

1 THANE D. SOMERVILLE, Wash. Bar No. 31468  
FRANK R. JOZWIAK, Wash. Bar No. 9482  
2 Morisset, Schlosser, Jozwiak & Somerville  
3 801 Second Avenue, Suite 1115  
Seattle, WA 98104-1509  
4 Telephone: 206-386-5200  
Facsimile: 206-386-7322  
5 E-mail: [t.somerville@msaj.com](mailto:t.somerville@msaj.com)  
[f.jozwiak@msaj.com](mailto:f.jozwiak@msaj.com)  
6 Attorneys for Plaintiff Quechan Indian Tribe

7  
8 BRYAN R. SNYDER, Cal. Bar No. 125212  
Law Office of Bryan R. Snyder  
9 1245 Island Avenue  
San Diego, California 92101  
10 Telephone: 619-398-8379  
Facsimile: 619-398-8377  
11 E-mail: [BSnyder@SDtrialattorney.com](mailto:BSnyder@SDtrialattorney.com)  
12 Local Counsel for Plaintiff Quechan Indian Tribe

13 **UNITED STATES DISTRICT COURT**  
14 **SOUTHERN DISTRICT OF CALIFORNIA**

15 QUECHAN TRIBE OF THE FORT YUMA  
INDIAN RESERVATION, a federally  
16 recognized Indian Tribe,

17 Plaintiff,

18 v.

19 UNITED STATES DEPARTMENT OF THE  
20 INTERIOR; United States Bureau of Land  
Management; Ken Salazar, Secretary of the  
21 Interior; Robert Abbey, Director, Bureau of  
22 Land Management; Teri Raml, District  
Manager, BLM California Desert District;  
23 Margaret Goodro, Field Manager, BLM  
24 El Centro Field Office

25 Defendants

Civil Action No. 12cv1167 WQH MDD

DECLARATION OF JOHN BATHKE IN  
SUPPORT OF PLAINTIFF'S MOTION FOR  
SUMMARY JUDGMENT

HON. WILLIAM Q. HAYES  
U.S. DISTRICT COURT JUDGE

DATE: OCTOBER 29, 2012  
TIME: 11:00 AM  
COURTROOM 4

NO ORAL ARGUMENT UNLESS  
REQUESTED BY THE COURT

**DECLARATION OF JOHN BATHKE**

I, John Bathke, state and declare as follows:

1. This declaration is based upon my personal knowledge, education, training, research, and experience.

2. I am an enrolled member of the Navajo Nation. I received my B.A. from Yale University, and I received my J.D. from the UCLA School of Law. Prior to my current position with the Quechan Indian Tribe, I worked at Kumeyaay Community College for about nine years, more recently as the Coordinator of that institution. While managing the College, I worked with several Kumeyaay elders in the Kumeyaay Language Institute, where I helped develop language and cultural courses, such as Kumeyaay Language (I-IV), Kumeyaay History, and Kumeyaay Ethnobotany. I learned about the close cultural and linguistic relationship between the Kumeyaay and the Quechan (both are part of the Yuman Language Family, as well as the Cocopah). In Fall 2011, I received a certificate of completion for the Native American Monitoring Class, sponsored by the San Manuel Band of Mission Indians and AECOM. Since 2004, I have been an online instructor with UCLA Extension, teaching courses such as Federal Indian Law and Policy and Introduction to Indian Legal Studies. I have taught several college courses at several universities, such as the University of San Diego, California State University at San Bernardino, Alliant International University, and Kumeyaay Community College. These courses include Native American Spirituality and Healing, Native American Sovereignty, Federal Indian Law, and Introduction to Native American Studies.

3. I am presently employed by the Quechan Indian Tribe as the Historic Preservation Officer within the Quechan Indian Tribe's Historic Preservation Office. I have held this position since November 14, 2011. My duties include managing the protection and preservation of the Tribe's historic and cultural resources, whether located within or outside the exterior boundaries of the Tribe's Fort Yuma Indian Reservation, in consultation with, and at the direction of, the Quechan Culture Committee and the Quechan Tribal Council.

4. As the Tribe's Historic Preservation Officer, I work closely with the Tribe's Culture Committee and the Quechan Tribal Council, as well as tribal elders and community members, and I

1 have gained valuable insight into the Tribe's perspective in regards to the management and protection  
2 of the Tribe's culture, history, and spiritual values.

3 5. Through the course of my work I have had the opportunity to visit numerous sites  
4 within the Tribe's traditional land area, and have been taught by Quechan elders how the Tribe's  
5 Creation Story and Traditional Songs relate to certain landforms, as well as the archeological sites  
6 visible on the ground, to form a larger cultural landscape. Additionally, cultural resources and  
7 archaeological sites existing subsurface, because of the passing of thousands of years of time and the  
8 movement of soil, are also considered part of this larger cultural landscape, according to Quechan.  
9 As defined by the National Park Service, a cultural landscape is "a geographic area (including both  
10 cultural and natural resources and the wildlife and domestic animals therein), associated with a  
11 historic event, activity, or person or exhibiting other cultural or aesthetic values."

12 6. The Quechan Tribe and tribal ancestors have lived on their Traditional Lands since  
13 Creation. They have occupied and utilized resources of the Lower Colorado River Valley and the  
14 confluence with the Gila River Valley for thousands of years, as well as the Colorado and Sonora  
15 Deserts. The Tribe, who was here prior to the arrival of the Spaniards or Europeans, had several  
16 villages scattered throughout what is now Arizona and California.

17 7. By Executive Order of January 9, 1884, President Arthur set aside approximately  
18 46,000 acres of traditional land of the Quechan Tribe within the state of California as a Reservation  
19 for the Tribe. Such land is located along the Colorado River adjacent to present-day Yuma, Arizona.  
20 As a result of changes in the channel of the Colorado River, a portion of the Fort Yuma Indian  
21 Reservation now lies within the State of Arizona. There are approximately 3,500 members of the  
22 Quechan Tribe, many of whom live on the Fort Yuma Indian Reservation or in the town of  
23 Winterhaven, California and the City of Yuma, Arizona, both of which are contiguous to the  
24 Reservation boundaries.

25 8. The Tribe is unique because it remains located within a portion of its traditional  
26 territory. The Tribe was not moved or conquered by Spain, Mexico, early Yuma settlers, or the  
27 United States, although the Tribe's original land base has been significantly diminished.

28

1           9.       The Tribe's traditional territory extends beyond the Reservation's exterior boundaries,  
2 encompassing lands that are at issue in this case. The western traditional territory of the Tribe  
3 extended to the area surrounding California's Cahuilla mountains and encompasses the lands  
4 proposed for the Ocotillo Wind Project (OWEF Project).

5           10.       The Department of the Interior has acknowledged the prehistoric and historic presence  
6 of the Quechan Tribe and the Tribe's traditional use of the OWEF Project lands at issue in this case.

7           11.       The cultural landscape of the Quechan consists of a myriad of natural and cultural  
8 features; intaglios, geoglyphs, petroglyphs, cremation/funerary sites, trails and pottery and lithic  
9 scatters are just a few of the types of physical remains visible today from the past activities of the  
10 Tribe. These features are collectively part of a larger cultural landscape that includes ceremonial,  
11 travel, habitation, and battle site locations, as well as sacred, religious, and spiritual places. The  
12 Tribe views the relevant landforms, such as sacred mountains, lands, and archaeological sites, as  
13 being interconnected.

14           12.       The Tribe and its members consider their religious and cultural practices to be an  
15 integral part of maintaining the health and balance of the individual, the Tribe, and the natural world.  
16 The Tribe still practices the sacred rite of cremation, as their tribal ancestors did before them. Tribal  
17 members highly value the spiritual and physical aspects of their ancestors and continuity to future  
18 generations is an important goal.

19           13.       The protection of the Tribe's historic, cultural, and spiritual resources, both inside the  
20 boundaries of the Fort Yuma Indian Reservation and within its broader traditional territory, is a  
21 sovereign prerogative and cultural priority of the Tribe.

22           14.       The Tribal Council established the Quechan Culture Committee to promote, protect,  
23 and preserve Quechan culture, language, religion, history, and ancient sites and artifacts and to advise  
24 the Tribe on matters relating to such things. The Committee includes tribal elders selected to protect  
25 Quechan history, identity, and spiritual practices. The Committee works closely with the Tribe's  
26 Historic Preservation Officer and the Tribal Council to ensure protection and preservation of Cultural  
27 Resources of significance to the Tribe, whether located within or outside Reservation boundaries.

28

1           15.     The Tribe’s Cultural Resources are historically and culturally interrelated and  
2 interconnected over many miles of desert land within the Tribe’s traditional territory, within and  
3 outside the exterior Reservation boundaries.

4           16.     Destruction or damage to any one Cultural Resource or Cultural Landscape  
5 contributes to the destruction of the Tribe’s culture, history, and religion.

6           17.     Damage and destruction to Cultural Resources causes injury to the Tribe and its  
7 people by diminishing and degrading the Tribe’s culture, its ability to honor its ancestors, its religion,  
8 and its ability to educate and teach its children about its heritage and culture. Cultural Resources are  
9 non-renewable resources—once they are destroyed, they cannot be replaced ever.

10          18.     Federal laws such as FLPMA, the NHPA, AIRFA, the RFRA and NAGPRA,  
11 affirmatively protect tribal rights and recognize a protected tribal interest in cultural resources located  
12 within traditional areas outside of reservation boundaries.

13          19.     The Tribe’s efforts to protect its Cultural Resources have been heightened in recent  
14 years following the United States, Western Area Power Administration’s negligent destruction of  
15 Cultural Resources, including cleared circles and lithic scatters, which occurred during Western’s  
16 unmonitored power pole replacement project on the Fort Yuma Indian Reservation in 1998-99. This  
17 event remains the subject of a lawsuit. *Quechan Indian Tribe v. United States*, Case No. 02-cv-1096  
18 (S.D. Cal.). *See* 535 F. Supp. 2d 1072 (S.D. Cal. 2008).

19          20.     The Tribe’s efforts to protect its Cultural Resources are also heightened by the  
20 seemingly constant efforts of private entities to develop resource-intensive projects on sensitive  
21 public desert lands near the Reservation. Although the United States and federal law are supposed to  
22 protect the Tribe’s cultural resources on public lands, the Tribe is often forced to spend its own  
23 resources to protect its cultural heritage. For example, approximately 12 years ago, the Tribe  
24 dedicated substantial resources to protect a sacred area to the north of its Reservation from a massive  
25 mining project. *See* NAFTA Tribunal Decision, *Glamis Gold, Ltd. v. United States*, 48 ILM 1038  
26 (2009). More recently, the Tribe fought the proposed transfer of public lands containing numerous  
27 tribal cultural artifacts into the hands of a private entity who intended to cover the area with a large  
28 oil refinery. *See Quechan Tribe v. U.S. Department of the Interior*, 547 F.Supp.2d 1033 (D. Ariz.

1 2008). Now, with the push to quickly develop large-scale solar and wind energy projects on  
2 hundreds of thousands of acres of desert lands, the Tribe is literally in a fight for the survival of its  
3 culture, spirituality, and heritage.

4 21. During this administration, two regularly-processed solar projects have been approved  
5 (CSolar South and CSolar West), a 500 kV transmission line was approved and constructed (Sunrise  
6 Powerlink), three fast-track renewable energy projects have already been approved (Ocotillo Wind,  
7 Genesis Solar, and Centinella Solar), and five more fast-track projects (McCoy Solar, Quartzsite  
8 Solar, Desert Harvest Solar, Mount Signal Solar Farm #1, and Ocotillo Sol Solar) are in  
9 application—all of which are on Quechan Traditional Lands under the control of the BLM—and  
10 several more projects are in the pre-application phase to follow these projects. The BLM did not  
11 have siting meetings with Quechan for these renewable energy projects, and all indications suggest  
12 that all of these proposed projects will be approved as well, despite the concerns and objections of  
13 Quechan. The fast-track process does not allow for adequate government-to-government  
14 consultation.

15 22. The culturally significant area near the OWEF Project lands has been subject to these  
16 increasing development pressures, requiring action by the Quechan Tribe to protect their heritage. In  
17 2010, the Tribe obtained an injunction against a proposed utility-scale solar project that would have  
18 destroyed hundreds of cultural resources only a few miles from the OWEF Project lands. *See*  
19 *Quechan Tribe v. U.S. Department of the Interior*, 755 F. Supp. 2d 1104 (S.D. Cal. 2010). The Tribe  
20 was also forced to challenge the proposed development of a private race-track/shooting range facility  
21 on lands near the proposed solar facility and close to OWEF Project lands, due to the project's  
22 confirmed impacts on cultural resources. *Quechan Tribe v. Imperial County Board of Supervisors*,  
23 Case No ECU06233. Notably, the Tribe has successfully protected its rights and its resources from  
24 the planned impacts in all of these cases.

25 23. Although the Tribe is often forced to spend its resources advocating for protection of  
26 its culture, this does not mean the Tribe is generally opposed to development. Certain lands in the  
27 California desert are specifically set aside and likely appropriate for large energy developments like  
28 the OWEF Project. However, the lands at issue in this case are entirely inappropriate. The Tribe was

1 not asked to be involved in early project siting consultations, which could have more appropriately  
2 sited the OWEF project location. Interior has known for decades about the sensitive cultural  
3 resources and Native American values associated with these lands. The lands at issue are  
4 affirmatively designated for protection of sensitive resources in the California Desert Conservation  
5 Area Plan, and the cultural and historic values of these lands should remain protected.

6 24. The OWEF Project's proposed location is next to Coyote Mountain, a sacred mountain  
7 mentioned in the Creation Story of the Quechan, Kumeyaay, and Cocopah. Within the project area is  
8 Sugarloaf Mountain, another mountain sacred to the Quechan, Kumeyaay, and Cocopah. West of the  
9 project site, immediately adjacent to the project, is the archaeological site "Indian Hills", which holds  
10 importance to these three tribes as well. And east of the project site is Mount Signal  
11 (AVII'SHPA/WII'SHPA), also sacred to these three tribes. The viewshed between all of these sacred  
12 locations is extremely important to the Quechan, Kumeyaay, and Cocopah.

13 25. The OWEF Project Area contains geoglyphs, petroglyphs, sleeping circles, milling  
14 features, agave roasting pits, ceramics (including unusual painted and stucco) and rare artifacts (such  
15 as a ceramic anvil and a crescentic) dating back to 8,000-10,000 years old. According to the Revised  
16 (Draft) Archaeological Report, the Project area contains 287 identified archaeological sites, which  
17 include tens of thousands of individual artifacts.

18 26. There are other resources of significance to Quechan culture, religion, and values  
19 located in the OWEF Project Area including 24 pre-historic trail segments and at least ten identified  
20 burial sites. However, the likelihood for future discovery of additional resources, including  
21 additional burial sites, is high. The lands within the OWEF Project Area are colloquially known as  
22 the "Valley of the Dead" and these lands constitute a tribal burial ground.

23 27. Given the density of artifacts and the documented significance to Quechan and other  
24 tribes, these lands may be the richest, in terms of cultural resources, of any other renewable energy  
25 application in the Southern California Desert.

26 28. During the administrative process, BLM representatives provided me with the maps  
27 attached hereto as Exhibit 1, which were prepared during development of the CDCA Plan in 1980, in  
28 which Interior described these specific Class L lands, in the OWEF Project Area, as "concentrated,

1 sensitive areas of traditional Native American secular and religious use” and as part of a “cultural  
2 resource area of . . . sensitivity and significance which are most vulnerable to negative impact.”

3 29. In addition to the specific archaeological sites that have been identified to date, the  
4 lands proposed for development here are culturally and spiritually significant to the Tribe and qualify,  
5 as a whole, as a Traditional Cultural Property that is eligible for inclusion in the National Register of  
6 Historic Places. However, to this date, Interior/BLM has not commenced any consultation or other  
7 process to formally nominate this land as a Traditional Cultural Property.

8 30. Even though there are hundreds of archaeological sites inventoried in the  
9 archaeological report, a vast majority of which have been discovered during the survey for this  
10 project, the BLM has not consulted with Quechan about which sites should be nominated for  
11 eligibility for inclusion in the National Register of Historic Places.

12 31. The OWEF Project lands also contain habitat for certain species of lizards that will be  
13 disrupted. The lizard, is a central component of the Tribe’s Creation Story and thus continues to have  
14 cultural significance to the Tribe.

15 32. I consider Pattern Energy’s repeated claim of “no direct impacts” to be a mis-  
16 statement or impossible to support. I have many reasons to believe this. Prior to Project approval, I  
17 personally visited about 20 turbine locations, with a Tierra Environmental archaeologist, and I saw  
18 archaeological and cultural materials within some of those “direct impact areas.”

19 33. During official site visits to the project area, on 4/11/12, 4/12/12, & 4/13/12, several  
20 participants, including myself, discovered previously unrecorded cultural materials and  
21 archaeological sites within direct impact areas, including such areas as the substation, turbine  
22 locations, and access roads.

23 34. Since the Project began construction through August 6, 2012, at least 37 new sites and  
24 hundreds of individual artifacts were discovered (according to the Bi-Weekly Archaeological  
25 Summary Reports), many of which are located in direct impact areas. The Bi-Weekly  
26 Archaeological Summary Reports from May 15 through August 6 are attached as Exhibits 2-7.

27 35. I have heard direct statements from two Native American Monitors, and one non-  
28 Indian crew member, that the archaeological survey that occurred prior to the Project was incomplete



1 because the Native American Monitors were forbidden from surveying any of the direct impact areas,  
2 and Pattern had prematurely forced Tierra Environmental to define site boundaries quickly and  
3 prohibited the archaeological crews from expanding those site boundaries even if additional  
4 archaeological evidence was present.

5 36. On multiple occasions over the past three months, teams of trained forensic dogs—  
6 trained in finding prehistoric, human remains— have identified dozens of areas that likely contain  
7 new and unrecorded funerary/cremation sites. Given the number of cremation sites found in the  
8 small area surveyed, there is an extremely high probability of finding more funerary/cremation sites  
9 within the OWEF Project area. For example, since construction began, four cremation sites and/or  
10 funerary sites have been newly discovered and documented, raising the previous total from six to ten.

11 37. Based on my field visits to the Project Area, it is apparent that there are likely  
12 additional sites and resources and cremation sites that have not been identified by the applicant or  
13 BLM in their surveys and that lie within direct impact areas.

14 38. It is also apparent that construction of the current project design without direct impact  
15 to sites, artifacts, and cremation areas will be impossible.

16 39. The Tribal Council and the Culture Committee have repeatedly expressed their  
17 concern to Interior/BLM about development of the lands at issue here, due to the cultural value of  
18 these lands.

19 40. For example, the administrative record for this proceeding contains a letter dated  
20 December 9, 2011, from Quechan Vice-President Ronda Aguerro to State Director James Kenna,  
21 which states:

22 The Ocotillo Desert is part of the traditional Western Corridor for the Quechan Tribe  
23 and it is also an area of transition between the Quechan, Cocopah, Kumeyaay, and  
24 Kamia/Desert Kumeyaay . . . The area of the Ocotillo Desert holds tremendous  
25 spiritual essence for the Quechan Tribe. The [OWEF Project Area] lies at the bottom  
26 of the Coyote Mountain (Carrizo Mountain), which is an important cultural  
27 component to the Quechan cosmology. The importance of that mountain is recounted  
28 and held sacred in our Creation Story, songs, and other oral traditions. To allow a  
project of such magnitude to be erected next to one of our sacred sites – which helps  
form our identity as Quechan – would be a desecration of our culture and way of life.

1           41.     The Tribe, at the direction of the Tribal Council and support of the Culture  
2 Committee, has attempted to actively participate in the administrative process relating to the OWEF  
3 Project to identify the importance of the OWEF Project Area and to advocate for preservation of the  
4 OWEF Project Area in a manner consistent with federal law; however, such participation has been  
5 impaired by Interior's failure to exchange and share information with the Tribe, and Interior's failure  
6 to consider or incorporate the Tribe's comments in the planning process.

7           42.     The Tribe has been repeatedly deprived of timely information necessary to the Section  
8 106 consultation process. During the application process, the BLM failed to inform Quechan of their  
9 approval of ground-disturbing geo-technical testing, despite the BLM knowing Quechan's request of  
10 notification of all proposed ground-disturbing activities or testing. BLM did not disclose during  
11 consultations to Quechan that Pattern had conducted LIDAR testing, which is potentially informative  
12 for archaeological purposes, in 2009, and BLM did not share this until after OWEF was approved.

13           43.     Comments submitted by the Tribe in the administrative process were not included or  
14 addressed by Interior in its FEIS.

15           44.     Despite repeated requests, Interior failed to conduct ethnography, prehistoric trails,  
16 and regional synthesis studies that would have provided critical information to the decision-makers  
17 about the cultural significance of the OWEF Project Area. It is not appropriate for Interior to conduct  
18 these studies only after the Project is approved – these are studies that would further show the cultural  
19 importance of the area and should be used to inform the decision and they are not used appropriately  
20 as mitigation efforts.

21           45.     Development of the OWEF Project on the lands at issue will irreparably harm  
22 Quechan culture, history, tradition, and religion, because once the lands and resources are impaired,  
23 that impairment lasts forever. Desert lands are incredibly sensitive and cannot be effectively  
24 rehabilitated. Once a cultural resource, site, or landscape is destroyed, it is gone forever and cannot  
25 be replaced.

26           46.     Construction of more than one hundred massive wind turbines, along with 42 miles of  
27 roads, and power lines, subsurface cabling, buildings, substations, and associated infrastructure is  
28 simply not consistent with and will destroy the cultural values of this land. The historic/prehistoric,

1 cultural, and spiritual value of the land will be lost. These impacts are especially severe given the  
2 likelihood of additional burials and cremation sites on and around the Project area.

3 47. The adverse visual impacts of placing these 450-foot tall wind turbines on this land  
4 will also be significant and impair the lands. On February 13, 2012, I wrote to BLM informing it:

5 The remaining [112] turbines would still obstruct the viewshed to Coyote Mountain  
6 from locations other than the Spoked-Wheel Geoglyph, such as from the Indian Hills  
7 location. Second, the [112-turbine] Alternative neglects the viewshed towards the  
8 East to AVII'SHPA/WII'SHPA (Mount Signal) . . . . The Quechan Tribe assert that  
9 there is a spiritual connection between Coyote Mountain and WII'SHPA, and the  
10 imposition of any turbines between the two locations would not only interfere with  
11 this spiritual connection but it would detrimentally impact the ability of the Quechan  
12 people to spiritually interact and appreciate these sacred locations.

13 48. The Tribe's interests are not solely limited to Cultural Resources. The Tribe and its  
14 members also have an interest in preserving the quality of the land, water, and air within its  
15 traditional territory, within and outside of the Reservation.

16 49. The Tribe's concerns about this Project have been ignored by Interior.

17 50. The Tribe has requested meaningful government-to-government consultation for the  
18 purpose of participating in the Section 106 cultural resource evaluations, as well as to discuss the  
19 impacts of the project on a government-to-government basis, but such consultation has not occurred.

20 51. Interior has repeatedly declined to share necessary studies and information with the  
21 Tribe, impairing its ability to consult and participate in the process.

22 52. The Tribe's requests to consult with the actual decision-maker in this proceeding, as  
23 required by the Department of the Interior's Policy on Consultation with Indian Tribes, Secretarial  
24 Order 3317, and basic principles of sovereign government-to-government consultation, have been  
25 rejected.

26 53. Interior has repeatedly provided information in an untimely fashion and unreasonably  
27 demanded the Tribe to provide comments on extensive and critical documents in a rushed and  
28 compressed time frame. For example, near the conclusion of the administrative process, Interior did  
a massive "document dump" providing the Tribe with the Revised Draft MOA relating to cultural  
resources, the Historic Properties Treatment Plan, the NAGPRA Plan of Action, the Long Term  
Management Plan, and the Archeological Monitoring Post-Review Discovery Plan and demanding

1 tribal input within approximately 30 days. These comment periods coincided with comments due on  
2 Revised Archaeological Reports and the FEIS. These time pressures were arbitrarily placed on the  
3 Tribe solely to achieve project approval on a “fast-track” basis.

4 54. It has been clear throughout this process that the approval of the Project was never in  
5 doubt. Interior’s intent in the NEPA and NHPA process was not to consider *whether* to approve the  
6 Project. Project timeline documents established a May 2012 deadline for project approval. Speed of  
7 approval, not analysis of impacts or concern of Native American values, appeared to be the top  
8 priority.

9 55. Since the Project began construction, there have been repeated examples of violations  
10 and BLM’s failure to enforce terms and conditions of the ROD, right of way, and mitigation  
11 measures. These failures and violations include: (a) allowing variance construction to begin prior to  
12 variance approval; (b) failing to adequately suppress dust associated with construction, which makes  
13 monitoring impossible; (c) constructing roads wider than the 36-foot maximum allowed under the  
14 OWEF ROD; (d) placing turbine pads closer together than permitted by the OWEF ROD; (e)  
15 commencing and conducting construction activities at times when monitors are not present; (f)  
16 engaging in ground disturbance that is not able to be monitored that can cause irreversible and non-  
17 mitigable damage to cultural resources; (g) changing Project design and layout without consultation  
18 with tribal governments; (h) excavating, collecting, and removing cultural resources without required  
19 permits; (i) failing to monitor for subsurface resources during Project construction; (j) burying  
20 electrical lines at depths that are not consistent with applicable requirements and that create safety  
21 hazards to members of the public; and (k) failing to stop work or engage in consultation when new  
22 archaeological sites have been discovered.

23 56. Between May 11, 2012 and July 10, 2012, Pattern or its cultural resource consultant  
24 excavated and removed dozens of archaeological resources from the OWEF Project Area according  
25 to the Bi-Weekly Archaeological Summary Reports, despite the lack of any permit authorizing such  
26 excavation.

27 57. Despite Interior’s notice and knowledge of these violations, Interior has done nothing  
28 to bring Pattern into compliance. Interior’s claim that impacts to the environment and cultural

1 resources will be mitigated is not credible, as Interior has not shown any interest or ability to regulate  
2 the Project.

3 58. Interior has also failed to consult with the Tribe regarding the discoveries of new  
4 artifacts, sites, and cremations/funerary areas in the Project area, including those resources that are  
5 located within direct impact areas.

6 59. Due to the MOA and related documents signed by Interior and Pattern, the Tribe has  
7 been effectively cut out of the consultation process.

8 60. As of September 4, 2012, I was informed by BLM that no further communication  
9 between the Tribe and BLM would occur regarding implementation of the Project and mitigation  
10 measures, due to the pending litigation. Thus, BLM is now using the litigation as an excuse to avoid  
11 compliance with its prospective consultation obligations. For example, currently, the BLM is  
12 consulting with other Tribal Governments on the allocation and distribution of approximately  
13 \$1,170,000 of mitigation funds for projects that are to benefit all consulting Tribal Governments, as  
14 outlined in the final MOA by Pattern, but BLM refuses to consult with Quechan about the disposition  
15 of these promised funds.

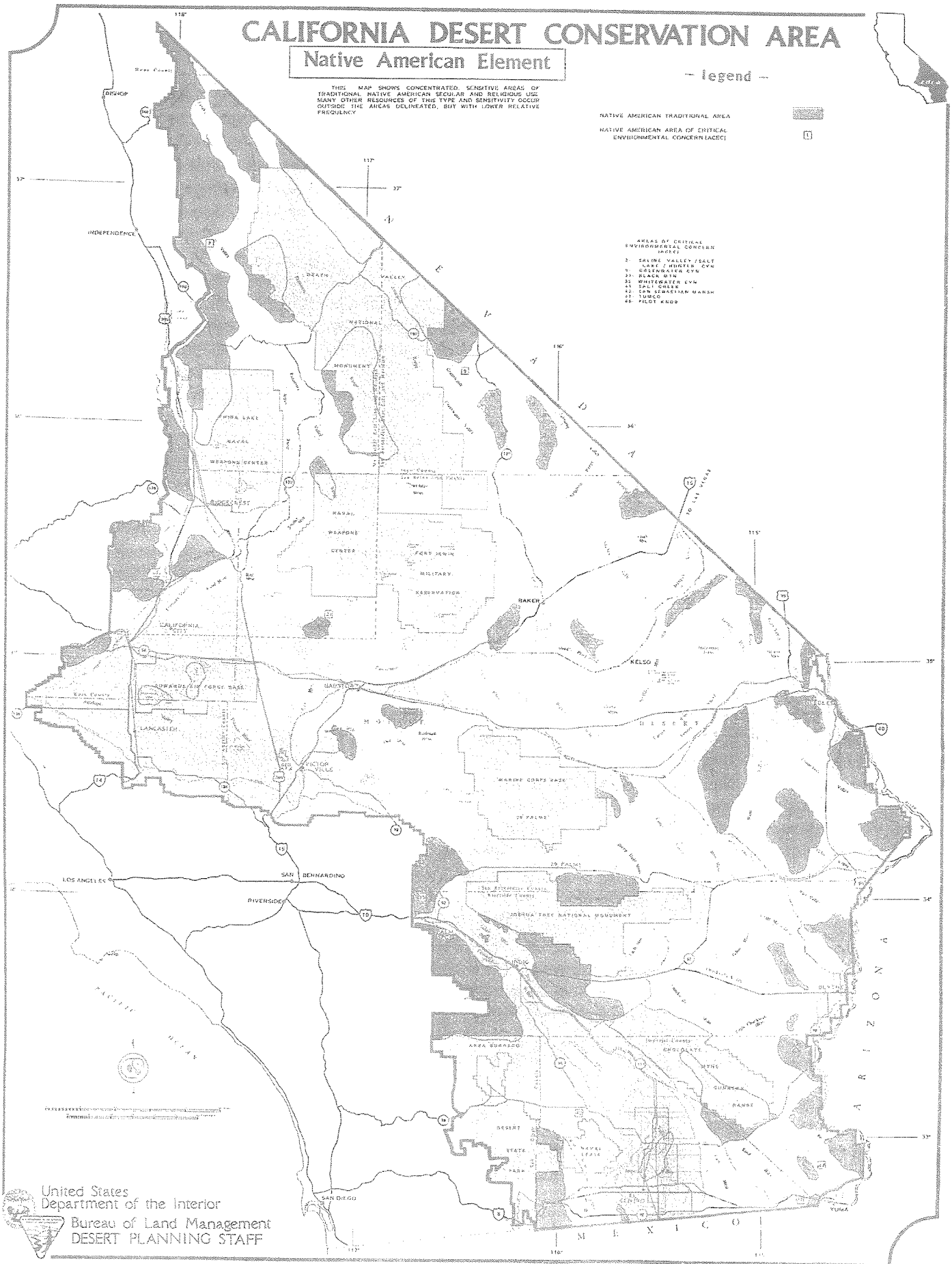
16 61. I declare under penalty of perjury under the laws of the United States of America that  
17 the foregoing is true and correct.

