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September 17, 2010

Via E-Mail

Mr. Christopher Meyer
Energy Commission Project Manager
California Energy Commission
1516 Ninth Street
Sacramento, CA 95814-5512

Re: Docket No.: 08-AFC-13
Objection to Holding of Evidentiary Hearing

Dear Mr. Meyer:

Given the unavailability of the underlying documents on which the Applicant is relying, significant amounts of which were only loaded onto the website and the FTP site today, BNSF and its experts have not had adequate time to prepare testimony for the evidentiary hearing on Monday, September 20, 2010. BNSF, therefore, objects to the holding of the evidentiary hearing. In light of the obstacles to the preparation of evidence, BNSF reserves the right to introduce further testimony and exhibits the day of the hearing.

Sincerely,

Cynthia Burch

Cynthia L. Burch

STATE OF CALIFORNIA

Energy Resources Conservation And Development Commission

In the Matter of:
The Application for Certification for the Calico Solar Power Project Licensing Case

Docket No. 08-AFC-13

PREPARED DIRECT TESTIMONY OF STEVEN J. METRO, PE
Senior Civil Engineer, Wilson Company

September 14, 2010

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PREPARED DIRECT TESTIMONY

OF

Steven J. Metro, PE

Senior Civil Engineer, Wilson Company

Q.1 Please state your name and occupation?

A.1 My name is Steven J. Metro. I am a Senior Civil Engineer with Wilson Company. Wilson Company is a civil engineering and consulting company. Approximately one fourth of all of our work is for the railroads. The company has completed at least 30 drainage and flood studies for railroad bridges throughout the Southwest.

Q.2 What is your particular area of expertise?

A.2 I am a licensed professional engineer. I have particular experience in drainage and flooding issues and have worked on numerous matters involving the railroads. I have worked on over twenty matters involving drainage and flooding issues in a desert environment with alluvial fans. I have seen first hand the effects of flooding caused by structural improvements placed upgradient from a railroad right-of-way. In my practice, I routinely interface with Army Corps of Engineers and local flood control districts. I have provided expert testimony regarding flood damage to railroad infrastructure. A copy of my *curriculum vitae* is attached hereto as Exhibit "A."

Q.3 What is the purpose of your testimony?

A.3 To outline the concerns that BNSF has regarding the current two alternatives being proposed by Applicant, Alternative 5.5 and 6, which completely eliminate the debris basins and detention basins that were critical safety features and mitigation measures of the proposed project for many months. The Record in this matter clearly reflects that upon reviewed of the proposed project, Applicant experts acknowledged and Staff experts found that the proposed project would adversely impact the storm water runoff over and through the area encompassing the proposed project. This adverse impact is a result of the fact that the placement of over 24,000 SunCatchers, foundations and pads for the main service complex and substation, the hundreds of miles of access and service roads, and associated structures required to support the proposed project, which will necessarily decrease the surface area that will allow absorption of storm water and the day-to-day operations associated with the facility that will create new channels throughout the site. The impervious nature of these structures and facilities and the newly created channels will result in an increase flow of stormwater and will alter the already shifting and unpredictable nature of the streambeds within the alluvial fans in the proposed project area. In turn, this will have an adverse impact on the BNSF Right-of-Way that runs through the proposed project in that the BNSF Right-of-Way will necessarily encounter increased flows and sediment deposits along the Right-of-Way as a result of the proposed project. This will result in an increased risk of flooding and scour that the existing trestles and Right-of-Way grade may not be able to accommodate. Ultimately this could result in an increased potential to wash out portions of the BNSF Right-of-Way and

portions of the transcontinental mainline track, interrupting a critical interstate transportation artery. To mitigate this significant safety risk and environmental hazard, both Applicant and the Staff proposed a network of debris basins on the northern boundary of the proposed project site, upgradient of the BNSF Right-of Way. These debris basins would be designed to capture some but not all of the storm water and associated debris from the Cady Mountains. Through storage and a gradual release of the storm water from the debris basins down to a series of detention basins strategically located within the proposed project site itself, Applicant and Staff planned to abate and mitigate the adverse and potentially catastrophic impact of storm water runoff on the BNSF Right-of-Way. Staff found that the installation of these basins would reduce the project's impact on site hydrology to less than significant. While the specific plans for the debris basins and detention basins had not been designed and were pending a comprehensive hydrology study, the general scheme of debris basins and detention basins was a major component of the proposed project for well over a year. The Energy Commission Certification Committee for the Calico Solar Project issued an order on September 3, 2010 finding that it could not support certification of the proposed project. The Committee order was based on a finding that the proposed project's impact on critical habitat outweighed the potential benefit of the proposed project. The September 3rd order noted that it would reconsider the proposed project if it were revised to reflect a smaller footprint that did not adversely impact so much critical habitat. In response, Applicant proposed six alternatives on September 7, 2010, all of which eliminated the

