



February 20, 2013

## **NRDC Statement before the Nuclear Regulatory Commission on Uranium Extraction and Processing**

### **Introduction**

Chairman McFarlane, members of the Commission, thank you for the opportunity to present the views of the Natural Resources Defense Council (NRDC) in today's "Briefing on Uranium Recovery." Our statement focuses on three significant problems in the Nuclear Regulatory Commission (NRC) regulatory regime regarding the first step toward producing nuclear fuel. First, in our experience, NRC staff often act as an adversarial party to public intervenors in uranium recovery licensing proceedings, preserving and replicating industry errors in the agency's Environmental Impact Statement (EIS). Per your directions, we will, of course, discuss no specific matters in litigation. Second, legal controls and applicable regulatory schemes over uranium recovery are not protective of public health and the environment. Third, NRC has not acted on its responsibility to proceed with sister agencies in formulating a groundwater protection rule for In-Situ Leach (ISL) uranium mining facilities. We note that NRDC has testified before the Commission on this matter and we find the unacceptable regulatory situation little changed with each passing year: in the area of uranium recovery, NRC protection of public health and the environment is not restrictive of harmful actions by industry.

### **Statement of Interest**

NRDC is a national non-profit membership environmental organization with offices in Washington, D.C., New York City, San Francisco, Chicago, Los Angeles and Beijing. NRDC has a nationwide membership of over one million combined members and activists. NRDC's activities include maintaining and enhancing environmental quality and monitoring federal agency actions to ensure that federal statutes enacted to protect human health and the environment are fully and properly implemented. Since its inception in 1970, NRDC has sought to improve the environmental, health, and safety conditions at the nuclear facilities operated by DOE and the civil nuclear facilities licensed by the NRC and their predecessor agencies.

### **Current NRC Rules for Public Participation in Licensing Proceedings**

I start with echoing key points made by my colleague Christopher Paine, Director of NRDC's nuclear program, in a public hearing before you on January 31, 2013. There NRDC observed that unlike many other federal agencies with statutory mandates that include the public—via citizen suit provisions—as a *partner* in achieving compliance with the statute, the Commission's

statutory authority does not assign a direct role to the public in enforcing its regulatory requirements, which by law must ensure adequate protection of the public health and safety against hazards from the licensed civilian uses of nuclear energy. Instead, the role envisioned under the Atomic Energy Act (AEA) is for members of the public, including representatives of state, local, and tribal governments, to bring their concerns regarding compliance with NRC's statutory mandate and regulatory requirements into the Commission's licensing and rulemaking processes, where these concerns are intended to be fairly adjudicated.

As my colleague pointed out, demonstrated by the Staff's close alignment with industry in opposing citizen petitions to intervene in licensing proceedings, the Commission today has strayed far from the intent of this statutory framework, which was designed to allow contending views of nuclear hazards and risks to be fully explored and adjudicated in a quasi-judicial proceeding. Regardless of whether the matter is power reactor relicensing or materials licensing, we've noticed little difference in how the agency and hearing process functions.

The many concerns voiced by my colleague apply directly to our experience with materials licensing, but National Environmental Policy Act (NEPA) concerns merit special mention. NEPA public participation and interdisciplinary study requirements were adopted along with a number of environmental control laws in the early 1970s. These laws were in place when the 1978 Uranium Mill Tailings Radiation Control Act was adopted to address serious problems with both state and federal management of the waste created by uranium extraction and yellowcake processing.

As the Commissioners are aware, when a draft or final EIS is produced by NRC Staff, parties to the proceeding may file new or amended contentions regarding this new document only to the extent that there are "data and conclusions in the NRC draft or final [EIS], environmental assessment, or any supplements relating thereto, that differ significantly from the data or conclusions in the applicant's documents." This provision fails to acknowledge that staff has a Congressionally-imposed duty to conduct its own independent analysis and to gather information for the purposes of involving the public and informing the relevant decision-maker.

The present NRC requirement places an *error-inducing* premium on the Staff's EIS to demonstrate *consistency* with what NRDC and many others have deemed to be an Applicant's flawed environmental report, thereby insulating the staff's Draft EIA and Final EIS from further challenges. In other words, staff acts as an adversarial party with an incentive to not reveal flaws in the applicant's environmental report in order to defeat contentions that may be brought by NRDC and others. Unless every potential flaw is identified by intervenors when first suggested by information in the ER, serious problems *may actually be preserved and replicated* in the EIS, with the official endorsement of the NRC's own rules and procedures.

