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November 1, 1999

Secretary,
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555
Attention: Rulemaking and Adjudications Staff

Re: Release of Solid Materials at Licensed Facilities

Dear Gentlepersons:

Pursuant to the *Federal Register* "request for comment" of June 30, 1999, at page 35090, and regarding "Release of Solid Materials at Licensed Facilities; Issues Paper, Scoping Process for Environmental Issues, and Notice of Public Meetings," I enclose for Commission consideration one copy of **Comments of the Paper, Allied-Industrial, Chemical & Energy Workers Union, ("PACE"), November 1, 1999, U.S. Nuclear Regulatory Commission, Proceeding on Release of Solid Materials At Licensed Facilities.**

Please put the enclosed **Comments** in the public file for the proceeding. Please let the undersigned know if there are any questions regarding this matter.

Very truly yours,

Dan Guttman
Counsel for PACE

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Comments of the Paper, Allied-Industrial, Chemical & Energy Workers Union, ("PACE")
November 1, 1999
U.S. Nuclear Regulatory Commission
Proceeding on Release of Solid Materials At Licensed Facilities

Introduction and Summary

The Paper, Allied-Industrial, Chemical and Energy Workers International Union, ("PACE"), the successor union to the Oil, Chemical & Atomic Workers Union, has 330,000 members nationwide, and is the largest employee representative within the United States Government's nuclear complex. PACE members also work in metal processing facilities, industrial machining operations, and settings where radioactive metals can be smelted, cast, ground, plated, grit blasted, welded or otherwise processed. PACE has a long standing interest in the risks posed by exposure to radioactive materials and the protection of the public, including PACE members, their families, and the communities in which they live and work. PACE has need to understand not only the health effects of exposure to radioactive materials, but, of no less importance, the capabilities, competence, and historic and continuing shortcomings of the institutions -- public agencies and private corporations -- to whom radioactive materials have been entrusted for processing and use.

As further discussed below:

- THE INTEGRITY OF THE NRC'S RULEMAKING REQUIRES AFFIRMATIVE DEMONSTRATION THAT THE STATUS QUO POLICY --NO UNRESTRICTED RELEASE AT ALL -- WILL BE FAIRLY AND EQUALLY CONSIDERED AMONG ALTERNATIVES

- UNRESTRICTED RELEASE CANNOT BE FOUND SAFE WITHOUT A FULL FACT FINDING REGARDING THE BASIC RELIABILITY AND COMPETENCE OF ENTERPRISES--PRIVATE AND PUBLIC--TO SAFELY RECYCLE MATERIALS AND TO TELL THE TRUTH ABOUT THEIR ACTIVITIES. A RISK BASED STANDARD IS NECESSARILY UNACCEPTABLY ARBITRARY IF IT IS NOT ROOTED IN THE EXPERIENCE OF THE REAL WORLD. THE NRC MUST PROVIDE FOR:

    - Factfinding regarding a Federal court determination that an ongoing Oak Ridge radioactive metal recycling project is proceeding in violation of environmental law, and whether the Energy Department will take prompt action to require compliance with the law;

    - Factfinding regarding the State of Tennessee's recent issuance of a license for recycling of volumetrically contaminated metals in the absence of legal authority to do so, and related actions by the NRC to assure compliance by

this Agreement State with the law;

- Factfinding regarding the government and its contractors' historic policies and practices of keeping information on the public release of radioactive substances secret from the exposed public, and prompt action to assure full disclosure;

- Fact finding regarding the NRC's previous written declaration that it will rely on expertise in this proceeding that is tainted by conflict of interest, and what steps will be taken to assure corrective action;

- Fact finding regarding evidence that those entrusted with the public release of radioactive materials do not have requisite competence;

- Fact finding regarding the failure of DOE and recycling contractors to provide credible and public analysis of, and protection against, worker exposures;

- Fact finding regarding evidence that this Commission's predecessor may have historically sanctioned the commercial release of radioactively contaminated materials without any public notice.

