UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF NEW YORK

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TOWN OF HALFMOON and COUNTY OF SARATOGA,

Plaintiffs,

-v- 1:09-CV-228 (LEAD)

GENERAL ELECTRIC COMPANY,

Defendant.

- -

SARATOGA COUNTY WATER AUTHORITY,

Plaintiff,

-v- 1:11-CV-6 (MEMBER)

GENERAL ELECTRIC COMPANY,

Defendant.

- -

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DAVID N. HURD
United States District Judge

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MEMORANDUM–DECISION and ORDER

I. INTRODUCTION

This is the final installment in a trilogy of decisions necessitated by the flurry of motion practice that occurred at the completion of discovery in this case, which pits remaining plaintiffs Town of Halfmoon ("Halfmoon"), County of Saratoga ("Saratoga"), and Saratoga County Water Authority ("SCWA") (collectively "plaintiffs") against defendant General Electric Company ("GE") in their bid to recover damages pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act ("CERCLA") and related state law.

The first of these decisions resolved the bulk of the parties' cross-motions for summary judgment, denying plaintiffs a summary victory on the issue of GE's liability and concluding that all of plaintiffs' state law claims, save for one based on New York's Navigation Law, were pre-empted. Town of Halfmoon v. Gen. Elec. Co., 105 F. Supp. 3d 202 (N.D.N.Y. 2015) ("Halfmoon I").

The second of these decisions denied GE's motion for partial reconsideration of that latter conclusion, rejecting GE's assertion that proper application of the doctrine of conflict pre-emption required dismissal of plaintiffs' New York Navigation Law claims as well. Town of Halfmoon v. Gen. Elec. Co., 2015 WL 6872308 (N.D.N.Y. Nov. 9, 2015) ("Halfmoon II").

The instant decision aims to resolve the parties' still-pending motions to exclude, in whole or in part, the testimony of a litany of experts, thereby clearing the final major hurdle left standing before the liability phase of a trial can be scheduled in this matter.

II. LEGAL STANDARD

Federal Rule of Evidence ("Rule") 702 permits a witness "who is qualified as an expert by knowledge, skill, experience, training, or education" to "testify in the form of an opinion or

otherwise" provided that: (a) the expert's scientific, technical, or other specialized knowledge will help the trier of fact to understand the evidence or to determine a fact in issue; (b) the testimony is based on sufficient facts or data; (c) the testimony is the product of reliable principles and methods; and (d) the expert has reliably applied those principles and methods to the facts of the case. FED. R. EVID. 702.

"The law assigns district courts a 'gatekeeping' role in ensuring that expert testimony satisfies the requirements of Rule 702." United States v. Farhane, 634 F.3d 127, 158 (2d Cir. 2011), cert. denied, 132 S. Ct. 833 (2011). This role as gatekeeper requires a court to make three, related findings before permitting a person to testify as an expert: "(1) the witness is qualified to be an expert; (2) the opinion is based upon reliable data and methodology; and (3) the expert's testimony on a particular issue will 'assist the trier of fact.'" Valente v. Textron, Inc., 931 F. Supp. 2d 409, 415 (E.D.N.Y. 2013) (quoting Nimely v. City of New York, 414 F.3d 381, 396-97 (2d Cir. 2005)).

In Daubert v. Merrell Dow Pharms., Inc., 509 U.S. 579 (1993), the Supreme Court set forth a non-exhaustive list of factors that bear on the reliability aspect of this inquiry: "(1) whether a theory or technique has been or can be tested; (2) whether the theory or technique has been subjected to peer review and publication; (3) the technique's known or potential rate of error and the existence and maintenance of standards controlling the technique's operation; and (4) whether a particular technique or theory has gained general acceptance in the relevant scientific community." United States v. Williams, 506 F.3d 151, 160 (2d Cir. 2007). "These factors do not constitute, however, a definitive checklist or

test. Rather, [t]he inquiry envisioned by Rule 702 is . . . a flexible one." Davis v. Carroll, 937 F. Supp. 2d 390, 412 (S.D.N.Y. 2013) (citation omitted).[1]

The flexibility contemplated by Rule 702 is particularly helpful when an expert's testimony does not rest on traditional scientific methods. "In such cases, where a proposed expert witness bases her testimony on practical experience rather than scientific analysis, courts recognize that '[e]xperts of all kinds tie observations to conclusion through the use of what Judge Learned Hand called 'general truths derived from . . . specialized experience.'" Davis, 937 F. Supp. 2d at 412 (quoting Kumho Tire Co., Ltd. v. Carmichael, 526 U.S. 137, 149-50 (1999)). "Thus, the Daubert factors do not necessarily apply even in every instance in which reliability of scientific testimony is challenged, and in many cases, the reliability inquiry may instead focus upon personal knowledge and experience of the expert." Id. (citation and internal quotation marks omitted).

Whether based on traditional science or specialized experience, Rule 702 further mandates that an expert "stay within the reasonable confines of [their] subject area, and [thus] cannot render expert opinion on an entirely different field or discipline." Lappe v. Am. Honda Motor Co., Inc., 857 F. Supp. 222, 227 (N.D.N.Y. 1994), aff'd sub nom., Lappe v. Honda Motor Co. Ltd. of Japan, 101 F.3d 682 (2d Cir. 1996). In other words, "where an expert is admitted under Rule 702 and then purports to offer opinions beyond the scope of their expertise, courts strike the extraneous testimony, as the admission of an expert does not provide that individual with *carte blanche* to opine on every issue in the case." Davis, 937 F. Supp. 2d at 413.

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[1] Of course, "[e]xpert testimony must also be relevant under Rule 401 and must not be unfairly prejudicial under Rule 403." Davis, 937 F. Supp. 2d at 412.

As always, "[t]he proponent of the expert testimony bears the burden of 'establishing by a preponderance of the evidence that the admissibility requirements of Rule 702 are satisfied.'" Valente, 931 F. Supp. 2d at 415 (quoting Williams, 506 F.3d at 160). Importantly, however, "[t]he Second Circuit has held that under the Federal Rules of Evidence, there is a general presumption of admissibility of evidence." Hilaire v. DeWalt Indus. Tool Co., 54 F. Supp. 3d 223, 235 (E.D.N.Y. 2014) (citation and internal quotation marks omitted). Accordingly, "the rejection of expert testimony is the exception rather than the rule." FED. R. EVID. 702 advisory committee's note.

Ultimately, "a trial judge should exclude expert testimony if it is speculative or conjectural or based on assumptions that are "so unrealistic and contradictory as to suggest bad faith" or to be in essence "an apples and oranges comparison." Zerega Ave. Realty Corp. v. Hornbeck Offshore Transp., LLC, 571 F.3d 206, 213-14 (2d Cir. 2009). However, "[t]o the extent that a party questions the weight of the evidence upon which the other party's expert relied or the conclusions generated from the expert's assessment of that evidence, it may present those challenges through cross-examination of the expert." R.F.M.A.S., Inc. v. So, 748 F. Supp. 2d 244, 252 (S.D.N.Y. 2010). Simply put, "our adversary system provides the necessary tools for challenging reliable, albeit debatable, expert testimony." Amorgianos v. Nat'l R.R. Passenger Corp., 303 F.3d 256, 267 (2d Cir. 2002).

III. DISCUSSION[2]

The prior decisions delineated five principal issues for the liability phase of trial on plaintiffs' remaining claims. With regard to Saratoga and SCWA (collectively "Saratoga"),

[2] The parties' familiarity with the extensive factual background in this matter is presumed and will not be repeated here.

Halfmoon I held that a fact-finder must first determine whether: (1) the decision to locate the intake at Moreau was part of an effort to avoid the threat of resuspended PCBs during the dredging project; (2) the construction and operation of the water intake at Moreau was done in substantial compliance with the National Contingency Plan ("NCP"); and (3) the PCBs are petroleum-based or have been mixed with petroleum. See 105 F. Supp. 3d at 221. With regard to Halfmoon's claims, the issue of GE's liability first required determinations as to whether: (1) the construction and operation of the alternative water supply line to the City of Troy was done in substantial compliance with the NCP; and (2) the resuspended PCBs are petroleum-based or have been mixed with petroleum. Id. at 221-22.

This decision will confine its analysis of the pending expert motions to only those aspects of the experts' opinions identified in the notices filed by the parties in accordance with Halfmoon I; i.e., only those challenged opinions relevant to the liability issues just outlined above. The remaining aspects of these motions will be denied without prejudice to renew at the appropriate time.

However, as other courts have observed and as the parties are no doubt acutely aware, CERCLA and its attendant regulatory framework are just as complex as "the tax code and Medicare regulations." Amcast Indus. Corp. v. Detrex Corp., 779 F. Supp. 1519, 1534 (N.D. Ind. 1991), rev'd in part on other grounds, 2 F.3d 746 (7th Cir. 1993); see also Cadlerock Props. Joint Venture, L.P. v. Schilberg, 2005 WL 1683494, at *5 (D. Conn. 2005) ("The Court recognizes full-well that wading through CERCLA's morass of statutory provisions can often seem as daunting as cleaning up one of the sites the statute is designed to cover."). Consequently, at least some of the considerations relevant to the issues surrounding GE's alleged liability appear inextricably linked to issues that Halfmoon I fairly

characterized as questions that were best reserved for the damages phase of the trial.

Accordingly, to the extent that resolution of a party's "entire" challenge to a particular expert, as opposed to just those opinions clearly relevant to the liability issues outlined above, is deemed necessary, the entire challenge to that expert's testimony will be decided here. The parties should not, however, construe this course of action as an invitation to broaden the scope of the issues properly raised at the liability phase of the trial.

A. Halfmoon's Notice

1. Mark P. Millspaugh

Halfmoon intends to call Mark Millspaugh at the liability phase of the trial to offer his opinion "as to the issue of NCP compliance in connection with its CERCLA claims." GE has moved to exclude Millspaugh's opinions on this issue as unreliable—GE claims that an "[e]xamination of the underpinnings and content of his opinion confirms that it is based almost entirely on his own *ipse dixit* and is directly inconsistent with the express terms of the CERCLA, governing regulations, and applicable case law."

Millspaugh, President of Sterling Environmental Engineering, P.C., is a professional engineer registered in New York, Pennsylvania, Vermont, and New Hampshire. Millspaugh's relevant experience stretches back to 1977, the year he graduated with a B.S. in Environmental Engineering from Rensselaer Polytechnic Institute ("RPI").

Since bolstering his professional credentials by completing an M.S. in that same field in 1981 (which was also conferred on him by RPI), Millspaugh has enjoyed employment with a number of professional organizations relevant to this litigation, including a five-year stint with the New York State Department of Environmental Conservation ("DEC").

In sum, Millspaugh claims over thirty-five years of experience "involving a wide range

of engineering projects in the fields of solid and hazardous waste management, site development, water and wastewater facilities, and environmental permitting."

As Halfmoon notes, GE does not challenge Millspaugh's qualifications, and an independent review of his credentials reveals no basis on which to conclude further inquiry on this issue might be warranted. Rather, GE seeks preclusion of Millspaugh's opinions regarding Halfmoon's compliance with the provisions of the NCP, a prerequisite to recovery under the relevant provisions of CERCLA.

Codified at 40 C.F.R. pt. 300, the National Oil and Hazardous Substances Pollution Contingency Plan, or NCP, is "essentially the federal government's toxic waste playbook, detailing the steps the government must take to identify, evaluate, and respond to hazardous substances in the environment." Niagara Mohawk Power Corp. v. Chevron U.S.A., Inc., 596 F.3d 112, 136 (2d Cir. 2010). "Adherence to the plan is the gatekeeper to seeking reimbursement of response costs." Id.

"The NCP's procedural requirements include, among other things, that the party seeking response costs conduct a remedial site investigation, prepare a remedial investigation and feasibility study ("RI/FS"), and provide an opportunity for public comment." City of Mose Lake v. United States, 458 F. Supp. 2d 1198, 1236 (E.D. Wa. 2006) (internal citations and citation omitted). "Courts presume that actions undertaken by the federal, or a state, government are consistent with the National Contingency Plan." Niagara Mohawk Power Corp., 596 F.3d at 137 (citation omitted). However, "private parties that have responded to hazardous substances must establish compliance" with the NCP or risk being barred from recovery under the statute. Id.

