UNITED STATES DISTRICT COURT
DISTRICT OF CONNECTICUT

Monica and Richard BEYER, *Plaintiffs*, *v.* Anchor Insulation Co., *Defendant*.	Civil No. 3:13-cv-1576 (JBA) February 17, 2017

RULING ON DEFENDANT'S MOTION FOR SUMMARY JUDGMENT

Defendant Anchor Insulation Co. ("Anchor" or "Defendant") moves [Doc. # 189] for summary judgment on all remaining counts in this product liability action involving Defendant's installation of spray polyurethane foam insulation ("SPF") in the home of the Plaintiffs Richard and Monica Beyer ("Plaintiffs" or the "Beyers"), arguing that Plaintiffs cannot establish product defect or causation absent expert testimony that must be precluded as argued in Defendant's three separate Daubert motions [Docs. ## 192 (Motion to preclude Testimony of Mr. Gary Cude), 194 (Motion to Preclude Testimony of Dr. Yuh-Chin Huang), and 195 (Motion to Preclude Testimony of Dr. David Nicewicz).[1] Oral argument was held on January 17, 2017. For the reasons set out below, the Court GRANTS Defendant's motion to preclude the testimony of Dr. Yuh-Chin Huang, GRANTS in part and DENIES in part Defendant's motion to preclude the testimony of Mr. Gary

[1] Defendant Anchor Insulation Co., the sole remaining defendant, was the entity that installed the insulation in Plaintiffs' home. Plaintiffs initially sued Anchor under theories of negligence, breach of implied warranty, and both product defect and failure to warn under the Connecticut Product Liability Act ("CPLA"). At oral argument on the motion to dismiss, Plaintiff conceded that the exclusivity provision of the CPLA "subsumes" the negligence and breach of warranty claims. (*See* Ruling on Motions to Dismiss [Doc. # 67] at 3 n. 2.) This Court will read the counts against Anchor as a unified CPLA claim advancing four different theories of liability: negligence, breach of warranty, failure to warn, and product defect.

Cude (limiting his testimony to his areas of expertise) and GRANTS in part and DENIES in part Defendant's motion to preclude the testimony of Dr. David Nicewicz (limiting his testimony to his areas of expertise). Based on these Daubert rulings, the Court DENIES Defendant's motion for summary judgment.

I. Background[2]

A. SPF Foam Insulation

The SPF at issue in this case is a foam insulation that forms when two liquids, an isocyanate component and a polyol resin component, referred to as "A Side" and "B Side," come together at the tip of a spray gun in equal parts. (*See* Plaintiff's Memorandum in Opposition to Mot. Summ. J. ("Mem. Opp'n") [Doc. # 225] at 3; Ex. 28 ("John Mansville Corbond III Advertisement") to Opposition to Summ. J. ("Opp'n") [Doc. # 228-30] at 1.) The A Side and B Side are stored in separate drums, pumped through separate hoses and combined at nozzle-point to spray onto surfaces that are to be insulated. (Corbond III Advertisement at 3.) When the two sides combine, they form a foam that expands and goes through a period of curing before it is a fully finished product. (*Id.*)

The spray foams at issue in this case are manufactured by Johns Manville ("JM"), which manufactures "Corbond III," a 2 lb. "closed cell" spray foam insulation (Corbond III

[2] In connection with its motion for summary judgment, Defendant submits a one-paragraph statement of uncontested material facts in connection with D. Conn. L. Civ. R. 56a(1) [Doc. # 191], whose sole assertion is that "if the plaintiffs' experts . . . have been precluded, the case is ripe for summary judgment as the plaintiffs have disclosed no other experts." Def.'s D. Conn. L. Civ. R. 56a(1) Stmt. at ¶ 1. Plaintiffs reply with a statement of facts to which they believe there is genuine dispute of material fact. The facts in this background section are taken in part from Plaintiffs' 56a(2) statement.

Advertisement at 3), and by Icynene, which manufactures a 2 lb. spray foam insulation called "LD-R-50." (Ex. 18 ("Icynene Technical Bulletin") to Mem. Opp'n [Doc. # 225-20] at 2.) These companies are no longer in this case.

Both Johns Manville and Icynene train installers in the proper technique for installing spray foam, including installers from Anchor. (Plaintiffs' D. Conn. L. Civ. R. 56a(2) Statement ("56a(2)") [Doc. # 225-2] at ¶16). Both companies direct installers not to mix their product with that of other manufacturers. John Mansville notes that when SPF "is installed off ratio [i.e. when the A Side and B Side are not combined in equal parts], outside the manufacturer's installation guidelines, or in concert with other products [e.g. when a Johns Manville A Side is mixed with an Icynene B Side or *vice versa*] which may affect the chemistry of the SPF product . . . the resulting finished SPF product may shrink substantially and/or have sections of un-reacted or very brittle foam." (Ex. 4 to Opp'n to Mot. Summ. J. [Doc. # 225-6].)

Anchor's email correspondence with Icynene reflects similar beliefs about the effects of mixing different products, though in more prosaic language. On December 21, 2011, Greg Fiske of Anchor wrote to Paul Duffy of Icynene regarding "Franken-foam:" "What I want to know is, if there was a contamination of Icynene into Corbond, is there a chance the result[ ] . . . would be any more harmful than the sum of the parts? . . . 90+ percent Corbond with a bit of Icynene, have we got some monster chemical that is deadly?" Paul Duffy forwarded the inquiry to Larry Genyn, the Vice President of Technology at Icynene, who responded, "there is no hybrid chemical that can be produced. . . . Even the bad foam that was there, may have had a distinct odor or feel, but nothing that would be classified as poisonous or toxic." (Ex. 22 to Plaintiff's Opp'n to Mot. Summ. J. [Doc. # 225-24].)

Johns Manville publishes Materials Safety Data Sheets ("MSDSs") for its A Side, B Side, and the compound SPF foam. (Ex. 12 ("JM MSDSs") to Opp'n. to Mot. Summ. J. [Doc. # 225-14].) The JM MSDS for A Side states that "breathing vapors from this product may cause irritation of the upper respiratory tract, fatigue, weakness, drowsiness, and headache. Allergic or asthma-type reactions may occur following sensitization to isocyanates." (*Id.*) The MSDS for B Side indicates that "[i]nhalation at levels above the occupational safety exposure limit could cause respiratory sensitization and risk of serious damage to the respiratory system. The onset of respiratory symptoms may be delayed for several hours after exposure." (*Id.*) By contrast, the finished spray foam is relatively inert, but nonetheless can be hazardous under certain conditions, primarily if ground into dust or chipped: "Primary routes of exposure: Respiratory tract if product is torn, chipped or ground into chips or dust. Mechanical irritant. Acute Effects: Inhalation: Repeated excessive exposure to dust or small chips may cause upper respiratory irritation." (*Id.*)

Icynene's president and CEO distributed a memorandum to all of its licensed dealers and distributors world-wide delineating safety procedures for installing Icynene foam. In its introduction, the memorandum stated,

> [d]uring the handling, processing and application of Icynene spray foam products, exposure to chemicals, particularly MDI [methylene diphenyl diisocyanate], may cause a range of adverse health effects including irritation or sensitization. Short or long-term exposure to MDI can affect the skin, eyes and respiratory system. Chronic skin exposure can lead to skin irritation and/or sensitization, and may cause respiratory sensitization.

(Icynene Technical Bulletin at 1.)

B. Installation of the Foam

Plaintiffs Richard and Monica Beyer live in a century-old home in Niantic, Connecticut. Since 2000, Mr. Beyer has worked for a granite countertop company in a building that has been

shared since 2009 with Defendant Anchor Insulation. Anchor used the warehouse to store its chemicals and in 2010 those chemicals were moved closer to Mr. Beyer's work station. (*See* Ex. 17 ("Russomanno Report") to Opp'n to Mot. Summ. J. [Doc. # 225-19] at 2-4.)

In Fall 2010, Plaintiffs contracted with Anchor for the installation of SPF throughout their home. (Opp'n. to Mot. Summ. J. at 3.) Plaintiffs remained in the home during the installation, which took place on several days spaced out over some weeks in September and October 2010. Mr. Beyer personally observed some portion of the installation, while Mrs. Beyer was simply in the home during the installation. (56a(2) Stmt. ¶ 2.)[3] Neither Mr. Beyer nor the men installing the foam wore protective clothing, and Mr. Beyer did not wear any respiratory protective device.[4] (Ex. 7 ("M. Beyer Tr.") to Opp'n to Mot. Summ. J. [Doc. # 225-9] at 41:8-21.)

After the SPF was installed, Plaintiffs noticed a sweet odor throughout their house (Ex. 1 ("R. Beyer Tr. Vol. 1") to Opp'n to Mot. Summ. J. [Doc. # 225-2] 75:22-25; M. Beyer Tr. 41:1-4)[5]

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[3] Mr. Beyer's deposition does not make clear if he was present for the spraying of the foam at issue, or whether he was present for the spraying of TigerFoam insulation some years prior. *Compare* 56a(2) Stmt. ¶ 2 *with* R. Beyer Tr. Vol. 1 at 63:2-23.

