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February 5, 2013

VIA ELECTRONIC MAIL

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U.S. Department of Energy
National Nuclear Security Administration
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(Scrap_PEAcomments@hq.doe.gov)

**Re: Comments of the Metals Industry Recycling Coalition: Draft
Programmatic Environmental Assessment for the Recycling of
Scrap Metals Originating from Radiological Areas**

Dear Department of Energy:

On behalf of the Metals Industry Recycling Coalition (“MIRC”),¹ we hereby submit the following comments regarding the draft Programmatic Environmental Assessment (“Draft PEA”) issued by the Department of Energy (“DOE”) National Nuclear Security Administration (“NNSA”) for the recycling of scrap metal originating from radiological areas. 77 Fed. Reg. 73,996 (Dec. 12, 2012). The draft PEA purportedly analyzes the potential human health and environmental impacts of allowing the clearance and “unrestricted release” from DOE radiological areas for recycling of scrap metals deemed “uncontaminated” based on “stringent criteria” and “robust practices.” *Id.* While MIRC is open to the possibility of allowing the clearance, release, and recycling of truly uncontaminated scrap metal from DOE facilities, unfortunately the proposed action and draft PEA in fact are not limited to that concept and would allow the release of contaminated materials from radiological areas if the scrap metal meets

¹ MIRC is an ad hoc coalition of metals industry trade associations and companies comprised of World Resources, the American Iron and Steel Institute (“AISI”), the Steel Manufacturers Association (“SMA”), the Specialty Steel Industry of North America (“SSINA”), the Nickel Institute, and the Copper and Brass Fabricator’s Council (“CBFC”).

certain activity levels. The activity levels assessed in the draft PEA (*i.e.*, the authorized limits described in DOE Order 458.1) are the same levels published in 1974 in Atomic Energy Commission (now the Nuclear Regulatory Commission (“NRC”)) Regulatory Guide 1.86. MIRC previously has considered these activity levels, in discussions with DOE and the NRC, and found them to be well above background levels and inadequate to prevent interference with radiation detectors at metal recycling facilities. Accordingly, MIRC remains concerned about the potential release of these scrap metals and finds the draft PEA to be seriously deficient in numerous respects. These concerns are discussed in detail below.

MIRC greatly appreciates DOE’s past responsiveness to our concerns regarding the release of radioactively contaminated scrap metal, including and subsequent to the 2000 suspension of the unrestricted release of scrap metal originating from DOE radiological areas for the purpose of recycling. We hope to continue these productive efforts with the goal of finding a reasonable resolution of the fate of scrap metals found at DOE facilities, while preserving an uncontaminated scrap metal supply. However, we are concerned that the draft PEA is both incomplete and founded on numerous misconceptions that underlie the proposed policy option.

I. THE DRAFT PEA FAILS TO CONSIDER THE SIGNIFICANT IMPACT ON METAL RECYCLING FACILITIES OF ALLOWING LOW-LEVEL RADIOACTIVE MATERIALS INTO THE STREAM OF COMMERCE

The draft PEA asserts that under the proposed action there is not expected to be “any significant socioeconomic impacts” (Draft PEA at 18) or “any measurable unavoidable adverse impacts to the environment” (Draft PEA at 24). These conclusions ignore the fact that, for over 15 years, MIRC has provided DOE with extensive information regarding the substantial adverse impact that release of low-level radioactive scrap metal will have on metal recycling industries and the public’s confidence in metal products. MIRC’s primary concern is that scrap metal with levels of radioactivity that may be low but are measurably above background will find its way into the unrestricted stream of commerce through the eventual recycling of both the manufactured products and the wastes generated from the decontamination process. If such low-level radioactive scrap metal or by-product waste streams enter the scrap supply stream, they would make their way to metal recycling facilities where they would disrupt mill operations, contaminate the mill, impose significant response costs, and potentially expose workers and the public to radiation. In addition, even the perception that radioactive scrap metal has entered the stream of commerce would impact negatively the entire metal market and the use and acceptance of the many products containing recycled metals.

