

**BLYTHE SOLAR POWER PROJECT (09-AFC-6)
CEC STAFF DATA REQUESTS 98 - 152**

Technical Area: Cultural Resources (AFC Section 5.4)

Response Date: January 6, 2010

INTRODUCTION

In a letter dated December 1, 2009, the staff of the California Energy Commission (CEC) provided guidance to Palo Verde I, LLC concerning the review of cultural resources under Federal (National Environmental Policy Act [NEPA] and Section 106 of the National Historic Preservation Act [NHPA]) and State (California Environmental Quality Act [CEQA]) law. The letter outlined three approaches, each of which requires an equally thorough review of cultural resources under the law by the CEC and the Bureau of Land Management (BLM).

The first approach is typically used for projects with a relatively small number (≤ 75) of cultural resources. Under this approach, Applicants would complete all investigations necessary to identify, evaluate the significance of, and assess the reasonably foreseeable impacts to cultural resources in the project area before the CEC's Staff Assessment.

The second approach is commonly used for projects with a larger number (> 75) cultural resources. Under this approach, the CEC and the BLM would draft their joint CEQA and NEPA analysis on the basis of an assessment of a large sample (≥ 25 stage) of the cultural resources identified during inventory. On the basis of the inventory and sample, a Programmatic Agreement (PA) concerning the disposition of cultural resources would be executed as part of the NHPA section 106 process. All further cultural resources compliance work would be subject to the provisions of the PA.

The third approach was developed by the CEC and BLM staff to facilitate the review of certain solar thermal projects with compressed review schedules, including the BSPP. Under this approach, all inventoried cultural resources would be assumed to be historically significant for the purposes of the joint CEQA and NEPA analysis. Those cultural resources that staff could determine to be not historically significant on the basis of extant inventory information, or those that would not be affected by the project, could be excluded from further assessment work. Thorough consideration and treatment of cultural resources in the Project area would be ensured through the use of a phased treatment plan as specified in a Memorandum of Agreement (MOA) pursuant to the NHPA section 106 process. This treatment plan would be executed after the issuance of the CEC's Staff Assessment but before the onset of construction.

Subsequent to the receipt of the December 1, 2009 letter, the Applicant received the CEC's Data Requests for Cultural Resources as part of the combined BSPP Data Requests Set 1, dated December 7, 2009. In those requests, staff indicated which data requests for cultural resources must be answered under each of the three specified approaches. Under Approach 1, responses to all of the data requests for cultural resources are required. Under Approach 2, responses to all but Data Request (DR) 120 are required, and the scope of DR 142 would be modified. Under Approach 3, responses are required to only DRs 109, 120, 121, 124–133, 135, 136, and 139–148. The Applicant has chosen Approach 3 for the assessment, treatment, and disposition of cultural resources affected by the BSPP. Therefore, responses are provided only in the following pages for those Data Requests specified by CEC staff as required under Approach 3.

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DR-CR-98

Information Requested:

Please provide Figure 2-4 revised as a series of color figures at a larger facility routes and other project features such as fences and roads of various type.

Response:

No response required under Approach 3 (see Introduction).

DR-CR-99

Information Requested:

Please include in the revised Figure 2-4 series, in addition to components already depicted, the following additional project components:

- on-site transmission lines
- off-site transmission lines (preferred and alternatives, if any)
- on-site fiber optic system, overhead and/or underground, on- and off-site
- on-site steam lines
- on-site wells and water pipelines
- on-site firewater system pipelines
- septic tanks and leach fields
- shared buildings and switchyard, labeled as "shared"
- natural gas pipelines, on- and off-site
- SCE natural gas —custody transfer station
- drainage diversion channels
- all project-constructed roads, on- and off-site
- culverts
- Land Treatment Units

Response:

No response required under Approach 3 (see Introduction).

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DR-CR-100

Information Requested:

Please provide the length of the site access road from Black Rock Road to the plant site entrance.

Response:

No response required under Approach 3 (see Introduction).

DR-CR-101

Information Requested:

In a table, please list all linear facilities that entail trenching or the excavation of holes for footings, and provide, for both the on- and off-site segments of each, the total length of each facility, and the trench dimensions (width and depth of excavation) required to install each.

Response:

No response required under Approach 3 (see Introduction).

DR-CR-102

Information Requested:

In a table, please list all buildings and equipment whose foundations require excavation and provide the dimensions and depths of holes that would be dug to construct these foundations.

Response:

No response required under Approach 3 (see Introduction).

DR-CR-103

Information Requested:

In a table, please list all buildings and structures and provide the height of each.

Response:

No response required under Approach 3 (see Introduction).

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DR-CR-104

Information Requested:

Please provide the dimensions and depth into the ground of the holes excavated for the Land Treatment Units.

Response:

No response required under Approach 3 (see Introduction).

DR-CR-105

Information Requested:

Please provide a description of the process of constructing the Land Treatment Units.

Response:

No response required under Approach 3 (see Introduction).

DR-CR-106

Information Requested:

Please provide the length, width, and depth of each diversion channel segment.

Response:

No response required under Approach 3 (see Introduction).

DR-CR-107

Information Requested:

Please provide a map, at a scale of 1" =500', showing each diversion channel segment, labeled for easy reference to the above dimension data.

Response:

No response required under Approach 3 (see Introduction).

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DR-CR-108

Information Requested:

Please provide a revised Figure 2-1 showing the natural gas pipeline route.

Response:

No response required under Approach 3 (see Introduction).

DR-CR-109

Information Requested:

Please indicate whether the proposed project might use any non-licensed, non-commercial soil borrow or disposal sites. If so:

- Please have a qualified archaeologist survey these sites and record on Department of Parks and Recreation (DPR) 523 forms any cultural resources that are identified; and
- Please submit to staff, under confidential cover, a report on the methods and results of these surveys, with recommendations for the treatment of any cultural resources identified in the surveys.

Response:

The BSPP will not use any non-licensed, non-commercial soil borrow or disposal sites.

DR-CR-110

Information Requested:

Please provide the number, dimensions, and depth of the bore pits.

Response:

No response required under Approach 3 (see Introduction).

DR-CR-111

Information Requested:

Please provide a map showing all locations where the proposed project could use directional drilling, with the bore pits shown to scale.

Response:

No response required under Approach 3 (see Introduction).

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DR-CR-112

Information Requested:

Please provide the dimensions (diameter, depth) of the holes necessary for the construction of the foundations associated with the various types of support towers (tangent, angle, dead-end, splicing, and pull-off).

Response:

No response required under Approach 3 (see Introduction).

DR-CR-113

Information Requested:

Please provide the extent of the area of surface disturbance associated with the installation of the various types of support towers (tangent, angle, dead-end, splicing, and pull-off).

Response:

No response required under Approach 3 (see Introduction).

DR-CR-114

Information Requested:

Please provide the extent of the area of surface disturbance associated with the conducting of the support towers at the approximately three pulling sites and between support towers.

Response:

No response required under Approach 3 (see Introduction).

DR-CR-115

Information Requested:

Please provide a map showing the route and dimensions of the new transmission gen-tie access road south of I-10, including all stub roads, if any.

Response:

No response required under Approach 3 (see Introduction).

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DR-CR-116

Information Requested:

Please provide the dimensions of the new transmission gen-tie access road south of I-10, including all stub roads, if any.

Response:

No response required under Approach 3 (see Introduction).

DR-CR-117

Information Requested:

If the same support towers are not used for the fiber optic cable system, please describe the supports and provide the dimensions (diameter, depth) of the holes necessary for the construction of the foundations of the supports for this system.

Response:

No response required under Approach 3 (see Introduction).

DR-CR-118

Information Requested:

Please provide a map showing the locations of the supports for the fiber optic cable system.

Response:

No response required under Approach 3 (see Introduction).

DR-CR-119

Information Requested:

Please provide a copy of the geotechnical report for the proposed project when it becomes available.

Response:

No response required under Approach 3 (see Introduction).

Please note that the Preliminary Geotechnical Investigation Report was submitted as part of AFC Volume III, Data Adequacy Supplement in October 2009.

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DR-CR-120

Information Requested:

Please provide to staff a series of scaled and dimensioned plan and profile views of the proposed project's (and alternative locations') impact blocks.

Response:

The response to this Data Request will be submitted by January 20, 2010.

DR-CR-121

Information Requested:

Please provide, under confidential cover, copies of the following cultural resources reports:

- Crew, Harvey, —An Archaeological Survey of Geothermal Drilling Sites in Riverside County (Report No. 00982)
- Swenson, James, —An Archaeological Assessment of the Proposed Wastewater Treatment Plant Site in Section 33 and 28, T6S, R7E, SBBM, in the Coachella Valley, Riverside County (Report No. 01334)

Response:

These two previous reports are provided under separate cover as part of the Cultural Resources Confidential Data Responses. Please note that the Swenson report (# 01334) was provided by the EIC in error. The report discusses work conducted in the Coachella Valley approximately 90 miles west of the Project site.

DR-CR-122

Information Requested:

Please provide, under confidential cover, copies of the forms for the following cultural resources:

SMB-H-522

SMB-P-431

Response:

No response required under Approach 3 (see Introduction).

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DR-CR-123

Information Requested:

Please provide color copies of the following United States Geological Survey (USGS) historic maps:

- McCoy Peak (1951, 1975)
- McCoy Spring (1952, 1983)
- McCoy Wash (1951, 1983)
- Ripley (1952, 1975)
- Roosevelt Mine (1952, 1983)
- Ehrenberg (1943)
- Colorado River (1903)

Response:

No response required under Approach 3 (see Introduction above).