- THERE IS NO BASIS FOR UNRESTRICTED RELEASE OF RADIOACTIVE MATERIALS -- SUCH AS PLUTONIUM -- THAT DO NOT NATURALLY OCCUR IN NATURE.

I. The Proposed Rulemaking Lacks Integrity; the Result Has Been Prejudged and Reasonable Alternatives -- Including Maintaining the Current Prohibition on the Unrestricted Release of Volumetrically Contaminated Metals -- Will Not be Seriously Considered

The NRC casts this rulemaking as one in which the public will participate and its views be considered. However, the NRC's conduct to date shows that it has a closed mind.

Even before the onset of public participation, the Commission determined that:

(1) there will be a rule(s) permitting free release of radioactively contaminated materials for use in commerce and;

(2) the rule(s) will be based on a putative effort to determine health risk (which, as discussed below, relies on tainted analysis from the start), rather than an effort to protect the

public from all measurable exposures to radioactive substances.[1]

Any legitimate rulemaking must demonstrably give full and fair consideration -- including provision for factfinding -- to alternatives other than that which the NRC has already decided on.

These alternatives include:

(1) a conclusion that no level of unrestricted free release of radioactively contaminated materials above background levels is consistent with the public interest; and

(2) a conclusion that no level of unrestricted free release of radioactively contaminated materials above detectable levels is consistent with the public interest not some (inevitably arbitrary) health standard.

The public record (much of which is only now emerging from secrecy) shows that public and private institutions entrusted with public releases of radiation have been, and remain, incapable of managing these releases in a manner that complies with the law, the basic requirements of technical competence, and the requirements of public integrity. Therefore no rule permitting any free releases can be permitted without:

(1) means to assure that:

> (a) all materials are adequately labeled for disclosure to otherwise unknowing consumers, and
>
> (b) that the materials may not be used for consumer products that come into intimate human contact; and

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[1] See June 30, 1998 Memorandum to L. Joseph Callen, Executive Director for Operations from John C. Hoyle, Secretary re "Staff Requirements - SECY-98-028-regulatory options for setting standards on clearance of materials and equipment having residual radioactivity." The Memorandum concludes (emphasis added):

> The rulemaking should focus on the codified clearance levels above background for unrestricted use that are adequately protective of public health and safety. *This level should be based on realistic scenarios of health effects from low doses that still allows quantities of materials to be released.* The rule should be comprehensive and apply to all metals, equipment, and materials, including soil. *If problems that would delay completing the rulemaking arise in certain categories of solid materials, then a decision can be made to narrow the scope of the rule.*

(c) all materials released to the public are practicably subject to identification and recall at every stage of the recycling and reuse process.

(2) thorough accounting to the public with respect to the history of compliance by the public and private enterprises in complying with current standards governing already licensed materials, such as sealed sources.

(3) full consideration to the economic and health impacts on the metal working industries, (including those where our members are employed) from managing radiologically contaminated materials in a non licensed workplace.

II Any Rulemaking Must Permit Full Factfinding Regarding Growing Evidence that Those Entrusted with Public Releases of Radiation Cannot be Presumed to Comply with the Law, Possess Basic Competence, or Tell the Exposed Public the Truth

The NRC evidently views its central task as that of determining the ostensible level(s) at which the public can safely be exposed to the radioactive materials which will be released into commerce. However, there is no basis for presuming that those institutions entrusted with releasing radioactive materials into communities and households can be entrusted to abide by any rule, however technically plausible it might be in the abstract. To the contrary, there is serious and growing evidence that those engaged in public releases have historically, and to this date, acted unlawfully and/or incompetently and/or unethically. No further public releases can be sanctioned by the United States Government unless and until it fully considers and accounts for this evidence. No rulemaking that fails to account for this evidence can adequately protect the public.

A. No Releases Can be Sanctioned Until Ongoing Recycling is Brought into Compliance with The Law

1. A Federal Court Has Confirmed that Ongoing Recycling is in Violation of NEPA and the Public Requirements for Openness

In 1997 the U.S. Department of Energy ("DOE") entered into a quarter billion dollar noncompetitive contract with British Nuclear Fuels ("BNFL") to decontaminate and recycle approximately 100,000 tons of contaminated metals from DOE's Oak, Ridge, Tennessee "K-25" gaseous diffusion facilities. This action was taken by the government notwithstanding the warning by labor, citizen and environmental groups that the project was proceeding without regard for minimally requisite health, safety, and environmental protection requirements.