debris and detention basin safety and mitigation measures. After a workshop on September 9, 2010, the Applicant further refined its proposed revised project to two alternatives, 5.5 and 6. Again, both of these alternatives eliminate the debris and detention basin safety and mitigation measures. Before further discussing these alternatives, however, I think it is important to review the Record in this matter in relation to debris and detention basins. I have reviewed the history of debris and detention basins in the Record in this matter in order to form the opinions contained herein. My observations follow:

Chronology of References to Debris and Detention Basins

December 2, 2008. Application for Certification ("AFC"). AFC notes that the Project Area is an unmapped area by FEMA. FEMA designates the Project Area as a "Zone D" area – meaning it is possible but undetermined flood hazards. [AFC at 5.5-6.] AFC notes that a 100-year flood[1] will flow southwest from the Cady Mountains through the Project Area. Flooding will pass through the BNSF RoW trestles and along the RoW. According to the AFC, "[t]he Project will not adversely affect existing drainage features. The existing flooding patterns will remain once the Project is constructed. [AFC at 5.5-10.]

By April 2009, Applicant had responded to numerous data adequacy requests and noted that, "[f]rom a surface water perspective, the Project will create new impervious surfaces that will have the potential to create additional runoff and subsequent erosion and sedimentation." [Supplemental Response

[1] To put this in perspective, there is a one percent probability that a catastrophic storm of a specific magnitude could occur in any given year. Personally, I am aware of two 100-year intensity flood events happening in 2006 in Albuquerque, NM.

at WATER-1.] Best Management Practices ("BMP's") being considered by the Applicant include "sediment basins" and "detention/infiltration basins." [Supplemental Response at WATER-11.]

After a series of workshops covering various aspects of the Project, Applicant submitted in February 2010 a Drainage Layout Figure that reflects a series of "debris basins" along the northernmost border of the Project Site. [February 12, 2010 Drainage Layout Figure.]

On March 30, 2010, the CEC and BLM issued the Staff Assessment/Draft Environmental Impact Statement ("SA/DEIS"). According to the Executive Summary, "[t]hese project debris basins are designed to retain storm water discharge and associated debris resulting from a 100-year flood." [SA/DEIS at ES-5.] The SA/DEIS noted that the debris basins were located on the northernmost border of the Project Site and, if the Site footprint was reduced under the Reduced Acreage Alternative [as it was], that the "flood intercept debris collection and flow detention basins would need to be similarly designed and constructed downstream from the southern boundary [of the lands no longer included in the Project Site as a result of the Reduced Acreage Alternative]." Assuming this was done, there would be "no change to the CEQA Level of Significance Impact." [SA/DEIS at ES-24 (implying that failure to do so would constitute a change to CEQA Level of Significance Impact).

Under the Biological Resources Section, the SA/DEIS identified thirteen major components of the Proposed Project, including "[s]tormwater

detention basins, debris basins, and diversion channels." [SA/DEIS at C.2-11.]

The SA/DEIS Section on Hydrology,/Soil & Water makes a finding that the proposed project "could result in impacts that would be significant with respect to California Environmental Quality Act significance criteria specified herein and National Environmental Policy Act significant criteria specified in 40 CFR 1508.27," and makes it clear that the detention basins are an essential mitigation measure in the Project.

