

CALIFORNIA ENERGY COMMISSION1516 NINTH STREET
SACRAMENTO, CA 95814-5512

July 15, 2011

Jeffery Benoit
Solar Reserve
2425 Olympic Blvd., Suite 500 E.
Santa Monica, CA 90404

DOCKET	
09-AFC-10	

DATE	July 15 2011
RECD.	July 15 2011

**SUBJECT: Rice Solar Energy Project (RSEP), 09-AFC-10C
Limited Notice to Proceed with Modifications to Well 2**

Dear Mr. Benoit:

Staff has reviewed the well modification plan dated June 30, 2011 and the cultural resources map . These activities are scheduled to occur from July 18 to July 22, 2011. These activities shall be allowed for the modifications to well 2 and may commence immediately under the following provisions.

- Work may commence consistent with the attached work plan dated June 30, 2011, the well permit from Riverside County and the cultural resources materials provided by the applicant.
- Thomas Jackson shall act as a Biological Monitor during the activities and shall be onsite at all times.
- Activities shall commence consistent with the memo from cultural staff and attached to this letter and in particular:
 1. The project owner must avoid impacts to Feature 51a, Feature 51b, and Feature 51c by flagging a buffer area on the concrete pad (Feature 52) 30 feet around them and restricting staging, parking, and laydown activities from the buffer area;
 2. The project owner must conduct data recovery on Feature 52 and Feature 130 per CUL-9, parts 4 and 5, and complete, per CUL-9, verification 2, a DPR 523c form, to be submitted for CPM review and approval;
 3. The project owner is not required to provide archaeological monitoring of the well modification activities after the above avoidance and data recovery are completed; and
 4. The project owner must inform the CPM of any changes in the described Well 2 modification activities and get CPM approval for these changes if they entail potential disturbance to cultural resources located outside the above specified impact areas, as depicted on the July 14 map provided to the CPM by the project owner.

If you have any questions, please call me at (916) 654-4781 or e-mail me at choffman@energy.state.ca.us.

Sincerely,

Original signed by C. Hoffman

Craig Hoffman
Compliance Project Manager

cc: Docket Unit
Lisa DeCarlo, Staff Attorney

Memorandum

To: **Craig Hoffman**
Compliance Project Manager (CPM)

Date: July 15, 2011

From: **Beverly E. Bastian**
California Energy Commission
Cultural Resources Unit
1516 Ninth Street
Sacramento CA 95814-5512

Telephone: (916) 654-4840

Subject: Rice Solar Energy Project (RSEP), 09-AFC-10
Limited Notice to Proceed with Modifications to Well 2 (CTS Log # 2011-1438)

During the RSEP Construction Kick-off Meeting on June 7, 2011, the project owner requested CPM approval of modifications to existing Well 2 to provide water for construction needs. This work is planned for July 18 through July 22, and the project owner needs a Limited Notice to Proceed. In the June 30, 2011 cover letter for their description of the well modification, the project owner informed the CPM that they do not plan to have cultural resources monitors (CRMs) present during the well modification activities because they do not anticipate disturbing any cultural resources.

Access to the well modification site will be via existing dirt and gravel roads. The well modification work, as described, consists of filling the lower portion of existing Well 2, discharging water until an acceptable level of turbidity is achieved, and installing a sounding tube, a pump, a sampling port, a propeller-type flow meter, an electrical panel, and a pump controller. The work would be confined to three impact areas:

1. An existing concrete pad, which will be used as a temporary staging area, laydown area, and for parking; this concrete pad was identified by the project owner as part of Rice Army Airfield (RAA) and in its analysis staff assumed that the pad was a historical resource under CEQA.
2. An area of approximately 200 feet by 200 feet in size around Well 2, where trucks will turn around, and where vehicles and a drilling rig will be used and equipment will be installed; and
3. A three-acre spray field to the east of Well 2, where discharged water will be disposed of by spraying through impact sprinklers for ground infiltration and evaporation.

