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**SUPERIOR COURT OF THE STATE OF CALIFORNIA
COUNTY OF KINGS**

CARMELA ZAMORA AVILA AND REYMUNDO
ARCINIEGA HERRERA, on behalf of themselves
and as parents and next friends of BRITNEY
MICHELLE ARCINIEGA, a minor,

Plaintiffs,

v.

CORTEVA INC.; DOW CHEMICAL COMPANY;
CITY OF AVENAL, CALIFORNIA; JOHN A.
KOCHERGEN PROPERTIES, INC. and WESTSIDE
HARVESTING, L.P.

Defendants.

Case No.: 20C-0311

COMPLAINT

Civil Complex Litigation

JURY TRIAL DEMANDED

1 Plaintiffs Carmela Zamora Avila and Reymundo Arciniega Herrera bring the instant civil
2 action for themselves and on behalf of their minor daughter, Britney Michelle Arciniega
3 (“Britney”), to recover damages and other cognizable relief arising out of the severe neurological
4 injuries suffered by Britney, as a result of her *in utero*, infant, and ongoing exposure to the
5 pesticide chlorpyrifos and its more toxic oxygen analog, chlorpyrifos oxon.
6

7 **PARTIES AND JURISDICTION**

8 1. Plaintiff Carmela Zamora Avila (“Carmela”) currently resides at 505 South Corcoran
9 Street, Number 20, Avenal, Kings County, California. Carmela is Britney Michelle Arciniega’s
10 mother. She brings this action as the parent and next friend of Britney Michelle Arciniega
11 (“Britney”), and also on her own behalf, to recover payments made for Britney’s care and for
12 loss of parental consortium.
13

14 2. Plaintiff Reymundo Arciniega Herrera (“Reymundo”) resides at 505 South Corcoran
15 Street, Number 20, Avenal, Kings County, California. Reymundo is Britney’s father. Reymundo
16 and Carmela are husband and wife. Reymundo brings this action as the parent and next friend of
17 Britney, and also on his own behalf, to recover payments made for Britney’s care and for loss of
18 parental consortium.
19

20 3. Defendant Corteva Inc. is a Delaware corporation with its principal place of business
21 in Wilmington, Delaware. Corteva Inc. is the recently re-branded and spun-off successor-in-
22 interest to Dow Agrosiences, LLC. During all relevant times, Dow (operating as Dow
23 AgroSciences and then Corteva) was registered to do business in the State of California and was
24 in fact doing business in the State of California, and more specifically in Kings County,
25 California. During all relevant times, Dow AgroSciences, operating in combination with its
26 former parent company and Co-Defendant, Dow Chemical Company, was the primary registrant
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1 (and essentially the only) manufacturer and seller of chlorpyrifos and chlorpyrifos oxon in the
2 United States. Dow marketed and sold chlorpyrifos and chlorpyrifos oxon for agricultural use
3 under the trade name Lorsban.

4
5 4. Defendant Dow Chemical Company is a Delaware corporation with its principal
6 place of business in Midland, Michigan. Dow Chemical has been through a recent string of
7 mergers (e.g., with DuPont) and then spin-offs (e.g., from DuPont), the legal effect of which is
8 that today's Dow Chemical Company is the successor-in-interest to the Dow Chemical Company
9 of the 2000s.

10
11 5. At relevant times, basically for our purposes the 2000s, Defendant Dow Chemical
12 Company was the parent company of Dow AgroSciences (n/k/a Defendant Corteva Inc.), and
13 effectively controlled Dow AgroSciences. More importantly, while Dow AgroSciences was,
14 during the 2000s, the legal registrant and seller of Lorsban and all other Dow-family chlorpyrifos
15 and chlorpyrifos oxon products in the United States, Dow Chemical was the actual manufacturer
16 of chlorpyrifos and chlorpyrifos oxon. In other words, while Dow AgroSciences was
17 headquartered in Indianapolis, Indiana, during the 2000s, the actual chlorpyrifos production
18 facilities were located in Midland, Michigan, and operated, upon information and belief, by Dow
19 Chemical Company and employees of Dow Chemical Company. In fact, these chlorpyrifos
20 production facilities were, upon information and belief, inextricably integrated into Dow
21 Chemical's Midland production facilities and the production of other chemicals sold for other
22 purposes, at least some of which were marketed and sold directly by Dow Chemical, not Dow
23 AgroSciences. Dow Chemical therefore had its own stake in the continued production and sale
24 of chlorpyrifos and chlorpyrifos oxon, separate and apart from the contribution of its subsidiary,
25 Dow AgroSciences, to parent Dow Chemical's bottom line. These entities—Corteva, Dow
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1 AgroSciences, the Dow Chemical of the 2000s and earlier and the Dow Chemical of today—are
2 collectively referred to as “Dow” unless otherwise noted.

3
4 6. Defendant City of Avenal, California, is a municipal corporation and a political
5 subdivision of the State of California, located in Kings County, California. At all relevant times,
6 the City of Avenal is and has been the owner and operator of a proprietary water treatment plant
7 and water distribution system, including pipes and at least one water tank, and sells that water for
8 human consumption and other purposes to businesses and residents of Avenal, California.

9
10 7. Upon information and belief, Defendant John A. Kochergen Properties, Inc. is a
11 California company with its principal place of business in Fresno County, California. John A.
12 Kochergen Properties, Inc. is the successor-in-interest to Alex A. Kochergen Farms, Inc., as a
13 result of a merger between John A. Kochergen Properties and Alex A. Kochergen Farms. At all
14 times relevant, Alex A. Kochergen Farms was registered to do business as a pesticide applicator
15 in the State of California. According to records maintained by the California Department of
16 Pesticide Regulation (“CPDR”), from May to July of 2006, Alex A. Kochergen Farms applied
17 707 pounds of chlorpyrifos by aerial and ground application to a section of land located north of
18 the City of Avenal’s water intake abutting the California Aqueduct. In 2007, Alex A. Kochergen
19 Farms applied 990 pounds of chlorpyrifos by ground application. In 2008, Alex A. Kochergen
20 Farms, applied 223 pounds of chlorpyrifos by ground application.

