptors. She has also gathered and analyzed information on State, federal and local laws, policies and regulations relevant to land uses and public policy. Her specific projects are described below.

- **TANC Transmission Project (TTP), several Northern California Counties.** Ms. Vahidi is currently serving as the Deputy Project Manager in charge of preparation of the EIR/EIS and guiding the CEQA/NEPA analysis. The Transmission Agency of Northern California (TANC) and Western Area Power Administration (Western), an agency of the U.S. Department of Energy (DOE), are the CEQA lead agency and NEPA lead agency, respectively. The TTP generally would consist of approximately 600 miles of new and upgraded 500 kilovolt (kV) and 230 kV transmission lines, substations, and related facilities generally extending from northeastern California near Ravendale in Lassen County to the California Central Valley through Sacramento and Contra Costa Counties and westward into the San Francisco Bay Area. Ms. Vahidi worked with TANC and Western to initiate the scoping process, including preparation of the NOP, preparing for scoping meetings, frameworking the EIR/EIS document, etc. She also led the preparation of the project scoping report.

- **Littlerock Reservoir Sediment Removal Project EIS/EIR, Palmdale, CA.** Ms. Vahidi is the Project Manager for this joint EIS/EIR evaluating the impacts of sediment removal alternatives for the Littlerock Reservoir and Dam on USFS Angeles National Forest (NEPA Lead Agency) lands in Los Angeles County. The Palmdale Water District (District) [CEQA Lead Agency] proposes to remove approximately 540,000 cubic yards of sediment from the reservoir (behind the dam) and haul it to off-site commercial gravel pits located 6 miles north of the dam site in the community of Littlerock. The project involves impacts to the arroyo toad, extensive coordination with USFWS for a Section 7 consultation, incorporation of new Forest Service Plan updates and requirements into the
analysis, preparation of the Forest Service required BE/BA, and analysis of compliance with federal air quality conformity requirements. Under Ms. Vahidi’s direction, Aspen developed six different project alternatives for sediment removal, involving detailed hydraulics analysis and preparation of a hydraulics technical report. The most feasible of these alternatives (grade control structure) was chosen by the PWD as their proposed project to be evaluated in the EIS/EIR. In addition, the PWD is currently considering an additional alternative (use of a slurry line for sediment removal) presented by Aspen. Aspen is currently working on the Administrative Draft EIR/EIS and assisting the PWD with portions of their Proposition 50 grant application to the DWR.

- **El Casco System Project, Riverside, CA.** Ms. Vahidi is serving as the Project Manager for this EIR being prepared for the CPUC to evaluate SCE’s application for a Permit to Construct (PTC) the El Casco System Project. The Proposed Project would be located in a rapidly growing area of northern Riverside County, which includes the Cities of Beaumont, Banning, and Calimesa. A 115 kV subtransmission line begins at Banning Substation and extends westward toward the proposed El Casco Substation site within the existing Banning to Maraschino 115 kV subtransmission line and Maraschino–El Casco 115 kV subtransmission line ROWs. Major issues of concern include impacts to existing and residential land uses, which have led to the development of a partial underground alternative and a route alternative different than the project route proposed by SCE (the Applicant). The 1,200-page Draft EIR was released for a 45-day public review and comment on December 12, 2007, and evaluates project alternatives at the same level of detail as the Proposed Project analysis.

- **Sacramento Area Voltage Support Supplemental Environmental Impact Statement (SEIS), Western Area Power Administration.** Ms. Vahidi served as the task leader for several social science sections for the SEIS for a double-circuit 230 kV circuit between Western’s O’Banion/Sutter Power Plant and Elverta Substation/Natomas Substation. New transmission lines and transmission upgrades are needed to mitigate transmission line overload, reduce the frequency of automatic generation and load curtailment during the summer peak load periods, and help maintain reliability of the interconnected system operation. Ms. Vahidi directed the preparation of the land use, aesthetics, socioeconomics, and environmental justice sections of the SEIS.

- **Sunset Substation and Transmission and Distribution Project CEQA Documentation, Banning, CA.** The City of Banning proposes to construct the Sunset Substation and supporting 33-kilovolt (kV) transmission line that would interconnect with the City’s existing distribution system. The purpose of this new substation and transmission is to relieve the existing overloads that are occurring within the City’s electric system and to accommodate projected growth in the City. Ms. Vahidi served as the Environmental Project Manager for the initial stages of CEQA documentation prepared for the City’s Utility Department.

- **San Onofre Nuclear Generating Station (SONGS) Steam Generator Replacement Project, San Clemente, CA.** Ms. Vahidi served as the Technical Senior in charge of developing the methodology and guiding the analysis for the Land Use and Recreation Section of this EIR. This project EIR addressed the environmental effects of SCE’s proposed replacement of Steam Generator Units 2 & 3 at the SONGS Nuclear Power Plant located entirely within the boundaries of the U.S. Marine Corps Base Camp (MCBCP) Pendleton. Issues of concern included potential conflicts resulting from the transport of the large units through sensitive recreation areas such as beaches, and the San Onofre State Park.

- **Diablo Canyon Power Plant (DCPP) Steam Generator Replacement Project, San Luis Obispo County, CA.** Ms. Vahidi served as the Technical Senior in charge of developing the methodology and guiding the analysis for the Land Use and Recreation Section of this EIR. The EIR addressed impacts associated with the replacement of the eight original steam generators (OSGs) at DCPP Units 1 and 2 due to degradation from stress and corrosion cracking, and other maintenance difficulties. The Proposed Project would be located at the DCPP facility, which occupies 760 acres within PG&E’s 12,000-acre owner-controlled land on the California coast in central San Luis Obispo County. Land
use issues of concern include impacts to agricultural lands, recreational resources, and potential Coastal Act inconsistencies.

- **Cabrillo Port Liquefied Natural Gas (LNG) Deepwater Port, Ventura County, CA.** Under contract to the City of Oxnard, Aspen was tasked to review the Draft EIS/EIR for this the proposed construction and operation of an offshore floating storage and regasification unit (FSRU) that would be moored in Federal waters offshore of Ventura County. As proposed, liquefied natural gas (LNG) from the Pacific basin would be delivered by an LNG Carrier to and offloaded onto, the FSRU; regasified; and delivered onshore via two new 21.1-mile (33.8-kilometer), 24-inch (0.6-meter) diameter natural gas pipelines laid on the ocean floor. These pipelines would come onshore at Ormond Beach near Oxnard, California to connect through proposed new onshore pipelines to the existing Southern California Gas Company intrastate pipeline system to distribute natural gas throughout the Southern California region. Ms. Vahidi reviewed the document for technical adequacy and assisted the City in preparing written comments for the following sections of the EIS/EIR: Aesthetics, Land Use, Recreation, Socioeconomics, and Environmental Justice.

- **Long Beach LNG Import Project, Long Beach, CA.** Under contract to the City of Long Beach, Aspen was tasked to review the Draft EIS/EIR for the proposed construction and operation of this onshore LNG facility to be located at the Port of Long Beach. Ms. Vahidi reviewed the document for technical adequacy and assisted the City in preparing written comments for the following sections of the EIS/EIR: Aesthetics, Land Use, Recreation, Socioeconomics, Environmental Justice, and Port Master Plan Amendment.

- **Post-Suspension Activities of the Nine Federal Undeveloped Units and Lease OCS-P 0409, Offshore Southern California.** Aspen assisted the U.S. Department of the Interior, Minerals Management Service (MMS) to prepare an Environmental Information Document (EID) evaluating the potential environmental effects associated with six separate suspensions for undeveloped oil and gas leases Pacific Outer Continental Shelf (OCS) located offshore Southern California. These undeveloped leases lie between 3 and 12 miles offshore Santa Barbara, Ventura and southern San Luis Obispo Counties and are grouped into nine units, with one individual lease that is not unitized. As the Senior Aspen social scientist, Ms. Vahidi guided the analysis of community characteristics and tourism resources, recreation, visual resources, social and economic environment, and military operations.

- **Otay River Watershed Management Plan (ORWMP) and Special Area Management Plan (SAMP) in San Diego County, CA.** Ms. Vahidi served as a Technical Senior for social science and land use issues. The ORWMP focused on developing strategies to protect and enhance beneficial uses within this watershed and thereby comply with the San Diego Region’s NPDES permit, and the SAMP intended to achieve a balance between reasonable economic development and aquatic resource preservation, enhancement, and restoration in this 145-square-mile (93,000 acres) area through the issuance of Corps and CDFG programmatic permits.

**California Energy Commission (CEC)**

In response to California’s power shortage, Aspen has assisted the CEC in evaluating the environmental and engineering aspects of new power plant applications throughout the State under three separate contracts. Ms. Vahidi has served as Technical Senior for land use (since 2001), and a specialist for socioeconomics and environmental justice, and alternatives analyses and special studies. Her specific projects are listed below.

  - **Woodland Generation Station No. 2, Modesto, CA.** As the land use Technical Specialist, prepared the Land Use and Recreation, and Agricultural Resources Staff Assessments of this 80-megawatt nominal, natural gas-fired power generating facility and associated linear facilities (i.e., gas and water pipeline and
transmission line. The Staff Assessment evaluated potential impacts on nearby residential, recreational, and agricultural land uses, including important farmlands being traversed by linear facilities.

- **Valero Cogeneration Project, Benicia, CA.** Prepared the Socioeconomics Staff Assessment for a proposed cogeneration facility at the Valero Refinery in Benicia. Issues addressed included impacts on public services and other project-related population impacts such as school impact fees.

- **Rio Linda/Elverta Power Project, Sacramento, CA.** Prepared the Socioeconomics Staff Assessment for a 560-megawatt natural gas power plant in the northern Sacramento County. Issues of importance included environmental justice and impacts on property values.

- **Magnolia Power Project, Burbank, CA.** As the Socioeconomics technical specialist, prepared the Staff Assessment for this nominal 250-megawatt natural gas combined-cycle fired electrical generating facility to be located at the site of the existing City of Burbank power plant. Environmental justice issues and potential impacts on local economy and employment were evaluated.

- **Potrero Power Plant Project, San Francisco, CA.** Prepared the land use portion of the Alternatives Staff Assessment for this proposed nominal 540 MW natural gas-fired, combined cycle power generating facility. Analysis included review of several alternative sites for development of the power plant and the comparative merits of those alternatives with the proposed site located on the San Francisco Bay.

- **Los Esteros Critical Energy Facility, San Jose, CA.** Technical Senior for the Land Use Staff Assessment of this 180-megawatt natural-gas-fired simple cycle peaking facility. Issues included potential impacts resulting from loss of agricultural land, and impacts associated with the project’s non-compliance with local General Plan land use and zoning designations.

- **East Altamont Energy Center, Alameda County, CA.** Technical Specialist for the Land Use Assessment for a 1,100-megawatt nominal, natural gas-fired power plant and associated linear facilities. Provided expert witness testimony on Land Use Staff Assessment. Major issues addressed in the Staff Assessment included loss of Prime Farmlands, recommendation of land preservation mitigation, and the project’s non-compliance with local General Plan land use and zoning designations.

- **Tracy Peaker Project, Tracy, CA.** Technical Senior for the Land Use Staff Assessment of this 169-megawatt simple-cycle peaking facility in an unincorporated area of San Joaquin County. Provided expert witness testimony on Land Use Staff Assessment. Issues included potential impacts resulting from loss of agricultural land under Williamson Act Contract, and evaluation of cumulative development in the fast-growing surrounding area.

- **Inland Empire Energy Center, Riverside County, CA.** Technical Specialist for the Land Use Assessment for a 670-megawatt natural gas-fired, combined-cycle electric generating facility and associated linear facilities including, a new 18-inch, 4.7-mile pipeline for the disposal of non-reclaimable wastewater, and a new 20-inch natural gas pipeline. Provided expert witness testimony on Land Use Staff Assessment. The project would be located on approximately 46-acres near Romoland, within Riverside County. Major issues addressed in the Staff Assessment included potential loss of agricultural lands, impacts to planned school uses, and the project’s potential non-compliance with local General Plan land use and zoning designations.
• **Senior Technical Lead, Land Use Resources.** The California Energy Commission (CEC) requested that the Aspen Team provide Technical Seniors for the Land Use Resources area in order to help coordinate and review Land Use Resource Assessments. As a Technical Senior, Negar Vahidi was responsible for the technical review of Land Use sections for various power plants assigned to them.

• **Legislative Bill Review.** As a Land Use Technical Senior for the CEC, Ms. Vahidi conducted legislative bill review related to energy facilities siting. She conducted portions of the CEC Systems Assessment & Facilities Siting Division analysis of Senate Bill 1550 which was intended to give the Superintendent of Public Instruction/CDE approval authority over siting of power plants within one mile of existing or proposed K-12 school sites by requiring the CDE (in coordination with the State Architect, and the commission) to develop appropriate siting guidelines.

• Engineering & Environmental Technical Assistance to Support the Energy Facility Planning and Licensing Program Contract (Contract # 700-02-004; 6/30/03 through 3/30/06)

• **Environmental Performance Report (EPR).** Ms. Vahidi managed the preparation of the Socioeconomics chapter of the EPR for the California Energy Commission, which eventually became part of the State of California’s Integrated Energy Policy Report (IEPR). The Socioeconomics chapter addressed: the importance of reliable and affordable electricity supply power plant construction and operation impacts, including labor force, taxation, etc.; and trends in the energy section, including renewable power sources such as wind and solar. She also conducted the analysis of a new portion of the Land Resources Chapter, which addressed the siting and land use issues associated with renewable power. This new portion of the land use analysis compared the land use and siting constraints associated with renewable power infrastructure such as wind and solar versus other forms of power infrastructure, such as gas pipelines, transmission lines, LNG facilities, and power plants.

• **Coastal Plant Study.** Ms. Vahidi served as the Social Sciences Task Manager for this special study being conducted as part of Aspen’s contract with the California Energy Commission. The study included identification and evaluation of potential issues associated with the possible modernization, re-tooling, or expansion of California’s 25 coastal power plants including: northern California power plants such as Humboldt, Potrero, Hunter’s Point, Pittsburg, and Oakland; central coast power plants such as Contra Costa, Diablo Canyon Nuclear, Morro Bay, Moss Landing, Elwood, Mandalay, and Ormond Power Plants; and southern California power plants such as the Alamitos, Long Beach, Los Angeles Harbor, Haynes, Redondo Beach, Scattergood, El Segundo, Huntington Beach, Encina, Silver Gate, South Bay, and San Onofre Nuclear. As Task Manager her responsibilities included, identification of potential political, social, community, and physical land use impacts that may arise from the potential increased output of energy from plants in highly sensitive coastal communities. The intent of the study is to identify red flag items for the Energy Commission in order to streamline future licensing processes. Her task as the Social Science Task Manager also included a thorough review of applicable Local Coastal Plans, and Coastal Commission regulations associated with Coastal Development Permits and Consistency Determinations.

• **Natural Gas Market Outlook Report (NGMOR).** Ms. Vahidi assisted the CEC’s Natural Gas Unit as a technical editor in their preparation and publication of the NGMOR. She managed Aspen’s efforts, including format and graphics, to edit technical sections prepared by Natural Gas Unit Staff under a condensed time frame. The Preliminary NGMOR was released for public review in June 2003.

• **Peak Workload Support for the Energy Facility Siting Program and the Energy Planning Program (Contract #700-05-002; 4/11/06 through 3/30/09)**

• **Chula Vista Energy Upgrade Project, Chula Vista, CA.** Senior Technical Specialist for the Land Use Staff Assessment for MMC Energy, Inc.’s Application for Certification (AFC) to construct and operate replacements and upgrades of equipment at the Chula Vista Power Plant, located on a 3.8-acre parcel in the City of Chula Vista’s Main Street Industrial Corridor and within the City’s Light Industrial zoning district. Issues of concern include the impacts of the power plant on adjacent residential and open space land uses, and compliance with applicable local LORS. Provided expert witness testimony on Land Use Staff Assessment.

• **Ivanpah Solar Electric Generating System Project, San Bernardino County, CA.** Senior Technical Specialist for the Socioeconomics Staff Assessment/BLM EIS for a 400-megawatt solar thermal electric power generating system. The project’s technology would include heliostat mirror fields focusing solar energy on power tower receivers producing steam for running turbine generators. Related facilities would
include administrative buildings, transmission lines, a substation, gas lines, water lines, steam lines, and well water pumps. The proposed project would be developed entirely in the Mojave Desert region of San Bernardino County, California. The document was prepared in compliance with both NEPA and CEQA requirements.

- **Sentinel Energy Project, Riverside County, CA.** Senior Technical Specialist for the Land Use Staff Assessment for CPV Sentinel’s Application for Certification (AFC) to construct and operate an 850-megawatt (MW) peaking electrical generating facility near SCE’s Devers Substation. The proposed project site consists of 37 acres of land situated approximately eight miles northwest of the center of the City of Palm Springs with portions of the construction laydown area and natural gas pipeline within the Palm Springs city limits. Land use issues of concern include the project’s compliance with local LORS.

- **Carrizo Energy Solar Farm, San Luis Obispo County, CA.** Senior Technical Specialist for the Land Use Staff Assessment for Carrizo Energy, LLC’s Application for Certification (AFC) to build the Carrizo Energy Solar Farm (CESF), which will consist of approximately 195 Compact Linear Fresnel Reflector (CLFR) solar concentrating lines, and associated steam drums, steam turbine generators (STGs), air-cooled condensers (ACCs), and infrastructure, producing up to a nominal 177 megawatts (MW) net. The CESF is located in an unincorporated area of eastern San Luis Obispo County, west of Simmler and northwest of California Valley, California. The CESF includes the solar farm site, a minimal offsite transmission system connection, and construction laydown area. The CESF site will encompass approximately 640 acres of fenced area in an area zoned for agricultural uses as specified in the San Luis Obispo County General Land Use Plan. Issues of concern include the impacts of the power plant on adjacent land uses and compliance with applicable local LORS.

- **Carlsbad Energy Center Project, Carlsbad, CA.** Senior Technical Specialist for the Land Use and Alternatives Staff Assessments for Carlsbad Energy Center, LLC’s Application for Certification (AFC) to build the Carlsbad Energy Center Project (CECP), which will consist of a 558 MW gross combined-cycle generating facility configured using two units with one natural-gas-fired combustion turbine and one steam turbine per unit. Issues of concern include major incompatibilities with local LORS, and cumulative impacts from widening of I-5.

- **Marsh Landing Generating Station, Contra Costa County, CA.** Senior Technical Specialist for the Land Use Staff Assessment for the Mirant Marsh Landing, LLC AFC for a 930 MW natural gas-fired power plant, which would be sited adjacent to the existing Contra Costa Power Plant in unincorporated Contra Costa County, near the City of Antioch.

- **Canyon Power Plant, Anaheim, CA.** Senior Technical Specialist for the Socioeconomics Staff Assessments for a nominal 200 megawatt (MW) simple-cycle plant, using four natural gas-fired combustion turbines and associated infrastructure proposed by Southern California Public Power Authority (SCPPA). This project is a peaking power plant project located within the City of Anaheim, California.

- **Willow Pass Generating Station, Pittsburg, CA.** Senior Technical Specialist for the Land Use Staff Assessment for a new, approximately 550-megawatt (MW) dry-cooled, natural gas-fired electric power facility proposed by Mirant. Development of Willow Pass would entail the construction of two generating units and ancillary systems including, adjacent electric and gas transmission lines, and water and wastewater pipelines.

- **Marsh Landing Generating Station, Contra Costa County, CA.** Senior Technical Specialist for the Land Use Staff Assessment for a new, 930-megawatt (MW) gas-fired electric generating facility proposed by Mirant. Delta. The proposed 27-acre Project site would be located at the existing Contra Costa Power Plant.

- **Stirling Energy Systems Solar One, San Bernardino County, CA.** Senior Technical Specialist for the Land Use Staff Assessment/BLM EIS for a nominal 850-megawatt (MW) Stirling engine project, with construction planned to begin late 2010. The primary equipment for the generating facility would include the approximately 30,000, 25-kilowatt solar dish Stirling systems (referred to as SunCatchers), their associated equipment and systems, and their support infrastructure. Major issues of concern include the conversion of approximately 8,230 acres of open space to industrial uses, compliance with BLM’s CDCA Plan, etc.

- **Stirling Energy Systems Solar Two, Imperial County, CA.** Senior Technical Specialist for the Land Use Staff Assessment/BLM EIS for a nominal 750-megawatt (MW) Stirling engine project, with construction
planned to begin either late 2009 or early 2010. The primary equipment for the generating facility would include the approximately 30,000, 25-kilowatt solar dish Stirling systems (referred to as SunCatchers), their associated equipment and systems, and their support infrastructure. Major issues of concern include conversion of 6,500 acres of public recreation land used for OHV use and camping, and compliance with the BLM’s CDCA plan.

- **GWF Tracy Combined Cycle Power Plant, San Joaquin County, CA.** Senior Technical Specialist for the Land Use Staff Assessment for GWF’s proposal to modify the existing TPP (see description above), a nominal 169-megawatt (MW) simple-cycle power plant, by converting the facility into a combined-cycle power plant with a nominal 145 MW, net, of additional generating capacity.

