



Oak Ridge Environmental Peace Alliance

nuclear watch  new mexico

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VIA EMAIL

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**Re: Comments on the April 2020 Draft Supplement Analysis For the Final Site-Wide Environmental Impact Statement For the Y-12 National Security Complex, Earthquake Accident Analysis, DOE/EIS-0387-SA-04**

On behalf of the Natural Resources Defense Council, Oak Ridge Environmental Peace Alliance (“OREPA”) and Nuclear Watch New Mexico, we are submitting these comments on the National Nuclear Security Administration’s (“NNSA”) April 2020 Supplement Analysis for the Site-Wide Environmental Impact Statement for the Y-12 National Security Complex (“2020 SA”).

Although we are taking this opportunity to comment on the 2020 SA, we must stress at the outset that the 2020 SA is not a lawful substitute for the new or supplemental Environmental Impact Statement (“EIS”) that is plainly required under these circumstances by the National Environmental Policy Act (“NEPA”). Our clients have called for a new or supplemental EIS for at least six years, but NNSA has done everything in its power to avoid preparing one. The 2020 SA—deficient as it is, as described below—again makes clear that a new or supplemental site-wide EIS is the only lawful and logical way for NNSA to proceed.<sup>1</sup>

The 2020 SA is NNSA’s reaction to a loss in federal court, but fails to correct the analytical deficiencies that the court identified. *See Oak Ridge Environmental Peace Alliance v. Perry* (“*OREPA v. Perry*”), 412 F. Supp. 3d 786 (E.D. Tenn. 2019). Instead, the 2020 SA is

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<sup>1</sup> As previously explained in comments on a previous, now-vacated 2018 SA, NNSA’s willingness to accept public comment on this draft SA is in no way a substitute for the far more meaningful public involvement that is required in the EIS process. For example, because the SA process does not include a consideration of alternatives, the public has no meaningful opportunity to propose or comment on reasonable alternatives. Nor can this limited comment period make up for the fact that NNSA has not meaningfully considered public input on its fundamental re-design of its Y-12 modernization activities for the last 9 years.



NNSA's attempt to provide a cursory and superficial glance at environmental issues where both NEPA and the Court's order require far more comprehensive analysis. Even more troubling, the agency has prepared this draft SA while continuing operations at Y-12 under a patently unlawful Amended Record of Decision ("2019 AROD") that the agency issued a mere three days after the Court ruled, unsupported even by the cursory analysis that the 2020 SA belatedly provides.

As discussed below, NNSA is presently in violation of NEPA, the APA, and the Court's Order in *OREPA v. Perry*, and the draft 2020 SA wholly fails to cure the agency's legal violations.

### **FACTUAL BACKGROUND**

The Court provided a thorough description of the Y-12 National Security Complex in *OREPA v. Perry*, 412 F. Supp. 3d at 815–29. For the sake of brevity, these comments incorporate the Court's ruling in full. Additionally, these comments include as an attachment and incorporate by reference Plaintiffs' briefing on the post-ruling Motion to Enforce that was filed in *OREPA v. Perry*, which explains NNSA's issuance of the 2019 AROD a mere three days after the court ruled and describe how that action was not lawful. Likewise, these comments include as an attachment and incorporate by reference comments previously filed on NNSA's now-vacated 2018 SA, which also provide an extensive discussion of the relevant factual background.

In response to the Court's order in *OREPA v. Perry*, NNSA issued its draft 2020 SA on April 9, 2020, and is currently accepting public comments.

### **LEGAL BACKGROUND**

NEPA is "our basic national charter for protection of the environment." *Southwest Williamson County Community Assn. v. Slater*, 243 F.3d 270, 274 n.3 (6th Cir. 2001). It "establishes 'action-forcing' procedures that require agencies to take a 'hard look' at [the] environmental consequences" of their actions. *Baltimore Gas & Elec. Co. v. Natural Res. Def. Council, Inc.*, 462 U.S. 87, 97 (1983). Implementing regulations from the Council on Environmental Quality ("CEQ") are "binding on all federal agencies," 40 C.F.R. § 1500.3.

Agencies must prepare an Environmental Impact Statement ("EIS") for any "major federal action significantly affecting the quality of the human environment." *Slater*, 243 F.3d at 274 n.3. (citing 42 U.S.C. § 4332(2)(C)). To determine whether impacts are significant, agencies must consider a project's "context," which considers "both short- and long-term effects," as well as the project's "intensity," which "refers to the severity of impact" and is evaluated according to ten significance factors. 40 C.F.R. § 1508.27. Any "one of these factors may be sufficient to require preparation of an EIS." *Ocean Advocates v. U.S. Army Corps of Eng'rs*, 402 F.3d 846, 865 (9th Cir. 2005).

One of the twin aims of NEPA is active public involvement and access to information." *Price Rd. Neighborhood Ass'n v. U.S. Dep't of Transp.*, 113 F.3d 1505, 1511 (9th Cir. 1997). Thus, NEPA "require[s] [agencies] to articulate, publicly and in detail, the reasons for and likely effects of [their] management decisions, and to allow public comment." *Kern*, 284 F.3d at 1073.

Similarly, because NEPA “reflects the paramount Congressional desire to internalize opposing viewpoints into the decision-making process,” *Cal. v. Block*, 690 F.2d 753, 771 (9th Cir 1982), agencies “shall discuss . . . any responsible opposing view . . . and shall indicate the agency’s response.” 40 C.F.R. § 1502.9(b). NEPA’s “hard look” standard similarly requires agencies to include “high quality information, including accurate scientific analysis. *CBD*, 349 F.3d at 1167.

The analysis of alternatives “is the heart” of the NEPA process. 40 C.F.R. § 1502.14. NEPA’s implementing regulations require that the decision-making agency “present the environmental impacts of the proposal and the alternatives in comparative form, thus sharply defining the issues and providing a clear basis for choice among options by the decision maker and the public.” *Id.* Importantly, the NEPA process “shall serve as the means of assessing the environmental impact of proposed agency actions, *rather than justifying decisions already made.*” 40 C.F.R. § 1502.2(g) (emphasis added); *see also id.* § 1502.5 (requiring that NEPA review “shall be prepared early enough *so that it can serve practically as an important contribution to the decision making process and will not be used to rationalize or justify decisions already made*”) (emphasis added).