Importantly, though, "[t]he EPA [has] expressly recognized that requiring private

parties to adhere to a set of mechanical rules would impede this objective." Aviall Servs., Inc. v. Cooper Indus., LLC, 572 F. Supp. 2d 676, 691 (N.D. Tex. 2008). As the Aviall Court observed, the EPA's own rulemaking has noted that "[p]rivate parties generally will have limited experience in performing cleanups under the NCP, and thus may be unfamiliar with the detailed practices and procedures in this rather long and complex rule; an omission based on lack of experience with the Superfund program should not be grounds for defeating an otherwise valid cost recovery action, assuming the omission does not affect the quality of the cleanup." Id. at n.16 (citation omitted).

Therefore, the mere fact that a party "did not adhere to particular provisions of the NCP is not controlling." Aviall Servs., Inc., 572 F. Supp. 2d at 691. Rather, consistency with the NCP is analyzed under a "substantial compliance" standard, and "immaterial or insubstantial deviations" will not necessarily render a particular remedial action inconsistent. Halfmoon I, 105 F. Supp. 3d at 215. "Ultimately, the goal is consistency and cohesiveness to response planning and actions." Niagara Mohawk Power Corp., 596 F.3d at 136-37 (citation and internal quotation marks omitted); see also AlliedSignal, Inc. v. Amcast Int'l Corp., 177 F. Supp. 2d 713, 738-43 (S.D. Ohio 2001) (noting NCP compliance focuses on whether the remedial activities are "protective of health and the environment and . . . [are] cost-effective").

In this case, Halfmoon I found that although the EPA had determined, as a general matter, that some provision of alternative drinking water would be necessary to protect plaintiffs' respective communities from the potential hazard of consuming contaminated water in connection with the dredging projects, there was no indication EPA had "specifically endorse[d] the plaintiffs' respective plans" for carrying out that important goal. 105 F. Supp.

3d at 215-16. Accordingly, Halfmoon I concluded:

> "Issues of material fact exist regarding whether plaintiffs' specific projects were chosen and implemented in substantial compliance with the NCP. For example, a jury must determine whether the EPA and NYDEC were sufficiently involved in the selection, implementation, and monitoring of the projects . . . . [and] [w]hether plaintiffs adequately considered alternatives must also be determined."

105 F. Supp. 3d at 217.

It is against this backdrop that GE challenges Millspaugh's expert conclusions. First, GE argues Millspaugh's expert opinion fails to correctly apply the relevant provisions of the NCP because "[w]hen he was specifically asked to draw a connection between the NCP provisions he actually cited in his report and [Halfmoon's] purchase of alternative water, he could not do it." GE emphasizes an exchange that took place at Millspaugh's deposition:

> Q. Can you tell me which provisions, that you discuss in Section 2 of your report, apply specifically to what Halfmoon did when it chose to use Troy water full-time?
>
> A. After laying a foundation with the definition of remedial action, and pointing to the provisions of removal actions, both including recognition of alternate water, I then stepped through that the Record of Decision identified that the downstream water users needed to be protected, and that alternate water would be planned and implemented as needed. **I don't have a particular citation to an individual provision of the NCP**. Rather, I relied on the fact that EPA managed this through the RIFS process, ultimately led to a decision that was embodied in a ROD, and that that ROD included alternate water.

In other words, GE seizes on the bolded statement identified above to claim that Millspaugh has "disavow[ed] having undertaken any review of relevant facts" in this matter, leaving his opinions "wholly divorced" from the NCP itself and thus subject to exclusion from this case. Cf. Parsi v. Daioleslam, 852 F. Supp. 2d 82, 89 (D.D.C. 2012) ("An expert

proposing to testify about professional standards must, however, identify specific and objective standards, not rely on his personal opinions about what professional standards should be."). Halfmoon defends Millspaugh's alleged gaffe by arguing that GE only managed to elicit this response by resorting to an allegedly deceptive maneuver; that is, asking Millspaugh to choose between which of two closely related subdivisions of the NCP applied to a municipality like Halfmoon.[3]

After careful consideration, Millspaugh's apparent inability to pass GE's impromptu closed-book examination on particular nuances of the NCP is not itself sufficient to justify exclusion. Although Millspaugh's highlighted testimony does reflect a degree of possible inexactitude or imprecision regarding certain sub-sections of the NCP, ("I don't recall specifically stepping down each and every element of subparagraph 5 and 6."), Halfmoon correctly notes that Millspaugh's expert report is focused on detailing how the oversight and approval process undertaken by the EPA in selecting the water supply contingency to be used during the dredging project is connected to the issues in this case.

This kind of analysis is relevant because, as Halfmoon I noted, one way of demonstrating compliance with the NCP would be to show that a party's response was conducted "under the monitoring, and with the ultimate approval, of the state's environmental agency" or the EPA. 105 F. Supp. 3d at 215. To be sure, there is a vigorous dispute between the parties over what GE perceives as Halfmoon's unilateral abandonment of that monitoring arrangement in favor of the full-time purchase of Troy water, something

[3] According to Halfmoon, an impossible choice that exploits a bit of unsettled law in our Circuit. See Town of New Windsor v. Tesa Tuck, Inc., 919 F. Supp. 662, 682-84 (S.D.N.Y. 1996) (examining whether a municipality should be considered a "state" for purposes of CERCLA cost recovery actions, answering that question in the negative, and surveying the conflict on the issue)

Millspaugh's opinion appears to indicate was nevertheless permissible and in substantial compliance with the NCP.

That may well be incorrect. But Millspaugh, an expert with specialized experience in the field of environmental engineering and hazardous waste management, reached this challenged conclusion after examining the particulars of the EPA's agreement and analyzing how that agreement was implemented in this case. In short, the best way to resolve the alleged shortcomings in Millspaugh's expert report is at trial. See Borawick v. Shay, 68 F.3d 597, 610 (2d Cir. 1995) (holding that the Supreme Court in Daubert "expressed its faith in the power of the adversary system to test 'shaky but admissible' evidence, . . . and advanced a bias in favor of admitting evidence short of that solidly and indisputably proven to be reliable").

GE further faults Millspaugh for his alleged failure to consider the fact Halfmoon never conducted its own investigation, study, or analysis to substantiate its decision to purchase Troy water on a full-time basis. Relatedly, GE notes that Millspaugh was unfamiliar with the "nine evaluation criteria" related to selecting a remedy under the NCP.

Again, though, rigid adherence to a checklist of rules is not necessary to demonstrate "substantial compliance" with the NCP. That matters in this context, because courts have endorsed a "purpose-based" approach to the issue of NCP compliance. See, e.g., Aviall Servs., Inc., 572 F. Supp. 2d at 692. As relevant here, "[t]he remedial investigation and feasibility study ("RI/FS") requirement of the NCP 'is intended to determine the extent of contamination and possible remedies.'" Carson Harbor Vill., Ltd. v. Unocal Corp., 287 F. Supp. 2d 1118, 1172 (C.D. Cal. 2003) (internal citation omitted).

According to Halfmoon, Millspaugh's opinion is that an independent evaluation would

have been "duplicative and unnecessary" in these circumstances, since the EPA had conducted its own multi-year RI/FS, issued a Record of Decision, and determined that the provision of alternate water was within the scope of the remedy selected. GE disagrees, making much of the fact that EPA's Record of Decision does not appear to explicitly authorize the unilateral purchase of Troy water on a full-time basis. Once again, Millspaugh's opinion may well be wrong, but it is based on his professional experience in the field, his review of the exhaustive history of this case, and his own understanding of the strictures of the NCP.

Finally, GE claims Millspaugh misstates the relevant law on NCP compliance. In support of its claim, GE points out Millspaugh's alleged misidentification of Halfmoon's action as "not inconsistent with," rather than "consistent with," the NCP. Of course, this seemingly trite semantic distinction matters—those phrases, found in different provisions of CERCLA, "carry with them different standards and burdens of proof." Town of New Windsor, 919 F. Supp. at 682.

Much like GE's first argument, this is an attempt to highlight Millspaugh's alleged misunderstanding of consequential distinctions in a complex regulatory scheme. But as Halfmoon notes, Millspaugh's expert report and his rebuttal report both utilize the "correct" language—speaking of Halfmoon's actions as being "fully consistent with" the regulations.

On balance, neither Millspaugh's usage of inconsistent language nor any of the other shortcomings identified by GE warrant exclusion at this juncture. Rather, GE is "free to challenge any 'shaky or unreliable' testimony before the jury using the 'traditional devices of vigorous cross-examination, presentation of contrary evidence, and careful instruction on the burden of proof.'" Hilaire, 54 F. Supp. 3d at 235 (citation omitted).

2. Robert Michaels

Halfmoon also intends to call Robert Michaels at the liability phase of the trial testify as to his first three expert conclusions:

1. The Dredging Project has resulted in elevated levels of PCBs in the Hudson River, including the presence of sheens of PCB NAPL (non-aqueous phase liquid PCB oils) on the river surface. Such PCB NAPL sheens were due to the presence of PCB NAPL in the bottom sediments of the river.

2. PCBs, including PCB NAPL, reside in the riverbed because of their release, discharge, and/or disposal by GE.

3. The Dredging Project cannot and will not eliminate all PCB contamination, including PCB NAPL, located in the bottom sediment of the Hudson River.

GE has not moved to exclude these portions of Michaels's expert report. Rather, GE previously sought only to exclude Michaels's eighth opinion, which recommends that Halfmoon obtain water from an alternate source for at least ten years following the completion of the dredging project.

However, GE argues in its supplemental notice that certain aspects of the first and third of Michaels's conclusions appear to stray outside the scope of the issues identified by Halfmoon I for resolution at the liability phase—generally speaking, Michaels's conclusions regarding the "incompleteness" of the cleanup of the sediment and the long-term consequences of that fact on the fitness of the drinking water going forward.

As Halfmoon notes, this opinion falls outside the scope of the issues identified for resolution at the liability phase of the trial. Indeed, Halfmoon's notice explains that Michaels's involvement at the liability phase of the trial will be limited to testimony as to (1) the nature and characteristics of oil and NAPL sheens in the river; (2) the mechanisms by

which those contaminants are released into the water column; (3) the forms or phases in which these contaminants present themselves; (4) the impact the dredging process has had on the contaminants present in the sediment; and (5) why these contaminants fall within the definition of "petroleum" set forth in New York's Navigation Law.

This outlined testimony appears relevant to a technical understanding of PCB contamination as well as the two liability issues delineated above. Therefore, although Michaels will certainly be confined to offering opinions relevant to topics suitable for resolution at the liability phase of the trial, further discussion of the admissibility of his opinions is unwarranted at this time.

B. Saratoga's Notice

1. Kirk Brown

Saratoga intends to call Kirk Brown at the liability phase of the trial to offer his opinion regarding the PCBs present in the Hudson River system, including the impact dredging has had on the existing contamination as well as the long-term consequences of their release on the river's water as a source of drinking water.[4] GE has moved to exclude several of Brown's opinions, arguing that neither his expertise nor his methodology is sufficient to support his opinions on these topics.

As an initial matter, a review of Brown's qualifications reveal that his current position as professor emeritus in the Soil and Crop Sciences Department at Texas A&M University is the capstone to a career spanning more than fifty years. Brown's educational background

[4] Halfmoon's notice discloses its intention to rely on Brown's testimony as to compliance with the NCP as well as scientific information regarding the nature, presence, and transport of PCBs in the Hudson River system.

includes a B.S. in Agronomy from Delaware Valley College, an M.S. in Agronomy / Plant Physiology from Cornell University, and a Ph.D. in Agronomy from the University of Nebraska.

In addition to these academic credentials, Brown's curriculum vitae reflects a laundry list of professional achievements. All told, the various committee appointments, society memberships, awards, guest lectures, and scientific publications span nineteen pages of small-type text. Brown also claims prior experience as a panel member for various EPA studies addressing issues of toxicity and risk as well as knowledge and experience evaluating risk assessment and mitigation of risk in the decision-making process for remedial actions in the context of hazardous waste sites.

