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**Re: Comments on the Final Complex Transformation SPEIS**

Dear Mr. Wyka:

Tri-Valley CAREs (Communities Against a Radioactive Environment) is a non-profit organization founded in 1983 by Livermore, California area residents to research and conduct public education and advocacy regarding the potential environmental, health, and proliferation impacts of the Department of Energy's (DOE) Lawrence Livermore National Laboratory (LLNL). On behalf of our more than 5,000 members, Tri-Valley CAREs submits the following comments on the Final Complex Transformation Supplemental Programmatic Environmental Impact Statement (Final SPEIS).

**The Final SPEIS**

In violation of applicable regulations, the Final SPEIS is not written in plain language, nor does it follow a clear format. Pursuant to the National Environmental Policy Act (NEPA) regulations promulgated by the Council on Environmental Quality (CEQ), federal agencies are required to write environmental impact statements in plain language and follow a clear format for such statements.<sup>1</sup> Much of the content in the Final SPEIS is highly technical in nature, and no attempt has been made to render this content in "clear prose."<sup>2</sup> Moreover, the opaque format of the Final SPEIS fails to illuminate the reasonably foreseeable environmental impacts of NNSA's preferred alternatives, which should be its principal purpose. As a result, public officials and the general public are forced to cross-reference various sections of the Final SPEIS in order to approach a reasoned understanding of NNSA preferred alternatives and their potential environmental impacts.

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<sup>1</sup> 40 C.F.R. § 1500.4(d) - (e) (1978). *See also id.* at § 1502.8.

<sup>2</sup> *Id.* at § 1502.8.

For instance, according to NNSA, under its preferred alternatives, hydrodynamic testing at LLNL would be contained in the Contained Firing Facility by the end of fiscal year (FY) 2008.<sup>3</sup> This implies that open-air detonation experiments would cease at LLNL's Site 300 by the end of FY2008. However, NNSA then states that hydrotesting at Site 300 would be consolidated to a smaller footprint by 2015.<sup>4</sup> Since many of the hydrodynamic testing facilities at Site 300 are open-air firing tables, it is not clear whether open-air detonations would continue at these facilities until 2015, or potentially a later date. In addition, elsewhere in the Final SPEIS, NNSA attempts to analyze the potential environmental impacts of LLNL's now withdrawn permit application to allow larger open-air detonations at Site 300, which clearly conflicts with any plan to contain hydrotesting experiments at Site 300.<sup>5</sup> If NNSA plans to cease open-air detonation experiments at Site 300, either by the end of FY2008 or in 2015, it should express this determination in unequivocal language.

### **Purpose and need**

The Final SPEIS, issued by the National Nuclear Security Administration (NNSA), purports to analyze the potential environmental impacts of alternatives for transforming the nuclear weapons complex. However, any decisions regarding the future of the nuclear weapons complex should be deferred until the completion of a Congressionally-mandated Nuclear Posture Review (NPR) in 2009. The new NPR, which is being prepared "to clarify United States nuclear deterrence policy and strategy for the near term," consists of "a comprehensive review of the nuclear posture of the United States for the next 5 to 10 years."<sup>6</sup> Significantly, the new NPR will include the following element, among others: "The nuclear weapons complex that will be required for implementing the United States national and military strategy, including any plans to modernize or modify the complex."<sup>7</sup> Clearly, in light of this Congressional directive, it is premature for NNSA to make any decisions regarding the future of the nuclear weapons complex, particularly with the upcoming change in presidential administrations.

Moreover, Congress has also established the "Congressional Commission on the Strategic Posture of the United States," which must report its findings to the President, the Secretary of Defense, the Secretary of Energy, the Secretary of State, and the Director of National Intelligence, among others, not later than December 1, 2008.<sup>8</sup> As with the new NPR, the commission will report its findings regarding "the nuclear infrastructure (that is, the size of the nuclear complex) required to support the [nuclear weapons] strategy[.]"<sup>9</sup> Rather than foreclosing available options regarding the nuclear weapons complex, NNSA should respect Congressional prerogatives and align its Complex Transformation plans with those set forth in the forthcoming NPR and commission report.

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<sup>3</sup> Final SPEIS at 3-153.

<sup>4</sup> *Id.* at 3-154.

<sup>5</sup> *Id.* at 3-87, 6-26 - 6-27.

<sup>6</sup> National Defense Authorization Act for Fiscal Year 2008, Pub. L. No. 110-181, § 1070 (2008).

<sup>7</sup> *Id.*

<sup>8</sup> *Id.* at § 1062.

