

Comments re SA/DEIS for Imperial Valley Solar/SES Solar 2 Project Docket No. 08-AFC-5 and Supplement to the Application for Certification URS Project No. 27657106.00806" (SAFC) proposed to use groundwater from well 16S/9E-36G4 in Ocotillo-Coyote Wells SSA

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To: Christopher Meyer
1516 Ninth Street MS-4
Sacramento, CA 95814
docket@energy.state.ca.us

Daniel Steward
BLM
1661 South Fourth St.
El Centro, CA 92243
caivspp@blm.org
daniel_steward@ca.blm.gov

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From: Edie Harmon
Ocotillo, CA 922599
desertharmon@gmail.com

Re: SA/DEIS for Imperial Valley Solar/SES Solar 2 Project Docket No. 08-AFC-5 and Supplement to the Application for Certification URS Project No. 27657106.00806" (SAFC) proposed to use groundwater from well 16S/9E-36G4 in Ocotillo-Coyote Wells SSA

1. Please accept these comments on the SA/DEIS for the IV Solar Project Docket No. 08-AFC-5. Unfortunately, my computer just obliterated all evidence of about 15 pages of text so I will do the best I can in the remaining time. I will also incorporate by reference all comments and Exhibits submitted to the CEC for the Evidentiary Hearings on May 24, and 25, 2010 and the comments submitted to the US Army Corps of Engineers. I apologize for repetition, but I have been having computer difficulties and been unable to catch what are probably many duplications., and simply run out of time to remedy what the computer decided to vanish.
2. The numbering of my exhibits will be continuing with the numbers for my testimony before the CEC as a witness for Intervenor Tom Budlong, beginning with Exhibit Number 515. Because of lack of time, comments will go to both agencies and address issues which may be considered for both CEQA and NEPA and the BLM Plan Amendment Process as referenced in BLM materials.
3. I am concerned that the project applicant is rushing consideration for this process, with the end result that the public feels that it is being inadequate time to review the various aspects of the project and being left only with information from the project applicant without enough time for staff input from CEC or BLM before the public is expected to submit comments. In reviewing CEQA and NEPA documents for about 30 years, I have never before seen such a chaotic and time pressured process, or reviewed any project which would so irreparably alter the surface of such a large areas. There have been times during the workshops and even during parts of the evidentiary hearings that it seemed as if decisions have been already made and public input intended to be ignored. Not a good perception for members of the public who have attended

most if not all the public participation opportunities in Imperial County.

4. I am also concerned that the phone conferencing excludes those who do not have landline phone service and cannot afford to participate by cell phone during daytime because it is cost prohibitive. I understand that I am not the only concerned member of the public who lives in a place where the phone companies never have run phone lines. Yes, I was present during the entire two days of evidentiary hearings, but I could never have heard any of that input by phone. An around the world plane trip would likely have been less expensive than a two day cell phone call! So, yes, I can appreciate that the State has a tight budget, but so do concerned members of the public who care enough to want to participate. If the state and BLM cannot afford the costs of travel or staff time to provide opportunities for public participation as intended by CEQA and NEPA than there should be a higher up-front cost for the applicant rather than just excuses about the need for a rush deadline. Staff are real people who also occasionally need a few hours to sleep and occasionally to eat also. If the Applicant fails to provide required information in a timely manner, that is the applicant's problem, not to be pushed off on staff and the public because the applicant's real motive and need to get taxpayer financing for a project that is still unproven on a scale proposed. Yes, it is all about money, not about meeting energy needs.
5. After Van Paten's testimony of May 25, 2010 re need to rush to get taxpayer monies, please, as an alternative to using taxpayer funds to go to the applicant, consider what could be accomplished if that \$2 billion were to go to use known reliable human-scale options that would result in avoidance, reduction, or elimination of some of the anthropogenic emissions of greenhouse gases as a means of meeting the goals of the problems for which solutions are being sought. It seems more prudent to put the largest quantities of funds to making changes that will reduce emissions and reduce or eliminate generation of such emissions in the future. Please note that from the February SA/DEIR the pricetag has gone up from \$1.4 to \$2 billion.
6. Creative solutions and careful zoning and planning should come before widespread destruction of relatively undisturbed public lands financed by taxpayer funds. Again, when will we return to the 55 mph speed limit and require that public buildings and schools have windows that open so that forced air and air conditioning are not required for places with large concentrations of people? Please consider the wisdom of the Native American elders and the knowledge of your parents and grandparents as they lived far more lightly on the environment than those today and created far less adverse impacts on the environment.
7. Mandating the use of new or unproven technologies without first having experience with prototype operations of scale and duration to be assured of reliability seems extremely ill advised use of public funds, especially when there are tight budgets. This IV Solar/Solar 2 applicant and project seem to view the US Treasure as an endless pot of gold awaiting their grab, and with no assurances that this is a workable project on a scale of 30,000 units over almost 6,500 acres!
8. A country that can afford a space program and can afford to be engaged in two wars can certainly afford to spend the money to improve insulation and housing stock so that there are not health problems associated with summertime high temperatures or wintertime cold temperatures by means far more effective than simply increasing energy to avoid making significant changes that will have long term benefits that do not require ever increasing amounts of energy. Using funds NOW to improve the places where people live would most likely play a more significant role in meeting the emission standards than speculative technologies funded by taxpayers.
9. Anyone who has ever lived in rural parts of Africa in Botswana or Namibia knows first hand that the traditional African home construction with extremely thick walls (12-18" of "mud and wattle" style with 12-15" of bundled grass thatched roofs were very comfortable during the

coldest parts of winter and hottest parts of the summer because the homes worked without the addition of external energy sources. But contrast those to the thin 4-6 inch thick concrete walls with corrugated metal roofs of the British, and one instantly sees the wisdom of centuries of traditional knowledge of what works. Water would freeze in basins in my British style home in winter, but those fortunate enough to live in traditional housing did not experience such swings in temperatures of the home. Early homes in the southern parts of the US in days before air conditioning looked to the proper placement of windows to take advantage of breezes to cool in the summer. How sad that in an age of technology we have lost the ability and desire to learn from the wisdom of those who came before us.

10. As decision-makers, you have the opportunity to make the decisions that will reinforce public statements when you say you will not short change the processes and that you will insist that serious solutions to problems are truly deserving of taxpayer funding, not only speculative projects that have a large component interest in "return of monies to the investors". What about the need to invest in a better quality of life for future generations by considering something other than massive destruction of public lands with their treasures cultural and biological resources so necessary for intact ecosystems in a changing world. Why not insist that all the investments will be for implementing technologies and solutions in the communities where lands had already been disturbed for human development in the form of commercial, industrial and agricultural lands in addition solving the problems of existing construction..
11. **Changing Project description without Staff analysis requires revisions, and recirculation for public comment under both NEPA and CEQA** rather than merely a Final EIS for BLM and a Supplemental Staff Assessment from CEC. Having the Staff analysis which is the environmental review documents become available after the close of public comment precludes meaningful public comment.
12. IV Solar Project description has been a moving target and the SA/DEIS does not reflect the current state of the project description under the May 10, 2010 posting of the Applicant's Supplement to the Application for Certification URS Project No. 27657106.00806" (SAFC)
13. How many members of the public would have been aware that the Project Applicant had submitted a SAFC that was posted on May 10, 2010? Even though I have been participating as a witness for Intervenor Tom Budlong, I do not regularly check the CEC website to look for updates without first getting information from the CEC.

Obtaining and analyzing information takes time and often cannot be rushed

14. Changing project components and piecemealing review by withholding important information and analysis until after public comment is contrary to the intent of CEQA and NEPA. The public should not be forced to conduct its own research to ferret out information to analyze the accuracy and/or reliability of information provided in the last weeks before comments are due. I have decades of documents related to groundwater use and I have internet access to the very latest monitoring data from USGS (as does the applicant), but I am not paid to do an environmental analysis that should have provided more than outdated and inaccurate information to the CEC and BLM.
15. Could the CEC or BLM staff ever have found some of the information that I have provided, or would they even have known that such information was available and should be considered? Should staff for BLM, CEC or its hopefully 3rd party consultants on topics other than cultural resources been required to ferret out essential information withheld by the applicant? After more than 30 years of reviewing information on groundwater I can see how woefully inadequate and erroneous some of the information provided by the applicant was, but that leaves me wondering

about the adequacy and accuracy of information on other topics. Rushing the review to meet the applicant's funding motivated deadlines could leave the public with a monument to ill advised project approvals. And located adjacent to an Interstate, it would be a lasting monument to flaws in the permitting and approvals processes. Any project requiring 6,500 acres most of it public lands with majority of public financing must take longer than what is customary for CEQA and/or NEPA review.

