SRS Citizen's Advisory Board

Recommendation No. 144

October 23, 2001

PEIS on Disposition of Radioactive Scrap Metal

Background

DOE currently has two policies that limit the disposition of surplus scrap metal for recycling. One is a moratorium. This moratorium was issued on January 12, 2000 and prohibits the unrestricted release of volumetrically contaminated metals pending a decision by the Nuclear Regulatory Commission (NRC) whether to establish national standards (Ref. 1). The second is a suspension that was issued in July 2000. It suspended the unrestricted release for recycling of metal from radiological areas within DOE facilities pending the completion of changes to DOE Order 5400.5 (Ref. 2).

This DOE Order revision was drafted because DOE received public input indicating that even very low potential exposure to radiation from DOE recycled scrap metal was not acceptable. DOE recognized this input as valid even though its experience indicated that most scrap metal released within the existing criteria was either not contaminated at all or only had residual levels of surface contamination well below the current DOE standard. A public comment period on the proposed changes to the DOE directive ended December 4, 2000 (Ref. 3). DOE received comments from the Savannah River Site (SRS) Citizens Advisory Board (CAB) and the general public on these proposed changes (Ref. 4).

DOE received numerous comments and decided that the best way to address them was to not issue the draft revisions and to prepare a Programmatic Environmental Impact Statement (PEIS). DOE is currently in a scoping period for the PEIS and is holding public meetings to help determine the scope of the PEIS (Ref 5). This scoping period extends through November 9, 2001. DOE has identified three alternatives along with a No Action alternative for consideration. They are as follows:

No Action – Continue current suspension indefinitely.

Alternative 1 – Control the release of scrap metal from DOE radiological areas consistent with requirements in DOE Order 5400.5.

Alternative 2 – Control the release of scrap metal from DOE radiological areas consistent with alternative standards to DOE Order 5400.5.

Alternative 3 – No unrestricted release of scrap metal from DOE radiological areas unless there is clear knowledge, confirmed by monitoring, that there is no potential for residual surface radioactivity.

Comment

The PEIS applies to the recycling of scrap metal with the potential for residual surface radioactivity. It does not apply to volumetrically contaminated metals nor does it cover reuse of excess metal from DOE radiological areas. DOE still can not release any volumetrically contaminated metals.

In its previous recommendation, the SRS CAB was in favor of the proposed Surface Activity Guidelines, the revised DOE 5400.5 Order, and the planned local public participation program. At that time, the SRS CAB wanted DOE to resume unrestricted release of scrap metal cleaned from, or free of, contamination for recycling as quickly as possible. However, the possibility of using an alternative standard does have some merit and the SRS CAB would like to see this option explored in more detail, especially if an existing national or international standard could be utilized. At the same time, based upon DOE's experience, releasing scrap metal under the existing and now revised Order is not without merit and warrants further discussion. The SRS CAB supports the PEIS and DOE's effort to get public comments to help decide the ultimate disposition of scrap metal from DOE facilities. The SRS CAB has had a long history in its interest in the disposition of radioactive scrap metal and was instrumental in evaluating the beneficial reuse of radioactive scrap metal over 3 years ago (Ref. 6).

A primary issue is what's considered radioactive or how to distinguish no detectable activity. More than 80 percent of the radiation we are exposed to comes from background radiation, such as sunlight, soil, and certain types of rocks. In addition, we are exposed to many man-made sources of radiation everyday, such as television, smoke detectors, computer monitors, and X-rays. The current typical annual exposure from natural background is estimated to be 300 mrem. Receiving an annual dental X-ray for 50 years, or smoking 12 cigarettes a day for one year would result in a 500 mrem dose.

Every metal has some radioactive material in it, either from natural radioactive impurities or impurities from worldwide fallout of fission products and activation products. DOE must convey to the general public that they can never achieve zero levels of contamination in scrap metal do not exist, inside or outside of DOE facilities.

The SRS CAB offers the following recommendations to help DOE determine the alternatives, issues, and environmental impacts to be analyzed in the PEIS.

Recommendation

The SRS Citizens Advisory Board recommends that the PEIS:

1. Convey to the general public the various alternatives in language that is clear and easy to understand.
2. Include the expected inventory of all scrap metal and the financial impacts of implementing each alternative including disposal cost, expected income from recycling, costs for detection methodology, processing costs, record maintenance, etc.
3. Identify the industry/government standard it would consider using in Alternative # 2. Provide a rationale for choosing that standard realizing that a zero level of radioactivity can never be achieved.
4. Address the anticipated public involvement and communications program in the PEIS.
5. Identify the short-term health effects to site workers, off-site workers, and the general public for each alternative under consideration.
6. Identify the long-term (10,000 years) health and environmental impacts of metal compounds expected from the degradation of scrap metal exposed to the elements and potential landfill leachate.

References

1. *Energy Secretary Richardson Blocks Nickel Recycling at Oak Ridge*, Press Release, January 12, 2000.
2. Release of Surplus and Scrap Metal, Memorandum for Heads of Departmental Elements from Bill Richardson, Secretary of Energy dated July 13, 2000.
3. U. S. Department of Energy, Control of Materials with Residual Radioactive Contamination from DOE Facilities, Notice of Availability and Opportunity for Public Comment, November 6, 2000.
4. Citizens Advisory Board Recommendation No. 132 (adopted November 14, 2000), "Release of Radioactive Scrap Metal".
5. Public Scoping Meeting for Programmatic Environmental Impact Statement on Disposition of Scrap Metals, by Kenneth Picha, Jr., PEIS Program Manager, July 31, 2001.
6. Citizens Advisory Board Recommendation No. 54 (adopted March 24, 1998), "SRS Beneficial Reuse Program".

Agency Responses

Department of Energy-SR