[4] At oral argument Defendant contested several of these assertions, including specifically that Mr. Beyer did not wear a respirator or Tyvek suit. By submitting a one-paragraph 56a(1) Statement, Defendant appears to have conceded these facts for the purpose of summary judgment.

[5] Mr. Beyer also testified that "it was a very sweet smell, not – it wasn't an odor that would alarm you like if somebody were to spill fuel or something. It wasn't a noxious odor. It was very sweet like candy." Beyer Tr. 76:1-5. However, because of the way the Plaintiff has submitted only excerpts of the deposition, it is unclear whether Mr. Beyer is referring to the SPF, the TigerFoam insulation he installed, or some other product in this passage. Mr Beyer's description of the odor does not seem to match that found by Plaintiffs' medical expert: "all subjects reported smelling unpleasant odors during the spray or when they returned within 48 h after the spray was completed. The descriptive terms used by the subjects included 'fishy', 'ammonia-like', 'chemical', etc." Huang and Tsuang, "Health Effects Associated with Faulty Application of Spray Polyurethane Foam in Residential Homes," *Environmental Research* 134 (2014) at 296.

and when Mr. Beyer went into the attic, the odor became stronger, burning his eyes and irritating his throat. (R. Beyer Tr. at 75:17-25.)

Plaintiffs maintain that Anchor installed the Beyer's insulation improperly. (*See* 56a(2) Stmt. ¶¶ 9 (samples contaminated), 17 (layers too thick; insufficient cure time), 19 (incorrect product).) This claim of faulty installation reflects Anchor's practices at the time: in a September 24, 2010 Johns Manville email, JM employee Mike Donnelly described a visit to Anchor's warehouse where

> Anchor's men did spray some material in a constructed wall cavity in the warehouse from the same set of JM Corbond III material for Neal to inspect. Neal noticed immediately that there was much contamination evident in this material. Anchor's men admitted that they often are forced to switch from open cell product (Icynene) to Corbond III using the same spray equipment. Neal told them in no uncertain terms that this is the main cause of the product defect.

(Ex. 13 ("Sept. 24, 2010 Donnelly E-mail")to Opp'n to Mot. Summ. J. [Doc. # 225-15].) Anchor's installer Wayne LaPierre testified that he often sprayed the foam in thicker swaths than recommended and that he did not wait the recommended cure time before spraying further layers on top of layers he had already sprayed. (Ex. 9 ("LaPierre Tr.") to Opp'n to Mot. Summ. J. [Doc. # 225-11] at 198:16-201:20.)

After the installation, visual inspection of the foam revealed that during the process of curing and hardening, it had shrunk and pulled away from the surfaces on which it had been sprayed. (Ex. 2 ("Photographs of Insulation") to Opp'n to Mot. Summ. J. [Doc. # 225-4]; Ex. 22 ("December 22, 2011 E-mail") to Opp'n. to Mot. Summ. J. [Doc. # 225-24] (Icynene representative stating in internal email that the foam "shrunk and cracked. . . .”))

After Mr. Beyer sent samples of the foam installed by Anchor to JM for inspection, JM responded:

> Initial visual inspection of several of the samples showed foam that was very low in density with large course [sic] open cell structures. The low-density open cell foam is brownish and/or purple color. Ordinarily, a true, properly prepared JM Corbond III product is uniformly lavender in color. The visually observed color abnormalities . . . are an easy indicator that . . . there has been some form of contamination of the JM Corbond III product. . . . Because of the apparent presence of the other, materials/contaminants, JM cannot comment as to the exact product that was installed in your home . . . .

(Ex. 5 ("September 19, 2011 Johns Manville Letter") to Opp'n to Mot. Summ. J. [Doc. 225-7].)

C. Plaintiffs' Symptoms

Shortly after installation of the insulation, Plaintiffs began to experience certain physical symptoms. Mrs. Beyer testified that she experienced headaches lasting up to two days, fatigue, and, one year after the foam was removed from the home, one episode of heart palpitations and difficulty breathing. (M. Beyer Tr. at 59:14-17; 60:1-20; 61:23-25 ("That particular time was the only breathing issue that I had. Other than that, it was just fatigue . . . . Again, my main issues were the – being tired, and also headaches. Headaches that would last two days."))[6]

Mr. Beyer complained of symptoms that included "tongue swelling," severe headaches he describes as "brain-swelling," ("not a headache type of explosion. It almost mimicked a commercial when I was younger where they take the eggs and put them into a cast iron pan and fry them" (R.

[6] In the one study on general causation submitted by Plaintiffs and discussed below, Dr. Huang and his co-author report that twelve of the thirteen subjects reported some form of "neuropsychiatric symptoms" including "headache, dizziness, poor memory, difficulty in concentrating, photosensitivity, myalgia and insomnia" but he did not isolate how many complained of headache alone and the authors did not mention fatigue. *See* Ex. 2 (Yuh-Chin T. Huang, Wayne Tsuang, "Health Effects Associated with Faulty Application of Spray Polyurethane Foam in Residential Homes," in the *Journal of Environmental Research* 134 (2014)) to Mem. Supp. Mot. to Preclude Testimony of Yuh-Chin Huang [Doc. # 196] at 2.

Beyer Tr. at 206:11-16)), a metallic taste in his mouth (*id.* at 206:18-19), loss of memory (*id.*), and boils on his body (*id.* at 207:15-18).[7]

D. Removal of the Foam

After approximately eleven months, during which time Mr. Beyer complained to Anchor, the two agreed that Anchor would remove the insulation. (Beyer Tr. 105:12-106:22.) Mr. Beyer again was present during the removal; he testified that he observed the removal for at least an hour without wearing any protective gear at all. (R Beyer Tr. at 110:7-12.) When Anchor removed the foam, it ground the foam into small particles that caused the house to fill with dust. (M. Beyer Tr. at 120:10-24; R. Beyer Tr. at 113:20-114:23.)

Mr. Beyer testified that most of his symptoms went away after the insulation was removed, but that some symptoms continued through 2012. Mr. Beyer explained that it was unsurprising that the symptoms continued because "[the removal] didn't matter. I'm still working in the same building where they store the chemistry." (R. Beyer Tr. at 207:8-9.)

E. Physicians' Reports

Because key aspects of Defendant's summary judgment motion turn on the sufficiency of Plaintiffs' proof of causation of physical symptoms, an overview of the evidence on medical causation follows. The record contains a report from Mr. Beyer's treating physician, Dr. Licata, who described a follow-up exam he performed on April 30, 2013: "Visit for: follow-up exam asthma: w/ environmental exposure to isocyanide [sic] from sprayfoam insulation" and "follow-

[7] Drs. Huang and Tsuang did not find tongue swelling among their study subjects, but they did find headaches among some number of them. Three study subjects of the thirteen reported skin rashes, but none reported boils. All test subjects reported "fishy," "ammonia-like" or "chemical" odors. *See* Huang and Tsuang, "Health Effects" in *Journal of Environmental Research* 134 (2014).

up asthma – Asthma TX via Qvar // Sinus Dse on CT and Cyst Removal on Hold w/ ID risk // Prior Exposure w/ Foam Insulation." (Ex. 30 ("April 30, 2014 Letter from Dr. Licata") to Opp'n [Doc. # 225-32] at 1.) During this exam, Dr. Licata noted that Mr. Beyer complained of

> headache during post sleep period. Postnasal drip and nasal passage blockage/congestion. . . . Chest pain or discomfort heaviness. No palpitations. Dyspnea during exertion. No cough . . . . Nonrestorative sleep. . . . HA in morning and last all day. . . . Patient says he has hx of environmental exposure to isocyanide [sic] from Sprayfoam insulation exposure in house. . . . Patient notes when the home heats up, patient thinks the off gases from seafoam[sic] are emitted (smells, odor), worse in the summer than the winter. . . . Patient's business is attached to the same building as the company he bought the spray foam from.
>
> Diagnoses:
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> Nasal polyps from CT scan. Allergic rhinitis. . . . Respiratory disorder environmental exoposure [sic] to Sprayfoam. . . .
> Assessment:
> - Extrinsic asthma – with acute exacerbation Foam insulation exposure in house w/ no remediation
> - Intrinsic asthma
> - Primary snoring

Id. at 1-2.

