Figure 11: Building A, front (east) side.

Figure 12: Building A, back (west) side.

Figure 13: Building A, west end.

Figure 14: Building B front (north) side.

Figure 15: Building B, back (south) side.

Figure 16: Building B, north side.

Figure 17: Concrete water trough fishpond in front of Building B.

Figure 18: Date inscribed in concrete at southwest corner of fishpond.

Figure 19: Names inscribed in concrete at southeast corner of fishpond.

Figure 20: Barn Structure C, front (east) side.

Figure 21: Barn, north side.

Figure 22: Barn south side.

Figure 23: Barn, back (east) side.

Figure 24: Feature D terraced foundations, looking west.

SIGNIFICANCE

Historic resources were evaluated for significance using standards for listing on the California Register of Historic Resources and San Diego County Local Register of Historical Resources. To qualify for these listings a property must meet at least one of the following four criteria:

1. That are associated with events that make a significant contribution to the broad patterns of our history; or

2. That are associated with the lives of persons significant in our past; or

3. That embody the distinctive characteristics of a type, period, or method of construction or represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

4. That have yielded, or may be likely to yield, information important in prehistory or history (National Park Service 1991; County of San Diego 2007).

The resources were also evaluated for significance under the County of San Diego Resource Protection Ordinance (RPO). Under the RPO:

> o). “Significant Prehistoric or Historic Sites”: Sites that provide information regarding important scientific research questions about prehistoric or historic activities that have scientific, religious, or other ethnic value of local, regional, state, or federal importance. Such locations shall include, but not be limited to:

(1) Any prehistoric or historic district, site, interrelated collection of features or artifacts, building, structure, or object either:
(aa) Formally determined eligible or listed in the National Register of Historic Places by the Keeper of the National Register; or
(bb) To which the Historic Resource (“H” Designator) Special Area Regulations have been applied; or

(2) One-of-a-kind, locally unique, or regionally unique cultural resources which contain a significant volume and range of data and materials; and

(3) Any location of past or current sacred religious or ceremonial observances (RPO 2009).

Significance Statement

Research has determined that the property was homesteaded around 1871 by the pioneer farming family of Benjamin and Caroline Cook. It was later owned by James and Phoebe Jones, another family of pioneer farmers in the Bernardo area. In the 1930s Edward and Mary Mullally owned and farmed the property. Beginning in the 1940s the parcel was owned by a series of individuals who had primary residences and occupations elsewhere.

The buildings on the property all date after 1941, when the parcel was owned by absentee land holders whose primary occupations were activities other than those associated with the property. None of these owners were found to be persons of significance in regional or local history, and the buildings do not represent the pioneering phase of San Diego County farming from circa 1870 to 1940, when families likes the Cooks, Jones, and Mullallys resided on their farms and were

organized in small communities like Bernardo. For these reasons the buildings do not qualify for listing on either the California Register of Historic Resources, or San Diego County Local Register of Historical Resources. In addition they do not qualify as significant under the County of San Diego Resource Protection Ordinance.

The area around Buildings A, B, and C, however, covers the general location of the Cook, Jones, and Mullally houses and could potentially have important archaeological deposits associated with this significant period in the property's history. For this reason any ground disturbance in these areas should be monitored by an archaeologist.

REFERENCES

Aerial Photograph
1928 Tax Factor Aerial Photographs. San Diego History Center Archives.

1947-2006 U.S. Department of Agriculture and United States Geological Service Aerial Photographs from Historicaerials.com.

Census
1880-1940 Federal Census Manuscript Returns, Schedule 1, Population. Available on line at ancestry.com.

County of San Diego
2007 County of San Diego Report Format and Content Requirements Cultural Resources: Archaeological and Historical Resources. Land Use and Development Group. Department of Planning and Land Use, Department of Public Works.

Deeds
1900-1919 Various Deed Books cited in text on file at the San Diego County Assessors Office.

Directories
1895-1975 San Diego County Difectories on file at the San Diego History Center Archives.