Among other things, Brown's expertise has been utilized for:

> site assessments, data review and interpretation, waste management activities, the study of fate and transport of contaminants in the environment, the movement of contaminants in groundwater and surface water, the design and implementation of remedial actions for recalcitrant organic compounds, and other related matters.

Brown has also testified as an expert "in civil cases in federal and state courts, regulatory hearings, and enforcement actions" on issues "pertaining to hazardous wastes, organic chemical contamination, and the fate and transport of organic chemicals, NAPL, DNAPL, metals, and other contaminants in environmental media."

GE does not directly challenge Brown's expert qualifications, and for good reason. As Judge Cardamone observed nearly twenty years ago, "it is difficult . . . to imagine an expert with more experience and knowledge in the hazardous substances field than Dr. Brown." B.F. Goodrich v. Betkoski, 99 F.3d 505, 525 (2d Cir. 1996), overruled on other

grounds by New York v. Nat'l Serv. Indus., Inc., 352 F.3d 682, 685 (2d Cir. 2003).

That is not to say, however, that Brown's credentials place his expert conclusions above responsible scrutiny. See, e.g., Seneca Meadows, Inc. v. ECI Liquidating, Inc., 427 F. Supp. 2d 279 (W.D.N.Y. 2006) (discounting Brown's expert conclusions as speculative and characterizing his methodology "unique"). Here, GE seeks to preclude four[5] of Brown's opinions, arguing that he "lacks both the expertise and the reliable factual and methodological basis necessary" to make certain conclusions that "go well beyond the boundaries of fate-and-transport issues into questions of PCB health effects and the implications of those health effects for municipal water suppliers."

Specifically, GE's motion seeks to preclude Brown from opining that:

1. Communities that used to draw their drinking after from the Hudson River will require alternative water long after the Dredging Project is concluded (Opinion 4.5);

2. Potential spikes in PCB concentrations cannot be predicted with sufficient certainty to permit municipalities along the Hudson to use the river as a safe source of drinking water (Opinion 4.6);

3. It will not be safe for residents of Halfmoon to use the river for drinking water until there are no PCBs in the River (Opinion 4.11); and

4. The only way to ensure safe drinking water is to provide a permanent source of alternative water for the Plaintiff communities (Opinion 4.12).

At the outset, a review of these challenged conclusions suggests that although the continuing danger from (or successful elimination of) PCB contamination in the river will be

[5] GE also seeks to exclude Brown's opinions regarding PCB handling practices. However, these opinions appear to bear on certain of plaintiffs' now-preempted claims. See Saratoga Opp'n, ECF No. 217, 12 (discussing New York negligence claims). Accordingly, this branch of GE's motion is denied without prejudice to renew if necessary.

relevant to the damages phase of the trial, it is likely beyond the scope of the issues flagged for resolution at the liability phase.

Specifically, Halfmoon I held that, with respect to Saratoga, determinations were required regarding: (1) whether the decision to locate the intake in Moreau was an effort to avoid resuspended PCBs during the dredging project or was completely independent from the proposed dredging project; (2) whether the construction and operation of the water intake in Moreau was done in substantial compliance with the NCP; and (3) whether the resuspended PCBs are petroleum-based or have been mixed with petroleum.

Here, Saratoga's expert notice indicates that Brown's testimony at the liability phase will be focused on: (1) his knowledge of the nature, persistence, fate, and transport of PCBs discharged and released from GE plants into the Hudson River; (2) federal and state sampling, monitoring, and testing of those contaminants; (3) the process and effects of resuspension from the dredging project; and (4) the continued discharge of PCBs into the environment. This information seems limited to the liability issues outlined above, since it goes to an understanding of how PCBs are interacting with the Hudson River system and will assist the trier of fact in understanding the complex issues in this case.

In fact, a review of Brown's expert report reveals that he has carefully documented the sources (and, according to him, associated uncertainties) of ongoing PCB contamination in the Hudson River. For instance, Brown begins from his area of indisputable expertise—he concludes there is a significant likelihood that bedrock fractures and other soil-related contamination from GE sites along the waterfront are "continuing sources" of PCB contamination leaching into the river and that, although GE claims these sources are declining, "they have not ceased and the mass transported to the river is not zero." Brown is

certainly entitled to rely on his review of the data and tests available to him, along with his expertise, to draw that conclusion.

Relatedly, Brown notes that the effects of PCB resuspension and unpredictable downstream transportation—both from dredging activities and from naturally occurring events—make it difficult, if not impossible, to accurately monitor the concentration of PCBs on a real-time basis. In Brown's view, this issue is further complicated by the heterogeneity of the water column, which poses additional difficulties when attempting to accurately measure the levels of PCB contamination present in any one location. Likewise, Brown adequately explains the basis for his opinion that the presence or absence of visible oil sheens on the surface has no necessary bearing on the less-visible movement of contaminants along the river's bed.

In sum, these conclusions are based on Brown's extensive understanding of, and experience in, the fate and transport of contaminants in a complex system, such as the Hudson River, and are admissible. GE's motion does take a passing shot at Brown's apparent lack of academic familiarity in dealing specifically with PCBs, but Saratoga persuasively responds that Brown's years of experience as a technical advisor to the EPA and other agencies on issues related to hazardous substances, along with Brown's thorough review of the particular facts of this case, are a more than sufficient basis on which to conclude Brown is qualified to opine about the fate and transport of PCBs. See Argonaut Ins. Co. v. Samsung Heavy Indus. Co. Ltd., 929 F. Supp. 2d 159, 168 (N.D.N.Y. 2013) (D'Agostino, J.) ("An expert does not have to conduct his own tests and may rely upon data that he did not personally collect." (citation and internal quotation marks omitted)).

Beyond these foundational opinions, it appears that the four opinions GE's motion

seeks to preclude specifically concern the length of time that the safety of the Hudson River water cannot be assured and are likely only relevant to the extent of the damages Saratoga could claim, not the issues of liability identified above. However, in light of the possibility that Brown may be called upon to describe how knowledge of the threat of resuspended PCBs may have played some role in Saratoga's decision to locate its facility at Moreau, the remainder of GE's challenge to Brown's opinions will be resolved here.

The four opinions GE challenges above are efforts by Brown to do anything beyond simply describe the complexities and uncertainties of the river system itself—GE maintains Brown is unqualified to opine about the fitness of the Hudson River as a source of "safe" drinking water.

First, however, and as Saratoga correctly argues, nothing in Rule 702 precludes Brown from making "reasonable observations about the widely accepted governmental position that PCBs are a hazardous substance and a known carcinogen."

Indeed, a review of CERCLA case law reveals that PCB exposure is widely understood as harmful. See, e.g., NCR Corp. v. George A. Whiting Paper Co., 768 F.3d 682, 688 (7th Cir. 2014) ("PCBs are carcinogenic for humans and animals alike, and they have harmful noncarcinogenic effects on the immune, reproductive, neurological, and endocrine systems, as well as the skin."); Consolidation Coal Co. v. Georgia Power Co., 781 F.3d 129, 155 (4th Cir. 2015) (noting PCBs are "potent human carcinogens 'linked to skin cancer, liver cancer, brain cancer, intestinal cancer, bladder cancer, leukemia, birth defects in humans and animals, and other health problems'" (quoting United States v. Gen. Elec. Co., 670 F.3d 377, 379 n.1 (1st Cir. 2012))).

Importantly, Brown's statements regarding the widely accepted health risks of PCBs

do *not* include any speculation about the specific, long-term effects of such exposure on the human body, something which Brown has been precluded from opining about in the past. Palmer v. Asarco Inc., 2007 WL 2302584 (N.D. Okla. Aug. 7, 2007) ("While Dr. Brown can testify how lead dust is transported from one place to another, the actual ingestion and elevation of blood lead levels is outside of his expertise."). However, based on a similar rationale to Palmer, Brown can permissibly reason that, since a given level of exposure poses a quantifiable risk, exposure beyond the given level serves to increase that risk. See id. at *9 ("Dr. Brown can testify about an increased risk of [contaminant] exposure" for persons in a given area).

In fact, Brown's expert report goes into significant detail regarding the accepted New York State standards for PCB concentrations and explains how water sampling from the Hudson River frequently exceeded, and, in his opinion, could be expected to continue to exceed, these standards. Brown includes a similar discussion of the risk-based concentrations used by the EPA.

Importantly, Brown notes that his previous, permissible conclusions about "fluctuations in the flow of the river and widely variable PCB concentrations within the channel of the river" mean that, in his expert opinion, sample results from monitoring stations "will not be representative of the water drawn from the river by the public."

This conclusion is based on Brown's opinion that attempts at accurate monitoring have been imperfect and likely too conservative. For instance, he notes that established standards during Phase I of the Dredging Project were exceeded at various times and that the EPA and GE responded by actually relaxing the permissible criteria. In other words, Brown builds on his earlier conclusions about the uncertain fate of PCBs in the river system

to conclude it has been, and will continue to be, difficult to ever accurately determine the *true* levels of PCB exposure resulting from Hudson River water.

Of course, GE urges adoption of the EPA's position on this issue, which is that PCB-laden river water below certain concentrations is safe to consume. But although this expert agency position is likely relevant in this case, it is not the final word on possible harmful health effects. Cf. United States v. P.H. Glatfelter Co., 768 F.3d 662, 677 (7th Cir. 2014) ("Thus, sediment with a PCB concentration of 0.99ppm will be left alone, not because it is uncontaminated, but because it is insufficiently contaminated to push the [EPA's chosen standard of harm] . . ." to a particular level). In other words, while Brown's apparent disapproval of the EPA standard, or his failure to adopt it, may be troubling, it is not the kind of "serious flaw" in reasoning that would warrant exclusion. See Fed. R. Evid. 702 advisory committee's note ("The evidentiary requirement of reliability is lower than the merits standard of correctness." (quoting In re Paoli R.R. Yard PCB Litig., 35 F.3d 717, 744 (3d Cir. 1994)).

Rather, and as Saratoga notes, Brown's opinion that river water must contain "zero PCBs" before it can be considered "safe," the main conclusion challenged by GE, is based on Brown's detailed findings of rampant uncertainty regarding the true extent and expected duration of PCB contamination in the river system. The correctness of this conclusion, as well as Brown's apparent failure to consider whether filtration of raw water would be a viable alternative solution, are subjects ripe for cross-examination, not bases for exclusion. Cf. Argonaut Ins. Co., 929 F. Supp. 2d at 170 (noting the fact that an expert allegedly failed to perform or consider some "essential" test or measurement goes to the weight, and not admissibility, of the testimony).

2. David O. Carpenter

Saratoga intends to call Carpenter during the liability phase of the trial to testify, among other things, as to (1) the toxicity, adverse health effects, and other risks associated with PCBs on public health; (2) the decision to locate the public water intake upstream of dredging; (3) the issue of NCP compliance; and (4) the public health impact of past, present, and future PCB concentrations and the need for alternative water supplies.

However, as GE's supplemental notice points out, Halfmoon I already concluded that "the dredging project posed an actual threat to human health—a threat sufficiently significant to necessitate the provision, at least initially, of alternative drinking water to the public. The issue of whether the threat of harm ever dissipated and when, if ever, the water in the Upper Hudson River became safe enough for public consumption is altogether separate and may limit the damages." 105 F. Supp. 3d at 213.

In other words, GE claims certain aspects of Carpenter's expected testimony regarding the adverse health effects of PCBs, already established as a known harm to the public in Halfmoon I, would fall outside the scope of the liability phase of trial.[6] To be sure, the reality and/or risk of a continuing harm to the public through PCB exposure, as well as its possible duration, will be relevant to the issue of damages as framed by Halfmoon I. However, a review of the material reveals that the possible utility of Carpenter's expert testimony is not so easily bifurcated. Therefore, out of an abundance of caution, GE's motion to exclude Carpenter will be resolved here.

As an initial matter, a review of Carpenter's credentials confirms that he is qualified to

[6] Carpenter, like many of plaintiffs' experts, seems to take the position that exposure to any concentration of PCBs is harmful.

opine on the general public health risks associated with PCB exposure. Currently a Professor of Environmental Health Sciences in the School of Public Health and Director of the Institute for Health and the Environment at the University of Albany, Carpenter's career in "biomedical research and public health" began in 1964, when he graduated from Harvard Medical School.