21
22 8. Upon information and belief, Defendant Westside Harvesting, L.P. is a California
23 company with its principal place of business in Fresno County, California. At all times relevant,
24 Westside Harvesting was registered to do business as a pesticide applicator in the State of
25 California. According to records maintained by the CPDR, in June of 2006, Westside
26 Harvesting applied 288 pounds of chlorpyrifos by ground application to a section of land located
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1 north of the City of Avenal's water intake abutting the California Aqueduct. Additionally in
2 2006, Westside Harvesting applied 494 pounds of chlorpyrifos by ground application to a section
3 land located beside and south of the City of Avenal's water intake abutting the California
4 Aqueduct. In 2007, West Side Harvesting applied 921 pounds of chlorpyrifos by ground
5 application in both sections. In 2008, Westside Harvesting also applied 921 pounds of
6 chlorpyrifos by ground application in both sections.
7

8 9. Jurisdiction and venue are proper in Kings County, California, because Defendant
9 City of Avenal is located in Kings County, Dow is an out of state corporation that does business
10 in Kings County, Plaintiffs currently reside in Kings County, Westside Harvesting is an in state
11 limited partnership that does business in Kings County, and Britney's exposures to chlorpyrifos
12 and chlorpyrifos oxon described below occurred in Kings County.
13

14 **FACTUAL ALLEGATIONS**

15 10. Britney was born on December 16, 2006.
16

17 11. At an early age, it was clear to Britney's doctors that Britney had developmental
18 problems with deficits in attention, cognition, language skills, fine motor skills, and social skills.
19 When being reviewed for kindergarten readiness, Britney's symptoms were obvious enough to
20 create concern. Five months later, Britney was referred by her kindergarten teacher for special
21 education evaluation because she couldn't learn basic skills or play with children her own age.
22 Therefore, the allegations in the instant Complaint focus on the time period from early 2006,
23 when Britney was conceived, through the first six years of her life. However, Britney's exposure
24 to, and harm from, chlorpyrifos and chlorpyrifos oxon has been ongoing and continuous
25 throughout her life.
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1 12. Britney has subsequently been diagnosed with autism, obesity, and vision problems.
2 She has ongoing difficulties with verbal and nonverbal communication, compulsive behaviors,
3 and attending to her own needs and activities of daily living. It is unlikely that Britney will ever
4 be able to be gainfully employed or able to live independently, and she is reasonably certain to
5 need some assistance and care for the rest of her natural life.
6

7 13. Britney's injuries were proximately caused by her *in utero* exposure to chlorpyrifos
8 and chlorpyrifos oxon beginning around March 2006, when her mother, Carmela, became
9 pregnant with her, and her subsequent exposure to chlorpyrifos and chlorpyrifos oxon as an
10 infant.
11

12 14. These chlorpyrifos and chlorpyrifos oxon exposures came from multiple sources and
13 routes: Britney's mother's picking of grapes and cleaning the grapefruit fields as an agricultural
14 field worker and as a packing house worker during her pregnancy; her consumption as an infant
15 of chlorpyrifos oxon-laden tap water drawn from the California Aqueduct; secondary transfer
16 from her father's work as a grape and pistachio picker in agricultural fields to Britney's mother
17 during her pregnancy; and, on occasion, to Britney as an infant; and, at all times, from
18 chlorpyrifos overspray and spray drift, much of which first converted to chlorpyrifos oxon, that
19 entered the structures where Britney's mother worked and lived during her pregnancy and where
20 Britney lived as an infant. These exposures are described in more detail in the "Exposures"
21 subsection, below.
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23

24 **History of Chlorpyrifos**

25 15. On April 5, 1966, the Dow Chemical Company—the predecessor in interest and
26 former parent of Dow AgroSciences LLC and therefore the predecessor in interest of Corteva—
27 was awarded United States Patent Number 3,244,586 which provided patent protection for
28

1 various formulations of o-pyridyl phosphates and phosphorothioate-based pesticides. One of the
2 patented phosphorothioate formulations (*O,O – diethyl O – 3,5,6 – pyridyl phosphorothioate*)
3 became known as the pesticide “chlorpyrifos.” One of the patented phosphate pesticide
4 formulations (*diethyl 3,5,6-trichloro-2-pyridyl phosphate*) is the oxygen analog of Chlorpyrifos
5 and is known as “chlorpyrifos oxon.”
6

7 16. Chlorpyrifos is approved and registered by the United States Environmental
8 Protection Agency (EPA) for use as a pesticide in a variety of agricultural applications, and was
9 approved for a variety of residential applications until 2000. Chlorpyrifos is identified as the
10 active ingredient on the labels of numerous commercial, brand name, pesticide formulations.
11

12 17. Chlorpyrifos oxon is a much more acutely potent and deadly neurotoxin, belonging
13 to the same family of organophosphate-based pesticides as the chemical warfare agent, Sarin. In
14 the mid 1930s, a German chemist, Gerhard Schrader, developed Sarin as a pesticide to combat
15 insects adversely impacting German agriculture. Because of its extraordinary human
16 neurotoxicity, Sarin was never implemented as an agricultural pesticide in Germany. Like Sarin,
17 chlorpyrifos oxon is an extremely potent human neurotoxin.
18

19 18. Even though chlorpyrifos oxon (hereinafter “oxon”) was included as a pesticide in
20 the chlorpyrifos patent, it has never been registered or presented for registration with and to the
21 EPA as a pesticide due to its extreme neurotoxicity. Chlorpyrifos, although registered as a
22 pesticide, has little or no insecticidal action prior to being converted to the oxon. When
23 Chlorpyrifos is mixed with water (almost always chlorinated treated water or water recycled
24 from agricultural fields that is contaminated with brominated pesticides) and applied to the fields
25 and orchards, it begins to convert to the unregistered, but Dow-patented pesticide, chlorpyrifos
26 oxon.
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1 19. Dow claims that the effectiveness of chlorpyrifos as an insecticide depends on the
2 target insect's biologic ability to convert chlorpyrifos, once ingested, to the oxon. Dow does not
3 disclose that chlorpyrifos is unstable in the environment—particularly in the presence of chlorine
4 or bromine, which catalyze the conversion—and that it quickly begins to convert to oxon when
5 mixed with water according to label directions, nor does Dow disclose that it will also convert in
6 sunlight during and after application, which Dow knew or should have known as far back as the
7 late 1960s or early 1970s. Unlike chlorpyrifos, the oxon is relatively stable in the environment,
8 especially once it gets indoors, so that its toxic effects persist for months. The practical effect of
9 this reality is that an application of chlorpyrifos to the fields and orchards of California's Central
10 Valley is an application of the unregistered neurotoxin, chlorpyrifos oxon.
11

12 20. At all relevant times, and as more particularly stated hereinafter, Dow had actual
13 notice and knowledge of the propensity of its product, chlorpyrifos, to convert to its oxygen
14 analog, oxon, in the agricultural environment. At no time did Dow provide any label warning
15 regarding the dangers of oxon contamination related to the application of chlorpyrifos.
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17

18 **Revelations in the 1990s and Early 2000s**

19 21. In 1995, roughly eleven years before Britney's birth, the United States
20 Environmental Protection Agency ("EPA") fined Dow for failing to report what are known in the
21 industry as "adverse incidents"—incidents where Dow received notice that a person claims or is
22 believed to have been poisoned by chlorpyrifos. Many of the incidents that Dow failed to report
23 involved children who had been poisoned.
24

25 22. Despite Dow's efforts to conceal the harmful effects of chlorpyrifos and chlorpyrifos
26 oxon from consumers, parents, agricultural communities, and the public, by July 2002, regulators
27
28

1 and other researchers doing their own investigations into the hazards of chlorpyrifos had started
2 to uncover some of the truths that Dow sought to conceal.