<sup>9</sup> *Id.*

## Alternatives

### *Curatorship*

The Curatorship Alternative was eliminated from detailed study due to an errant and prejudicial representation of its fundamental precepts. According to NNSA, this alternative was considered but eliminated from detailed study because it does not define a programmatic alternative outside the range of alternatives evaluated in the Final SPEIS.<sup>10</sup> Pursuant to CEQ's NEPA regulations, a federal agency must "[r]igorously explore and objectively evaluate all reasonable alternatives[.]"<sup>11</sup> Under the Curatorship Alternative, NNSA would repair nuclear weapons "[o]nly if there is compelling evidence that components have degraded, or will soon degrade, and could cause a significant loss of safety or reliability[.]"<sup>12</sup> This is a reasonable alternative that must be rigorously explored and objectively evaluated by NNSA.

According to NNSA, the Curatorship Alternative is not reasonable because it would involve giving up the capabilities to design and develop replacement nuclear weapons.<sup>13</sup> This, in itself, demonstrates that the Curatorship Alternative is distinct from NNSA's Stockpile Stewardship Program (SSP). Moreover, NNSA claims that maintaining these capabilities is vital to the effective functioning of the SSP, yet it fails to describe a single instance where the technical capabilities required to design new weapons are necessary for the SSP. Thus, there is no support for NNSA's assertion that allowing the capabilities to design and develop new weapons to atrophy would impair NNSA's ability to assess and address issues regarding the safety, security, and reliability of its existing stockpile. If, as NNSA claims, "SSP is technically designed for maintenance of the legacy stockpile[.]" then there should be no need to maintain the capabilities to design and develop new nuclear weapons.<sup>14</sup>

In addition, according to NNSA, the Curatorship Alternative is not reasonable because it "*may* not differ significantly from the existing SSP," with regard to surveillance and remanufacturing.<sup>15</sup> As an initial matter, NNSA's use of the qualifier "*may*" demonstrates that its analysis of the Curatorship Alternative is inadequate. If NNSA cannot determine whether the Curatorship Alternative differs significantly from the existing SSP, then the Curatorship Alternative should be subjected to further analysis.

More importantly, there is a fundamental difference between the Curatorship Alternative and the existing SSP with regard to remanufacturing. Under the Curatorship Alternative, no attempt would be made to improve the performance of a nuclear weapon component; instead DOE would replace such components with others as close to the original as possible.<sup>16</sup> Conversely, under the existing SSP, the performance specifications of nuclear weapons components may be altered as part of the Life Extension Programs. This significant difference further distinguishes the Curatorship Alternative from the existing SSP.

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<sup>10</sup> Final SPEIS at 3-139 – 3-142.

<sup>11</sup> 40 C.F.R. § 1502.14(a) (1978).

<sup>12</sup> Final SPEIS at 3-140.

<sup>13</sup> *Id.* at 3-141.

<sup>14</sup> *Id.*

<sup>15</sup> *Id.* (emphasis added).

<sup>16</sup> *Id.* at 3-140.

Furthermore, NNSA claims that the Curatorship Alternative does not define a programmatic alternative outside the range of alternatives considered in the Final SPEIS because the No Net Production/Capability-Based Alternative includes many facets of the Curatorship Alternative.<sup>17</sup> Again, NNSA fundamentally misunderstands the concept of curatorship, which would result in a smaller nuclear weapon complex.<sup>18</sup> In contrast, NNSA would maintain the same number of sites in the nuclear weapons complex under the No Net Production/Capability-Based Alternative.<sup>19</sup> This is hardly a trivial distinction. Moreover, under the No Net Production/Capability-Based Alternative, the Chemistry and Metallurgy Research Replacement-Nuclear Facility (CMRR-NF) at Los Alamos National Laboratory (Los Alamos of LANL) and Uranium Processing Facility (UPF) at Y-12 may still be necessary, which is not the case under the Curatorship Alternative.

Thus, the Curatorship Alternative would have a smaller environmental footprint than NNSA's preferred alternatives. Under CEQ's NEPA regulations, federal agencies shall, to the fullest extent possible, "[u]se the NEPA process to identify and assess the reasonable alternatives to proposed actions that will avoid or minimize adverse effects of these actions upon the quality of the human environment."<sup>20</sup> By eliminating the Curatorship Alternative from detailed study, NNSA has plainly failed to assess a reasonable alternative that would minimize the environmental impacts of NNSA's proposed actions.

