

Comments of Public Citizen and Nuclear Information & Resource Service

Prepared by Wenonah Hauter,

Director of Public Citizen's Critical Mass Energy Project and

Diane D'Arrigo, Radioactive Project Director, NIRS

DOCKETED  
1999 DEC 29 09:41

U.S. Nuclear Regulatory Commission  
Proceeding on Release of Solid Materials At Licensed Facilities (64FR-35090) and  
NUREG -11640 (64FR-14952)  
December 22, 1999

**Background**

Public Citizen's Critical Mass Energy Project, founded by Ralph Nader in 1974, is a non-profit, membership organization that represents citizens in the "halls of power"—at the federal agencies, the executive branch, and U.S. Congress. Since the 1970's, when the idea of radioactive recycling was first introduced, we have opposed the release of radioactively contaminated materials into commerce or the household waste stream. Our position is to fully regulate radioactive wastes and materials and anything they contaminate, regardless of the level of contamination. The radioactive legacy of atomic weapons and energy production should be isolated from the public and the environment.

Time and time again citizens have told policymakers that they are unwilling to assume the risk posed by releasing radioactive materials for recycling into products or the household waste stream. In the late 1970's, after U.S. government investigated and determined that recycling radioactive materials was the least expensive method of disposal, consumer and environmental activists and union representatives informed the public about the intention to exempt metal alloys containing radioactive residues from any standard for radiation exposure. Subsequently, a draft environmental impact statement was prepared for a proposed rulemaking process to legalize radioactive recycling. The public's opposition to this plan resulted in its discontinuation.

Once again, in 1986 and 1990, the NRC adopted two "below regulatory concern" (BRC) policies, which would have "deregulated" radioactive waste under certain levels of contamination. These policies would have released large amounts of radioactive waste and material from regulatory control. Around the country, at the grassroots level, there was an outcry against this policy. State and local governments began passing ordinances and resolutions requiring ongoing regulatory control of BRC radioactive waste. As a result of this outpouring of grassroots opposition to radioactive recycling, the U.S. Congress revoked the NRC's BRC policies in a provision of the Energy Policy Act, which was signed into law on October 24, 1992.

Unfortunately, the NRC almost immediately turned around and began pursuing a new plan to deregulate radioactive waste, despite the opinion of the American public or action by Congress. The NRC began a contractual relationship with a private contractor called Science Applications International Corporation (SAIC) on August 18, 1992, which continued until 1999. Even though the NRC's BRC policies were revoked in EPACT, the agency continued its contractual relationship with SAIC (which began two months before EPACT) was signed into law. The estimated cost to the NRC for full performance of this

contract was \$1,234,542. However, because the contract was repeatedly amended to increase payments to SAIC, the total payment to the company was \$2,630,000.<sup>1</sup> The contract was renewed in August 1999.

### Summary

- The foundation for the NRC's current rulemaking process is flawed because the agency continued to pursue BRC policies after EPACT became law, as demonstrated by the 1992 contract with SAIC.
- SAIC has a serious conflict-of-interest in its work with the NRC because it is a teaming partner with BNFL in the quarter billion dollar DOE Oak Ridge, Tennessee contract.
- The NRC rulemaking has been compromised by SAIC's conflict of interest. No SAIC analysis or reports should be used in any scoping process conducted by the NRC in the future regarding the "clearance" of materials.
- SAIC failed to meaningfully consider the DOE's waste from the weapons facilities, a principal source of radioactive waste in the nation.
- The NRC has prejudged the outcome of the rulemaking.
- The NRC has not considered the poor track record of DOE and its contractors.
- Any NRC scoping process should be complete and consider the options of recapturing materials already released, as well as the future regulation and isolation of radioactively contaminated materials or materials derived from them.