> "A Draft Drainage, Erosion, and Sedimentation Control Plan mitigates the potential project-related storm water and sediment impacts. However, the calculations and assumptions used to evaluate potential storm water and sedimentation impacts are imprecise and have limitations and uncertainties associated with them such that the magnitude of potential impacts that could occur cannot be determined precisely. Based on these factors, the proposed project could result in impacts that would be significant with respect to California Environmental Quality Act significance criteria specified herein and National Environmental Policy Act significant criteria specified in 40 CFR 1508.27. Therefore, Conditions of Certification **SOIL&WATER-1, SOIL&WATER-2** and **SOIL&WATER-3** have been developed that define specific methods of design analysis, development of best management practices, and monitoring and reporting procedures to mitigate impacts related to flooding, erosion, sedimentation, and stream morphological changes. Compliance with

[Laws, Ordinances, Regulations and Standards ("LORS")], particularly the Clean Water Act requirements, will insure no adverse impacts to waters of the U.S. **With implementation of these Conditions,[2] the potential effects of the proposed project would be less than significant**. The applicant has not provided information necessary to complete the development of requirements for dredge and fill in waters of the state. Once the applicant provides this information staff can complete the development of requirements that will be included in Condition of Certification."

[SA/DEIS at C.7-1-C.7-2 (emphasis added).]

The SA/DEIS makes it clear that there will be impacts to the BNSF RoW:

"Localized channel grading is proposed to take place on a limited basis to improve channel hydraulics in the vicinity of BNSF railway right-of-way to control the surface runoff. In addition, the Main Services Complex will be protected from a 100-year flood by berms and/or channels that will direct the flow around the perimeter of the building site, if required.

The proposed arterial roadway section between the Main Services Complex and I-40 will be a designated evacuation route. As such, the driving surface will be constructed at an elevation above the projected profile of a 25-year storm event. In addition, overflow resulting from the 100-year storm event will be limited to a depth not to exceed 7 inches. It is anticipated that roadway maintenance will be required after rainfall events. For minor storm events, in

[2] These Conditions of Certification evolved into SOIL&WATER-8.

addition to the aforementioned maintenance, roadway repairs may be required due to possible damage to pavement where the roadway crosses the channels and where the flows exceed the culvert capacity. Soft bottom storm water detention basins will be constructed to mitigate the increase in runoff from the proposed building sites. Rainfall from paved areas and building roofs will be collected and directed to the storm water detention basins. The storm water detention basins will be sized to hold the entire volume from the proposed building sites resulting from a 24-hour, 100-year storm. The detention basin will be designed so that the retained flows will empty within 72 hours after the storm to provide mosquito abatement. This design can be accomplished by draining, evaporation, infiltration, or a combination thereof. The post-development flow rates released from the project site are expected to be less than the pre-development flow rates. Except for the building sites, the majority of the project site will remain pervious, as only a negligible portion of the site will be affected by pavement and SunCatchers foundations. Site drainage during construction will follow predevelopment flow patterns, with ultimate discharge to the BNSF ROW and ultimately at the westernmost property boundary.

Debris basins and/or low-flow culverts consisting of a small diameter storm drain with a perforated stem pipe will be installed for sediment control and to provide for storm peak attenuation.

BMPs for erosion and sediment control will be used in combination with debris basins for roadway crossing of major washes. In the Main Services Complex, the storm water will be directed to a detention basis, where the site runoff will infiltrate and/or evaporate. The detention basin will be sized to meet the San Bernardino County development criteria.

The temporary erosion and sedimentation control measures to be used during construction will be designed to prevent sediment from being displaced and carried off-site by storm water runoff. Before beginning excavation activities, debris basins, silt fence, straw bales, or other BMPs will be constructed/installed along the perimeter of the Project, where minor runoff to off-site areas could occur. Debris basins will be constructed for the major site runoff discharge and will also provide for low flow detention. The silt fence will filter sediments from construction runoff. Berms with perforated risers will be used at road crossings and other locations as needed to control sediment transportation. During construction, the extent of earth disturbances will be minimized as much as practical. A sediment trap will be located immediately upstream of the property boundary.

Diversion swales with berms will be constructed as necessary to divert runoff from off-site areas and on-site undisturbed areas around the construction site. Temporary BMP control measures

will be maintained during the rainy season as necessary throughout the construction period.

[SA\DEIS at C.7-29.]

The Supplemental Staff Assessment of July 21, 2010 ("SSA") notes that large debris basins are being designed to control runoff and sedimentation. The SSA makes the following finding: "Impacts due to flooding in these areas are potentially significant without adequate mitigation. This leaves portions of the project subject to significant adverse impact due to flooding." [SSA at C.7-2.]