A December 9, 2015 letter from Dr. John Russomanno (the "Russomanno Report"), the Defendant's Rule 35 Examining Physician, indicates the following: Mr. Beyer is a 47 year-old former smoker who quit smoking during the summer and early fall of 2010, at about the same time the SPF was installed in the Beyer household. (Ex. 17 ("Russomanno Report") to Opp'n to Mot. Summ. J. [Doc. # 225-19] at 3-4.) He was diagnosed with asthma in his 30s on the basis of symptoms including coughing, wheezing, and shortness of breath, as well as occasional headaches. (*Id.*) Mr. Beyer told Dr. Russomanno that he observed the installation of the SPF for several hours and that he saw yellow dust in the air during the installation. (*Id.*) Although he did not recall

developing symptoms during the installation, he "soon thereafter recalls developing a burning skin irritation . . . [and] later developed heart palpitations, headaches, slurred speech, memory problems, and a feeling of pressure in his head at night lasting 5-10 seconds." (*Id.*) Mr. Beyer told Dr. Russomanno that he had to increase use of his asthma inhaler during this period. (*Id.*) The insulation was removed in 2011 and Mr. Beyer reported that his symptoms improved after removal. (*Id.*)

Dr. Russomanno concluded:

> Mr. Beyer had a reported period of likely exposure to diisocyanate foam insulation during its installation in his home in 2010. There is a documented increase in his albuterol use with at least one visit documenting the presence of symptoms of cough and white sputum production and wheezing after installation was installed into his home. These symptoms resolved after the installation was removed. He does have a history of pre-existing asthma with increased symptoms following exposure to nonspecific bronchial irritants. This may have been the mechanism of his worsening symptoms at that time. After removal of the material from his home his symptoms improved. In addition to the worsening followed by improvement in his airway symptoms there is a temporary decrease in his pulmonary function that subsequently improved after October 2011. This strongly suggests that his asthma did worsen during that period of time. . . .

Id.

II. Discussion

Defendant moves for summary judgment on all remaining counts[8] against it on the basis that its three Daubert motions should be granted and that without the Plaintiffs' expert testimony it seeks to preclude, Plaintiffs cannot establish causation to support any of their product liability

[8] In its ruling on Defendants' Motions to Dismiss [Doc. # 67], the Court dismissed of Plaintiff's Fifth Count against Anchor, alleging violation of the Connecticut Unfair Trade Practices Act.

theories. Further, Defendant asserts that absent the expert testimony of Mr. Cude and Dr. Nicewicz, Plaintiffs will not be able to establish product defect or damages related to the cost of remediation. Plaintiffs contend that even without expert testimony, the record is sufficient to show both general and specific causation for the personal injury claims, and that proof of their negligence and breach of warranty claims do not require medical causation testimony since the property damage to the house, which requires remediation, is also claimed. Because decisions on the Daubert motions affect which issues can advance to trial, the Daubert motions will be discussed first.

A. Expert Testimony

Defendant challenges each of Plaintiffs' three experts under Rule 702 of the Federal Rules of Evidence and the standards established in *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993). Rule 702 was amended in 2000 to address the Supreme Court's seminal opinion of *Daubert v. Merrill Dow Pharm., Inc.,* 509 U.S. 579 (1993), and its progeny, including *Kumho Tire Co., Ltd. v. Carmichael,* 526 U.S. 137 (1999). *See* Fed. R. Evid. 702, Advisory Committee Notes.

Fed. R. Evid. 702 provides that

> [i]f 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 principles and methods reliably to the facts of the case.

Thus, reliability is the touchstone of the *Daubert* inquiry, and the Supreme Court set out a list of non-exhaustive factors for trial courts to consider in determining whether an expert's reasoning and methodology are sufficiently reliable to be presented to the fact finder: (1) whether

the theory or technique on which the expert relies has been or could be tested; (2) whether the theory or technique has been subjected to peer review and publication; (3) the known or potential rate of error of the technique or theory when applied; (4) the existence and maintenance of standards controlling the technique's operation; and (5) whether the theory or technique has been generally accepted in the scientific community. *Daubert,* 509 U.S. at 593-94; *see also Nimely v. City of New York,* 414 F.3d 381, 396 (2d Cir. 2005).

The test of reliability is a "flexible" one depending on the "nature of the issue, the expert's particular expertise, and the subject of his testimony" and no one factor will necessarily be determinative of the reliability of an expert's testimony, because the trial court need only "consider the specific factors identified in *Daubert* where they are reasonable measures of the reliability of expert testimony." *Kumho Tire,* 526 U.S. at 150, 152; *accord Amorgianos v. Nat'l R.R. Passenger Corp.,* 303 F.3d 256, 265–66 (2d Cir. 2002). Where the factors listed in *Daubert* do not gain much purchase, as for instance in the case of an expert who has acquired his or her expertise through long years of experience rather than academic credentialing, the court exercises its gatekeeping function by ensuring that the expert "employs in the courtroom the same level of intellectual rigor that characterizes the practice of an expert in the relevant field." *In re Methyl Tertiary Butyl Ether (MTBE) Prod. Liab. Litig.*, 593 F. Supp. 2d 549, 555 (S.D.N.Y. 2008), *on reconsideration in part* (June 26, 2008)(*quoting Kumho Tire,* 526 U.S. at 156).

1. Dr. Yuh-Chin Tony Huang

Plaintiffs proffer the testimony of Dr. Huang to support their claims that exposure to the volatile organic compounds ("VOCs") emitted by the spray foam insulation caused their maladies. Plaintiffs offer Dr. Huang to testify on three opinions: first, that Mr. and Mrs. Beyer's physical conditions and symptoms, necessitating their medical treatment, resulted from their exposure to

SPF chemical compounds; second, that Mr. and Mrs. Beyer's symptoms are consistent with and most likely related to their exposure to the SPF chemical compounds which were emitted in their home while they were present during the installation and thereafter; and third that the Beyers likely developed chemical sensitivities as a result of their exposure to these compounds. (Huang Report at 3.)

Causation in a toxic tort case has two components: general and specific. "General causation is whether a substance is capable of causing a particular injury or condition in the general population, while specific causation is whether a substance caused a particular individual's injury." *In re Rezulin Prod.*, No. 00 CIV. 2843 (LAK), 2004 WL 2884327, at *2 (S.D.N.Y. Dec. 10, 2004); *see also K.E. v. GlaxoSmithKline LLC*, No. 14-cv-1294 (VAB), 2017 WL 440242 (D. Conn. Feb. 1, 2017) (requiring proof of general causation—that the substance is capable of causing a particular injury—and specific causation—that the substance caused Plaintiff's injury—under the Connecticut Products Liability Act).

To prove general causation, scientists frequently rely on epidemiological data to first establish an association between a chemical and a disease or set of symptoms which they then probe to determine if the association warrants being described as cause-effect relationship. *See* Federal Judicial Center, *Reference Manual on Scientific Evidence* 374 (2d ed. 2000). "Epidemiology is usually the best evidence of general causation in toxic tort cases." *Baker v. Chevron USA, Inc.*, 680 F.Supp.2d 865, 875 (S.D. Ohio 2010) (citing *Norris v. Baxter Healthcare Corp.*, 397 F.3d 878, 882 (10th Cir.2005)).

"[I]t should be emphasized that an association is not equivalent to causation." *Reference Manual on Scientific Evidence*, 374. "An association between exposure to an agent and disease exists when they occur together more frequently than one would expect by chance. Although a

causal relationship is one possible explanation for an observed association between an exposure and a disease, an association does not necessarily mean that there is a cause-effect relationship." *Cornell v. 360 W. 51st St. Realty, LLC*, 22 N.Y.3d 762, 783 (2014) (citing the Reference Manual at 566).

In determining if an association should be described as a causal relationship, researchers look to several factors, including, but not limited to, temporal relationship, strength of the association, consideration of alternative explanations, and consistency with other knowledge. *Id.* at 375. At oral argument, Plaintiffs maintained that association is sufficient to show general causation. However, "[c]ourts should normally require more than one epidemiological study showing a positive association to establish general causation, because a study's results must be capable of replication." *King v. Burlington N. Santa Fe Ry. Co.*, 762 N.W.2d 24, 48 (Neb. 2009) (*citing Richardson by Richardson v. Richardson–Merrell, Inc.*, 857 F.2d 823 (D.C. Cir. 1988)).

Absent robust epidemiological evidence, experts sometimes rely on case reports. Courts in other circuits have faced the issue of whether to treat case reports as evidence of causation. Drawing on the Reference Manual, one court reasoned that

> standing alone, case reports may or may not be a sufficient basis for expert opinion regarding causation. . . . Case reports are reports in medical journals describing clinical events involving one individual or a few individuals. They report unusual or new disease presentations, treatments, or manifestations, or suspected associations between two diseases, effects of medication, or external causes of diseases. Case reports lack controls and thus do not provide as much information as controlled epidemiological studies do. However, case reports are often all that is available on a particular subject because they usually do not require substantial, if any, funding to accomplish, and human exposure may be rare and difficult to study. Causal attribution based on case studies must be regarded with caution.

Smith v. Wyeth-Ayerst Labs. Co., 278 F. Supp. 2d 684, 695 (W.D.N.C. 2003). In *Wyeth-Ayerst*, in the context of "numerous published case series cited by Plaintiff documenting suspected diet-drug induced PPH cases" and the statistically demonstrated "strength of the association, the dose-response relationship, and temporal relationship" the court considered seven case reports as additional evidence supporting a finding of general causation. *Wyeth-Ayerst*, 278 F. Supp. 2d at 696.

Dr. Huang, the Plaintiffs' proffered expert witness on causation is a Professor of Medicine at the Duke University School of Medicine who specializes in pulmonology and has published widely in peer-reviewed journals, including publishing articles on pulmonary ventilation and occupational and environmental lung diseases.[9] Defendants do not challenge his credentials or his designation as an expert.