For more than twelve years, Carpenter has directed a large, interdisciplinary research study on PCB contamination emanating from an industrial site in New York funded by the Superfund Basic Research Program of the National Institute of Environmental Health Sciences, one of the National Institutes of Health. This project has included, among other things, health studies of nearby residents, animal toxicology studies on the effects of PCBs, and detailed determinations regarding PCB levels in the region's humans, animals, soils, sediments, air, and water.

Carpenter has also served on "several national and international advisory committees," published numerous articles on the results from human and animal exposure to PCBs, and has reviewed thousands of medical records in connection with this body of research. Carpenter currently co-chairs a United States task force of the International Joint Commission "dealing with the variety of health concerns resulting from contamination" on Lake Erie and is also a member of a panel of experts assembled to review the newest edition of the Agency for Toxic Substances and Disease Registry's *Toxicological Profiles for Polychlorinated Biphenyls*. In sum, Carpenter is qualified to provide an opinion on the risk to human health posed by exposure to PCBs.

GE does not contest Carpenters' qualifications, and a review of them indicates he is well-suited to offer opinions on certain issues in this case. Rather, GE requests exclusion of

three aspects of Carpenter's expert opinions:

1. "[T]o the effect that plaintiffs acted reasonably in taking steps to avoid drawing drinking water from stretches of the Hudson River affected by PCBs and GE's Dredging Project."

2. About the "superiority" of "congener-specific" PCB detection methods over "Aroclor" detection methods.

3. Regarding compliance with the NCP.

First, GE argues that Carpenter's opinions about the reasonableness of plaintiffs' decision to avoid drawing drinking water from the Hudson River must be excluded because Carpenter, who is admittedly *not* an expert in the nuances of municipal "cost-benefit decision-making," cannot opine on the reasonableness of plaintiffs' chosen courses of conduct.

This argument is unpersuasive. Essentially, it is an attempt by GE to cast Carpenter's opinions about the health effects of PCB exposure as opinions about the totality of the relevant inputs required for a proper, or "reasonable," cost-benefit analysis of the kind in which a municipality would be expected to engage when selecting (or avoiding) a particular drinking water source. But as GE readily admits, information about the "risks associated with a given water source" is certainly relevant as an input into such a risk-based analysis. And while it is likely not, as GE argues, the "only input," Carpenter does not purport to make that claim.

Rather, if one assumes that the reasonableness of a chosen response to a threat, perceived or otherwise, exists on a continuum, then Carpenter's expert opinion substantiates the degree of one of the factors relevant in that calculus—in his opinion, exposing the residents of plaintiffs' respective municipalities to PCBs at *any* concentration poses a

significant health risk.

For example, assume that a hypothetical municipality's decision-makers have chosen, or have been forced, to engage in such a risk analysis. If these decision-makers had acted either in the absence of the kind of information substantiating a threat that Carpenter has offered here, or possibly in the face of some consensus demonstrating there was no risk, one would likely describe such a response as an "unreasonable" or "unnecessary" one under the circumstances. N.Y.S. Elec. & Gas Corp. v. FirstEnergy Corp., 808 F. Supp. 2d 417, 522 (N.D.N.Y. 2011) (Peebles, M.J.) (noting "courts generally deny [CERCLA] recovery where costs incurred are duplicative of others, wasteful, or otherwise unnecessary to address the hazardous substances involved"), vacated in part on other grounds by 766 F.3d 212 (2d Cir. 2014). In other words, Carpenter's opinions about the degree, reality, and likely duration of the harm helps put such decision-making, which necessarily exists on a continuum, into context.

The conclusion on this issue might be different if Carpenter's report attempted to flesh out a formalized municipal risk assessment or advance an assessment that valued, say, *only* the risk of PCB exposure to the exclusion of all else. But as Saratoga notes, Carpenter explicitly disavows that kind of risk analysis expertise; rather, he readily acknowledges that he is only contributing his opinion about how the risks stemming from PCB exposure deserve to be weighed in that equation.

GE cites to Allgood v. General Motors Corp., a case in which Carpenter was precluded from offering his opinion "as to the proper components and cost of a proper medical monitoring program," to justify his exclusion here. 2006 WL 2669337, at *29 (S.D. Ind. 2006). But unlike in Allgood, Carpenter's expert opinion here is not about the proper (or

improper) elements of a risk assessment, but rather about how PCB risk might fit into such an analysis. As Saratoga notes, there is no requirement that Carpenter consider every input GE identifies as relevant in its preferred equation. Rather, the best way to test the relevance (or limits) of Carpenter's opinion on this issue is through cross-examination.

Second, GE contends Carpenter's opinion about the relative accuracy of two different methods of PCB measurements are "speculative" and "contrary to available data." Specifically, GE is challenging Carpenter's opinion that the so-called "Aroclor method" of analyzing Hudson River water fails to "adequately determine the total exposure coming from drinking water." Instead, Carpenter touts the superiority of a "congener-specific" analysis.

Resolution of this challenge requires some quick background information, since the term "PCB" actually represents a group of 209 possible molecular variants, known as "congeners." And although these variants share many common characteristics, different congeners have different biological actions and cause different adverse health effects.[7]

According to Carpenter, the Aroclor method of testing for PCBs "does not determine total PCB concentration, but rather determines only the concentration of PCBs that match the pattern of the original commercial mixture." Therefore, the Arocolor method "will ignore concentrations of congeners that don't fit the pattern of the original commercial mixture, and thus will significantly underestimate the total PCB concentration, especially of lower chlorinated congeners."

GE argues this opinion must be excluded because Carpenter's hypothesis regarding

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[7] Monsanto manufactured commercial mixtures of PCBs in the United States under the brand name Aroclor. Allgood, 2006 WL 2669337, at *6.

the superior accuracy of congener-specific testing has been "shown to be false." To support this claim of falsity, GE points to a 2008 study conducted by the New York State Department of Public Health ("DOH"), which collected samples of finished drinking water from nine public water systems on the Hudson River. DOH performed a "form" of Arocolor analysis and compared those results to the "Green Bay Method," a "form" of congener-specific analysis.

According to GE, the results published by DOH "showed that in virtually every instance where the reported PCB level was above the detection limit of the instrumentation, the Aroclor method reported a higher total PCB concentration than the congener-specific method." When shown the results of this study at his deposition, GE claims Carpenter categorically refused to accept this empirical data.

But GE's assertion is an overstatement. A review of Carpenter's deposition transcript reveals that his position on the relative value of these two methods is not avowedly anti-science, as GE claims, but is rather an expression of skepticism regarding the outcome of the particular test run by the DOH in light of his own technical understanding of these analyses:

> Q. And does this seem to indicate that the values obtained by the Green Bay method were lower than the values obtained by the method 508 for finished drinking water?
>
> A. Well, that would seem what it's showing here, but I don't believe it. The Green Bay method is not a very sensitive congener-specific method. I – actually, I – I work with the laboratory on my research projects, the laboratory that does all of the the – these analyses. And I've specifically asked that question of [the chief of the analytical program at the Pace laboratory]. And he basically totally agrees with me that the Aroclor method is an underestimation of the total concentration and the Green Bay method, while it is a congener-specific method, is just not a very sensitive congener-specific method. My laboratory only did congener-

> specific analyses, although in my lab, we only had ability to measure 101 of the 209 congeners, but we got almost all of the ones that are usually found. And we've done many comparisons – well, I shouldn't say many, but we've done comparisons between Aroclor analyses and our congener-specific analysis, and the – the Aroclor analyses are not – not sensitive.
>
> And it makes sense, because you have these commercial mixtures, and there are five major – sometimes people say six major Aroclors. The Aroclor method looks at patterns derived from four or five congeners and – and judges what the total would be on the basis of those four or five congeners. But in the real world, whether you're talking about congeners in sediment, in sediment that are anaerobic bacteria that removes some chlorine, so the pattern changes from the commercial mixture. Then what goes into solution is a selective solubility to the lower chlorinated congeners, so that pattern changes.

As Saratoga notes, GE has not identified some massive body of scientific literature expressing a consensus that weighs against Carpenter's position on the value of a congener-specific analysis, but rather has identified a single DOH study, which uses a congener-specific method that Carpenter specifically challenges as insufficiently "sensitive," that appears to *possibly* contradict his professional opinion. But just as Carpenter's opinions on the matter are not to be taken as gospel, neither are the DOH's findings on a 2008 study the final word on the matter. Rather, GE is free to challenge any problems it perceives with Carpenter's congener-specific analysis on cross-examination.

Finally, GE seeks to preclude Carpenter from opining on the issue of NCP compliance. As with Millspaugh, GE takes issue with Carpenter's inability to recite the details of the complex regulatory regime that is the National Contingency Plan, the details of which Carpenter unsurprisingly characterizes in his deposition as "[e]ven more boring" than CERCLA.

As noted above, GE is no doubt correct to point out that the NCP is at least as technical as "the tax code and Medicare regulations." Amcast Indus. Corp., 779 F. Supp. at 1534. But, just as with Millspaugh's allegedly unsophisticated understanding of the same issue, it is not fatal to Carpenter's admissibility. Rather, Carpenter's expert report reflects that he has reviewed and is familiar with the relevant provisions of CERCLA as well as the complex, "even more boring" framework of the NCP. Given the plaintiff-friendly nature of the aforementioned "substantial compliance" standard of the NCP, GE must do more than demonstrate an expert's inability to recall certain aspects of that complex regulation at a deposition in order to justify preclusion. Rather, to the extent GE believes Carpenter, Millspaugh, or other experts lack the requisite understanding of the so-called "toxic waste playbook," that belief can be tested on cross-examination.

C. GE's Notice

1. Stephen A. Johnson

i. Saratoga

GE intends to call Johnson to address whether Saratoga's response costs were "necessary" and "consistent with the NCP." In Johnson's expert opinion, Saratoga's claimed response costs were not "necessary" because "they were not in fact incurred in response to a threat to human health or the environment" and were not "consistent with the NCP" because Saratoga failed to adequately (1) evaluate the risks to be addressed; (2) consider alternative methods of addressing those risks; and (3) utilize the public participation process.

Johnson, a Professional Engineer licensed in the State of California, claims thirty years of professional experience in the cleanup of contaminated sites and the related issues of compliance with environmental laws and regulations. After attending Stanford University,

where he obtained both a B.S. in Civil Engineering and an M.S. in Environmental Engineering, Johnson joined the EPA, where he began work as a Remedial Project Manager in the newly created Superfund Program.

In that role, Johnson enjoyed direct responsibility for investigation and cleanup operations at various Superfund sites in Region IX, the Pacific Southwest. Among other things, Johnson oversaw private party CERCLA response actions and ensured that those actions complied with the NCP.

Thereafter, Johnson became an Inspector and Compliance Officer with the EPA Region IX's Water Management Division and, eventually, Chief of Region IX's Resource Conservation and Recovery Act ("RCRA") Enforcement Section. In the former role, he inspected facilities subject to various state and federal regulatory requirements and again oversaw private party response actions taken "to control releases of hazardous substances to ground water" being implemented in accordance with the Clean Water Act. In the latter, Johnson "developed and implemented EPA Region IX's RCRA corrective action program," a site cleanup program analogous to CERCLA's Superfund program.

Eventually, Johnson left the EPA to become an Assistant Director of the Arizona Department of Environmental Quality, where he headed the Office of Waste Programs. There, Johnson developed and implemented all waste-related programs and coordinated the cleanup of sites contaminated with hazardous substances, hazardous waste, deleterious solid waste, and other chemicals or wastes that potentially posed threats to human health or the environment.

These days, Johnson is a Director at Gnarus Advisors LLC, a consulting firm that provides "economic, financial, and environmental analysis, expert testimony, litigation

support, regulatory analysis, strategic management consulting, and other services to a broad range of public and private enterprises" on environmentally related issues.

