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UNITED STATES DISTRICT COURT FOR THE

NORTHERN DISTRICT OF CALIFORNIA

SCOTT KOLLER, TIM FERGUSON, RUBY CORNEJO and JOHN LYSEK, individually, and on behalf of the general public and those similarly situated,

Plaintiffs,

v.

MONSANTO COMPANY; BAYER CROPSCIENCE LP; THE SCOTTS COMPANY LLC; and SEAMLESS CONTROL LLC.,

Defendants.

CASE NO. 3:22-cv-04260-MMC

FIRST AMENDED CLASS ACTION COMPLAINT FOR VIOLATIONS OF THE MAGNUSON-MOSS WARRANTY ACT; VIOLATIONS OF THE SONG-BEVERLY CONSUMER WARRANTY ACT; BREACH OF EXPRESS AND IMPLIED WARRANTIES; VIOLATIONS OF CALIFORNIA CONSUMERS LEGAL REMEDIES ACT; FALSE ADVERTISING; FRAUDULENT CONCEALMENT; FRAUD, DECEIT, AND/OR MISREPRESENTATION; UNFAIR BUSINESS PRACTICES; AND UNJUST ENRICHMENT

JURY TRIAL DEMANDED

INTRODUCTION

1. Scott Koller, Tim Ferguson, Ruby Cornejo, and John Lysek (collectively, "Plaintiffs") bring this Class Action Complaint against Defendants Monsanto Company ("Monsanto"), Bayer CropScience LP ("Bayer CropScience"), The Scotts Company LLC ("Scotts"), and Seamless Control LLC ("Seamless Control") (collectively "Defendants"), on behalf of themselves and those similarly situated, for violations of Magnuson-Moss Warranty Act, violations of the Song-Beverly Consumer Warranty Act, breach of express and implied warranties, fraud, false advertising, unfair business practices, violations of the Consumers Legal Remedies Act of California, and unjust enrichment. The following allegations are based upon information and belief, including the investigation of Plaintiffs' counsel, unless stated otherwise.

2. Defendants Monsanto, Bayer CropScience, and Seamless Control manufacture, sell, market and distribute, through third-parties, glyphosate-based herbicides which are designed to kill weeds and primarily sold under the brand name "Roundup." Scotts formulates, distributes, offers for sale, and markets various forms of Roundup.

3. Roundup consists of a family of various products, most of which are glyphosate-based herbicides, with different formulations and different amounts of glyphosate. Some versions have around 2% glyphosate. But Monsanto and Bayer CropScience also manufacture super concentrated formulations with significantly higher amounts of glyphosate ranging from 41% to as much as 73.3% of glyphosate. This case relates to the concentrated forms of Roundup that consist of more than 40% glyphosate in sizes at or below 6.8 lbs (the "Products"[1]).

4. The amount of glyphosate in a pesticide matters.[2] N-Nitrosoglyphosate ("NNG") is an impurity inherent to glyphosate. As a result, increasing glyphosate increases the NNG impurity as well. Impurities are "not intentional additives of the pesticide product"; rather, they are "chemical compounds formed, during synthesis of the active ingredient, or during formulation or storage." 45 Fed. Reg. 42855.

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[1] This includes all herbicides with over 40% of glyphosate, regardless of whether they are sold under the Roundup brand name. The Products include, but are not limited to, the Products listed on Exhibit 1.

[2] An herbicide is a type of pesticide under 7 U.S.C. § 136(u)(2).

5. NNG belongs to a class of chemicals called nitrosamines. Nitrosamines are so dangerous that The Environmental Protection Agency ("EPA") ***presumes*** them to be carcinogenic when they occur at certain levels. EPA based its approach on testing that found that 80% of the nitrosamines tested are carcinogenic. *See* 45 Fed. Reg. 42855.

6. Due to acute safety concerns with nitrosamines, EPA sets a hard limit of 1 part per million ("ppm") of NNG in pesticides, including glyphosate products. *Id.*

7. The amount of NNG in a glyphosate product, however, does not remain static. It grows over time.

8. Glyphosate, by its nature, is an unstable chemical in the presence of nitrites. Any time glyphosate reacts with nitrites, which are prevalent in everyday environments such as city air, exhaust from cars, and water, glyphosate degrades into NNG. As Monsanto's own former registration manager for glyphosate put it, the degradation reaction is "fast and complete" and occurs "early." *See* Deposition of Stephen Wratten in *Evans v. Monsanto Co.*, No. 1722-CC01372-01, Cir. Ct. of Cty. of St. Louis Cty., Sept. 17, 2021 ("Wratten Tr."), 135:14-18. And, the degradation of glyphosate into NNG occurs regardless of whether the glyphosate is pure or mixed into a formulated end product.

