

# **EXHIBIT A**

IN THE UNITED STATES DISTRICT COURT  
FOR THE EASTERN DISTRICT OF NORTH CAROLINA  
Civil Action No.: 7:23-CV-00897

IN RE:	)	<b>PLAINTIFFS' SURREPLY IN</b>
	)	<b>RESPONSE TO DEFENDANT</b>
CAMP LEJEUNE WATER LITIGATION	)	<b>UNITED STATES' REPLY IN</b>
	)	<b>SUPPORT OF MOTION TO</b>
This Pleading Relates to:	)	<b>EXCLUDE PLG's PHASE I</b>
	)	<b>EXPERT TESTIMONY IN</b>
ALL CASES.	)	<b>SUPPORT OF USING ATSDR'S</b>
	)	<b>WATER MODELS TO</b>
	)	<b>DETERMINE EXPOSURE LEVELS</b>
	)	<b>FOR INDIVIDUAL PLAINTIFFS</b>

PLG files this surreply brief to correct the newly-raised, incorrect assertions made by the Government in its reply brief that should not, in fairness, go unanswered. In all other respects, PLG relies on its response to the Government's motion, D.E. 397.

The Government asserts that the data are not sufficient to accurately estimate daily levels of contaminants in the water at Camp Lejeune, quoting ATSDR Tarawa Terrace Chapter A as stating: "No. The available data are not specific enough to accurately estimate daily levels of PCE in the Tarawa Terrace water system." D.E. 425 at 4. This quote is taken out of context – the next two sentences support use of the ATSDR data by PLG experts: "**The modeling approach used by ATSDR provides a high level of detail and accuracy to estimate monthly PCE exposure concentrations in finished water at the Tarawa Terrace WTP. It is assumed that simulated monthly concentrations of PCE represent a typical day during a month.**" D.E. 370-3 at A97; *see also* D.E. 371-3 at A181 (similar language regarding Hadnot Point-Holcomb Boulevard).

In making the argument that ATSDR chose conservative, health-protective assumptions, the Government confuses the ATSDR's Public Health Assessment (PHA) performed by epidemiologists to estimate health risks with ATSDR's water models. As explained in PLG's

response, the water modelers did *not* make conservative, health-protective assumptions.<sup>1</sup> D.E. 397 at 5, 21-23. Without distinguishing between the PHA and the water models, the Government represents that “ATSDR ‘chose conservative, health-protective data-interpretation options that were estimates of exposure in the upper end of the range of recommended values’” – an assertion that is valid only for the PHA, not the water models. D.E. 425 at 8; *see also* page 5 & 10.<sup>2</sup> Indeed, that quote is from the PHA, D.E. 397-3, which was performed four years after the models had been completed. Later in the PHA, the ATSDR epidemiologists explained that the conservative, health-protective estimates at the upper end of the range of values that they were referring to concerned issues such as showering/bathing frequency, breathing rates, body weights, length of residency, and the use of “one-compartment *air* models” for vapor inhalation – not to the assumptions made by the water modelers. D.E. 397-3 at 43 (page 66 of 203).

The Government repeatedly contends that “neither PLG’s opposition brief nor PLG’s phase I expert reports address error rates or error bounds, confidence intervals, or the results of the uncertainty analyses performed on ATSDR’s water models.” D.E. 425 at 1; *see also id.* at 7. That is false. *See, e.g.,* D.E. 397, PLG Response, at 10-13; 27-29 (including section titled “The ATSDR’s modeling methodology has an acceptable rate of error”); 38; D.E. 368-6, Maslia Report, at 44 (section titled “Model Calibration, Sensitivity and Uncertainty”); 47-52 & 55-61 (describing “goodness of fit” of modeled vs. measured (real world) values for all 4 stages of the TT calibration process); 61 (post-audit); 61-68 (sections on Uncertainty, Water-Supply Well Scheduling Analysis, Sensitivity Analysis, and Probabilistic Analysis for TT); 72-79 & 82-87 (describing

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<sup>1</sup> The Government asserts that PLG does not dispute various “conservative assumptions.” D.E. 425 at 11. DOJ’s assertions are incorrect, but this is also not the correct inquiry. All models include assumptions; the question is whether the assumptions are reasonable and defensible. D.E. 397 at 12-13. They are here. *Id.* at 21-23; 32-36, 38.

<sup>2</sup> In at least two places in its reply, the Government attributes this quote to documents that do not contain it. *E.g.,* D.E. 425 at 8 (citing D.E. 370-7, ATSDR Response to Navy Letter) and D.E. 397 (PLG Response).

