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VIA e-mail to

Roger Petrie
OREM Regulatory Affairs
DOE Oak Ridge Operations
P.O. Box 2001
Oak Ridge, TN 37831
OakRidgeEM@orem.doe.gov

RE: Comments on the Environmental Management Disposal Facility Fact sheets

Dear Mr. Petrie:

The Southern Environmental Law Center, on behalf of the Advocates for the Oak Ridge Reservation, Tennessee Chapter of the Sierra Club, and Tennessee Citizens for Wilderness Planning (Community Groups), submits these comments on the three fact sheets ("EMDF fact sheets" or "fact sheets") which the U.S. Department of Energy (DOE) has made available for public comment regarding the planned Environmental Management Disposal Facility (EMDF) which DOE has proposed as a remedial action pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). All comment letters by Community Groups that are included as attachments to this comment letter—including those sent to DOE as well as the U.S. Environmental Protection Agency (EPA)—are incorporated by reference into these comments.

Community Groups previously submitted comments on the EMDF fact sheets which alerted the Department to missing and incomplete information within the sheets themselves as well as the inadequacy of these documents to fulfill the public participation requirements of CERCLA.[1] Community Groups submit these additional comments to highlight the arbitrary and capricious process by which DOE has attempted to force its preferred remedial alternative—construction and operation of the EMDF—through the CERCLA selection process. This ham-handed and multi-year exercise has and continues to violate the statutory and regulatory requirements of CERCLA, including its public participation requirements, and has resulted in DOE's attempted selection of a final remedy that still lacks basic details including what types and amounts of waste will be disposed in the landfill and how wastewater will be treated when discharged into local recreational waterways.

DOE's recent actions with respect to the CERCLA remediation process have resulted in the Department publishing a Draft 1 (D1) Record of Decision (ROD) which is demonstrably not

[1] Att. 1, Letter from Amanda Garcia (SELC) et al. to Roger Petrie (DOE), Re: Request to Provide Completed Information for Public Discussion of the EMDF and an Additional Period of Public Comment as Required under CERCLA (May 10, 2022).

protective of human health and the environment. The three fact sheets recently issued by DOE neither adequately address missing and incomplete information in the D1 ROD nor provide the public with the opportunity to comprehensively evaluate and comment on DOE's preferred remedial alternative as required under CERCLA. Rather than attempt to issue a Draft 2 (D2) ROD, as DOE has indicated it intends to do later this summer, DOE must instead issue a revised proposed plan for public comment which contains all necessary, outstanding information regarding its proposed remedy.

As it currently stands, DOE is attempting to force the community of Oak Ridge to coexist alongside its hazardous and radioactive waste for perpetuity without allowing the public the opportunity to comprehensively evaluate and comment on its plans. Community Groups maintain that the Oak Ridge Reservation must and can be cleaned of its waste in a way that protects both the environment and surrounding communities while complying with the law. In accordance with federal law, DOE should reverse course, issue an updated and revised proposed plan, reopen a period of public comment, and demonstrate that it has adhered to CERCLA's requirements of selecting a remedial action that is protective of human health and the environment and complies with all identified and non-waived applicable or relevant and appropriate requirements (ARARs).

I. DOE Cannot Select a Final Remedy Under CERCLA Without Providing the Public with Basic, Essential Information About Its Preferred Alternative in a Revised Proposed Plan and Reopening a Period of Formal Public Comment

a. DOE has failed to follow the remedial selection process outlined in CERCLA for the proposed EMDF.

DOE has issued three "fact sheets" purportedly to provide the public with new information on its preferred remedial action at the Oak Ridge Reservation. However, and as discussed in detail below, these fact sheets lack necessary information and detail to allow the public to meaningfully evaluate DOE's proposed action as required by CERCLA. DOE has specified in each of the fact sheets that it is allowing the public to comment "on the EMDF fact sheets" through June 7, 2022.[2] DOE's explicit limitation of public review to only these fact sheets exemplifies the arbitrary and capricious manner in which DOE has conducted this entire remedial process.

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[2] *See* U.S. Dep't of Energy, *Environmental Management Disposal Facility Site Groundwater Characterization*, 4 (April 2022), http://ucor.com/wp-content/uploads/2022/05/EMDF-Site-Characterization-factsheet-r05-02-2022.pdf ("EMDF Groundwater fact sheet" or "Site Groundwater Characterization fact sheet"); U.S. Dep't of Energy, *Environmental Management Disposal Facility Water Quality Protection for Bear Creek*, 4 (April 2022), http://ucor.com/wp-content/uploads/2022/05/EMDF_Water_Quality_factsheet.pdf ("EMDF Bear Creek fact sheet" or "Water Quality Protection for Bear Creek fact sheet"); U.S. Dep't of Energy, *Environmental Management Disposal Facility Waste Acceptance Criteria*, 4 (April 2022), http://ucor.com/wp-content/uploads/2022/05/EMDF_WAC_factsheet.pdf ("EMDF WAC fact sheet" or "Waste Acceptance Criteria fact sheet").

CERCLA and its implementing regulations clearly lay out the sequence of steps an agency should undertake when developing and implementing a remedial action. The process should begin with a thorough assessment of the remedial action site and alternative remedial options. This is done through preparation of a remedial investigation and feasibility study (RI/FS) "to assess site conditions and evaluate alternatives."[3] The remedial investigation allows an agency to "collect data necessary to adequately characterize the site,"[4] including its physical characteristics such as the geology and hydrogeology of the location.[5] The agency should then compile a feasibility study "to ensure that appropriate remedial alternatives are developed and evaluated."[6]

Only after the RI/FS process has been completed should an agency begin the remedy selection process by issuing a proposed plan which "identif[ies] the alternative that best meets the requirements" for a protective remedy as detailed in CERCLA.[7] At this point in the process—after a proposed plan is issued based on a completed RI/FS—the public should be invited to provide formal comments. The sequencing of these events is meant to allow the public to have the benefit of viewing the agency's preferred remedial alternative against the backdrop of the information gathered and alternatives analyzed in the RI/FS process. As the CERCLA regulations note, "[t]he 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."[8]

