IN THE UNITED STATES DISTRICT COURT

FOR THE NORTHERN DISTRICT OF CALIFORNIA

DONNA AVILA, *et al.*,

Plaintiffs,

v.

WILLITS ENVIRONMENTAL REMEDIATION TRUST, *et al.*,

Defendants.
_____/

No. C 99-3941 SI

(Consolidated with Case Nos. C 01-266 SI and C 06-2555 SI)

ORDER GRANTING DEFENDANTS' MOTION TO STRIKE MARCH 15, 2008 DECLARATION OF DR. LEVIN; GRANTING DEFENDANTS' MOTION FOR SUMMARY JUDGMENT

On May 1, 2009, the Court held a hearing on defendants' motion for summary judgment on all remaining claims of the ten remaining plaintiffs, and on defendants' motion to strike the March 15, 2008 declaration of Dr. Alan Levin on the ground that his testimony fails to meet the standards for admissibility and reliability under *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993). After consideration of the parties' papers and arguments, and the voluminous record in this case, the Court GRANTS defendants' motions for the reasons set forth below.

In summary, the Court finds that there is no factual or scientific support for Dr. Levin's opinion that the remaining plaintiffs were exposed to toxicologically significant levels of dioxins, volatile organic chemicals, or hexavalent chromium, or that any of the plaintiffs' claimed injuries were caused by such exposure. There is *no* testing data showing any level of dioxins at the Remco site. Blood tests performed on four plaintiffs – one of whom remains in this case – show that 80% of the dioxin congeners tested for were *not* detected, and that the levels of dioxins that were detected are not unusual and are statistically similar to populations examined in major, authoritative studies. Similarly, Dr. Levin's claim that the plaintiffs were exposed to trichloroethylene or other volatile organic chemicals

through a groundwater plume is pure speculation. The evidence also shows that the maximum level of hexavalent chromium to which plaintiffs were potentially exposed is *far below* the threshold identified by plaintiffs' own expert, Dr. William Sawyer, as necessary to cause injury.

The Court must ensure that "scientific evidence meets a certain standard of reliability before it is admitted. This means that the expert's bald assurance of validity is not enough." *Daubert v. Merrell Dow Pharm. Inc.*, 43 F.3d 1311, 1316 (9th Cir. 1995). Here, rather than setting forth a factual or scientific basis for exposure and causation, Dr. Levin's March 2008 report simply asserts exposure and causation under the aegis of his purported expertise. Without evidence of exposure and causation, plaintiffs' claims fail and defendants are entitled to summary judgment.

BACKGROUND

I. Investigation and remediation of the Remco site

In 1945, Joe and R.E. Harrah began operating the Harrah Brothers Machine Shop. Tercero Decl. Ex. 4. The shop, which fabricated saw mill equipment, was located at 934 Main Street in Willits, California. The seven-acre site is bordered on its northern side by Franklin Avenue, a residential street where several plaintiffs lived at various times. Wannamaker Decl. Ex. J. In 1961, the facility changed its name to Remco Manufacturing Company, and later to Remco Hydraulics, Inc. Tercero Decl. Ex. 6-7. Chromium electroplating began at the Remco facility around 1963. Tercero Decl. Ex. 4, 11, 94. The type of chromium electroplating performed at the facility is "hard chrome plating," in which a base metal and another substance made of a lead alloy are immersed in a tank of chromic acid solution, and an electric current is passed through the solution, causing the hexavalent chromium to adhere to a base metal. *Id.* Ex. 12 (Kenfield depo. at 27).

Defendants Pneumo Abex Corporation and Whitman Corporation are successors to former operators and owners of the Remco plant. Defendants' predecessors and subsidiary companies operated the Remco facility from August 21, 1968 through December 16, 1988. *Id*. Ex. 8-9. On December 16, 1988, one of defendants' predecessor companies sold Remco to MC Industries, Inc. *Id*. Ex. 9. The facility was closed in 1995 when MC Industries declared bankruptcy. *Id*. Ex. 5.

In 1996, the City of Willits filed a lawsuit in this Court entitled *People of the State of California*

and the City of Willits v. Remco Hydraulics et al., C 96-283 SI. The City alleged that the Remco site was contaminated and sought an order requiring current and former owners to investigate and remediate the site. The defendants entered into a Final Consent Decree, endorsed by the City of Willits, on August 22, 1997, which was later amended with approval by the Court on December 22, 2000. Under the Consent Decree, the Court established the Willits Environmental Remediation Trust ("Willits Trust"). Remediation of the Remco site began in 1997, and since that time the Willits Trust has overseen many large-scale efforts, including an investigation for areas of potential concern, thousands of groundwater, soil, vegetation and air samples, and an extensive remediation campaign. The Willits Trust has completed and made publicly available numerous Groundwater Monitoring and Sampling Reports, Interim Remedial Action Reports, Work Plans, and various "Fact Sheets" detailing the background of the facility, the environmental investigation activities, waste removal programs, findings from testing samples, and remedial action items. *See generally* http://www.willitstrust.org/home.html.

II. This action

In 1999, plaintiffs filed *Avila, et al. v. Willits Environmental Remediation Trust, et al.*, C 99-3941 SI. Another related action was filed in 2001, *Abbott, et al. v. Willits Environmental Remediation Trust, et al.*, C 01-266 SI, and a third related action was removed to this Court in 2006, *Nickerman, et al. v Remco Hydraulics, Inc., et al.*, C 06-2555 SI. The three cases have been consolidated, and originally involved approximately 1000 plaintiffs. During the course of this litigation, hundreds of plaintiffs have settled their claims with defendants, and others have been dismissed for various reasons. At this time, the remaining plaintiffs are Bernadette Avila, Donna Avila, Francisco Avila, Frank Avila, Michelle Avila, Samuel Ligosky, Arolla Rodriquez, Mark Rodriguez, Gracey Tharp, and John Tharp.

The Fifth Amended [First Consolidated] Complaint alleges various causes of action for damages purportedly suffered as a result of exposure to contamination from the Remco site. Plaintiffs asserted claims for various types of negligence, strict liability, fraudulent concealment, intentional and negligent infliction of emotional distress, battery, negligent undertaking, trespass and nuisance. As a result of various orders, the claims that remain are based solely on plaintiffs' alleged personal injuries, with the exception of plaintiffs' claims for fraudulent concealment, and Bernadette Avila, who also alleges

claims for trespass and nuisance.[1]

In 2007, the 57 *prima facie* plaintiffs – those plaintiffs who either never lived in Willits, or who lived there or were born after defendants' predecessors' sold the Remco facility on December 16, 1988 – submitted an affidavit from Dr. Alan S. Levin in an attempt to show that their alleged injuries could have been and were caused by exposures to chemicals emitted from the Remco facility prior to December 16, 1988. In his 2007 report, Dr. Levin opined that burning of waste at the Remco site created "excessively high levels" of dioxins which were later found in the blood of four "Blood Test Plaintiffs." Dr. Levin also asserted that a groundwater plume containing trichloroethylene ("TCE") and other volatile organic chemicals ("VOCs") had spread throughout Willits. Despite the fact that this case had been litigated since its inception as one involving hexavalent chromium (and not dioxins or VOCs), Dr. Levin did not provide any opinion in the 2007 report as to whether the *prima facie* plaintiffs had been exposed to hexavalent chromium, or whether hexavalent chromium caused any of those plaintiffs' alleged injuries.

Defendants moved to strike Dr. Levin's 2007 report, and on February 6, 2008, the Court issued a 29 page order holding that Dr. Levin's report failed to meet the standards for admissibility and reliability under *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993). The Court addressed in detail the many defects with Dr. Levin's 2007 declaration, and found inadmissible numerous pieces of evidence submitted by plaintiffs.

On March 15, 2008, the remaining plaintiffs were similarly required to set forth all factual and scientific support for their claims or face dismissal.[2] In response, plaintiffs submitted the following expert reports: (1) a March 17, 2008 declaration by Linda Remy, Ph.D.; (2) an August 8, 2007

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[1] Plaintiffs' opposition asserts, without any support, that the other remaining plaintiffs also have claims for nuisance. However, based on Appendix A to the Fifth Amended Consolidated Complaint or their deposition testimony, all remaining plaintiffs except Bernadette Avila have stated that they are not bringing claims for property damage, which would include claims for nuisance. *See* FACC App. A at Nos. 29, 505, 723, 843 & 845; *see also* Tercero Decl. Ex. 31 (Donna Avila depo. at 408:17-23; Francisco Avila depo. at 298:3-4; Michelle Avila depo. at 226:16-22; Arolla Rodriguez depo. at 215:9-11). Moreover, all remaining plaintiffs – including Bernadette Avila – have not submitted any evidence in support of a nuisance claim.

[2] With both the *prima facie* plaintiffs and the remaining plaintiffs, the Court granted plaintiffs' counsel numerous extensions of the deadlines for production of exposure and causation evidence.

declaration by Dr. Rash Ghosh; (3) a March 17, 2008 affidavit[3] of Dr. William Sawyer; and (4) a March 15, 2008 declaration by Dr. Levin. Dr. Levin's March 15, 2008 declaration is the sole specific causation evidence presented by plaintiffs, and the primary evidence of exposure.[4]

LEGAL STANDARDS

I. Summary judgment

Summary adjudication is proper when "the pleadings, depositions, answers to interrogatories, and admissions on file, together with affidavits, if any, show that there is no genuine issue as to any material fact and that the moving party is entitled to a judgment as a matter of law." Fed. R. Civ. P. 56(c).

In a motion for summary judgment, "[if] the moving party for summary judgment meets its initial burden of identifying for the court those portions of the materials on file that it believes demonstrate the absence of any genuine issues of material fact, the burden of production then shifts so that the non-moving party must set forth, by affidavit or as otherwise provided in Rule 56, specific facts showing that there is a genuine issue for trial." *See T.W. Elec. Serv., Inc., v. Pac. Elec. Contractors Ass'n*, 809 F.2d 626, 630 (9th Cir. 1987) (citing *Celotex Corp. v. Catrett*, 477 U.S. 317 (1986)). In judging evidence at the summary judgment stage, the Court does not make credibility determinations or weigh conflicting evidence, and draws all inferences in the light most favorable to the non-moving party. *See T.W. Elec.*, 809 F.2d at 630-31 (citing *Matsushita Elec. Indus. Co., Ltd. v. Zenith Radio Corp.*, 475 U.S. 574 (1986)); *Ting v. United States*, 927 F.2d 1504, 1509 (9th Cir. 1991). The evidence presented by the parties must be admissible. Fed. R. Civ. P. 56(e). Conclusory, speculative testimony in affidavits and moving papers is insufficient to raise genuine issues of fact and defeat summary

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[3] Although in the form of an affidavit, this order refers to Dr. Sawyer's submission as a report or declaration.

[4] As discussed in greater detail *infra*, a plaintiff claiming personal injury from exposure to hazardous substances must prove actual exposure and causation. *See Ferris v. Gatke Corp.*, 107 Cal. App. 4th 1211, 1220 n.4 (2003). With regard to causation, a plaintiff must show both that the substances at issue are capable of causing the alleged injury (general causation), and also that they actually caused, or were a substantial factor in causing, the plaintiff's injuries (specific causation). *See In re Hanford Nuclear Reservation Litig.*, 292 F.3d 1124, 1133 (9th Cir. 2002); *In re Bextra & Celebrex Mktg. Sales Practices & Prod. Liab. Litig.*, 524 F. Supp. 2d 1166, 1171-72 (N.D. Cal. 2007).

judgment. *Thornhill Publ'g Co., Inc. v. GTE Corp.*, 594 F.2d 730, 738 (9th Cir. 1979).

II. Expert testimony

Federal Rule of Evidence 702 provides that expert testimony is admissible if "scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue." Fed. R. Evid. 702. Expert testimony under Rule 702 must be both relevant and reliable. *Daubert*, 509 U.S. at 589. When considering evidence proffered under Rule 702, the trial court must act as a "gatekeeper" by making a preliminary determination that the expert's proposed testimony is reliable. *Elsayed Mukhtar v. Cal. State Univ., Hayward*, 299 F.3d 1053, 1063 (9th Cir. 2002), *amended by* 319 F.3d 1073 (9th Cir. 2003).