When DOE proceeded in noncompliance with the National Environmental Policy Act, PACE, joined by the Natural Resources Defense Council ("NRDC") had little recourse but to file suit seeking an order that DOE comply with NEPA and prepare an Environmental Impact Statement ("EIS").

On June 29, 1999 U.S. District Court Judge Gladys Kessler found that citizens are barred by a provision of the Superfund law ("Section 113(h)") from bringing suit to compel the DOE to follow the law during the pendency of a cleanup. However, the Judge agreed that the Department of Energy's ongoing recycling of radioactive material from Oak Ridge for "unrestricted" commercial uses poses "great" and unexamined potential for environmental harm. "In the absence of Section 113(h)," the Judge stated, "an Environmental Impact Statement would clearly have been mandated."[2]

Judge Kessler's decision stated:

> The Court acknowledges and shares the many concerns raised by [PACE and NRDC]. The potential for environmental harm is great, especially given the unprecedented amount of hazardous materials which [DOE and BNFL] seek to release.

The Judge found, "ample evidence that the proposed recycling significantly affects the quality of the human environment." Two years following the August, 1997 contract award, and following millions of taxpayer dollars expended on the project, the Judge found that "Plaintiffs allege and [DOE and BNFL] have not disputed, that there is no data regarding the process efficacy or track record with respect to safety."

Finally, the Judge termed "startling and worrisome" the absence of opportunity for "public scrutiny or input on a matter of such grave importance." She explained that "[t]he lack of public scrutiny is only compounded by the fact that the recycling process which BNFL intends to use is entirely experimental at this stage." The Judge also found "quite troubling" that DOE and BNFL "have provided no adequate explanation" for their failure to provide for public notice of the recycling project as required by the governing Federal Facilities Agreement among EPA, DOE, and the State of Tennessee.

In sum, the June 29 decision confirmed that -- as labor, citizen, and environmental groups stated prior to the 1997 contract award -- Oak Ridge recycling is proceeding in callous and knowing disregard of the public procedures required by law and the Administration's commitment to the environment and reinventing government in a manner that will enhance the public's trust -- rather than reaffirm its suspicions.

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[2] PACE notes that Commissioner McGaffigan's comments on Judge Kessler's decision indicate that he may read the decision as suggesting that the Court's decision found recycling to be appropriate if conducted through a rulemaking. PACE respectfully points out that the Court's decision did not endorse the proposition that free release, via rulemaking or otherwise, is an outcome in keeping with the law.

Required Rulemaking Action:

Therefore, as a predicate to any rule, the Commission must provide for factfinding regarding:

* Why and how did government officials permit the Oak Ridge recycling to proceed in violation of the law;

* Why and how did BNFL (and its teaming partners, including SAIC) participate in a project which was plainly being undertaken in disregard of environmental law and public participation requirements;

* What lessons does the failure of the government and its contractors to abide by environmental law and public participation requirements in this precedent setting free release project teach about the wisdom of sanctioning future free releases?

2. The State of Tennessee Is Licensing Free Releases in Evident Violation of Law and Policy

On March 26, 1999, the Tennessee Department of Environment and Conservation ("TDEC") approved a license amendment by which BNFL is proceeding to recycle contaminated waste from Oak Ridge for free release. As found by Judge Kessler, TDEC's action took place without opportunity for public scrutiny. It now appears that TDEC acted without lawful authority as well.