DR-CR-124

Information Requested:

Please provide, under confidential cover, a copy of "Cultural Resources Class III Survey Draft Report for the Proposed Blythe Solar Power Project."

Response:

A copy of the "Cultural Resources Class III Survey Draft Report for the Proposed Blythe Solar Power Project" co-authored by Angela Keller and Christopher Doolittle is provided as part of the Cultural Resources Confidential Data Responses submittal.

DR-CR-125

Information Requested:

Please provide a copy of the resume for Angela Keller.

Response:

Please see Angela Keller's curriculum vitae, provided as Attachment DR-CR-125.

DR-CR-126

Information Requested:

Please provide a definition of the archaeological surface APE for the proposed project, identifying the areas included in it.

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Response:

The archaeological surface Area of Potential Effects (APE) is defined as the extent of the Project plant site disturbance area and disturbance areas associated with any linear features such as transmission corridors. The BSPP APE consists of the plant site disturbance area, one transmission corridor, and a planned substation location, which total approximately 7,243 acres. Note that this acreage total is without the mandated CEC survey buffers, which add an additional 629 acres. The APE includes all or part of Township 6S and Range 21E, Sections 1, 2, 3, 4, 5, 8, 9, 10, 11, 12, 13, 14, 15, 16, 23, 24, 26, and 35; and Township 6S and Range 22E, Sections 6, 7, and 18; Township 7S and Range 21E, Sections 2, 3, 4, 5, and 6. These sections are located in the McCoy Peak, the McCoy Wash, and Roosevelt Mine 7.5" USGS topographic quadrangle maps.

DR-CR-127

Information Requested:

Please provide a map at a scale of 1:24,000 depicting the final and definitive archaeological surface APE for the proposed project.

Response:

Please see attached non-confidential maps labeled Figures DR CUL-127-1, -DR-CUL-127-2, and -DR-127-3.

DR-CR-128

Information Requested:

Please check field notes for all newly identified sites and ensure that the data in the DPR 523 forms is correct; then cross-check the data in Table 9 with the data in the forms and correct any errors in Table 9.

Response:

A corrected table is being submitted under confidential cover.

DR-CR-129

Information Requested:

Please interpret more precise dates for all sites, based on the observed artifacts, and revise the forms to reflect this additional analysis.

Response:

Revised DPR 523 forms are being submitted under confidential cover.

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DR-CR-130

Information Requested:

Please provide, under confidential cover, the revised DPR 523 forms to staff.

Response:

Revised DPR 523 forms are being submitted under confidential cover.

DR-CR-131

Information Requested:

Please provide, under confidential cover, a corrected Table 9 in which the site data have been revised and into which the gen-tie survey and results have been integrated.

Response:

A corrected table is being submitted under confidential cover.

DR-CR-132

Information Requested:

Please provide, under confidential cover, individual DPR 523 forms for the historic-period archaeological resources that were lumped into Groups in the forms provided in Preliminary Draft Cultural Resources Technical Report, Att. 5.

Response:

Revised DPR 523 forms for individual resources are being submitted under confidential cover.

DR-CR-133

Information Requested:

Please revise these individual forms to respond to the request for more precise dating information, made in the previous data request.

Response:

Revised DPR 523 forms, including more precise dating information, are being submitted under confidential cover.

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DR-CR-134

Information Requested:

Please provide the length and width of all gen-tie transmission line alternative routes and of all associated new gen-tie access roads, including stub roads, if any.

Response;

No response required under Approach 3 (see Introduction).

DR-CR-135

Information Requested:

Please provide a map showing all gen-tie transmission line alternative routes and the routes of associated new transmission gen-tie access roads, including all stub roads, if any.

Response:

See the attached non-confidential map of the gen-tie transmission line alternatives.

DR-CR-136

Information Requested:

Please provide, under confidential cover, completed site forms, including more precise dating information as requested above for all new DPR 523 forms, for all cultural resources identified within or near all surveyed alternative gen-tie transmission line routes.

Response:

Two alternative transmission line routes have been evaluated. These are: 1) the route that was included in the AFC filed in August 2009, and 2) the route that was included in Volume III, Data Adequacy Supplement filed in October 2009. The cultural resources materials provided in association with these past submittals are the only alternative routes that have been studied for cultural resources. No additional alternative routes have been identified or studied.

DR-CR-137

Information Requested:

Please propose and submit for staff approval a research plan (including methods that do not entail significant impacts to the sites), a proposed schedule, and personnel resumes, to provide data supporting or discounting the existence of an archaeological

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district representing the Native American toolstone mining of local Pleistocene pebble terraces, located in and adjacent to the east side of the proposed surface APE.

Response:

No response required under Approach 3 (see Introduction).

DR-CR-138

Information Requested:

Please implement the staff-approved research plan and, under confidential cover, provide staff with a report, presenting all the collected data, describing and dating the potential archaeological district, and making a recommendation on its CRHR-eligibility, supported by the collected data.

Response:

No response required under Approach 3 (see Introduction).

DR-CR-139

Information Requested:

Please obtain the services of a professional in geoarchaeology: a person who, at a minimum, meets the U.S. Secretary of the Interior's Professional Qualifications Standards for prehistoric archaeology, as published in Title 36, Code of Federal Regulations, part 61, and has completed graduatelevel coursework in geoarchaeology, physical geography, geomorphology, or Quaternary science, or who has education and experience acceptable to staff. Please submit the resume of the proposed geoarchaeologist for staff review and approval.

Response:

Please see resume for Matthew Steinkamp, geoarchaeologist provided as Attachment DR-CR-139.

DR-CR-140

Information Requested:

Please have the approved geoarchaeologist provide a discussion, based on the available Quaternary science and geoarchaeological literature, of the historical geomorphology of the proposed project's APE, including:

- A description of the development of the landforms, with dates, focused on the character of the depositional regime of each landform from the Late Pleistocene epoch to the present;

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- Data on the geomorphology, sedimentology, pedology, hydrology, and stratigraphy of the APE, and the near vicinity; and
- The relationship of landform development to the potential in the APE for buried archaeological deposits.

Response:

Please see Geoarchaeology Monitoring Report provided as Attachment DR-CR-140 and submitted under confidential cover as requested by the CEC.

DR-CR-141

Information Requested:

Please have the approved geoarchaeologist produce a map or maps of the landforms present in the project area at a scale of not less than 1:24,000; the data sources for the maps may be any combination of published maps and/or satellite or aerial imagery that has been subject to field verification, and/or the result of field mapping efforts; the maps should overlay the project APE on the landform data. Please also provide the metadata for each overlay used.

Response:

Please see Geoarchaeology Monitoring Report provided as Attachment DR-CR-140 and submitted under confidential cover as requested by the CEC.

Note that these maps are also included in the revised Cultural Resources Class III Survey Report that will be submitted to the BLM and CEC on January 20, 2010.

DR-CR-142

Information Requested:

Absent sufficient technical literature pertinent to the reconstruction of the historical geomorphology of the project APE, and absent sufficient field data to elucidate landform relationships, please have the approved geoarchaeologist design a primary geoarchaeological field study of the project APE, submit a research plan for staff approval, and conduct the approved research. The purpose of the study is to facilitate staff's assessment of the likelihood of the presence of subsurface components for previously known or found surface archaeological deposits and of buried archaeological deposits in the project's APE. The primary study should, at a minimum, include the following elements:

- Use any natural exposures that reveal aspects of the stratigraphy of the portions of the landforms in the project APE;
- A subsurface sampling strategy to document the landform stratigraphy not revealed in natural exposures;

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- Data collection necessary for determinations of the physical character, the ages, and the depositional rates of the various sedimentary deposits and paleosols that may be beneath the surface of the landforms in the project APE, to the proposed maximum depth of ground disturbance. Data collection at each sampling locale should include a measured profile drawing and a profile photograph (with a metric scale), and the screening of a small sample (three 5-gallon buckets) of sediment from the major sedimentary units in each profile through ¼-inch hardware cloth. Data collection should also include the collection and assaying of enough soil humate or other organic samples to reliably radiocarbon date a master stratigraphic column for each sampled landform; and
- An analysis of the collected field data and an assessment, based on those data, of the likelihood of the presence of subsurface components for previously known or found surface archaeological deposits and of buried archaeological deposits in the project APE, and, to the extent possible, the likely age and character of such deposits.

Response:

The existing technical literature pertinent to the reconstruction of the historical geomorphology of the Project APE is sufficient to elucidate landform relationships on a gross scale. To augment and refine existing data, the Applicant retained the services of Matthew Steinkamp, a qualified geoarchaeologist with experience in southern California (see Steinkamp resume submitted as an attachment to DR-CR-139). Mr. Steinkamp monitored geotechnical boring and test pitting programs at the BSPP site. The number, spacing, depth, and field methods of the geotechnical test probes reflect engineering and other considerations. Nevertheless, all landforms within the Project site were subjected to testing, allowing the Mr. Steinkamp sufficient data to field confirm the surface mapping of the Project geology.

Although no buried archaeological deposits were identified in the Project APE, Mr. Steinkamp did identify buried surfaces which have the potential for intact cultural deposits. Please see the Geoarchaeology Monitoring Report (Attachment DR-CR-140) submitted under confidential cover, as requested, for an assessment of the likelihood of as yet unidentified buried archaeological deposits in the Project APE, and recommendations for future work.

DR-CR-143

Information Requested:

Please have the approved geoarchaeologist prepare a report of the primary field study and submit it to staff under confidential cover.

Response;

Please see the Geoarchaeology Monitoring Report provided as Attachment DR-CR-140 and submitted under confidential cover as requested.

