

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

COMMISSIONERS:

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**DOCKETED 10/19/05**

**SERVED 10/19/05**

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In the Matter of )

LOUISIANA ENERGY SERVICES, L.P. )

(National Enrichment Facility) )

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Docket No. 70-3103-ML

**CLI-05-20**

**MEMORANDUM AND ORDER**

**I. Introduction**

Two intervenors, the Nuclear Information Resource Service (NIRS) and Public Citizen (PC), seek Commission review of LBP-05-13, an Atomic Safety and Licensing Board decision on environmental contentions.<sup>1</sup> Both the NRC staff and the license applicant, Louisiana Energy Services, L.P. (LES), oppose the petition for review. Today we decide that the Board erred in not admitting for hearing an amended contention on the environmental impacts of depleted uranium disposal. As we see the record, NIRS/PC timely challenged the “impacts” discussion in the LES Draft Environmental Impact Statement (DEIS). We remand NIRS/PC’s amended contention to the Board for further consideration and appropriate action.

The Commission sees no need, however, for a stand-alone hearing on the remanded environmental “impacts” contention. The issues and allegations on near surface disposal of depleted uranium that NIRS/PC raised in its “impacts” contention substantially overlap those now before the Board as part of NIRS/PC’s contentions challenging LES’s estimates of depleted

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<sup>1</sup> 61 NRC \_\_ (2005).

uranium disposal costs. Those contentions will be considered in an upcoming Board hearing scheduled to begin on October 24, 2005. The Board's fact findings on the disposal cost contentions – which also challenge near-surface disposal – may well prove sufficient for the Board to address and resolve the waste “impacts” contention. But if necessary, the Board can request supplemental evidence from the parties, to fill in gaps in the record.

The Commission continues to consider six other alleged Board errors raised in the petition for review. But given that the waste impacts issue relates to issues the Board expects to consider at the hearing scheduled to begin on October 24, 2005, we thought it important to decide that issue now.

## **II. Background**

This proceeding stems from LES's license application to construct, operate, and decommission a gas centrifuge uranium enrichment facility near Eunice, New Mexico. Earlier this year, the Board conducted an evidentiary hearing on NIRS/PC's four admitted environmental contentions. The Board ruled against NIRS/PC on all four contentions. In their petition for review, NIRS/PC allege seven Board errors.

Our decision today considers only the first alleged error, a claim that the Board erred in “refusing to allow NIRS/PC to show the environmental impacts of waste disposal.”<sup>2</sup> NIRS/PC argue that they timely questioned the adequacy of the DEIS's discussion of near-surface disposal impacts. NIRS/PC also argue that they timely challenged the DEIS's analysis of the radiological impacts of deep disposal of depleted uranium. LES and the NRC maintain that the Board properly rejected these claims as too late and as an inappropriate expansion of already-admitted contentions.

Some confusion appears to have resulted from the originally similar titles and initially

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<sup>2</sup> Petition on Behalf of NIRS/PC for Review of First Partial Initial Decision on Environmental Contentions (“Petition for Review”)(June 23, 2005) at 14.

unclear scope of two contentions admitted in this proceeding. In their intervention petition, NIRS/PC submitted one large two-part contention titled “Waste Storage and Disposal.”<sup>3</sup> Its first part focused on the “plausibility” of LES’s proposed private and public sector depleted uranium disposal options. The contention’s second part alleged an inadequate environmental impacts analysis in LES’s Environmental Report. The Board divided the separate claims into two contentions.<sup>4</sup> It admitted three “plausible strategy” bases under a contention titled “Depleted Uranium Hexafluoride Storage and Disposal.” The Board admitted one basis alleging inadequate Environmental Report analysis of the impacts of a waste deconversion facility under a separate contention titled “Impacts of Waste Storage and Disposal.”<sup>5</sup>

In their petition for review, NIRS/PC refer to both the “plausible strategy” and the “impacts” contentions. They attempted at different points in the proceeding to amend both contentions to raise new challenges to proposed disposal methods for depleted uranium waste. The “plausible strategy” contention (NIRS/PC EC-3/TC-1), however, remains before the Board and is scheduled for hearing. An appeal of Board rulings in regard to that contention is unripe at this time.<sup>6</sup> Accordingly, today we consider only Board rulings pertinent to the environmental “impacts” contention (NIRS/PC EC-4). The Board’s decision in LBP-05-13 was its final decision on environmental issues. Our decision does, however, touch on the “plausible strategy”

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<sup>3</sup> Petition to Intervene By NIRS/PC (Apr. 6, 2004) at 25-36.

