IN THE DISTRICT COURT OF THE VIRGIN ISLANDS
DIVISION OF ST. CROIX

COMMISSIONER OF THE DEPARTMENT OF PLANNING AND NATURAL RESOURCES, ALICIA V. BARNES, et al.	:	CIVIL ACTION
v.	:	
CENTURY ALUMINUM COMPANY, et al.	:	NO. 05-62

MEMORANDUM

Bartle, J. May 8, 2013

Plaintiffs, Commissioner of the United States Virgin Islands Department of Planning and Natural Resources, Alicia V. Barnes (the "Commissioner"), and the Government of the Virgin Islands (together with the Commissioner, the "Government"), filed this multi-count environmental lawsuit against entities who at various times owned portions of an industrial area in Kingshill, St. Croix on which both an alumina refinery and an oil refinery have operated. These defendants were Century Aluminum Company ("Century"), Virgin Islands Alumina Corporation ("VIALCO"), St. Croix Alumina, LLC ("SCA"), Lockheed Martin Corporation ("Lockheed"), Alcoa World Alumina, LLC, ("Alcoa"), St. Croix Renaissance Group, LLLP ("SCRG"), HOVENSA, LLC ("HOVENSA") and Hess Oil Virgin Islands Corporation ("HOVIC").[1] We have

1. The Virgin Islands Port Authority and the Virgin Islands Waste Management Authority are third-party defendants sued by
(continued...)

previously approved a settlement between the Government and SCA, Alcoa, and SCRG and granted summary judgment in favor of Century. Accordingly, the remaining defendants are VIALCO, Lockheed, HOVENSA, and HOVIC.

There are a number of pending motions under Daubert v. Merrel Dow Pharmaceuticals, 509 U.S. 579 (1993). We will now consider the motion of defendants HOVENSA and HOVIC (together, the "Refinery Defendants") to exclude the expert testimony and report of Dr. Remy J.-C. Hennet ("Dr. Hennet"), the motion of Lockheed to exclude the opinion testimony of Dr. Hennet, and the motion of Lockheed to strike the declaration of Dr. Hennet filed on December 14, 2012 and incorporated memorandum of law.

I.

The court has a "gatekeeping" function in connection with expert testimony. See Gen. Elec. Co., et al. v. Joiner, 522 U.S. 136, 142 (1997); see also Daubert, 509 U.S. at 589. Rule 702 of the Federal Rules of Evidence provides:

> If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise, if (1) the testimony is based upon sufficient facts or data, (2) the testimony is the product of reliable principles and methods, and (3) the witness has applied the

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1.(...continued)
defendants VIALCO and Lockheed and former defendant Century for contribution.

> principles and methods reliably to the facts of the case.

As our Court of Appeals has repeatedly noted, Rule 702 embodies three requirements: qualification, reliability, and fit. Pineda v. Ford Motor Co., 520 F.3d 237, 244 (3d Cir. 2008).

An expert is qualified if he "possess[es] specialized expertise." Schneider ex rel. Estate of Schneider v. Fried, 320 F.3d 396, 404 (3d Cir. 2003). This does not necessarily require formal credentials, as "a broad range of knowledge, skills, and training qualify an expert," and may include informal qualifications such as real-world experience. In re Paoli R.R. Yard PCB Litig., 35 F.3d 717, 741 (3d Cir. 1994). The qualification standard is a liberal one, and an expert may be sufficiently qualified under Rule 702 even if "the trial court does not deem the proposed expert to be the best qualified or because the proposed expert does not have the specialization that the court considers most appropriate." Holbrook v. Lykes Bros. S.S. Co., 80 F.3d 777, 782 (3d Cir. 1996).

To determine reliability, we focus not on the expert's conclusion but on whether that conclusion is "based on the methods and procedures of science rather than on subjective belief or unsupported speculation." Schneider, 320 F.3d at 404 (internal quotation marks omitted). Our analysis may include such factors as:

> (1) whether a method consists of a testable hypothesis; (2) whether the method has been subject to peer review; (3) the known or potential rate of error; (4) the existence

> and maintenance of standards controlling the technique's operation; (5) whether the method is generally accepted; (6) the relationship of the technique to methods which have been established to be reliable; (7) the qualifications of the expert witness testifying based on the methodology; and (8) the non-judicial uses to which the method has been put.

Pineda, 520 F.3d at 247-48.