NEPA requires agencies to prepare a supplemental EIS if “[t]here are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts.” 40 C.F.R. § 1502.9(c)(1)(ii); 10 C.F.R. § 1021.314(a). DOE’s regulations contemplate the use of an SA “[w]hen it is unclear whether or not an EIS supplement is required.” 10 C.F.R. §1021.314(c). An SA “shall discuss the circumstances that are pertinent to deciding whether to prepare” an SEIS and “shall contain sufficient information for DOE to determine whether . . . [a]n existing EIS should be supplemented; [a] new EIS should be prepared; or [n]o further NEPA documentation is required.” *Id.*

Whether new information is sufficiently significant to necessitate an SEIS “turns on the value of the new information to the still pending decisionmaking process.” *Marsh v. Or. Nat. Res. Council*, 490 U.S. 360, 374 (1989). Where “new information is sufficient to show that the remaining action will affect the quality of the human environment in a significant manner or to a significant extent not already considered, a supplemental EIS must be prepared.” *Id.* The term “significant” in the SEIS context is defined according to the CEQ’s regulations. *Id.* at 374 n.20 (quoting 40 C.F.R. § 1508.27).

“NEPA makes no distinction between initial actions and subsequent changes to initial actions, and the decision whether to prepare a supplemental EIS is similar to the decision whether to prepare an EIS in the first instance.” *United States v. City of Detroit*, 329 F.3d 515, 529 (6th Cir. 2003) (Moore, J., concurring). “That is, if the change itself constitutes a major federal action that will significantly affect the environment, the agency must prepare an SEIS.” *Id.* Similarly, because the decision whether to prepare an SEIS is similar to the decision to prepare an EIS in the first instance, new information that “raise[s] substantial questions regarding the project’s impacts [is] enough to require further analysis.” *Klamath Siskiyou Wildlands Ctr. v. Boody*, 468 F.3d 549, 561–62 (9th Cir. 2006).

Under NEPA, an agency “shall consider 3 types of actions,” including connected actions, cumulative actions, and similar actions. *Id.* § 1508.25. Connected actions are those that

“[a]utomatically trigger other actions which may require environmental impact statements . . . [,] cannot or will not proceed unless other actions are taken previously or simultaneously . . . [,] or are interdependent parts of a larger action and depend on the larger action for their justification.” *Id.* § 1508.25(a)(1). Cumulative actions are those that “with other proposed actions have cumulatively significant impacts.” *Id.* 1508.25(a)(2). And similar actions “when viewed with other reasonably foreseeable or proposed agency actions have similarities that provide a basis for evaluating their environmental consequences together.” *Id.* § 1508.25(a)(3). An agency should analyze similar actions together “when the best way to assess adequately the combined impacts of similar actions or reasonable alternatives to such actions is to treat them in a single impact statement.” *Id.*

Because NEPA requires agencies to consider connected actions, cumulative actions, and similar actions together in a single EIS, agencies may not segment an action to avoid application of the NEPA process. *See Tenn. Env’t Council v. Tenn. Valley Auth.*, 32 F. Supp. 3d 876, 890 (E.D. Tenn. 2014). “The hallmark of improper segmentation is the existence of two proposed actions where the proposed component action has little or no independent utility and its completion may force the larger or related project to go forward notwithstanding the environmental consequences.” *Hirt v. Richardson*, 127 F. Supp. 2d 833, 842 (W.D. Mich. 1999). Under this rule, “multiple stages of a development must be analyzed together when the dependency [between them] is such that it would be irrational, or at least unwise, to undertake the first phase if subsequent phases were not also undertaken.” *Id.* (citing *Thomas v. Peterson*, 753 F.2d 754, 759 (9th Cir. 1985)).

NEPA’s implementing regulations also specify an agency’s duties when it is making a decision on the basis of incomplete information. Where incomplete information is “relevant to reasonably foreseeable adverse impacts” and “essential to a reasoned choice among alternatives,” the agency “shall” gather that information and include it in its NEPA analysis. *Id.* § 1502.22(a). Although in limited circumstances an agency may conclude that obtaining missing information is exorbitantly costly, or that the means to obtain it are not known, an agency “shall always make clear that such information is lacking,” and in that event must consider all existing scientific evidence and analyze any “impacts which have catastrophic consequences, even if their probability of occurrence is low.” *Id.* § 1502.22(b). The failure to comply with this requirement necessarily means that the agency has “fail[ed] to consider an important aspect of the problem, resulting in an arbitrary and capricious decision.” *Northern Plains*, 688 F.3d at 1085.

“The very purpose of NEPA[] . . . is to obviate the need for speculation by insuring that available data [are] gathered and analyzed prior to the implementation of the proposed action” *LaFlamme v. F.E.R.C.*, 852 F.2d 389, 400 (9th Cir. 1988). Accordingly, NEPA requires an agency to gather the necessary information and to prepare an EIS *before* taking implementing actions. *National Parks & Conservation Ass’n v. Babbitt*, 241 F.3d 722, 732 (9th Cir. 2001) (abrogated on other grounds by *Monsanto Co. v. Geertson Seed Farms*, 561 U.S. 139 (2010)) (finding that an agency “has the process exactly backwards,” where it implements an action before completing its studies because under these circumstances, completion of ongoing studies is “required *before* a decision that may have a significant impact on the environment is made,” rather than “increas[ing] the risk of harm to the environment and then perform[ing] its studies”). “NEPA requires more” than an agency “ask[ing the public] to assume the adequacy and accuracy

of partial data without providing any basis for doing so.” *WildEarth Guardians, v. Montana Snowmobile Ass’n*, 790 F.3d 920, 927 (9th Cir. 2015). Through this approach, “NEPA emphasizes the importance of coherent and comprehensive up-front environmental analysis to ensure informed decisionmaking to the end that the agency will not act on incomplete information, only to regret its decision after it is too late to correct.” *Id.*

“It is DOE’s policy to follow the letter and spirit of NEPA; comply fully with the CEQ Regulations; and apply the NEPA review process early in the planning stages for DOE proposals.” 10 C.F.R. § 1021.101.<sup>2</sup>

## **DISCUSSION**

### **I. NNSA Is Currently Violating The Court’s Order in *OREPA v. Perry***

As explained in the still-pending Motion to Enforce the Court’s Judgment in *OREPA v. Perry*, the Court found that NNSA’s previous 2016 AROD, 2016 SA, and 2018 SA “are in violation of NEPA.” *OREPA v. Perry*, 412 F.3d at 859. As such, the Court vacated all three documents. *Id.* Further, the Court remanded this matter to NNSA with specific instructions that the agency “shall conduct further NEPA analysis—including at minimum, a supplement analysis—that includes an unbounded accident analysis of earthquake consequences at the Y-12 site, performed using updated seismic hazard analyses that incorporate the 2014 USGS seismic hazard map.” *Id.* By vacating NNSA’s 2016 AROD, 2016 SA, and 2018 SA and remanding the matter to the agency for further review consistent with NEPA and the Court’s ruling, the Court made clear that (1) the 2016 AROD provided no lawful authorization to continue implementing actions and (2) adequate NEPA review was necessary before the agency could undertake any such implementing actions.

