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Re: Notice of Intent to Sue for Violations of the Comprehensive Environmental Response, Compensation and Liability Act

Greetings:

This letter provides notice that Foundation for Global Sustainability, Oak Ridge Environmental Peace Alliance, Tennessee Citizens for Wilderness Planning, Tennessee Scenic Rivers Association, Nuclear Information and Resource Service, Community Defense of East Tennessee, Sowing Justice, and Sierra Club (Plaintiffs) intend to file suit against the U.S. Department of Energy (DOE) and the U.S. Environmental Protection Agency (EPA) for violations of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) associated with the cleanup of the Oak Ridge Reservation (ORR) in Tennessee. The actions taken by DOE and EPA violate federal law and harm our members who live

near, fish, paddle, and otherwise enjoy Bear Creek and other waters of the United States which have been designated for recreational use under the Clean Water Act.

Unless the violations described below are fully addressed immediately, therefore, Plaintiffs intend to file a lawsuit under CERCLA section 310(a), 42 U.S.C. § 9659(a) on behalf of themselves and their adversely affected members, in the U.S. District Court for the District of Columbia after the applicable notice period has expired. Plaintiffs will seek injunctive relief, fees and costs of litigation, and such other relief as the court deems appropriate to address the ongoing violations described below.

CERCLA § 310(a) provides for citizen suits against the United States when there is an alleged violation of "any standard, regulation, condition, requirement, or order which has become effective pursuant to this chapter (including any provision of an agreement under section 9620 of this title, relating to Federal facilities)," and/or "where there is alleged a failure of the President or of such other officer to perform any act or duty under this chapter, including an act or duty under section 9620 of this title (relating to Federal facilities), which is not discretionary with the President or such other officer." 42 U.S.C. § 9659(a). Consistent with 40 C.F.R. § 374, this letter serves as official notice of our intent to file suit against the EPA and the DOE for the alleged violations of standards, regulations, conditions, and requirements which have become effective pursuant to CERCLA, alleged violations of the ORR § 120 agreement, and for the failures of EPA and DOE to perform non-discretionary duties under CERCLA, as described below.

This notice of intent letter concerns the Record of Decision (ROD) issued pursuant to CERCLA for the Environmental Management Disposal Facility (EMDF) at DOE's Oak Ridge Reservation (ORR) in Tennessee. The EMDF ROD has been signed by officials from DOE, the Tennessee Department of Environmental Conservation (TDEC), and by the EPA Administrator. DOE, EPA and the state of Tennessee are parties to a longstanding interagency agreement entered into pursuant to CERCLA § 120 authority (hereinafter referred to as the Federal Facilities Agreement or FFA) in 1992; an FFA is required for federal facilities (like ORR) which have been placed on the CERCLA National Priorities List (NPL).

The EMDF ROD makes numerous references to the fact that it is based on and follows a decision letter signed by former EPA Administrator Andrew Wheeler ("the Wheeler decision"), dated December 30, 2020. The Wheeler decision was the culmination of a formal dispute resolution process initiated in 2016 pursuant to the FFA; it represents final agency action resolving a disagreement between the three signatories regarding remedy selection issues related to both the planned EMDF and the existing, currently operating Environmental Management Waste Management Facility (EMWMF). The ROD for the EMWMF was signed in 1999 and the disposal facility began receiving wastes in 2002; according to DOE, the last cell to be built at the EMWMF has already been constructed and is currently receiving cleanup-related wastes. Because both the Wheeler decision and the EMDF Focused Feasibility Study for Water Management (FFS) make it clear that effluent discharge limits are to be calculated the same way for both landfills, this notice of intent letter also concerns the Wheeler decision and the EMWMF ROD.

CERCLA § 310(a)(1) provides authority for a citizen suit "against any person (including the United States and any other governmental instrumentality or agency, to the extent permitted by the eleventh amendment to the Constitution) who is alleged to be in violation of any standard, regulation, condition, requirement, or order which has become effective pursuant to this chapter (including any provision of an agreement under section 9620 of this title, relating to Federal facilities)." The section 120 agreement for the Oak Ridge site signed in 1992 by EPA, DOE and the state of Tennessee contains provisions which require the cleanup to be carried out "in accordance with" CERCLA, the NCP and EPA guidance.

CERCLA § 310(a)(2) provides authority for a citizen suit against the United States "where there is alleged a failure of the President or of such other officer to perform any act or duty under this chapter, including an act or duty under section 9620 of this title (relating to Federal facilities), which is not discretionary with the President or such other officer."

CERCLA § 310(a)(1). DOE, EPA and the state of Tennessee are parties to a longstanding interagency agreement entered into pursuant to CERCLA § 120 authority (hereinafter referred to as the Federal Facilities Agreement or FFA) in 1992; an FFA is required for federal facilities (like ORR) which have been placed on the CERCLA National Priorities List (NPL). A stated purpose of the FFA is to "[e]stablish a procedural framework and schedule for developing, *implementing* and monitoring appropriate *response actions at the Site in accordance with CERCLA, the NCP, RCRA, NEPA, appropriate guidance and policy, and in accordance with Tennessee law*" (emphasis added).[1] The FFA further requires EPA and DOE to "meet the purposes set forth in Section III (Purposes of the Agreement)" when preparing remedy selection documents, including but not limited to remedial investigation and feasibility studies, proposed plans, and records of decision.[2] The enumerated purposes of the FFA also are to *"[i]mplement the selected operable unit(s) and final remedial action(s) in accordance with CERCLA*" (emphasis added).[3]

CERCLA contains a number of requirements that must be met when selecting and implementing remedial actions. These requirements include a variety of mandatory and non-discretionary duties. CERCLA §121, for example, contains several separate, independent requirements, such as attaining federal and more stringent state ARARs, ensuring protectiveness of human health and the environment, and using treatment to the maximum extent practicable. EPA has interpreted these statutory requirements in the 1990 preamble to the final NCP, which clarifies the mandatory nature of CERCLA §121's requirements.

As explained further below, many of the actions taken by EPA and DOE at ORR do not comply with CERCLA standards, regulations, conditions, and requirements, are nondiscretionary, are inconsistent with the National Contingency Plan (NCP), and deviate from numerous long-standing national EPA guidance documents without providing any reasoned explanations and scientifically credible supporting data for such deviations. By not acting "in accordance with" CERCLA, the NCP and EPA guidance, EPA and DOE have

1 DOE ET AL., FEDERAL FACILITY AGREEMENT FOR THE OAK RIDGE RESERVATION (1992), § III. https://www.energy.gov/sites/prod/files/em/2001_Agreements/ORR_FFA_1-1-92.pdf

2 *See id.* §§ XI, XII, XIV, XV, and XVI.

3 *See id.* § III.

violated these standards, regulations, conditions, and requirements and have violated provisions of the FFA for purposes of the citizen suit provision of CERCLA, § 310(a)(1).