### **Reliable Replacement Warhead**

If the Reliable Replacement Warhead (RRW) program is authorized and funded by Congress, it must undergo separate review under NEPA. According to NNSA, because the environmental impacts analyzed in the Final SPEIS are based on legacy weapons, those "impacts should be larger than and bound the potential impacts of an RRW if it were to go into production."<sup>21</sup> This statement is inadequately supported. Until a detailed cost study and further analyses of an RRW design are completed, it is premature to speculate about its potential environmental impacts. Accordingly, further NEPA review will be necessary if an RRW goes into production.

### **Kansas City Plant**

In violation of NEPA, NNSA has segmented its plans to construct and operate a new facility for the production and procurement of the non-nuclear components of nuclear weapons in Kansas City, Missouri. According to NNSA, its decision to construct a new Kansas City Plant (KCP) "will neither affect nor be affected by the decisions regarding the alternatives evaluated in [the Final SPEIS]."<sup>22</sup> Segmentation is unlawful "when the segmented project has no independent justification, no life of its own, or is simply illogical when viewed in isolation."<sup>23</sup> NNSA's plans for the new KCP clearly meet this standard, since producing the non-nuclear components of nuclear weapons has no "independent utility" apart from the production and maintenance of

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<sup>17</sup> See *id.* at 3-142.

<sup>18</sup> See *id.* at 3-141.

<sup>19</sup> See *id.* at 3-68 - 3-71.

<sup>20</sup> 40 C.F.R. § 1500.2(e) (1978).

<sup>21</sup> Final SPEIS at 2-21.

<sup>22</sup> *Id.* at S-28.

<sup>23</sup> *One Thousand Friends v. Mineta*, 364 F.3d 890, 894 (8th Cir. 2004) (citations and internal quotation omitted).

nuclear weapons contemplated in the Final SPEIS.<sup>24</sup> Moreover, it is plainly illogical to segment consideration of the new KCP from the Final SPEIS, which analyzes every other active site in the nuclear weapons complex. In fact, the existing KCP was included in the 1996 Programmatic Environmental Impact Statement for Stockpile Stewardship and Management, to which the Final SPEIS is a supplement. In light of the above, it is clear that NNSA's plans for the construction and operation of the new KCP were unlawfully segmented from the Final SPEIS.

### **Cumulative Impacts**

The Final SPEIS fails to analyze the impacts of Complex Transformation on climate change. Pursuant to the NEPA regulations promulgated by CEQ, “[c]umulative impact’ is the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.”<sup>25</sup> In conjunction with other reasonably foreseeable actions, it is clear that NNSA's preferred alternatives will result in significant impacts to the environment as the result of climate change.

Alternatively, the impacts of climate change could be considered indirect effects of the proposed actions. Under CEQ's regulations, indirect effects “are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect effects may include growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, *and related effects on air and water and other natural systems, including ecosystems.*”<sup>26</sup>

According to the Fourth Assessment of Working Group II of the Intergovernmental Panel on Climate Change, “many natural systems are being affected by regional climate change, particularly temperature increases.”<sup>27</sup> These effects include changes in snow, ice, and frozen ground cover; impacts to hydrological systems and terrestrial biological systems; earlier “greening” of vegetation in the spring; impacts to agricultural and forestry management at Northern Hemisphere higher latitudes; impacts to human health through heat-related mortality and allergenic pollen; and loss of coastal wetlands and mangroves, among many others.<sup>28</sup>

It is indisputable that NNSA's preferred alternatives will result in environmental impacts related to climate change. According to the Final SPEIS, “[t]he irretrievable commitment of resources during construction and operation of the facilities would include the consumption of fossil fuels used to generate heat and electricity for the sites. Energy would also be expended in the form of diesel fuel, gasoline, and oil for construction equipment and transportation vehicles.”<sup>29</sup> Despite

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<sup>24</sup> *Id.*

<sup>25</sup> 40 C.F.R. § 1508.7 (1978).

<sup>26</sup> *Id.* at § 1508.8(b) (1978) (emphasis added).

<sup>27</sup> IPCC, 2007: Summary for Policymakers. In: *Climate Change 2007: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*, M.L. Parry, O.F. Canziani, J.P. Palutikof, P.J. van der Linden and C.E. Hanson, Eds., Cambridge University Press, Cambridge, UK, 7-22, at 8.

<sup>28</sup> *See id.* at 8-9.

<sup>29</sup> Final SPEIS at 9-1.

the clear linkage between the consumption of fossil fuels and impacts to the climate, the Final SPEIS fails to analyze either the cumulative impact or indirect effect of NNSA's preferred alternatives with regard to climate change. This deficiency must be corrected.