NNSA has brazenly disregarded the Court’s ruling in a manner that is willful, egregious, and patently unlawful—indeed, in a manner that shows flagrant disregard for the Court and for the nation’s bedrock environmental laws. As explained in the still-pending Motion to Enforce, instead of providing the analysis the Court explained NEPA requires, NNSA responded to the Court’s ruling by issuing a new AROD *only three days later*, which failed to provide *any of the analysis* that the Court found necessary and ordered the agency to complete. Instead, the 2019 AROD continued the very same activities previously authorized under the 2016 AROD that the

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<sup>2</sup> DOE should be acutely aware of the value of fully complying with the NEPA process, since comments from Nuclear Watch submitted during the NEPA process for another project actually helped avert a catastrophe. In 1998, Nuclear Watch New Mexico submitted extensive comments on a draft Site-Wide Environmental Impact Statement for the Los Alamos National Laboratory (LANL), noting that it did not analyze the threat of wildfire. In response, the final 1999 LANL SWEIS postulated a fire that started in Bandelier National Monument and threatened the Lab. Following that, LANL instituted various fire mitigation measures, including cutting fire lanes around Area G, which stores above ground radioactive transuranic wastes. The all-too-real 2000 Cerro Grande Fire eerily matched the hypothetical LANL SWEIS fire, burning to within a half-mile of Area G. Thus, the NEPA process concretely helped prevent a true catastrophe.

Court vacated, and did so without furnishing any of the analysis the Court required. As such, the 2019 AROD constituted an obvious attempt to deliberately circumvent the Court's ruling by resuscitating the same activities once authorized under the now-vacated 2016 AROD without first satisfying the Court's holding that NNSA must complete a legally required NEPA analysis.

The 2019 AROD is profoundly inconsistent with the Court's reasoning and holding, as explained in the Motion to Enforce, and adopted a view of the Court's ruling that is self-serving, excessively narrow, and illogical. For all the reasons explained in the Motion to Enforce, and incorporated by reference here, NNSA is presently in violation of the Court's Order and in violation of NEPA.

NNSA's present and ongoing violation of the Court's judgment and of NEPA is especially flagrant when considered in light of the years-long history of repeated public requests for the agency to properly consider seismic hazards:

- In 2014, the Oak Ridge Environmental Peace Alliance petitioned NNSA to prepare a new or supplemental EIS for its redesign of its modernization plans for the Y-12 Complex, and specifically identified the 2014 USGS seismic hazard maps as new information that the agency was legally obligated to consider. NNSA did not analyze the 2014 USGS seismic hazard maps at that time.
- In 2017, my clients filed *OREPA v. Perry*, challenging the 2016 AROD and specifically alleging that NNSA violated NEPA by, among other things, failing to properly consider the 2014 USGS seismic hazard maps. In response, NNSA elected to prepare a new 2018 SA. The draft 2018 SA acknowledged that the agency does need to update its analysis to consider the 2014 USGS seismic hazard maps. However, the agency still provided no analysis of the 2014 USGS seismic hazard maps, instead merely stating that the agency intended to analyze those maps at some point in the future.
- In comments on the draft 2018 SA, Dr. David Jackson explained that NNSA's analysis of seismic risks was badly lacking and not a scientifically based review of seismic risks. Among the deficiencies Dr. Jackson identified was a simplistic treatment of USGS data, including the 2014 USGS seismic hazard maps. However, when it issued the final 2018 SA, NNSA failed to address any of the issues Dr. Jackson identified, failing to provide any scientifically defensible analysis of the 2014 seismic hazard maps and instead again merely stating that it would address these issues at some point in the future.
- In September 2019, the Court issued its ruling in *OREPA v. Perry*. The Court found that "NNSA did not really dispute most of Dr. Jackson's comments, but rather indicated that it was taking the more sophisticated data Dr. Jackson mentioned into account as part of the site-specific analysis it was preparing." 412 F. Supp. 3d at 829. The Court held that "new information revealed since the 2011 SWEIS requires further NEPA analysis," vacated NNSA's 2016 AROD, 2016 SA, and 2018 SA, and remanded the matter to NNSA with specific instructions

that the agency “shall conduct further NEPA analysis—including at minimum, a supplement analysis—that includes an unbounded accident analysis of earthquake consequences at the Y-12 site, performed using updated seismic hazard analyses that incorporate the 2014 USGS seismic hazard map.” *Id.* at 859.

- Instead of conducting the analysis the Court required, NNSA issued its 2019 AROD a mere three days after the Court ruled. The 2019 AROD did not include any of the analysis that the Court specifically ordered, but instead continued the very same activities that were previously authorized under the 2016 AROD that the Court vacated. In short, NNSA chose to disregard the Court’s ruling by continuing the activities that the Court found lacked a lawful analytical foundation under NEPA without providing any of the analysis the Court found was necessary. In particular, the 2019 AROD did not include any analysis of the 2014 USGS seismic hazard maps, but instead stated that “further NEPA documentation will be developed on an expedited basis . . . using updated seismic hazard analyses that incorporate the 2014 [USGS] maps.”
- Now, NNSA has issued its draft 2020 SA, which purports to be a response to the Court’s ruling in *OREPA v. Perry*. However, as discussed below, the draft 2020 SA fails to comply with the plain language of the Court’s remand. In particular, the draft 2020 SA does not include any adequate analysis of the 2014 USGS seismic hazard maps (much less any subsequent information from the USGS); instead, NNSA again merely states its intention to conduct that analysis in the future. Specifically, NNSA acknowledges that it must prepare updated “probabilistic seismic hazard analysis” that “*will incorporate* the 2014 USGS seismic hazard maps,” but states that this analysis will not be complete until at least the end of 2021.
- The draft 2020 SA provides no coherent time frame for completing the analysis the Court ordered. Although it suggests that an updated probabilistic seismic hazard analysis for ELP facilities may be complete by the end of 2021, the SA also states that new “safety basis documents,” which would actually describe whether or how the agency plans to upgrade buildings to address seismic hazards, would not be completed until 2025—*eleven years after the 2014 USGS maps were issued, eleven years after the agency decided to press these old buildings into ongoing service, and six years after the Court’s ruling*. As such, the public has no way to know when the agency may actually issue any analysis that explains what seismic hazards the agency faces in relation to its decision to continue to rely on aging, unsafe buildings or what, if anything, the agency can do to make these aging buildings more resilient. Moreover, the public has no assurance whatsoever that any such future analysis will be issued in any NEPA document, be available for public comment, or even be published at all.