CERCLA regulations also outline when additional public outreach and participation is required, and the mechanism for satisfying that requirement. Specifically, "[a]fter publication of the proposed plan and prior to adoption of the selected remedy in the record of decision, if new information is made available that significantly changes the basic features of the remedy with respect to scope, performance, or cost, such that the remedy significantly differs from the original proposal in the proposed plan and the supporting analysis and information, the lead agency *shall* . . . seek additional public comment *on a revised proposed plan*" when these changes could not have been "reasonably anticipated" by the public."[9] As Community Groups have previously noted, "[b]y requiring substantial new and unanticipated information to be compiled into a revised proposed plan and analyzed anew, CERCLA ensures that agencies substantively reevaluate selected remedies in response to new and significant information, and that both the information and analysis are presented in a consolidated way for the public to review."[10]

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[3] 40 C.F.R § 300.430(a)(2).
[4] *Id.* at § 300.430(d)(1).
[5] *Id.* at § 300.430(d)(2)(i).
[6] *Id.* at § 300.430(e)(1).
[7] *Id.* at § 300.430(f)(2).
[8] *Id.* (emphasis added).
[9] *Id.* at § 300.430(f)(3)(ii) (emphasis added).
[10] Att. 2, Letter from Amanda Garcia et al. (SELC) to Michael Regan (EPA), Re: Request for Update Regarding the U.S. Environmental Protection Agency's Review of the Radionuclide

DOE has flouted CERCLA's prescribed process with respect to the EMDF. To begin, DOE issued a D1 of its RI/FS on September 15, 2012. Nearly ten years later, that document has *still* not been finalized. Neither has the Focused Feasibility Study (FFS) for water management, which is properly considered an element of the RI/FS intended to establish preliminary remediation goals for the site. Instead, DOE issued a proposed plan for public comment in September of 2018 when, as DOE acknowledged, there were significant gaps in the information presented to the public, including but not limited to an unfinished characterization of the proposed landfill location and proposed waivers from ARARs under federal and state law.[11] Although some of that information has since been made publicly available, still other information remains missing, and even more information has come to light which calls into question the assertions and analyses DOE relied on in its Proposed Plan to select onsite disposal in the EMDF as its preferred remedy. Community Groups note that in the latest draft RI/FS, DOE performed analysis demonstrating that other viable and implementable remedial actions exist for this CERCLA action, including offsite disposal, which have not been revisited even as the challenges of constructing the EMDF have been made clear.[12]

DOE has continued to charge ahead with its attempts to finalize its remedy selection by issuing a D1 ROD and these EMDF fact sheets in anticipation of issuing a D2 ROD this summer. It bears repeating that the D1 ROD and the EMDF fact sheets have been issued before the RI/FS and FFS have been finalized. To make matters worse, these "fact sheets" make clear that crucial information related to site characterization, the waste acceptance criteria (WAC), and surface water releases will not be available until after the ROD is finalized.[13] In other words, DOE has again put the cart before the horse by trying to select a final remedy before it has even completed its analysis of the site and feasible alternatives or fully disclosed the contours of its proposed action, upending the entire CERCLA process along the way.

Pollution Decision and for a Revised Proposed Plan Regarding Environmental Management Disposal Facility at the Oak Ridge Reservation (Nov. 4, 2021).

[11] U.S. Dep't of Energy, DOE/OR/01-2695&D2/R1, *Proposed Plan for the Disposal of Oak Ridge Reservation Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA Waste)*, 6, 18, 21 (2018), https://doeic.science.energy.gov/uploads/A.0100.030.2596.pdf.

[12] *See* U.S. Dep't of Energy, DOE/OR/01-2535&D5, *Draft Remedial Investigation/Feasibility Study for Comprehensive Environmental Response Compensation, and Liability Act Oak Ridge Reservation Waste Disposal Oak Ridge, Tennessee*, 7-40–7-48 (2017) (hereinafter "D5 RI/FS"), https://doeic.science.energy.gov/uploads/F.0615.029.0055.pdf.

[13] *See e.g. EMDF Groundwater* fact sheet, *supra* note 2, at 3 (noting that a "field demonstration test" at the EMDF site analyzing the landfill's effect on local groundwater has yet to occur but could show that a new landfill design is needed); *EMDF WAC* fact sheet, *supra* note 2, at 1, 3 (acknowledging that "the final WAC have not been determined" and stating that supplemental modeling must be completed to develop the analytical WAC); *EMDF Bear Creek* fact sheet, *supra* note 2, at 4 (stating that a "comprehensive mercury strategy" will be developed to address mercury discharges into Bear Creek, a mercury-impaired waterway subject to Tennessee's Antidegradation Statement.).

It is also worth noting that, if DOE's proposed discharges from the EMDF were subject to the National Pollutant Discharge Elimination System (NPDES) permitting process under the Clean Water Act (CWA), the Department would need to provide the relevant permitting authority with basic information such as what it is planning to discharge prior to the opening of public comment period on the draft permit and issuance of a final permit.[14] No equivalent process is occurring under CERCLA here, as DOE is attempting to finalize a ROD without disclosing this information.

As discussed in further detail below, these actions by the Department have occurred despite repeated requests from the local community for an opportunity to comprehensively evaluate and comment on the changes that have been made to DOE's proposed remedy in the roughly four years since the Proposed Plan was issued. DOE's response is the publication of three fact sheets for public comment, which total twelve pages of generalized, high-level information, provide little of the necessary missing information, and do not place the information the context of a revised proposed plan.[15] DOE has not explained how this process fulfills CERCLA's public participation requirements, nor can it.