Saratoga does not dispute Johnson's credentials or the relevance of his extensive professional experience to the issues at play here, and an independent review reveals no basis on which such a dispute could be based. Rather, Saratoga claims Johnson's expert opinions: (1) impermissibly rest on conclusions about the "motivations and intent" of Saratoga's decision-makers; (2) include improper legal conclusions; and (3) employ an unreliable methodology.

First, Saratoga contends that Johnson's opinions are based on his conclusions about the "motivations and intent" of Saratoga's decision-makers regarding the construction of the intake at Moreau. But as GE correctly responds, Johnson's expert report does not "rest on any effort to read Saratoga's institutional mind." Instead, Johnson's opinions are based on a review of the paper trail created by Saratoga during its run up to eventually selecting Moreau as the appropriate site for the facility and an examination of whether or not any documentary evidence produced in discovery substantiates Saratoga's claim that relocation of the facility was necessary in light of the threat of PCB contamination. See N.Y.S. Elec. & Gas Corp., 808 F. Supp. 2d at 523 ("[C]osts motivated solely out of business concerns are not recoverable under CERCLA; [i]f a party would have incurred identical costs to those recovery of which is sought in the absence of any threat, then the presence of the threat cannot be said to have cause[d] the incurrence of response costs." (citation and internal quotation marks omitted)).

Second, Saratoga argues "Johnson should not be permitted to opine as to whether plaintiffs complied with CERCLA and/or the NCP." However, Halfmoon I already concluded

that those issues must be determined by a jury. See 105 F. Supp. 3d at 217 ("Issues of material fact exist regarding whether plaintiffs' specific projects were chosen and implemented in substantial compliance with the NCP."). And as GE notes, expert testimony on those issues is regularly utilized in these cases. See, e.g., Pentair Thermal Mgmt., LLC v. Rowe Indus., Inc., 2013 WL 1320422, at *16 (N.D. Cal. Mar. 31, 2013) (finding Johnson's expert testimony on necessary response costs to be "credible and [his] method consistent with the case law"); see also G.J. Leasing Co. v. Union Elec. Co., 54 F.3d 379, 386 (7th Cir. 1995) (noting a party "could have called an additional expert to bolster its case for the necessity of its response costs").

To be sure, "[t]he distinction between fact and legal conclusions . . . is extremely fine and courts faced with determining whether an expert's opinion goes too far are often forced to recite a slew of case law in an attempt to determine where the line should be drawn." TC Sys. Inc. v. Town of Colonie, N.Y., 213 F. Supp. 2d 171, 181 (Treece, M.J.). But the mere fact that an expert's opinion is based on criteria delineated by the applicable law does not transmogrify it into a legal conclusion. See id. at 182 ("If a proper foundation is laid and [the expert] can establish a nexus between the [statutory and regulatory] criteria and the facts here, her testimony may be appropriate.").

Of course, the Court will exercise its supervisory authority at trial to ensure that neither Johnson's testimony, nor the testimony of any other expert for that matter, "usurp[s] the role of the trial judge in instructing the jury as to the applicable law or the role of the jury in applying that law to the facts before it." TC Sys. Inc., 213 F. Supp. 2d at 181 (citation omitted); see also id. at 182 ("Any testimony as to the *intent* of the [statute or regulations] or how the jury should ultimately decide this case, however, is inappropriate." (emphasis

added)).

Third, Saratoga challenges Johnson's document-based approach to reconstructing Saratoga's decision-making process vis-a-vis locating the water intake at Moreau. In particular, Saratoga argues that Johnson has simply reviewed and summarized "selected documents," which amounts to an "incomplete historical narrative" that must be excluded. GE responds by pointing out that the NCP "consists in large part of procedural and documentary requirements"; in other words, the applicable regulations "call for the creation of various types of documents in order to ensure that remedial options are properly considered, evaluated, and tailored to the health risks involved and that the decisional process is open to objective scrutiny." In GE's view, there is no alternative way to conduct this kind of analysis.

GE has the better of this argument. There is no doubt that a simple recitation of the parties' history, without any scientific or technical connection, is not admissible as expert testimony. Member Servs., Inc. v. Sec. Mut. Life Ins. Co., 2010 WL 3907489, at *26 (N.D.N.Y. Sept. 30, 2010) (McAvoy, S.J.) (excluding expert report that was "little more than a factual narrative based upon [a] review of select discovery documents and . . . other expert reports"). Johnson's report does contain a factual narrative that has been drawn from his review of the paper trail leading up to the siting decision at Moreau. But that is as it must be, since NCP compliance is evaluated by comparing a record of a party's actions against the regulations. Cf. Washington State Dep't of Transp. v. Washington Nat. Gas Co., Pacificorp, 59 F.3d 793, 802 (9th Cir. 1995) ("We evaluate consistency with the NCP by reviewing the actions of the party seeking response costs.").

In other words, Johnson's testimony is admissible insofar as it is helpful to the

factfinder in evaluating whether Saratoga's course of conduct was in "substantial compliance" with the NCP's "procedures for preparing for and responding to . . . releases of hazardous substances." Nashua Corp. v. Norton Co., 116 F. Supp. 2d 330, 352 (N.D.N.Y. 2000); cf. Linde v. Arab Bank, PLC, 922 F. Supp. 2d 316, 323 (E.D.N.Y. 2013) (finding testimony admissible where expert "pull[ed] together information from discrete sources . . .and cross-referenc[ed] it against other supportive or contradictory information in reaching his conclusions").

As Saratoga points out, certain of Johnson's conclusions, such as his "astonishing statement" that "there is no information in the documents I have reviewed that *in any way* indicates that PCBs in the Hudson River played any role whatsoever in [Saratoga's] decision," may well be wrong. But Saratoga is free to highlight those shortcomings on cross-examination; the factfinder is equally free to consider and discredit them. See APL Co. Pte. v. Kemira Water Sols., Inc., 999 F. Supp. 2d 590, 622 (S.D.N.Y. 2014) (admitting and considering similar expert testimony in bench trial on CERCLA case before concluding the expert's opinions "are based on either an inaccurate or incomplete understanding of the factual record about which he opined").

ii. Halfmoon

GE intends to call Johnson to address substantially the same issues with regard to Halfmoon; that is, whether the municipality's response costs were incurred in compliance with the NCP. In Johnson's expert opinion, Halfmoon's costs were not "consistent with the NCP" because Halfmoon failed to adequately (1) evaluate the risks to be addressed; (3) consider alternative methods of addressing those risks; and (3) utilize the public participation process.

Halfmoon's exclusion motion presses many of the same claims against Johnson as

Saratoga, and those claims are rejected for substantially the same reasons articulated above. However, Halfmoon also claims Johnson's report makes an assumption belied by the factual record: that Halfmoon's use of Troy water constituted a "separate response action," rather than part of the contingency already selected and planned for by the EPA. According to Halfmoon, any conclusions drawn from this false premise are likely to mislead the jury and must be excluded.

But as GE notes, Johnson's report does not deny the existence of the EPA agreement to reimburse Halfmoon for the cost of purchasing Troy water. Rather, Johnson's report points out that the EPA reimbursement agreement was, at least at first, only triggered by certain "Water Supply Decision Criteria." This reimbursement was therefore limited to instances where:

> 1. Measurement of a concentration equal to or exceeding the Resuspension Standard of 500 ng/l Total PCBs at any of several enumerated far-field monitoring stations or at any Upper Hudson River water supply system, or
>
> 2. If there is insufficient time to provide at least four hours advance notification to Waterford and Halfmoon prior to the arrival of a potentially contaminated parcel of water at the water purveyor's intakes, taking into account time-of-travel considerations.

However, later EPA documentation demonstrates that the EPA eventually agreed to cover additional costs incurred by Halfmoon. Of particular relevance here, these were the incremental costs of obtaining Troy water, on a full-time basis and without reference to the specific criteria articulated above, (a) year-round from March 2010 through at least the end of the 2012 dredging season and (b) during all dredging seasons for the remainder of the dredging project.

The dispute here is over how this evolving relationship between Halfmoon and the EPA should be characterized. According to Halfmoon, it is wrong (and consequently misleading) for Johnson to opine that these changes amounted to reimbursement of Halfmoon "at certain time periods other than when the EPA Decision Criteria were triggered," because it suggests the EPA acted improperly or that Halfmoon's purchase of water was not part of the original EPA agreement. According to GE, Johnson is merely pointing out that the two-pronged criteria for reimbursement set forth in the block quote above required a different, more specific set of condition to be met than the later agreement permitting broader latitude in when and how to purchase Troy water.

Ultimately, whether Johnson's report is fairly read as suggesting the EPA acted *ultra vires* is irrelevant to resolving Halfmoon's motion. A careful review of Johnson's report shows that it correctly defines the "Decision Criteria" considered the EPA as the two criteria set forth in the block quote above. In other words, defined on that basis, Johnson is correct to say that reimbursement eventually occurred under circumstances outside of those initially defined criteria.

GE's further position (ostensibly supported by other aspects of Johnson's analysis) is that Halfmoon is attempting to avoid exposing a logical fallacy on which its cost recovery claim is based: that is, that it does not follow that because the EPA agreed to reimburse *certain* costs of alternative water (in whatever iteration of the agreement under consideration), that therefore *any* costs of alternative water – even those costs incurred in circumstances and/or at times not covered by the reimbursement commitment (again, in whatever iteration of the agreement you consider) – necessarily fall within the EPA-selected remedy and are therefore excused from any independent inquiry into their consistency with

the NCP's complex requirements. That argument goes to the heart of the trial in this matter and is best resolved by permitting experts in NCP compliance to offer testimony to the jury.

2. Gregg W. Jones

GE intends to call Jones to address issues related to whether certain response costs incurred by Saratoga were necessary. In particular, Saratoga contends "that but for the pending dredging project[,] [the municipality] would have put the water intake in the Town of Stillwater [a less costly location], which is within the dredging zone." Halfmoon I, 105 F. Supp. 3d at 209. However, GE claims that Saratoga's decision to ultimately locate the raw water intake and treatment facility at Moreau actually "had nothing to do" with any consideration of the dredging, or planned dredging, of the Hudson River. GE relies on Jones's expert opinion to substantiate this litigation position.

Jones is a professional geologist with twenty-eight years of professional experience "in all aspects of water supply planning." Jones began his career in the field in 1986 as a Staff Hydrologist on the Groundwater Quality Monitoring Program at the Southwest Florida Management District, "a state agency of over 700 employees charged with managing all aspects of water in a 16-county area."

From 1998 through 2007, Jones held the title of Director of the Water Supply Planning Department, where he oversaw the efforts of sixty "water resource professionals" in developing the district's comprehensive, long-term water supply plan. Currently, Jones is Vice President and Technical Director of Water Resources & Water Supply Management at Cardno ENTRIX, Inc., a provider of environmental consulting services.[8]

[8] As of the date of his deposition, Jones was also pursuing a doctorate in Geochemistry.

Jones's expert report centers on a 1990 intermunicipal water study (the "1990 Study") completed by a consulting firm at Saratoga's behest. The 1990 Study "analyzed population trends, water demands, and potential plans for the provision of water to municipalities within the County" and initially concluded that a raw water intake and treatment plant should be located at Moreau. Halfmoon I, 105 F. Supp. 3d at 207. Two subsequent studies, completed by the same consulting firm in 1995 and 2002, substantially re-endorsed that initial siting location. Id.

Jones seeks to "demonstrate that these original recommendations and projections . . . remained largely consistent and valid throughout the 20-year period" between the original analysis in 1990 and the completion of the first phase of the Moreau system in 2010. Ostensibly, Jones's expert testimony lends support to GE's assertion that Saratoga never seriously considered locating its treatment facility at the less costly Stillwater site.

As an initial matter, Saratoga challenges Jones's fitness to opine on this issue, arguing his training as a geologist does not supply the necessary expertise in engineering, demography, or economics necessary to evaluate siting decisions for water supply projects. However, as GE correctly notes and an independent review of his credentials confirms, Jones's substantial professional experience as Director of the Water Supply Planning Department at the Southwest Florida Management District qualifies him to opine on the sort of issues a municipal organization might encounter when making water supply planning decisions.[9]

[9] Although it appears that his professional experience is focused primarily on water planning issues germane only to Florida, Jones's deposition also indicates he has consulted with various other water management districts as well as conducted extensive water supply planning on a large scale project in North Dakota on behalf of the Bureau of Reclamation.