3 23. Six years before Britney’s conception, on June 8, 2000, the EPA conducted a
4 thorough review of data submitted by Dow and determined that chlorpyrifos is toxic to the
5 developing nervous system and brain of mammals and children and that, therefore, an additional
6 safety factor was required for uses that might expose children to chlorpyrifos. This EPA finding
7 led to chlorpyrifos being withdrawn from the residential pesticide market, where it had been
8 marketed as “Dursban.”
9

10 24. At around the same time in 2000, concerns about minuscule quantities of
11 chlorpyrifos remaining as residues on foods commonly consumed by children nationwide—even
12 *after* washing and processing by packing-house workers like Britney’s mom and other workers
13 in California’s Central Valley—led Dow to stop marketing Lorsban for applications involving
14 tomatoes and apples, crops thought to be associated with consumption by children in the United
15 States.
16
17

18 25. Incredibly, however, despite Dow’s knowledge that fetuses, infants, and young
19 children were at heightened risk of developmental and neurological injuries, Dow continued to
20 market and sell Lorsban for all other crops—even though comparatively much larger exposures
21 necessarily result to the children of agricultural workers and children living in agricultural
22 communities like the City of Avenal and other locations in California’s Central Valley.
23 Chlorpyrifos and chlorpyrifos oxon continues to be sold and sprayed liberally on all other crops
24 almost 20 years later—especially on orchards and other crops growing on trees and bushes, like
25 citrus fruits and pistachios. The calculus used by Dow’s toxicologists, risk assessors, market
26 analysts, and executives to justify this distinction between tomatoes and apples versus all other
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1 crops remains obscure. Interestingly, apples are one of the only crops for which total production
2 in the State of Michigan, where Dow's ultimate decision-makers lived and worked at the time,
3 rivals or exceeds production in the State of California.
4

5 26. Lorsban not only continued to be marketed and sold for extensive use in California's
6 Central Valley during Britney's gestation and infancy. Dow continued to sell Lorsban for use in
7 California's Central Valley until February 2020, and growers can continue to apply it to their
8 fields until the end of the current year, roughly 20 years after Dow's executives and managers
9 plainly knew that chlorpyrifos and chlorpyrifos oxon were too dangerous to risk their own
10 children's exposure to minuscule, trace quantities of chlorpyrifos in apple sauce, ketchup, and
11 pasta sauce.
12

13 27. Two years later after the EPA determined that the developing brains and nervous
14 systems of children were especially vulnerable to chlorpyrifos, researchers working with another
15 important United States agency—the United States Department of Agriculture—published their
16 discovery that water containing chlorine (which is typically added to tap water for disinfecting
17 and sometimes oxidizing purposes) causes chlorpyrifos to transform to chlorpyrifos oxon.¹ The
18 publication of these findings in July 2002, which almost surely were known to Dow beforehand,
19 was well before Britney's conception in early 2006.
20

21 28. These same researchers noted in their July 2002 publication that chlorpyrifos oxon is
22 approximately 1,000 times more toxic than chlorpyrifos itself, and that their findings therefore
23 raised important concerns about the safety of chlorpyrifos products. Despite this publication,
24 which obviously should have raised alarm bells in Dow's product stewardship and toxicology
25 departments—assuming, that is, the doubtful proposition that Dow was not already aware of the
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28 ¹ Wu, J. and Laird, D., "Abiotic transformation of chlorpyrifos to chlorpyrifos oxon in chlorinated water," *Environmental Toxicology and Chemistry*, vol. 22(2): 261–62 (2002).

propensity of chlorpyrifos to transform to chlorpyrifos oxon in mixtures containing chlorinated water and elsewhere—Dow did not sound any alarms, at least not publicly. Chlorpyrifos continued to be marketed—without any additional warnings—for agricultural use in California’s Central Valley, and to fields that abut the California Aqueduct, from which communities like Avenal draw their drinking water.

Britney’s Exposures to Lorsban During Gestation and Infancy

29. In and around early summer 2006, during her pregnancy, Britney’s mother, Carmela worked in agricultural fields picking grapes and cleaning the grapefruit orchards, crops known to have high levels of chlorpyrifos residue in this time frame, with CDPR records showing more than 3,000 pounds applied to those crops that year. Carmela did this work in San Luis Obispo County, California, where, according to CDPR records, in that year alone, there was over 11,000 pounds of chlorpyrifos applied.

30. In and around mid/late summer 2006, during her pregnancy, Britney’s mother, Carmela, worked for several months in a packing house situated Coalinga, California. Given the prevailing practice of washing the produce in highly chlorinated water, the washing of this produce by packing house workers such as Carmela converted large portions of the chlorpyrifos residues on the produce to chlorpyrifos oxon, the analyte that is 1,000 times as toxic as chlorpyrifos itself. The environment of the packing house creates a warehouse storage area of chlorpyrifos and chlorpyrifos oxon due to the normal working processes within.

31. It has been known and knowable from animal studies for many years prior to Britney’s gestational exposure in 2006 that chlorpyrifos and chlorpyrifos oxon enter the blood stream and cross through the umbilical cord blood to the fetuses of mammals, which, depending on the dose and other factors, causes developmental toxicity.