As Community Groups have previously noted:

> By issuing a Record of Decision now without reopening a public comment period, DOE is essentially trying to shift the cost of its decision to issue a premature Proposed Plan onto the public. DOE's strategy to forge ahead with issuing an incomplete Proposed Plan meant that new information would be generated after the public comment period closed, and much of that new information has significantly changed the basic features of the proposed remedy. Although TDEC and EPA agreed to allow DOE to issue the Proposed Plan prior to a finalized RI/FS, the public never agreed to forego their rights under CERCLA to provide public comment on new significant and unanticipated information that was revealed thereafter.[16]

Publication of EMDF fact sheets does not alter this reality. The fact sheets do not constitute a revised proposed plan; they do not consolidate, synthesize, and analyze all of the new information that has been made available on DOE's preferred alternative; and they still lack

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[14] *See* 40 C.F.R. § 122.21.

[15] The United Cleanup Oak Ridge LLC (UCOR) website containing DOE's published fact sheets contains certain "project framework documents" and "additional resources"; however, this information does not provide all necessary information, nor is it compiled in a revised proposed plan. *See EMDF Information*, United Cleanup Oak Ridge LLC, https://ucor.com/additional-emdf-information/ (last visited June 6, 2022).

[16] Att. 3, Letter from Amanda Garcia (SELC) et al. to Michael Regan (EPA), Re: Concerns Regarding the U.S. Department of Energy's Recent Actions During the U.S. Environmental Protection Agency's Review of the December 31, 2020 Radionuclide Pollution Decision for the Oak Ridge Reservation Facility in Oak Ridge, Tennessee (Aug. 2, 2021).

basic information which is essential to allow the public to participate in the remedial selection process in an informed manner. Instead, they represent an effort by DOE to arbitrarily silo the information that the public is allowed to comment on regarding the proposed EMDF and to present information in disjointed documents instead of in a CERCLA-prescribed revised proposed plan. This is contrary to the remedial process outlined in CERCLA and insufficient under federal law.

b. Community Groups have repeatedly requested that DOE provide the public with completed information as required under CERCLA so that the community can give informed comments on DOE's preferred remedial alternative.

Community Groups have repeatedly requested that DOE provide sufficient information on its proposed remedial action to fulfill CERCLA's public notice requirements and allow the community to provide informed comments on all relevant data, analyses, and proposals. These requests have been ignored. DOE has still not made all needed information available to the community, refused to reopen the public comment period on a revised proposed plan, and has acted arbitrarily and capriciously by issuing a D1 ROD based on incomplete information and insufficient review. Specifically,

- On December 10, 2018, Community Groups commented on DOE's Proposed Plan for the EMDF and noted that DOE "has not satisfied its obligation to provide for meaningful opportunity for public comment" due to the Department's failure to provide sufficient supporting analysis, data, and information regarding its preferred remedial alternative, including a completed characterization of the proposed landfill location and a finalized list of regulatory waivers.[17]

- On August 1, 2019, Community Groups wrote to DOE again requesting that a period of public comment be reopened on the Proposed Plan given that, in addition to the concerns outlined in their previous comments, the Proposed Plan did not include a finalized WAC, discuss the long-term effectiveness and permanence of the EMDF, disclose primary balancing criteria, account for the EMDF's long-term liability and costs, or include a completed site characterization and groundwater modeling.[18] Community Groups outlined seven categories of information that DOE should at a minimum provide prior to reopening a period of public comment, including: completed hydrological data, a finalized list of ARARs, the WAC, a completed composite analysis and comparative analysis of costs for onsite and offsite disposal alternatives, mercury remediation and disposal plans, landfill controls for

[17] Att. 4, Letter from Christina Reichert (SELC) et al. to John Japp (DOE), Re: Proposed Plan for the Disposal of Oak Ridge Reservation Comprehensive Environmental Response, Compensation, and Liability Act Waste (Dec. 10, 2018).
[18] Att. 5, Letter from Nate Watson (SELC) et al. to John Japp (DOE), Re: Continuing lack of meaningful public comment on Proposed Plan for the Disposal of Oak Ridge Reservation Comprehensive Environmental Response, Compensation, and Liability Act Waste (September 2018) (Aug. 1, 2019).

radionuclides, and information regarding the performance failures of DOE's Environmental Waste Management Facility (EMWMF) landfill.[19]

- On October 1, 2019, Community Groups wrote to DOE stating that the Department must reopen public comment on the Proposed Plan as a result of alarming new groundwater and geologic information recently made available in Technical Memorandum 2 that "fundamentally changes the suitability" of the proposed EMDF's site to safely store hazardous and radioactive waste.[20]

- On May 10, 2022, Community Groups wrote to DOE alerting the Department that its publication of three EMDF fact sheets and request for comments on the same was insufficient to fulfill its public comment obligations.[21] Community Groups further noted that a new public comment period on the entire proposed remedial action was necessary under CERCLA.[22]

c. *DOE must issue a revised Proposed Plan to allow the public to comment on new and still-outstanding information related to the proposed EMDF.*

DOE has not met the public participation requirements of CERCLA for its proposed remedial action, and the publication of and request for community feedback to three fact sheets does not change that reality. As Community Groups have previously noted, "these newly-published fact sheets and DOE's solicitation of comments on them neither fulfills nor negates the public comment requirements of CERCLA regarding the proposed EMDF."[23] Community Groups have explained:

> When an agency publishes a proposed remedial plan, CERCLA requires that the plan and its accompanying notice and analysis "shall include sufficient information" to provide the public with "a reasonable explanation" of the proposed remedy as well as the other alternatives which were considered. 42 U.S.C. § 9617(a). DOE's initial proposed remedial plan for the EMDF fell far short of this statutory mandate. As EPA notes in its comments on the draft ROD, when DOE issued its Proposed Plan for public comment in 2018, several portions of the administrative record were incomplete. EPA Comments, 7. At that time, DOE had yet to finalize a Remedial Investigation/Feasibility Study (RI/FS), wastewater focused feasibility study (FFS), waste acceptance criteria (WAC), list of complete ARARs, or to present the public with sufficient information regarding the geology and hydrology of the selected site. In sum, the 2018 Proposed Plan

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[19] *Id.* at 3–4.
[20] Att. 6, Letter from Christina Reichert (SELC) et al. to John Japp (DOE), Re: New information regarding the proposed landfill site for Oak Ridge Reservation Comprehensive Environmental Response, Compensation, and Liability Act Waste. (Oct. 1, 2019).
[21] Letter from Amanda Garcia, *supra* note 1, at 1–2.
[22] *Id.* at 3.
[23] *Id.* at 2.