### Basis for Concern

#### **1) The foundation for the NRC's current rulemaking process is flawed because the agency continued to pursue BRC policies after EPACT became law, as demonstrated by the 1992 contract with SAIC.**

The contract clearly refers to the NRC's BRC Policy Statement and says that the "objective of this contract is to provide RES [the NRC's research branch] with detailed technical assistance in the development of an information base and subsequent rulemaking related to recycle and reuse of material and equipment from nuclear facilities."<sup>2</sup>

The contract also shows that NRC is dependent on SAIC for almost every aspect of the policy and regulatory work. The contract says that the above objective will be met by:

"undertaking technical aspects of multiple tasks, including: (1) a thorough review of the literature including review of previous pathway analyses performed, computer codes available for pathway analysis, and current recycle and reuse practices in other countries; (2) development of, or identification of adequate existing, pathway models and technical bases upon which to support NRC regulations in this area; (3) preparation of an options paper outlining the regulatory approach for recycle and

<sup>1</sup> Amendment 16 was signed on November 13, 1998.

<sup>2</sup> See contract between NRC and SAIC from August 18, 1992 (NRC-04-92-037), Section C-Description/Specifications/Work Statement, p 9.

reuse of materials and equipment with very low levels of radioactivity; (4) assistance in preparation of a rulemaking package...and (5) assistance in preparation of implementing regulatory guidance.”<sup>3</sup>

Task number 3 is further defined as:

“provid[ing] assistance to NRC in preparation of regulation amendments and regulatory guidance for recycle and reuse of materials with very low levels of radioactivity. To facilitate that effort the contractor shall prepare an options paper which outlines possible approaches for rulemaking which would ultimately result in a regulation that provides clear, reasonable, and enforceable criteria as applied to the recycle and reuse of materials and equipment from nuclear facilities.”<sup>4</sup>

The language in the contract clearly reflects the NRC’s intention to continue pursuing the BRC policies. While the NRC discontinued the use of the BRC term after EPACT was enacted, it continued to pursue the BRC policies under a different guise.<sup>5</sup> SAIC was involved in every aspect of the NRC’s preparation for this rulemaking, including preparation of the technical basis for the rulemaking (NUREG-1640)<sup>6</sup>.

The abstract for this document states that the “report documents the technical basis for the Nuclear Regulatory Commission to use in developing regulatory standards for clearing equipment and materials with residual radioactivity from nuclear facilities.”

Although the NRC asserts in the Federal Register notice of June 30, 1999 (Vol. 64, No. 125) on the “Release of Solid Materials at Licensed Facilities: Issues Paper, Scoping Process for Environmental Issues, and Notice of Public Meetings” that the new process is unlike the BRC process, we believe this statement is false. Both policies have the same result. Regardless of whether radioactive waste is released because it contains a dose of radiation that is no longer regulated or a “dose-based regulation for clearance of materials”,<sup>7</sup> the outcome is that radioactively contaminated waste will be “cleared” for use in commerce. The entire NRC process is predicated on the belief that radioactive recycling WILL take place. No serious consideration is given to the option of continuing to regulate this material and insure that it is isolated from the environment.

---

<sup>3</sup> Ibid, p 10

<sup>4</sup> Ibid, p 14

<sup>5</sup> EPACT specified in Title XXIX-Additional Nuclear Energy Provisions, Sec. 276. (b) Revocation of Related NRC Policy Statements that “[the] policy statements of the Nuclear Regulatory Commission published in the Federal Register on July 3, 1990 (55 Reg. 27522) and August 29, 1986 (51 Fed. Reg. 30839) relating to radioactive waste below regulatory concern, shall have no effect after the date of the enactment of this Act.”

<sup>6</sup> NUREG 1640 is entitled *Radiological Assessments for Clearance of Equipment and Materials from Nuclear Facilities*.

<sup>7</sup> Staff Requirements -SECY-98-028 Regulatory Options For Setting Standards on Clearance of Materials and Equipment Having Residual radioactivity.