TDEC did not provide a public notice of the licensing amendment it was considering; nor did TDEC's license amendment itself state any basis in authority for its action.[3]

As explained in detail in the October 25, 1999 letter to Chairman Dicus [4] from Congressmen Dingell, Klink, and Markey, TDEC's licensing appears to be in violation of NRC regulations, the Atomic Energy Act, and the TDEC/NRC delegation Agreement. Among other things, the Congressmen explained:

> Such a release appears to violate numerous NRC regulations which were developed specifically to prohibit the uncontrolled release by

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[3] PACE and NRDC have, by letters of October 5 and October 18,1999, asked TDEC to provide the legal authority under which it acted, as well as further information supporting its closed decisionmaking. TDEC has not yet provided a written response to these queries.

[4] PACE presumes that this letter and its attachments will be incorporated in full in the record of the instant proceeding. (PACE would be pleased to provide a copy for the record of this, and further documents, referenced herein).

> radioactive byproduct material into general commerce. These regulations implement a decades-long and still-existing policy of the Atomic Energy Commission to keep radioactive byproduct material out of the hands of the general public for safety and national security reasons.

Moreover, as the Congressmen's letter explained in detail, Tennessee's action is at odds with the requirement that state actions be compatible with this Commission's actions. Indeed, this Commission's proposed rulemaking confirms the absence of federal standards for release of, at the least, volumetrically contaminated materials. Thus, as the Congressmen have stated: "[b]ecause the NRC has set no release standard for volumetrically contaminated materials and is in the process of beginning a rulemaking to establish that release standard, Tennessee cannot establish a standard in an individual license amendment and maintain compatability."

TDEC's issuance of a license in the evident absence of authority -- and in direct contravention of longstanding law and policy to the contrary -- raises the most serious questions about the integrity of controls on the public release of radioactive materials. Put simply, if the TDEC can act unlawfully, with the active support of the U.S. Department of Energy and the passive acquiescence of this Commission, why should any citizen have reason to credit the integrity of any future regulation of public releases of radioactively contaminated materials?

Required Rulemaking Action:

As a predicate to any consideration of NRC sanctioned future releases, therefore, the Commission must:

* confirm the unlawfulness of the BNFL/MSC TDEC license and

* provide for the development of a full record regarding how this unlawful licensing could have taken place in full view of the NRC and the DOE;

* determine what lessons are to be learned from the failure of the licensing process in the precedent setting Oak Ridge case?

B. This Commission Must Require Full Disclosure About Past and Continuing Practices of Concealment Regarding Public Releases of Radiation

As the veil of Cold War secrecy is lifted, it is increasingly apparent that this Commission, at least through its predecessor agency the Atomic Energy Commission ("AEC"), pursued a calculated and secret policy of keeping the public in the dark about radiation risk, including public releases of radiation. The recently released documentation shows the government did so not for reasons of national security, but because it feared embarrassment to itself and/or its contractors, and because it did not trust the public with information about radiation risk.

Unfortunately, recent revelations confirm that this policy did not vanish, but has continued to be the premise of ongoing Federally funded (indeed subsidized) radioactive metals recycling. Until this pattern of secrecy and deception regarding the public release of radiation is fully exhumed and evaluated, there can be no basis for a rule that provides for broad public releases of radioactively contaminated materials.

1. From its 1947 Inception this Commission's Predecessor Kept Public Radiation Releases Secret to Avoid Embarrassment to the Government and Its Contractors

In January 1994 President Clinton created the Advisory Committee on Human Radiation Experiments to retrieve and tell the full story of government-sponsored human radiation experiments conducted during the Cold War.

In October 1995 the Committee reported to the President that at its 1947 inception the Atomic Energy Commission ("AEC") – the predecessor to today's DOE and NRC– kept health and safety data and analysis secret to avoid embarrassment and liability to the government and its contractors. Remarkably, these rationale, the documents showed, were employed when officials knew that national security itself would not justify keeping the information secret.[5]

The documents uncovered and made public by the President's Committee revealed that the suppression of health and safety information was directed at the government's nuclear weapons workers and their representatives and their communities, as well as experimental subjects. Thus, a 1947 memo from the AEC Director of Oak Ridge operations to the AEC General Manager stated:

> Papers referring to levels of soil and water contamination surrounding Atomic Energy Commission installations, idle speculation on future genetic effects of radiation and papers dealing with potential process ha prejudicial to the best interests of the government. Every such release is reflected in an increase in insurance claims, increased difficulty in labor relations and adverse public sentiment.