As this history demonstrates, NNSA has faced repeated calls over the last six years to consider updated information about seismic hazards, including the 2014 USGS seismic hazard maps. These calls have come from the public, from an undisputed expert seismologist, and from

an order from a federal court. However, the agency has consistently failed to prepare any meaningful analysis of this information—despite having the information for over six years and having far more than sufficient time to do so. Instead, NNSA has made a series of decisions that are not grounded in adequate science and that have not taken the hard look at environmental impacts that NEPA requires, and that are thus unlawful. In light of this history, NNSA’s violations of NEPA—and of the Court’s order to comply with NEPA—are flagrant.

NNSA’s violations of the Court order and NEPA are only growing more egregious over time, as the agency continues to commit irretrievable resources to implement the same activities that were authorized under the now-vacated AROD without providing any of the analysis that the Court identified as necessary. Moreover, given the entirely interdependent nature of the enriched uranium facilities at Y-12, NNSA’s decision to continue construction of the UPF inevitably prejudices future NEPA outcomes.

## **II. The 2020 SA Fails to Satisfy the Court’s Order in *OREPA v. Perry***

In *OREPA v. Perry*, the Court found that NNSA’s 2016 SA, 2016 AROD, and 2018 SA “are in violation of NEPA,” vacated these documents as a result of that legal violation, and provided NNSA with specific instructions for how to correct the legal violation on remand. 412 F. Supp. 3d at 859. In particular, the Court ordered that NNSA “shall conduct further NEPA analysis—including at minimum, a supplement analysis—that includes an unbounded accident analysis of earthquake consequences at the Y-12 site, performed using updated seismic hazard analyses that incorporate the 2014 USGS seismic hazard map.” *Id.*

As discussed above, NNSA violated the plain import of the Court’s ruling by again authorizing the same activities that were previously authorized in the 2016 SA without first correcting the violations of law that the Court identified. That violation of the Court’s ruling was flagrantly unlawful, shows utter disregard for the Court’s ruling, and continues to this day.

Now, NNSA has issued a draft 2020 SA that purports to be a response to the Court’s ruling in *OREPA v. Perry*, but fails to comply with the letter or spirit of the ruling or the letter or spirit of NEPA. *But see* 10 C.F.R. § 1021.101 (DOE purporting to have a “policy to follow the letter and spirit of NEPA”).

### **A. The 2020 SA does not include the unbounded accident analysis that the Court ordered**

In *OREPA v. Perry*, the Court specifically ordered NNSA to prepare “an unbounded accident analysis of earthquake consequences.” 412 F. Supp. 3d at 859. The Court also explained the analytical deficiencies that accompanied NNSA’s bounding analysis, noting that “Defendants have blatantly disregarded DOE’s own guidance against using bounding analyses when a more detailed analysis would help to decide among alternatives or to address concerns the public has expressed.” *Id.* at 856. The Court identified significant problems with the use of a bounding analysis in these circumstances, noting that it “obscure[d] differences in impacts among alternatives.” *Id.* Thus, “by using the bounding analysis, DOE avoided *any* comparison of the relative differences in impacts that might result when choosing between the action alternatives,”

because the agency “simply said that for any of the ‘action’ alternatives . . . the impacts would be ‘no greater’ than the (bounded) impacts of the no action alternative.” *Id.* at 856–57.

Although the draft 2020 SA purports to comply with the Court’s order for an “unbounded accident analysis of earthquake consequences at the Y-12 site,” *id.*, by “compar[ing] facility-specific earthquake consequences between specific relevant facilities/alternatives,” Draft 2020 SA at 9, the draft SA fails to cure the logical defect that the Court identified.<sup>3</sup>

As the Court explained, “what matters is that NNSA adequately discloses the potential environmental impacts of any decision it makes, and that it does so in a timely fashion.” *OREPA v. Perry*, 412 F. Supp. 3d at 857. NNSA has not done this here, because it has not actually conducted any updated seismic hazard analysis that incorporates recent data, as discussed below. Instead, while simultaneously admitting that more recent seismic information, including the 2014 USGS seismic hazard maps, feature “differences” from the agency’s previous analysis that “merit more formal review, which is currently underway,” Draft 2020 SA, Appendix B at 14, the agency has not, in fact, taken this more recent seismic information into consideration in any rigorous or analytically defensible manner. As such, because NNSA itself has not completed the “more formal review” it concedes is necessary, the agency itself does not understand the potential environmental impacts of its decision and has not adequately disclosed those impacts to the public, as the Court explained is “what matters.”

Likewise, NNSA has acted in exactly the opposite of the “timely fashion” the Court stressed is critical to NEPA compliance. NEPA mandates that a hard look must be taken *before* an agency commits to a particular course of action; by continuing to implement *the same decision* it initially made in the 2016 AROD and resurrected in the unlawful 2019 AROD, NNSA is standing NEPA on its head.

Moreover, just as the agency’s previous, unlawful bounding analysis obscured differences among alternatives by simply stating that the impacts of various alternatives would be no greater than the no-action alternative, the agency concedes that, as to the aging facilities on which NNSA intends to continue to rely for decades, “the consequence comparison [in the draft 2020 SA] is essentially a comparison of the upgrade-in-place alternative with the no-action alternative.” Draft 2020 SA, Appendix B, at 14. As such, the agency has repeated the same logical flaw from its original unlawful bounding analysis.

Most conspicuously, the draft 2020 SA’s conclusion demonstrates that the agency has resurrected the same illogical and unlawful bounding approach that the Court invalidated. Thus, although the draft 2020 SA concedes that “[t]he consequences of the worst-case design-basis accidents for the [now chosen] Hybrid Alternative are approximately ten times larger than the consequences for the [previously chosen] Capability-sized UPF Alternative,” the SA relies on the assertion that these consequences are “significantly smaller than the worst-case design-basis

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<sup>3</sup> Again demonstrating extreme disregard for the Court’s authority, the draft 2020 SA characterizes the Court’s ruling as a “request.” Plainly, the ruling from a federal court is not a request. It is an order that the agency is legally obligated to follow. Moreover, it is an order the agency has not followed.

accidents for the No Action Alternative,” Draft SA at 31, to conclude that “the potential impacts associated with an earthquake accident at Y-12 would not be significantly different than impacts presented in the Y-12 SWEIS,” *id.* at 34. Thus, because the draft 2020 SA concludes that no further NEPA analysis is necessary because the consequences of its chosen—and partially implemented—course of action are “smaller than the . . . no action alternative” in the 2011 SWEIS, the agency has produced an analysis that fundamentally fails to correct the flaws that the Court identified in the agency’s original bounding analysis.