16. US Gypsum environmental review took almost 6 years to produce a DEIR/EIS and then another year and half to produce a final EIR/EIS, and two years after the release of the FEIS, BLM still has not issued its Record of Decision for a right of way for a simple water line adjacent to the road, for which the boundaries of IID were changed almost 30 years ago! And that is a far less damaging project in terms of surface disturbances. It took BLM probably 4-5 years of review before deciding to not approve the Plan of Operations for the Glamis Imperial Mine project. (See NAFTA Tribunal decision of 2008.)
17. At the CEC Evidentiary Hearing in El Centro May 24-25, 2010 there were numerous topics of the SA/DEIS that were not considered for testimony because the CEC Staff had not had sufficient time or opportunity and/or the Applicant had failed to provide the necessary information to complete Staff Analysis, and or public review. Piecemealing project components and intentionally withholding information relevant to the changed project description (such as an assured water supply for future) appears to violate certainly the intent of the law.
18. CEQA defines a project as "the whole of an action" which has the potential to result in a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment. The "Project" refers to the activity being approved and which may be subject to several discretionary approvals by distinct governmental agencies. The analysis must embrace future development that will foreseeably occur if the agency approves the project and also include analysis of cumulative impacts associated with the changed project description which could not have been understood prior to the Applicant's posted changed description on May 10, 2010
19. In my efforts to respond to the Alternative Water Supply, I have documented considerable information which either contradicts what the Applicant states about the Boyer water well 16S/9E-36G4 in Ocotillo or fails to substantiate assertions made by applicant or applicant's consultants related to groundwater usage at the well site. Those letters and their accompanying exhibits are included as Exhibits 566 and 567 and 515-564.
20. **The Changing Project description without Staff analysis requires revisions, and recirculation for public comment under both NEPA and CEQA.**
21. IV Solar Project description has been a moving target and the SA/DEIS does not reflect the current state of the project description under the May 10, 2010 posting of the Applicant's Supplement to the Application for Certification URS Project No. 27657106.00806" (SAFC) which includes a proposal to use groundwater from well 16S/9E-36G4 in the Ocotillo-Coyote Wells Groundwater Basin. This basin is an US EPA designated Sola Source Aquifer in 1996.

The proposed Imperial Valley Solar Project/SES Solar 2, what is the real project description? How much has changed?

22. According to information in the February 2010 SA/DEIS and Supplement to the AFC dated May 5, 2020 Stirling Energy Systems Solar Two, LLC applied to the Energy Commission for a license to build and operate the Imperial Valley Solar Project. The proposed project proposes a nominal 750-megawatt facility, with construction planned to begin in late 2010 if the project

applicant is able to secure funding for what was stated to now be a \$2 billion project according to statements by Mark Van Paten on May 25, 2010. 9See Exhibit 569 “Rush is on for desert solar” at signonsansigeo.com, May 26, 2010 account of CEC Evidentiary Hearing.).

23. The primary equipment for the generating facility would include approximately 30,000, 25-kilowatt solar dish SunCatchers, their associated equipment and systems, and their support infrastructure. Power would be generated by groups of 60 SunCatchers connected by underground lines. The project would also require construction of approximately 10.3 miles of double circuit 230 kV transmission lines to connect to the existing SDG&E transmission facilities. In addition to hundreds of miles of roads the solar thermal electric generating facility would include a 230 kV substation and various buildings at the center of the proposed site.
24. More than 5,000 suncatchers would be placed in areas known to be subject to flash flooding (ES-28) There are 878 acres of jurisdictional waters, including 165 acres with permanent impacts (ES-29)
25. The 6,500 acre (more than 10 square miles) project site is located on approximately 6,140 acres of federal public land managed by the Bureau of Land Management (BLM) and approximately 360 acres of privately owned land. The site is approximately 100 miles east of San Diego, 14 miles west of El Centro, and approximately 4 miles east of Ocotillo, even if the SA/DEIS mischaracterizes the location as being 4 miles east of Ocotillo Wells in San Diego County. Conversion of these lands is cumulatively significant, even though it may seem small compared to the approximately one million acres of lands in the California Deserts that have been proposed for solar or wind development. (ES-31). Other resource values would be lost as public lands are converted to industrial scale solar.
26. Although the Staff may conclude that conversion of such acreage under FLPMA is consistent with applicable laws, ordinances, regulations and statutes, (ES-32), it would create a significant and unavoidable impact, the negative effects which would be disproportionately felt is rural communities already suffering from adverse health impacts of air pollution. (See Exhibits 569, 570 and 571 related to Imperial County and EPA concerns about poor air quality and health issues in Imperial County from a community leader, an elected official, and from US EPA..)
27. The BLM lands are “Limited use” lands, in part to restrict vehicle travel to the approved routes of travel. This designation was made after the initial portrayal of these lands as the “Plaster City Area of Critical Environmental Concern” (ACEC) in the 1980 BLM Draft EIS for the California Desert Conservation Area (CDCA) to protect what in 1980 was known to be an extremely important area for prehistoric cultural resources, cremation sites and Native American values. It is my understanding that the ACEC designation as an ACEC for the entire project area was not included in the final determination or Record of Decision (ROD), in part because identification of an area with such easy access near lands identified for OHV activity would have increased the likelihood of damage and vandalism if the cultural resource values were known. (Conversations with many BLM staff locally, and BLM staff involved in the Section 106 consultation with Native American Tribes. I am participating in the consultation process.)
28. “Approximately 27 miles of paved arterial roads, 14 miles of unpaved perimeter roads, and approximately 234 miles of unpaved access routes would be constructed on the SES Solar Two Project site. “ (SA/DEIS ES-5) The project would not be able to operate if wind speeds exceed 35 mph. (ES-6) However, a major concern about the use of unpaved roads is the amount of dust that would be generated as surfaces are continually broken down by vehicular use for construction and maintenance. Increasing the travel speed on the unpaved roads from 15 mph to 25 mph as requested by the applicant on May 24, 2010 at the Evidentiary Hearing for the

purposes of reducing the time spent on travel thorough the site would appear to increase the amount of dust generated. Ultimately, during periods of higher winds, this would result in additional particulates reaching residents to the east, as I have seen when visiting friends in El Centro. I have observed clouds of sand blowing down the streets of El Centro with severely limited visibility, much worse than the dust storms where I live south of Ocotillo. (See Exhibits 569, 570, 571 to read of concerns about Imperial County air quality issues.)

29. When it comes to the issue of power plant reliability, the staff seems quite accurate in asserting that:

Staff cannot determine whether the applicant's availability goal is achievable and cannot predict what the actual availability might be, given the demonstration status of this Stirling engine and limited data on large-scaled deployments of Stirling engines. (The availability factor of a power plant is the percentage of time it is available to generate power; both planned and unplanned outages subtract from this availability.) Staff believes it possible that the project may face challenges from considerable maintenance demands, reducing its availability. (ES-35)

30. Given the unproven nature of the proposed technology and lack of larger scale or longer duration demonstration of success, it seem more than ill-advised to use federal funding to finance a private investor company whose "renewable energy " activities would cause irreparable harm to the public lands and their resources, both for the IV Solar Project site and for the public lands that would be impacted by the activities whether the project succeeded or failed. Accordingly the wise decision in light of the very significant cultural resources and wildlife habitat would appear to be to support the No Action Alternative with Plan Amendment to ensure that no other solar projects submit AFCs in the future. This would be the resource protective and staff would not have to engage kin seemingly endless hours reviewing projects which should not have merited the expenditure of time and effort.
31. How curious it is to review the Staff summary of **Socioeconomics and environmental justice** in the SA/EIS.) At the Evidentiary hearings the applicant spoke of a \$2 billion project, but when one considers the \$8.92 million for local operation annual payroll, property taxes of \$0.84 million, 7.4 million for operations and maintenance, etc, it appears that relatively little money would stay in Imperial County.
32. I was unable to find discussion of **visual resources analysis** from the perspective of Native Americans for whom the lands are sacred. I know that this can be done because BLM considered visual resources issues when it evaluated and decided to deny the Plan of Operations for the proposed Glamis Imperial Mine. Even if sacred sites are not disclosed, and they should not be, It would seem that the public benefits form a better understanding and appreciation of Native American traditions and views of the lands on which their ancestor lived.
33. With reference to staff discussion of Noteworthy public benefits,(ES-47) there is inadequate information for comparisons to ascertain if the same benefits could be achieved by other means.
34. For example, if a goal is reducing GHG, what amount of GHG reduction could be achieved by reducing the speed limit back to 55 mph, increasing the energy efficiency of existing housing stock and using distributed rooftop PV rather than using all the fuel for manufacturing, transportation and construction of the materials needed for the SunCatcher technology and needed new transmission lines? How would those alternatives, either alone or combined make a contribution to reduction of toxic air contaminants?
35. The section on Noteworthy Public Benefits is absolutely unconvincing and appears to be a

desperate attempt to say to find something positive to say about the project, without considering any meaningful alternative solutions and reducing demand. The alternatives suggested in this letter should be able to qualify for loan guarantees under Title XVII of the Energy Policy Act of 2005 (ENACT) given a strict interpretation of the text provided at p. A-3.