The only literature Dr. Huang relies on to support his opinion in this case is an article he co-authored with Wayne Tsuang entitled "Health Effects Associated with Faulty Application of Spray Polyurethane Foam in Residential Homes," in the *Journal of Environmental Research* 134 (2014) (Ex. 3 ("Huang Tr.") to Mem. Supp. Mot. to Exclude Huang Testimony [Doc. # 196] at 173:17-24)[10] and he is aware of no other peer reviewed study that supports his opinion on causation in this case (*id.* at 346:7-19.). He performed no experiments to confirm his hypotheses about any

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[9] *See* Duke University School of Medicine's Web page for Dr. Huang, available at https://medicine.duke.edu/faculty/yuh-chin-tony-huang-md (last accessed January 15, 2017).

[10] Q: And, other than your study, did you gather information in order for you to opine in regard to the offgassing of chemicals from any other source?

A: No.

Q: All comes strictly form that one study?

A: Yes.

causal relationship between the Plaintiffs' symptoms and their SPF exposure,[11] and as of the time he rendered his opinion he had not examined Plaintiffs. (*Id.*)

Dr. Huang explained that this 2014 article was an expanded form of case report: "we found more cases with similar symptoms, and – so we decided to, you know, expand the . . . study to summarize the commonality among these cases. So that's the whole purpose of reporting it. So now from a case report to a case study to . . . research, to observational research." (*Id.* 238:4-10.) As he acknowledged, "there is no control group. It's a first time when you try to describe something. They just describe it. That's how medicine starts." (*Id.* 243:1-4.)

His co-authored article reports on studies of 13 patients conducted by the two author doctors, "half a dozen in the clinic after their residential homes were retrofitted with SPF to improve energy efficiency," and others who had received referrals from other physicians. (*Id.* at 296.) Because of the small population and absence of any methodology used to develop and test hypotheses that would falsify hypothetical causal connections, this article does not establish causation. Rather, as its authors concluded, "[i]n this study, we described 13 subjects who developed health complaints after their homes were retrofitted with SPF. The health effects were likely associated with the faulty application of SPF, although the exact causes for these symptoms remain unclear." *Id.* at 300.

In deposition, Dr. Huang carefully distinguished between association and cause and highlighted that his research established association, but not causation:

> I did not say cause. I said associated with exposure. . . . Cause, you have to have an established causal relationship. Association can be just happen right during and

[11] Dr. Huang derides Defense Counsel's suggestion that there was any testing Dr. Huang could have performed since human experiments would require exposing them to toxins.

> after. So from the time standpoint it is associated with exposure, but in order to make sure that this is a cause in medicine or in science, you have to do a study.

(Huang Tr. 393:16-394:1.) Dr. Huang testified that the temporal connection between the patients' exposure and the onset and nature of their symptoms was evidence of causation, but it was not conclusive. "Do I think the symptoms are associated with exposure? Yes. Does exposure in the broad sense related – or cause the symptoms? Yes. But in a real strict sense of causation, because we didn't have those kinds of studies. So in the medical term it's temporally associated. And we said, yes, that's the case. It is cause – it is in a sense caused by it." (Huang Tr. 395:17-24.)

The "likely association" Dr. Huang and Dr. Tsuang found between exposure and symptom developed on the basis of 13 patient case studies is not the equivalent of legal causation. This article, which reports common symptoms among the thirteen patients and proposes a common associated link is, as Dr. Huang noted, "how medicine starts," but standing by itself, this article does not establish general causation. Absent further published studies, comparison to a control group, or replication by other researchers, this article does not satisfy the reliability standard of Daubert for general causation.

At oral argument, Plaintiffs' counsel maintained that Dr. Huang's testimony should be evaluated in conjunction with the MSDSs which together would permit an inference of general causation. Plaintiffs argue that the JM MSDS for A Side and B Side function as admissions of general causation because they are both framed in causal terms. The JM MSDS for the A Side states that "breathing vapors from this product *may cause* irritation of the upper respiratory tract, fatigue, weakness, drowsiness, and headache. Allergic or asthma-type reactions may occur following sensitization to isocyanates." (JM MSDS (emphasis added).) The MSDS for B Side indicates that "[i]nhalation at levels above the occupational safety exposure limit *could cause* respiratory

sensitization and risk of serious damage to the respiratory system. The onset of respiratory symptoms may be delayed for several hours after exposure." (JM MSDSs (emphasis added)).

Plaintiffs' reasoning is not persuasive for three reasons. First, the law surrounding warnings requires that customers be warned of potential adverse effects even where causation has not been established. "A jury may find that a warning is inadequate and unreasonable even where . . . a causal relationship between use of the product and resulting injury has not been definitely established. Thus, where scientific or medical evidence exists tending to show that a certain danger is associated with use of the drug, the manufacturer may not ignore or discount that information in drafting its warning solely because it finds it to be unconvincing." *Smith v. Pfizer Inc.*, No. CIV.A. 98-4156-CM, 2001 WL 968369, at *4 (D. Kan. Aug. 14, 2001). Thus, MSDSs that warn consumers of potential adverse effects should not automatically be treated as admissions establishing scientific causation—even where causal language is used—because such warnings must be given even where there is only an association and causation has not (yet) been proven.

Second, and relatedly, there are strong policy reasons to encourage manufacturers to use clear, unambiguous language in crafting warnings that would be undermined by treating warning labels as admissions of scientific causation. Permitting recitation of product label warnings or MSDS sheets as an admission of causation "as a policy matter . . . might stifle free discussion of adverse event reports and potential label changes, and discourage pharmaceutical companies and other manufacturers from open discourse, if such discussion might later be held to concede the issue of general causation." *In re Mirena IUD Prod. Liab. Litig.*, No. 13-MC-2434 (CS), 2016 WL 4059224, at *12 (S.D.N.Y. July 28, 2016).

Third, Dr. Huang's deposition testimony on causation contradicts the MSDS warnings with respect to the A Side. Dr. Huang states that the isocyanates in the A Side do not cause the

symptoms he reports (e.g. Huang Tr. at 262:21-263:14 ("we know it's probably not isocyanate . . . Now A is out, so [the cause of the symptoms] is either B or A plus B"); *id.* at 357:4-21) in contrast to the A Side MSDS for both Icynene and JM, which warn that exposure to A Side vapors can cause the symptoms. The Icynene technical bulletin, which focuses specifically on isocyanates as the causal agent, is too vague to establish general causation of any specific syndrome and states only that "exposure to chemicals, particularly MDI [isocyanates], may cause a range of adverse health effects including irritation or sensitization." (Icynene Technical Bulletin at 2.)

Without more, Dr. Huang's opinion testimony of the relationship between Plaintiffs' symptoms and Defendant's faulty application of SPF based on his 2014 article and his review of Plaintiff's medical records and statements would not provide a reasonable jury with an evidentiary basis for concluding Plaintiffs had proved the requisite element of proximate cause. Dr. Huang clearly explains that his research establishes only a likely association of exposure to symptoms and distinguishes this conclusion from causation. The quality and quantity of Plaintiffs' evidence fares no better even when the MSDSs are considered. Even with recognition that a reasonable degree of medical certainty requires less than absolute certainty, the medical and epidemiological evidence of association proffered by Plaintiffs in this case through Dr. Huang is insufficient to be presented to the jury.

Furthermore, even if Dr. Huang were permitted to opine on general causation, his opinion could not show specific causation. First, his expert report was authored before he examined either plaintiff, and he instead relied on written description of their symptoms, even though he stated that an in-person examination was important in cases like this because a treating physician needs to assess the veracity of a patient's complaints of non-specific symptoms "so that I can actually judge, is this real." (Huang Tr. at 45:6-11.) Second, Dr. Huang did not adequately explore or

explain why he ruled out alternative causes. Dr. Huang's conclusory statement that he has "ruled out other potential causes in coming to my conclusions in this case" (Huang Report at 4) does not reliably show which other potential causes he has ruled out or his reasoning for doing so. Furthermore, in contrast to the patients studied in Dr. Huang's article, "none [of whom] had significant respiratory or non-respiratory conditions before the foam spray, but [who] all noted symptoms after the foam spray independently," Mr. Beyer had previously suffered from asthma and had previously reported sleep apnea, fatigue, coughing, wheezing and skin rashes to his personal physician. (Beyer Tr. at 329:5-20.)[12] For all of the foregoing reasons, *Daubert* requires the exclusion of Dr. Huang's testimony on causation as insufficiently reliable for a jury's consideration.

