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NORTH AMERICAN WATER OFFICE

PO BOX 174 Lake Elmo, MN 55042

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December 22, 1999

Richard Meserve
US Nuclear Regulatory Commission
Washington, DC 20555
Attention: Rulemaking and Adjudications Staff

DOCKET NUMBER
PROPOSED RULE PR 20
(64FR35090)

Dear Richard Meserve:

The public is not in favor of any re-use/recycling of radioactive scrap metals, plastics, concrete or soils from the nuclear industry. In fact, we have repeatedly called for the recapture of those materials that have already been released or those that have inadvertently escaped containment.

The Environmental Protection Agency's Evaluation of the Potential For Recycling of Scrap Metals From Nuclear Facilities from 1997 contains fatally flawed assumptions that require comment.

These comments were made to John Karhnak of the US EPA, Center for Cleanup and Re-Use Radiation Protection Division on January 27, 1998. These concerns were never addressed or responded to in any way. We were invited stakeholders requested to comment on the review drafts of the EPA documents. The memorandum we received stated there would be a second opportunity for public comment on subsequent versions of the documents should the issue go to rulemaking. No final documents were ever received from the EPA.

Cost Benefit Analysis

(ES-4) A primary assumption in the analysis is that bureaucrats will pick the 15.0 millirem standard, or leave it at the 10.0 millirem standard that currently exists as the next best choice because these would save the most money. These standards may save the most money, but would cause the most cancers and deaths in the process. This assumption reduces human health and suffering to a formula based on greed. Decision-makers who knowingly permit the fabrication of consumer products out of radioactive metals that ultimately cause cancer and death should be liable for wrongful death or

Phone 651-770-3861 Fax 651-770-3976 email gwillc@mtn.org www.mtn.org/pic

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premeditated murder. There is no amount of money saved that justifies the sickness and death of those individuals who would be exposed/dosed with the radiation from scrap metal released into the nation's metal supply. This assumption is unethical.

(ES-9) The analysis does not address environmental justice issues. Historically speaking nuclear racism is a blatant abuse by the nuclear industry, foisting the harm and environmental degradation on Indigenous Peoples and other People of Color. This existing pattern of abuse demands to be addressed and has admittedly been omitted.

(5-26) A critical assumption is that dilution is a solution to radioactive contamination. This foundation is justified by use of the Beir V methodology. The assumption is that there is a low level of radiation under which no effects occur. This is an incorrect assumption. Conflicting scientific information states that there is no safe dose of ionizing radiation. Elevating background radiation levels all over the country with diluted radioactive metals, plastics, concrete and soils will not make additional doses of radiation safe.

Cell membranes have been shown to dissolve with doses of less than one rad of low intensity protracted radiation. This phenomenon is called the Petkau Effect and changes the cancer risk numbers by orders of magnitude, 10 to 1,000 times greater. The fundamental difference between Beir V methodology and the actual phenomenon explained by the Petkau analysis, is that Petkau demonstrates that, during exposure to low-level radiation fields, the relative field strength is not the dominant factor in terms of destruction to exposed cells. Rather, the dominant factor is the length of time that living cells are exposed. The Petkau Effect better defines the exposure/dose to the public from the low-level radiation defined by this cost-benefit analysis and subsequently should be used to recalculate the public health impacts.

(6-1) Workers from the existing scrap metal industry have stated that the existing supplies of scrap metals are sufficient to meet the existing demands, and that the introduction of contaminated metals would damage the industry. Public perception of the tainted metals would depress the market for their material. The EPA analysis states the complete opposite of the workers statements on radioactive scrap. The added monitoring and quality control assurance expenses, when combined with the perception of tainted metal are viewed very poorly. Commandeering the terms recycle and re-use to impart a positive image to radioactive waste disposal is deceptive at best.

(6-7) Contamination of the nation's entire scrap metal supply with radioactive metals could actually increase the demand for virgin metals and create more of a pollution burden. Critical industries must have radiation free metals to fabricate their products as discussed in the analysis. General release of radioactive metals to the nation's commercial scrap supplies would eliminate the potential for these industries to utilize recycled metal. These industries are defined as some of the most critical such as computer, electronics, instrumentation, photographic etc. These are not minor industries. Other industries would necessarily have to develop an ability to claim that they have

radiation free metals. More regulating, monitoring and certifying would be required as unfunded mandates.

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(ES-1) The statement is made that these assessments are being done to ensure that the recycling of radioactive scrap metal does not endanger public health and safety. Yet the entire mountain of paper is replete with who will get the cancers/deaths and by what pathway. There is an assumption that a few people getting cancer/dying is an acceptable level of risk for the benefit of saving money. This is what causes the public to mistrust government agencies.

(ES-5) Reasonably Maximally Exposed Individuals is certainly a cavalier attitude toward human life. There is nothing reasonable about being the most affected by disease and death from radioactive contamination. Human steelworkers may have to be replaced by some mechanical devise. Steelworkers are not monitored for exposure to radioactive materials and are an unprotected labor force. They also do not receive the hazardous duty pay that nuclear workers receive when they willingly expose themselves. What makes you think that the steelworkers are willing victims? This is another unfunded mandate.

(ES-9-ES-10) A steel mill's radioactive airborne emissions from recycling radioactive metal, or radioactive slag leachate contaminating ground water and the subsequent radioactive exposure of offsite residents is a serious problem. There is a potential to contaminate millions of people. North Star Steel Corporation, Minnesota Division, as one example, (G4-Vol. 3 of 3) is in the center of a major metropolitan area of more than a million inhabitants, Minneapolis-St. Paul. This electric arc furnace would certainly receive the radioactive metals from Northern States Power Company's twin Prairie Island Reactors and its Monticello Reactor both located within fifty miles of the mill. At least two other reactors may be deemed within transportation distance, Fermi 2 and LaCrosse.