9. Increasing the concentration of glyphosate within a product necessarily increases the concentration of NNG formed in the product when it degrades to NNG. Thus, when a product has 73.3% glyphosate, as opposed to 2% glyphosate, the concentrated product will have far more NNG. The Products, thus, have inherently elevated levels of NNG at manufacture when compared to glyphosate-based herbicides with only 2% glyphosate.

10. At least as early as 1997, Monsanto had evidence of serious problems with controlling NNG during manufacture. Monsanto's internal testing revealed levels as high as ***8 ppm*** in a glyphosate-based product that was stored in warehouse-like conditions for just 18 months. Later on, in the early 2000s, Monsanto discovered high levels of NNG in whole bags of glyphosate. It hypothesized that the elevated NNG was due to the exhaust from the propane-powered forklifts that were driven near its products. Yet, Monsanto never reported either incident to EPA.

11. Monsanto knew that glyphosate's reactivity with nitrites meant that NNG would continue to form in the Products post-manufacture. Most importantly, Monsanto knew that, no matter what efforts it took to control the level of NNG in the Products at manufacture—e.g., testing the water that goes into the Products—it could not control NNG levels once the Products left the factory. Monsanto knew that simply opening a Product can cause NNG to form if nitrites are in the air. This occurs anywhere exhaust is present, as in consumers' garages, in the presence of smog or near mowers, weed whackers, and other common lawn care equipment. ***Even adding water***—which is necessary to use the Products since they are concentrated formulations—causes NNG to form when nitrites are present in water (which they frequently are). Other factors common to consumer use and storage of the Products increase NNG. Heat is one example. Long storage periods also exacerbate glyphosate degradation and NNG production, often rapidly.

12. In 2004, Monsanto witnessed first-hand just how high NNG can get in its glyphosate-based products. After discovering NNG levels of over 1 ppm in almost all of the productions lots for one of its Products, QuikPRO, Monsanto conducted a study to understand NNG formation. The study confirmed that NNG formation cannot be controlled in the presence of nitrites and that the chemical Monsanto uses to try to control NNG, sodium sulfite, is ineffective at keeping NNG below 1 ppm. It also revealed that surfactants, which are found in the Products, can increase NNG formation upon exposure to nitrites. Not only did the study show that the Products could develop levels of NNG in excess of EPA's regulatory limit, it revealed that ***NNG can exceed an eye-popping 80 ppm*****,** more than 80 times EPA's regulatory limit in a ***matter of minutes***.

13. Registration of a pesticide is a license to sell the particular chemical that EPA approves. All pesticides sold and distributed in California must be registered with EPA and California. The EPA ensures that the Products that consumers actually use are chemically identical to their registrations by (1) banning the sale and distribution of unregistered pesticides (i.e., chemical compositions that are not approved), and (2) defining the pesticide that is permitted to be sold and distributed through a registration by setting limits on active ingredients, inert ingredients and certain impurities. *See* 7 U.S.C. § 136a(a); 7 U.S.C. § 136j(a)(1)(A); 40

C.F.R. § 156.350; Cal. Food & Agric. Code §§ 12811, 12993. EPA regulations make the certified limits "legally binding" "from the date of production to date of use" unless the label bears a prohibition against use after a certain date. 40 C.F.R. § 156.350. The certified limits function as a guarantee that the Product will stay within its certified limits through the entire time a consumer uses the Product. A pesticide is registered and legal to sell ***only if*** it is guaranteed to stay within its certified limits for the Product's ***entire life cycle*** in the absence of "a statement prohibiting use after a certain date" (i.e., an expiration date). 40 C.F.R. § 156.350. (emphasis supplied.)

