

FACT SHEET

SEMPRASAFE DECISION

ISSUE: *EnergySolutions* submitted a proposal to dispose of thermally processed ion-exchange resins as Class A low-level radioactive waste at the Clive facility in Tooele County. Ion-exchange resins are produced by nuclear power plants as part of their on-site wastewater treatment process and are commonly classified as low-level radioactive waste. The thermally treated resins are the product of a new SempraSafe process; a joint venture between *EnergySolutions* and its partner, Studsvik. Resin treatment will be done at the Studsvik facility in Tennessee

Under its current license, *EnergySolutions* can receive and dispose resins that qualify as Class A low-level radioactive waste. For the last 10 years, the existing license has allowed *EnergySolutions* to dispose of small volumes of treated resins, similar to the SempraSafe material. However, the new proposal means *EnergySolutions* would receive and dispose of this waste on a large-scale basis.

REGULATORY JUSTIFICATION: The Division reviewed *EnergySolutions*' proposal with respect to new criteria adopted by the Radiation Control Board, U.S. Nuclear Regulatory Commission (NRC) Guidance, and the existing Performance Assessment (PA) approved by the Division in 2000:

- In early 2011, the Board adopted changes to the Radiation Control Rules that establish criteria when a new PA model report is required for the disposal of proposed low-level radioactive waste streams. This change requires the Division to evaluate proposals as outlined in R313-25-8(1).
- After reviewing R313-25-8(1), the Executive Secretary (Division Director), has decided that R313-25-8(1)(a) is met. If SempraSafe volume is limited to 40,000 cubic feet per year the criteria in R313-25-8(1)(c) is met. This value represents one percent of the annual waste volume received by *EnergySolutions* and is significantly less than the 10% volume that can be associated with the radioactivity threshold in R313-25-8(1)(c).
- A new PA model report will ensure all remaining criteria are addressed.
- In March 2011, the NRC issued guidance regarding large-scale blending of low-level radioactive waste. It stated that "large-scale blending could result in disposal of significant quantities of waste at or near the Class A concentration limit, which was not considered in the analysis supporting the development of [federal regulations addressing the disposal of low-level radioactive waste]." NRC rulemaking on this is underway but will not be complete for over a year.

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- In the meantime, some uncertainty exists in that the March, 2011 NRC guidance failed to define what volume of waste constitutes large-scale blending proposals.

DECISION: The Division reviewed *EnergySolutions*' proposal with respect to the above. Because the SempraSafe material is similar to wastes already being disposed of by *EnergySolutions* at Clive, the Division will allow disposal to begin as long as the new PA model report is submitted by late December, 2012 AND the volume of waste is 40,000 cubic feet per year or less in the meantime. The volume limit will be re-evaluated following the completion of the analysis of an updated PA.

The Division of Radiation Control believes the limited annual volume is protective of the public health and safety since this is similar to other Class A low-level radioactive waste *EnergySolutions* is licensed to receive. The PA will answer the questions for volumes beyond this amount.

OPPORTUNITY TO COMMENT: A public comment period on this issue will be held from Tuesday, January 17 to Friday, March 16, 2012. Comments can be submitted to radpublic@utah.gov

Additional information on *EnergySolutions*' issues and an opportunity to sign up for a listserv is available at: <http://www.deq.utah.gov/Issues/energysolutions/index.htm>



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