Department of Energy
Washington, DC 20585

August 25, 2011 EXEC-2011-009585

MEMORANDUM FOR THE SECRETARY

FROM: ARUNAVA MAJUMDAR
SENIOR ADVISOR TO THE SECRETARY

STEVEN E. KOONIN
UNDER SECRETARY FOR SCIENCE

THOMAS P. D'AGOSTINO
UNDER SECRETARY FOR NUCLEAR SECURITY AND
ADMINISTRATOR, NATIONAL NUCLEAR SECURITY ADMINISTRATION

SUBJECT: Clearance for Recycle of Scrap Metal and Materials from Radiological Areas

ISSUE: Whether to delegate authority to resume clearance of scrap metal from radiological areas as defined by 10 CFR 835, Occupational Radiation Protection.

BACKGROUND: On July 13, 2000, Secretary Bill Richardson imposed an agency-wide suspension of the unrestricted release of scrap metal stored in radiological areas at the Department of Energy (DOE) facilities for the purpose of recycling. The suspension was imposed in response to concerns from the general public and industry groups about the potential effects of radioactivity in or on material released pursuant to the established requirements of DOE O 5400.5, *Radiation Protection of the Public and Environment*.[1] The suspension was to remain in force until DOE developed and implemented improvements in its release criteria and information management.

On January 19, 2001, the suspension was reaffirmed and extended indefinitely until Departmental elements could demonstrate certain specific improvements were made and integrated into the site radiological clearance processes. Additionally, the Secretary committed to develop a programmatic environmental impact statement (PEIS) on the policy alternatives relevant to disposition of materials from DOE sites. The PEIS, and subsequently, changes to DOE O 5400.5 were never completed.

[1] DOE Order 5400.5, *Radiation Protection of the Public and Environment* was replaced on February 11, 2011 by DOE Order 458.1 of the same name. The technical scope and purpose of the order remain the same.

Consequently, DOE facilities have continued to operate under the suspension and have taken on the burden of accumulating valuable clean scrap metals that are in some cases stored in radiological areas. Under the current policy, release of the metals would require permission from the Secretary.

Delegating authority to resume release of these materials from the Secretary to each Under Secretary would enable each Under Secretary to authorize resumption of scrap metal recycling. This would occur after verifying that sites have implemented appropriate process improvements and procedures to assure no contaminated material is inadvertently released. Continuation of the suspension policy, which bans recycle of scrap metal, conflicts with the environmental stewardship goals of Executive Order 13514, *Federal Leadership in Environmental, Energy, and Economic Performance*. Also, mining, smelting, refining, and commoditization of replacement metals consumes considerable energy and accrues significant environmental impacts, including emission of greenhouse gases. The impacts to be absorbed would provide no commensurate environmental benefit or additional radiation protection of the public.

Presented in Attachment I is a complete discussion of the background of the suspension policy as well as actions taken by NNSA and the Offices of Science and Energy Programs to define a pathway to resolve its underlying issues.

OPTIONS:

1) Delegate decision-making authority to manage radiological clearance of scrap metal from radiological areas to each Under Secretary for sites under his or her cognizance, in accordance with the processes contained in DOE O 458.1, *Radiation Protection of the Public and Environment*. This authority would be executed only after the site has implemented recommendations contained in the report *"Radiological Clearance of Scrap and Personal Property at NNSA Sites: Evaluation of Current Practices and Recommendations for Improvement,"* dated May 2010 (Attachment II). Public notification and involvement at sites authorized to resume clearance of scrap metal for recycle would be conducted and coordinated with local communities through existing frameworks established for public interaction (e.g., local government and regulatory agencies, site specific advisory boards, citizens advisory boards, etc.).

Pro: Approval of this option will enable DOE/NNSA sites to disposition scrap metal generated as a result of footprint reduction and dismantlement through recycling, support environmental sustainability goals, and minimize disposition costs and potentially generate revenue. The process would continue to provide for radiation protection of the public.

Con: Some public interest groups may interpret this decision as a retreat from a policy deemed to be more conservative with regard to potential exposure of the public to residual radioactive materials. The Secretary and members of Congress will likely get letters opposing this action.