36. “The ENACT established a Federal loan guarantee program for eligible energy projects that employ innovative technologies. Title XVII of ENACT authorizes the Secretary of Energy to make loan guarantees for a variety of types of projects, including those that “avoid, reduce, or sequester air pollutants or anthropogenic emissions of greenhouse gases, and employ new or significantly improved technologies as compared to commercial technologies in service in the U.S. at the time the guarantee is issued.” The two principal goals of the loan guarantee program are to encourage commercial use in the U.S. of new or significantly improved energy-related technologies and to achieve substantial environmental benefits. DOE can comply with the requirements under ENACT by selecting eligible projects that meet the goals of the Act.” (A-3)
37. Why not be innovative and creative and try the new and improved technologies to insulate homes, change behaviors and lifestyles by driving less, and using small portable 6 inch personal fans rather than air conditioning and sweaters and jerseys instead of heating homes and buildings in Southern CA, what about retrofitting windows on public places that would be energy efficient
38. **Project does not have an assured water supply and there is inadequate up to date information on the proposed alternative water supply for any agency decision other than to deny.** The question of an assured water supply and what it means to others who have relied on that source **if groundwater**. I have submitted a detailed analysis with many exhibits on the alternative water supply as a witness for Intervenor Tom Budlong at the CEC Evidentiary Hearings. Yes, there is repetition, and there may be some typos not yet found, but I am submitting them as exhibits for the comments on the SA/DEIS. (See Exhibits 566 and 567.) (The letter to the US ACE is submitted as Exhibit 572.)
39. SA/DEIS at c.7-3 states that “No groundwater would be used by the project and the effect on groundwater infiltration would be negligible.”
40. Project appears now to have no assured water supply. Seeley WasteWater Treatment Facility is in process of doing an EIR for upgrade and to address impacts of loss of outflow to wetlands along New River and could not be ready to deliver water for construction when applicant wants to start ...driven by desire to get federal monies.. May 5th Applicant's Supplemental AFC now identifies use of potable groundwater from Ocotillo by tank trucks for construction, dust suppression and mirror washings. However the documentation provided by the applicant for the hydrology and groundwater issues is more than woefully inadequate given the absence of monitoring information, pumping information and water quality information for the well in question and the nearest wells the US Gypsum wells.
41. We learned that there is no valid permit to export water from the proposed well as of yesterday May 25th, 2010 at the Evidentiary hearing.
42. If groundwater were to be approved, it could/would eliminate source of domestic water for residents of Painted Gorge and West Texas who were identified as using this source in documents dating since 1996 and likely much earlier. So much for the CA hierarchy that puts domestic use as a higher priority than industrial or commercial activities. No one could answer the question about what happens if current domestic users lose their supply. Applicant intends to take all the water pumped from the well. The groundwater is from a US EPA designated Sole Source Aquifer, which means that in 1996 when EPA made the determination it recognized the

water availability/water quality problems that are associated with the area where groundwater users get water for all needs. Derailed information and questions about the Boyer Well will be appended at the end of this comment letter.

43. The 2/2010 SA/DEIS document identifies the Seeley Waste Water Treatment Facility (SWWTF) as an intended source for 150,000 to 200,200 gallons of tertiary treated water for construction and operation (ES-4). The environmental impacts of use of this water have not been fully evaluated because there has not been any real discussion of what losing the outfall of treated wastewater would mean to the wetlands now receiving the water.
44. When it comes to water I am wondering (ES-6) what is meant by the statement that the daily water requirement for SunCatcher mirror washing would be approximately 10.4 gallons of water/minute.” If 30,000 SunCatchers that sounds like 0.96 AF/min, but again what does this really mean in terms of water usage.

Alternatives

45. SA/DEIS fails as an informational document because the Alternatives discussion really only considers variations in the size and placement of SunCatcher units on the site under NEPA or at off site locations under CEQA in addition to the No Action/No Project Alternative. See Sections starting with B.2.6. There was no consideration of alternative measures or technologies recommended by the public as measures which could accomplish the energy and GHG emissions goals of the proposed project. CEQA and NEPA provide opportunities for considering alternative measures, solutions, or locations to solve a problem even if they are not part of the project as described by a project applicant.
46. Here Alternatives analysis other than the No Action alternatives seem to be driven by the profit motives of the project applicant. The SA/DEIS Alternatives discussion is from the perspective of applicant financial motives, when there must be some analysis of what the same amount of taxpayer funding could accomplish if the same amount of funding were to be made available for community based solutions which would reduce electrical demands on the system.
47. Please add an analysis of public generated recommendations for alternatives to the proposed industrial scale privatization of public lands to solve the energy and emissions problems.
48. And please add to the analysis the savings in fossil fuels that will accrue when the speed limit is reduced to 55 mph as under President Carter. Surely there is abundant data indicating the success of that effort in the past.
49. I am appending a letter submitted to the US ACE for its comments and included a number of exhibits related to the question of new, and alternatives solutions.(Exhibit 572)

BLM CDCA Plan Amendment Issues

50. The Summary in Sec A.3 for Land use plan conformance and amendment raises troubling questions about how BLM language is to be interpreted. I reviewed the section of the SA/DEIS and compared that with text from BLM’s 199 version of the 1980 CDCA Plan.
51. **What uses are categorically allowed in all Class L Multiple Use areas.?** It is extremely troubling to note that the A-8 text suggests that in BLMs’ Class L lands that such intensive surface damaging industrial activities would be consistent with a Class L designation without any amendment to the CDCA Plan.. The SA/DEIS p. A-8 states that: “The proposed project does not require a change in the Multiple-Use Class classification for any area within the CDCA.” Very specifically the BLM CDCA Plan makes the following statement defining Multiple Use Class L:

52. **MULTIPLE-USE CLASS L**

Multiple-Use Class L (Limited Use) protects sensitive, natural, scenic, ecological, and cultural resource values. Public lands designated as Class L are managed to provide for generally lower-intensity, carefully controlled multiple use of resources, while ensuring that sensitive values are not significantly diminished. (BLM CDCA Plan As Amended at p. 13, copied verbatim from Plan).

53. Please explain what it is that I do not understand about the nature of the activities proposed for the solar project including roads, buried piping, installation of SunCatcher units, construction of buildings, etc that is in any way protective of the sensitive natural, scenic, ecological, and cultural resource values that we hear about in public meetings , workshops and evidentiary hearings. What I have heard sounds like privatization , fencing to exclude all other uses, and carving up the land with more than 234 miles of scraped unpaved roads to access the intensive industrial facilities components. Massive industrial conversion of 6,500 acres for private use seems the antithesis of compliance with the language and intent of the Multiple-Use Class L designation.
54. If as other text on BLM 199 Amended CDCA Plan (at p. 13) suggests that 5,883,000 acres of BLM administered public lands (or 48.5% of CDCA lands) are Class L, should the public now be advised that 48.5% of BLM managed lands or almost 5.9 million acres are now fair game for intensive industrial development for “renewable energy” and could be considered sacrifice areas for disposal to private investors at the expense of the public treasure and at a use loss for the resource values that triggered the Class L designation?
55. Has the definition of Multiple Use Class L already been changed to allow for intensive industrial scale solar, or is it the intent of the CDCA Plan Amendment for this or another project to change the definition of Class L to allow industrial scale solar generating facilities in any and all Class L 5,883,000 acres of public lands managed by BLM in the CDCA? If the definition of Class L has been changed, when was it and by what means was that information conveyed to the public, not just industry.
56. Title VI of the FLPMA, under CDCA, provides for the immediate and future protection and administration of the public lands in the California desert within the framework of a program of multiple use and sustained yield, and maintenance of environmental quality. Multiple use includes the use of renewable energy resources, and through Title V of FLPMA, the BLM is authorized to grant ROWs for generation and transmission of electric energy. *The acceptability of use of public lands within the CDCA for this purpose is recognized through the Plan’s approval of solar generating facilities within Multiple-Use Class L.* (SA/DEIS at p. A-9) (emphasis added)
57. But what does this mean? Has the definition of Class L already been changed? Or is it that the CDCA wide definition for Multiple Use Class L will be changed if the Plan is Amended for this project, even if the Amendment is to deny the siting of any future solar projects on the proposed IV Solar site? The language of any Plan Amendment is extremely important because the Plan covers more than 12 million acres of BLM managed lands in California. An error or omission in language could create loopholes of unimaginable magnitude and significance. (Imperial County spent more than 15 years and 8 lawsuits in state and federal court, because it ignored public concerns, and compounded that mistake in judgement by the addition of the letter “s” at the end of a single word. Relevant, of course, because that mistake was related to use of groundwater from a single well in Ocotillo, consequences to the groundwater basin locally were bad enough, but years in court for County vs the property owner all could have been avoided. That was one wells, but there was litigation related to impacts of export from a second well also.)