"In accordance with CERCLA"

The phrase, "in accordance with CERCLA" encompasses §121(b), "General Rules" as follows:

> *The President shall conduct an assessment of* permanent solutions and alternative *treatment technologies* or resource recovery technologies that, in whole or in part, will result in a permanent and significant decrease in the toxicity, mobility, or volume of the hazardous substance, pollutant, or contaminant. *In making such assessment,* the President shall specifically address the long-term effectiveness of *various alternatives*
>
> *Remedial actions in which treatment which permanently and significantly reduces the volume, toxicity or mobility of the hazardous substances, pollutants, and contaminants is a principal element, are to be preferred over remedial actions not involving such treatment.*
>
> *The President shall select a remedial action that is protective of human health and the environment*, that is cost effective, *and that utilizes permanent solutions and alternative treatment technologies or resource recovery technologies to the maximum extent practicable.* If the President selects a remedial action not appropriate for a preference under this subsection, *the President shall publish an explanation as to why a remedial action involving such reductions was not selected.*

"In accordance with CERCLA" includes § 121(d)(1): "Remedial actions selected under this section or otherwise required or agreed to by the President under this chapter *shall attain* a degree of cleanup of hazardous substances, pollutants, and contaminants released into the environment and *of control of further release at a minimum which assures protection of human health and the environment.*"

"In accordance with CERCLA" relative to §121(d)(2) means:

> A) With respect to any hazardous substance, pollutant or contaminant that will remain onsite, if—
> (i) any standard, requirement, criteria, or limitation under any Federal environmental law, including, but not limited to … *the Clean Water Act* … or
> (ii) any promulgated standard, requirement, criteria, or limitation under a State environmental or facility siting law *that is more stringent* than any Federal standard, requirement, criteria, or limitation, including each such State standard, requirement, criteria, or limitation contained in a program approved, authorized or delegated by the Administrator under a statute cited in subparagraph (A), and that has been identified to the President by the State in a timely manner, s legally applicable to the hazardous substance or pollutant or contaminant concerned or is relevant and appropriate under the circumstances of the release or threatened release of such hazardous substance or

> pollutant or contaminant, the remedial action selected under section 9604 of this title or secured under section 9606 of this title shall require, at the completion of the remedial action, a level or standard of control for such hazardous substance or pollutant or contaminant *which at least attains such legally applicable or relevant and appropriate standard, requirement, criteria, or limitation.*

The EPA and DOE actions at ORR are not 'in accordance with CERCLA" because among other things, these obligations were not discharged:

(1) The cleanup does not use available treatment technology (as pointed out in written comments from the state to DOE to the effect that ion exchange resin technology is practicable and is already being used by DOE at ORR);
(2) The cleanup does not attain all available Clean Water Act (CWA) ARARs (including regulations for Technology Based Effluent Limitations (TBELs), anti-degradation, Water Quality Based Effluent Limitations (WQBELs), and protection of the designated recreational use for Bear Creek and its downstream waters), and results in a cleanup that does not ensure protection of human health and the environment (cumulative risk is outside the excess cancer risk range).
(3) EPA and DOE have not "published an explanation as to why" ion exchange resin treatment technology is not being adopted as part of the cleanup.

"In accordance with CERCLA" includes the following requirements in CERCLA §121(c):

> If the President selects a remedial action that results in any hazardous substances, pollutants, or contaminants remaining at the site, the President shall review such remedial action no less often than each 5 years after the initiation of such remedial action to assure that human health and the environment are being protected by the remedial action being implemented.

The 1999 ROD for the existing EMWMF landfill never had, and still does not have, any discharge limits for the effluent containing CERCLA hazardous substances going into Bear Creek and its downstream waters from the landfill. In addition, no CWA § 402 permit has been issued setting effluent discharge limits for the effluent from the landfill going into Bear Creek and its downstream waters. In 2016, the State posted "do not eat the fish" signs on Bear Creek, after determining that recreational fishing is not safe. There is no CERCLA §121(c) five-year review report for the 1999 EMWMF ROD which determines that the remedy selected in that ROD allowing discharges of effluent from the landfill into Bear Creek and its downstream waters without establishing any effluent discharge limits is ensuring protection of human health and the environment.

"In accordance with CERCLA" regarding §117 of the statute entails these obligations:

> a) Proposed plan
> Before adoption of any plan for remedial action to be undertaken by the President, by a State, or by any other person, under section 9604, 9606, 9620, or 9622 of this title, the President or State, as appropriate, *shall take both of the following actions*:

(1) *Publish a notice and brief analysis of the proposed plan and make such plan available to the public.*
(2) Provide a reasonable opportunity for submission of written and oral comments and an opportunity for a public meeting at or near the facility at issue regarding the proposed plan and regarding any proposed findings under section 9621(d)(4) of this title (relating to cleanup standards). The President or the State shall keep a transcript of the meeting and make such transcript available to the public.

The notice and analysis published under paragraph (1) shall include sufficient information as may be necessary to provide a reasonable explanation of the proposed plan and alternative proposals considered.

(b) Final plan
Notice of the final remedial action plan adopted shall be published and the plan shall be made available to the public before commencement of any remedial action. Such final plan shall be accompanied by a discussion of any significant changes (and the reasons for such changes) in the proposed plan and *a response to each of the significant comments, criticisms, and new data submitted in written or oral presentations under subsection (a) of this section.*

CERCLA §117 was violated by EPA and DOE. With regard to effluent discharge limits for discharges from the two ORR landfills into Bear Creek, EPA and DOE did not prepare and make available a proposed plan prior to issuing the EMDF ROD, nor did the agencies prepare and make available prior to such a proposed plan a finalized and approved Remedial Investigation/Feasibility Study or Focused Feasibility Study, or information or reasonable explanation of the proposed plan and alternative proposals considered, and did not provide meaningful responses to significant comments made by interested parties regarding the lack of such effluent discharge limits.

"In accordance with the NCP"

The National Contingency Plan is a regulation promulgated by EPA which establishes the federal "blueprint" for carrying out CERCLA cleanup actions.

In accordance with the NCP, 40 CFR § 300.400(g)(2) directs:

> In evaluating relevance and appropriateness [for purposes of the ARARs requirements in CERCLA § 121(d)(2)], the factors in paragraphs (g)(2)(i) through (viii) of this section *shall be examined*, where pertinent, *to determine whether a requirement* addresses problems or situations sufficiently similar to the circumstances of the release or remedial action contemplated, and whether the requirement is well-suited to the site, and therefore *is both relevant and appropriate*.