> was not the culmination of an effective fact-gathering and evaluative process but rather set forth a pre-selected remedy accompanied by overtures that the agency would later fill in the necessary informational and analytic gaps. . . .
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> Given the extensive amount of information missing from the administrative record at the time the 2018 Proposed Plan was issued, CERCLA requires DOE to issue a revised proposed plan. As EPA correctly notes, "[u]nder the NCP, new information should be made available for public review and comment consistent with 40 CFR 300.430(f)(3)" before issuance of a final ROD. EPA Comments, 18. That regulation mandates that an agency "shall" issue "a revised proposed plan" when new, unanticipated information is made available to the public after a previous proposed plan is put forth but before a ROD is finalized. 40 CFR 300.430(f)(3). The revised proposed plan should include "appropriate supporting material that provides the necessary engineering, cost, and risk information" absent from the first proposed plan and its supporting analysis and should further discuss how the updated selected alternative "compares to the other alternatives with respect to the nine evaluation criteria [in 40 CFR 300.430(e)(9)]. U.S. Env't Prot. Agency, *A Guide to Preparing Superfund Proposed Plans, Records of Decision, and Other Remedy Decision Documents*, 4-4 (July 1999).[24]
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> By requiring substantial new and unanticipated information to be compiled into a revised proposed plan and analyzed anew, CERCLA ensures that agencies substantively reevaluate selected remedies in response to new and significant information, and that both the information and analysis are presented in a consolidated way for the public to review. Given the amount of new information that must be compiled, analyzed, and reviewed prior to finalizing a ROD in this case, DOE must issue a revised proposed plan.[25]

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[24] *Available at* https://www.epa.gov/sites/default/files/2015-02/documents/rod_guidance.pdf.
[25] Letter from Amanda Garcia, *supra* note 10.

As they did previously, Community Groups incorporate by reference the concerns outlined in a letter and accompanying attachment sent to EPA by several former Tennessee Department of Environment and Conservation (TDEC) employees. The letter and attachment provide context on the history and operation of the EMWMF and the proposed EMDF, highlight inconsistencies in the D1 ROD which must be addressed in a revised proposed plan, and shows how the current administrative record does not support a finding that the threshold criteria of protectiveness of public health and the environment and compliance with non-waived ARARs will be met. *See* Att. 7, Letter from Steve Goins et al. to Michael Regan (EPA), Re: Misinformation concerning the Department of Energy (DOE) Oak Ridge Reservation (ORR) Environmental Management Waste Management Facility (EMWMF) and the proposed Environmental Management Disposal Facility (EMDF) that affects the EMDF Record of Decision (ROD), Oak Ridge, Tennessee (Nov. 4, 2021).

As discussed and as previously articulated in Community Groups' letters to DOE, the amount of new and significant information which has come to light since the 2018 public comment period as well as all of the outstanding information which must still be provided necessitate that a revised proposed plan be issued for this remedial action.[26] The fact sheets issued by DOE fail to provide this needed information and contain inappropriately segmented information which does not allow the public to holistically evaluate DOE's preferred remedy. Further, the fact sheets lack any analysis of how the proposed alternative measures against other alternatives given the new and unanticipated information developed since 2018.

Issuance of a revised Proposed Plan is also necessary in this instance because DOE has indicated that significant changes are still being made to its proposed remedy. At DOE's public meeting on the EMDF fact sheets, DOE employee Roger Petrie noted that the D1 ROD published by DOE "is very different" than the forthcoming D2 ROD which DOE expects to release this upcoming July.[27] Yet DOE is asking the public to comment on three fact sheets which reference the D1 ROD and which are supported by "Project Framework Documents," that include both the D1 ROD and DOE's Responsiveness Summary to the D1 ROD.[28] In other words, DOE is asking the public to comment on fact sheets that the agency has publicly admitted contain and rely on outdated information regarding its proposed remedy. This is insufficient under CERCLA, and DOE must include any updated information in a revised proposed plan available for public review and comment.

II. The EMDF Fact sheets Do Not Provide Sufficient Information for the Public to Make Informed Comments on DOE's Proposed CERCLA Remedy

The three fact sheets published by DOE describing its proposed remedial action do not supply the public with sufficient information or analysis to demonstrate that the EMDF will be protective of human health and the environment or meet all identified and non-waived ARARs as required by CERCLA.[29] The fact sheets additionally lack necessary detail to allow the public to meaningfully comment on DOE's preferred remedial alternative.

a. DOE's use of fact sheets to provide new information in lieu of a revised proposed plan is inappropriate.

CERCLA regulations and guidance make clear when publication of facts sheets is appropriate as part of a remedial action. This is not such a time. CERCLA regulations themselves only mention the potential use of fact sheets at one point in the remedial process: during the remedial design/remedial action (RD/RA) stage—which occurs after a ROD has been

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[26] *See* Letter from Christina Reichert, *supra* note 17; Letter from Nate Watson, *supra* note 18; Letter from Christina Reichert, *supra* note 20; Letter from Amanda Garcia, *supra* note 1.
[27] U.S. Dep't of Energy, *EMDF Public Meeting – May 17, 2022* at 7:46 (May 19, 2022), https://www.youtube.com/watch?v=_0lhQsTE-_I.
[28] *See* United Cleanup Oak Ridge LLC, *EMDF Information* (last visited June 3, 2022), https://ucor.com/additional-emdf-information/.
[29] *See* 40 C.F.R. § 300.430(f)(1)(i)(A).

issued.[30] At that point, fact sheets can be used to update the public on the completion of the remedial design prior to initiation of the remedial action itself.[31] In the *Superfund Community Involvement Handbook* ("the Handbook"), EPA additionally opines that publication of fact sheets may be appropriate in limited circumstances, such as providing the public with general information on the Superfund remedial selection process or publishing preliminary findings from a site assessment.[32] Neither of those circumstances involves allowing an agency to use fact sheets to affirmatively replace publication of other necessary documents as outlined by the statute.