As a guide for assessing the scientific validity of expert testimony, the Supreme Court provided a nonexhaustive list of factors that courts may consider: (1) whether the theory or technique is generally accepted within a relevant scientific community, (2) whether the theory or technique has been subjected to peer review and publication, (3) the known or potential rate of error, and (4) whether the theory or technique can be tested. *Daubert*, 509 U.S. at 593-94; *see also Kumho Tire Co., Ltd. v. Carmichael*, 526 U.S. 137 (1999). The Ninth Circuit also has indicated that independent research, rather than research conducted for the purposes of litigation, carries with it the indicia of reliability. *See Daubert v. Merrell Dow Pharm., Inc.*, 43 F.3d 1311,1317 (9th Cir. 1995) ("*Daubert II*"). In particular, using independent, pre-existing research "provides objective proof that the research comports with the dictates of good science" and is less likely "to have been biased by the promise of remuneration." *Id*. If the testimony is not based on "pre-litigation" research or if the expert's research has not been subjected to peer review, then the expert must explain precisely how he went about reaching his conclusions and point to some objective source – a learned treatise, the policy statement of a professional association, a published article in a reputable scientific journal or the like – to show that he has followed the scientific method, as it is practiced by (at least) a recognized minority of scientists in his field. *Id*. at 1318-19 (citing *United States v. Rincon*, 28 F.3d 921, 924 (9th Cir. 1994)); *see also Lust v. Merrell Dow Pharmaceuticals, Inc.*, 89 F.3d 594, 597 (9th Cir. 1996). The proponent of the evidence must prove its admissibility by a preponderance of proof. *See Daubert*, 509 U.S. at 593 n.10.

DISCUSSION

I. Exposure and causation

"The law is well settled that in a personal injury action causation must be proven within a reasonable medical probability based upon competent expert testimony. Mere possibility alone is insufficient to establish a prima facie case." *Jones v. Ortho Pharm. Corp.*, 163 Cal. App. 3d 396, 402 (1985). In a toxic tort case, a plaintiff must first show that he or she was actually exposed to a toxic substance because "[i]f there has been no exposure, there is no causation." *Ferris*, 107 Cal. App. 4th at 1220 n.4. If a plaintiff demonstrates exposure, he must then show through admissible scientific evidence that it is "more likely than not" that exposure to the toxic substances could cause his injuries (general causation), and in fact did cause his injuries (specific causation). *See Jones*, 163 Cal. App. 3d at 403 ("more likely than not" causation standard is "the outer limit of inference upon which an issue may be submitted to an jury"); *see also Golden v. CH2M Hill Hanford Grp., Inc.*, 528 F.3d 681, 683 (9th Cir. 2008) ("To survive summary judgment on a toxic tort claim for physical injuries, Golden had to show that he was exposed to chemicals that could have caused the physical injuries he complains about (general causation), and that his exposure did in fact result in those injuries (specific causation).").

Plaintiffs' central scientific evidence in support of exposure and causation is Dr. Levin's March 15, 2008 report, which consists of nine pages of text. Dr. Levin's opinions are as follows:[5]

> I have reviewed the documents available at the Willits Environmental Remediation Trust site http://www.willitstrust.org/key_documents.html. I have reviewed the January 15, 1998 Versar, Preliminary Removal Site Evaluation Report, each of Plaintiff's responses to defendant's Second Set of Request for Production of Each of the plaintiffs and Second Set of Interrogatories; Plaintiffs' Second Amended Response to Defendants Fifth Set of Interrogatories and related documents primarily related to Dioxin and PCB creations at Remco site. I have reviewed the following depositions primarily related to burning activity at Remco: George Dudley, Jr., Donna Avila, Robert Frey, Stephen Lewis, Charles Nickerman, and Valdee Dryden. I have reviewed the medical records available from the specific patients. I have performed several site visits and have sampled blood from representative long term residents of the contaminated area. These samples were tested for dioxins and PCBs in a laboratory that performed a comprehensive study of dioxin/PCB contamination of individuals exposed to the Dow Chemical Plant in Midland, Michigan for the University of Michigan. I have also had blood drawn from representative patients of the mediation group and sent their

[5] Dr. Levin's report contains numerous typographical errors. Where such errors are obvious – such as misspelling plaintiff's names (e.g, "Donna Avile" instead of "Donna Avila" and "Charles Nicerkrman" instead of "Charles Nickerman") – the Court has corrected those errors in this order rather than repeatedly using "[sic]."

> blood to Ergo Laboratories in Germany.[6] I have reviewed the affidavits of Remco workers regarding the disposal of halogenated hydrocarbon waste.
>
> These sources demonstrate that toxic chemicals were in use at the facilities, and these compounds have leaked out of the facilities, contaminating the ground, water and air of the inhabitants living in the area. The chemicals included but are not limited to dioxins, polychlorinated biphenols, Hexvalent Chromium, chloroform, Chloroethane, Chromic Acid, 1,1-Dichloroethane, 1-2-Dichloroethane, 1,1-Dichloroethene,, Tetrachloroethene, 1,1,1,-Trichloroethane, ("TCA"), Trichloroethene ("TCE"), tetrachloreoethene, 1,2-Dichloroethene, Petroleum hydrocarbons including, but not limited to diesel fuel, hydraulic oil, cutting oil, Methylethylketone (MEK, also known as 2-Butanone), Polyaeromatic Hydrocarbons, Indeno (1,2,3-cd) Pyrene and other dangerous chemicals which are, or may be discovered, at or emanating from the Remco site and which may require further investigation.

Tercero Decl. Ex. 42 (March 15, 2008 report at 2-3). Dr. Levin then devotes over three pages of the report to generally describing the effects that can purportedly be produced by the aforementioned chemicals. None of this discussion is specifically tied to any plaintiff. With regard to "dose," Dr. Levin states,

> Historic dose estimations for specific individuals for specific chemicals are costly, time consuming and marginally reliable for evaluation of exposures in this case. When available, objective individual clues in medical records and laboratory tests are far superior tools to assess the adverse effects of environmental toxic chemical exposure.

Id. at 6.

Dr. Levin also states,

> There is no reliable peer reviewed medical literature identifying biological responses []7 the unique mix of chemical[s] emanating from the Remco sites on the type of population involved in this case. Each exposure site has its own unique mix of toxins and its unique exposed population. Dose estimations depend very much on the conditions that the chemical is absorbed and how it is metabolized. Genetic diversity could therefore contribute to significant differences in this aspect. Furthermore, many of the reference values established have so far not been fully validated and therefore their usefulness is rather limited . . .[8] recent findings to show that biological reference values are influenced not just by the above mentioned issues, but also factors such as (1) health and nutritional status of the exposed population, (2) social and cultural factors, and (3) climatic conditions. (Ong, C.N. 1999)

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[6] This reference is to blood tests for since-dismissed plaintiff Craig Carbrey, and remaining plaintiff Samuel Ligosky. By order filed July 9, 2008, the Court excluded Mr. Ligosky's blood test as untimely because plaintiffs did not submit the blood test by the March 15, 2008 deadline for exposure and causation evidence, and plaintiffs did not show any good cause for the untimely submission. *See* Docket No. 1079 at 3.

[7] It appears that a word is missing from Dr. Levin's report.

[8] The ellipsis is in Dr. Levin's report.

> It is well recognized in industrial and environmental health that man is exposed simultaneously to more than one chemical. Interaction may take place in the metabolism of chemicals absorbed in combination or in sequence, especially when the chemicals share similar chemical structures. It is further conceivable that the extent of possible metabolic interaction will depend on the intensity of exposure. Moreover, the metabolism of chemicals may be modified by social habits, especially smoking. No systemic and comprehensive studies however have been reported in literature, possibly because the combinations of the chemicals are various and the exposure intensities vary greatly. (Ikeda, M. 1995) Traditional dose response curves do not fit in these situations. It is well recognized that very low doses of industrial solvents produce profound cellular level immunotoxicity. (McDermott, C. 2007)
>
> In conclusion, the unique mix of chemicals emanating from the Remco contamination site contains a mix of well accepted carcinogens, immunotoxic and neurotoxic materials. Considering TCE alone, "[a]mong the immunotoxicity end points the committee evaluated, evidence for an effect of trichloroethylene was strongest for autoimmune disease. Studies in generally susceptible rodents have shown that trichloroethylene exacerbates underlying autoimmune disease, and supporting information comes from multiple human studies of scleroderma and exposures to organic solvents." (TCE-NAS Report 2006).
>
> Although there are other ***possible*** sources of exposure for this population (such as diesel exhaust, medical incinerators, burn barrels etc.) there are no other proven ***probable*** sites that can be factored into this causation analysis. Even if one speculates that other such sources exist, it is more probable than not that some one single chemical or the unique mix of chemicals emanating from the Remco contamination sites is a substantial factor in the injuries suffered by each and every patient listed below.

Id. at 8 (emphasis in original).

Dr. Levin then described his causation analysis:

> In my causation analysis I will use a careful clinical differential diagnosis just as the practicing clinician uses to make causal opinions daily in their clinical practice. I will use the analysis of the clinical histories and medical records along with interviews with the individual patients to assess causation in a 4 step process. First I will identify the valid presence of disease. Second I will then establish a biologically plausible link between that disease and exposure to the one chemical or the unique mix of chemicals emanating from the Remco contamination sites. Third I will then establish an appropriate temporal association between the exposure and the onset of the disease. I will finally consider confounding factors. My opinion will be based upon these steps.

Id. at 8-9.

Dr. Levin also provides an exposure and causation opinion for each remaining plaintiff. The following opinion with regard to Bernadette Avila is typical:

> **a. Identity of each chemical exposed to:**
> Plaintiff was exposed to the following mix of chemicals which have been discovered by regulating agencies and specified in their files and those chemicals found in the blood serum of tested plaintiffs in this action: the chemicals and chemical containing substances include, but are not limited to Hexvalent Chromium, Trivalent and including, but not limited to chloroform, Chloroethane, Chromic Acid, 1,1-Dichloroethane, 1-2-Dichloroethane, 1,1-Dichloroethene,, Tetrachloroethene, 1,1,1,-Trichlorethane, ("TCA"),

Trichloroethene ("TCE"), tetrachloreoethene, 1,2-Dichlorothene,, Petroleum hydrocarbons including, but not limited to diesel fuel, hydraulic oil, cutting oil, Methylethylketone (MEK, also known as 2-Butanone); dioxin, vinyl chloride Polychlorinated biphenyls, and other dangerous chemical, such as arsenic, cadmium, lead and nickel compound and other chemicals which are, or may be discovered, at or emanating from the Remco site and which may require further investigation.

b. Dates/times of exposure:
1985 through 2005; all day

c. Duration of exposure:
All day & night 1985 through 2005

d. Locations exposed:
67 Franklin Avenue, Willits (1997-2005); Easy Living Trailer Park, Willits, (1995-1996); 71 Franklin (1985-1995), 210 Bitten Bender Rd., Willits, (6/85/19.85[9]

Also exposed at the following locations in Willits, CA: 934 South Main Street, 175 Lenore Street; Ponds at Muir Mill Road, Baechtel Creek; Bob Peter's property; collies pond; and the well on Luna's property and Luna's Apartment.

Plaintiff was also exposed to the VOC that emanated from Remco at Baechtel Grove Elementary School where she attended and recreated (1985-1986); Willits High (graduated in 1990) Luna's market to get a Soda candy bar on the way to school; played in Baechtel Creek; she went shopping at Safeway, every other day with her mom and relatives. She ate the berries from Remco fence.

e. Route of exposure:
Inhalation, dermal and ingestion

f. Injuries:
Frequent/severe headaches, nausea, dizziness, chronic or frequent colds, sinusitis, skin disease, pneumonia, Bronchitis, Shortness of breath, chronic cough, peritonaillar abcess, abnormal blood count, recurrent lymphadenopathy at various sites suggesting nascent lymphoreticular malignancy, Numbness of extremities, stomach conditions, sleeping disorders, loss of memory or amnesia, extreme fatigue, respiratory system injuries, heart/circulation system injury, immune system injury, and breast (fibroids or lumps).

Opinion
This patient has no history of significant recreational drug abuse, industrial exposure to toxic chemicals or other confounding factors in causation. As outlined above, many single components of the unique Remco mix are accepted causes of the injuries listed in paragraph (f) including but not exclusive to hexachrome, Vinyl Chloride, TCE, PCE and dioxins. There is little doubt that this patient was exposed to some dose of each and every chemical in the Remco mix. As in every aspect of everyday clinical medicine, it would be impossible to identify the exact dose to which this patient was exposed at any given time during the exposure period. Since this patient definitely has the diseases listed in paragraph (f) and the Remco mix is a biologically plausible cause compounded by an appropriate temporal association between the exposure and the development of the disease and in the absence of confounding factors I, as a practicing clinician can make a causation analysis. Therefore, based upon my training, experience and education it is my opinion to a reasonable degree of medical/scientific certainty that some single

[9] This appears to be a typographical error, and it is unclear what the claimed dates are.

> chemical or the unique mix of chemicals emanating from the Remco contamination sites were substantial contributors to this patient's injuries listed in paragraph (f).

Id. at 13-14. Dr. Levin's "Opinion" section for each plaintiff is identical.