Escondido Progress
1922 Issue of April 19 from an on line genealogy source. Pioneer Room, Escondido Public Library.

Escondido Times
1887- Various issues of the *Escondido Times* and *Escondido Times Advocate*
1919 cited in text. Pioneer Room Escondido Public Library.

Fuller, Wayne E.
1981 School District 37: Prairie Community. *The Western Historical Quarterly,* 12: 412-32.

Goverment Land Office (GLO)
1876, Plat Map of Township 12 South, Range 2 West. San Diego County
1885 Operations Center.

Great Register
1876- San Diego County Great Register of Voters. City of San Diego Central
1890 Library and on line at ancestry.com.

Hubbon, Alexander
1900 Official Map of San Diego County. San Diego History Center Research Archives, San Diego, CA.

Kiefer, Wayne E.
1972 An Agricultural Settlement Complex in Indiana. *Annals of the Association of American Geographers*, 62:487-506.

National Park Service
1991 *National Register Bulletin 15: How to Apply the National Register Criteria for Evaluation*. U.S. Department of the Interior, National Park Service, Interagency Division.

Oak Hill Cemetery Records
1933 Burial Records and Grave Stones for Oak Hill Cemetary, Escondido California available at ancestry.com.

Official Records
1934- Official Records cited in text, San Diego County Assessors Office.
2007

Olds, Nelson
1922 Interview. Vertical files, Pioneer Room, Escondido Library.

Patents
1885 Patent Book 3 cited in text. San Diego County Assessors Office.

Public Records Index
2013 Public Records Index at ancestry.com.

Resource Protection Ordinace (RPO)
2009 Ordinace No. 9842. San Diego County Board of Supervisors.

San Diego Sun
1883 Edition of November 17, cited in text. Avalible at Geneology Bank.Com.

San Diego Union
1885-1992 Various issues of the *San Diego Union* and the *San Diego Union Tribune* cited in text. San Diego History Center Archives and Geneology Bank.Com.

Sikes, Harry
1922 Interview. Vertical files, Pioneer Room, Escondido Library.

Superintendent of Schools
1905, 1909 Directory of the Schools of San Diego County California. Epermania Collection – Education, Superintendent of Schools Directories, San Diego History Center, San Diego CA.

Tax Assessor
1941-2013 Real Property Records, San Diego County Tax Assessor's Office.

USGS
1901 Escondido Quadrangle.

1942 Rancho Santa Fe Quadrangle.

Van Wormer, Stephen R.
1986a A History of Jamacha Valley: Agricultural and Community Development in Southern California. Master's thesis, San Diego State University: 34-46, 58-64.

1986b "Beeves and Bees: A History of the Settlement of Pamo Valley, San Diego County." *Southern California Quarterly*, 68 (Spring):37-64.

APPENDIX E

RESEARCH DESIGN AND DATA RECOVERY PLAN

RESEARCH DESIGN AND DATA RECOVERY PLAN: VALIANO SAN DIEGO COUNTY, CALIFORNIA

CASE NUMBER PDS2013-SP-13-001, PDS2013-GPA-13-001, PDS2013-STP-13-003, PDS2013-TM-5575, PDS2013-REZ-13-001, PDS2013-ER-13-08-002

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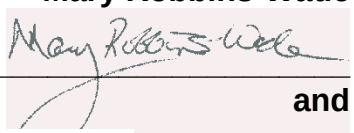

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April 2014
Affinis Job No. 2527

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INTRODUCTION

CA-SDI-17,506 is a significant archaeological resource under the California Environmental Quality Act (CEQA) and the guidelines of the County of San Diego. The site meets the criteria for listing on the California Register of Historical Resources, due to its scientific research potential, as well as its cultural value to the Native American (Luiseño and Kumeyaay) community. The proposed Valiano project would have significant impacts to CA-SDI-17,506, which must be avoided or mitigated. Under the proposed project design, avoidance of the site is not feasible. Therefore, a data recovery program is proposed, in order to mitigate impacts to below a level of significant.