### **Relationship Between Short-Term and Long-Term Uses**

Historical activities at sites in the nuclear weapons complex have left a legacy of pollution that may never be remedied. According to a DOE-commissioned study, “[l]ong-term stewardship’ (activities to protect human health and the environment from hazards that may remain at [DOE’s] sites after cessation of remediation) will be required for over 100 of the 144 waste sites under DOE control.”<sup>30</sup> As a result, “[p]hysical containment barriers, the management systems upon which their long-term reliability depends, and institutional controls intended to prevent exposure of people and the environment to the remaining site hazards, will have to be maintained at some DOE sites for an indefinite period of time.”<sup>31</sup> Yet, according to NNSA, “[t]he use of land on any of the candidate sites for new programmatic-decision facilities would not affect the long-term productivity adversely since these facilities would all be constructed on disturbed land.”<sup>32</sup> Here, NNSA has clearly ignored the fact that its short-term uses of the environment—which generally result in the sort of contamination that forecloses long-term uses—will significantly degrade the long-term productivity of the environment. Moreover, the Kansas City Plant, which was illegally segmented from the Final SPEIS, as outlined above, is proposed to be located on a site currently zoned for agriculture.<sup>33</sup>

### **Irreversible and Irretrievable Resource Commitments**

In the Final SPEIS, NNSA overlooks irreversible and irretrievable resource commitments that will be required under its preferred alternatives. According to NNSA, after the facilities proposed to be constructed as part of Complex Transformation “end their useful life, they could be returned to open uses if the building, roads, and other structures were removed, areas cleaned up, and the land revegetated.”<sup>34</sup> As outlined above, this assertion is not supported by the historical evidence. Although NNSA acknowledges that some land may be rendered permanently unusable, according to DOE’s own estimates, “109 of the 144 DOE waste sites, including its largest sites . . . are unlikely to become available for site-wide unrestricted use[.]”<sup>35</sup> NNSA’s proposed construction and operation of the Chemistry and Metallurgy Research Replacement-Nuclear Facility at Los Alamos National Laboratory and the Uranium Processing Facility at Y-12, for example, will very likely result in the irreversible and irretrievable

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<sup>30</sup> Committee on the Remediation of Buried and Tank Wastes, Board on Radioactive Waste Management, National Research Council, *Long-Term Institutional Management of U.S. Department of Energy Legacy Waste Sites*, at 3 (2000).

<sup>31</sup> *Id.*

<sup>32</sup> Final SPEIS at 8-1.

<sup>33</sup> General Services Administration, *Environmental Assessment for the Modernization of Facilities and Infrastructure for the Non-Nuclear Production Activities Conducted at the Kansas City Plant*, at 12 (2008).

<sup>34</sup> Final SPEIS at 9-1.

<sup>35</sup> Committee on the Remediation of Buried and Tank Wastes, Board on Radioactive Waste Management, National Research Council, *Long-Term Institutional Management of U.S. Department of Energy Legacy Waste Sites*, at 6 (2000).

commitment of resources at these sites. These commitments of resources, which are neither speculative nor unforeseeable, must be analyzed.

### **Environmental Impact Methodology**

NNSA should disclose the potential impacts of successfully executed credible terrorist attack scenarios at sites in the nuclear weapons complex affected by the Final SPEIS. According to NNSA, these impacts may “exceed those of bounding accidents” analyzed in the Final SPEIS.<sup>36</sup> Because this information has been withheld, public officials and citizens have been denied environmental information that must be provided before decisions are made and before actions are taken.<sup>37</sup> While it may be proper to withhold substantive details about credible attack scenarios because of legitimate terrorism-related concerns, the potential impacts of such attacks should be disclosed to the public. This information, which is directly relevant to the reasonably foreseeable impacts of NNSA’s preferred alternatives, is segregable and should not be withheld.

### **Accident Scenarios**

In the Final SPEIS, NNSA postulates a number of accident scenarios.<sup>38</sup> However, NNSA’s accident analyses overlook the potential environmental impacts to air, land, and water resulting from its postulated scenarios. For instance, an explosion in a feed casting furnace or an inadvertent criticality are likely to affect the environment in a significant manner, apart from any impacts to human health and safety. These impacts, which could include land contamination and pollution of ground and surface waters may persist in the environment for an extended period of time, resulting in extensive environmental degradation and attendant remediation activities.

### **Conclusion**

In light of the above, it is clear that the Final SPEIS is legally inadequate. In order to remedy these deficiencies, NNSA should revise the SPEIS before issuing any Records of Decision based upon it. The Revised Final SPEIS should then be recirculated for public review and comment.

Thank you for your consideration.

Sincerely,

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<sup>36</sup> Final SPEIS at B-18.

<sup>37</sup> 40 C.F.R. § 1500.1(b) (1978).

<sup>38</sup> See Final SPEIS at Appendix C.