Defendants move to strike Dr. Levin's March 15, 2008 report on numerous grounds. Defendants contend that the 2008 report is based on the same discredited theories Dr. Levin advanced in his 2007 report regarding the *prima facie* plaintiffs, namely that the plaintiffs were exposed to a "Remco mix" of chemicals which caused their claimed injuries. Relatedly, defendants move for summary judgment on the ground that plaintiffs have no evidence of exposure or causation. Plaintiffs oppose summary judgment,[10] and assert that Dr. Levin's report meets the standards articulated in *Daubert*.[11]

A. Exposure

1. Dioxins

In the 2007 affidavit, Dr. Levin opined that dioxin and PCB exposure were a main cause of plaintiffs' injuries. The Court's February 6, 2008 Order explained at length why Dr. Levin's theory of dioxin and PCB exposure and causation was not factually or scientifically supported. Dr. Levin and plaintiffs assert that Dr. Levin has rectified the shortcomings identified in the February 2008 order, and that Dr. Levin now has factual and scientific support for his dioxin theory.[12] This is not true. First, the 2008 declaration does not present any new evidence or science in support of Dr. Levin's dioxin theory.

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[10] Without condoning plaintiffs' repeated and flagrant violations of scheduling orders, the Court GRANTS plaintiffs' request to file a late and oversized brief. Docket No. 1203.

[11] Plaintiffs' opposition papers, in various contexts, assert that the Willits Trust, defendants, Montgomery Watson Harza (the Trust's contractor), and the State of California's North Coast Regional Water Quality Control Board have ignored and/or covered up Remco contamination. *See* Opposition to Motion for Summary Judgment at 12-17, 24-25, 27. Plaintiffs' conspiracy theory is wholly speculative and without factual support, and is inconsistent with the documented, intensive fifteen year, $45 million investigation and remediation of the property and surrounding area. In any event, even a conspiracy theory could not salvage plaintiffs' remaining claims, since the fundamental evidentiary lapses – concerning plaintiffs' exposure and causation – are dispositive.

[12] With regard to PCBs, the Court's February 6, 2008 order found that "testing for PCBs showed no levels above the United States Environmental Protection Agency remediation goals." February 6, 2008 Order at 1. Dr. Levin's 2008 report does not provide any additional evidence regarding PCBs, and Dr. Levin admitted at his deposition that he could not produce any document countering the fact the levels of PCBs found were below the EPA goals. *See* Tercero Decl. Ex. 34 (Levin depo. at 675:19-679:8). Neither of plaintiffs' oppositions address PCBs, and thus it appears that plaintiffs have abandoned the claim that they were exposed to PCBs.

As the Court previously recognized, it is undisputed that there is no actual evidence that dioxins are or have been present at the Remco site: there is no data whatsoever showing that dioxins were produced and released at Remco.[13] Plaintiffs admit as much: "[] Plaintiffs do and cannot adduce any actual sampling data to show that dioxins were produced and released at Remco . . . ." Opposition to Motion to Strike at 28:6-7. Nevertheless, Dr. Levin and plaintiffs continue to assert that there "must" be dioxin at Remco because the "activities which occurred at Remco do in fact produce dioxins." *Id*. at 28:10; *see also id*. at 28:17-29:1 ("Dr. Levin *reasonably inferred* that the Remco site generated dioxins both by burning chlorinated solvents and by the machining of solvent-cleaned metal parts and hydraulic cylinders for chrome plating.") (emphasis added). Plaintiffs devote a significant portion of their opposition briefs detailing numerous instances of alleged burning of wastes at the Remco site, including extensive "new" evidence of burning.

Much of the "new" evidence of alleged burning has in fact been previously submitted by plaintiffs. More importantly, and as the Court found in the February 2008 order when rejecting Dr. Levin's opinions about dioxin exposure based on burning, Dr. Levin does not have any scientific expertise to state that burning activities could or did result in the creation of toxicologically significant amounts of dioxins. Plaintiffs have not identified any special training or knowledge regarding metal working industries which would allow Dr. Levin to opine that the activities at the Remco plant "must" have created dioxins.

Even if Dr. Levin was qualified to opine that burning of wastes created dioxins, much of the evidence that plaintiffs have submitted is problematic. Several of the witnesses, former employees, did

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[13] Dr. Levin testified at his deposition that he did not test the soil, air or water at the Remco site, and he admitted that he "has not seen any testing data from the Willits area that identifies dioxins as having been found in or around the Remco facility." Tercero Decl. Ex. 34 (Levin Depo. at 58:11-13); *see also id*. at 57:8-12, 72:21-73:4, 70:14-18. In a letter dated November 29, 2006, Dr. Anne Farr, Trustee of the Willits Trust, responded to a request from plaintiffs' counsel regarding environmental testing conducted at the Remco site. Dr. Farr stated that "the Willits Trust carefully considered whether to sample and analyze for dioxins during the preparation of the Remedial Investigation/Feasibility Study (RI/FS) Workplan . . . . However, based on a review of available information, including information on historic operations at the Remco Facility, the Willits Trust concluded that sampling for dioxins was not warranted." Tercero Decl. Ex. 1. Dr. Farr then explained in detail why the Trust did not sample for dioxins. *See generally id*. The Court's February 6, 2008 order quoted at length from Dr. Farr's letter in support of the conclusion that "Dr. Levin's opinion that burning of industrial waste created dioxins is based on pure speculation, not 'sufficient facts or data' as required by Rule 702." *See* February 6, 2008 Order at 11-12.

not testify about burning at the Remco site, but rather about the use of solvents or other aspects of their work while at Remco. For example, Joe Holt stated he worked at the Remco plant as a machinist from 1986-1988, that machines were cleaned with trichlor, and that during his work he would see smoke released into the air, as well as fumes that he could smell. Simpich Decl. Ex. 21 (Holt Decl. ¶ 5-6). Mr. Holt also states machine tools "ran at a high temperature, generally exceeding 400 degrees Fahrenheit," *id*. ¶ 4, and that he worked next to the welding shop and "it was common to see metals cleaned with solvents and oil before torching them for welding. During the welding, the temperatures reached were regularly well over 200 degrees Fahrenheit." *Id*. ¶ 8. Plaintiffs submitted this same declaration from Mr. Holt in connection with Dr. Levin's 2007 declaration. As the Court held in the February 2008 order, Mr. Holt does not lay a foundation for the statements in paragraphs 4 and 8 regarding the temperatures at which machines operated. In any event, nothing in Mr. Holt's declaration, or the declarations of other former employees who testify about the use of solvents or other activities at the Remco facility, provide a basis for Dr. Levin to conclude that dioxins were created at Remco, particularly when *there is no data* showing that dioxins were actually created at Remco.[14]

The testimony about alleged burning is also problematic because this evidence does not prove that dioxins were created at Remco. For example, Steve Lewis testified that he smelled smoke and something that smelled like "burned plastic" coming from a barrel on the Remco site in 1986 or 1987 when he lived on Franklin Avenue in Willits. Simpich Decl. Ex. 25 (Lewis depo. at 27:22-32:15). However, Mr. Lewis also testified that he did not know what was burning in the barrel. Dampf Decl. Ex. 1 (Lewis depo. at 36:8-9). Similarly, Donna Avila testified that she saw liquid poured into a barrel and then burned, and that she saw "greasy" pallets burned, but that she did not know what the liquid was, or what the pallets had been used for before they were burned. Simpich Decl. Ex. 26 (Avila depo. at 107:1-22; 110:6-7; 111:5-20; 114:12-22); Dampf Decl. Ex. 2 (Avila depo. at 96:12-17, 106:7-107:13).

Moreover, even if the Court accepted Dr. Levin's unsupported opinion that burning of waste at the Remco site created dioxins, there is still no basis for his conclusion that plaintiffs were exposed to

[14] The declaration of former employee Robert Frey is similar. Simpich Decl. Ex. 24 (Frey Decl.). Mr. Frey states, *inter alia*, that he built the foundation for a concrete tub that was used as a receptacle for chemicals, and that "electric heaters reduced the chemicals." *Id*. ¶ 5.

toxicologically significant amounts of dioxin. If there had been such exposure, that exposure would be reflected in the blood test results of the four "Blood Test Plaintiffs," one of whom is Donna Avila.[15] As he did in 2007, Dr. Levin continues to opine that these test results show a dioxin congener "signature profile" demonstrating exposure to a single source, the Remco facility. The Court's February 2008 order explained why Dr. Levin's opinions based on the blood test results were fundamentally flawed:

> . . . The Eno River Labs results did not detect 53 of the 68 dioxin congeners tested; Charles Nickerman had non-detects for 15 of 17, Donna Avila and Deanna Deaton had non-detects for 14 of 17, and Dorothy Liles had non-detects for 12 of 17. *See* Comb Decl. Ex. 7. For each of the undetected congeners, Dr. Levin assumed that these congeners were in fact present at the detection limit. Dr. Levin then converted each of the congener results, including the uniform non-detects, to a "lipid-adjusted" basis. Dr. Levin did not ask Eno River Labs to analyze each individual's lipid levels. Instead, Dr. Levin assumed that all four plaintiffs had an identical lipid level of 1000 mg/dL. After assuming that each of the undetected congeners was actually present at the limit of detection, and after converting the results to a uniform "lipid-adjusted" basis, Dr. Levin compared those results to two key studies, the University of Michigan Dioxin Exposure Study (UMDES) and the National Health and Nutrition Examination Survey (NHANES), and concluded that the Blood Test plaintiffs had a higher level of dioxin in their blood than the comparison groups.
>
> Dr. Levin also asserts that the four Blood Test plaintiffs share a "signature congener profile" indicative of a exposure from a single source, which he claims is the Remco site. Dr. Levin's declaration states,
>
> > [F]our unrelated adults who lived in four separate locations around the Remco contamination sites have the same dioxin and PCB congener profile signatures in their serum. . . . Since the Remco contamination is the only proven source of these chemicals, it is more probable than not that this congener profile is characteristic of the Remco Plant signature.
>
> Levin Decl. at 3. In particular, Dr. Levin states that the "presence" of one *undetected* congener, 2,3,7,8-TCDD, is indicative of a single source. *Id*. at Ex. C ("Conclusion").
>
> There are several fatal problems with Dr. Levin's methodology. As defendant's expert Dr. Peter Adriaens explains,
>
> > To properly compare the results from the four individuals with the data presented in the UMDES and NHANES studies, the same assumptions have to be made, and similar normalization procedures need to be followed. In chemical analysis, the LOD [limit of detection] is the minimum amount of a particular component that can be determined by a single measurement with a stated confidence level. Statistically, the LOD is the level at which the measurement has a 95% probability of being greater than zero. Hence, these measurements have to be treated as "non-zero" for statistical analysis. Typically, either LOD divided by 2, or LOD divided by the square root of 2 are used. Second, lipid

[15] The other three "Blood Test Plaintiffs" – Deanna Deaton, Charles Nickerman, and Dorothy Liles – have been dismissed.

> adjustment is non-trivial, because analytical laboratories provide only cholesterol content, which is only a fraction of total lipid content. Using the actual values of lipid content and the same LOD treatment as in the UMDES and NHANES studies, the TEQ [toxic equivalency] of the four Willits residents were recalculated and compared to both published studies.
>
> Results: Based on my recalculation of the concentration and the toxic equivalency (TEQ) of the blood levels in the four individuals in accordance with standard procedures, the Willits residents fall within expected ranges of dioxin exposure with concentrations reflective of age-driven bioaccumulation.

Adriaens Report at 9-10. Put differently, "the Willits residents are statistically not different from the U.S. background population (NHANES) or referent populations in the UMDES or ATSDR studies. The levels of dioxins in the blood of the Willits residents do not indicate an exposure from specific sources of dioxin emission, industrial or otherwise defined." *Id*. at 16. By improperly assuming that the non-detected congeners were actually present at the limit of detection, Dr. Levin substantially exaggerated the importance of the non-detects. *Id*. at 11. Relatedly, and as explained by Dr. Adriaens, because Dr. Levin's treatment of non-detects and lipid adjustment was markedly different from the methods used by UMDES and NHANES, Dr. Levin's comparison of the Blood Test plaintiffs' results with those studies is inappropriate. *Id*. at 12.

Dr. Adriaens also demonstrates that, when proper scientific methodologies are used, the Blood Test plaintiffs do not share a "signature congener profile." As Dr. Adriaens explains, signature profiling cannot be performed where more than 35-50% of the congeners being examined are non-detects. Adriaens Report at 25, 29. Here, 80% of the dioxin congeners were non-detects. In addition,

> Pattern analysis for dioxins/furans in blood has to be based on more than one congener (TCDD) to be able to establish causality with a specific exposure pathway or source of dioxins. The analysis of blood patterns in the four individuals is particularly confounded because of the fact that most congeners, including TCDD, were below the LOD. . . .
>
> Result: As the result of the proper adjustments, the blood pattern in the residents, inasmuch as can be derived from nondetects and out-of-calibration range concentrations, is in line of that expected from background contamination, which tends to be dominated by octaCDD, heptaCDD, and HexaCDD. There is no argument to be made that TCDD in the blood (which was a nondetect) is in any way related to a single point source.

Id. at 20.

