DOCKET
08-AFC-13
DATE
RECD. June 23 2009

Comments on Stirling Energy Systems (SES) Solar One Project Application For Certification (AFC) to the California Energy Commission (CEC) and Bureau of Land Management (BLM)

§/Pg	Comments/Questions	Answer/Response
§3.1 p1-4	Near the end of subsection 1.3 at the top of page 1-4 of the AFC, SES states 'Water would be provided via <u>a</u> groundwater well on a portion of the BLM ROW … and transported through an underground pipeline.' SES goes on to stipulate it intends to consume about 50 acre-feet of water per year during the nearly four years of construction. After words, they expect that quantity to decrease to around 36.2^{af} per year over the life of the Solar One project. Q-1: Can SES tell us more about the underground pipeline to be used to transport water from the well? What will it be made of, what size/length, where will it go, will there be pressure regulators, double checks/backflow devices, valves, hydrants, bibs, etc.? Did I simply overlook it or is there a plumbing schematic or other map provided within the AFC and if so, where? Because as far as I can see, it's not in the plumbing site plan A, B, or C of Figures 3-44, 45, or 46. Q-2: Will there be water towers or evaporative coolers on site? If so, what quantity of water will they consume? Q-3: The language says "a groundwater well" meaning just one, but as we'll discover later in the AFC, SES intends to drill as many "secondary" wells as it may deem necessary or perhaps appropriate to obtain the fossil groundwater to quench its desires. Why would more than one well be needed? And what's the total number of wells that will be drilled to support this project?	A-1: A-2: A-3:
3.1 3-4	Table 3-2 on page 3-10 describes 3 water storage tanks, two of which will measure 20' high by 40' feet in diameter for the purpose of storing 175,000 gallons each. Ignoring sea level and gravity as factors, the	A-1:

§/Pg	Comments/Questions	Answer/Response
	formula $\pi \cdot r^2 \cdot h \cdot 7.5$ provides a volume of these storage tanks at almost 13,500 (7.7%) gallons greater capacity than listed. Q-1: Any reason SES opted to withhold this information?	
1.5.6 1-7	Subsection 1.5.6 mentions the project 'would have some level of impact on travelers passing through the area' and even 'has the potential to become a tourist attraction (similar to Palm Springs wind generation along I-10), drawing visitors from the energy industry, the environmental community, schools, research facilities, and government/political figures who seek direct personal experience of progressive renewable energy solutions.' Q-1: How will SES accommodate the bus loads of students and other visitors touring the Solar One facility? Q-2: Will there be a welcome center or museum constructed at or near the site? How about a public parking lot? Q-3: What safety plan has been developed for the multitudes of visitors envisioned? Q-4: How will the impact of the increased local traffic and trash be controlled and mitigated? Q-5: What affect on water resources will these visitors have? Where visitor populations considered in calculations for water consumption? Q-6: Does SES intend to construct any sort of public observation areas where visitors may enjoy an overview of the project, perhaps on a highpoint of land located adjacent to the underground high pressure gas pipeline just south of the I-40 at Hector Road? If so, where are the plans for that within the AFC?	A-1: A-2: A-3: A-4: A-5: A-6:

§/Pg	Comments/Questions	Answer/Response
3.3.1 3-7	The end of subsection 3.3.1 on page 3.7 under the topic of Surface Water discusses drainage features and lack of floodplains, and it ends with 'additional delineation will be undertaken to identify flood paths within the project site that pose a hazard.' Q-1: What hazards? Q-2: Has this been done? If so, by whom and what are the results? If not, when will it be completed? Q-3: Upon completion, will the findings be made available for consideration of the CEC, BLM, and other interested parties including the public? If so, in what form (another application or over the Internet, etc.)?	A-1: A-2: A-3:
3.5.8 3-24	Under the topic of Site Security, the first sentence of subsection 3.5.8 appears incomplete – "…as part of the." What? SES intends to maintain '24-hour site security monitoring … via closed circuit TV cameras' and further, as described in detail in Figures 3-20 through 3-23, SES plans to utilize bright lighting at night in the main complex area and some paved roads. Q-1: "…as part of the." What? Q-2: What affect will night time light pollution have on wildlife? Q-3: What affect will night time light pollution have on travelers? Q-4: Will there also be lighting along the perimeter fence? Q-5: How will SES mitigate this light pollution? Q-6: Upon completion of construction, would it be feasible to utilize night vision	A-1: A-2: A-3: A-4: A-5:

§/Pg	Comments/Questions	Answer/Response
	capable security cameras and equipment in place of external lighting? Q-7: While this subsection on site security fails to address the topic of coordination with or the oversight of Homeland Security, how difficult or likely would it be for a terrorist to blowup a truck bomb parked on the shoulder of I-40 whereby the percussion would shatter a multitude of SunCatcher unit mirrors and wreak havoc on our economy? How quickly could Solar One recover from such a catastrophic event? Q-8: Unlike photovoltaic's which operate autonomous to the grid, it seems Solar One will make a mighty fine terrorist target. Who will pay for its security and repair if it suffers a terrorist attack? Any insurance?	A-6: A-7: A-8:
3.5.10 3-27	SES asserts an estimated maximum or average annual water usage of 36.2 acre feet of water during normal operation but an additional 13.8^{af} equating to 50^{af} during the roughly four-year construction stages. However, here in subsection 3.5.10 on page 3-27 they reveal 'peak construction states will increase water consumption to 10 times peak operations demand.' Q-1: If 10 x 36.2af = 362^{af} then how does SES justify an assertion of only 50af? Q-2: Here again, exactly how many wells will be drilled to satisfy the demand of the proposed project? As we learned earlier from the discussions of subsection 1.3 on page 1-4, well water will be transported by 'underground' pipeline, but here at 3.5.10, conflicting language advises us SES will use 'above-ground' conduits. Q-3: Which is accurate and why the discrepancy?	A-1: A-2: A-3:

§/Pg	Comments/Questions	Answer/Response
T 3-4 3-35	Water Usage Rates – According to Table 3-4 on page 3-35, roughly a third of the estimated 24.2 acre feet if water pumped annually from the aquifer and processed (presumably through reverse osmosis (RO)) for purposes of mirror washing will be discarded as brine to an evaporation pond due to the high levels of total dissolved solids it will contain. Over the 20 to 40 year life of the Project, the estimated 162 to 324[af] of purposely evaporated water could be quantified as substantial. Q-1: Are these TDS's hazardous? Q-2: In order to reduce the amount of resources consumed and the associated costs over the life of the project, can the brine be filtered and then used for dust control, fire suppression, and to flush commodes? If not, why not? Secondly, the totals provided under the last two columns don't add up. This type of simple mathematical error does not instill confidence in the engineering capabilities of SES as presented in the residual of their AFC. By correcting the addition, we find the GPM increase while the volume in acre feet is reduced. Q-3: How does SES explain this error? Also, is the gpm rate per well or for all of them combined? Thirdly, the footnotes use the term 'based on' three times and the word 'assumes' seven. Q-4: How does this not add up to ten erroneous guesses? Also, footnote two and three appear to conflict in the quantity of scrub washes each SunCatcher unit will receive annually. Nor is this addressed subsequently in subsection	A-1: A-2: A-3: One or all: A-4:

§/Pg	Comments/Questions	Answer/Response
	3.7.5 on page 3-37 under the aptly titled 'SunCatcher Mirror Washing' where one might expect. Footnote 2 seems to estimate 100% of the units will receive one scrub per quarter, equating to four per annum while footnote 3 estimates eight normal and only one scrub. The language is ambiguous at best, perhaps intentionally so. Q-5: Which is accurate, one or four scrubs per year? Q-6: Under what circumstances would the number of scrubs per year increase or decrease? The Potable Water (for drinking and sanitary) Use is calculated presumably via the official SES water use dart board to be 5.2^{af}. Sarcasm seems appropriate as here again the numbers do not add up. Footnote 1 stipulates there is a 5 day work week totaling 21 work days a month. Hence 21 days x 12 months = 252 work days per annum. Footnote 5 assumes 30 gallons of water per person per (work) day for 182 people. Hence 30 x 182 x 252 = 1,375,920 gallons per year ÷ 325,851 gallons in an acre foot = 4.2^{af} vice 5.2^{af} as claimed in the table. So where is the other acre foot going, besides bad math? Well footnote 7 seems to say it's going to the sixth day in a six day work week, in conflict with footnote 1. Hence, 252 + 52 = 304 work days x 30 x 182 = 1,659,840 ÷ 325,851 = 5.1^{af} (still not 5.2^{af}). However, subsection 3.9.1 asserts some construction will continue 24/7, suggesting a 7 day work week. It's all so convoluted. Q-7: Of the 182 workers, how many will be construction workers and how many will be non-construction workers? Also, how many will suffer a five, six or seven day work week. Q-8: How will the onsite workforce population fluctuate by shifts, by work week, by construction/operation, per day,	A-5: A-6: A-7: Construction: Non-Construction: 5 day: 6 day: 7 day: A-8:

§/Pg	Comments/Questions	Answer/Response
	week, month, year – throughout the life of the project? What affect will this have on the environment and on water resources?	
3.7.1 3-36	Water Supply Source Q-1: What size is the aquifer? How much water does it hold? Q-2: Does the underground aquifer ever recharge? If so, how is this proven? If not, then how is the deduction wrong that concludes SES proposes to essentially mine fossil water from one, two, or 'possibly of additional wells being added to provide water supply as needed' apparently without regard to sustainability over the life of the project or the detrimental effects to the environment and wildlife? Q-3: Here again, how many wells? Q-4: What is the risk aquifer depletion may result in a sinkhole as has occurred in other parts of the country and world?	A-1: A-2: Y / N or unknown – Proven? A-3: A-4: Unknown, high, or low because:
3.7.2 3-36	SES claims pump and water quality tests were performed but "The data was insufficient to make proper determinations!" Q-1: Really? Are we to believe SES spent millions to prepare this AFC over the past many months only to submit it for review and consideration without bothering to provide pertinent data on the topic of water quality and volume availability on a project located in the middle of the Mojave Desert? Q-2: Does SES think desert groundwater is of such little consequence or concern to us as to avoid or delay revealing their findings on the topic? Is SES truly incompetent or are they trying to hide something? Q-3: What are the levels of nitrates? Q-4: What are the levels of fluoride? Q-5: What are the levels of pharmaceuticals	A-1: Y / N – remarks: A-2: Y / N – remarks: A-3: A-4: A-5:

§/Pg	Comments/Questions	Answer/Response
	and endocrine disrupters? Q-6: Why is this AFC incomplete and why are we considering it before it is complete?	 A-6:
3.7.3 3-36	Water Treatment Requirements Q-1: By 'fire water' does SES mean fire suppression water or rye whisky? Q-2: The first sentence ends with another disclosure of SES's intent to drill as many wells at it likes, so here again, how many wells will be drilled and at what rate of flow/volume will water be drawn from the aquifer by each? Q-3: Once construction is completed will secondary wells be capped and abandoned or will they be removed and backfilled? The language asserts 'water for potable use will meet EPA standards' and 'disinfection treatment is required to meet drinking water standards.' But the language does not describe how those standards and requirements will be met. We know groundwater in this area typically suffers from high alkalinity and natural fluorides and with high nitrates not uncommon, as well as excessively high TDS. Lacking the water quality analysis promised in Table 3-5, what we don't know and are left to our imaginations to speculate is weather additional pollutants (pharmaceuticals, endocrine disruptors, etc.) will be a valid concern among many others. One thing we do know is high levels of natural fluorides in our local ground water results in weakened enamel to human teeth after long term exposure; turning teeth brown and increasing the risk of tooth loss. Q-4: Will the workforce be permitted to drink the deionized water to mitigate the effects of excessive fluoride? What dental plan will the workers enjoy? The language of 3.7.3 ends by disclosing an	A-1: A-2: A-3: A-4: A-5:

§/Pg	Comments/Questions	Answer/Response
	intent to store drinking water intermixed with fire suppression water in the same 188.5k capacity water storage tank. Q-5: Here again, why not utilize brine water for fire suppression and RO for drinking? By doing so, the million gallon brine evaporation pond could be claimed as a backup for fire suppression and a smaller brine storage tank would save money on infrastructure.	
3.7.4 3-36	Water Treatment Systems – Here we are told SES recognizes a requirement to treat water in different ways for differing uses. SES then offer non-committal evasive language in the third sentence where it says "Using a value engineering method, …" which we can only hope is less prone to error than their inability to perform simple addition as previously discovered in Table 3-4. Um, "Using a value engineering method, further evaluation will be performed for the various options that may be available to treat, store, and distribute the water as needed. It is envisioned that the water treatment system will consist of …" among other things "… a disinfection system, [and] a demineralized water treatment system for mirror washing water, …" Q-1: What 'further evaluation' is the applicant talking about? May we assume SES is not considering the massive consumption of lumber or coal to deionized water through boiling? In other words, if the options are limited to RO or one other process, why not say so? Otherwise what else are they hiding? Q-2: If not reverse osmosis (RO) then why do they need evaporation ponds? Q-3: If RO, how much energy will the process consume? The language near the top of page 3-37 introduces the terms 'reject water and	A-1: A-2: A-3: A-4: A-5:

§/Pg	Comments/Questions	Answer/Response
	sludge disposal' but fails to define either. Q-4: Is 'reject water' an exclusive euphemism to brine or is there another meaning within this AFC? Q-5: Is 'sludge disposal' exclusively synonymous with the term 'salt cake' as used in 3.8.2 on page 3-42? Or are we also talking about septic tank sludge? Q-6: If these terms have other meanings, what are they?	A-6:
3.7.5	This subsection on SunCatcher Mirror Washing is woefully lacking in content in that it fails to provide some basic information the reader would logically expect to find under such topic. For instance: Q-1: How many washes/scrubs will be performed per given time periods of daily, weekly, monthly, quarterly, or annually? Q-2: Are wash processes performed manually (maybe by some guy named Manuel), or automatically? Q-3: If automated, is it computer controlled like timed irrigation or does someone flip switches and turn valves? Q-4: If automated, how is it plumbed? Is wash equipment internal to each of the SunCatcher units or external? Q-5: If additional information is provided in another section or appendices of the AFC, why aren't they referred to within this subsection?	A-1: A-2: A-3: A-4: A-5:
3.7.6	Fire Protection Water – The paragraph mentions '…treated water for fire protection applications and domestic uses.' Q-1: Is the water treated for purposes of fire protections (i.e. oxygen inhibitor) or domestic uses (i.e. filtering, softening, or	A-1: A-2:

§/Pg	Comments/Questions	Answer/Response
	chlorination)? Q-2: What form of treatment process is the water subjected to and what, if any chemicals are involved in the treatment processes, and at what quantities/levels? Q-3: If chemicals are used, what (if any) health risk or hazards to people or to the environment do they pose? Q-4: How will such be controlled/mitigated?	A-3: A-4:
3.7.7 3-37	Dust Control – "Construction water augmentation from the Secondary Water Well or from other on-site wells …" Q-1: How many wells? Q-2: If above-ground conduits are used will they be pressurized and if so how will they be protected from leaks or rupture or from being damaged or destroyed by vehicular traffic? Q-3: What is the reaction plan upon the unlikely event of catastrophic mainline failure in order to reduce loss of water? On page 3-38 we discover there will be a 'demineralized waterline … will be used to supply well water for dust control' Q-4: What is a demineralized waterline? Is it a euphemism for deionized? Q-5: Will it be above ground or below? Q-6: Does this mean SES intends to use demineralized water for dust control?	A-1: A-2: A-3: A-4: A-5: A-6:
3.7.8 3-38	Potable Water – Mentions 'chemical dosage for disinfection' but fails to disclose what chemical or at what dosage, nor what quantity is kept on site or related risks. Besides what is listed in Table 3-11; Q-1: What disinfection chemicals?	A-1: A-2:

§/Pg	Comments/Questions	Answer/Response
	Q-2: What dosages? Q-3: What quantities are kept on site? Q-4: What potential hazards do such chemicals present and how will they be mitigated? The subsection also mentions bottled water. Q-5: If bottled water or soda will be available on site, what recycling program will be implemented and how will it work? Q-6: Which bottling companies are being considered to contract a supply? Are they local?	A-3: A-4: A-5: A-6:
3.8.1 3-39	Sanitary Wastewater System – Few things are more wasteful than using fresh water to flush human waste. Where ever SES can realistically reduce water consumption or the need for pluming to transport and control water, the less cost there will be. It takes money to produce the energy needed to pump water from here to there. Waterless urinals mean less power is needed to pump water which means more power is available for sale. Waterless urinals also mean less pluming to install or maintain which also reduces costs and increases profits. Also consider the bragging rights and PR. Q-1: Will SES commit to utilize waterless urinals to reduce water consumption and extend the life of the leach field by reducing saturation from unnecessary volume? Q-2: How about compost toilets? What would be the cost savings over the life of the project? Q-3: What 'approved off-site disposal facility' will be the recipient of sewer sludge from the Solar One project?	A-1: A-2: A-3:
3.8.2 3-42	Water Treatment Solid Wastes – SES expects to remove and transport 34 tons of low-moisture salt cake to the Barstow or Victorville landfill each year from the	A-1:

§/Pg	Comments/Questions	Answer/Response
	evaporated brine. Q-1: Considering the Solar One project is located well beyond the city boundaries, how do the cities of Barstow and Victorville feel about being dumped on? Q-2: If the cities reject the solid waste, how will SES get rid of it? Will they ship it to Detroit by train? Where exactly? Q-3: Why are Tables 3-7 and 3-8 incomplete? How does SES expect us to make a determination on their application without disclosing this information?	A-2: A-3:
3.8.3 3-44	Waste Management – other than being listed in Tables 3-9 and 3-10 and a single obscure sentence (in §3.8.3.1) on page 3-45 under Operation Wastes, there's nothing here to speak of regarding an internal recycling program for beverage containers, paper, plastic, glass, cardboard, Styrofoam, tires, scrap metal, lumber, etc. Q-1: What program does SES intend to implement as an internal recycling program? How will it work? Q-2: Under §3.8.3.3, how many hours of training will each employee receive and from whom? Q-3: Is the HMMP available on the Internet for review and consideration?	A-1: A-2: A-3:
3.8.4	Under §3.8.4.3, the text fails to consider ethylene glycol. Q-1: Why? The same subsection provides for an evacuation of personnel but then says hydrogen poses no adverse effects. Q-2: If there are no adverse effects, then why evacuate?	A-1: A-2:
	More to come.	A-1:

§/Pg	Comments/Questions	Answer/Response
	Q-1: Q-2: Q-3: Q-4: Q-5: Q-6:	A-2: A-3: A-4: A-5: A-6:

Topic: Abandonment/Closure/Decommission

Document & Page	Text	Remarks
First page of each of the following files: MASTER_Section_ 5.3, 5.4, 5.5, 5.6, 5.9, 5.10, 5.11, 5.12, 5.13, 5.14, 5.15, 5.16, and 5.17, as well as on page 5.11-10, etc.	"The Project includes the construction, operation, maintenance, and abandonment of up to 850 megawatts (MW) of capacity by solar power generating facility and its ancillary systems in two phases …"	This opening statement appears over a dozen times throughout the SES AFC. How does SES define "abandonment" as used throughout its documents? Does 'abandonment' mean walk away and leave the mess for the taxpayer or someone else to cleanup? Is SES talking about the abandonment of 'capacity' or the actual infrastructure of the 'facility and ancillary systems?' Is it the intent of SES to build and profit from this Solar One project and then abandon it in place? If not, what insurance or funding mechanism and guarantee is in place to resolve this concern?
MASTER_Section_5.2 page 5.2-1	"The Project includes the construction, operation, maintenance, and decommissioning of up to 850 megawatts (MW) of capacity by solar power generating facility and its ancillary systems in two phases …"	This opening statement appears rarely throughout the SES AFC. How does SES define "decommissioning" as used throughout its documents? Here again, what subject is SES talking about? Is 'abandonment' and 'decommissioning' interchangeable. If not, why use one word here and the other in most other places? Does decommissioning mean deconstruct, dismantle, removal, and repair environment to preconstruction conditions? If so, and if these words are used interchangeably, does 'abandonment' mean the same thing as decommission? Or vice versa?
MASTER_Section_5.5 Pate 5.5-2	"This section summarizes the potential environmental effects on water resources that could result from construction, operation, maintenance, and abandonment of the Project."	I've yet to read anything in 5.5 summarizing the potential environmental effects on water resources that could result from 'abandonment' of the Project.
MASTER_Section_5.13 page 5.13-2	"This section discusses the potential for the construction, operation, maintenance, and decommissioning of the) Project and its ancillary systems to cause significant effects to aesthetic values within the Project vicinity."	I've yet to read anything in 5.13 discussing the potential effects to aesthetic values that could result from 'decommissioning' of the Project.
SiteVisitInfo_	"BLM must comply with the	In that there is no closure plan, it seems BLM has failed to comply with this

Document & Page	Text	Remarks
ScopingHearingNotice Subsection Attachment A on page 5	requirement of NEPA to ensure that environmental impacts associated with construction, operation, and decommissioning will be identified, analyzed and considered in the application process."	requirement.
MASTER_Section_2.0 page 2-5	"In processing the application, the BLM will comply with the requirements of NEPA, which requires that federal agencies reviewing projects under their jurisdiction consider the environmental impacts associated with their construction, operation, maintenance, and decommissioning."	Here again, considering there is no closure plan, it seems BLM has failed to comply with this requirement. But SES has made clear the responsibility is not theirs, it's BLM's.
MASTER_Section_3.0 Subsection 3.4.4.2 on page 3-13	"The solar dish will typically be mounted on a foundation consisting of a metal fin-pipe that is hydraulically driven into the ground. This foundation is preferred because no concrete is required, no spoils are generated, and the foundations can be completely removed when the Project is decommissioned."	They "can be" but lacking a written commitment to do so, there exists no requirement to actually remove anything.
MASTER_Section_3.0 page 3-21	"Assembly buildings will be decommissioned after the Project's SunCatchers are assembled and installed."	Define decommissioned. Does SES mean dismantled or deconstructed and removed from the site?
MASTER_Section_3.0 page 3-62	"Post construction the assembly building and their associated laydown areas will be decommissioned and dishes installed on this acreage."	Here the inference is 'decommissioned' should be defined as deconstruct and remove. (But what are 'laydown' areas?)
MASTER_Section_3.0 page 3-81	"The removal of the Project from service, or decommissioning, may range from "mothballing" to the removal of equipment and appurtenant facilities,	However, here 'decommissioned' is described to encompass a variety of meanings. The term 'mothballing' seems indicative of abandonment more so than removal.