- **City of Palmdale Hybrid Power Plant Project, Palmdale, CA.** Senior Technical Specialist for the Land Use Staff Assessment for the Palmdale Hybrid Power Project (PHPP) proposed by the City of Palmdale. The PHPP consists of a hybrid of natural gas-fired combined-cycle generating equipment integrated with solar thermal generating equipment to be developed on an approximately 377-acre site in the northern portions of the City of Palmdale (City).

- **Lodi Energy Center, Lodi, CA.** Senior Technical Specialist for the Socioeconomics Staff Assessment for a combined-cycle nominal 225-megawatt (MW) power generating facility.

- **Abengoa Mojave Solar One Project, San Bernardino County, CA.** Senior Technical Specialist for the Land Use Staff Assessment of a nominal 250 megawatt (MW) solar electric generating facility to be located near Harper Dry Lake in an unincorporated area of San Bernardino County. Issues of concern include the impacts associated with the conversion of 1,765 acres of open space lands.

- **Genesis Solar Energy Project, Riverside County, CA.** Senior Technical Specialist for the Land Use Staff Assessment/BLM EIS for two independent solar electric generating facilities with a nominal net electrical output of 125 megawatts (MW) each, for a total net electrical output of 250 MW. Electrical power would be produced using steam turbine generators fed from solar steam generators. The project is located approximately 25 miles west of the city of Blythe. Major issues of concern include conversion of 4,460 acres of BLM lands to an industrial use.

- **Contra Costa Generating Station, Contra Costa County, CA.** Senior Technical Specialist for the Land Use Staff Assessment for a natural gas-fired, combined-cycle electrical generating facility rated at a nominal generating capacity of 624 megawatts (MW). The project would be located in the City of Oakley.

- **Topaz Solar Project EIR, San Luis Obispo County, CA.** (Applicant: First Solar). Aspen is managing preparation of an EIR for this 500 MW solar photovoltaic project in the Carrizo Plain area. A major issue of concern is the conversion of approximately 6,000 acres of open space (60 percent of which are under land preservation contracts) to an industrial use. Ms. Vahidi is the Senior in charge of developing the methodology, approach, and thresholds of significance for analysis of impacts related to agricultural land conversion using the CA Department of Conservation LESA Model. One major issue of concern related to agricultural resources is impacts to lands under Williamson Act contracts. She will be guiding the analysis.

- **California Valley Solar Ranch EIR, San Luis Obispo County, CA.** (Applicant: SunPower). Aspen is managing preparation of an EIR for this 250 MW solar photovoltaic project in the Carrizo Plain area. A major issue of concern is the conversion of approximately 4,000 acres of open space to an industrial use. Ms. Vahidi is the Senior in charge of developing the methodology, approach, and thresholds of significance for analysis of impacts related to agricultural land conversion using the CA Department of Conservation LESA Model. She will be guiding the analysis.

- **Santa Ana Valley Pipeline Repairs Project, San Bernardino and Riverside Counties, CA.** Under Aspen’s on-going environmental services contract with the DWR, Ms. Vahidi served as the project manager for CEQA documentation and permitting efforts related to the repair of 12 sites along the pipeline portion of the East Branch of the California Aqueduct. The repair of the 12 sites was crucial because, eight of the Priority 1 sites included areas of the pipeline that were under high stress and subject to rupture. Issues of concern included, potential impacts to special status species, sensitive receptors, and traffic. As the DWR’s CEQA consultant, Ms. Vahidi determined that the proposed SAPL Repairs Project would qualify for a CEQA Categorical Exemption, and recommended the preparation
of a Technical Memorandum to justify this exemption. The Technical Memorandum and supporting documentation, including a Biological Constraints Report, and analyses of proposed project potential construction-related air quality, noise, and traffic impacts, were prepared and presented to DWR as one packet to support both a Class 1 and Class 2 CEQA Exemption. Subsequent to preparation of this packet, DWR filed a Notice of Exemption on June 13, 2003 for their repair activities.

- **Piru Creek Erosion Repairs and Bridge Seismic Retrofit Project, Northern Los Angeles County, CA.** Under Aspen’s on-going environmental services contract with the DWR, Ms. Vahidi served as the project manager for CEQA documentation for this project. An IS/MND was prepared to evaluate the impacts of the project, which proposed to maintain four access routes to DWR’s facilities along the West Branch of the California Aqueduct downstream of the Pyramid Dam. Repair and improvement activities would occur on Osito Canyon (an intermittent tributary to Piru Creek) at Osito Adit, adjacent to Old Highway 99 at North Adit (or access tunnel), alongside an eroded section of Old Highway 99 along Piru Creek, and at Pyramid Dam Bridge. Repair activities would serve to improve conditions of access routes, as well as strengthening and reinforcing them against seismic or flood events. Project-related construction could result in potentially significant impacts to biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, noise, and transportation and traffic.

- **Pyramid Lake Repairs and Improvements Project, northern Los Angeles County.** Under Aspen’s on-going environmental services contract with the DWR, Ms. Vahidi served as the project manager for CEQA documentation, ADA (Americans with Disabilities Act) compliance, and permitting efforts for this project. DWR and the Department of Boating and Waterways (DBW) are planning repairs and improvements at various recreational sites at Pyramid Lake, which is located on the border between Los Padres National Forest and Angeles National Forest; recreation is managed by Angeles National Forest. The lake is also part of Federal Energy Regulatory Commission Project 2426. Aspen worked with DWR and DBW to determine ADA compliance components at each site. CEQA documentation in support of a Class 1 and 2 Categorical Exemption was prepared to evaluate the potential impacts of the repairs and improvements, and provide CEQA clearance for filing of required permit applications, including but not necessarily limited to 404, 401, and 1602 permits. In addition to the CEQA documentation and preparation of permit applications, Aspen coordinated DWR and DBW’s efforts with the USFS, and the permitting agencies (i.e., CDFG, RWQCB, and USACE). Through coordination with the USAC, Aspen prepared the NEPA EA for Corps 404 permit process, and reviewed and coordinated revisions to the 1602 with CDFG.

- **Mulholland Pumping Station and Lower Hollywood Reservoir Outlet Chlorination Station Project, Los Angeles, CA.** Under Aspen’s on-going environmental services contract with the City of Los Angeles Department of Water and Power (LADWP), Ms. Vahidi served as the Project Manager for preparation of CEQA documentation for this project. LADWP proposed to replace the existing historic pumping/chlorination station building as well as the existing lavatory and unoccupied Water Quality Laboratory buildings with a new single structure pumping/chlorination station within the LADWP’s Hollywood Reservoir Complex located in the Hollywood Hills section of the City Los Angeles. These improvements were required due to the age and deterioration of the facility and the potential risk of seismic damage to existing structures. An Initial Study was prepared in support of a City of Los Angeles General Exemption.

- **River Supply Conduit (RSC) Upper Reach Project EIR, Los Angeles and Burbank, CA.** Under Aspen’s on-going environmental services contract with the City of Los Angeles Department of Water and Power (LADWP), Ms. Vahidi served as the Task Leader for land use issues and is in charge of development and analysis of project alternatives for the CEQA document for this project. The RSC is a major transmission pipeline in the LADWP water distribution system. The existing RSC pipeline’s purpose is to transport large amounts of water from the Los Angeles Reservoir Complex and local ground water wells to reservoirs and distribution facilities located in the central areas within of the City of Los Angeles. The LADWP proposed a new larger RSC pipeline to replace and realign the
Upper and Lower Reaches of the existing RSC pipeline, which would involve the construction of approximately 69,600 linear feet (about 13.2 miles) of 42-, 48-, 60-, 66-, 72-, 84-, and 96-inch diameter welded steel underground pipeline.

- **Valley Generating Station Site Survey & Documentation Report, Los Angeles, CA.** Ms. Vahidi managed the preparation of a comprehensive report (over 150 pages) documenting all of the structures and facilities located at the Valley Generating Station (VGS). The report includes exhibits that illustrate locations of each structure at the VGS, a detailed appendix of color photos of each structure, and a written description of each structure. The report also provides a general discussion of the history and background of the VGS and its development to provide a context for the structures on site.

- **Taylor Yard Water Recycling Project (TYWRP), Los Angeles and Glendale, CA.** Under Aspen’s on-going environmental services contract with the City of Los Angeles Department of Water and Power (LADWP), Ms. Vahidi served as the Project Manager for preparation of CEQA documentation for this project. LADWP proposed to construct the TYWRP in order to provide recycled water produced by the Los Angeles–Glendale Water Reclamation Plant (LAGWRP) to the Taylor Yard. An important part of the City of Los Angeles’ expanding emphasis on water conservation is the concept that water is a resource that can be used more than once. Because all uses of water do not require the same quality of supply, the City has been developing programs to use recycled water for suitable landscaping and industrial uses. The project is located in the southernmost part of the City of Glendale and northeastern part of the City of Los Angeles. The IS/MND was adopted in the Summer of 2007.

- **Devers–Palo Verde 500 kV Transmission Line Project EIS/EIR, southern California/western Arizona.** For this EIR/EIS prepared by U.S. Bureau of Land Management and CPUC, Ms. Vahidi served as the Deputy Project Manager and Social Sciences Issue Area Coordinator for SCE’s proposed 250-mile transmission line project from the Palo Verde Nuclear power plant in Arizona to the northern Palm Springs area in California. Major issues of concern include EMF and visual impacts on property values, impacts on the area’s vast recreational resources and tribal lands, and the development and evaluation of several route alternatives, including the Devers-Valley No. 2 Route Alternative, which eventually was approved by the CPUC.

- **Antelope-Pardee 500 kV Transmission Line Project EIR/EIS, Los Angeles County, CA.** For this EIR/EIS prepared by USFS, Angeles National Forest and CPUC, Ms. Vahidi is served as the Deputy Project Manager and Social Sciences Issue Area Coordinator for SCE’s proposed 25-mile transmission line project from the Antelope Substation in the City of Lancaster, through the ANF, and terminating at SCE’s Pardee Substation in Santa Clarita. Major issues of concern included impacts to biological, recreational, and cultural resources within Forest lands, EMF and visual impacts on property values, impacts on residences in the urbanized southern regions of the route, and the development and evaluation of several route alternatives.

- **Antelope Transmission Project, Segments 2 & 3 EIR, Los Angeles and Kern Counties, CA.** For this EIR being prepared by the CPUC, Ms. Vahidi served as the Deputy Project Manager and Social Sciences Issue Area Coordinator. The proposed Project includes both Segment 2 and Segment 3 of the Antelope Transmission Project, and involves construction of new transmission line infrastructure from the Tehachapi Wind Resource Area in southern Kern County, California, to SCE’s existing Vincent Substation in Los Angeles County, California. The Tehachapi Wind Resource Area is one of the State’s greatest potential sources for the generation of wind energy. A variety of wind energy projects are currently in development for this region. Major issues of concern include EMF and visual impacts on property values, impacts on residences and agricultural resources, and the development and evaluation of several substation and route alternatives.

- **Tehachapi Renewable Transmission Project (TRTP) EIR/EIS, Kern, Los Angeles, and San Bernardino Counties, CA.** For this EIR/EIS prepared by USFS, Angeles National Forest and CPUC,
Ms. Vahidi is served as the Deputy Project Manager in the early stages (i.e., during Scoping) of the project for SCE’s proposal to construct, use, and maintain a series of new and upgraded high-voltage electric transmission lines and substations to deliver electricity generated from new wind energy projects in eastern Kern County. Approximately 46 miles of the project would be located in a 200- to 400-foot right-of-way on National Forest System land (managed by the Angeles National Forest) and approximately three miles would require expanded right-of-way within the Angeles National Forest. The proposed transmission system upgrades of TRTP are separated into eight distinct segments: Segments 4 through 11. Segments 1 (Antelope-Pardee) and Segments 2 and 3 (Antelope Transmission Project) were evaluated in separate CEQA and NEPA documents as described above.

- **Jefferson-Martin 230 kV Transmission Line Project EIR, San Francisco Bay Area, CA.** Ms. Vahidi served as the Issue Area Coordinator for the Social Science issues of the EIR, and was responsible for preparation of the socioeconomics, recreation, and public utilities sections of the EIR prepared on behalf of the California Public Utilities Commission (CPUC) to evaluate a proposed 27-mile transmission line in San Mateo County. Major issues of concern included EMF and visual impacts on property values, impacts on the area’s vast recreational resources, and evaluation of several route alternatives.

- **Miguel-Mission 230 kV #2 Project EIR, San Diego, CA.** Ms. Vahidi conducted the land use, recreation, socioeconomics, and environmental justice analyses for this EIR for a proposed 230 kV circuit within an existing transmission line ROW between Miguel and Mission substations in San Diego County. The proposed project included installing a new 230 kV circuit on existing towers along the 35-mile ROW, as well as relocate 69 kV and 138 kV circuits on approximately 80 steel pole structures. In addition, the Miguel Substation and Mission Substation would be modified to accommodate the new 230 kV transmission circuit.

- **Viejo System Project, Orange County, CA.** Ms. Vahidi served as the Deputy Project Manager for the project’s CEQA documentation, including and Initial Study, prepared on behalf of the CPUC to evaluate Southern California Edison’s (SCE) Application for a Permit to Construct the Viejo System Project, which was in SCE’s forecasted demand of electricity and goal of providing reliable electric service in southern Orange County. The Viejo System Project would serve Lake Forest, Mission Viejo, and the surrounding areas. Components of the project included, construction of the new 220/66/12 kilovolt (kV) Viejo Substation, installation of a new 66 kV subtransmission line within an existing SCE right-of-way, replacement of 19 double-circuit tubular steel poles with 13 H-frames structures, and minor modification to other transmission lines. Major issues of concern include visual impacts of transmission towers, EMF effects, and project impacts on property values.

- **MARS EIR/EIS, Monterey, CA.** Ms. Vahidi served as the technical specialist in charge of preparing the Environmental Justice analysis for this EIR/EIS, which would evaluate the effects associated with the installation and operation of the proposed Monterey Accelerated Research System (MARS) Cabled Observatory Project (Project) proposed by Monterey Bay Aquarium Research Institute (MBARI)[NEPA Lead Agency]. The goal of the Project was to install and operate, in State and Federal waters, an advanced cabled observatory in Monterey Bay that would provide a continuous monitoring presence in the Monterey Bay National Marine Sanctuary (MBNMS) as well as serve as the test bed for a state-of-the-art regional ocean observatory, currently one component of the National Science Foundation (NSF) Ocean Observatories Initiative (OOI). The Project would provide real-time communication and continuous power to suites of scientific instruments enabling monitoring of biologically sensitive benthic sites and allowing scientific experiments to be performed. The environmental justice analysis evaluated the potential for any disproportionate project impacts to both land-based populations and fisheries workers. The CEQA Lead Agency was CSLC.

- **Kinder Morgan Concord-Sacramento Pipeline EIR.** Ms. Vahidi prepared the environmental justice and utilities and service systems sections of an EIR evaluating a proposed 70-mile petroleum products pipeline for the California State Lands Commission. Analysis included consideration of potential impacts of pipeline accidents in Contra Costa, Solano, and Yolo Counties.
- **Shore Marine Terminal Lease Consideration Project EIR, Contra Costa County, CA.** Served as Aspen’s Project Manager (under contract to Chambers Group, Inc.) in charge of conducting the preparation of the Land Use, Recreation, Air Quality, and Noise sections of this EIR evaluating Shore Terminal, LLC’s application to the California State Lands Commission (CLSC) to exercise the first of two 10-year lease renewal options, with no change in current operations. Shore Terminals operations comprise the marine terminal and on-land storage facilities in an industrial part of the city of Martinez. The marine terminal is on public land leased from the CSCLC with the upland storage facilities located on private land.

- **Looking Glass Networks Fiber Optic Cable Project IS/MND, northern and southern California.** As part of Aspen’s ongoing contract with the CPUC for review of Telecommunications projects, this document encompassed the evaluation of project impacts and network upgrades in the San Francisco Bay Area and the Los Angeles Basin Area. Ms. Vahidi served as the Deputy Project Manager and Study Area Manager for the Los Angeles Basin for this comprehensive CEQA document reviewing the potential impacts of hundreds of miles of newly proposed fiber optic lines throughout northern and southern California, including Los Angeles and Orange Counties. Issues of concern focused on potential construction impacts of linear alignments in highly urbanized rights-of-way, and resultant land use, traffic and utilities conflicts.

- **U.S. Army Corps of Engineers, Los Angeles District.** Ms. Vahidi is responsible for managing Delivery Orders and conducting the analyses of the social science issue areas for 16 projects throughout southern California and Arizona as part of two environmental services contracts. Delivery orders have included:
  - **Northeast Phoenix Drainage Area Alternatives Analysis Report, Phoenix and Scottsdale, AZ.** As the project manager guided the preparation of an alternatives analysis report that evaluated the potential environmental impacts associated with channel and detention basin alternatives to control flooding problems resulting from fast rate of development in the northeast Phoenix area.
  - **Imperial Beach Shore Protection EIS/EIR, Imperial Beach, CA.** Responsible for preparing the affected environment and environmental consequences sections for the land use, recreation, aesthetics, and socioeconomics issue areas. This EIS will analyze the impacts of shore protection measures along a 4.7-mile stretch of beach in southwest San Diego County.
  - **U.S. Food and Drug Administration Laboratory EIS/EIR, Irvine, CA.** Prepared the land use and recreation; socioeconomics, public services, and utilities; and visual resources/aesthetics analyses for this proposed “mega-laboratory” on the University of California Irvine Campus. Also developed the cumulative projects scenario for analyses of cumulative impacts. As the Public Participation Coordinator for the EIS/EIR review process, prepared the NOP, set up the scoping meeting and public hearing, prepared meeting handouts, and developed the project mailing list.
  - **San Antonio Dam EIS, Los Angeles and San Bernardino Counties, CA.** Responsible for preparing the cultural resources, land use and recreation, and aesthetics sections for the analysis of impacts resulting from the re-operation of San Antonio Dam to increase flood protection.
  - **Rio Salado Environmental Restoration EIS, Phoenix and Tempe, AZ.** Conducted the land use and recreation, and aesthetics analyses for this environmental restoration project in the Salt River and Indian Bend Wash located in the Cities of Phoenix and Tempe. Incidental to the primary objective of the Proposed Action (environmental restoration) is the creation of passive recreational opportunities associated with the restored habitat areas, such as trails for walking and biking, and areas for observing wildlife and learning about the natural history of the river.
  - **Airspace Restrictions EA, Ft. Irwin, CA.** Conducted the land use, recreation, aesthetics, and socioeconomics analyses of impacts for the conversion of unrestricted airspace to restricted airspace above Ft. Irwin in the Mojave Desert.
  - **National Guard Armory Building EA, Los Angeles, CA.** Conducted the land use, aesthetics, and socioeconomics analyses and prepared the cumulative impacts and policy consistency sections.
Supplemental EA for the Seven Oaks Dam Woolly Star Land Exchange, San Bernardino County, CA. Prepared the land use and recreation analyses and policy consistency section.

Lower Santa Ana River Operations and Maintenance EA, Orange County, CA. Responsible for conducting the land use, recreation, aesthetics, socioeconomics, and cultural resources analyses.

EA for Area Lighting, Fencing, and Roadways at the International Border, San Diego, CA. Conducted the land use, aesthetics, and socioeconomics analyses and prepared the policy consistency section.

Border Patrol Checkpoint Station EA, San Clemente, CA. Analyzed the aesthetic impacts of the installation of a concrete center divider and a Pre-inspected Automated Lane adjacent to and parallel to Interstate 5.

Upper Newport Bay Environmental Restoration Project, Newport Beach, CA. Prepared physical setting, socioeconomics, land and water uses, and cultural resources sections for the Baseline Conditions Report and the Environmental Planning Report.

Whitewater/Thousand Palms Flood Control Project, Thousand Palms, CA. Prepared the land use and recreation, aesthetics, and socioeconomics affected environment sections for the project’s Baseline Conditions Report that was incorporated into the project EIS.

San Antonio Creek Bridges Project, Vandenberg Air Force Base, CA. Prepared the physical setting, land use, socioeconomics, utilities, and aesthetics sections for analyses of bridge alternative impacts for missile transport on Vandenberg Air Force Base.

Ft. Irwin Expansion Mitigation Plan, Mojave Desert, CA. Responsible for developing Ft. Irwin's Public Access Policy based on mitigation measures from the Army’s Land Acquisition EIS for the National Training Center. Policy includes provisions for access by research and scientific uses.