“goodness of fit” for HPHB); 88-91 (sections on Uncertainty, Sensitivity Analysis, and Probabilistic Analysis for HPHB); D.E. 369-2, Maslia Rebuttal Report, at 36-39 (section titled “Model Calibration and Uncertainty Analysis”); D.E. 369-11, Konikow Rebuttal Report, at 7, 9 (noting that 73% of TT sampling wells show reasonably and acceptably accurate simulation results); 15-18; 25-28.

Regarding the ATSDR’s probabilistic Monte Carlo analysis used to assess uncertainty associated with the Tarawa Terrace modeling results, the Government claims that the fact that “only 510 physically viable realizations were produced” and that “330 out of 840 or approximately 39% of the realizations were not viable” raises “concerns about the accuracy of the model and the representativeness of the input model parameters.” D.E. 425 at 7-8. Notably, the Government did not cite to any expert report or testimony in support of these alleged concerns. The Government did cite to Chapter I, but that document simply explained the procedure used, which was to run the Monte Carlo simulations until they had 500 or more usable realizations – there is no mention of a “concern” related to the realizations which were halted due to predetermined stopping criteria. D.E. 397-6 at I48. In fact, it is normal for a Monte Carlo simulation to try various combinations of parameters, in which some combinations yield physically unrealistic results (*e.g.*, the wells would run dry). *See* D.E. 372-9, 9/26/24 Maslia Dep., at 243:19-244:18. It is expected that those simulations are excluded from the subsequent statistical analyses. *See* D.E. 369-11, Konikow Rebuttal Report, at 15-16. The Government’s litigation expert Dr. Spiliotopoulos praised ATSDR for defining a range of reasonable parameter values for its Monte Carlo analysis. D.E. 377-3, Spiliotopoulos Report, at 87-88. The Government also cited the Navy’s June 2008 letter regarding the alleged concerns, but that letter indicated that the Navy had performed an incomplete analysis

because Chapter I had not yet been released. D.E. 370-5 at 6 (noting that “[t]he Navy/Marine Corps feels that additional information on this matter would likely help our understanding.”).

The Government repeatedly references overprediction of concentrations, accusing ATSDR’s models of being “biased-high,” but all models either over- or under-predict – no model is “spot-on” perfect. The issue is the degree of over- or under-prediction, and whether it is within the range of uncertainty bounds (*i.e.*, the confidence intervals). The Government, without citation to any authority, makes accusations of “limitless” and “enormous” uncertainty, but PLG experts have explained that any over-prediction is reasonable and acceptable (and not applicable to key aspects of the model such as TT-26 and the water treatment plant) and the uncertainty is well-documented and in line with other groundwater flow and fate and transport models. *E.g.*, D.E. 369-11, Konikow Rebuttal Report, at 9, 14-17; 19; D.E. 369-2, Maslia Rebuttal Report, at 17-18; 36-37; 42; 49-50; D.E. 369-8, Konikow Dep., at 279:3-281:24; D.E. 425-3, May 2025 Maslia Dep., 36:4-37:13; 56:10-21; D.E. 397, PLG Response, at 10-13; 27-29; 38; D.E. 368-6, Maslia Report, at 44; 47-52 & 55-68; 72-79 & 82-87; 88-91. This does not render the models inadmissible. *See, e.g., Westberry v. Gislaved Gummi AB*, 178 F.3d 257, 261 (4<sup>th</sup> Cir. 1999) (experts are not required to be “irrefutable or certainly correct.”).

PLG did not “avoid the analyses of *Somerville* and *Coleman*” as asserted by the Government at D.E. 425 at 10. PLG distinguished those cases, which (among other things) applied “worst case scenario” assumptions that were not made by ATSDR here. *See* D.E. 397 at 20-22.

The Government implies that ATSDR epidemiologists did not use the water model results for the 2024 Mortality and Cancer Incidence Study due to a reliability issue. D.E. 425 at 8. That is incorrect. Dr. Bove explained that he did not use the water modeling data to perform individualized exposure assessments in the 2024 study – as he had in prior studies – not because of any issue with

the models themselves, but because he lacked sufficient data on where each Marine trained on base. While he had data on where individuals lived, there was not enough information to reliably determine when and where each Marine was present on base for training – particularly for those living off base and training on base each day. D.E. 425-5, Bove Dep. (Oct. 18, 2024), at 20:3-21:19. The limitation was with the availability of individual Marine training data, not with the water modeling itself.