We've witnessed such disputes incentives play out on matters of significant import such as baseline water quality and restoration requirements. We share the Commission's concern that specific matters in litigation not be discussed, so as a general matter we note that if public intervenors fail to satisfy the dysfunctional criterion just described, intervenors may file new or amended contentions "only with leave of the presiding officer," upon a showing that the

contention is based on information that was not “previously available,” is “materially different than information previously available,” and has been submitted “in a timely fashion based on the availability of the subsequent information.”<sup>1</sup>

Not only does this run counter to the central purposes of NEPA - public participation and informed environmental decisionmaking - such a process constitutes an extraordinary shifting of burdens of providing information, careful analysis, and disclosure from the industry and regulator to the public. Such rules artificially constrain adjudication of the merits of environmental issues surrounding the start-up or extended operation of nuclear power plants and materials facilities. As Mr. Paine noted, a proliferation of procedural rules designed to bat away issues before they can be considered on their merits lends credence to the supposition that the Commission is unwilling to let Atomic Safety & Licensing Board judges do the work that Congress envisioned for them.

### **NRDC’s Substantive & Regulatory Analysis**

In order to suggest constructive improvements to the agency for the protection of public health and the environment with respect to uranium recovery, NRDC took an extensive look at uranium extraction and yellowcake processing and last year produced the report we provided to you today. For other interested readers, our uranium report can also be found on the web at <http://www.nrdc.org/nuclear/files/uranium-mining-report.pdf>.

The question we set out to examine was simple: are the current controls on both conventional hard-rock mining and milling, and alternative solution-mining techniques sufficient to prevent a new round of harms to the natural resources and communities of this region, which is already being heavily exploited for the extraction of oil, natural gas, coal, coal-bed methane, and now shale-gas?

The answer we found is that the controls and applicable regulatory schemes are not protective of public health and the environment. Concerns over matters such as long-term groundwater contamination, waste management and disposal, environmental justice, and basic scientific and engineering disputes over fundamental technical matters such as setting background water quality standards and appropriate decommissioning bonds appeared repeatedly. NRDC and the Southwest Research and Information Center (SRIC) extracted as much public data about the impact of ISL mining from NRC and state records as was readily available to both organizations. Though not comprehensive, the effort is consistent with the limited studies done by other entities. NRDC and SRIC did not find a single ISL operation where an aquifer was restored to its pre-mining state for all contaminants. The common practice for the NRC or the Agreement State to deem an aquifer “restored” despite elevated concentrations of uranium, radium-226, selenium, and other harmful constituents.

Further, the combined impacts of uranium mining alongside the broad range of natural resource extraction techniques in the American West have remains nearly entirely unexamined at the state

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<sup>1</sup> 10 C.F.R. § 2.309 (f) (2), (i) – (iii).

and federal level. Most concerning, we found a complete lack of analysis of cumulative impacts, where long-term impairment of freshwater aquifers is a major concern, compounded by population growth, prolonged dry weather conditions, and severe competition for water resources. In sum, we found the NRC has yet to conduct the thorough analysis of ISL groundwater restoration and results that we believe is necessary to continue final licensing of new mines. NRDC believes it is crucial that a detailed cataloguing of ISL restoration history and analysis of its cumulative impacts with other resource extraction techniques take place so that informed decisions can be made regarding the efficacy of current techniques and adequacy of relevant standards. Fundamentally, we don't know enough about the extent or significance of the adverse impacts of ISL mining on mined and adjacent aquifers, as the NRC's final Generic EIS did not undertake such an analysis. Indeed, no entity we know of has conducted a thorough regulatory assessment to investigate the current state of aquifers in proximity to ISL operations.

Our report documents these and many other matters.

### **The Need for Rules**

The neglect we found of uranium mining impacts by federal research and analysis can be attributed to the flawed framework responsible for regulating resource extraction. As evidenced by the parties at the table today, the NRC and EPA share jurisdiction for conventional milling and ISL mining regulation, with the NRC serving as the primary licensing body for many new and existing uranium recovery sites, applying environmental standards for uranium recovery set by the EPA. As we know the Commission is aware, these regulatory standards are faulty, outdated, and are not faithful to the Congressional action taken in the 1970s to address serious environmental problems. Federal and state regulations for uranium milling—or hard rock uranium recovery—have not been updated for more than two decades and do not match today's scientific understanding of the impact that radiation and heavy metals have on the environment and public health.

Since at least the late 1990s, the Commissioners have shown concern about the “complex and unmanageable” regulatory system under which ISL mines operate and groundwater restoration is currently managed. In 2003 the NRC sought to delegate regulation of groundwater protection to non-Agreement States through memorandums of understanding. This approach hit numerous roadblocks and was ultimately unsuccessful. In that same year, there was also a downturn in the market price of yellowcake, which contributed to the Commissioners' decision to defer a rulemaking for ISL facilities. In 2006, Commissioner Jeffrey Merrifield called for a rulemaking to solve the problems plaguing the regulation and protection of groundwater at ISL mining facilities. He stated,

While the staff has done its best to regulate ISL licensees through the generally applicable requirements in Part 40 and imposition of license conditions, our failure to promulgate specific regulations for ISLs has resulted in an inconsistent and ineffective regulatory program. We have been attempting to force a square peg into a round hole for years, and I believe we should finally remedy this situation through notice and comment rulemaking.