## **B. The 2020 SA does not consider the entire Y-12 site**

The Court in *OREPA v. Perry* ordered NNSA to analyze “earthquake consequences *at the Y-12 site.*” 412 F. Supp. 3d at 859 (emphasis added). Notably, the Court did not merely order the agency to focus on particular buildings or facilities; it ordered the agency to analyze “consequences at the Y-12 site.” The draft 2020 SA fails to do so. Indeed, the draft 2020 SA explicitly limits its analysis solely to how an earthquake would impact the new UPF facility and the two ELP facilities, the 9215 Complex and Building 9204-2E. This artificially narrow focus leads NNSA to ignore numerous environmental impacts that would result from an earthquake at Y-12. The draft SA thus fails to comport with the Court’s ruling, which clearly contemplated not a narrow SA solely focused on an accident analysis for a small set of buildings, but “at minimum” a full SA that addresses the entire Y-12 site and includes an updated analysis of earthquake consequences.

For example, although NNSA concedes that the incomplete UPF facility is a replacement for the concededly high-hazard Building 9212, notably absent from the draft 2020 SA is any discussion of how an earthquake that strikes before Building 9212 is decommissioned might impact that building, ongoing operations at Y-12, or the environment. This is an especially glaring omission given the fact that NNSA decided that it needed to build a UPF to replace Building 9212 due to the unsafe conditions in that building, which make it the highest-risk facility still in use at the Complex. This omission is also especially problematic given the fact that Building 9212 is literally conjoined to the 9215 Complex; thus, if an earthquake were to cause serious issues such as structural damage to Building 9212, that damage would be extremely likely to damage the 9215 Complex as well, with likely impacts on Y-12 operations, the safety of workers and the public, and the environment more broadly. This is precisely the type of “secondary effect” that Dr. Jackson previously explained that NNSA needs to consider in preparing any professionally adequate seismic analysis. And in light of Dr. Jackson’s previous identification of the need to consider this type of secondary effect, the lack of any such analysis is an extremely serious deficiency in the draft 2020 SA.

Likewise, numerous other environmental impacts at Y-12 could result from an earthquake, yet the draft 2020 SA is entirely silent as to these impacts. For example, the entire Y-12 site is badly contaminated and has been listed as a Superfund site since the 1980s, but has never actually been decontaminated. For example, over 2 million pounds of mercury have been spilled or lost at Y-12, and at least 800,000 pounds have been released into the local environment. As a result, soils at Y-12 are heavily contaminated with mercury. Likewise, soils are also contaminated with a witch’s brew of other hazardous wastes, including toxic and radiological materials. An earthquake could easily result in the mobilization of numerous

contaminants that are present at the Y-12 site and their uncontrolled release into neighboring waterways, including waterways where local residents recreate. This type of issue—the degree to which an earthquake could cause or exacerbate the release of environmental contaminants from the Y-12 site—must be analyzed as part of any meaningful evaluation of “earthquake consequences at the Y-12 site.” *OREPA v. Perry*, 412 F. Supp. 3d at 859 (emphasis added). However, the draft 2020 SA wrongly ignores these broader environmental issues, instead focusing only on the impacts to selected buildings.

Moreover, even with regard to the buildings on which NNSA narrowly focuses, the draft SA fails to consider the bevy of other hazardous materials that are also situated within these buildings. Instead, the draft SA solely focuses on the potential release of radiological contamination, wholly ignoring the fact that these buildings also house numerous other types of hazardous materials that could be released in an uncontrolled fashion as a result of an earthquake.

Moreover, the draft 2020 SA also ignores how an earthquake might cause significant impacts by impeding emergency access, by causing uncontrolled releases of contaminants from other facilities, by impairing or preventing the decommissioning or decontamination of high-risk excess facilities or similar cleanup efforts under the Comprehensive Environmental Response, Compensation, and Liability Act (“CERCLA”), or by impairing NNSA’s ability to conduct its mission at the Y-12 facility. NNSA has previously conceded that even the few facilities considered in the draft 2020 SA are critical to the agency’s overall mission, yet the draft 2020 SA fails entirely to consider how an earthquake might compromise that mission by rendering these facilities temporarily or permanently inoperable, or by forcing the agency to identify other facilities to which such operations may be relocated (if such other facilities even exist).

Because the draft 2020 SA myopically focuses only on a few select buildings, it falls far short of the analysis of “earthquake consequences at the Y-12 site” that the Court ordered the agency to consider. *OREPA v. Perry*, 412 F. Supp. 3d at 859 (emphasis added).

NNSA’s failure to conduct any analysis of the broader Y-12 site is also especially problematic because at this time NNSA has not conducted *any* site-wide analysis that comports with NEPA since 2011. Although the 2016 SA and 2018 SA purported to conduct some such site-wide analysis (which was itself deficient, as explained in comments on the 2018 SA), the Court in *OREPA v. Perry* found that those documents violate NEPA and vacated them. As such, they are without any force or legal effect. As a result, NNSA now has *no* analysis of how site-wide conditions have changed at Y-12 since 2011. Consequently, NNSA’s failure to consider any such site-wide issues in the present SA constitutes another failure to take a hard look at environmental issues, contrary to NEPA’s requirements.

Likewise, NNSA’s extremely cursory attention to cumulative impacts cannot pass logical or legal muster. A legitimate cumulative impacts analysis must take into consideration “past, present, and reasonably foreseeable future actions.” 40 C.F.R. § 1508.7. The entirety of the draft 2020 SA’s cursory treatment of cumulative impacts occurs in a mere two sentences, purporting to find that its (already inadequate) discussion of “site-wide accidents/simultaneous accidents in multiple facilities . . . provides cumulative impacts information regarding accidents.” Draft SA at

32–33. This extremely cursory glance at cumulative impacts is wholly inadequate, and is not even consistent with the agency’s previous discussion of this issue. For example, even the 2018 SA that the Court found violated NEPA contained a far more thorough (though still inadequate) consideration of cumulative impacts. Previous comments have described this issue and are incorporated by reference here. To comply with NEPA, NNSA must do far more to consider cumulative impacts.

**C. The 2020 SA fails to use updated seismic hazard analyses or incorporate the 2014 USGS seismic hazard map**

The Court in *OREPA v. Perry* also specifically ordered NNSA to conduct analysis of earthquake consequences “using updated seismic hazard analyses that incorporate the 2014 USGS seismic hazard map.” *Id.* The draft 2020 SA concededly falls short on this front as well.

With regard to the aging ELP facilities that NNSA is pressing into service for decades to come, the last time the agency prepared a “probabilistic seismic hazard analysis” was in 2003—*seventeen years ago*. Draft 2020 SA at 9. As explained in the attached comments from the undisputed expert seismologist Dr. David Jackson, that 2003 analysis “is relatively old now, and missing the kind of technical detail, resolution, and precision available now.” As such, Dr. Jackson’s professional opinion is that “NNSA has not provided any sufficient documentation of a professionally adequate, rigorous site-specific study for either the UPF of the existing buildings,” which is “an important deficiency because genuinely rigorous site-specific analysis can provide much greater information about the risks that facilities face and what measures may possibly be taken to reduce such risks.”