On July 14, in response to staff's July 11, 2011 request, the project owner provided a map showing the well modification impact areas, a 100-foot buffer area around the impact areas, and the known cultural resources located in the impact areas and buffer. The project owner provided further clarification on the impact areas in a July 14 e-mail to staff.

From the map it appears that the well modification work could impact, in the ways described below, the following historical RAA features:

- Feature 51a, Feature 51b, and Feature 51c, wood-lined pits located along the northern edge of Feature 52, between the access road and the northeast

corner of Feature 52, where staging, parking, and laydown activities could disturb them;

- Feature 52, a large concrete pad proposed for staging and laydown, where mechanical scraping by backhoes and similar machines used to move dirt piles and pipe and equipment could damage the pad; and
- Feature 130, a small concrete foundation located west of the Well 2 impact area directly on the east-west leg of the dirt access road, where heavy vehicle (e.g., drill rig) passage could crack and break it.

Consequently, if the CPM decides to grant a Limited Notice to Proceed with the Well 2 modification work, that is acceptable from the perspective of cultural resources staff, subject to the following requirements:

1. The project owner must avoid impacts to Feature 51a, Feature 51b, and Feature 51c by flagging a buffer area on the concrete pad (Feature 52) 30 feet around them and restricting staging, parking, and laydown activities from the buffer area;
2. The project owner must conduct data recovery on Feature 52 and Feature 130 per CUL-9, parts 4 and 5, and complete, per CUL-9, verification 2, a DPR 523c form, to be submitted for CPM review and approval;
3. The project owner is not required to provide archaeological monitoring of the well modification activities after the above avoidance and data recovery are completed; and
4. The project owner must inform the CPM of any changes in the described Well 2 modification activities and get CPM approval for these changes if they entail potential disturbance to cultural resources located outside the above specified impact areas, as depicted on the July 14 map provided to the CPM by the project owner.

To implement the above required avoidance flagging and data recovery, it is also acceptable to cultural resources staff that the CPM approve proposed Cultural Resources Specialist (CRS) Clint Helton to serve as the temporary CRS, under CUL-2, but only for the well modification work permitted through this Limited Notice to Proceed. When RSEP starts pre-construction submittals pursuant to a full Notice to Proceed for this project, the project owner should propose a permanent CRS for CPM review and approval. Please note: Due to concerns regarding the ability of a CRS to respond to simultaneous discoveries at two or more projects, cultural resources staff is in the process of limiting the number of projects on which a person can serve as CRS. Staff must inform the RSEP CPM and project owner that staff has concerns regarding the number of power plant projects, over which the Energy Commission has compliance oversight, where Mr. Helton is currently serving or proposed as the CRS.

Due to the short time available in which to arrange for a Project Historical Archaeologist to conduct the required data recovery from Features 52 and 130, it is acceptable to staff that one of the proposed CRMs undertake this. In a telephone call

today, Mr. Helton recommended Daniel Ewers, who was part of the crew that recorded all the features of the RAA for the proposed project. If Mr. Ewers should be unable to do this work, it is acceptable to staff for Mr. Helton to assign another CRM. Staff will provide guidance to Mr. Helton to convey to the assigned recorder on completing this recordation according to the standards set out in the Desert Training Center Cultural Landscape Draft Field and Laboratory Manual.

GRENIER & ASSOCIATES, INC.

ENVIRONMENTAL PLANNING • LICENSING & PERMITTING • REGULATORY COMPLIANCE

June 30, 2011

Compliance Chron Log 2011-030

Mr. Craig Hoffman
Compliance Project Manager
California Energy Commission
1516 Ninth Street MS-2000
Sacramento, CA 95661

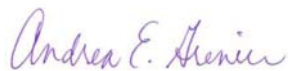
Subject: Rice Solar Energy Project (Docket No. 09-AFC-10C)
Well Modification Plan

Dear Craig:

As discussed during the June 7, 2011 kickoff meeting for the Rice Solar Energy Project, attached please find a brief memo discussing the Well Modification Plan that will be undertaken in mid-July 2011. In conversations with you and staff, it has been agreed that we will have an approved USFWS Designated Biologist onsite during these activities to monitor for any disturbance to biological resources including the Desert Tortoise. The biologist will escort all vehicles heading out to the well site to prevent any impacts to any Desert Tortoise, and will remain onsite during the well activities. At this time since no cultural resources are anticipated to be disturbed, we are not planning on a cultural or paleontological monitor to be onsite during these activities.