The Committee did not find that this policy was ever formally and effectively countermanded -- by the AEC or its successors. (Indeed, the policy was only made public following the President's creation of the Committee in 1995)

2. It Now Appears That the AEC's Secret Policy Continued In Secret For Years and May Never Have Been Effectively Countermanded

Now, documentation emerging from recent revelations about Paducah and other sites

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[5] *See Final Report: Advisory Committee on Human Radiation Experiments*, at chapter 13 ("Secrecy, Human Radiation Experiments, and Intentional Releases").

shows that the policy may have continued unabated into the 1960's and later. A March 11, 1960 AEC memo ("Neptunium Contamination Problem, Paducah, Kentucky, February 4, 1960") shows that top AEC biomedical officials recognized that "possibly 300 people at Paducah should be checked out" for neptunium contamination, but that there was hesitation to "proceed to intensive studies because of the union's use of this as an excuse for hazard pay."

In short, it appears that the policy and practice of public deception engaged in by the AEC regarding public risk continued in effect; there is no public evidence as to when, if ever, it was effectively countermanded.

3. The Current Release of Oak Ridge Materials Is Now Known to Have Been Forwarded In Calculated Darkness

As quoted above, in her June, 1999 decision, Federal Judge Kessler confirmed that the ongoing recycling sponsored by DOE and conducted by BNFL has been conducted in the disturbing absence of the most elemental public review. Documents produced only in the litigation make plain that this was no accident. Thus, a previously secret BNFL strategy memo explained that quick action was needed to avoid public discussion:

> Issuance of radioactive materials licenses within the State of Tennessee has not previously involved a public consultation process. It is unlikely that this will continue to be the case for the long term...Therefore, amendment to the existing MSC license for release of a small quantity of decontaminated nickel is being pursued to establish the precedent for nickel release.

In sum, there is ample basis to presume that government sanctioned release of radioactive materials for general public use cannot be conducted by the government and its contractors with the full and fair disclosure required by the public interest.

Required Rulemaking Action:

Any proposal to permit the free release of radioactive materials cannot proceed in the absence of this Commission's provision for the full development of facts regarding:

- The extent to which the AEC and its successors and their contractors have historically kept the public uninformed regarding public releases of radiation;
- The extent to which the past policies and practices have been effectively countermanded (in particular, what role did this Commission, its Agreement State, and DOE play in BNFL's calculated design to avoid public review of its free release proposals)?

C. The Commission Must Promptly Account for Its Reliance on Experts with Undisclosed Conflict of Interest

The June 30, 1998 Memorandum recording the Commission's approval of "Option 2" (to "promulgate a dose-based regulation") states that:

> The proposed standard for clearance should...draw from the IAEA's interim report and the SAIC analysis.

The Commission has apparently failed to inform the public (assuming it were itself informed) that SAIC has a substantial interest in the outcome of this proceeding. Indeed, as part of the BNFL team, it is the beneficiary of a share of the quarter billion dollar contract under which BNFL is proceeding with the Oak Ridge recycling. Moreover, PACE understands that on August 20, 1999 SAIC sought a contract from a group at yet a further DOE uranium enrichment site to assist in further efforts to free release radioactive materials. The Commission's reliance on SAIC, particularly where it has failed to provide simultaneous public disclosure of the full range of SAIC's interests in the promotion of recycling and release of radioactive materials is inexplicable. [6]

Required Rulemaking Action:

As a predicate to any Commission reliance on SAIC analyses or data, therefore, it is imperative that the Commission:

- Provide a full public disclosure of any interests that SAIC may have in the recycling of radioactive wastes, including, but not limited to: (1) its participation

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[6] We note that the Atomic Energy Act, at 42 U.S. Code Section 2210(a) requires that the Commission shall not employ a contractor in the absence of: (1) full disclosure by that contractor of all relevant interests; (2) a determination by the Commission that:

> (1) it is unlikely that a conflict of interest would exist; or
>
> (2) such conflict has been avoided after appropriate conditions have been included in such contract...except that if the Commission determines that such conflict of interest cannot be avoided by including appropriate conditions therein, the Commission may enter into such contract...if the Commission determines that it is in the best interests of the United States to do so and includes appropriate conditions in such contract...to mitigate such conflict.