EPA and DOE either did not examine, or failed to properly examine, the italicized factors with regard to the CWA regulations for TBELs and the anti-degradation provision. For example, with regard to the first factor ((g)(2)(i): "The purpose of the requirement and the purpose of the CERCLA action"), EPA determined that CERCLA and the Clean Water Act

are not aligned even though the primary purpose of both of these major federal environmental laws is protection of human health and the environment, and both statutes adopt the use of treatment technology to accomplish their primary purpose. The administrative record contains no credible basis for finding that the CWA regulations on establishing TBELs and prohibiting antidegradation are not well-suited for the purposes of establishing PRGs and cleanup levels for the 20-odd radionuclides associated with landfill wastewater discharges from EMWMF and EMDF into Bear Creek.

In accordance with the NCP, 40 C.F.R. §300.430(a)(1)(i) sets the standard: "The national goal of the remedy selection process is to select remedies that are *protective of human health and the environment*, that maintain protection over time, and that *minimize untreated waste*."

In accordance with the NCP, 40 CFR § 300.430(a)(iii) requires:

> EPA generally *shall consider* the following expectations *in developing appropriate remedial alternatives:*
> (A) EPA expects to use *treatment* to address the principal threats posed by a site, *wherever practicable*. Principal threats for which treatment is most likely to be appropriate include liquids, areas contaminated with high concentrations of toxic compounds, and highly mobile materials…
> (C) EPA expects to use a combination of methods, as appropriate, to achieve protection of human health and the environment. In appropriate site situations, *treatment of the principal threats posed by a site, with priority placed on treating waste that is liquid, highly toxic or highly mobile,* will be combined with engineering controls (such as containment) and institutional controls, as appropriate, for treatment residuals and untreated waste…

EPA and DOE either did not consider or evaluate, or improperly considered or evaluated, ion exchange resin treatment technology in the RI/FS, the FFS or EMDF ROD (even though the state in written comments highlighted the use of that treatment technology elsewhere at ORR and encouraged its use for effluent discharges from the landfills).

In accordance with the NCP, 40 CFR § 300.430(e)(2) directs:

> *Alternatives shall be developed* that protect human health and the environment by recycling waste or by eliminating, reducing, and/or controlling risks posed through each pathway by a site. The number and type of alternatives to be analyzed shall be determined at each site, taking into account the scope, characteristics, and complexity of the site problem that is being addressed. *In developing and, as appropriate, screening the alternatives, the lead agency shall:*
> *(i) Establish remedial action objectives specifying contaminants and media of concern, potential exposure pathways, and remediation goals. Initially, preliminary remediation goals are developed based on readily available information, such as chemical-specific ARARs or other reliable information.* Preliminary remediation goals should be modified, as necessary, as more information becomes available during the RI/FS. *Final*

remediation goals will be determined when the remedy is selected. Remediation goals shall establish acceptable exposure levels that are protective of human health and the environment and shall be developed by considering the following:

(A) Applicable or relevant and appropriate requirements under federal environmental or state environmental or facility siting laws, if available, and the following factors:

(1) For systemic toxicants, acceptable exposure levels shall represent concentration levels to which the human population, including sensitive subgroups, may be exposed without adverse effect during a lifetime or part of a lifetime, incorporating an adequate margin of safety;

(2) For known or suspected carcinogens, acceptable exposure levels are generally concentration levels that represent an excess upper bound lifetime cancer risk to an individual of between 10^{-4} *and* 10^{-6} using information on the relationship between dose and response. The 10^{-6} *risk level shall be used as the point of departure for determining remediation goals for alternatives when ARARs are not available or are not sufficiently protective because of the presence of multiple contaminants at a site or multiple pathways of exposure;*

EPA and DOE did not develop alternatives in an RI/FS or FFS using ion exchange treatment technology, did not develop PRGs based on available ARARs (TBELs and anti-degradation CWA regulations were improperly excluded and WQBELs and use designation regulations were improperly developed ignoring extensive EPA guidance), and did not use 10-6 as a point of departure, selected concentration levels with cumulative risk of multiple contaminants outside the excess cancer risk range.

In accordance with the NCP, 40 CFR § 300.430(e)(9)(i) requires "Detailed analysis of alternatives":

(i) *A detailed analysis shall be conducted on the limited number of alternatives that represent viable approaches to remedial action after evaluation in the screening stage. The lead and support agencies must identify their ARARs related to specific actions in a timely manner and no later than the early stages of the comparative analysis.* The lead and support agencies may also, as appropriate, identify other pertinent advisories, criteria, or guidance in a timely manner.

EPA and DOE have not provided an alternatives analysis in a final approved RI/FS or FFS, proposed plan or any other CERCLA decision document which addresses the full range of available treatment options for effluent discharge limits for discharges from the landfills into Bear Creek – including but not limited to ion resin exchange currently used by DOE at ORR and at its other NPL sites.

In accordance with the NCP, 40 CFR 40 CFR § 300.430(e)(9)(iii)(A) mandates:

(A) Overall protection of human health and the environment. *Alternatives shall be assessed to determine whether they can adequately protect human health and the environment, in both the short- and long-term, from unacceptable risks posed by*

hazardous substances, pollutants, or contaminants present at the site by eliminating, reducing, or controlling exposures to levels established during development of remediation goals consistent with § 300.430(e)(2)(i). Overall protection of human health and the environment draws on the assessments of other evaluation criteria, especially long-term effectiveness and permanence, short-term effectiveness, and compliance with ARARs.

(B) Compliance with ARARs. *The alternatives shall be assessed* to determine whether they attain applicable or relevant and appropriate requirements under federal environmental laws and state environmental or facility siting laws or provide grounds for invoking one of the waivers under paragraph (f)(1)(ii)(C) of this section…

(D) Reduction of toxicity, mobility, or volume through treatment. The degree to which alternatives employ recycling or treatment that reduces toxicity, mobility, or volume *shall be assessed*, including how treatment is used to address the principal threats posed by the site. The RI/FS and EMDF ROD do not include evaluation of ion exchange resin treatment technology, even though DOE is using that technology elsewhere at ORR and at its other cleanup sites to reduce the toxicity, mobility or volume of radionuclides.

EPA and DOE did not develop alternatives as required and which met these criteria, and proceeded to issue the EMDF ROD which consequently does not meet these criteria.

In accordance with the NCP, 40 CFR § 300.430(f)(1):

(1) *Remedies selected shall* reflect the scope and purpose of the actions being undertaken and how the action relates to long-term, comprehensive response at the site. (i) The criteria noted in paragraph (e)(9)(iii) of this section *are used to select a remedy.* These criteria are categorized into three groups.

(A) Threshold criteria. Overall protection of human health and the environment and compliance with ARARs (unless a specific ARAR is waived) *are threshold requirements that each alternative must meet in order to be eligible for selection.*

The remedy selected by EPA and DOE in the EMDF ROD does not meet the threshold criteria of ensuring protectiveness of human health and the environment and attaining ARARs.