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DR-CR-144

Information Requested:

Pursuant to achieving a BLM Class III inventory for the alternative project site location(s), please provide to staff, under confidential cover, the following:

- Copies of DPR 523 site forms for all previously known cultural resources from California Historical Resources Information System (CHRIS) record searches, and from BLM records (if pertinent), for the alternative locations, out to 1.0 mile beyond the sites' and linear facility corridors' boundaries;
- Copies of CHRIS reports of previous archaeological excavations and architectural surveys conducted within the boundaries of the alternative sites and their linear facility corridors;
- A copy of the results of the Native American Heritage Commission's (NAHC) sacred lands database search for each alternative location;
- Copies of all letters sent to and received from Native Americans identified by the NAHC as interested in development at each alternative location;
- A pedestrian archaeological survey of 100 percent of the acreage of the alternative location, including a visit to all previously recorded archaeological sites to verify location and to update content and condition;
- An examination of historic maps to identify former and extant buildings and structures, including trails, roads, and other infrastructure, aged 45 years or older, for each alternative location;
- A windshield built-environment survey of all of the trails, roads, and historic-period use areas in each alternative location, identified from the examination of historic maps; and a visit to all previously recorded built-environment sites to verify location and to update content and condition;
- Copies of DPR 523 site forms (with as precise dates as possible) for all cultural resources newly identified or updated through the applicant's additional pedestrian archaeological surveys and windshield built-environment surveys for each alternative location;
- A map at a scale of 1:24,000 depicting the locations of all previously known and newly identified cultural resources for each alternative location; and
- A discussion of the comparative advantages and disadvantages of the proposed project and each alternative location, with respect to cultural resources.

Response:

Records searches have been completed for the CEC-proposed Blythe Disturbed Lands Alternative, and the Chuckwalla Valley and El Centro alternatives described in the August 2009 BSPP AFC. The results of these Class I record searches will be submitted on January 8, 2010. Letters to the Native American Heritage Commission (NAHC) have been submitted for all alternatives. The archives housing the data for the Johnson Valley and East of Lancaster alternative sites were closed over the Christmas/New Year holidays. Therefore, record searches for these two sites could not be completed in time for the January 6,

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2010 submittal. These records searches were conducted on January 5 and 6, 2010 and the results will be submitted by January 20, 2010.

Material to be provided under confidential cover from the record searches include: (1) copies of DPR 523 site forms for all previously documented cultural resources from the California Historical Resources Information System (CHRIS) record searches and from any BLM records within a one-mile radius around the boundaries of the sites and associated linear facility corridors; (2) copies of reports filed with CHRIS of previous archaeological investigations and architectural surveys conducted within the boundaries of the alternative sites and their linear facility corridors; (3) a copy of the results of the NAHC's sacred lands database search for each alternative location; and (4) copies of all letters sent to and received from the NAHC and those Native Americans identified by the NAHC as potentially interested in development at each alternative location.

For those alternative sites with extant data that the CEC and BLM deem insufficient for comparison under CEQA and NEPA, any required archaeological surveys and built environment surveys for alternatives on BLM land are expected to begin in late January 2010, with results to be provided under confidential cover to staff and BLM in May 2010. At that time, an analysis will be provided of the comparative advantages and disadvantages of the proposed Project and alternative locations from a cultural resources perspective, along with any new DPR forms and cultural resources maps.

DR-CR-145

Information Requested:

If the applicant has analyzed other alternatives, unique to the proposed project, please provide to staff the above requested information for each additional alternative.

Response:

No other alternatives have been analyzed for cultural resources at the level specified in DR-CR-144.

DR-CR-146

Information Requested:

Please explicitly discuss the efficacy of modeling the potential archaeological characteristics and spatial distribution of at-this-time unknown Native American traditional use areas on the basis of available ethnographic information and theoretical principles of ethnogeography.

Response:

The response to this Data Request will be submitted by January 20, 2010.

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DR-CR-147

Information Requested:

If reasonably practicable, please develop such a model and submit for staff review and approval a research plan for the field verification in the APE of the model's predictions and recordation of identified traditional use areas.

Response:

The response to this Data Request will be submitted by January 20, 2010.

DR-CR-148

Information Requested:

Please implement the staff-approved plan and provide to staff a report on the results and a comprehensive discussion of the traditional use areas in and adjacent to the project APE that may be subject to the visual impact of the construction, operation, and maintenance of the proposed project (e.g., landforms in sight of the APE on which sacred or other traditional activities took place). Please include any additional DPR 523 site forms in an appendix.

Response:

The response to this Data Request will be submitted by January 20, 2010.

DR-CR-149

Information Requested:

Please complete and provide, under confidential cover, copies to staff of DPR 523 forms for the isolates identified during all cultural resources surveys.

Response:

No response required under Approach 3 (see Introduction).

Note that this is addressed in the revised Class III survey report that will be submitted to the BLM and CEC on January 20, 2010.

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DR-CR-150

Information Requested:

Please provide a description of the field conditions experienced by the survey teams for the archaeological surveys of both the proposed plant site and the later gen-tie route, including ground visibility, temperatures, terrain, etc.

Response:

No response required under Approach 3 (see Introduction).

Note that this is addressed in the revised Class III survey report that will be submitted to the BLM and CEC on January 20, 2010.

DR-CR-151

Information Requested:

For all archaeological sites for which project impacts cannot be avoided, please submit for staff approval a plan, including a research design and methods that do not entail significant impacts to the sites listed in Tables 12 and 13, for using test excavations or the CARIDAP protocol to determine if any subsurface deposits are present and to acquire sufficient data to make recommendations of NRHP and CRHR eligibility for these sites, with the potential of the recovered data evaluated according to its applicability to the research questions posed in the research design. The testing plan should include the following analyses:

- Dating all or a sample of datable materials recovered from tested sites, including obsidian, charcoal, bone, and shell;
- Detailed lithic analysis of debitage addressing manufacturing techniques and sourcing of toolstone materials, including, if locally derived, an estimated collection radius; and
- Site-specific and landscape- or APE-based strategies for ceramic analysis to generate such attributions as source, age, mineral content, and paste characteristics that are consistent with J. Schaefer's ongoing research efforts.

Response:

No response required under Approach 3 (see Introduction).

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DR-CR-152

Information Requested:

Please provide to staff a report on the testing and results at these sites, presenting an analysis of the recovered data and recommendations regarding the eligibility of the sites.

Response:

No response required under Approach 3 (see Introduction).

Attachment DR-CR-125

Keller Resume

Angela H. Keller, PhD, RPA

Senior Archaeologist

Education

PhD, Anthropology (Archaeology),
University of Pennsylvania, 2006
BA, Anthropology (Art History minor),
University of California, Berkeley, 1989

Professional Certification

Registered Professional Archaeologist,
National
HAZWOPER 24-Hour trained
Native American Consultation Training
Section 106/NHPA Training
Trench Safety Training

Professional Memberships

American Anthropological Association
Society for American Archaeology
Society for California Archaeology
Register of Professional Archaeologists

Professional History

With Earth Tech, Inc.: 1 Years
With Other Firms: 17 Years

Experience

Dr. Keller is an archaeologist with 18 years of experience working in California, the US Southwest, Mesoamerica, and Europe. She received her doctorate from the Anthropology Department of the University of Pennsylvania in May 2006 after completing a dissertation on Classic period Maya roads. She has training and experience running large, archaeological projects involving significant fieldwork and laboratory analysis. She has also worked closely with various Native American groups in California, as well as Maya groups in Mexico and Belize. Dr. Keller is currently employed as a Senior Archaeologist by AECOM Environment, where most of her time is devoted to directing cultural resources projects, and editing and writing archaeological research reports. In California, she has worked for state and federal governmental agencies, as well as private clients. Dr. Keller has experience working on politically contentious projects with multiple stakeholders and complex archaeological issues. She has authored and edited dozens of archaeological reports, compliance documents, and academic publications.

Selected Cultural Resources Projects

U.S. Navy NAVFAC SW, Archaeological Testing at Sites CA-SNI-316, -361, and -550, San Nicolas Island, California, Project Director for field investigations at three prehistoric sites impacted by the historic construction of the San Nicolas Island Naval facilities. Presently overseeing the analysis of the recovered cultural materials and authoring a report incorporating field and laboratory data.

Solar Millennium and Chevron Energy Solutions, Blythe Solar Power Class-III Archaeological Survey, Blythe, California. Co-project director overseeing the analysis and presentation of data collected during the field survey. Primary author and compiling editor of the archaeological survey report, prepared in support of an environmental impact statement and an application for certification from the California Energy Commission.

US Forest Service, San Bernardino National Forest Archaeological Survey and Testing in the Balanced Rock Area, California. Lead author and editor. Compiled and wrote extensive sections of the archaeological report on work completed during field seasons in 2001 and 2002.

California Department of Parks and Recreation, Santa Susana Pass State Historic Park Area Prehistoric Sites Archaeological Overview, California. Lead author and editor. Wrote extensive sections of the overview, and edited all sections for the final report available through the University of Arizona Press.

US Army Corps of Engineers, Honey Lake Archaeological Survey, Lassen County, California. Project director for the analysis and compilation of data collected during an intensive Class-III survey of the entire Honey Lake shoreline and vicinity. Completed a large-scale spatial analysis of all known archaeological sites in the greater Honey Lake Valley. Co-edited and contributed significant sections to the final report.

California Department of Parks and Recreation, Leo Carrillo State Park Archaeological Survey and Testing, California. Materials analyst for all worked shell artifacts and other ornamental artifacts collected during

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a testing program completed in anticipation of a proposed visitor's center. Identified a sequence of shell beads which, in combination with radiocarbon dates, created a chronological context for the site.