Los Angeles Unified School District (LAUSD), Los Angeles County, CA. Ms. Vahidi is Program Manager for Aspen’s Environmental Master Services Agreement with the LAUSD (nation’s second largest school district) to prepare CEQA documents (EIRs, IS/MNDs, Categorical Exemptions) in review of the LAUSD’s four-phased new school construction program intended to meet existing and projected overcrowded conditions (200,000 seat shortfall) within the LAUSD (i.e., City of Los Angeles and all or parts of 28 surrounding jurisdictions cover 700 square miles of land). As the Program Manager, she is responsible for client interface and providing CEQA expertise to the LAUSD on day-to-day basis, QA/QC activities for all Aspen documents submitted, budget tracking and allocation, staff assignments, and the general day-to-day management of this contract. Thus far, Aspen has been awarded 48 CEQA document assignments for new school projects, school expansions and additions. In addition to her duties as the contract manager, Ms. Vahidi has managed the preparation of several CEQA documents under this contract, including:

East Valley Middle School No. 2 EIR. This middle school was proposed to be located at the previous Van Nuys Drive-In site. The EIR focused on impacts associated with air quality, hazards and hazardous materials, noise, land use and planning, and traffic and transportation. Major issues of concern included traffic and noise generated by school operation activities. The EIR included LAUSD design standards and measures employed to minimize environmental impacts.

Canoga Park New Elementary School IS/MND. This elementary school would be developed on a parcel of land owned by the non-profit organization, New Economics For Women (NEW). This “Turn-Key” project consisted of a Charter Elementary School to be developed by NEW and sold to the LAUSD for operation. It was later decided that NEW would lease the school back and run it as a charter school. Issues of concern included, pedestrian safety, traffic, air quality, noise, and land use.

Mt. Washington Elementary School Multi-Purpose Room Addition Project IS/MND. This project proposed the development of a multi-purpose room facility, including a library, auditorium, and theater, to the existing Mt. Washington Elementary School campus located in Los Angeles. The surrounding residential community had concerns regarding the proposed project’s impacts on aesthetics, traffic, air quality, and noise. Of particular concern, were impacts generated due to the after-hours use of the multi-purpose room facility by civic and community groups.
**New School Construction Program EIR.** Serves as a Study Area Manager (Valley Districts), and Issue Area Coordinator (IAC) (i.e., technical lead and reviewer) for social science issues, including land use, socioeconomics, public services, population and housing, and utilities and service systems. As the IAC, she has formulated the scope of work and methodology for analysis of issues and mitigation options. In addition to her managerial duties, Ms. Vahidi is preparing the Land Use section of the EIR, and directing the preparation of the Project’s Scoping Report.

**Belmont Senior High School 20-Classroom Modular Building Addition Project.** Under Aspen’s ongoing master services agreement with the LAUSD, served as the project manager for CEQA documentation and permitting efforts related to the addition of modular classrooms to the existing Belmont Senior High School campus. Issues of concern included, potential impacts to sensitive receptors adjacent to the school from construction-related air quality, noise, and traffic, and operation-related noise generated by the new classrooms. As the LAUSD’s CEQA consultant, Ms. Vahidi directed the preparation of technical documentation in support of a Class 32 In-Fill CEQA Categorical Exemption. This technical documentation included analyses of potential project-related air quality, noise, and traffic impacts, which were then submitted to LAUSD as one packet. Subsequent to preparation of this packet, LAUSD filed a CEQA Notice of Exemption for the classroom addition project.

**Narbonne High School Stadium Lighting Project MND Addendum.** Served as the project manager for this project proposed to add a new stadium, lighting, and associated sport facilities needed to address existing needs at Narbonne High School. Issues of concern include lighting impacts to the surrounding neighborhood, and available parking stock.

**SCE Calnev Power Line and Substation Project IS/MND.** Aspen was contracted to thoroughly review and analyze Southern California Edison Company’s Application for a Permit to Construct and Proponent’s Environmental Assessment (PEA) for the Calnev Power Line and Substation Project in the City of Colton. Ms. Vahidi served as the Deputy Project Manager for preparation of the IS/MND. Tasks include: a site visit, and evaluation of the project’s compliance with the Commission’s General Order 131D, Rule 17.1, and associated information submittal requirements; and preparation of a letter report identifying data deficiencies of the Application and PEA. Upon formal CPUC acceptance of the Application and PEA, Aspen prepared a CEQA Initial Study Checklist by identifying baseline data, project characteristics, and determining impact significance for each issue area. Each issue area’s impact determination was supported by a paragraph or more of analysis describing the rationale for the impact identified, or for the lack of a significant impact. Upon completion of the Initial Study, the Mandatory Findings of Significance were prepared and Aspen determine that a Mitigated Negative Declaration should be prepared per CEQA Guidelines.

**SCE Six Flags Substation and Power Line Project IS/MND.** Ms. Vahidi served as Deputy Project Manager for preparation of the IS/MND. Reviewed and provided comments on the permit application by SCE to construct a substation and power line to provide electrical service to Six Flags Amusement Park in Valencia, CA. Subsequent to the application completeness review, she prepared the project’s Initial Study Checklist and Mitigated Negative Declaration for the California Public Utilities Commission (CPUC). Identified possible deficiencies and provided recommendations.

**Industrywide Survey for the South Coast Air Quality Management District.** Ms. Vahidi coordinated Aspen’s work for an Air Toxics Survey of harmful emissions by auto body and paint shops, performed in compliance with AB2588. She was responsible for development of an industrywide emission inventory for these facilities; she also performed information management, facility verifications, survey mail-outs, emissions calculations, analysis of calculated results, and preparation of the final report.

**Technical Support to NEPA Lawsuit, Angeles National Forest, CA.** Ms. Vahidi prepared a detailed project chronology and a list of all applicable federal, State, and local laws and regulations in support of the USDA Office of General Counsel and National Forest’s response to the City of Los Angeles’ 1996 lawsuit on the adequacy of the Pacific Pipeline EIS.

**Yellowstone Pipeline EIS, Lolo National Forest, Montana.** Environmental Justice and Public Services Issue Area Specialist. Responsible for conducting the analysis of project impacts on minority and
low-income populations to comply with Presidential Executive Order 12898 on Environmental Justice using Census data to determine population density, minority population percentages and unemployment rates to determine the potential for disproportionate project impacts on affected communities. Also responsible for conducting analysis of project impacts such as population immigration and pipeline accidents on public services in western Montana. During the EIS scoping process, she served as the project public participation coordinator and was responsible for preparation of the project newsletter, setup of the first round of scoping meetings, and determination of project information centers.

- **Santa Fe Pacific Pipeline Project EIR.** Ms. Vahidi was responsible for development and screening of alternatives for a 13-mile petroleum products pipeline from Carson to Norwalk, CA. Prepared analyses of project impacts on socioeconomics, public services, utilities, and aesthetics.

- **Pacific Pipeline Project Mitigation Monitoring, Compliance, and Reporting Program (MMCRP).** Ms. Vahidi served as the expert technical reviewer for the socioeconomics and environmental justice issues. As the MMCRP Agency Liaison, was responsible for developing protocol for efficient interagency communication procedures in coordination of mitigation activities with the CPUC, USFS, Responsible Agencies, and the project proponent. Also responsible for the development and management of the MMCRP Community Outreach and Public Access Program.

- **Pacific Pipeline Project EIR.** For the California Public Utilities Commission’s (CPUC) EIR on the originally proposed route of this proposed pipeline (from Santa Barbara County to Los Angeles), Ms. Vahidi developed and coordinated a public participation program to comply with CEQA’s mandate for information disclosure and public involvement in decision-making. The Final EIR was certified in September 1993.

- **Pacific Pipeline Project EIS and Subsequent EIR.** Ms. Vahidi prepared the socioeconomics and public services analysis, the Environmental Justice analysis in compliance with Presidential Executive Order 12898, as well as portions of the Land Use and Public Recreation analyses, including a comprehensive comparative analysis of project alternatives on this EIS/Subsequent EIR for the U.S. Forest Service (Angeles National Forest) and the CPUC. Ms. Vahidi managed the subsequent GIS mapping of socioeconomic data relative to pipeline corridor alternatives and other industrial facilities. She also prepared the cumulative projects list (covering a five county area for the Proposed Project and its alternatives) used for the cumulative scenario analyses of the various issue areas in the EIS/SEIR. As the Public Participation Program Coordinator for the project, she developed, implemented, and managed the public involvement efforts for the NEPA and CEQA environmental review processes. This included: setup and logistics for 20 separate scoping meetings, informational workshops, and public hearings along the project route; preparation of all meeting handouts; preparation of project newsletters and public notices; placement of project documents on Internet; and maintenance of the a project telephone information hotline. She also reviewed over 2,000 public comments (written and verbal) received on the Draft EIS/SEIR, for subsequent distribution to the project team.

- **Alturas Transmission Line Project EIR/EIS.** Ms. Vahidi conducted the analysis of potential impacts on minority populations and low-income populations in compliance with Presidential Executive Order 12898 on Environmental Justice using Census data to determine population density, minority population percentages and unemployment rates, and the potential impacts of the transmission line on affected communities. She also prepared the cumulative projects list and map used for analyses of cumulative impacts. She managed development of meeting handouts; scheduling and logistics for four scoping meetings; developed and maintained project mailing list; reviewed public scoping comments and prepared the Scoping Report; coordinated four sets of informational workshops and public hearings for the Draft EIR/EIS; supervised the distribution of comments on the Draft EIR/EIS to the project team; and coordinated the distribution of the Draft and Final EIR/EIS to affected public agencies, organizations, and citizens.
**Program EIR for the Divestiture of PG&E’s Hydroelectric Generation Assets.** For the CPUC’s EIR evaluating the Pacific Gas & Electric Company’s (PG&E) proposal to divest their hydroelectric facilities in California, served as the land use technical analyst for two watershed areas, and the Task Manager for the Socioeconomics and Transportation sections of the EIR covering five watershed areas. PG&E owns and operates the largest private hydroelectric power system in the nation. Situated in the Sierra Nevada, Southern Cascade, and Coastal mountain ranges of California, this system is strung along 16 different river basins and annually generates approximately five percent of the power consumed each year in California. The proposed sale of assets also includes approximately 140,000 acres of land proposed for sale with the hydroelectric system. The EIR analyzes the range of operational changes that could occur under new ownership, including complex integrated models that analyze power generation and water management. The land use section of the EIR examines the implications of the change in ownership of lands and the potential for impacts due to development or potential changes in use. Contributed significantly to the extensive GIS analysis, which was conducted to determine the development suitability and potential intensity of development that might occur on the lands if sold. These results served as one of the primary bases for analysis of impacts associated with the sale of the hydroelectric assets.

**Section 108 Loan Guarantee EA/FONSI for the Waterfront Development Project.** Served as the Manager and Principal Preparer for this EA/FONSI for the City of Huntington Beach Economic Development Department. Prepared NEPA documentation evaluating the impacts resulting from the use of HUD Section 108 Loan guarantee funds for the Waterfront Resort Expansion Project in accordance with The HUD NEPA Guidelines and Format 1 (Environmental Assessments at the Community Level). Tasks included: (1) Evaluation of activities that would be categorically excluded from NEPA based on an assessment of the NEPA Implementing Guidelines for HUD Projects; (2) Evaluation of proposed actions compliance with all applicable federal statutes, regulations, and policies; and (3) Preparation of an Environmental Assessment/Mitigated Finding of No Significant Impact (EA/FONSI) for proposed actions that are not categorically excluded. Proposed actions to be evaluated consisted mainly of infrastructure improvement projects, rehabilitation and/or development of affordable housing, provision of relocation assistance, facilitation of development and/or redevelopment plans, property acquisition, provision of open space, etc.

**MTA Mid Cities/Westside Transit Corridor Study EIS/EIR.** Served as the EIS/EIR Deputy Project Manager (DPM) for this 3-phase (including prepared the Major Investment Study (MIS), the Environmental Impact Statement (EIS), and an evaluation of the urban design implications of transit interventions on selected routes) study intended to address current and long range traffic congestion in the central and westside areas of the Los Angeles, Basin. Three east/west corridors and a range of transit alternatives ranging including Rapid Bus, light rail, and heavy rail are being evaluated. In addition to her duties as DPM for this comprehensive joint EIS/EIR, Ms. Vahidi prepared the Environmental Justice Analysis (per Executive Order 12898), the Section 4(f) Parklands discussion, and the land use and socioeconomics sections of the EIS/EIR.

**Wes Thompson Ranch Development Project EIR.** Served as the EIR Project Manager for this hillside residential development in the City of Santa Clarita. Issues of concern included seismic and air quality impacts associated with the excavation of 2 million cubic yards of soil, the project’s non-compliance with the City’s hillside ordinance for innovative design, and traffic generated by project-related population growth in the area. Four different site configuration alternatives were developed as part of the EIR analysis. Other issues of concern included sensitive biological resources, the potential for hydrological impacts due to disturbance of the hillside, and cultural resources.

**City of Santa Monica Environmental Assessments.** As one of the City’s qualified CEQA consultants managed several environmental assessment documents for housing, commercial, institutional, and mixed-use developments in compliance with CEQA, including:
Berkeley Manor Condominium EIR and Technical Reports. This one-issue EIR originally was a CEQA Categorical Exemption per direction of the City. During preparation of the Categorical Exemption documentation, it was determined that project-generated traffic would have potentially significant impacts. As a result, a traffic technical report was prepared as the background document for and EIR. In addition, shade and shadow impacts were evaluated in a technical report to ensure that shading impacts from the proposed structure on surrounding uses would not be significant. A simple Excel model was developed for calculation of shade and shadow angles.

Seaview Court Condominiums IS/MND. This comprehensive Initial Study/Mitigated Negative Declaration included six technical reports including traffic, cultural resources, parking survey, shade and shadow analysis, and a geotechnical assessment to evaluate the level of severity of this development in the waterfront area of Santa Monica. Major issues of concern were; parking and project-generated traffic on adjacent narrow residential streets; visual obstruction and shading impacts of the proposed structure; liquefaction and seismic impacts to adjacent properties as result of the project’s excavation for a subterranean parking garage; and the potential impacts of the project to impact the integrity of a historic district and the historic Seaview Walkway to the beachfront.

Four-Story Hotel IS/MND. A comprehensive Initial Study/Mitigated Negative Declaration was prepared for this four-story hotel adjacent to St. John’s Hospital in Santa Monica. Major issues of concern included project-generated traffic on surrounding multi-family residential uses and emergency access to the hospital.

Santa Monica College Parking Structure B Replacement EIR. This focused EIR addressed issues related to traffic and neighborhood land use impacts associated with the addition of a 3-story parking structure in the center of the SMC campus. Major issues of concern included the potential for project-generated traffic to cause congestion at the school’s main entrance on Pico Boulevard, and the potential for overflow traffic to impact the Sunset Community of single-family homes adjacent to the school.

North Main Street Mixed-Use Development Project EIR. This EIR included evaluation of impacts resulting from the development of a mixed-use development in Santa Monica’s “Commercial Corridor” on Main Street, with ground-floor residences and boutique commercial uses. Major issues of concern included traffic and parking impacts to Main Street and surrounding residential land uses, shade and shadow impacts, and neighborhood impacts.

Specific Plans and Redevelopment Projects. As the senior technical lead for land use, prepared the project description, alternatives screening and development, cumulative scenario, and land use analysis for:

Cabrillo Plaza Specific Plan EIR in Santa Barbara. This project consisted of a mixed-use commercial development on Santa Barbara’s waterfront on Cabrillo Boulevard. On-site uses included an aquarium, specialty retail, restaurants, and office space.

Culver City Redevelopment Plan and Merger EIR. This programmatic EIR evaluated the impacts of the City’s redevelopment of its redevelopment zones. A major land use survey and calculation of acreage of redevelopment lands was conducted as part of the EIR.

Dana Point Headlands Specific Plan EIR. This EIR evaluated the development of coastal bluff in the City with hotel, single- and multi-family residential, and commercial uses. Major issues of concern included ground disturbance as a result of excavation, impacts to terrestrial and wildlife biology, recreation impacts to beachgoers, and project-generated population inducement.

Blocks 104/105 Redevelopment Project EIR in Huntington Beach (Project Manager). This EIR evaluated the development of a supermarket, retail shops, and office space in the City’s Waterfront Redevelopment Zone. Issues of concern evaluated included traffic, land use, and impacts to on-site historic structures.

HONORS AND AWARDS

2006 American Planning Association, Los Angeles Section Environmental Award for the Los Angeles Unified School District New School Construction Program, Program EIR

2004 Association of Environmental Professionals Statewide Best EIR Award for the Jefferson-Martin 230 kV Transmission Project EIR.

2001 Outstanding Performance Award from the State of California Energy Commission.

University of California, Irvine, School of Social Sciences. Graduated with Highest Honors in Political Science.

PROFESSIONAL ASSOCIATIONS
- American Planning Association (APA), Los Angeles Section Executive Board Member
- Association of Environmental Professionals (AEP)
DECLARATION OF
Testimony of Susanne Huerta

I, Susanne Huerta, declare as follows:

1. I am presently employed by Aspen Environmental Group, a contractor to the California Energy Commission, Siting, Transmission and Environmental Protection Division, as an **Associate Planner/Land Use Staff Professional**.

2. A copy of my professional qualifications and experience is attached hereto and incorporated by reference herein.

3. I prepared the staff testimony on **Land Use** for the **SES Solar Two Project** based on my independent analysis of the Application for Certification and supplements hereto, data from reliable documents and sources, and my professional experience and knowledge.

4. It is my professional opinion that the prepared testimony is valid and accurate with respect to the issue addressed therein.

5. I am personally familiar with the facts and conclusions related in the testimony and if called as a witness could testify competently thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Dated: February 8, 2010          Signed: ____________________________

At: **Agoura Hills, California**
SUSANNE R. HUERTA
Environmental Planner

ACADEMIC BACKGROUND

Master of Urban Planning, New York University, 2007
B.A., Geography, University of California, Los Angeles, 2004

PROFESSIONAL EXPERIENCE

Ms. Huerta is an Environmental Planner with five years of experience in environmental consulting, city planning, economic development and GIS analysis. She is currently conducting the technical analysis for agricultural and land use analyses for numerous solar and wind energy generating facilities. While attending graduate school, Ms. Huerta interned for a city planning consultant firm in New Jersey. Her city planning background includes experience in the preparation of master plans, the evaluation of site plans and subdivisions, and conducting land use surveys. At Aspen Environmental Group, Ms. Huerta conducts research and prepares environmental analyses in accordance with CEQA, NEPA, and various other environmental laws and regulations. Ms. Huerta’s project-specific efforts are provided below.

Aspen Environmental Group 2007 to present

- **Topaz Solar Farm Project Environmental Impact Report (EIR), San Luis Obispo County, CA, Project Assistant/Technical Specialist (2009-Present).** Ms. Huerta is currently preparing the Project Description and the technical analysis for the agriculture section for this 550 MW solar photovoltaic power plant on the Carrizo Plain of eastern San Luis Obispo County. The project includes solar arrays that would cover approximately 4,200 acres, as well as an electric substation and switching station.

- **California Valley Solar Ranch Project EIR, San Luis Obispo County, CA, Technical Specialist (2009-Present).** Ms. Huerta is currently preparing the technical analysis for the agricultural resources for this 250 MW solar photovoltaic power plant on the Carrizo Plain of eastern San Luis Obispo County. The project includes solar arrays that would cover nearly 2,000 acres, as well as an electric substation, a 2.5-mile transmission line, and expansion of a surface aggregate mine.

- **Pacific Wind Project EIR, Kern County, CA, Technical Specialist (2009-Present).** Ms. Huerta is currently preparing the technical analysis for land use and public services. The project is proposed to be located on approximately 8,300 acres of land with up to 250 wind turbines to produce up to 250 MW of wind energy.

- **Alcoa Dike Project Supplemental Environmental Assessment EA/EIR, US Army Corps of Engineers, Technical Specialist (2009-Present).** Ms. Huerta is preparing the land use and visual analysis for the Supplemental EA/EIR Addendum under the NEPA/CEQA for the United States Army Corps of Engineers. A Supplemental EA/EIR Addendum is being performed to address design changes to the approved Alcoa Dike located in the Prado Basin, Riverside County.

- **Auxiliary Dike Project Supplemental Environmental Assessment (EA)/EIR, US Army Corps of Engineers, Technical Specialist (2009).** Ms. Huerta prepared the land use and visual analysis for the Supplemental EA/EIR Addendum under the NEPA/CEQA for the United States Army Corps of Engineers. A Supplemental EA/EIR Addendum is being performed to address design changes to the approved Auxiliary Dike located in the Prado Basin, Riverside County.
- **Baldwin Hills Community Standards District (CSD), City of Culver City, Technical Specialist (2009).** Technical Specialist for the review of a County of Los Angeles environmental document and preparation of an oil and gas drilling ordinance for the City of Culver City in Los Angeles County. Ms. Huerta reviewed the technical comments on the Baldwin Hills Community Standards District EIR prepared by the County of Los Angeles for the Inglewood Oil Field. The technical review included the evaluation of the County’s proposed CSD (drilling ordinance), which the County revised based on public comments. The City used the review comments as part of their formal comments submitted on the County’s EIR and CSD.

- **California River Parkways Trailhead Project Initial Study/Mitigated Negative Declaration (IS/MND), Ventura County Watershed Protection District, Technical Specialist, (2009).** The project would provide a new point of entry to the Ventura County-maintained Ojai Valley Trail and the Ventura River Trail, building on an existing trails network, and would include a new parking lot and crosswalk. Ms. Huerta performed the analyses for land use, agricultural and mineral resources, public services, and recreation resources.