**2) SAIC has a serious conflict-of-interest in its work with the NRC because it is a teaming partner with BNFL in the quarter billion dollar DOE Oak Ridge, Tennessee contract.**

SAIC is a major contributor to the NRC's regulatory process for "clearance of materials and equipment having residual radioactivity." SAIC has a long history of working for the nuclear industry, which is a proponent of radioactive recycling. As early as 1973, SAIC's Applied Sciences and Technology Group began contracting with the nuclear industry.<sup>8</sup>

SAIC has also worked extensively with the U.S. Department of Energy (DOE). DOE is a primary source of radioactive metal waste, and a powerful advocate of radioactive recycling. SAIC's web site names among their success stories in working with DOE that they have completed Environmental Impact Statements to support the Nation's nuclear policies.<sup>9</sup>

SAIC has profited handsomely from its long relationship with federal agencies. Founded in 1969, SAIC is now a Fortune 500 company that with its subsidiaries has 38,000 employees and reported earnings of \$62.7 million on revenues of \$1.4 billion for the second fiscal quarter that ended on July 31, 1999.<sup>10</sup> Obviously, SAIC has a cozy relationship with the agencies that use its services regularly and for lengthy contracts. From a public interest point of view, the company was a poor choice for developing the technical basis to support a rulemaking on radioactive recycling.

However, the problem is much deeper than conjecture about how SAIC benefits economically by receiving more contracts because their work accommodates agency goals. SAIC has serious conflict of interest problems, which may border on being fraudulent. SAIC has been a teaming partner with British Nuclear Fuels Ltd. (BNFL) in the quarter billion dollar contract for gutting the K-25 buildings at DOE's Oak Ridge, Tennessee facility. The economics of the project are predicated on the precedent-setting release of large amounts of radioactively contaminated metals into commerce.

In October, 1996 the DOE announced its intent to award a contract to process the contaminated K-25 site at Oak Ridge, Tennessee. The DOE press release stated that a consortium, comprised of BNFL, Inc., BNFL's wholly owned subsidiary Manufacturing Sciences Corporation (MSC), and SAIC would be used to "reindustrialize" the gaseous diffusion facilities. In August, 1997 DOE awarded the BNFL consortium the contract, which was called "East Tennessee Technology Park Three-Building Decontamination and Decommissioning (D&D) and Recycle Project." The Oak Ridge project involves recycling as much as 127,000 tons of radioactive metal, including volumetrically<sup>11</sup> contaminated nickel.

---

<sup>8</sup> [www.saic.com/company/timeline/1973.html](http://www.saic.com/company/timeline/1973.html) (12/22/99)

<sup>9</sup> [www.saic.com/business/solutions/envIRON/quantitative/nepa.html](http://www.saic.com/business/solutions/envIRON/quantitative/nepa.html)

<sup>10</sup> [www.saic.com/company](http://www.saic.com/company)

<sup>11</sup> Volumetrically contaminated material is radioactive throughout its mass. An analogy is the way sugar is distributed in a cake.

Although the 1997 contract does not require that the consortium recycle radioactive metal, the economics of the project provide a tremendous incentive to BNFL/MS/SAIC to do so. According to the Paper, Allied-Industrial, Chemical & Energy Workers Union (PACE), they determined from a deposition taken during a legal battle over the contract that the consortium needed to recycle the metal to make the economics of the project viable.<sup>12</sup> A November 30, 1998 affidavit from Jack Howard, the DOE Project Manager for the BNFL/MS/SAIC project, stated that BNFL concluded that it could sell a significant portion of the metal as "scrap." He went on to say:<sup>13</sup>

"BNFL's contractual rights to recycle metals...is the cornerstone of the ETTP Three-Building D&D Recycling Project. That is, the project's schedule and costs depend on BNFL's ability to steadily and constantly disassemble and reduce the size of the equipment and material containing contaminated metal, and shipping it to MS's facility for recycling."

SAIC's participation in this contract at the same time that it was under contract to the NRC is shocking. How could SAIC work objectively on its tasks for the NRC, while it was teaming with the BNFL on a precedent setting radioactive recycling project at Oak Ridge?