In accordance with the NCP, 40 CFR § 300.430(f)(1):

(ii) The selection of a remedial action is a two-step process and shall proceed in accordance with § 300.515(e). *First, the lead agency, in conjunction with the support agency, identifies a preferred alternative and presents it to the public in a proposed plan, for review and comment.* Second, the lead agency shall review the public comments and consult with the state (or support agency) in order to determine if the alternative remains the most appropriate remedial action for the site or site problem. The lead agency, as specified in § 300.515(e), *makes the final remedy selection decision, which shall be documented in the ROD.* Each remedial alternative selected

as a Superfund remedy will employ the criteria as indicated in paragraph (f)(1)(i) of this section to make the following determination:
(A) Each remedial action selected shall be protective of human health and the environment.
(B) On-site remedial actions selected in a ROD must attain those ARARs that are identified at the time of ROD signature or provide grounds for invoking a waiver under § 300.430(f)(1)(ii)(C).
***
(E) *Each remedial action shall utilize permanent solutions and alternative treatment technologies or resource recovery technologies to the maximum extent practicable.*

EPA and DOE violated the requirement to prepare a proposed plan with a preferred alternative which is protective of human health and the environment, attains all available ARARs, and uses treatment to the maximum extent practicable, and which addresses the effluent discharges from the proposed EMDF landfill, or from the existing EMWMF landfill. This has allowed continuation of the EMWMF's twenty-plus year history of discharging mercury, PCBs, uranium and approximately twenty radionuclides into Bear Creek, a recreational use stream, without a CWA permit and without satisfying CERCLA § 121(e)(1).

EPA and DOE selected a remedial action that does not ensure protectiveness of human health and the environment and does not attain ARARs. The EMDF ROD does not invoke a waiver for the four CWA ARARs that were improperly excluded or incorrectly applied.

The remedial action selected in the EMDF ROD does not utilize ion exchange resin treatment technology, which is available, being used by DOE at ORR and at its other facilities, and is practicable "to the maximum extent."

In addition, with regard to ARAR waivers, EPA and DOE have not invoked an ARAR waiver for 40 CFR § 761.75 (requiring a 50-foot buffer between the bottom of a landfill accepting PCB waste and the ground water beneath the unit) pursuant to CERCLA § 121(d)(4) and have not provided data, information or analysis in the administrative record, RI/FS, proposed plan or EMDF ROD to justify a statutory waiver. In addition, EPA and DOE have not provided sufficient actual data and information (*e.g.*, documentation showing actual knowledge of and approval of the "no unreasonable risk" determination by the EPA Administrator or Regional Administrator) demonstrating how siting the new landfill without a 50-foot buffer meets all of the requirements in that regulation, 40 CFR § 761.75. And, even if all the requirements were to be met, given the weaker "no unreasonable risk" standard in TSCA, EPA and DOE have not shown how siting the new landfill without a 50-foot buffer would ensure protectiveness of human health and the environment in accordance with CERCLA, the NCP and existing EPA guidance (*e.g.*, not exceeding that cancer risk range/hazard index of 1; restoration of groundwater to its beneficial use; achieving MCLs throughout the plume, including the MCL for PCBs of .5 ppb), especially given the extensive existing ground water contamination caused by DOE's previous and ongoing actions at this portion of ORR.

Finally, with regard to making "the final remedy selection decision, which shall be documented in the ROD." EPA and DOE openly admit in the EMDF ROD itself that they have not collected critically important data and information needed to make a final remedy selection decision on essential components of the cleanup; as such, EPA and DOE are not ready to make a final remedy selection decision." The EMDF ROD indicates that additional work needs to be done to prepare Waste Acceptance Criteria (WAC) for what will be disposed of in the EMDF landfill, additional sampling is needed to fully characterize the ground water table underneath that landfill, and that effluent "discharge limits will be developed in the future, based on the remediation goals, when the specifics of the EMDF landfill wastewater treatment systems are known, including the discharge location," and that "[w]astewater discharge limits will be developed following completion of the engineering design, when additional information is available, and prior to operation of the facility." EPA and DOE clearly were not ready to make a final remedy selection decision in the EMDF ROD and cannot credibly determine whether they are actually ensuring protectiveness of human health and the environment by among other things, selecting a remedial action that will "fully protect" the designated use of Bear Creek and the recreational users of its waters, as required by CWA regulations published in 40 CFR § 122.44(d)(1)(vi)(A) and 40 CFR § 131.10 and § 131.11.

In accordance with the NCP, 40 CFR § 300.430(f)(2) instructs:

> (2) The proposed plan. *In the first step in the remedy selection process, the lead agency shall identify the alternative that best meets the requirements in § 300.430(f)(1), above, and shall present that alternative to the public in a proposed plan. The lead agency, in conjunction with the support agency and consistent with § 300.515(e), shall prepare a proposed plan that briefly describes the remedial alternatives analyzed by the lead agency, proposes a preferred remedial action alternative, and summarizes the information relied upon to select the preferred alternative.* The selection of remedy process for an operable unit may be initiated at any time during the remedial action process. *The purpose of the proposed plan is to supplement the RI/FS and provide the public with a reasonable opportunity to comment on the preferred alternative for remedial action,* as well as alternative plans under consideration, and to participate in the selection of remedial action at a site. *At a minimum, the proposed plan shall:*
>
> (i) *Provide a brief summary description of the remedial alternatives evaluated in the detailed analysis established under paragraph (e)(9) of this section;*
>
> *(ii) Identify and provide a discussion of the rationale that supports the preferred alternative;*
>
> (iii) Provide a summary of any formal comments received from the support agency;
>
> (iv) Provide a summary explanation of any proposed waiver identified under paragraph (f)(1)(ii)(C) of this section from an ARAR.

EPA and DOE have not prepared or published a proposed plan, detailed or otherwise, discussing the wastewater effluent discharge limits for the EMWMF or EMDF landfills in a manner that would allow for informed, meaningful public comment.

EPA and DOE did not make available a final RI/FS or FFS approved by EPA and TDEC to the public in a timely fashion before issuance of the EMDF ROD. In reality, the FFS was a

moving target with multiple, substantively different draft versions prepared after the Wheeler Decision was issued, before a final FFS addressing significant comments from EPA and TDEC was approved in September 2022, a few weeks before the EMDF ROD was signed.

In accordance with the NCP, 40 CFR § 300.430(f)(3) requires as follows:

> (3) Community relations to support the selection of remedy.
> (i) The lead agency, after preparation of the proposed plan and review by the support agency, *shall conduct the following activities:*
> (A) Publish a notice of availability and brief analysis of the proposed plan in a major local newspaper of general circulation;
> (B) Make the proposed plan and supporting analysis and information available in the administrative record *required* under subpart I of this part;
> (C) *Provide a reasonable opportunity*, not less than 30 calendar days, for submission of *written and oral comments on the proposed plan and the supporting analysis and information located in the information repository, including the RI/FS.* Upon timely request, the lead agency will extend the public comment period by a minimum of 30 additional days;
> (D) Provide the opportunity for a public meeting to be held during the public comment period at or near the site at issue regarding the proposed plan and the supporting analysis and information;
> (E) Keep a transcript of the public meeting held during the public comment period pursuant to CERCLA section 117(a) and make such transcript available to the public; and
> (F) Prepare a written summary of significant comments, criticisms, and new relevant information submitted during the public comment period and the lead agency response to each issue. This responsiveness summary shall be made available with the record of decision.