Plaintiffs failed to specifically respond to any of these criticisms, and neither plaintiffs nor Dr. Levin have submitted *any* scientific literature or authority supporting Dr. Levin's methodology. Instead, plaintiffs defend Dr. Levin's analysis by citing his credentials, and by simply asserting that Dr. Levin's methods are "generally accepted." As the Supreme Court has held, "nothing in either *Daubert* or the Federal Rules of Evidence requires a district court to admit opinion evidence that is connected to existing data only by the *ipse dixit* of the expert. A court may conclude that there is simply too great an analytical gap between the data and the opinion proffered." *General Elec. Co. v. Joiner*, 522 U.S. 136, 146 (1997) (holding district court did not abuse its discretion in

> excluding medical causation expert where expert's conclusions based on speculation); *see also Daubert v. Merrell Dow Pharmaceuticals*, 43 F.3d 1311, 1320 (9th Cir. 1995) ("[P]laintiffs rely entirely on the experts' unadorned assertions that the methodology they employed comports with standard scientific procedures. . . . they neither explain the methodology the experts followed to reach their conclusions nor point to any external source to validate that methodology. . . . Under *Daubert*, that's not enough.").

February 6, 2008 Order at 8-11.

Plaintiffs assert that Dr. Levin has "reanalyzed" the blood test results and arrived at the same conclusion that the results show dioxin exposure and a "signature congener profile." However, in his reanalysis, Dr. Levin merely reduced by half the level he used for the non-detects, which resulted in the same "signature congener profile," just with the non-detects at lower levels. The fundamental flaw remains, however, because Dr. Levin continues to manipulate the data by improperly assigning a uniform value to the 80% of tested congeners that were non-detects, thus artificially creating a "signature" profile. Plaintiffs attempt to justify Dr. Levin's reanalysis by claiming it is based on Dr. Adriaens' methodology. However, Dr. Adriaens advocates halving the limit of detection (LOD), or dividing the LOD by the square root of two, for purposes of comparing an individual's toxic equivalency (TEQ) to background populations. Docket No. 858 (Adriaens report at 9-10). Dr. Adriaens does not suggest that it is appropriate to assume all non-detects are actually detected, and to assign the non-detects a uniform value – even if that uniform value is later halved – when analyzing whether there is a signature profile. To the contrary, Dr. Adriaens explained that profiling can only be done when there is proper treatment of LOD, proper lipid adjustment, and where no more than 50% of congeners are non-detects. *Id*. at 18-29. Dr. Levin's "reanalysis" of the blood test results is further flawed because it does not appear that he corrected his method of lipid adjustment.[16]

Further, plaintiffs' own expert, Dr. Sawyer, testified that Donna Avila's blood test results did not show overall TEQ levels above background. Tercero Decl. Ex. 2 (Sawyer depo. at 333:24-334:1). In addition, in response to a question about whether he could "conclude to a reasonable degree of

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[16] In addition, even if Dr. Levin's reanalysis cured the deficiencies previously identified, Dr. Levin has not shown that the Blood Test plaintiffs' test results could be extrapolated to the remaining plaintiffs (aside, of course, from Donna Avila). The Blood Test plaintiffs are significantly older than all of the remaining plaintiffs except Donna and Frank Avila. As Dr. Levin admits, "[t]he most important factor related to levels of dioxins in people's blood is age." Tercero Decl. Ex. 34 (Levin depo. at 183:4-6).

toxicological certainty that any injury she might have is caused by exposure to dioxins," Dr. Sawyer responded, "Well, without having conducted a specific causation analysis, all I can do is speak on general causation, and certainly there's increased risk of diabetes." *Id*. at 334:2-9. Ms. Avila does not have diabetes, and is not seeking compensation for diabetes in this case. Tercero Decl. Ex. 60 at 26 (Donna Avila questionnaire)

Another flaw in Dr. Levin's dioxin exposure theory is that he did not consider and rule out other potential sources of dioxin exposure. In the February 6, 2008 order, the Court held that this failure rendered his opinion that the Remco site is the "only proven source" of plaintiffs' purported exposure speculative and unreliable. February 6, 2008 Order at 16. In his deposition, Dr. Levin answered "no" in response to a question asking whether he had done "any additional on-site investigation in Willits for possible alternative sources of dioxins after the deposition in April of [2007]." Tercero Decl. Ex. 34 (Levin depo. at 910:8-14).

Plaintiffs contend that Dr. Levin properly considered alternative sources, and they cite statements in his March 2008 report to that effect. However, Dr. Levin's bare assertion that "[a]lthough there are other ***possible*** sources of exposure for this population (such as diesel exhaust, medical incinerators, burn barrels etc.) there are no other proven ***probable*** sites that can be factored into my causation analysis" is woefully insufficient. March 2008 report at 8 (emphasis in original). Dr. Levin does not explain how or why he eliminated other possible sources of exposure. Instead, Dr. Levin simply states that other sources cannot have caused plaintiffs' injuries. As the Ninth Circuit has instructed, such conclusory opinions are insufficient. *See Daubert II*, 43 F.3d at 1320 ("[P]laintiffs rely entirely on the experts' unadorned assertions that the methodology they employed comports with standard scientific procedures . . . . they neither explain the methodology the experts followed to reach their conclusions nor point to any external source to validate that methodology. . . . Under *Daubert*, that's not enough."); *see also Jones*, 163 Cal. App. 3d at 403 ("There can be many possible 'causes,' indeed, an infinite number of circumstances which can produce an injury or disease. A possible cause only becomes 'probable' when, in the absence of other reasonable causal explanations, it becomes more likely than not that the injury was a result of its action."); *cf. Golden*, 528 F.3d at 683 (affirming summary judgment and finding no specific causation where plaintiff's expert opined injuries were

caused by "exposures" but did not link injuries to particular exposure at issue).

In conclusion, there is simply no factual or scientific basis for Dr. Levin's opinion that the Remco site is the only "proven" source of dioxin exposure in the face of (1) no testing results showing toxicologically significant levels of dioxin in any plaintiffs' blood; (2) no soil samples or other data showing the presence of dioxin at the Remco site; and (3) no consideration of alternative sources of dioxin exposure.

2. VOCs

Dr. Levin opines that plaintiffs were exposed to VOCs through soil gas volatization from the groundwater and soil. Although his 2008 declaration does not describe or explain this theory, plaintiffs' opposition papers make clear that Dr. Levin's 2008 theory is the same as his unsupported 2007 theory:

> Dr. Levin opined that VOCs vaporized from the contaminated water underneath Plaintiffs' residences and playgrounds and entered their lungs, and directly contacted their skin when they played in the dirt.

Opposition to Motion to Strike at 24:2-4 (citing Dr. Levin's April 26, 2007 depo. at 106:22-25). Dr. Levin asserts that there is a contaminated groundwater plume extending throughout Willits that is much larger than the plume documented by the Willits Trust, and that VOCs have vaporized from this plume causing plaintiffs to be exposed to VOCs.

In rejecting Dr. Levin's previous identical VOC exposure theory, the Court noted that "Dr. Levin does not have *any data* showing the presence of VOCs in the blood of any *prima facie* plaintiff or Blood Test Plaintiff." February 6, 2008 Order at 19 (emphasis in original). The Court found that Dr. Levin did not explain how any VOCs from the groundwater migrated through the soil and resulted in toxicologically significant exposures, even for those few plaintiffs who lived or spent time on or near the scientifically documented plume. *Id*. at 20. "Dr. Levin's claim that the plaintiffs were exposed to trichloroethylene or other volatile organic chemicals through a groundwater plume is pure speculation and contradicted by more than 1000 test samples collected over the years by the Willits Environmental Remediation Trust." *Id*. at 2. The Court also found that Dr. Levin misrepresented the facts regarding the size and scope of the plume. Dr. Levin had relied upon the "Versar map" as evidence that there was a contaminated groundwater plume extending throughout Willits; the Court's February 2008 order

expressly rejected any reliance on the Versar map, finding that it "does not contain any actual data upon which a scientist could credibly rely." *Id*. at 25.

Dr. Levin's 2008 declaration does not present any new soil, water, or air test data that might provide some factual basis for concluding that the groundwater plume extended beyond the plume identified by the thousands of water samples collected by the Willits Trust, or for concluding that any amount of VOCs contained in the groundwater resulted in exposures in either air or soil in places where plaintiffs were present. Dr. Levin is neither a hydrologist nor a geologist. Dr. Levin admitted that no additional soil, indoor air or groundwater testing was performed. Tercero Decl. Ex. 34 (Levin depo. at 660:3-662:24). Instead, Dr. Levin (1) relies on previously-rejected sources to continue to assert that the groundwater plume extends throughout Willits, (2) ignores the tests performed at residences located on the actual plume and at various locations in Willits showing that most VOCs were non-detects and that those VOCs that were detected were not found at an unusual range for indoor air, and (3) contends for the first time that there is "abundant" evidence of exposure to VOCs from spills at or near the Remco site. These attempts to repackage Dr. Levin's unfounded VOC exposure theory fail.[17]

a. Size of groundwater plume

Dr. Levin and plaintiffs continue to assert that "[t]he record amply shows that the Remco toxins released by Defendants migrated through the soil into groundwater underneath Defendants' property and surrounding properties," and that "[t]he groundwater contamination plume beneath the Remco site and beyond, near Highway 101 and underneath the Safeway Shopping, is well-documented," as is the "fact that the plume also migrated beyond the Franklin Street boundary line." Opposition to Motion to Strike at 24:4-12. Contrary to these assertions, and at the risk of repetition, there are no facts showing that the groundwater plume extended beyond the plume identified and documented by the Willits Trust.

[17] Plaintiffs contend that the Court's February 2008 order has no bearing on Dr. Levin's current VOC theory by drawing false distinctions between the *prima facie* plaintiffs and the remaining plaintiffs. For example, plaintiffs argue that the Court rejected Dr. Levin's previous theory on the ground that Dr. Levin did not explain how the location of the plume could have affected plaintiffs who had not lived in or near Willits during the operative times, whereas the remaining plaintiffs all lived over or near the plume. However, the *prima facie* plaintiff group included individuals who had lived on Franklin Avenue, as well as many individuals who did not live on the plume.

Dr. Levin and plaintiffs rely on three sources to support the opinion that the VOCs traveled beyond the plume identified by the Willits Trust: (1) the Versar map, (2) the August 2007 declaration of Dr. Ghosh, and (3) the Willits Environmental Remediation Trust ("WERT") Final Remediation Investigation Report. As the Court explained in the February 2008 order, the "Versar map" refers to Figure 9 of the preliminary report put together by Versar, Inc. in 1998, and is entitled "Well Survey Area Showing Approximate Areas of Potential Concern Requiring Additional Investigation." The map shows "areas" of concern with "?" around darkened "areas of potential concern." The Versar map does not contain any actual data and on its face is preliminary. Accordingly, any opinion or argument based on the Versar map is flawed and inadmissible.

Plaintiffs' reliance on Dr. Ghosh's August 2007 declaration is similarly flawed. The Court's February 2008 order found Dr. Ghosh's opinions about the size of the plume speculative, not based on sufficient facts or data, and/or beyond his expertise. First, Dr. Ghosh's August 2007 declaration relies on the Versar map. In addition, as the February 6, 2008 order explained:

> . . . Dr. Ghosh provides numerous opinions about groundwater contamination based upon the Draft Remedial Investigation Report, dated December 2001 ("Draft RI"). Dr. Ghosh did not consider either the Final Remedial Investigation Report, dated April 2002, or the 2006 Baseline Risk Assessment ("BLRA"), both of which are publicly available and include additional years of sampling data, and are final reports. Dr. Ghosh does not show why it is sound or reliable to base his opinions on preliminary data rather than final data.
>
> As another example of the speculative nature of Dr. Ghosh's report, Dr. Ghosh opines that the groundwater plume extends farther than the plume identified in the BLRA. The Final Remedial Investigation Report and BLRA show that the area where TCE and/or VOCs are present in the groundwater under and near the Remco site at levels that exceed the EPA's maximum concentration level ("MCL") for drinking water is much smaller than Dr. Ghosh opines. *See* Comb Decl. Ex. 16 (WERT RI Report, Figures 5-11-5-18); Ex. 17 (WERT BRA, Figures 4-9-4-11); Ex. 28 (GeoSyntec Report at 5-1 to 5-2); Wannamaker Decl., Ex. 5 (Base Map). Dr. Ghosh does not have any data to support this opinion, and he did not collect or analyze any groundwater samples in any of the areas where he predicts there is contamination (despite the Willits Trust's failure to find any such contamination). The Court also notes that for many of his opinions, Dr. Ghosh simply states that Dr. Levin is "correct," without providing any independent reasoning. Not only are such bare opinions unhelpful, but it is also unnecessary for Dr. Ghosh to evaluate the credibility of Dr. Levin's opinions and testimony.