During the evidentiary hearings, Mr. Byall testified for Applicant extensively about the detention basins. According to Mr. Byall, the detention basins are designed, among other things, to reduce the impact on the RoW due to sediment buildup as a result of storms:

> What we're trying to do is not create an adverse condition where we will increase scour within the washes themselves and cause degradation of the washes; so we're trying to come up with a balance between what naturally occurs and the interference we're going to cause by installing the SunCatchers and the maintenance that would be required because of that. So it's a little bit of a balancing act.
>
> What we're trying to do is make it so that we don't have to go out after every storm that creates a fair amount of flow and go out and remove a whole bunch of sediment from our at-grade crossings, ...

[Testimony of R. Byall, 8/6/2010 TR at 35:12-24 (emphasis added).]

Staff Counsel extensively cross examined Mr. Byall and Mr. Moore of Applicant regarding the detention basins and the fact that Applicant kept changing the numbers and sizes of the detention basins. Staff expert Mr. Weaver testified extensively about how Applicant kept changing the numbers and sizes of the detention basins. [See Testimony of C. Weaver, 8/6/2010 TR at 41:11-46:21.]

Moreover, there was extensive cross examination designed to establish that, as of the hearing, Applicant still did not have an actual layout and design of the detention basins. Indeed, Mr. Weaver noted that Applicant testified to yet additional changes to the design plans for the detention basins on the third day of evidentiary hearings in Barstow.

MS. HOLMES: And this morning you heard testimony about yet additional changes to the proposed plans; is that correct?

MR. WEAVER: Yes, just this morning.

[Testimony of C. Weaver, 8/6/2010 TR at 46:22-25.]

Mr. Weaver explained that it was very difficult for Staff to deal with the uncertainty regarding the design of the debris and detention basins, but that "Soil and Water 8 was written to assure that the applicant will develop an appropriate design and will construct adequate flood control features that will protect the site from flooding hazards."]Testimony of C. Weaver, 8/6/2010 TR at 47:17-20.] As Mr. Weaver further explained, "[c]ompliance with Soil and Water 8 will protect the project from flow – excuse me, from flood hazards resulting from the hundred-year storm while allowing pass-through of flows resulting from smaller storms to replenish sediment in channels allowing groundwater recharge along the drainages which will maintain the function of the desert washes." [Testimony of C. Weaver, 8/6/2010 TR at 47:21-48:2.] After Staff counsel noted that Applicant had asked that same morning to substitute SOIL&WATER-8 and that Staff opposed this request, counsel for applicant stipulated to SOIL&WATER-8:

MS FOLEY GANNON: Hearing Officer Kramer, Ms. Holmes, we have an offer to make that may simplify some of this discussion.

The applicant is willing to stipulate to Soil and Water 8 and agree with its inclusion.

[8/6/2010 TR at 49:1-5.]

Until the development of Alternatives 1 through 6 and Dr. Chang's report of September 8 with requested change to SOIL&WATER-8, SOIL&WATER-8 clearly called for detention basins. In reliance on Applicant's stipulation, Staff shifted to a different topic. Moreover, BSNF did not examine Mr. Weaver based on Applicant's stipulation to SOIL&WATER-8. Furthermore, the day before, on August 5th, counsel for BNSF specifically asked Applicant if it would agree that the proposed Condition of Certification in the written testimony of Thomas Schmidt, Exhibit 1102, was reasonable, to include the following language – "applicant represents that applicant will deliver the following documents to BNSF: 1) Final drainage report; 2) final detention basin designs/plans; and 3) maintenance plan. At the time of delivery applicant will address any comments or concerns of BNSF. If there are any amendments to these documents or if there are alterations to any of the detention basins applicant will deliver such revisions to BNSF. " [8/5/2010 TR at 330:18-25.] Hearing Officer Kramer asked, "Does any party want to comment on that, including the applicant, on that? I guess it's more or less a stipulation." [8/5/2010 TR at 331:20-222.] To which counsel for Applicant responded, "No, we agree to the language." [8/5/2010 TR at 331:23.][3]

[3] Consistent with this stipulation, before the close of the evidentiary hearings on August 25th, counsel for Applicant confirmed the stipulation. Applicant clarified that Applicant agreed to pay for a hydrology study by an expert of BSNF's choosing and that Applicant would pay for all necessary mitigation measures: "MS. FOLEY GANNON: So we said, 'Prior to installing any SunCatchers or construction of the detention basins, project owners shall pay for a hydrology study commissioned by BNSF, which will determine the impact, if any, on the rail safety and BNSF operation of its planned placement of SunCatchers and detention basins and determined appropriate mitigation measures, if necessary, to be paid for by project owner.'" [8/25/2010 TR at 317:10-17.]