"[T]he test of reliability is flexible" and this court possesses a broad latitude in determining reliability. Kumho Tire Co. v. Carmichael, 526 U.S. 137, 141-42 (1999). To be reliable under Daubert, a party need not prove that his or her expert's opinion is "correct." Paoli, 35 F.3d at 744. Instead:

> As long as an expert's scientific testimony rests upon good grounds, based on what is known, it should be tested by the adversary process-competing expert testimony and active cross-examination-rather than excluded from jurors' scrutiny for fear that they will not grasp its complexities or satisfactorily weigh its inadequacies.

United States v. Mitchell, 365 F.3d 215, 244 (3d Cir. 2004) (quoting Ruiz-Troche v. Pepsi Cola Bottling Co., 161 F.3d 77, 85 (1st Cir. 1998)).

As for "fit," expert testimony must also "assist the trier of fact to understand the evidence or to determine a fact in issue." Fed. R. Evid. 702. Thus, to "fit," such evidence must bear some relation to the "particular disputed factual issues in the case." United States v. Downing, 753 F.2d 1224, 1237 (3d Cir. 1985). Accordingly, this factor has been described

as one of relevance. Daubert, 509 U.S. at 591; Paoli, 35 F.3d at 745 & n.13.

II.

Dr. Hennet was retained by the plaintiffs in order to evaluate environmental contamination from operations at the refinery. He holds a Ph.D. in geochemistry and a masters degree in geology from Princeton University. He also holds the equivalent of a masters degree in hydrogeology from the Université de Neuchatel in Switzerland. Dr. Hennet will offer the following nine opinions:

> Opinion 1: Petroleum hydrocarbons, hazardous substances, and other contaminants were present in the crude oil, catalyst products, and other materials used for refining
> Opinion 2: Petroleum hydrocarbons, hazardous substances, and other contaminants have been identified in waste materials that were generated, disposed of, and/or released at the site
> Opinion 3: Site operations and waste management and disposal practices led to the release of contaminants to groundwater, surface water, soils, and sediments
> Opinion 4: Contaminants in groundwater exceed Maximum Contaminant Levels for drinking water and Virgin Islands surface water quality standards
> Opinion 5: Releases of contaminants at the Hovensa site first occurred no later than the mid to late 1960's following the start-up of refining operations. Releases have continued to the present. Impacts to groundwater, surface water, sediment and soil from these releases will continue for decades into the future
> Opinion 6: Kingshill Aquifer, except for industrial contamination, is a potential source of potable water
> Opinion 7: Elevated arsenic in groundwater beneath the Hovensa site is related to refining operations

> Opinion 8: The release of elemental sulfur to the Hovensa shipping channel has resulted in the release of hydrogen sulfide and other sulfur compounds at the sediment water interface
> Opinion 9: Releases at the facility contribute to the excess nutrients and micronutrients to surface water, the Hovensa shipping channels, and the Alucroix Channel.

III.

We will first address the motion of the Refinery Defendants to exclude the opinions of Dr. Hennet. The Refinery Defendants preliminarily contend that "Dr. Hennet's first five opinions are no more than his conclusory summaries of disputed facts." They contend that these opinions are not "supported by valid, site-specific data or the application of scientific technique." We disagree. These opinions are part of Dr. Hennet's pathways analysis to determine how contaminants traveled away from the refinery. He relies upon published reports to draw conclusions about what contaminants were present at the refinery and released at the site. He also describes the observations which he made when he visited the site and analyzes data from monitoring wells. He bases his opinions on the prior reports, observations, data, and his experience evaluating the origin and transport of contaminants in the environment. This is reliable under Daubert.

The Refinery Defendants next contend that Dr. Hennet is unqualified to opine in his sixth opinion that the Kingshill Aquifer, except for industrial contamination, is a source of potable water. We are not persuaded. Dr. Hennet has expertise

in geology, hydrogeology, and geochemistry and the equivalent of a masters in hydrogeology from a European university. The Refinery Defendants further argue that he relies on inadmissible hearsay for this opinion. Dr. Hennet based his conclusion in part upon the affidavits of two individuals, Louis Maldonado ("Maldonado") and Arnold Golden ("Golden), whose testimony was struck from the case because they were not timely identified as witnesses. The Refinery Defendants contend that their affidavits contain inadmissable opinion and hearsay testimony and not the kind of factual data on which an expert may rely under Rule 703 of the Federal Rules of Evidence. We disagree. Rule 703 provides:

> An expert may base an opinion on facts or data in the case that the expert has been made aware of or personally observed. If experts in the particular field would reasonably rely on those kinds of facts or data in forming an opinion on the subject, they need not be admissible for the opinion to be admitted. But if the facts or data would otherwise be inadmissible, the proponent of the opinion may disclose them to the jury only if their probative value in helping the jury evaluate the opinion substantially outweighs their prejudicial effect.