Furthermore, SAIC partners with BNFL on a range of projects:

- BNFL's team, including SAIC, was awarded "stage one of the world's biggest clean-up contract" at the DOE Hanford site.<sup>14</sup>
- In December, 1996 BNFL, SAIC, and Morrison-Knudsen were awarded a multimillion dollar mixed waste treatment contract by DOE's Idaho site. A press release explained that SAIC provides the BNFL team "all permitting and regulatory support."<sup>15</sup>
- BNFL and SAIC won a \$6.9 million contract for clean-up at Hanford in mid 1998.<sup>16</sup>
- SAIC announced a joint venture with BNFL, Westinghouse, and Morrison Knudsen to seek a \$6 billion dollar contract to manage DOE's Idaho Facilities. The press release included a statement that they have a proven record of working together throughout the DOE complex.<sup>17</sup>

The record speaks for itself. SAIC, clearly has a conflict of interest in working for the NRC on their rulemaking and at the same time, participating as a "teaming

---

<sup>12</sup> See *Oil, Chemical & Atomic Workers International Union (OCAW) v. Pena*, Civil Action NO. 97-1926, slip opinion at 8. OCAW has now joined with the Paper Workers International Union to become PACE.

<sup>13</sup> Declaration of Jack Howard, at paragraphs 10 and 14 in the November 30, 1998 affidavit filed with the Federal Court by the Department of Energy in *OCAW vs. Pena*.

<sup>14</sup> See "BNFL Wins Stage One of World's Biggest Clean-up Contract," 9/25/96, at [www.BNFL.com](http://www.BNFL.com).

<sup>15</sup> See Morrison Knudsen Wins \$200 Million Role in Nuclear Cleanup Job at Idaho National Engineering Laboratory," 12/20/96, *PR Newswire*.

<sup>16</sup> See BNFL web site release "BNFL INC. Wins Massive U.S. Nuclear Cleanup" and "BNFL Wins \$7 Billion Hanford Clean-up," Nuclear Engineering International, 8/31/99.

<sup>17</sup> See "Morrison Knudsen, BNFL, Westinghouse, and SAIC Form Idaho International Technologies, LLC to Pursue INEEL Contract," 3/4/99, SAIC web site at [www.saic.com](http://www.saic.com).

partner” with BNFL and MSC in the radioactive recycling project at Oak Ridge. SAIC also is clearly so closely aligned with BNFL on various projects, that the probability that they can be impartial in their preparation of the technical basis for the NRC’s rulemaking is close to zero.

**3) The NRC rulemaking has been compromised by SAIC’s conflict of interest. No SAIC analysis or reports should be used in any scoping process conducted by the NRC in the future regarding the “clearance” of materials.**

The NRC has a clear responsibility to require the full disclosure by contractors of all relevant information and to insure that there is no conflict of interest. The entire body of work prepared by SAIC for the NRC during its contractual relationship should be rejected by the NRC. Since mid-1996 they have had a contractual relationship with the NRC to submit the draft and final issues paper and regulatory options paper, while contemporaneously they have teamed with BNFL on radioactive recycling. SAIC’s major role in the rulemaking has compromised the entire process. Not only does SAIC have a biased point of view because of their long relationship with the nuclear industry, their vested economic interest in radioactive recycling should disqualify them from preparing the technical basis for the rulemaking process.

SAIC’s role in the Oak Ridge project is the task of “regulatory compliance.” The regulatory process clearly requires public participation and inquiry. The entire radioactive recycling project has been shrouded in secrecy and avoidance of public participation. The Federal Facilities’ Agreement requires the opportunity for public notice and comment. Judge Kessler stated in her decision on *OCAW vs. Pena*, that the “[d]efendants [DOE and BNFL] have provided no adequate explanation as to why the 1997 amendment...did not deem recycling an integral part of the cleanup action, which would then have triggered public notice and comment opportunities.

The BNFL, MSC, and SAIC team also used the Tennessee state licensing procedures to evade public review. According to PACE, a previously secret BNFL/MS strategy analysis explained that quick Tennessee approval was needed to avoid public discussion. This memo said that the issuance of radioactive materials licenses within the State of Tennessee has not previously involved a public consultation process and that they were pursuing an amendment to the existing license to set a precedent for nickel releases. The nickel at Oak Ridge is volumetrically contaminated and its release into commerce is extremely dangerous.