The Handbook also states that, during a remedial process, it may be appropriate to publish a fact sheet *in addition* to a proposed plan in order to "summarize[] the key findings and conclusions contained in the Proposed Plan."[33] Similarly, the Handbook states that fact sheets may be utilized *in tandem* with publication of a revised proposed plan to "explain[] significant changes and the process for a new public comment period."[34] These circumstances clearly demonstrate that fact sheets should be utilized in the CERCLA to summarize, explain, or update the public on a remedial action, not to affirmatively publish new information about a proposed remedy and certainly not to usurp CERCLA's clear regulatory requirements regarding when a revised proposed plan must be issued.[35] DOE's attempt to publish fact sheets in lieu of issuing a revised proposed plan is therefore inappropriate.

b. The structure of the fact sheets prevents the public from providing informed comments.

At their most basic level, the EMDF fact sheets do not allow the public to meaningfully engage with the new and additional information DOE purports to make available through publication of these documents. In particular, DOE fails to define the terms it utilizes, explain how these terms interact with each other, or provide necessary details regarding its actions. Take, for example, the second paragraph of the *Water Quality Protection for Bear Creek* fact sheet. That paragraph states:

> DOE will **treat** all contaminated wastewater and leachate from EMDF prior to discharge into Bear Creek. The treatment will include, **at a minimum**, chemical flocculation/precipitation and sediment removal. DOE will conduct **secondary treatment** as necessary to ensure compliance with all **regulatory limits** and full protection of human health and environment. **Protective levels** have been set for radionuclides that may potentially be in the landfill wastewater. **Radionuclide levels** will be directly measured in contaminated wastewater and leachate, fish, and surface waters. These **measured values** will be compared to **regulatory limits** and newly developed **fish tissue and surface water values** (preliminary

[30] *See* 40 C.F.R. § 300.435(c)(3).
[31] *Id.*
[32] U.S. Env't Prot. Agency, *Superfund Community Involvement Handbook*, 28–29, 38 (2016), https://semspub.epa.gov/work/HQ/100000070.pdf.
[33] *Id.* at 40.
[34] *Id.* at 44–45.
[35] *See* 40 C.F.R. § 300.430(f)(3)(ii).

> remediation goals [PRG]) that ensure **protection of public health**. (For more information on **these values**, and how they are calculated, see http://ucor.com/wp-content/uploads/2022/05/Rad-PRG-Explanation.pdf.)[36]

This paragraph is confusing at best and misleading at worst. To start, DOE fails to provide meaningful insight into its proposed treatment standards. The Department states that it will "treat" wastewater and leachate from the EMDF, lays out treatment methods which will be performed "at a minimum," and then states that "secondary treatment" may also occur. Yet the public is left in the dark about the actual contours of this treatment regime. Is DOE considering other basic treatments which will apply to all contaminated wastewater and leachate? Do these include control technologies as preferred by CERCLA, prioritized in the CWA, and which are ARARs for hazardous pollutants like PCBs and mercury?[37] When will secondary treatment occur? What will that entail? Neither this paragraph nor the remainder of the fact sheet provide any further details.

The paragraph also includes several terms that are undefined and unclearly applied. For instance, the paragraph at different times refers to "protective levels" that have been set for radionuclides and also "radionuclide levels." Are these terms interchangeable? Or do they mean different things? The paragraph also repeatedly refers to "regulatory limits" that will be complied with to protect human health and the environment. But there are no "regulatory limits' for radionuclides under Section 122 of the CWA because radionuclides are excluded from the statute's definition of pollutants.[38] And CERCLA is a remedial statute, not a regulatory statute, so radionuclide "regulatory limits" are likewise missing there. DOE fails to define or explain what "regulatory limits" it is referencing. DOE then discusses "measured values" and "fish and surface water values," before purporting to provide more information on "these values" without clarifying which values it is referencing. The Department also states that it will compare some combination of these "values" to "ensure protection of public health," which notably leaves out any reference to CERCLA's additional requirement that the remedial action also be protective of the environment and comply with all non-waived ARARs.[39]

In short, it is unclear to Community Groups how the public is supposed to provide meaningful input on the EMDF fact sheets when they are rife with undefined and intermixed terms as well as vague assertions with unclear implications. Apart from the informational gaps the fact sheets contain—which are discussed in more detail below—DOE's confused presentation of the information itself prohibits the public from engaging with the fact sheets in a meaningful way.

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[36] *EMDF Bear Creek* fact sheet, *supra* note 2 at 1 (emphases added).
[37] *See* 42 U.S.C. § 9621(b)(1); 33 U.S.C. § 1311(b)(1).
[38] *See* 40 C.F.R. § 122.2
[39] *See* 40 C.F.R. § 300.430 (f)(ii).

c. *The fact sheets lack information necessary to allow the public to provide informed comments.*

Review of the EMDF fact sheets makes clear that the documents provide more questions than answers. In particular, the *Site Groundwater Characterization* fact sheet does not adequately address or provide:

- Whether and how DOE's design of the EMDF landfill considers and incorporates the foreseeable increase in precipitation, storm events, and changed hydrologic conditions which will occur in East Tennessee due to climate change;
- Alternative remedial actions DOE will undertake if its upcoming field demonstration test at the EMDF does not result in predicted outcomes, including lowered groundwater levels at the proposed landfill site;
- Why "adjustments" may be made to observed groundwater elevations used to support EMDF design if there are "unusual amounts of rainfall" during the field demonstration project when, as mentioned, this area of East Tennessee is predicted to have a foreseeable increase in wet weather events[40];
- Whether the public will be afforded another period of public comment if current ARARs and ARAR waivers are "revisit[ed]" based on findings from the future field demonstration project analyzing groundwater elevations at the proposed EMDF site.

