



# California Regional Water Quality Control Board San Francisco Bay Region



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Secretary for  
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Arnold Schwarzenegger  
Governor

DEC 27 2006

December 20, 2006  
File No. 2198.09 (BKW)

Jeri Zene Scott, Compliance Project Manager  
Planning Division  
California Energy Commission  
1516 Ninth Street  
Sacramento, CA 95814-5515

<b>DOCKET</b>
<b>01-AFC-7C</b>
DATE DEC 20 2006
REC DEC 21 2006

**Re: Comments on the Request for Agency Participation in the Review of the Russell City Energy Company, LLC, Amendment Petition (01-AFC-7C)  
SCH No.: 2005092093**

Dear Ms Scott:

Regional Water Quality Control Board (Water Board) staff have reviewed the Request for Agency Participation in the Review of the Russell City Energy Company, LLC, Amendment Petition (01-AFC-7C). Water Board staff have the following comment on the Amendment Petition.

**Comment 1.**

**Post Construction Stormwater Management.**

Neither the original AFC nor the Amended AFC address compliance with the National Pollutant Discharge Elimination System (NPDES) permit for stormwater discharges from new development or significant redevelopment. The documents neglect the requirement to treat stormwater runoff from the developed project, in conformance with the February 2003, Alameda County Clean Water Program, NPDES Municipal Stormwater Permit (Order R2-2003-0021; NPDES Permit No. CAS0029831). Under the NPDES permit, post-construction stormwater best management practices (BMPs) are required to provide treatment that meets the maximum extent practicable (MEP) treatment standard in the Clean Water Act (CWA). To meet the MEP standard, treatment BMPs are to be constructed that incorporate, at a minimum, the following hydraulic sizing design criteria to treat stormwater runoff. As appropriate for each criterion, local rainfall data are to be used or appropriately analyzed for the design of BMPs.

**Volume Hydraulic Design Basis:** Treatment BMPs whose primary mode of action depends on volume capacity, such as detention/retention units or infiltration structures, shall be designed to treat stormwater runoff equal to:

1. the maximized stormwater quality capture volume for the area, based on historical rainfall records, determined using the formula and volume capture coefficients set forth in *Urban Runoff Quality Management, WEF Manual of Practice No. 23/ ASCE Manual of Practice*

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No. 87, (1998), pages 175-178 (e.g., approximately the 85<sup>th</sup> percentile 24-hour storm runoff event); or

2. the volume of annual runoff required to achieve 80 percent or more capture, determined in accordance with the methodology set forth in Appendix D of the *California Stormwater Best Management Practices Handbook*, (1993), using local rainfall data.

**Flow Hydraulic Design Basis:** Treatment BMPs whose primary mode of action depends on flow capacity, such as swales, sand filters, or wetlands, shall be sized to treat:

1. 10% of the 50-year peak flow rate;
2. or the flow of runoff produced by a rain event equal to at least two times the 85th percentile hourly rainfall intensity for the applicable area, based on historical records of hourly rainfall depths; or
3. the flow of runoff resulting from a rain event equal to at least 0.2 inches per hour intensity.

Water Board staff strongly encourage the use of landscape-based stormwater treatment measures, such as biofilters and vegetated swales, to manage runoff from project sites. Since landscape-based stormwater treatment measures require that some of the site surface area be set aside for their construction, the proper sizing and placement of these features should be evaluated early in the design process to facilitate incorporation of the features into the site landscaping. Water Board staff discourage the use of inlet filter devices for stormwater management. Filtration systems require a maintenance program that is adequate to maintain the functional integrity of the systems and to ensure that improperly maintained filtration devices do not themselves become sources of stormwater contaminants or fail to function. Water Board staff have observed problems with the use of inlet filter inserts, since these devices require high levels of maintenance and are easily clogged by leaves or other commonly occurring debris, rendering them ineffective. Research conducted by the California Department of Transportation has demonstrated that inlet filters can be clogged by a single storm event. The study found that these devices required maintenance before and after storm events as small as 0.1 inch of rain.<sup>1</sup> In addition, trash, debris, and sediment in the catchment had a significant impact on the frequency of maintenance. Therefore, adequate maintenance of inlet filters to provide MEP water quality treatment would be prohibitively expensive and impractically time consuming.

Water Board staff recommend that the project proponents refer to *Start at the Source*, a design guidance manual for storm water quality protection, for a fuller discussion of the selection of stormwater management practices. This manual provides innovative procedures for designing

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<sup>1</sup> Othmer, Friedman, Borroum and Currier, November 2001, *Performance Evaluation of Structural BMPs: Drain Inlet Inserts (Fossil Filter™ and StreamGuard™) and Oil/Water Separator*, Sacramento, Caltrans.



structures, parking lots, drainage systems, and landscaping to mitigate the impacts of stormwater runoff on receiving waters. This manual may be obtained from the Santa Clara Valley Urban Runoff Pollution Prevention Program's website ([www.scvurppp.org](http://www.scvurppp.org)) or by e-mailing a request to the e-mail address in the last paragraph of this letter. Additional innovative techniques for incorporating structural stormwater best management practices (BMPs) into urban design, such as infiltration planter boxes, can be found in Portland, Oregon's *2002 Stormwater Management Manual*, which can be obtained at [www.cleanrivers-pdx.org/tech\\_resources/2002\\_swmm.htm](http://www.cleanrivers-pdx.org/tech_resources/2002_swmm.htm).

If you have questions, please contact me at (510) 622- 5680 or by email at [bwines@waterboards.ca.gov](mailto:bwines@waterboards.ca.gov).

Sincerely,



Brian Wines  
Water Resources Control Engineer  
South/East Bay Section

cc: State Clearinghouse, P.O. Box 3044, Sacramento, CA 95812-3044