CA-SDI-17,506 is located on a small knoll, between two intermittent drainages. The site was recorded as 23.8 m (78.1 ft.) northeast to southwest by 9.3 m (30.5 ft.) northwest to southeast, covering 1,330.2 square meters (14,318.2 square feet) (Smith 2011). Artifacts were noted within and on the sides of an access road that has been graded through the site. The entire site has been plowed for agricultural uses. Testing included surface collection, as well as excavation of 11 shovel tests and one test unit.

> Site SDI-17,506 was represented by lithic production waste, several precision, percussion, and milling tools, as well as marine shell fragments. A total of 122 artifacts, including one whole mano, one mano fragment, one metate fragment, four core tools, five pieces of debitage, 95 flakes, three retouched flakes, three scrapers, and two utilized flakes. In addition, 6.9 grams of ecofactual material were recovered from the surface and subsurface investigations [Smith 2011:6.1-1].

"The range of lithic tools, including ground stone tools and precision tools as well as marine shell, suggest that resource processing was a common activity at the site" (Smith 2011:6.1-4). Due to the range of artifacts at the site, the presence of subsurface cultural deposits, and the potential for buried features, the site was recommended as a significant resource under CEQA, but the site does not meet the significance criteria of the County's RPO (Smith 2011).

During the February 2013 site visit by Affinis and the Native American monitors, this site was found essentially as previously recorded but covering a somewhat larger area than previously recorded. Numerous surface artifacts were observed, particularly in graded dirt roads, where ground visibility was excellent. Many of the artifacts exhibited a great deal of patination. One very high quality crystal quartz flake was noted.

This document presents a discussion of the research topics that may be addressed with data from investigations at CA-SDI-17,506. Important topics that could be addressed at the site include chronology, subsistence/settlement, and intersite patterning. The data needed to address each of these topics is considered and a program adequate for obtaining those data is outlined.

RESEARCH DESIGN

The research design for the Valiano data recovery program includes three basic topics: chronology, subsistence/settlement pattern, and intersite patterning. In addition, Traditional Cultural Properties and Native American Heritage Values will be addressed.

Chronology

Chronological control is critical to answering most of the kinds of questions that archaeologists ask. It is necessary to control for time in analysis of both intrasite and intersite patterning, for if the archaeological entities being compared are of different ages, they cannot be part of the pattern that results from the operation of a particular prehistoric cultural system. Several lines of evidence can be brought to bear on this question, including radiocarbon dating, obsidian sourcing and hydration analysis, and the occurrence of time-sensitive artifacts.

No temporally diagnostic cultural material was found during the testing program conducted at CA-SDI-17,506 by Brian F. Smith and Associates (BFSA) in 2005 (see Robbins-Wade and Giletti 2013; Smith 2011). Flaked stone tools and debitage were found, as well as ground stone implements. The lack of ceramics at the site could indicate preceramic use of site or that activities carried out at the site were not ones for which ceramic vessels would be used. Food processing appears to have been done at the site, for which ceramic vessels might have been used, suggesting use of the site prior to the introduction of ceramics, however, this is conjectural. The presence of bedrock milling features at other sites in proximity to this one suggests Late Prehistoric use of the area.

Radiocarbon analysis would be conducted to obtain dates on samples from the site, such as charcoal or faunal material. Submitting individual large shells or large pieces of charcoal for analysis is preferable to submitting bulk samples, to minimize the chance for error by grouping shell or charcoal that may be of different ages. It is important to take into consideration past disturbance at the site and remember that the occurrence of items in proximity to one another does not guarantee that they are associated. A radiocarbon date for a large piece of *Chione* is not necessarily totally applicable to the lithic tool found next to it, but the date obtained for a single specimen is less likely to introduce errors than a date for a bulk sample. Unfortunately, no large pieces of shell were recovered during the testing program, but some may be found during the data recovery program. In addition, animal bone or charcoal might be found and collected as part of the data recovery program. Accelerator mass spectrometry (AMS) analysis requires substantially less material than conventional radiocarbon dating; this is one option for samples from the site.