1 32. Extensive testing of cord blood samples by researchers in New York City and
2 elsewhere in the 2000s subsequently confirmed that when pregnant women are exposed to
3 chlorpyrifos through skin contact, the breathing of volatilized and aerosolized chlorpyrifos, and
4 ingestion of dust particles, that chlorpyrifos enters the pregnant mother's blood stream and is
5 passed through cord blood to the developing baby. The same scientists confirmed—in
6 published, peer-reviewed studies from the 2000s—that residential exposures in New York City
7 housing from indoor crack-and-crevice applications of chlorpyrifos result in cord blood levels
8 that cause permanent neurological damage to the developing human fetus, resulting in a
9 significantly and dramatically increased chance of developmental delays and permanent deficits
10 in learning, memory, and cognition to the exposed children.
11

13 33. Unlike the participants in the New York City housing studies from the 2000s,
14 Britney's mother's cord blood was not tested for chlorpyrifos levels at her birth, so a precise,
15 quantitative comparison cannot be made between Britney's fetal exposure and those in the New
16 York City studies. However, drawing on other literature from agricultural workers and by using
17 scientific techniques for estimating and comparing exposures under different scenarios, it is clear
18 that the expected exposure of Britney to chlorpyrifos and chlorpyrifos oxon resulting from her
19 mother's employment and handling of contaminated produce in the field and the packing house
20 during her pregnancy equaled or exceeded the high end exposures of New York City residents.
21 Yet this single exposure scenario was far from Britney's only gestational and infant exposure to
22 chlorpyrifos and chlorpyrifos oxon.
23
24

25 34. A significant source of chlorpyrifos and especially chlorpyrifos oxon was the tap
26 water supplied by Defendant City of Avenal to Britney's family. The City of Avenal draws their
27 tap water straight from the California Aqueduct. Approximately 2,549 pounds of chlorpyrifos
28

1 were applied along the 2 mile stretch of the California Aqueduct surrounding the City of
2 Avenal's water intake in 2006. This chlorpyrifos and chlorpyrifos oxon would migrate into the
3 Aqueduct, especially during periods of peak run-off from storms and other weather events, and
4 then much of it would make its way into the Avenal intake.
5

6 35. Chlorpyrifos that enters any water treatment facility, such as Avenal's in 2006, is
7 unlikely to be effectively removed by the treatment and filtration process. The filters may
8 remove some chlorpyrifos, but certainly not all, even under the best conditions, and Avenal's
9 water system does not and did not operate under anything approximating the best conditions.
10

11 36. Chlorine will eventually break chlorpyrifos down into non-toxic byproducts, but not
12 before first breaking chlorpyrifos down into the much more toxic chlorpyrifos oxon. Chlorine
13 has to be in contact with this chlorpyrifos oxon for many hours to complete this process, which
14 takes a minimum of seven hours, sometimes much longer depending on a variety of factors. The
15 City of Avenal's distribution system is small, and the apartments where Britney and her mother
16 lived are located just over 6 miles from the treatment facility, in the eastern section of Avenal
17 nearest the facility.
18

19 37. Given all of this, it is nearly certain that tap water supplied by Defendant City of
20 Avenal and used by Britney's mother during her pregnancy for bathing, cooking, and drinking
21 contained significant quantities of chlorpyrifos oxon following periods of spraying at fields
22 adjacent to the treatment plant and also following storms and other run-off events impacting the
23 quality of water in the California Aqueduct. This chlorpyrifos oxon entered her bloodstream and
24 umbilical cord blood and thereby entered Britney's blood. Moreover, during the first year
25 Britney's life, Britney was bottle fed with formula mixed with this same chlorpyrifos oxon-
26 contaminated tap water, which she ingested straight into her infant body. During this time and to
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28

1 the present, Britney has bathed, washed her hands, drunk water, and eaten food cooked in tap
2 water.

3 38. One last significant source of chlorpyrifos and chlorpyrifos oxon exposure came
4 from secondary contact with Britney's father, Reymundo, who worked as an agricultural field
5 worker during Britney's mother's pregnancy and all of Britney's life, working in fields sprayed
6 with chemicals as is common practice in the Central Valley agricultural community. Among
7 other chemicals, Reymundo's work exposed him to residues of Lorsban mixed with chlorinated
8 or brominated water, a combination guaranteed to produce a mixture of chlorpyrifos and
9 chlorpyrifos oxon in water, although the label did not mention the chlorpyrifos oxon. Reymundo
10 ordinarily tried to take off his chemical-laden clothes when he returned from work, but
11 sometimes his young family and young children, including Britney, excited to see him, met him
12 at the door and hugged him or asked to be held by him. Sometimes dinner was ready and he was
13 called to eat before changing. This resulted in another significant exposure to chlorpyrifos and
14 chlorpyrifos oxon for Britney during her gestation and infancy.

15 39. As a direct and proximate consequence of the above exposures to chlorpyrifos and
16 chlorpyrifos oxon during gestation and infancy, Britney suffered from the severe neurotoxic
17 effects of chlorpyrifos and its oxon analyte. The neurotoxic effects of these exposures caused
18 autism, development delay, and compulsive behaviors. Each of the above exposures
19 independently contributed to Britney's neurological injuries, and the cumulative effect of all of
20 them combined was devastating to her and her family.

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25 **COUNT I – NEGLIGENCE AS TO THE DOW DEFENDANTS**

26 40. Plaintiffs re-allege and incorporate each paragraph above as if separately set forth
27 herein.
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1 41. Beginning in the 1980s and continuing into the 1990s and 2000s, Dow engaged in a
2 pattern of conduct designed to hide the dangers of chlorpyrifos from its customers and the
3 general public. At best, this conduct could be characterized as the negligent failure to test for
4 certain specific harms or to appreciate and take appropriate measures to protect from those harms
5 associated with chlorpyrifos. At worst, it amounted to selfish, greedy, malicious, and willful
6 manipulation of the scientific data and the public's perception of the harms of Lorsban—that is,
7 chlorpyrifos and chlorpyrifos oxon.
8

9 42. All of these actions and omissions—whether willful, reckless, or merely negligent—
10 were in the service of the false (and certainly untested) safety narrative that Dow promoted for
11 years, which is that the toxicity of chlorpyrifos is mediated solely by cholinesterase inhibition,
12 the first and main toxic effect, and therefore any dose that does not result in acute cholinergic
13 signs and symptoms (such as salivation, lacrimation, sweating, rapid heartrate, etc.) has no
14 adverse impact.
15

16 43. Dow used this untested safety narrative for years as an internal excuse to conceal
17 numerous reports of chlorpyrifos poisoning and adverse effects following applications, on the
18 grounds that it simply could not be verified as a chlorpyrifos-related adverse event if the person
19 allegedly poisoned did not show signs and symptoms of a cholinergic reaction. Notice the
20 perfectly circular and subversive nature of this logic: If a manufacturer does not report incidents
21 involving suspected poisoning in the absence of acute cholinergic signs on the grounds that there
22 were no acute cholinergic signs, no evidence can come to light that poisoning does, in fact, occur
23 in the absence of acute cholinergic signs.
24