18 Executed this 20<sup>th</sup> day of September, 2012 on the Fort Yuma Indian Reservation.

19  
20  
21   
22 \_\_\_\_\_  
23 John Bathke  
24 Quechan Tribal Historic Preservation Officer  
25  
26  
27  
28

**LIST OF EXHIBITS**

<b>Exhibit</b>	<b>Description</b>	<b>Page</b>
1.	Native American Element Map and Cultural Resources Map from California Desert Conservation Area Plan 1980, as amended, U.S. Department of the Interior, Bureau of Land Management	1
2.	Ocotillo Express Wind Energy Project Bi-weekly Archaeological Summary Report for July 24 – August 6, 2012	3
3.	Ocotillo Express Wind Energy Project Bi-weekly Archaeological Summary Report for July 10 – July 23, 2012	14
4.	Ocotillo Express Wind Energy Project Bi-weekly Archaeological Summary Report for June 26 – July 9, 2012	30
5.	Ocotillo Express Wind Energy Project Bi-weekly Archaeological Summary Report for June 12 – June 25, 2012	39
6.	Ocotillo Express Wind Energy Project Bi-weekly Archaeological Summary Report for May 29 – June 11, 2012	54
7.	Ocotillo Express Wind Energy Project Bi-weekly Archaeological Summary Report for May 15 – May 28, 2012	68



United States  
 Department of the Interior  
 Bureau of Land Management  
 DESERT PLANNING STAFF

# CALIFORNIA DESERT CONSERVATION AREA

## Cultural Resources Element

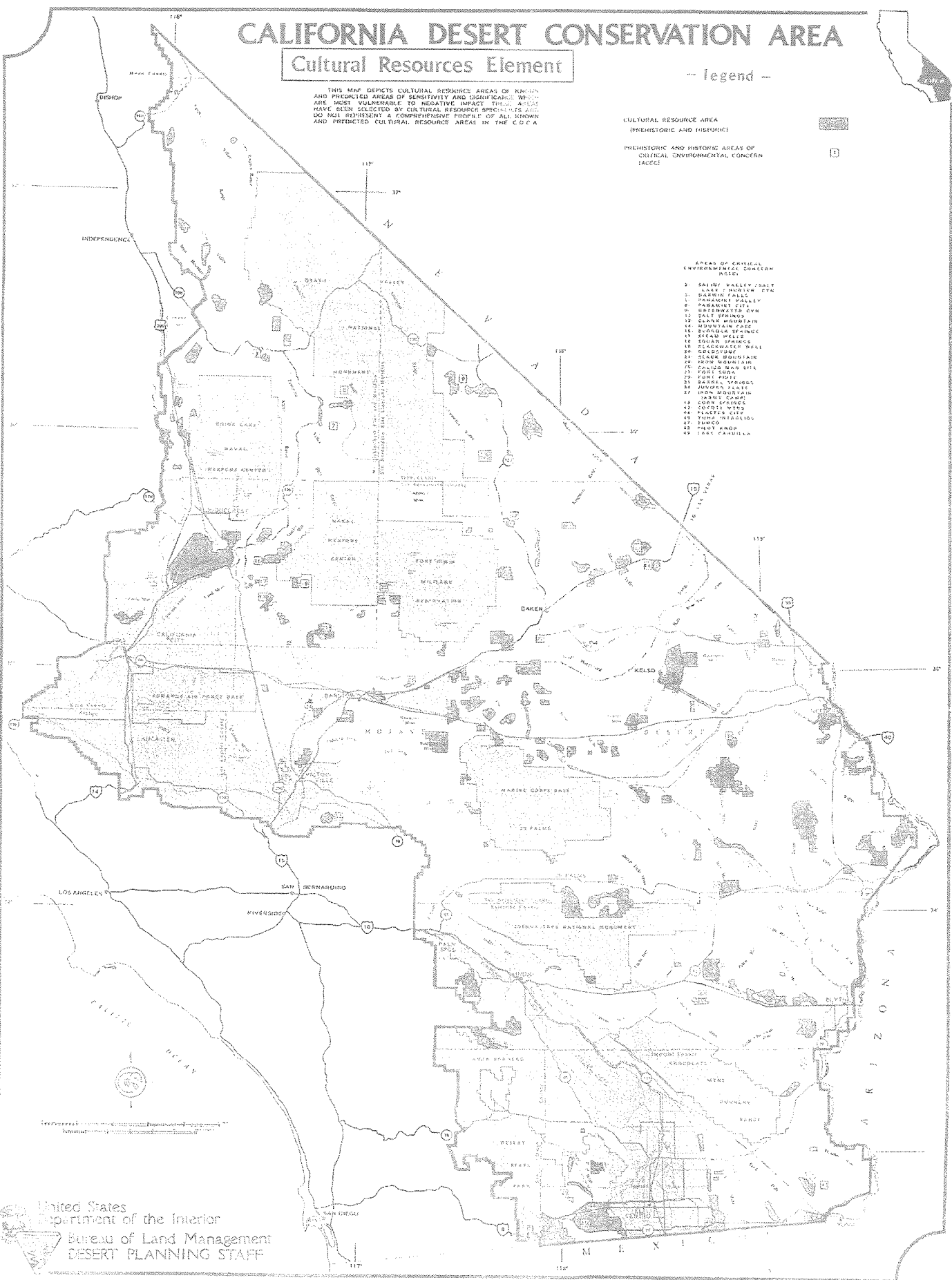
— Legend —

THIS MAP DEPICTS CULTURAL RESOURCE AREAS OF KNOWN AND PREDICTED AREAS OF SENSITIVITY AND SIGNIFICANCE WHICH ARE MOST VULNERABLE TO NEGATIVE IMPACT. THESE AREAS HAVE BEEN SELECTED BY CULTURAL RESOURCE SPECIALISTS AND DO NOT REPRESENT A COMPREHENSIVE ROSTER OF ALL KNOWN AND PREDICTED CULTURAL RESOURCE AREAS IN THE C.D.C.A.

- CULTURAL RESOURCE AREA (PREHISTORIC AND HISTORIC) [Symbol]
- PREHISTORIC AND HISTORIC AREA OF CRITICAL ENVIRONMENTAL CONCERN (ACEC) [Symbol]

AREA OF CRITICAL ENVIRONMENTAL CONCERN (ACEC) [Symbol]

- 1. SAGE VALLEY DESERT
- 2. SAGE VALLEY DESERT
- 3. SAGE VALLEY DESERT
- 4. SAGE VALLEY DESERT
- 5. SAGE VALLEY DESERT
- 6. SAGE VALLEY DESERT
- 7. SAGE VALLEY DESERT
- 8. SAGE VALLEY DESERT
- 9. SAGE VALLEY DESERT
- 10. SAGE VALLEY DESERT
- 11. SAGE VALLEY DESERT
- 12. SAGE VALLEY DESERT
- 13. SAGE VALLEY DESERT
- 14. SAGE VALLEY DESERT
- 15. SAGE VALLEY DESERT
- 16. SAGE VALLEY DESERT
- 17. SAGE VALLEY DESERT
- 18. SAGE VALLEY DESERT
- 19. SAGE VALLEY DESERT
- 20. SAGE VALLEY DESERT
- 21. SAGE VALLEY DESERT
- 22. SAGE VALLEY DESERT
- 23. SAGE VALLEY DESERT
- 24. SAGE VALLEY DESERT
- 25. SAGE VALLEY DESERT
- 26. SAGE VALLEY DESERT
- 27. SAGE VALLEY DESERT
- 28. SAGE VALLEY DESERT
- 29. SAGE VALLEY DESERT
- 30. SAGE VALLEY DESERT
- 31. SAGE VALLEY DESERT
- 32. SAGE VALLEY DESERT
- 33. SAGE VALLEY DESERT
- 34. SAGE VALLEY DESERT
- 35. SAGE VALLEY DESERT
- 36. SAGE VALLEY DESERT
- 37. SAGE VALLEY DESERT
- 38. SAGE VALLEY DESERT
- 39. SAGE VALLEY DESERT
- 40. SAGE VALLEY DESERT
- 41. SAGE VALLEY DESERT
- 42. SAGE VALLEY DESERT
- 43. SAGE VALLEY DESERT
- 44. SAGE VALLEY DESERT
- 45. SAGE VALLEY DESERT
- 46. SAGE VALLEY DESERT
- 47. SAGE VALLEY DESERT
- 48. SAGE VALLEY DESERT
- 49. SAGE VALLEY DESERT



United States  
Department of the Interior  
Bureau of Land Management  
DESERT PLANNING STAFF





## Ocotillo Express Wind Energy Project Bi-weekly Archaeological Summary Report

---

### Bi-Weekly Summary Report For: July 24 – August 6, 2012

#### 1. Archaeological Monitoring Personnel

Archaeological monitoring was directed by Tierra Environmental Services, LLC (Tierra) Co-Principal Investigators Dr. Michael Baksh and Mr. Bobby Bolger during this period.

Archaeological monitors present during the July 24 to August 6, 2012 period included Mark Abelon, Sarah Bock, Mitch Evans, Benito Guzman, Patrick Hadel, Aaron Harper, Ken Norwood, Natalie Ortega, Nina Rogers, Edgar Rojas, and Ross Way.

The Native American Monitors included: Clarence Brown (Viejas), Sonnie Brown (Viejas), Joshua Craddock (Viejas), James Cuero (Campo), Ronald Cuero (Campo), Dave Z. Elliott (Sycuan), Rudi Flores (San Pasqual), Danielle Goff (San Pasqual), Julie Hagen (Viejas), Robert Hughes (Campo), Jonathan Jones (Campo), Carmen Lucas (Kwaaymii Laguna Band of Indians), Janie McClain (Cocopah), Ed Mercado (La Posta), Daniel Padilla (Cocopah), Phillip Paipa (Ewiiapaayp), Jason Pinto (Jamul), Nicholas Rodriguez (Ewiiapaayp), Albert Quihuis (Ewiiapaayp), Frank Salazar (Campo), PJ Stoneburner (Ewiiapaayp), Ethian Thomas (Cocopah), and Boe Willey (Manzanita).

#### 2. Activities Conducted by Tierra Staff

##### ESAs

Tierra established Environmentally Sensitive Area (ESA) barriers for several recorded archaeological and historic sites within the project Area of Potential Affect (APE). As outlined in the *Memorandum of Agreement Among the Bureau of Land Management-California, The United States Army Corps of Engineers, Ocotillo Express LLC, The California State Historic Preservation Officer, and the Advisory Council on Historic Preservation Regarding the Ocotillo Express Wind Energy Project, Imperial County, California, May 2012* (Memorandum of Agreement) and the *Management Plan for Archaeological Monitoring, Post-Review Discovery and Unanticipated Effects, April 2012* (Management Plan), ESAs were erected prior to construction or earthmoving activities within 150 feet of a known resource. To avoid unnecessary disclosure of sensitive resources to the general public, ESAs have not been prematurely constructed favoring waiting to within seven days of the scheduled work. Furthermore, the preference for ESA boundaries was not to entirely encapsulate the resource whenever feasible since that could also encourage a search of the contents of the ESA. During the July 24 to August 6, 2012 period, 26 ESAs were constructed (see Table 1). Additionally, Tierra altered the ESAs surrounding a dog alert and a previously identified human bone (both located just south of the substation) in response to a BLM Variance that expanded the ESAs at each location.

---

TIERRA ENVIRONMENTAL SERVICES, INC.

9915 Businesspark Avenue, Suite C ▲ San Diego, CA 92131

O: (858) 578-9064 F: (858) 578-3646 TierraEnv@aol.com

Page 1 of 11



## Ocotillo Express Wind Energy Project

### Bi-weekly Archaeological Summary Report

**Table 1 ESAs within Project APE**

ESA Designation	Other	Resource Description	Facility or Location
CA-IMP-103/H	-	Artifact Scatter, Historic Mining Site and Refuse Deposit	Access Rd. at Turbine 78
CA-IMP-103/H	-	Artifact Scatter, Historic Mining Site and Refuse Deposit	Turbine 80
CA-IMP-2471/H	-	Camp, Cremation, Trail, and Historic Refuse Deposit	Access Rd. at Turbines 159-162
CA-IMP-2488	-	Lithic Scatter and Rock Feature	Access Rd. at Turbine 105
CA-IMP-11837	BF-018/H	Lithic Scatter and Historic Mine Site	Access Rd. at Turbines 159-162
CA-IMP-11838	BF-019/H	Lithic Scatter and Historic Mine Site	Turbine 163
CA-IMP-11849	BF-017	Lithic Scatter and Rock Feature	Turbine 135
CA-IMP-11940	JLU-173/H	Artifact Scatter and Historic Mine Site	Turbine 160
CA-IMP-11940	JLU-173H	Artifact Scatter and Historic Mine Site	Access Rd. at Turbine 172
CA-IMP-11949	KRM-020	Pottery Scatter	Access Rd. at Turbine 78
CA-IMP-11999	MOW-059/H	Historic Refuse Deposit	Access Rd. at Turbine 79
CA-IMP-11978	MOW-016	Artifact Scatter	Turbine 78
CA-IMP-12012	OCO-003	Camp Site, Rock Feature and Modern Geoglyph	Turbine 159
CA-IMP-12031	EAM-064	Rock Feature	Turbine 155
CA-IMP-12032	EAM-065	Lithic Scatter	Crane Walk at Turbines 156-159
AH023S	-	Lithic Scatter	Turbine 107
AH054s	-	Lithic Scatter	Turbine 165
AH055S	-	Pottery Scatter	Turbine 162
AH057S	-	Lithic Scatter	Access Rd. at Turbines 165-163
AH058S	-	Pottery Scatter	Proposed area for Turbine 126
SJ002	SJ-14002	Lithic Scatter	Turbine 105
Not Yet Recorded*	-	Pottery Scatter	Access Rd. at Turbine 77
Not Yet Recorded*	-	Pottery Scatter	Access Rd. at Turbine 77
Not Yet Recorded*	-	Historic Can Scatter	Access Rd. at Turbines 79-78
Not Yet Recorded*	-	Historic Can Scatter	Access Rd. at Turbines 79-78
Not Yet Recorded*	-	Lithic Scatter	Turbine 135

\*Full Site Recordation is ongoing at these sites.

TIERRA ENVIRONMENTAL SERVICES, INC.

9915 Businesspark Avenue, Suite C ▲ San Diego, CA 92131

O: (858) 578-9064 F: (858) 578-3646 TierraEnv@aol.com

Page 2 of 11



## Ocotillo Express Wind Energy Project

### Bi-weekly Archaeological Summary Report

#### Preconstruction Walkthroughs

In accordance with the Memorandum of Agreement and the Management Plan, Tierra crewmembers conducted preconstruction walkthroughs for access roads and turbines. During the course of preconstruction walkthroughs several new resources were identified and are detailed below in Section 4 and Tables 3 and 4 below.

#### Training Seminars

Five WEAP training seminars were held during the July 24 to August 6, 2012 period. Bobby Bolger of Tierra provided the archaeological sensitivity training at the Ocotillo Community Center on July 30, August 6, August 8, and August 15, 2012, while Hillary Murphy of Tierra provided the archaeological sensitivity training at the SDG&E Office in San Diego on July 28, 2012. The Native American sensitivity training was conducted by Carmen Lucas of the Kwaaymii Laguna Band of Indians on each of the above referenced days.

#### Unavoidable New Discovery Evaluations

Tierra field crews conducted testing on four unavoidable new discoveries (UND) during this bi-weekly period. The testing methods were conducted in accordance with Tierra's Research Design and the BLM approved site specific testing plan and included a close-interval transect survey to identify and record individual artifacts, tools, or areas with a higher density of cultural materials. Depending on the composition of the site, one or more of the following subsurface excavation techniques were utilized:

- Shovel Test Pits (STP) - Measured 0.5 m by 0.5 m in size and were excavated in 0.2 m intervals.
- Test Units (TU) - Measured 1.0 m by 1.0 m in size and were excavated in 0.1 m levels.

The following sites were tested and recommended not eligible for listing on the NRHP.

Site RW003H was recorded as a historic refuse deposit within the tower pad of Turbine 99. The surface survey relocated the historic assemblage of cans, wire fragments, amethyst glass, but also identified four metavolcanic flakes. Additionally, a 10 cm diameter carbonized soil feature was also observed within the site boundary. Three of the STPs were placed in areas of higher surface artifact densities; however, no subsurface artifacts were encountered. The fourth STP was placed to bisect the carbonized soil feature which revealed a very shallow (<5 cm deep) bowl-shaped soil feature, but lacked any associated artifacts. To improve the chances of artifact recovery, a TU was positioned to further expose the feature, although no subsurface artifacts were recovered from the TU. No subsurface artifacts or intact cultural deposits were identified within the testing of site RW003H.

Site SJ000S was recorded as a prehistoric knapping station within the tower pad of Turbine 131. The surface survey relocated the prehistoric assemblage of a rhyolitic core and 12 associated flakes. To improve the chances of artifact recovery, a TU was placed over the densest surface concentration. The first level (0-10 cm) recovered 70 associated flakes. The second level (10-20 cm) identified a severe drop

---

TIERRA ENVIRONMENTAL SERVICES, INC.

9915 Businesspark Avenue, Suite C ▲ San Diego, CA 92131  
 O: (858) 578-9064 F: (858) 578-3646 TierraEnv@aol.com

Page 3 of 11



## Ocotillo Express Wind Energy Project

### Bi-weekly Archaeological Summary Report

---

in artifact density recovering only 3 flakes while the next two levels (20-30 and 30-40 cm) were culturally sterile. While a limited artifact assemblage was identified just beneath the surface, site SJ000S can be characterized as a surface or near surface resource.

Site CR101S was recorded as a prehistoric lithic scatter within the tower pad of Turbine 110. The surface survey relocated the prehistoric assemblage of a seven lithics artifacts. To improve the chances of artifact recovery, a TU was placed over the densest surface concentration, although no subsurface artifacts were recovered from the TU. No subsurface artifacts or intact cultural deposits were identified within the testing of site CR101S.

Site SJ011S was recorded as a prehistoric lithic scatter within the access road to Turbine 98. The surface survey relocated the prehistoric assemblage of three lithic artifacts. To improve the chances of artifact recovery, a TU was placed over the densest surface concentration, although no subsurface artifacts were recovered from the TU. No subsurface artifacts or intact cultural deposits were identified within the testing of site CR101S.

### 3. Construction Activities

During the July 24th to August 6th, 2012 period, construction occurred every day except Sunday, July 29th, Saturday, August 4th and Sunday August 5th, 2012. Work was generally performed by Graders, Scrapers, Water Trucks, Skip Loaders, Backhoes, Excavators, and All Terrain Vehicles (ATVs). The activities monitored for this period included the following:

1. Surveyor staking of roads and other facilities.
2. Ocotillo and Cholla removal.
3. Scraping (topsoil removal), grading, and removal of large boulders at portions of Dos Cabezas Road, Turbine String Access Roads, and Collector Lines.
4. Some sub-surface excavation.

### 4. Archaeological Resources

Whenever new resources were encountered, the teams would follow the protocol established in the Management Plan for the Project. This included, but was not limited to:

- Close-interval surface survey
- Assessment of the observed resource(s)
- Written documentation
- Photographic documentation
- GPS recordation
- Isolate collection
- Site protection (By means of ESA)

---

TIERRA ENVIRONMENTAL SERVICES, INC.

9915 Businesspark Avenue, Suite C ▲ San Diego, CA 92131  
O: (858) 578-9064 F: (858) 578-3646 TierraEnv@aol.com

Page 4 of 11



## Ocotillo Express Wind Energy Project

### Bi-weekly Archaeological Summary Report

The cultural resources monitoring teams observed several archaeological resources and used the GPS to acquire reference points for comparison with planned project facilities. In some occurrences where the observed archaeological sites would not be directly impacted by any portion of the current undertaking, only minimal data was collected at that time with more detailed recordation occurring at a later date. When a resource was determined to be a site within an area of direct impact, Tierra began working with Pattern to see if project facilities may potentially be moved in order to avoid and protect the site. All sites are recorded on the appropriate DPR forms, photographed, GPS'd, and mapped. Details regarding the resource and its potential to be affected by the project limits is still being determined and will be subject to BLM review (Table 3). All prehistoric isolates within direct impact areas were recorded and collected for curation. As per the BLM approved isolate collection policy, all prehistoric isolates and only unique diagnostic historic artifacts are collected.

As part of the monitoring activities covered by this two-week period, 113 isolated resources (37 historic, 76 prehistoric) and eight sites were documented. The isolated finds are detailed in Table 2 below followed by sites in Table 3. Please note that isolates not within the direct construction footprint were left in place as per BLM direction.

**Table 2. Isolate Discoveries During Project APE Monitoring.**

Resource	Period	Artifact(s)	Qty	Location	Collected
AH051i	Prehistoric	Metavolcanic Flake	1	Collector Line between SR 98 and I-8	Y
BG024i	Prehistoric	Pottery Body Sherd	1	Access Rd. at Turbine 77	Y
BG025i	Prehistoric	Charcoal	1	Access Rd. at Turbines 76-77	Y
BG026i	Prehistoric	Metavolcanic Flake	1	Turbine 91	Y
CR084i	Historic	Lump Coal	1	Dos Cabezas Rd. at Turbines 18-44	N
CR085i	Prehistoric	Metavolcanic Flake	1	Dos Cabezas Rd. at Turbines 18-44	Y
CR086i	Historic	Charcoal Briquettes	1	Access Rd. at Turbine 151	Y
CR087i	Prehistoric	Quartz Flake	1	Turbine 135	Y
CR088i	Prehistoric	Metavolcanic Flake	1	Turbine 135	Y
CR089i	Prehistoric	Metavolcanic Flake	1	Turbine 135	Y
CR090i	Prehistoric	Metavolcanic Flake	1	Turbine 107	Y
CR091i	Prehistoric	Metavolcanic Flake	1	Turbine 107	Y
CR092i	Prehistoric	Metavolcanic Hammerstone	1	Turbine 107	Y
CR093i	Prehistoric	Metavolcanic Hammerstone	1	Turbine 107	Y
ER044i.01	Historic	Bullet	1	Just North of the S2 Hwy	Y
ER044i.02	Historic	Bullet	1	Just North of the S2 Hwy	Y
ER045i	Prehistoric	Chert Chopper	1	Just North of the S2 Hwy	Y
ER046i	Prehistoric	Chert Hammerstone	1	Just North of the S2 Hwy	Y
ER047i	Prehistoric	Chert Chopper	1	Just North of the S2 Hwy	Y

TIERRA ENVIRONMENTAL SERVICES, INC.

9915 Businesspark Avenue, Suite C ▲ San Diego, CA 92131

O: (858) 578-9064 F: (858) 578-3646 TierraEnv@aol.com

Page 5 of 11



## Ocotillo Express Wind Energy Project

### Bi-weekly Archaeological Summary Report

**Table 2. Isolate Discoveries During Project APE Monitoring.**

Resource	Period	Artifact(s)	Qty	Location	Collected
ER048i	Prehistoric	Chert Flake	1	Just North of the S2 Hwy	Y
ER049i	Prehistoric	Geofact Sandstone	1	Access Rd. at Turbine 153	Y
ER050i	Prehistoric	Iron Bolt Head	1	Just North of the S2 Hwy	Y
MA101i	Historic	Charcoal	1	Access Rd. at Turbine 93	Y
MA102i	Historic	Charcoal	1	Access Rd. at Turbine 93	Y
MA103i	Prehistoric	Metavolcanic Flake	1	Access Rd. at Turbine 93	Y
ME067i	Prehistoric	Metavolcanic Tested Cobble	1	South of the S2 in a Berm	Y
ME068i	Prehistoric	Metavolcanic Hammerstone	1	South of the S2 in a Berm	Y
ME069i	Prehistoric	Metavolcanic Flake	1	Turbine 99	Y
ME070i	Prehistoric	Metavolcanic Flake	1	Turbine 99	Y
ME071i	Prehistoric	Metavolcanic Angular Waste	1	Turbine 99	Y
ME072i	Prehistoric	Quartz Flake	1	Turbine 99	Y
ME073i	Prehistoric	Quartz Chopper	1	Connex Box Near Turbine 147	Y
ME074i	Prehistoric	Metavolcanic Flake	1	Turbine 154	Y
NO064i	Prehistoric	Mano	1	Access Rd. at Turbine 156	Y
NO065i	Historic	Can	1	Turbine 117	N
NO066i	Historic	Can	1	Turbine 117	N
NO067i	Historic	Can	1	Turbine 117	N
NO068i	Historic	Can	1	Turbine 117	N
NO069i	Historic	Can	1	Turbine 117	N
NO070i	Historic	Can	1	Turbine 117	N
NO071i	Prehistoric	Metavolcanic Flake	1	Turbine 116	Y
NO072i	Prehistoric	Metavolcanic Shatter	1	Turbine 116	Y
NO073i	Prehistoric	Metavolcanic Flake	1	Turbine 116	Y
NO074i	Historic	Can	1	Turbine 116	N
NO075i	Historic	Can	1	Turbine 116	N
NO076i	Prehistoric	Metavolcanic Core	1	Turbine 51	Y
NO077i	Prehistoric	Metavolcanic Hammerstone	1	Turbine 51	Y
NO078i	Prehistoric	Quartzite Core	1	Turbine 51	Y
RW327i	Prehistoric	Metavolcanic Flake	1	Turbine 26	Y
RW328i	Prehistoric	Metavolcanic Flake	1	Turbine 26	Y
RW329i	Prehistoric	Metavolcanic Flake	1	Turbine 26	Y
RW330i	Prehistoric	Metavolcanic Flake	1	Turbine 27	Y
RW331i	Historic	Can	1	Collector Line along the S2	N

TIERRA ENVIRONMENTAL SERVICES, INC.