<sup>4</sup> LBP-04-14, 60 NRC 40, 67-68 (2004).

<sup>5</sup> Later in the proceeding, LES proposed that the Board drop the word “Disposal” from the title of the “Impacts” contention because, as originally admitted, the basis accepted for the contention pertained only to the environmental impacts of waste deconversion (converting depleted uranium to the U308 form for disposal). The Board then renamed the contention “Impacts of Waste Storage.” See Memorandum and Order (Ruling on Late-Filed Contentions) (11/22/04) at 15.

<sup>6</sup> See *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-00-2, 51 NRC 77 (2000).

contention insofar as it relates the “impacts” contention.

### III. Analysis

In NRC practice, “contentions” must be based on documents or other information available at the time the petition is filed, and petitioners must articulate at the outset the specific issues they wish to litigate.<sup>7</sup> On issues arising under the National Environmental Policy Act (NEPA), petitioners “shall file contentions based on the applicant’s environmental report,” but “may amend those contentions or file new contentions if there are data or conclusions in the NRC draft or final environmental impact statement ... that differ significantly from the data or conclusions” in the applicant’s documents.<sup>8</sup>

With these principles in mind, we turn to the question before us: whether NIRS/PC raised their concerns about the environmental impacts analyses of near-surface and geologic disposal of depleted uranium in a timely fashion.

NIRS/PC first challenged near-surface disposal of depleted uranium in their original petition to intervene. They alleged that LES did not have a “plausible strategy” for disposal of the depleted uranium that the LES facility would produce. The Board admitted three bases for the “plausible strategy” contention. Two challenged the plausibility of LES’s proposals for private sector disposal of depleted uranium -- *i.e.*, LES’s intent to have a private conversion facility convert depleted uranium to a U308 product form and its intent then to dispose of the U308 in an exhausted uranium mine. A third basis challenged the plausibility of LES’s proposal to have the Department of Energy (DOE) dispose of the depleted uranium waste pursuant to section 3113 of the USEC Privatization Act. That Act obligates DOE to accept depleted uranium for disposal if the NRC has made a determination that depleted uranium is a low-level

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<sup>7</sup> See 10 C.F.R. § 2.309(f); *Duke Energy Corp.* (Oconee Nuclear Station, Units 1, 2, and 3), CLI-94-11, 49 NRC 328, 338 (1999).

<sup>8</sup> 10 C.F.R. § 2.309(f)(2).

radioactive waste.<sup>9</sup>

In challenging the proposed DOE waste disposal option, NIRS/PC argued that the option would be “plausible” only if the NRC determines that depleted uranium is a low-level radioactive waste. They went on to argue that it would be inappropriate for the NRC to declare depleted uranium low-level waste because “the classification of low-level waste can apply only to waste that would clearly be appropriate for shallow land disposal and 100 year institutional control,” and that “DU [depleted uranium] meets neither requirement.”<sup>10</sup> They argued that the DOE disposal option was not a “plausible strategy” because depleted uranium actually should be treated as Greater-Than-Class-C (GTCC) waste, and requires deep disposal.<sup>11</sup> They presented a number of arguments addressing the radiological properties of depleted uranium and addressing our Part 61 regulations governing near-surface disposal of low-level waste. The Board admitted the “plausible strategy” contention for hearing, but said that the contention raised a “novel legal or policy question regarding the status of depleted uranium hexafluoride waste as low-level waste.”<sup>12</sup> The Board therefore referred its admissibility ruling to the Commission.

While our decision on the referred “plausible strategy” contention was still pending, the NRC staff issued the DEIS.<sup>13</sup> NIRS/PC promptly moved to amend and supplement their admitted contentions based on the DEIS. They attempted to amend both their “plausible

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<sup>9</sup> See Petition to Intervene at 27-31; LBP-04-14, 60 NRC 40, 67 (2004).

<sup>10</sup> *Id.* at 28.

<sup>11</sup> *Id.* at 28-29.

<sup>12</sup> LBP-04-14, 60 NRC at 67.

<sup>13</sup> NUREG-1790, “Environmental Impact Statement for the Proposed National Enrichment Facility in Lea County, New Mexico,” Draft Report for Comment (Sept. 2004)(LES DEIS).

strategy” and their environmental “impacts” contentions.