25 44. However, Dow's willful concealment of these reports was discovered in the early
26 1990s, and Dow was fined for it by EPA in 1995.
27
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1 45. In response, Dow doubled down on its safety narrative, paying a panel of
2 “independent” researchers to review spoon-fed studies and literature at its behest, and conclude,
3 in 1997: “The available scientific evidence provides no basis for concern that [chlorpyrifos]
4 causes human adverse health effects other than its known cholinergic effects associated with
5 acute poisoning.” Statements like this succinctly captured Dow’s central chlorpyrifos narrative.
6 It was at best untested and supported only by the circular reasoning embodied in Dow’s willful
7 concealment of adverse incident reports that challenged the cholinergic poisoning narrative even
8 in 1997.
9

10 46. In fact, Dow’s safety narrative had already been contradicted by 1997 by recent
11 publications that focused on low-dose, non-cholinergic harm in mammalian development, but it
12 would have fallen apart completely in the years between 1997 but for Dow’s negligent, reckless,
13 and willful manipulation of data and public opinion.
14

15 47. There are a fair number of subparts to Dow’s false chlorpyrifos safety narrative.
16 One is Dow’s denial of any special risk of toxicity to children or developing brains that might
17 happen through any mechanism other than cholinesterase inhibition or in the absence of acute
18 cholinergic signs and symptoms. Another is Dow’s denial of any neurotoxic effects from
19 chronic, low-dose poisoning below the threshold for clinical signs and symptoms of cholinergic
20 poisoning. Yet another critical component of this narrative is Dow’s insistence that chlorpyrifos
21 is only converted to chlorpyrifos oxon inside the host organism, such as the target pest or non-
22 target human bystander, and that this need for biological conversion adds a layer of protection
23 because detoxification of chlorpyrifos oxon occurs at the same sites (e.g., the liver) as the
24 conversion. All of these were fundamentally untested and ultimately false propositions. Dow
25 knew or should have known that all of these propositions needed to be tested well before
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1 Britney's conception in 2006. Instead, Dow delayed testing them until forced to do so by
2 regulatory requirement or regulatory agency pressure, and then concealed and misrepresented
3 findings that were unfavorable to its narrative.
4

5 48. Another reason Dow promoted its favored narrative was to deny any reason or
6 responsibility for conducting careful exposure studies of children or others in various exposure
7 scenarios, whether agricultural or residential, behind the false claim that cholinesterase
8 monitoring and vigilance for signs of cholinergic poisoning were sufficient to determine whether
9 any humans were getting a potentially harmful dose. "Biological monitoring"—the process of
10 testing urine or blood for the presence of a toxicant or a unique metabolite of a toxicant—was
11 available for chlorpyrifos by the late 1980s. The need to carefully assess the exposures and
12 potential exposures of children to chlorpyrifos was known within the risk assessment community
13 in the 1980s and actually flagged by researchers with the California Department of Food and
14 Agriculture's Worker Health and Safety Branch in the 1980s and stated in a 1990 publication of
15 that agency. Yet Dow conducted no biological monitoring of any sort to quantify the exposures
16 of children from various use patterns and exposure scenarios, such as the exposures identified
17 above that resulted in Britney's poisoning.
18
19

20 49. Dow also failed to consider or test the possibility that chlorpyrifos was a
21 developmental neurotoxicant—that is, toxic to the nervous systems of fetuses and infants—for
22 years. The EPA first issued a standardized protocol for developmental neurotoxicity testing in
23 1991, but Dow did not design or begin such a test until an independent researcher first published
24 a study in 1995 suggesting that chlorpyrifos was, indeed, a developmental neurotoxicant and that
25 the mechanism was something other than cholinesterase inhibition. So, in response, Dow
26 undertook its own developmental neurotoxicity study specifically to refute those findings. When
27
28

1 Dow finally disclosed the findings of that study in 1998, Dow misleadingly and falsely dismissed
2 a critical and clearly significant adverse effect on a specific part of the brain of the developing rat
3 pups in its own chlorpyrifos study group, and assured the public and regulators that the study
4 provided no evidence of developmental neurotoxicity.
5

6 50. That 1995 study by independent researchers was also important because it involved
7 chronic low dose exposures to rat pups, rather than a single acute and symptomatic poisoning. In
8 response to this threat to Dow's chlorpyrifos safety narrative, Dow designed and commissioned
9 an expensive study by researchers at the University of Michigan of its own adult worker
10 populations in its chlorpyrifos manufacturing plant in Midland, Michigan. The thought was that
11 workers at Dow's chlorpyrifos plant represented a population of persons exposed to repeated or
12 chronic low level doses of chlorpyrifos. These researchers began their research in the late 1990s
13 and finalized their report for EPA submission in 2002, before Britney's birth, and subsequently
14 published several journal articles from the study.
15
16

17 51. The researchers at the University of Michigan were nominally independent, but,
18 upon information and belief, they were intimately aware of who was funding the research and
19 regularly communicated with their contacts at Dow. Upon information and belief, these
20 researchers found adverse neurological effects during the course of analyzing the data from the
21 study, but did not report or disclose those adverse findings in the final report that Dow submitted
22 to the EPA in 2002. The adverse neurological findings from the study only emerged in the
23 public literature in 2007, in a published journal article from the study, when, many years after the
24 study was completed and a report omitting this analysis and finding was delivered to the EPA,
25 the University of Michigan team published an article attempting to explain the adverse findings
26 away on the basis of a convoluted and twisted post hoc analysis of the data.
27
28

1 52. In 2002, researchers working with the United States Department of Agriculture
2 (“USDA”) published findings that challenged another foundational element of Dow’s
3 chlorpyrifos safety narrative when they reported that chlorinated water catalyzes the
4 transformation of chlorpyrifos to chlorpyrifos oxon, which is 1,000 times as toxic to mammals as
5 chlorpyrifos itself. Dow’s safety narrative depends heavily on the notion that mammals,
6 including humans, are protected from chlorpyrifos toxicity by the need for it to be converted to
7 chlorpyrifos oxon in the body, at sites where that oxon can be rapidly detoxified. Moreover, all
8 or almost all of the laboratory science supporting the registrations of chlorpyrifos and various
9 Lorsban products were conducted using analytical grade chlorpyrifos or formulations of
10 chlorpyrifos that would not be influenced by this chlorine conversion, and therefore were
11 rendered largely irrelevant by the discovery. In other words, as of July 2002, at the latest, Dow
12 knew or should have known that Dow’s toxicity testing conducted on pure chlorpyrifos and pure
13 chlorpyrifos formulations did not meaningfully say anything about the safety of its Lorsban
14 products given that—after diluting with chlorinated (or brominated) water per the instructions on
15 the label—they began converting to a compound that is 1,000 times as toxic.