14. The EPA and Monsanto agreed to set a 1 ppm certified limit for NNG for all the Products, and none of the Products have ever contained a statement prohibiting use after a certain date. In order to legally sell or distribute any of the Products, the Products must guarantee that they can never exceed 1 ppm limit for NNG for the entire duration of the life cycle of the Product. 40 C.F.R. § 156.350. The Products, however, suffer from a design flaw: they are incapable of preventing NNG from forming above 1 ppm. Indeed, no ingredient or other chemical within any Products can fully stop glyphosate from degrading into NNG, or prevent NNG from exceeding 1 ppm. Because glyphosate readily degrades into NNG in the presence of nitrites through common use, it is substantially certain that the Products will exceed 1 ppm before they are fully used. The Products, accordingly, were always unregistered and were illegal to sell and distribute in violation of Federal Insecticide, Fungicide, and Rodenticide Act ("FIFRA") and the California Food & Agriculture Code.

15. Moreover, the EPA has a regulatory process for dealing with pesticides that change over time: the expiration date. If a pesticide cannot stay within the bounds of its certified limits for the entire duration of its life cycle, the EPA allows the sale and distribution of such products if there is an expiration date on the label. In such instances, when a manufacturer states that use of the product is prohibited after a certain date on the product's label, the certified limit will apply only through that date. *See* 40 C.F.R. § 158.350. If there is no such date, then the regulatory limits apply until the consumer finishes using the product, whenever that may occur. *Id.* Because Monsanto, Bayer CropScience, Scotts and Seamless Control never put an expiration

date on the Products' labels, the EPA regulatory limit of 1 ppm of NNG has always applied from the time of production until the consumer uses all of the Product, even if that is months or decades after purchase. The failure to include an expiration date on the label renders the Products misbranded since they can exceed the 1 ppm limit for NNG before they are fully used.

16. Despite knowing all of the above, for decades, Monsanto has intentionally refused to conduct tests on real world Products to find out how much NNG is actually in the Products that consumers use. Dr. Stephen Wratten, Monsanto's registration manager for glyphosate (i.e., the person in charge of interfacing with EPA about the Products), put this bluntly in a 2003 email: "There is a lingering concern about aged samples of dry products…I would avoid sampling long-aged dry product from retail." Wratten Tr. at 136:6-11. When asked point blank why he would "avoid" testing real world products, he stated: "because you might find differences from when it was manufactured." *Id*. at 138:2-3. With respect to NNG, he conceded "you might find more than you started with." *Id*. at 138:6-7. And then acknowledged testing "***might result in you having to recall a bunch of product***." *Id*. at 138:18-139:2 (emphasis supplied). When asked directly if Monsanto would have to recall product that had more than 1 ppm of NNG, he said "***yes***." *Id*. (emphasis supplied.)

17. Monsanto has not acted alone in concealing the safety hazards associated with the Products. In 2018, Bayer Aktiengesellschaft ("Bayer AG") acquired Monsanto and subsequently appointed Bayer CropScience as the EPA registrant for the Products. Further, since around 1998, Scotts served as Monsanto's, and later Bayer CropScience's, exclusive distributor and marketer for at least one Product, the Roundup Weed & Grass Killer Super Concentrate, and, at least as of 2019, the Roundup PRO as well. From 2018 through at least 2019, Monsanto and Bayer CropScience sold some Products through a distributor, Seamless Control, which independently registered the Products with EPA. Scotts and Monsanto jointly owned Seamless Control until Seamless Control merged into Monsanto on July 1, 2022, notably, about two months after both companies received a letter from Plaintiffs notifying them of the problems associated with NNG.

18. Monsanto, Bayer CropScience, Scotts, and Seamless Control sold the Products or caused the Products to be sold to consumers, even though they knew or should have known at the

time of those sales that the Products were defective because the Products could never guarantee they would stay below the 1 ppm safety limit for NNG through the time a consumer uses the entirety of the Product. This is true even if the Product was used, and stored, in accordance with the labels. The fact that the Products cannot ensure compliance with the regulatory limit for NNG presents a serious safety hazard for consumers that makes them unfit for use since NNG is a probable carcinogen. The regulatory limit for NNG is designed to keep consumer exposure to NNG, which occurs when consumers mix or spray the Product, to a minimal level. By making the 1 ppm limit "legally binding" through full use, EPA recognizes that impurities like NNG are invisible to consumers so they have no way of knowing when or if the Product surpasses the safety limit. If a Product cannot guarantee that it will remain within EPA's risk tolerance for carcinogenic exposure (i.e., below 1 ppm for NNG) and does not warn consumers about the risk, ***it is never safe to use the Product***. This is especially the case, here, where none of the Products included an expiration date on the label prohibiting use after a certain time frame, which would have informed consumers when the Product can no longer ensure it is within EPA's safety limits. As a result, Monsanto, Bayer CropScience, Scotts and Seamless Control breached the Products' express and implied warranties and/or deceptively failed to disclose the defect with the Products.