The *Waste Acceptance Criteria* fact sheet does not adequately address or provide:

- Whether the public will be afforded an opportunity to provide public comments on a finalized WAC, including a completed analytical WAC;
- Explanation for how issuance of a ROD prior to determining what waste and waste amounts will be accepted in the landfill complies with CERCLA's requirement that RODs contain a determination that the remedial action is protective of human health and the environment and complies with all non-waived ARARs[41];
- Necessary details regarding the "supplemental modeling on additional post-closure scenarios to ensure inventory limits do not result in an unacceptable risk" which DOE plans to perform for the EMDF, or whether the public will be able to provide public comment on this modeling and analysis[42];
- Whether and in what ways the waste that will be accepted at the EMDF differs from the waste that has been disposed of at the EMWMF;
- Whether the performance assessment analysis to be undertaken by DOE will consider the decay chains and progeny of all disposed radionuclides;

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[40] *See EMDF Groundwater* fact sheet, *supra* note 2, at 3.
[41] *See* 40 C.F.R. § 300.430 (f)(1)(ii)(A)–(B).
[42] *See EMDF WAC* fact sheet at 3.

- Community Groups also note that this fact sheet contains an assertion that the EMWMF "has operated safely for 20 years"[43] without any discussion or analysis of the landfill's contamination of local groundwater or the multiple, unauthorized discharges of thousands of gallons of untreated wastewater containing radionuclides and other hazardous pollutants which DOE and its contractors have allowed to enter local waterways.[44]

Finally, the *Water Quality Protection for Bear Creek* fact sheet does not adequately address or provide:

- Whether DOE has completed or plans to undertake any fish consumption studies regarding local populations who may participate in recreational or subsistence fishing in and around the Oak Ridge Reservation, including on Bear Creek and its downstream waterways;[45]
- What criteria DOE will use to determine whether secondary treatment is necessary for contaminated wastewater and leachate being discharged from the EMDF to Bear Creek;[46]

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[43] *Id.* at 2.
[44] *See, e.g.*, Att. 8, Plea Agreement, *United States v. Duratek Federal Services*, No. 3:06-cr-00172-CCS, 1 (E.D. Tenn. Dec. 14, 2006); Att. 9, Factual Basis, *United States v. Duratek Federal Services*, No. 3:06-cr-00172-CCS, 2–3 (E.D. Tenn. Dec. 14, 2006).
[45] Community Groups have previously raised concerns regarding EMDF given the fishing practices of local communities. *See* Att. 10, Letter from Amanda Garcia et al. (SELC) to Carlton Waterhouse (EPA), Re: Additional Information Regarding Communities Potentially Affected by the U.S. Environmental Protection Agency's Oversight of Cleanup Decisions at the Oak Ridge Reservation and the Radionuclide Pollution Decision (Feb. 16, 2022).
[46] *See EMDF Bear Creek* fact sheet, *supra* note 2, at 1 ("DOE will conduct secondary treatment as necessary . . . .").

Community Groups highlight comments submitted by TDEC on the D1 ROD, which discuss the standard and currently-in-use practice by DOE at the ORR to treat radionuclide discharge with ion exchange, to support its use as treatment for contaminated wastewater and leachate. Specifically, EPA stated that "[a] version of ion exchange treatment using media such as resins is the generally accepted approach for removing radiological constituents prior to discharge. DOE has and continues to use such wastewater treatment methods across the ORR and can lead the discussion of appropriate treatment media for radionuclides projected to be disposed in the EMDF." Letter from Randy Young (TDEC) to Roger Petrie (DOE), Re: TDEC Comment Letter: Record of Decision for Comprehensive Environmental Response, Compensation, and Liability Act Oak Ridge Reservation Waste Disposal at the Environmental Management Disposal Facility, Oak Ridge Tennessee (DOE/OR/01-2794&D1), 11–12 (Oct. 8, 2021) ("TDEC Comments on D1 ROD").

- Finalized radiological discharge limits from the EMDF;[47]
- Finalized mercury discharge limits from the EMDF which include mass limitations;
- How DOE's fish ingestion exposure parameters, including exposure duration and fish ingestion rates, in Table A.2 of the *Development of Fish Tissue and Surface Water Preliminary Remediation Goals for Radionuclides of Interest for the Proposed Environmental Management Disposal Facility, Oak Ridge, Tennessee* ("PRG Report"),[48] as referenced in the fact sheet, provide full protection of Bear Creek's designated use and will adequately protect human health and the environment given their inconsistencies with EPA guidance documents including but not limited to *Methodology for Deriving Ambient Water Quality Criteria for the Protection of Human Health*[49];
- Whether required monitoring, detection, and reporting limits will enable sufficient quantification of radioactive and hazardous substance discharges from the EMDF to ensure protection of both human health and the environment;
- Whether required monitoring, detection, and reporting limits will enable effective evaluation of whether the discharges comply with promulgated water quality criteria for toxic substances in surface water designated for recreational use;
- Effluent discharge limits for hazardous pollutants which will allow attainment of ambient water quality criteria throughout Bear Creek;
- How discharges of PCBs and mercury from EMDF into Bear Creek, which is impaired by both substances, will not violate Tennessee's Antidegradation Statement, which is an ARAR for these hazardous pollutants.[50]

More broadly, none of these fact sheets address or provide critical information which the public must have in order to be able to effectively evaluate the safety and effectiveness of this proposed remedial action. This includes:

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[47] EPA has previously identified the lack of finalized radiological discharge limits as impeding the Agency's "ability to evaluate whether the ROD is protective and complies with ARARs." U.S. Envt'l Prot. Agency, *EPA Comments on the Record of Decision for Comprehensive Environmental Response, Compensation, and Liability Act Oak Ridge Reservation Waste Disposal at the Environmental Management Disposal Facility, Oak Ridge, Tennessee (DOE/OR/01-2794&D1)*, 1 (Oct. 6, 2021) ("EPA Comments on D1 ROD").

[48] *See* United Cleanup Oak Ridge LLC, UCOR-5550, *Development of Fish Tissue and Surface Water Preliminary Remediation Goals for Radionuclides of Interest for the Proposed Environmental Management Disposal Facility, Oak Ridge, Tennessee*, A-10 (2022), http://ucor.com/wp-content/uploads/2022/05/Rad-PRG-Explanation.pdf.