- **TANC Transmission Project, Transmission Agency of Northern California, Staff Professional (2009).** Public scoping for 600 miles of proposed 230-kV and 500-kV transmission lines and associated infrastructure extending from eastern Lassen County south through the Sacramento Valley, and branching west to the Bay Area and east to Tuolumne County: Ms. Huerta assisted in the acquisition and processing of 6,600 scoping comments and information requests; responded via phone, email, and postal mail to public and agency inquiries throughout the twice extended, five-month scoping period; quantitatively evaluated scoping data; and authored sections of the scoping report.

- **Alta-Oak Creek Mojave Project EIR, Kern County, CA, Technical Specialist (2008-2009).** Ms. Huerta prepared the technical analysis for land use, public services, population, and housing resources. The project is proposed to be located on approximately 11,000 acres of land with up to 350 wind turbines to produce up to 800 MW of wind energy. This would be the first project of the Alta Wind Energy Center which is designed to produce 1,500 MW of wind power in the Tehachapi Wind Resource Area of Kern County.

- **Santa Maria River Levee Repair Project, US Army Corps of Engineers, Technical Specialist (2008).** An Environmental Assessment (EA) is being performed for the corrective action to repair the design deficiency of the Santa Maria River Levee in order to avoid the potentially catastrophic consequences of a levee breach that would affect the population of the city of Santa Maria. Ms. Huerta has prepared technical analysis of potential land use and socioeconomic impacts for the EA under NEPA.

- **River Supply Conduit (RSC) Upper Reach Project EIR, Los Angeles and Burbank, CA, Technical Reviewer (2008).** Under Aspen’s environmental services contract with the City of Los Angeles Department of Water and Power (LADWP), Ms. Huerta assisted in preparation of the potential impacts to recreational resources for this EIR. The RSC is a major transmission pipeline in the LADWP water distribution system. The existing RSC pipeline’s purpose is to transport large amounts of water from the Los Angeles Reservoir Complex and local ground water wells to reservoirs and distribution facilities located in the central areas within of the City of Los Angeles. The LADWP proposed a new larger RSC pipeline to replace and realign the Upper and Lower Reaches of the existing RSC pipeline.

- **Tehachapi Renewable Transmission Project (TRTP) EIR/EIS, Kern, Los Angeles, and San Bernardino Counties, CA, Technical Specialist (2007-Present).** In preparation of a joint EIR/EIS for the CPUC and USDA Forest Service (Angeles National Forest), Ms. Huerta conducted research and analysis for impacts related to public services and utilities, and prepared the Cumulative Impact Scenario. In addition, she prepared the EIR/EIS Summary; and assisted in preparation of the Project
Description, Alternative Screening Report, Scoping Report, and the public comment period of the Draft EIR/EIS.

**California Energy Commission (CEC)**

In response to California’s power shortage, Aspen has assisted the CEC in evaluating the environmental and engineering aspects of new power plant applications throughout the State under three separate contracts. Ms. Huerta has served as a Staff Professional for Land Use Staff Assessments since 2008. Her specific projects are listed below.

- **Peak Workload Support for the Energy Facility Siting Program and the Energy Planning Program (Contract #700-05-002; 4/11/06 through 3/30/09)**

  - **Carrizo Energy Solar Farm, San Luis Obispo County, CA.** Staff Professional for the Land Use Staff Assessment for Carrizo Energy, LLC’s Application for Certification (AFC) to build the Carrizo Energy Solar Farm (CESF), which will consist of approximately 195 Compact Linear Fresnel Reflector (CLFR) solar concentrating lines, and associated steam drums, steam turbine generators (STGs), air-cooled condensers (ACCs), and infrastructure, producing up to a nominal 177 megawatts (MW) net. The CESF is located in an unincorporated area of eastern San Luis Obispo County, west of Simmler and northwest of California Valley, California. The CESF includes the solar farm site, a minimal offsite transmission system connection, and construction laydown area. The CESF site will encompass approximately 640 acres of fenced area in an area zoned for agricultural uses as specified in the San Luis Obispo County General Land Use Plan. Issues of concern include the impacts of the power plant on adjacent land uses and compliance with applicable local LORS.

  - **Willow Pass Generating Station, Pittsburg, CA.** Staff Professional for the Land Use Staff Assessment for a new, approximately 550-megawatt (MW) dry-cooled, natural gas-fired electric power facility proposed by Mirant. Development of Willow Pass would entail the construction of two generating units and ancillary systems including, adjacent electric and gas transmission lines, and water and wastewater pipelines.

  - **Stirling Energy Systems Solar One, San Bernardino County, CA.** Staff Professional for the Land Use Staff Assessment/BLM EIS for a nominal 850-megawatt (MW) Stirling engine project, with construction planned to begin late 2010. The primary equipment for the generating facility would include the approximately 30,000, 25-kilowatt solar dish Stirling systems (referred to as SunCatchers), their associated equipment and systems, and their support infrastructure. Major issues of concern include the conversion of approximately 8,230 acres of open space to industrial uses, compliance with BLM’s CDCA Plan, etc.

  - **Stirling Energy Systems Solar Two, Imperial County, CA.** Staff Professional for the Land Use Staff Assessment/BLM EIS for a nominal 750-megawatt (MW) Stirling engine project, with construction planned to begin either late 2009 or early 2010. The primary equipment for the generating facility would include the approximately 30,000, 25-kilowatt solar dish Stirling systems (referred to as SunCatchers), their associated equipment and systems, and their support infrastructure. Major issues of concern include conversion of 6,500 acres of public recreation land used for OHV use and camping, and compliance with the BLM’s CDCA plan.

  - **City of Palmdale Hybrid Power Plant Project, Palmdale, CA.** Staff Professional for the Land Use Staff Assessment for the Palmdale Hybrid Power Project (PHPP) proposed by the City of Palmdale. The PHPP consists of a hybrid of natural gas-fired combined-cycle generating equipment integrated with solar thermal generating equipment to be developed on an approximately 377-acre site in the northern portions of the City of Palmdale (City).

  - **Abengoa Mojave Solar One Project, San Bernardino County, CA.** Staff Professional for the Land Use Staff Assessment of a nominal 250 megawatt (MW) solar electric generating facility to be located near Harper Dry Lake in an unincorporated area of San Bernardino County. Issues of concern include the impacts associated with the conversion of 1,765 acres of open space lands.
PREVIOUS EXPERIENCE


Ms. Huerta worked as a consultant for city planning departments and private developers throughout northern New Jersey. Her primary projects were to draft a master plan reexamination report and an open space and recreation element of a master plan. Within these projects she evaluated existing socioeconomic conditions and land uses, and conducted an inventory of recreational facilities and open space. She also used ArcGIS to illustrate zoning recommendations and update land use and zoning maps. Other routine projects included the evaluation of site plan, subdivision and variance applications for compliance with local, State and federal regulations.

Brooklyn Economic Development Corporation  September to December 2005

Ms. Huerta conducted research and field surveys for community revitalization projects. She also participated in collaborative meetings with other community organizations.

ADDITIONAL TRAINING AND COURSES

- Successful CEQA Compliance (February 2009)
- CEQA Basics Workshop Series (November 2008)
- Advanced courses in ArcGIS
- Graduate courses in Environmental Impact Assessment and Environmental Policy

PROFESSIONAL AFFILIATIONS

- American Planning Association
DECLARATION OF
Erin Bright

I, Erin Bright, declare as follows:

1. I am presently employed by the California Energy Commission in the Engineering Office of the Siting Transmission and Environmental Protection Division as a Mechanical Engineer.

2. A copy of my professional qualifications and experience is attached hereto and incorporated by reference herein.

3. I prepared the staff testimony on Noise and Vibration for the Stirling Energy Systems Solar Two Project based on my independent analysis of the Application, supplements thereto, data from reliable documents and sources, and my professional experience and knowledge.

4. It is my professional opinion that the prepared testimony is valid and accurate with respect to the issues addressed therein.

5. I am personally familiar with the facts and conclusions related in the testimony and if called as a witness could testify competently thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Dated: February 10, 2010
Signed: ________________________________

At: Sacramento, California
Experience Summary

One year of experience in the electric power generation field, including analysis of noise pollution, construction/licensing of electric generating power plants, and engineering and policy analysis of thermal power plant regulatory issues. One year of experience in the alternative energy field, including analysis of alternative fuel production and use.

Education

- University of California, Davis--Bachelor of Science, Mechanical Engineering and Materials Science
- University of California, Davis Extension Program--Renewable Energy Systems

Professional Experience

2007 to Present-- Mechanical Engineer, Energy Facilities Siting Division - California Energy Commission

Performed analysis of generating capacity, reliability, efficiency, noise, and the mechanical, civil/structural and geotechnical engineering aspects of power plant siting cases.

2006 to 2007--Energy Analyst, Fuels & Transportation Division - California Energy Commission

Performed analysis of use potential and environmental effects of emerging non-petroleum fuels, including compressed natural gas, biomass, hydrogen and electricity, in heavy and light duty transportation vehicles. Contributor to Energy Commission’s alternative fuels plan.
DECLARATION OF
Alvin J. Greenberg, Ph.D.

I, Alvin J. Greenberg, Ph.D. declare as follows:

1. I am presently a consultant to the California Energy Commission, Energy Facilities Siting and Environmental Protection Division.

2. A copy of my professional qualifications and experience is attached hereto and incorporated by reference herein.

3. I helped prepare the staff testimony on the Public Health section for the Sterling Energy Systems Solar-2 Application based on my independent analysis of the amendment petition, supplements hereto, data from reliable documents and sources, and my professional experience and knowledge.

4. It is my professional opinion that the prepared testimony is valid and accurate with respect to the issue addressed therein.

5. I am personally familiar with the facts and conclusions related in the testimony and if called as a witness could testify competently thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Dated: ___________________    Signed: ____________________

At: Sacramento, California
Dr. Greenberg has had over two decades of complete technical and administrative responsibility as a team leader for hazardous waste site characterization, preparation of human and ecological risk assessments, air quality assessments, interaction with regulatory agencies in obtaining permits, hazardous materials handling and risk management prevention, infrastructure vulnerability assessments, conducting lead surveys and studies, with particular expertise in the assessment of dioxins, lead, diesel exhaust, petroleum hydrocarbons, mercury, and the intrusion of subsurface contaminants into indoor air. Dr. Greenberg’s expertise in risk assessment has led to his appointment as a member of several state and federal advisory committees, including the California EPA Advisory Committee on Stochastic Risk Assessment Methods, the US EPA Workgroup on Cumulative Risk Assessment, the Cal/EPA Peer Review Committee of the Health Risks of Using Ethanol in Reformulated Gasoline, the California Air Resources Board Advisory Committee on Diesel Emissions, the Cal/EPA Department of Toxic Substances Control Program Review Committee, and the DTSC Integrated Site Mitigation Committee. Dr. Greenberg is the former Chair of the Bay Area Air Quality Management District Hearing Board, a former member of the State of California Occupational Health and Safety Standards Board (appointed by the Governor), and former Assistant Deputy Chief for Health, California OSHA. And, since the events of 9/11, Dr. Greenberg has been the lead person for developing vulnerability assessments, power plant security programs, and conducting safety and security audits of power plants for the California Energy Commission. In addition to providing security expertise to the State of California, Dr. Greenberg is Team Leader and main consultant to the State of Hawaii on the updating of their Energy Emergency Preparedness Plan.

Years Experience: 25

Education:

B.S. 1969 Chemistry, University of Illinois Urbana

Ph.D. 1976 Pharmaceutical/Medicinal Chemistry, University of California, San Francisco

Postdoctoral Fellowship 1976-1979 Pharmacology/Toxicology, University of California, San Francisco

Postgraduate Training 1980 Inhalation Toxicology, Lovelace Inhalation Toxicology Research Institute, Albuquerque, NM
Professional Registrations:

Board Certified as a Qualified Environmental Professional (QEP)
California Registered Environmental Assessor - I (REA)
Fellow of the American Institute of Chemists (FAIC)

Professional Affiliations:

Society for Risk Analysis
Air and Waste Management Association
American Chemical Society
American Association for the Advancement of Science
National Fire Protection Association

Technical Boards and Committee Memberships - Present:

Squaw Valley Technical Review Committee
(appointed 1986)

Technical Boards and Committee Memberships - Past:

July 1996 – March 2002
  Member, Bay Area Air Quality Management District Hearing Board
    (Chairman 1999-2002)
September 2000 – February 2001
  Member, State Water Resources Control Board Noncompliant Underground
  Tanks Advisory Group
January 1999 – June 2001
  Member, California Air Resources Board Advisory Committee on Diesel
  Emissions
January 1994 - September 1999
  Vice-Chairman, State Water Resources Control Board Bay Protection and Toxic
  Cleanup Program Advisory Committee
September 1998
  Member, US EPA Workgroup on Cumulative Risk Assessment
April 1997 - September 1997
  Member, Cal/EPA Private Site Manager Advisory Committee
January 1986 - July 1996
  Member, Bay Area Air Quality Management District Advisory Council
    (Chairman 1995-96)
January 1988 - June 1995
  Member: California Department of Toxic Substance Control Site Mitigation
  Program Advisory Group
January 1989 - February 1995
  Member: Department of Toxics Substances Control Review Committee, Cal-EPA
October 1991 - February 1992
Chair: Pollution Prevention and Waste Management Planning Task Force of the Department of Toxics Substances Control Review Committee, Cal-EPA

September 1990 - February 1991
Member: California Integrated Waste Management Board Sludge Advisory Committee

September 1987 - September 1988
ABAG Advisory Committee on Regional Hazardous Waste Management Plan

March 1987 - September 1987
California Department of Health Services Advisory Committee on County and Regional Hazardous Waste Management Plans

January 1984 - October 1987
Member, San Francisco Hazardous Materials Advisory Committee

March 1984 - March 1987
Member, Lawrence Hall of Science Toxic Substances and Hazardous Materials Education Project Advisory Board

Jan. 1, 1986 - June 1, 1986
Member, Solid Waste Advisory Committee, Governor's Task Force on Hazardous Waste

Jan. 1, 1983 - June 30, 1985
Member, Contra Costa County Hazardous Waste Task Force

Sept. 1, 1982 - Feb. 1, 1983
Member, Scientific Panel to Address Public Health Concerns of Delta Water Supplies, California Department of Water Resources

Present Position

January 1983- present
Owner and principal with Risk Sciences Associates, a Marin County, California, environmental consulting company specializing in multi-media human health and ecological risk assessment, air pathway analyses, hazardous materials management-infrastructure security, environmental site assessments, and litigation support for toxic substance exposure cases.

Previous Positions

Jan. 2, 1983 - June 12, 1984
Member, State of California Occupational Safety and Health Standards Board (Cal/OSHA), appointed by the Governor

Assistant Deputy Chief for Health, California Occupational Safety and Health Administration

Feb. 1, 1979 - Aug. 1, 1979
Administrative Assistant to Chairperson of Finance Committee, Board of Supervisors, San Francisco
Jan. 1, 1976 - Feb. 1, 1979
Research Pharmacologist and Postdoctoral Fellow, Department of Pharmacology and Toxicology, School of Medicine, University of California, San Francisco

Jan. 1, 1975 - Dec. 31, 1975
Acting Assistant Professor, Department of Pharmaceutical Chemistry, University of California, San Francisco

**Experience**

**General**

Dr. Greenberg has been a consultant in Human and Ecological Risk Assessment, Occupational Health, Toxicology, Hazardous Materials Management and Security, Hazardous Waste Site Characterization and Toxic Substances Control Policy for over 25 years. He has broad experience in the identification, evaluation and control of health and environmental hazards due to exposure to toxic substances. His experience includes Community Relations Support and Risk Communication through experience at high-profile sites and presentations at professional society meetings.

He has considerable experience in the review and evaluation of exposure via the air pathway - particularly to emissions from power plants and diesel exhaust - and a thorough knowledge of the regulatory requirements through his experience at Cal/OSHA, the BAAQMD Hearing Board, as a consultant to the California Energy Commission, and in preparing such assessments for local government and industry. He has assessed exposures to diesel exhaust during construction and operations of stationary and mobile sources and has testified at evidentiary hearings numerous times on this subject.

He served for over five years as the Vice-chair of the California State Water Resources Control Board Advisory Committee convened to address toxic substances in sediments in bays, rivers, and estuaries. He has also conducted numerous ecological risk assessments and characterizations, including those for marine and terrestrial habitats.

Since the events of 9/11, Dr. Greenberg has taken the lead for the California Energy Commission in developing a power plant vulnerability assessment methodology and model power plant security plan. He also assisted the CEC in the preparation of a “background” report on the risks and hazards of siting LNG terminals in California and consulted for the City of Vallejo on a proposed LNG terminal and storage facility at the former Mare Island Naval Shipyard. In August 2004, a team of experts led by Dr. Greenberg was awarded an 18-month contract by the State of Hawaii to update and improve the state’s Energy Emergency Preparedness Plan and make recommendations for increased security of critical energy infrastructure on this isolated group of islands.

Dr. Greenberg has extensive experience in data collection and preparation of human and ecological risk assessments on numerous military bases and industrial sites with Cal/EPA DTSC and RWQCB oversight. He has also been retained to provide technical services to the Cal/EPA Department of Toxic Substances Control (preparation of human health risk assessments) and the
Office of Environmental Health Hazard Assessment (review and evaluation of air toxics health risk assessments and preparation of profiles describing the acute and chronic toxicity of toxic air contaminants). He has also conducted several surveys of sites containing significant lead contamination from various sources including lead-based paint, evaluated potential occupational exposure to lead dust and fumes in industrial settings, prepared numerous human health risk assessments of lead exposure, and prepared safety and health plans for remedial investigation of lead oxide contaminated soil at DOD facilities.

Dr. Greenberg is also a recognized expert on the requirements of California’s Proposition 65 and has served as an expert on Prop. 65 litigation.

**Mercury Contamination**

Dr. Greenberg has prepared and/or reviewed several human health and ecological risk assessments regarding mercury contamination in soils, sediments, and indoor surfaces. Dr. Greenberg served on the State Water Resources Control Board Bay Protection and Toxic Cleanup Program Advisory Committee from 1994 until the end of the program in 1999.

**Examples**

Review and evaluation of a human health risk assessment of ingestion of sport fish caught from San Diego Bay and which contain tissue levels of mercury and PCBs (November 2004 – present)

Screening Human Health Risk Assessment, Calculation of Soil Clean-up Levels, and Aquatic Ecological Screening Evaluation, Galilee Harbor, Sausalito, Ca. (May 1998)

Health Risk Assessment for Residual Mercury at the Deer Creek Facility, 3475 Deer Creek Road, Palo Alto, California. (July 1997)

Human Health Risk Assessment Due to Emissions from a Medical Waste Incinerator, prepared for Kauai Veterans Memorial Hospital, Kauai, Hawai’i (1994)

**Air Pathway Analysis**

Dr. Greenberg has prepared numerous Air Pathway Analyses and human health risk assessments, evaluating exposure at numerous locations in California, Hawai’i, Oregon, Minnesota, Michigan, and New York. He is experienced in working with Region IX EPA, the State of California DTSC, and the Hawai’i Department of Health Clean Air Branch in the application of both site-specific and non site-specific health risk assessment criteria.

**Examples**

Human Health Risk Assessment for the Open Burn/Open Detonation Operation at McCormick Selph, Inc., Hollister, Ca. (June 2003)

Air Quality and Human Health Risk Assessment for the Royal Oaks Industrial Complex, Monrovia, Ca. (January 2003)

Human Health Risk Assessment and Indoor Vapor Intrusion Assessment for the former Pt. St. George Fisheries Site, Santa Rosa, Ca. (October 2002)
Human Health Risk Assessment for the former Sargent Industries Site, Huntington Park, Ca. (July 2001)

Ballard Canyon Air Pathway Analysis and Human Health Risk Assessment, Santa Barbara County, Ca. (September 2000)

Health Risk Assessment Due to Diesel Train Engine Emissions, Oakland, Ca. (June 1999)


The Avila Beach Health Study Phase 1, Volume 2: Environmental Monitoring. (May 1998)

Health Risk Assessment and Air Pathway Analysis for the Ballard Canyon Landfill, Santa Barbara County, Ca. (March 1999)

Human Health Risk Assessment, Teledyne Ryan Aeronautical, McCormick Selph Ordnance. Hollister, California. (December 1996)

Initial Phase Human Health Risk Assessment, Teledyne Inc., San Diego, Ca. (October 1996)


Focused Ecological Risk Characterization, Hawaiian Electric Company, Keahole Generating Station Expansion, Hawai‘i (June 1993)

Human Health Risk Assessment for the Proposed Palima Point Space Launch Complex, prepared for the Hawai‘i Office of Space Industry (April 1993)

Ecological Risk Assessment for the Proposed Palima Point Space Launch Complex, prepared for the Hawai‘i Office of Space Industry (March 1993)

Human Health Risk Assessment Due to Emissions from a Medical Waste Incinerator, prepared for Kauai Veterans Memorial Hospital, Kauai, Hawai‘i (1994)

Cancer Risk Assessment for the H-Power Generating Station, Campbell Industrial Park, Oahu, Hawai‘i (1988)

**Infrastructure Security**

For the past three years, Dr. Greenberg has been trained by and is working with the Israeli company SB Security, LTD, the most experienced and tested security planning and service company in the world. Since the events of 9/11, Dr. Greenberg has been the lead person for developing vulnerability assessments and power plant security programs for the California Energy Commission (CEC). In taking the lead for this state agency, Dr. Greenberg has
interfaced with the California Terrorism Information Center (CATIC) and provided analysis, recommendations, and testimony at CEC evidentiary hearings regarding the security of power plants within the state. These analyses include the preparation of vulnerability assessments and off-site consequence analyses addressing the use, storage, and transportation of hazardous materials, recommendations for security to reduce the threat from terrorist activities, perimeter security, site access by personnel and vendors, personnel background checks, management responsibilities for facility security, and employee training in security methods. Dr. Greenberg is the lead person in developing a model power plant security plan, vulnerability assessment matrix, and a security training manual for the CEC. The model security plan will be used by all power plants in California as guidance in developing and implementing security measures to reduce the vulnerability of California’s energy infrastructure to terrorist attack. He has testified at several evidentiary hearings for the CEC on power plant security issues. He has also led an audit team conducting safety and security audits at power plants throughout California that are under the jurisdiction of the CEC. In addition to providing security expertise to the State of California, Dr. Greenberg is Team Leader and main consultant to the State of Hawaii on the updating of their Energy Emergency Preparedness Plan.