16 53. In fact, Dow—as the manufacturer, seller, and registrant of chlorpyrifos and many
17 Lorsban products that it instructed users to dilute with water before use—should have
18 investigated and discovered this abiotic conversion in the presence of chlorinated water, which
19 describes almost all tap water, and brominated water, given the similarity between bromine and
20 the ubiquitous nature of brominated pesticides in agricultural settings. In fairness, given what we
21 know about Dow’s sophisticated culture, Dow probably did know about the abiotic conversion of
22 chlorpyrifos to chlorpyrifos oxon well before USDA discovered it for itself.

1 54. Dow's response to the publication of the USDA research was, first, to ignore it, and
2 then to set about challenging the claim that chlorpyrifos oxon was, in fact, 1,000 times as toxic, a
3 proposition that Dow had never invested much in challenging before.
4

5 55. In 2009, Plaintiffs' counsel commissioned an independent expert review of
6 chlorpyrifos studies published by Dow scientists in refereed journals. The experts identified nine
7 "core" experimental studies published by Dow researchers of the effects of chlorpyrifos on
8 mammalian toxicology ranging from 1980 to 2000, with four of the nine published in 2000, a
9 period of intense regulatory scrutiny. The experts also identified approximately ten relevant
10 "secondary" studies by Dow researchers.
11

12 56. That independent expert review concluded that the Dow publications were littered
13 with numerous errors and problems, such as: the use of atypical and inappropriately small
14 sample sizes; analyzing only a subset of the data in a way that increases the likelihood of a false
15 negative finding; inappropriately crude measurement techniques; the use of inappropriate and
16 subjective qualitative measures; a failure to further investigate findings of near-statistical
17 significance; discounting valid findings; and making unsupported claims. All of the problems
18 and errors in Dow's published studies identified by the expert review were biased in the direction
19 of making it less likely that a study would find an adverse effect associated with chlorpyrifos.
20
21

22 57. In other words, Dow contaminated the published information and literature available
23 on chlorpyrifos with bad science, through its negligent, reckless, and willful underreporting and
24 concealment of adverse incidents and its overproduction of studies finding no adverse effects by
25 heavily biased design. This was all done to promote Dow's favored safety narrative on
26 chlorpyrifos and conceal the dangers of chlorpyrifos from the public, so Dow could continue to
27
28

1 sell it and sell it without the kind of warnings that would be required to prevent catastrophic
2 injuries like those suffered by Britney and her family.

3 58. Dow's negligence, recklessness, and willfulness worked to disastrous effect on at
4 least two levels. First, Dow itself failed to take appropriate measures in light of what it knew or
5 should have known were the risks and harms of chlorpyrifos, especially to infants and children,
6 from doses below the level of cholinergic signs and symptoms. Second, by concealing critical
7 information from the public and contaminating the public discussion and literature with false
8 assertions and biased studies, Dow prevented others—such as homeowners, parents, employers,
9 and regulators—from taking steps necessary to protect themselves and their children, employees,
10 employees' children, and citizens from these harms.
11

12 59. Had Dow taken the steps that a reasonably careful manufacturer would have taken,
13 and conducted additional tests, reported the results, and adopted protective measures in response,
14 then a reasonable manufacturer in possession of that knowledge would have removed Lorsban
15 from the market entirely before 2006.
16
17

18 60. At the very least, a reasonable manufacturer would have issued stricter directions for
19 use and warnings in at least the following ways: It would have recommended that applicators
20 mix chlorpyrifos only with purified or distilled water, not with chlorinated tap water or water
21 from agricultural runoff where brominated pesticides are applied; it would have warned
22 specifically of the likelihood that applicators and bystanders would encounter chlorpyrifos oxon
23 directly, a much more toxic substance than the chlorpyrifos listed as an active ingredient on the
24 label; it would have warned of the special risks to children and the risks from chronic low-dose
25 exposures even in the absence of cholinergic signs and symptoms; it would have increased the
26 required distance or "setback" from occupied structures, both residential and business structures
27
28

1 (including packing houses), to prevent the occurrence of overspray and spray drift entering
2 occupied buildings where pregnant women or children are likely to be present; and it would have
3 warned against the use near “aqueducts” and “canals” or any body of water from which potable
4 water is drawn specifically in its label. Instead, Dow’s Lorsban labels warned only of use
5 “adjacent to permanent bodies of water such as rivers, natural ponds, lakes, streams, reservoirs,
6 marshes, estuaries, and commercial fish ponds.” By excluding “canals” and “aqueducts” from
7 the list, Dow created the impression that the only harm at issue was a harm to aquatic life, not to
8 residents of Central Valley towns that consume drinking water sourced from the California
9 Aqueduct.
10

11
12 61. As a result of Dow’s negligence, recklessness, and willfulness, as described in the
13 preceding paragraph, Lorsban was misbranded under federal law and EPA regulations, including
14 7 U.S.C § 136j(a)(1) and 40 C.F.R. §§ 156.10(i)(2)(vi) and 156.10(i)(2)(x), due to its failure to
15 include the necessary instructions for dilution and limitations and restrictions on use noted in the
16 preceding paragraph, which were required to prevent unreasonable adverse effects. Therefore,
17 this right of action is not preempted by federal law. Plaintiffs are not making a claim under
18 federal law but note it only for purposes of avoiding unnecessary arguments and motion practice
19 relating to federal preemption.
20

21
22 62. Dow’s negligence, recklessness, and willfulness were the proximate cause of
23 Britney’s developmental and neurological injuries, including autism, developmental delay, and
24 compulsive behaviors.

25 **COUNT II – STRICT PRODUCTS LIABILITY – FAILURE TO WARN**
26 **AS TO THE DOW DEFENDANTS**

27 63. Plaintiffs re-allege and incorporate each paragraph above as if separately set forth
28 herein.