MSC's management to be incompetent;.

-- DOE did not do any analysis of MSC's past competence (even though it had been under DOE/Morgantown contract) prior to the contract award;

-- a DOE January, 1998 post-contract audit found that MSC -- which had been under DOE contract for years -- was in noncompliance with a wide array of health and safety requirements.[8]

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[8] Thus, among other things, DOE's auditors found:

> Training - a training program has not been implemented. Training and qualification records are unsatisfactory. Training did not provide personnel with an adequate understanding of work fundamentals. The training program has been identified as a recurring deficiency by MSC.
>
> Documents/Records Management - Documents/Records management have not been formally developed and thus the integrity of the records can not be ensured.
>
> Procurement Control - The present Contracts and Procurement process does not ensure that procured material or services meets the established requirements and perform as specified.
>
> Corrective Action and Problem Resolution - . . . many noted deficiencies have not been corrected in a timely manner.

The auditors found deficiencies in sampling and laboratory measurements:

> Formal sampling protocols have not been developed for various MSC sampling activities. . .Comparison of [sampling] activities with Environmental Protection Agency (EPA) standard methodology indicated several weaknesses:
>
> * * *
>
> A formal analytical laboratory logkeeping program has not been established.
>
> * * *
>
> Analytical laboratory balances have not been calibrated.

(Audit at 7;9).

It must be emphasized that the deficiencies found in 1997 and 1998 existed following years of presumed oversight by both DOE (to which MSC was under contract) and TDEC (to which it was a licensee.) It now appears that TDEC amended the BNFL (MSC) license in March, 1999 in the absence of any independent review that might show that the deficiencies found by the DOE have, in fact, been cured. [9]

Required Rulemaking Action:

As a predicate to any rulemaking, therefore, the Commission must provide for full fact

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The DOE auditors did not seek to identify OSHA deficiencies, but nonetheless found them:

> The MSC Lock Out/Tag Out (LO/TO) Program does not meet applicable regulatory requirements.
>
> * * *
>
> The MSC Respiratory Program does not meet applicable regulatory requirements.

(Audit at 10.)

[9] This failure is striking given TDEC's own recognition of the inadequacy of DOE review. Thus, the following comments from Mr. Mike Mobley, TDEC's director of the division of radiological health:

> "In years past, a lot of material went out of these [DOE] facilities that wouldn't meet commercial world standards," says Michael Mobley, the director of the division of radiological health in the Tennessee Department of Energy and Conservation. And the cavalier attitude at the DOE is no help, he says. "There's been some issue about this; 'Well, if we miss one or two spots it's no big deal because the standard is so strict.' If every once in a while stuff is going out that's hotter than standard, how much is going out that's hotter than standard? Their survey processes are just going to evolve into nothing."

See "Nuclear Spoons: Hot Metal May Find its Way to Your Dinner Table," the Progressive, October 1998, quotation, at page 26.

development regarding:

- why and how BNFL/MSC was permitted by the U.S. government to obtain a quarter billion dollar recycling contract in the absence of minimally requisite inquiry as to its ability to perform work in compliance with basic environmental, health, and safety requirements;

- why and how TDEC was permitted to license MSC in the absence of its own independent review of the findings of DOE auditors and BNFL's own management;

- what lessons must be learned from the inability of the government to assure that those employed to release radioactive metals for unrestricted public use will have an impeccable track record that is thoroughly checked out in advance of their employment;

- whether DOE, as a primary advocate for putting radioactive metals into commerce for use in every day products, has (as indicated TDEC official Mobley) permitted surface contaminated metals to be free released from its facilities that were in excess of the existing NUREG guidance 1.86, and how these releases were detected;

- whether DOE, in its recent Phase I Oversight Report on Paducah, determined that its Management and Integrating Contractor lacked adequate procedures, as already required by DOE Orders and NUREG 1.86, to assure that there was no plutonium contamination on fluorine cells that were shipped for unrestricted re-use to Pennsylvania and to DOD/CIA operations.