Here, the affidavits would otherwise be inadmissible. Accordingly, Dr. Hennet may disclose them to the jury only if their probative value substantially outweighs their prejudicial effect. That standard has been met. In his report, Dr. Hennet cites Maldonado and Golden for the following:

> Witnesses have described the use of the land in the northern portion of Hovensa. Reported

> land use included cattle grazing and the use of wells for drinking in and around historical settlements that included the former Estate Jerusalem, Estate Hope, and Estate Blessing.

This testimony would be substantially more helpful to the jury than it is prejudicial to the Refinery Defendants. It will be helpful for the jury to know the history of the refinery land, and the Refinery Defendants will not be significantly prejudiced by the introduction of this information. Refinery Defendants, of course, may seek to rebut it.

The Refinery Defendants also challenge Dr. Hennet's sixth opinion as unsupported by test data or his individual evaluation. That opinion, as noted above, is that the Kingshill Aquifer, except for industrial contamination, is a potential source of potable water. Dr. Hennet provides in his report:

> The Total Dissolved Solids content in groundwater from the Kingshill aquifer is much less than 10,000 mg/L under background conditions. Groundwater is considered by the U.S. EPA to be a potential source of drinking water if the total dissolved solids concentration is less than 10,000 mg/L and if the aquifer is capable of yielding more than 150 gallons per day to a well (USEPA 1986). The groundwater in the Kingshill aquifer meets the definition of a potential source of drinking water (Graves, 1995; Robinson, 1972; Gill et al., undated).

Furthermore, Dr. Hennet testified at his deposition that he independently looked at the potable characteristics of the Aquifer. We will not exclude Dr. Hennet's opinion on the potability of the water in the Kingshill Aquifer.

The Refinery Defendants next argue that Dr. Hennet's seventh opinion, that elevated arsenic in groundwater beneath the Hovensa site is related to refining operations, is unsupported by data, is speculative, lacks a valid methodology, and ignores long-term sewage releases that coincide with elevated arsenic measurements. Dr. Hennet may testify at trial as to his seventh opinion. It is supported by data which Dr. Hennet cites in his report. He further explained his methodology at his deposition. His methodology was valid and scientific, involving gathering information, making hypotheses, and evaluating data. Finally, he did not ignore the sewage releases but rather acknowledged them as a potential cause but rejected it.

In addition, Dr. Hennet is not precluded from testifying as to his eighth opinion, which is that the release of elemental sulfur to the Hovensa shipping channel has resulted in the release of sulfur compounds including hydrogen sulfide at the sediment water interface and to the water column. The Refinery Defendants contend that Dr. Hennet provides no analytic data to support his opinion that the sulfur granules produced hydrogen sulfide or that the sulfur granules are preventing biomass growth.

Preliminarily, Dr. Hennet is not offering an opinion regarding reduced biomass growth due to sulfur compounds. Rather, he simply plans to testify to the existence of elemental sulfur, which he witnessed at the refinery site. When elemental sulfur is present in sea water and sediments like those in the

East Turning Basin, he will say that it converts to diverse sulfur compounds including hydrogen sulfide. Dr. Hennet explained that although ordinarily contaminants are measured in a laboratory, in this instance they could be visually analyzed because the amount of sulfur was so substantial. Furthermore, Dr. Hennet testified at his deposition that he smelled hydrogen sulfide at the site. The Refinery Defendants may dispute this methodology on cross-examination at trial, but it meets the Daubert standard.

They also contend that Dr. Hennet relied on a model for his eighth opinion that was run by another employee at his firm, who was not identified as an expert and not subject to cross-examination. Dr. Hennet is permitted to use data of this sort under Rule 703.