To the “impacts” contention – then titled “Impacts of Waste Storage and Disposal” – NIRS/PC added a challenge to new conclusions and data in the DEIS. They alleged that the DEIS impacts analysis was “incorrect” or deficient because it merely “assume[d]” that LES’s depleted uranium may be disposed of in near-surface disposal facilities.<sup>14</sup>

NIRS/PC set forth their specific claims in three bases. First, they complained of the DEIS’s conclusion that depleted uranium may be disposed of as a “Class A” low-level waste. In support, NIRS/PC argued that the Commission’s adoption of the Part 61 waste classifications rules did not include an environmental analysis of disposal of depleted uranium in the large quantities involved, and therefore that further additional environmental analysis was necessary to assure that near-surface disposal was appropriate.<sup>15</sup> They also claimed that depleted uranium more appropriately should be disposed of in the same manner as wastes classified as GTCC waste.<sup>16</sup> Secondly, they argued that the DEIS failed to acknowledge or “account for” earlier statements by the NRC expressing concern or doubt about whether near-surface

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<sup>14</sup> The broadly-phrased paragraph NIRS/PC proposed adding to the existing contention on waste “impacts” went as follows:

The DEIS contains an incorrect analysis of the environmental impacts of the disposal of depleted uranium hexafluoride waste. The DEIS assumes that depleted uranium may be disposed of as low-level waste, which is incorrect. The DEIS fails to recognize the Commission’s stated position that depleted uranium is not appropriate for near-surface disposal. The DEIS fails to support or explain the modeling of disposal of depleted uranium.

*See* Motion on Behalf of NIRS/PC to Amend and Supplement Contentions (Oct. 20, 2004) at 13. Of note, where NIRS/PC claim that the DEIS merely assumes that depleted uranium may be disposed of as “low-level waste,” it is clear from the arguments made in the contention that they equate “low-level waste” with “near-surface” disposal. *See id.* at 16.

<sup>15</sup> *Id.* at 15.

<sup>16</sup> *Id.*

disposal of depleted uranium would meet the 10 C.F.R. Part 61 performance objectives for land disposal, and that instead the DEIS “simply assumes that disposal may occur at a near-surface disposal site.”<sup>17</sup> Lastly, NIRS/PC challenged the DEIS’s estimates of the radiological releases from postulated geologic disposal sites. They claimed that the DEIS did not specify the models used. They argued that the geologic dose estimates for LES’s New Mexico facility were “unlike any reported” for LES’s earlier (now abandoned) Claiborne (Louisiana) enrichment facility application, and therefore it was unclear whether the DEIS had used the same models used in the *Claiborne* proceeding.<sup>18</sup>

In ruling on NIRS/PC’s motion, the Board noted that the claims appeared to rest on “significant new information revealed in the staff DEIS,” which was “sufficient to provide the requisite good cause” for late submissions.<sup>19</sup> But the Board declined to admit the new claims because it said that they related to the “issue of classification of depleted uranium as a low-level waste,” an issue then pending before the Commission.<sup>20</sup> While stating that it would not “at this juncture” admit the DEIS challenge, the Board stressed that NIRS/PC could make “a renewed motion” to amend the “impacts” contention “should the Commission hold that the Board should hear the waste classification issue.”<sup>21</sup>

Later, in CLI-05-5, we found that depleted uranium is properly considered a low-level

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<sup>17</sup> *Id.* at 15-16.

<sup>18</sup> *Id.* at 16.

<sup>19</sup> Memorandum and Order (11/22/04)(unpublished) at 14. No one has challenged the Board’s “good cause” ruling.

<sup>20</sup> *See* October 20, 2005 Motion at 15.

<sup>21</sup> *Id.*

waste.<sup>22</sup> Accordingly, we held that disposal by DOE represents a “plausible strategy” under the USEC Privatization Act.<sup>23</sup> But we left open the question whether disposal in a near-surface facility is appropriate. We stated that “low-level radioactive waste can encompass *both* those wastes suitable for near-surface disposal and those that may require greater isolation.”<sup>24</sup> Even if NIRS/PC’s allegations about the unsuitability of near-surface disposal proved correct, we said, “they would not show that depleted uranium should be categorized as anything other than a low-level radioactive waste.”<sup>25</sup> Having resolved the low-level waste question, we saw no need to decide questions about the suitability of near-surface disposal or questions about the precise classification of the depleted uranium waste (Class A, B, etc.).