E. The Commission Cannot Consider Public Release of Radiation Absent Full Consideration of the Historic Failure to Fully Protect Workers Who Will Be Exposed by these Releases

The releases of radiation proposed here will effect workers in multiple respects. First, they will effect those who work in the recycling process itself. Second, they will expose workers in the innumerable settings in which the released material will be processed and employed.

The public record, as ongoing hearings and news articles regarding Paducah and other DOE sites confirms, provides abundant evidence that the government has been unable to account for the exposures of those -- including PACE members -- who work in and around government licensed nuclear weapons facilities. There is no reason to assume that the situation will be any different where those facilities are used for the recycling of waste.

To the contrary, the ongoing DOE/BNFL/Oak Ridge recycling is hallmarked by:

-- Federal government award of a quarter billion dollar recycling contract without any inquiry as to the contractor's (i.e., MSC's) compliance with worker protection requirements;

-- the belated, post contract award, DOE discovery that the contractor was in profound non-compliance with OSHA, as well as many other rules designed to protect workers;

-- the TDEC grant of a license without independent inquiry as to whether BNFL/MSC are truly capable of complying with worker safety requirements;

-- the absence of any evident analysis of the risks to workers (including analyses of exposure pathways, particularly with regard to subsequent reuse, where no radiation controls are required or exist);

-- the absence of any public opportunity for workers to comment on the (unanalyzed and undisclosed) risks to the licensing agency (TDEC).

Moreover, there is no evidence that DOE, BNFL, TDEC, or any other relevant party considered the difficult questions that must be addressed regarding worker exposures in the context of recycling. These include;

-- the routine absence of adequate characterization of the contaminated metals with which the workers must deal[10];

-- the complex exposure pathways that must considered for differing radioisotopes and differing work settings;

-- the likelihood that any protective mechanisms and sampling devices will be imperfect (even when administered by those with a basic level of competence);

-- the fact that, in the absence of labeling, the recycled materials will routinely and continually be used by unknowing workers.

Required Rulemaking Action:

As a predicate to any rulemaking, therefore, the Commission must provide:

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[10] For example, nickel from the Oak Ridge gaseous diffusion plant is contaminated with radioactive technetium, but may also contain amounts of other radioactive elements, including plutonium and neptunium. However, MSC's Valerie MacNair – who coordinates the BNFL/MSC Nickel Recovery Project – explained that MSC has had only limited access to classified documentation that might shed light on the K-25 nickel's characteristics. With regard to the nickel that was made available to MSC , Ms. McNair explained that BNFL/MSC did not sample for anything other than technetium.

- Factfinding regarding the reasons for the failure of the ongoing recycling to assure worker protections, including the failure to provide any public analysis of risk to workers (both involved in recycling and in reuses), the failure to provide full characterization of material to which workers are exposed, the failure to provide for public comments on risk analysis, the choice of a recycling contractor without regard to its compliance with worker protection rules;

- Factfinding and consideration of the government's historic inability to do what is needed to protect of radiation workers from exposures, and the basis, if any, for presuming that these deficiencies will not recur in the recycling and release of radioactive materials;

- Full opportunity to consider the adequacy of understanding regarding exposure pathways that are relevant to worker effects, limitations of measurement methods.

F. This Commission Cannot Consider Future Public Releases of Radioactive Waste until it Fully Accounts to the Public for Past Undisclosed Public Release

In the early 1990's the public was informed that the Atomic Energy Commission ("AEC"), this Commission's predecessor, had sponsored an untold number of secret intentional public releases of radiation, ostensibly for research purposes. Pursuant to the directive of the President, the President's Advisory Commission on Human Radiation Experiments determined that the number of secret and intentional environmental releases of radiation sponsored by the Commission numbered in the hundreds. [11] These releases exposed unknowing citizens in and around to radiation risks which remained undisclosed and unexamined for decades.