US Forest Service, Willow Fire Burn Area Archaeological Survey and Testing, San Bernardino National Forest, California. Lead author and editor, compiled field data and wrote significant portions of the final report. Co-edited the draft and final versions of the report.

Playa Vista, CA-LAN-54 Data Recovery, Marina del Rey, California. Project director and field work supervisor for a small habitation site with intact burials. Conducted 100% recovery of a portion of the site that would be removed due to road widening. Also primary author and compiling editor of the final data recovery report.

Playa Vista, Archaeological Construction Monitoring, Marina del Rey, California. Project director for a team of archaeological monitors working alongside demolition and construction crews. Wrote quarterly reports and maintained a CAD-based mapping and data-management system. Also coordinated with Native American monitors.

US Bureau of Reclamation, Native Fish Protected Habitat Development Class I Historic Context and Cultural Inventory Report, Yuma County, Arizona. Native American contact coordinator for a habitat development project proposed by the Bureau of Reclamation. Initiated contact with potentially interested Native American tribes. Conducted all correspondence and conversations with Native American groups. Kept a detailed log of contact efforts and wrote a report section summarizing the contacts and addressing critical issues involved in Native American contact programs.

Playa Vista, CA-LAN-60, CA-LAN-193, and CA-LAN-2768 Archaeological Testing and Treatment Plan, Marina del Rey, California. Analyzed the invertebrate faunal remains (primarily unworked marine shell) from three prehistoric sites adjacent to the historic Ballona Lagoon. Contributed the invertebrate faunal remains technical chapter to the report.

Playa Vista, Site SR-13 Archaeological Testing, Marina del Rey, California. Project director for the testing of an extensive, buried prehistoric site. Coordinated all work and data analysis. Contributed to a joint final report for several small sites within the project.

Playa Vista, CA-LAN-2676 Archaeological Testing and Treatment Plan, Marina del Rey, California. Invertebrate faunal analyst for the invertebrate faunal remains (primarily unworked marine shell) from a prehistoric site along the historic Ballona Lagoon. Contributed the invertebrate faunal remains technical chapter to the report.

Playa Vista, Site SR-23 Archaeological Testing, Marina del Rey, California. Project director for intensive testing at a prehistoric site identified during surface survey. Recorded detailed geomorphological and artifactual data by which we determined the site to be redeposited.

Playa Vista, Site SR-10 Archaeological Testing, Marina del Rey, California. Project director for the testing of a deposit of shell and recent cultural material identified as an archaeological site from surface inspection. Determined the site to be a deposit of dredged shell material and recent dumping. Coordinated all work and analysis and wrote the final report.

US Food and Drug Administration, CA-ORA-116 Remote Sensing and Data Recovery, Newport Bay, California. Invertebrate faunal analyst and field crew in resistivity/conductivity and magnetometer remote sensing survey of the site. Also assisted in the excavation and documentation of house pits and other features. Completed

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a spatial analysis of the distribution of shell and other materials across the site in relation to the house pit structures. Contributed the invertebrate faunal analysis section to the final report.

US Army Corps of Engineers, Sites CA-SNI-39 and CA-SNI-162 Intensive Archaeological Testing, San Nicolas Island, California. Lead author, invertebrate faunal analyst, and crew chief for the excavation of two dune sites with excellent preservation on the northwest tip of the island. Created all field maps and documented all features. Analyzed the invertebrate faunal materials and wrote the technical section for the final report. Also contributed several other sections and chapters to the report, and co-edited the draft and final versions.

Site CA-SBR-6815/H Archaeological Data Recovery, Hunter's Ridge, Fontana, California. Field crew in the excavation of an extensive hunter-gatherer site along several ridges in the foothills of the San Bernardino Mountains.

Additional Research Experience

Field Director, Actuncan Archaeological Project, Belize, 2010–2013 (with NSF funding). Initiating detailed excavations of the palace compound and elite residences at the Maya center of Actuncan. Coordinating all aspects of fieldwork, mapping, and database design. Principal Investigator: Dr. Lisa J. LeCount.

Database Designer/Materials Analyst, Chan Archaeological Project, Belize, 2007–2008. Created an integrated project database incorporating field and laboratory data. Analyzing the shell, jade, and other special artifacts from the Chan site and surrounding community. Research questions include the negotiation of power through the display and exchange of special objects, the social and spatial organization of shell craft work, identity formation through personal adornment, and the ritual use of exotic items. Principal Investigator: Dr. Cynthia Robin.

Field Technician, Belize Valley Archaeological Reconnaissance Project, Belize, 1993. Assisted field school students in the excavation of Zubin, a mid-sized Maya site. Project Directors: Drs. Jaime Awe and Gyles Iannone.

Surveyor, Xunantunich Archaeological Project, Belize, 1992–1993. Designed a project-wide mapping system utilizing electronic survey equipment and computer-aided drawing programs. Project Directors: Drs. Richard M. Leventhal and Wendy Ashmore.

Camp Supervisor and Crew Member, Cagny l'Épinette, France, 1992. Coordinated work schedules of French and American personnel. Assisted in the excavation and conservation of Paleolithic artifacts. Project Directors: Drs. Harold Dibble and Phillip Chase.

Surveyor, Yucatan, Mexico, 1991. Surveyed the roads, houselots, and public architecture of a modern Yucatec-speaking Maya village as part of an anthropological census. Project Director: Dr. John Lucy.

Student, Archaeological Fieldschool at Grasshopper, University of Arizona, 1991. Practical archaeological methods course and independent ceramic analysis project. Director: Dr. J. Jefferson Reid.

Professional Experience

Senior Archaeologist, AECOM Environment, 2009-present. Directing archaeological projects, developing proposals, and writing research designs and synthetic reports for projects throughout California. Directing archaeological projects from initiation to completion. Editing and writing theoretical and technical sections for cultural resources reports. Overseeing data analysis and cultural resources report compilation.

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Lecturer, Anthropology Department, University of California, Riverside, 2006–2009. Developing new and previously offered courses. Courses include original illustrated lectures, weekly exercises, and a variety of interactive learning techniques, such as small-group work, seminar-style discussion, independent projects, online collaboration, peer-review, and writing assignments. Also involved in academic advising of undergraduate and graduate students.

Designed and taught the courses:

- *Database Design for Anthropology*, a new upper-division course introducing the theory and skills necessary to develop data management systems for anthropological research. Course has a mixed undergraduate and graduate student enrollment (Fall 2006, Winter 2009).
- *Anthropology of Art*, an upper-division course examining anthropological approaches to the study of art using case studies from Oceania, Africa, and the Americas. (Winter 2007).
- *World Prehistory*, a lower-division course exploring human prehistory from our earliest ancestors to the rise of complexity in the Old and New World (Spring 2007, Winter & Fall 2008).
- *Archaeological Theory & Method*, a new upper-division course introducing students to the history of archaeological thought and practice. Incorporates seminar-style discussion and practical experience with archaeological materials and methods (Spring 2008).
- *Art of Pre-Columbian America*, a lower-division course surveying the ancient art and peoples of the Americas with an emphasis on Mesoamerica and the Andes. (Spring 2009).

Lecturer, Anthropology Department, CSU San Bernardino, 2007–2009. Designed and taught the courses:

- *Aztecs, Maya, and Their Predecessors*, an upper-division course introducing students to the prehistory of Mesoamerica from the area's first inhabitants to the Conquest (Fall 2007).
- *World Civilizations I*, a lower-division course tracing the history of humanity from our earliest ancestors through the rise of state-level societies around the globe (Spring 2008, 2009).

Lecturer, Sociology and Anthropology Department, University of Redlands, Spring 2008. Designed and taught the course:

- *Introduction to Archaeology*, a lower-division course introducing the practice of archaeology and the contours of world prehistory from our earliest ancestors to archaic states.

Principal Investigator, Statistical Research, Inc., Redlands, CA, 2006. Developed proposals, research designs, and synthetic reports for projects throughout California and the US Southwest. Supervised all material analysis for the Playa Vista project, and directed the analysis of over 80,000 worked shell ornaments from domestic, ritual, and mortuary contexts.

Co-Instructor, CSU San Bernardino Archaeological Field School, 2006. Instructed students in the practical aspects of archaeological survey, excavation, field documentation, and laboratory methods. Lectured on various topics in California prehistory. Guest Instructor in the 2001–2005 seasons.

Project Director, Statistical Research, Inc., Redlands, CA, 1996–2005. Promoted to Senior Project Director in 2003. Directed numerous archaeological projects from initiation to completion. Wrote theoretical and technical sections for site reports, and edited or co-edited over a dozen reports. Coordinated Native American consultations and supervised the invertebrate faunal analysis section.

Project Director, Sacbe Project, Xunantunich Archaeological Project, Belize, 1994–1997. Designed and implemented doctoral field research on the causeways (*sacbes*) of the Maya center of Xunantunich. Directed all phases of field work and laboratory research, including survey, testing, excavation, and materials analysis. Constructed an integrated project database.

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Teaching Fellow, Anthropology Department, University of Pennsylvania, 1991–1992. Courses: *World Prehistory* and *Physical Anthropology*. Designed and taught discussion and lab sessions, presented a guest lecture on Maya archaeology, completed all grading, supervised extra-credit research projects, created teaching aids and practicum exercises.

Professional Service

Solicited Peer-Reviewer, *Journal of Archaeological Method and Theory* (2008), *Reviews in Anthropology* (2006), *Great Empires of the Past* (2008)

Faculty Sponsor, Mesoamerican Reading Group, UC Riverside, 2008–2009.

Board Member, The Grove School Governing Board, Redlands, California, 2009–present.