Obsidian source and hydration analysis is a form of relative dating that is often quite useful. No obsidian was recovered during the testing program by BFSA, but if

appropriate obsidian specimens are recovered, obsidian analysis would be conducted as part of the data recovery program.

Although the research design includes questions relating to changes over time, CA-SDI-17,506 is relatively small and the cultural deposit is not deep (approximately 30 cm), suggesting that the site was not used over a long period of time or by different cultural groups. It might not be possible to address diachronic changes.

Question: What is the occupational history of CA-SDI-17,506? What is the range of dates of the occupation of the site?

Data requirements: Collection of suitable sample sizes of datable material, such as shell, charcoal, and/or obsidian, would be required. Radiocarbon samples from features, such as hearths, are desirable as they would date the cultural features directly. A series of samples from the same unit would be useful, as would samples from several units across the site. Information from this data recovery project would be compared with data from previous work at sites in the general vicinity to refine the occupational history of the area.

Question: Is CA-SDI-17,506 contemporaneous with other nearby sites, including sites in the Harmony Grove Village area and along Escondido Creek?

Data requirements: Datable material at CA-SDI-17,506 and information on chronology from other sites that have been studied would be necessary. It is assumed that many of the sites in the area are contemporaneous and were all part of the same settlement system; additional radiocarbon analysis would help to refine these relationships.

Subsistence/Settlement Pattern

Subsistence strategies and settlement systems are interrelated to such a degree that it is difficult to address one without the other. The study of settlement patterning is dependent upon data from a number of sources, as settlement systems are the result of many interrelated factors. Variables involved include chronology, topographic setting, environmental conditions, essential food and nonfood resources, desirable (but nonessential) resources, and demographic arrangements. Understanding (or simply discerning) settlement patterning is dependent upon the archaeological visibility of elements of the settlement system. Archaeological visibility is a function not only of site type and history of use, but of natural and cultural site formation processes, both depositional and post-depositional.

Analysis of the variety of tools found at the site, as well as shellfish, and other food remains that might be recovered, would be used to address subsistence and the types of activities that were undertaken at the site. Pollen, starch, and macrobotanical analyses would be useful in addressing plant resources used. Blood protein residue analysis would complement faunal studies to address animal resources used by inhabitants of the site. Past disturbances must be considered, as they affect what is

visible archaeologically. Comparison of the assemblage and location of the site with other sites in the vicinity that have been studied previously will add to our understanding of the settlement system at work. Good chronological data is essential for fully addressing these research issues.

No animal bone was collected during the testing program, and the amount of marine shell recovered was small. So, analyses of flaked stone and ground stone tools will be important. Blood protein residue analysis may be productive, as well as analyses on the ground stone, as addressed below.

Question: What activities were conducted at the site?

Data requirements: An adequate sample of debitage and tools would be required to address the types of activities undertaken at the site. Analysis of debitage in terms of stages of manufacture and other attributes, ratios of debitage to cores and debitage to tools, and analysis of ground stone and flaked stone tool attributes would be used to address this research question.

Debitage analysis would identify stages of manufacture, mean flake size and mean flake weight, degree and types of platform preparation, and other variables. These attributes are indicative of the types of tools manufactured at the site, the degree of care (or expediency) with which tools were made, the amount of tool finishing (shaping into formal designs, as opposed to more expedient tools), and the degree to which tools were resharpened and reused. These factors reflect site type and the nature of activities undertaken. For example, at a habitation site, we would expect to find more tool finishing and a greater degree of reuse of tools, as people are staying at the site for longer periods of time and working on a variety of tasks. If a site was simply a resource gathering and processing area, we would expect to find more expediently made tools that could be discarded when the task group left the site. If the group was not spending a great deal of time at a specific site or locus, there would not be the need for resharpening or reworking implements; we would expect that at a longer term occupation area. In addition, certain tasks may require more finely made tools and thus result in a different collection of debitage. Comparison of the debitage assemblage with other sites could reflect activities conducted at the site and help discern its place in the settlement system of the area.