Beyond this threshold issue, Saratoga advances several reasons why Jones's opinions must nevertheless be excluded. First, Saratoga claims that Jones's opinions are not the product of any independent study or analysis, but rather limited to an incomplete assessment of some of the factors considered in the 1990 Study. But as GE correctly responds, that is not quite what Jones has done here. Rather, Jones's expert report isolates certain projections made by the studies in 1990, 1995, and 2002, and compares the accuracy of those projections with independent analyses of population distribution, water quality, and certain costs of operation.[10]

Second, Saratoga identifies certain factors that Jones failed to consider, chief among them the impact of PCBs. This omission rightly raises suspicion given that PCB contamination is a core issue in this case. However, Jones's chosen approach limits the analysis to those factors laid out in the 1990 Study, which was conducted well before the dredging project became reality. According to Jones, if the projections made in the water studies proved to be accurate or largely unchanged, then the initial recommendation made in the 1990 Study—to site the intake at Moreau—should have remained the "preferred" location irrespective of any concerns about dredging or PCBs.

That may well be the wrong conclusion, but whether and to what extent the spectre of PCB contamination influenced Saratoga's ultimate siting decision is a vigorously disputed issue in this case. N.Y.S. Elec. & Gas Corp., 808 F. Supp. 2d at 523 ("There is sometimes

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[10] Saratoga also faults Jones for failing to conduct a threshold inquiry into whether, in his opinion, the original recommendation made in the 1990 Study was correct. But that sort of inquiry would not impact the validity of the analysis. Jones is not concerned with the "correctness" of the recommendation made in the 1990 Study (since presumably GE would argue Saratoga would have relied on it as written, correct or otherwise), but rather with whether the projections made in that initial study proved accurate over time (since, ceteris paribus, there would be no reason to alter the original siting recommendation).

overlap between necessary hazardous waste responses and actions undertaken for other reasons . . . ."). So while the overall value of Jones's analysis in the context of Saratoga's claims is suspect (since it carries with it the tacit implication that the 1990 Study's recommendation regarding the appropriate site for the water intake was the *only* acceptable input into that decision-making process), Jones's expert opinions fall on the admissible side of the divide preventing presentation of so-called "junk" science. In sum, Jones's alleged failure to consider certain factors in his analysis, and especially his apparent lack of familiarity (as evidenced by his deposition) with the serious issues raised by PCBs, are all matters for trial.

Essentially, this expert challenge boils down to the same kind of arguments GE has pressed against plaintiffs' experts. Here, Saratoga is claiming Jones's analysis fails to consider certain factors it claims are relevant and/or erroneously focuses on certain other factors that it claims are not relevant.

However, the issue at this stage of the litigation is not the "correctness" of Jones's results, but rather whether they are connected to reality. An independent review of his expert report reveals that he adequately compares his first principles to an established method that yields logical results. Jones may be well wrong about the relevance of certain factors, and his analysis may not account for things that Saratoga officials actually considered at the time, but regardless of the way this issue is framed, it is best resolved at trial.

3. <u>Theodore C. Schlette</u>

GE intends to call Schlette to address issues related to whether the response costs incurred by Saratoga were necessary. Specifically, Schlette's expert opinion rebuts Saratoga's economic argument—that Stillwater was a less expensive site for a water

treatment facility and therefore would have been selected were it not for the risks posed by the dredging project. Schlette accomplishes this task by identifying alleged shortcomings in the cost comparison analysis of the Moreau and Stillwater sites completed by Edward Hernandez, an Professional Engineer, on behalf of Saratoga.

Schlette, a Senior Consultant with Cardno ENTRIX, Inc., is an economist with over thirty years' experience in the field of environmental engineering. Since receiving his B.A. in Economics and History from Connecticut College in 1975 and a Master's in Resource Economics from the University of Connecticut three years later, Schlette has accrued a broad range of experience in utility management, environmental planning, and infrastructure development. Among other things, Schlette's resume reveals extensive work on evaluating the costs associated with the provision and treatment of water resources to large facilities and various municipalities around the northeastern United States.

As relevant here, Schlette claims Hernandez's expert report fails to account for certain "critical differences" between the existing facility at Moreau and the planned facility at Stillwater, which results in an "unfair cost comparison" between the two. According to Schlette, these differences can be attributed to the (1) differences between the intended objective of each facility and the (2) distinction between the actual, fully constructed cost of Moreau and the conceptual, estimated cost of Stillwater.

Schlette believes the resulting comparison is "apples to oranges"—it makes little sense to compare "the actual costs expended to build a system designed to service multiple customers across Saratoga County" (the site at Moreau) to "the conceptual costs of a system intended to service a single customer: the [Luther Forest Technology Campus]" (the site at Stillwater).

Specifically, Schlette opines that Hernandez failed to make three, nuanced "adjustments" to the cost of building at Stillwater: (1) Cost Escalation Adjustment; (2) Transmission Capacity Allocation Adjustment; and (3) Contingency Adjustment. GE asserts that each of these supposed claims of error undermine the validity of Hernandez's opinion.

Schlette first takes issue with Hernandez's use of a "simple" Consumer Price Index ("CPI") escalator, which was used to adjust the conceptual cost estimate developed in 2002 for the Stillwater project to account for the hypothetical cost to construct such a facility in 2006. According to Schlette, Hernandez's report employs the CPI escalator for an incorrect number of years. In Schlette's opinion, the estimate of future costs are normally calculated to the mid-point of construction. Therefore, application of the CPI escalator for the "appropriate" amount of time—in this case, two additional years—would add "approximately $3 million to the estimated cost" of Stillwater.

Saratoga argues Schlette's methodology on this issue is flawed because his opinion fails to consider that Hernandez's calculations are based on the cost of building at the time of contract award, after a competitive bidding process has been completed. According to Saratoga, even Schlette acknowledges that such competitive bids would already include the cost escalation adjustment that Hernandez allegedly "failed" to consider.

GE responds that this issue is basically beside the point, since the crux of Schlette's opinion on this issue is that any adjustment, CPI-based or otherwise, should have been done at a date representing the mid-point of the projected construction project rather than the date when bids were received. According to GE, the CT Male Report, which provides the basis for the Stillwater cost estimate at issue, "is about as far from a competitive bid as one can get."

Rather, it is a simple estimate based on limited information and therefore some degree of cost adjustment is appropriate to reflect that fact.

Schlette also takes issue with Hernandez's "simplistic" assumption that no adjustment would need to be made to the cost of the water transmission main provided for in the Stillwater design plans. According to Schlette, Stillwater was never conceived as a county-wide water supply alternative and therefore did not incorporate the necessary infrastructure to service the entire county's needs. In Schlette's opinion, there should be an adjustment to the Stillwater cost estimate to "reflect the size and type of transmission main and the transmission system capacity" that would be necessary to achieve this goal. Therefore, application of an "appropriate contingency allowance" in this case "could add over $4 million to the estimated cost presented in the Hernandez Report."

Saratoga argues that this opinion is based on the "incorrect factual assumption" that the cost to build two comparably sized water treatment plants is affected by the number of customers that ultimately purchase water. Saratoga also argues Schlette, an economist, is unqualified to opine on technical issues such as the facility's water transmission design.

GE responds that this is an unfair characterization of Schlette's opinion, which is more fairly understood as making the claim that, if distribution costs are part of the calculation for the Moreau facility, then some level of analysis must also be given to those costs if the facility had been located elsewhere, such as at Stillwater. In other words, the same costs considered at Moreau should also have been considered for any comparison to Stillwater. Further, GE points out that Schlette has decades of experience as an analyst and project manager economist, working closely with engineering consulting businesses to make sense of the necessary components of proper cost estimates.

Lastly, Schlette assails Hernandez's alleged failure to incorporate a contingency allowance, which is intended to account for "subsequent changes to a conceptual plan that are likely to increase costs during design and construction." According to Schlette, it is standard practice to apply a higher contingency (of approximately thirty percent) during the earlier stages of project planning, with a subsequent reduction in that contingency allowance "as the project progresses through design and ultimately construction."

Saratoga argues that a contingency allowance is "simply a tool for risk assessment" and that adding such an adjustment would "improperly alter" Hernandez's comparative analysis because "no such additional costs beyond the actual cost of construction for [Moreau] were used" in that report. Saratoga further claims that there is no "foundation or other basis to believe" such additional costs might actually be incurred during construction and, in any event, a proper estimate of those costs would require engineering and design considerations beyond Schlette's expertise. Finally, Saratoga argues that Schlette's so-called "standard practice" of applying an approximately thirty percent contingency seems plucked from thin air.

GE responds that "[c]ommon sense dictates that early-stage cost estimates embody uncertainties that present risk," which "have cost impacts" that, according to Schlette, "need to be taken into account in any reasonable cost estimate." According to GE, the "[i]nclusion of a contingency in the Stillwater estimate is necessary precisely to take account of the fact that one comparator (Stillwater) carries a distinctive economic burden, namely uncertainty, that the other comparator (Moreau [having been already constructed]) does not." GE claims that Schlette's point still stands regardless of whether or not these additional costs actually materialize precisely because of this risk.

After careful consideration, each of the challenges to Schlette's opinions outlined above are rejected. Of course, where an appraisal or other valuation "rests on inadequate factual foundations, problematic assumptions, or a misleadingly partial selection of relevant facts," exclusion is warranted under Rule 702. Davis, 937 F. Supp. 2d at 418.

But Schlette considered a laundry list of documents relevant to the issues under consideration here before applying his economic expertise to reach the conclusions in his report. U.S. Bank Nat'l Ass'n v. PHL Variable Life Ins. Co., 112 F. Supp. 3d 122, 134 (S.D.N.Y. 2015) ("As a general rule, the factual basis of an expert opinion goes to the credibility of the testimony, not the admissibility, and it is up to the opposing party to examine the factual basis for the opinion in cross-examination." (citation omitted)).

Equally important, it is far from apparent on the record that his conclusions somehow rest on "problematic" assumptions; rather, Schlette's expert report, while admittedly terse, clearly explains the reasoning underlying the application of each challenged assumption.

As GE repeatedly asserts in its opposition paperwork, Saratoga's arguments are less about Schlette's methodology and more about a belief that his conclusions are incorrect. However, there is no indication that Schlette's planned testimony is so speculative or conjectural, or his assumptions so unrealistic or contradictory, "as to suggest bad faith or to be in essence an apples and oranges comparison." Zerega Ave. Realty Corp., 571 F.3d at 214 (citation and internal quotation marks omitted). Rather, Saratoga's challenges to Schlette's opinions may be properly made on cross-examination.

4. Neil S. Shifrin

GE intends to call Shifrin as an expert on PCBs, including the issue of whether those compounds are petroleum-based. GE also intends to introduce Shifrin's testimony to explain

the particular environmental issues posed by the different forms of PCBs present in the Hudson River system.

Currently the Director of Berkeley Research Group, LLC, a consulting firm, Shifrin's credentials include a B.S. in Chemical Engineering from the University of Pennsylvania as well as a Ph.D. in Environmental Engineering from the Massachusetts Institute of Technology. In his current role, Shifrin performs technical consulting on environmental elements of economic projects, such as cost allocation, insurance claims, and toxic torts.

In sum, Shifrin claims over forty years of experience as an environmental engineer specializing in "contaminant fate [and] transport, [potentially responsible party] cost allocations, cost recovery, waste management standards of care, hazardous waste site remedy/renegotiation, cleanup levels, [ ] environmental due diligence, monitoring/investigation program design, and water quality."

Here, Shifrin has exercised his extensive professional experience with environmental contaminants to generate a voluminous expert report on behalf of GE, which includes a detailed recitation of the history of GE's use of PCBs at the Ford Edward and Hudson Falls capacitor plants as well as a historical narrative regarding GE's evolving efforts to remediate PCB contamination as scientific knowledge indicating their dangerousness began to accumulate.