1 64. Dow, as the manufacturer and seller of Lorsban products in the United States, had a
2 duty under California law to know the expected uses and ensure that its Lorsban products, as
3 manufactured, designed, and labeled, were safe for those reasonably expected uses.
4

5 65. The reasonably expected uses of Lorsban products in the early and mid-2000s
6 included all of the uses described in preceding sections of this Complaint that resulted in
7 Britney's exposure to chlorpyrifos and chlorpyrifos oxon during gestation and infancy and as a
8 toddler. It was reasonably foreseeable and expected that pregnant women and infants such as
9 Britney would be exposed to Lorsban in these ways.
10

11 66. Dow had comparable, if not identical, duties under federal law that prohibits that
12 misbranding of pesticides. *See* 7 U.S.C § 136j(a)(1) and 40 C.F.R. §§ 156.10(i)(2)(vi) and
13 156.10(i)(2)(x). Plaintiffs are not suing under those federal laws or duties, but note them only
14 for purposes of avoiding unnecessary arguments and motion practice related to federal
15 preemption.
16

17 67. By the time Britney was conceived in 2006, Dow knew or should have known that
18 Lorsban, as labeled and sold, was not safe for its reasonably expected uses in California's
19 Central Valley because it lacked warnings and instructions necessary to render it reasonably safe
20 for its reasonably expected uses. Warnings and instructions that were required to make Lorsban
21 safe but were omitted relate to, at least, the following hazards and necessary remedial measures,
22 all of which were known when Britney was conceived:
23

- 24 (i) Chlorpyrifos transforms to chlorpyrifos oxon in the presence of chlorinated or
25 brominated water. Chlorpyrifos oxon is 1,000 times more toxic to mammals than
26 chlorpyrifos. Therefore, Dow should have recommended, at minimum, that
27 applicators mix chlorpyrifos only with purified or distilled water, not with
28

1 chlorinated tap water or water from agricultural runoff where brominated
2 pesticides are applied. Dow should have recommended against the use of
3 Lorsban products adjacent to or near “canals” and “aqueducts”—such as the
4 California Aqueduct, from which small towns in California draw tap water—in
5 addition to other specifically identified bodies of water on the label. Dow also
6 should have warned specifically of the likelihood that applicators and bystanders
7 would encounter chlorpyrifos oxon directly, a much more toxic substance than the
8 chlorpyrifos listed as an active ingredient on the label.

10
11 (ii) Chlorpyrifos and chlorpyrifos oxon were already known to be particularly
12 hazardous to the developing nervous systems of mammals. Therefore, Dow
13 should have warned of the special risks to children and the extra care required
14 around structures where children or pregnant women might be present. For
15 example, Dow should have increased the required distance or “setback” from
16 occupied structures, both residential and business structures (including packing
17 houses), to prevent the occurrence of overspray and spray drift entering occupied
18 buildings where pregnant women or children are likely to be present.

19
20 (iii) Chlorpyrifos and chlorpyrifos oxon were already known to cause neurotoxic
21 effects in the absence of acute cholinergic signs and symptoms, such as from
22 chronic low-dose exposures to children and adults. Therefore, Dow should have
23 warned of the special risks to children and the extra care required around
24 structures where children or pregnant women might be present. For example,
25 Dow should have increased the required distance or “setback” from occupied
26 structures, both residential and business structures (including packing houses), to
27
28

1 prevent the occurrence of overspray and spray drift entering occupied buildings
2 where pregnant women or children are likely to be present. In order to prevent
3 chronic, low dose exposure from drinking, cooking with, and bathing in Lorsban-
4 contaminated tap water, Dow should have recommended against the use of
5 Lorsban products adjacent to or near “canals” and “aqueducts”—such as the
6 California Aqueduct, from which small towns in California draw tap water—in
7 addition to other specifically identified bodies of water on the label.
8

9 68. Had Dow included warnings and instructions such as the ones identified in the
10 preceding paragraph, Britney would have been exposed to significantly less, if any, chlorpyrifos
11 and chlorpyrifos oxon, and would not have suffered her severe neurological injuries. Dow’s
12 inadequate warnings and instructions for use were therefore the proximate cause of Britney’s
13 developmental and neurological injuries, including autism, developmental delay, and compulsive
14 behaviors.
15

16
17 **COUNT III – STRICT PRODUCTS LIABILITY – DESIGN DEFECT**
18 **AS TO THE DOW DEFENDANTS**

19 69. Plaintiffs re-allege and incorporate each paragraph above as if separately set forth
20 herein.

21 70. Dow, as the manufacturer and seller of Lorsban products in the United States, had a
22 duty under California law to know the expected uses and ensure that its Lorsban products, as
23 manufactured, designed, and labeled, were safe for those reasonably expected uses.
24

25 71. The reasonably expected uses of Lorsban products in the early 2000s included all of
26 the uses described in preceding sections of this Complaint that resulted in Britney’s exposure to
27 chlorpyrifos and chlorpyrifos oxon during gestation, infancy, and as a toddler and small child. It
28

1 was reasonably foreseeable and expected that pregnant women and infants such as Britney would
2 be exposed to Lorsban in these ways.

3 72. Federal law permits states to prohibit the sale of any pesticide that is unreasonably
4 dangerous as designed. Therefore, claims for design defect are not preempted by federal law.
5

6 73. Dow's Lorsban products were defectively designed for two reasons: First, they were
7 more dangerous than the ordinary consumer or end user would reasonably expect. Second,
8 Dow's Lorsban products contained active insecticidal ingredients, chlorpyrifos and chlorpyrifos
9 oxon, that rendered the products unreasonably dangerous, and there were safer, alternative
10 insecticidal ingredients available.
11

12 74. Dow's Lorsban products were more dangerous than any reasonable consumer or end
13 user would expect for the following reasons: (1) the active ingredients—chlorpyrifos and
14 chlorpyrifos oxon—were highly toxic to the nervous systems of fetuses and infants;
15 (2) chlorpyrifos and chlorpyrifos oxon caused developmental and chronic neurological deficits
16 from repeated low-dose exposures even in the absence of acute poisoning events; and (3) the
17 active ingredient that Dow disclosed to the public, chlorpyrifos, transformed into its much more
18 toxic metabolite when mixed with chlorinated or brominated water, which the ordinary consumer
19 or end user had no way of knowing. All of these hazards were known or knowable to Dow by
20 2002, but not known to ordinary consumers and end users.
21
22

23 75. In fact, Dow actively and maliciously took steps to conceal these hazards from the
24 public, in all of the ways described in Count I, above. Throughout the 1990s and the 2000s, Dow
25 worked hard to convince the public and ordinary consumers of its favored safety narrative, as
26 summarized by a panel of "independent" researchers paid by Dow in 1997: "The available
27
28

1 scientific evidence provides no basis for concern that [chlorpyrifos] causes human adverse health
2 effects other than its known cholinergic effects associated with acute poisoning.”

3 76. These design defects were the proximate cause of Britney’s developmental and
4 neurological injuries, including autism, developmental delay, and compulsive behaviors.
5

6 **COUNT IV – NEGLIGENCE AS TO CITY OF AVENAL**

7 77. Plaintiffs re-allege and incorporate each paragraph above as if separately set forth
8 herein.