The draft 2020 SA concedes that although the ELP “includes a commitment to update the Y-12 site-specific [probabilistic seismic hazard analysis] and then perform new seismic facility evaluations for the ELP facilities,” this work has not in fact been completed. Instead, the draft SA merely states that this “work is underway, with the updated [probabilistic seismic hazard analysis] anticipated by the end of 2020 and the updated facility evaluations by the end of 2021.” Draft SA, Appendix B, at 13. More troublingly, the draft 2020 SA also indicates that the agency will not complete any evaluation of what steps, if any, it may be able to take to render these ELP facilities more resilient *until 2025*. *Id.* at 9 (“New safety basis documents are planned for these facilities in 2025.”).

NNSA concedes that the development of a seismic hazard analysis requires rigorous analysis of various technical considerations. As NNSA describes it, a “site-specific PSHA considers a range of regional and site-specific information”:

A full-scale PSHA also involves extensive field work including geologic mapping, fault excavation, geophysics, geologic age dating, evaluation of seismic (vibratory ground motion) wave propagation through rock and soil layers, expert elicitation/judgement, and peer reviews, which has been done at the Y-12 site. Many parameters for a specific site or facility location are evaluated, including PGA and ground velocity and displacement, to define the potential hazard. These

parameters and the models based on them are affected by local variables such as bedrock type, depth to bedrock, and local soil thickness and properties

Draft 2020 SA at 8. Additionally, NNSA stresses the importance of the updated analysis by stating that “[t]he new seismic facility evaluations”—which will be based on these updated analyses that will not be available until the end of 2021 at the earliest—“will provide an up-to-date evaluation of any remaining weaknesses and the potential for upgrades will be addressed,” while simultaneously conceding that upgrading ELP facilities “to fully meet modern seismic standards for new facilities may not be feasible or practical.” Draft 2020 SA, Appendix B, at 13.

Because NNSA concedes in the draft 2020 SA that it has not generated updated probabilistic seismic hazard analysis for ELP facilities, it has not complied with the Court’s order to prepare “updated seismic hazard analyses.” *OREPA v. Perry*, 412 F.3d at 859.

Likewise, the draft 2020 SA does not actually incorporate the 2014 USGS seismic hazard map, despite the Court’s order to do so. As described above, the last time NNSA created a seismic hazard analysis for ELP facilities was in 2003; the agency then reviewed these 2003 analyses against the 2008 USGS maps in 2012. Draft 2020 SA at 11. However, the agency concedes it has not actually engaged in any such comparison against the 2014 seismic hazard maps. Instead, the agency has said that it will conduct this analysis only by the end of 2021 at the earliest, stating that “[t]he updated [probabilistic seismic hazard analysis] will incorporate the 2014 USGS seismic hazard maps.” Again, the agency concedes that it has not met the plain requirements of the Court’s order to “incorporate the 2014 USGS seismic hazard map” into its analysis. *OREPA v. Perry*, 412 F.3d at 859.

As Dr. Jackson explains, the information provided in the draft 2020 SA simply does not constitute the “updated seismic hazard analyses” that the Court ordered NNSA to prepare. *OREPA v. Perry*, 412 F.3d at 859. As Dr. Jackson states, “the draft SA that NNSA has produced falls far short of the scientifically sound seismic analysis that is necessary under these circumstances.” Likewise, Dr. Jackson states that because “the agency clearly states that it has not generated updated probabilistic seismic hazard analysis for existing buildings that takes the 2014 USGS maps into consideration (much less the subsequent USGS evidence that shows an even greater level of seismic risk), in [Dr. Jackson’s] professional opinion, NNSA has not met the plain requirements of the court’s order and has failed to generate any analysis of seismic risks that comports with professional standards.”

NNSA’s failure to meet the plain terms of the Court’s order in *OREPA v. Perry* would constitute unlawful conduct under the best of circumstances, and in light of the history of NNSA’s years-long failure to meaningfully consider seismic hazards, this failure is extremely egregious. As Dr. Jackson explains, “it is clear that NNSA has had at least six years to prepare a rigorous assessment of the seismic risks associated with the ongoing use of aging buildings—which is more than enough time, in [his] professional opinion—yet has failed to do so.”

Moreover, the failure is especially egregious because Dr. Jackson specifically noted this issue, among others, in comments in 2018.

NNSA has never provided any logical or science-based justification for its failure to meaningfully consider seismic hazards before making the decision to continue to rely on aging facilities that do not meet modern seismic standards. In light of the fact that a federal court ordered the agency to do so nearly a year ago, this failure is indefensible. The public is left with the inescapable conclusion that NNSA is committed to operations in these facilities whether they are seismically qualified or not. By refusing to meet DOE's own safety standards for Category IV facilities, committing to continue enriched uranium operations in these facilities until 2050, and refusing to prepare an EIS or hold public hearings on this plan, NNSA has essentially declared its intent to continue to operate with impunity—regardless of the requirements of federal environmental law or the ruling of a federal court.

**D. The 2020 SA fails to address the issues that Dr. Jackson previously raised and that NNSA has never disputed must be addressed**

The Court in *OREPA v. Perry* noted that Dr. Jackson provided expert comments on a previous SA—the now-vacated 2018 SA—specifically identifying seismic issues that require more rigorous analysis. 412 F. Supp. 3d at 828–29. Moreover, the Court found it noteworthy that “NNSA did not really dispute most of Dr. Jackson’s comments, but rather indicated that it was taking the more sophisticated data Dr. Jackson mentioned into account as part of the site-specific analysis it was preparing.” *Id.* at 829. Specifically, the Court noted that Dr. Jackson had criticized the agency’s treatment of USGS data as simplistic, had criticized the agency’s focus on capable faults in light of recent science showing that large earthquakes can occur in the absence of a known capable fault, had stressed the importance of non-linear analysis, and had stressed the need to consider secondary hazards that an earthquake might cause. *Id.* In ruling in favor of the Plaintiffs in *OREPA v. Perry*, the Court ordered NNSA to conduct an “updated seismic hazard analysis.” *Id.* at 859. Plainly, the Court ordered the agency to correct the deficiencies that Dr. Jackson had identified and that the agency itself had conceded required further study.

The draft 2020 SA wholly fails to correct the issues that Dr. Jackson previously identified and thus fails to comply with the plain import of the Court’s order or NEPA’s requirement to take a “hard look” at environmental issues. First, NNSA continues to offer a discussion of USGS data that is, in Dr. Jackson’s description, “deficient.” For example, as was the case for the 2018 SA, Dr. Jackson again stresses that NNSA’s reliance on a measure of risk in terms of a “2 percent over 50 years” standard is inappropriate in light of the age of the buildings at Y-12 and the hazardous and important work done there. As such, NNSA’s failure to even consider another, more appropriate standard for evaluating risk—as Dr. Jackson previously suggested—forces Dr. Jackson to reiterate this concern: “the hazardous nature of the work done at Y-12, the importance of this work, and the vulnerability of the aging buildings warrant more careful analysis and consideration of less frequent but much larger shaking than that reported for 2% in 50 years.”