Our decision in CLI-05-5 noted that still pending before the Board for hearing were related waste disposal challenges raised in connection with contentions challenging LES’s waste disposal cost estimates.<sup>26</sup> We indicated that resolving those challenges may require further environmental or safety analysis of waste disposal. (At the time, the NRC staff had not yet issued the FEIS or the Safety Analysis Report for the proposed facility). We did not, however, actually “remand” waste disposal issues, as NIRS/PC suggest in their petition for review.<sup>27</sup> We simply decided the question before us: the plausibility of the DOE disposal option.<sup>28</sup> Notably, however, while we found that option plausible and reversed the Board’s

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<sup>22</sup> 61 NRC 22 (2005).

<sup>23</sup> *Id.* at 36.

<sup>24</sup> *Id.* at 32 (emphasis added).

<sup>25</sup> *Id.* at 34.

<sup>26</sup> *Id.* at 35 & n.64.

<sup>27</sup> Petition for Review at 15.

<sup>28</sup> On review, NIRS/PC attempt to recast their earlier arguments as if they were not focused on challenging the “plausibility” of the DOE disposal option and on the question



decision admitting a challenge to it, our decision cannot be understood to suggest that arguments on the suitability of near-surface disposal could never again be resubmitted in support of a new timely issue in the proceeding. We simply did not address the suitability of particular waste disposal methods or sites.

Following our decision on the DOE option, NIRS/PC again moved to amend and supplement their contentions to challenge the DEIS analysis of near-surface disposal. They pointed to the Board's earlier statements that they would be allowed to file "a renewed motion" following our decision, and expressly cited the specific pages of their earlier motion challenging the DEIS waste impacts analysis.<sup>29</sup> NIRS/PC's new motion again sought to challenge the DEIS impacts analysis of near-surface disposal methods and estimated geologic repository doses. They broadly alleged that the "analyses of disposal methods in the DEIS are unsupported and technically deficient," and that the proposed methods would not meet "relevant" Commission standards.<sup>30</sup> As in their previous motion, NIRS/PC submitted contention bases with their more detailed claims. But while their earlier motion set forth the bases on two pages, the new one presented some twenty pages of bases, spanning a host of issues, most of which

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whether depleted uranium could be categorized as a low-level radioactive waste. *See Reply On Behalf of NIRS/PC* (July 11, 2005) at 3. They stress that their waste disposal arguments apply "to private as well as DOE disposal" of depleted uranium. *See Petition for Review* at 3. But the contention we considered in CLI-05-5 was, as framed by the arguments presented, a "plausible strategy" contention. It challenged LES's proposed "private" disposal strategy (a private waste conversion facility and an exhausted uranium mine) and the DOE disposal option. In CLI-05-5 we reversed the Board's decision to admit for hearing the DOE disposal issue -- based on our finding that depleted uranium is low-level waste. While the Licensing Board appears to have given the particular basis challenging the DOE disposal option an over-broad title (*see* LBP-04-14, 60 NRC 40, 78 (2004)) the fact remains that the basis focused on the DOE disposal option and the related question whether depleted uranium properly can be categorized as a low-level radioactive waste -- issues resolved in CLI-05-5.

<sup>29</sup> Motion on Behalf of NIRS/PC for Admission of Late-Filed Contentions (Feb. 2, 2005)(Proprietary) at 2.

<sup>30</sup> *Id.* at 8.

went well beyond the issues raised in their earlier claims following the DEIS issuance.

Among these numerous new claims, however, were essentially the same claims that had been raised in the previous contention. For example, quoting a study on depleted uranium disposal as a “Class A” low-level radioactive waste, NIRS/PC reiterated their claim that the Part 61 rulemaking had not included an environmental analysis of disposing of such a large inventory of depleted uranium, and that such additional analysis was necessary to assure that near-surface disposal would be appropriate.<sup>31</sup> They again argued that the radiological characteristics of the depleted uranium made it most comparable to wastes classified under Part 61 as GTCC waste.<sup>32</sup> They again noted that in the *Claiborne* enrichment facility proceeding, the NRC environmental impacts analysis had concluded that near-surface disposal under the conditions assumed may not meet the NRC dose limits.<sup>33</sup>

They also renewed their earlier challenge to the DEIS’s estimates of radiological doses expected from deep disposal of depleted uranium, again claiming that the methodology for the dose calculations had not been provided. Specifically, they noted that there was an “unexplained discrepancy” between the *NEF* geological dose estimates, and the earlier *Claiborne* estimates upon which they were based, even taking into account the proportionally larger amount of depleted uranium the NEF facility is expected to generate.<sup>34</sup>

The Board rejected NIRS/PC’s renewed contention amendment request on several grounds. First, the Board found the new claims untimely and lacking “good cause” for late-filing. Because the claims related to an alleged deficiency in the DEIS, the Board stated that they

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<sup>31</sup> See February 2, 2005 Motion (Proprietary) at 16-17.