Subsequently the NRC Commissioners “directed the NRC staff to initiate a rulemaking effort specifically tailored to groundwater protection programs in the well-field production zone at ISL uranium recovery facilities.” In 2007 the NRC staff met several times with representatives of the EPA and the National Mining Association to “reach a consensus on a rulemaking strategy.” Though it has now been more than five years since the NRC Commissioners instructed staff to begin work on a groundwater protection rule for ISL uranium mining facilities, no such rule has been shared with the public in draft form or officially promulgated, despite repeated requests from the public for the issuance of a draft rule for public comment.

In March 2010, NRC staff testified before the commissioners at a briefing on uranium recovery that they “anticipate providing that rule to the Commission in draft form in April of this year.” In fact, we understand at the time that NRC formed a working group, “to revise Appendix A in 10 CFR Part 40 to clarify the regulations related to groundwater protection at in-situ leach uranium recovery facilities in order to improve regulatory efficiency.” It’s now 2013 and still no changes have been made, no draft rule has been shared with the public, and the NRC continues to review and grant ISL licenses and expansions.

### **Next Steps**

The two reasons for the current regulatory morass bear repeating. First, the weak regulatory regime exists because ISL uranium mining was not in widespread use when conventional uranium mining was first subjected to any oversight beyond that of the federal government promoting and guaranteeing the viability of a nuclear fuels market. Laws to protect public health and the environment from uranium mining and milling impacts were not drafted and passed until several decades of harm had already been inflicted across the American West. Those laws that were passed have rarely been updated, were resisted by industry-captured portions of agencies, and have been haphazardly enforced, with little accountability for lax decisions and a decided unwillingness among regulators to enforce protective standards. The NRC, the EPA, the DOI, the DOE, and the Bureau of Indian Affairs (under its trust responsibility) all hold portions of accountability for the regulation of past, present, and future harm resulting from uranium recovery.

The second reason for the ongoing failure to address the impact of ISL mining is that the existing regulatory schemes are assembled from a dated set of jurisdictional concerns now overcome by events. NRC jurisdiction over uranium milling (and eventually ISL mining)—and not over conventional uranium mining—is founded on the perceived national need for the federal government to have full authority over nuclear materials in order to ensure the smooth operation of our National Security and commercial nuclear industries. The EPA’s authority, confirmed by Congress in 1978, has been superimposed on the NRC process, with at best grudging acceptance by the agency and industry. The result is an over-complicated and conflicting set of standards assembled from regulations intended for differing areas. In NRDC’s view, the focus for the federal government must now be to cure these deficiencies and swiftly develop a more protective regulatory framework for uranium recovery of all types, before even more public health and environmental damage is done.

Simply, both the EPA and the NRC should move swiftly to update the relevant environmental protections for uranium recovery as a whole. Such actions must, of course, include standards for ISL uranium mining. The sooner that improved standards can be put into effect, the sooner will public health and the environment will be protected.

The EPA, to its credit, several years ago commenced a revision of its health and environmental protection standards for uranium and thorium mill tailings. EPA's Science Advisory Board weighed in on the matter approximately one year ago, so we are hopeful that a draft rule is imminent. In contrast to EPA's as-yet unfulfilled promises to adopt new standards, as we discussed above, NRC has yet to move forward with reforming its own regulations. In fact, for several years the NRC has declined to publish a draft groundwater protection rule for ISL facilities, relying instead on a set of incomprehensible internal guidance documents.

Today we urge the Commissioners to commit to the following – immediately after the EPA issues its *draft* rulemaking, the NRC will commence work on its own ISL rulemaking to conform to EPA's new standards. We are aware that we are requesting NRC start its process before EPA's rules are final, but we think with the decades that have passed since meaningful action, incorporation of EPA's guidance is not beyond the capacity of the agency and can be adjusted as necessary throughout the rulemaking process.

Until that time when all parties have some measure of certainty regarding new standards, NRDC supports a moratorium on the final decisions with respect to the granting of new ISL uranium mining licenses. Moreover, the NRC should defer action on any new application for a uranium extraction or yellowcake processing license until there is federal adoption of, as just one example, key elements of Colorado's 2008 Land and Water Stewardship Act, which requires substantially more stringent protections than currently exist.

In closing, unless the federal government revises the regulatory scheme for ISL uranium mining and other forms of uranium extraction and yellowcake production, damage will likely continue as uranium ore will be recovered by both conventional and unconventional means well into the future. The time to rectify the inadequacies of the regulatory structure is today. ISL uranium mining has a troubled past of inflicting real harms that merits specific federal treatment and meaningful, protective standards.

Thank you for this opportunity and I look forward to answering your questions.

Geoffrey H. Fettus  
Senior Attorney  
Natural Resources Defense Council