Should you have any questions or require additional information related to this submittal, please contact me at (916) 780-1171.

Sincerely,



Andrea E. Grenier
Permitting and Compliance Manager

Attachment



Rice Solar Energy Project

Rice Well 2 Modification and Well Installation

June 28, 2011

Introduction

The Rice Solar Energy Project (RSEP) is a 150-megawatt (MW) concentrating solar thermal power project with a central receiver tower, sun-tracking heliostat field and an integral thermal storage system using liquid salt as the heat transfer and storage medium. When electricity is to be generated, the heated salt will be routed to a steam generation system, which generates steam for use in a high-efficiency reheat steam turbine cycle. The RSEP has elected to use dry cooling technology for the steam turbine cycle using an air-cooled condenser (ACC). RSEP's maximum total project water consumption will be approximately 180 acre-feet per year.

The project's power block and solar arrays would be located on the site of the Rice Army Air Field and a portion of Camp Rice, a World War II desert training base that was part of the infantry and artillery Desert Training Center. The airport was used by the public and private sector, respectively and was abandoned between 1955 and 1958. Little remains of Camp Rice or the Rice Army Airfield, aside from a few foundations, concrete pads, and defunct runways.

The RSEP requires a water source to support operations, including process water consisting of make-up water for the steam system and wash water for the heliostats, and potable water for domestic water needs. Two wells currently exist at the Site, designated as Rice 1 and Rice 2.

Rice 1 is a shallow well, screened in the Upper Alluvium water-bearing zone (WBZ). The well extends to a depth of 455 feet below ground surface (bgs) and is screened from 225 to 425 bgs. Rice Well 1 is not suitable as a water source because of low yield and high Total Dissolved Solids (TDS).

Rice Well 2 was constructed with two distinct screened intervals. The upper screened interval extends from 625 to 705 feet bgs and is screened in the Lower Alluvium WBZ. The lower screened interval extends from 745 to 965 feet bgs and is screened in the Lower Alluvium WBZ (from a depth of 745 feet bgs to the Lower Alluvium/Bouse interface at about 810 feet bgs), and in the underlying Bouse Formation (below a depth of 810 feet bgs). The total well depth for Rice Well 2 is 985 feet bgs. Due to unacceptable water quality in the Bouse Formation, this well will be modified prior to the Pre-construction (Baseline) Groundwater Level and Quality Monitoring Event so that only the Lower Alluvium WBZ will be accessed for water quality sampling. It is anticipated that the lower portion of the well (extending into the Bouse Formation) will be grouted below the bottom of the Lower Alluvium WBZ (i.e., just below a depth of 810 feet bgs). A new well will be constructed at the Site to serve as an additional construction water source. After construction is complete, this new well will serve as the primary source to meet the facility

operational water demand. Rice 2 will likely serve as a secondary well for the facility operation.

Program Objectives

During construction of the facilities, water will be required for soil moisture conditioning during the earthmoving operations and for dust control. RSEP will use groundwater supplied from one existing well (Rice Well 2) and one newly constructed onsite well to support the construction water demand. After construction, one of these wells will serve as a primary supply and other well will serve as a standby well.

This project description addresses only the well modification work to be performed prior to initiation of facility construction (in mid-July). A separate project description will be prepared to address the planned well installation prior to the start of that work.

Pre-Construction Field Work

An area of approximately 200 feet by 200 feet (or less) will be needed for the well modification and associated activities. A nearby spray field consisting of approximately three acres will also be needed for the project, as well as a truck turn around and laydown area of approximately 50 by 100 feet. If the sprayfield extends into undisturbed areas of the surrounding desert, the spray will be re-directed frequently to minimize disturbance.