<sup>32</sup> See *id.* at 8, 9-12, 16.

<sup>33</sup> See *id.* at 17.

<sup>34</sup> See *id.*

should have been raised in NIRS/PC's earlier filing following the issuance of the DEIS.<sup>35</sup> On review, NIRS/PC argue that the Board "fail[ed] to note that NIRS/PC did seek to add such [waste disposal analysis claims], but the Board had excluded them."<sup>36</sup>

We cannot agree with the Board on the timeliness point. As we noted above, portions of NIRS/PC's new motion had raised essentially the same "near surface disposal" and geological dose discrepancy issues raised right after the DEIS issued. The Board rejected the earlier contention -- subject, though, to NIRS/PC's right to file a "renewed motion" -- because related issues were then pending before the Commission.<sup>37</sup> All of this would have been clearer had NIRS/PC not -- inappropriately -- used their renewed motion to also introduce an extensive array of untimely claims, many altogether unrelated to their challenge to the DEIS analysis of depleted uranium disposal impacts.<sup>38</sup> Nonetheless, there was an overlap between the impacts analysis claims raised in the two motions, and therefore we cannot conclude that the second motion's waste impacts claims were untimely in their *entirety*.

Moreover, the second motion expressly referenced (effectively reviving) the relevant pages of the earlier contention's claims on the DEIS impacts analysis -- claims the Board

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<sup>35</sup> Memorandum and Order (5/03/05)(unpublished) at 10.

<sup>36</sup> NIRS/PC Petition for Review at 14.

<sup>37</sup> Memorandum and Order (11/22/04)(unpublished) at 15.

<sup>38</sup> Indeed, the majority of the bases they submitted ventured into completely different issues that could have been raised previously, including claims about federal drinking water regulations, transportation, depleted uranium's toxicity as a heavy metal, and alternative depleted uranium product forms that NIRS/PC sought to have analyzed. Moreover, many of the claims appear to be late attempts to challenge the radiological dose analysis provided in the LES Environmental Report. Arguments challenging the specific groundwater or intruder dose conclusions set forth in the LES Environmental Report, the methodology upon which the dose calculations were made, and the adequacy of generic "wet" site and "dry" site dose analyses should have been raised earlier. We agree with the Board insofar as it ruled that those aspects of NIRS/PC's contention were untimely.

explicitly had found timely when NIRS/PC originally advanced them.<sup>39</sup> Significantly, there would have been no question about the timeliness of the NIRS/PC challenge to the DEIS impacts analysis had the Board simply held the timely-filed waste “impacts” contention in abeyance, pending our decision on the question of depleted uranium’s status as a low-level radioactive waste. Our decision in CLI-05-5 would not have affected the admission for hearing of the NIRS/PC “impacts” contention, which challenged the DEIS’s discussion of near surface disposal of depleted uranium and alleged a “discrepancy” in the DEIS geological dose estimates. On review, NIRS/PC additionally argue that their contention essentially dealt with the “performance of disposal sites in containing radioactivity,” not “the issue of classification of depleted uranium as low-level waste,” and therefore inappropriately was dismissed on account of the pending Commission decision on depleted uranium classification.<sup>40</sup>

In light of this unusually complicated procedural history and the factors outlined above, we find that NIRS/PC’s second motion did reiterate and thus revive their previous (and timely) challenge to the DEIS analysis of depleted uranium disposal impacts. For clarity’s sake, however, we direct the Board and parties to focus on the terms and bases of the contention submitted in the first motion rather than the overbroad claims in the renewed motion. The renewed motion may be considered only to the extent that it raises or elaborates upon essentially the same “impacts” analysis arguments made following the DEIS. All other claims from the renewed motion appear untimely.

In addition to its timeliness ruling, the Board also found NIRS/PC’s “impacts” contention inadmissible because “the issue of disposal of depleted uranium falls outside of the narrow

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<sup>39</sup> See February 2, 2005 Motion (Proprietary) at 2.