58. I spoke with Daniel Steward at the BLM EL Centro Field office this morning to try to understand answers. There were no answers, only encouragement to raise the issue in comments. I also spoke with Jim Stobaugh and understand that any Plan Amendment would be very site specific. Nevertheless, experience urges caution, because I am uncertain who the ultimate decision-maker or crafter of Plan Amendment text might be.
59. The SA/DEIS mentions site specific plan amendment when it states that “the proposed project would require a BLM ROW grant and a project-specific CDCA Plan Amendment.” (C.8-1) But with more than 1 million acres of the CA desert proposed for solar and wind energy development, any Plan Amendment, no matter how site specific it is intended to be could, indeed would have implications far beyond the specific project site.

NEPA No Action Alternatives

60. Discussion of the three different BLM No Action Alternatives (SA/DEIS B.2-18) is more than a little confusing without the specific text of any CDCA Plan Amendment related to interpretation of the definition for Multiple Use Class L.
61. I strongly recommend the No Action Alternative, and believe that it makes sense to deny any future consideration of industrial scale solar development at the proposed project site. However, if such a plan amendment would open the door to all Class L lands being available for industrial scale wind and solar in the future, it would be better to have no plan amendment, but what a waste of time energy and resources to have to go through the same process again!
62. A Plan Amendment that would prohibit consideration of any other solar projects at the site and denying the IV Solar Project would best serve the interests of public lands. But Please be extremely careful about the text and I urge that there be NO change in the definition of Multiple Use Class L.

Importance of place to the public, or feeling of sacred sites may be something universal

63. I have been participating in the Section 106 consultation process because I have had a long time concern about the issues of sacred lands, sacred geography and had the extraordinary opportunity to get to know indigenous people living in North America and from all continents except Antarctic.. I understand the pull of the land, of certain places that change forever how one related to the environment and world in which one finds oneself. For more than a decade I have been invited to participate in conferences where the vast majority of participants are indigenous people coming together to try to find solutions to problems that threaten traditional cultures, ways of life and traditional lands. Each gathering has been inspirational and I have learned so much more than I have been able to share.
64. I have been with Tibetan refugees on several occasions at the site of the proposed Glamis Imperial Mine project in eastern Imperial County and experienced their reluctance to leave, because for them they were in a place that took them back to similar places in Tibet. It is the land, the viewshed, the rocks and diversity of short vegetation that does not interfere with the views of the mountains that gave Tibetans peace in Imperial County. Something about the universality of the sacred and the understanding of sacred geography that pulled Tibetans to the place that has long been sacred to Native American peoples along the Colorado River. And, yes, My husband and I also spent many days there because it was an incredible and awe-inspiring viewshed where one could never get lost, a place to find peace and purpose in life, a place where land matters.
65. So, I was surprised when I left the 106 PA meeting last week and drove west on Interstate 8 through agricultural lands and out into the open desert, a trip I have made hundreds of times in

recent decades. I have always loved the washes and topographic diversity between I-8 and Old Hwy 80, the very lands proposed for the IV Solar project.

66. As I told Carrie Simmons in a phone message after returning home and also mentioned in public comment at the CEC hearing on Monday May 24, 2010, the first word that came to my mind after leaving Ag lands and getting into the open desert was "safe". Over and over again the word "safe" told me about that place, safe and peace. I had not realized just how much this very part of the desert had come to mean to me. For me the IV Solar project site, looking out across the desert, feeling the life associated with the washes all with the Coyote Mountains in the distance, there is a sudden overwhelming sense of suddenly feeling safe and at peace, the washes are almost magical, healthy with vegetation showing no signs of die-back as elsewhere in the western part of the County. In the 33 years I have lived here, this special part of the desert has become sacred to me, because it is bringing me home, close to the desert I love, and away from the technologies and chaos of a fast paced world that often makes no sense in terms of what is important. I was in tears before I got to Ocotillo because the thoughts of losing this open desert and healthy washes was a hurt that caught me off guard, and I am in tears as I write this as Carrie Simmons requested that I share with others at BLM.
67. For those of us who are not city folk and live with the desert as our neighbor, sacred lands are a part of our lives. One does not have to be a Native American or have generations of cultural ties to the land to understand that the concept of sacred sites and viewsheds that encompass the sacred are a part of everyday life, even if we are not physically there every day. Last week I finally understood that for me the north side of I-8 with the lands proposed for IV Solar...that is land and a viewshed that has become part of who I am and what I value and I cannot imagine what losing that viewshed will mean for me. I understand Carmen Lucas and Preston Arrowweed, their passions and concerns, and how difficult it is to get others to understand something that cannot be easily described with written words..
68. The Imperial County desert is not a wasteland to be exploited or sacrificed so people a hundred miles away, who know nothing of the land or its resource values, can have ever increasing consumptive lifestyles. There are other solutions to energy issues that do not involve loss of significant public lands.
69. City people too often see the deserts as sacrifice areas necessary to support affluent urban lifestyles and higher levels of consumption. They can't recognize prehistoric evidence of the desert dwellers hundreds and thousands of years ago. Some seem to prefer Interstates, paved streets, vs. foot trails going from water source to water source with distant mountain peaks to guide the way. Some of us need to see and feel a wide horizon to have any hope for the future. The biological diversity in so much of the desert far surpasses that of the forests...that from my sister who is a botanist for the National Forest Service doing plant surveys in NH and ME, but regularly visits here in the desert.
70. On the day we spent exploring part of the project site it was most amazing twwhat we found.. What a wonderful experience that was, with wildflowers and healthy washes beyond my wildest imagination. And how many hundreds of times have I driven past the site during the past 33 years. It has become part of my sacred geography. One doesn't have to be a Native American to become extremely attached to those open public lands with exciting washes and mountains on the horizon to understand the overwhelming sense of peace and safety that overcomes you as soon as you eliminate the view of agriculture and modern human activities from the horizon. "Safe" was the word I felt as soon as I reached the open desert by the proposed project site after leaving a day of 106 meetings last week. Traveling west, by the time I got to Ocotillo I was in tears at the thoughts that it might all be destroyed for an unneeded project. I had not realized

how much that area had come to mean to me each time I left Imperial Valley agricultural fields for the open desert as it has been left for us all to find peace. Yes, I understand why Native Americans have such a difficult time trying to explain why this area is so important. They speak for the future of all living things, and they are right to care.

Environmental Justice

71. All this really points to is looking at areas with low levels of education, high unemployment and majority non-anglo populations as areas where damaging projects are acceptable to many in remote urban areas, projects that would be rejected near more affluent communities. This **environmental justice** issue was brought home to the CEC during public comment by a faculty member at the college. What is in it for residents of Imperial County, increased air pollution, likely increased asthma rates and an eyesore to remind them of their second class status every time they leave or return to the County, something to remind them that others have found the low income desert communities acceptable sacrifice areas. Siting a project such as Solar 2 adjacent to the Interstate is to be sure that the local people will not be able to ignore how others have chosen this place where they live to be a sacrifice area.
72. Yes, it is an environmental justice issue! If people really cared about the jobs issue, the money would go to distributed rooftop PV and insulating homes to make them use less electricity both winter and summer in the desert. \$2 Billion (that is for Solar 2 only, transmission line is extra) would go a lot further for improving the quality of life for people in Imperial County if NOT spent on an industrial scale solar project not needed by San Diego. Should I find some comfort that it is the electric rate-payers who get their electricity from SDG&E that will have to face the increased electric bills, rather than increasing rates for electricity in Imperial County. But what have the average electric users in San Diego done to deserve what this will cost them? I don't understand why they are not getting very upset. And I don't understand why CEC and BLM are not evaluating serious alternatives to industrial scale remote generation.
73. The only winners would be the investors of the project applicant and SDG&E...and then only maybe. This project is one of many slated for the destruction of Imperial County deserts. Individually ugly, but cumulatively an impending disaster for the species that have adapted to extremely harsh conditions and for the people who call this area home.

FTHL

74. As we listened to the info at the Evidentiary Hearing, with a potential for 2000 to 5000 FTHL on site, if they do construction immediately and increase travel speeds from 15 to 25 mph on the hundreds of miles of unpaved roads, the only real questions are how, when and where the FTHL will be killed. To think of translocation to already occupied habitat in winter sounds like a grand scheme for failure. And inappropriate for a species being considered for listing now.