9915 Businesspark Avenue, Suite C ▲ San Diego, CA 92131

O: (858) 578-9064 F: (858) 578-3646 TierraEnv@aol.com

Page 6 of 11



## Ocotillo Express Wind Energy Project

### Bi-weekly Archaeological Summary Report

**Table 2. Isolate Discoveries During Project APE Monitoring.**

Resource	Period	Artifact(s)	Qty	Location	Collected
RW332i	Historic	Can	1	Collector Line along the S2	N
RW333i	Prehistoric	Metavolcanic Test Block	1	Collector Line along the S2	Y
RW334i	Prehistoric	Metavolcanic Core Fragment	1	Collector Line along the S2	Y
RW335i	Prehistoric	Metavolcanic Flake	1	Collector Line along the S2	Y
RW336i	Historic	Can	1	Collector Line along the S2	N
RW337i	Historic	Can	1	Collector Line along the S2	N
RW338i	Historic	Can	1	Collector Line along the S2	N
RW339i	Historic	Can	1	Collector Line along the S2	N
RW340i	Historic	Can	1	Collector Line along the S2	N
RW341i	Historic	Can	1	Collector Line along the S2	N
RW342i	Prehistoric	Metavolcanic Flake	1	Collector Line along the S2	Y
RW343i	Prehistoric	Metavolcanic Multitool	1	Collector Line along the S2	Y
RW344i	Historic	Can	1	Turbine 28	N
RW345i	Historic	Can	1	Turbine 28	N
RW346i	Historic	Can	1	Turbine 28	N
RW347i	Historic	Can	1	Turbine 28	N
RW348i	Historic	Can	1	Turbine 28	N
RW349i	Historic	Mixing Bowl	1	Turbine 28	N
RW350i	Historic	Can	1	Alternate Collector Line North of S2	N
RW351i	Prehistoric	Quartz Flake	1	Alternate Collector Line North of S2	Y
RW352i	Prehistoric	Metavolcanic Flake	1	Alternate Collector Line North of S2	Y
RW353i	Prehistoric	Quartz Flake	1	Alternate Collector Line North of S2	Y
RW354i	Historic	Can	1	Alternate Collector Line North of S2	N
RW355i	Prehistoric	Metavolcanic Flake	1	Alternate Collector Line North of S2	Y
RW356i	Prehistoric	Metavolcanic Flake	1	Alternate Collector Line North of S2	Y
RW357i	Historic	Can	1	Alternate Collector Line North of S2	N
RW358i	Prehistoric	Metavolcanic Core	1	Alternate Collector Line North of S2	Y
RW359i	Prehistoric	Quartz Flake	1	Alternate Collector Line North of S2	Y
RW360i	Historic	Can	1	Access Rd. at Turbine 105	N
RW361i	Prehistoric	Quartz Flake	1	Access Rd. at Turbine 105	Y
RW362i	Historic	Can	1	Turbine 28	N
RW363i	Prehistoric	Metavolcanic Flake	1	Turbine 28	Y
RW364i	Historic	Can	1	Turbine 28	N
RW365i	Prehistoric	Pottery Body Sherd	1	Turbine 27	Y
RW366i	Prehistoric	Pottery Rim Sherd	1	Turbine 27	Y

TIERRA ENVIRONMENTAL SERVICES, INC.

9915 Businesspark Avenue, Suite C ▲ San Diego, CA 92131  
O: (858) 578-9064 F: (858) 578-3646 TierraEnv@aol.com

Page 7 of 11



## Ocotillo Express Wind Energy Project

### Bi-weekly Archaeological Summary Report

**Table 2. Isolate Discoveries During Project APE Monitoring.**

Resource	Period	Artifact(s)	Qty	Location	Collected
RW367i	Prehistoric	Metavolcanic Flake	1	Turbine 27	Y
RW368i	Historic	Can	1	Crane Walk Northwest of Turbine 150	N
RW369i	Prehistoric	Metavolcanic Flake	1	Alt. Turbine 51	Y
RW370i	Prehistoric	Metavolcanic Flake	1	Alt. Turbine 51	Y
RW371i	Prehistoric	Metavolcanic Flake	1	Alt. Turbine 51	Y
RW372i	Historic	Can	1	Alt. Turbine 51	N
RW373i	Prehistoric	Metavolcanic Core Tool	1	Access Rd. at Alternate Turbine 51	Y
RW374i	Prehistoric	Metavolcanic Flake	1	Turbine 26	Y
RW375i	Historic	Stove Shroud	1	Alternate Turbine 28	N
RW376i	Prehistoric	Metavolcanic Flake	1	Access Rd. at Turbines 50-9	Y
RW377i	Prehistoric	Quartz Core	1	Turbine 10	Y
RW378i	Prehistoric	Metavolcanic Flake	1	Turbine 11	Y
RW379i	Prehistoric	Metavolcanic Flake	1	Access Rd. at Turbines 11-10	Y
RW380i	Prehistoric	Metavolcanic Flake	1	Turbine 11	Y
RW381i	Prehistoric	Metavolcanic Core	1	Turbine 9	Y
RW382i.01	Prehistoric	Quartz Core	1	Turbine 9	Y
RW382i.02	Prehistoric	Quartz Core	1	Turbine 9	Y
RW383i	Prehistoric	Metavolcanic Flake	1	Access Rd. at Turbine 50	Y
RW384i	Prehistoric	Metavolcanic Flake	1	Access Rd. at Turbine 105	Y
RW385i	Prehistoric	Metavolcanic Flake	1	Access Rd. at Turbine 105	Y
RW386i	Prehistoric	Quartz Flake	1	Turbine 105	Y
RW387i	Prehistoric	Metavolcanic Flake	1	Turbine 105	Y
RW388i	Prehistoric	Quartz Flake	1	Turbine 105	Y
RW389i	Prehistoric	Metavolcanic Flake Tool	1	Turbine 102	Y
RW390i	Prehistoric	Metavolcanic Core	1	Turbine 176	Y

TIERRA ENVIRONMENTAL SERVICES, INC.

9915 Businesspark Avenue, Suite C ▲ San Diego, CA 92131

O: (858) 578-9064 F: (858) 578-3646 TierraEnv@aol.com

Page 8 of 11





## Ocotillo Express Wind Energy Project

### Bi-weekly Archaeological Summary Report

**Table 3. Site Discoveries During Project APE Monitoring**

Resource	Period	Site Description	Location	Avoidable Resource
AH050S	Prehistoric	Site consists of a metavolcanic single reduction locus.	Collector Line Between SR 98 and I-8	To Be Determined (TBD)
AH053S	Prehistoric/ Historic	Site consists of a prehistoric lithic scatter with knapping stations, as well as a multi-component historic trash scatter.	Collector Line Between SR 98 and I-8	TBD
AH054S	Prehistoric	Sits consists of a Metavolcanic lithic reduction, including a chopper, scraper, and two hammerstones.	Turbine 165	TBD
AH055S	Prehistoric	Site consists of six pottery body sherds	Turbine 162	TBD
AH056S	Prehistoric	Site consists of a quartz lithic reduction with 12 flakes and one scraper.	Turbine 163	TBD
AH057S	Prehistoric	Site consists of a metavolcanic lithic reduction.	Access Rd. at Turbines 163-165	TBD
AH058S	Prehistoric	Site consists of a buffware pottery scatter, including 5 body sherds and 1 rim sherd.	Turbine 26	TBD
SB057S	Prehistoric	Site consists of a lithic scatter associated with previously recorded site EAM-005.	Access Rd. to MET Tower	TBD

### 5. Expressed Concerns and Resolutions

During the July 24th to August 6th, 2012 period, several issues were brought to the attention of Tierra personnel. In each case the issue was addressed and resolved or an action item offered for consideration. Please see the text below for each occurrence.

TIERRA ENVIRONMENTAL SERVICES, INC.

9915 Businesspark Avenue, Suite C ▲ San Diego, CA 92131  
O: (858) 578-9064 F: (858) 578-3646 TierraEnv@aol.com

Page 9 of 11



## Ocotillo Express Wind Energy Project

### Bi-weekly Archaeological Summary Report

---

#### **Issue A**

A tribal cultural consultant expressed the concern that areas outside of the Area of Direct Impact should be resurveyed in addition to the area under proposed construction. The consultant was informed of the work outlined in the BLM-approved Management Plan and Memorandum of Agreement for the project. In instances where resources identified within the ADI extend outside of the construction area, then additional site specific survey and inventory can be accomplished in accordance with Tierra's Cultural Use Permit and Fieldwork Authorization.

#### **Issue B**

A tribal cultural consultant expressed concern that personnel on the excavation crew may not be conducting their best work after a full day in the sun. The Field Director arranged for shade to be established over the crews excavating and reminded to drink adequate water throughout the day. As a follow up, all monitors (archaeological and tribal cultural consultants) were reminded of the hazards of the environment and to stay properly hydrated to ensure that the importance of doing their best is maintained throughout the workday.

#### **Issue C**

A tribal cultural consultant expressed concern that a water truck driver sprayed water onto an ESA. Field Director made contact with the driver and the foreman and advised them of the rules concerning ESAs. The Field Director was assured the incident would not happen again and no additional occurrences have been recorded.

#### **Issue D**

A tribal cultural consultant observed that the July 13, 2012 rainfall exposed a previously unknown agave roasting feature within the proposed access road to Turbine 50. The area around the feature was surveyed and when a nearby area was found to be clear of cultural resources, a shape-file of a proposed road change was sent to Pattern and Blattner. A new Variance under consideration represents these changes.

#### **Issue E**

Three fragments of bone were discovered on a tower pad as it was being graded. Two of the fragments were protected by the installation of ESAs until they could be evaluated by the Coroner. The third fragment was determined conclusively not human although a tribal cultural consultant raised the objection that only the coroner can decide if a bone is human. The bone in question was saw-cut and diagnostic as a bovine rib. It was resolved that if a bone can be determined as not human with complete certainty by a qualified archaeologist, then the coroner does not need to be notified of the find. The coroner was notified of the two bones protected by ESAs and upon arrival determined that the two fragments were not human and were collected by the coroner.

---

TIERRA ENVIRONMENTAL SERVICES, INC.

9915 Businesspark Avenue, Suite C ▲ San Diego, CA 92131  
O: (858) 578-9064 F: (858) 578-3646 TierraEnv@aol.com

Page 10 of 11



## Ocotillo Express Wind Energy Project

### Bi-weekly Archaeological Summary Report

---

#### *Issue F*

A tribal cultural consultant expressed concern regarding Tower 176 since a “dog alert” was identified in the immediate vicinity. Pattern addressed the issue by moving Tower 176 to avoid the “dog alert” area.

#### **6. Summary**

Construction of the Ocotillo Express Wind Energy project continued from July 24th to August 6th, 2012 (with the exception of July 29, August 4 and 5, 2012). As addressed in section 2, ESAs were established for previously recorded and newly recorded archaeological resources located near construction areas. All initial grading, geotech drilling and work conducted within 150 ft of an ESA was monitored by a crew consisting of an archaeological monitor and a Native American monitor. One hundred and thirteen isolates were recorded and 81 artifacts were collected for temporary curation at Tierra Environmental Services.

---

TIERRA ENVIRONMENTAL SERVICES, INC.

9915 Businesspark Avenue, Suite C ▲ San Diego, CA 92131

O: (858) 578-9064 F: (858) 578-3646 TierraEnv@aol.com

Page 11 of 11



## Ocotillo Express Wind Energy Project Bi-weekly Archaeological Summary Report

---

### Bi-Weekly Summary Report For: July 10 – July 23, 2012

#### 1. Archaeological Monitoring Personnel

Archaeological monitoring was directed by Tierra Environmental Services, LLC (Tierra) Co-Principal Investigators Dr. Michael Baksh and Mr. Bobby Bolger during this period.

Archaeological monitors present during the July 10 to July 23, 2012 period included Mark Abelon, Sarah Bock, Mitch Evans, Benito Guzman, Patrick Hadel, Scott Justus, Ken Norwood, Natalie Ortega, Nina Rogers, Edgar Rojas, and Ross Way.

The Native American Monitors included: Clarence Brown (Viejas), Sonnie Brown (Viejas), Joshua Craddock (Viejas), Ronald Cuero (Campo), Dave Elliot (Sycuan), Toni Elliot (Manzanita), Rudy Flores (San Pasqual), Julie Hagen (Viejas), Carmen Lucas (Kwaaymii), Dan Mason (Campo), Janie McClain (Cocopah), Ed Mercado (La Posta), Daniel Padilla (Cocopah), Phillip Paipa (Ewiiapaayp), Jason Pinto (Jamul), Jesse Pinto (Jamul), Albert Quihuis (Ewiiapaayp), Vanessa Raya (San Pasqual), Nicholas Rodriguez (Ewiiapaayp), Frank Salazar (Campo), Veronica Santos (Manzanita), PJ Stoneburner (Ewiiapaayp), Ethian Thomas (Cocopah), and Boe Willey (Manzanita).

#### 2. Activities Conducted by Tierra Staff

##### ESAs

Tierra established Environmentally Sensitive Area (ESA) barriers for several recorded archaeological and historic sites within the project Area of Potential Affect (APE). As outlined in the *Memorandum of Agreement Among the Bureau of Land Management-California, The United States Army Corps of Engineers, Ocotillo Express LLC, The California State Historic Preservation Officer, and the Advisory Council on Historic Preservation Regarding the Ocotillo Express Wind Energy Project, Imperial County, California*, May 2012 (Memorandum of Agreement) and the *Management Plan for Archaeological Monitoring, Post-Review Discovery and Unanticipated Effects*, April 2012 (Management Plan), ESAs were erected prior to construction or earthmoving activities within 150 feet of a known resource. To avoid unnecessary disclosure of sensitive resources to the general public, ESAs have not been prematurely constructed favoring waiting to within seven days of the scheduled work. Furthermore, the preference for ESA boundaries was not to entirely encapsulate the resource whenever feasible since that could also encourage a search of the contents of the ESA. During the July 10 to July 23, 2012 period, 23 ESAs were constructed (see Table 1).

---

TIERRA ENVIRONMENTAL SERVICES, INC.

9915 Businesspark Avenue, Suite C t San Diego, CA 92131  
O: (858) 578-9064 F: (858) 578-3646 TierraEnv@aol.com

Page 1 of 14



## Ocotillo Express Wind Energy Project

### Bi-weekly Archaeological Summary Report

**Table 1. ESAs within Project APE**

ESA Designation	Other	Resource Description	Facility Location
CA-IMP-008/H	-	Camp Site, Agave Processing Area, Rock Features and Historic Refuse Deposits	Turbine 44
CA-IMP-103H	-	Artifact Scatter, Historic Mining Site and Refuse Deposit	Access Rd. at Turbine 88-79
CA-IMP-11903	EAM-300H	Historic Mining Site and Refuse Deposit	Dos Cabezas Rd.
CA-IMP-11905	EAM-005	Lithic Scatter	Turbine 40
CA-IMP-11915	EAM-015	Lithic Scatter and Rock Features	Dos Cabezas Rd.
CA-IMP-11972	MOW-002	Artifact Scatter	Dos Cabezas Rd.
CA-IMP-11983	MOW-029H	Historic Mining Site	Access Rd. at Substation
CA-IMP-11987	MOW-040H	Historic Mining Site	Turbine 81
CA-IMP-11990	MOW-045H	Historic Mining Site	Turbine 81
CA-IMP-11999	MOW-059H	Historic Refuse Deposit	Turbine 79
CA-IMP-12000	MOW-064/H	Artifact Scatter, Historic Mining Site and Refuse Deposit	Access Rd. at Turbines 88-82
CA-IMP-12001	MOW-065H	Historic Mining Site	Access Rd. at Turbines 88-79
CA-IMP-12002	MOW-066	Artifact Scatter	Access Rd. at Turbines 88-79
CA-IMP-12003	MOW-067H	Historic Mining Site and Survey Marker	Turbine 79
CA-IMP-12023	SAC-003	Artifact Scatter and Agave Processing Area	Access Rd. at Turbines 31-40
AH017S	-	Stone Ringed Fire Pit	Turbine 76
AH041S	-	Lithic Scatter	Dos Cabezas Rd.
Dos Cabezas Site 1*	-	Lithic Scatter	Dos Cabezas Rd.
Dos Cabezas Site 2*	-	Lithic Scatter	Dos Cabezas Rd.
Dos Cabezas Site 3*	-	Lithic Scatter	Dos Cabezas Rd.
Turbine 18 Site 1*	-	Lithic Scatter	Turbine 18

\*Full Site Recordation is ongoing at these sites.

A follow-up visit was conducted after a significant rainfall on July 13, 2012. Tierra staff conducted checks on each of the established ESAs to ensure they were still standing. After confirmation of the ESA fencing, Tierra personnel conducted basic site overviews to assess changes in artifact placement and densities or larger changes to site topography resulting in artifact assemblage deposition. An example of significant change was observed at site SJ003S at Turbine 67. At this location, the previously

TIERRA ENVIRONMENTAL SERVICES, INC.

9915 Businesspark Avenue, Suite C t San Diego, CA 92131

O: (858) 578-9064 F: (858) 578-3646 TierraEnv@aol.com

Page 2 of 14



## Ocotillo Express Wind Energy Project

### Bi-weekly Archaeological Summary Report

---

identified lithic assemblage consisting of a core and eight fragments of debitage could not be relocated either by surface scouring or burying of the site's assemblage. Additionally, at the tower pad for Turbine 79 and the road leading to Tower 78 new artifacts were observed that had not existed in those location previously including areas that had already been graded.

#### **Preconstruction Walkthroughs**

In accordance with the Memorandum of Agreement and the Management Plan, Tierra crewmembers conducted preconstruction walkthroughs for access roads and turbines. During the course of preconstruction walkthroughs several new resources were identified and are detailed below in Section 4 and Tables 3 and 4 below.

#### **Training Seminars**

Six WEAP training seminars were held during the July 10 to July 23, 2012 period. Bobby Bolger of Tierra provided the archaeological sensitivity training at the Ocotillo Community Center. The Native American sensitivity training was conducted by Carmen Lucas of the Kwaaymii Laguna Band of Indians. All six of the training seminars were conducted by Mr. Bolger and Ms. Lucas.

#### **Osteology Study**

During the July 10 to July 23, 2012 period, one bone fragment was identified within the proposed Turbine 176 pad footprint. Susan Arter of the San Diego Zooarchaeology Laboratory at the San Diego Natural History Museum conducted an examination of the bone fragment on July 18, 2012. The fragment is located approximately 100 meters west-northwest of Specimen 3 discussed in detail within her June 25, 2012 letter report. The following excerpt is from her July 18, 2012 report addressing the bone at Turbine 176 (Specimen 1- see attached):

"The field specimen I examined is an unidentifiable large-size mammal fragment that was significantly weathered and bleached white from surface exposure. None of the original outer cortex, or bone surface, remained intact. It was not burned. The bone retained some cortical bone (minus the outer cortex), and very dense, trabecular (spongy) bone. The specimen may be the proximal or distal end of a limb bone, possibly the proximal, anterior portion of tibia, or the distal end of a calcaneus, from a large-size artiodactyl (such as deer, sheep, goat). The morphology and density of the trabecular bone suggests it is more likely animal versus human bone."

### **3. Construction Activities**

During the July 10 to July 23, 2012 period, construction occurred every day except Sunday, July 22, 2012. Work was generally performed by Graders, Scrapers, Water Trucks, Skip Loaders, Backhoes, Boring Rigs, Excavators, and All Terrain Vehicles (ATVs). The activities monitored for this period included the following:



## Ocotillo Express Wind Energy Project

### Bi-weekly Archaeological Summary Report

1. Surveyor staking of roads and other facilities.
2. Clearing and grubbing of portions of Laydown Area, Substation, Substation Access Road, saturation and compaction by water trucks of various locations, Turbine String Access Roads, and Collector Lines.
3. Scraping (topsoil removal), grading, and removal of large boulders at portions of Laydown Area, Substation, Dos Cabezas Road, Substation Access Road, truck turnaround area, Turbine String Access Roads, and Collector Lines.
4. Borings by Geotech crews.
5. Some sub-surface excavation.

#### 4. Archaeological Resources

Whenever new resources were encountered, the teams would follow the protocol established in the Management Plan for the Project. This included, but was not limited to:

- Close-interval surface survey
- Assessment of the observed resource(s)
- Written documentation
- Photographic documentation
- GPS recordation
- Isolate collection
- Site protection (By means of ESA)

The cultural resources monitoring teams observed several archaeological resources and used the GPS to acquire reference points for comparison with planned project facilities. In some occurrences where the observed archaeological sites would not be directly impacted by any portion of the current undertaking, only minimal data was collected at that time with more detailed recordation occurring at a later date. When a resource was determined to be a site within an area of direct impact, Tierra began working with Pattern to see if project facilities may potentially be moved in order to avoid and protect the site. All sites are recorded on the appropriate DPR forms, photographed, GPS'd, and mapped. Details regarding the resource and its potential to be affected by the project limits are still being determined and will be subject to BLM review (Table 3). All prehistoric isolates within direct impact areas were recorded and collected for curation. As per the BLM approved isolate collection policy, all prehistoric isolates and only unique diagnostic historic artifacts are collected.

As part of the monitoring activities covered by this two week period, 234 isolated resources (49 historic, 185 prehistoric) and nine sites were documented. The isolated finds are detailed in Table 2 below followed by sites in Table 3. Please note that isolates not within the direct construction footprint were left in place as per BLM direction.

#### Table 2. Isolate Discoveries During Project APE Monitoring.

---

TIERRA ENVIRONMENTAL SERVICES, INC.

9915 Businesspark Avenue, Suite C t San Diego, CA 92131

O: (858) 578-9064 F: (858) 578-3646 TierraEnv@aol.com

Page 4 of 14



## Ocotillo Express Wind Energy Project

### Bi-weekly Archaeological Summary Report

Resource	Period	Artifact(s)	Qty	Location	Collected
AH011i.01	Prehistoric	Pottery Body Sherd	1	Dos Cabezas Rd. near Turbine 90	Y
AH011i.02	Prehistoric	Pottery Body Sherd	1	Dos Cabezas Rd. near Turbine 90	Y
AH011i.03	Prehistoric	Pottery Body Sherd	1	Dos Cabezas Rd. near Turbine 90	Y
AH013i	Historic	Charcoal	1	Turbine 76	Y
AH015i	Prehistoric	Pottery Body Sherd	1	Access Rd. at Turbine 78-79	Y
AH016i	Prehistoric	Pottery Body Sherd	1	Access Rd. at Turbine 78-79	Y
AH018i	Historic	Can	1	Dos Cabezas Rd. at Turbine 17	N
AH019i	Prehistoric	Metavolcanic Core	1	Turbine 103	Y
AH020i	Prehistoric	Metavolcanic Flake	1	Turbine 103	Y
AH022i	Prehistoric	Metavolcanic Flake	1	Turbine 98	Y
AH024i	Prehistoric	Metavolcanic Flake	1	Turbine 107	Y
AH025i	Prehistoric	Quartz Flake	1	Turbine 107	Y
AH027i	Prehistoric	Metavolcanic Shatter	1	Turbine 79	Y
AH028i	Prehistoric	Metavolcanic Flake	1	Turbine 79	Y
AH029i	Prehistoric	Chert Flake	1	Turbine 79	Y
AH030i	Prehistoric	Metavolcanic Flake	1	Turbine 79	Y
AH031i	Prehistoric	Metavolcanic Flake	1	Turbine 79	Y
AH032i	Prehistoric	Metavolcanic Flake	1	Turbine 79	Y
AH033i	Prehistoric	Basalt Flake	1	Turbine 79	Y
AH034i	Prehistoric	Quartzite Flake	1	Turbine 79	Y
AH035i	Prehistoric	Pottery Body Sherd	1	Turbine 79	Y
AH036i	Prehistoric	Quartz Shatter	1	Turbine 79	Y
AH037i	Prehistoric	Metavolcanic Hammerstone	1	Turbine 79	Y
AH038i	Prehistoric	Pottery Body Sherd	1	Turbine 79	Y
AH039i	Prehistoric	Metavolcanic Flake	1	Turbine 79	Y
AH040i	Prehistoric	Metavolcanic Flake	1	Turbine 79	Y
AH042i	Prehistoric	Metavolcanic Flake	1	Turbine 44	Y
AH043i	Prehistoric	Metavolcanic Flake	1	Turbine 44	Y
AH044i	Prehistoric	Metavolcanic Flake	1	Turbine 44	Y
AH045i	Prehistoric	Metavolcanic Flake	1	Turbine 44	Y
AH046i	Prehistoric	Metavolcanic Flake	1	Turbine 44	Y
BG022i	Prehistoric	Metavolcanic Scraper	1	Access Rd. at Turbines 130-73	Y
BG023i	Prehistoric	Metavolcanic Flake	1	Dos Cabezas Rd. near Turbine 17	Y
CR061i	Prehistoric	Pottery Body Sherd	1	Collector Line near MOW-028	Y
CR062i	Prehistoric	Metavolcanic Flake	1	Collector Line near MOW-028	Y
CR063i.01	Historic	Bottle Top	1	Turbine 76	N
CR063i.02	Historic	Bottle Top	1	Turbine 76	N

TIERRA ENVIRONMENTAL SERVICES, INC.

9915 Businesspark Avenue, Suite C t San Diego, CA 92131  
O: (858) 578-9064 F: (858) 578-3646 TierraEnv@aol.com

Page 5 of 14





## Ocotillo Express Wind Energy Project

### Bi-weekly Archaeological Summary Report

**Table 2. Isolate Discoveries During Project APE Monitoring.**

Resource	Period	Artifact(s)	Qty	Location	Collected
CR064i	Prehistoric	Metavolcanic Flake	1	Collector Line at Turbine 113-131	Y
CR065i	Historic	Survey Marker	1	Collector Line at Turbine 113-131	N
CR066i	Prehistoric	Metavolcanic Scraper	1	Access Rd. at Turbines 88-87	Y
CR067i	Prehistoric	Basalt Scraper	1	Access Rd. at Turbine 79	Y
CR068i	Prehistoric	Metavolcanic Flake	1	Dos Cabezas Rd.	Y
CR069i	Prehistoric	Metavolcanic Core	1	Access Rd. at Turbines 89-88	Y
CR070i	Prehistoric	Metavolcanic Flake	1	Turbine 44	Y
CR071i	Historic	Can	1	Collector Line near Turbine 87	N
CR072i	Historic	Can	1	Collector Line near Turbine 87	N
CR073i	Prehistoric	Metavolcanic Flake	1	Collector Line near Turbine 87	Y
CR074i	Prehistoric	Metavolcanic Flake	1	Collector Line near Turbine 87	Y
CR075i	Prehistoric	Metavolcanic Multi-tool	1	Collector Line near Turbine 87	Y
CR076i	Prehistoric	Metavolcanic Hammerstone	1	Collector Line near Turbine 87	Y
CR077i	Prehistoric	Metavolcanic Flake	1	Collector Line near Turbine 87	Y
CR078i	Prehistoric	Metavolcanic Hammerstone	1	Collector Line near Turbine 87	Y
CR079i	Prehistoric	Metavolcanic Angular Waste	1	Collector Line near Turbine 87	Y
CR080i	Prehistoric	Metavolcanic Chopper	1	Collector Line near Turbine 87	Y
CR081i	Prehistoric	Metavolcanic Chopper	1	Collector Line near Turbine 87	Y
CR082i.01	Prehistoric	Pottery Body Sherd	1	Turbine 94	Y
CR082i.02	Prehistoric	Pottery Body Sherd	1	Turbine 94	Y
CR083i	Prehistoric	Metavolcanic Flake	1	Access Rd. at Turbine 91	Y
ER027i	Prehistoric	Quartzite Flake	1	Turbine 18	Y
ER028i	Prehistoric	Metavolcanic Flake	1	Dos Cabezas Rd. near Turbine 18	Y
ER029i	Prehistoric	Metavolcanic Scraper	1	Dos Cabezas Rd. near Turbine 18	Y
ER030i	Prehistoric	Basalt Flake	1	Dos Cabezas Rd. near Turbine 18	Y
ER031i	Prehistoric	Basalt Chopper	1	Dos Cabezas Rd. near Turbine 18	Y
ER032i	Prehistoric	Metavolcanic Flake	1	Dos Cabezas Rd. near Turbine 18	Y
ER033i	Prehistoric	Metavolcanic Flake	1	Access Rd. at Turbine 98	Y
ER034i	Historic	Bottle Base	1	Access Rd. at Turbine 98	N
ER035i	Prehistoric	Pottery Body Sherd	1	Access Rd. at Turbine 105	Y
ER036i	Prehistoric	Chert Flake	1	Turbine 79	Y
ER037i	Prehistoric	Metavolcanic Flake	1	Turbine 79	Y
ER038i	Prehistoric	Chert Flake	1	Turbine 79	Y
ER039i	Prehistoric	Chert Flake	1	Turbine 79	Y

TIERRA ENVIRONMENTAL SERVICES, INC.