Likewise, the draft SA concedes that it has not utilized modern, non-linear modeling techniques and that “accounting for non-linear effects” is part of what “the planned updated studies are intended to answer in more detail.” Draft 2020 SA at 12. Dr. Jackson’s comments on

the 2020 SA again stress that NNSA’s failure to consider non-linear modeling “is another egregious defect in its consideration of seismic risks and a reason that the draft SA falls short of providing any meaningful reassurance of the safety of existing buildings.”

Similarly, as a result of its narrow focus solely on the UPF and ELP facilities, the draft SA wholly fails to consider secondary effects (for example, the degree to which an earthquake that causes Building 9212 to collapse may also cause damage to the 9215 Complex). Again, NNSA’s inadequate analysis forces Dr. Jackson to reiterate the importance of this analytical deficiency, stressing that in his “professional opinion, NNSA’s consideration of secondary effects from an earthquake is seriously inadequate.”

Moreover, with regard to capable faults as well, NNSA failed to address Dr. Jackson’s previous criticism. Dr. Jackson previously explained why a focus on capable faults is inappropriate in light of recent scientific evidence showing that powerful earthquakes can—and in fact do—occur in areas with no known capable faults. As Dr. Jackson again stresses “NNSA should give greater consideration to the possibility of a large earthquake in the vicinity of Y-12, because a focus on ‘capable faults’ is inappropriate in light of the new seismological information.” And as Dr. Jackson states, “[t]o ignore the empirical evidence in favor of an arbitrary definition and outdated observations is unjustifiable.”

As Dr. Jackson describes, NNSA’s “delay in producing any scientifically defensible analysis of seismic risks is also especially troubling” because Dr. Jackson specifically identified these issues in 2018. As Dr. Jackson states, “NNSA’s failure to consider these issues in any scientifically defensible way—despite having two years to do so since [he] raised them in detailed comments—is very troubling.”

**E. The SA does not comply with NEPA’s regulations on making decisions based on incomplete or unavailable information**

The Court in *OREPA v. Perry* ordered NNSA to “conduct further NEPA analysis,” 412 F. Supp. 3d at 859, which by any fair reading of the ruling requires NNSA to comply with NEPA’s plain terms and implementing regulations that are “binding on all federal agencies.” 40 C.F.R. § 1500.3. NEPA’s implementing regulations establish specific requirements for agencies that are making decisions based on “incomplete or unavailable information.” 40 C.F.R. § 1502.22. Because NNSA has conceded that it has not completed the necessary seismic hazard analyses, this regulation plainly applies. However, NNSA has blatantly failed to comply with this requirement.

To begin with, NNSA’s act-first, analyze-later approach to NEPA “has the process exactly backwards.” *Nat’l Parks Conservation Ass’n v. Babbitt*, 241 F.3d 722, 733 (9th Cir. 2001) (*abrogated on other grounds by Monsanto Co. v. Geertson Seed Farms*, 561 U.S. 139 (2010)). “[T]he ‘hard look’ must be taken before, not after, the environmentally-threatening actions are put into effect.” *Id.* Here, to take the hard look that NEPA requires, NNSA must *complete* its consideration of seismic risks and produce analysis that complies with NEPA *before* committing to a course of action. NNSA has flagrantly violated NEPA by committing to this course of action since 2014 without providing any hard look at its environmental impacts. This

violation has become only more apparent and more egregious as NNSA has *continued* to implement this same chosen course of action *even after a federal court found that the agency violated NEPA*.

Moreover, the draft 2020 SA still fails to comply with NEPA’s requirement that an agency making a decision based on incomplete or unavailable information must—even where the information “cannot be obtained”—consider “impacts which have catastrophic consequences, even if their probability of occurrence is low” 40 C.F.R. § 1502.22(b).

Here, the draft SA fails to candidly or accurately describe the “catastrophic consequences” that would result from a strong earthquake striking the Y-12 Complex. For example, the Defense Nuclear Facilities Safety Board (“DNFSB”) previously found that an earthquake striking Y-12 would likely cause the 9215 Complex to collapse, yet the draft 2020 SA neither acknowledges this likely consequence nor analyzes what consequences would unfold from such a structural collapse. Instead, the SA purports to analyze what would occur if an earthquake causes a criticality event in Building 9215, but claims that “the impacts of a nuclear criticality accident, if one occurred, would likely not extend beyond the building boundary,” ostensibly because of “[d]istance and shielding (e.g. containers, process equipment, and the walls of the facility).” Draft SA, Appendix B, at 15. This assumption is neither credible nor consistent with the evidence that the DNFSB provided. Instead, evidence before NNSA—including evidence from CNS, the same contractor that has now provided this ostensible analysis of criticality events—showed that in the event that an earthquake were to strike Y-12, Building 9215 could experience *both* a structural collapse *and* a nuclear criticality event. In that event, the collapsed walls of the structure could not contain any contamination.

NNSA must be more clear and candid about the catastrophic consequences that an earthquake would entail. As the Court stated, it is difficult to imagine “a more dramatic hypothetical than . . . what might occur if a major earthquake struck a nuclear weapons manufacturing facility located in a major population center.” *OREPA v. Perry*, 412 F. Supp. 3d at 855. The Court remanded this issue to NNSA precisely for the agency to provide a clear, comprehensive, and accurate assessment of such consequences. NNSA’s draft 2020 SA wholly fails to do so and thus violates both NEPA and the Court’s ruling.

#### **F. The Draft 2020 SA Does Not Comply with DOE’s Own Regulations**

The Department of Energy’s regulations implementing NEPA mandate that a Supplement Analysis must “contain sufficient information for DOE to determine whether (i) [a]n existing EIS should be supplemented; (ii) [a] new EIS should be prepared; or (iii) [n]o further NEPA documentation is required.” 10 C.F.R. § 1021.314(c)(2). However, the draft 2020 SA falls far short of this standard. To begin with, the draft 2020 SA is deficient for all the reasons described in these comments, including its failure to adequately consider new information that has become available since 2011 and its failure to conduct any evaluation of the entire Y-12 site. Additionally, the draft 2020 SA’s narrow focus on only a select few facilities, and a few select risks associated with those facilities, means that the draft SA does not contain sufficient information for NNSA to make any informed decision about whether to prepare a new or supplemental EIS. Indeed, NNSA itself has conceded that far more information is necessary in

any SA for the 2011 SWEIS; the agency's previous 2016 SA and 2018 SA were (although inadequate and in violation of NEPA, as the Court found in *OREPA v. Perry*) far broader in scope than the draft 2020 SA. Those previous documents were vacated by the Court precisely because they did not contain sufficient consideration of new information for NNSA to make any informed decision as to whether a new or supplemental EIS was necessary. Because they have been vacated, they lack any legal force or effect. Accordingly, to meet the standards in DOE's own regulations, as well as NEPA's requirement to take a hard look at environmental issues, any SA must, at a minimum, have a focus that is *broader* than the 2016 SA and 2018 SA. To rectify this situation, NNSA must prepare a draft SA that contains at least as much information as the 2016 SA and 2018 SA while also correcting the deficiencies the Court identified in those documents.