Noise

75. I was shocked to see and hear the incredible noise of the SunCatchers at the Maricopa site. It would be enough to drive anyone crazy unless the person is already deaf, but animals cannot obtain hearing protection. Until Monday I had not realized how much noise would be generated!

De Anza Trail

76. From what I am learning I believe that there is serious concern about proposals for moving the De Anza trail, which of course was originally a Native American trail going from water source to water source. Hundreds of years ago, and even when Europeans first arrived, there were still

small surface bodies of water. Many were destroyed when the canal broke banks and the New River was formed in 1905, That flood destroyed many historic lakes that are memorialized only in name now. Of course, the original inhabitants knew where the water sources were.

77. San Diego residents who are members of environmental organizations including the Sierra Club and others know the IV Solar project is not needed based on the research and writings of Bill Powers.

Alternatives and what the \$2 billion could do to solve energy issues

78. Based on all I know, I am more convinced than ever that the preferred Alternative that makes the most sense is the No Project, BLM Plan Amendment to deny the project and prohibit solar projects on the project site. That recommendation was made in public comments and in my comments as an individual to the Army Corps of Engineers. Yesterday ,the project applicant explained that this is a \$2 billion project and that the deadlines are driven by the Applicant's need to get federal funding.
79. In my mind there are serious questions about whether there can be any justification for using taxpayers' money to destroy fragile desert public lands with important cultural resource/sacred sites values when there are so many viable alternatives that combined would reduce electrical demands, improve quality of life, and reduce greenhouse gases. Does anyone know how much distributed PV and home insulation to reduce demand could be done with the \$2 billion that the industrial scale solar would require for financial viability? \$2 billion for alternatives would mean lots more jobs closer to where people live.

Water well issues related to the Boyer well and the Ocotillo-Coyote Wells groundwater basin:

80. The monitoring data and information about water wells that was used by USGS for its 1977 report on the groundwater basin raised much interest and concern among residents of the groundwater basin. And can be summarized as follows.
 - a. The County Dept. Of Public Works provided to residents copies of the 1977 USGS Groundwater study and model that was locally called the Skrivan Report. (Exhibit 537, USGS 1977)
 - b. Some time after the USGS made its presentation to the Board of Supervisors, and during a public hearing, I challenged the reliability of the computer model because USGS water level monitoring data for the domestic wells in Yuha area and the well that was exporting groundwater showed that there was a significant decline in water level centered at the export well.
 - c. USGS staff agreed with my conclusion that when the computer model cannot predict what the monitoring data shows, that it is the computer model that is inaccurate not the monitoring data.
 - d. I was provided with computer print outs of water level and water quality monitoring data from USGS and a USGS printout that provided information on well construction, location, and ownership (Exhibit 553) that was included in the 1977 USGS Report (USGS 1977 Exhibit 537 and 553) .
81. Water levels and water quality issues in the groundwater basin have been a growing and continuing concern for groundwater users for more than three decades. In fall 1977 I moved from Ocotillo to Yuha and was caretaking a property immediately south of a well which had started to export groundwater in September 1977. In 1977 all the homeowners became very concerned because in September 1977 tank trucks began lining up, leaving engines running and filling with water at all hours of day and night from the Simpson-McDougal well at the center of the 160 acre subdivision in addition to lining up at the well in Ocotillo. Residents were concerned, and when USGS came to monitor wells, residents learned water levels were showing signs of decline.
82. The 1977 USGS study that residents and the County were concerned because the USGS study revealed that:
 - a. Water levels were declining where the residential development was.
 - b. All groundwater pumping in the basin was located in a relatively small area or private land because most land is owned by federal govt BLM (See ONCAP Exhibit 517, Fig 1 after text, and Exhibit 562 a figure depicting location of wells on private lands)
 - c. 90% of annual pumpage is centered in Ocotillo (Exhibit 537 p.1, 45)
 - d. overdraft or groundwater mining because groundwater levels are declining (USGS 1977, 7 Exhibit 537 p. 35) and discussion by USGS at County meeting
 - e. large cones of depression of water levels centered around and downgradient from wells that were pumping 100 AF/Y or more of groundwater in locations relatively close together (USGS 1977, Exhibit 537 Fig 12, pp. 38-39)
 - f. concern about saline intrusion or migration of highly saline groundwater from the east side of the . (USGS 1977, Exhibit 537 p. 1, 20, 41.)

- g. Some wells in residential areas have poor quality water or high fluoride levels (USGS 1977, Exhibit 537 Fig. 6, pp 18-19)
 - h. USGS report stated that when it was prepared that there was only one well exporting water to Mexico, that was well 16S/9E-25K2 in Ocotillo (USGS 1977, Exhibit 537 at p 14) but a second well 17S/10E -11G1 had started to export to Mexico in September 1977. USGS report had not considered impacts of this export because it was not exporting water at the time the report was completed and/or the County had not told USGS that there was a second well exporting groundwater from Yuha Estates.
83. The USGS report discussed overdraft and showed local cones of depression where water levels were lower where wells were pumping more than for single family use. But, additionally, there other studies or analyses that addressed these concerns during years when there was ongoing litigation. Important new insights related to how groundwater basin was responding to pumping came to light in these additional/subsequent reports.
- a. Huntley 1979 described significant well interference in locations where groundwater pumping exceeded 100 AF/Y and declining water levels in spite of years one might consider above average recharge based on rainfall (Huntley 1979 p. 11, 21 Exhibit 549)
 - b. Huntley expressed concern about the computed overdraft or depletion as seen by declining water levels, and “continued uncontrolled pumping” which “suggests that the ground water resources of the basin are seriously overallocated.” (Huntley 1979 p. 21 Exhibit 549)
 - c. Huntley was further concerned that the USGS report tended to “underestimate the problems of overdraft in the Ocotillo-Coyote Wells basin.” (Huntley 1979 p. 21 Exhibit 549)
 - d. Zipp from the State Water Resources Control Board prepared a report for a hearing of the RWQCB and noted that the basin (a very large area of mostly BLM lands) was not in critical condition of overdraft, but that there were several local cones of depression around major extraction areas. (Zipp 1980, Exhibit 554 p. 19)
 - e. 80% of water pumped in basin is exported from the basin. County should use hydrologic boundaries not political boundaries to define basin.. ...”all extractions from basin by US Gypsum must be considered as exports because water is taken across the fault into poor quality, unusable area.” (Zipp 1980 Exhibit 554 p. 7)
 - f. Cones of depression in Ocotillo, Coyote Wells, and Yuha Estates areas have resulted in well interference. (Zipp 1980, Exhibit 554 p. 19)
 - g. There is no evidence of recharge despite years of heavy rainfall,(Zipp 1980, Exhibit 554 p. 19)
 - h. Additional export of water from the areas affected by well interference will only intensify the problem. (Zipp 1980 at p.19)
 - i. Deepening of the pumping cones may induce poor quality water upward from the deeper zones.” (Zipp 1980 at p.19)
 - j. Huntley 1993 in response to my observation that one well exhibited an increase in chloride level which his court testimony had stated could be an indicator of saline intrusion, prepared a report for the APCD in response to a request by US Gypsum to increase the amount of groundwater it exported. (Exhibit 548)

- k. Huntley discusses “local degradation [of water quality] in response to overdraft in the Ocotillo area” at the export well 16S/9E-25K2. (Huntley 1993 p. 1, Exhibit 548)
 - l. “Groundwater level information suggests that local overdraft conditions continue to exist within the Ocotillo-Coyote Wells basin, despite decreases in production from wells.” USGS monitoring data indicated declining water levels including from US Gypsum well 36H1 contrary to the information provided by USG. ((Huntley 1993 p. 2, Exhibit 548)
 - m. Huntley recommended that US Gypsum groundwater production should not exceed 380 AF/Y. (Huntley 1993 p. 2, Exhibit 548)
84. Imperial County updated its General Plan in 1993. The updated General Plan affect planning for the Ocotillo-Coyote Wells Groundwater basin planning area in the following ways related to groundwater usage.
- a. After lengthy input and community meetings, in 1994 the Board of Supervisors adopted the Ocotillo/Nomirage Community Area Plan (ONCAP) as a part of the Land Use Element of the General Plan. (Exhibit 517)
 - b. The intent of the County in preparing the ONCAP “is to maintain and protect the existing rural character of the area and to preserve its natural resources.” (ONCAP p.2)
 - c. Text notes that “The entire planning area is dependent on groundwater. Historically, water has been of good quality. Recently, however, data seems to indicate a possible decline in water quality in some areas of the basin.” (ONCAP p. 4)
 - d. The ONCAP states that: “Preservation and conservation of groundwater is one of the major concerns of the Ocotillo/Nomirage Community Area Plan. Water use, quality, quantity and protection are key issues in planning for the area. All land use proposals shall be reviewed to determine their impacts on groundwater quantity and quality.” (ONCAP4)
 - e. Protection of Environmental Resources lists Objective 5.3 “Protect the groundwater in the Ocotillo/Nomirage Community Area from overdraft and saline conditions.” (ONCAP p. 10) Objective 5.4 “Ensure that new development proposals do not contribute to overdraft or increase salinity of groundwater.” (ONCAP p. 10) Objective 5.8 Work with IID and US Gypsum to examine other water sources and reduce their dependence on groundwater. (ONCAP p. 10) Objective 5.10 “Impose a limit of 1.5 acre-feet of water per dwelling unit in the Ocotillo/Nomirage Community Area>” (ONCAP 10)
 - f. For the Community Vision Objective 7.2 says: “Ensure that future growth and development is orderly, safe and does not cause overdraft, contamination or increase salinity of the groundwater aquifer.” (ONCAP p. 11)
 - g. The ONCAP specifically requires a site specific geohydrology study for any project or property intending ro use more than 5 acre/feet/year or for any subdivision to be served by groundwater. (ONCAP 14, 15, 16, 17) .
 - h. Under Commercial Development the ONCAP states that: “It is the intent of the plan to maintain the existing character of the community by discouraging regional commercial land uses in order to preserve the groundwater resources from overdraft and contamination.” (ONCAP 22)
85. Did the ONCAP ‘s only reference to the well at the Boyer property (formerly the WestWind Water Company) is found on ONCAP p. 4 ONCAP did not say anything about export of water from this property to Mexico or state how much water us supplied to the residents of Painted