9915 Businesspark Avenue, Suite C t San Diego, CA 92131

O: (858) 578-9064 F: (858) 578-3646 TierraEnv@aol.com

Page 6 of 14



## Ocotillo Express Wind Energy Project

### Bi-weekly Archaeological Summary Report

**Table 2. Isolate Discoveries During Project APE Monitoring.**

Resource	Period	Artifact(s)	Qty	Location	Collected
ER040i	Prehistoric	Chert Chopper	1	Turbine 79	Y
ER041i	Prehistoric	Metavolcanic Flake	1	Turbine 79	Y
ER042i	Prehistoric	Metavolcanic Flake	1	Turbine 79	Y
ER043i	Prehistoric	Chert Flake	1	Turbine 79	Y
KM001i	Prehistoric	Quartzite Hammerstone	1	Turbine 147	Y
KN001i	Prehistoric	Metavolcanic Flake	1	Dos Cabezas Rd. near Turbine 18	Y
MA060i	Prehistoric	Chalcedony Flake	1	Turbine 76	Y
MA061i	Prehistoric	Quartz Core	1	Access Rd. at Turbines 40-31	Y
MA062i	Prehistoric	Metavolcanic Flake	1	Turbine 39	Y
MA063i	Prehistoric	Stone Tool	1	Dos Cabezas Rd. at Turbines 18-17	Y
MA064i	Prehistoric	Metavolcanic Angular Waste	1	Dos Cabezas Rd. at Turbines 18-17	Y
MA065i	Prehistoric	Metavolcanic Hammerstone	1	Dos Cabezas Rd. at Turbines 18-17	Y
MA066i	Prehistoric	Metavolcanic Angular Waste	1	Dos Cabezas Rd. at Turbines 18-17	Y
MA067i	Prehistoric	Metavolcanic Angular Waste	1	Dos Cabezas Rd. at Turbines 18-17	Y
MA068i	Prehistoric	Quartz Flake	1	Dos Cabezas Rd. at Turbines 18-17	Y
MA069i	Prehistoric	Metavolcanic Bi-face	1	Dos Cabezas Rd. at Turbines 18-17	Y
MA070i	Prehistoric	Chert Chopper	1	Dos Cabezas Rd. at Turbines 17-43	Y
MA071i	Prehistoric	Metavolcanic Multi- tool	1	Dos Cabezas Rd. at Turbines 17-43	Y
MA072i	Prehistoric	Metavolcanic Shatter	1	Dos Cabezas Rd. at Turbines 17-43	Y
MA073i	Prehistoric	Metavolcanic Flake	1	Dos Cabezas Rd. at Turbines 17-43	Y
MA076i	Prehistoric	Metavolcanic Flake	1	Dos Cabezas Rd. at Turbines 18-43	Y
MA077i	Prehistoric	Metavolcanic Core	1	Dos Cabezas Rd. at Turbines 18-17	Y
MA078i	Prehistoric	Metavolcanic Flake	1	Dos Cabezas Rd. at Turbines 17-43	Y
MA079i	Prehistoric	Metavolcanic Chopper	1	Dos Cabezas Rd. at Turbines 18-43	Y
MA080i	Prehistoric	Metavolcanic Core	1	Dos Cabezas Rd. at Turbines 18-43	Y
MA081i	Prehistoric	Metavolcanic Flake	1	Dos Cabezas Rd. at Turbines 17-43	Y
MA082i	Prehistoric	Metavolcanic Flake	1	Dos Cabezas Rd. at Turbines 17-43	Y
MA083i	Prehistoric	Metavolcanic Flake	1	Dos Cabezas Rd. at Turbines 17-43	Y
MA084i	Prehistoric	Metavolcanic Flake	1	Dos Cabezas Rd. at Turbines 17-43	Y
MA085i	Prehistoric	Metavolcanic Scraper	1	Dos Cabezas Rd. at Turbines 17-43	Y
MA086i	Prehistoric	Metavolcanic Flake	1	Dos Cabezas Rd. at Turbines 17-43	Y
MA087i	Prehistoric	Metavolcanic Flake	1	Dos Cabezas Rd. at Turbines 17-43	Y

TIERRA ENVIRONMENTAL SERVICES, INC.

9915 Businesspark Avenue, Suite C t San Diego, CA 92131

O: (858) 578-9064 F: (858) 578-3646 TierraEnv@aol.com

Page 7 of 14



## Ocotillo Express Wind Energy Project

### Bi-weekly Archaeological Summary Report

**Table 2. Isolate Discoveries During Project APE Monitoring.**

Resource	Period	Artifact(s)	Qty	Location	Collected
MA088i	Prehistoric	Chert Debitage	1	Dos Cabezas Rd. at Turbines 17-43	Y
MA089i	Prehistoric	Metavolcanic Flake	1	Dos Cabezas Rd. at Turbines 17-43	Y
MA090i	Prehistoric	Metavolcanic Flake	1	Dos Cabezas Rd. at Turbines 17-43	Y
MA091i	Prehistoric	Metavolcanic Flake	1	Dos Cabezas Rd. at Turbines 18-43	Y
MA092i	Prehistoric	Metavolcanic Flake	1	Dos Cabezas Rd. at Turbines 18-43	Y
MA093i	Prehistoric	Metavolcanic Angular Waste	1	Dos Cabezas Rd. at Turbines 18-43	Y
MA094i	Prehistoric	Metavolcanic Flake	1	Dos Cabezas Rd. at Turbines 18-43	Y
MA095i	Prehistoric	Metavolcanic Flake	1	Dos Cabezas Rd. at Turbines 18-43	Y
MA097i	Prehistoric	Metavolcanic Hammerstone	1	Dos Cabezas Rd. at Turbines 18-43	Y
MA098i	Prehistoric	Metavolcanic Hammerstone	1	Dos Cabezas Rd. at Turbines 18-43	Y
MA099i	Prehistoric	Metavolcanic Flake	1	Turbine 82	Y
MA100i	Prehistoric	Metavolcanic Flake	1	Turbine 79	Y
ME059i.01	Prehistoric	Pottery Body Sherd	1	Turbine 27	Y
ME059i.02	Prehistoric	Pottery Body Sherd	1	Turbine 27	Y
ME059i.03	Prehistoric	Pottery Body Sherd	1	Turbine 27	Y
ME060i	Prehistoric	Metavolcanic Angular Waste	1	Turbine 87	Y
ME061i	Prehistoric	Pottery Body Sherd	1	Turbine 87	Y
ME062i	Prehistoric	Metavolcanic Mano	1	Turbine 81	Y
ME063i	Prehistoric	Metavolcanic Hammerstone	1	Turbine 81	Y
ME064i	Prehistoric	Metavolcanic Chopper	1	Turbine 91	Y
ME065i	Prehistoric	Metavolcanic Hammerstone	1	Turbine 81	Y
ME066i	Prehistoric	Metavolcanic Chopper	1	Turbine 18	Y
NO045i	Prehistoric	Metavolcanic Shatter	1	Turbine 27	Y
NO046i	Historic	Can	1	Turbine 89	N
NO047i	Prehistoric	Metavolcanic Scraper	1	Turbine 88	Y
NO048i	Prehistoric	Metavolcanic Core	1	Access Rd. at Turbine 80	Y
NO049i	Historic	Can	1	Turbine 79	N
NO050i	Prehistoric	Metavolcanic Scraper	1	Turbine 79	Y
NO051i	Prehistoric	Metavolcanic Shatter	1	Turbine 82	Y
NO052i	Prehistoric	Metavolcanic Angular Waste	1	Turbine 82	Y
NO053i	Prehistoric	Metavolcanic Flake	1	Access Rd. at Turbine 81	Y
NO054i	Prehistoric	Metavolcanic	1	Turbine 80	Y

TIERRA ENVIRONMENTAL SERVICES, INC.

9915 Businesspark Avenue, Suite C t San Diego, CA 92131  
O: (858) 578-9064 F: (858) 578-3646 TierraEnv@aol.com

Page 8 of 14



## Ocotillo Express Wind Energy Project

### Bi-weekly Archaeological Summary Report

**Table 2. Isolate Discoveries During Project APE Monitoring.**

Resource	Period	Artifact(s)	Qty	Location	Collected
		Hammerstone			
N0055i	Historic	Can	1	Collector Line near Turbine 87	Y
N0056i	Prehistoric	Pottery Body Sherd	1	Collector Line near Turbine 87	Y
N0057i	Prehistoric	Metavolcanic Core	1	Collector Line near Turbine 87	Y
N0058i	Prehistoric	Metavolcanic Chopper	1	Collector Line near Turbine 87	Y
N0059i	Prehistoric	Metavolcanic Chopper	1	Collector Line near Turbine 87	Y
N0060i	Prehistoric	Metavolcanic Debitage	1	Collector Line near Turbine 87	Y
N0061i.01	Prehistoric	Metavolcanic Flake	1	Collector Line near Turbine 87	Y
N0061i.02	Prehistoric	Metavolcanic Flake	1	Collector Line near Turbine 87	Y
N0062i	Historic	Can	1	Collector Line near Turbine 87	N
N0063i	Historic	Bullet	1	Turbine 91	Y
PH085i	Prehistoric	Metavolcanic Hammerstone	1	Dos Cabezas Rd. at Turbines 76-18	Y
RW244i	Historic	Can	1	Collector Line near Turbine 99	N
RW245i	Historic	Can	1	Collector Line near Turbine 99	N
RW246i	Historic	Can	1	Collector Line near Turbine 99	N
RW247i	Historic	Can	1	Collector Line near Turbine 99	N
RW248i	Historic	Can	1	Collector Line north of the S2	N
RW249i	Historic	Can	1	Collector Line north of the S2	N
RW250i	Historic	Can	1	Collector Line north of the S2	N
RW251i	Historic	Can	1	Collector Line north of the S2	N
RW252i	Historic	Can	1	Collector Line near Turbine 99	N
RW253i	Historic	Can	1	Collector Line near Turbine 99	N
RW254i	Historic	Can	1	Collector Line near Turbine 99	N
RW255i	Historic	Can	1	Collector Line near Turbine 99	N
RW256i	Historic	Can	1	Collector Line near Turbine 64	N
RW257i	Prehistoric	Chalcedony Flake	1	Turbine 167	Y
RW258i	Prehistoric	Metavolcanic Scraper	1	Turbine 164	Y
RW259i	Prehistoric	Jasper Flake	1	Access Rd. at Turbines 165-164	Y
RW260i	Prehistoric	Rhyolite Core	1	Turbine 163	Y
RW261i	Prehistoric	Metavolcanic Core Fragment	1	Access Rd. at Turbine 165	Y
RW262i	Prehistoric	Quartz Flake	1	Access Rd. at Turbine 159	Y
RW263i	Historic	Can	1	Access Rd. at Turbine 159	N
RW264i	Prehistoric	Metavolcanic Core	1	Turbine 159	Y
RW265i	Historic	Can	1	Access Rd. at Turbine 159	N
RW266i	Historic	Can	1	Turbine 154	N

TIERRA ENVIRONMENTAL SERVICES, INC.

9915 Businesspark Avenue, Suite C t San Diego, CA 92131  
O: (858) 578-9064 F: (858) 578-3646 TierraEnv@aol.com

Page 9 of 14



## Ocotillo Express Wind Energy Project

### Bi-weekly Archaeological Summary Report

**Table 2. Isolate Discoveries During Project APE Monitoring.**

Resource	Period	Artifact(s)	Qty	Location	Collected
RW267i	Historic	Can	1	Turbine 155	N
RW268i	Historic	Can	1	Turbine 155	N
RW269i	Prehistoric	Quartz Core	1	Turbine 156	Y
RW270i	Historic	Survey Marker	1	Collector Line near Turbine 131	N
RW271i	Historic	Can	1	Access Rd. at Turbine 126	N
RW272i	Prehistoric	Quartz Flake Tool	1	Access Rd. at Turbine 126	Y
RW273i	Prehistoric	Metavolcanic Scraper	1	Access Rd. at Turbine 126	Y
RW274i	Prehistoric	Metavolcanic Core	1	Access Rd. at Turbine 126	Y
RW275i	Prehistoric	Metavolcanic Flake	1	Access Rd. at Turbine 126	Y
RW276i	Prehistoric	Metavolcanic Flake	1	Access Rd. at Turbine 126	Y
RW277i	Prehistoric	Metavolcanic Flake	1	Access Rd. at Turbine 126	Y
RW278i	Prehistoric	Quartz Flake	1	Access Rd. at Turbines 106-107	Y
RW279i	Prehistoric	Metavolcanic Flake	1	Access Rd. at Turbine 159	Y
RW280i	Historic	Can	1	Crane Walk at Turbines 156-159	N
RW281i	Historic	Can	1	Crane Walk at Turbines 156-159	N
RW282i	Prehistoric	Metavolcanic Core	1	Access Rd. at Turbine 126	Y
RW283i	Prehistoric	Metavolcanic Debitage	1	Access Rd. at Turbine 126	Y
RW284i	Prehistoric	Metavolcanic Debitage	1	Access Rd. at Turbine 126	Y
RW285i	Prehistoric	Metavolcanic Flake	1	Access Rd. at Turbine 126	Y
RW286i	Prehistoric	Metavolcanic Flake	1	Access Rd. at Turbine 126	Y
RW287i	Prehistoric	Metavolcanic Scraper	1	Access Rd. at Turbine 128	Y
RW288i	Prehistoric	Metavolcanic Flake	1	Turbine 128	Y
RW289i	Prehistoric	Metavolcanic Flake	1	Turbine 128	Y
RW290i	Historic	Can	1	Access Road at Turbines 125-126	N
RW291i	Prehistoric	Metavolcanic Flake	1	Turbine 125	Y
RW292i	Prehistoric	Metavolcanic Scraper	1	Turbine 122	Y
RW293i	Historic	Bottle	1	Access Rd. at Turbines 120-122	N
RW294i	Historic	Can	1	Access Rd. at Turbines 120-122	N
RW295i	Historic	Can	1	Turbine 120	N
RW296i	Historic	Can	1	Turbine 120	N
RW297i	Prehistoric	Metavolcanic Flake	1	Turbine 120	Y
RW298i	Prehistoric	Metavolcanic Core	1	Access Rd. at Turbine 120	Y
RW299i	Prehistoric	Metavolcanic Tested Cobble	1	Access Rd. at Turbine 120	Y
RW300i	Prehistoric	Metavolcanic Core	1	Access Rd. at Turbine 120	Y
RW301i	Prehistoric	Metavolcanic Core	1	Access Rd. at Turbine 120	Y
RW302i	Historic	Can	1	Access Rd. at Turbine 120	N

TIERRA ENVIRONMENTAL SERVICES, INC.

9915 Businesspark Avenue, Suite C t San Diego, CA 92131  
O: (858) 578-9064 F: (858) 578-3646 TierraEnv@aol.com



## Ocotillo Express Wind Energy Project

### Bi-weekly Archaeological Summary Report

**Table 2. Isolate Discoveries During Project APE Monitoring.**

Resource	Period	Artifact(s)	Qty	Location	Collected
RW303i	Prehistoric	Metavolcanic Flake	1	Turbine 129	Y
RW304i	Prehistoric	Metavolcanic Flake	1	Turbine 129	Y
RW305i	Prehistoric	Metavolcanic Core	1	Turbine 129	Y
RW306i	Prehistoric	Metavolcanic Flake	1	Turbine 129	Y
RW307i	Prehistoric	Scraper	1	Turbine 129	Y
RW308i	Prehistoric	Metavolcanic Flake	1	Turbine 129	Y
RW309i	Prehistoric	Metavolcanic Flake	1	Turbine 129	Y
RW310i	Prehistoric	Metavolcanic Flake	1	Turbine 129	Y
RW311i	Prehistoric	Metavolcanic Flake	1	Turbine 129	Y
RW312i	Prehistoric	Metavolcanic Chopper	1	Turbine 129	Y
RW313i	Prehistoric	Chalcedony Flake	1	Turbine 118	Y
RW314i	Prehistoric	Metavolcanic Flake	1	Turbine 117	Y
RW315i	Prehistoric	Chert Core	1	Turbine 117	Y
RW316i	Prehistoric	Metavolcanic Core	1	Turbine 116	Y
RW317i	Historic	Can	1	Access Rd. at Turbine 116	N
RW318i	Historic	Can	1	Access Rd. at Turbine 116	N
RW319i	Prehistoric	Metavolcanic Flake	1	Collector Line near Turbine 116	Y
RW320i	Historic	Can	1	Collector Line between HWY 98 and I-8	N
RW321i	Historic	Can	1	Collector Line between HWY 98 and I-8	N
RW322i	Historic	Can	1	Collector Line between HWY 98 and I-8	N
RW323i	Historic	Can	1	Collector Line between HWY 98 and I-8	N
RW324i	Prehistoric	Metavolcanic Flake	1	Collector Line Southeast of Turbine 87	Y
RW325i	Historic	Can	1	Collector Line Southeast of Turbine 87	N
RW326i	Historic	Mason Jar	1	MET Tower 3	N
SB052i	Prehistoric	Metavolcanic Flake	1	Turbine 44	Y
SB053i	Prehistoric	Metavolcanic Angular Waste	1	Turbine 44	Y
SB054i	Prehistoric	Metavolcanic Flake	1	Turbine 44	Y
SB055i	Prehistoric	Metavolcanic Flake	1	Turbine 44	Y
SB056i	Prehistoric	Metavolcanic Flake	1	Turbine 44	Y

TIERRA ENVIRONMENTAL SERVICES, INC.

9915 Businesspark Avenue, Suite C t San Diego, CA 92131  
O: (858) 578-9064 F: (858) 578-3646 TierraEnv@aol.com

Page 11 of 14



## Ocotillo Express Wind Energy Project

### Bi-weekly Archaeological Summary Report

**Table 3. Site Discoveries During Project APE Monitoring**

Resource	Period	Site Description	Location	Avoidable Resource
0621-1	Prehistoric	Site consists of a lithic scatter of 21 flakes.	Turbine 20	To Be Determined (TBD)
0621-2	Prehistoric	Site consists of a large lithic scatter including four knapping stations with a bi-face, hammerstone, flakes, and two glass fragments.	Turbine 20	TBD
AH017S	Unknown	Site consists of a stone ringed fire pit, with charcoal and ash in a soil matrix.	Turbine 76	TBD
AH023S	Prehistoric	Site consists of a knapping station with a core, hammerstone, and flakes.	Turbine 107	TBD
AH026S	Prehistoric	Site consists of a small lithic scatter of three flakes	Turbine 174	TBD
AH041S	Prehistoric	Site consists of 18 lithic concentrations, along with 12 isolated lithic artifacts, and one prehistoric trail.	South of Dos Cabezas Rd. near Turbine 18	TBD
AH047S	Prehistoric	Site consists of a lithic scatter of two flakes, two scrapers, one expedient chopper, and one modified flake tool.	Access Rd. to Turbine 126	TBD
AH048S	Prehistoric	Site consists of a lithic scatter of one hammerstone, one scraper, one tested cobble, one flake tool, one core tool, and two flakes.	Access Rd. to Turbine 126	TBD
AH049S	Prehistoric	Site consists of a lithic scatter including a knapping station with 11 flakes and five core fragments. Three of the five core fragments refit together.	Access Rd. to Turbine 126	TBD

TIERRA ENVIRONMENTAL SERVICES, INC.

9915 Businesspark Avenue, Suite C t San Diego, CA 92131  
O: (858) 578-9064 F: (858) 578-3646 TierraEnv@aol.com

Page 12 of 14



## Ocotillo Express Wind Energy Project

### Bi-weekly Archaeological Summary Report

---

#### 5. Expressed Concerns and Resolutions

During the July 10 to July 23, 2012 period, several issues were brought to the attention of Tierra personnel. In each case the issue was addressed and resolved or an action item offered for consideration. Please see the text below for each occurrence.

##### ***Issue A***

A tribal cultural consultant expressed the concern that Dos Cabezas Road bisects some sites and redeposited isolates could also be occasionally found within the road. To limit potential impacts to the sites adjacent to the road, ESAs were established and closely monitored during any additional road grading. Furthermore, the tribal cultural consultant was assigned to personally watch the mechanical blading until he was satisfied with the process.

##### ***Issue B***

A tribal cultural consultant became exhausted while walking a survey line on a particularly warm day. The monitor was transported in an air-conditioned vehicle back to the air-conditioned trailer and met with the Blattner site safety supervisor and the field director. Over a significant period of time, the consultant was watched and cared for to ensure his safety. After the monitor had sufficiently rested and the field supervisors confident that he was in good health, he was allowed to go home and rest. The field director, after discussing it with the consultant, has agreed to assign him to less strenuous activities.

##### ***Issue C***

A tribal cultural consultant expressed the concern that construction is continuing in close proximity to a dog alert area. As with each of the established dog alert area, an ESA was erected and has been maintained to prevent accidental impacts by construction crews. Tierra personnel have continued to enforce this protection policy.

##### ***Issue D***

A tribal cultural consultant expressed the concern that under the current design, the access road to Turbine 9 would impact an existing ESA. Tierra personnel are at present working with Helix, Blattner and Pattern to address a possible change to the road alignment that would avoid the ESA. This alteration to the approved design is addressed in Variance 5 currently under review.

---

TIERRA ENVIRONMENTAL SERVICES, INC.

9915 Businesspark Avenue, Suite C t San Diego, CA 92131

O: (858) 578-9064 F: (858) 578-3646 TierraEnv@aol.com

Page 13 of 14





## Ocotillo Express Wind Energy Project

### Bi-weekly Archaeological Summary Report

---

#### ***Issue E***

A tribal cultural consultant expressed concern that the recent rainstorm had washed artifacts into areas that had previously been cleared and will soon be impacted by construction crews. To address this concern a large team of archaeologists and tribal cultural consultants conducted small area surveys to collect the newly identified isolates prior to construction grading impacts. While specifics are not known, based on the general topography of the area, the artifacts washed in from the south and southwest of the turbine pad.

#### ***Issue F***

A tribal cultural consultant expressed a concern that artifacts may be washed across tower pads during heavy rainstorms. Tierra personnel requested that Blattner use straw waddles (or other appropriate barrier) to line turbine pads in areas with a high potential for artifact redistribution. Blattner is reviewing the possibility of using the straw waddles in areas where it wouldn't affect current construction grading work.

## **6. Summary**

Construction of the Ocotillo Express Wind Energy project continued from July 10 to July 23, 2012 (with the exception of July 22, 2012). As addressed in section 2, ESAs were established for previously recorded and newly recorded archaeological resources located near construction areas. All initial grading, geotech drilling and work conducted within 150ft of an ESA was monitored by a crew consisting of an archaeological monitor and a Native American monitor. Nine sites and two hundred and thirty-four isolates were recorded. 188 isolated artifacts were collected for temporary curation at Tierra Environmental Services.

---

TIERRA ENVIRONMENTAL SERVICES, INC.

9915 Businesspark Avenue, Suite C t San Diego, CA 92131  
O: (858) 578-9064 F: (858) 578-3646 TierraEnv@aol.com

Page 14 of 14

Report on the Identification of Bone Fragments from the Ocotillo Wind Project Site, California

Susan Arter  
San Diego Zooarchaeology Laboratory  
San Diego Natural History Museum

On Wednesday, July 18, 2012 I examined one in-situ bone specimen on-site at the Ocotillo Wind Project. I also examined two skeletal elements inside the office trailer that had been bagged and collected. Below are my comments on each of the fragments:

The field specimen I examined is an unidentifiable large-size mammal fragment that was significantly weathered and bleached white from surface exposure. None of the original outer cortex, or bone surface, remained intact. It was not burned. The bone retained some cortical bone (minus the outer cortex), and very dense, trabecular (spongy) bone. The specimen may be the proximal or distal end of a limb bone, possibly the proximal, anterior portion of tibia, or the distal end of a calcaneus, from a large-size artiodactyl (such as deer, sheep, goat). The morphology and density of the trabecular bone suggests it is more likely animal versus human bone.

The second and third specimens I examined are associated elements. They are the distal right shaft and unfused epiphysis of a large, subadult pig. The specimens were bleached white from surface exposure, not burned. The mid-shaft end of the bone had been mechanically sawn, indicating that it would have had to have been deposited sometime after the late 1920's following the arrival of mechanized saws on the west coast. The symmetrical saw striations are visible with a hand lense.

Report on the Identification of Bone Fragments from the Ocotillo Wind Project Site, California

Susan Arter  
San Diego Zooarchaeology Laboratory  
San Diego Natural History Museum

On Wednesday, July 18, 2012 I examined one in-situ bone specimen on-site at the Ocotillo Wind Project. I also examined two skeletal elements inside the office trailer that had been bagged and collected. Below are my comments on each of the fragments:

The field specimen I examined is an unidentifiable large-size mammal fragment that was significantly weathered and bleached white from surface exposure. None of the original outer cortex, or bone surface, remained intact. It was not burned. The bone retained some cortical bone (minus the outer cortex), and very dense, trabecular (spongy) bone. The specimen may be the proximal or distal end of a limb bone, possibly the proximal, anterior portion of tibia, or the distal end of a calcaneus, from a large-size artiodactyl (such as deer, sheep, goat). The morphology and density of the trabecular bone suggests it is more likely animal versus human bone.

The second and third specimens I examined are associated elements. They are the distal right shaft and unfused epiphysis of a large, subadult pig. The specimens were bleached white from surface exposure, not burned. The mid-shaft end of the bone had been mechanically sawn, indicating that it would have had to have been deposited sometime after the late 1920's following the arrival of mechanized saws on the west coast. The symmetrical saw striations are visible with a hand lense.



## Ocotillo Express Wind Energy Project Bi-weekly Archaeological Summary Report

---

### Bi-Weekly Summary Report For: June 26 – July 9, 2012

#### 1. Archaeological Monitoring Personnel

Archaeological monitoring was directed by Tierra Environmental Services, LLC (Tierra) Co-Principal Investigators Dr. Michael Baksh and Mr. Bobby Bolger during this period.

Archaeological monitors present during the June 26 to July 9, 2012 period included Mark Abelon, Sarah Bock, Mitch Evans, Benito Guzman, Patrick Hadel, Aaron Harper, Scott Justus, Natalie Ortega, Nina Rogers, Edgar Rojas, and Ross Way.

The Native American monitors included: Richard Alvanez (Cocopah), Dave Elliot (Sycuan), Victor Estrada (La Posta), Rudi Flores, Jr. (San Pasqual), Rudy Flores (San Pasqual), Carmen Lucas (Kwaaymii), Janie McClain (Cocopah), Ed Mercado (La Posta), Phillip Paipa (Ewiiapaayp), Jason Pinto (Jamul), Jesse Pinto (Jamul), Albert Quihuis (Ewiiapaayp), Vanessa Raya (San Pasqual), Frank Salazar (Campo), Veronica Santos (Manzanita), PJ Stoneburner (Ewiiapaayp), David Thompson (Manzanita), and Boe Willey (Manzanita).

#### 2. Activities Conducted by Tierra Staff

##### ESAs

Tierra established Environmentally Sensitive Area (ESA) barriers for several recorded archaeological and historic sites within the project Area of Potential Affect (APE). As outlined in the *Memorandum of Agreement Among the Bureau of Land Management-California, The United States Army Corps of Engineers, Ocotillo Express LLC, The California State Historic Preservation Officer, and the Advisory Council on Historic Preservation Regarding the Ocotillo Express Wind Energy Project, Imperial County, California*, May 2012 (Memorandum of Agreement) and the *Management Plan for Archaeological Monitoring, Post-Review Discovery and Unanticipated Effects*, April 2012 (Management Plan), ESAs were erected prior to construction or earthmoving activities within 150 feet of a known resource. To avoid unnecessary disclosure of sensitive resources to the general public, ESAs have not been prematurely constructed favoring waiting to within seven days of the scheduled work. Furthermore, the preference for ESA boundaries was not to entirely encapsulate the resource whenever feasible since that could also encourage a search of the contents of the ESA. During the June 26 to July 9, 2012 period, eight ESAs were constructed (see Table 1).



## Ocotillo Express Wind Energy Project

### Bi-weekly Archaeological Summary Report

**Table 1. ESAs within Project APE**

ESA Designation	Other	Resource Description	Site Size (meters)	Facility or Location
CA-IMP-008/H	-	Camp Site, Agave Processing Area, Rock Features and Historic Refuse Deposit	4024m (NW/SE) x 1610m (NE/SW)	Turbine 96
CA-IMP-008/H	-	Camp Site, Agave Processing Area, Rock Features and Historic Refuse Deposit	4024m (NW/SE) x 1610m (NE/SW)	Turbine 97
CA-IMP-11860	EAM-052	Lithic Scatter	149m (NW/SE) x 60m (NE/SW)	Turbine 95
CA-IMP-11895	EAM-109	Lithic Scatter and Agave Processing Area	370m (N/S) x 630m (E/W)	Access Road
CA-IMP-11972	MOW-002	Artifact Scatter	68m (N/S) x 85m (E/W)	Dos Cabezas Road
CA-IMP-11980	MOW-026H	Mining Site	52 ft (N/S) x 197 ft (E/W)	Dos Cabezas Road
SJ012S	-	Lithic and Pottery Scatter	4m (N/S) x 2m (E/W)	Turbine 79
SJ013S	-	Agave Processing Area, Lithic and Pottery Scatter	11m (N/S) x 7m (E/W)	Access Road to Turbine 10

### Preconstruction Walkthroughs

In accordance with the Memorandum of Agreement and the Management Plan, Tierra crewmembers conducted preconstruction walkthroughs for access roads and turbines. During the course of preconstruction walkthroughs, several new resources were identified and are detailed below in Section 4 and Tables 2 and 3 below.

### Training Seminar

One WEAP training seminar was held during the June 26 to July 9, 2012 period. The training was held on June 28, 2012 at the Ocotillo Community Center with Bobby Bolger of Tierra providing the archaeological sensitivity and Ms. Carmen Lucas of the Kwaaymii Laguna Band of Indians providing the Native American sensitivity training.

### 3. Construction Activities

During the current biweekly period work did not occur between July 3 and July 8, 2012. Aside from these 6 days, construction work occurred every day and was generally performed by Graders, Scrapers, Water Trucks, Skip Loaders, Backhoes, Boring Rigs, Excavators, and All Terrain Vehicles (ATVs). The activities monitored for this period included the following:



## Ocotillo Express Wind Energy Project

### Bi-weekly Archaeological Summary Report

---

1. Surveyor staking of roads and other facilities.
2. Clearing and grubbing of portions of Laydown Area, Substation, Substation Access Road, saturation and compaction by water trucks of various locations, Turbine String Access Roads, and Collection Lines.
3. Scraping (topsoil removal), grading, and removal of large boulders at portions of Laydown Area, Substation, Dos Cabezas Road, Substation Access Road, truck turnaround area, Turbine String Access Roads, and Collection Lines.
4. Borings by Geotech crews.
5. Some sub-surface excavation.