While this area may be metropolitan, there are also many local agricultural and horticultural producers in the area in very close proximity. Well water supplies many communities including part of St. Paul. North Star Steel is also located on the Mississippi River a major drinking water source for the nation.

(3-18) The statement that radioactive scrap metal recycled into the national scrap metal supply would have an approximate 200 fold dilution ratio is contradicted by an earlier statement (2-5) that states it would be possible for an electric arc furnace to receive a supply of scrap metal made up entirely from a nuclear facility and be undiluted. The assumption that a steel worker may receive an undiluted shipment of radioactive metal and simultaneously receive additional radiation doses because he/she lives downwind of the steel mill is only unrealistic if the worker has been informed not to live in close proximity to the work site.

(5-1) All baghouse dust would become radioactive and could not be shipped off site to the current disposal locations.

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(A5-1-A5-2) Methods of decontamination of radioactive metals themselves pose additional problems and health risks, in that water supplies are contaminated with radioactive isotopes, toxic solvents are used (acetone) and enormous amounts of low-level radioactive waste from abrasives are created, multiplying the contamination instead of reducing it. None of the decontamination methods were described as efficient or very effective.

(E-28-E-29) Two of the most deadly/dangerous radioactive isotopes to have inside the human body, Plutonium and Strontium are predicted to partition to the slag which is used as a soil conditioner in agriculture. In other words, this proposal creates the most efficient radioactive pathway for public contamination possible by the isotopes of greatest concern from a public health perspective. This is a totally unacceptable disposal/dumping process for this dangerous material.

The EPA cost-benefit analysis for the recycling of radioactive scrap metal from nuclear facilities is fatally flawed for the following reasons: a zero release option is not included; a bias to protect capital is displayed in favor over human health risks; human health risks are underestimated by a factor of ten and perhaps as much as one thousand; and environmental justice issues are not considered.

Under no circumstances should the metal supply of the nation be used as a dumping ground for low-level radioactive waste. The project is ill conceived and should not proceed forward.

This proposal demonstrates a complete lack of respect for the health of the people. It demonstrates a level of corruption and greed that has no place in a true democracy.

Those materials that have been released under the current RG 1.86 criteria of 10 millirem/year, or those materials which have escaped inadvertently should be reclaimed and isolated to protect the public health now and for future generations.

These additional organizations and their representatives have indicated support for these comments on the EPA documents.

Joseph Campbell
Prairie Island Environmental Protection Committee
Prairie Island Mdewakanton Dakota Nation

Tom Goldtooth
Indigenous Environmental Network

The North American Water Office learned of the current Nuclear Regulatory Commission rule making procedure from other stakeholder groups not the EPA or the NRC. In order to access this process we had to specifically solicit the materials from the NRC consultant mediator, Meridian Institute.

As a participant of record we find this deplorable at best and incompetent on the part of federal agencies who are attempting to foist on the public a poison it does not want and has said so for eighteen years.

The Radiological Assessments for Clearance of Equipment and Materials From Nuclear Facilities does nothing to address the public concerns of zero release and recapture of materials already released under RG 1.86 criteria. Dilution and dispersion is not an appropriate method of management for radioactive waste. Burning and burying are also inappropriate. Dispersion into the atmosphere from an industrial furnace, contamination of groundwater by burial in landfill, and incorporation in soils as an agricultural amendment are deliberate pollution and health impairment to the general public for the personal financial gain of the nuclear industry. This will not be tolerated. Our health and the health of all our future generations is more important than the short term financial gain of the nuclear industry.

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(4-38) Protective clothing and respirators are insufficient to prevent unwanted irradiation for steelworkers. This statement verifies the deliberate contamination of a previously unexposed work force will take place. This is not acceptable. This forces a steelworker to choose between employment and financial remuneration and becoming contaminated on a daily basis with the waste of the nuclear industry. This is bad for labor relations, and generates increased social strife and disorder.

(4-39) The public uses home gardens to provide healthful fresh produce to their families diet. Many choose this method to avoid the pollutants and contaminates in commercial produce purchased in stores that have been treated with pesticides, herbicides, fungicides, or irradiation. This proposal again forces the public to choose between eating irradiated food or not to grow a garden. This assumes the public has even been educated to know they must make this choice!

Many gardeners harvest food daily for the current meal being prepared and there is no holding period. Eating while in the garden without thoroughly washing the produce is common, especially with small children.

Many farmers markets are popular during the growing season and the distribution of the produce can be far reaching to others beyond the immediate resident in proximity to a steel furnace.

(4-114) It is particularly damning to have those radionuclides with long half-lives which are alpha and beta emitters concentrating in the wastes (slag, dust, and off-gas scenarios) that have internal dose pathways to the body contaminating the members of the general public who live, garden and enjoy the outdoors in proximity to a metal melting furnace.

These waste materials from the nuclear industry be they from nuclear power or nuclear war must be isolated from all biological life. They must be licensed, controlled and monitored, not allowed to be diluted and dispersed into our air, soils, water, foods and even the tools of civilization we use. This is not responsible government. It will tear the fabric of our civilization and do irreparable harm to the human genome.

Sincerely yours,

Lea Foushee
North American Water Office