Shifrin also opines that GE's handling of PCBs was "consistent with good industrial practices during the time PCBs were in use" at the Hudson River-area plants and that GE's responses to the PCB environmental issue "were reasonable and consistent with evolving scientific knowledge." Finally, it is Shifrin's opinion that:

> [A]ny continuing releases [of PCBs] during GE's responses did not

> have any substantial impact on the scope (breadth or depth) of the dredging remedy selected by [the EPA] in 2002, or on the length of time and the manner in which the dredging could potentially impact the communities whose drinking water comes from or is associated with the Hudson River.

Both Halfmoon and Saratoga seek to exclude the portions of Shifrin's report that purport to engage in a historical analysis of GE's treatment of PCBs at the Hudson River plants as well as his opinions as to GE's compliance with certain industry standards of care.

To be sure, it is "inappropriate for experts to become a vehicle for a factual narrative that simply accumulates and puts together pieces of a factual story." Travelers Indem. Co. v. Northrop Grumman Corp., 2014 WL 464769, at *3 (S.D.N.Y. Jan. 28, 2014); see also Highland Capital Mgmt., L.P. v. Schneider, 551 F. Supp. 2d 173, 187 (S.D.N.Y. 2008) ("[A]n expert's factual narrative is unnecessary . . . "). This is so because "[a]cting simply as a narrator of the facts does not convey opinions that are based on an expert's knowledge and expertise; nor is such a narration traceable to a reliable methodology." Id. Equally problematically, "narration of facts of the case may easily invade the province of the jury, providing a separate basis for exclusion." Id. Rather, "[s]uch material, to the extent it is admissible is properly presented through percipient witnesses and documentary evidence." In re Rezulin Prods. Liability Litig., 309 F. Supp. 2d at 551.

However, as GE notes, both Saratoga and Halfmoon acknowledge that Shifrin, as an experienced environmental engineer, can appropriately opine on the possible significance of certain technical documents and scientific materials. Indeed, a review of the historical narrative recounted by Shifrin is largely intertwined with his attempt to opine on the so-called "reasonableness" of GE's history of actions, so it makes sense that a historical account of those actions would be necessary in order to makes sense of any attendant comparison to

the contemporaneous conduct of similar actors in an industry-wide setting.

But it bears noting that the remaining claims in this lawsuit involve issues of strict liability. See Price Trucking Corp. v. Norampac Indus., Inc., 748 F.3d 75, 82 (2d Cir. 2014) (noting CERCLA "adopts a strict liability regime"); N.Y. Nav. Law § 181(1)("Any person who has discharged petroleum shall be strictly liable . . . ."). Therefore, the vast majority of Shifrin's expert opinions, which deal at length with the alleged "reasonableness" of GE's handling of PCBs and its evolving responses to the realities of contamination, will be inadmissible because they are irrelevant to the issues still at play.

In fact, GE's expert notice indicates that Shifrin's testimony will now be limited to his technical expertise regarding the chemical composition of the PCB contamination present in the Hudson River system as the result of GE's manufacturing activities, opinions which neither plaintiff appear to have challenged. Accordingly, Shifrin's testimony is admissible subject to both the limitations described above as well as any other appropriate objections made at trial.

D. GE's Supplemental Notice

1. John Connolly

GE's supplemental notice indicates that it may call John Connolly to rebut certain opinions offered by Michaels and/or Brown, two of plaintiffs' experts, at the liability phase of the trial. As discussed above, the universe of issues that may be permissibly raised at this juncture will be limited to those relevant to liability. However, plaintiffs have challenged certain aspects of Connolly's expert report. Therefore, out of an abundance of caution and in light of the possibility his testimony may prove necessary during the liability phase of trial, those challenges will be decided now.

Specifically, Saratoga joins in Halfmoon's attempt to exclude Connolly's second, third, fourth, seventh, eighth, and ninth opinions:

> **Opinion No. 2**: There are no significant pools of PCB DNAPL in or beneath the sediments in the area of the river subject to the dredging remedy
>
> **Opinion No. 3**: The dredging is removing nearly all the PCBs in the targeted areas. In general, the PCB concentrations left behind are low and the residual coring indicates sediments that have less than 1 mg/kg Total PCBs exist below the residual sediments.
>
> **Opinion No. 4**: Although redeposition of dredged sediments does occur, data indicate that it does not have a long-term impact on the Upper Hudson River.
>
> **Opinion No. 7**: There is no mass of PCB-contaminated bedload sediment or a DNAPL plume/pool moving along the river bottom, escaping monitoring yet affecting water intakes.
>
> **Opinion No. 8**: PCB levels in the river decline rapidly in response to the dredging program.
>
> **Opinion No. 9**: We can project with a reasonable degree of scientific certainty that the water column and PCB levels post-dredging will not be greater than they were pre-dredging.

Before addressing plaintiffs' arguments, a quick review of Connolly's expert credentials are in order. Like many of the experts in this case, Connolly's resume reflects extensive experience in the study of environmental contaminants—beginning with his receipt of undergraduate and graduate degrees from Manhattan College in the 1970s in Civil and Environmental Engineering and later with his attainment of a Ph.D. in Environmental Health Engineering from The University of Texas at Austin in 1980.

Of relevance here, Connolly has spent the past thirty-five years studying "the fate and bioaccumulation of contaminants in sediments" and touts his status as a "nationally recognized expert on contaminated sediments and eutrophication [the process by which a

body of water acquires high concentrations of nutrients, such as phosphates and nitrates]." During this time, his research and publishing efforts have focused on "methods to determine the sources of contaminants found in sediments, and to evaluate the long-term fate of such contaminants."

Currently, Connolly is the Senior Technical Advisor and Principal Engineer for Anchor QEA, LLC, a consulting organization. However, it bears noting that Connolly has studied the PCB contamination of the Hudson River since 1990. In fact, since the EPA issued its 2002 ROD calling for removal of PCB-contaminated sediments, Connolly has been engaged in supporting the design of the remedy and monitoring its performance.

Plaintiffs do not mount a direct challenge to Connolly's fitness to opine on the issues in this case, and an independent evaluation reveals no basis on which such a challenge might be warranted. Therefore, what remains is for an examination of the substance of plaintiffs' individual challenges to Connolly's opinions.

i. Opinion No. 2

According to Connolly, the incredible sampling density (approximately eight locations per acre in the Thompson Island Pool area) undertaken during the dredging process "provide[s] a comprehensive understanding of the mass of PCBs stored in the river sediments." In Connolly's opinion, "[i]f a significant pool of PCB DNAPL was present within the sediments, it would have been found."

Plaintiffs contend that Connolly's insertion of the ill-defined qualifier "significant" into this statement renders it misleading because GE, and Connolly for that matter, both admit that *some* quantity of PCB DNAPL exists in the sediments of the river. GE readily acknowledges that Connolly recognizes the "phenomenon" at issue, but argues that nothing

in Rule 702 constrains an expert to simply offering a "yes" or "no" answer "to the question of whether PCB fluids or PCB NAPL are present in the River." Rather, it is precisely the function of an expert to analyze the data and reach a conclusion; here, that PCB DNAPL "is not a significant contributor to observed or future conditions in the River."

GE has the better of this argument. Connolly, an expert in the "fate and bioaccumulation" of contaminants in sediment, has generated a detailed expert opinion based on an exhaustive, data-driven analysis of the information generated from the continued sampling of the river. To be sure, Connolly's expert conclusion appears directly at odds with Brown's conclusion that a substantial, unknowable mass of PCBs continues to threaten those who would draw water from the river. That conflict is best resolved at trial, where any shortcomings in Connolly's explanation of his chosen qualifier can be highlighted for the fact finder.

ii. Opinion No. 3

According to Connolly, the dredging activities have succeeded in removing approximately ninety-seven percent of the PCB mass in the targeted areas. In Connolly's opinion, the extensive post-dredging sampling of the river "provides an understanding of the PCB concentrations that remain after dredging activities are completed."

Plaintiffs argue that this opinion "misleadingly suggests that sediment PCB measurements within the dredge footprint serve as surrogates for water column measurements, and that redeposition of dredged sediments outside the dredge footprint has no impact on water PCB levels."

GE responds that this opinion is not about resuspension or redeposition, but is rather a straightforward opinion about the efficacy of the dredging remedy. GE explains that this

opinion serves to substantiate Connolly's later conclusions (for example, Opinion No. 4) that the reduced PCB levels on the surface of the river bottom has also reduced the likely significance of natural resuspension in the future.

Again, GE has the better of this argument. It is Connolly's opinion, based on his comparison of the pre- and post-dredging sampling data, that from a statistical perspective the vast majority of PCBs within the Thompson Island Pool have been removed. With the exception of the final line of this opinion, which notes that the PCBs remaining after dredging have become isolated from the river by being buried under backfill and cap material, nothing in this opinion even hints at any discussion of whether or not PCBs might become resuspended or redistributed.

There is nothing objectionable about Connolly opining that, in his expert opinion, a comparison of data reveals that PCB concentrations are significantly decreasing. And while there is little doubt that this particular opinion might cause the fact finder to take a certain view of the effect of resuspension, a thorough cross-examination will surely reveal any limits on the significance of this particular opinion.

iii. Opinion No. 4

Connolly readily acknowledges that dredging activities cause the resuspension of sediment, which will either redeposit elsewhere in the river or remain in suspension depending on particle size, the local characteristics of the river channel, and the flow conditions present at the time. Connolly also acknowledges that data collected from sediment traps and core samples immediately downstream of dredging revealed elevated PCB concentrations.

However, according to Connolly, these elevated results were only representative of

localized redeposition and were of no use in determining whether there would be any long-term, widespread impact from sediment redeposition on PCB concentrations elsewhere in the river. In Connolly's opinion, additional data collected during Downstream Deposition Studies ("DDS") conducted in 2011, 2012, and 2013 indicate that dredging actually did not cause an increase in PCB concentrations in downstream surface sediments.

Relatedly, Connolly believes that redeposition has not interfered with the desired reductions in water column PCB levels that were hoped for as a result of the dredging. For example, areas that were downstream of locations where dredging have already been completed, but upstream of active dredging activity, "have low PCB water column concentrations that show no increase at high flows." Based on this and other data, Connolly opines that redeposited sediment is not a long-term significant source of PCBs in the water column.

Plaintiffs argue that this opinion flatly contradicts Connolly's prior position on redeposition. In support of that claim, plaintiffs point out that in a May 2010 presentation to the Peer Review Panel involved in evaluating the effectiveness of the dredging project Connolly stated:

> We also found that we have spread contamination on the river bottom, what we are calling redeposition, and that that has had a longer term impact, an impact that has lasted beyond the end of the dredging project. **We know from Phase 1 that we send [sic] a considerable amount of PCB to the Lower Hudson as we dredge.**

(all emphases in original). Plaintiffs further claim that the DDS sampling between 2011 and 2013, which they seem to concede provides the basis for Connolly's more recent position and which conflicts with the above quoted one, is based on a faulty process, as explained by

Millspaugh's expert report. Finally, plaintiffs assert that Connolly's reliance on data from "high flow events" actually conflict with, rather than support, his conclusion that PCB levels measured during these events demonstrate the absence of widespread redeposition.

Of course, GE willingly concedes that Connolly's 2010 comments to the Peer Review Panel reflected his belief that redeposition of resuspended sediment caused by dredging was having a significant impact on the river and could continue to do so. But GE correctly points out that this argument ignores that the DDS sampling conducted between 2011 and 2013 provides a legitimate basis on which Connolly could alter his opinion on this subject—such is simply the nature of honest scientific inquiry.

Plaintiffs related attack on the allegedly faulty design of the DDS studies, substantiated by Millspaugh's expert opinions, is likewise best left for trial. Despite plaintiffs' urging, a review of Connolly's analysis of the DDS data does not expose the kind of significant "analytical gap" that would warrant exclusion at this juncture.

The conclusions drawn by Connolly from the "high flow" data also pass muster here. Since high flow events cause the resuspension of PCB-contaminated sediment, they also cause a measurable increase in the PCB concentrations found in the water column. According to Connolly, measurements taken during high flow events in areas where dredging has already been completed no longer lead to the same increase in water column measurements that was observed at other times.