#### 4. Archaeological Resources

Whenever new resources were encountered, the teams would follow the protocol established in the Management Plan for the Project. This included, but was not limited to:

- Close-interval surface survey
- Assessment of the observed resource(s)
- Written documentation
- Photographic documentation
- GPS recordation
- Isolate collection
- Site protection (By means of ESA)

The cultural resources monitoring teams observed several archaeological resources and used the GPS to acquire reference points for comparison with planned project facilities. In some occurrences where the observed archaeological sites would not be directly impacted by any portion of the current undertaking, only minimal data was collected at that time with more detailed recordation occurring at a later date. When a resource was determined to be a site within an area of direct impact, Tierra began working with Pattern to see if project facilities may potentially be moved in order to avoid and protect the site. All sites are recorded on the appropriate DPR forms, photographed, GPS'd, and mapped. Details regarding the resource and its potential to be affected by the project limits is still being determined and will be subject to BLM review (Table 3). All prehistoric isolates within direct impact areas were recorded and collected for curation. As per the BLM approved isolate collection policy, all prehistoric isolates and only unique diagnostic historic artifacts are collected.

As part of the monitoring activities covered by this two - week period, 129 isolated resources (13 historic, 116 prehistoric) and three sites were documented. The isolated finds are detailed in Table 2 below followed by sites in Table 3. While a location has been provided for general reference, in most instances it underestimates the large scale of the project area and facilities under development. For example the isolates located near the *Access Road at Turbine 82* covers a substantial lineal distance of approximately one mile. Therefore, the location is only intended to provide the reader with a



## Ocotillo Express Wind Energy Project

### Bi-weekly Archaeological Summary Report

generalized area for convenience. Please note that isolates not within the direct construction footprint were left in place as per BLM direction.

**Table 2. Isolate Discoveries During Project APE Monitoring.**

Resource	Period	Artifact(s)	Qty	Location	Collected
MA051i	Prehistoric	Metavolcanic Chopper	1	Turbine 66	Y
MA052i.01	Prehistoric	Fire Affected Rock	1	Turbine 66	Y
MA052i.02	Prehistoric	Fire Affected Rock	1	Turbine 66	Y
MA053i	Prehistoric	Quartz Angular Waste	1	Turbine 66	Y
MA054i	Prehistoric	Metavolcanic Flake	1	Turbine 65	Y
MA055i	Prehistoric	Basalt Flake	1	Turbine 65	Y
MA056i	Prehistoric	Metavolcanic Flake	1	Access Rd. at Turbine 94	Y
MA057i	Prehistoric	Metavolcanic Flake	1	Access Rd. at Turbine 94	Y
MA058i	Historic	Charcoal	1	Dos Cabezas Rd. near Turbines 90-76	Y
MA059i	Historic	Charcoal	1	Dos Cabezas Rd. near Turbines 70-18	Y
ME036i	Prehistoric	Quartz Flake	1	Access Rd. at Turbines 131-148	Y
ME037i	Prehistoric	Metavolcanic Hammerstone	1	Access Rd. at Turbines 131-148	Y
ME038i	Prehistoric	Chert Tested Cobble	1	Access Rd. at Turbines 131-148	Y
ME039i	Prehistoric	Metavolcanic Chopper	1	Access Rd. at Turbines 81-82	Y
ME040i.01	Prehistoric	Metavolcanic Flake	1	Access Rd. at Turbines 81-82	Y
ME040i.02	Prehistoric	Metavolcanic Flake	1	Access Rd. at Turbines 81-82	Y
ME041i.01	Prehistoric	Metavolcanic Flake	1	Turbine 82	Y
ME041i.02	Prehistoric	Metavolcanic Flake	1	Turbine 82	Y
ME041i.03	Prehistoric	Metavolcanic Flake	1	Turbine 82	Y
ME042i	Prehistoric	Metavolcanic Flake	1	Turbine 82	Y
ME043i	Prehistoric	Metavolcanic Angular Waste	1	Turbine 82	Y
ME044i	Prehistoric	Metavolcanic Flake	1	Turbine 83	Y
ME045i	Prehistoric	Metavolcanic Hammerstone	1	Turbine 83	Y
ME046i	Prehistoric	Metavolcanic Flake	1	Turbine 83	Y
ME047i	Prehistoric	Metavolcanic Hammerstone	1	Turbine 83	Y
ME048i	Prehistoric	Metavolcanic Flake	1	Access Rd. at Turbine 131	Y
ME049i	Prehistoric	Metavolcanic Hammerstone	1	Turbine 65	Y
ME050i	Prehistoric	Metavolcanic Hammerstone	1	Turbine 65	Y
ME051i	Prehistoric	Granitic Metate	1	Access Rd. at Turbines 64-10	Y
ME052i	Prehistoric	Metavolcanic Scraper	1	Turbine 64	Y
ME053i	Prehistoric	Metavolcanic Angular Waste	1	Turbine 64	Y
ME054i	Prehistoric	Metavolcanic Tested Cobble	1	Turbine 94	Y
ME055i	Prehistoric	Metavolcanic Angular Waste	1	Turbine 94	Y

TIERRA ENVIRONMENTAL SERVICES, INC.

9915 Businesspark Avenue, Suite C San Diego, CA 92131  
O: (858) 578-9064 F: (858) 578-3646 TierraEnv@aol.com

Page 4 of 9



## Ocotillo Express Wind Energy Project

### Bi-weekly Archaeological Summary Report

**Table 2. Isolate Discoveries During Project APE Monitoring.**

Resource	Period	Artifact(s)	Qty	Location	Collected
ME056i	Prehistoric	Metavolcanic Flake	1	Access Rd. at Turbines 97-96	Y
ME057i	Prehistoric	Metavolcanic Hammerstone	1	Access Rd. at Turbines 97-96	Y
ME058i	Prehistoric	Metavolcanic Chopper	1	Access Rd. at Turbines 96-95	Y
RW220i	Prehistoric	Metavolcanic Flake	1	Turbine 83	Y
RW221i	Prehistoric	Metavolcanic Flake	1	Turbine 83	Y
RW222i	Prehistoric	Quartz Flake	1	Turbine 83	Y
RW223i	Prehistoric	Metavolcanic Flake	1	Turbine 83	Y
RW224i	Prehistoric	Flake Tool	1	Turbine 81	Y
RW225i	Prehistoric	Metavolcanic Flake	1	1-Mile Access Rd. at Turbine 82	Y
RW226i	Prehistoric	Metavolcanic Flake	1	1-Mile Access Rd. at Turbine 82	Y
RW227i	Prehistoric	Metavolcanic Scraper	1	1-Mile Access Rd. at Turbine 82	Y
RW228i	Prehistoric	Metavolcanic Flake	1	1-Mile Access Rd. at Turbine 82	Y
RW229i	Historic	Can	1	1-Mile Access Rd. at Turbine 82	N
RW230i.01	Prehistoric	Metavolcanic Flake	1	1-Mile Access Rd. at Turbine 82	Y
RW230i.02	Prehistoric	Metavolcanic Flake	1	1-Mile Access Rd. at Turbine 82	Y
RW231i	Prehistoric	Pottery Body Sherd	1	1-Mile Access Rd. at Turbine 82	Y
RW232i	Prehistoric	Metavolcanic Flake Tool	1	1-Mile Access Rd. at Turbine 82	Y
RW233i	Historic	Can	1	Access Rd. at Turbines 160-161	N
RW234i	Historic	Can	1	Access Rd. at Turbines 160-172	N
RW235i	Prehistoric	Metavolcanic Core	1	Turbine 172	Y
RW236i	Historic	Can	1	Access Rd. at Turbines 161-172	N
RW237i	Historic	Can	1	Access Rd. at Turbines 161-172	N
RW238i	Historic	Can	1	Access Rd. at Turbines 160-172	N
RW239i	Historic	Can	1	Access Rd. at Turbines 160-172	N
RW240i	Prehistoric	Metavolcanic Flake	1	Turbine 168	Y
RW241i	Prehistoric	Jasper Flake	1	Turbine 168	Y
RW242i	Prehistoric	Metavolcanic Flake	1	Turbine 161	Y
RW243i	Prehistoric	Metavolcanic Hammerstone	1	Turbine 168	Y
NO039i	Prehistoric	Metavolcanic Core	1	Turbine 135	Y
NO040i	Prehistoric	Metavolcanic Flake	1	Turbine 135	Y
NO041i	Prehistoric	Metavolcanic Angular Waste	1	Turbine 135	Y
NO042i	Prehistoric	Metavolcanic Flake	1	Dos Cabezas Rd.	Y
NO043i	Prehistoric	Metavolcanic Flake	1	Dos Cabezas Rd.	Y
NO044i	Prehistoric	Metavolcanic Multitool	1	Dos Cabezas Rd.	Y
PH045i	Prehistoric	Metavolcanic Hammerstone	1	Access Rd. at Turbine 78	Y
PH046i	Prehistoric	Pottery Body Sherd	1	Turbine 78	Y

TIERRA ENVIRONMENTAL SERVICES, INC.

9915 Businesspark Avenue, Suite C San Diego, CA 92131  
O: (858) 578-9064 F: (858) 578-3646 TierraEnv@aol.com

Page 5 of 9





## Ocotillo Express Wind Energy Project

### Bi-weekly Archaeological Summary Report

**Table 2. Isolate Discoveries During Project APE Monitoring.**

Resource	Period	Artifact(s)	Qty	Location	Collected
PH047i	Prehistoric	Metavolcanic Flake	1	Turbine 78	Y
PH048i	Prehistoric	Pottery Body Sherd	1	Turbine 78	Y
PH049i	Prehistoric	Metavolcanic Angular Waste	1	Turbine 78	Y
PH050i	Prehistoric	Pottery Body Sherd	1	Turbine 79	Y
PH051i	Prehistoric	Metavolcanic Flake	1	Turbine 79	Y
PH052i	Prehistoric	Metavolcanic Flake	1	Turbine 79	Y
PH053i	Prehistoric	Quartz Flake	1	Turbine 79	Y
PH054i.01	Prehistoric	Metavolcanic Flake	1	1-Mile Access Rd. at Turbine 82	Y
PH054i.02	Prehistoric	Metavolcanic Flake	1	1-Mile Access Rd. at Turbine 82	Y
PH055i	Prehistoric	Pottery Rim Sherd	1	1-Mile Access Rd. at Turbine 82	Y
PH056i	Prehistoric	Quartz Flake	1	1-Mile Access Rd. at Turbine 82	Y
PH057i	Prehistoric	Metavolcanic Flake	1	1-Mile Access Rd. at Turbine 82	Y
PH058i	Prehistoric	Pottery Body Sherd	1	1-Mile Access Rd. at Turbine 82	Y
PH059i	Historic	Can	1	1-Mile Access Rd. at Turbine 82	N
PH060i	Prehistoric	Pottery Body Sherd	1	1-Mile Access Rd. at Turbine 82	Y
PH061i	Prehistoric	Pottery Body Sherd	1	1-Mile Access Rd. at Turbine 82	Y
PH062i	Prehistoric	Pottery Neck Fragment	1	1-Mile Access Rd. at Turbine 82	Y
PH063i	Historic	Can	1	1-Mile Access Rd. at Turbine 82	N
PH064i	Historic	Can	1	1-Mile Access Rd. at Turbine 82	N
PH065i	Prehistoric	Pottery Body Sherd	1	1-Mile Access Rd. at Turbine 82	Y
PH066i	Prehistoric	Metavolcanic Angular Waste	1	1-Mile Access Rd. at Turbine 82	Y
PH067i	Historic	Can	1	1-Mile Access Rd. at Turbine 82	N
PH068i	Prehistoric	Pottery Body Sherd	1	1-Mile Access Rd. at Turbine 82	Y
PH069i	Prehistoric	Pottery Body Sherd	1	1-Mile Access Rd. at Turbine 82	Y
PH070i	Prehistoric	Pottery Body Sherd	1	1-Mile Access Rd. at Turbine 82	Y
PH071i	Prehistoric	Pottery Body Sherd	1	1-Mile Access Rd. at Turbine 82	Y
PH072i	Prehistoric	Pottery Body Sherd	1	1-Mile Access Rd. at Turbine 82	Y
PH073i	Prehistoric	Metavolcanic Flake	1	1-Mile Access Rd. at Turbine 82	Y
PH074i	Prehistoric	Metavolcanic Flake	1	1-Mile Access Rd. at Turbine 82	Y
PH075i	Prehistoric	Quartz Flake	1	Access Rd. at Turbine 10	Y
PH076i	Prehistoric	Metavolcanic Flake	1	1-Mile Access Rd. at Turbine 82	Y
PH077i	Prehistoric	Metavolcanic Shatter	1	Turbine 99	Y
PH078i	Prehistoric	Quartz Flake	1	Turbine 99	Y
PH079i	Prehistoric	Metavolcanic Flake	1	Access Rd. at Turbines 99-100	Y
PH080i	Prehistoric	Metavolcanic Flake	1	Turbine 101	Y
PH081i.01	Prehistoric	Quartz Angular Waste	1	Turbine 97	Y

TIERRA ENVIRONMENTAL SERVICES, INC.

9915 Businesspark Avenue, Suite C San Diego, CA 92131  
O: (858) 578-9064 F: (858) 578-3646 TierraEnv@aol.com

Page 6 of 9



## Ocotillo Express Wind Energy Project

### Bi-weekly Archaeological Summary Report

**Table 2. Isolate Discoveries During Project APE Monitoring.**

Resource	Period	Artifact(s)	Qty	Location	Collected
PH081i.02	Prehistoric	Quartz Angular Waste	1	Turbine 97	Y
PH082i	Prehistoric	Metavolcanic Flake	1	Turbine 97	Y
PH083i	Prehistoric	Metavolcanic Core Tool	1	Turbine 97	Y
PH084i	Prehistoric	Charcoal	1	Dos Cabezas Rd. near Turbines 90-76	Y
SB033i	Prehistoric	Metavolcanic Chopper	1	Turbine 65	Y
SB034i	Prehistoric	Metavolcanic Flake	1	Access Rd. at Turbine 65	Y
SB035i	Prehistoric	Quartzite Groundstone	1	Access Rd. at Turbine 64	Y
SB036i	Prehistoric	Quartz Flake	1	Access Rd. at Turbine 64	Y
SB038i	Prehistoric	Quartz Core Fragment	1	Access Rd. at Turbine 64	Y
SB040i	Prehistoric	Metavolcanic Flake	1	Turbine 94	Y
SB041i	Prehistoric	Metavolcanic Tested Cobble	1	Turbine 94	Y
SB042i	Prehistoric	Metavolcanic Core	1	Turbine 94	Y
SB043i	Prehistoric	Metavolcanic Tested Cobble	1	Turbine 94	Y
SB044i	Prehistoric	Quartz Flake	1	Turbine 94	Y
SB045i	Prehistoric	Metavolcanic Flake	1	Turbine 94	Y
SB046i	Prehistoric	Metavolcanic Flake	1	Turbine 94	Y
SB047i	Prehistoric	Metavolcanic Flake	1	Turbine 94	Y
SB048i	Prehistoric	Metavolcanic Flake	1	Access Rd. at Turbine 94	Y
SB049i	Prehistoric	Metavolcanic Flake	1	Access Rd. at Turbine 94	Y
ER026i	Prehistoric	Metavolcanic Flake	1	Access Rd. at Turbines 18-75	Y
CR059i	Prehistoric	Metavolcanic Flake	1	Access Rd. at Turbines 100-101	Y
CR060i	Prehistoric	Metavolcanic Multitool	1	Access Rd. at Turbines 96-97	Y
SJ050i	Prehistoric	Quartzite Chopper	1	Access Rd. South of Substation	Y
SJ051i	Prehistoric	Granitic Handstone	1	Access Rd. South of Substation	Y

**Table 3. Site Discoveries During Project APE Monitoring**

Resource	Period	Site Description	Size	Location	Avoidable Resource
EAM-109 Update	Prehistoric	Site is an extension to the previously recorded EAM-109. Included is a roasting pit/hearth feature, along with one tested cobble/core.	370m (N/S) x 630m (E/W)	Access Road to Turbine 9	To Be Determined (TBD)
SJ012s	Prehistoric	Site consists of a small sparse lithic scatter of two Metavolcanic flakes and one Buffware ceramic sherd.	4m (N/S) x 2m (E/W)	Turbine 79	TBD
SJ013s	Prehistoric	Site consists of an agave roasting pit,	11m (N/S) x	Access	TBD

TIERRA ENVIRONMENTAL SERVICES, INC.

9915 Businesspark Avenue, Suite C San Diego, CA 92131  
O: (858) 578-9064 F: (858) 578-3646 TierraEnv@aol.com

Page 7 of 9



## Ocotillo Express Wind Energy Project

### Bi-weekly Archaeological Summary Report

**Table 3. Site Discoveries During Project APE Monitoring**

Resource	Period	Site Description	Size	Location	Avoidable Resource
		three refitting pottery body sherds, and a sparse lithic scatter of three metavolcanic flakes and one quartz shatter.	7m (E/W)	Road to Turbine 10	

#### 5. Expressed Concerns and Resolution

During the June 26 to July 9, 2012 period, several issues were brought to the attention of Tierra. In each case the issue was addressed and resolved or an action item offered for consideration. Please see the text below for each occurrence.

##### Issue A

Some members of the tribal cultural consultants expressed strong concerns that a 3<sup>rd</sup> Party monitor may have taken photographs at a cremation site without permission. The field director contacted the 3<sup>rd</sup> Party monitor and the BLM archaeologist to inform them of the concern. All crewmembers (including 3<sup>rd</sup> Party monitors) were reacquainted with the prohibition on photographing funerary or items of cultural patrimony without consent of the onsite Tribal cultural consultants.

##### Issue B

A tribal cultural consultant expressed a concern that biologists replanting cholla outside of the established Area of Impact were potentially disturbing archaeological resources. The biological teams were instructed to follow established guidelines and protocols and not conduct ground disturbing activities unless archaeological and tribal cultural monitors are present. Tierra personnel will prepare a damage assessment summary letter for the BLM detailing the impact to the identified resource.

##### Issue C

A tribal cultural consultant expressed the concern that large holes were being drilled within the substation footprint without monitoring. The areas in question had already been subjected to initial ground disturbing activity monitoring as per the Memorandum of Agreement and the Management Plan. The field director arranged for a guided tour of the drilled holes accompanied by representatives of Blattner and SDG&E. The tribal cultural consultant was given full access to these areas to look around and examine until she was satisfied that no artifacts were within the subsurface strata.

##### Issue D

A tribal cultural consultant expressed the concern that grading activity was taking place too close to the ESA buffer boundary, leaving open the possibility for wall fall. The field director spoke with the site foreman requesting that there be no more grading against that wall and near the ESA boundary. The



## Ocotillo Express Wind Energy Project

### Bi-weekly Archaeological Summary Report

---

foreman was also instructed to regularly check the ESA boundary markers to ensure it was still is still up and functioning. As per standard policy, ESAs are regularly checked by a cultural team consisting of an archaeologist and a tribal cultural consultant.

#### 6. Summary

Construction of the Ocotillo Express Wind Energy project continued during the June 26 to July 9, 2012 period except between July 3 and July 8, 2012. As addressed in Section 2, ESAs were established for previously recorded archaeological resources located near construction areas. All initial grading, geotech drilling, and surveyor staking activities, as well as all work conducted within 150 feet of ESAs, was monitored by a crew consisting of an archaeological monitor and a Native American monitor. One hundred twenty-nine isolates were recorded, and 118 artifacts were collected for temporary curation at Tierra Environmental Services.



## Ocotillo Express Wind Energy Project Bi-weekly Archaeological Summary Report

---

**BI-WEEKLY SUMMARY REPORT FOR: June 12 – June 25, 2012**

### **1. Archaeological Monitoring Personnel**

Archaeological monitoring was directed by Tierra Environmental Services, LLC (Tierra) Co-Principal Investigators Dr. Michael Baksh, Chris Shaver, and Mr. Bobby Bolger during this period.

Archaeological monitors present during the June 12 to June 25, 2012 period included Mark Abelon, Sarah Bock, Mitch Evans, Benito Guzman, Patrick Hadel, Scott Justus, Natalie Ortega, Nina Rogers, Edgar Rojas, and Ross Way.

The Native American monitors included: Richard Alvanez (Cocopah), Ronald Cuero (Campo), Dave Elliott (Sycuan), Toni Lee Elliot (Manzanita), Vincent Estrada (La Posta), Rudi Flores, Jr. (San Pasqual), Danielle Goff (San Pasqual), Jonathon Jones (Campo), Carmen Lucas (Kwaaymii), Dan Mason (Campo), Ed Mercado (La Posta), Janie McClain (Cocopah), Jason Pinto (Jamul), Albert Quihuis (Ewiiapaayp), Nicholas Rodriguez (Ewiiapaayp), Frank Salazar (Campo), Veronica Santos (Manzanita), PJ Stoneburner (Ewiiapaayp), Ethian Thomas (Cocopah), and Boe Willey (Manzanita),

### **2. Activities Conducted by Tierra Staff**

#### **ESAs**

Tierra established Environmentally Sensitive Area (ESA) barriers for several recorded archaeological and historic sites within the project Area of Potential Affect (APE). As outlined in the *Memorandum of Agreement Among the Bureau of Land Management-California, The United States Army Corps of Engineers, Ocotillo Express LLC, The California State Historic Preservation Officer, and the Advisory Council on Historic Preservation Regarding the Ocotillo Express Wind Energy Project, Imperial County, California*, May 2012 (Memorandum of Agreement) and the *Management Plan for Archaeological Monitoring, Post-Review Discovery and Unanticipated Effects*, April 2012 (Management Plan), ESAs were erected prior to construction or earthmoving activities within 150 feet of a known resource. To avoid unnecessary disclosure of sensitive resources to the general public, ESAs have not been prematurely constructed favoring waiting to within seven days of the scheduled work. Furthermore, the preference for ESA boundaries was not to entirely encapsulate the resource whenever feasible since that could also encourage a search of the contents of the ESA. During the June 12 to June 25, 2012 period, 17 ESAs were constructed (see Table 1).

---

TIERRA ENVIRONMENTAL SERVICES, INC.

9915 Businesspark Avenue, Suite C t San Diego, CA 92131  
O: (858) 578-9064 F: (858) 578-3646 TierraEnv@aol.com

Page 1 of 15



## Ocotillo Express Wind Energy Project

### Bi-weekly Archaeological Summary Report

**Table 1. ESAs within Project APE**

ESA Designation	Other	Resource Description	Facility or Location
CA-IMP-008/H	-	Camp Site, Agave Processing Area, Rock Features and Historic Refuse Deposit	Transmission Line and Access Rd.
CA-IMP-2488	-	Lithic Scatter and Rock Features	Access Rd.
CA-IMP-6988	-	Artifact Scatter, Agave Processing Area, and Geoglyph	Electrical Interconnect
CA-IMP-11803	OCO-AMC-028	Artifact Scatter and Agave Processing Area	Assembly Areas
CA-IMP-11834	OCO-BF-008	Lithic Scatter	Access Rd. and Turbines 67 and 102
CA-IMP-11847	OCO-BF-004H	Mine Site	Turbine 100
CA-IMP-11849	OCO-BF-017	Lithic Scatter and Rock Features	Assembly Areas
CA-IMP-11888	OCO-EAM-101	Lithic Scatter and Agave Processing Area	Transmission Line and Access Rd.
CA-IMP-11889	OCO-EAM-102	Lithic Scatter and Agave Processing Area	Access Rd.
CA-IMP-11890	OCO-EAM-103	Lithic Scatter and Agave Processing Area	Access Rd.
CA-IMP-11895	OCO-EAM-109	Lithic Scatter and Agave Processing Area	Transmission Line and Access Rd.
CA-IMP-11896	OCO-EAM-110	Artifact Scatter and Agave Processing Area	Access Rd.
CA-IMP-11897	OCO-EAM-111	Artifact Scatter and Agave Processing Area	Access Rd.
CA-IMP-11898	OCO-EAM-112	Lithic Scatter and Agave Processing Area	Access Rd.
CA-IMP-12017	OCO-023	Artifact Scatter and Agave Processing Area	Assembly Areas
CA-IMP-12018	OCO-024	Lithic Scatter	Transmission Line and Access Rd.
CA-IMP-12022	OCO-025	Lithic Scatter	Transmission Line and Access Rd.

#### Preconstruction Walkthroughs

In accordance with the Memorandum of Agreement and the Management Plan, Tierra crewmembers conducted preconstruction walkthroughs for access roads and turbines. During the course of preconstruction walkthroughs several new resources were identified and are detailed below in Section 4 and Tables 4 and 5 below.

TIERRA ENVIRONMENTAL SERVICES, INC.

9915 Businesspark Avenue, Suite C t San Diego, CA 92131  
O: (858) 578-9064 F: (858) 578-3646 TierraEnv@aol.com

Page 2 of 15



## Ocotillo Express Wind Energy Project

### Bi-weekly Archaeological Summary Report

#### Training Seminars

Two WEAP training seminars were held during the June 12 to June 25, 2012 period. Bobby Bolger of Tierra provided the archaeological sensitivity training on June 14 and June 21 at the Ocotillo Community Center. The Native American sensitivity training was conducted by Carmen Lucas of the Kwaaymii Laguna Band of Indians on June 21, 2012.

#### Osteology Study

Tierra participated in the osteology visit conducted by Susan Arter of the San Diego Zooarchaeology Laboratory at the San Diego Natural History Museum on June 22, 2012. Ms. Arter's osteology report was provided and received by the BLM on June 25, 2012. See Table 2 below for a brief synopsis of the osteology report.

**Table 2. Synopsis Of Osteology Report**

Specimen No.	Description	Evaluation
1  (Locality 2 Dr. Hinkes 5/22/12 Report)	Calcined gray, proximal shaft portion of a tibia in fairly good condition. Slightly weathered appearance of the outer cortical surface may be due exposure to the elements or possibly a juvenile animal whereby the outer cortex is not fully developed and still retains a pithy surface texture. Of particular note was that the interior surface contained spongy, trabecular bone typical of human limb bones, and atypical of animal limb bones (other than horse). After review of the comparative collection at the San Diego Natural History Museum it was concluded that the bone fragment was not <i>canis</i> sp. (coyote or dog) or <i>artiodactyla</i> sp. (deer, pronghorn antelope, sheep, or goat). Based on size, morphology, the presence of trabecular bone, and the fact that it is calcined, the fragment may be the left, proximal, tibia shaft of a sub adult human.	May be human
2  (Undesignated area bone fragment Dr. Hinkes 5/22/12 Report)	Exterior was bleached white and highly weathered and exfoliated with only a small area still exhibiting the outer cortical surface; however, the interior was in good condition. Based on size, morphology, and the smooth interior surface, it was determined to be a medium- to large-size <i>artiodactyla</i> sp. (deer, pronghorn antelope, sheep, or goat).	Animal
3	Exterior was bleached white; however, the cortical surface was in good condition. Based on size and morphology, the specimen is most likely a vertebral spine fragment of a medium- to large-size <i>artiodactyla</i> sp. (deer, pronghorn antelope, sheep, or goat).	Animal
4  SB031i	Exterior was bleached white and highly weathered and exfoliated; however, based on size and morphology it was determined to be an ischium fragment (pelvic bone) from a large <i>artiodactyla</i> sp. (probably cow). This is further supported by an apparent, albeit weathered, saw-cut on the proximal shaft of the bone suggesting secondary processing of a cattle pelvis for human consumption.	Animal
5	Photographic review of a bone fragment concluded to be the femur of a <i>canis</i> sp. (coyote or dog).	Animal

TIERRA ENVIRONMENTAL SERVICES, INC.

9915 Businesspark Avenue, Suite C t San Diego, CA 92131  
O: (858) 578-9064 F: (858) 578-3646 TierraEnv@aol.com

Page 3 of 15



## Ocotillo Express Wind Energy Project

### Bi-weekly Archaeological Summary Report

---

In each occurrence of bone discovery, Tierra personnel followed the protocols established within the Memorandum of Agreement and the Management Plan. The ESA surrounding Specimen 1 will be retained to avoid unintentional disturbance at the location.

### 3. Construction Activities

During the June 12 to June 25, 2012 period, construction occurred every day. Work was generally performed by Graders, Scrapers, Water Trucks, Skip Loaders, Backhoes, Boring Rigs, and All Terrain Vehicles (ATVs). The activities monitored for this period included the following:

1. Surveyor staking of roads and other facilities.
2. Clearing and grubbing of portions of Laydown Area, Substation, Substation Access Road, saturation and compaction by water trucks of various locations
3. Scraping (topsoil removal), grading, and removal of large boulders at portions of Laydown Area, Substation, Dos Cabezas Road, Substation Access Road, and truck turnaround area.
4. Borings by Geotech crews.