Panelist, *Women Reaching Out: Strategies and Contexts for Mentoring in Archaeology*, a COSWA-sponsored working group, Society for American Archaeology, 2008.

Speaker, various venues including Kiwanis, DAR, Kingsbury Elementary, Montessori in Redlands, Cope Middle School, 2002–2009.

Focus Group Member, Western Association of Schools and Colleges (WASC) Accreditation Program, Montessori in Redlands School, 2005–2006.

Author, Program in Archaeology, Chaa Creek Natural History Centre, Belize, 1995.

Author, Anthropology TA Information Packet, University of Pennsylvania, 1993.

Co-Chair, Anthropology Colloquium Committee, University of Pennsylvania, 1990–1991.

Cal Student Orientation (CalSO) Counselor, University of California, Berkeley, 1988.

Grants, Fellowships, and Awards

Professional Development Award, in support of ongoing faculty research, University of California, Riverside, 2009.

Dissertation Improvement Grant, supporting one year of dissertation research, National Science Foundation (NSF), 1997–1998.

Conference Grant, support for research dissemination, University of Pennsylvania, 1997.

Dissertation Research Fellowship, supporting one year of field research, Fulbright/IIE, 1995.

Field Research Grant, for dissertation project development, Department of Anthropology, University of Pennsylvania, 1993.

William Penn Fellowship, merit-based four-year scholarship, University of Pennsylvania, 1989–1993.

Kroeber Award, for the most outstanding Honors Thesis in Anthropology, University of California, Berkeley, 1989.

Phi Beta Kappa, one of 20 Junior-year recipients, University of California, Berkeley, 1988.

Frank Edward Kraft Award, one of 100 top-ranked Arts & Sciences freshman, University of California, Berkeley, 1986.

Scholarly Presentations

Going to War in America: Examining the Landscape of War in the WWII-era Desert Training Center/California-Arizona Maneuvers Area (DTC/C-AMA). Co-author, Christopher J. Doolittle. Paper to be presented at the 75th Annual Meeting of the Society for American Archaeology, St. Louis, April 2010.

Crafting Power: Preclassic Shell Working in the Eastern Maya Lowlands. Paper presented at the 74th Annual Meeting of the Society for American Archaeology, Atlanta, April 2009.

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- Virtual Data: Making Web-based Data Sharing Work for Archaeology.* Co-author with Mark Woodson (IT professional). Poster presented at the 74th Annual Meeting of the Society for American Archaeology, Atlanta, April 2009.
- The Chan Shell Collection: Creating Community with Shell.* Paper presented at the 73rd Annual Meeting of the Society for American Archaeology, Vancouver, B.C. In the symposium, “Chan: The 2000-Year History of an Ancient Maya Farming Community in Belize,” organized by Cynthia Robin, March 2008.
- Another Roadside Attraction: Marketplaces, Causeways, and the Case of Xunantunich, Belize.* Paper presented at the 72nd Annual Meeting of the Society for American Archaeology, Austin. In the symposium, “The Recognition of Maya Marketplaces: Views from the Maya Lowlands,” organized by Eleanor King and Leslie Shaw, April 2007.
- Constructing Identity in Colonial Southern California.* Co-author with John Douglass, Benjamin Vargas, Richard Ciolek-Torrello, and Donn Grenda. Paper presented at the 72nd Annual Meeting of the Society for American Archaeology. In the symposium, “Identity and Colonialism in California, 1769–1848,” organized by Angela Keller, John Douglass, and Benjamin Vargas, April, 2007.
- A Road by Any Other Name: Trails, Paths, and Roads in Maya Language and Thought.* Paper presented at the Penn Museum International Research Conference titled, “Landscapes of Movement: Trails and Paths in Anthropological Perspective,” organized by James E. Snead, Clark L. Erickson, and J. Andrew Darling, May 30–June 1, 2006.
- Time, Space, and Power in Maya Roads.* Paper presented at the 105th Annual Meeting of the American Anthropological Association, San Jose, California. In the session, “Issues of Power in the Past,” November 2006.
- Prehistoric Land Use, Obsidian Procurement and the Environmental Record at Honey Lake, Lassen County, California.* Co-author with Robert Wegener and Marc W. Hintzman. Paper presented at the 29th Great Basin Anthropological Conference, Sparks, Nevada, October 2004.
- Pacing the Polity: The Roads of Xunantunich.* Paper presented at the 68th Annual Meeting of the Society for American Archaeology, Milwaukee. In the symposium, “Provincial Politics: Investigations at the Lowland Maya Site of Xunantunich, Belize,” organized by Lisa J. LeCount and Jason Yaeger, April 2003.
- Features at SNI-39 and their Implications for Island Archaeology.* Co-author with Donn R. Grenda. Paper presented at the 35th Annual Meeting of the Society for California Archaeology, San Diego, April 2002.
- Generative Acts: The Power of Procession in the Maya World.* Paper presented at the Ninth Annual Maya Weekend, University of California, Los Angeles. In the symposium, “Pomp, Pageantry, and Performance: Ancient Maya Music, Dance, and Processions,” organized by Julia L. J. Sanchez, October 2002.
- Locating Ritual Activity at Ancient Maya Centers: A Test of an Ethnohistorically Based Approach at the Classic Maya Center of Xunantunich, Belize.* Paper presented at the 66th Annual Meeting of the Society for American Archaeology, New Orleans, April 2001.
- Road Types and Political Statements at the Classic Period Maya Center of Xunantunich.* Paper presented at An Odyssey of Space: The 2001 Chacmool Conference, Calgary, Canada. Symposium titled, “In Transit: The Archaeology of Transportation,” organized by Heather M.-L. Miller, November 2001.
- Putting Sacbes In Their Place: Classic Maya Site-Planning and Community Ritual.* Paper presented at the 62nd Annual Meeting of the Society for American Archaeology, Nashville. In the symposium, “Ancient Maya Causeways: New Views on Their Intrasite Role,” organized by Rafael Cobos, April 1997.
- In Large Things Remembered: Constructing A Landscape of Pilgrimage.* Paper presented at the 15th Annual Maya Weekend at the University of Pennsylvania Museum. In the symposium, “Pilgrimage, Migration, and Trade,” organized by Elin C. Danien, April 1997.
- Roads to Understanding: Language and Lowland Maya Sacbes of the Classic Period.* Paper presented at the 61st Annual Meeting of the Society for American Archaeology, New Orleans. In the symposium, “Maya Architecture: The Disadvantaged End of the Spectrum,” organized by James Aimers and Peter Harrison, April 1996.

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- Getting Into Xunantunich: Investigations of the Access Points of Xunantunich, Belize.* Paper presented at the First International Symposium of Maya Archaeology in Belize, San Ignacio, June 1995.
- Community Integration at Terminal Classic Xunantunich, Belize.* Co-Author with Jason Yaeger and Jennifer Braswell. Paper presented at the 93rd Annual Meeting of the American Anthropological Association, Nashville, December 1994.
- The Immediate Settlement Context of Xunantunich, Belize.* Junior Author. Paper presented by Wendy Ashmore at the Katun Aniversario Palenque Mesa Redonda, Palenque, Mexico, April 1993.

Sessions Organized

- Identity and Colonialism in California, 1769–1848.* Co-organizer with John Douglass and Benjamin Vargas. Symposium organized for the 72nd Annual Meeting of the Society for American Archaeology, Austin, April 2007.

Publications

Contributed Chapters and Articles

- The Social Construction of Roads at Xunantunich. In *Provincial Politics: The Classic Maya Center of Xunantunich and its Hinterland*, edited by Lisa J. LeCount and Jason R. Yaeger. University of Arizona Press, Tucson. In Press (Winter 2010).
- In Defense of the Database. *SAA Archaeological Record* 9(5):26-32. November 2009.
- A Road by Any Other Name: Paths, Trails, and Roads in Maya Language and Thought. In *Landscapes of Movement: Trails and Paths in Anthropological Perspective*, edited by James E. Snead, Clark L. Erickson and J. Andrew Darling, pp. 133-157. University of Pennsylvania Press, University of Pennsylvania Museum of Archaeology and Anthropology, November, 2009.
- The Chan Shell Collection. In *Chan Project Report 2007*, edited by Cynthia Robin. Report on file, Institute of Archaeology, Belmopan, Belize, January 2008.
- An Overview of Prehistoric Sites in the Vicinity of the Santa Susana Pass State Historic Park. In *A Passage in Time: Three Archaeological Sites in the Santa Susana Pass State Historic Park*, edited by Richard Ciolek-Torrello, Donn R. Grenda, Angela H. Keller, and Anne Q. Stoll. University of Arizona Press, Tucson, 2006.
- Prehistoric Use of a Great Basin Wetland. In *Distant Shores: Cultural Resources Survey at Honey Lake, Lassen County, California*, edited by Robert M. Wegener, Jeffrey H. Altschul, Angela H. Keller, and Anne Q. Stoll, pp. 461–500. Technical Report 04-10. Statistical Research, Redlands, California, November 2004.
- Beads, Ornaments, and Other Artifacts. In *Leo Carrillo State Park Archaeological Investigations: Phase II Investigation: Archaeological Survey and Testing Program within the Proposed Concession Store and Visitors Center Areas of Potential Effects*, edited by Richard Ciolek-Torrello and Benjamin R. Vargas, pp. 63–80. Technical Report 03-42. Statistical Research, Redlands, California, December 2003.
- Invertebrate Faunal Remains. In *Life on the Dunes: Fishing, Ritual, and Daily Life at Two Late Period Sites on Vizcaino Point*, edited by David Maxwell, Donn R. Grenda, and Angela H. Keller, pp. 9-1–9-20. Draft Technical Report 02-27. Statistical Research, Tucson, April 2002.
- Site Context, with Koral Ahmet and Jill A. Onken. In *Data Recovery Excavation Report for CA-AMA-514, State Route 49, Amador County, California*, edited by Christopher J. Doolittle, pp. 7–28. Technical Report 01-75. Statistical Research, Redlands, California, October 2002.
- Roads to Understanding: A Semantic Analysis of the Maya Word for “Road” and Ancient Maya Causeways. *The Codex* 9(3):8–31, June 2001.
- Native American Contact and Information-Gathering Program. In *A Class I Historic Context and Cultural Inventory Report for the Native Fish Protected Habitat Development Project, Yuma County, Arizona*, edited by Joseph A. Ezzo, pp. 21–33. Technical Report 99-34. Statistical Research, Tucson, February 2000.