EPA and DOE did not carry out these procedural steps, as explained above in the immediately prior comments.

In accordance with the NCP, 40 CFR § 300.430(f)(5) mandates:

> (5) Documenting the decision.
> (ii) The *ROD shall describe* the following statutory requirements as they relate to the scope and objectives of the action:
> (A) *How the selected remedy is protective of human health and the environment, explaining how the remedy eliminates, reduces, or controls exposures to human and environmental receptors;*
> (B) *The federal and state requirements that are applicable or relevant and appropriate to the site that the remedy will attain;*
> (C) The applicable or relevant and appropriate requirements of other federal and state laws that the remedy will not meet, the waiver invoked, and the justification for invoking the waiver;

(D) How the remedy is cost-effective, i.e., explaining how the remedy provides overall effectiveness proportional to its costs;
(E) How the remedy utilizes permanent solutions and alternative treatment technologies or resource recovery technologies to the maximum extent practicable; and
(F) *Whether the preference for remedies employing treatment which permanently and significantly reduces the toxicity, mobility, or volume of the hazardous substances, pollutants, or contaminants as a principal element is or is not satisfied by the selected remedy. If this preference is not satisfied, the record of decision must explain why a remedial action involving such reductions in toxicity, mobility, or volume was not selected.*

EPA and DOE have not met these requirements, as explained in the comments above. The administrative record does not support the Declarations made in the EMDF ROD signed by the EPA Administrator and DOE.

"In accordance with guidance and policy"

To help administer the CERCLA cleanup program in a consistent and transparent manner in order to help provide a minimum floor of protection for all cleanups across the country, EPA has issued numerous policy statements and guidance documents, many of which address issues within the purview of EPA's technical expertise.

There are numerous EPA policy statements in the preamble to the final NCP interpreting CERCLA and the provisions in the final NCP, including the following policy statements.

In accordance with the preamble to the final NCP, 55 Fed. Reg. 8666, 8712 (Mar. 8, 1990), the CERCLA remedy selection process, including the development of preliminary remediation goals (PRGs), is designed "to ensure that remedies comply *with CERCLA's mandate to be protective of human health and the environment and comply with ARARs*."

In accordance with the preamble to the final NCP, 55 Fed. Reg. 8666, 8720: "The criterion [long-term effectiveness and permanence] is founded on *CERCLA's mandates to select remedies that are protective of human health and the environment and that utilize permanent solutions and alternative treatment technologies or resource recovery technologies to the maximum extent practicable* and that maintain protection over time."

In accordance with the preamble to the final NCP, 55 Fed. Reg. 8666, 8720: "*The overall assessment of protection draws on* the assessments conducted under other evaluation criteria, especially long-term effectiveness and permanence, short-term effectiveness, and *compliance with ARARs*."

In accordance with the preamble to the final NCP, 55 Fed. Reg. 8666, 8709:

Further, EPA notes that *CERCLA requires that all Superfund remedies be protective of human health and the environment* but provides no guidance on

how this determination is to be made other than to *require the use of ARARs as remediation goals where these ARARs are related to protectiveness.*

In accordance with the preamble to the final NCP, 55 Fed. Reg. 8666, 8741: "*CERCLA requires* that remedial actions comply with all requirements that are applicable or relevant and appropriate. *Therefore, a remedial action has to comply with the most stringent requirement that is ARAR to ensure that all ARARs are attained.*"

In accordance with the preamble to the final NCP, 55 Fed. Reg. 8666, 8703: "However, *consistent with CERCLA, treatment remains the preferred method of attaining protectiveness, wherever practicable.*"

EPA and DOE actions have not discharged their obligations in accordance with CERCLA because the most stringent available ARARs and ion exchange resin treatment technology were not used in selecting the remedial action in the EMDF ROD, resulting in a remedy which is not protective of human health and the environment.

In accordance with the preamble to the final NCP, 55 Fed. Reg. 8666, 8743: "Jurisdictional prerequisites, while key in the applicability determination, *are not the basis* for relevance and appropriateness. Rather, the evaluation focuses on the purpose of the requirement, the physical characteristics of the site and the waste, and other environmentally- or technically-related factors."

EPA and DOE have used jurisdictional prerequisites to improperly exclude the two most stringent CWA regulations from being ARARs, resulting in a remedy which is not protective of human health and the environment.

In accordance with the preamble to the final NCP, 55 Fed. Reg. 8666, 8744, EPA policy is clear that with regard to the eight factors for evaluating RARs in 40 CFR 300.400(g)(2), any potential exemptions are those related to "specific circumstances where compliance with a requirement may be inappropriate for technical reasons or unnecessary to protect human health and the environment."

Given the use of ion exchange resin treatment technology by DOE already at ORR and at other DOE NPL sites, there are no "technical reasons" for eliminating TBELs as RARs. Nor are there any reasons to make use of TBELs "unnecessary to protect human health and the environment"; to the contrary, the known, serious risks posed by radionuclides weigh heavily in favor of using the BAT to develop stringent TBELs in order to protect the public using Bear Creek and its downstream waters in and around ORR, which are designated by the state for "recreational use."

As a result, EPA and DOR have improperly applied the NCP's eight factors in 40 CFR § 300.400(g)(2) in order to exclude the CWA TBEL regulations from being used as RARs in the CERCLA remedy selection process, including the preparation of the FFS and the EMDF ROD, resulting in a remedy which is not protective of human health and the environment.

In accordance with the preamble to the final NCP, 55 Fed. Reg. 8666, 8746:

> EPA believes, however, that general goals, such as non-degradation laws, can be potential ARARs if they are promulgated, and therefore legally enforceable, and if they are directive in intent.
>
> ***
>
> For example, in the preamble to the proposed NCP, EPA cited the example of a state anti-degradation statute that prohibits the degradation of surface water below a level of quality necessary to protect certain uses of the water body (53 FR 51438). If promulgated, such a requirement is clearly directive in nature and intent. State regulations that designate uses of a given water body and state water quality standards that establish maximum in-stream concentrations to protect those uses define how the antidegradation law will be implemented are, if promulgated, also potential ARARs.

Contrary to long-standing EPA policy, EPA and DOE have improperly considered pre-existing degradation caused by the operation of the EMWMF landfill over the past twenty years to serve as a green light for continuing and additional degradation by CERCLA hazardous substances (e.g., radionuclides), pollutants, or contaminants in a manner which does not protect the designated recreational use of Bear Creek and its downstream waters.

In accordance with the preamble to the final NCP, 55 Fed. Reg. 8666, 8716: "EPA's preference, all things being equal, is to select remedies that are at the more protective end of the risk range. Therefore, when developing its preliminary remediation goals, *EPA uses 10-6* as a point of departure (see next preamble section on point of departure)."