Radioactive sources (including shielded radioactive devices as well as scrap metal) in scrap feedstock pose a number of serious problems for the metal recycling industries.² To

² According to the General Accounting Office (“GAO”), there are approximately 40,000 general licensees authorized to possess approximately 600,000 shielded radioactive sources in the United States alone. (Nuclear Nonproliferation: DOE Action Needed to Ensure the Continued Recovery of Unwanted Sealed Radioactive Sources. GAO-03-483 (Apr. 2003).) Since 1980, there have

preserve consumer confidence and the safe and continued operation of their mills, the metals recycling companies have implemented use of sophisticated radiological detection devices to screen scrap shipments before they enter a facility. Many facilities also retest their scrap feedstock before it enters the furnace. In order to screen most effectively the incoming scrap, detection equipment is calibrated to be as sensitive as possible; oftentimes at, or slightly above, background levels. Any source of elevated radiation, whether from naturally-occurring radioactive materials (“NORM”) or scrap released from DOE facilities under the proposed action, may trip the sensors causing disruption in the operation of the mills. Consequently, it is our understanding that low-level sources, including scrap with activity levels that may meet the activity levels for “uncontaminated” scrap metal discussed in the draft PEA, will trip the sensors on a regular basis.

Further, it is inaccurate to conclude, as the draft PEA does, that scrap metal cleared from DOE radiological areas under the proposed action “would not differ in radiological character from that released and recycled by commercial firms.” Draft PEA at 6. In fact, metal recycling facilities typically screen radioactive materials from entering their operations at activity levels significantly below the proposed DOE criteria for identifying “uncontaminated” scrap metal.

A conservative estimate, based on conversations with MIRC member companies, indicates that a typical mill, under current circumstances, may sound between 20-50 false positives – *per month*. Each of these requires a response. MIRC’s concern with the proposed DOE action is that mills may be forced to decrease the sensitivity of their equipment so that the number of false positive alerts becomes more manageable and fewer process interruptions occur. However, in “turning up the dial” on their radiation detection equipment, mills are exposed to a greater risk of melting a high-level source. The release of low-level radioactively contaminated scrap metal would increase substantially these risks.

Further, the draft PEA identifies several isotopes (alpha emitters) that potentially would be released on scrap metal from DOE facilities but are not capable of detection by the radiation detectors employed at metal recycling facilities. These alpha emitters – identified as Groups 1-3 in Appendix A, Table A-1 of the draft PEA – are detectable by employing wipes,

(cont.) been 84 known melts of significantly radioactive sources by the metals recycling industry internationally. (Meltings of Radioactive Materials, Yusko, J.G., Pennsylvania Department of Environmental Protection (2004)). When a radioactive source is melted, depending on the isotope involved, it may contaminate slag and slag handling equipment, the finished metal product, the furnace, baghouse, and duct systems and the surrounding facility. In addition to exposure concerns, when a source is melted, each component of the system must be completely cleaned and many mill components must be discarded. Contaminated items must be disposed of in costly low-level radioactive waste disposal facilities. The mill must remain closed while the remediation and replacement takes place. Often this can take several weeks to several months. The combined cost of the remediation, disposal and closure following an inadvertent melt of a radioactive source typically requires a remediation program that can cost \$12-\$24 million.

which are infeasible to utilize at facilities that must screen hundreds of thousands of tons of scrap metal each year.

In addition, the scrap industry is global, with thousands of tons of scrap metal exported from the United States each month. DOE policies that promote the release of radioactively-contaminated scrap will result in the export of some of this material, including potentially to less developed countries with minimal or no radiation detection equipment or other protections. In addition to the potential health and environmental impacts associated with the “dumping” of radioactive material on less developed countries, the U.S. scrap metal industry would suffer adverse economic impacts from the likely backlash.

These well-known concerns were not addressed in the draft PEA.

II. THE PROPOSED ACTION IN FACT WOULD BE CONTRARY TO SUSTAINABLE ENVIRONMENTAL POLICY GOALS

While failing to consider the long-standing MIRC concerns discussed above, the draft PEA instead states that the proposed action is “consistent with the principles of sustainable materials management.” Draft PEA at 3. The draft PEA further asserts that the proposed action would “be a benefit to the environment” by reducing the need for mining, smelting, and refining virgin metal ores, and avoiding environmental impacts associated with those activities. Draft PEA at 23-24. In fact, by undermining confidence in the scrap metal stream and products manufactured from scrap metal, the introduction of low-level radioactively contaminated scrap metal will *reduce* demand for scrap metal, *reduce* recycling rates, and *increase* the need for virgin ores and metals. While clearance of the DOE scrap metal may be desirable for the Department (and may be, in fact, an efficient use of that particular scrap material), the action will have an adverse spillover effect on the hundreds of millions of tons of scrap that are recycled each year by the metals industry. To pursue such a policy for the sake of reducing the burdens of managing what is a small percentage of the total scrap metal supply – estimated in the draft PEA as 0.004 percent of the total metals recycled during the 2005-2009 period (Draft PEA at 12) – would be short-sighted and, in fact, contrary to sustainable environmental policy goals.