### 4. Archaeological Resources

Whenever new resources were encountered, the teams would follow the protocol established in the Management Plan for the Project. This included, but was not limited to:

- Close-interval surface survey
- Assessment of the observed resource(s)
- Written documentation
- Photographic documentation
- GPS recordation

The cultural resources monitoring teams observed several archaeological resources during the Surveyor Staking effort and used the GPS to acquire reference points for comparison with planned project facilities. In some occurrences where the observed archaeological sites would not be directly impacted by any portion of the current undertaking, only minimal data was collected at that time with more detailed recordation occurring at a later date. When a resource was determined to be a site within an area of direct impact, Tierra began working with Pattern to see if project facilities may potentially be moved in order to avoid and protect the site. All sites are recorded on the appropriate DPR forms, photographed, GPS'd, and mapped. Details regarding the resource and its potential to be affected by the project limits is still being determined and will be subject to BLM review (Table 5). All prehistoric isolates within direct impact areas were recorded and collected for curation. As per the BLM approved isolate collection policy, all prehistoric isolates and only unique diagnostic historic artifacts are collected. Two prehistoric isolates originally recorded in the May 29 to June 11, 2012 were revisited and the

---

TIERRA ENVIRONMENTAL SERVICES, INC.

9915 Businesspark Avenue, Suite C t San Diego, CA 92131  
O: (858) 578-9064 F: (858) 578-3646 TierraEnv@aol.com

Page 4 of 15





## Ocotillo Express Wind Energy Project

### Bi-weekly Archaeological Summary Report

artifacts collected during the current bi-weekly time period. These isolates are presented below in Table 3.

**Table 3. Isolate Collection Revisits from May 29 to June 11, 2012 period.**

Resource	Period	Artifact(s)	Qty	Location	Collected
SJ010i	Prehistoric	Metavolcanic Flake	1	Turbine 133	Y
SJ011i	Prehistoric	Metavolcanic Flake	1	Turbine 133	Y

As part of the monitoring activities covered by this two week period, 272 isolated resources (160 historic, 112 prehistoric) and eight sites (6 prehistoric, 2 historic) were documented. The isolated finds are detailed in Table 4 below followed by sites in Table 5. Please note that isolates not within the direct construction footprint were left in place as per BLM direction.

**Table 4. Isolate Discoveries During Project APE Monitoring.**

Resource	Period	Artifact(s)	Qty	Location	Collected
ER013i	Prehistoric	Fire Affected Rock	1	Substation	Y
ER014i	Prehistoric	Pottery Body Sherd	1	Substation	Y
ER015i	Prehistoric	Chert Tested Cobble	1	Substation	Y
ER016i	Prehistoric	Chert Flake	1	Substation	Y
ER017i	Prehistoric	Quartz Flake	1	Substation	Y
ER018i	Prehistoric	Quartz Flake	1	Substation	Y
ER019i	Prehistoric	Metavolcanic Flake	1	Substation	Y
ER020i	Prehistoric	Basalt Tested Cobble	1	Substation	Y
ER021i	Prehistoric	Quartzite Tested Cobble	1	Access Rd. S2 at Turbine 64	Y
ER022i	Prehistoric	Metavolcanic Flake	1	Access Rd. S2 at Turbine 64	Y
ER023i	Prehistoric	Pottery Body Sherd	1	Access Rd. at Turbines 9-10	Y
ER024i	Prehistoric	Pottery Rim Sherd	1	Access Rd. at Turbines 9-10	Y
ER025i	Prehistoric	Chert Tested Cobble	1	Access Rd. at Turbines 10-11	Y
SJ008i.01	Prehistoric	Metavolcanic Flake	1	Turbine 49	Y
SJ008i.02	Prehistoric	Metavolcanic Flake	1	Turbine 49	Y
SJ010i	Prehistoric	Metavolcanic Flake	1	Turbine 133	Y
SJ011i	Prehistoric	Metavolcanic Flake	1	Turbine 133	Y
SJ012i	Prehistoric	Metavolcanic Flake	1	Turbine 173	Y
SJ013i	Prehistoric	Pottery Body Sherd	1	Turbine 39	Y
SJ014i	Prehistoric	Pottery Body Sherd	1	Turbine 39	Y
SJ015i	Prehistoric	Metavolcanic Flake	1	Turbine 39	Y
SJ016i	Prehistoric	Quartz Flake	1	Turbine 39	Y

TIERRA ENVIRONMENTAL SERVICES, INC.

9915 Businesspark Avenue, Suite C t San Diego, CA 92131  
O: (858) 578-9064 F: (858) 578-3646 TierraEnv@aol.com



## Ocotillo Express Wind Energy Project

### Bi-weekly Archaeological Summary Report

**Table 4. Isolate Discoveries During Project APE Monitoring.**

Resource	Period	Artifact(s)	Qty	Location	Collected
SJ017i	Prehistoric	Metavolcanic Flake	1	Turbine 40	Y
SJ018i	Prehistoric	Metavolcanic Flake	1	Turbine 40	Y
SJ019i	Prehistoric	Quartz Flake	1	Turbine 40	Y
SJ020i	Prehistoric	Quartz Flake	1	Turbine 40	Y
SJ021i	Prehistoric	Quartz Flake	1	Turbine 40	Y
SJ022i	Prehistoric	Metavolcanic Flake	1	Turbine 40	Y
SJ023i	Prehistoric	Quartz Flake	1	Turbine 40	Y
SJ024i	Prehistoric	Metavolcanic Flake	1	Turbine 40	Y
SJ025i	Prehistoric	Metavolcanic Core	1	Turbine 30	Y
SJ026i	Prehistoric	Quartz Flake	1	Turbine 30	Y
MA036i	Prehistoric	Metavolcanic Flake	1	Access Rd. at Turbines 113-112	Y
MA037i	Prehistoric	Metavolcanic Flake	1	Access Rd. at Turbines 14-15	Y
MA038i	Prehistoric	Metavolcanic Flake	1	Access Rd. at Turbines 14-15	Y
MA039i	Prehistoric	Metavolcanic Flake	1	Access Rd. at Turbines 15-69	Y
MA040i	Prehistoric	Metavolcanic Flake	1	Turbine 69	Y
MA041i.01	Prehistoric	Metavolcanic Flake	1	Turbine 69	Y
MA041i.02	Prehistoric	Metavolcanic Flake	1	Turbine 69	Y
MA042i	Prehistoric	Metavolcanic Flake	1	Turbine 69	Y
MA043i	Prehistoric	Metavolcanic Flake	1	Turbine 69	Y
MA044i	Prehistoric	Metavolcanic Flake	1	Turbine 69	Y
MA047i	Historic	Can	1	Turbine 17	N
MA048i	Prehistoric	Metavolcanic Flake	1	Turbine 16	Y
MA049i	Prehistoric	Metavolcanic Flake	1	Turbine 16	Y
ME025i	Historic	Can	1	S-2	N
ME026i	Prehistoric	Metavolcanic Tested Cobble	1	Turbine 79	Y
ME027i	Prehistoric	Metavolcanic Core	1	Turbine 79	Y
ME028i	Prehistoric	Can	1	Turbine 79	N
ME029i	Prehistoric	Pottery Body Sherd	1	Access Rd. at Turbines 81-82	Y
ME030i	Prehistoric	Metavolcanic Hammerstone	1	Access Rd. at Turbines 81-82	Y
ME031i	Prehistoric	Metavolcanic Tested Cobble	1	Access Rd. Substation	N
ME032i	Historic	Can	1	Operations & Maintenance Yard	N
ME033i.01	Prehistoric	Pottery Body Sherd	1	Operations & Maintenance Yard	Y
ME033i.02	Prehistoric	Pottery Body Sherd	1	Operations & Maintenance Yard	Y
ME034i	Prehistoric	Pottery Body Sherd	1	Operations & Maintenance Yard	Y

TIERRA ENVIRONMENTAL SERVICES, INC.

9915 Businesspark Avenue, Suite C t San Diego, CA 92131  
O: (858) 578-9064 F: (858) 578-3646 TierraEnv@aol.com

Page 6 of 15



## Ocotillo Express Wind Energy Project

### Bi-weekly Archaeological Summary Report

**Table 4. Isolate Discoveries During Project APE Monitoring.**

Resource	Period	Artifact(s)	Qty	Location	Collected
ME035i	Historic	Can	1	Operations & Maintenance Yard	N
RW062i	Prehistoric	Metavolcanic Flake	1	Access Rd. at Turbines 72-95	Y
RW063i	Historic	Can	1	Access Rd. at Turbine 94	N
RW064i	Prehistoric	Metavolcanic Flake	1	Turbine 94	Y
RW066i	Prehistoric	Quartz Flake	1	Access Rd. at Turbine 98	Y
RW069i	Historic	Can	1	Access Rd. at Turbines 74-75	N
RW070i	Historic	Can	1	Turbine at Turbine 75	N
RW071i	Historic	Can	1	Access Rd. at Turbine 75	N
RW072i	Historic	Can	1	Access Rd. at Turbine 75	N
RW073i	Historic	Can	1	Access Rd. at Turbine 75	N
RW074i	Historic	Can	1	Access Rd. at Turbine 75	N
RW075i	Historic	Can	1	Turbine 76	N
RW076i	Historic	Can	1	Turbine 76	N
RW077i	Prehistoric	Chert Flake	1	Turbine 76	Y
RW078i	Historic	Can	1	Turbine 76	N
RW079i	Historic	Can	1	Turbine 76	N
RW080i	Historic	Can	1	Turbine 76	N
RW081i	Historic	Can	1	Turbine 76	N
RW082i	Historic	Can	1	Turbine 77	N
RW083i	Historic	Can	1	Turbine 77	N
RW085i	Historic	Can	1	Access Rd. at Turbine 92	N
RW086i	Prehistoric	Metavolcanic Flake	1	Access Rd. at Turbine 91	Y
RW088i	Historic	Can	1	Dos Cabezas Rd. near Turbine 76	N
RW089i	Historic	Can	1	North side Dos Cabezas Rd.	N
RW090i	Historic	Can	1	North side Dos Cabezas Rd.	N
RW091i	Historic	Can	1	North side Dos Cabezas Rd.	N
RW092i	Historic	Can	1	North side Dos Cabezas Rd.	N
RW093i	Historic	Can	1	North side Dos Cabezas Rd.	N
RW096i	Historic	Can	1	Dos Cabezas Rd at Turbines 18-76	N
RW097i	Historic	Can	1	Dos Cabezas Rd. near Turbine 76	N
RW098i	Prehistoric	Quartz Flake	1	Dos Cabezas Rd. near Turbine 76	Y
RW099i	Historic	Can	1	Dos Cabezas Rd. near Turbine 76	N
RW100i	Historic	Can	1	Dos Cabezas Rd. near Turbine 76	N
RW101i	Historic	Can	1	Dos Cabezas Rd. near Turbine 76	N

TIERRA ENVIRONMENTAL SERVICES, INC.

9915 Businesspark Avenue, Suite C t San Diego, CA 92131

O: (858) 578-9064 F: (858) 578-3646 TierraEnv@aol.com

Page 7 of 15



## Ocotillo Express Wind Energy Project

### Bi-weekly Archaeological Summary Report

**Table 4. Isolate Discoveries During Project APE Monitoring.**

Resource	Period	Artifact(s)	Qty	Location	Collected
RW102i	Historic	Can	1	Dos Cabezas Rd. near Turbine 76	N
RW103i	Historic	Can	1	Dos Cabezas Rd. near Turbine 76	N
RW104i	Historic	Can	1	Dos Cabezas Rd. near Turbine 76	N
RW105i	Historic	Can	1	Access Rd. at Turbine 28	N
RW106i	Historic	Can	1	Access Rd. at Turbine 28	N
RW107i	Historic	Can	1	Access Rd. at Turbine 28	N
RW108i	Historic	Can	1	Access Rd. at Turbine 28	N
RW109i	Historic	Can	1	Access Rd. at Turbine 28	N
RW110i	Historic	Can	1	Turbine 28	N
RW111i	Historic	Can	1	Turbine 28	N
RW112i.01	Historic	Can	1	Turbine 28	N
RW112i.02	Historic	Can	1	Turbine 28	N
RW113i	Historic	Can	1	Turbine 28	N
RW114i	Prehistoric	Metavolcanic Flake	1	Turbine 28	Y
RW115i	Historic	Can	1	Turbine 28	N
RW116i	Historic	Pipe	1	Turbine 28	N
RW117i	Historic	Can	1	Turbine 28	N
RW118i	Historic	Miscellaneous Metal	1	Turbine 28	N
RW119i	Prehistoric	Chert Flake	1	Turbine 28	Y
RW120i	Historic	Can	1	Turbine 28	N
RW121i	Historic	Can	1	Turbine 28	N
RW122i	Historic	Can	1	Turbine 28	N
RW123i	Historic	Can	1	Turbine 28	N
RW124i	Historic	Can	1	Dos Cabezas Rd.	N
RW125i	Historic	Can	1	Turbine 18	N
RW126i	Historic	Can	1	Turbine 18	N
RW127i	Historic	Can	1	Turbine 18	N
RW128i	Historic	Can	1	Turbine 18	N
RW129i	Historic	Can	1	Turbine 18	N
RW130i	Historic	Can	1	Turbine 18	N
RW132i	Prehistoric	Core	1	Dos Cabezas Rd.	Y
RW133i.01	Historic	Can	1	Turbine 17	Y
RW133i.02	Historic	Can	1	Turbine 17	Y
RW134i	Historic	Can	1	Dos Cabezas Rd.	N

TIERRA ENVIRONMENTAL SERVICES, INC.

9915 Businesspark Avenue, Suite C t San Diego, CA 92131

O: (858) 578-9064 F: (858) 578-3646 TierraEnv@aol.com

Page 8 of 15



## Ocotillo Express Wind Energy Project

### Bi-weekly Archaeological Summary Report

**Table 4. Isolate Discoveries During Project APE Monitoring.**

Resource	Period	Artifact(s)	Qty	Location	Collected
RW135i	Historic	Church Key Opener	1	Dos Cabezas Rd.	N
RW136i	Historic	Can	1	Dos Cabezas Rd.	N
RW137i	Historic	Can	1	Dos Cabezas Rd.	N
RW138i	Historic	Can	1	Dos Cabezas Rd.	N
RW139i	Historic	Can	1	Dos Cabezas Rd.	N
RW140i	Historic	Can	1	Dos Cabezas Rd.	N
RW141i	Historic	Can	1	Dos Cabezas Rd.	N
RW142i	Historic	Can	1	Dos Cabezas Rd.	N
RW143i	Historic	Can	1	Dos Cabezas Rd.	N
RW144i	Historic	Can	1	Dos Cabezas Rd.	N
RW145i	Historic	Can	1	Dos Cabezas Rd.	N
RW146i	Historic	Can	1	Dos Cabezas Rd.	N
RW147i	Historic	Can	1	Turbine 43	N
RW148i	Historic	Can	1	Turbine 43	N
RW149i	Historic	Can	1	Turbine 43	N
RW150i	Historic	Can	1	Turbine 43	N
RW151i	Historic	Can	1	Turbine 43	N
RW152i	Historic	Can	1	Turbine 44	N
RW153i	Historic	Can	1	Turbine 44	N
RW154i	Prehistoric	Pottery Body Sherd	1	Access Rd. at Turbine 27	Y
RW155i	Historic	Can	1	Access Rd. at Turbine 27	N
RW156i	Historic	Can	1	Access Rd. at Turbine 27	N
RW157i	Historic	Can	1	Access Rd. at Turbine 27	N
RW158i	Historic	Can	1	Access Rd. at Turbine 27	N
RW159i	Prehistoric	Quartz Biface	1	Access Rd. at Turbines 26-27	Y
RW160i	Historic	Can	1	Access Rd. at Turbine 27	N
RW161i	Historic	Can	1	Access Rd. at Turbine 26	N
RW162i	Prehistoric	Pottery Body Sherd	1	Access Rd. at Turbines 27-24	Y
RW163i.01	Prehistoric	Pottery Body Sherd	1	Access Rd. at Turbines 27-24	Y
RW163i.02	Prehistoric	Pottery Body Sherd	1	Access Rd. at Turbines 27-24	Y
RW164i	Prehistoric	Pottery Body Sherd	1	Access Rd. at Turbines 27-24	Y
RW165i	Prehistoric	Metavolcanic Core	1	Access Rd. at Turbine 25	Y
RW166i	Prehistoric	Metavolcanic Flake	1	Turbine 25	Y
RW167i	Historic	Can	1	Access Rd. at Turbines 27-24	N

TIERRA ENVIRONMENTAL SERVICES, INC.

9915 Businesspark Avenue, Suite C t San Diego, CA 92131  
O: (858) 578-9064 F: (858) 578-3646 TierraEnv@aol.com

Page 9 of 15



## Ocotillo Express Wind Energy Project

### Bi-weekly Archaeological Summary Report

**Table 4. Isolate Discoveries During Project APE Monitoring.**

Resource	Period	Artifact(s)	Qty	Location	Collected
RW168i	Historic	Can	1	Turbine 27	N
RW169i	Prehistoric	Quartz Core	1	Turbine 20	Y
RW170i	Historic	Can	1	Turbine 19	N
RW171i	Prehistoric	Metavolcanic Flake	1	Turbine 19	Y
RW172i	Prehistoric	Metavolcanic Pestle	1	Turbine 29	Y
RW173i.01	Prehistoric	Metavolcanic Flake	1	Access Rd. at Turbine 21	Y
RW173i.02	Prehistoric	Metavolcanic Flake	1	Access Rd. at Turbine 21	Y
RW174i	Prehistoric	Metavolcanic Scraper	1	Access Rd. at Turbine 21	Y
RW175i	Prehistoric	Metavolcanic Flake	1	Access Rd. at Turbine 21	Y
RW176i	Historic	Can	1	Turbine 23	N
RW177i	Prehistoric	Metavolcanic Flake	1	Access Rd. at Turbines 23-24	Y
RW178i	Historic	Can	1	Access Rd. at Turbine 79	N
RW179i	Prehistoric	Pottery Body Sherd	1	Access Rd. at Turbine 79	Y
RW180i	Historic	Can	1	Access Rd. at Turbine 79	N
RW181i	Historic	Can	1	Access Rd. at Turbine 79	N
RW182i	Historic	Can	1	Access Rd. at Turbine 79	N
RW183i	Historic	Can	1	Access Rd. at Turbine 79	N
RW184i	Historic	Can	1	Access Rd. at Turbine 79	N
RW185i	Prehistoric	Pottery Body Sherd	1	Access Rd. at Turbine 79	Y
RW186i	Historic	Can	1	Access Rd. at Turbine 79	N
RW187i	Historic	Can	1	Turbine 79	N
RW188i	Historic	Can	1	Turbine 79	N
RW189i	Historic	Can	1	Turbine 79	N
RW190i	Historic	Can	1	Turbine 79	N
RW191i	Prehistoric	Pottery Body Sherd	1	Turbine 79	Y
RW192i	Prehistoric	Pottery Body Sherd	1	Turbine 79	Y
RW193i	Prehistoric	Pottery Body Sherd	1	Turbine 79	Y
RW194i	Prehistoric	Metavolcanic Core	1	Turbine 79	Y
RW195i	Historic	Can	1	Turbine 79	N
RW196i	Historic	Can	1	Turbine 79	N
RW197i	Historic	Can	1	Turbine 79	N
RW198i	Historic	Can	1	Turbine 79	N
RW199i	Historic	Can	1	Turbine 79	N
RW200i	Historic	Can	1	Turbine 79	N

TIERRA ENVIRONMENTAL SERVICES, INC.

9915 Businesspark Avenue, Suite C t San Diego, CA 92131

O: (858) 578-9064 F: (858) 578-3646 TierraEnv@aol.com

Page 10 of 15



## Ocotillo Express Wind Energy Project

### Bi-weekly Archaeological Summary Report

**Table 4. Isolate Discoveries During Project APE Monitoring.**

Resource	Period	Artifact(s)	Qty	Location	Collected
RW201i	Prehistoric	Metavolcanic Chopper	1	Turbine 79	Y
RW202i	Historic	Can	1	Turbine 79	N
RW203i	Historic	Metavolcanic Flake	1	Turbine 79	Y
RW204i	Historic	Can	1	Turbine 79	N
RW205i	Historic	Can	1	Turbine 93	N
RW206i	Prehistoric	Metavolcanic Flake	1	Turbine 80	Y
RW207i	Prehistoric	Metavolcanic Flake	1	Access Rd. at Turbine 80	Y
RW208i	Historic	Can	1	Turbine 80	N
RW209i	Historic	Can	1	Turbine 80	N
RW210i	Historic	Can	1	Turbine 80	N
RW211i	Historic	Can	1	Turbine 80	N
RW212i	Prehistoric	Metavolcanic Flake	1	Turbine 80	Y
RW213i.01	Historic	Can	1	Turbine 80	N
RW213i.02	Historic	Can	1	Turbine 80	N
RW214i	Prehistoric	Metavolcanic Flake	1	Turbine 80	Y
RW215i	Historic	Can	1	Turbine 80	N
RW216i	Historic	Can	1	Turbine 80	N
RW217i	Prehistoric	Pottery	1	Access Rd. at Turbines 78-79	Y
RW218i	Historic	Can	1	Access Rd. at Turbines 78-79	N
RW219i	Prehistoric	Chalcedony Projectile Point	1	Access Rd. at Turbines 78-79	Y
NO034i	Historic	Can	1	Turbine 167	N
NO035i	Historic	Can	1	Access Rd. at Turbine 172	N
NO036i	Historic	Can	1	Access Rd. at Turbine 172	N
NO037i	Historic	Can	1	Access Rd. at Turbine 172	N
NO038i	Historic	Can	1	Access Rd. at Turbine 93	N
CR050i	Prehistoric	Metavolcanic Flake	1	Access Rd. at Turbine 110	Y
CR051i	Historic	Can	1	Access Rd. at Turbine 93	N
CR052i	Prehistoric	Metavolcanic Flake	1	Turbine 80	Y
CR053i	Historic	Can	1	Turbine 80	N
CR054i	Historic	Can	1	Turbine 80	N
CR055i	Historic	Can	1	Turbine 80	N
CR056i	Historic	Can	1	Turbine 80	N
CR057i	Historic	Can	1	Turbine 80	N
CR058i	Historic	Church Key	1	Turbine 80	N

TIERRA ENVIRONMENTAL SERVICES, INC.

9915 Businesspark Avenue, Suite C t San Diego, CA 92131

O: (858) 578-9064 F: (858) 578-3646 TierraEnv@aol.com

Page 11 of 15



## Ocotillo Express Wind Energy Project

### Bi-weekly Archaeological Summary Report

**Table 4. Isolate Discoveries During Project APE Monitoring.**

Resource	Period	Artifact(s)	Qty	Location	Collected
PH001i	Prehistoric	Metavolcanic Shatter	1	Turbine 111	Y
PH002i.01	Prehistoric	Quartz Scraper	1	Turbine 111	Y
PH002i.02	Prehistoric	Quartz Core	1	Turbine 111	Y
PH003i	Prehistoric	Pottery Body Sherd	1	Turbine 149	Y
PH004i	Prehistoric	Metavolcanic Shatter	1	Turbine 149	Y
PH005i	Prehistoric	Quartz Multitool	1	Turbine 149	Y
PH006i	Prehistoric	Quartz Scraper	1	Access Rd. at Turbines 147-149	Y
PH007i	Prehistoric	Metavolcanic Multitool	1	Turbine 147	Y
PH008i	Prehistoric	Metavolcanic Hammerstone	1	Access Rd. at Turbines 147-148	Y
PH011i	Prehistoric	Metavolcanic Flake	1	Turbine 79	Y
PH012i	Historic	Can	1	Turbine 79	N
PH013i	Historic	Can	1	Turbine 79	N
PH014i	Historic	Can	1	Turbine 79	N
PH015i	Historic	Can	1	Turbine 79	N
PH016i	Historic	Can	1	Turbine 80	N
PH017i	Historic	Can	1	Turbine 80	N
PH018i	Historic	Can	1	Turbine 80	N
PH019i	Historic	Can	1	Turbine 80	N
PH020i	Historic	Can	1	Turbine 80	N
PH021i	Historic	Can	1	Turbine 80	N
PH023i	Historic	Can	1	Turbine 80	N
PH024i	Historic	Can	1	Turbine 80	N
PH025i	Historic	Can	1	Turbine 80	N
PH026i	Historic	Can	1	Turbine 80	N
PH027i	Historic	Can	1	Turbine 80	N
PH028i	Historic	Can	1	Turbine 80	N
PH029i	Historic	Can	1	Turbine 80	N
PH030i	Historic	Can	1	Turbine 80	N
PH031i	Historic	Can	1	Turbine 80	N
PH032i	Historic	Can	1	Turbine 80	N
PH033i	Historic	Can	1	Turbine 80	N
PH034i	Prehistoric	Quartz Biface	1	Turbine 80	Y
PH035i	Historic	Can	1	Turbine 80	N
PH036i	Historic	Can	1	Turbine 80	N

TIERRA ENVIRONMENTAL SERVICES, INC.

9915 Businesspark Avenue, Suite C t San Diego, CA 92131

O: (858) 578-9064 F: (858) 578-3646 TierraEnv@aol.com

Page 12 of 15





## Ocotillo Express Wind Energy Project

### Bi-weekly Archaeological Summary Report

**Table 4. Isolate Discoveries During Project APE Monitoring.**

Resource	Period	Artifact(s)	Qty	Location	Collected
PH037i	Historic	Can	1	Turbine 80	N
PH038i	Historic	Can	1	Turbine 80	N
PH039i	Historic	Can	1	Turbine 80	N
PH040i	Prehistoric	Pottery Body Sherd	1	Access Rd. at Turbine 27	Y
PH041i	Prehistoric	Pottery Body Sherd	1	Access Rd. at Turbine 27	Y
PH042i	Prehistoric	Pottery Body Sherd	1	Access Rd. at Turbine 27	Y
PH043i	Prehistoric	Chalcedony Flake	1	Access Rd. at Turbine 27	Y
PH044i	Prehistoric	Pottery Body Sherd	1	Access Rd. at Turbine 27	Y
SB031i	Historic	Faunal Bone	1	Between Turbines 130-73	N
BG016i	Prehistoric	Chert Core	1	Access Rd. at Turbines 120-122	Y
BG017i	Prehistoric	Flake	1	Access Rd. at Turbines 120-122	Y
BG018i	Prehistoric	Scraper	1	Access Rd. at Turbines 120-122	Y
BG020i	Prehistoric	Flake	1	Access Rd. at Turbines 120-122	Y
BG021i	Prehistoric	Flake	1	Access Rd. at Turbines 120-122	Y

**Table 5. Site Discoveries During Project APE Monitoring**

Resource	Period	Site Description	Location	Avoidable Resource
BG014S	Prehistoric	Site consists of a lithic scatter with three main loci, one of which was previously recorded with CA-IMP-11913. The two new loci will become extensions of CA-IMP-11913.	South side of Access Road between Turbine 21 & 29	To be determined (TBD)
SJ007S	Prehistoric	Site consists of three features which are possibly agave roasting or hearth features and in association with a sparse lithic scatter.	Turbine 49	TBD
SJ009S	Prehistoric	Site consists of large lithic scatter including 46 knapping stations with a rock feature and a trail segment.	East of Access Road between Turbine 73 & 130	TBD
SJ011S	Prehistoric	Site consists of a sparse lithic scatter of three metavolcanic flakes.	Access Road to Turbine 98	TBD
RW084S	Prehistoric	Ceramic scatter with more than nine sherd fragments.	Turbine 92	TBD
RW087S	Prehistoric	Site consists of a knapping station with flakes and a core fragment.	Turbine 91	TBD
RW094S	Historic	Site consists of a historic refuse deposit including three cans and two bottles.	Dos Cabezas Road	TBD

TIERRA ENVIRONMENTAL SERVICES, INC.

9915 Businesspark Avenue, Suite C t San Diego, CA 92131

O: (858) 578-9064 F: (858) 578-3646 TierraEnv@aol.com

Page 13 of 15



## Ocotillo Express Wind Energy Project

### Bi-weekly Archaeological Summary Report

**Table 5. Site Discoveries During Project APE Monitoring**

Resource	Period	Site Description	Location	Avoidable Resource
RW095S	Historic	Site consists of a historic refuse deposit of four beverage cans.	Turbine 90	TBD

## 5 Expressed Concerns and Resolutions

During the June 12 to June 25, 2012 period, several issues were brought to the attention of Tierra. In each case the issue was addressed and resolved or an action item offered for consideration. Please see the text below for each occurrence.

### **Issue A**

A tribal cultural consultant observed that a newly identified site (SJ009S) between Turbines 73 and 103 would be impacted by the proposed access road. To address this, the access road was rerouted around the site and the site recorded in detail.

### **Issue B**

There was concern expressed by a tribal cultural consultant that members of the general public were taking pictures of the workers. Tierra's field director approached the citizens and asked them to not take pictures of the tribal consultants due to cultural sensitivity. The citizens agreed to stop.