Sites with RWQCB and/or DTSC Oversight

Dr. Greenberg has specific experience in assessing human health and ecological risks at contaminated sites at the land/water interface, including petroleum contaminants, metals, mercury, and VOCs at several locations in California including Oxnard, Richmond, Avila Beach, Mare Island Naval Shipyard, San Diego, Hollister, San Francisco, Hayward, Richmond, the Port of San Francisco, and numerous other locations. He has used Cal/EPA methods, US EPA methods, and ASTM Risk Based Corrective Action (RBCA) and Cal/Tox methodologies. He is extremely knowledgeable about SWRCB and SF Bay RWQCB regulations on underground storage tank sites and with ecological issues presented by contaminated sediments including sediment analysis, toxicity testing, tissue analysis, and sediment quality objectives. Dr. Greenberg served on the State Water Resources Control Board Bay Protection and Toxic Cleanup Program Advisory Committee from 1994 until the end of the program in 1999.

Dr. Greenberg experience on many of these contaminated sites has been as a consultant to local governments, state agencies, and citizen groups. He assisted the City and County of San Francisco in developing local ordinance requiring soil testing (Article 20, Maher ordinance) and hazardous materials use reporting (Article 21, Walker ordinance). He served as the City of San Rafael’s consultant to provide independent review and evaluation of the site characterization and remedial action plan prepared for a former coal gasification site. He was a consultant to a citizen group in northern California regarding exposure and risks due to accidental releases from a petroleum refinery and assisted in the assessment of risks due to crude petroleum contamination of a southern California beach. He has prepared a number of risk assessments addressing crude petroleum, diesel and gasoline contamination, including coordinating site investigations, environmental monitoring, and health risk assessment for the County of San Luis Obispo regarding Avila Beach subsurface petroleum contamination. That high-profile project lasted for over one year and Dr. Greenberg managed a team of experts with a budget of $750,000. Another high-profile project included the preparation of an extensive comprehensive human and ecological risk assessment for the Hawaii Office of Space Industry on rocket launch impacts and transportation/storage of rocket fuels at the southern end of the Big Island of Hawaii. Dr. Greenberg’s risk assessments were part of the EIS for the project. Dr. Greenberg also worked on
another high-profile project conducting Air Pathway Analysis of off-site and on-site impacts from landfill gas constituents, including indoor and outdoor air measurements, air dispersion modeling, flux chamber investigations, and health risk assessment for the County of Santa Barbara.

Dr. Greenberg has conducted RI/FS work, prepared health risk assessments, evaluated hazardous waste sites and hazardous materials use at numerous locations in California, Hawaii, Oregon, Minnesota, Michigan, and New York. He has considerable experience in the development of clean-up standards and the development of quantitative risk assessments for site RI/FS work at CERCLA sites, as well as site closures, involving toxic substances and petroleum hydrocarbon wastes. He is experienced in working with both Region IX EPA and the State of California DTSC in negotiating clean-up standards based on the application of both site-specific and non site-specific health and ecological based clean-up criteria. He has significant experience in the development of site chemicals of concern list, quantitative data quality levels, site remedial design, the site closure process, the design and execution of data quality programs and verification of data quality prior to its use in the decision making process on large NPL sites.

Examples
The Avila Beach Health Study Phase 1, Volume 2: Environmental Monitoring. (May 1998)

Health Risk Assessment and Air Pathway Analysis for the Ballard Canyon Landfill, Santa Barbara County, Ca. (March 1999)

Screening Human Health Risk Assessment, Calculation of Soil Clean-up Levels, and Aquatic Ecological Screening Evaluation, Galilee Harbor, Sausalito, Ca. (May 1998)

Health Risk Assessment Due to Diesel Train Engine Emissions, Oakland, Ca. (June 1999)

Health Risk Assessment for Residual Mercury at the Deer Creek Facility, 3475 Deer Creek Road, Palo Alto, California. (July 1997)

Phase 2 Human Health Risk Assessment, Teledyne Inc., San Diego, Ca. (February 1997)

Human Health Risk Assessment, Teledyne Ryan Aeronautical, McCormick Selph Ordnance. Hollister, California. (December 1996)

Initial Phase Human Health Risk Assessment, Teledyne Inc., San Diego, Ca. (October 1996)

Human Health Risk Assessment, Ecological Screening Evaluation, and Development of Proposed Remediation Goals for the Flair Custom Cleaners Site, Chico, California (January 1996)
Human Health Risk Assessment for the X-3 Extrudate Project at Criterion Catalyst, Pittsburg, Ca. (November 1994)

Screening Health Risk Assessment and Development of Proposed Soil Remediation Levels at Hercules Plant #3, Culver City, Ca. (July 1993)

Ecological Screening Evaluation for the Altamont Landfill, Alameda County, Ca. (June, 1993)

Focused Ecological Risk Characterization, Hawaiian Electric Company, Keahole Generating Station Expansion, Hawaii (June 1993)

Human Health Risk Assessment for the Proposed Palima Point Space Launch Complex, prepared for the Hawaii Office of Space Industry (April 1993)

Ecological Risk Assessment for the Proposed Palima Point Space Launch Complex, prepared for the Hawaii Office of Space Industry (March 1993)


Screening Health Risk Assessment for the Proposed Expansion of the West Marin Sanitary Landfill, Point Reyes Station, Ca. (March, 1993)

Health Risk Assessment for the Proposed Expansion of the Forward, Inc. Landfill, Stockton, Ca. (September 14, 1992)


Development of Proposed Soil Remediation Levels for the Marine Corps Air-Ground Combat Center, 29 Palms, California (May 30, 1991)


**Military Bases**
Dr. Greenberg has experience in conducting assessments at DOD facilities, including RI/FS work, preparation of health risk assessments, evaluation of hazardous waste sites and hazardous materials use at the following Navy sites in California: San Diego Naval Base; Marine Corps Air-Ground Combat Center, 29 Palms; Mare Island Naval Shipyard, Vallejo; Treasure Island Naval Station, San Francisco; Hunters Point Naval Shipyard, San Francisco, and the Marine Corps Logistics Base, Barstow. He worked with the U.S. Navy and the U.S. EPA in the implementation of Data Quality Objectives (DQO’s) at MCLB, Barstow.

Examples

Review and Evaluation of the Remedial Investigation Report and Human Health Risk Assessment for the U. S. Naval Station at Treasure Island, Ca. (June 1999)

Screening Health Risk Assessment for the Proposed San Francisco Police Department’s Helicopter Landing Pad at Hunters Point Shipyard, San Francisco, Ca. (September 1997)

Development of Proposed Soil Remediation Levels for the Marine Corps Air-Ground Combat Center, 29 Palms, California (May 30, 1991)

Health Risk Assessment for the Chrome Plating Facility, Mare Island Naval Shipyard, Vallejo, California (October 24, 1988)

Background Levels and Health Risk Assessment of Trace Metals present at the Naval Petroleum Reserve No.1, 27R Waste Disposal Trench Area, Lost Hills, California (August 12, 1988)

RCRA Facility Investigation (RFI) Work Plan of Lead Oxide Contaminated Areas, Mare Island Naval Shipyard, Vallejo, California. Prepared in conjunction with Kaman Sciences Corp. (August 14, 1989)

Hazardous Waste and Solid Waste Audit and Management Plan, Mare Island Naval Shipyard, Vallejo, California. Prepared in conjunction with Kaman Sciences Corp. (July 3, 1989)

Water Quality Solid Waste Assessment Test (SWAT) Proposal RCRA Landfill, Mare Island Naval Shipyard, Vallejo, California. Prepared in conjunction with Kaman Sciences Corp. (October 31, 1988)


Sampling and Analysis Plan, Health and Safety Plan, Site Characterization of Lead Oxide Contaminated Areas, Mare Island Naval Shipyard, Vallejo, California. Prepared in conjunction with Kaman Sciences Corp. (September 2, 1988)

Air Quality Solid Waste Assessment Test (SWAT) Proposal, Mare Island Naval Shipyard, Vallejo, California. Prepared in conjunction with Kaman Sciences Corp. (August 25, 1988)

**Occupational Safety and Health/Health and Safety Plans/Indoor Air Quality**
Dr. Greenberg has significant experience in occupational safety and health, having directed the development, adoption, and implementation of over 50 different Cal/OSHA regulations, including airborne contaminants (>450 substances), lead, asbestos, and worker-right-to-know (MSDSs). He has conducted numerous occupational health surveys and has extensive experience in the sampling and analysis of indoor air quality at residences, workplaces, and school classrooms.

Examples

Preliminary Report on Indoor Air Quality in Elementary School Portable Classrooms, Marin County, Ca. (December 1999)

Health Risk Assessment Due to Diesel Train Engine Emissions, Oakland, Ca. (June 1999)

Air Pathway Analysis for the Ballard Canyon Landfill, Submitted to the County of Santa Barbara, (March 1999)


The Avila Beach Health Study Phase 1, Volume 2: Environmental Monitoring. (May 1998)

Phase 2 Human Health Risk Assessment, Teledyne Inc., San Diego, Ca. (February 1997)

Determination of Occupational Lead Exposure at a Tire Shop in Placerville, Ca. (April 1993)


Sampling and Analysis Plan, Health and Safety Plan, Site Characterization of Lead Oxide Contaminated Areas, Mare Island Naval Shipyard, Vallejo, California. Prepared in conjunction with Kaman Sciences Corp. (September 2, 1988)


Dr. Greenberg also has significant experience as a consultant and expert witness for the California Energy Commission providing analysis, recommendations, and testimony in the areas of hazardous materials management, process safety management, waste management, worker safety and fire protection, and public health impacts for proposed power plant/cogeneration facilities. These analyses include the evaluation and/or preparation of the following:

- Off-site consequence analyses of the handling, use, storage, and transportation of hazardous materials,
- Risk Management Plans (required by the Cal-ARP) and Business Plans (required by H&S Code section 25503.5),

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• Safety Management Plans (required by 8 CCR section 5189),
• Natural gas pipeline safety,
• Solid and hazardous waste management plans,
• Phase I and II Environmental Site Assessments,
• Construction and Operations Worker Safety and Health Programs,
• Fire Prevention Programs,
• Human health risk assessment from stack emissions and from diesel engines, and
• Mitigation measures to address PM exposure, including diesel particulates

Examples

• Inland Empire Energy Center, Romoland, Ca. 2002-3. hazardous materials, worker safety/fire protection, waste management, public health
• Malburg Generating Station Project, City of Vernon, Ca. 2002-3. hazardous materials, worker safety/fire protection, waste management, public health
• Blythe II, Blythe, Ca. 2002-3. hazardous materials, worker safety/fire protection,
• Palomar Energy Center, Escondido, Ca. 2002-3. hazardous materials, worker safety/fire protection, waste management, public health
• Cosumnes Power Project, Rancho Seco, Ca. 2002-3. hazardous materials, worker safety/fire protection, waste management, public health
• Tesla Power Project, Tesla, Ca. 2002-3. hazardous materials, worker safety/fire protection, waste management, public health
• San Joaquin Valley Energy Center, San Joaquin, Ca. 2002-3. hazardous materials, worker safety/fire protection, waste management
• Morro Bay Power Plant, Morro Bay, Ca., 2001-2: hazardous materials, worker safety/fire protection, waste management
• Potrero Power Plant Unit 7, San Francisco, Ca., 2001-2: hazardous materials, worker safety/fire protection
• El Segundo Power Redevelopment Project, El Segundo, Ca., 2001-2: hazardous materials, worker safety/fire protection, waste management
• Rio Linda Power Project, Rio Linda, Ca., 2001-2: hazardous materials, worker safety/fire protection, waste management, public health
• Pastoria II Energy Facility Expansion, Grapevine, Ca., 2001: hazardous materials, worker safety/fire protection
• East Altamont Energy Center, Byron, Ca., 2001-2: hazardous materials, worker safety/fire protection
• Magnolia Power Project, Burbank, Ca., 2001-2: hazardous materials, worker safety/fire protection, waste management, public health
• Russell City Energy Center, Hayward, Ca., 2001-2: hazardous materials, worker safety/fire protection, waste management
• Woodbridge Power Plant, Modesto, Ca., 2001: hazardous materials, worker safety/fire protection, waste management
• Colusa Power Plant Project, Colusa County, Ca., 2001-2: hazardous materials, worker safety/fire protection, waste management, public health
• Valero Refinery Cogeneration Project, Benicia, Ca., 2001: hazardous materials, worker safety/fire protection
• Ocotillo Energy Project, Palm Springs, Ca., 2001: hazardous materials, worker safety/fire protection
• Gilroy Energy Center Phase II Project, Gilroy, Ca., 2001-2: hazardous materials, worker safety/fire protection
• Los Esteros Critical Energy Facility, San Jose, Ca., 2001-2: hazardous materials, worker safety/fire protection, waste management, public health
• Roseville Energy Facility, Roseville, Ca., 2001-2: hazardous materials, worker safety/fire protection, waste management, public health
• Spartan Power, San Jose, Ca., 2001-2: hazardous materials, worker safety/fire protection, waste management, public health
• Inland Empire Energy Center, Romoland, Ca., 2001-2: hazardous materials, worker safety/fire protection, waste management, public health
• South Star Cogeneration Project, Taft, Ca., 2001-2: hazardous materials, worker safety/fire protection, waste management, public health
• Tesla Power Plant, Eastern Alameda County, Ca., 2001-2: hazardous materials, worker safety/fire protection, waste management, public health
• Tracy Peaker Project, Tracy, Ca., 2001-2: hazardous materials, worker safety/fire protection, waste management, public health
• Henrietta Peaker Project, Kings County, Ca., 2001: hazardous materials, worker safety/fire protection, waste management, public health
• Central Valley Energy Center, San Joaquin, Ca., 2001-2: hazardous materials, worker safety/fire protection, waste management, public health
• Cosumnes Power Plant, Rancho Seco, Ca., 2001-2: hazardous materials, worker safety/fire protection, waste management, public health
• Los Banos Voltage Support Facility, Western Merced County, Ca., 2001-2: waste management, public health
• Palomar Energy Project, Escondido, Ca., 2001-2: hazardous materials, worker safety/fire protection, waste management, public health
• Metcalf Energy Center, San Jose, Ca., 2000-1: hazardous materials
• Blythe Power Plant, Blythe, Ca., 2000-1: hazardous materials
• San Francisco Energy Co. Cogeneration Project, San Francisco, Ca., 1994-5: hazardous materials
• Campbell Soup Cogeneration Project, Sacramento, Ca., 1994: hazardous materials
• Proctor and Gamble Cogeneration Project, Sacramento, Ca., 1993-4: hazardous materials
• San Diego Gas and Electric South Bay Project, Chula Vista, Ca., 1993: hazardous materials
• SEPCO Project, Rio Linda, Ca., 1993: hazardous materials
• Shell Martinez Manufacturing Complex Cogeneration Project, Martinez, Ca., 1993: hazardous materials and review and evaluation of EIR
I, Amanda Stennick declare as follows:

1. I am presently employed by the California Energy Commission in the Siting, Transmission and Environmental Protection Division as a Planner III.

2. A copy of my professional qualifications and experience is attached hereto and incorporated by reference herein.

3. I helped prepare the staff testimony on Socioeconomics and Environmental Justice for the Stirling Solar Two based on my independent analysis of the Application for Certification and supplements hereto, data from reliable documents and sources, and my professional experience and knowledge.

4. It is my professional opinion that the prepared testimony is valid and accurate with respect to the issue addressed therein.

5. I am personally familiar with the facts and conclusions related in the testimony and if called as a witness could testify competently thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Dated: February 19, 2010

Signed:

At: Sacramento, California
Education
B.A., Urban and Economic Geography, University of California, Davis, 1986

Ms. Stennick is an environmental planner with more than 22 years experience in land use, socioeconomic, and public policy analysis for power plants and energy infrastructure, and industrial and residential development projects in California. Ms. Stennick has extensive professional planning experience in both the public and private sectors; her expertise includes NEPA and CEQA document preparation, land use analysis and regulatory requirements for Williamson Act cancellations, assessment of land use alternatives, socioeconomic and public policy analysis, and environmental justice analysis. A partial list of projects where she has written assessments or managed the preparation of environmental documents is provided below.

Land Use Assessment for Energy Projects

Ivanpah Solar Project (FSA/EIS)
Blythe Transmission Line (FSA/EIS)
Analysis of service district boundaries (LAFCO/San Diego County) Orange Grove Energy Project
Land use and Williamson Act analysis for Panoche Energy Center, Starwood Power Project, Pastoria Energy Facility, Hydrogen Energy California
Land use and California Coastal Act consistency analysis for Humboldt Bay Repowering City of Pittsburg Trans Bay Cable Project
LNG facility, Port of Long Beach, CA.

Environmental Justice Analysis

San Francisco Energy Cogeneration Project, Morro Bay Power Plant Project, El Segundo Power Redevelopment Project

Infrastructure Projects

Project Manager for EIR/EA for the Mammoth County Water District. Analyzed impacts resulting from lake water transfers and maintenance of in-stream flows in the Mammoth Lakes Basin; prepared land use, socioeconomics, recreation, and public services and utilities sections of EIR/EA.

Project Manager for Effluent Treatment Plant EIR for Simpson Paper Company (Humboldt County). Prepared land use, socioeconomics, recreation, public services and utilities, cumulative impacts sections, and mitigation monitoring.

Project Manager for Folsom/SAFCA Reoperation. Determined parameters of project description with respect to water modeling, project geographic boundaries, and agency jurisdictional boundaries; ensured compliance with federal, state, and local plans and policies.

Project Manager. Yolo County Powerline Ordinance. Developed land use policies and mitigation measures for placement of powerlines and substations in Yolo County.
Project Manager and principal author for Energy Component of the Public Services and Facilities Element of the Sacramento County General Plan.

Redevelopment and Residential Projects

Project Manager: EIR for a Planned Development, General Plan Amendment, and rezone request for a 504-acre Business and Industrial Park expansion for the Port of Sacramento. Prepared work scope and budget for Public Improvements Plan and Specific Plan for an 80-acre Mixed Use/Water Related development, including a Mitigation Monitoring Plan and Statement of Overriding Considerations for the City of West Sacramento. With CDFG, developed regional approach to mitigation for project-impacted endangered species.

Project Manager: EIR for the Wildhorse Residential/Recreational Planned Development, (Davis, CA). Prepared land use, project alternatives, cumulative impacts sections; determined project alternatives based on traffic models and allowable housing densities.

Professional and Continuing Education

California Environmental Quality Act (UC Davis, 1988)
Subdivision Map Act (UC Davis, 1989)
Fiscal Impact Analysis (UC Davis, 1991)
APAC Conference (San Francisco, 1994)
Environmental Justice Conference (UC Berkeley, 1994)
California Environmental Quality Act (California Energy Commission, 1998)
Roundtable on Environmental Justice US/Mexico Border 1999
Local Agency Formation Commission - LAFCO (UC Davis, 2000) 2000
Geographic Information System – GIS (UC Davis, 2005)
Mapping Your Community: GIS and Community Analysis (Sacramento, CA, 2006)
Conservation Strategies, Easements, and the Williamson Act (Valley Springs, CA, 2008)
Tribal Energy in California; Law Seminars International (Cabazon, CA, 2009)
I, Philip Lowe, declare as follows:

1. I am presently employed by Aspen Environmental Group, a contractor to the California Energy Commission, Siting, Transmission and Environmental Protection Division, as a Water Resources Professional.