2. Mr. Gary Cude

Plaintiffs submit the expert report of Mr. Gary Cude as evidence that Defendant's product was defective, that required warnings were not provided, and to estimate the cost of remediation of the home. Mr. Cude is expected to testify that the SPF was defective in that it mixed A Side from one company with B Side from another, was sprayed off-ratio and too quickly, and that the installation did not conform to industry standards; additionally, he is expected to opine that the installers failed to provide the required warnings, that Anchor failed to properly ventilate and that it failed to take proper precautions during removal, and that specialized remediation of the home is necessary and would cost approximately what the consulting expert, Bernard Bloom, states it

[12] In fact, Mr. Beyer told the Rule 35 examining physician that Anchor stores its chemicals in the same building as Mr. Beyer's workplace and that in 2010, Anchor moved the storage location closer to Mr. Beyer's work station, and he was unsurprised that his symptoms did not diminish after removal of the spray foam from his house because "[the removal] didn't matter. I'm still working in the same building where they store the chemistry." (R. Beyer Tr. at 207:8-9.) Dr. Huang did not address this aspect of Mr. Beyer's workplace, only the granite dust there.

would cost. (*See* Ex. A ("Cude Report, ")to Mem. Supp. Mot. to Preclude Cude Testimony [Doc. # 193-1].)[13]

Mr. Cude is an analytical chemist, materials scientist, and certified indoor environmental consultant with an M.S. in environmental sciences from the University of Texas at Austin. His central area of expertise is failure analysis of engineered materials including glass products, ceramics, metal alloys, organic coatings, and other materials. (*See* Cude Report at 1.) In addition, Mr. Cude specializes in "chemical consulting, including process design and implementation," and "sampling and analysis of indoor air for quality content and source of remediation," as well as "laboratory analysis" of air samples. (*Id.*) Defendant does not challenge Mr. Cude's qualifications.

Defendant primarily attacks Mr. Cude's report as parroting the findings of a consulting non-testifying expert, Mr. Bernard Bloom without application of his own independent judgment. Mr. Bloom has many of the same credentials as Mr. Cude; their experience and areas of expertise overlap to a great degree. In 2012, Mr. Bloom drafted a report on the conditions at the Beyer home. As part of his investigation, he took air samples in two areas of the house which he sent to Mr. Cude's lab for analysis. Mr. Cude's report incorporates all of the Bloom findings; indeed, in some places it appears to repeat those findings verbatim.

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[13] In his 2015 report, Mr. Cude did not give a remediation cost, only incorporated by reference Mr. Bloom's estimate. On December 12, 2016, Mr. Cude untimely disclosed supplemental expert report (the deadline for disclosure was July 22, 2015) which repeats almost word-for-word the assessment of Mr. Bloom about remediation costs, changing the addressee, incorporating by reference Mr. Bloom's report "of which I am in complete agreement," and adding a reference to the one remediation plan "in a similar home with spray foam insulation in Alvaredo Texas" that Mr. Cude had "personally prepared." (*See* Ex. 1 to Mot. to Strike Supplemental Cude Report [Doc. # 250-1] at 1.)

While it is well established that "a scientist, however well-credentialed he may be, is not permitted to be the mouthpiece of a scientist in a different specialty" *Dura Auto Sys. Of Ind. v. CTS Corp.*, 285 F.3d 509, 614 (7th Cir. 2002); s*ee also Louis Vuitton Malletier v. Dooney & Bourke, Inc.*, 525 F.Supp.2d 558, 564 (S.D.N.Y. 2007), that is not the case here since Mr. Cude shares many of the qualifications of Mr. Bloom and since Mr. Cude and Mr. Bloom collaborated to the extent of collecting and analyzing the air samples.

"Where a testifying expert has expertise in the field covered by a consulting expert and independently verifies the latter's conclusions, there is no danger that the former is acting as a mere 'mouthpiece or conduit' of the latter." *Medisim Ltd. v. BestMed LLC*, 861 F. Supp. 2d 158, 169 (S.D.N.Y. 2012), *on reconsideration in part*, No. 10 CIV. 2463 SAS, 2012 WL 1450420 (S.D.N.Y. Apr. 23, 2012). However, even where there is such an overlap, it is essential that the testifying expert "independently verify" or critically evaluate the work of the non-testifying expert. In *Medisim*, for example, the testifying expert looked to the work of the non-testifying expert "only after analyzing the source code on his own," and confirmed that the conclusions they reached were the same. *Id.* The record in the instant case is more opaque. Although Mr. Cude and Mr. Bloom have overlapping expertise and experience, passages in Mr. Cude's report are copied word-for-word[14] and his deposition testimony suggests that he adopted some of Mr. Bloom's results without critical evaluation.

For purposes of the instant motion, it is helpful to divide Mr. Cude's opinions into three groups: first, the opinions regarding remediation set forth on page 4 of his report; second, the seven

[14] In some instances, Mr. Cude has simply copied factual descriptions of the Beyers' home and layout. These instances are less troubling than the wholesale adoption of Mr. Bloom's opinions or conclusions.

opinions set forth on page 2 of his report regarding the installation of the foam; and third, any residual, tacit opinions Mr. Cude incorporates by reference from Mr. Bloom's report, including opinions regarding the source of elevated VOCs in the Beyer house as of 2012 when the air samples were taken.

In the first category, with respect to remediation opinions, Mr. Cude opines that

> based upon the current reports by the Beyers and the air-quality testing that I have provided (attached hereto), specialized remediation is required to reduce the likelihood of further contamination and adverse health effects to the Beyers. . . . To remediate, I would agree with the assessment in the Bloom report, and I incorporate those opinions into my report with this reference. I have experience in building science and have reviewed and consulted in other cases involving SPF remediation plans. The plan set forth by Mr. Bloom is consistent with similar SPF remediations where air quality concerns are linked to SPF installation errors like those described in this case.[15]

(Cude Report at 4.) Mr. Cude performed the analysis of the air samples and explained the need to remediate the house on the basis of those samples. While Defendant believes it has uncovered methodological infirmities in Mr. Cude's air sample analysis (including, for example, that Mr. Cude does not know where the air samples were taken or why they were taken for different lengths of time), these go to the weight, rather than the reliability of his opinion.

However, with regard to the kind of remediation necessary and its cost, Mr. Cude simply adopts the opinions of Mr. Bloom. As disclosed during his deposition, when Mr. Cude writes, "based on the current reports of the Beyers," what he means is what the Beyers told Mr. Bloom in

[15] This opinion relies on two unstated assumptions. First, Mr. Cude assumes but does not show that the elevated VOCs found in his 2012 air quality analysis were caused by the SPF in the Beyer home. Second, it assumes that the SPF to be removed is the cause of the adverse health effects suffered by the Beyers.

2012, since Mr. Cude had not received any input directly from the Beyers in support of his report. (Ex. B ("Cude Tr.") to Mot. to Preclude Cude Testimony [Doc. # 193-2] at 266:2-16) Mr. Cude further explained that he relied on Mr. Bloom's remediation opinions because Mr. Bloom had "vastly" more experience in remediation: "He's remediated lots and lots of properties for various issues. And mold being one of them. And the general protocol is very similar in terms of blocking everything off and having negative air containment and everything else. Same with asbestos and probably even lead." (*Id.* at 126:17-127:16.) Mr. Cude further noted that Mr. Bloom "did a home inspection. He actually inspected the property and that's pretty – that's necessary in order to write a proper remediation plan" and conceded that he himself had not inspected the Beyer home for the purpose of preparing or evaluating remediation proposals. *Id.* The fact that Mr. Cude believes a home inspection is necessary to prepare a remediation report, but did not himself do a home inspection before drafting his report,[16] indicates he is merely a conduit for Mr. Bloom's opinion based on Mr. Bloom's inspection and analysis. Unlike the expert in *Medisim* who first reached a set of conclusions and then referred to the work of the non-testifying expert, Mr. Cude appears to have relied solely on Mr. Bloom's work.

A further reason Mr. Cude's remediation opinion must be excluded, however, is that it cannot satisfy the fundamental *Daubert* requirement that the expert "employ[] in the courtroom the same level of intellectual rigor that characterizes the practice of an expert in the relevant field." *In re Methyl Tertiary Butyl Ether (MTBE) Prod. Liab. Litig.*, 593 F. Supp. 2d 549, 555 (S.D.N.Y. 2008), *on reconsideration in part* (June 26, 2008)(quoting *Kumho Tire*, 526 U.S. at 152). As Mr.

[16] Mr. Cude conceded at deposition that he never did a home inspection for purposes of remediation, though he did attend the October 22, 2015 home inspection and take air samples at that time. Cude Tr. at 127:14-16.

Cude stated in his deposition, he has only been involved in the preparation of three remediation plans and each of those plans was prepared for the purposes of litigation. (Cude Tr. at 268:9-24.) *Kumho Tire*'s requirement of practitioner rigor does not create a per se bar to testimony of forensic experts simply because they provide courtroom testimony and are not active in the field, but it does require the Court, as gatekeeper, to confirm that the methods used by the testifying expert are as rigorous as those used by experts in the field. Here, again, Mr. Cude's failure to perform a home inspection or to speak to the Beyers before preparing his remediation opinion demonstrate that the method by which he formed that opinion falls short of exhibiting the level of rigor exhibited by an expert in remediation in the field and is thus insufficiently reliable for trial purposes. For this reason, although Mr. Cude may testify that remediation is necessary based on his air samples, he will be precluded from testifying to the specifics of remediation or its cost.[17]

Second, Mr. Cude expresses four opinions about potential defects in the installation of the SPF: (1) that it is highly likely that the installer mixed Side A from one manufacturer with Side B from another; (2) that the SPF was sprayed off-ratio, (3) that the SPF in the basement was sprayed too rapidly, and (4) that the installers did not follow reasonable and standard practices of highly toxic chemicals. (Cude Report at 2.)