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- Invertebrate Remains. In *At the Head of the Marsh: Middle Period Settlement along Upper Centinela Creek, Archaeological Treatment Plan for CA-LAN-60, CA-LAN-193, and CA-LAN-2768, Marina del Rey, California*, edited by Jeffery H. Altschul, Su Benaron, and Christopher J. Doolittle, pp. 83–99. Playa Vista Monograph Series, Test Excavation Report 2. Statistical Research, Redlands, California, June 1999.
- Invertebrate Remains. In *Settlement on the Lagoon Edge: Archaeological Treatment Plan for CA-LAN-2676, Marina del Rey, California*, edited by Jeffrey H. Altschul, Christopher J. Doolittle, and Su Benaron, pp. 101–114. Playa Vista Monograph Series, Test Excavation Report 1. Statistical Research, Redlands, California, December 1998.
- Invertebrate Faunal Analysis. In *House Pits and Middens: A Methodological Study of Site Structure and Formation Processes at CA-ORA-116, Orange County, California*, edited by Donn R. Grenda, Christopher J. Doolittle, and Jeffrey H. Altschul, pp. 105–126. Technical Series 69. Statistical Research, Redlands, California, June 1998.
- Testing and Excavation Around Sacbe II and Group C. In *Xunantunich Archaeological Project Report 1997*, edited by Richard M. Leventhal and Wendy Ashmore, pp. 96–115. Report on file, Institute of Archaeology, Belmopan, Belize, January 1998.
- The 1995 Investigations of the Access Points and Accessibility of Xunantunich. In *Xunantunich Archaeological Project Report 1995*, edited by Richard M. Leventhal and Wendy Ashmore, pp. 83–111. Report on file, Institute of Archaeology, Belmopan, Belize, January 1996. The Xunantunich Sacbe Project 1994. In the *Xunantunich Archaeological Project Report 1994*, edited by Richard M. Leventhal and Wendy Ashmore, pp. 75–92. Report on file, Institute of Archaeology, Belmopan, Belize, January 1995.
- Vision and Revision: The Remapping of Xunantunich, Belize, C.A. In *the Xunantunich Archaeological Project Report 1993*, edited by Richard M. Leventhal pp. 85–102. Report on file, Institute of Archaeology, Belmopan, Belize, January 1994.

Edited Volumes, Reports, Theses

- Cultural Resources Class III Survey Draft Report for the Proposed Blythe Solar Power Project, Riverside County, California*. Primary author. Prepared for Solar Millennium, LLC and Chevron Energy Solutions. Submitted to the California Energy Commission and the Bureau of Land Management, September 2009.
- A Rock and A Hard Place: Prehistoric Millingstone Camps and Historic Gold Mining in the Balanced Rock Area, San Bernardino National Forest*. Co-editor with Michael K. Lerch and Richard Ciolek-Torrello. Technical Report 06-70. Statistical Research, Redlands, California, 2007.
- Life on the Dunes: Fishing, Ritual, and Daily Life at Two Late Period Sites on Vizcaino Point*. Co-editor with Brian Fagan, Donn R. Grenda, David Maxwell, and Richard Ciolek-Torrello. Technical Series, No. 88. Statistical Research, Tucson, Arizona, 2006.
- Roads to the Center: The Design, Use, and Meaning of the Roads of Xunantunich, Belize*. Ph.D. dissertation, Department of Anthropology, University of Pennsylvania. UMI, Ann Arbor, Michigan, 2006.
- A Passage in Time: Three Archaeological Sites in the Santa Susana Pass State Historic Park*. Co-editor with Richard Ciolek-Torrello, Anne Q. Stoll, and Donn R. Grenda. University of Arizona Press, Tucson, 2006.
- Distant Shores: Cultural Resources Survey at Honey Lake, Lassen County, California*. Co-editor with Robert M. Wegener, Jeffrey H. Altschul, and Anne Q. Stoll. Technical Report 04-10. Statistical Research, Redlands, California, 2004.
- From out of the Ashes: Archaeological Studies in the Willow Fire Burn Area, San Bernardino National Forest, California*. Co-editor with Michael K. Lerch and Donn R. Grenda. Technical Report 02-38. Statistical Research, Tucson, 2002.
- Life on the Dunes: Fishing, Ritual, and Daily Life at Two Late Period Sites on Vizcaino Point*. Co-editor with David Maxwell and Donn R. Grenda. Draft Technical Report 02-27. Statistical Research, Tucson, 2002.
- Evaluation of SR 10, a Nonarchaeological Assemblage in the Ballona Wetlands, Marina del Rey, California*. Primary author. Playa Vista Archaeological and Historical Project, Technical Report 9. Statistical Research, Redlands, California, 1999.

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Archaeological Monitoring Reports for 1998 (5 vols). Playa Vista Archaeological and Historical Project, Monitoring Report. Statistical Research, Redlands, California, October 1998 and March 1999.

Field and Laboratory Methods for Archaeological Monitoring. Primary author. Playa Vista Archaeological and Historical Project, Monitoring Report. Statistical Research, Redlands, California, 1998.

Women of Vision: The Lintels of Structures 22 and 24 at Yaxchilan, Chiapas, Mexico. Unpublished Honor's Thesis, Department of Anthropology, University of California, Berkeley, 1989.

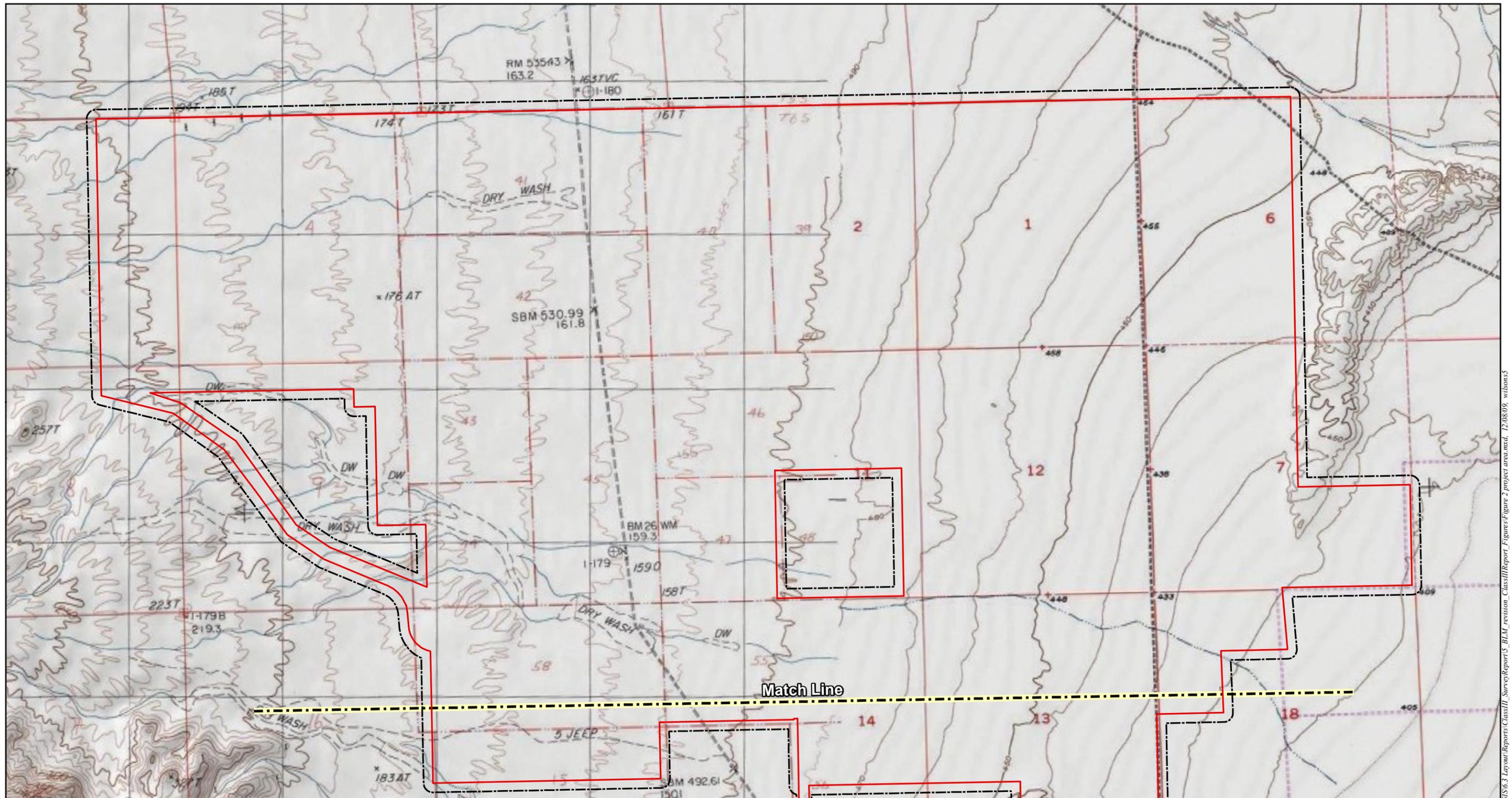
Other Qualifications

Computer Competencies: Database Design, GIS, AutoCAD, Graphic Design, Word Processing, Spreadsheet-based Accounting and Data Analysis, Basic Programming (Basic, Visual Basic, SQL).