2. A copy of my professional qualifications and experience is attached hereto and incorporated by reference herein.

3. I prepared the staff testimony on Hydrology, Water Use, and Water Quality for the SES Solar Two Project based on my independent analysis of the Application for Certification and supplements hereto, data from reliable documents and sources, and my professional experience and knowledge.

4. It is my professional opinion that the prepared testimony is valid and accurate with respect to the issue addressed therein.

5. I am personally familiar with the facts and conclusions related in the testimony and if called as a witness could testify competently thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Dated: February 10, 2010

Signed: [Signature]

At: Mesa, Arizona
PHILIP O. LOWE, P.E.
Senior Associate, Water and Earth Resources

ACADEMIC BACKGROUND
M.S. Watershed Management, University of Arizona, 1975
B.S. Wildlife Management, University of Arizona, 1973

REGISTRATIONS/CERTIFICATIONS
1988 Professional Engineer (Civil)/Arizona/21699
1996 Professional Engineer (Civil)/California/55258

PROFESSIONAL EXPERIENCE
Mr. Lowe is a senior engineer and project manager with 28 years experience in the hydrologic analysis of watersheds, water resources analysis, floodplain analysis, analysis and design of hydraulic structures, and channel erosion and sedimentation analysis. In addition to his engineering experience, Mr. Lowe is educated in wildlife ecology and watershed management. His responsibilities and experience include environmental permitting and environmental impact analysis under CEQA and NEPA and for the California Energy Commission. Typical projects managed by Mr. Lowe are in the following areas:

- Hydrologic analysis of watersheds
- Surface water hydraulic analysis
- Channel erosion and sedimentation analysis
- Design of flood control and erosion control structures
- Plan formulation and feasibility including benefit/cost analysis
- Environmental impact analysis
- U.S. Army Corps of Engineers 404 Permitting
- Habitat restoration and enhancement.

Relevant project experience includes:

- **Staff Assessment for Cosumnes Power Plant, California Energy Commission.** Mr. Lowe prepared the surface water and soils analysis in the Soil and Water Resources sections of the Final Staff Assessment for the Cosumnes Power Plant in Sacramento County.

- **Staff Assessment for Tracy Peaker Power Plant, California Energy Commission.** Mr. Lowe prepared the Soil and Water Resources section of the Final Staff Assessment for the proposed Tracy Peaker Power Plant near Tracy, California.

- **SONGS/Diablo Canyon Steam Generator Replacement Project Environmental Impact Report (EIR).** Mr. Lowe is currently responsible for the water resources analysis in preparation of an EIR for replacement of the steam generators at Southern California Edison’s San Onofre Nuclear Generating Station near San Clemente in San Diego County, as well as for a similar EIR for the Diablo Canyon nuclear power plant near San Luis Obispo.

- **Vermont Yankee Nuclear Power Plant, Vermont Department of Public Service, Water Resources Specialist (2008).** Mr. Lowe prepared the water resources section of an environmental impact evaluation of surface water impacts for the Vermont Yankee Nuclear Power Plant. The evaluation
PHILIP O. LOWE, P.E., page 2


- **Hydrology Specialist, Sunrise Powerlink Transmission Line EIR.** Mr. Lowe prepared the water resources section of an EIR/EIS for the Sunrise Powerlink transmission line. This power transmission project would extend from the Imperial Valley to San Diego in California. Portions of the project and project alternatives would pass through the Cleveland National Forest and the Anza-Borrego State Park.

- **Tehachapi Renewable Transmission Project (TRTP).** Mr. Lowe was responsible for baseline conditions analysis and quality control for water resources impact analysis for the TRTP power line Environmental Impact Report. TRTP includes a series of new and upgraded high-voltage electric transmission lines and substations to deliver electricity from new wind farms in eastern Kern County, California, to the Los Angeles Basin.

- **Devers/Palo Verde Transmission Line EIR, California Public Utilities Commission, Water Resources Specialist (2005 – 2006).** Mr. Lowe prepared the water resources section of an EIR/EIS for the Devers/Palo Verde transmission line project extending from the Palo Verde Nuclear Power Plant in Arizona to San Bernardino, California. One route alternative evaluated passed through the San Bernardino National Forest near Palm Springs, California.

- **Miguel Mission Transmission Line EIR.** Mr. Lowe prepared the hydrology and water resources section of this EIR being prepared on behalf of the California Public Utilities Commission evaluating a proposed 35-mile transmission line in San Mateo County. Work included preparation of an initial study prior to preparation of the EIR document.

- **Jefferson-Martin Transmission Line EIR.** Mr. Lowe prepared the hydrology and water resources section of this EIR being prepared on behalf of the California Public Utilities Commission evaluating a proposed 27-mile transmission line in San Mateo County.

- **Kinder Morgan Concord to Sacramento Pipeline EIR.** Mr. Lowe prepared the hydrology and water resources section of an EIR evaluating a proposed 70-mile petroleum products pipeline for the California State Lands Commission. Analysis includes consideration of potential for pipeline accidents to contaminate surface and groundwater in Contra Costa, Solano, and Yolo Counties.

- **Hydrology Specialist, Devers/Palo Verde Transmission Line EIR.** Mr. Lowe prepared the water resources section of an EIR/EIS for the Devers/Palo Verde transmission line project extending from the Palo Verde Nuclear Power Plant in Arizona to San Bernardino, California. One route alternative evaluated passed through the San Bernardino National Forest near Palm Springs, California.

- **Wood Canyon Ecosystem Restoration, Corps, Los Angeles District.** Mr. Lowe is currently responsible for a Detailed Project Report for riparian restoration of Wood Canyon Creek in Orange County, CA. The project involves hydrogeomorphic evaluation of stream functional capacity, and design of restoration features to increase functional capacity.

- **Hydrologic Analysis for the Pacific Pipeline EIS/SEIR, Kern and Los Angeles Counties.** As a subconsultant to Aspen and on behalf of the CPUC, Mr. Lowe was responsible for preparation of the hydrologic analysis section in support of an EIR/EIS under CEQA and NEPA for a 58-mile oil pipeline route originating in Kern County and terminating in Santa Clarita. The pipeline crosses 62 watercourses, including 24 that drain directly into water supply reservoirs. Mr. Lowe evaluated baseline conditions and potential groundwater, water quality, stream hydrology, hydraulic, and sediment transport impacts for each crossing of the proposed and alternate routes.

- **Matilija Dam Removal, U.S. Army Corps of Engineers Los Angeles District.** Mr. Lowe prepared the hydrology and water resources environmental impact analysis for the U.S. Army Corps of Engineers Environmental Impact Statement to evaluate effects of removal of the Matilija Dam on Matilija Creek in Ventura County, California.
Yellowstone Pipeline Environmental Impact Statement Hydrologic Analysis. Mr. Lowe was responsible for preparation of the hydrologic and hydraulic analysis in support of the Yellowstone Pipeline Environmental Impact Statement under NEPA for the Lolo National Forest in Montana. The 10-inch pipeline carries gasoline, diesel, and jet fuel between Missoula, Montana, and Cataldo, Idaho. Six alternative routes totaling approximately 300 miles in length are being investigated in detail. Mr. Lowe was responsible for evaluating potential hydrologic, hydraulic, sediment, groundwater, and water quality impacts along each alternative and at each stream crossing. Secondary impacts such as oil spills, rupture, or exposure of pipe through erosion or other impacts related to the stream are also evaluated. He assessed the severity of potential impacts, developing mitigation measures and prepared a report consistent with the format and guidelines required by NEPA.

San Vicente Reservoir Pipeline EIR Hydrologic Analysis. Mr. Lowe was a task leader responsible for the hydrologic and hydraulic analysis in support of an environmental impact report for a 28-mile pipeline to carry tertiary treated wastewater from the North City Wastewater Treatment Plant to San Vicente Reservoir in San Diego County, CA. Two alternative routes were investigated. Mr. Lowe evaluated potential hydrologic, hydraulic, sediment, groundwater, and water quality impacts along each alternative and at each stream crossing. Secondary impacts related to rupture or exposure of pipe through erosion or other impacts stream were also evaluated. Mr. Lowe also assessed the severity of potential impacts, developed mitigation measures and prepared a report consistent with the format and guidelines required by the California Environmental Quality Act (CEQA).

Crude Oil Pipeline Investigations and Hydraulic and Hydrologic Analyses of Oil Spill Sites for Counties in the States of Missouri, Kansas, and Texas. Mr. Lowe was project manager for an evaluation of oil spills from a network of hundreds of four- to eighteen-inch crude oil pipelines across the midwestern United States. Due to deterioration of the network, oil spills occurred over a three-state area, potentially impacting thousands of square miles of surface waters. Mr. Lowe performed a hydrologic analysis by regional equation method, determined probable limits of the waters of the U.S., and evaluated the extent or potential environmental impacts associated with the oil spills. Approximately 130 oil spill sites spread over several counties in the states of Missouri, Kansas, and Texas were investigated.

San Antonio Creek Reconnaissance Study, Upland, CA. Mr. Lowe was Project Manager of a reconnaissance study of San Antonio Creek for the U.S. Army Corps of Engineers. The study included a detailed hydraulic capacity analysis, floodplain analysis, general inventory of and valuation of floodplain structures, determination of potential without-project flood control and water supply benefits and development of potential flood control and water supply solutions along an 11-mile, urbanized reach to the San Antonio Creek flood control channel in western San Bernardino County, CA.

Environmental Constraints Analysis for a Residential Development in Apple Valley, CA. Mr. Lowe was responsible for preparation of an environmental constraints analysis for a proposed 1,100-acre development project in the Apple Valley area of San Bernardino County, CA. The constraints analysis was prepared as an Environmental Impact Report for developing acceptable land use criteria and mitigation measures for preliminary planning of the project. The analysis included an overall analysis of a surrounding 35,000-acre area for regional planning purposes. Environmental issues included endangered species (desert tortoise), flooding, earthquake faulting, traffic, land use, wildlife, vegetation, aesthetics, water supply, wastewater treatment, air quality, cultural resources, and paleontological resources.

Los Angeles Unified School District (LAUSD) Program Environmental Impact Report for New School Construction. Mr. Lowe prepared the water resources section for a program EIR for a new school construction program for the Los Angeles Unified School District. The purpose of the Program EIR was to establish a consistent process for CEQA review of future LAUSD projects proposed in the New School Construction program. The purpose of the program was to provide 200,000 new classroom seats in order to accommodate anticipated enrollment growth.
- **San Juan Creek River Management Plan, City of San Juan Capistrano.** Mr. Lowe was project manager for reconnaissance-level development of a comprehensive plan for erosion control, flood reduction, riparian vegetation, and wetland restoration and comprehensive management of San Juan Creek in Orange County. Long-term aggregate mining, agricultural use, urban runoff, channelization and piece-meal bank protection have caused significant degradation of the channel system, impacting water quality, beach sand supplies, and the functions and values of the ecosystem. The river management plan includes the removal of large drop structures and levee impoundments to facilitate movement of fish, re-establishment of a riffle-pool sequence with frequent, gentle low drops protected by riprap, re-establishment of riparian and wetland vegetation between riffles, and construction of gabion, riprap or articulated revetment bank protection to protect existing infrastructure.

- **Pacific Heights Environmental Impact Report for, Los Angeles County, CA.** Mr. Lowe was responsible for the preparation of an environmental impact report under CEQA for a 50-unit residential development on a 110-acre, designated significant ecological area in the community of Hacienda Heights, CA. EIR issue areas included biology, drainage, geology and soils, visual resources, traffic and access, land use and public services.

- **San Antonio Creek Hydraulic and Sediment Analysis, Vandenberg Air Force Base.** Severe accumulation of fine sediments in San Antonio Creek on Vandenberg Air Force Base resulted in loss of roadway access across the creek near the point where it enters the Pacific Ocean. Mr. Lowe was project manager responsible for a hydrologic, hydraulic and sediment transport analysis to determine sources and rate of sediment accumulation, and development of long-term crossing solutions.

- **Littleton Reservoir Sediment Transport Analysis, Angeles National Forest, California.** Mr. Lowe performed a sediment transport analysis for the Littleton Reservoir in the Angeles National Forest near Palmdale, California for the purpose of evaluating environmental impacts associated with reservoir dredging. The analysis consisted of an assessment of hydrologic conditions, field survey of river and reservoir topography and sediment conditions, hydraulic analysis using HEC-RAS, and sediment transport analysis using the HEC-RAS sediment transport package. Mr. Lowe developed sediment dredging alternatives and evaluated potential upstream impacts from the alternatives using sediment transport analysis.

- **Goldsborough Dam/Goldsborough Creek Restoration Study, U.S. Army Corps of Engineers, Mason County, Washington.** Mr. Lowe prepared a hydraulic and sediment transport analysis to evaluate the effects of removal of Goldsborough Dam for the purpose of restoring Goldsborough Creek in Washington State.

- **Los Angeles River Alternatives Study (LARAS).** Mr. Lowe was project manager for the LARAS study initiated by Los Angeles County to investigate alternatives to the US Army Corps of Engineers Los Angeles County Drainage Area feasibility plan for flood protection along the lower Los Angeles River in Los Angeles, CA. The LARAS Study conducted by Mr. Lowe involved engineering and environmental feasibility investigations of channel widening, use of existing sand and gravel mines as detention basins, re-operation of Whittier Narrows, Santa Fe and other reservoirs, raising Whittier Narrows Dam, watershed management solutions, detention in groundwater spreading basins, habitat restoration, water supply, and recreation.
DECLARATION OF
Steven Brown, PE

I, Steven Brown declare as follows:

1. I am presently employed by the California Energy Commission in the Siting, Transmission and Environmental Protection Division as a Contract Planner.

2. A copy of my professional qualifications and experience is attached hereto and incorporated by reference herein.

3. I prepared the staff testimony on Traffic and Transportation for the SES Solar Two Project based on my independent analysis of the Application for Certification and supplements thereto, data from reliable documents and sources, and my professional experience and knowledge.

4. It is my professional opinion that the prepared testimony is valid and accurate with respect to the issue addressed therein.

5. I am personally familiar with the facts and conclusions related in the testimony and if called as a witness could testify competently thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Dated: February 9, 2010 Signed: ______________________

At: Sacramento, California
EXPERIENCE RECORD

Transportation Planning

- North Natomas Community Plan, Sacramento, CA
- Southeast Area Transportation Plan, Sacramento, CA
- East Elk Grove Community Plan, Sacramento County, CA
- Clackamas County Neo-Traditional Community Plan, Portland, OR
- Sutter Bay Master Plan, Sutter County, CA

Environmental Impact Reports (Transportation)

- El Dorado River Management Plan, El Dorado County, CA
- Material Recovery Facilities, Sacramento, CA
- Granite Park Master Plan, Sacramento, CA
- Oyster Point, South San Francisco, CA
- Lent Ranch, Sacramento, CA

Traffic Impact Analysis

- Pendland Parkway Circulation Plan, Anchorage, AK
- Sierra Ski Ranch Expansion, El Dorado County, CA
- Woodlake Hills Subdivision, Spokane, WA
- Benicia Library Expansion, Benicia, CA
- Cub Foods Discount Supermarket, Chico, CA

Community Involvement/Facilitation

- Midtown NPTP Advisory Committee, Sacramento, CA
- Stockton Boulevard Improvement Committee, Sacramento, CA
- Reno Parking Committee, Reno, NV
- Street Standards Committee, Sacramento, CA
- City/County Bicycle Advisory Committee, Sacramento, CA

Freeway/Interchange Studies

- East Folsom Interchange Studies, Folsom, CA
- North Natomas Freeway-related Improvements, Sacramento, CA
- Applegate Road/Highway 99 Project Study Report, Merced, CA
- Sutter Bay Boulevard/Highway 99 Project Study Report, Sutter County, CA
- Madison Avenue/Interstate 80 Project Study Report, Sacramento, CA

Parking Facilities

- Downtown Reno Parking Master Plan, Reno, NV
- Alta Bates/Herrick Hospital Parking Studies, Berkeley, CA
- North Beach Parking Garage, San Francisco, CA
- Capitol Towers, Sacramento, CA
- Serramonte Shopping Center, Redwood City, CA
Transportation Systems Management

- John Muir Hospital, Walnut Creek, CA
- Landmark Plaza, Larkspur, CA
- Coral Business Center, Sacramento, CA
- Gateway Business Park, South San Francisco, CA
- North of Del Paso Residential Area, Sacramento, CA

Bicycle/Transit/Pedestrian

- King's County Bicycle Master Plan, Kings County, CA
- Staff to City/County Bicycle Advisory Committee, Sacramento, CA
- Freeport Boulevard Bicycle Lanes, Sacramento, CA
- North Natomas Transit & Shuttle Systems, Sacramento, CA
- Small Electric Vehicle System, Sutter County, CA

EDUCATION

University of California at Berkeley, B.S. in Civil Engineering, 1985 (Honors)
University of California at Berkeley, M.S. in Transportation, 1987 (Fellow)
Golden Gate University, Masters in Business Administration, 1998

LICENSE

Licensed Professional Traffic Engineer, State of California (TR1510)

PREVIOUS POSITIONS

City of Sacramento, Supervising Engineer (3/95-3/97)
Kittelson & Associates, Office Manager (7/92-3/95)
Fehr & Peers Associates, Associate (6/87-7/92)

LECTURES

Livable Communities, UC Davis Extension Program, 1997
Transportation Aspects of CEQA, Sacramento State University, 1997
Traffic Calming, Sacramento State University, 1997
Neo-traditional Design, UC Davis Extension Program, 1995
Sustainable Communities, Clackamas County, 1994

PUBLICATIONS

Calming the Community (Traffic Calming in Downtown Sacramento), co-authored with Steve Fitzsimons, ITE National and District 6 Conf., 1997.
I, Obed Odoemelam declare as follows:

1. I am presently employed by the California Energy Commission in the Facilities Siting, Transmission, and Environmental Protection Division as a Staff Toxicologist.

2. A copy of my professional qualifications and experience is attached hereto and incorporated by reference herein.

3. I helped prepare the staff testimony on Transmission Line safety and Nuisance for the Stirling Engine Solar Two Project based on my independent analysis of the Application for Certification and supplements thereto, data from reliable documents and sources, and my professional experience and knowledge.

4. It is my professional opinion that the prepared testimony is valid and accurate with respect to the issue addressed therein.

5. I am personally familiar with the facts and conclusions related in the testimony and if called as a witness could testify competently thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Dated: ________________  Signed: ____________________________

At: Sacramento, California
RESUME

DR. OBED ODOEMELAM

EDUCATION:

1979-1981 University of California, Davis, California. Ph.D., Ecotoxicology
1972-1976 University of Wisconsin, Eau Claire, Wisconsin. B.S., Biology

EXPERIENCE:

1989
The Present: California Energy Commission. Staff Toxicologist.

Responsible for the technical oversight of staffs from all Divisions in the Commission as well as outside consultants or University researchers who manage or conduct multi-disciplinary research in support of Commission programs. Research is in the following program areas: Energy conservation-related indoor pollution, power plant-related outdoor pollution, power plant-related waste management, alternative fuels-related health effects, waste water treatment, and the health effects of electromagnetic fields. Serve as scientific adviser to Commissioners and Commission staff on issues related to energy conservation. Serve on statewide advisory panels on issues related to multiple chemical sensitivity, ventilation standards, electromagnetic field regulation, health risk assessment, and outdoor pollution control technology. Testify as an expert witness at Commission hearings and before the California legislature on health issues related to energy development and conservation. Review research proposals and findings for policy implications, interact with federal and state agencies and industry on the establishment of exposure limits for environmental pollutants, and prepare reports for publication.


Responsible for assessing the potential impacts of criteria and noncriteria pollutants and hazardous wastes associated with the construction, operation and decommissioning of specific power plant projects. Testified before the Commission in the power plant certification process, and interacted with federal and state agencies on the establishment of environmental limits for air and water pollutants.

1983-1985 California Department of Food and Agriculture.

Environmental Health Specialist.

Evaluated pesticide registration data regarding the health and environmental effects of agricultural chemicals. Prepared reports for public information in connection with the eradication of specific agricultural pests in California.
DECLARATION OF
William D. Kanemoto

I, William Kanemoto, declare as follows:

1. I am presently under contract with Aspen Environmental Group, a contractor to the California Energy Commission, Systems Assessment and Facilities Siting Division. I am serving as a Visual Resource Specialist to provide Peak Workload Support for the Energy Facility Siting Program and for the Energy Planning Program.

2. A copy of my professional qualifications and experience is attached hereto and incorporated by reference herein.

3. I prepared staff testimony on Visual Resources for the SES Solar 2 Project based on my independent analysis of the Application for Certification and supplements hereto, data from documents and sources deemed to be reliable, and my professional experience and knowledge.

4. It is my professional opinion that the prepared testimony is valid and accurate with respect to the issues addressed therein.