Question: What were the subsistence practices at CA-SDI-17,506?

Data requirements: Faunal remains (shell and bone) and subsistence-related artifacts, such as milling equipment, various flaked stone tools, or projectile points, would be required to address this issue. Pollen, starch, and macrobotanical samples from ground stone could be used to address what plant resources were used at the site. Such samples from hearths or other in situ features would also be of value. Protein residue samples gathered from ground stone surfaces, projectile points, and the edges of various flaked stone tools could be used to address animal resources used by inhabitants of the site.

Question: Did subsistence practices change over time?

Data requirements: Faunal remains; pollen, starch, and macrobotanical samples; protein residue samples; and subsistence-related artifacts would be required for analysis. Again, good chronological control would be necessary to address the diachronic changes in the assemblage. As previously noted, CA-SDI-17,506 probably was not used for a great length of time, so it may not be possible to address changes over time with data from this site.

Intersite Patterning

As previously discussed, comparison with other contemporaneous sites in the area is the key to addressing settlement and subsistence strategies and how such strategies may have changed through time. A number of sites in relative proximity to CA-SDI-17,506 have been addressed to some degree in conjunction with proposed development projects. Comparison of CA-SDI-17,506 with these sites will be important in addressing settlement patterning.

Traditional Cultural Properties and Native American Heritage Values

Federal and state laws mandate that consideration be given to the concerns of contemporary Native Americans with regard to potentially ancestral human remains, associated funerary objects, and items of cultural patrimony. Consequently, an important element in assessing the significance of the sites in the study area has been to evaluate the likelihood that these classes of items are present in areas that would be affected by the proposed project.

Also potentially relevant to prehistoric and ethnohistoric archaeological sites is the category termed traditional cultural properties. According to Patricia L. Parker and Thomas F. King (1998), “Traditional” in this context refers to those beliefs, customs, and practices of a living community of people that have been passed down through the generations, usually orally or through practice. The traditional cultural significance of a historic property, then, is significance derived from the role the property plays in a community's historically rooted beliefs, customs, and practices. Examples of properties possessing such significance include:

1. A location associated with the traditional beliefs of a Native American group about its origins, its cultural history, or the nature of the world;
2. A rural community whose organization, buildings and structures, or patterns of land use reflect the cultural traditions valued by its long-term residents;
3. An urban neighborhood that is the traditional home of a particular cultural group, and that reflects its beliefs and practices;
4. A location where Native American religious practitioners have historically gone, and are known or thought to go today, to perform ceremonial activities in accordance with traditional cultural rules of practice; and

5. A location where a community has traditionally carried out economic, artistic, or other cultural practices important in maintaining its historic identity.

A traditional cultural property, then, can be defined generally as one that is eligible for inclusion in the National Register or California Register (that is, a significant resource under CEQA and RPO) because of its association with cultural practices or beliefs of a living community that (a) are rooted in that community's history, and (b) are important in maintaining the continuing cultural identity of the community.

Although CA-SDI-17,506 has not been identified as a traditional cultural property as such, members of both the Luiseño and Kumeyaay communities have expressed interest and concern regarding this site and other cultural resources in the project area. Input from the Native American community will be incorporated into the data recovery study.

DATA RECOVERY PLAN

Fieldwork

Phase 1

Prior to the beginning of Phase 1, the site boundaries of CA-SDI-17,506 shall be adequately defined to determine whether the site can be avoided and eliminate the requirement for data recovery. If determined that the site can be avoided, a letter report shall be submitted to the Director of Planning & Development Services which will serve as condition satisfaction for Data Recovery.