Gorge.

- a. ONCAP in discussion of existing conditions related to water mentions the “West Wind Water Company (Elfring) which supplies Painted Gorge residents.” (ONCAP p. 4) The West Wind Water Company is now known as the Boyer well.
 - b. There is no information about how many homes there are in Painted Gorge or in West Texas which is just to the east of Coyote Wells. Also no information about how many permanent residents live in those places. In the ONCAP, However, information about that water usage at West Texas and Painted Gorge is found in the BE 1996 and 2004 reports for US Gypsum.
86. After the ONCAP was approved and residents had learned more about groundwater issues and seen how other communities tried to protect their groundwater basins from over-development or degraded quality, local residents were inspired by the efforts of the residents of Boulevard after their groundwater basin was designated as a Sole Source Aquifer by US EPA.
- a. USGS report and other studies all showed that the groundwater basin was the only source of water for all domestic needs of the communities overlying the groundwater basin, and reports warned that overpumping could result in the degradation of water quality if water levels continued to decline.
 - b. In May 1994, residents began working together to apply for Sole Source Aquifer status with the aid of a pro bono attorney who lived in the community.
 - c. In September 1996, the Ocotillo-Coyote Wells basin was designated as a “Sole Source Aquifer” by EPA in 1996, and because of that designation, any project for which there is any federal money to be spent would require a serious study by US EPA and USGS to determine impacts and mitigation for impacts on the SSA. (Exhibit 515.)
87. What is the significance of Sole Source Aquifer designation?
- a. The EPA determined that the Ocotillo-Coyote Wells Aquifer in SW Imperial County CA “is the sole or principal source of drinking water for Ocotillo, Nomirage, Yuha Estates, and Coyote Wells and that this aquifer, if contaminated, would create a significant public health hazard.” (EPA 1996 at p. 47752, Exhibit 515)
 - b. “There is no economically feasible alternative drinking water source near the designated area.” (EPA 1996 at p. 4775, Exhibit 515)
 - c. The designation is important because the EPA made its designation based on hydrologic boundaries with the Elsinore Fault marking the northern boundary and the Laguna Salada Fault along the eastern boundary (as recommended by Zipp 1980) rather than using a political boundary to include Plaster City factory as did USGS 1977 presumably at County request.
88. Groundwater basin come from fossil water. Several reports state that there is recharge to the basin from the Jacumba Mountains and Coyote Mts Wilderness areas, but there is very little rainfall in these mountains. There is also supposed to be some recharge to the basin when water in Myer Canyon is flowing if there is runoff in the mountains to the southwest of Ocotillo. However,
- a. No water level monitoring of wells overlying potable waters done by USGS since the 1977 report has shown any increase in water levels in wells even though there have been three 100 year storm events that caused flooding from the Jacumba Mountains, in addition to several years of above average rainfall associated with El Nino years.

- b. My discussions with John Izbicki, PhD of USGS water Resources Center in San Diego over the years leads me to the understanding that the water in the basin is “fossil groundwater” that is a remnant of a different weather and climate pattern toward the end of the last ice age., perhaps 10,000 to 100,000 years ago.
 - c. Groundwater in other desert groundwater basins has been dated and is tens of thousands of years old according to published research by Dr. Izbicki. From Dr. Izbicki and others at USGS I have learned that when the water is gone, it is gone because there is no longer enough rainfall to wet a dry column of soil in many places several hundred feet below the surface.
89. Based on information in technical reports and my own analysis of monitoring data from USGS, I am concerned about the potential for declining water levels and degradation of water quality for downgradient domestic wells in the Nomirage area based on changes already observed in wells monitored in other nearby parts of the groundwater basin.
- a. Based on my review of USGS monitoring data and the studies that have been done, I am concerned that if US Gypsum and other nearby wells are permitted to export or extract 100-200 AF/Y from the existing large capacity wells that water levels will continue to decline and that there are inadequate protections /ineffective mitigation measures / inadequate and unimplemented monitoring which could do anything to protect residents of Nomirage from serious water quantity/quality problems?.
 - b. The Boyer well is the closest well to the USG wells.
90. Why the concern about impacts of pumping near the SE part of Ocotillo on the community of Nomirage?
- a. The Graham well near the center of Nomirage was unable to supply the needs of the Nomirage subdivision decades ago, so all dwellings had to pay to put in private domestic wells to serve each family, even though the subdivision was intended to have a single water supplier such as in the community of Ocotillo a few miles to the NW.
 - b. Depths to groundwater near and in parts of Nomirage are relatively shallow according to USGS 1977 and USGS subsequent water level monitoring (See Exhibit 516 for a table with water levels.).
 - c. The Nomirage area does not respond to pumping the same way as do the larger capacity wells in Ocotillo. Water quality in the Nomirage area is highly variable today with considerable difference for one well to another even on adjoining lots. Water level declines in Nomirage are on a continuum and static water levels are much lower than in Ocotillo. (See details in Exhibit 516, the table I prepared for comments on the 2008 Final EIR/EIS for the US Gypsum project.)
91. The major past or proposed groundwater concerns for the community of Nomirage follow:
- a. Failure of County to adequately and seriously consider impacts of commercial and industrial scale projects on Nomirage
 - b. Past proposal to create a sand and gravel operation on lands adjacent to the SE part of Nomirage, finally denied by Supervisors in November 1998. White Gravel pit would have intersected watertable if permitted and been the first sand and gravel operation in the State of California to be approved on lands designated for residential development..
 - c. Continued or increased groundwater extraction for export from 3 wells owned by US

Gypsum to east and southeast of Ocotillo . County approved US Gypsum expansion and increasing groundwater export in 1998 without requiring any groundwater study as required by the ONCAP. That decision was challenged in Court in January 1999 and still has not been resolved.

- d. Proposal by Wind Zero Group for a military style “law enforcement training facility” and 6.1 mile competitive race course, and luxury townhomes and resort hotel called Coyote Wells Specific Plan (CWSP) on about 944 acres immediately adjacent to Molitar Road, the eastern boundary of Nomirage,
 - e. CWSP project has a FEMA designated floodway going through property and nearby wells have poor quality water. Applicant proposed to use anywhere from 67 to 87 or more AF/Y of groundwater from 2 wells on-site My calculations of the uses suggest closer to 126 AF/Y. CWSP DEIR suggests that even more groundwater might be needed. ()
 - f. And now the proposal for the Boyer well upgradient of Nomirage to be used as an Alternative Supply of Water for the Imperial Valley Solar/Solar 2 Project pumping 40 AF/Y, but asserting a need for 50 AF/Y during construction..
92. There have been other studies or reports on this groundwater basin that have raised concerns about the potential for adverse impacts of increased groundwater pumping. And I have submitted written comments on those projects for different organizations and community groups.
- a. El Remate 1990 proposal to pump about 1000 AF/Y in the vicinity of Sunrise Butte along the Laguna Salada Fault in the SE part of the basin. Against the recommendations of its own consultant, the County approved a permit for pumping about 600 AF/Y. I submitted comments for the Ocotillo Community Council and Exhibit 562 is one of the maps I prepared to depict geology and well location and extent of private property, and the distance to which the cone of depression would extend, even upgradient. Lawsuit followed and project was abandoned. County decided to Update its General Plan.
 - b. White Pit project adjacent to Nomirage. It took about 5 years for community to convince County to deny this ill-advised project. Land is now for lease.
 - c. US Gypsum expansion project. USG first wanted to increase its groundwater pumping in 1993, then again in 1998. Huntley had recommended that USG’s pumping be limited to 380 AF/Y. I commented on project and problems at Planning Commission on behalf of Sierra Club. After County approved the project without requiring an EIR, Sierra Club filed a lawsuit and the Court of Appeals decision required preparation of an EIR . See Exhibit 538.
 - d. Recently in 2010 the Wind Zero Group’s Coyote Wells Specific Plan for law enforcement training , competitive racing, luxury housing and resort hotel on property through which a FEMA designated floodway passes has raised lots of concerns about groundwater impacts. I submitted comments on behalf of Sierra Club’s San Diego Chapter, the CNRCC Desert Committee, and Desert Survivors.
 - e. The 2009 Ocotillo Express Wind Facility also proposed to use groundwater from undisclosed sources for construction of the wind turbans, using 22,000 gallons of groundwater for each of the 240 wind turbines. Turbines are planned for north and west of Ocotillo and west and south of Nomirage. (See Exhibits 525 and 529 for locations of wind turbines and estimates of water usage..)
 - f. Further away near the Coyote Mountains are Granite Construction wells are pumping water