Languages: English (native), Spanish (conversational, technical), Yucatec Maya (written), French (elementary).

DR-CR-127 Figures

Map of Area of Potential Effects (3 Figures)



Legend

- Area of Potential Effects (7,243 acres)
- CEC Buffers (Additional 629 acres)

Source: NAIP, 2005; USGS 7.5" Quadrangle McCoy Peak (1983), McCoy Wash (1975), and Roosevelt Mine (1983); AECOM 2009

1 inch = 2,000 feet

0 2,000 4,000
Feet

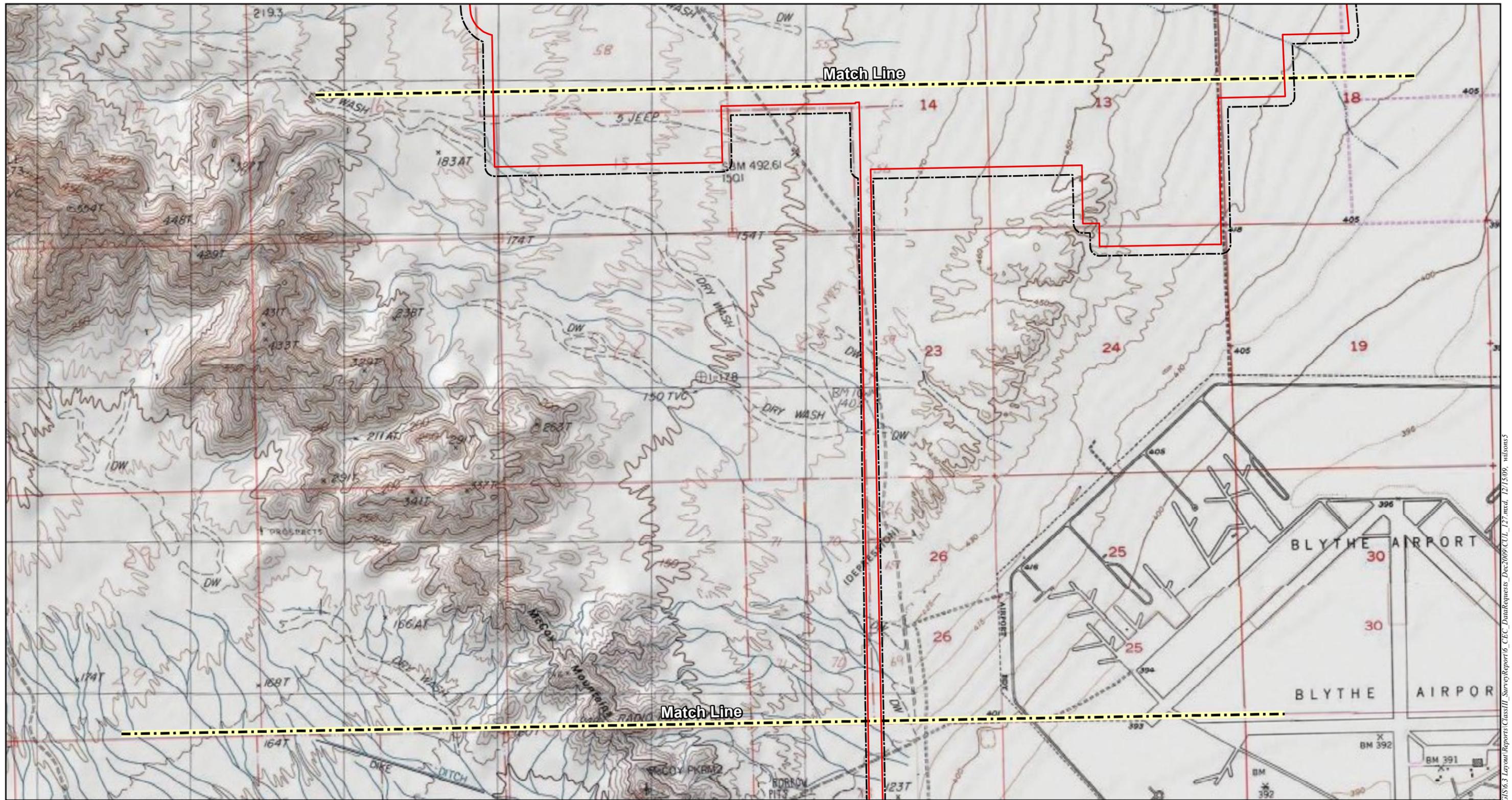
**Class III Cultural Resources
Report for the
Blythe Solar Power Project**

**CUL 127a
Project
Area of Potential Effects**

AECOM

Date: January 2010

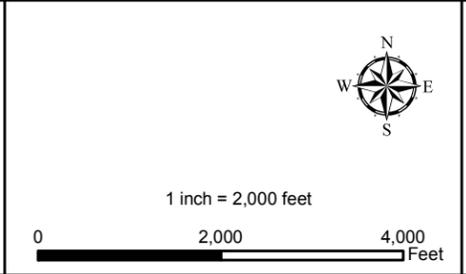
Path: P:\2009\0908082_Sol.Mil_Blythe\6.0_GIS\6.3_Layout\Reports\ClassIII_Survey\Report5_BLM_revisor_ClassIIIReport_Figures\Figure 2 project area.mxd, 12/08/09, wilson5



Legend

- Area of Potential Effects (7,243 acres)
- CEC Buffers (Additional 629 acres)

Source: NAIP, 2005; USGS 7.5" Quadrangle McCoy Peak (1983), McCoy Wash (1975), and Roosevelt Mine (1983); AECOM 2009

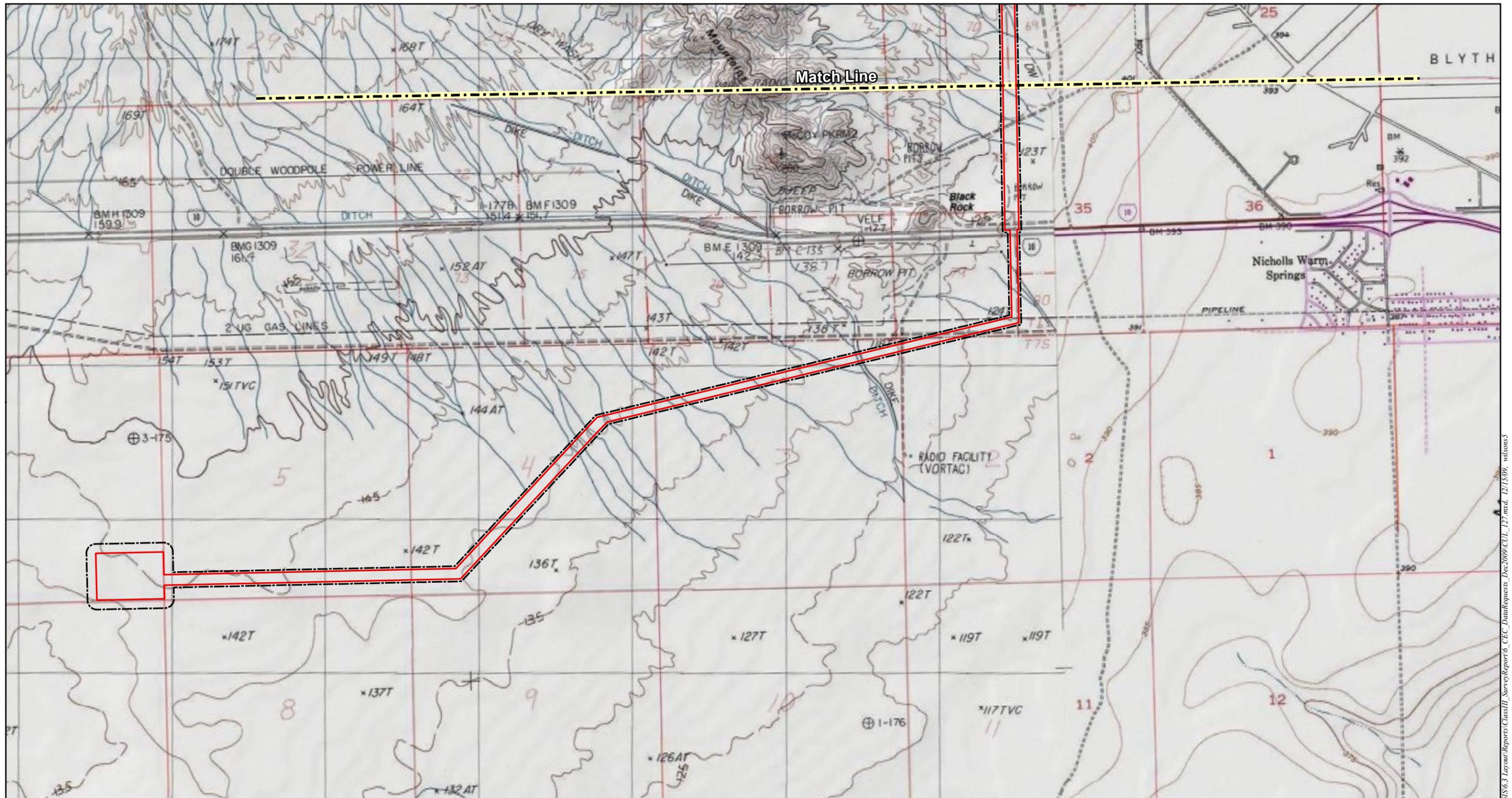


Class III Cultural Resources Report for the Blythe Solar Power Project

CUL 127b Project Area of Potential Effects




Date: December 2009



Legend

- Area of Potential Effects (7,243 acres)
- CEC Buffers (Additional 629 acres)