Phase 1 will include hand excavation of a 2-3 percent sample of the site. Placement of units will be guided by the results of the testing program conducted by BFSA in 2005 (see Robbins-Wade and Giletti 2013; Smith 2011) as well as the surface extent of the site as noted at the time of the implementation of the data recovery program. The standard unit size will be 1-m-by-1-m, but if features are encountered blocks of unit may be excavated in order to better expose and recover the features. Soil will be screened using standard methods (1/8-in. mesh). Sidewall profiles for at least one wall of each excavation unit will be drawn and photographed. Material for special studies will be collected as appropriate and as described below.

If intact subsurface features, such as hearths, roasting pits, storage pits, etc., are encountered, flotation would be undertaken, as these features are discrete units, which are better candidates for this type of analysis than bulk unit samples.

Native American monitors representing both the Luiseño and Kumeyaay communities will be on-site during field work, and concerns of the local Native American community will be addressed in field work and laboratory analysis.

Phase 2

At the completion of Phase 1 of the fieldwork program, a letter report will be submitted to the Director of Planning and Development Services evaluating the issues of site integrity, data redundancy, spatial and temporal patterning, features, and other relevant topics, in order to assess the adequacy of the initial sample. Based on this assessment, the letter report shall recommend the need for and scope of a second phase of field investigations, not to exceed a total hand-excavated sample of 15 percent of the site deposits.

Phase 3

It is anticipated that the site will be destroyed by eventual development of the project; therefore, mechanical stripping will be used following hand excavation to identify, map, and sample buried cultural features. This phase of work (Phase 3) will be conducted regardless of whether Phase 2 excavation is required. If subsurface features are found, they would contribute greatly to the research avenues regarding activities conducted at the site and differences between this site and others in the vicinity. Cultural features encountered may have cultural heritage significance beyond their archaeological value.

If cultural features are identified during Phase 3, flotation analysis would be undertaken. In addition, organic material, such as charcoal, shell, or animal bone, from discrete features would provide more reliable samples for radiocarbon analysis than specimens from a less specific context. Any exotic or potential trade items, such as obsidian, found in association with discrete features would also be good candidates for analysis, as their context is more reliable than those from a general level sample. Features would be drawn and photographed as well.

Human Remains

If human remains or features having cultural heritage significance are encountered, excavation in the area will be halted while the archaeological consultant confers with the Most Likely Descendant (MLD) and representatives of the Native American (Luiseño and Kumeyaay) community to determine the disposition of the cultural material. Native American monitors representing the Luiseño and Kumeyaay communities will be on-site during all field work, and any concerns expressed by the monitors will be addressed immediately.

1. If evidence of human remains and/or grave goods is discovered during project implementation, all work in the area of the discovery shall be stopped, and the Native American monitors shall be informed immediately, along with all other parties as required by State law.
2. If human remains are discovered, the County Medical Examiner's Office shall be informed by the Property Owner or their representative. The Medical Examiner's Office will notify the Native American Heritage Commission, who will notify the Most Likely Descendant (MLD).

3. The disposition of human remains and grave goods will be determined by the MLD.
4. Human remains constitute all cremated remains, inhumations, partial and complete, including non-articulated bone fragments, that have been determined by way of non-destructive analysis to be human, or are deemed likely to be human.

Collection Methods for Special Studies

The Paleo Research Institute website (www.paleoresearch.com) provides instructions for the collection and handling of samples for pollen, phytolith, starch, macrofloral, and protein residue analysis. The following field methods are a summary of the collection methods, which are presented in greater detail on the website.