These opinions fall within the realm of Mr. Cude's expertise in failure analysis of engineered materials. To reach his opinions, he largely relied on the Bloom report, as well as "information, photos and available data," specifically the one photo included in Mr. Bloom's

[17] Mr. Cude argues that special remediation is necessary "to reduce the likelihood of further contamination and adverse health effects to the Beyers . . . ." Neither Mr. Cude nor Mr. Bloom is qualified to testify to medical causation and so any opinion regarding whether or not SPF causes "adverse health effects" or "contamination" lies outside their areas of expertise and would be inappropriate for presentation to the jury.

report. (*Id.*) The other "available data" he referred to were the results of his air sample analysis, the Nicewicz report and information he had obtained from the Beyers through Mr. Bloom. (Cude Tr. at 128:7-129:2.)

With respect to the first opinion, that the installer mixed JM and Icynene products, Mr. Cude conceded that he relied primarily on Mr. Bloom's opinion and, when asked if there was something he relied on other than Mr. Bloom's opinion, he stated, "nothing comes to mind." (Cude Tr. 194:14-23).[18] However, Mr. Cude later offered testimony on the potential effects of mixing products made by different manufacturers, indicating that he had some experiential basis for evaluating Mr. Bloom's opinion. With regard to this opinion on mixed products, Mr. Cude's opinion seems grounded in his own research and experience. Similarly, with respect to the second opinion, that the foam was off-ratio, he again referred to Mr. Bloom's report and the sole photograph and contained, but also offered testimony regarding the potential effects of spraying foam off-ratio and his opinion is thus not just parroting Mr. Bloom's results. The third opinion, that the foam was sprayed too rapidly, likewise derives in large part from Mr. Bloom's judgment, but independent inspection of the photo in the Bloom report allowed Mr. Cude to confirm Mr. Bloom's opinion. Thus, with respect to the first three opinions, the Court finds that Mr. Cude properly evaluated the Bloom report and is qualified to deliver the opinions his report expressed.

[18] Mr. Cude's report was disclosed in the summer of 2015 and was drafted, as he admits, before depositions of other witnesses in this case were taken. It is not clear if Plaintiffs had received or made available to Mr. Cude the September 19, 2011 Johns Manville Letter (Ex. 5 to Pl.'s Opp'n to Mot. Summ. J. [Doc. 225-7]) that stated the samples sent by Mr. Beyer to JM were not pure JM product but rather somehow contaminated. Instead, Mr. Cude seems to rely primarily on Mr. Bloom's visual inspection of the foam and the single photo of the Beyer home included in the Bloom report.

Mr. Cude's fourth opinion concerns Anchor's installation procedures, which Mr. Cude opines are "well below reasonable and standard practices for installers." (Cude Report at 2.) Defendant contends that this opinion should be excluded because Mr. Cude is no expert in SPF installation; rather, he is a materials scientist who specializes in failure of engineered materials and who performed air testing on samples taken from the Beyer household. Most importantly, at deposition, Mr. Cude conceded that he relied solely on Mr. Bloom for a statement of reasonable and standard practices of SPF installation:

> Q: . . . Do I understand that, without going back to Mr. Bloom's report, you can't tell me what the reasonable and standard practice is for installers that were not followed?
> A: Well, as stated in my report, I relied heavily on [Mr. Bloom's] field inspection and his report.

Cude Tr. at 208:2-9. While Mr. Cude's years of experience in failure analysis provides him a basis for explaining why or how a material might fail (including, as in the present case, due to mis-installation), he admits that he has no independent basis of knowledge regarding industry standards or practice in the installation of SPF. His testimony on this opinion must be excluded.

Mr. Cude's fifth opinion, that Defendant did not warn the Beyers of hazards associated with SPF and that industry standards require such warnings; his sixth opinion, that Defendant failed to appropriately ventilate the house during installation and thereafter, and his seventh opinion, that Defendant failed to take appropriate precautions during removal, suffer from the same shortcoming as the fourth. While Mr. Cude notes that there "is a kind of – I wouldn't call it a governing body, but the spray foam institute sets quite a few guidelines" (Cude Tr. 204:15-17), his deposition testimony does not demonstrate the depth of knowledge that would assist the jury

in understanding what those standards are and how Mr. Cude used them as a basis for his opinion.[19]

Finally, Defendant notes that Mr. Cude's incorporation by reference of the Bloom report leaves open the possibility that he will be called on to testify as to the source of the elevated VOC levels that Mr. Cude found in his analysis of the air samples taken from the Beyer home. While the Cude report does not address the elevated VOCs in the air samples, and the summary of opinions does not set forth any opinion regarding elevated VOCs to which Mr. Cude intends to testify at trial, he does attach the results of his air sample analysis and is qualified to testify to those results. In summary, Mr. Cude may testify about the likely mis-installation of the foam and he may testify to the results of his air sampling. He is precluded from testifying about specific remediation measures and about industry safety standards for installation and whether Defendant conformed to those standards. Finally, Mr. Cude is not qualified to offer opinions as to whether the SPF in the Beyers' home caused Plaintiffs' adverse health effects.

3. Dr. David Nicewicz

Dr. David Nicewicz is an associate professor of chemistry at the University of North Carolina at Chapel Hill who specializes in synthetic organic chemistry, catalysis and natural product synthesis. He earned his Ph.D. in organic chemistry at UNC Chapel Hill and has had a post-doctoral fellowship at Princeton. He has won several awards for his research and published broadly on topics in organic chemistry in peer-reviewed journals.

[19] The Court notes that the testimony of Dr. Nicewicz concerning handling of chemicals likely covers the same ground.

Dr. Nicewicz's report distinguishes between the "topics" to which he will testify and the "opinions" which he will provide. While the "topics" appear, for the most part, to be within the range of his expertise, the "opinions" fall outside that range. Dr. Nicewicz states that he will testify to the following "opinions:" (1) the Beyers "were not properly warned of potential hazards" of SPF (Ex. A ("Nicewicz Report, ") to Mem. Supp. Motion to Preclude testimony of Dr. Nicewicz [Doc. # 197-1] at 3]); (2) the Beyers "were not warned, nor was there signage or cordons prohibiting" entry into the house during installation (*id.*); (3) the Beyers "were not told to stay out of their home" for 24-48 hours after installation (*id.*); (4) Anchor did not provide any cross ventilation during installation (*id.*); (5) Anchor did not protect surfaces of house during installation (*id.*); (6) Mr. Beyer was exposed to airborne isocyanate concentrations far in excess of OSHA limits when he was permitted within ten feet of the spray foam gun during installation (*id.*); (7) Mr. Beyer was permitted to spray insulation without wearing proper protective gear (*id.*); (8) Mr. Beyer "was not told to stay out" of the house when the SPF was removed, and he therefore was exposed to "the components of the SPF that are trapped within the closed-cell foam" (*id.*); (9) the Beyers were exposed to elevated VOCs "after the application of SPF by Anchor Insulation" (*id.*); and (10) the Beyers were exposed to elevated levels of formaldehyde after installation of the SPF (*id.*). Dr. Nicewicz then opines that the A-side component contains an isocyanate that is "a known eye, skin and respiratory irritant that causes chemical sensitization," (*id.*) and the B-side contains diethylmethylbenzene diamine, "which has documented acute inhalation toxicity" (*id.*) and concludes that "it is my opinion that both Monica and Richard Beyer were exposed to known toxic chemicals which, within reasonable scientific certainty, have caused the ill health effects described by both Monica and Richard Beyer" (*id.*).

In contrast to his "opinions," Dr. Nicewicz states that the topics to which he would testify include the safe handling of chemicals, the hazardous chemicals contained in and off-gassed by SPF, the toxicity of those chemicals and their decomposition, the likely cause of the contamination in the plaintiffs' home, the chemistry of polymers, the appropriate warnings to give to homeowners and other related topics. Dr. Nicewicz is certainly qualified to testify regarding the chemistry of the Side A and Side B components and the resulting foam, and could helpfully explain how those chemicals emit VOCs both before they are combined, during the chemical reaction by which the SPF is formed, and after, during the cure period.

Defendant argues that Dr. Nicewicz is unqualified to offer opinions on warnings because he has no training in industrial hygiene and therefore seeks to preclude Dr. Nicewicz from testifying as to his first four opinions and opinions seven and eight. (Mem. Supp. Mot. to Preclude Nicewicz [Doc. # 197] at 10.) In making this argument, Defendant downplays the fact that Dr. Nicewicz has designed a lab safety course at UNC and that he has a general knowledge of safety around chemicals. Defendant also argues that Dr. Nicewicz has no background in SPF installation and thus ought not be permitted to testify as to proper installation techniques.

Given Dr. Nicewicz's training and expertise, it is appropriate that he testify as to the safe handling of chemicals, the hazardous chemicals contained and emitted by SPF, the chemistry of those chemicals and how they decompose. However, as Defendant argues, the form of the first eight opinions as drafted in the report can be read to do nothing more than restate the Beyer's factual testimony regarding whether and what kinds of warnings were given to the Beyers. Because Dr. Nicewicz "has no personal knowledge of these facts and they are lay matters that the jury is capable of understanding and deciding without" Dr. Nicewicz's testimony, he will not be permitted to testify that the Beyers were not warned or that Mr. Beyer helped spray the foam or the like,

except in hypothetical form based on the Beyers' factual testimony. *Highland Capital Mgmt., L.P. v. Schneider*, 551 F. Supp. 2d 173, 180 (S.D.N.Y. 2008) (precluding expert from testifying to the "factual narrative" underlying his expert opinion).

