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Simon A Brendle* (brendle@math.stanford.edu), 450 Serra Mall, Bldg 380, Stanford, CA 94305. *Asymptotic behavior of singular solutions to the prescribed scalar curvature problem.* Preliminary report.

We consider local solutions to the prescribed scalar curvature equation with isolated singularities. We study the asymptotic behavior of such solutions near point singularities, and discuss which of these are not asymptotic to one of the Fowler solutions. We show that this class of solutions can be characterized in terms of the boundary term in the radial Pohozaev identity. Moreover, we provide necessary conditions for the existence of solutions with this asymptotic behavior. This is a joint project with Richard Schoen. (Received March 02, 2006)