<sup>40</sup> See Petition for Review at 4-5.

scope” of the contention NIRS/PC sought to modify (NIRS/PC EC-4).<sup>41</sup> In opposing NIRS/PC’s petition for review, LES elaborates on the Board’s position. As LES’s argument goes, because NIRS/PC’s “impacts” contention – *as originally admitted* – challenged only the analysis of the impacts of depleted uranium *deconversion* (e.g., converting depleted uranium to the U308 product form), the Board acted properly in rejecting any new claims about depleted uranium *disposal*.<sup>42</sup>

But LES apparently has confused two different scenarios. LES is quite right that an intervenor “may not freely change the focus of an admitted contention at will as litigation progresses, but is bound by the terms of the contention.”<sup>43</sup> That is, intervenors cannot seek to cure deficiencies of earlier pleadings by later introducing wholly new issues that could have been raised previously.<sup>44</sup> That was not the case here. NIRS/PC raised their challenge of the DEIS waste “impacts” analysis promptly after the DEIS issued – the first available opportunity, in other words, and the Board found “requisite good cause” for the submission because of apparent “significant new information” in the DEIS.<sup>45</sup> When the Board refused to admit the amended “impacts” contention, citing a pending Commission decision, NIRS/PC promptly renewed their contention once we issued our decision. Our rules expressly allow timely amendment of NEPA contentions if there is significant new information or different conclusions in the DEIS that could not have been challenged previously.<sup>46</sup> By definition, an *amended*

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<sup>41</sup> Memorandum and Order (5/03/05)(unpublished) at 11.

<sup>42</sup> *See* Answer of LES to Petition for Review (July 5, 2005) at 11-12.

<sup>43</sup> *Id.* at 12 (internal quotes and citation omitted).

<sup>44</sup> *Duke Energy Corp.* (McGuire Nuclear Station, Units 1 & 2; Catawba Nuclear Station, Units 1 and 2), CLI-02-28, 56 NRC 373, 386 (2002).

<sup>45</sup> *See* Memorandum and Order (11/22/04)(unpublished) at 14.

<sup>46</sup> 10 C.F.R. § 2.309.

contention can include additional issues outside of the scope of the contention as originally admitted.

Finally, the Board concluded, without elaboration, that the proposed contention amendment lacked adequate factual or expert opinion support. But the bases for the waste impacts claims were in fact based upon the analyses of NIRS/PC experts.<sup>47</sup> In our view, NIRS/PC provided enough support for their challenge to the DEIS analysis.<sup>48</sup>

In short, we find that the NIRS/PC contention on the “impacts” analysis should have been admitted. We therefore reverse the Board’s admissibility ruling and remand the contention, on the DEIS waste impacts analysis, as proposed in NIRS/PC’s October 20, 2004 contention challenging the DEIS and as renewed early this year in the wake of our decision in CLI-05-5.<sup>49</sup>

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<sup>47</sup> See February 2, 2005 Motion at 8.

<sup>48</sup> NIRS/PC alleged facts (supported by expert analysis) about the radiological characteristics of depleted uranium, and alleged that the environmental impacts of depleted uranium disposal in large quantities had not been analyzed in the Part 61 rulemaking. They cited to earlier NRC statements indicating that disposal of large quantities of depleted uranium at near-surface facilities may not meet the requirements of 10 C.F.R. Part 61.

NIRS/PC’s support for their challenge to the DEIS estimate of doses from a geological repository is more sparse. They question whether the DEIS used the same models used in the earlier *Claiborne* proceeding because, they say, it is not clear how the DEIS used the earlier *Claiborne* dose estimates to calculate new estimates. Given corrections made in the FEIS, this issue appears amenable to summary disposition. Significantly, the NRC staff in the FEIS clarified that the same models used in the *Claiborne* proceeding were used, and apparently has corrected the DEIS dose discrepancy highlighted by NIRS/PC. See LES FEIS (NUREG-1790), Vol. 1 at 4-64. If NIRS/PC actually mean to challenge the dose estimates used in the *Claiborne* proceeding, such a challenge appears untimely, given that the LES Environmental Report said that it was relying on the *Claiborne* dose estimates. Similarly, if NIRS/PC seek to challenge the dose analysis because it is based upon two representative disposal sites, such a claim seemingly also could have been based upon the Environmental Report, which addressed the same two representative sites.

<sup>49</sup> See October 20, 2004 Motion at 13, 15-16; February 2, 2005 Motion (Proprietary) at 9-12, 16-17.