In accordance with the preamble to the final NCP, 55 Fed. Reg. 8666, 8701 EPA further maintains:

> Additionally, it is now clear that ARARs do not by themselves necessarily define protectiveness. First, ARARs do not exist for every contaminant, location, or waste management activity that may be encountered or undertaken at a CERCLA site. Second, in those circumstances where multiple contaminants are present, the cumulative risks posed by the potential additivity of the constituents may require cleanup levels for individual contaminants to be more stringent than ARARs to ensure protection at the site. Finally, determining whether a remedy is protective of human health and the environment also requires consideration of the acceptability of any short-term or cross-media impacts that may be posed during implementation of a remedial action.

In accordance with the preamble to the final NCP, 55 Fed. Reg. 8666, 8713, the EPA says:

> Where ARARs do not exist or where the baseline risk assessment indicates that cumulative risks—due to additive or synergistic effects from multiple

> contaminants or multiple exposure pathways—make ARARs nonprotective, EPA will modify preliminary remediation goals, as appropriate, to be protective of human health and the environment."

In accordance with the preamble to the final NCP, 55 Fed. Reg. 8666, 8726, this means:

> In some situations, compliance with ARARs may not result in protective remedies because of exposure to multiple chemicals or through multiple exposure pathways that have additive or synergistic effects. In this case a remedy may need to achieve levels more stringent than the ARARs to ensure protection."

EPA and DOE have improperly excluded the two most stringent CWA ARARs (TBELs and the anti-degradation provision), which would result in a protective remedy. And to make matters worse, EPA and DOE have not used 10-6 as a point of departure in the risk assessment process – a process which is unnecessary and inappropriate because protective, more stringent TBELs are available -- and have not taken into account the additive/cumulative risks posed by over twenty radionuclides, resulting in a remedy which is not protective of human health and the environment.

In accordance with the preamble to the proposed NCP, 53 Fed. Reg. 51394, 51443 substantive requirements may be expressed other than in a permit:

> The purpose of this [CERCLA section 121(e)(1)] exemption is to allow CERCLA response actions to proceed expeditiously without the delays that could result while waiting for other offices or agencies to issue a permit. *The substantive requirements that would be imposed by a permit still must be stated in Superfund documents*, but the redundancy of stating such standards in a permit issued by another office or agency is avoided.

In accordance with the preamble to the final NCP, 55 Fed. Reg. 8666, 8756:

> These subsections reflect Congress' judgment that *CERCLA actions should not be delayed by* time-consuming and *duplicative* administrative requirements such as permitting, although the remedies should achieve the substantive standards of applicable or relevant and appropriate laws. Indeed, CERCLA has its own comparable procedures for remedy selection and state and community involvement. . . . Accordingly, it would be inappropriate to formally subject CERCLA response actions to the multitude of administrative requirements of other federal and state offices and agencies.

For the point source discharges from EMWMF and EMDF, the administrative records do not provide comparable data and information, and do not show how the discharges into Bear Creek fully attain the substantive requirements of the CWA and its regulations.

EPA also has published numerous long-standing, national CERCLA guidance documents, including the following.

In accordance with *Clarification of the Role of Applicable or Relevant and Appropriate Requirements in Establishing Preliminary Remediation Goals Under CERCLA*:

> These [other] federal environmental and public health laws were enacted with the goal of protecting public health and the environment. Regulations developed under these laws have imposed requirements that EPA and other Federal agencies deemed necessary to protect public health and the environment. Because protection of public health and the environment is also the goal of CERCLA's response actions, other Federal environmental and public health laws will normally provide a baseline or floor for CERCLA responses. National Oil and Hazardous Substances Pollution Contingency Plan, 50 Fed. Reg. 47912, 47917 (Nov. 20, 1985).

In accordance with the *Compliance with Other Laws Manual*, EPA guidance includes an entire chapter devoted to "Guidance for Compliance with Clean Water Act Requirements." The guidance (at p. 3-3) highlights the fact that the CWA's objective "is achieved through the control of discharges of pollutants to navigable waters." The guidance (at p. 3-4) states that the use of best available technology (BAT) "is the major national method of controlling the direct discharge of toxic and non-conventional pollutants to waters of the U.S."

In accordance with *CERCLA COMPLIANCE WITH THE CWA AND SDWA*, p. 2:

> Technology-Based Limitations • CWA section 301(b) requires that, at a minimum, all direct discharges meet technology-based limits. Technology-based requirements for conventional pollutant discharges include application of the best conventional pollutant control technology (BCT). For toxic and nonconventional pollutants, technology-based requirements include the best available technology economically achievable (BAT).

In accordance with the *NPDES PERMIT WRITERS' MANUAL*, p. 5-1:

> Technology-based effluent limitations (TBELs) aim to prevent pollution by requiring a minimum level of effluent quality that is attainable using demonstrated technologies for reducing discharges of pollutants or pollution into the waters of the United States. . . . The NPDES regulations at Title 40 of the Code of Federal Regulations (CFR) 125.3(a) require NPDES permit writers to develop technology-based treatment requirements, consistent with CWA section 301(b), that represent the minimum level of control that must be imposed in a permit. The regulation also indicates that permit writers must include in permits additional or more stringent effluent limitations and conditions, including those necessary to protect water quality.

In accordance with *NPDES PERMIT WRITERS' MANUAL*, at p. 6-1:

WQBELs are designed to protect water quality by ensuring that water quality standards are met in the receiving water. On the basis of the requirements of Title 40 of the Code of Federal Regulations (CFR) 125.3(a), additional or more stringent effluent limitations and conditions, such as WQBELs, are imposed when TBELs are not sufficient to protect water quality.

In accordance with *Permit Limits—TBELs and WQBELs*, "[i]f TBELs are not sufficient to meet the water quality standards in the receiving water, the CWA (§303(b)(1)(c)) and NPDES regulations (40 CFR 122.44(d)) require that the permit writer develop more stringent, water quality-based effluent limits (WQBELs)."

EPA and DOE have ignored extensive, long-standing, national EPA guidance on the use of TBELs – which are sufficient to ensure the full protection of the designated recreational use of Bear Creek and its downstream waters -- in the CERCLA remedy selection process by improperly excluding the CWA TBEL regulations from being ARARs. They do not have a basis to do so under the circumstances

In accordance with *Key Concepts Module 4: Antidegradation*: "Under the Clean Water Act (CWA), once the existing uses of a water body have been established—by evaluating the water's quality relative to uses already attained—a State/Tribe must maintain the level of water quality that has been identified as being necessary to support those existing uses;" and, "Before permitting degradation for point sources, the State/Tribe must ensure that the most stringent technology-based controls required by statute and regulation will be implemented."