### **Issue C**

There were expressed concerns by a tribal cultural consultant that Turbines 49 and 51 would need to be moved due to archaeological sites within the construction footprint. Tierra personnel recorded the resources in detail and are currently working with Blattner staff to conduct the necessary micro-siting surveys to relocate the turbines as necessary. As per the Memorandum of Agreement and Monitoring Plan, whenever feasible, tower locations are being proposed for adjustment to avoid these resources. If the resource cannot be avoided it will be classified as an Unavoidable New Discovery (UND) and evaluations conducted.

### **Issue D**

A tribal cultural consultant expressed concerns that resources were not being returned to their original location and too many footprints were being left at the site. Tierra's field director and the tribal cultural consultant addressed the cultural resources staff about the importance of respecting artifacts and returning them to their original location. While the number of personnel who must visit the site is discussed in the Monitoring Plan (identifying individual, crew chief, tribal cultural consultant, field director, site recording team (minimally an archaeologist and a tribal cultural consultant), efforts will be made to impact the sites as little as possible during recordation.

TIERRA ENVIRONMENTAL SERVICES, INC.

9915 Businesspark Avenue, Suite C t San Diego, CA 92131  
O: (858) 578-9064 F: (858) 578-3646 TierraEnv@aol.com

Page 14 of 15



## Ocotillo Express Wind Energy Project

### Bi-weekly Archaeological Summary Report

---

#### 6. Summary

Construction of the Ocotillo Express Wind Energy project continued uninterrupted for the June 12 to June 25, 2012 period. As addressed in Section 2, ESAs were established for previously recorded archaeological resources located near construction areas. All initial grading, geotech drilling, and surveyor staking activities, as well as all work conducted within 150 feet of ESAs, was monitored by a crew consisting of an archaeological monitor and a Native American monitor. Two hundred seventy-two isolates were recorded, and 113 artifacts were collected for temporary curation at Tierra Environmental Services.

---

TIERRA ENVIRONMENTAL SERVICES, INC.

9915 Businesspark Avenue, Suite C t San Diego, CA 92131  
O: (858) 578-9064 F: (858) 578-3646 TierraEnv@aol.com

Page 15 of 15



## Ocotillo Express Wind Energy Project Bi-weekly Archaeological Summary Report

---

### BI-WEEKLY SUMMARY REPORT FOR: May 29 – June 11, 2012

#### 1. Archaeological Monitoring Personnel

Archaeological monitoring was directed by Tierra Environmental Services, LLC (Tierra) Co-Principal Investigators Dr. Michael Baksh and Mr. Bobby Bolger during this period.

Archaeological monitors present during the May 29 to June 11 period included Mitch Evans, Jose Benito Guzman, Aaron Harper, Mark Abelon, Natalie Ortega, K. Ross Way, Nina Rogers, Edgar Rojas, Scott Justus, and Sarah Bock.

The Native American monitors included: Albert Quihuis (Ewiiapaayp), Richard Alvanez (Cocopah), Boe Willey (Manzanita), Jason Pinto (Jamul), Victor Estrada (La Posta), Vincent Estrada (La Posta), PJ Stoneburner (Ewiiapaayp), Toni Lee Elliot (Manzanita), Richard Tellow (Jamul), Janie McClain (Cocopah), Nicholas Rodriguez (Ewiiapaayp), Dave Elliott (Sycuan), Vanessa Raya (San Pasqual), Veronica Santos (Manzanita), and Dave Thompson (Manzanita).

#### 2. Activities Conducted by Tierra Staff

##### ESAs

Tierra established Environmentally Sensitive Area (ESA) barriers for several recorded archaeological and historic sites within the project Area of Potential Affect (APE). As outlined in the *Memorandum of Agreement Among the Bureau of Land Management-California, The United States Army Corps of Engineers, Ocotillo Express LLC, The California State Historic Preservation Officer, and the Advisory Council on Historic Preservation Regarding the Ocotillo Express Wind Energy Project, Imperial County, California*, May 2012 (Memorandum of Agreement) and the *Management Plan for Archaeological Monitoring, Post-Review Discovery and Unanticipated Effects*, April 2012 (Management Plan), ESAs were erected prior to construction or earthmoving activities within 150 feet of a known resource. To avoid unnecessary disclosure of sensitive resources to the general public, ESAs have not been prematurely constructed favoring waiting to within seven days of the scheduled work. Furthermore, the preference for ESA boundaries was not to entirely encapsulate the resource whenever feasible since that could also encourage a search of the contents of the ESA. During the May 29 to June 11, 2012 period, four ESAs were constructed (see Table 1). In addition to the two previously recorded sites (CA-IMP-11925 and CA-IMP-11927), two newly discovered sites (14-000S and 14-001S) required ESAs to be established as well. See site descriptions of the two new sites discussed in greater detail below in Section 4.

---

TIERRA ENVIRONMENTAL SERVICES, INC.

9915 Businesspark Avenue, Suite C t San Diego, CA 92131  
O: (858) 578-9064 F: (858) 578-3646 TierraEnv@aol.com

Page 1 of 14



## Ocotillo Express Wind Energy Project

### Bi-weekly Archaeological Summary Report

**Table 1. ESAs within Project APE**

ESA Designation	Other	Resource Description	Facility or Location
CA-IMP-11925	OCO-EAM 028	Lithic Scatter	Road Near Turbine 110
CA-IMP-11927	OCO-EAM 034	Agave Processing Area	Collection Line between Turbines 112 and 147
14-000S	SJC-001s	Knapping Station	Turbine 131
14-001S	SJC-002s	Lithic Scatter	Turbine 110

### Preconstruction Walkthroughs

In accordance with the Memorandum of Agreement and the Management Plan, Tierra crewmembers conducted preconstruction walkthroughs for access roads and turbines. During the course of preconstruction walkthroughs several resources were identified and are detailed below in Section 4 and Tables 3 and 4 below.

### Training Seminars

Three WEAP training seminars were held during the May 29 to June 11, 2012 period. Tierra provided the archaeological sensitivity training on May 31 at the Ocotillo Community Center (Bobby Bolger), June 4 at the SDG&E offices in San Diego (Hillary Murphy), and on June 7 at the Ocotillo Community Center (Bobby Bolger). The Native American sensitivity training was conducted by Carmen Lucas of the Kwaaymii Laguna Band of Indians on June 4, 2011.

## 3. Construction Activities

During the May 29 to June 11 period, construction occurred everyday during except June 3rd, 2012. Work was generally performed by Graders, Scrapers, Water Trucks, Skip Loaders, Backhoes, Boring Rigs, and All Terrain Vehicles (ATVs). The activities monitored for this period included the following:

1. Surveyor staking of roads and other facilities.
2. Clearing and grubbing of portions of Laydown Area, Substation, Substation Access Road, saturation and compaction by water trucks of various locations
3. Scraping (topsoil removal), grading, and removal of large boulders at portions of Laydown Area, Substation, Dos Cabezas Road, Substation Access Road, and truck turnaround area.
4. Borings by Geotech crews.

## 4. Archaeological Resources

Whenever new resources were encountered, the teams would follow the protocol established in the Management Plan for the Project. This included, but was not limited to:

- Close-interval surface survey
- Assessment of the observed resource(s)

TIERRA ENVIRONMENTAL SERVICES, INC.

9915 Businesspark Avenue, Suite C t San Diego, CA 92131

O: (858) 578-9064 F: (858) 578-3646 TierraEnv@aol.com

Page 2 of 14



## Ocotillo Express Wind Energy Project

### Bi-weekly Archaeological Summary Report

- Written documentation
- Photographic documentation
- GPS recordation

The cultural resources monitoring teams observed several archaeological resources during the Surveyor Staking effort and used the GPS to acquire reference points for comparison with planned project facilities. In some occurrences where the observed archaeological sites would not be directly impacted by any portion of the current undertaking, only minimal data was collected at that time with more detailed recordation occurring at a later date. When a resource was determined to be a site within an area of direct impact, Tierra began working with Pattern to see if project facilities may potentially be moved in order to avoid and protect the site. All sites are recorded on the appropriate DPR forms, photographed, GPS'd, and mapped. In some cases, Pattern has already made an initial assessment to determine if a site can be avoided and this is presented in Table 4 below, within the column titled "Avoidable Resource," and is subject to BLM review. All prehistoric isolates within direct impact areas were recorded and collected for curation. The isolate collection policy has been modified in that all isolated prehistoric isolates will be collected and only unique diagnostic historic artifacts will be collected. Eleven prehistoric isolates originally recorded in the May 15 to May 28, 2012 were revisited and the artifacts collected during the current bi-weekly time period. These isolates are presented below in Table 2.

**Table 2. Isolate Collection Revisits from May 15 to May 28, 2012 period.**

Resource	Period	Artifact(s)	Qty	Location	Collected
05-001	Prehistoric	Andesite Core	1	Access Rd. to Turbine 132	Y
05-002a	Prehistoric	Chert Flake	1	Turbine 110	Y
05-002b	Prehistoric	Chert Flake	1	Turbine 110	Y
05-005	Prehistoric	Metavolcanic Flake	1	Turbine 174	Y
07-002a	Prehistoric	Quartz Flake	1	Adjacent to BLM Rd.	Y
07-002b	Prehistoric	Quartz Scraper	1	Adjacent to BLM Rd.	Y
07-003a	Prehistoric	Quartz Flake	1	Turbine 79	Y
07-003b	Prehistoric	Metavolcanic Flake	1	Turbine 79	Y
07-004a	Prehistoric	Quartz Flake	1	Turbine 79	Y
07-004b	Prehistoric	Quartz Flake	1	Turbine 79	Y
07-005	Prehistoric	Metavolcanic Flake	1	Access Rd. to Turbines 79-80	Y

As part of the monitoring activities covered by this two week period, 231 isolated resources (160 prehistoric, 71 historic) and eight sites (6 prehistoric, 1 historic and 1 combined prehistoric and historic) were documented. The isolated finds are detailed in Table 3 below followed by sites in Table 4. Please note that isolates not within the direct construction footprint were left in place as per BLM direction.

TIERRA ENVIRONMENTAL SERVICES, INC.

9915 Businesspark Avenue, Suite C t San Diego, CA 92131  
 O: (858) 578-9064 F: (858) 578-3646 TierraEnv@aol.com

Page 3 of 14



## Ocotillo Express Wind Energy Project

### Bi-weekly Archaeological Summary Report

**Table 3. Isolate Discoveries During Project APE Monitoring**

Resource	Period	Artifact(s)	Qty	Location	Collected
01-003	Prehistoric	Metavolcanic Flake	1	Switchyard	N
01-004	Prehistoric	Metavolcanic Flake	1	Switchyard	N
01-005	Prehistoric	Metavolcanic Flake	1	Switchyard	N
01-006	Prehistoric	Metavolcanic Flake	1	Near Turbine 70	N
01-007a	Prehistoric	Metavolcanic Core Tool	1	Near Turbine 70	N
01-007b	Prehistoric	Metavolcanic Flake	1	Near Turbine 70	N
01-008	Prehistoric	Metavolcanic Flake	1	Access Rd. to Turbines 70-71	N
01-009	Prehistoric	Quartz Core	1	Substation	Y
01-010	Prehistoric	Pottery Rim Sherd	1	NE Side of Substation	Y
02-002	Prehistoric	Quartz Flake	1	Intersection of Dos Cabezas Rd. and S-2	N
02-003	Prehistoric	Metavolcanic Cobble	1	East of Dos Cabezas Rd. and S-2	N
02-004	Prehistoric	Metavolcanic Flake	1	Substation Rd.	N
02-005	Prehistoric	Metavolcanic Scraper	1	Turbine 10	N
02-006	Prehistoric	Metavolcanic Flake	1	Turbine 9	N
02-007	Prehistoric	Pottery Body Sherd	1	Turbine 64	Y
02-008	Historic	Can	1	Substation	N
02-009	Historic	Can	1	Turbine 150-175	N
02-010	Historic	Can	1	Turbine 151	N
02-011	Historic	Can	1	Turbine 151	N
02-012	Historic	Can	1	Access Rd. to Turbines 151-152	N
02-013	Historic	Can	1	Access Rd. to Turbines 151-152	N
02-014	Historic	Can	1	Turbine 152	N
02-015	Historic	Can	1	Turbine 153	N
02-016	Historic	Can	1	Turbine 153	N
02-017	Historic	Can	1	Turbine 175	N
02-018	Historic	Can	1	Turbine 153	N
02-019	Historic	Can	1	Turbine 152	N
02-020	Historic	Can	1	Turbine 131	N
02-021	Historic	Can	1	Access Rd. to Turbine 131	N
02-022	Historic	Can	1	Access Rd. to Turbine 132	N

TIERRA ENVIRONMENTAL SERVICES, INC.

9915 Businesspark Avenue, Suite C t San Diego, CA 92131

O: (858) 578-9064 F: (858) 578-3646 TierraEnv@aol.com

Page 4 of 14



## Ocotillo Express Wind Energy Project

### Bi-weekly Archaeological Summary Report

**Table 3. Isolate Discoveries During Project APE Monitoring**

Resource	Period	Artifact(s)	Qty	Location	Collected
02-023	Historic	Can	1	Access Rd. Turbines 131 & 147	N
02-024	Historic	Can	1	Access Rd. Turbines 131 & 147	N
02-025	Historic	Can	1	Turbine 147	N
02-026	Historic	Can	1	Turbine 147	N
02-027	Historic	Can	1	Turbine 147	N
02-028	Historic	Can	1	Turbine 147	N
02-029	Historic	Can	1	Turbine 147	N
02-030	Historic	Can	1	NE Palm Canyon Wash	N
02-031	Historic	Can	1	Access Rd. to Turbine 147	N
02-032	Historic	Can	1	Turbine 148	N
02-033a	Prehistoric	Granitic Hammerstone	1	Access Rd. to Turbines 148-149	Y
02-033b	Prehistoric	Metavolcanic Core	1	Access Rd. to Turbines 148-149	Y
02-034	Historic	Can	1	Turbine 149	N
02-035	Prehistoric	Metavolcanic Hammerstone	1	Access Rd. to Turbines 149 & 169	Y
02-036	Historic	Can	1	Turbine 176	N
02-037	Historic	Can	1	Turbine 176	N
02-038	Prehistoric	Metavolcanic Core	1	Access Rd. to Turbines 148 & 149	N
02-039	Prehistoric	Metavolcanic Flake	1	NE Palm Canyon Wash	N
02-040	Prehistoric	Metavolcanic Core	1	Access Rd. to Turbines 112 & 113	Y
02-041	Prehistoric	Metavolcanic Scraper	1	Access Rd. to Turbines 112 & 113	Y
02-042	Prehistoric	Metavolcanic Flake	1	Access Rd. to Turbines 112 & 113	N
02-043	Prehistoric	Quartz Flake	1	Access Rd. to Turbines 112 & 113	Y
02-044	Prehistoric	Metavolcanic Scraper	1	Turbine 99	Y
02-045	Prehistoric	Metavolcanic Core	1	Turbine 99	N
02-046	Historic	Can	1	Access Rd. to Turbines 100-101	N

TIERRA ENVIRONMENTAL SERVICES, INC.

9915 Businesspark Avenue, Suite C t San Diego, CA 92131  
O: (858) 578-9064 F: (858) 578-3646 TierraEnv@aol.com

Page 5 of 14





## Ocotillo Express Wind Energy Project

### Bi-weekly Archaeological Summary Report

**Table 3. Isolate Discoveries During Project APE Monitoring**

Resource	Period	Artifact(s)	Qty	Location	Collected
02-047	Historic	Can	1	Access Rd. to Turbines 100 & 101	N
02-048	Prehistoric	Metavolcanic Flake	1	Turbine 99	Y
02-049	Prehistoric	Quartz Flake	1	Turbine 99	Y
02-050	Historic	Munition	1	Access Rd. to Turbine 98	Y
02-051	Historic	Can	1	Turbine 98	N
02-052	Prehistoric	Metavolcanic Flake	1	Turbine 98	Y
02-053a	Historic	Can	1	Turbine 98	N
02-053b	Historic	Can	1	Turbine 98	N
02-054	Historic	Can	1	Turbine 98	N
02-055	Historic	Can	1	Turbine 98	N
02-056	Prehistoric	Metavolcanic Flake	1	Access Rd. to Turbines 112-113	Y
02-057	Prehistoric	Metavolcanic Flake	1	Access Rd. to Turbine 113	Y
02-058	Prehistoric	Metavolcanic Flake	1	Turbine 113	Y
02-059	Prehistoric	Metavolcanic Flake	1	Turbine 174	Y
02-060	Prehistoric	Metavolcanic Flake	1	Turbine 113	Y
02-061a	Prehistoric	Metavolcanic Flake	1	Turbine 113	Y
02-061b	Prehistoric	Metavolcanic Flake	1	Turbine 113	Y
02-071	Prehistoric	Metavolcanic Flake	1	Turbine 113	Y
02-072	Prehistoric	Metavolcanic Flake	1	Turbine 113	Y
03-004	Prehistoric	Quartz Flake	1	Access Rd. to Turbines 66 & 65	Y
03-005	Prehistoric	Metavolcanic Flake	1	Access Rd. to Turbines 65-66	Y
03-006	Prehistoric	Metavolcanic Flake	1	Turbine 66	Y
03-007	Prehistoric	Metavolcanic Flake	1	Access Rd. to Turbines 65-64	Y
03-008	Historic	Can	1	Turbine 64	N
03-009	Prehistoric	Granitic Hammerstone	1	Substation	Y
03-010	Prehistoric	Quartz Flake	1	Substation	Y
03-011	Prehistoric	Metavolcanic Flake	1	Access Rd. to Turbines 9 & 50	N
03-012	Prehistoric	Quartz Flake	1	Access Rd. to Turbines 50-51	Y
03-013	Prehistoric	Metavolcanic Flake	1	Turbine 50	Y
03-014	Prehistoric	Metavolcanic Flake	1	Turbines 50-51	N
03-015	Prehistoric	Petrified Wood Flake	1	Turbines 50-51	N
05-007	Prehistoric	Chert Flake	1	Access Rd. to Turbine 64	Y

TIERRA ENVIRONMENTAL SERVICES, INC.

9915 Businesspark Avenue, Suite C t San Diego, CA 92131  
O: (858) 578-9064 F: (858) 578-3646 TierraEnv@aol.com

Page 6 of 14



## Ocotillo Express Wind Energy Project

### Bi-weekly Archaeological Summary Report

**Table 3. Isolate Discoveries During Project APE Monitoring**

Resource	Period	Artifact(s)	Qty	Location	Collected
05-008	Prehistoric	Chert Core	1	Access Rd. to Turbine 64	Y
05-009	Prehistoric	Chert Scraper	1	Access Rd. to Turbine 64	Y
05-010	Prehistoric	Chert Flake	1	Access Rd. to Turbine 64	Y
05-011	Prehistoric	Quartz Flake	1	Access Rd. to Turbine 64	Y
06-004	Prehistoric	Metavolcanic Flake	1	Access Rd. to Turbines 104-105	Y
06-005a	Prehistoric	Quartz Scraper	1	Turbine 106	Y
06-005b	Prehistoric	Quartz Scraper	1	Turbine 106	Y
06-006	Historic	Can	1	Turbine 106	Y
06-007	Prehistoric	Pottery Rim Sherd	1	Access Rd. to Turbines 104-105	Y
06-008	Historic	Can	1	Turbine 150	N
06-009	Historic	Can	1	Turbine 151	N
06-010	Historic	Can	1	Turbine 151	N
06-011	Historic	Can	1	Access Rd. to Turbine 152	N
06-012	Historic	Can	1	Turbine 152	N
06-013	Historic	Can	1	Access Rd. to Turbine 152	N
06-014	Historic	Can	1	Turbine 153	N
06-015	Historic	Can	1	Access Rd. Turbine 148	N
06-016	Prehistoric	Quartz Flake	1	Access Rd. between Turbines 149-169	Y
06-017	Historic	Can	1	Access Rd. between Turbines 149 & 169	N
06-018	Historic	Can	1	Access Rd. between Turbines 149-169	N
06-019	Historic	Can	1	Turbine 176	N
06-020	Historic	Can	1	Turbine 173	N
06-021	Prehistoric	Quartz Flake	1	Turbine 174	N
06-022	Historic	Can	1	Turbine 133	N
06-023	Prehistoric	Quartz Flake	1	Access Rd. between Turbines 133-132	N
06-024	Prehistoric	Metavolcanic Flake	1	Turbine 132	N
06-025	Historic	Can	1	Turbine 132	N

TIERRA ENVIRONMENTAL SERVICES, INC.

9915 Businesspark Avenue, Suite C t San Diego, CA 92131

O: (858) 578-9064 F: (858) 578-3646 TierraEnv@aol.com

Page 7 of 14



## Ocotillo Express Wind Energy Project

### Bi-weekly Archaeological Summary Report

**Table 3. Isolate Discoveries During Project APE Monitoring**

Resource	Period	Artifact(s)	Qty	Location	Collected
06-026	Prehistoric	Metavolcanic Hammerstone / Core	1	Turbine 132	Y
06-027	Prehistoric	Metavolcanic Flake	1	Turbine 132	Y
06-028	Prehistoric	Metavolcanic Hammerstone	1	Turbine 132	Y
06-029	Prehistoric	Metavolcanic Flake	1	Turbine 132	Y
06-030	Prehistoric	Quartz Flake	1	Turbine 132	Y
06-031a	Prehistoric	Metavolcanic Flake	1	Access Rd. to Turbines 110-111	Y
06-031b	Prehistoric	Metavolcanic Flake	1	Access Rd. to Turbines 110-111	Y
06-032	Prehistoric	Metavolcanic Flake	1	Turbine 110	Y
06-041	Prehistoric	Metavolcanic Hammerstone	1	Turbine 67	Y
06-042	Prehistoric	Metavolcanic Core	1	Turbine 67	Y
06-043	Prehistoric	Metavolcanic Hammerstone	1	Turbine 67	Y
06-044	Historic	Can	1	Turbine 67	N
06-045	Prehistoric	Metavolcanic Hammerstone / Core / Chopper	1	Turbine 67	Y
06-046	Prehistoric	Quartz Core	1	Turbine 66	Y
06-047	Prehistoric	Quartz Flake	1	Turbine 66	Y
06-048	Prehistoric	Metavolcanic Flake	1	Turbine 65	Y
06-049	Prehistoric	Metavolcanic Hammerstone	1	Access Rd. to Turbines 65-66	Y
07-001	Prehistoric	Metavolcanic Scraper	1	Turbine 112	Y
07-008	Prehistoric	Metavolcanic Scraper	1	Access Rd. Turbine 81 & 82	Y
07-010	Prehistoric	Metavolcanic Tested Cobble	1	Turbine 73	N
07-011	Prehistoric	Metavolcanic Multitool	1	Access Rd. Turbine 81 & 82	Y
07-012	Prehistoric	Metavolcanic Scraper	1	Turbine 81	Y
07-013	Historic	Can	1	Between Turbines 19-82	N
07-014	Prehistoric	Core / Scraper	1	Access Rd. to Turbines 74 & 130	Y
08-000a	Prehistoric	Pottery Rim Sherd	1	Substation	Y

TIERRA ENVIRONMENTAL SERVICES, INC.

9915 Businesspark Avenue, Suite C t San Diego, CA 92131

O: (858) 578-9064 F: (858) 578-3646 TierraEnv@aol.com

Page 8 of 14



## Ocotillo Express Wind Energy Project

### Bi-weekly Archaeological Summary Report

**Table 3. Isolate Discoveries During Project APE Monitoring**

Resource	Period	Artifact(s)	Qty	Location	Collected
08-000b	Prehistoric	Metavolcanic Core	1	Substation	Y
08-009	Prehistoric	Metavolcanic Flake	1	Substation	Y
08-010	Prehistoric	Metavolcanic Multitool	1	Substation	Y
08-011	Prehistoric	Metavolcanic Flake	1	Substation	Y
08-012	Prehistoric	Metavolcanic Flake	1	Substation	Y
08-013	Prehistoric	Quartz Flake	1	Access Rd. to Turbine 134	Y
08-014	Prehistoric	Metavolcanic Flake	1	Access Rd. to Turbine 134	Y
08-015	Prehistoric	Quartz Flake	1	Turbine 134	Y
08-016	Historic	Can	1	Turbine 49	N
08-017	Prehistoric	Chert Flake	1	Access Rd. to Turbine 51	Y
08-018	Historic	Can	1	Turbine 152	N
08-019	Historic	Can	1	Turbine 152	N
08-020	Historic	Can	1	Access Rd. to Turbine 49	N
08-021	Historic	Can	1	Turbine 173	N
08-022	Historic	Can	1	Turbine 173	N
08-023	Historic	Can	1	Turbine 173	N
08-024	Historic	Can	1	Turbine 173	N
08-025	Historic	Can	1	Access Rd. to Turbine 173	N
08-026	Prehistoric	Metavolcanic Flake	1	Turbine 133	N
08-027	Prehistoric	Metavolcanic Flake	1	Turbine 134	N
08-028	Historic	Can	1	Access Rd. to Turbine 107	N
08-029	Prehistoric	Metavolcanic Flake	1	Access Rd. to Turbine 106	N
08-030	Historic	Can	1	Access Rd. to Turbine 105	N
08-031	Historic	Can	1	Turbine 105	N
08-032	Prehistoric	Quartzite Flake	1	Turbine 102	Y
08-033	Historic	Pottery Body Sherd	1	Substation	Y
10-003	Historic	Can	1	Access Rd. to Turbine 81	Y
10-004	Prehistoric	Metavolcanic Flake	1	Turbine 79	N
10-005	Prehistoric	Pottery Body Sherd	1	Access Rd. between Turbines 79-80	Y
10-006a	Prehistoric	Quartz Flake	1	Access Rd. to Turbine 67	Y
10-006b	Prehistoric	Metavolcanic Biface	1	Access Rd. to Turbine 67	N
10-007	Prehistoric	Metavolcanic Flake	1	Turbine 82	N
10-008	Prehistoric	Metavolcanic Flake	1	Access Rd. to Turbines 86-87	Y

TIERRA ENVIRONMENTAL SERVICES, INC.

9915 Businesspark Avenue, Suite C t San Diego, CA 92131

O: (858) 578-9064 F: (858) 578-3646 TierraEnv@aol.com

Page 9 of 14



## Ocotillo Express Wind Energy Project

### Bi-weekly Archaeological Summary Report

**Table 3. Isolate Discoveries During Project APE Monitoring**

Resource	Period	Artifact(s)	Qty	Location	Collected
10-009	Prehistoric	Metavolcanic Flake	1	Access Rd. to Turbines 86-87	N
10-010	Prehistoric	Hammerstone	1	Access Rd. to Turbines 81 & 82	N
10-014	Historic	Can	1	Turbine 134	N
10-015	Prehistoric	Quartz Flake	1	Turbine 134	N
10-016	Prehistoric	Metavolcanic Flake	1	Access Rd. to Turbine 102	N
10-017	Prehistoric	Quartz Flake	1	Turbine 66	Y
10-018	Prehistoric	Quartz Scraper	1	Access Rd. to Turbines 66-67	Y
10-019	Prehistoric	Quartz Flake	1	Access Rd. to Turbines 66-67	Y
10-020	Prehistoric	Quartz Flake	1	Access Rd. to Turbines 66-67	Y
10-021	Prehistoric	Quartz Flake	1	Access Rd. to Turbines 66-67	Y
10-022	Prehistoric	Quartz Flake	1	Access Rd. to Turbines 66-67	Y
10-023	Prehistoric	Metavolcanic Flake	1	Access Rd. to Turbines 66-67	Y
10-024	Prehistoric	Metavolcanic Chopper	1	Access Rd. to Turbines 66-67	Y
10-025	Prehistoric	Metavolcanic Flake	1	Turbine 10	Y
10-026	Prehistoric	Metavolcanic Flake	1	Turbine 10	Y
10-027	Prehistoric	Metavolcanic Flake	1	Turbine 11	Y
10-028	Prehistoric	Metavolcanic Flake	1	Turbine 11	Y
10-029	Prehistoric	Metavolcanic Flake	1	Turbine 11	Y
10-030	Prehistoric	Metavolcanic Flake	1	Turbine 11	Y
10-031	Prehistoric	Metavolcanic Flake	1	Access Rd. to Turbines 10-11	Y
10-032	Prehistoric	Metavolcanic Flake	1	Access Rd. to Turbines 9-64	Y
10-033	Historic	Can	1	Access Rd. to Turbines 9-64	N
10-034	Prehistoric	Metavolcanic Flake	1	Access Rd. to Turbines 9-64	Y
10-035	Prehistoric	Metavolcanic Hammerstone	1	Turbine 11	Y
11-002	Prehistoric	Metavolcanic Flake	1	Substation	Y
11-003a	Prehistoric	Metavolcanic Flake	1	Substation	Y
11-003b	Prehistoric	Metavolcanic Flake	1	Substation	Y
11-004	Prehistoric	Metavolcanic Flake	1	Substation	Y
11-005	Historic	Can	1	Substation	N
11-006a	Prehistoric	Metavolcanic Flake	1	Substation	Y
11-006b	Prehistoric	Metavolcanic Flake	1	Substation	Y
11-007a	Prehistoric	Metavolcanic Flake	1	Substation	Y

TIERRA ENVIRONMENTAL SERVICES, INC.