In Connolly's opinion, that change in observed data lends support to the theory that the amount of contaminated surface sediment available to be resuspended has been greatly reduced. There is nothing so clearly objectionable about that conclusion that exclusion is warranted.

iv. Opinion No. 7

Connolly's seventh opinion expresses disagreement with the opinions of Brown and Michaels, two of plaintiffs' experts discussed above. In particular, both Brown and Michaels express concerns regarding the ability of the water monitoring programs to provide a fully accurate representation, on a continuous basis, of the PCB concentrations in the river.

According to Connolly, these concerns are unfounded—the monitoring program reflects consistent patterns and relationships between the various monitoring stations. If PCBs were being transported in significant quantities in a form that evaded detection at some of these stations (such as in DNAPL form or in bedload), these PCBs would be captured "at least occasionally" by monitoring at *some* stations, "resulting in variability and inconsistency" among the stations.

Plaintiffs argue that "significant evidence exists" to support the idea that heterogenous patterns of PCB contamination exist within the river, a fact that would undermine Connolly's opinion on this issue. Plaintiffs point out that Connolly's views on the possibility of PCB contamination moving down river "have shifted during the pendency of this case." But as GE responds, Connolly's position is simply that PCBs "generally" do not move down river via bedload or DNAPL, not that it could never occur (or that it has never occurred). Mere disagreement with how an expert in a particular matter chose to resolve conflicting data in reaching an opinion is not a basis for exclusion.

v. Opinion No. 8

Connolly's eighth opinion is another rebuttal, this time to Brown's claim that "the time required to return the PCB concentrations in the river to levels before the start of dredging could take decades, if not longer." According to Connolly, this statement is contradicted by

the available data. Specifically, Connolly has compared data from pre- and post-dredging floating buoy surveys under similar flow conditions. In his opinion, this data shows that post-dredging average PCB concentrations were "less variable, significantly lower, and often below the MDL."

Plaintiffs argue Connolly was only able to reach these conclusions by artificially excluding data from certain high flow events, since data from those events continue to show that the river "experiences significant spikes in PCB values." According to plaintiff, Connolly's methodology improperly excludes data from these important events and therefore must be excluded. GE responds that nothing in Connolly's opinion purports to exclude data on high flow events. Rather, Connolly's opinion is that the elevated PCB levels detected during high flow events do not represent any long-term change in the level of PCBs in the sediment.

As GE notes, Connolly does not deny the existence of high flow events or their possible relevance on these issues. Rather, he draws a conclusion that is at odds with plaintiffs' expert's view of the matter. Disagreement does not warrant exclusion. Cf. Argonaut Ins. Co., 929 F. Supp. 2d at 170 (noting the fact that an expert allegedly failed to consider some "essential" data point goes to the weight, and not admissibility, of the testimony).

vi. Opinion No. 9

Connolly's ninth opinion concerns the future of the Upper Hudson River. In his opinion, the uncertainties that do exist do not preclude the use of reliable modeling, along with general knowledge of the river system, to make predictions about what will happen in the future. According to Connolly, an application of those principles shows that water column

PCB concentrations will decline and that the dredging program will accelerate that decline.

Plaintiffs argue that this sweeping conclusion is not only unsupported by data or evidence, but also requires Connolly to dismiss "numerous lines of evidence" suggesting otherwise. GE responds, in essence, that plaintiffs' personal view of the evidence in this matter is not a basis for exclusion of Connolly's opinions.

Importantly, plaintiffs are incorrect to state that Connolly's opinion is based only on his belief in the "use of models in general." As GE points out, plaintiff's excerpt improperly truncates Connolly's statement, reproduced in full below:

> Q. When you refer to the model here, could you describe to use what the model is that you're using?
>
> A. I'm not referring to one model per se. I'm referring to the use of models in general, and, with regard to predictions for the Hudson, predictions were made by a model developed by EPA and separately a model developed by us on behalf of General Electric.
>
> And both of those models rely on the same principles, the same scientific principles with regard to how water moves, how sediment is transported and the fate of PCBs in the river.

Upon further questioning, Connolly launched into detail about the three submodels that comprise the modeling system to which he had just referred. In other words, this opinion is based on conclusions drawn from a detailed methodology and therefore will not be excluded.

2. <u>Brent Kerger</u>

GE's supplemental notice indicates it may call Kerger to testify as to his first and fifth opinions, which rebut certain aspects of Carpenter's testimony regarding PCB health risks. Because the issue of Carpenter's admissibility has partially been decided, plaintiffs'

challenges to Kerger's first and fifth opinions will also be resolved.[11]

Kerger holds a B.S. in Chemistry from Florida State University as well as a Ph.D. in Toxicology from the University of Arkansas for Medical Sciences. Since completing his schooling in 1988, Kerger has been engaged as an environmental chemist and toxicologist, utilizing his expertise to research and consult on issues of environmental chemistry, toxicology, and human health risk assessment related to chemical exposures. Among other things, Kerger's experience is focused on human health and ecological risk assessments involving complex, indirect exposure pathways.

Saratoga challenges Kerger's first opinion, which is reproduced in summary form:

> **Question 1**: Was the Upper Hudson River water monitoring program during PCB dredging designed and implemented in a manner that would reasonably assure the protection of raw river water used to make drinking water?
>
> **Summary Answer 1**: Yes. From my perspective as an environmental chemist, toxicologist, and risk assessor, the water monitoring program was designed with rigorous technical input from [the EPA], [GE], other independent technical resources (e.g., the Peer Review Committee), and local community stakeholders. The program includes an extensive network of [PCB] sampling locations and use of timed sampling and analysis together with protective 'engineering performance standards' and other operating procedures designed to be protective of downstream water purveyors. And the program was implemented in a manner that reasonably assured that dredging activities would not appreciably increase PCB exposures and associated risks from drinking water use of Hudson River water. The data sets generated from this monitoring program were available to the public in a timely manner and were closely watched by those implementing the dredging activities, helping to 'fine tune' both the monitoring system and the dredging methods to minimize PCB releases. This monitoring system provides a competent and coherent means for assuring water source protection throughout the

[11] Saratoga has moved to exclude Kerger's first and third opinions; Halfmoon has moved to exclude Kerger's testimony in its entirety.

> course of dredging until the agreed objectives of the cleanup project under the 2002 [ROD] have been accomplished.

Saratoga argues that this opinion is irrelevant, because the question of whether the EPA's monitoring program is reasonable has absolutely no impact on plaintiffs' CERCLA and Navigation Law claims. According to Saratoga, the EPA's risk monitoring program "does not alter defendant's admissions that releases occurred and were threatening to occur during the relevant time period, including before, during, and after dredging."

GE responds that "the mere fact that releases occurred is not the end of the inquiry" into those claims. Rather, the evidence, burnished by Kerger's independent assessment of the program, "shows that the magnitude of the releases has been accurately measured and that they do not present any real risk." In other words, Kerger's analysis supports GE's contention that the response costs incurred by Saratoga were not "necessary" and are therefore unrecoverable under CERCLA.

A lengthy analysis of this particular opinion is unnecessary, since it is admissible for substantially the same reasons as Carpenter's contrary opinion regarding the ongoing, and serious, risk of PCB exposure. To be sure, there is substantial merit to Saratoga's objection, which is that Kerger's *post hoc* analysis of the robustness of the EPA's monitoring program is of little value because it was unavailable to Saratoga decision-makers at the time the threat to the drinking water presented itself and allegedly forced the siting decision at Moreau.

But as GE points out, Kerger's expert opinion serves to substantiate GE's claim that the EPA's monitoring program was, and is, a perfectly adequate means of protecting the water supply on an ongoing basis; consequently, the complete absence of danger from dredging rendered Saratoga's decision to site its facility at Moreau unnecessary or

unreasonable. Halfmoon I, 105 F. Supp. 3d at 211 ("Response costs are deemed 'necessary' when an actual and real threat to human health or the environment exist[s]." (citation omitted)).[12]

GE's supplemental notice also indicates it may call Kerger to testify as to his fifth opinion, which also serves to rebut certain aspects of Carpenter's testimony:

> **Question 5**: How does risk assessment help to address claims by plaintiffs' expert Dr. David Carpenter that there is "no known safe dose of PCBs" and that "these substances cause subcellular and cellular damage at any concentration, not only increasing the risk of cancer but also disturbing biological functions that lead to a variety of other diseases"?
>
> **Summary Answer 5**: Dr. Carpenter is apparently basing these claims predominantly on poorly supported assertions that the uncertainties involved in science are great, and thus in his view it is not possible to identify an absolutely "safe" or risk-free does of PCBs (or any other potential carcinogen). These claims represent a very pessimistic view of scientific evidence and its utility; such claims are counter-productive to making viable public health decisions and ignore dose-response considerations, a key underlying tenet of toxicology and risk assessment. The EPA risk assessment methodology was designed to logically address data variability and uncertainties, and to integrate dose-response considerations in a protective manner. Moreover, decision-making with respect to chemical exposures and public health hazards could never be effectively implemented if most scientists adopted Dr. Carpenter's presumption that "subcellular and cellular damage" occurs at "any concentration." Dr. Carpenter's viewpoints are not generally accepted nor well supported in the scientific community; numerous studies of PCB toxicology have identified no effect levels for a wide variety of endpoints in a wide variety of species and exposure settings. Furthermore, many cellular/subcellular changes that may be purported as "damage" by Dr. Carpenter may be more appropriately described as normal adaptive responses that are fully

[12] Saratoga's passing challenge to Kerger's reliance on "far-field" testing sites fares no better. As GE persuasively responds, Saratoga has failed to support this contention with any "treatise, journal article, professional standard, testimony from its own or other experts, or any other authority in the field." In the absence of such authority, Kerger's decision to rely on certain data points, rather than others, provides no basis for exclusion.

> reversible and occur with a wide variety of natural and synthetic chemicals. It is EPA's protective process of identifying the sensitive species and endpoint to rely on for their published toxicity criteria that allows risk assessment to reasonably address the uncertainties that Dr. Carpenter is inferring cannot be addressed without reducing PCB exposures to zero (which he recognizes is not possible in this region or throughout the United States). Thus EPA's risk assessment methodology can be used to identify consensus values for reasonably certain safe doses of PCBs that are not associated with adverse health effects in humans.

Saratoga's preclusion motion does not actually challenge this opinion. And although Halfmoon purports to seek exclusion of *all* of Kerger's opinions, a review of its submissions reveals that Halfmoon has not articulated a particular argument in support of a challenge to this portion of Kerger's report.

In any event, this kind of expert rebuttal statement seems appropriate in this case. See, e.g., Luitpold Pharm., Inc. v. Ed. Geistlich Sohne A.G. Fur Chemische Industrie, 2015 WL 5459662, at *12 (S.D.N.Y. Sept. 16, 2015) ("A rebuttal expert, by nature, criticizes the methodology and/or opinions of another . . . . his opinions may properly concern criticizing that presented by another party."). Kerger's attempt to point out the alleged errors, shortcomings, or inconsistencies in the scientific methodology Carpenter has relied on to reach his conclusions about PCB exposure is the kind of core function a rebuttal expert is expected to perform. Absent some concrete, clearly articulated challenge to this opinion by either plaintiff, it is admissible.

IV. CONCLUSION

Therefore, it is

ORDERED that

1. Saratoga's motion to preclude certain experts (ECF No. 203) is DENIED;

2. Halfmoon's motion to preclude certain experts (ECF No. 205) is DENIED;

3. GE's motion to preclude certain of Millspaugh's opinions (ECF No. 209) is DENIED;

4. GE's motion to preclude certain of Brown's opinions (ECF No. 210) is DENIED;

5. GE's motion to preclude certain of Michaels's opinions (ECF No. 211) is DENIED;

6. GE's motion to preclude certain of Carpenter's opinions (ECF No. 212) is DENIED;

7. GE's motion to preclude certain of Whitelaw's opinions (ECF No. 213) is DENIED without prejudice to renew; and

8. GE's motion to preclude Halfmoon's claim for replacement cost damages (ECF No. 245) is DENIED without prejudice to renew prior to the damages phase, if any, of trial.

IT IS SO ORDERED.

United States District Judge

Dated: March 3, 2016
Utica, New York.