Defendant further objects to Dr. Nicewicz's testimony about the possible sources of VOCs in the Beyers' home, although Dr. Nicewicz's report indicates that he will testify only that the levels were elevated after installation, and not that the SPF caused elevated levels. Dr. Nicewicz reaches this conclusion on the basis of the results of Mr. Cude's air sampling analysis. Defendant reiterates its challenge to the air testing done by Mr. Cude, arguing that the lack of chain of custody, the lack of calibration report, the use of a non-standard method, and the fact that Mr. Cude's lab is not accredited or certified undermine the reliability of the data. Mr. Cude will be permitted to testify to the elevated level of VOCs, and his methods and conclusions will be subject to cross-examination, Dr. Nicewicz however may offer testimony on possible sources of elevated levels of VOCs from his experience and training.

Dr. Nicewicz's final opinion appears to be one of medical causation: "It is my opinion that both Monica and Richard Beyer were exposed to known toxic chemicals which, within reasonable scientific certainty, have caused the ill health effects described by both Monica and Richard Beyer." This opinion on the causes of the Beyers' symptoms lies outside Dr. Nicewicz's training and expertise as an organic chemist. He has not demonstrated that he is in any way qualified to testify to medical causation, although his opinion regarding Plaintiffs' exposure to toxic, potentially harmful chemicals is within his expertise. It is within the Court's discretion to preclude an expert "from rendering opinions on subjects outside his field of expertise," and Dr. Nicewicz will be precluded from offering medical causation testimony and testimony on the Beyers' experience which he did not observe. *Morse/Diesel, Inc. v. Trinity Indus., Inc.*, 67 F.3d 435, 444 (2d Cir. 1995).

B. Defendant's Motion for Summary Judgment

Having determined the admissibility of Plaintiffs' experts' reports, the Court turns to the Defendant's motion for summary judgment on Plaintiffs' four remaining causes of action: negligence, breach of warranty, failure to warn and strict liability from product defect. In addition to damages arising from personal injury, Plaintiffs claim they have "suffered substantial property damages, includ[ing] but not limited to the loss in the valuation of their home, damage to the integrity of their home, and structural damage." (Amended Complaint [Doc. # 44] at 5.)

1. Legal Standard

Summary judgment is appropriate where, "resolv[ing] all ambiguities and draw[ing] all permissible factual inferences in favor of the party against whom summary judgment is sought," *Holcomb v. Iona Coll.*, 521 F.3d 130, 137 (2d Cir. 2008), "the movant shows that there is no genuine dispute as to any material fact and the movant is entitled to judgment as a matter of law," Fed. R. Civ. P. 56(a). "A dispute regarding a material fact is genuine if the evidence is such that a reasonable jury could return a verdict for the nonmoving party." *Williams v. Utica Coll. of Syracuse Univ.*, 453 F.3d 112, 116 (2d Cir. 2006) (quotation marks omitted). "The substantive law governing the case will identify those facts that are material, and '[o]nly disputes over facts that might affect the outcome of the suit under the governing law will properly preclude the entry of summary judgment.'" *Bouboulis v. Transp. Workers Union of Am.*, 442 F.3d 55, 59 (2d Cir. 2006) (quoting *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 248 (1986)). When considering a motion for summary judgment, the Court may consider depositions, documents, affidavits, interrogatory answers, and other exhibits in the record. Fed. R. Civ. P. 56(c).

Plaintiffs' claims all fall under the Connecticut Product Liability Act (the "CPLA"), which provides remedies for both personal injury and property damage caused by, *inter alia*, the

installation of a product. (*See* Conn. Gen. Stat. § 52-572m(b), defining "Product liability action" to include "all claims or actions brought for personal injury, death or property damages caused by the . . . installation . . . of any product.") Although the CPLA provides the exclusive remedy for plaintiffs with product liability claims, the CPLA was "not meant to alter the substance of a plaintiff's rights or the facts that a plaintiff must prove in order to prevail" (*LaMontagne v. E.I. DuPont De Nemours & Co., Inc.*, 41 F.3d 846, 856 (2d Cir. 1994)) for "all actions based on the following theories: strict liability in tort; negligence; breach of warranty, express or implied; breach of or failure to discharge a duty to warn or instruct, whether negligent or innocent; misrepresentation or nondisclosure, whether negligent or innocent." Conn. Gen. Stat. § 52–572m(b).

2. Plaintiffs' Causes of Action

a) Negligence

To prove their claims for negligence, the Beyers must establish: "duty of care; breach of that duty; causation; and actual injury." *Bifolck v. Philip Morris, Inc.*, 324 Conn. 402, 443 (2016) (discussing elements of proof for negligence theories in products liability claims). "'If a plaintiff cannot prove all of those elements, the cause of action fails.'" *Angiolillo v. Buckmiller,* 102 Conn. App. 697, 2007 WL 2051409, at *6 (Conn. App. Ct. 2007). Plaintiffs' negligent installation claim falls under the CPLA because Anchor was a product seller, but their negligent removal claim, in which Defendant did not function as a seller but as a service provider, is outside the scope of the CPLA. *See Johnson v. Sears Roebuck & Co.*, 05-cv-139 (JCH), 2007 WL 2491897 at *6 n.7 (D. Conn. Aug. 29, 2007) (treating a plaintiff's claim for breach of warranty in connection with the installation of a water heater as falling under the CPLA, but treating her claim for negligent repair

of the same heater as outside the CPLA because Defendant functioned as service provider, and not "product seller" when repairing the heater).

"An essential element of any negligence action is the establishment of the defendant's conduct as a proximate cause of the plaintiff's injury. . . . The causal relation between the defendant's wrongful conduct and the plaintiff's injuries must be established in order for the plaintiff to recover damages.'" *Wu v. Town of Fairfield*, 204 Conn. 435, 438 (1987). The existence of the proximate cause "is determined by looking from the injury to the negligent act complained of for the necessary causal connection. . . . This causal connection must be based upon more than conjecture and surmise." *Paige v. Saint Andrew's Roman Catholic Church Corp.*, 250 Conn. 14, 26 (1999).

b) Failure to Warn

Under the CPLA, the Beyers must prove (1) that the SPF or its component parts were "defective in that adequate warnings or instructions were not provided" and (2) "that if adequate warnings or instructions had been provided, [the Beyers] would not have suffered the harm." Conn. Gen. Stat. § 52–572q(a), (c); *see also Batoh v. McNeil-PPC, Inc.*, 167 F. Supp. 3d 296, 308 (D. Conn. 2016). The second element requires a showing of causation, but it is not restricted to medical causation because the failure to warn may have led to property damage.

c) Breach of Implied Warranty of Workmanlike Conduct

Plaintiffs style their third cause of action a breach of implied warranty but this is not an independent cause of action under Connecticut law and will be treated as part of the negligence claim in Plaintiffs' first count. An allegation of failure to perform work in a "skillful, competent, and workmanlike manner" by its "very words implicate[s] negligence principles" and where the

damages alleged under either theory are the same, it is appropriate to construe the breach of contract claim as a negligence claim and to combine the two causes of action. *Bonan v. Goldring Home Inspections, Inc.*, 68 Conn. App. 862, 871, 794 A.2d 997, 1004 (2002); *see also Ranger v. Gianmarco*, No. CV085004260, 2009 WL 1218790, at *2 (Conn. Super. Ct. Apr. 14, 2009) ("no authority has been found in which an implied warranty to perform the services in a workmanlike manner has been given status as an independent cause of action; rather, such a claim has been viewed as a breach of contract."); *New Hampshire Ins. v. Hartford Sprinkler*, No. CV054007221, 2008 WL 808914, at *2 (Conn. Sup. Ct. Mar. 10, 2008) ("where breach of service contract claims and negligence claims have been asserted in the same action, our courts have combined such claims into one negligence claim.")

d) Strict Liability for Product Defect

"In order to recover under the doctrine of strict liability in tort the plaintiff must prove that: (1) the defendant was engaged in the business of selling the product; (2) the product was in a defective condition unreasonably dangerous to the consumer or user; (3) the defect caused the injury for which compensation was sought; (4) the defect existed at the time of the sale; and (5) the product was expected to and did reach the consumer without substantial change in condition." *Giglio v. Connecticut Light & Power Co.*, 180 Conn. 230, 234, 429 A.2d 486 (1980).

3. Causation

Under each of the three counts described above—negligence, failure to warn, and strict liability—the Beyers must prove proximate causation as a necessary element. The Beyers allege two forms of injury: personal injury and damage to property. The damage to property includes foam shrinking, which caused warping and deformation of the structures it was sprayed onto,

destruction to property value, and removal problems. (*See* Amended Complaint [Doc. # 44] at ¶ 17.) As explained below, exclusion of Dr. Huang's testimony means that the Beyers will not have the requisite expert evidence to prove the causal connection between the SPF foam and their medical symptoms, precluding their claim from recovering damages for personal injuries. However, their claim for damages to their home arising from Anchor's negligent installation of SPF, needed remediation, and a consequent reduction in property value remains for trial.