9 78. California imposes a duty on utilities that furnish drinking water for human
10 consumption to “provide water that is wholesome, potable, [and] in no way harmful or dangerous
11 to health.”
12

13 79. The City of Avenal is a municipal corporation and political subdivision that owns
14 and operates the Huron water treatment plant. The operation of the water treatment utility by the
15 City of Avenal is a classic example of a proprietary function, and it is therefore not entitled to
16 any kind of sovereign immunity for harms caused by its operation of the water treatment plant.
17

18 80. The City of Avenal has the same duty as all other water utilities to supply water that
19 is “wholesome, potable, [and] in no way harmful or dangerous to health.”
20

21 81. The City of Avenal breached its duty to supply water that is “wholesome, potable,
22 [and] in no way harmful or dangerous to health” by supplying water to Britney’s mother and
23 family and to Britney that was contaminated with chlorpyrifos oxon and therefore toxic.

24 82. The City of Avenal failed to exercise reasonable care in the following ways:

- 25 (i) By leaving portions of its treatment facility exposed to the air and thereby
26 exposed to drift and over-spray from aerial pesticide applications, including
27 chlorpyrifos applications; and
28

1 (ii) By failing to heed the July 2002 publication of the USDA and take extra
2 precautions against invasion of its water system by chlorpyrifos oxon, such
3 as extending chlorine treatment or pretreatment time to ensure the
4 decomposition of chlorpyrifos oxon to less toxic chemicals, or increasing
5 filtration capacity;
6

7 83. As a result of these acts and omissions, water supplied by the City of Avenal for the
8 purpose of human consumption was contaminated with chlorpyrifos oxon.
9

10 84. The City of Avenal's negligence in the operation of its water treatment plant was a
11 proximate cause of Britney's injuries.

12 **COUNT V – STRICT PRODUCTS LIABILITY – MANUFACTURING DEFECT**
13 **AS TO THE CITY OF HURON AND THE CITY OF AVENAL**

14 85. Plaintiffs re-allege and incorporate each paragraph above as if separately set forth
15 herein.

16 86. The drinking water supplied by the City of Avenal (the "Water Seller") was sold to
17 customers for human consumption. The manufacturing specifications for the drinking water did
18 not include, allow for, or permit any chlorpyrifos or chlorpyrifos oxon.
19

20 87. Nonetheless, chlorpyrifos at times—especially after heavy rains following in the fall,
21 following the typical chlorpyrifos application season of late summer and fall—infiltrated the
22 Water Seller's manufacturing facilities and got caught in the treatment plant, where the chlorine
23 added by the Water Seller converted the chlorpyrifos to chlorpyrifos oxon.
24

25 88. This chlorpyrifos oxon was present, at times, in the water sold by the Water Seller to
26 Britney's family at the point of sale (the meter) and consumption (the taps). The chlorpyrifos
27 oxon present in the water was not intended and rendered the water unreasonably dangerous. The
28

1 water sold by the Water Seller was therefore defective under the law in containing a
2 manufacturing defect.

3 89. The Water Seller is liable for the harm caused by manufacturing defects even if they
4 took reasonable care to prevent such defects (which they did not).
5

6 90. The manufacturing defect in the water sold by the Water Seller was a proximate
7 cause of Britney's injuries.

8 **COUNT VI – NEGLIGENCE AS TO THE APPLICATOR DEFENDANTS**

9 91. Plaintiffs re-allege and incorporate each paragraph above as if separately set forth
10 herein.
11

12 92. Defendant Kochergen Properties "Applicator ID 1080390" and Defendant Westside
13 Harvesting "Applicator ID 1600124," are collectively referred to herein as the "Applicator
14 Defendants."
15

16 93. Upon information and belief, each of the Applicator Defendants negligently applied
17 chlorpyrifos by aerial application in one or more of the following ways:

18 (1) By flying at too high of a height (greater than 10 feet) above the target plants,
19 thus resulting in more significant spray drift and overspray;

20 (2) By using a combination of nozzles, pressure, airspeed, and nozzle angle that
21 resulted in fine droplets, thus resulting in more significant spray drift and
22 overspray;
23

24 (3) By applying with the aircraft traveling downwind and in conditions with
25 excessive windspeeds, and failing to adjust properly for the wind and
26 windspeeds;
27
28

1 (4) By failing to control droplet size and spraying smaller droplets, thus resulting in
2 more significant spray drift and overspray; and

3 (5) By failing to observe proper setbacks for bodies of water or sensitive sites.
4

5 94. The negligent acts of Defendant Applicators in, among other things referred to
6 above, failing to control droplet size, observe proper spray heights and setbacks for bodies of
7 water, and adjust properly for windspeeds, resulted in excessive spray drift in and around the
8 California Aqueduct source water for the Avenal water systems. Chlorpyrifos entered Avenal
9 source water, was transformed to chlorpyrifos oxon, and was thereby consumed by Britney
10 and/or her mother.
11

12 95. The negligence of each of the Applicator Defendants was therefore a proximate
13 cause of Britney's exposure to chlorpyrifos and chlorpyrifos oxon and therefore her serious
14 neurological injuries.
15

16 **PRAYER FOR RELIEF AND DEMAND FOR JURY TRIAL**

17 96. Wherefore, Plaintiffs respectfully pray for the following:

18 (1) General compensatory damages for the pain and suffering of Britney Michelle
19 Arciniega resulting from her injuries due to chlorpyrifos and chlorpyrifos oxon
20 exposure;
21

22 (2) Special compensatory damages for the loss in earning capacity suffered by
23 Britney Michelle Arciniega resulting from her injuries due to chlorpyrifos and
24 chlorpyrifos oxon exposure;


25 (3) Special compensatory damages for the past and future medical expenses and
26 special needs and care for Britney Michelle Arciniega resulting from her injuries
27 due to chlorpyrifos and chlorpyrifos oxon exposure;
28

- 1 (4) Compensatory damages for loss of consortium, mental anguish, and sorrow
2 suffered by Britney Michelle Arciniega's parents;
3 (5) Punitive damages for the willful, reckless, and recklessly indifferent conduct of
4 the Defendants, in an amount sufficient to deter such future conduct;
5 (6) Pre-judgment and post-judgment interest; and
6 (7) Such other relief as this Court may deem appropriate.
7

8 97. Plaintiffs demand a jury trial as to all issues.

9 DATED this 27th day of October 2020.
10

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