1. Surface samples: a surface sample should be collected at the site prior to clearing or excavation. The surface sample will provide data for comparison of the modern environment with the past environment. Surface soils samples should use the pinch technique, i.e., a spoonful of sediment from various places within a diameter of approximately 30 m (100 ft.) around the site. Surface samples collected in conjunction with a stratigraphic column should be collected in the same manner as the rest of the samples in the column.
2. All ceramic vessels and sherds considered for archaeobotanic analysis and all subsurface ground stone artifacts should be bagged immediately in the field and sent to the lab for removal of extraneous sediment and for pollen, starch, and/or phytolith washing.
3. Projectile points should be bagged and sent to the lab prior to removal of dirt by rubbing or other means.
4. Scrape trowel free of dirt, scrape area to be sampled to remove accumulation of modern pollen.
5. Clean trowel of dirt. Spray trowel with distilled water and wipe with paper towel.
6. Quickly remove pollen sample (150 cc, which is about ¾ cup) or pollen and phytolith sample (300 cc, which is about 1 ½ cup) and place into Whirl-pak or Zip-lok bag and secure. Sand does not contain as much pollen as silty or clay sediments, so the sample sizes given here are larger than those recommended for silty or clay soils.
7. Stratigraphic columns should be sampled so that the shape of the area sampled is rectangular, 2 cm (1 in.) in height. Extend the sample as far to the side as necessary to get an adequate volume of sediment. In general, collect stratigraphic samples every 10 cm. Sample by natural levels, never collecting a sample that crosses level boundaries.
8. Place plastic sample bag into a second plastic bag or a paper bag. Record sample data in pencil on an inventory card placed between the two bags or write on the paper bag using a Sharpie marker. Double bagging will help to protect the bag from puncture and provide a convenient place for recording sample information.

9. All whole vessels, sherds to be sampled, and ground stone artifacts should be bagged in the field prior to the removal of dirt and sent to the lab.
10. Hearths and roasting pits: sample fill from the feature; if the fill is stratified, collect samples from each stratum. Collect samples from the living surface adjacent to the hearth, if it can be defined.
11. Storage cists and pits: the lower portion of the fill of these features should be sampled for macrofloral remains. Collect a scrape from the wall and the bottom of the feature.
12. Metates: When ground stone is found in situ, a suite of samples is desirable. In addition to bagging the metate, pollen/starch and macrofloral samples should be collected in front of, behind, and to each side of the metate from the living surface. If metates are recovered grinding side down, a sample should be collected from sediment in contact with the grinding surface. For protein residue analysis, all flaked lithic specimens should be placed directly in plastic bags with minimal handling. Do not spit, lick, or rub the items, as this may result in positive results for human proteins. Label the outside of the bag, and a second label may be placed inside the bag as well.
13. For protein residue analysis, a soil control sample must be submitted as well. Collect approximately 1 g samples from the soil surrounding each artifact to be analyzed and place in suitable containers, such as film canisters. Other control samples may be collected: 1 g samples from all cultural levels of stratified sites and one to three samples from off-site areas.
14. Handling cigarettes or chewing tobacco contaminates the hands, which then contaminate the work area and any samples collected. The use of tobacco should be avoided on-site; if tobacco products are handled, hands must be washed before collecting samples for analysis.
15. Dogs contaminate the pollen record and make it difficult to analyze animal fibers in the record. If dogs are present on-site for any reason, a sample of dog hair should be saved and sent with the samples to be analyzed.

Laboratory Analysis and Special Studies

The laboratory analysis will start with cleaning, sorting, and cataloging of all cultural material recovered during the data recovery program. Tool and debitage analysis will investigate manufacturing techniques, tool function, style, and breakage patterns, identifying attributes that are diagnostic of specific temporal or cultural patterns, as well as stages of manufacture. The tool and debitage assemblage could be compared with material from other sites in the area to investigate whether differences in manufacturing techniques that may reflect differing time periods or culture groups are evident between site assemblages. Debitage analysis would identify stages of manufacture, mean flake size and mean flake weight, degree and types of platform preparation, and other variables.

Neutron activation analysis of metavolcanic artifacts has been used to trace sources of lithic material. Chemical composition (trace element) signatures have been identified

for sources throughout San Diego County (see Gross et al. 1998). Analysis of 5 to 10 artifacts from the site is recommended, if appropriate specimens are recovered.