[49] U.S. Env't Prot. Agency, EPA-822-B-00-004, *Methodology for Deriving Ambient Water Quality Criteria for the Protection of Human Health (2000)* (2000), https://www.epa.gov/sites/default/files/2018-10/documents/methodology-wqc-protection-hh-2000.pdf.

[50] *See* Tenn. Comp. R. & Regs. 400-40-03-.06.

- A finalized RI/FS;
- A finalized FFS;
- DOE's response to EPA and TDEC's comments on the latest draft RI/FS, draft FFS, and D1 ROD;
- Clear identification of which ARARs are being used in the proposed remedial action;
- An analysis of how climate change will impact the preferred remedy;
- An analysis of the impacts DOE's selected remedy will have on environmental justice communities; and
- Any changes which have been made to the EMDF design as a result of lessons learned from the unauthorized discharges and pollution to local groundwater and surface water from the EMWMF.

Community Groups also incorporate by reference the concerns outlined by former TDEC employees in comments submitted to DOE on the EMDF fact sheets.[51]

Both TDEC and EPA have previously identified many of these concerns and highlighted this missing information in their comments on the D1 ROD. For instance, EPA has previously noted that without finalized effluent limits and instream criteria, the D1 ROD "is not consistent with" the National Contingency Plan requirements at 40 C.F.R. § 300.430(f)(5)(iii).[52] Similarly, TDEC has stated that the D1 ROD "lacks the information needed to demonstrate protective landfill wastewater discharge limits and waste acceptance criteria."[53] And both parties have highlighted DOE's failure to analyze the potential impacts that climate change will have on the proposed EMDF facility.[54]

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[51] Att. 11, Letter from Andy Binford to Roger Petrie (DOE), Re: Comments primarily related to the Site Groundwater Characterization fact sheet (June 7, 2022); Att. 12, Letter from Andy Binford et al. to Roger Petrie (DOE), Re: Comments primarily related to the Water Quality Protection of Bear Creek fact sheet, page 4 concerning mercury discharge limits, PCBs, and antidegradation and the TSCA ARAR exemption or waiver in the Site Groundwater Characterization fact sheet (June 7, 2022); Att. 13, Letter from Andy Binford to Roger Petrie (DOE), Re: Comments primarily related to the Water Quality Protection of Bear Creek fact sheet concerning discharge limits for radionuclides including values and how they are calculated referenced on page 1 of the fact sheet (June 7, 2022); Att. 14, Letter from Andy Binford to Roger Petrie (DOE), Re: Comments primarily related to the Waste Acceptance Criteria fact sheet (June 7, 2022).
[52] EPA Comments on D1 ROD, *supra* note 47, at 2.
[53] TDEC Comments on D1 ROD, *supra* note 46, at 2.
[54] *See* EPA Comments on D1 ROD, *supra* note 47, at 1 (stating that the Agency "expects the ROD to include a discussion of the potential impacts of climate change on the proposed remedy, including potential changes in rainfall, storm events and hydrologic condition, and climate resiliency measures to be addressed in the design and construction of the remedy."); TDEC Comments on D1 ROD, *supra* note 46, at 43 (noting that historically high average annual rainfall levels "are no longer extreme events, but rather the norm, and this must be taken into consideration for storage treatment and design.").

Apart from the information currently still missing from the ROD, EPA has highlighted the incomplete nature of other CERCLA remedial documents. In particular, in its comments on the D1 ROD, EPA asserted that the FFS should be revised and approved by EPA and TDEC "prior to the issuance of the D2 EMDF ROD," and that these steps are necessary "to have an adequate Administrative Record supporting the final decision in the ROD."[55] Despite EPA and TDEC's efforts to highlight the still-missing and still-needed information to adequately analyze DOE's preferred remedial alternative prior to finalizing a ROD, neither DOE's responsiveness summary nor these new EMDF fact sheets sufficiently address or remedy these deficiencies.

Finally, DOE's solicitation of public comment on the EMDF fact sheets does not comport with the public engagement scenario apparently agreed upon by DOE, EPA, and TDEC. In its comments on the D1 ROD, EPA noted that "EPA and TDEC have determined, and DOE has agreed, that the EMDF ROD merits additional public involvement activities before finalization. Public involvement should include new information developed since the September 2018 Proposed Plan *specifically the WAC, limits for radionuclides and mercury in surface water, and groundwater elevation at the proposed site location.* Resulting public comments and responsiveness should be included in the final ROD."[56] The EMDF fact sheets do not provide the information identified by EPA, TDEC, and DOE as being necessarily released to the public prior to engaging the public for comments. Accordingly, this information must be made available and a period of public comment reopened.

III. DOE Should Not Issue Any Draft Record of Decisions Until EPA has Completed Its Review of the Radionuclide Pollution Decision

On June 9, 2021, EPA alerted Community Groups that it was in the process of reviewing a December 31, 2020 Radionuclide Pollution Decision[57] issued by former EPA Administrator Andrew Wheeler regarding proposed wastewater discharges to surface water from the EMDF facility.[58] Community Groups had previously alerted EPA to inconsistencies with the Radionuclide Pollution Decision and federal environmental law, including but not limited to discrepancies between the Radionuclide Pollution Decision and CERCLA's preference for

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[55] EPA Comments on D1 ROD, *supra* note 47, at 1, 3.

[56] *Id.* at 2; *see also* TDEC Comments on D1 ROD at 24 ("[A]s of the D1 ROD (summer 2021), DOE has not completed the required public review and comment on WAC, as the Proposed Plan did not present that information. It is also TDEC's perspective that additional public review and comment is warranted on updated groundwater information, approaches for establishing landfill wastewater discharge limits, and significant changes the D1 ROD incorporates in the ARAR table.").

[57] Att. 15, Letter from Andrew Wheeler (EPA) to John Mullis (DOE) and David Salyers (TDEC) (Dec. 31, 2020).