Access

A concrete pad that exists near the Rice 2 Well Site will be accessed using an existing dirt and gravel road that extends from route 62. This pad will be used as a temporary staging area. The Rice Well 2 Site will be accessed via an existing dirt road that extends from the concrete pad, as indicated on Figure 1. There will be no need for vegetation clearing or road construction. Additionally, sand and silt areas along the access roads may be wetted down using a water truck to facilitate vehicle passage and suppress dust, if needed.

On-site Vehicle Use

It is anticipated that the following vehicles will be present on-site during the planned pre-construction field work:

- 1 Passenger vehicle for hydrogeologist;
- 1 Passenger vehicle for drilling contractor;
- 1 Pick-up truck for drilling contractor;
- 1 Drill Rig
- 2 Water Trucks

Well Modification Details

The Rice Well 2 (8-inch diameter) shall be modified by filling the existing well with neat cement grout pumped through a tremie pipe from the current well bottom (at a depth of approximately 990 feet bgs) to a depth just above the Lower Alluvial Aquifer / Bouse Formation aquitard (i.e., approximately 810 feet bgs). A well packer shall be placed above the top of the grout interval to prevent grout from entering the overlying screen interval during the grouting process. The packer and tremie pipe shall be removed after the completion of grouting. A K-packer or a similar device shall be permanently installed immediately above the cement.

After completion of grouting and placement of the permanent packer and after the grout has cured, development of Rice Well 2 shall be conducted using a combination of airlifting, surging, bailing, and pumping to remove any suspended materials in the lower portions of the screen interval. Development shall occur until the turbidity of the discharged water is less than 10 NTU, and the sand content is less than 15 ppm, as measured by a Rossum Sand Tester.

A 1 ½ inch diameter steel sounding tube (with end cap and a 5-foot section of screen) will be installed into modified Rice Well 2 to a depth of 650 feet bgs.

A dedicated pump shall be installed into modified Rice Well 2. The target groundwater discharge rate (at ground surface) for modified Rice Well 2 is 750 gpm. If it is determined that the target discharge rate is not achievable or sustainable for Rice Well 2, then a smaller pump will be installed. A discharge pipe at the surface that is equipped with a sampling port and a propeller type flow meter (turbine meter) will be installed in the well. The electrical wiring extending from the pump shall be tied into an electrical panel and pump controller at the surface, so that the pump can receive power from an on-site generator or construction electrical service.

Well Development

Following Rice Well 2 modification, the well will be developed by bailing, jetting, air lift pumping, conventional pumping and/or surging until residual drilling mud is removed and the removed water becomes relatively clear and free of sediment. During this phase of construction, the drill rig, stem/pipe truck, mud cleaner and any unnecessary equipment will be demobilized, and a pump/development truck will be mobilized to the site. The water will be discharged to a spray field using large impact sprinklers and gasoline-powered pumps. The spray field will be established by placing portable irrigation pipe or high pressure water hoses along the dirt access road to the well location with impact sprinklers set at least 300 feet from the well location. The impact sprinklers will be moved periodically (by hand – without need for vehicle support) within the spray field area as necessary to prevent erosion, distribute salt loading, and maximize infiltration and evaporation of the water. The volume of well development water that will be discharged is estimated to be up to approximately 20,000 gallons.