Consistent with MIRC’s assertions in our November 1, 2011 letter expressing concern with the DOE policy recommendation approved on September 28, 2011 by Secretary Chu, the draft PEA does little to enhance the public’s comfort with the potential release of radioactive scrap metal. The draft PEA fails to address the adverse impacts on the broader scrap supply stream and the public’s perception of the safety of products made from scrap metal. For the reasons noted above, MIRC is concerned that the draft PEA is narrowly focused on the use of relatively small amounts of radioactive scrap metal from DOE facilities, and fails to account for the far broader impacts that release of radioactive metals will have on the scrap supply stream.

The metals industry has worked diligently for many years to build consumer confidence in the safety and utility of products made from recycled metal. However, the public, often fueled by sensationalized news reports, remains concerned about the safety of recycled

metals in products that they use. The mere perception that metal products are unsafe because they are made from potentially radioactive scrap metal may lead to massive customer de-selection. Notwithstanding government assurances that the scrap or low levels of radiation are safe, consumers simply do not want any added radiation in their homes, automobiles, or workplaces. This is especially true when it is asserted that “uncontaminated” scrap metal includes materials with low, but measurably above background, levels of radioactivity. Rightly or wrongly, consumer confidence would be severely undermined if even small amounts of low-level radioactive sources were found in the scrap feedstock.

III. DEFICIENCIES OF THE DRAFT PEA

A. The Draft PEA Fails To Explain How Compliance With The One Millirem/Year Dose Level Is Calculated From The Identified Surface Activity Authorized Limits

The draft PEA proposes that scrap materials would be considered “uncontaminated” and eligible for unrestricted release if the surface concentration of radioactive materials results in a total effective dose to a member of the public of 1 millirem (“mrem”) above background per year (“mrem/y”) or less. Draft PEA at 5. The draft PEA also identifies surface activity levels that purportedly would result in compliance with the 1 mrem/y dose level. Draft PEA, Appendix A. While the draft PEA asserts that the 1 mrem dose level has “been determined to be protective of human health and the environment,” the analysis lacks any discussion of how compliance with that dose level is calculated from the identified surface activity levels. No exposure scenarios or assumptions are presented from which the public could assess the reasonableness of the conclusion that the surface activity levels would result in exposures below the 1 mrem/y standard.

Also unaddressed is the fundamental issue of how the surface activity levels are translated into the assumed dose level received by a member of the public. Basic exposure assumptions are not presented, such as the duration of exposure and the quantity of released DOE scrap metal to which an individual may be exposed. Similarly, the potential aggregation of exposure to multiple shipments of radioactive materials is not examined. Moreover, there is no analysis of the potential dose level that a worker at a metal recycling facility would be expected to receive.

These issues are further complicated by the fact that the draft PEA states that the standard “applies to each lot or stream of scrap cleared from an individual site.” Draft PEA at 5, note 3. Hence, the policy would allow multiple shipments that, if combined downstream, could result in exposure beyond the 1 mrem/y dose standard. It is not difficult to imagine a worker at a metal recycling facility being exposed to multiple lots of cleared DOE scrap. Accordingly, if a worker or other member of the public may be exposed to multiple shipments, how can it be assumed that an individual would not be exposed to a dose level less than 1 mrem/y? In essence, by applying the standard to individual shipments, the overall dose level is practically unrestricted.

B. The Scope And Volume Of Materials Subject To The Policy Needs To Be Clarified

The draft PEA states that the policy could result in the release and recycling of 13,790 metric tonnes of scrap metal from DOE facilities. Draft PEA at 11-12. In contrast, it has been MIRC's long-time understanding that over 1 million tons of scrap metal in fact are present at the DOE facilities covered by the proposed action and potentially eligible for release.³ For example, a 2001 DOE report provides an inventory of scrap iron and steel expected to be available from the decontamination and decommissioning of DOE facilities, with totals as follows:

Exhibit 3-1. Potential Available Metal Quantities			
Metal	Inventory¹	Generation from D&D	Total by Metals
Carbon Steel	85,187	780,332	865,519
Stainless Steel	6,609	167,394	174,003
Nickel	9,700	27,906	37,606
Iron	11	7,525	7,536
Total	101,507	983,157	1,084,664
¹ All metal quantities are shown in tons.			