The Bureau of Land Management ("BLM"), issued its Final Environmental Impact Statement ("FEIS") on August 3, 2010. The FEIS indicates that the detention basins were included as part of the proposed project to mitigate the adverse impacts that would result from the project. The FEIS Hydrology section states: "Due to the project area's susceptibility to flash flooding and prolonged periods of precipitation, high intensity and short duration runoff events coupled with earth disturbance activities could result in accelerated on-site erosion.... Off-site flow would be intercepted prior to entering the project site using large debris basins constructed on-site and located at the toe of each mountainous drainage basin.... On-site runoff would be intercepted in detention basins which would be sized to retain the 100-year on-site stormwater discharge runoff and debris flows...." [FEIS at 4-362.]

The FEIS further provides that, "The Applicant has conducted mathematical calculations and probabilistic modeling to estimate anticipated potential impacts. Site development for the Proposed Action would result in direct, adverse, long-term impacts on surface hydrology on the project site due to a loss of on-site ephemeral drainages which promote groundwater recharge, flood peak attenuation, floodwater storage, and wildlife corridors and habitat. However, impacts would be localized and would be effectively mitigated with the implementation of mitigation measures required for the Proposed Action." [FEIS at 4-364.]

The FEIS further states: "Migration of channels and local scour caused by stormwater flows could remove sediment supporting individual poles and cause them to fall to the ground. Once on the ground during a storm event, the broken

glass associated with the mirrors could further break and be transported downstream. Also, the SunCatcher structure itself and the associated wiring, could be transported downstream. Although the security fence located on the downstream side of the project site could stop larger pieces from leaving the property, it would not stop small glass fragments. Also, the fence itself could be damaged by stormwater flows and may not guarantee the onsite capture of all damaged materials. The detention/debris basins inside the northern boundary of the project site would be of sufficient size to completely retain flood flows resulting from a 100-year flood. Following significant storms, retained water would be released into the existing channels in a controlled and metered manner at a rate that is designed to not cause damage to SunCatcher pole foundations located within the channels." [FEIS at 4-371-372.]

Under the FEIS, the proposed mitigation measures for the proposed project include that the Applicant must obtain both BLM's Authorized Officer's and the Committee Presiding Member's approval for a site specific Drainage, Erosion and Sediment Control Plan (DESCP) that ensures protection of water quality and soil resources of the project site and all linear facilities for both the construction and operation phases of the project, and the DESCP must meet a number of requirements set forth in the FEIS. [FEIS at 4-379.] Also, the Applicant must ensure that all SunCatcher pole foundations are designed to withstand stormwater scour from surface erosion and/or channel migration, and that a stormwater Damage Monitoring and Response Plan be developed to evaluate potential impacts from stormwater. [FEIS at 4.382.]

As recently as August 26, 2010, Applicant submitted its proposed SOIL&WATER-8 to the CEC Committee. SOIL&WATER-8 specifically included detention basins. [See Exhibit 113.]

On September 8, 2010, in response to the CEC Committee's request that the Applicant consider a smaller project site, Applicant submitted a report by Howard Chang, Ph.D, P.E., which now recommends that detention basins not be installed. Dr. Chang's report contains a revised SOIL&WATER-8 that excludes any reference to detention basins.