### **III. The 2020 SA Plainly Reveals That a New or Supplemental EIS is Needed**

The Court in *OREPA v. Perry* granted Plaintiffs' motion for summary judgment "with respect to the argument that new information revealed since the 2011 SWEIS requires further NEPA analysis." 412 F. Supp. 3d at 859. Consequently, the Court ordered NNSA to "conduct further NEPA analysis—including at minimum, a supplement analysis—that includes an unbounded accident analysis of earthquake consequences at the Y-12 site, performed using updated seismic hazard analyses that incorporate the 2014 USGS seismic hazard map." *Id.* As discussed above, NNSA has wholly failed to comply with the Court's ruling, and the draft 2020 SA fails to meet the plain language of the Court's requirement.

Additionally, the purpose of the Court's requirement that the agency "conduct further NEPA analysis—including at minimum, a supplement analysis"—is to force the agency to meaningfully consider whether new information revealed since 2011 warrants the preparation of a new or supplemental EIS. Under the circumstances present here, the answer is clearly that a new or supplemental EIS is required.

As an initial matter, the draft 2020 SA is a far cry from a hard look at new information that has come to light since 2011. For example, in *OREPA v. Perry*, Plaintiffs stressed that such new information includes reports from the Department of Energy's Inspector General and reports and weekly assessments from the DNFSB. The Court specifically referred to certain DNFSB findings in ruling that NNSA must consider whether new information requires the preparation of a new or supplemental SWEIS. *See* 412 F. Supp. 3d at 851. Yet the draft 2020 SA is completely silent as to these reports from agencies with indisputable expertise on relevant issues. Indeed, the draft 2020 SA does not include any citation to any report from the DNFSB or any direct discussion of the DNFSB's findings. To conduct a complete evaluation of new information, as contemplated by the Court's ruling, NNSA must directly consider *all* new information relevant to the agency's ongoing operations at Y-12 that has become available since 2011, including at a minimum all relevant reports or weekly updates from the DNFSB, any relevant findings from the Department of Energy's Inspector General, and all updated scientific information about seismic risks in eastern Tennessee.

As described above, whether new information is sufficiently significant to necessitate an SEIS "turns on the value of the new information to the still pending decisionmaking process."

*Marsh v. Or. Nat. Res. Council*, 490 U.S. 360, 374 (1989). Where “new information is sufficient to show that the remaining action will affect the quality of the human environment in a significant manner or to a significant extent not already considered, a supplemental EIS must be prepared.” *Id.*

The draft 2020 SA amply demonstrates that new information shows that NNSA’s chosen course of action “will affect the quality of the human environment in a significant manner or to a significant extent not already considered.” *Id.* For example, the draft SA flatly concedes that “earthquake accidents were not analyzed in detail in the 2011 SWEIS.” Draft 2020 SA at 26. For this reason alone, the new information about earthquake hazards reveals impacts that were “not already considered.” *Marsh*, 490 U.S. at 374.

Moreover, the draft 2020 SA concedes that the USGS’s 2014 seismic hazard data “represents an increase in predicted ground motion of approximately 56 percent.” Draft 2020 SA at 7. Although this calculation is based on an overly simplistic consideration of only a single measure of earthquake intensity—which Dr. Jackson has extensively criticized *twice*—it nonetheless reveals that information obtained since 2011 indicates that Y-12 may experience significantly stronger earthquakes than any that were considered in the 2011 SWEIS. This new information is significant by any definition of the term.

Likewise, the draft 2020 SA also discloses for the first time that an earthquake that would cause extremely serious consequences regarding Building 9204-2E or the 9215 Complex is more probable than purportedly comparable hazards considered in the 2011 SWEIS. For example, with regard to Building 9204-2E, the SA concedes that the probability of an earthquake that causes a criticality event in the 9204-2E facility is  $2 \times 10^{-3}$ , whereas the only point of comparison identified in the 2011 SWEIS had a probability of only  $1 \times 10^{-4}$ . Draft SA at 30. Accordingly, the new information reveals that an earthquake is *twenty times more probable* than the accidents previously considered in the 2011 SWEIS.

Moreover, the draft 2020 SA also concedes that NNSA’s chosen course of action—the so-called “Hybrid Alternative”—has consequences for “the worst-case design-basis accidents” that are “approximately *ten times larger* than the consequences for the Capability-sized UPF Alternative.” Draft SA at 31 (emphasis added).

As such, the draft SA concedes that new information shows that (a) an earthquake at Y-12 could be 56 percent stronger than previously estimated in 2011; (b) an earthquake is twenty times more probable than accidents previously considered in 2011; and (c) the consequences for NNSA’s chosen course of action could be ten times greater than the consequences of the action NNSA committed to in 2011 and has since abandoned.

These facts amply demonstrate that “new information is sufficient to show that the remaining action will affect the quality of the human environment in a significant manner or to a

significant extent not already considered,” and thus that “a supplemental EIS must be prepared.” *Marsh v. Or. Nat. Res. Council*, 490 U.S. 360, 374 (1989).<sup>4</sup>

### **CONCLUSION**

NNSA is in flagrant violation of NEPA and the ruling in *OREPA v. Perry*. The draft 2020 SA does not correct the deficiencies the Court identified, does not accurately or adequately consider the consequences of an earthquake striking the Y-12 Complex, and does not justify NNSA’s continued refusal to prepare a new or supplemental EIS. Under these circumstances, a new or supplemental EIS is plainly necessary.

To come into compliance with NEPA and the Court’s order in *OREPA v. Perry*, NNSA must immediately withdraw its unlawful 2019 AROD, must immediately cease implementing the activities for which it has failed to provide any lawful analysis under NEPA, and must complete a new or supplemental EIS before taking any further actions.

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<sup>4</sup> It is beyond dispute that the impacts from an earthquake at Y-12 would be “significant” within the meaning of NEPA. For example, an action is significant if it affects public health or safety. 40 C.F.R. § 1508.27(b)(2). The draft SA concedes that as many as 100 workers in each of the ELP facilities “would be at risk of injury or death” in the event a strong earthquake were to strike Y-12.