February 6, 2008 Order at 24. At his March 2009 deposition, Dr. Ghosh stated that he had seen no new data since he submitted his August 2007 declaration. Tercero Decl. Ex. 52 (Ghosh depo. at 76:23-77:23;

279:24-281:3).[18]

Third, plaintiffs and Dr. Levin rely on the WERT Final Remedial Investigation Report, dated April 2002.[19] However, as the Court found in the February 2008 order, that report demonstrates that the plume where levels of TCE and/or VOCs in the groundwater exceed the EPA's maximum concentration level for drinking water is very small, barely extending beyond the edge of the Remco site to the near side of Franklin Avenue and part of Highway 101, and not, as Dr. Levin claims, "large geographic areas." *See* Docket No. 861 Ex. 16 (WERT RI Report).[20]

Plaintiffs and Dr. Levin dismiss the thousands of lab test samples collected over the years by the Willits Trust – which show the plume to be much smaller than asserted by Dr. Levin – as being "of little value" because the tests were conducted in the 1998-2002 era, and "therefore do not provide any sort of portrait of Plaintiffs' ongoing exposure going back to the 1960s for Michael Wells,[21] and for the remaining plaintiffs for a 15 to 20 year period before testing." Opposition to Motion to Strike at 24 n.7. However, plaintiffs have not submitted *any* expert evidence modeling the groundwater plume during

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[18] Plaintiffs have resubmitted Dr. Ghosh's August 2007 declaration at Simpich Decl. Ex. 14, and again as Exhibit A to Dr. Ghosh's January 2009 declaration, which is found at Simpich Decl. Ex. 62. Dr. Ghosh's January 2009 declaration consists of a cover page stating that "[a]ll opinions expressed are stated in the attached declaration [the August 2007 declaration] and the powerpoint presentation [also attached to the 2009 declaration]." Ex. 62 ¶ 1. Dr. Ghosh's 2009 declaration states that in forming his opinion he considered, *inter alia*, the "Versar reports of 1998," as well as the WERT Final RI Report, the BLRA, and other documents posted on the Willits Trust website. The 2009 declaration attaches the 2007 declaration, a PowerPoint presentation titled "An Extremely Hazardous Waste Site: REMCO, Willits, California," and a one page statement of Dr. Ghosh's "Qualifying Experience in Brief." Again any reliance on Figure 9 of the Versar report is improper. As stated in the February 6, 2008 order and this order, the WERT Final RI Report and the BLRA do not support Dr. Ghosh's (and Dr. Levin's) opinion that the VOC groundwater plume extends throughout Willits.

[19] Unaccountably, plaintiffs also object to this report, on grounds of relevance and hearsay; see discussion *infra*.

[20] Plaintiffs also rely on the Court's Findings of Fact and Conclusions of Law in *People v. Remco*, C 96-283 SI, to assert that "the groundwater was contaminated with VOCs, including TCE." However, those findings do not answer the question of how far, if at all, the contaminated groundwater plume extended beyond the Remco property, and more importantly, do not establish that any contamination resulted in exposure to any plaintiff. Similarly, plaintiffs cite to GeoSyntec groundwater samples which they contend show "some very high numbers for VOCs right near the Avila residence and Luna's market." Opposition to Motion for Summary Judgment at 35:16-26; Simpich Decl. Ex. 58. However, plaintiffs and Dr. Levin fail to connect the groundwater samples to exposure of any plaintiff.

[21] After the instant motions were filed, Michael and Ester Wells settled.

this earlier time period. Moreover, both Dr. Levin and Dr. Ghosh testified at their depositions that the plume has grown over time, and thus the Trust's data would strongly suggest that the historical plume could not have been larger than as mapped by the Trust. Tercero Decl. Ex. 34 (Levin depo. at 893:20-24; 895:2-7); Dampf Decl. Ex. 3 (Ghosh depo. at 271:3-5). In addition, all but one of the remaining plaintiffs claim exposure continuing after 1998, and thus the Trust's groundwater testing is directly relevant as to them.

b. Soil gas emissions

Even if there were factual or scientific support for Dr. Levin's opinion that the contaminated groundwater plume extended throughout Willits, there is still no evidence that any plaintiff was exposed to toxicologically significant levels of VOCs through soil gas emissions. First, it bears repeating that neither Dr. Levin nor plaintiffs have any data showing the presence of VOCs in the blood of any remaining plaintiff. Second, the only data in the record *refutes* Dr. Levin's opinion that plaintiffs were exposed to VOCs through soil gas emissions. Only five of the remaining ten plaintiffs – the Avilas – lived for any period of time at locations above the demonstrated groundwater plume. The Avila homes located at 67 and 71 Franklin Avenue (as well as other locations on the plume) were tested on multiple occasions for VOCs. All of the indoor testing results either failed to show any amount of VOCs in the indoor air or showed concentrations below minimum screening levels. *See* Tercero Decl. Ex. 47 (WERT RI); Ex. 53 (Geomatrix testing); Ex. 54 (Preliminary Endangerment Assessment, Former Remco Hydraulics, Inc., prepared by Henshaw Associates Inc., Environmental Engineering Servs. for Willits Trust); Ex. 45 at 39-41 (Jan. 2009 Dr. Guzelian report). As stated in the Executive Summary of the 2005 Geomatrix testing:

> The purpose of the data collection was to assess whether vapors containing halogenated volatile organic chemicals (VOCs) from the Remco Facility may be migrating from groundwater into the properties at 61, 67 and 71 Franklin Avenue. VOCs in the sample collected from the crawl space under 67 Franklin Avenue were not detected above the laboratory reporting limits. However, VOCs were detected at concentrations below existing California EPA (Cal-EPA) recommended risk-based screening criteria in the homes at 61, 67 and 71 Franklin Avenue. In light of the data collected in the crawl space of 67 Franklin Avenue, it does not appear that VOCs are migrating into these properties from groundwater underlying the Remco Facility. The low concentrations of VOCs detected within Franklin Avenue residences are likely related to possible sources within the houses themselves.

Id. Ex. 53.

Indoor sampling was also done at a number of locations around Willits, including the Luna Apartments, Baechtel Grove Middle School, Willits City Hall, and south of the Remco facility at the northeast corner of Holly and Poplar streets. *Id*. Ex. 47 (WERT RI Report). These are some of the locations at which Dr. Levin and plaintiffs claim that plaintiffs were exposed to VOCs. All of those tests failed to detect any VOCs above the applicable detection limit. *Id*. Plaintiffs' own expert, Dr. Sawyer, admitted in his deposition that he has not seen any indoor air sampling tests showing soil gas emission levels above minimum risk levels. *Id*. Ex. 2 (Sawyer depo. at 49:6-12).

Plaintiffs and Dr. Levin dismiss the indoor air testing results because the testing was performed between 1995 and 2005. Dr. Levin "concluded that Defendants' findings are unreliable" since they "were performed 14 years after the Plaintiffs were exposed to the contaminated plume." Opposition to Motion to Strike at 27:9-11. This assertion is flawed for a number of reasons. First, all remaining plaintiffs except Samuel Ligosky claim exposure after 1995, and thus indoor testing results from this time period are directly applicable to them. Second, it is undisputed that there are *no* data showing the presence of VOCs in any plaintiffs' blood, or any data or test sample results showing the presence of VOCs above minimum risk levels at any plaintiffs' residences or any other location anywhere in Willits at any point in time. Third, neither plaintiffs nor Dr. Levin have identified any flaws in the indoor air testing results. Finally, although Dr. Levin and plaintiffs speculate that VOC soil gas emission levels were greater at an earlier time period, neither Dr. Levin nor any other expert has attempted to model past soil gas emission levels.

c. Exposure through spills

For the very first time in this 10 year litigation, plaintiffs now contend that there is "abundant" and "extensive" evidence that the remaining plaintiffs were exposed to toxicologically significant levels of VOCs through direct exposure from spills at or near the Remco site. This theory is both untimely and suffers from numerous flaws.

First, most of plaintiffs' "evidence" of chemical spills and dumping dates from the 1965 to 1983 time period. All of the remaining plaintiffs lived in Willits after 1983, and thus this evidence is

irrelevant because none of these plaintiffs could have been directly exposed as a result of the alleged spills or dumping. Moreover, the evidence of spills and dumping after 1983 – such as Gary Crothers' deposition testimony that he overheard Remco employees talking about other employees dumping waste on the ground – is riddled with hearsay and other evidentiary problems. In any event, as stated above, even accepting all of plaintiffs' evidence of spills and dumping, plaintiffs have not linked this evidence to either exposure or causation.

3. Hexavalent chromium

The air modeling evidence upon which plaintiffs rely, the 2004 Final Public Health Assessment for Abex/Remco Hydraulics Facility ("2004 Final PHA"), estimates that for the time period relevant to the remaining plaintiffs, the maximum exposure level was .2 micrograms per cubic meter, .2 $\mu g/m^3$. Tercero Decl. Ex. 59 at Fig. 4.[22] Dr. Levin's 2008 declaration opines that hexavalent chromium caused, at least in part, certain of plaintiffs' claimed injuries. However, another of plaintiffs' experts, Dr. Sawyer, testified that he could not conclude that any injury was caused by hexavalent chromium unless there was exposure to at least 1.0 $\mu g/m^3$. Tercero Decl. Ex. 2 (Sawyer depo. at 160:18-161.15); *see also id*. at 262:18-24; 263:25-264:10; 265:3-10 (stating that 1.0 $\mu g/m^3$ is threshold for causing a number of specific diseases). None of the remaining plaintiffs lived in Willits during a time when, according to the 2004 Final PHA, hexavalent chromium concentrations reached or exceeded the 1.0 $\mu g/m^3$threshold.

Thus, according to plaintiffs' own evidence – the 2004 Final PHA and Dr. Sawyer's testimony – the remaining plaintiffs lived in Willits at a time when the maximum estimated concentration was five times less than the threshold for causation. Even during this time period, the area with the estimated .2 $\mu g/m^3$ concentration was very small and did not encompass any plaintiff's residence. *See* Wannamaker Decl. Ex. J at Fig. 1B, 2B, 3B, 4B, 5B, 8, 9B, 10B, 11B & 12B (maps plotting plaintiffs' residences against 2004 PHA).

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[22] The 2004 Final PHA refers to the *Public Health Assessment for Abex/Remco Hydraulics Facility*, U.S. Dep't of Health & Human Servs., Public Health Service, Agency for Toxic Substances and Disease Registry (July 30, 2004). Defendants contend that the air modeling performed in the 2004 Final PHA is "seriously flawed and significantly overstates actual air concentrations in Willits during the applicable time periods," but nevertheless refer to the 2004 PHA for purposes of the present motions given plaintiffs' exclusive reliance on the 2004 PHA to show exposure to hexavalent chromium.

In their oppositions, plaintiffs argue that Dr. Sawyer's January 2009 report actually found "plaintiffs' prior hexavalent chromium exposures and dose via inhalation (ranging between 10 to 40 µg per day, or 0.147 to 5.7 µg/kg/day within plaintiffs' exposure zone) is well within a range consistent with both the carcinogenic actions and non-carcinogenic toxicological effects." Dampf Decl. Ex. 6 (Sawyer report at 12). In his report, Dr. Sawyer states that the low end of this range is based upon the "lowest exposure from the 1976 to 1990 era at 0.6 µg/m^3." *Id*. at 7. Plaintiffs also cite Dr. Sawyer's statement during his deposition that the emissions in Willits were the "highest level chromium exposure I've ever seen." *Id*. at 22:4 (citing Sawyer depo. at 354:25-356:22, Simpich Decl. Ex. 7).

However, these comments and findings were in the context of Dr. Sawyer's review of the 2003 Draft PHA, not the 2004 Final PHA. *See* Simpich Decl. Ex. 7 (Sawyer depo. at 355:5-20, stating that "I was asked by [Dr. Levin] to at least give him some preliminary information as to dose, and I did explain to him that this was the highest level chromium exposure that I've ever seen and that certainly the levels were well within the range of both cancer and noncancer effects. I had not yet made my final quantitative assessments in my report, but I had reviewed the – at least the preliminary review of the ATSDR[23] documents that, as I recall, the 2003 document that gave me some preliminary information to explain."). The air concentration estimates were greatly reduced from the 2003 Draft PHA to the 2004 Final PHA. *Compare* Dampf Decl. Ex. 4 (Fig. 4 of 2004 Final PHA, showing maximum concentration level of .2 µg/m^3, *with* Dampf Decl. Ex. 5 (Fig. 4 of Draft 2003 PHA, showing maximum concentration level of 1.0 µg/m^3).