#### IV. Proceedings On Remand

The Licensing Board suggested that a reason for not admitting for hearing the NIRS/PC renewed waste impacts contention was that there already was “at least one other NIRS/PC contention concerning the impacts of depleted uranium disposal” pending for litigation.<sup>50</sup> Indeed, NIRS/PC has a pending contention titled “Costs of Management and Disposal of Depleted UF<sub>6</sub>,” or NIRS/PC EC-6/TC-3. That contention raises the question whether the “engineered trench” near-surface disposal method is an acceptable disposal method for depleted uranium under 10 C.F.R. Part 61. NIRS/PC also have a contention on “Decommissioning Costs” (NIRS/PC EC-5/TC-2). It challenges aspects of LES’s decommissioning funding plan, including estimates of the cost of depleted uranium disposal which are based on near-surface disposal.

The Commission does not believe that these pending contentions on cost estimates are sufficient reason to reject altogether a contention that goes to the adequacy of the environmental impacts analysis, a matter separate from cost estimates. But it is true that essentially all of the bases or claims that NIRS/PC alleged in support of its environmental “impacts” contention made following issuance of the DEIS are addressed in the pre-filed testimony that NIRS/PC has submitted to the Board on the cost-related contentions. Those contentions also challenge the viability of the near-surface disposal option.

In challenging cost estimates that are based on near-surface disposal, NIRS/PC present arguments that essentially encompass the same issues they raise in support of their “impacts” analysis claims about near-surface disposal. These include, for example, arguments on the radiological characteristics of depleted uranium in large quantities, the Part 61 rulemaking history, the impacts analysis from the earlier *Claiborne* proceeding, and other studies of near-

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<sup>50</sup> Memorandum and Order (5/03/05)(unpublished) at 10.

surface disposal of depleted uranium.<sup>51</sup>

Given this substantial overlap between NIRS/PC's claims in support of the "impacts" analysis contention and their claims on near-surface disposal in support of the cost-related contentions, we expect that the Board will be able to address and resolve the "impacts" contention in conjunction with its fact-finding on the other contentions. If the Board finds that additional information is necessary to resolve the "impacts" contention, it can provide the parties an opportunity to provide supplemental evidence.<sup>52</sup>

#### **V. Waste Classification Tables (10 C.F.R. § 61.55)**

NIRS/PC's disposal "impacts" contention challenged the DEIS's classification of depleted uranium as a Class A low-level radioactive waste. That classification was based upon § 61.55(a)(6), which specifies that if radioactive waste does not contain any of the radionuclides listed in either of two listed waste classification tables, it is Class A waste.<sup>53</sup> Depleted uranium

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<sup>51</sup> Compare October 20, 2004 Motion at 15-16; February 2, 2005 Motion (Proprietary) at 9-12 with Revised Direct Testimony of Dr. Arjun Makhijani in support of NIRS/PC Contentions EC-3/TC-1, EC-5/TC-2, and EC-6/TC-3 Concerning LES's Disposal Strategy and Cost Estimate (October 11, 2005) at 9-15, 20-25.

<sup>52</sup> The record already contains additional information on estimated radiological doses at representative "wet" disposal sites, typical of the humid southeastern United States, and "dry" disposal sites, typical of the western United States. These estimates derive from a Department of Energy Programmatic Environmental Impact Statement on the long-term management of depleted uranium hexafluoride. LES's Environmental Report summarized and referenced the DOE analysis and conclusions. See LES Environmental Report (Dec. 2003) at 4-13-12 to 4.13-13; see also DOE "Final Programmatic Environmental Impact Statement for Alternative Strategies for the Long-term Management and Use of Depleted Uranium Hexafluoride, DOE-/EIS-0269 (April 1999) at 1-19, 1-69 to 1-70, 1-3 to 1-4. NIRS/PC's intervention petition did not challenge the radiological dose estimates referenced in the LES Environmental Report, and therefore the Board should consider whether they have waived the opportunity to challenge the adequacy of the dose estimates for "wet" and "dry" disposal sites.

<sup>53</sup> See LES DEIS, NUREG-1790 at 2-27 (citing 10 C.F.R. § 61.55(a)(6)).



does not contain the radionuclides listed in the specified tables, and therefore under a plain reading of the regulation, depleted uranium is a Class A waste. NIRS/PC nonetheless challenge the application of § 61.55(a)(6) to depleted uranium from uranium enrichment facilities. Specifically, they argue that in establishing the waste classification scheme, the Part 61 rulemaking did not analyze the radiological impacts of disposing of the large quantities of depleted uranium generated by uranium enrichment facilities.