Source: NAIP, 2005; USGS 7.5" Quadrangle McCoy Peak (1983), McCoy Wash (1975), and Roosevelt Mine (1983); AECOM 2009

1 inch = 2,000 feet

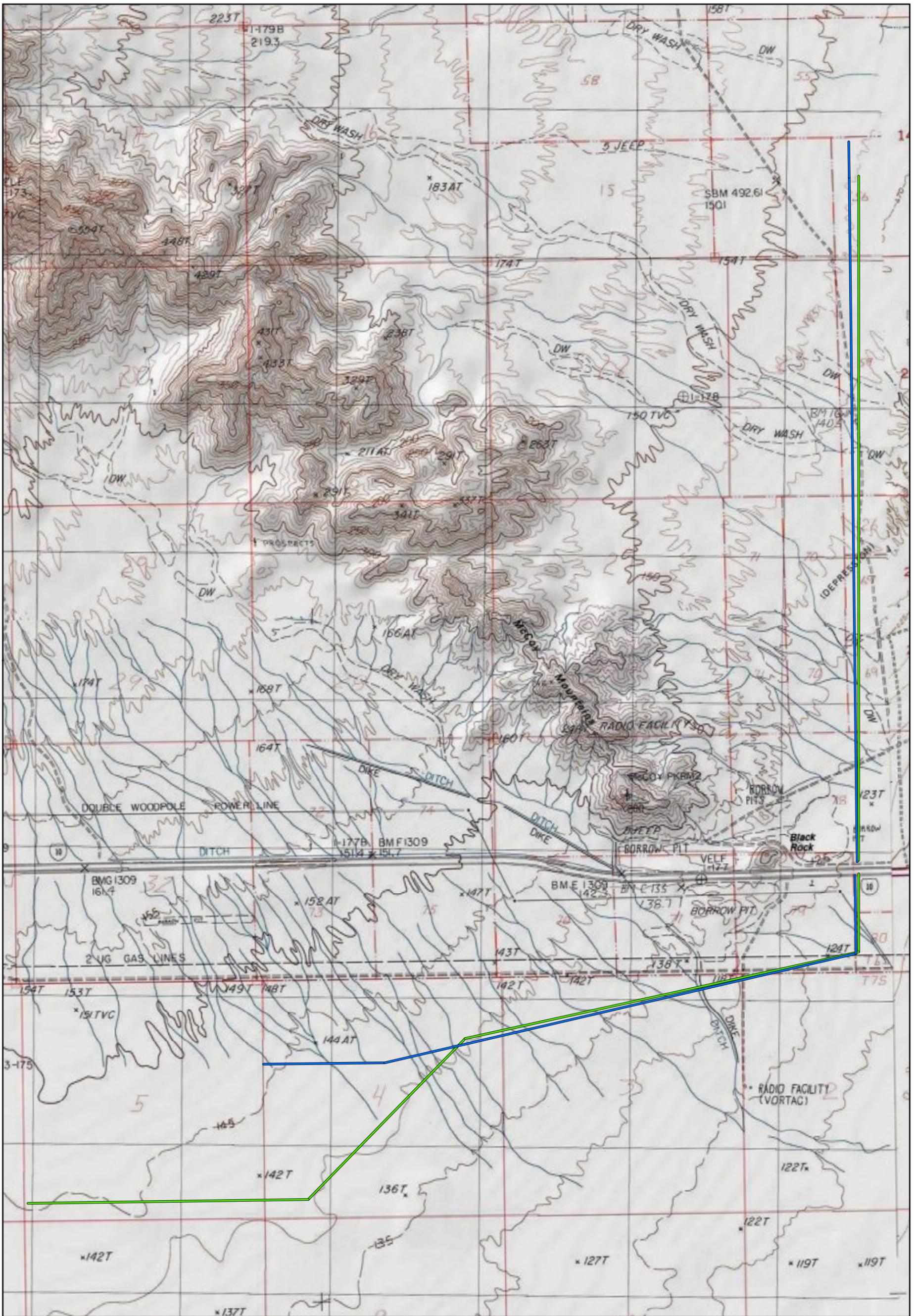
**Class III Cultural Resources
 Report for the
 Blythe Solar Power Project**

**CUL 127c
 Project
 Area of Potential Effects**

Date: December 2009

Attachment DR-CR-135

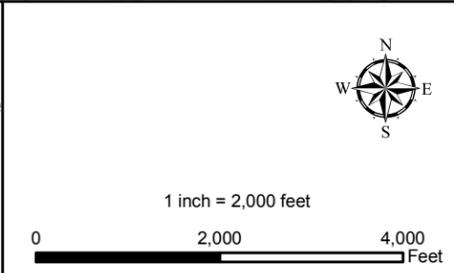
**Figure-DR-CR-135
Gen-Tie Transmission Line Alternative Routes**



Legend

- July 2009 Alternative
- October 2009 Alternative

Source: USGS 7.5" Quadrangle Roosevelt Mine (1983); AECOM 2009



Class III Cultural Resources Report for the Blythe Solar Power Project

DR-CR-135 Gen-tie Transmission Line Alternative Routes

AECOM

Date: December 2009

Attachment DR-CR-139

Steinkamp Resume

Education

- M.S., Geology, Oregon State University, 2006
- B.A., Anthropology, University of Cincinnati, Ohio, 1986

Registration / Certification

- NHPA Section 106 Compliance Certification. Instructor: Dr. Thomas King, 2007
- Geologist In Training (G.I.T) Oregon Board of Geologist Examiners, 2007
- NAUI certified diver, 1991

Expertise

- Cultural resource survey design, testing, data recovery, monitoring, field methods.
- Stratigraphy and Sedimentology
- Geomorphological and geological analysis, core logging.
- Lithic analysis and raw material analysis
- Northwest, Basin and Range, Southwest, Northeast, Southeast, Midwest region prehistoric and historic archaeology.
- Micro-fossil analysis
- Underwater archaeology

Selected Projects

- Geoarchaeologist, Ridgecrest Solar Power Project (RSPP), Kern County, California
- Geoarchaeologist, Palen Solar Power Project (PSPP), Riverside County, California
- Geoarchaeologist, Blythe Solar Power Project (BSPP), Riverside County, California
- Geoarchaeologist, Stockton Generation Power Project (SGEN), Stockton, California
- Archaeologist, Archaeological Testing at the Acorn and Emerson Lake Training Areas, Marine Air Force Training Command, Twentynine Palms, California

Matthew Steinkamp is a geologist, geomorphologist, geoarchaeologist, underwater archaeologist, and cultural resources project manager with more than 20 years of prehistoric and historic archaeological and historic preservation experience in all areas of the United States, Hawaiian Islands, Micronesia and East Africa. He joined SWCA in 2007 and is a geologist, geomorphologist and geoarchaeologist. He is responsible for assessing the effects of projects on historic and prehistoric resources on land and underwater, and conducting geomorphology and geoarchaeology studies by analyzing the bedrock geology, geomorphic processes and soils to determine archaeological site formation processes, integrity of deposits and presence or absence of sealed cultural remains in deep seated sedimentary environments.

Mr. Steinkamp's work experience has allowed him to acquire extensive knowledge in all phases of prehistoric and historic archaeology. He has worked on numerous cultural resource inventory projects, testing, construction monitoring, mitigation and data-recovery on sites in the Northwest, Southwest, Great Basin, Midwest, Northeast and Southeast United States, as well as the Hawaiian Islands and islands of Micronesia. He has extensive experience in geology and geomorphology such as piston and gravity coring of Lake Tanganyika, East Africa, core logging of mechanical drilling in the Northwest, as well as analyzing ocean drilling cores from the Pacific Ocean abyssal plain to develop a chronological and intensity sequence of large earthquakes along the Cascadia Subduction Zone and San Andreas Fault for the past 10,000 years.

Mr. Steinkamp also has extensive experience in laboratory methods, lithic analysis, micro-fossil analysis of cherts, flints and lacustrine sediments utilizing microscopy, raw material analysis, mineral separation, igneous and sedimentary petrography and petrology, field mapping of geological formations, invertebrate fossil analysis and flint-knapping.

Mr. Steinkamp has conducted cultural resource surveys for various state and federal agencies and private-sector clients. His experience has introduced him to numerous types of construction effects on cultural resources including gas and water-line construction, roadways, commercial buildings, parks, dam re-licensing, canals, coal mines, nuclear facilities, and logging operations. Mr. Steinkamp has co-authored numerous cultural resource inventory, testing and data recovery reports, and his publications include *Lacustrine Micro-Fossil Assemblage from Core NP04-KH3 from the Moba-Kalya Horst Region of Lake Tanganyika, East Africa, as a Biogeochemical Proxy for Late Pleistocene and Early Holocene Climate and Lake Levels* and *Diatoms are Cool, Yet Do They Indicate Dramatic Climate Shifts in the Holocene, Or Are They Just Full of Silica*. Mr. Steinkamp has presented at the University of Dar es Salaam Annual Science Conference in Dar es Salaam, Tanzania.

Attachment DR-CR-140
Geosarch Report
(Confidential attachment and will be submitted under separate cover)