5. I am personally familiar with the facts and conclusions applicable to the vapor plume simulations and if called as a witness could testify competently thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Dated: February 10, 2010

At: Oakland, California
William Kanemoto
Visual Resource/Aesthetics Analyst

Academic Background:

M. Landscape Architecture, University of Michigan, Ann Arbor, 1982
B.A. Liberal Arts (Honors), University of California, Santa Cruz, 1973

Professional Experience:

Principal
William Kanemoto & Associates, Oakland, California, 1993 - Present

William Kanemoto is Principal of William Kanemoto & Associates, an environmental consulting practice specializing in visual analysis and computer visualization in the context of environmental review. In this capacity he has served as principal investigator for visual analysis and simulation on a wide range of major infrastructure and development projects, including the High Desert Power Project AFC, Port of Oakland Expansion EIS, Route 4 East/Pittsburg BART EIS, FMC Substation and Transmission Line PEA, and numerous other infrastructure and transportation projects. Mr. Kanemoto received recognition from the California Association of Environmental Professionals for visual analysis, computer simulation, animation, and video production for the Stanford Sand Hill Road Projects EIR, prepared by EIP Associates and judged 'Best State-Wide EIR of 1997'.

Associate Director
Environmental Simulation Laboratory,
Institute of Urban and Regional Development,
Center for Environmental Design Research
University of California, Berkeley, 1994 - 2000

Instructed graduate students in the College of Environmental Design, U.C. Berkeley, served as consultant on various major planning projects in the San Francisco Bay Area, and conducted design collaborations with counterparts at Keio University and ARK CyberUniversity in Tokyo, Japan via the Internet.

Principal Investigator/Project Manager
Dames & Moore, San Francisco/Oakland, California, 1988-1992

Served as principal investigator of numerous visual analyses of major infrastructure projects throughout the U.S., in Europe, and in Asia. Gained extensive familiarity with the application of a wide range of professionally accepted visual assessment techniques in the context of CEQA, NEPA, and related regulatory requirements of the CPUC, CEC, FERC, DOT, U.S. Forest Service, BLM, and other agencies.

Project Manager

Project manager and planner on environmental impact reports for various residential and commercial development projects in northern California.

Environmental Planner
Holton Associates, Berkeley, California, 1984-1987

Preparation of various resource and regulatory studies including EIRs, FERC Exhibit E, Section 404 alternative analyses, riparian restoration studies, and cumulative impact methodology studies for EPRI and Sierra County, CA.
DECLARATION OF
Suzanne L. Phinney, D.Env.

I, Suzanne L. Phinney, declare as follows:

1. I am presently employed by Aspen Environmental Group, consultant to the California Energy Commission’s Facilities Siting Office of the Systems Assessments and Facilities Siting Division as a Senior Associate.

2. A copy of my professional qualifications and experience is attached hereto and incorporated by reference herein.

3. I helped prepare the staff testimony on Waste Management for the SES Solar Two Licensing Case Project based on my independent analysis of the Application for Certification and supplements hereto, data from reliable documents and sources, and my professional experience and knowledge.

4. It is my professional opinion that the prepared testimony is valid and accurate with respect to the issue addressed therein.

5. I am personally familiar with the facts and conclusions related in the testimony and if called as a witness could testify competently thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Dated: February 8, 2010
Signed: __________________________

At: Sacramento, California
SUZANNE L. PHINNEY  
Senior Associate, Energy and Infrastructure

ACADEMIC BACKGROUND

Doctorate, Environmental Science & Engineering (D.Env.), University of California, Los Angeles, 1981  
M.S., Marine Biology, Dalhousie University, Halifax, Nova Scotia, Canada, 1975  
B.A., Biological Sciences, University of California, Berkeley, 1973

PROFESSIONAL EXPERIENCE

Dr. Phinney has 30 years of experience in the environmental and energy field, providing technical and policy support in energy analysis, environmental assessment, environmental remediation, air and water quality assessments, risk assessment, regulatory compliance, permitting, and project/program management. Her particular emphasis is energy and infrastructure with projects addressing climate change, alternative energy generation technologies, liquefied natural gas, petroleum infrastructure, advanced transportation vehicles and fuels, land use and energy, and power plant siting. Prior to employment at Aspen, Dr. Phinney worked for 16 years with Aerojet, where she oversaw all environmental and safety issues.

Aspen Environmental Group 2001 to present

Dr. Phinney manages energy and infrastructure projects for Aspen and provides environmental support on major projects. She has provided energy and environmental expertise to the following clients:

California Energy Commission (CEC). Dr. Phinney has supported CEC staff since 2001. She has prepared analyses for several power plants throughout the State, and has authored or contributed to over a dozen special studies. She is currently Deputy Program Manager for planning studies conducted by the Aspen team. Her major efforts for the CEC include the following.

■ Power Plant Siting, CEC, Project Management/Technical Support (2001 – Present). Dr. Phinney prepared the alternatives analysis for the following power plants under review by the Energy Commission:
  ■ Palomar Energy Project – 500 MW combined-cycle natural gas facility in Escondido, San Diego County
  ■ Russell City Energy Center – 600 MW combined-cycle natural gas facility in Hayward, Alameda County
  ■ Eastshore Energy Center - 115.5 MW simple-cycle natural gas facility in Hayward, Alameda County
  ■ Carrizo Energy Solar Farm – 177 MW solar thermal (Compact Linear Fresnel Reflector) plant in the Carrizo Plain, San Luis Obispo County
  ■ CPV Sentinel Energy Project – 850 MW natural gas plant in the Coachella Valley, Riverside County
  ■ Marsh Landing Generating Station- 930 MW natural gas plant within the existing Contra Costa Power Plant in Antioch, Contra Costa County
  ■ Orange Grove Project – 96 MW natural-gas peaking facility near Pala, San Diego County
  ■ Willow Pass Generating Station – 550 MW natural gas plant within the existing Pittsburg Power Plant in Pittsburg, Contra Costa County
- **Almond 2 Peaking Power Plant Project** – 174 MW natural-gas peaking facility near Ceres, Stanislaus County
- **Abengoa Mojave Solar Project** – 250 MW solar thermal (parabolic trough) plant near Harper Dry Lake, San Bernardino County
- **Ridgecrest Solar Power Project** – 250 MW solar thermal (parabolic trough) plant on 3,920 acres of BLM land near Ridgecrest, Kern County

Dr. Phinney prepared the waste management assessments of power plant licensing applications:
- **Eastshore Energy Center** – 115.5 MW natural gas simple-cycle plant in Hayward, Alameda County
- **Carrizo Energy Solar Farm** – 177 MW solar thermal (Compact Linear Fresnel Reflector) plant in the Carrizo Plain, San Luis Obispo County
- **Palmdale Hybrid Power Project** – 570 MW natural gas-solar thermal (parabolic trough) hybrid plant in Palmdale, Los Angeles County
- **SES Solar Two Siting Case** – 750 MW solar thermal (Stirling dish) plant on 6,500 acres of mostly BLM land in Imperial County
- **Hanford Energy Park Peaker Plant** – 120 MW simple-cycle, natural gas facility in Hanford, Kings County
- **Ridgecrest Solar Power Project** – 250 MW solar thermal (parabolic trough) plant on 3,920 acres of BLM land near Ridgecrest, Kern County
- **Blythe Solar Power Project** – 1,000 MW solar thermal (parabolic trough) plant on 9,400 acres of BLM land near Blythe, Riverside County
- **Palen Solar Power Project** – 500 MW solar thermal (parabolic trough) plant on 5,200 acres of BLM land in the Chuckwalla Valley, Riverside County

Dr. Phinney also coordinated the study of cooling water alternatives for the Tesla and Tracy natural gas, combined-cycle power plants.

- **Environmental Performance Report, CEC, Project Manager/Technical Support (2001, 2003, 2005)**. Dr. Phinney was Project Manager for Aspen’s technical contributions, graphics and production efforts for the 2001 Environmental Performance Report (EPR) which detailed the current and historical air, water and biological impacts from in-state generation facilities. She provided support to the water resources discussion in the 2003 EPR and managed the analysis of out-of-state generation facilities for the 2005 EPR.

- **Advanced Electric Generation Technologies, CEC, Project Manager (2001 - 2002)**. Dr. Phinney served as Project Manager for a report defining the technical development, developmental capacity, commercial status, costs and deployment constraints of selected alternative electric generation technologies. Technologies included geothermal, fuel cell, solar thermal, solar photovoltaic, wind and hydro. The focus was on development and application of the technology in California. Two page fact sheets on each technology and a matrix comparing all technologies was developed. Finally, an updated discussion of renewable technologies was developed for insertion into the alternatives section of Staff Assessments for power plant applications.

- **Liquefied Natural Gas Support, CEC, Technical Author (2002 – 2007)**. Dr. Phinney has been instrumental in the preparation of numerous safety and policy reports on liquefied natural gas (LNG). She authored the Commission document: *International and National Efforts to Address the Safety and Security of Importing Liquefied Natural Gas: A Compendium*. This report reviewed national and international LNG regulations, standards and guidelines, reviewed risk assessment techniques, and identified, compiled and reviewed LNG safety/risk studies. Dr. Phinney helped organize LNG Access Workshops held in June 2005 and prepared a 40 page summary of presentations made at the workshops. She developed over 30 fact sheets on LNG subject areas for distribution to the public. Dr. Phinney compiled state and local comments on a proposed LNG terminal at the Port of Long Beach;
these were presented in the Safety Advisory Report on the Proposed Sound Energy Solutions Natural Gas Terminal at the Port of Long Beach, California, which was delivered to the Federal Energy Regulatory Commission within the mandated 30-day period imposed by the 2005 federal Energy Bill. She provided technical review for the report The Outlook for Global Trade in Liquefied Natural Projections to the year 2020.


- **Petroleum Infrastructure Environmental Performance Report, CEC, Project Manager (2005).** Dr. Phinney served as Project Manager for the 2005 IEPR document Petroleum Infrastructure Environmental Performance Report. In addition to managing preparation of the report and workshop presentations, she prepared responses to comments and provided policy recommendations.

- **Hydropower and Global Climate Change, CEC, Technical Author (2005).** Dr. Phinney coauthored the document Potential Changes in Hydropower Production from Global Climate Change in California and the Western United States. This report investigated the effects of climate change on hydropower production in the West and compared impacts and policy actions in California, the Pacific Northwest, and the Southwest.

- **Advanced Energy Pathways, CEC, Project Manager (2006 – 2008).** Dr. Phinney provided project management support for a 3-year study evaluating the effects of advanced transportation technologies and fuels (out to 2050) on California’s natural gas and electricity systems. This report involved the development of baseline and alternative energy demand and supply scenarios, in-depth technical analysis of advanced transportation technologies and fuels, and the development of an energy-rich model.

- **Land Use and Energy, CEC, Project Manager/Technical Author (2006 – 2008).** Dr. Phinney authored a CEC report on the linkages between land use and energy, which ultimately became one of the two chapters presented in the 2006 IEPR Update. The report highlighted how energy can be better integrated in land use planning, and how efforts such as smart growth can help the state meet its energy and greenhouse gas emission reduction goals. She organized a full-day workshop involving over a dozen speakers representing state agencies, local governments, research entities, environmental groups, utilities, and non-profits. Dr. Phinney was one of the authors of the 2007 land use and energy follow-up report which further defined the role of land use in meeting California’s energy and climate change goals. She helped synthesize the report into a chapter for the 2007 IEPR. Dr. Phinney helped edit the Land Use Subgroup of the Climate Action Team report prepared for submission to the California Air Resources Board AB 32 Scoping Plan.

- **AB 1632 Nuclear Power Plant Assessment, CEC, Technical Author (2007 – 2008).** Dr. Phinney was a key member of a team evaluating nuclear power issues in the state in response to AB 1632 legislation. She managed and prepared report sections regarding the impacts to local communities and the environmental issues and costs associated with alternatives, including renewables, to the state’s two nuclear facilities. These sections were incorporated in the report An Assessment of California’s Nuclear Power Plants.

- **Environmental Screening Tool for Out-of-State Renewable Energy Facilities, CEC, Project Manager (2009).** Dr. Phinney prepared an environmental screening tool/analysis allowing CEC to determine quickly whether out-of-state renewable facilities requesting RPS certification met California laws, ordinances, regulations and standards.
- **Energy Aware Facility Planning and Siting Guide, CEC, Project Manager (2009-2010).** Dr. Phinney is updating a 1997 version of the Energy Aware Guide to help local governments plan for and permit electricity generation facilities and transmission lines that will be needed in the upcoming years. The Guide informs planners, decision makers and the public about what, how, and why electricity infrastructure may be developed.

**California Public Utilities Commission.** Dr. Phinney has managed several environmental assessments for the CPUC and has been heavily involved in editorial support of many other CPUC documents prepared by Aspen.

- **Looking Glass Network Initial Study/Mitigated Negative Declaration, CPUC, Project Manager (2002 – 2003).** Dr. Phinney served as Project Manager for the preparation of Initial Study/Mitigated Negative Declarations (IS/MND) for this telecommunication project that involved construction in the San Francisco Bay Area and the Los Angeles Basin to allow fiber optic connections in numerous locations.

- **Williams Communications Sentry Marysville Project IS/MND, CPUC, Project Manager (2002 – 2003).** Dr. Phinney served as Project Manager for the installation of fiber optic connection to a Beale Air Force Base in Yuba County.

- **Kirby Hills II Natural Gas Storage Facility IS/MND, CPUC, Project Manager (2007).** Dr. Phinney managed an IS/MND for expansions at a natural gas storage facility in Solano County.

- **Multiple EIR Documents, CPUC, Technical Editor (2004 - 2008).** Dr. Phinney provided editorial and QA/QC review for the Diablo Canyon Steam Generator Replacement EIR, the Miguel Mission 230 kV Transmission Line EIR and the Sunrise Powerlink EIR/EIS.

**California Institute of Technology/University of California.** Dr. Phinney provided project management support to the following project.

- **Combined Array for Research in Millimeter-wave Astronomy EIS/EIR, U.S. Forest Service and the University of California (2001 – 2002).** Dr. Phinney was the Project Manager for this EIS/EIR for a radio telescope antenna array to be placed at a high altitude site in the Inyo National Forest. The evaluation of alternatives was especially contentious, and Aspen’s field analyses of several potential sites were pivotal in the ultimate selection of one of these alternative sites.

**Western Area Power Administration.** Dr. Phinney provided editorial and QA/QC support to the following projects.

- **North Area ROW Maintenance Project Environmental Assessment, Western, Technical Editor/QA/QC (2006-2008).** Dr. Phinney provided technical editing and QA/QC support for all documents relating to the development of 800 miles of transmission lines in Northern California.

- **Sacramento Area Voltage Support Supplemental EIS/EA, Technical Editor/QA/QC (2006 – 2008).** Dr. Phinney provided technical editing and QA/QC support for all environmental documentation and permitting for new construction and reconstruction of transmission lines in the greater Sacramento area.

**Vermont Yankee Nuclear Power Plant Report, Vermont Department of Public Service, Project Manager (December 2008 to January 2009).** Dr. Phinney was the Project Manager and provided technical support for the environmental analysis of the continued operation of the Vermont Yankee Nuclear Power Station in Vernon, Vermont. The report assessed the environmental impacts to land, water and air resources (including climate change), soil and seismicity, on-site and off-site storage and disposal of high-level and low-level nuclear waste.
SUZANNE L. PHINNEY, D. ENV., page 5

GenCorp 1999 to 2000

- As Vice President, Environmental and Regulatory Affairs, Dr. Phinney held primary responsibility for coordinating the company’s aerospace and automotive environmental activities with various federal, State, and local regulatory agencies. Her specific responsibilities included: working with external groups and entities to develop responsible environmental legislation, regulations, and standards and the implementation of sound public policy; developing stakeholder base and strategy to ensure that company objectives were achieved; facilitating company and regulatory agency discussions to achieve more comprehensive and quicker remediation of sites; and spearheading a stakeholder group to develop and fund scientific studies on selected chemicals of concern.

Aerojet General Corporation 1984 to 1999

As Vice President, Environmental Health and Safety, Dr. Phinney ensured that programs were in place to meet all regulatory requirements and company initiatives. Her responsibilities included: providing strategic direction and management of all superfund-related investigation and remediation activities; developing environmental management plans; communicating environmental requirements, concerns, and successes to both internal and external audiences, including the board of directors, investment banking, and the analyst community; and participating as a member of the leadership council in defining company-wide business objectives and targets.

- Dr. Phinney created the first corporate EHS department, defining and staffing key functional areas. She managed a $20,000,000 annual budget and oversaw a staff of up to 30 professionals. Select accomplishments include: the development of remediation technologies that resulted in the cleanup of over 50 billion gallons of contaminated groundwater; development of the world’s first groundwater treatment facility for perchlorate; significant reductions in emissions and hazardous waste generation; representation on numerous legislative and regulatory task forces and leadership positions on external business and community EHS committees and councils; and extensive public outreach efforts.

Previous Experience, 1976 to 1984

Jacobs Engineering Group. Dr. Phinney conducted toxicological, ecological, and air and water quality assessments.

Department of Environmental Science and Engineering at the University of California, Los Angeles. Dr. Phinney analyzed legal, economic, public health, and administrative barriers to waste water reuse. She also conducted an analysis of ecological and institutional factors in coastal siting of power plants.

Southwest Los Angeles Junior College. Dr. Phinney taught lecture and laboratory courses in general science.

Training

- Certificate, Executive Program, University of California, Davis, 1989

Honors and Awards

- Who’s Who of American Women, 18th Edition
- YWCA Outstanding Woman of the Year (Sciences) Award, 1992
- Woman of Achievement Award, Downtown Capitol Business and Professional Women, 1993
- Individual Award for Outstanding Contribution in Air Quality, 1995
- Sacramento Safety Center Incorporated, Eagle Award for Safety, 1998
- Regional Award for Outstanding Contribution in Air Quality, 2003
ACTIVITIES AND ASSOCIATIONS

- Editorial Board, The Environmental Professional, 1987-1989
- City of Sacramento Toxic Substances Commission, 1986-1988
- Board of Directors, League of Women Voters of Sacramento, 1989-1999; President 1996-1997; Co-President 1997-1998; 2003-2005; Energy Study Committee 2005; Moderator/Facilitator of Debates and Forums (e.g., climate change, the SACOG’s MTP, and flood control)
- Member, Advisory Committee on AB 3777 (Risk Management Prevention Programs)
- Board of Directors, American Lung Association of Sacramento-Emigrant Trails, 1992-2000; President 1998-1999;
- Board of Directors, Sacramento Metropolitan Chamber of Commerce, 1992-1997; Vice President, Public Policy, 1996-1997
- Board of Directors, Air and Waste Management Association, 1991-1994
- Steering Committee Chair, Cleaner Air Partnership, 1993-1996, 2000-2001; Executive Committee 1993 to present
- Co-chair, TCE Issues Group, 1994-2000
- Rate Advisory Committee, Sacramento Municipal Utility District, 1999-2001

SELECTED PUBLICATIONS/PRESENTATIONS


Phinney, S.L., Guest Speaker, Sacramento County Bar Association, Environmental Law Section, Sacramento, California, 1991.


DECLARATION OF  
SHAHAB KHOSHMASHRAB

I, SHAHAB KHOSHMASHRAB, declare as follows:

1. I am presently employed by the California Energy Commission in the ENGINEERING OFFICE of the Facilities Siting Division as a MECHANICAL ENGINEER.

2. A copy of my professional qualifications and experience is attached hereto and incorporated by reference herein.

3. I participated in the preparation of the staff testimony on Facility Design for the SES Solar Two project based on my independent analysis of the Application for Certification and supplements thereto, data from reliable documents and sources, and my professional experience and knowledge.

4. It is my professional opinion that the prepared testimony is valid and accurate with respect to the issues addressed therein.

5. I am personally familiar with the facts and conclusions related in the testimony and if called as a witness could testify competently thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Dated: ___________________    Signed: ____________________

At:  Sacramento, California
I, SHAHAB KHOSHMASHRAB, declare as follows:

1. I am presently employed by the California Energy Commission in the ENGINEERING OFFICE of the Facilities Siting Division as a MECHANICAL ENGINEER.

2. A copy of my professional qualifications and experience is attached hereto and incorporated by reference herein.

3. I participated in the preparation of the staff testimony on Power Plant Efficiency for the SES Solar Two project based on my independent analysis of the Application for Certification and supplements thereto, data from reliable documents and sources, and my professional experience and knowledge.

4. It is my professional opinion that the prepared testimony is valid and accurate with respect to the issues addressed therein.

5. I am personally familiar with the facts and conclusions related in the testimony and if called as a witness could testify competently thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Dated: ___________________    Signed: ____________________

At: Sacramento, California
DECLARATION OF  
SHAHAB KHOSHMASHRAB

I, SHAHAB KHOSHMASHRAB, declare as follows:

1. I am presently employed by the California Energy Commission in the ENGINEERING OFFICE of the Facilities Siting Division as a MECHANICAL ENGINEER.

2. A copy of my professional qualifications and experience is attached hereto and incorporated by reference herein.

3. I participated in the preparation of the staff testimony on Power Plant Reliability for the SES Solar Two project based on my independent analysis of the Application for Certification and supplements thereto, data from reliable documents and sources, and my professional experience and knowledge.

4. It is my professional opinion that the prepared testimony is valid and accurate with respect to the issues addressed therein.