Also among SAIC’s duties, as part of its teaming agreement with BNFL, are the “development of plan, procedures and program for industrial safety, OSHA [Occupational Safety and Health Administration] compliance, OSHA PSM Program and non rad safety issues...[and] the development of plan, procedures

and program for ALARA program [“as low as is reasonably achievable”], monitoring program and regulatory compliance for rad materials.”<sup>18</sup>

The Oak Ridge team has failed to disclose its noncompliance with basic health, safety and worker protections and there is no evidence that they performed the basic work needed to consider the health and safety of workers engaged in the recycling project. A November 1999 report records serious worker health and safety problems on the project and no assurance that the public will be protected. A report by the president of the local union details a persistent series of accidents inside the contaminated facility that have occurred since the work started, less than a year ago, and that at least one of the incidents led to a work stoppage.<sup>19</sup> Not only has SAIC had a conflict of interest in its work with BNFL, there are many quality issues that should concern the NRC.

Unfortunately, the NRC’s Stop Work Order for the SAIC contract NRC-04-99-046 does not solve the conflict of interest problem (the 1992 contract was renewed in 1999). SAIC’s relationship with the nuclear industry has prejudiced them towards the point of view that radioactively contaminated material should be recycled. This point of reference matches the NRC’s and has been the basis for the policy work on the issue. None of SAIC’s work should be used in any potential scoping process. The NRC should discontinue its relationship with SAIC permanently, cease to use any documents prepared by SAIC, including NUREG-1640 and rethink the entire strategy for responsibly managing and isolating radioactive waste.

#### **4) SAIC failed to meaningfully consider the DOE’s waste from the weapons facilities, a principal source of radioactive waste in the nation.**

NUREG-1640, prepared by SAIC, primarily considers waste from the nation’s nuclear reactors, not the DOE weapons facilities. NUREG-1640 states at xvii (emphasis in original): that [t]he purpose of this report is *to calculate realistic estimates of the dose factors for the average member of the critical group associated with the clearance of equipment and of scrap iron and steel, copper, aluminum and concrete on a radionuclide-by-radionuclide basis.*” It goes on to say that “[r]ealistic” estimates are estimated using scenarios and models whose parameters are based on general practices of the U.S. nuclear power industry.

Even though DOE has as many as one million tons of contaminated metals, which the agency intends to release into commerce, NUREG-1640 does not consider many of the contaminated metals from the weapons complexes, such as the highly contaminated nickel that is being recycled at Oak Ridge. This is an outrageous omission. How can this rulemaking proceed when the technical basis does not include an analysis of some of the most contaminated radioactive metals that DOE intends to recycle?

---

<sup>18</sup> This information was obtained from PACE. The BNFL/MS/SAIC Teaming Agreement was obtained by PACE from SAIC during the *OCAW v. Pena litigation*.

<sup>19</sup> See [www.tompaine.com](http://www.tompaine.com)

### **5) The NRC has prejudged the outcome of the rulemaking.**

Public Citizen, Nuclear Information and Resource Service (NIRS) and many other citizen organizations have refused to participate in the public meetings associated with this enhanced rulemaking process because the NRC is not interested in seriously considering the option of fully regulating and isolating radioactive wastes and materials and anything they contaminate. This NRC is not using its considerable resources to explore this option and all of the NRC materials on this rulemaking use language that prognosticates the release of materials.

This is clearly demonstrated by the NRC's Federal Register notice where two options are considered. The first option outlined is continuing the current practice of handling requests for release on a case-by-case basis. The second option is "developing dose-based regulation limiting releases of solid material to provide a consistent regulatory framework protective of public health and safety."

The second option, by its portrayal, presupposes that "clearance" will take place. Moreover, although the NRC pays lip service to health and safety, the proceeding thus far is based on biased technical documents. In the section on the "Factors of Decision Making," the NRC references the NUREG-1640 report, which does not even begin to provide a full picture of the metals and other materials that will be released.

Also, in the Federal Register notice under "Items for Discussion, (A) Human Health and Environmental Impacts," no consideration is given to the health impacts of multiple exposures to different products made from radioactive materials. In addition, no mention is made at all of examining the extra burden to immune systems of exposure to radioactive materials. A wide range of man made toxins are already present in the environment and some consideration should be given to how adding products contaminated with radioactive isotopes will compound the threat to human health and the environment.

Why is the NRC creating the false dichotomy of continuing the irresponsible pattern of case-by-case releases or releasing at a certain level of contamination?