Site Restoration

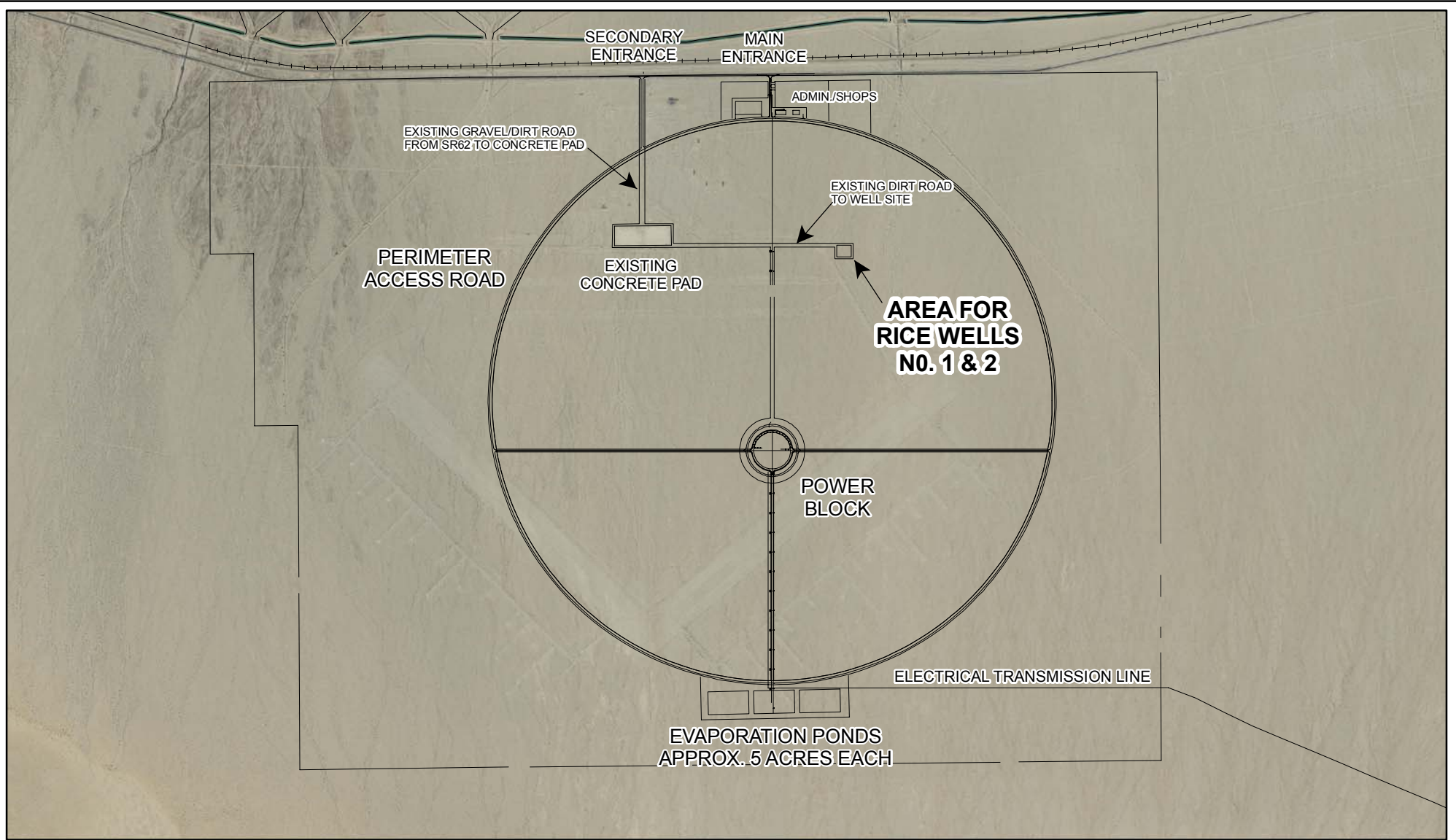
Following completion of the Rice Well 2 modification, all equipment, materials, debris and any waste materials will be removed from the site. Rutting in the access road will be repaired (if necessary, and wheel ruts in pull out areas will be raked level.

Construction Schedule

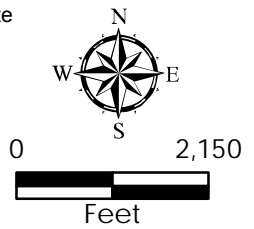
The anticipated schedule for Rice Well 2 modification and development, and for demobilization of construction equipment from the well site is estimated to be 1 week as summarized in Table 1.