19. By marketing, distributing, and selling the Products under the names of registered pesticides like "Roundup QuikPRO Herbicide" and "Roundup Weed & Grass Killer Super Concentrate," all Defendants misled consumers into believing they were actually buying products that are chemically identical to those like the "Roundup QuikPRO Herbicide" and "Roundup Weed & Grass Killer Super Concentrate" registered with EPA. Consumers reasonably expect when they see a Product bearing a label that purports to contain an EPA-approved pesticide that they are buying a Product that meets EPA's standard of quality and baseline safety standards. Consumers also reasonably expect that they are buying the pesticide (i.e., the formulation) the Product purports to contain. However, as explained above, the Products sold to consumers did not contain the advertised pesticides. The Products actually registered with EPA were supposed to come with a guarantee that they would stay below the regulatory limit for NNG for their ***entire*** life cycle. The Products actually sold and distributed to consumers, however, have no way to

guarantee they can abide by this limit through the time the consumer uses the entirety of the Product. The Products, thus, misrepresented EPA's approval or certification of them; misrepresented that they are of a particular standard, quality and grade that meets EPA standards when they are not; were advertised as containing pesticides that were fundamentally different from the Products actually sold to consumers; were misbranded, "imitations" of registered pesticides they purported to be, and, thus, illegal to sell or distribute.

20. All Defendants further unlawfully, unfairly and/or deceptively manufactured, marketed and sold, or caused to be manufactured, marketed and sold, the Products and engaged in illegitimate business or dishonest dealings by selling and distributing the Products without including a "Not for sale or use after [date]" and/or statement prohibiting use after a certain date. EPA requires "the product label [to] bear[] a statement prohibiting use after a certain date" when a pesticide product cannot guarantee that it will stay within its certified limits "from the date of production to date of use" pursuant to § 158.350. Similarly, when "a pesticide formulation changes chemical composition significantly," such as here, the product "must bear the following statement in a prominent position on the label: 'Not for sale or use after [date].'" 40 C.F.R. § 156.10(g)(6). As explained above, the Products cannot guarantee that they will stay under the limit for NNG through the "date of use" since ordinary use causes glyphosate to degrade into NNG at levels above regulatory limits. The change in chemical composition is significant since the defect allows NNG, an impurity of toxicological significance, to form at levels above EPA's safety limits. Even though all Defendants knew this, none of the Products included "Not for sale or use after [date]" or statement prohibiting use after a certain date on the label.

21. Consumers reasonably expect, in the absence of a prominent expiration date, that the Products will remain suitable for use indefinitely. It can take consumers years to go through a single unit, because the Products are highly concentrated and predominantly sold in bulk sizes (i.e., a gallon to 6.8 lbs). But the Products cannot guarantee that they will stay below 1 ppm NNG, a probable carcinogen, even with use consistent with the labels. Had an expiration date been on the Products, as was required under the law, it would have revealed that the Products expire. That information was material to reasonable consumers. Accordingly, the failure to include an

expiration date makes the sale, distribution, and marketing of the Products unlawful, unfair and/or misleading

PARTIES

22. Plaintiff Scott Koller is, and was at all relevant times, an individual and resident of and is domiciled in Brentwood, California.

23. Plaintiff Tim Ferguson is, and was at all relevant times, an individual and resident of and is domiciled in Manteca, California.

24. Ruby Cornejo is, and was at all relevant times, an individual and resident of and is domiciled in Galt, California.

25. Plaintiff John Lysek is, and was at all relevant times, an individual and resident of and is domiciled in Redding, California.

26. Defendant Monsanto Company ("Monsanto"), is a Delaware corporation with its principal place of business in St. Louis, Missouri. Monsanto is registered to do business in California. Monsanto is engaged in the design, development, manufacture, testing, packaging, promoting, marketing, advertising, distribution, labeling, and sale of the Products either directly or through its agents. Upon information and belief, Monsanto has sold or caused the sale of millions of Products within the state of California. Bayer AG acquired Monsanto in June 2018. Monsanto is an indirect, wholly-owned subsidiary of Bayer AG.