Document & Page	Text	Remarks
	depending on conditions at the time."	
MASTER_Section_3.0 page 3-81	"Because the conditions that would affect the decommission-ing decision are largely unknown at this time, these conditions would be presented to the CEC, the BLM, and other applicable agencies. To ensure that public health, safety, and the environment are protected during decommissioning, a decommissioning plan will be submitted to the CEC for approval before decommissioning."	'would be?' sounds a lot like maybe or maybe not. If it is presented, *when* will it be presented? What will it contain?
2009-04-06_AFC_SUPLLEMENT_TN-50880 Data Adequacy Request 47. On page WASTE-1	"A more detailed closure plan will be finalized prior to construction related activities associated with the Solar One Project."	Does this mean SES intends to offer a detailed closure plan before construction starts but after authorization for construction is approved? This is not acceptable. The public needs to know what the details of the closure plan is, including funding and full reclamation before support can be entertained.
MASTER_Section_3.0 page 3-81	"The plan will discuss the following: … decommissioning alternatives other than complete restoration to the original condition "	No closure plan exists, but SES is notifying everyone who reads their AFC of their intent to entertain and consider alternatives to restoration, perhaps to include abandonment.
MASTER_Section_3.0 page 3-81	"The plan will discuss the following: … associated costs of the proposed decommissioning and the source of funds to pay for the decommissioning."	This should be resolved before this AFC can be approved. Funding will probably come from the rate payer, and the rate payer should be made aware and have a say before approval is considered. The SES should be held responsible for all costs via bonding.
MASTER_Section_2.0 page 2-4	"The Applicant's request for right-of-way will also include the right to maintain access to the Project for the duration of the 20-year PPA."	Upon completion of the Power Purchase Agreement with SCE, does not SES anticipate a need for continued access for any purpose, like to implement a closing plan for instance?
MASTER_Section_2.0 page 2-1	"The Project is a solar power electric generation project that has been developed and designed to conform to the	Clearly, SES perceives this Project has an anticipated lifecycle of 20 to 40 years or more. If this proves accurate, most of us will likely be dead and gone before this project

Document & Page	Text	Remarks
	requirements of the 20-year Power Purchase Agreement (PPA) between SCE and SES Solar Three, LLC and SES Solar Six, LLC (Applicant1)."	suffers the same fate. Why should SES care what we think or what we worry about? In order to reduce the risk of abandonment for those who follow us, the Project must have a written closure/decommission plan requirement clearly detailing all aspects of returning the environment to its current condition *prior to* any approval of the SES AFC by the CEC and BLM, with consideration of approval contingent upon full disclosure and consideration of said plan. It is not 'impossible to foresee' what the likely situation will be in the future, and thus it is possible to draft a plan which includes certain guarantees for the return of the environment to its preconstruction conditions. Notice the primary factor considered in anticipation of 'forcing early decommissioning' is economics rather than continued compliance with laws (i.e. 33% by 2020) or climate change. It's all about externalizing costs to maximize profits.
MASTER_Section_2.0 page 2-2	"The Applicant has signed an initial 20-year contract with SCE under which SCE will buy all the energy produced from the first 500MW phase of the Project and has an option to purchase all the energy from the 350MW expansion phase as well."	
2009-04-06_AFC_SUPPLEMENT_TN-50880 Data Adequacy Request 47. On page WASTE-1	"Although the project setting for this project does not appear, at this time, to present any special or unusual closure problems, it is impossible to foresee what the situation will be in 30 years or more when the project ceases operation."	
MASTER_Section_3.0 subsection 3.11.1 on page 3-77	"The Project has a designed operating life of 40 years and is capable approximately 3,500 hours of annual electricity production, with a projected annual availability of approximately 99 percent while on-sun."	
MASTER_Section_3.0 subsection 3.12.3 on page 3-80	"The planned life of Solar One is 40 years; however, if the Project is still economically viable, it could be operated longer. It is also possible that the Project could become economically noncompetitive before 40 years have passed, forcing early decommissioning."	
2009-04-06_AFC_SUPPLEMENT_TN-50880 Data Adequacy Request 47. On page WASTE-2	"To ensure adequate review of a planned project closure, SES would submit a proposed facility closure plan to the Energy Commission for review	SES 'would' (a.k.a. 'may' or 'might' or for that matter 'might not') suggest a closure plan (not necessarily in writing, maybe orally over the phone or something) for the consideration of the CPM of the CEC (who may or may not be on the payroll of various