The Commission is aware that in creating the § 61.55 waste classification tables, the NRC considered depleted uranium, but apparently examined only specific kinds of depleted uranium waste streams – “the types of uranium-bearing waste being typically disposed of by NRC licensees” at the time.<sup>54</sup> The NRC concluded that those waste streams posed an insufficient hazard to warrant establishing a concentration limit for depleted uranium in the waste classification tables.<sup>55</sup> Perhaps the same conclusion would have been drawn had the Part 61 rulemaking explicitly analyzed the uranium enrichment waste stream. But as Part 61's FEIS indicates, no such analysis was done.<sup>56</sup> Therefore, the Commission directs the NRC staff, outside of this adjudication, to consider whether the quantities of depleted uranium at issue in the waste stream from uranium enrichment facilities warrant amending section 61.55(a)(6) or the section 61.55(a) waste classification tables.

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<sup>54</sup> See FEIS (Part 61), NUREG-0945, Vol. 1 (Nov. 1982) at 5-38; DEIS (Part 61), Vol. 3 at D-7; see also SECY-91-019, “Disposition of Depleted Uranium Tails from Enrichment Plants,” (Jan. 25, 1991) at 4 (“Review of the Environmental Impact Statement supporting 10 C.F.R. Part 61 shows that although the NRC considered the disposal of uranium and UF<sub>6</sub> conversion facility source terms in the analysis supporting Part 61, NRC did not consider disposal of large quantities of depleted uranium from an enrichment facility in the waste streams analyzed because there was no commercial source at that time”).

<sup>55</sup> See Final Rule, “Licensing Requirements for Land Disposal of Radioactive Waste,” 47 Fed. Reg. 57,446, 57,456 (1982).

<sup>56</sup> See note 54, *supra*.

Here, section 61.55(a)(6) makes no exception for depleted uranium from enrichment facilities. Hence, NIRS/PC's effort to use this adjudicatory proceeding to modify the rule to include such an exception is misdirected. The NRC has long prohibited the use of adjudicatory proceedings to challenge the terms of regulations.<sup>57</sup> Despite section 61.55(a), we are permitting the NIRS/PC waste impacts contention to go forward because a formal waste classification finding is not necessary to resolve the disposal impacts contention, which at bottom goes to whether the impacts of near-surface disposal have been adequately estimated or assessed for NEPA purposes.

We close with a word of caution. An NRC "impacts" analysis does not require a full-scale site-specific review, an inquiry in the purview of the responsible licensing agency, such as an Agreement State. NEPA also does not call for certainty or precision, but an *estimate* of anticipated (not unduly speculative) impacts. An assessment of the estimated impacts at one or more representative or reference sites can be sufficient. In this type of analysis, the impacts for a range of potential facilities or locations having common site or design features can be bounded. The LES facility will generate large new quantities of depleted uranium for disposal, and therefore it is appropriate for the NRC in its impacts analysis to assess whether the impacts of disposing of the LES depleted uranium are expected to be small, moderate, or otherwise.

## V. Conclusion

For the foregoing reasons, we *affirm in part* and *reverse in part* the Board decision rejecting NIRS/PC's amended contention on the environmental impacts of depleted uranium disposal, and *remand* the contention to the Board for further proceedings consistent with this decision. We would expect the Board to consider this contention in connection with its

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<sup>57</sup> See, e.g., *Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Unit 2), CLI-03-14, 58 NRC 207, 218 (2003); see also 10 C.F.R. § 2.335. NIRS/PC have not sought a waiver of the rules, as section 2.335 permits.

upcoming hearing on “cost” issues. The Board should make full use of its broad powers under our rules<sup>58</sup> to resolve the remanded issue on a schedule consistent with the Commission’s overall 30-month goal for completing this adjudication.<sup>59</sup>

IT IS SO ORDERED.

For the Commission

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Annette L. Vietti-Cook  
Secretary of the Commission

Dated at Rockville, Maryland,  
this 19<sup>th</sup> day of October 2005.

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<sup>58</sup> See 10 C.F.R. § 2.319(k).

<sup>59</sup> See CLI-04-03, 59 NRC 10, 16 (2004). Any Board “impacts” findings will be added to the NEPA record of decision. See *Hydro Resources, Inc.* (Rio Rancho, NM), CLI-01-4, 53 NRC 31, 53 (2001).