27. Defendant Bayer CropScience LP ("Bayer CropScience") is a Delaware limited partnership with its principal place of business in Research Triangle Park, North Carolina. It is an indirect subsidiary of Bayer AG. Bayer CropScience is registered to do business in California. Upon information and belief, Bayer CropScience has sold or caused the sale of some or all of the Products within the state of California. Bayer CropScience's general partner is Athenix Corporation, which is a North Carolina corporation with its principal place of business located in St. Louis, Missouri. Bayer CropScience's limited partners are:

- Monsanto
- Bayer CropScience Inc., a New York corporation with its principal place of business located in St. Louis, Missouri.

- Bayer CropScience Holding, Inc., a Delaware corporation with its principal place of business located in St. Louis, Missouri.
- Bayer Seeds B.V., a private company with limited liability incorporated under the laws of the Netherlands with its principal place of business located in Mijdrecht, Netherlands.
- Hornbeck Seed Company, Inc., an Arkansas corporation with its principal place of business located in St. Louis, Missouri.
- AgraQuest, Inc., a Delaware corporation with its principal place of business located in St. Louis, Missouri.
- Bayer CropScience LLC, a Delaware limited liability company with its principal place of business located in St. Louis, Missouri whose sole member is BCS US Holding LLC. BCS US Holding LLC is a Delaware limited liability company with its principal place of business located in Research Triangle Park, North Carolina whose sole member is KWA Investment IV LLC. KWA Investment IV LLC is a Delaware limited liability company with its principal place of business located in Wilmington, Delaware. Its sole member is KWA Investment III LLC.

28. KWA Investment III LLC is a Delaware limited liability company with its principal place of business located in Wilmington, Delaware, whose members are Bayer New TH M1763 LLC, Bayer New MY M1455 LLC, Bayer New NL M3644 LLC, Bayer New CZ M3204 LLC, Bayer New CH M3868 LLC, Bayer New CA M5015 LLC, Bayer New MX M3640 LLC, Bayer New ZA M3743 LLC, Bayer New UA M3702 LLC, Bayer New BE M3155 LLC, Bayer New AU M1059 USD LLC, Bayer New TK M3970 LLC, Bayer New HU M3440 LLC, Bayer New RO M3695 LLC, Bayer New DE M3385 LLC, Bayer New MA M3130 LLC, Bayer New RU M3708 LLC, Bayer New PL M3655 LLC; Bayer Corporation; and Bayer US Holding LP.

29. Bayer New TH M1763 LLC is a Delaware limited liability company with its principal place of business located in St. Louis, Missouri. Its sole member is Seminis Vegetable Seeds, Inc., a California corporation whose principal place of business is located in St. Louis, Missouri.

30. Bayer New MY M1455 LLC, Bayer New NL M3644 LLC, and Bayer New CZ

M3204 LLC are Delaware limited liability companies whose sole member is Monsanto.

31. Bayer New CH M3868 LLC, Bayer New CA M5015 LLC, Bayer New MX M3640 LLC, Bayer New ZA M3743 LLC, Bayer New UA M3702 LLC, Bayer New BE M3155 LLC, Bayer New AU M1059 USD LLC, Bayer New TK M3970 LLC, Bayer New HU M3440 LLC, Bayer New RO M3695 LLC, Bayer New DE M3385 LLC, Bayer New MA M3130 LLC, Bayer New RU M3708 LLC, Bayer New PL M3655 LLC are all Delaware limited liability companies with their principal places of business located in St. Louis, Missouri and are indirect subsidiaries of Olympia Corporation, a Delaware corporation whose principal place of business is in St. Louis, Missouri.

32. Bayer Corporation is an Indiana corporation with its principal place of business located in Pittsburgh, Pennsylvania.

33. Bayer U.S. Holding LP is a Delaware limited partnership with its principal place of business located in Wilmington, Delaware. Its sole general partner is Bayer World Investments B.V., a Netherlands limited liability company with its principal place of business located in the Netherlands and its sole limited partner is Bayer Solution B.V., a Netherlands limited liability company with its principal place of business located in the Netherlands. Bayer Solution B.V. is a wholly-owned by Bayer World Investments B.V.

