# DOE NEWS

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## WINCO COORDINATES EFFORT TO RECYCLE CONTAMINATED METAL

Over the past several decades, scrap metal contaminated with radioactive materials has accumulated at Department of Energy facilities all over the country. Westinghouse Idaho Nuclear Co., a DOE contractor at the Idaho National Engineering Laboratory, is coordinating an effort to find new uses for that metal.

Working with universities, private industry and other DOE labs, WINCO is trying to identify smelting technologies that will allow the reuse of contaminated metals within the DOE complex. Eventually WINCO hopes to spin off the technology to private industry, which might build and operate a facility utilizing metal from both government and private nuclear facilities.

"Reusing contaminated scrap metal makes sense from an environmental and economic point of view," said Al Hoskins, manager of spent fuel conditioning and materials technology for WINCO. "It reduces the amount of new metal that has to be mined and the amount of waste that has to be managed. It makes good use of a resource that's already available."

WINCO is looking at a number of options for reusing contaminated scrap metal, but much of it could be used in storage and transportation casks for spent nuclear fuel or other radioactive materials. For example, WINCO estimates 23 kilotons of stainless steel will be needed to process and store high-level radioactive wastes that will be immobilized at the Idaho Chemical Processing Plant over the next 25 years or more. The current estimated cost to dispose of that contaminated scrap in an engineered facility is between $20 million and $200 million. The purchase price of new metal is estimated at $67 million, so recycling the contaminated scrap, including the cost of reforming the material, could save tens of millions to hundreds of millions of dollars.

The scrap metal recycle program is in its early stages. WINCO has contracted with Montana Tech in Butte to review available melting technologies, and with Oregon Graduate Institute in Portland to conduct melt studies and perform a market survey of the commercial nuclear industry. DOE sites around the country are conducting inventories of contaminated scrap metal. WINCO is seeking interest from private industry in performing melting and decontamination processes.

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Costs for evaluation of technologies will be shared with universities and private companies through cooperative agreements. Once potential melting, forming and fabrication technologies are identified, sample products like storage casks will be produced. The technology will then be transferred to private industry, which could build a state-of-the-art recycle facility capable of meeting the needs of DOE, as well as private nuclear facilities.

As the lead contractor for metal recycle in the DOE complex, WINCO is charged with clarifying regulations and criteria for metal recycle, developing an inventory and characterizing the types of metal on hand, assessing the types and degree of contamination, and identifying products and assessing costs of recycling contaminated metal.

"This is an excellent opportunity for WINCO and DOE to work with private industry and academia to develop environmentally beneficial technologies," said Hoskins. "It's an exciting program."

Hoskins emphasized the program will not result in any contamination exposure to the public. "The focus of the program is on beneficial reuse of contaminated scrap within the DOE complex," he said. "We don't expect release of the material into the general marketplace, and products generated from scrap recycle will remain within DOE control."

WINCO is DOE's contractor at the Idaho Chemical Processing Plant, where it receives and safely stores spent nuclear fuel, processes high-level radioactive waste and develops technologies for preparation of spent fuel and waste for final disposal.

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Media contact: Brad Bugger, (208) 526-0833

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