9915 Businesspark Avenue, Suite C t San Diego, CA 92131  
O: (858) 578-9064 F: (858) 578-3646 TierraEnv@aol.com

Page 10 of 14



## Ocotillo Express Wind Energy Project

### Bi-weekly Archaeological Summary Report

**Table 3. Isolate Discoveries During Project APE Monitoring**

Resource	Period	Artifact(s)	Qty	Location	Collected
11-007b	Prehistoric	Metavolcanic Flake	1	Substation	Y
11-009	Prehistoric	Quartz Flake	1	Substation	Y
11-010	Prehistoric	Granitic Hammerstone	1	Substation	Y
11-011	Prehistoric	Quartz Flake	1	Substation	Y
11-012	Prehistoric	Metavolcanic Flake	1	Substation	Y
11-013	Prehistoric	Metavolcanic Flake	1	Substation	Y
11-014	Prehistoric	Pottery Body Sherd	1	Access Rd. West of Substation	Y
11-015	Historic	Can	1	Access Rd. West of Substation	N
11-016	Prehistoric	Quartz Flake	1	Access Rd. West of Substation	Y
11-017	Prehistoric	Fire Affected Rock	1	Access Rd. West of Substation	Y
11-018	Prehistoric	Fire Affected Rock	1	Access Rd. West of Substation	Y
11-019	Prehistoric	Metavolcanic Flake	1	Access Rd. West of Substation	Y
11-020	Prehistoric	Fire Affected Rock	1	Access Rd. West of Substation	Y
11-021	Prehistoric	Metavolcanic Flake	1	North of Substation	Y
11-022	Prehistoric	Metavolcanic Flake	1	North of Substation	Y
11-023	Prehistoric	Metavolcanic Tested Cobble	1	Substation	Y
11-024	Prehistoric	Metavolcanic Tested Cobble	1	Substation	Y
11-025	Prehistoric	Hammerstone	1	North of Substation	Y
11-026	Prehistoric	Quartz Flake	1	North of Substation	Y
11-027	Prehistoric	Metavolcanic Flake	1	North of Substation	Y
11-028a	Prehistoric	Metavolcanic Flake	1	North of Substation	Y
11-028b	Prehistoric	Quartz Flake	1	North of Substation	Y
11-029	Prehistoric	Basalt Tested Cobble	1	North of Substation	Y
11-030	Prehistoric	Quartz Flake	1	West of Substation	Y
12-052	Prehistoric	Metavolcanic Flake	1	SE of Turbine 160	Y
14-004	Prehistoric	Chert Flake	1	Substation	Y
14-006	Prehistoric	Metavolcanic Flake	1	Turbine 49	Y

TIERRA ENVIRONMENTAL SERVICES, INC.

9915 Businesspark Avenue, Suite C t San Diego, CA 92131

O: (858) 578-9064 F: (858) 578-3646 TierraEnv@aol.com

Page 11 of 14



## Ocotillo Express Wind Energy Project

### Bi-weekly Archaeological Summary Report

**Table 4. Site Discoveries During Project APE Monitoring**

Resource	Period	Site Description	Location	Avoidable Resource
02-103	Historic	Historic refuse deposit; 15 cans, broken SCA glass, partially buried wire (possible bailing wire, miscellaneous metal, alarm clock bell, one terracotta beer tap (possible), and one modified sanitary can.	Turbine 99	To be determined (TBD)
02-104	Prehistoric	Pottery concentration. Likely from single vessel "pot drop." One rim sherd, 20 body sherds. Lower Colorado Buffware. Very thin (3.5mm thick), coarse, large inclusions. Coloration on outer portions of sherds suggests exposure to fire/ heat. Rim diameter estimated at 14cm. Site consists of one main concentration with outlying sherd spreading down-slope in the wash.	Access Rd. between Turbines 100-101	TBD
02-105	Prehistoric	One multidirectional quartz core, one core fragment, one interior flake, one fragment of angular waste.	Turbine 101	Yes
14-000S	Prehistoric	One bifacially reduced core/chopper with 13 flakes present.	Turbine 131	TBD
14-001S	Prehistoric / Historic	Prehistoric lithic scatter and a historic fire ring (possibly a collapsed cairn). Debitage includes a quartz knapping station withdebitage.	Turbine 110	Yes
14-002S	Prehistoric	Five distinct concentrations or chipping stations with quartz and metavolcanic material. One quartz hammerstone, one metavolcanic hammerstone and one metavolcanic core also recorded.	Access Rd. to Turbine 105	Yes
14-003S	Prehistoric	Sparse lithic scatter. Eight pieces ofdebitage with one quartz core	Turbine 67	TBD
14-005S	Prehistoric	Sparse lithic scatter. Five pieces ofdebitage with two scrapers (chert and metavolcanic).	Access Rd. to Turbine 105	Yes

TIERRA ENVIRONMENTAL SERVICES, INC.

9915 Businesspark Avenue, Suite C t San Diego, CA 92131  
O: (858) 578-9064 F: (858) 578-3646 TierraEnv@aol.com

Page 12 of 14



## Ocotillo Express Wind Energy Project

### Bi-weekly Archaeological Summary Report

---

#### **5 Expressed Concerns and Resolutions**

During the May 29 to June 11, 2012 period, several issues were brought to the attention of Tierra. In each case the issue was addressed and resolved or an action item offered for consideration. Please see the text below for each occurrence.

##### ***Issue A***

A member of the Native American community raised the issue that there were many people on site without available contact information for the monitors should the need arise. To address this, a contact sheet is being produced and will also be posted in the office trailer.

##### ***Issue B***

There was concern expressed by members of the Native American community that some monitors may not be aware of restroom facilities and that access to them might be impaired. Tierra formally addressed the issue during the morning safety meeting on two separate occasions, ensuring that all monitors knew where the restroom facilities were and that they could all access them at all times via truck, even when they were on survey far from the Laydown yard. Additional vehicles were also ordered.

##### ***Issue C***

There were expressed concerns by members of the Native American community that monitoring was not being conducted to depths sufficient enough. However, Tierra personnel have continued to monitor grading and construction work in accordance with the MOA and Monitoring Plan which outlines at a minimum the need for cultural monitors anytime ground disturbing activities occur within 150 feet of an ESA. To date, no intact subsurface deposits have been encountered, nor do the deflated soil profiles and landforms of the project area support the likelihood of such deposits existing throughout the project area.

##### ***Issue D***

Members of the Native American community expressed concerns that some tower locations contained resources within the tower footprint. As per the MOA and Monitoring Plan, whenever feasible, tower locations are being proposed for adjustment to avoid these resources. If the resource cannot be avoided it will be classified as a Unavoidable New Discovery (UND) and evaluations conducted

##### ***Issue E***

Members of the Native American community also expressed concerns that some tower locations may be subjected to future deposition of prehistoric resources upslope of areas already cleared for construction. Tierra agrees with this assessment since subsequent redistribution of surface materials is an ongoing occurrence in an active desert environment. No specific action was undertaken during the May 29 to June 11, 2012 time period to remedy this potential issue. It may be appropriate to address

---

TIERRA ENVIRONMENTAL SERVICES, INC.

9915 Businesspark Avenue, Suite C t San Diego, CA 92131  
O: (858) 578-9064 F: (858) 578-3646 TierraEnv@aol.com

Page 13 of 14





## Ocotillo Express Wind Energy Project Bi-weekly Archaeological Summary Report

---

this issue through BLM's Section 106 consultation on the Long Term Management Plan that is required per the Memorandum of Agreement.

### *Issue F*

Members of the Native American community expressed concern that isolated prehistoric resources in direct impact areas were not being collected for curation. To address this concern Dudek (3<sup>rd</sup> Party Review) and BLM personnel revisited the subject and amended the isolate collection policy to include all prehistoric artifacts within direct impact areas.

### **6. Summary**

Construction of the Ocotillo Express Wind Energy project continued for the May 29 to June 11, 2012 period, except on June 3, 2012. As addressed in Section 2, ESAs were established for previously recorded archaeological resources located near construction areas. All initial grading, geotech drilling, and surveyor staking activities, as well as all work conducted within 150 feet of ESAs, was monitored by a crew consisting of an archaeological monitor and a Native American monitor. Two hundred thirty-one isolates were recorded, and 130 artifacts were collected for temporary curation at Tierra Environmental Services.

---

TIERRA ENVIRONMENTAL SERVICES, INC.

9915 Businesspark Avenue, Suite C t San Diego, CA 92131  
O: (858) 578-9064 F: (858) 578-3646 TierraEnv@aol.com

Page 14 of 14

**BI-WEEKLY SUMMARY REPORT FOR: May 15 – May 28, 2012****1. Archaeological Monitoring Personnel**

Archaeological monitoring was directed by Tierra Environmental Services, LLC (Tierra) Co-Principal Investigators Dr. Michael Baksh and Mr. Bobby Bolger during this period.

Archaeological monitors present during the May 15 to May 28 period included Mitch Evans, Jose Benito Guzman, Aaron Harper, Mark Abelon, Natalie Ortega, K. Ross Way, Tom Dorsey, Hillary Murphy, Nina Rogers, Edgar Rojas and Sarah Bock.

The Native American monitors included Richard Alvanez (Cocopah), Toni Lee Elliott (Manzanita), Vincent Estrada (La Posta), Rudi Flores, Jr. ( San Pasqual), Jonathon Jones (Campo), Janie McClain (Cocopah), Ed Mercado (La Posta), Philip Paipa (Cuyapaibe), Jason Pinto (Jamul), Jesse Pinto (Jamul), Nick Rodriguez (Cuyapaibe), Frank Salazar (Campo), PJ Stoneburner (Cuyapaibe), Richard Tellow (Jamul), and Ethian Thomas (Cocopah).

**2. Activities Conducted by Tierra Staff****ESAs**

Tierra established Environmentally Sensitive Area (ESA) barriers for several recorded archaeological and historic sites within the project Area of Potential Affect (APE). As outlined in the *Memorandum of Agreement Among the Bureau of Land Management-California, The United States Army Corps of Engineers, Ocotillo Express LLC, The California State Historic Preservation Officer, and the Advisory Council on Historic Preservation Regarding the Ocotillo Express Wind Energy Project, Imperial County, California, May 2012* (Memorandum of Agreement) and the *Management Plan for Archaeological Monitoring, Post-Review Discovery and Unanticipated Effects, April 2012* (Management Plan), ESAs were erected prior to construction or earthmoving activities within 150 feet of a known resource. To avoid unnecessary disclosure of sensitive resources to the general public, ESAs have not been prematurely constructed favoring waiting to within seven days of the scheduled work. Furthermore, the preference for ESA boundaries was not to entirely encapsulate the resource whenever feasible since that could also encourage a search of the contents of the ESA. During the May 15 to May 28, 2012 period, 14 ESAs were constructed (see Table 1).

**Table 1. ESAs within Project APE**

<b>ESA Designation</b>	<b>Other</b>	<b>Resource Description</b>	<b>Facility or Location</b>
Dog Alert 1a <sup>†</sup>	Locality 4 <sup>†</sup>	Metate <sup>†</sup>	Substation / Switchyard
Dog Alert 1b <sup>†</sup>	Locality 3 <sup>†</sup>	Caliche <sup>†</sup>	Substation / Switchyard
Dog Alert 2a <sup>†</sup>	-	-	Laydown Area
Dog Alert 2b <sup>†</sup>	-	-	Laydown Area
Dog Alert 3a <sup>†</sup>	-	-	Turbine 76

**Table 1. ESAs within Project APE**

ESA Designation	Other	Resource Description	Facility or Location
Dog Alert 4a <sup>‡</sup>	-	Cairn	Dos Cabezas Access Road
Dog Alert 5a <sup>‡</sup>	-	-	Turbine 130
Locality 2 <sup>†</sup>	-	Bone	Substation / Switchyard
Undesignated Area <sup>†</sup>	-	Bone	Substation / Switchyard
08-A <sup>¥</sup>	Locality 1 <sup>†</sup>	Bone	Substation / Switchyard
CA-IMP-11981	-	Mining Site	Turbine 88
CA-IMP-11982	-	Artifact Scatter	Substation / Switchyard
CA-IMP-11983	-	Mining Site	Substation / Switchyard
CA-IMP-11996	-	Lithic Scatter	Turbine 90

<sup>†</sup> - *Osteology Report*. Madeleine J. Hinkes, PhD. May 23, 2012.

<sup>‡</sup> - *Native American Correspondence and Institute for Canine Forensic site visit designations*.

<sup>¥</sup> - Following the results of the Osteological Evaluation, this ESA was dismantled.

### Osteology Study

Tierra participated in the osteology visit conducted by Medical Examiner Dr. Madeleine Hinkes on May 22, 2012. Dr. Hinkes osteology report was received by and provided to the BLM on May 23, 2012. See Table 2 below for a brief synopsis of the osteology report.

**Table 2. Synopsis Of Osteology Report**

Area & Bone	Description	Evaluation
Locality 1	8 cm fragment of long bone shaft; sun-bleached, but not weathered; flecks of desiccated soft tissue; no odor; appears to be fairly recent.	Non-human
Locality 2	3.75 cm fragment of long bone shaft; 1.5 cm in diameter; triangular in cross-section; traces of burning; possibly tibia.	Could be human
Locality 3	No bone fragments located; several caliche fragments; possibly disturbed by many foot prints.	No bone noted
Locality 4	No bone fragments located; several caliche fragments.	No bone noted
Undesignated Area	3 cm white bone fragment; appears cremated; flat bone (possibly cranial); slightly weathered.	Species indeterminate

In each occurrence, Tierra personnel followed the protocols established within the MOA and the Management Plan. Following the evaluation, the ESA surrounding the non-human long bone fragment from Locality 1 was removed. The remaining fragments, or areas of concern, were left as ESAs to avoid unintentional disturbance. Once construction in the vicinity is complete, removal of the ESAs will be undertaken to avoid calling attention to these specific areas. Furthermore, in the interest of reducing any unintentional impacts to the areas, Pattern Energy (Pattern) has sought a Variance (001) to shift the

adjacent substation in the vicinity of Localities 1-4, 565 ft to the northeast. Additional discussion of this variance will be addressed in Section 5 of this Bi-weekly Summary Report.

### **Training Seminars**

Three cultural sensitivity training seminars were held during the May 15 to May 28, 2012 period. Tierra provided the archaeological training on 5/17 (Chris Shaver) at the Ocotillo Community Center (OCC), 5/24 (Bobby Bolger) at the OCC, and 5/26 (Chris Shaver) at the Pyramid Offices in Heber.

### **3. Construction Activities**

Construction occurred everyday during the reporting period, see attached schedule. Work was generally performed by Graders, Scrapers, Water Trucks, Skip Loaders, Backhoes, Boring Rigs, and All Terrain Vehicles (ATVs). The activities monitored for this period included the following:

1. Surveyor staking of roads and other facilities.
2. Clearing and grubbing of portions of Laydown Area, Substation, portions of Dos Cabezas Road, Substation Access Road, and the truck turnaround area near intersection of Dos Cabezas Road and Substation Access Road.
3. Saturation and compaction by water trucks of various locations
4. Scraping (topsoil removal), grading, and removal of large boulders at portions of Laydown Area, Substation, Dos Cabezas Road, Substation Access Road, and truck turnaround area.
5. Borings by Geotech crews.

### **4. Archaeological Resources**

During the May 15 to May 28, 2012 period, construction activities requiring archaeological monitoring included Surveyor Staking, Geotech Drilling, and general construction/grading work.

Whenever resources were encountered, the teams would follow the protocol established in the Management Plan for the Project. This included, but was not limited to:

- Close-interval surface survey
- Assessment of the observed resource(s)
- Written documentation
- Photographic documentation
- GPS recordation
- Collection of diagnostic material if likely to be disturbed by construction activities.

The Cultural Resources Monitoring Team observed several archaeological resources during the Surveyor Staking effort and used the GPS to acquire reference points for comparison with planned project facilities. In each occurrence, the observed archaeological sites would not be directly impacted by any portion of the current undertaking and therefore, only minimal data was collected. Complete recording of these resources will be completed in the near future.

During the construction and ground disturbing monitoring, 30 isolated artifacts were observed and recorded in detail. These isolated finds are detailed below in Table 3.

**Table 3. Archaeological Discovery During Project APE Monitoring**

<b>Resource No.</b>	<b>Period</b>	<b>Artifact(s)</b>	<b>Quantity</b>	<b>Location</b>	<b>Collected</b>
01-001	Prehistoric	Pottery	1	Substation/Switchyard	N
02-001	Prehistoric	Chopper/Core	1	Laydown yard	Y
05-001	Prehistoric	Core	1	Access road	N
05-002	Prehistoric	Flakes	2	Turbine 110	N
05-003	Historic	.50 Cal	1	Turbine 111	N
05-004	Prehistoric	Pottery	1	Turbine 111	Y
05-005	Prehistoric	Flake	1	Turbine 174	N
05-006	Prehistoric	Flake	1	Turbine 174	N
06-001	Prehistoric	Flake	1	Substation/Switchyard	Y
06-002	Prehistoric	Flake	1	Substation/Switchyard	Y
06-003	Prehistoric	Flake	1	Substation/Switchyard	Y
07-002	Prehistoric	Flake, Core	1,1	Turbine 89	N
07-003	Prehistoric	Flake	1	Turbine 79	N
07-004	Prehistoric	Flake	1	Turbine 79	N
07-005	Prehistoric	Flake	1	Turbine 79	N
07-006	Historic	Sanitary Cans	2	Turbine 79	N
07-007	Prehistoric	Pottery	1	Turbine 79	Y
08-001	Prehistoric	Flake	1	Substation/Switchyard	Y
08-002	Prehistoric	Flake	1	Substation/Switchyard	Y
08-003	Prehistoric	Flake	1	Substation/Switchyard	Y
08-004	Prehistoric	Scraper	1	Substation/Switchyard	Y
08-005	Prehistoric	Pottery	1	Substation/Switchyard	Y
08-006	Prehistoric	Pottery	1	Substation/Switchyard	Y
08-007	Prehistoric	Flake	1	Substation/Switchyard	Y
08-008	Prehistoric	Core	1	Substation/Switchyard	N
09-005	Prehistoric	Chopper	1	Turbine 98	Y
09-006	Prehistoric	Utilized Flake	1	Met Tower 1	Y
10-001	Prehistoric	Pottery	1	Turbine 80	Y
10-002	Prehistoric	Biface	1	Turbine 78	Y
11-001	Prehistoric	Fire Affected Rock	1	Turbine 93	N

## **5 Expressed Concerns and Resolutions**

During the May 15 to May 28, 2012 period, several issues were brought to the attention of Tierra. In each case the issue was addressed and resolved or an action item offered for consideration. Please see the text below for each occurrence.

### ***Issue A***

There were expressed concerns by members of the Native American community that Tierra was not appropriately addressing the treatment of possible human bone. However, in each instance, Tierra personnel followed the protocol established in the MOA and the Management Plan and established ESAs around the potential bone location until it could be further evaluated. Dr. Madeleine J. Hinkes was contacted for a formal evaluation of the material in question. Please see Section 2 for the results of Dr. Hinkes's evaluation.

### ***Issue B***

There was some concern expressed from Pattern, 3<sup>rd</sup> Party monitors, and members of the Native American community that ESAs were not being erected for each resource in the area. In each instance, Tierra personnel followed the protocol established in the MOA and the Management Plan and established ESAs in a responsive and timely manner. As stated in the MOA and the Management Plan resources within 150 ft. would need ESA fencing to limit potential inadvertent impact and in each case this was done. However, in order to avoid unnecessarily calling attention to a resource that might cause closer scrutiny by the general public, establishment of ESA boundaries has been accomplished through careful coordination and planning. To date, construction has not been delayed by this culturally-sensitive approach to site protection. Tierra will continue to maintain this close working relationship with construction crews.

### ***Issue C***

There were expressed concerns by members of the Native American community that Tierra was not appropriately collecting and addressing the recordation of isolated finds. However, in each case, Tierra personnel followed the protocol established in the MOA and the Management Plan and has maintained a diligent collection policy of retaining diagnostic artifacts that could be damaged by ground disturbing or construction-related activities. The Bureau of Land Management (BLM) and members of the 3<sup>rd</sup> Party Review are currently working to refine the collection policy to address the Native American concerns in a reasonable and practical manner.

### ***Issue D***

The BLM also expressed concerns regarding the appropriate level of documentation contained within the Daily Logs. The Cultural Resources Monitoring Teams were instructed to provide a more complete and detailed Daily Log.

**Issue E**

Members of the Native American community expressed concerns that not all of the artifacts observed by them were being adequately recorded. Tierra personnel followed the protocol established in the MOA and the Management Plan such that if a disagreement arose between the Tribal Cultural Monitor and the Archaeologist, a resolution was based on the monitoring guide, *Cultural Monitoring Information Packet for the Ocotillo Wind Express Project* provided to all members of the Cultural Resources Monitoring Team (Tribal Cultural Consultants and Archaeologists) prior to the beginning of construction activities. Within the brief it states:

[in] the event of a disagreement regarding a discovery, immediately contact the Field Director to assess the finding. After reviewing the situation, if the disagreement persists, contact the Principal Investigator (Mike Baksh or Chris Shaver (858) 578.9064). If an issue still persists, the BLM may be invited to assess the finding at the request of the Principal Investigator or the tribal cultural consultant, or their respective government. Construction in the area of question will be diverted until the discovery has been assessed.

To date, no questionable resource has been brought to the attention of the Principal Investigators requiring additional assessment.

In most cases, based on a careful review of the artifact, if the physical characteristics were not sufficient to make an archaeological determination, then the resource was documented at the request of the Tribal Cultural Consultant. Furthermore, at the request of the BLM and 3<sup>rd</sup> Party Reviewers, all potential resources brought to the attention of the Archeological Monitor (by any member of the Native American Community) will be documented in detail including description, photographs, and GPS point-provenience.

**Issue F**

Members of the Native American community expressed concern for several areas following the Institute for Canine Forensic (ICF) project area visit. The ICF dogs alerted to seven areas of which two were located in the immediate vicinity of the proposed Substation/Switchyard. Pattern concluded that shifting the Substation/Switchyard 565 ft. to the northeast would be feasible to avoid these potential resources. In support of that Variance (001), Tierra personnel conducted a re-survey of the nearly 15-acre shifted footprint previously surveyed and addressed in the BLM Class III draft inventory report prepared in support of this project, *Archaeological Survey Report for the Ocotillo Express Wind Energy Project, Imperial County, California*, March 2012. The re-survey was conducted week of May 21, 2012 utilizing standard linear transect oriented methodology and resulted in two isolates and no sites within the extended northeasterly footprint. The isolates consisted of a milky quartz tested cobble and a Tizon brownware rim sherd. As outlined in the, Memorandum of Agreement and the Management Plan, only diagnostic artifacts that would be potentially impacted were collected in the field (i.e. the prehistoric pottery sherd). The milky quartz tested cobble was recorded in detail and left in place. The new Substation/Switchyard footprint would not directly affect any new significant resource or area of concern.

***Issue G***

Members of the Native American community expressed concerns that all of the Tribal Cultural Consultant notes were not readily accessible. Tierra has since provided a secure FTP site to permit full access to the Tribal Consultant notes on a daily basis.

***Issue H***

Members of the Native American community expressed concerns that on site accommodations were inadequate as originally stated by the project proponents. It was understood that, air conditioned project trailers would be provided to facilitate collection and redistribution of project data as well as provide climate controlled conditions to help overcome any potential heat illness. However, due to permitting issues outside Tierra's control, the trailers could not be provided as outlined by Pattern and Blattner Energy. Therefore, Blattner Energy provided a temporary air-conditioned RV within the Laydown Yard to enable crews to meet and discuss project concerns within a shaded environment. As of the end of the May 15 to May 28, 2012 time period, trailers have not been established.

***Issue I***

Blattner Energy and 3<sup>rd</sup> Party Reviewers expressed concern that on two separate occasions, an archaeological monitor directed a boring rig around known cultural resources in excess of what was required and inadvertently went beyond the planned area of impact. No other resources were affected by the misjudgments and the archaeological monitor was relieved of further responsibilities. To avoid these mistakes in the future, crew members are explicitly directed to communicate closely with the construction operators to ensure that they do not go outside of the area of impact (*e.g.*, beyond 23 feet from centerline of new roads) during each morning's cultural tailgate briefing.

**6. Summary**

Construction of the Ocotillo Express Wind Energy project commenced on May 15, 2012 and occurred every day through May 28, 2012. As addressed in Section 2, ESAs were established for previously recorded archaeological and historic resources located near construction areas. ESAs were also established for all seven dog alert locations and three locations containing bone (one identified by Dr. Madeleine Hinkes as non-human; two are indeterminate to date). All initial grading, geotech drilling, and surveyor staking activities, as well as all work conducted within 150 feet of ESAs, was monitored by a crew consisting of an archaeological monitor and a Native American monitor. Thirty isolates were recorded, and 17 diagnostic artifacts and/or tools collected for temporary curation at Tierra Environmental Services.



Superintendent/Foreman Blattner / Ryan Dickerson Date 5/16/2012 Project 674 - Ocotillo Express

Week Ending 20-May Week Ending 27-May Week Ending 3-Jun

Items of Work	Week One							Week Two							Week Three						
	M	T	W	R	F	Sa	Su	M	T	W	R	F	Sa	Su	M	T	W	R	F	Sa	Su
Work Activity	Clear, Grub, Grade and Gravel Laydown Yard																				
Crew	Foreman, operators																				
Equipment	Blade, Flailer, Roller, Water truck																				
Materials	Brush rake and dump trucks																				
Necessary Approvals	Bio and cultural clearances																				
Safety Considerations	Heavy truck and foot traffic																				
Production Benchmark	Should finish by Tuesday																				

Items of Work	Week One							Week Two							Week Three						
	M	T	W	R	F	Sa	Su	M	T	W	R	F	Sa	Su	M	T	W	R	F	Sa	Su
Work Activity	Build and Line Pond																				
Crew	Foreman, operators, labors																				
Equipment	D8 Dozer, 345 Excavator, Water truck																				
Materials																					
Necessary Approvals	Bio and cultural clearances																				
Safety Considerations	Soft soils																				
Production Benchmark	1 day to dig, 2 days to line																				

Items of Work	Week One							Week Two							Week Three						
	M	T	W	R	F	Sa	Su	M	T	W	R	F	Sa	Su	M	T	W	R	F	Sa	Su
Work Activity	Land Survey - Access Roads																				
Crew	Surveyor, monitors																				
Equipment	Rhino																				
Materials																					
Necessary Approvals	Bio and cultural clearances																				
Safety Considerations	Hot weather																				
Production Benchmark	5 miles per day																				

Items of Work	Week One							Week Two							Week Three						
	M	T	W	R	F	Sa	Su	M	T	W	R	F	Sa	Su	M	T	W	R	F	Sa	Su
Work Activity	Build Access Road - S2 to Switchyard																				
Crew	Foreman, operators, stakers																				
Equipment	Blade, Flailer, Roller, Water truck																				
Materials																					
Necessary Approvals	Bio and cultural clearances																				
Safety Considerations	Heavy traffic																				
Production Benchmark	1 mile per day																				

Exh. 7  
15

Items of Work		Week One							Week Two							Week Three						
		M	T	W	R	F	Sa	Su	M	T	W	R	F	Sa	Su	M	T	W	R	F	Sa	Su
Work Activity	Clear and Grub - Switchyard (by hand)			X	X	X	X		X	X												
Crew	Foreman, operator, laborers																					
Equipment	Loader, pickups																					
Materials	Hand tools																					
Necessary Approvals	Bio and cultural clearances																					
Safety Considerations	Hot weather and hard labor																					
Production Benchmark	5 acres per day																					
Items of Work		Week One							Week Two							Week Three						
		M	T	W	R	F	Sa	Su	M	T	W	R	F	Sa	Su	M	T	W	R	F	Sa	Su
Work Activity	Geotech Borings - WTG Foundations				X	X	X	X	X	X	X	X										
Crew	Foreman, drillers																					
Equipment	Drill rig (3 crews), pickup																					
Materials																						
Necessary Approvals	Bio and cultural clearances																					
Safety Considerations	Hot weather																					
Production Benchmark	2 borings per rig, 6 WTG's per day																					
Items of Work		Week One							Week Two							Week Three						
		M	T	W	R	F	Sa	Su	M	T	W	R	F	Sa	Su	M	T	W	R	F	Sa	Su
Work Activity	Grade Substation and Switchyard										X	X	X	X	X	X	X	X	X	X	X	X
Crew	Foreman, operators																					
Equipment	Blade, Scrapers, Rollers, Dump trucks																					
Materials																						
Necessary Approvals	Bio and cultural clearances																					
Safety Considerations	Backing trucks, use a spotter and keep clear																					
Production Benchmark																						