2) Delegate authority to manage radiological clearance processes consistent with the conditions contained in Option 1 above, but make the delegation of decision-making authority and the resumption of the release of scrap metal from radiological areas contingent on completing an Environmental Assessment (EA). The EA would evaluate the potential environmental impact of the proposed action and describe the Department's rationale for delegating decision-making authority to the three Under Secretaries. The EA would allow for an open dialogue with the public regarding DOE's intent to resume clearance of scrap metal from radiological areas that (1) meet the requirements of DOE Order 458.1, and (2) have implemented the recommendations contained in *Radiological Clearance of Scrap and Personal Property at NNSA Sites-Evaluation of Current Practices and Recommendations for Improvement.*

Pro: This option offers similar Pros as Option 1 but includes a more formalized and rigorous process for (1) evaluation of potential environmental impacts of the proposed policy change, and (2) public notification and participation in issues associated with release of scrap metal managed in radiological areas at DOE/NNSA sites. Following the EA process may also provide a more defensible position against challenges to the requested change in DOE policy.

Con: The time frame for completing the EA is uncertain. Generally, an EA may be completed in six to eight months. During this time no change to the current suspension policy would be made and materials encumbered by the suspension policy would continue to be generated. The same response from interest groups would be expected under this option.

3) Rescind the suspension and affirm that compliance with the requirements of DOE Order 458.1 is the sole basis for clearance of materials from radiological areas. Assign responsibility for ensuring compliance with these requirements to the local site offices.

Pro: The suspension was put in place by Secretarial memorandum as a temporary restriction and can be similarly rescinded. Exercise of this option requires no marginal effort or application of additional resources on the part of DOE/NNSA field elements or site contractors and will allow immediate resumption of clearance operations according to the processes defined by DOE Order 458.1, *Radiation Protection of the Public and Environment.*

Con: This option is essentially a repudiation of the suspension and the concerns that inspired its creation. The option ignores observed, validated needs for improvements in field operations related to radiological clearance identified during reviews of NNSA, SC and EM sites. The option will get similar responses from interest groups as the previous options.

4) Maintain the current policy of suspending the release of scrap metals managed in radiological areas accumulated after July 13, 2000.

This option will likely be interpreted as an endorsement of the current suspension policy and precluding anticipated criticism from concerned public interest groups.

Pro: As this option is the status quo, selection will not arouse any public criticism or concern.

Con: Policy encumbered scrap metal will be disposed of as industrial or sanitary waste. Life cycle costs associated with continuation of the suspension policy will be planned and budgeted as a cost of business. Potentially salvageable material will be disposed of as waste contrary to the policy developed in Executive Order 13514 as well as DOE waste minimization and pollution prevention policies. Furthermore, because mining, smelting, refining and commoditization of replacement metal consumes considerable energy (e.g., internal combustion engine and fossil power plant emissions), this option is contrary to the Department's efforts to reduce greenhouse gas emission and provides no discernable benefit to the public or the environment.

RECOMMENDATION: Option 2. The preparation of a PEIS [or another NEPA document] that allows for public comment and involvement was specifically contemplated by the Secretary prior to release of the materials. While taking longer to implement, Option 2 allows for more formal public engagement and would more fully communicate the Department's policy.

We also recommend that consistent with its duties and responsibilities as outlined in DOE O 410.2, *Management of Nuclear Materials,* the NNSA Office of Nuclear Materials Integration, with advice and counsel from the DOE Nuclear Materials Advisory Board, be tasked with the responsibility for ensuring that the Principles of Management and Operations of Radiological Clearance Programs is implemented and institutionalized consistently across all field sites.

We do not recommend Option 3 because it does not address earlier commitments for public engagement. We do not recommend Option 4 since it would continue the suspension and provides no public benefit.

APPROVE: _____ DISAPPROVE: _____ DATE: SEP 28 2011

CONCURRENCES:

EM/Triay	2/25/11
GC/DOE/Harris	1/11/11
CI/DOE/Engle f/Lane	2/8/11
HS/Podonsky	12/22/10
SC/M. Jones f/Koonin	4/19/11
CFO/C. Johns /A. Stevenson	8/12/11