[58] Att. 16, Letter from Lawrence Starfield (EPA) to Amanda Garcia et al. (SELC), Re: Request to Review December 31, 2020, Radionuclide Pollution Decision (Decision) Regarding Discharge of Radioactive Wastewaters at the Oak Ridge Reservation Facility in Oak Ridge, Tennessee (June 9, 2021).

technology-based effluent limitations (TBELs).[59] In response, EPA stated that, pursuant to Executive Order 13990 and in the context of Executive Orders 14008 and 13985, the agency was "in the process of reviewing the Decision."[60] To the best of our knowledge, that review is ongoing.

Despite EPA's current, active reconsideration of the Radionuclide Pollution Decision, DOE has published several documents which interpret and rely on the Radionuclide Pollution Decision to push forward the Department's haphazard effort to finalize its proposed CERCLA remedial action. This includes release of a D3 FFS on June 23, 2021, and a D1 ROD on July 12, 2021. DOE has now issued the EMDF fact sheets which appear to have been published in reliance on the Radionuclide Pollution Decision. For the same reason that publishing a D3 FFS and a D1 ROD were inappropriate, so too is it premature for DOE to issue these fact sheets for public comment. Namely, the information within them is predicated, at least in part, on a decision that is subject to ongoing review by EPA. DOE should delay issuing a D2 ROD until EPA culminates its review of the Radionuclide Pollution Decision, and a revised proposed plan should then be published for a period of public comment.

To the extent that the *Water Quality Protection for Bear Creek* fact sheet and the referenced PRG Report can be read as an implicit affirmation of the Radionuclide Pollution Decision by EPA, that Decision cannot be used to justify or override the clearly-stated preference in CERCLA for technology-based treatment.[61] Former Administrator Wheeler was not authorized to rewrite CERCLA in the Radionuclide Pollution Decision. There is no basis for eschewing technology-based treatment for radionuclides at EMDF or EMWMF, and indeed, there is strong basis in both law and fact for requiring it. In addition to the statutory requirements of CERCLA (and the technology-based treatment requirements of CWA as an ARAR), application of technology-based treatment would help ensure that *all* discharged radionuclides—including those known to the public as well as those classified from public view—are treated so that the remedy is in fact protective of public health and the environment.

Community Groups additionally maintain that, for the same reasons that former Administrator Wheeler misapplied the eight-factor analysis in 40 C.F.R. § 300.400(g)(2) to find that TBELs were not ARARs for the discharge of radionuclides in this remedial action, he was also incorrect in finding that Tennessee's Antidegradation Statement was not an ARAR for radionuclide discharges. Namely, the CWA envisions a holistic water protection regime that begins with the premise that discharges should be treated with "the best practicable control technology" prior to discharge, and that more stringent limitations necessary to meet water

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[59] Att. 17, Letter from Amanda Garcia (SELC) et al. to Michael Regan (EPA), Re: Request to Review December 31, 2020 Radionuclide Pollution Decision Regarding Discharge of Radioactive Wastewaters at the Oak Ridge Reservation Facility in Oak Ridge, Tennessee (May 26, 2021).
[60] *See* Letter from Lawrence Starfield, *supra* note 58, at 1.
[61] *See* 42 U.S.C. § 9621(b)(1); *see also* Letter from Amanda Garcia, *supra* note 59, at 4; TDEC Comments on D1 ROD, *supra* note 46, at 7.

quality standards then be applied as necessary.[62] In Tennessee, those water quality standards include the State's Antidegradation Statement.[63]

In the Radionuclide Pollution Decision, former Administrator Wheeler eschewed application of the first two lines of CWA defense—treating discharges and applying water quality standards which prevent the degradation of waters—to prioritize water quality based effluent limitations and designated use criteria as ARARs. The Radionuclide Pollution Decision is therefore properly viewed as an attempt to unlawfully preference weaker water quality standards in the CWA in contravention of the Act's plain purpose and intent.

IV. Conclusion

As EPA has so aptly noted, "there currently is no factual basis in the D1 ROD or the Administrative Record for this ROD" to justify DOE's assertion that the Department's preferred remedy at the ORR site "will meet [remedial action objectives], . . . will protect human and ecological receptors, and will prevent adverse impacts to surface water."[64] Specifically, EPA noted that any such statement was "premature" because "the draft ROD does not specify remediation goals[] and does not accurately apply ARARs [] related to compliance with certain CWA and TDEC water quality standards."[65] The EMDF fact sheets, among other shortcomings, do not supply this missing information or fail to demonstrate that it would sufficiently protect human health and the environment. And if EPA cannot effectively evaluate DOE's preferred remedial alternative given these deficiencies, neither can the public.

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[62] 33 U.S.C. § 1311(b); s*ee* Att. 18, Letter from Acting Regional Administrator Mary S. Walker (EPA) to John A. Mullis II (DOE) and David W. Salyers (TDEC), 7 (Mar. 21, 2019) (stating that TBELs "constitute a minimum floor of controls" which must be implemented under the CWA regime).

[63] *See* Tenn. Comp. R. & Regs. 0400-40-03.06.

[64] EPA Comments on D1 ROD, *supra* note 47, at 27; s*ee also* TDEC Comments on D1 ROD, *supra* note 46, at 2 ("Per 40 CFR 300.430(f)(5)(ii)(A) the ROD must describe how the selected remedy is protective of human health and the environment. This D1 ROD lacks the information needed to demonstrate protective landfill wastewater discharge limits and waste acceptance criteria.").

[65] EPA Comments on D1 ROD, *supra* note 47, at 4.

In order to rationally and lawfully select a remedial action under CERCLA, DOE must address the deficiencies outlined above before issuing a revised proposed plan for public comment. DOE should additionally issue this revised proposed plan only after EPA has made a determination on its review of the Radionuclide Pollution Decision. It is imperative that DOE takes these steps to comply with federal law and so that the legacy waste at the Oak Ridge Reservation is disposed of in a manner that actually ensures the health and safety of the local community and surrounding environment.

Sincerely,

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Attachments can be viewed at: https://southernenvironment.sharefile.com/d-s1e4fa53bf7684edc958bfe5dd0b64e05