It is also clear from Dr. Sawyer's report that his conclusions about plaintiffs' exposure to hexavalent chromium are based on the 2003 Draft PHA, not the 2004 Final PHA. Dr. Sawyer assumes that between 1983 (the date of the remaining plaintiffs' earliest arrival in Willits, which is Samuel Ligosky's birth in November 1983) and 1988 (when defendants sold the facility), plaintiffs' exposure to hexavalent chromium was .6 µg/m^3. Dampf Decl. Ex. 6 (Jan. 2009 Sawyer report at 7). During his deposition, Dr. Sawyer explained that he based these calculations on the orange isopleth exposure zone from "Figure 4." *Id*. Ex. 7 (Sawyer depo. at 96:9-97:15). Although plaintiffs assert that Dr. Sawyer

[23] "ATSDR" refers to the Agency for Toxic Substances and Disease Registry, a public health service of the U.S. Department of Health and Human Services.

relied on the 2004 Final PHA, a review of Figure 4 of the 2004 Final PHA and Figure 4 of the 2003 Draft PHA shows that Dr. Sawyer could only have been relying on the 2003 Draft PHA: in the 2004 Final PHA, the orange isopleth zone shows a maximum exposure of .1 µg/m^3, while in the 2003 Draft PHA, the orange isopleth zone shows a maximum exposure of .6 µg/m^3. *Id.* Ex. 4, 5. As shown on Figure 4 of the 2004 Final PHA, the entire range of concentrations of hexavalent chromium is .003 µg/m^3 to .2 µg/m^3, all below the .6 µg/m^3 relied on by Dr. Sawyer. (In any event, exposure of .6 µg/m^3 is less than the 1.0 µg/m^3 threshold.) In light of the 2004 Final PHA and its adjusted exposure concentrations, any reliance on the concentrations contained in the 2003 Draft PHA is improper.

Plaintiffs also assert that Dr. Sawyer's 1.0 µg/m^3 threshold was "just a starting point" and that the threshold should be adjusted for children and to account for indoor dust. However, Dr. Sawyer stated during his deposition that the 1.0 µg/m^3 threshold incorporates consideration of children:

> Q So the MRL of 1 microgram per cubic meter, that is for a residential exposure and incorporates considerations for children or other special types of individuals?
>
> A It does, and that's for an intermediate duration which is defined less than 365 days.

Dampf Decl. Ex. 7 (Sawyer depo. at 156:21-157:1).

Plaintiffs' assertion that indoor dust "usually accounts for half of a person's overall exposure and that alone would cut the 1.0 figure to 0.5" is equally unsupported. Plaintiffs did not conduct any testing for the presence of hexavalent chromium in any off-site location in Willits, and have not made any attempt to model dust levels. Even if plaintiffs had provided a basis for adding a .5 µg/m^3 exposure based on dust, plaintiffs would *still* be below the 1.0 µg/m^3 threshold since the maximum estimated air concentration in the 2004 Final PHA was .2 µg/m^3.

Plaintiffs claim that Dr. Levin's hexavalent chromium opinion is not just based on Dr. Sawyer's opinions, but also on the Versar Report, the January 23, 2006 Public Health Assessment ("2006 PHA"), and various depositions and declarations regarding spills or other releases of water containing hexavalent chromium at the Remco facility. However, these other sources do not provide support for Dr. Levin's opinion that the remaining plaintiffs were exposed to a toxicologically significant amount of hexavalent chromium. To the extent plaintiffs and Dr. Levin assert that they were exposed to groundwater containing chromium, there is no evidence that any plaintiff used a contaminated well or

that any plaintiff was exposed through the soil by hexavalent chromium particulates.[24] Plaintiffs have not identified any spillage during a period of time when plaintiffs were residents in Willits, nor have they advanced any theory explaining how chromium spilled or dumped in the 1970s or early 1980s – before any remaining plaintiff lived in Willits – could result in toxicologically significant exposures years or decades later. Plaintiffs have not identified any off-site soil sample showing toxicologically significant levels of hexavalent chromium, and indeed the 2006 PHA found that "contact with off-site soil" poses "no apparent public health hazard." Dampf Decl. Ex. 8 at 44 (2006 PHA). Plaintiffs emphasize the statement in the 2006 PHA that "swimming or wading in Baechtel Creek (past)" "pose an indeterminate public health hazard." *Id*. The 2006 PHA states that this exposure pathway could not be evaluated due to insufficient data. *Id*. While this statement does not establish that swimming or wading in Baechtel Creek did *not* cause exposures to hexavalent chromium, neither does this statement constitute any proof that there was exposure: the hazard is "indeterminate."

4. Pre-1988 and post-1988 exposure

Except for plaintiff Samuel Ligosky, all of the remaining plaintiffs continued to live in Willits after defendants' predecessors sold the Remco facility on December 16, 1988. In rendering his exposure and causation opinion, Dr. Levin did not distinguish between emissions before and after December 16, 1988. Those plaintiffs who continued to live in Willits had post-1988 exposures[25] far longer than their pre-1988 exposures. The most extreme example is Gracey Tharp, who was born in August 1988, and continues to live in Willits, over twenty years after the sale. The other remaining plaintiffs (aside from Samuel Ligosky) had between nine to sixteen years of post-1988 exposure but only one to five years of pre-1988 exposure.

Plaintiffs assert that Dr. Levin did not need to distinguish between pre- and post-sale exposures

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[24] Plaintiffs and Dr. Levin admit that hexavalent chromium does not volatize and thus is not a soil gas emission. Opposition to Motion for Summary Judgment at 46.

[25] Plaintiffs have not submitted any evidence of exposure, except potentially *de minimis* exposure to hexavalent chromium. However, the Court assumes exposure for the limited purpose of discussing Dr. Levin's failure to segregate pre-December 1988 exposures from post-December 1988 exposures.

because "[p]laintiffs who continued to live in Willits after the 1988 sale were exposed to emissions from the prior operations of the facility which continued to work their way through the environment." Opposition to Motion to Strike at 40. However, there is no factual or scientific support for this assertion. Without showing that defendants are responsible for post-1988 exposures, the failure to segregate pre- and post-sale exposures also renders Dr. Levin's opinion fatally defective. *See Golden*, 528 F.3d at 683 (summary judgment proper for failure to show causation where plaintiff's expert opined injuries were caused by "exposures" but did not link injuries to particular exposure at issue).

B. Causation

Without any evidence of toxicologically significant levels of exposure, Dr. Levin's opinions about causation are speculative and unreliable. However, even if Dr. Levin could establish exposure, the 2008 declaration fails to show either general or specific causation.

1. General causation

In support of general causation, plaintiffs rely on the March 17, 2008 report of Dr. Linda Remy (Simpich Decl. Ex. 1), as well as studies cited by Dr. Levin in his March 2008 declaration and in his March 27, 2009 declaration (Tsadik Decl. Ex. 1). None of this evidence supports a finding of general causation. Dr. Remy's five page March 17, 2008 report, which she characterizes as "preliminary,"[26] states that "[t]he analysis reported here focuses on health status differences of people who lived in Mendocino County, California . . . at any time between 1991 and 2006, with a special focus on Willits, California." Simpich Decl. Ex. 1 (Remy report ¶ 6). The report concludes:

> Based on preliminary analysis, controlling for age, Willits residents have been more likely than other Mendocino County residents to be diagnosed with the following conditions:
>
> • Endocrine, Nutrition, Metabolic, Auto-Immune Disorders

[26] The Court does not fault Dr. Remy for the fact that her report was preliminary. The record reflects that, although this litigation has been pending for 10 years and plaintiffs' counsel have sought and received numerous continuances, Dr. Remy (and other experts such as Dr. Sawyer) were not engaged by plaintiffs' counsel until shortly before the March 15, 2008 deadline for production of exposure and causation evidence. *See, e.g.,* Tercero Decl. Ex. 2 (Sawyer depo. at 333:1-23).

- Circulatory System Disorders
- Respiratory System Disorders
- Digestive System Disorders
- Genitourinary System Disorders
- Musculoskeletal or Connective Tissue Disorders

Id. ¶ 10. Dr. Remy also lists several conditions for which Willits residents "have been neither more nor less likely to be diagnosed," two conditions for which Willits residents have been less likely to be diagnosed, and three conditions for which "[c]hildren and young adults through about age 24 have been more likely than other Mendocino County residents to be diagnosed with." *Id.* Dr. Remy's preliminary report does not support general causation because she does not tie any increased incidence of medical disorders with any of the hazardous substances at issue in this case. *See Golden*, 528 F.3d at 683. Even if Dr. Remy had made this connection, Dr. Remy's report would not aid the remaining plaintiffs with respect to the majority of their claimed injuries because those injuries do not fall into the category of conditions Dr. Remy claims are more prevalent among Willits residents. For example, Samuel Ligosky's primary injury is a birth defect – malformed bronchial tubes – but Dr. Remy found that Willits residents are not more likely to be diagnosed with congenital anomalies. Similarly, several plaintiffs allege that hazardous substances caused ADD, yet Dr. Remy found that Willits residents were not more likely to be diagnosed with mental disorders.

The articles cited in Dr. Levin's March 2008 declaration and March 27, 2009 declaration similarly do not show general causation. As an initial matter, all of the new article "summaries" and articles in Dr. Levin's March 27, 2009 declaration should have been produced by the March 15, 2008 deadline for production of evidence on exposure and causation. As they have on numerous occasions, plaintiffs continue to flout the Court's orders and deadlines. The Court has repeatedly warned plaintiffs' counsel of the consequences of ignoring deadlines, apparently to no avail. The Court EXCLUDES all of the new article summaries and articles in the March 27, 2009 declaration.

In any event, it does not appear that the excluded articles or the articles cited in Dr. Levin's March 2008 declaration establish general causation. Based on the parties' (and experts') discussions of the articles, they discuss carcinogenic effects of chemicals; none of the remaining plaintiffs claim to

have cancer of any kind. Similarly, the articles discuss a host of conditions, such as blink reflex and systemic lupus erythematous, that no plaintiff claims to have. Given the sheer number of articles, it may be that some article discusses some injury claimed by plaintiffs. If so, that is not readily apparent from plaintiffs' papers. In any event, even if there was some support somewhere in plaintiffs' evidence for general causation, plaintiffs' claims would nevertheless fail for lack of exposure and specific causation.

2. Specific causation

Defendants challenge Dr. Levin's specific causation methodology on numerous grounds. The parties debate, *inter alia*, whether a dose calculation is a required part of a specific causation analysis, and relatedly whether an expert may, as Dr. Levin purports to do, rely solely on a "differential diagnosis." In his 2008 declaration, Dr. Levin claims to follow a four step "differential diagnosis" methodology in rendering his causation opinion. Dr. Levin states:

> In my causation analysis I will use a careful clinical differential diagnosis just as the practicing clinician uses to make causal opinions daily in their clinical practice. I will use the analysis of clinical histories and medical records along with interviews with the individual patients to assess causation in a 4 step process. First I will identify the valid presence of disease. Second I will then establish a biologically plausible link between that disease and exposure to the one chemical or the one chemical [sic] or the unique mix of chemicals emanating from the Remco contamination sites. Third I will then establish an appropriate temporal association between the exposure and the onset of the disease. I will finally consider confounding factors.

Tercero Decl. Ex. 42 (Levin report at 8-9). Dr. Levin also states that it is unnecessary to consider dose because "dose estimations for specific individuals for specific chemicals are costly, time consuming and marginally reliable for evaluation of exposures in this case." *Id.* at 6.

The Court finds it unnecessary to decide whether a dose calculation is necessary, or whether in the abstract differential diagnosis could suffice, because Dr. Levin's report does not meet the most basic requirements for reliability. The Ninth Circuit has explained that "[w]here peer review and publication are absent, 'the experts must explain precisely how they went about reaching their conclusions and point to some objective source – a learned treatise, the policy statement of a professional association, a published article in a reputable scientific journal or the like – to show that they have followed the scientific evidence method, as it is practiced by (at least) a recognized minority of scientists in their field.'" *Clausen v. M/V New Carissa*, 339 F.3d 1049, 1056 (9th Cir. 2003) (quoting *Daubert II*, 43 F.3d

at 1319).

Here, rather than explaining how he reaches his exposure and causation opinions, Dr. Levin simply assumes, without factual or scientific basis, both exposure and causation. Indeed, Dr. Levin does not even follow the four step differential diagnosis process outlined in his report. Setting aside the first step of identifying the valid presence of disease,[27] Dr. Levin does not establish a biologically plausible link between disease and exposure (the second step), nor does he "establish an appropriate temporal association between the exposure and the onset of the disease" (the third step). To the contrary, Dr. Levin's reasoning is essentially as follows: (1) plaintiff have various alleged injuries; (2) plaintiffs lived in Willits; (3) the Remco facility operated in Willits; and (4) therefore Remco caused plaintiffs' injuries.

With regard to considering "confounding factors," the fourth step, Dr. Levin summarily dismisses alternative sources and causes, such as diet, age, cigarette smoke, a medical waste incinerator at the Frank Howard Hospital, gasoline and diesel exhaust from traffic on Highway 101, a local crematorium, and areas wood burning and burn barrels. Aside from his conclusory statement that other sources are not "proven probable sites that can be factored into this causation analysis," Levin report at 8, there is no discussion or analysis of these "confounding factors." However, '[t]he expert must provide reasons for rejecting alternative hypotheses using scientific methods and procedures and the elimination of those hypotheses must be founded on more than subjective beliefs or unsupported speculation." *Clausen*, 339 F.3d 1058 (internal quotation and citation omitted).