34. Bayer CropScience is listed as a registrant for numerous pesticides with the California Department of Pesticide Regulation.

35. Defendant The Scotts Company LLC ("Scotts") is a Delaware limited liability company with its principal place of business in Marysville, Ohio. Scotts is registered to do business in California. Based on filings with the California Secretary of State, Scotts' member is The Scotts Miracle-Gro Company which is an Ohio corporation with its principal place of business in Marysville, Ohio. Since around 1998, Scotts has been Monsanto's exclusive distributor for certain Monsanto products, including the Weed & Grass Killer Super Concentrate and, at least as of 2019, the Roundup PRO as well. It also has performed formulation work for Monsanto. It also unlawfully sold and distributed unregistered, illegal and misbranded pesticides both directly and through Seamless Control, as discussed below.

36. Defendant Seamless Control LLC ("Seamless Control") is a Delaware limited liability company. Based on its filings with the California Secretary of State, its principal place of business is in St. Louis, Missouri, and its managing member is Anthony Leisure, who is an individual who resides in St. Louis, Missouri. Its other members are Thierry Chenet and Gilles Galliou who both reside in St. Louis Missouri. Defendants now maintain that Seamless Control merged into Monsanto in July 2022. But the Ohio Secretary of State continues to identify Seamless Control as an active limited liability company.[3] To the extent Defendants are to be believed, Seamless Control would be owned entirely by Monsanto.

THE PARTIES' ROLES

A. MONSANTO

37. Monsanto initially registered each of the Products with EPA. Monsanto also registered the Products in California. Each Product's EPA and California registration numbers, the dates of registration, current EPA registrant, and size, if known, are identified in Exhibit 1. From time of their initial registrations, Monsanto designed and manufactured all of the Products and caused them to be distributed, marketed, and sold to consumers at brick and mortar and online retailers throughout the United States, including in California. Monsanto made express and implied warranties directly to consumers that are on the labels on the Products, which are attached hereto as follows:

[3] A copy of the webpage from the Ohio Secretary of State is attached as Exhibit 26.

Ex. No.[4]	Product
2	Roundup Weed & Grass Killer Super Concentrate
3	Roundup PRO Concentrate Herbicide
4	Roundup QuikPRO Herbicide
5	Roundup PROMAX Herbicide
6	Roundup Custom for Aquatic & Terrestrial Use
7	Ranger Pro Herbicide
8	Roundup PRO Herbicide
9	Roundup EasyMix Dry Concentrate Weed & Grass Killer
10	Roundup Quik Stik
11	Roundup ProDry Herbicide

38. All of the Products except the Roundup Weed & Grass Killer Super Concentrate, expressly warrant they "conform[] to the chemical description on the label."

39. Most of the Products expressly warrant that they are "reasonably fit for the purposes set forth in the Complete Directions for Use label booklet ("Directions") when used in accordance with those Directions under the conditions described therein." The Products that make this warranty include, but are not limited to:

- Roundup PRO Concentrate Herbicide
- Roundup QuikPRO Herbicide
- Roundup PROMAX Herbicide
- Roundup Custom for Aquatic & Terrestrial Use
- Ranger Pro Herbicide
- Roundup PRO Herbicide

[4] These exhibits are attached to the Complaint filed in this case on July 22, 2022 (ECF No. 1). Plaintiffs incorporate them herein by reference.

- Roundup ProDry Herbicide

40. Monsanto expressly warranted that each of the Products contain registered pesticides by representing such on labels. For instance, the Roundup Weed & Grass Killer Super Concentrate provides that it contains "Roundup Weed & Grass Killer Super Concentrate." The label further states "This product is identified as **Roundup® Weed & Grass Killer Super Concentrate, EPA Reg. No. 71995-25**." All of the Products uniformly made the same type of representation on the label that identifies the chemical name and EPA registration number.

41. Moreover, all of the Products come with implied warranties under California law that: "(a) [t]hat the pesticide corresponds to all claims and descriptions that the registrant has made in respect to it in print; (b) [t]hat the pesticide is reasonably fit for use for any purpose for which it is intended according to any printed statement of the registrant." Cal. Food & Ag. Code § 12854.

42. Monsanto breached the Products' express and implied warranties, as explained below.

43. Monsanto unlawfully sold and distributed, through third parties, misbranded pesticides throughout the United States, including in California, as explained below.