It now appears that the secret releases for research purposes may have been accompanied by secret releases of radioactive material for unrestricted use in commerce. Thus, in an October 9, 1953 letter a Vice President of Carbide and Carbon Chemicals Company asked the AEC for permission to release contaminated nickel for commercial use (emphasis added):

> The ingot nickel we are now selling (from uncontaminated scrap) goes to a second melting operation in the manufacture of nickel containing alloys which must be produced slag free. This second melting would insure in the present instance a cleansing operation for removal of the slightly contaminated slag and minimize the possibility of damage in specialized industrial applications which may be radiation sensitive.

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[11] *See Advisory Committee report at chapter 11* ("Intentional Releases: Lifting the Veil of Secrecy").

Since the nickel content of the stainless steels which will be made using the ingot nickel is in the maximum range of 8 to 12%, it is requested that the Commission determine if the ingots from the contaminated scrap can be disposed of through the channels used for disposal of our present ingots and establish the basis on which we can proceed to do so.

Required Rulemaking Acton:

The Carbide and Carbon Company letter raises the following questions, which must be answered as a predicate to any grant by this Commission of authority for future releases:

- Has this Commission, or its predecessor agency, ever sanctioned the release of contaminated materials for commercial use absent full and formal public notice and disclosure?

- Can this Commission provide the public with a full accounting of its disposition of the Carbide and Carbon Company's request, and any similar requests to release contaminated materials for scrap or commercial use?

- Can this Commission fully account for all the metals that became radioactively contaminated under its jurisdiction, to inform the public of the amount, if any, that is currently subject to free use in consumer products?

In short, any rulemaking must provide for full developments of the facts regarding any prior secret releases for commercial uses, as a predicate to the determination of the capacity of this agency to assure the integrity of future releases.

III. The NRC Cannot Permit Free Release of Plutonium and Other Elements or Isotopes that do not Occur in Nature as Background Radiation

Recent public revelations regarding DOE's management of the nuclear weapons complex confirm that PACE members required to work in and around radioactive materials have not been fully aware of the characteristics of the material to which the government and its contractors have exposed them. Thus, for example, it appears that radioactive wastes from the gaseous diffusion plants at Oak Ridge, Paducah, and Portsmouth --- including the materials now being recycled from Oak Ridge -- contain amounts of plutonium whose precise quantity is unknown, and may never be precisely determined. Yet it is just this material which the NRC, DOE, and their contractors now propose to release into the public's hands.

Moreover, the NRC's proposed rulemaking indicates that it is prepared to tolerate the release of amounts of radiation above and beyond that occurring in nature as background radiation. Whatever the basis for this position there is no basis for the tolerance of public release

of any amount of materials not occurring in nature (such as, but not limited to, plutonium) -- particularly in light of the historic inability of the government and its contractors to manage the public releases of radiation in keeping with the requirements of law and the public interest.

Conclusion

In the absence of a full accounting, the public record shows that there is no basis for public trust that any standards for release will of can be complied with; indeed, there is no basis for public trust that the public will even be told when its health is put at risk through violations of these standards. Therefore, and as further discussed above, above and beyond fair and serious consideration of the "no unrestricted release" alternative and the use of a detectability-based standard, rulemaking must provide for:

- full development -- including affirmative and complete disclosure by the government -- of the facts regarding the historic and current competence of official and private institutions to conduct any releases of radioactive materials in accord with the requirements of law. In the absence of such finding, no risk analysis that presumes compliance with regulatory standards can be credited.

- provision for tracking and recall of any released material based on the likelihood -- as shown by developing public record -- that government agencies and contractors cannot be presumed to release materials in keeping with the requirements of the law and the public interest.

- preclusion of any commercial uses that may permit radioactive substances to come into intimate contact with consumers and members of the public;

- preclusion of any unrestricted release of plutonium and other radioactive elements or isotopes that do not naturally occur in nature.

For clarification or amplification of these comments, please contact Richard Miller at 202-637-0400 or Dan Guttman at 202/638-6050.