Residue analysis would be conducted if appropriate samples are recovered, as discussed above. Some researchers have found that blood residue on tools can be analyzed to indicate what types of animals were processed (butchered, skinned, ground, etc.). However, erroneous results are possible if the analyst does not control for contamination by modern residues, or if the lab is unfamiliar with the native fauna and uses inappropriate controls and comparisons.

Obsidian source and hydration analysis would also be productive if obsidian is recovered (none was found during the testing conducted by BFSA). Hydration analysis provides relative dating of samples. Although there are problems with many of the hydration rates for converting hydration measurements to calendar dates, comparison of raw hydration measurements from sites that are accurately dated from other sources allows relative dating of material. Five to 10 obsidian specimens would be recommended for analysis; however, it is doubtful that that many pieces will be collected.

Other chronometric analysis, such as radiocarbon dating, would be pursued if appropriate material is recovered. Due to rodent activity and other post-occupational disturbance anticipated to have occurred at the site, large, individual pieces of shell or charcoal would be appropriate samples for radiocarbon analysis, but generalized level samples would not be appropriate at this site. The only faunal material collected during the testing program by BFSA was a small amount of marine shell, but there is a potential that suitable material would be recovered during the data recovery program. At least five radiocarbon samples are recommended for analysis, if large enough samples can be recovered to allow such analysis. The accelerator mass spectrometry technique (AMS) allows use of smaller specimens than traditional radiocarbon analysis.

As discussed above, pollen and macrobotanical analyses are often suggested for addressing subsistence and have been included in the data recovery plan. However, due to the generally disturbed nature of the site soils, caution must be used in these analyses. The mixing of the soil matrix would serve to distribute modern pollen throughout the soil profile, potentially causing confusion or invalidating the conclusions of such analysis.

Report

A comprehensive report will be completed addressing the methods and results of the data recovery program and including the results of the 2005 testing program.

The data recovery report will follow the general Archaeological Resources Management Report (ARMR) format. In order to allow the data recovery report to work as a stand-alone document, a project description will be included, describing the proposed development and the role of the data recovery program in mitigating impacts to below a

level of significance. The report will present the research design and a discussion of how the goals of the data recovery program were met (or not met). Field and laboratory methods will be detailed, and technical analyses will be included as appendices to the body of the report. Detailed site maps will be presented, illustrating the locations of shovel test pits and excavation units from the testing program and their spatial relationships to the units excavated for the data recovery program. Illustrations and photographs of representative tools and diagnostic artifacts will be used, including illustrations of diagnostic projectile points and other formal tools, and any unusual items. Photographic overviews of the site will also be included. Graphs or charts of statistical analyses will be included as appropriate.

Curation

Cultural material collected during and in conjunction with the data recovery program will be permanently curated at an appropriate facility within San Diego County, such as the San Diego Archaeological Center or a Tribal curation facility of appropriate affiliation. Alternatively, cultural material may be repatriated to the appropriate Native American group(s), as determined by agreement among the Tribes, the Principal Investigator, and County staff.

REFERENCES

Gross, G.T., J.A. Hildebrand, A. Pigniolo, J. Schaefer, and S.A. Wade
1997 Studies of Lithic and Ceramic Raw Materials near San Diego, California. Paper presented at the 62nd Annual Meeting of the Society for American Archaeology, Nashville.

Parker, Patricia L., and Thomas F. King
1998 *Guidelines for Evaluating and Documenting Traditional Cultural Properties*. National Register Bulletin 38. U.S. Department of the Interior, National Park Service, Washington, D.C.

Robbins-Wade, Mary, and Andrew Giletti
2013 *Cultural Resources Inventory and Assessment: Valiano, San Diego County, California*. Affinis, El Cajon. Report submitted to County of San Diego Department of Planning and Development Services.

Smith, Brian F.
2011 *An Archaeological/Historical Survey and Resource Evaluation of the Eden Hills Project, San Diego County, California*. Brian F. Smith and Associates, Poway, CA. Report submitted to Integral Communities, on file at Affinis.