for the sand and gravel operations.

- g. Then the proposal to use water from the Boyer well in a quantity in excess of the total permitted quantity, and from a well which is currently serving residential users..
93. What have I learned things from reviewing all these Draft and Final EIR/EIS documents that raises concerns about groundwater studies and the potential for success of proposed mitigation measures related to any groundwater pumping?
- a. First, is that applicants always seem to submit studies that were prepared several years prior to the release of the Draft EIR/EIS and have somewhat outdated USGS monitoring information. It doesn't matter who the applicant is.
 - b. Preparers of EIRs and County do not consider the implications of the fact that US Gypsum could not prove that it ever pumped as much as what it told USGS and the County. See discussions about the "US Gypsum variance" which is the difference between the water used at the plant based on production and the amount reported as being used by US Gypsum to USGS and County. This was described both in the Bookman-Edmonston 1996 study , in the DEIR and in the decision of the Court of Appeal.
 - c. The studies for the USG DEIR/S and FEIR/S do not make reference to this discrepancy in groundwater export to the factory or explain how such a 40% discrepancy might affect the conclusions of the USGS 1977 Report or any other groundwater reports .
94. Failure to ignore the discrepancy between what USG likely pumped and what it asserted it pumped is so great as to raise concerns about groundwater basin responses to pumping. Why is this important?
- a. Water levels have continued to decline since the 1977 USGS report and computer model. But what would the estimates of water level and water quality change be if the estimates were based on about half as much pumping as reported?
 - b. Would this mean that the groundwater basin is far more sensitive to smaller amounts of pumping than previously thought? If the basin or parts of the basin are more sensitive/respond to lower levels of pumping with declining water levels or changes in water quality?
 - c. Do the documented changes discovered by USGS monitoring mean that the problem of well interference is even greater than earlier thought?
 - d. What might happen if USG were to pump the quantity it wants, and what about the cumulative impacts of pumping at nearby wells?
95. Information about the Boyer Well 16S/9E-36G4 when learned when reviewing materials provided by the Applicant raises concerns about impacts if the well were to be used as an Alternative Water Supply for IV Solar. Specifically:
- a. IV Solar proposes at different places to use 40 AF/Y, or approximately 50 AF/Y. (Supplemental Application for Certification at pp 1-2, 1-3)
 - b. However, the well is only permitted for 40 AF/Y, but applicant proposed to use 10 AF/Y more than the permitted amount for all uses. (SAC 1-3)
 - c. The temporary nature could be for 6 to 11 months (Appendix D) or 6 months to 3 years (SAC 1-3) , or for the lifespan of operations (if needed). (URS App. D Groundwater Evaluation at p. 6-1)

- d. Well 16S/9E-36G4 is used for “personal use or personal consumption (SAC 1-2), but there is no indication of how many residences are served or how much water is provided for the residential needs of residents of West Texas and Painted Gorge as was noted in the BE 1996 and 2004 hydrology studies for the USG DEIR/S of 2006..
- e. If IV Solar is approved to use 100% of the output of the Boyer well, what will happen to domestic uses by residents of Painted Gorge and West Texas that have historically been met at the Boyer well?
- f. Applicant asserts that the well typically extracted over 100 AF/Y, but provided no documentation to support that assertion.
- g. The only documentation for water sales is from the period part of 1990 through June 2004. (Appendix D)
- h. Neither the 1977 USGS Report, the 1979 Huntley report, 1980 Zipp study, 1993 Huntley letter or 1994 ONCAP contain any statements to suggest that the Boyer well was exporting groundwater or pumping any quantity near 100 AF/Y. Because all of those documents were concerned with groundwater usage and identifying the largest centers of pumping, it seems unlikely that the Boyer well was doing much pumping without being noticed by the County or USGS, especially if there were about 40 trucks/day until 1982 as indicated in the Bammer 7-23-2004 letter. In Appendix D..
- i. Where is the data to support such a claim? Is there documentation or is it simply a claim without basin such as USG’s assertion of pumping up to 767 AF/Y?
- j. Planning Dept response to Brammer letter suggests that County also did not accept that assertion because there was no documentation. (Exhibit 565, referred to in sworn testimony by Harmon and Planning’s Jim Minnick during Evidentiary Hearing on May 25, 2010.
- k. Water level monitoring and water quality data where available suggest that the Boyer well responds in a manner suggestive of well interference and changes in both water level and water quality in wells on the Boyer property raise many questions.
- l. Why were water levels in 36G4 lower than in the USG well 36H1 which is downgradient? It is assumed that the USG well pumped more water than 36G4. (Exhibit 555)
- m. Why did the static water level in 36 H1 decline 6.7 feet between 2004 and 2005 when the well? (Exhibit 555)
- n. Why did water level in 36H1 decline 14.73 ft between 1996 and 2005? (Exhibit 555)
- o. The Westwind table reveals that between 1994 and 1995 when only 7.5 AF was pumped in 1994, that the static **water level in the well 16S/9E-36G4 declined by 16.25 ft. in one year.** Why?
- p. In 2010, the static water level for well 16S/9E-36G4 was 3.27 feet lower than in the nearby USG well 16S/9E-36H1 (USGS monitoring) which was expected to have pumped far more water than the Boyer well.
- q. Which is the center of the cone of depression and/or what is the role of well interference?
- r. At one of the wells on the Boyer property (16S/9E-36G1) there was a marked change in water quality when the water quality was monitored between 1958 to 1975. The amount of total dissolved solids (TDS) steadily increased from 341 mg/l to 635 mg/l during that 17 year period. Why? How much was it pumping during that period? How much were any of

the USG wells pumping at that time?

- s. Wells in this location appear to have rather dramatic responses in water level and water quality with only a small amount of pumping
 - t. Both at the Clifford 16S/9E-25K1 well in Ocotillo and McDougal 17S10E-11G1 well in the Yuha, increased pumping for export lead to declining water quality as measures by increased total dissolved solids?
96. It has been stated that the residents of Painted Gorge and West Texas get water trucked from the Boyer Well. It is uncertain how many people live there now. There are reasons related to water quality in different portions of the basin that explain why they get water from the Boyer well.
- a. The 2004 Bookman-Edmonston “Ocotillo-Coyote Wells Hydrology and Groundwater Modeling study” that was included as a Technical Appendix to the US Gypsum Draft EIR/EIS as Appendix B-2 includes two tables and two pages of information about the Painted Gorge and West Texas water issues at pp 4-4 to 4-6. (See Exhibit 563 re BE 2004 information about Painted Gorge, West Texas and WestWind Water company. Exhibit 564 is information from the B-E 1996 report.)
 - b. Table 4-3 estimates the population in 2010 for Painted Gorge to be 50 persons and West Texas as 13 persons, or a total estimated 2010 population without potable drinking water as 63 persons. (BE 2004 at p. 4-4)
 - c. “Westwind Water company is also located in Ocotillo and provides water by privately owned trucks to Painted Gorge, West Texas, and construction sites in the area. Groundwater underlying Painted Gorge is unsuitable for drinking and all water must be trucked in. Groundwater underlying West Texas is suitable for bathing and landscape irrigation, but drinking water must be trucked in.” (BE 2004 at p. 4-5 and Exhibit 564))
97. There is no documentation of how much water is supplied to those residents from the Westwind/Boyer well available for public review. Alternatively, I could find no information that might permit one to estimate how much water trucked in from the Boyer well might be used .
- a. I can find no information about water usage in Painted Gorge and West Texas in materials provided by the IV Solar applicant or information supplied by Boyer. If included it was not readily located.
 - b. However, the 2004 BE appendix in the 2006 US Gypsum DEIR/S Table at p. 4-4 for applied water usage suggests that residents in those areas might be using/hauling 60 gal/day/person. Using that figure 63 persons x 60 g/dx 365 days =1,379,700 gallons or 4.23 AF/Y. (See BE 2004 at p. 4-4; Exhibit 563)
98. I am concerned about what would happen if those residents are no longer permitted to obtain water from the Boyer well because it would be used at the IV Solar project site. Where would they get water?
- a. It appears that the WestWind /Boyer well has long provided water for those parts of the community and that such use was documented in the 1996 E-E study done for the USG DEIR/S..
 - b. I do not think that the Mutual Water companies would be permitted to provide a permanent supply of water for those who are not shareholders.
 - c. It is a matter of environmental justice that residents of those areas not be denied their

traditional water supply in favor of export of water from the Boyer well for construction and mirror washing at the proposed IV Solar Project site near the USG Plaster City factory.