44. Monsanto unlawfully sold and distributed, through third parties, unregistered pesticides and/or pesticides that differed in chemical composition from what was permitted under their registrations throughout the United States, including in California, as explained below.

45. Monsanto unfairly sold and distributed in the United States and California, through third parties, pesticides that can exceed the 1 ppm limit for NNG over the course of their life cycle, even when used in accordance with the directions on the label. Monsanto's conduct offends EPA's policy against the sale and distribution of herbicides that can form over 1 ppm nitrosamines absent proof that the nitrosamine is not carcinogenic as well as the federal and California statutes prohibiting the sale and distribution of pesticides that cannot ensure compliance with the limits set forth in their registrations and the requirement that only pesticides that do not pose "unreasonable adverse effects" may be registered and legally sold in the United States, as explained below.

46. Monsanto's labelling of the Products misled reasonable consumers, as explained below.

47. Monsanto fraudulently and deceptively represented the Products as chemically identical to registered pesticides when they were not. Monsanto further fraudulently concealed the Products' defect, the fact that the Products do not contain the registered pesticides they purport to contain, and the Products' expiration date.

B. BAYERCROPSCIENCE

48. Bayer AG acquired Monsanto in 2018. After the acquisition, Bayer CropScience, with Monsanto's assistance, continued to manufacture, sell and distribute, through third parties, Products with the labels identified in the following table:

Ex. No.[5]	Product
12	Roundup PRO Concentrate Herbicide
13	Roundup QuikPRO Herbicide
14	Roundup PROMAX Herbicide
15	Roundup Custom for Aquatic & Terrestrial Use
16	Ranger Pro Herbicide

49. After Bayer AG's acquisition of Monsanto in 2018, Bayer CropScience became the registrant with EPA for the following Products:

[5] These exhibits are attached to the Complaint filed in this case on July 22, 2022 (ECF No. 1). Plaintiffs incorporate them herein by reference.

Roundup PRO Concentrate Herbicide
Roundup QuikPRO Herbicide
Roundup PROMAX Herbicide
Roundup Custom for Aquatic & Terrestrial Use
Ranger Pro Herbicide
Roundup PRO Herbicide
Roundup ProDry Herbicide

50. Upon information and belief, Bayer CropScience currently manufactures the Roundup PRO Concentrate Herbicide, Roundup QuikPRO Herbicide, Roundup PROMAX Herbicide, Roundup Custom for Aquatic & Terrestrial Use, and Ranger Pro Herbicide and causes them to be distributed, marketed, and sold to consumers at brick and mortar and online retailers throughout the United States, including in California. Bayer CropScience also currently markets and creates advertisements for Roundup PROMAX Herbicide, Roundup QuikPRO Herbicide, Roundup Custom for Aquatic & Terrestrial Use, and Roundup PRO Concentrate Herbicide. Monsanto, however, remains the manufacturer for the other Products that are still on the market and sells and distributes those Products, through third parties, to consumers nationwide, including in California. The Monsanto labels identified above for those Products also remain on those particular Products. Further, Monsanto is and has been, at all relevant times, listed as the registrant for the Products with California's Department of Pesticide Regulation.

51. At least since 2020, and possibly earlier, Bayer CropScience made express and implied warranties on the labels for Roundup PRO Concentrate Herbicide, Roundup QuikPRO Herbicide, Roundup PROMAX Herbicide, Roundup Custom for Aquatic & Terrestrial Use, and Ranger Pro Herbicide to consumers nationwide and in California, and, as alleged herein, Bayer CropScience breached those warranties. Copies of the relevant labels with the warranty language from Bayer CropScience are in Exs. 12 to 16 to the initial Complaint (ECF No. 1).

52. All of the Products except the Roundup Weed & Grass Killer Super Concentrate

expressly warrant they "conform[] to the chemical description on the label."

53. Most of the Products, identified above, expressly warrant that they are "reasonably fit for the purposes set forth in the Complete Directions for Use label booklet ("Directions") when used in accordance with those Direction under the conditions described therein."

54. Bayer CropScience expressly warranted that each of the Products contain registered pesticides by representing such on labels. For instance, the Roundup PRO Concentrate Herbicide provides that it contains "Roundup PRO Concentrate Herbicide." The label further states "This product is identified as **Roundup PRO® Herbicide, EPA Reg. No. 71995-25**." All of the Products uniformly made the same type of representation on the label that identifies the chemical name and EPA registration number.