**Table 1
Estimated Duration of
Program For Rice Well 2
Modification**

Activity	Total Duration (Days)
Rice Well 2 Modification	1 to 2
Well Development	1.5
Demobilization	1
Total	5.5



SOURCE:
 SRRC-0-SK-112-111-001-RK.dwg
 USDA NAIP
 All locations approximate



RICE SOLAR ENERGY, LLC
 RICE SOLAR ENERGY PROJECT

WorleyParsons
 resources & energy

AREA FOR RICE WELLS NO. 1 & 2

SWL	EB	6/2011
108010-00225		1

From: <Sarah.Madams@CH2M.com>
To: <Bbastian@energy.state.ca.us>, <Andrea@agrenier.com>, <Clint.Helton@CH2M...>
CC: <CHoffman@energy.state.ca.us>
Date: 7/14/2011 3:36 PM
Subject: RE: Rice well modification map showing impact areas and culturalresources

Hi Beverly-

I just spoke with Worley Parsons. The truck turn around/laydown area - which will really be used more for just turn around as any laydown would be on the large existing concrete pad where parking would be - so truck turnaround area is identified as "area for Rice wells No. 1 & 2". Apologies for not showing that on the map earlier.

Sarah

Please note my new telephone number below

Sarah Madams
Project Manager
CH2M HILL
2485 Natomas Park Dr, Ste 600
Sacramento, CA 95833
(916) 286-0249 (office)
(916) 714-8572 (home office)

-----Original Message-----

From: Beverly Bastian [mailto:Bbastian@energy.state.ca.us]
Sent: Thursday, July 14, 2011 3:18 PM
To: Andrea@agrenier.com; Helton, Clint/SCO
Cc: Madams, Sarah/SAC; Craig Hoffman
Subject: Rice well modification map showing impact areas and cultural resources

Hi Andrea and Clint,

The June 30 description you provided of the well modification activities includes the plan to use "a truck turnaround and laydown area of 50 by 100 feet" (p. 2).

This area is not depicted on the map provided today, or is not labeled as such. Please call me (916 654 4840) as soon as possible and identify on the map where this area is located.

Thanks,

Beverly

>>> Andrea Grenier <Andrea@agrenier.com> 7/14/2011 2:32 PM >>>
Beverly: I understand from Clint that you will look at this in Dorothy's absence. Thank you!

Andrea Grenier

Grenier & Associates, Inc.