Document & Page	Text	Remarks
	and approval at least 12 months (or other period of time agreed to by CEC's compliance program manager CPM) prior to commencement of closure activities"	energy companies by then) about a year before SES starts shutting down the plant. If the CPM doesn't approve the plan, then what? Will SES shut down anyway and simply abandon the project because the CEC was unreasonable in denying their closure plan? Assuming the project remains open for its planned life of 40 years, by this language SES is not expected to submit a closure plan until 39 years after they open. That's unacceptable because neither the CEC or the BLM (nor any other interested party to include the public), can make an informed decision to support this project lacking this written plan.
2009-04-06_AFC_SUPLLEMENT_TN-50880 Data Adequacy Request 47. On page WASTE-2	"1. Identify and discuss any impacts and mitigation to address significant adverse impacts associated with proposed closure activities and to address facilities, equipment, or other project related remnants that will remain at the site; … 3. identify any facilities or equipment intended to remain on site after closure, the reason, and any future use; and …"	Obviously SES can envision circumstances which would result in the necessity to abandon infrastructure on site for some (apparently) indescribable reason but SES also argues it is 'impossible to foresee' what the future holds. Apparently SES can foresee a need to abandon but not the justification.
MASTER_Section_3.0 page 3-81	"In general, the decommissioning pan for the Project will attempt to maximize the recycling of Project components. Solar One will attempt to sell unused chemicals back to the suppliers or other purchasers or users."	This is not specific enough to substitute for a formal written abatement action plan upon anticipated cessation of operations. Their 'attempt' to do something is nice but what if their attempt fails? Unless SES states what it will do with 'unused chemicals' (for instance), it remains possible it will do what so many before it have done, and illegally dump or abandon hazardous waste. If this were not a concern, there would be no need for the existence of a Superfund or its designation.
MASTER_Appendix_T Focus map 1 orphan summary	"1003879078 ABANDONED REFINERY SITE"	This is one of over a dozen links to Environmental Data Resources Inc Site Reports. This one is specific to the abandoned refinery site located on Old Route 66 in Newberry Springs and serves as an example of what the taxpaying public can expect if there is no funding and planning for the removal and cleanup of a previously

Document & Page	Text	Remarks
		economically viable business operation. Here, *primary responsibility* of the site has fallen upon the State and thereby the taxpaying public.
MASTER_Section_5.9 page 5.9-3	"A heliostat tower was installed in 1982 and was decommissioned in 1999."	Here SES is referring to the original Solar One plant located in Daggett, CA. It was 'mothballed' until UC Davis found another use for it. I've tons of photos of this facility as well as the SEGS I and II and other power plant mentioned in this paragraph. The question is, once UC Davis is done with it, then who will pay for its eventual removal? Certainly not SCE. They absolve themselves of responsibility by their method of procuring (not creating) electricity. SCE is just the middle man. SES is the contracted provider. What if SES subcontracts? Then who's responsible?
MASTER_Section_5.13 page 5.13-3	"The power tower is a Heliostat design that was decommissioned in 1999 and is now used as a research facility, operated by University of California at Davis."	
MASTER_Section_5.18 on page 5.18-5	"Solar Two Tower was decommissioned in 1999, and was converted by the University of California, Davis, into an Air Cherenkov telescope in 2001, measuring gamma rays hitting the atmosphere."	
MASTER_Section_5.14 Subsection 5.14.2.3 on page 5.14-13 and 5.14-14	Abandonment/Closure	These two subsections, each consisting of two paragraphs totaling five sentences, merely allude to a 'Project closure plan' or 'the plan' without specific details of what such plan contains. It's sort of like if you wanted to know a phone number and SES says we plan to draft up a yellow pages phone book that may or may not contain the phone number you're looking for. Get back with us in 39 years.
MASTER_Section_5.15 Subsection 5.15.2.4 on page 5.15-14	Abandonment/Closure	

Submitted by Joe Orawczyk, a resident of Yermo, CA