3. "Remco mix" combination theory

Dr. Levin conceded that he could not testify to a reasonable degree of medical certainty that either dioxin or VOCs, on their own, could have or did cause any of the remaining plaintiffs' claimed injuries.[28] With regard to dioxin, Dr. Levin testified:

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[27] As discussed *infra*, plaintiffs have not substantiated many of their claimed injuries through objective medical evidence.

[28] As discussed above, Dr. Levin does not have any evidence that plaintiffs were exposed to toxicologically-significant levels of any of the chemicals, either individually or in some combination.

> By the way, I'm not, as you know, saying that there's toxicologically significant levels of dioxin. I'm saying that there are high levels of dioxin, but I'm not attributing any specific disease to that dioxin alone. It's simply a marker for the fact that these people were exposed to all of these toxic chemicals.

Tercero Decl. Ex. 34 (Levin depo. at 582:18-24). Similarly, Dr. Levin admitted during his deposition that he could not conclude, for any plaintiff, that soil gas emissions would have been sufficient to cause their injuries:

> Q What about the toxicological significance?
>
> A Well, it would contribute to the aggregate of the exposure, but whether it in and of itself could cause disease, I couldn't say.
>
> Q For any plaintiff, would you be able to conclude that if soil gas emissions – into the outdoor air would alone have been sufficient to cause their injuries?
>
> A No.

Id. at 905:5-9.

Dr. Levin's testimony about hexavalent chromium was more equivocal, yet no more helpful to plaintiffs' case. Dr. Levin admitted in his deposition that he does not know whether hexavalent chromium can cause a number of specific injuries claimed by plaintiffs (birth defects, endometriosis, cardiomyopathy, or kidney failure). *Id.* at 713:15-714:1. Dr. Sawyer also opined that hexavalent chromium cannot cause ADHD, malformed bronchial tube birth defects, and endometriosis, which are injuries all claimed by plaintiffs. Tercero Decl. Ex. 2 (Sawyer depo. at 201:25-202:3; 199:6-10; 259:7-12). More importantly, plaintiffs' own evidence – Dr. Sawyer's testimony and the 2004 PHA – show that the remaining plaintiffs were exposed at most to toxicologically insignificant amounts of hexavalent chromium.

Dr. Levin attempts to sidestep these deficiencies by claiming that the combination of these chemicals caused plaintiffs' alleged injuries. The Court previously rejected this theory as unreliable: "Dr. Levin's failure to provide any scientific support for his combination theory, coupled with his admission that the individual components could not and did not cause the claimed injuries renders his ultimate causation opinions inadmissible." February 6, 2008 Order at 22. Dr. Levin's March 2008 report provides no new scientific support for his opinion that a combination of chemicals caused plaintiffs' injuries. None of the articles or other documents cited by Dr. Levin in his declaration

mentions the combination of chemicals at issue here, or concludes that a combined exposure to these chemicals can cause any of the injuries claimed here. Dr. Levin admitted at his deposition that no peer-reviewed scientific study has concluded that the mix of chemicals at issue here is capable of causing the injuries claimed:

> Q Is there any reliable peer-reviewed literature with this unique mix for any other type of population?
>
> A No.

Tercero Decl. Ex. 34 (Levin depo. at 704:15-18). Dr. Levin also admitted that he has not seen any studies on the synergistic effect of hexavalent chromium and VOCs, or hexavalent chromium and dioxins. *Id*. at 1193:3-10; *see also* Tercero Decl. Ex. 59 (2004 Final PHA noting that "[t]here has been very limited toxicological study of the effects of chromium in combination with other chemicals.").

The Court recognizes that demonstrating causation is difficult. "The fact that a determination of causation is difficult to establish cannot, however, provide a plaintiff with an excuse to dispense with the introduction of some reasonably reliable evidence proving this essential element of his case." *Jones*, 163 Cal. App. 3d at 403.[29]

II. Substantiation of plaintiffs' alleged injuries

Defendants contend that an additional basis for summary judgment is plaintiffs' failure to substantiate many of their claimed injuries through objective medical evidence.[30] For each remaining plaintiff, defendants detailed which alleged injuries lacked any sort of objective medical proof. *See* Motion for Summary Judgment at 37-38 (Avila family), 42-43 (Ligosky), 47 (Arolla and Mark

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[29] Plaintiffs have not submitted any evidence in support of their fraudulent concealment claims, and thus defendants are entitled to summary judgment on these claims as well. "[T]he elements of an action for fraud and deceit based on concealment are: (1) the defendant must have concealed or suppressed a material fact, (2) the defendant must have been under a duty to disclose the fact to the plaintiff, (3) the defendant must have intentionally concealed or suppressed the fact with the intent to defraud the plaintiff, (4) the plaintiff must have been unaware of the fact and would not have acted as he did if he had known of the concealed or suppressed fact, and (5) as a result of the concealment or suppression of the fact, the plaintiff must have sustained damage." *Marketing West, Inc. v. Sanyo Fisher (USA) Corp.*, 6 Cal. App. 4th 603, 612-13 (1992). The failure of proof with respect to exposure and causation is dispositive as to this claim.

[30] There are medical records reflecting some of plaintiffs' claimed injuries, and thus this ground for summary judgment is partial.

Rodriguez), and 50 (John and Gracey Tharp). These injuries include, for example, for plaintiff John Tharp: frequent/severe headaches, dizziness/fainting spells, chronic/frequent colds, sinusitis, hay fever, shortness of breath, chronic cough, numbness of extremities, stomach conditions, gum conditions, extreme fatigue/lethargy, sleeping disorders (insomnia), nervous system injury, ADD and nosebleeds.

In response, plaintiffs assert that "any difference in interpretation of medical records is a triable issue of fact." Opposition to Motion for Summary Judgment at 53:5. Plaintiffs assert that "[i]n both his declaration and at deposition, Levin testified that he conducted physical examinations of each of the plaintiffs, took their histories, and reviewed their medical records to determine their injuries." *Id.* at 53:13-16 (citing Levin report at 8, Levin depo. at 632:11-14, 651-652:11). However, the cited portions of Dr. Levin's report and deposition transcript simply refer to the meetings between Dr. Levin and the plaintiffs during which he performed "mini-physical" examinations and plaintiffs told Dr. Levin about their injuries. Plaintiffs have not submitted any actual medical records documenting the alleged injuries listed in defendants' motion for summary judgment. Accordingly, summary judgment on plaintiffs' claims for these alleged injuries is appropriate.

III. Objections to evidence

A. Plaintiffs' objections

1. Wannamaker declaration

Plaintiff object that Mr. Wannamaker lacks the foundation and competence to "testify as to the accuracy of the aerial imagery map as a representation of Willits California, or any part thereof." Plaintiffs claim that Mr. Wannamaker has never visited Willits or viewed photographs or video of the location. However, Federal Rule of Evidence 703 permits Mr. Wannamaker, an expert, to rely on "evidence made known" to him, so long as the evidence is "of a type reasonably relied upon by experts in [his] particular field." Fed. R. Evid. 703. Mr. Wannamaker is an environmental engineer, and he states that he has approximately 8 years of professional experience in environmental consulting, including statistical and data analysis, and evaluations of fate and transport of groundwater and surface water contaminants. Wannamaker Decl. ¶¶ 1-2. The type of aerial imagery map upon which Mr. Wannamaker relied is the type of map upon which environmental experts regularly rely in their work.

Plaintiffs' objection that Mr. Wannamaker downloaded the map "on some unspecified date," is without merit, as plaintiffs have not that the map is inaccurate in any way. Mr. Wannamaker downloaded the map from the California Geographic Information Systems portal.

Plaintiffs also appear to argue that Mr. Wannamaker improperly relies on the WERT Final RI Report to opine about whether or not plaintiffs were exposed to Remco contaminants. However, Mr. Wannamaker does not make any conclusions about plaintiffs' exposure. Instead, Mr. Wannamaker's testimony is limited to mapping plaintiffs' residences in Willits against the VOC groundwater plume contained in the Final RI Report and the airborne hexavalent chromium isopleths contained in the 2004 Final PHA. Mr. Wannamaker may, as an expert, rely on these reports.

Plaintiffs also object that the VOC plume mapped in the Final RI Report does not represent the VOC plume prior to 2000 and 2001, As discussed above, plaintiffs have never attempted to model the historical VOC plume, and thus their assertion that the plume was different or larger in the past is pure speculation. Nor have plaintiffs submitted any evidence regarding the size or shape of the plume in the past, and both Dr. Levin and Dr. Ghosh testified that the plume would have been *smaller* in the past because the plume has grown larger over time. Plaintiffs also object that the plume mapped in the Final RI Report is irrelevant because the data was collected in 2000 and 2001. However, seven of the remaining plaintiffs lived in Willits through the mid-2000s and claim exposure to Remco contaminants during that time period.

2. Tercero Decl. Ex. 1: Nov. 29, 2006 Letter from Dr. Anne Farr to plaintiffs' counsel

This letter was sent by Dr. Farr, the trustee of the Willits Trust, to plaintiffs' counsel in response to their request for information regarding environmental testing conducted by the Trust. Plaintiffs object to this letter as hearsay. However, the letter falls within the business records exception to the hearsay rule, FRE 803(6). Dr. Farr has personal knowledge of the Trust's investigations, and the letter was sent and kept in the ordinary course of business in response to a request about the Trust's business activities. Plaintiffs do not assert that the letter is untrustworthy. *See United States v. Moore*, 923 F.2d 910, 915 (1st Cir. 1991) ("ordinary business circumstances suggest trustworthiness, at least where absolutely

nothing in the record in any way implies lack thereof. If counsel had some special reason for thinking the information untrustworthy, he failed to call it to the court's attention.") (internal citation omitted).

3. Tercero Decl. Ex. 8: Agreement and Plan of Reorganization between Stanray Corporation and Remco Hydraulics, Inc.

Plaintiffs object that this exhibit lacks foundation and is hearsay. Plaintiffs do not explain their objection.[31] The Tercero declaration states that the document is a true and correct copy. Tercero Decl. ¶ 10. With respect to hearsay, the document is not being offered for the truth of the matters asserted, but for its operative effect, which was to bring about the acquisition of Remco by defendants' corporate predecessor. *See Padilla v. United States*, 58 Fed. Cl. 585, 593 (Fed. Cl. 2003) ("When the evidence offered has legal significance independent of the truth of any statement contained in it, it is not hearsay."). Even if the document is hearsay, it falls within the exceptions of FRE 803(15) and FRE 803(16).

4. Tercero Decl. Ex. 9: General Bill of Sale and Instrument of Assignment

Plaintiffs object that this exhibit lacks foundation and is hearsay. The Tercero declaration states that the document is a true and correct copy. Tercero Decl. ¶ 11. The document is not being offered for the truth of the matters asserted, but for its operative effect, which was to bring about the sale of Remco to MC Industries. *See Padilla*, 58 Fed. Cl. at 593. Even if the document is hearsay, it falls within the exceptions of FRE 803(15) and FRE 803(16).

5. Tercero Decl. Ex. 14, 20, 24

Plaintiffs object that these exhibits lack foundation and are hearsay. Although the Tercero declaration states that these documents are true and correct copies, Tercero Decl. ¶ 16, 22, 26, the Tercero declaration does not sufficiently lay a foundation to establish that these are business records. Accordingly, the Court SUSTAINS plaintiffs' objections. In any event, the Court's order does not rely

[31] For this exhibit and many others, plaintiffs simply object "lacks foundation and hearsay." Docket No. 1204 at 3.

on these exhibits.

6. Tercero Decl. Ex. 25: January 1988 Report of the State of California, Air Resources Board

Plaintiffs object to this exhibit on the ground that it lacks foundation and is a draft. The Tercero declaration authenticates the document, and further because it is a "publication[] purporting to be issued by a public authority," extrinsic evidence of authenticity is not required. FRE 902(5). Plaintiffs do not support their assertion that the document is a draft. The title of the report is "Proposed Airborne Toxic Control Measure for Emissions of Hexavalent Chromium from Chrome Plating and Chromic Acid Anodizing Operations." Although the report contains the word "Proposed" in the title, "Proposed" refers to a proposed measure, not to the report itself.

7. Tercero Decl. Ex. 47, 48: WERT Final Remedial Report, WERT Final Baseline Risk Assessment

Plaintiffs object to these documents on both relevance and hearsay grounds. As an initial matter, plaintiffs and their experts rely on these same documents, and thus these objections border on frivolous. Plaintiffs contend that the documents are irrelevant because they discuss testing conducted in the 1990s and 2000s; however, numerous remaining plaintiffs lived in Willits during the 1990s until the mid-2000s, and claim exposure during this period. Plaintiffs also assert that the documents are "cursory." This objection goes to the weight, not the admissibility, of these reports. To the extent plaintiffs challenge the information in these documents regarding the VOC groundwater plume, those objections are discussed *supra*.