Finally, we decline to exclude Dr. Hennet's ninth opinion, that releases at the facility contribute to the excess nutrients and micronutrients to surface water and the Alucroix Channel. The Refinery Defendants again argue that Dr. Hennet is not qualified as a hydrologist, but we have already addressed that contention and found him to be qualified. They also maintain that Dr. Hennet did not consider other possible causes of the excess nutrients and micronutrients, such as the Alumina site or sewage, but Dr. Hennet explained in his deposition that he did consider these possible causes. While the Refinery Defendants further contend that Dr. Hennet "relies heavily" on a 1992 report involving the St. Croix Petrochemical Corporation,

Dr. Hennet mainly uses that report to show that his conclusions are consistent with past findings. Dr. Hennet performed a pathways analysis to determine whether the facility releases contributed to the nutrients and micronutrients in these areas. This is a reliable methodology under Daubert. The Refinery Defendants are, of course, free to bring up any inconsistencies in the methodology as applied by Dr. Hennet on cross-examination at trial.

IV.

Lockheed has also moved to exclude two of his opinions although it does not specifically reference them by number. First, it contends that the court should exclude Dr. Hennet's opinion that releases of contaminants from red mud ponds at the refinery site are currently infiltrating the groundwater beneath the property, thereby contaminating the water, and that such infiltration and contamination will continue absent remediation. Lockheed's motion is limited to Dr. Hennet's opinions as to the alleged current and continuing releases of contaminants, not the past contamination. It also asks the court to exclude Dr. Hennet's opinion that the contaminated groundwater is currently seeping and will continue to seep in the future into the Alucroix channel, causing algae blooms and eutrophication of the waters. We have already determined that Dr. Hennet's methodology is reliable. Lockheed's arguments that differ from those of the Refinery Defendants are also without merit. We will therefore deny Lockheed's motion.

V.

Finally, Lockheed moves to strike a late-filed declaration of Dr. Hennet under Rule 37(c)(1) of the Federal Rules of Civil Procedure, which provides:

> If a party fails to provide information or identify a witness as required by Rule 26(a) or (e), the party is not allowed to use that information or witness to supply evidence on a motion, at a hearing, or at a trial, unless the failure was substantially justified or is harmless.

Fed. R. Civ. P. 37(c)(1). Dr. Hennet was named in the plaintiffs' original Rule 26 disclosures as a person with discoverable information and provided an expert report during discovery. He then provided the declaration in issue as an exhibit to the plaintiffs' brief in response to the defendants' motions under Daubert to exclude his testimony. Rule 26(e) of the Federal Rules of Civil Procedure provides:

> (1) In General. A party who has made a disclosure under Rule 26(a) ... must supplement or correct its disclosure or response:
>
> > (A) in a timely manner if the party learns that in some material respect the disclosure or response is incomplete or incorrect, and if the additional or corrective information has not otherwise been made known to the other parties during the discovery process or in writing; or
> >
> > (B) as ordered by the court.
>
> (2) Expert Witness. For an expert whose report must be disclosed under Rule 26(a)(2)(B), the party's duty to supplement extends both to information included in the report and to information given during the

> expert's deposition. Any additions or changes to this information must be disclosed by the time the party's pretrial disclosures under Rule 26(a)(3) are due.

The court must consider four factors before striking testimony due to a party's failure to comply with the discovery rules. We examine the "prejudice or surprise" to the party against which the evidence would be admitted, the ability to cure that prejudice, "the extent to which allowing the evidence would disrupt the orderly and efficient trial of the case or other cases in the court," and "bad faith or wilfulness" on the part of the disclosing party in "failing to comply with a court order or discovery obligation." Nicholas v. Pa. State Univ., 227 F.3d 133, 148 (3d Cir. 2000). In applying these factors, we may consider the importance to the disclosing party of the proposed witnesses' testimony. Konstantopoulos v. Westvaco Corp., 112 F.3d 710, 719 (3d Cir. 1997).

Based on the above factors, we will not strike Dr. Hennet's declaration. There is no surprise or prejudice to any of the defendants if Dr. Hennet's declaration is not stricken. Dr. Hennet provided an export report and was deposed on his opinions. The declaration is a clarification of those opinions in response to the defendants' Daubert motions. Dr. Hennet does not change any of his opinions in the declaration or provide any new opinions. Lockheed had notice of Dr. Hennet's methodology, the facts of the case, and his opinions. This is sufficient under the circumstances to avoid surprise or prejudice.

The declaration also will not "disrupt the orderly and efficient trial of the case or other cases in the court." It is merely in response to one of the many motions filed under Daubert that the court is still addressing. It changes nothing in terms of the schedule for trial. Lockheed has not provided any evidence to show that the plaintiffs filed Dr. Hennet's declaration in bad faith. Dr. Hennet's testimony is important for the plaintiffs at trial. Accordingly, we will not strike it.