1420 E. Roseville Parkway, Suite 140-377

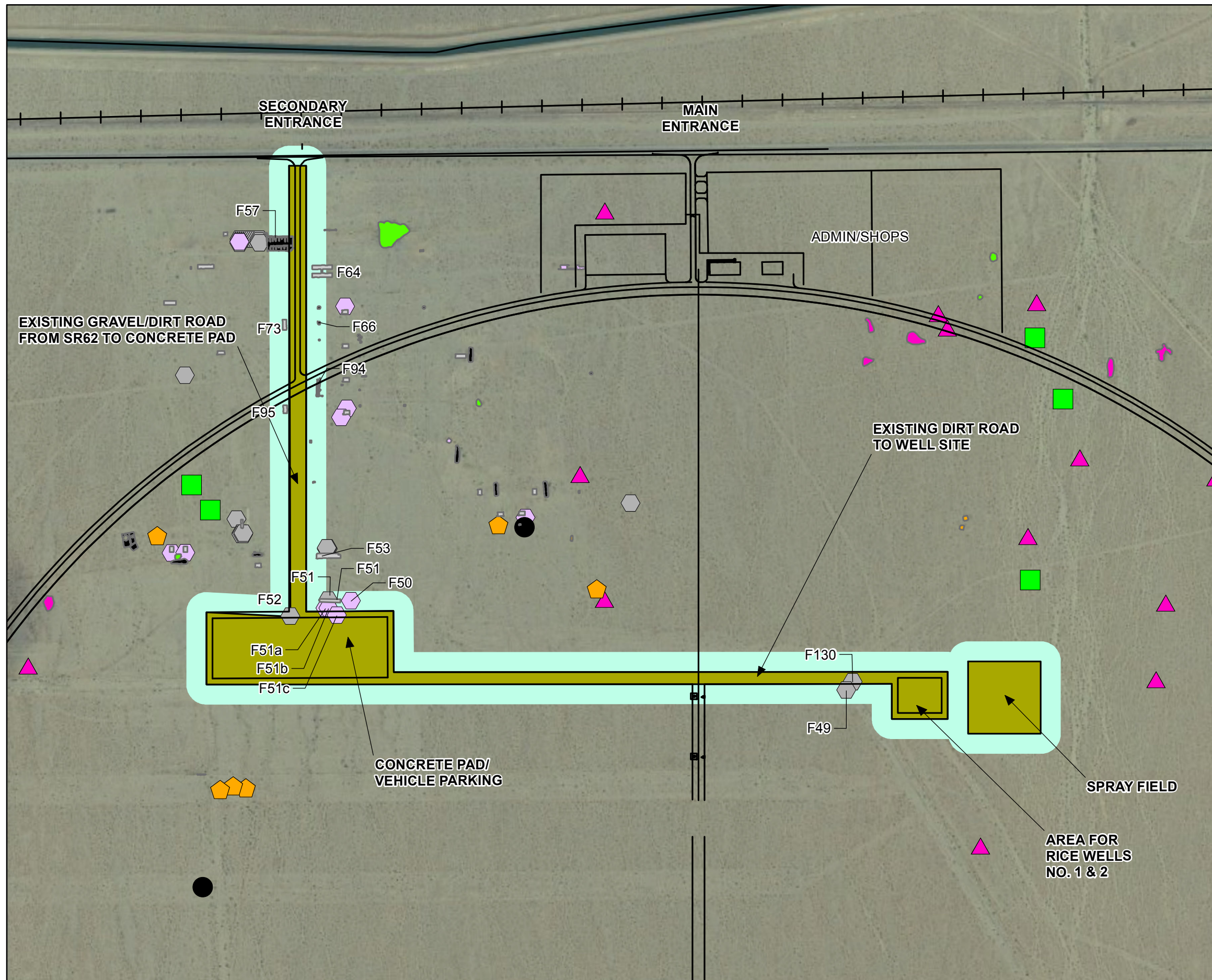
Roseville, CA 95661

916-780-1171 O

916-847-0918 C

From: Andrea Grenier [mailto:Andrea@agrenier.com]
Sent: Thursday, July 14, 2011 1:31 PM
To: Craig Hoffman (CHoffman@energy.state.ca.us); Dorothy Torres (DTorres@energy.state.ca.us)
Cc: Sarah Madams; 'Clint.Helton@CH2M.com'
Subject: FW: Rice: Cultural Map for Dorothy

Here you go. "To reiterate all activity will be contained within previously disturbed areas as depicted on the map. No new disturbance will occur. Existing concrete pad will be used for vehicle parking. "



- LEGEND**
- Surface artifact concentrations
 - Debris and artifact features
 - Earthen Features
 - Concrete Foundations
 - Rock-lined pits and rock features
 - Wood-lined pits and wood features
 - ▲ Surface artifact concentrations
 - Debris and artifact features
 - ◆ Earthen Features
 - Concrete Foundations
 - Rock-lined pits and rock features
 - Wood-lined pits and wood features
 - Previously Disturbed Area/
Location of Proposed Use
 - 100 Foot Buffer

This map was compiled from various scale source data and maps and is intended for use as only an approximate representation of actual locations.

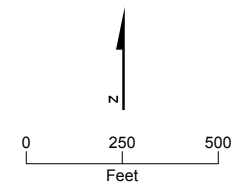


FIGURE 1
AREA FOR RICE WELLS NO. 1 AND 2
 RICE SOLAR ENERGY PROJECT
 RIVERSIDE COUNTY, CALIFORNIA