In accordance with *COMPLIANCE WITH OTHER LAWS MANUAL* at p. 3-14. "The objectives of the antidegradation policy are to: Protect existing uses of waters."

EPA and DOE have ignored extensive, long-standing, national EPA guidance on preventing the degradation of existing designated uses in the CERCLA remedy selection process by improperly excluding the CWA anti-degradation regulation from being ARARs. Under the circumstances, this amounts to a violation of the FFA.

In accordance with *HUMAN HEALTH AMBIENT WATER QUALITY CRITERIA AND FISH CONSUMPTION RATES: FREQUENTLY ASKED QUESTIONS*: "It is also important to avoid any suppression effect that may occur when a fish consumption rate for a given subpopulation reflects an artificially diminished level of consumption for that subpopulation because of a perception that fish are contaminated with pollutants."

In accordance with *GUIDANCE FOR CONDUCTING FISH AND WILDLIFE CONSUMPTION SURVEYS*: "Environmental standards utilizing suppressed rates may contribute to a scenario in which future aquatic environments will support no better than suppressed rates."

EPA and DOE have ignored extensive, long-standing, national EPA guidance by improperly excluding the CWA TBEL and anti-degradation regulations in the CERCLA remedy selection process. In addition, EPA and DOE actions allow DOE to be rewarded for the suppression effects of its prior and continuing polluting activities.

In accordance with *GUIDANCE FOR CONDUCTING REMEDIAL INVESTIGATIONS AND FEASIBILITY STUDIES UNDER CERCLA RI/FS*, at p. 6-8: "This evaluation criterion addresses the statutory preference for selecting remedial actions that employ treatment technologies that permanently and significantly reduce toxicity, mobility, or volume of the hazardous substances as their principal element."

EPA and DOE have not prepared a final, approved RI/FS or FFS which develops an alternative using the best available treatment technology (i.e., ion exchange resin treatment).

In accordance with *Establishment of Cleanup Levels for CERCLA Sites with Radioactive Contamination*:

> "Since all radionuclides are carcinogens, this guidance addresses carcinogenic risk;"
>
> "This guidance clarifies that cleanups of radionuclides are governed by the risk range for all carcinogens established in the NCP when ARARs are not available or are not sufficiently protective;"
>
> "Cleanup levels for radioactive contamination at CERCLA sites should be established as they would for any chemical that poses an unacceptable risk and the risks should be characterized in standard Agency risk language consistent with CERCLA guidance."

In accordance with *Preliminary Remediation Goals for Radionuclides*, EPA policy is that the risks to human health and the environment from radionuclides are comparable to the risks to human health and the environment from other hazardous substances (e.g., chemicals, metals, etc.), and should be addressed in a consistent manner (e.g., use of NCP's risk range for carcinogens).

EPA and DOE have in effect given radionuclides the status of "preferred pollutants" by not subjecting them to the same CERCLA procedural and substantive cleanup approach, and in fact have allowed (EMWMF landfill) and will allow (the EMDF landfill) the cleanup at ORR to pose risks to human health and the environment orders of magnitude greater than for other hazardous substances (e.g., mercury, PCBs).

In accordance with *A GUIDE TO PREPARING SUPERFUND PROPOSED PLANS, RECORDS OF DECISION, AND OTHER REMEDY SELECTION DECISION DOCUMENTS*, p. 1-5: "The Proposed Plan, as well as the RI/FS and the other information that forms the basis for the lead agency's response selection, is made available for public comment in the Administrative Record file," and at 3-4, [a proposed plan] "should clearly describe why the lead agency is recommending the Preferred Alternative."

In accordance with *Guidance for Conducting RI/FS*, at p.1-5:

> Section 117 of CERCLA (Public Participation) emphasizes the importance of early, constant, and responsive relations with communities affected by Superfund sites and codifies, with some modifications, current community relations activities applied at NPL sites. Specifically, *the law requires* publication of a notice of any proposed remedial action (proposed plan) in a local newspaper of general circulation and *a "reasonable opportunity" for the public to comment on the proposed plan and other contents of the administrative record, particularly the RI and the FS. I*n addition, the public is to be afforded an opportunity for a public meeting. The proposed plan should include a brief explanation of the alternatives considered, which will usually be in the form of a summary of the FS.

In accordance with *Guidance for Conducting RI/FS*, at 6-14: "Following completion of the RI/FS, the results of the detailed analyses, when combined with the risk management judgments made by the decisionmaker, become the rationale for selecting a preferred alternative and preparing the proposed plan."

EPA and DOE did not prepare a final, approved RI/FS or FFS prior to the publication of a proposed plan which fully addressed the wastewater discharge issue (e.g., use of all available CWA ARARs, use of treatment to the maximum extent practicable) and did not make it available for the public until just before the EMDF ROD was issued, thereby precluding meaningful public participation in the CERCLA remedy selection process. The acts of preparing the final, approved document and making it publicly accessible according to a specific chronology are acts which EPA and DOE failed to perform pursuant to the FFA's requirements.

In accordance with *GUIDE TO PREPARING REMEDY SELECTION DECISION DOCUMENTS*, at p. 6-57:

"At the same time, the summary will be a critical document in the defense of the lead agency's actions. For this reason, the summary should fully and completely express the lead agency's policy, technical, and legal rationales."

Contrary to EPA's guidance, the Responsiveness Summary included in the EMDF ROD does not provide any substantive policy, technical or legal rationale for EPA and DOE's approach to, among other issues, not using treatment to the maximum extent practicable for the wastewater discharges at the EMWMF and EMDF landfills, and only sidesteps the substantive issues and concerns raised by stakeholders.

In accordance with *METHODOLOGY FOR DERIVING AMBIENT WATER QUALITY CRITERIA FOR THE PROTECTION OF HUMAN HEALTH*, at 1-10:

> AWQC [ambient water quality criteria] for the protection of human health are designed to minimize the risk of adverse effects occurring to humans from chronic (lifetime) exposure to substances through the ingestion of drinking water and consumption of fish obtained from surface waters. . . . Although the AWQC are based on chronic health effects data (both cancer and noncancer effects), the criteria are intended to also be protective

against adverse effects that may reasonably be expected to occur as a result of elevated acute or short-term exposures. That is, through the use of conservative assumptions with respect to both toxicity and exposure parameters, *the resulting AWQC should provide adequate protection not only for the general population over a lifetime of exposure*, but also for special subpopulations who, because of high water- or fish-intake rates, or because of biological sensitivities, have an increased risk of receiving a dose that would elicit adverse effects. The Agency recognizes that there may be some cases where the AWQC based on chronic toxicity may not provide adequate protection for a subpopulation at special risk from shorter-term exposures. The Agency encourages States, Tribes, and others employing the 2000 Human Health Methodology to give consideration to such circumstances in deriving criteria *to ensure that adequate protection is afforded to all identifiable subpopulations.*

In accordance with *HUMAN HEALTH AMBIENT WATER QUALITY CRITERIA AND FISH CONSUMPTION RATES*, the use of a 70-year lifetime exposure assumption is explained further:

> This approach is consistent with a principle that *every State does its share to protect people who consume fish and shellfish that originate from multiple jurisdictions*. In addition, the goal of water quality criteria for human health is to *protect people from exposure to pollutants through fish and water over a lifetime*, and the *goal of a State's designated use should be that the waters are safe to fish in the context of the total consumption pattern of its residents.* Likewise, because people are expected to continue consuming fish and shellfish *throughout their lifetime regardless of where they live,* and this consumption leads to similar exposure to pollutants, it is appropriate to derive protective human health criteria in State and Tribal water quality standards *assuming a lifetime of exposure*.