99. The pump test information supplied by URS raises questions.
- a. Given the historic declines in static water level over a one year with limited pumping what was the pump test run for only one 8 hour day rather than for several days ?
 - b. I ask this because the recovery after 17 hours left water in well still 2.98 feet below what it was when pumping started. (URS at 3-2) What might the results have been if pumping on the second day started with water at a depth almost 3 feet lower than when pumping was initiated?
 - c. Why was there no effort made to get a water level measurement at the nearest well?
100. I have concerns about the significance of the pump test based on knowledge of other pump tests in the basin.
- a. Computer models and projections about the nature of impacts from pumping about 100 AF/Y from a well surrounded by domestic wells in Yuha Estates were more than overly optimistic and monitoring data could not be replicated by any computer model, even the most Recent.
 - b. Check the information in Exhibit 516 for the McDougal Yuha well which exhibited a dramatic decline in water level which also caused in declines in water levels in all measured domestic wells. Our well 17S/10E-11H3 (replacing 11H2)(which was less than 1000 ft from the export well 11G1) showed a decline in water level of about 30 feet in a 5 year period. The water level has been recovering ever since September 1982 when export pumping stopped. (See Exhibit 564 with figures depicting the cones of depression centered at Ocotillo and Yuha.)
 - c. All computer models had indicated that there should be no adverse impacts from pumping 100 or more AF/Y. See Exhibit 516 to see change in water levels.
 - d. It is my recollection that when pump tests have been done in the past, that water levels were monitored in the nearest well. But I was unable to find the test results.
101. For the Boyer well, there is already existing information suggesting that the well is more sensitive to pumping than being asserted by the applicant and those were not addressed by URS information provided by Robert Scott, the URS geologist who prepared the "Groundwater Evaluation Report Dan Boyer Water Company well State well No 16S/9E-36G4" dated 26 April 2010 for the IV Solar Alternative Water Supply assessment.
- a. Why did URS rely on the outdated January 2004 hydrology report by Bookman-Edmonston for the US Gypsum EIR/EIS project without providing more recent USGS monitoring data?
 - b. Why submit the hydrology text from the 2006 DEIR/EIS for the US Gypsum expansion project which appears to include monitoring information and tables with information no more recent than 2000, 2001, or 2003?
 - c. Why didn't URS update the studies with USGS water level and water quality information available on the internet through spring 2010?
 - d. What are the URS explanations for the interesting changes in water levels and water quality observed in the Boyer and USG wells?
 - e. Why didn't URS obtain the pumping amounts for each of the three USG wells and why did

- it fail to provide water quantities pumped from the Boyer well for the past 5 years? What analysis might be drawn if information on water levels and amounts pumped for all the USG wells AND the Boyer well
- f. Why does URS include Fig 1 with well locations but fail to include the location of all the USGS monitored wells? Why was well 16S/9E-34B1 to the west of Ocotillo not shown”
102. Why is the information about well 34B1 important?
- a. Because it is the furthest west well, closest to the supposed recharge coming from the mountains, but in 2009 it had a static water level (253.21' AMSL) that is about 15.71 ft lower than the 2009 static water level in the Ocotillo Mutual Water Company (well 16S/9E-25M2) (268.92' AMSL) that is to the east. What is the explanation for the upgradient well to have a lower static water level than those that are pumping more and are located down gradient?
 - b. Without answering some of these questions it is not possible to determine whether or not and to what extent the proposed alternative source of water would have a significant cumulative impact on downgradient domestic wells located within the growing and deepening cone of depression SE of Ocotillo.
 - c. Why was no information presented to indicate the success or failure of the groundwater related to the implementation of the various mitigation and monitoring measures that are part of the USG approvals from Imperial County in 2006?
 - d. Were the new monitoring wells drilled, if so when and by whom monitored?
 - e. Why was there no discussion or identification of other wells pumping more than a few AF/Y to makes some kind of consideration of cumulative impacts analysis? Wells such as the Ocotillo Mutual and Coyote Valley Mutual, , Wind Zero, Atlas Storage, and Ocotillo Express Wind Facility and sand and gravel operations?
 - f. This is especially concerning when the duration of the alternative water supply use was found in at least two places to state that the duration could be for the lifespan of operations.
103. There is ongoing litigation related to the Court requirement for the preparation of the Draft and Final EIR/EIS for the US Gypsum project and said that litigation is ongoing. I do not know if the mitigation and monitoring measures required when the County certified the EIR have been implemented since 2008. I was told by USGS staff that they are doing no additional monitoring of any new wells. So that makes me think that not all mitigation has been implemented or enforced.
104. BLM has NOT made its Record of Decision to approve the Right of Way for the USG waterline to the WestSide Main canal to use Colorado River water for at least a part of the factory use and this ultimately has a significant adverse impact on downgradient water levels .
- a. US Gypsum is currently getting gravity flow groundwater through w water pipeline from Ocotillo.
 - b. USG is not using the up to 1000 AF/Y of Colorado River water authorized by IID because BLM has not issued its Record of Decision for the 2008 USG FEIS.
 - c. BLM cannot issue a ROD until Fish and Wildlife Service completes its Biological Opinion because other projects related to energy are forcing the Service to rush certain reviews and let others wait.

105. The IV Solar Project might also have an adverse impact on the groundwater basin/sole source aquifer by forcing the solar project biological resources review to a priority position ahead of completing the biological opinion related to making it possible for US Gypsum to start reducing its export of groundwater and being using Colorado River. This is a serious but unintended consequence of making renewables issues a higher priority than other projects for the FWS?
- a. It seems obvious that in addition to the concerns about using the Boyer well as a water source for the project, the Solar project is effectively delaying the initiation of actions for USG to use Colorado River water. This continued export of potable groundwater for use in wallboard manufacturing represents an adverse impact on the groundwater basin and allows for continued pumping in the location that is very close to the center of the cone of depression.
106. My conclusions about the proposed Alternative water source are that
- a. First and most important, the monitoring data provided is not current even though it is possible to get current USGS data online.
 - b. In the absence of monitoring data it is not possible to reach the conclusion that impacts of well interference at the Boyer well location will not be significant.
 - c. Accordingly it would be inappropriate to conclude that the proposed well with its lack of pumping withdrawal information would not have an adverse impact if it began pumping and exporting 40 AF/y.

EH re CEC/BLM responses to Applicants Alternative Water Supply from well 16S/9E-36G4 and comments on SA/DEUS for Imperial Valley Solar Project (formerly Solar 2) Docket No. 08-AFC-5

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556 Hamilton 16S/9E-34B1 well location and water level graph from USGS website

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558 Discrepancies in groundwater pumping (AF/Y) by USG wells in Ocotillo-Nomirage area as submitted by Bookman-Edmonston’s Richard Rhone in January and September 2003 (Table 16-17 of Sierra Club comments on 2008 USG FEIR/S)

559 USG Annual Pumping and water levels in 3 USG wells in Ocotillo area (Table 14 of Sierra Club comments on 2008 USG FEIR/S) source of original information is in Exhibits 560 and 561.

560 USG Annual Reports 1993-2002 (originally Sierra Club Exhibit 242 for 2008 USG FEIR/S)

561 Rhone 2003 email re USG Annual pumpage for three wells combined (originally Sierra Club Exhibit 236 for 2008 USG FEIR/S)

562 Map depicting location of private land and water wells in relation to local geology

563 Bookman-Edmonston 2004 text and tables related to Westwind Water Company water use from well 16S/9E-26G4 at Painted Gorge and West Texas

564 Bookman-Edmonston 1996 text and tables related to Westwind Water Company water use from well 16S/9E-26G4 at Painted Gorge and West Texas . Figures depicting cones of depression

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