On September 13, 2010, Applicant submitted testimony in support of two proposed reduced acreage sites within the proposed project area – Alternate 5.5 and 6. Both Alternatives eliminate any debris or detention basins. Dr. Chang makes no reference to the fact that Applicant and Staff had, for over a year, recommended that the project site be constructed with a scheme of debris and detention basins to control stormwater impact. According to Dr. Chang's testimony he does not recommend the installation of detention basins because they "can be a safety hazard for SunCatchers" and because of the "potential adverse impacts of the detention basins on the fluvial system." [Chang Report at p. 14.] Mr. Byall made no reference to his prior recommendation that the project site include detention basins and testified in a conclusory manner that "[n]o debris or detention basins are planned for the site." [Byall at p. 1.] Mr. Moore testified that "[i]t is likely that additional maintenance will be required on the project site in the absence of the previously proposed detention basins." [Moore at ¶6.] Ms. Bellows has requested that SOIL&WATER-8 be modified to delete any reference to debris and detention basins. [Bellows at pp. 3-4.]

Q4 Have you reviewed the testimony of Dr. Chang and Messrs. Byall and Moore submitted by Applicant in support of Alternatives 5.5 and 6?

A.4 Yes, I have.

Q.5. In your opinion, is there adequate support for Dr. Chang's conclusion that detention basins are not recommended?

A.5. No.

Q.6 Why not?

A.6 Dr. Chang asserts that "the proposed solar units will have insignificant effects on the arid-land hydrology of the project site." I disagree. The Record is clear that stormwater flows across the proposed site in a southwesterly direction until it reaches the BNSF Right-of-Way, and then flows west. This has the most direct and significant impact on Sections 07 and 12 within the proposed project site. Before the Applicant was told it had to reduce its project site footprint, both Applicant experts – Messrs. Byall and Moore, as well as Staff expert Mr. Weaver – all agreed that the placement of the SunCatchers, together with the main service complex and substation foundations and pads, the hundreds of miles of roadways that interlace the project site and afford Applicant the ability to perform maintenance on the site, and other features and structures that will necessarily be built on the site will adversely affect the stormwater flow on the site. In turn, this will likely cause increased sediment build up along the BNSF Right-of-Way and also increase the risk of adverse impacts to backslopes, ditches, culverts, and trestles within the Right-of-Way. Ultimately, it will increase the risk of stormwater disrupting the transcontinental mainline. There is ample evidence of this fact and Dr. Chang does not present any evidence to the contrary. Contrary to Dr. Chang's assertions, alluvial fans are not stable and are not

at equilibrium. The arid desert region, such as the proposed project area in the Mojave Desert, is subject to flash flood type events that leave new sediment deposits after every event. When a subsequent flood occurs it may establish a new route to the valley floor. This creates a system of braided stream channels found in most alluvial fans. Dr. Chang has oversimplified the complex morphology of this region in particular and alluvial fans in general.

In my professional experience, when structures are built upgradient of the Right-of-Way along an alluvial fan in a desert environment there is increased runoff and erosion along the Right-of-Way and typically we see backslope, ditch and culvert damage. This is simply because the structures on the upgradient development reduce the ability of the respective property to absorb stormwater, which in turn results in increased flow and increased damage. Dr. Chang's analysis does not appear to take this into account. Ultimately, the stormwater can wash out a track and cause substantial damage and lengthy interruptions in train service.

The BNSF Railway Company has experienced heavy rainfall events in this area with the water surface rising against the bridge girders. However, there is no record of historic floods overtopping the tracks. This historic flooding demonstrates that the current drainage system does not have additional capacity to spare and it is critical that the proposed Calico Solar development maintain historic flows. Any increases in flows or sediment to the railroad drainage could result in overtopping of the railroad tracks. Therefore the BNSF Railway Company requires more substantial analysis for the hydrology of the proposed development to demonstrate that the construction of 24,000 sun catcher, miles of maintenance roads, a 90 acre substation

and the associated construction disturbance to the desert top soils will not change the existing drainage to the railroad structures.

Q.7 What is your opinion about the impact of emplacing the SunCatchers and associated infrastructure on the proposed Alternative 5.5 or Alternative 6?