DOE, "Dedicated Steel Mill Feasibility Study," January 2001, at 18 (attached); *see also, id.* at 17-23.

While we understand that, as noted in the draft PEA, volumetrically contaminated materials and those subject to RCRA/CERCLA actions are not included within the scope of the proposed action, there appears to be a significant discrepancy in the volumes potentially at issue. Accordingly, we request that DOE clarify which materials are within the scope of the policy and explain why the over 1 million tons of scrap metal MIRC has understood to be present at the affected DOE facilities would not be eligible for release.

³ According to MIRC calculations based on a 2007 inventory of DOE (and some NRC) facilities undergoing decommissioning, plus an estimate of scrap tonnages estimated to be generated through future decommissioning, it was estimated that approximately 1,068,000 tons of potentially radioactively contaminated scrap metal were present at the facilities. This sum includes the following breakdown by type of metal: Steel - 904,000 tons; Copper/Brass - 54,000 tons; Nickel - 44,900 tons; Aluminum - 27,000 tons; Lead - 36,000 tons; Monel (Ni/Cu Alloy) - 300 tons; Other metals - 1,900 tons.

C. **Appropriate Notice To Purchasers And Tracking Of Shipments Should Be Required For Any Scrap Material Released From DOE Facilities With Detectable Levels Of Radiation**

The proposed action does not contemplate the notification and tracking of shipments of scrap metal released under the policy. This is unacceptable. Because the policy is not limited to truly “uncontaminated” (*i.e.*, radiation non-detectable) scrap metal, these shipments must be tracked through the chain of commerce and purchasers notified of the presence of low levels of radiation. As noted above, metal recycling facilities generally have a policy of no detectable radiation for scrap materials and set radiation detectors as close to background as possible. A tracking mechanism would assist in providing metal recycling facilities with information to avoid radiation-detection incidents and the manufacturing delays that such incidents cause.

D. **Process Knowledge Alone Is Not Sufficient To Justify Release**

The draft PEA indicates that the clearance decision making process involves “the use of process knowledge, documented radiation surveys, or a combination of these methods to ensure that the potential public radiation doses are less than 1 mrem/y, above background.” While process knowledge no doubt plays an informational role in the clearance process, it would be unreasonable for DOE to allow the release of any scrap metal without conducting appropriation radiation testing. Even if process knowledge indicates that radiation levels for certain scrap should be non-existent or very low, for the market to have any confidence in the release of scrap metal the radiation levels of each shipment should be verified and documented.

IV. CONCLUSION

For the foregoing reasons, MIRC believes that the draft PEA is deficient and inadequate to support a policy that would allow the unrestricted release of scrap metals from DOE facilities. MIRC encourages DOE to develop a policy that could identify truly uncontaminated scrap metal, and avoid actions that would result in the release of scrap metal with levels of radiation that exceed background and would trigger the radiation detectors at metal recycling facilities. The draft PEA focuses narrowly on a quantity of scrap metals at DOE facilities that is miniscule in comparison to the millions of tons of scrap metal recycled annually. While purportedly aimed at encouraging the efficient use of 13,790 metric tonnes of scrap metal at DOE facilities, the proposed action would put at risk the recycling of the vast quantities of scrap metal processed each year to create new metal products. This is not an appropriate trade off and, contrary to the conclusions of the draft PEA, not beneficial to the environment or human health.

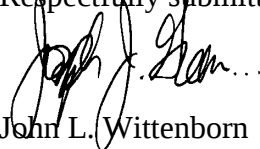
MIRC looks forward to continuing to work closely with the DOE to develop appropriate regulatory policies related to the management of the scrap metal supply stream. We would be happy to meet with appropriate DOE officials to discuss the draft PEA and seek a reasonable way forward. If you have any questions or would like additional information, please do not hesitate to contact John Wittenborn at 202.342.8514 or JWittenborn@KelleyDrye.com or

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KELLEY DRYE & WARREN LLP

Joe Green at 202.342.8849 or JGreen@KelleyDrye.com. MIRC greatly appreciates your attention to this matter which is of utmost importance to the metals industry.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "John L. Wittenborn".

John L. Wittenborn
Joseph J. Green
Counsel to the Metals Industry Recycling Coalition