### **6) The NRC has not considered the poor track record of DOE and its contractors.**

The DOE has a long history of mismanaging the weapons facilities. The recent scandal at the troubled Paducah, Kentucky uranium plant is just an example of the lack of accountability at the DOE. Not only have DOE and its contractors failed to warn the public about radioactive hazards at Paducah, they have concealed evidence about worker exposures, illegal waste dumping, plutonium contamination, and worker risks. Federal investigators have uncovered documents that show officials in the 1960's knew about the risk to workers and failed to warn them because of fears of public outcry.<sup>20</sup>

---

<sup>20</sup> See "Radiation Risks Long Concealed: Paducah Plant Memos Show Fear of Public Outcry." Joby Warrick, The Washington Post: 9/21/99.



Unfortunately, Paducah is not an anomaly. Thirteen other DOE facilities in 10 locations have handled contaminated, recycled uranium in the 1950's, 1960's and 1970's. This history of contamination is shrouded in secrecy and lies.

Many DOE facilities have habitual and severe problems. Hanford nuclear site, 560 square miles of land located in southeastern Washington, is the largest area of polluted land in the U.S. Incredible plumes of radioactive and chemical contaminants are moving faster toward the Columbia River than ever was believed possible. The clean-up at Hanford has been slow and thwarted by chronic problems.

There is plenty of evidence that DOE and its contractors cannot handle the ongoing clean-ups at its facilities. The lack of accountability at DOE is long-standing and chronic.

Why has the NRC not taken into account the habitual safety and competency problems at DOE in the rulemaking process? Even if you believed radioactive recycling is viable in some cases ( which, we do not), who would trust DOE to implement it?

**7) Any NRC scoping process should be complete and consider the options of recapturing materials already released, as well as the future regulation and isolation of radioactively contaminated materials with any radioactive contamination above background levels of radiation.**

As stated above, the scoping process that the NRC is considering for "codifying radiological criteria for release of solid materials from licensed facilities" should not make use of any of SAIC's work from 1992 to 1999. Any scoping process that takes place should consider all materials, all possible radioactive isotopes that could be present, all pathways of exposure, multiple exposures, and the effect of exposures in combination with other toxins. Issues related to decommissioning should be expanded, not eliminated from the scoping process. It should also include a full disclosure of what has already been released on a case-by-case basis over the last 40 years, including which radioactive isotopes were involved, how the radioactive materials were used and the product's location today. Consideration should be given to recapturing those materials and assessing the effect on human health and the environment.

Vince Adams, a chemist who manages DOE's recycling effort, was quoted in today's Wall Street Journal as saying, "[a]bout 30,000 tons of formerly irradiated scrap, half from the U.S. and half from the nuclear-power industry, currently is being recycled every year without harming the public."<sup>21</sup>

Unfortunately, there is no proof that these recycled products are not harming the public. Public Citizen has asked DOE to provide information on what materials have already been recycled and where those products are today. So far, they have

---

<sup>21</sup> See "Plan to Recycle Nuclear Materials Runs Into Flak From Unions, Industry and Environmentalists," *The Wall Street Journal*, 12/22/99.

failed to provide this information. Answers to these questions should be part of any scoping project.

Any scoping process should be objective, unbiased, and complete. It should not be a process tainted by the NRC's desire to release radioactive products into the marketplace.

### **Conclusion**

This entire rulemaking process has been tarnished by the NRC's and its contractor's bias. The NRC needs regulate and isolate radioactive waste. NRC regulations should regulate all human-made radioactive wastes, materials, emissions, practices and contamination.

The NRC's troubling relationship with SAIC is symptomatic of the agency's approach to this issue. The NRC is more concerned about the economics of nuclear power than the health and safety of the American public. Likewise, the NRC is enabling the DOE to release large amounts of dangerous radioactive isotopes, without even considering them in the technical basis.

The public is unwilling to assume this risk for their families, in order to make nuclear power more competitive or to solve the DOE's waste problem. The NRC should prohibit radioactive releases and thereby restore the public's faith in the agency by showing more regard for the health and safety of the nation's citizenry than for the economic interests of the industry that it regulates.

Wenonah Hauter, Public Citizen

Diane D'Arrigo, Nuclear Information and Resource Service