A.7 In relation to this site, there will be over 24,000 SunCatchers placed in a tight grid over the site. Each SunCatcher has a 2 foot circumference base pedestal, which will be impervious to stormwater absorption and will act as a barrier to channelize stormwater, causing what is referred to as scouring around the base of the pedestal. Both Alternatives include provision for a large main services complex and a substation, with associated foundations and pads. Additionally, I understand that there will be an improved roadway along the entire border of the site and then access/maintenance roads between every other row of SunCatchers. The total estimated roadway is hundreds of miles. While not all of the roads will be paved, I understand all roads may be all-weather roads, which will be graded and either paved or treated with Soiltec or a similar substance to keep dust down. The resulting effect is that these roads will act as at least partial impervious barriers to the absorption of stormwater and will channelize stormwater flow and disrupt the natural flows of the alluvial fan. In addition, Applicant plans to place the SunCatchers as close together as physically possible in order to maximize the concomitant megawatt output from increased SunCatchers. While they will be "stowed" during a storm, the rainfall will naturally flow along the "stowed" surface of the SunCatcher, ensuring that the stormwater will run off the SunCatchers in a different fashion than if the site remained in its natural state, without SunCatchers.

Q.8 In your opinion, given the current state of hydrological analysis and issues raised by Calico Solar as recently as this week, does BNSF have sufficient information to analyze and grant Calico Solar's four requests for licenses and crossings on the BNSF ROW?

A.8 No. In the absence of an adequate study and in light of the issues raised by the Applicant through Dr. Chang's declarations and studies and Mr. Moore's declaration of September 13, 2010, it is not possible to analyze the safety or compatibility concerns raised by the requests that (1) BNSF allow it to drive hundreds of trucks and cars over the ROW; (2) BNSF build a new temporary at-grade crossing for Calico Solar's use in the ROW; (3) BNSF allow it to build a bridge over the BNSF ROW; and (4) BNSF allow an expansion of an at-grade crossing's use to allow for emergency access to the Calico Solar site. The proper studies, including hydrological, need to be completed. In addition, Calico Solar needs to disclose what is being referred to by the statement of Matt Moore of URS when he states that: "Existing sedimentation and maintenance issues at railroad facilities represent an existing condition that would not be significantly altered by Scenario 5.5 or 6." Once this information is obtained, BNSF will need time to evaluate if such uses and infrastructure are compatible with railroad infrastructure and operations and where they might best be located. BNSF needs to be provided the precise location of all SunCatchers and related infrastructure so it can assess potential impacts on the ROW that need to be considered in processing Calico Solar's applications. Until this occurs, BNSF is not in a position to grant the requested licenses and crossings.

I swear under penalty of perjury that this testimony is true and correct to the best of my knowledge and belief.

Dated: September 14, 2010

Steven J. Metro

BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT
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APPLICATION FOR CERTIFICATION

***For the CALICO SOLAR** (Formerly SES Solar One)*

Docket No. 08-AFC-13

PROOF OF SERVICE
(Revised 8/9/10)

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DECLARATION OF SERVICE

I, Harriet Vletas, declare that on September 17, 2010, I served and filed copies of the attached Prepared Direct Testimony of Steven J. Metro, PE dated September 14, 2010; Letter to Christopher Meyer, dated September 17, 2010. The original document, filed with the Docket Unit, is accompanied by a copy of the most recent Proof of Service list, located on the web page for this project at: [www.energy.ca.gov/sitingcases/solarone].

The documents have been sent to both the other parties in this proceeding (as shown on the Proof of Service list) and to the Commission's Docket Unit, in the following manner:

(*Check all that Apply*)

FOR SERVICE TO ALL OTHER PARTIES:

__x__ sent electronically to all email addresses on the Proof of Service list;

____ by personal delivery;

____ by delivering on this date, for mailing with the United States Postal Service with first-class postage thereon fully prepaid, to the name and address of the person served, for mailing that same day in the ordinary course of business; that the envelope was sealed and placed for collection and mailing on that date to those addresses NOT marked "email preferred."

AND

FOR FILING WITH THE ENERGY COMMISSION:

__x__ sending an original paper copy and one electronic copy, mailed and emailed respectively, to the address below (***preferred method***);

OR

____ depositing in the mail an original and 12 paper copies, as follows:

CALIFORNIA ENERGY COMMISSION
Attn: Docket No. 08-AFC-13
1516 Ninth Street, MS-4
Sacramento, CA 95814-5512
docket@energy.state.ca.us

I declare under penalty of perjury that the foregoing is true and correct, that I am employed in the county where this mailing occurred, and that I am over the age of 18 years and not a party to the proceeding.

Signed By
Harriet Vletas

*indicates change