Navy employee Dr. Waddill is incorrect in stating “there were just not enough real-world measurements for this to count as a scientifically valid approach.” D.E. 425 at 3. As acknowledged by the DOJ’s litigation expert Dr. Spiliotopoulos, there is no industry standard “minimum” number of observations needed in order to make the approach scientifically valid – this is a red herring. D.E. 397-4, Spiliotopoulos Dep., 244:3-17; 248:4-9. *See also* D.E. 369-11, Konikow Rebuttal Report, at 30-31 (countering Dr. Waddill and explaining scientific validity of ATSDR’s methods).

The Government quotes an email from Robert Faye, a contract engineer for ATSDR, as if he is condemning the modeling project as a whole. D.E. 425 at 3. Instead, Mr. Faye was expressing frustration regarding an interim, mid-project professional disagreement about one issue (the biodegradation rate). This disagreement was eventually resolved and is not reflected in the final ATSDR reports. D.E. 372-9, 9/26/24 Maslia Dep., 278:1-15; 280:11-281:6; 282:2-22. Moreover, the DOJ’s repeated insinuations (D.E. 368 at 28; D.E. 425 at 3) that the PLG has hidden Mr. Faye are both inaccurate and irrelevant to the Rule 702 inquiry before the Court.

In support of its argument that ATSDR’s models “substantially” overpredict, the Government notes that “12% of simulated PCE concentrations failed the calibration standard at the water treatment plant and 53% of the simulated concentrations fell outside the calibration standard at the water supply wells.” D.E. 425 at 6. This statistic and the snippet of testimony from

Mr. Maslia's deposition provided by the Government are both misleading. The "calibration standard" mentioned by the Government refers to ATSDR's internal calibration target for the Tarawa Terrace model, and it has no bearing on the reliability or accuracy of the model. Indeed, as Mr. Maslia explained in his deposition, the 2009 Expert Panel advised the ATSDR to discontinue using calibration targets because it is not a standard practice. *See* D.E. 425-3 at 55:1-11; *see also* D.E. 397-25 at 101 (Dr. Konikow advising ATSDR in 2009 that "[s]uch targets are inevitably arbitrary and to some extent meaningless. They tend to distract from the quality of the calibration process and shift focus to the arbitrary goal. It is a 'red herring.' Not achieving a predetermined calibration target should not disqualify a model, nor does that prove a model is not valuable or useful."). Based on the panel's recommendation, ATSDR did not use calibration targets with its Hadnot Point model.

The purpose of the ATSDR models was to provide mean monthly concentrations "to facilitate the estimation of exposures"; this was *not* limited to estimating relative exposures. D.E. 370-3 at A5; *see also* D.E. 397 at 4-9; 19-20. The fact that this work was not done for purposes of litigation makes it more – not less – reliable. *Daubert v. Merrell Dow Pharms, Inc.*, 43 F.3d 1311, 1317 (9<sup>th</sup> Cir. 1995); Fed. R. Evid. 702, Advisory Comm. Notes (2000 Amendments).

The peer review of the ATSDR water models assessed from hydrological and hydrogeological considerations the reasonableness and reliability of the modelling approach (including the error, sensitivity and uncertainty analyses) for estimating mean monthly contaminant concentrations, without any distinction between assessing exposure levels for an epidemiology study versus individual exposure levels. That distinction makes no difference and had no impact on the design or review of the water models. *See* D.E. 397 at 20.

The Government's motion and reply brief consistently cite and quote statements made by ATSDR scientists, Expert Panel members and the Navy/Marine Corp. during the process of developing the models. Most if not all of the issues raised during this process were then addressed by the ATSDR – that was the purpose of seeking out input from others as part of the scientific process. *See e.g.*, D.E. 397 at 14-15. Notably absent from the Government's papers are opinions reached by their own retained experts or others made after all Chapter reports had been published and the models completed.

For the foregoing reasons and those stated in its Opposition, D.E. 397, the PLG respectfully requests the Court to deny the Government's motion.



DATED this 8th day of July 2025.

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**CERTIFICATE OF SERVICE**

I, J. Edward Bell, III, hereby certify that the foregoing document was electronically filed on the Court's CM/ECF system on this date, and that all counsel of record will be served with notice of the said filing via the CM/ECF system.

This the 8th day of July 2025.

/s/ J. Edward Bell, III\_\_\_\_\_

J. Edward Bell, III