The purpose of using a lifetime exposure of 70 years is also explained in *GUIDANCE IN THE EXPOSURE FACTORS HANDBOOK*, ch. 18.

In accordance with the 2014 *ESTIMATED FISH CONSUMPTION RATES FOR THE U.S. POPULATION AND SELECTED SUBPOPULATIONS*, EPA updated its national default fish consumption rate (FCR) guidance from 17.5 g/day to *22 g/day*. This FCR represents the 90th percentile consumption rate of fish and shellfish from inland and nearshore waters for the U.S. adult population 21 years of age and older, based on National Health and Nutrition Examination Survey data from 2003 to 2010. FINAL REPORT (2014) (EPA-820-R-14-002). In that same 2014 FCR guidance update, EPA set the inland south FCR—*which includes the state of Tennessee—at 22.8 g/day*. Finally, the current FCR default values in EPA's *PRG Calculator for Radionuclides* —the CERCLA guidance that the EMDF ROD says is being used as the basis for its calculations—are even higher.

To help states like Tennessee implement CWA statutory and regulatory requirements, EPA has published a number of national guidance documents. Tennessee's CWA regulations (i.e., TDEC Rule 0400-40-03-.02(10)) specifically require that "[i]nterpretation and application of narrative criteria *shall be based on* available scientific literature and *EPA*

guidance and regulations." The narrative criteria "for the use of Recreation" covered by this requirement appear subsequently in the same regulation. Nonetheless, EPA and DOE have ignored current EPA guidance.

EPA and DOE used the out-of-date FCR of 17.5 grams (g)/day and an exposure duration of 26 years in the EMDF ROD. EPA and DOE have not provided any scientific basis or reasoned explanation in the administrative record for why it is appropriate to use a 26 year exposure duration -- which is used for residential settings based on how long on average people live in one place, not on a lifetime of exposure based on recreational fishing patterns -- for radionuclides, or to explain why it is appropriate to use a 70-year lifetime exposure assumption to derive WQBELs for mercury and PCBs in Bear Creek, but only a 26-year exposure assumption to derive WQBELs for radionuclides, when all these pollutants are carcinogenic, toxic, and bioaccumulative and according to long-standing EPA CERCLA guidance (e.g., *Preliminary Remediation Goals for Radionuclides*), should be addressed in the same manner.

The use by EPA and DOE of a 26-year exposure duration and a 17.5 g/day fish consumption rate is not based on current, scientifically sound information, contradicts EPA guidance, undermines and effectively waives (without a basis in CERCLA section 121(d)(4)) the CWA WQBEL and use designation ARARs, and does not ensure protection of human health and the environment for the users of Bear Creek and other waters in and around ORR which have been designated by the state for recreational use.

CERCLA § 310(a)(2). In addition to the provisions in CERCLA §§ 117 and 121 discussed above, CERCLA § 121(a) states:

> The President *shall select appropriate remedial actions* determined to be necessary to be carried out under section 9604 of this title or secured under section 9606 of this title which are *in accordance with this section and, to the extent practicable, the national contingency plan,* and which provide for cost-effective response.

With regard to the EMWMF and EMDF landfills, EPA and DOE have not selected remedial actions which are in accordance with CERCLA § 121, the NCP, EPA policy and guidance, as discussed above. There is no basis for claiming, and there is nothing in the administrative record which suggests or supports a position, that acting in accordance with CERCLA § 121 or in accordance with the NCP is not "practicable." With regard to non-discretionary duties discussed above, EPA and DOE did not faithfully carry them out considering and following the procedures, standards, and benchmarks published in regulations (including the NCP) and existing national EPA guidance. We believe that the failure to follow so many of the NCP provisions and so many of the policy statements and guidance documents identified above has led the agencies to have conducted themselves in that fashion that ultimately leads to a failure to carry out statutory non-discretionary duties. As a result, based on the administrative record, the remedy selected in the EMDF ROD is arbitrary, capricious and not otherwise in accordance with law, as provided in CERCLA § 113(j) and (k).

According to the NCP and the EPA's interpretations of the statute and regulation found in the preamble to the final NCP and published national guidance, all four identified, available ARARs are to be used in developing PRGs and cleanup levels, including the regulations

governing TBELs and antidegradation, which are the most stringent ARARs. In addition to the most stringent ARARs, protection of human health and the environment is also based on use of treatment technology to the maximum extent practicable.

Actual numbers are accurate benchmarks for showing what happens when ARARs are not properly attained and treatment technology is not used. As just one example, for technetium – 99, one of the twenty or so radionuclides at issue here, following the NCP and EPA guidance (i.e., using the best available technology, ion exchange resin treatment technology, which DOE is using at ORR elsewhere and at its other facilities and which is "practicable") can meet a TBEL of approximately 3 pCi/L. A properly calculated WQBEL for Tc-99 following the NCP and EPA guidance and methodology is 22.2 pCi/L, ten times less stringent than the TBEL. The Tc-99 value in the EMDF ROD value is 1000 pCi/L, more than 300 times less stringent than the TBEL. By not following the NCP and extensive, long-standing EPA national guidance, EPA and DOE have failed to ensure protection of human health and the environment.

If these issues are not addressed, the relief we will seek includes an order compelling EPA and DOE to comply with the express terms of the FFA and carry out the cleanup in accordance with CERCLA, the NCP, EPA policy and guidance and Tennessee law, to obey the law and carry out their non-discretionary duties required by statute, and to withdraw and correct the arbitrary and capricious positions and interpretations they have taken in connection with this cleanup action.

Accordingly, we hereby notify you of our intent to file suit against EPA and DOE for violations of the FFA and for failing to perform the nondiscretionary duties described above. If these violations and failures remain unresolved at the end of the 60-day notice period, we intend to seek court orders (a) finding that EPA and DOE have violated the terms of the FFA; (b) finding that EPA and DOE have failed to perform the nondiscretionary duties described above; (c) ensuring future compliance with the terms of the FFA and with the non-discretionary duties; (d) providing for us to recover attorneys' fees and other costs of litigation; and (e) granting other appropriate relief to ensure that EPA and DOE comply with the laws they have been entrusted to carry out for the benefit and protection of the public.

Sincerely,

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