The documents are also not hearsay, as they fall within the public records and reports exception to the hearsay rule, FRE 803(8), as well as the business records exception. FRE 803(6). Plaintiffs assert that the documents are untrustworthy (despite the fact that they and their experts also rely on them), claiming that WERT "is hardly an objective actor in this affair," and that WERT is biased because it is funded by defendants (pursuant to Court order). There is absolutely nothing in the record to support plaintiffs' speculation that the Willits Trust and its trustee, Dr. Farr, are biased, or that the documents are untrustworthy.

8. Tercero Decl. Ex. 53: Geomatrix Report

Plaintiffs object to the Geomatrix report because the air samples discussed in the report were taken in 2005. However, a number of the remaining plaintiffs lived in Willits when the air sampling was conducted, and claim exposure on that date and afterwards. In addition, plaintiffs have not conducted any alternative sampling or modeling showing that the Geomatrix results are incorrect or not representative.

Plaintiffs also object that the report violates the Final Interim Vapor Intrusion Guidance Document because only one set of samples was gathered for each tested location. The Guidance Document recommends that "[b]uildings should be sampled twice over a six month period before a final risk determination is conducted." Tsadik Decl. Ex. 1 at v (Interim Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air). However, the document does not state that the failure to take two samples invalidates the results of one of the samples, and plaintiffs have not submitted any evidence showing that the air samples are inadmissible.

9. Tercero Decl. Ex. 54: Henshaw Associates Report

Plaintiffs raise the same relevance and hearsay objections to the Preliminary Endangerment Assessment, prepared by Henshaw Associates for the Willits Environmental Remediation Trust and dated July 13, 2000. For the reasons stated above, the 1990s and 2000s are relevant because plaintiffs claim exposure during this time period. Similarly, plaintiffs' criticism that the report's discussion of historical contamination is "cursory" goes to weight, not admissibility. Plaintiffs' assertion that the report contains an inaccurate discussion of the VOC groundwater plume is unsupported by any evidence or modeling. The report falls within the business records exception to the hearsay rule, FRE 803(6).

10. Tercero Decl. Ex. 85, 87, 88: Comparison Chart of Plaintiffs' Exposure Periods as Defined by Dr. Levin and Plaintiffs; Comparison Chart of Plaintiffs' Injuries According to Dr. Levin and Plaintiffs; Chart of Plaintiffs' Injuries Withdrawn from Dr. Levin's Opinion

Plaintiffs object that the charts are hearsay. However, as explained in the Tercero declaration, the charts are summaries of voluminous documents (Dr. Levin's March 2008 report, 1464 pages of

plaintiffs' deposition transcripts, and 1197 pages of Dr. Levin's deposition transcript), and thus the charts are admissible under FRE 1006. The Tercero declaration authenticates the charts as well as the underlying documents. Tercero Decl. ¶¶ 36, 44, 64, 66, 67, 69, 77, 89, 91, 92, 95.

Plaintiffs also object that the charts inaccurately characterizes Dr. Levin's testimony. Plaintiffs do not explain exactly how the charts inaccurately characterize his testimony, and the Court finds that for the most part the charts simply summarize and compare information. The only possible way in which the charts are argumentative is the column "Years Levin Overestimates Exposure" in exhibit 85, and accordingly the Court strikes the heading for that column.

11. Tercero Decl. Ex. 89: June 23, 1995 William Sawyer Presentation

Plaintiffs object to this exhibit, which is a presentation titled "Evaluating Toxic Exposures After Daubert" and authored by one of their own experts, Dr. Sawyer, along with David Rigle, M.D., on foundation and hearsay grounds. The Tercero declaration states that the exhibit is a true and correct copy. Tercero Decl. ¶ 93. . The presentation was given at the National Expert Witness and Litigation Seminar and is published by Seak, Inc., and thus is a commercial publication that may be generally used and relied upon by scientific expert witnesses pursuant to FRE 803(17).

B. Defendants' objections

Defendants raise many objections to much of plaintiffs' evidence. For the most part, the Court sustains defendants' objections.[32] Remarkably, plaintiffs have resubmitted a considerable amount of evidence that was previously excluded on substantive grounds, including Dr. Levin's 2007 declaration.[33] As explained below, much of plaintiffs' evidence is speculative, without foundation, hearsay, or

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[32] To the extent defendants object that evidence is untimely because plaintiffs' opposition papers were untimely, the Court OVERRULES those objections. Although plaintiffs' papers were untimely, the Court will not strike any exhibits on the ground that plaintiffs' opposition papers were filed up to 6 days late. However, while the Court excuses plaintiffs' untimely filing of the summary judgment papers, that does not mean that new exposure and causation evidence submitted for the first time in connection with the summary judgment opposition is admissible.

[33] In light of the Court's 29 page order striking this declaration on numerous substantive grounds, plaintiffs had no basis to resubmit it.

untimely. However, and importantly, as detailed in both this order and the February 6, 2008 order, even if this evidence were admitted defendants would still be entitled to summary judgment because none of this evidence shows that plaintiffs were exposed to toxicologically significant levels of hazardous substances, or that these substances caused any of plaintiffs' alleged injuries.

1. Evidence previously excluded

The Court EXCLUDES the following exhibits that the Court previously excluded on substantive grounds, to the extent noted in the parentheses: (1) Simpich Decl. Ex. 2 (February 2007 declaration of Dr. Levin; excluded in its entirety); (2) Simpich Decl. Ex. 10 (January 1998 and March 1998 Versar Reports; excluding as preliminary and unreliable Figure 9 of the January 1998 Versar Report); (3) Simpich Decl. Ex. 14 (Dr. Ghosh's August 2007 declaration; excluding as speculative and unreliable opinions that the groundwater plume spread throughout Willits and that plaintiffs were exposed to soil gas emissions from this plume); (4) Simpich Decl. Ex. 62 (Ex. A to Dr. Ghosh's January 2009 declaration; this exhibit is Dr. Ghosh's August 2007 declaration); (5) Simpich Decl. Ex. 21 (Holt Declaration; excluding paragraphs 4 and 8 as lacking foundation); (6) Simpich Decl. Ex. 28 (July 2007 Rebuttal Report of Dr. Levin; excluding to the extent that relies on Versar map and contains improper legal argument); (7) Simpich Decl. Ex. 45 (Quever depo. testimony; excluding as hearsay testimony at pages 73-75 to the extent such testimony is offered for the proposition that former Remco employees and witnesses were aware of combustion or other dioxin-creating activities); (8) Simpich Decl. Ex. 51 (Crothers depo. testimony; excluding as hearsay testimony at page 87 to the extent such testimony is offered for the proposition that former Remco employees and witnesses were aware of combustion or other dioxin-creating activities); and (9) Findings of Fact and Conclusions of Law from *People v. Remco.*

2. Untimely exposure and causation evidence that should have been produced by March 2008 deadline

In addition, the Court SUSTAINS defendants' objections and EXCLUDES the February 2009 rebuttal report of Dr. Levin (Simpich Decl. Ex. 29), and the March 27, 2009 declaration of Dr. Levin

(Tsadik Decl. Ex. 1) because this evidence should have been produced by the March 15, 2008 deadline for exposure and causation evidence. In addition, defendants also object that several articles submitted by plaintiffs (Tsadik Decl. No. 2 Ex. A; Simpich Decl. Ex. 15, 30), as well as three articles cited on page 35 of plaintiffs' opposition to the motion to strike (Wuthe, Kumagai, Schecter) were not disclosed in plaintiffs' March 2008 showing of causation. Plaintiffs do not dispute this point, and accordingly the Court STRIKES any reference to these articles.

3. Evidence of alleged burning, spills and dumping

As discussed *supra*, plaintiffs submitted a number of declarations and deposition excerpts in support of their claim that Remco employees burned, spilled and dumped hazardous wastes, and that those activities created dioxins and VOCs. Defendants object that this testimony is speculative, lacks foundation, lacks personal knowledge, and/or is hearsay.

As a general matter, the Court rules that to the extent that these witnesses testify about matters within their personal knowledge, such testimony is admissible. Thus, for example, Donna Avila may properly testify that she saw drums with something burning in them in 1987. However, defendants are correct that plaintiffs may not rely on this testimony as evidence that dioxins were created during this burning because Ms. Avila admitted she did not know what was being burned.

Accordingly, the Court SUSTAINS defendants' objections to the following: (1) Simpich Decl. Ex. 16 (Nickerman Decl.); (2) Simpich Decl. 24 (Frey Decl.); (3) Simpich Decl. Ex. 26 (Avila depo.); (4) Simpich Decl. Ex. 18 (Dryden depo.); (5) Simpich Decl. Ex. 20 (Dudley depo.); (6) Simpich Decl. Ex. 25 (Lewis depo.); (7) Simpich Decl. Ex. 34 (Hipes depo.); (8) Simpich Decl. Ex. 37 (Wake depo.); (9) Simpich Decl. Ex. 38 (Hannum depo.); (10) Simpich Decl. Ex. 39 (Nunnemaker depo.); (11) Simpich Decl. Ex. 46 (Strait depo.); (12) Simpich Decl. Ex. 49 (Brown depo.); (13) Simpich Decl. Ex. 50 (Keath depo.); (14) Simpich Decl. Ex. 52 (Evans depo.); (15) Simpich Decl. Ex. 53 (Douglas depo.); and (16) Simpich Decl. Ex. 54 (Choquette depo.).

4. Dr. Remy and Dr. Sawyer

Defendants object to Dr. Remy's March 2008 report (Simpich Decl. Ex. 1) as preliminary and

unreliable. Similarly, defendants object that certain testimony by Dr. Sawyer (Simpich Decl. Ex. 7) is unreliable to the extent that Dr. Sawyer relies on the 2003 Draft 2003 PHA. Many of defendants' objections are well-taken, and as explained *supra*, the Court concludes that this evidence does not show causation. However, in light of the Court's substantive discussion of this evidence, the Court declines to exclude these exhibits. For the same reason, while defendants' objections to the 2003 Draft PHA have merit, the Court will not exclude this document because this document, combined with Dr. Sawyer's deposition testimony, explains and provides the basis for Dr. Sawyer's (incorrect) statement in his report that plaintiffs' exposure to hexavalent chromium "was from the 1976 to 1990 era [] 0.6 $\mu g/m^3$."

5. Dr. Ghosh

In addition to the objections addressed above, defendants object to two additional exhibits associated with Dr. Ghosh. First, defendants object to an excerpt from Dr. Ghosh's deposition, attached as Exhibit 17 to the Simpich declaration. However, defendants objection is not really directed at Dr. Ghosh's testimony, but at plaintiffs' characterization of that testimony. Accordingly, the Court OVERRULES defendants' objection.

Defendants also object on numerous grounds to Dr. Ghosh's PowerPoint presentation, "An Extremely Hazardous Waste Site: REMCO, Willits, California." The presentation is found at Exhibit 57 to the Simpich declaration, as well as an attachment to Dr. Ghosh's January 2009 declaration, found at Exhibit 62 of the Simpich declaration. The Court SUSTAINS defendants' objections that this document lacks foundation, is an untimely expert disclosure that does not comply with the federal rules, and is unreliable for all of the reasons stated earlier with regard to Dr. Ghosh's opinions about the groundwater plume.

6. Simpich declaration "summaries"

In his declaration, plaintiffs' counsel Mr. Simpich provides a "summary" of plaintiffs' exposures and injures "as recounted in the March 2008 Levin Report." Simpich Decl. ¶ 1B. Mr. Simpich also "summarizes" what he characterizes as "lengthy evidence from a deposition by Thomas Dunbar of the

Regional Water Board that was ignored in the RI Report and the BLRA, although he repeatedly ordered Remco to stop chemical spills and releases in the creek and to report all accidents and Remco repeatedly flouted both orders as recounted at pages 28:5-11 of the Plaintiffs' Opposition to Motion for Summary Judgment." *Id.* ¶ 1C.

The Court SUSTAINS defendants' objections to these "summaries," as well as to Mr. Simpich's argumentative statements. These summaries violate FRE 1006 because the underlying documents are not so "voluminous" that they cannot be conveniently examined in Court. Plaintiffs provide no explanation whatsoever for the need to summarize Dr. Levin's March 2008 report, nor do they explain why they must summarize the Dunbar deposition, as opposed to filing the deposition transcript itself.

CONCLUSION

For the foregoing reasons, the Court hereby GRANTS defendants' motion for summary judgment on all claims, and GRANTS defendants' motion to strike the March 15, 2008 declaration of Dr. Levin. Docket Nos. 1173 & 1174.

IT IS SO ORDERED.

Dated: June 18, 2009

SUSAN ILLSTON
United States District Judge