With respect to claims for damages arising from personal injury to Plaintiffs, proof of general causation—"whether *the type of injury at issue can be caused or exacerbated* by the defendant's product,"—is necessary in a products liability case such as this. *Ruggiero v. Warner–Lambert Co.*, 424 F.3d 249, 251 n.1 (2d Cir.2005) (emphasis in original). The parties dispute whether expert testimony is necessary to make this showing. Defendant argues that expert testimony is required because the causal connection between Plaintiffs' injuries and their purported cause requires an understanding of complex medical issues outside the scope of knowledge of a lay juror. Plaintiff opposes, arguing that even if the experts are all excluded, the MSDSs establish general causation and the statements of Mr. Beyer's treating physician, Dr. Licata, as well as the report of Defendant's Rule 35 physician, show specific causation.

The Connecticut Supreme Court has held that "[d]epending on the type of product at issue—namely, its complexity—expert testimony regarding product defect or causation may be required in order to make out a prima facie product liability case." *D'Ascanio v. Toyota Indus. Corp.*, 309 Conn. 663, 674 (2013). The Supreme Court explained that expert testimony is not required "only when the everyday experiences of a particular product's users permits the inference that the product did not meet minimum safety expections" but that, where a product's complexity makes it impossible for an ordinary consumer to form an expectation of safety, expert testimony

is required. *Id.* For example, Connecticut requires expert testimony to establish causation in cases involving drugs and their effects on the human body. *Sullivan v. Pfizer, Inc.*, No. 3:14-CV-1374 (MPS), 2016 WL 868155, at *4 (D. Conn. Mar. 4, 2016) (requiring expert testimony on whether the drug Lipitor caused Plaintiff's severe peripheral neuropathy because the causal mechanism was too complex for an everyday user to form an expectation of safety). *See also Walters v. Howmedica Osteonics Corp.*, 676 F. Supp. 2d 44, 54 (D. Conn. 2009), *citing Aspiazu v. Orgera,* 205 Conn. 623, 630 (1987) ("Under certain circumstances, the Supreme Court of Connecticut has held that expert testimony is required to establish causation" including where it is difficult to discern the cause without expert testimony.)

Here, explaining the effects of chemicals that are purportedly toxic when uncombined but relatively inert after combination and a curing period and allegedly toxic when miscombined, even after the curing period, much like explaining the effects of medicines on the human body in the cases cited above, requires expert testimony since it is outside the scope of a layperson's knowledge. "[C]ases involving pharmaceuticals, toxins or medical devices involve complex questions of medical causation beyond the understanding of a lay person," and thus expert testimony is required. *In re Baycol Prods. Litig.*, 321 F.Supp.2d 1118, 1126 (D. Minn. 2004).

Plaintiffs' counter that expert testimony is not required in all product liability cases in Connecticut is true, but not their suggestion that the facts of this case are analogous to those in *Johannsen v. Zimmer, Inc.*, No. 00-cv-2270 (DJS), 2005 WL 756509 (D. Conn. Mar. 31, 2005) (no expert testimony required to establish causation where the plaintiff had a hip replacement and subsequently suffered hip pain as the joint between the bone and the artificial hip loosened, which pain was alleviated through a second replacement surgery with a different brand of artificial hip).

The facts of this case are not analogous to those in *Johanssen*, where the record left "no doubt about the tie between the plaintiff's injury and the failure of the prosthesis . . . the record [was] sufficient to show that Johannsen's hip failed and that it caused him pain and required a revision surgery." Here, by contrast, the symptoms complained of by Plaintiffs could have other causes, including certain household chemicals or other items (several of which the Plaintiffs threw out the day before their home was to be inspected; *see Ruling on Defendant's Motion for Sanctions for Spoliation of Evidence* [Doc. # 128] and *Ruling on Plaintiffs' Objection to Ruling on Motion for Sanctions* [Doc. # 180]). Mr. Beyer himself has testified that his symptoms continued after removal of the insulation from his home because he is exposed to the same chemicals in his workplace: "I'm still working in the same building where they store the chemistry." (R. Beyer Tr. at 207:8-9.)

The complexity of the causal link between SPF and Plaintiffs' health problems necessitates expert testimony as to general causation. Because of the possibility that Plaintiffs' symptoms have some other cause, expert medical testimony on the issue of specific causation is likewise necessary. Because the Court has precluded the testimony of Dr. Yuh-Chin Huang and because it has precluded any testimony from the two remaining witnesses on the issue of medical causation of Plaintiffs' personal injuries (although Dr. Nicewicz, as part of his testimony on the safe handling of chemicals, may testify to his knowledge of the risks posed by handling certain of the chemicals at issue in this case), Plaintiffs cannot make either a general or a specific medical causation showing.

Even if expert testimony were not required here, the various warnings given by the product manufacturers would not suffice to prove general causation. As discussed above, there are strong legal and policy reasons not to construe warnings as admissions of general causation. First, manufacturers are required to warn consumers of potential risks even where they are not

convinced that causation has been established. As a Kansas district court noted, "a warning [may be found] inadequate and unreasonable even where . . . a causal relationship . . . has not been definitely established." *Smith*, 2001 WL 968369, at *4. Second, and relatedly, treating warning labels as admissions of scientific causation "as a policy matter . . . might stifle free discussion of adverse event reports and potential label changes, and discourage pharmaceutical companies and other manufacturers from open discourse . . . ." *In re Mirena*, 2016 WL 4059224, at *12.

In addition, the MSDSs on which Plaintiffs rely, taken as a whole rather than quoting selectively from the JM A Side and B Side sheets are not unequivocal. Icynene warns only that ". . . exposure to chemicals, particularly MDI, may cause a range of adverse health effects including irritation and sensitization." (Technical Bulletin at 2.) "[I]rritation" and "sensitization" are vague enough that it would not be possible for a rational jury to conclude on the basis of this warning that Icynene had conceded that its product could cause symptoms similar to Plaintiffs'.

Johns Manville's MSDS sheets for the A Side and the B Side are a closer question, as they admit that inhalation of vapors emitted "can cause" or "may cause" "irritation to the upper respiratory tract, fatigue, weakness, drowsiness, and headache." (JM MSDSs.) The MSDS for the finished product, however, does not warn of any danger arising from inhaling vapors.

In *In re Mirena IUD Prod. Liab. Litig.*, No. 13-MC-2434 (CS), 2016 WL 4059224 (S.D.N.Y. July 28, 2016), the court held that in the exceedingly rare cases in which causation could be established by a party admission, that admission would have to be "the clearest and most unambiguous admission," rather than an invitation to the jury to speculate. The *Mirena* court noted that

> The danger of a jury speculating on scientific issues means that, at least absent the clearest and most unambiguous admission that the product or device in question can cause the alleged injury, a jury exposed to admissions but not expert testimony

> will be without the grounding in science necessary to determine whether, as a scientific matter, the events the plaintiff posits can occur in real life.

Id. at *11.[20] This is not such a case. The MSDSs, taken on their own, do not establish admissions of general causation.

C. Plaintiffs' Remaining Causes of Action

Plaintiffs' remaining claims—failure to warn, strict liability for product defect, and negligence—encompass two types of harm: personal injury and damage to property. Absent testimony regarding medical causation, Plaintiffs cannot establish that their symptoms were caused by VOCs emitted from the SPF installed in their house. However, the testimony of Mr. Cude and Dr. Nicewicz may establish at trial that the installation of the SPF damaged Plaintiffs' property.

III. Conclusion

For the foregoing reasons, the Court GRANTS Defendant's motion to preclude the testimony of Dr. Yuh-Chin Huang, GRANTS in part and DENIES in part Defendant's motion to preclude the testimony of Mr. Gary Cude (limiting his testimony as specified above), GRANTS in part and DENIES in part Defendant's motion to preclude the testimony of Dr. David Nicewicz (limiting his testimony as specified above), and DENIES Defendant's Motion for Summary Judgment on Counts One (negligence), Three (strict liability for product defect), and Count Four

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[20] *See also In re: Benicar (Olmesartan) Prod. Liab. Litig.*, No. 15-2606 (RBK/JS), 2016 WL 6652358, at *3 (D.N.J. Nov. 9, 2016): "*Mirena* and *Zoloft* resolve the issue raised by plaintiffs' request. Unless information characterized by plaintiffs as defendants' admissions provide to the jury evidence that is clear, unambiguous, and concrete and suffices to prove general causation without the jury's speculation as to complex medical issues, then such information does not substitute for *Daubert*-admissible expert testimony of general causation."

(failure to warn) but permits them to proceed only as to property damage. As noted above, the Court treats Count Two (breach of implied warranty) as subsumed into Count One.

IT IS SO ORDERED.

/s/
Janet Bond Arterton, U.S.D.J.

Dated at New Haven, Connecticut this 17th day of February 2017.