5. I am personally familiar with the facts and conclusions related in the testimony and if called as a witness could testify competently thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Dated: ___________________    Signed: ____________________

At: Sacramento, California
Shahab Khoshmashrab
Mechanical Engineer

Experience Summary

Nine years experience in the Mechanical, Civil, Structural, and Manufacturing Engineering fields involving engineering and manufacturing of various mechanical components and building structures. This experience includes QA/QC, construction/licensing of electric generating power plants, analysis of noise pollution, and engineering and policy analysis of thermal power plant regulatory issues.

Education

- California State University, Sacramento-- Bachelor of Science, Mechanical Engineering
- Registered Professional Engineer (Mechanical), California

Professional Experience

2001-2004--Mechanical Engineer, Systems Assessment and Facilities Siting– California Energy Commission

Performed analysis of generating capacity, reliability, efficiency, noise and vibration, and the mechanical, civil/structural and geotechnical engineering aspects of power plant siting cases.

1998-2001--Structural Engineer – Rankin & Rankin

Engineered concrete foundations, structural steel and sheet metal of various building structures including energy related structures such as fuel islands. Performed energy analysis/calculations of such structures and produced structural engineering detail drawings.

1995-1998--Manufacturing Engineer – Carpenter Advanced Technologies

Managed manufacturing projects of various mechanical components used in high tech medical and engineering equipment. Directed fabrication and inspection of first articles. Wrote and implemented QA/QC procedures and occupational safety procedures. Conducted developmental research of the most advanced manufacturing machines and processes including writing of formal reports. Developed project cost analysis. Developed/improved manufacturing processes.
DECLARATION OF
Testimony of Dal Hunter, Ph.D., C.E.G.

I, Dal Hunter, Ph.D., C.E.G., declare as follows:

1. I am presently employed as a subcontractor to Aspen Environmental Group, a contractor to the California Energy Commission, Systems Assessment and Facilities Siting Division, as an Engineering Geologist.

2. A copy of my professional qualifications and experience is attached hereto and incorporated by reference herein.

3. I helped prepare the staff testimony on GEOLOGY AND PALEONTOLOGY for the Stirling Energy Systems Solar Two Project based on my independent analysis of the Application for Certification and supplements hereto, data from reliable documents and sources, and my professional experience and knowledge.

4. It is my professional opinion that the prepared testimony is valid and accurate with respect to the issue addressed therein.

5. I am personally familiar with the facts and conclusions related in the testimony and if called as a witness could testify competently thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Dated: February 10, 2010

At: Black Eagle Consulting, Inc.
    Reno, Nevada
Robert D. Hunter, Ph.D., C.E.G.
Engineering Geologist
Vice President

Education

- Ph.D. – Geology – 1989 – University of Nevada, Reno
- M.S. – Geology – 1976 – University of California - Riverside
- B.S. – Earth Science – 1972 – California State University, Fullerton

Registrations

- Professional Geological Engineer – Nevada
- Registered Geologist – California
- Certified Engineering Geologist – California

Experience

1997 to Present: Black Eagle Consulting, Inc.; Vice President. Dr. Hunter is in charge of all phases of geochemical, geological, and geotechnical projects and is responsible for conducting, coordinating, and supervising geotechnical investigations for public and private sector clients. He is very familiar with design specifications and state and federal requirements.

Dr. Hunter has also provided geological, geotechnical, and paleontological review and written and oral testimony for California Energy Commission (CEC) power plant projects including:

- El Segundo Power Redevelopment Project (Coastal, including testimony and compliance monitoring)
- Magnolia Power Project (including compliance monitoring
- Ocotillo Energy Project (Wind Turbines)
- Vernon-Malburg Generating Station
- Inland Empire Energy Center (including testimony and compliance monitoring)
- Palomar Energy Project
- Henrietta Peaker Project
- East Altamont Energy Center
- Avenal Energy Center
- Teayawa Energy Center monitoring
- Walnut Energy Center (including compliance monitoring
- Riverside Energy Resource Center
- Salton Sea Unit 6 (Geothermal Turbines)
- National Modoc Power Plant
- Pastoria Energy Center
- Sun Valley Energy Project
- El Centro Unit 3 Repower Project
- AES Highgrove Project
- South Bay Replacement Project
- Vernon Power Plant
1978 to 1997: SEA, Incorporated; Geotechnical Manager, Engineering Geologist. Dr. Hunter was in charge of all phases of geotechnical projects for SEA, including project coordination and supervision, field exploration, geotechnical analysis, slope stability analysis, soil mechanics, engineering geochemistry, mineral and aggregate evaluations, and report preparation. Numerous investigations were undertaken on military, commercial, industrial, airport, residential, and roadway projects. He worked on many geothermal power plants, providing expertise in foundations design, slope stability, seismic assessment, geothermal hazard evaluation, expansive clay, and settlement problems. Project types included high-rise structures, airports, warehouses, shopping centers, apartments, subdivisions, storage tanks, roadways, mineral and aggregate evaluations, slope stability analyses, and fault studies.

1977 to 1978: Fugro (Ertec) Incorporated Consulting Engineers and Geologists; Staff Engineering Geologist; Long Beach, California.

Affiliations

- Association of Engineering Geologists

Publications


I, Mark Hesters declare as follows:

1. I am presently employed by the California Energy Commission in the Strategic Transmission Planning Office of the Siting, Transmission and Environmental Protection Division as a Senior Electrical Engineer.

2. A copy of my professional qualifications and experience is attached hereto and incorporated by reference herein.

3. I helped prepare the staff testimony on Transmission System Engineering, for the Stirling Energy Solar Two Project based on my independent analysis of the Application for Certification and supplements hereto, data from reliable documents and sources, and my professional experience and knowledge.

4. It is my professional opinion that the prepared testimony is valid and accurate with respect to the issue addressed therein.

5. I am personally familiar with the facts and conclusions related in the testimony and if called as a witness could testify competently thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Dated: ___________________________  Signed: ___________________________

At: Sacramento, California
Mark Hesters
Associate Electrical Engineer

Mark Hesters has fourteen years of experience in electric power regulation. He worked in the Engineering Office of the California Energy Commission’s Energy Facilities Siting & Environmental Protection Division since 1998 providing analysis of California transmission systems and testimony on transmission systems in several Commission power plant certification processes. Prior to that Mark worked in the CEC’s Electricity Analysis Office providing lead analysis on Southern California Edison resource issues and modeling support for all areas of California. He holds a B.S. degree from the University of California at Davis in Environmental Policy Analysis and Planning.
DECLARATION OF
Sudath E. Arachchige

I, Sudath E. Arachchige declare as follows:

1. I am presently employed by the California Energy Commission in the Strategic Transmission Planning Office of the Siting, Transmission and Environmental Protection Division as a Associate Electrical Engineer.

2. A copy of my professional qualifications and experience is attached hereto and incorporated by reference herein.

3. I helped prepare the staff testimony on Transmission System Engineering, for the Stirling Solar Energy Two Project based on my independent analysis of the Application for Certification and supplements hereto, data from reliable documents and sources, and my professional experience and knowledge.

4. It is my professional opinion that the prepared testimony is valid and accurate with respect to the issue addressed therein.

5. I am personally familiar with the facts and conclusions related in the testimony and if called as a witness could testify competently thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Dated: ___________________________ Signed: ___________________________

At: Sacramento, California
EDUCATION:
Bachelor of Science in Electrical Engineering at California State University Fullerton

ATTAINMENTS:
Member of the Professional Engineers in California Government
Vice President Electrical Engineering Society-California State University Fullerton.

EXPERIENCE:
November-2001 to Present: - Associate Electrical Engineer, System Assessment and Facilities Siting Division, California Energy Commission.
Conduct and perform planning studies and contingency analysis including power flow, short-circuit, stability, and post-transient analysis to maintain reliable operation of the power system. Investigates and analyzes Grid Planning problems and provides appropriate information to Grid Planning Engineers. Develops automated computer programs and other advance analysis methods for comprehensive evaluation of the operational performance of the transmission system.
Understanding of regulatory and reliability guidelines, WECC and NERC planning and operation criteria, CPUC and FERC requirements. Review technical analyses for WECC/ISO/PTO transmission systems and proposed system additions; provide support and analyses associated with Reliability Must-Run (RMR) contracts and the Local Area Reliability Services (LARS) process; review new generation interconnection studies; provide congestion analyses; and provide support for regulatory filings.

June-1998 to November-2001: - Project Electrical Engineer, Design Electrical Engineering Section, Department of Transportation, California.
Electrical Engineering knowledge and skills in the design, construction and maintenance of California state work projects involving all the public work areas; contract administration, construction management, plan checking, field engineering and provide liaison with consultants, developers, and contractors. Plan review in facility constructions, highway lighting, sign lighting, rest area lighting, preparation of project reports, cooperative agreements, review plans for compliance of construction and design guide lines for national electrical code, standards and ordinance. Review process included breaker relay coordination, detail wiring diagrams, layout details, service coordination, load, conductor sizes, derated ampacity, voltage drop calculations, harmonic and flicker determination.

June-1993 to May-1998: - Substation Electrical Engineer, City of Anaheim, California.
Performed underground service design 12kV and 4kV duct banks; pole riser; getaway upgrade; voltage drop calculation, ampacity calculation and wiring diagrams. Design and maintenance of substations in City Electrical Utility System. Upgrade Station Light and power transformers; upgrade capacitor banks; replacement of 12kV-4kV power circuits; Breakers at Metal Clad Switchgear. Design one-line diagrams; three line diagrams; grounding circuits; schematics; coordination of relay settings; conduit and material list preparation. Calculation of derated ampacity; inrush current, short circuit current and fault current.
DECLARATION OF
Susan V. Lee

I, Susan V. Lee, declare as follows:

1. I am presently employed by Aspen Environmental Group, consultant to the California Energy Commission's Facilities Siting Office of the Systems Assessments and Facilities Siting Division as a Senior Associate/Vice President.

2. A copy of my professional qualifications and experience is attached hereto and incorporated by reference herein.

3. I prepared the staff testimony on Alternatives for the SES Solar Two Project based on my independent analysis of the Application for Certification and supplements hereto, data from reliable documents and sources, and my professional experience and knowledge.

4. It is my professional opinion that the prepared testimony is valid and accurate with respect to the issue addressed therein.

5. I am personally familiar with the facts and conclusions related in the testimony and if called as a witness could testify competently thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Dated: February 10, 2010

At: San Francisco, California

Signed: [Signature]
SUSAN V. LEE
Vice President, San Francisco Operations

ACADEMIC BACKGROUND
M.S., Applied Earth Science, Stanford University, 1984
B.A., Geology, Oberlin College, 1977

PROFESSIONAL EXPERIENCE

Ms. Lee has over 25 years of technical and managerial experience in environmental assessment, and she currently manages Aspen’s San Francisco Office. Her expertise is in management of environmental assessment for infrastructure and energy projects (renewable energy projects, electric transmission lines, pipelines, and gas-fired power plants) under both the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA). Ms. Lee has managed preparation of several major controversial transmission line and pipeline siting EIR/EISs, including the Sunrise Powerlink, Path 15, Jefferson-Martin, Tri-Valley, and Devers–Palo Verde No. 2. Prior to employment at Aspen, Ms. Lee worked for 10 years with the Federal government [the U.S. Minerals Management Service (MMS) and the U.S. Geological Survey (USGS)].

Ms. Lee has worked for Aspen Environmental Group since 1993. She has contributed to both technical and project management aspects of Aspen’s environmental projects, including the following:

- **California Energy Commission.** Ms. Lee has supported CEC staff since the fall of 2000. To date, she has prepared analyses for 14 power plants throughout the State, and she has also contributed to several special project reports. She has participated in numerous public workshops and hearings around the state, and completed the CEC’s Expert Witness Training. Her major efforts for the CEC include the following:
  - Ms. Lee is managing the Alternatives and Cumulative impact analyses for several solar thermal projects on public lands, coordinating NEPA issues with BLM staff and CEQA issues with the Energy Commission’s Project Manager. Projects include the Ivanpah Solar Electric Generating Station, Stirling (SES) Solar Two, SES Solar One (Calico), Solar Millennium Blythe and Palen projects, and the NextEra Genesis project.
  - Ms. Lee has prepared staff assessment Alternatives Analyses (consistent with CEQA and the CEC’s procedures) for the CEC’s staff reports considering proposed new or re-powered gas-fired power plants at South Bay (San Diego), Blythe (BEP II), Morro Bay, El Segundo, Avenal, San Joaquin Valley, Potrero Unit 7 (San Francisco), Tracy, East Altamont, Henrietta, and the San Francisco Electric Reliability Project. She also prepared the alternatives analysis for the CEC’s Blythe Transmission Modifications Project. In addition to preparing staff assessment sections documenting comparative impacts of alternatives, this work includes making presentations at PSA Workshops and testifying at Evidentiary Hearings.
  - Ms. Lee managed preparation of the CEC’s first comprehensive dry cooling analysis for a coastal power plant using once-through cooling, the Morro Bay Power Plant Modernization Project. She managed a team of authors who developed a preliminary cooling design, and provided impact analysis.
  - Ms. Lee managed a three-year transmission corridor modeling project, Planning Alternative Corridors for Transmission (PACT), in conjunction with the CEC PIER Environmental Program. The model uses Geographic Information Systems and decision modeling to assist in comparing potential alternative transmission corridors. Aspen’s work included overall contract management, as well as development and management of a Project Steering Committee and six Technical Advisory Groups.
  - Ms. Lee prepared a detailed Background Report and made a presentation at an Energy Commission workshop on “Comparative Alternatives to Transmission” as part of the Integrated Energy Policy Report (IEPR) 2004 Update process. This project evaluated non-wires alternatives to transmission lines; ongoing
work is related to development of a methodology for consideration of these alternatives as part of the transmission planning process.

- Ms. Lee served as the CEC’s Project Manager for the Small Power Plant Exemption (SPPE) environmental review process for the Woodland Generation Station 2, an 80-megawatt power plant proposed by the Modesto Irrigation District.

- Ms. Lee managed preparation of Power Plant Cooling Options Reports for the Potrero Unit 7 Project, Morro Bay, SMUD Cosumnes, and El Segundo power plants. These analyses include conceptual design of dry cooling systems, hybrid cooling systems, and water supply options including use of reclaimed water in both once through and hybrid cooling systems.

- Ms. Lee has provided management and technical support to Aspen’s preparation of several reports for the CEC: the Environmental Performance Report, the Coastal Power Plant Study, and the Alternative Generation Technology study.

- California Valley Solar Ranch EIR. Under contract to San Luis Obispo County, Ms. Lee is managing preparation of an EIR to evaluate development of a 250 MW solar photovoltaic power facility on nearly 4,000 acres in the Carrizo Plain.

- SDG&E Sunrise Powerlink Transmission Project EIR/EIS. Under a $14 million contract to the CPUC, and under a Memorandum of Understanding with the Bureau of Land Management (BLM), Ms. Lee managed preparation of an EIR/EIS for a highly controversial 150-mile transmission line from Imperial County to coastal San Diego County.

- SCE Devers–Palo Verde No. 2 Transmission Line Project EIR/EIS. Under contract to the CPUC, Ms. Lee managed preparation of an EIR/EIS to evaluate the impacts of constructing a 230-mile 500 kV transmission line between the Palo Verde generating hub in Arizona and SCE’s Devers Substation.

- Long-Term Procurement Planning and Barriers to Renewable Power Implementation. For the CPUC, Ms. Lee and a team of environmental and economic specialists developed environmental and economic data and developed timelines of permitting and barriers to implementing the proposed 33 percent Renewable Portfolio Standard, including ranking and screening of available energy resources.


- PG&E Northeast San Jose Transmission Reinforcement Project: Ms. Lee served as the Project Manager for this CPUC contract to evaluate PG&E’s proposed transmission improvements in Santa Clara and Alameda Counties.

- PG&E Tri-Valley 2002 Capacity Increase Project. Ms. Lee managed preparation of the Draft and Final EIRs for this controversial and complex project during 2000 and 2001, which was certified by the CPUC in May 2001. The Draft EIR (over 800 pages) evaluated proposed transmission lines and substations in the Tri-Valley area (Cities of Pleasanton, Dublin, Livermore, and San Ramon) of Alameda and Contra Costa Counties, and responded to a high level of local concern regarding electric and magnetic fields (EMFs).
DECLARATION OF
MARY DYAS

I, MARY DYAS declare as follows:

1. I am presently employed by the California Energy Commission in the SITING AND COMPLIANCE OFFICE of the Siting Transmission and Environmental Protection Division as a COMPLIANCE PROJECT MANAGER.

2. A copy of my professional qualifications and experience is attached hereto and incorporated by reference herein.

3. I helped prepare the staff testimony on JOINT AGENCY GENERAL CONDITIONS INCLUDING COMPLIANCE MONITORING AND CLOSURE PLAN, for the SES SOLAR TWO based on my independent analysis of the Application for Certification and supplements hereto, data from reliable documents and sources, and my professional experience and knowledge.

4. It is my professional opinion that the prepared testimony is valid and accurate with respect to the issue addressed therein.

5. I am personally familiar with the facts and conclusions related in the testimony and if called as a witness could testify competently thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Dated: ___________________________ Signed: ___________________________

At: Sacramento, California
MARY DYAS
CALIFORNIA ENERGY COMMISSION – COMPLIANCE PROJECT MANAGER

PROFESSIONAL EXPERIENCE

**Planner II/III – Energy Facilities Compliance Project Manager** 05/01/2008 to Present
Siting Unit / Siting and Compliance Office, California Energy Commission, Sacramento, California

Compliance Project Manager—Provide oversight of energy facility construction and operation activities to ensure compliance with conditions of certification. Function as team leader for all compliance monitoring activities, processing of post-certification amendments, complaints, and facility closures.

Currently acting as working team leader on projects filed with the Energy Commission including renewable energy projects (SES Solar One and Solar Two), transmission line projects (Blythe Transmission Line), and natural gas-fired energy projects (Russell City Energy Center) in the licensing, construction and operational phases of each project.

**Planner II – Energy Facilities Siting Project Manager** 01/18/2006 to 04/30/2008
Siting Unit / Siting and Compliance Office, California Energy Commission, Sacramento, California

Siting Project Manager – Provide day-to-day management of complex and controversial energy facility siting projects and renewable solar projects, including the Carrizo Energy Solar Farm Project, Bullard Energy Center, El Centro Unit 3 Repower Project and Chevron Replacement Project. Planning, organizing and directing the work of an interdisciplinary environmental and engineering staff team engaged in the review of complex or controversial energy facility siting Applications for Certification.

**Energy Analyst / Associate Energy Specialist – LNG Research** 09/27/2002 to 01/17/2006
Natural Gas Office / Transportation Division, California Energy Commission, Sacramento, California

Coordinating and assisting with the facilitation of monthly Interagency LNG Working Group meetings involving cooperative federal, state, and local agencies; assisting with report writing conducting LNG facility assessments; Organizing/facilitating public workshops and preparing status reports on LNG facility development for use by Commissioners and Governor's Office, as well as reviewing and analyzing LNG-related legislative bills in California; Creating and maintaining the Commission LNG webpage, researching and preparing numerous LNG fact sheets for public education, and gathering information on new technology, tracking new LNG projects, and LNG market information.

**Office Technician / Energy Analyst - Assistant Siting Project Manager** 06/27/2000 to 09/27/2002
Siting Unit / Siting and Compliance Office, California Energy Commission, Sacramento, CA

Assisting energy facility project managers with organization of and conducting workshops and public meetings between staff and power plant developers, other governmental agencies, private organizations, and the public. Also assisting with the reviewing, evaluating and editing of project correspondence, reports, and testimony as well as assisting project secretaries, and Office Managers as needed. Also performed all the same duties in relation to the Emergency Power Plant Permitting 21-day, 4-month, 6-month and 12-month projects.

**Office Technician / Energy Analyst - Assistant Siting Project Manager** 06/27/2000 to 09/27/2002
Siting Unit / Siting and Compliance Office, California Energy Commission, Sacramento, CA

Managing the Siting Peak Workload Contract, including the preparation of hundreds of work authorizations, invoices, and general coordination of work between technical staff and contractor and preparing associated budget information for office managers and executive office.

EDUCATION

Bachelor of Science degree in Biological Sciences  California State University, Sacramento ~ 1995
APPLICATION FOR CERTIFICATION
For the SES SOLAR TWO PROJECT

Docket No. 08-AFC-5
PROOF OF SERVICE
(Revised 1/27/10)

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DECLARATION OF SERVICE

I, Maria Santourdjian, declare that on February 12th, 2010, I served the Notice of Availability of the SES Solar Two 08-AFC-5 SA/PDEIS on CD, dated February 12th, 2010. The original document in paper format 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/].

The documents have been sent both to the 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 PARTIES:

X CD version sent by U.S. Mail to all addresses on the Proof of Service list
(Paper Copy is available upon request)

AND

FOR FILING WITH THE ENERGY COMMISSION:

X posted to the Commission Website

CALIFORNIA ENERGY COMMISSION
Attn: Docket No. 08-AFC-5
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.

Originally Signed by
Maria Santourdjian