55. Moreover, all of the Products come with implied warranties under California law that: "(a) [t]hat the pesticide corresponds to all claims and descriptions that the registrant has made in respect to it in print; (b) [t]hat the pesticide is reasonably fit for use for any purpose for which it is intended according to any printed statement of the registrant." Cal. Food & Ag. Code § 12854.

56. Bayer CropScience breached the Products' express and implied warranties, as explained below.

57. Bayer CropScience unlawfully sold and distributed, through third parties, misbranded pesticides throughout the United States, including in California, as explained below.

58. Bayer CropScience unlawfully sold and distributed, through third parties, unregistered pesticides and/or pesticides that differed in chemical composition from what was permitted under their registrations throughout the United States, including in California, as explained below.

59. Bayer CropScience unfairly sold and distributed in the United States and California, either itself or through third parties, pesticides that can exceed the 1 ppm limit for NNG over the course of their life cycle, even when used in accordance with the directions on the label. Bayer CropScience's conduct offends EPA's policy against the sale and distribution of herbicides that can form over 1 ppm nitrosamines absent proof that the nitrosamine is not

carcinogenic as well as the federal and California statutes prohibiting the sale and distribution of pesticides that cannot ensure compliance with the limits set forth in their registrations and the requirement that only pesticides that do not pose "unreasonable adverse effects" may be registered and legally sold in the United States, as explained below.

60. Bayer CropScience's labelling of the Products misled reasonable consumers, as explained below.

61. Bayer CropScience fraudulently and deceptively represented the Products as chemically identical to registered pesticides when they were not. Bayer CropScience further fraudulently concealed the defect with the Products, the fact that the Products do not contain the registered pesticides they purport to contain, and the Products' expiration date.

C. SCOTTS

62. Since around 1998, Scotts has served as Monsanto's exclusive distributor for its glyphosate-based products in the Lawn and Garden sector, which includes the Roundup Weed & Grass Killer Super Concentrate and, at least as of 2019, the Roundup PRO as well as possibly other Products. Scotts marketed and distributed the Roundup Weed & Grass Killer Super Concentrate and Roundup PRO to retailers, which, in turn, sold the Roundup Weed & Grass Killer Super Concentrate and Roundup PRO to consumers nationwide, including in California on behalf of Monsanto.

63. Scotts' relationship with Monsanto goes far beyond simply distributing Roundup. As set forth in their Third Amended and Restated Exclusive Agency and Marketing Agreement, Monsanto and Scotts run Monsanto's Lawn and Garden business jointly, with Scotts handling the vast majority of day-to-day affairs. The structure of the business is akin to a partnership with a steering committee that oversees the business strategy. The steering committee consists of equal numbers of executives from Scotts and Monsanto. By structuring the steering committee in this manner, Monsanto vests Scotts with equal control over the affairs of the Roundup Lawn and Garden business, including control over the business's annual business plan, overall strategy, and decisions related to key personnel running the Roundup Lawn and Garden business. The annual business plan serves to set Scotts' parameters for implementing the day-to-day operation of the

business.

64. Monsanto delegates the vast majority of the Roundup Lawn and Garden's day-to-day affairs to Scotts. Scotts handles all of the marketing, warehousing, sales and financial analysis for the business. Indeed, Monsanto and Scotts share a common reconciliation statement (prepared by Scotts) that is used to determine the profits of their shared business and the amounts to be remitted to Monsanto and retained by Scotts. Scotts retains a significant share of profits derived from all sales Roundup Lawn and Garden products, which includes that Roundup Weed & Grass Killer Super Concentrate. Before 2020, Scotts retained 50% of earnings before tax and interest generated over a certain amount; as of 2020, it retained 50% of all earnings before tax and interest.

65. Through this arrangement, Scotts was in charge of critical communications to consumers, including communications that could have warned consumer about the defect with the Products. Specifically, the Scotts' Third Amended and Restated Exclusive Agency and Marketing Agreement with Monsanto, which has been in effect since at least 2019, provides that Scotts shall:

- "perform in-store merchandising, store set-up, and other services related to the in-store promotion of Roundup Products;"
- "(A) maintain or contract for adequate facilities and technologies to manage consumer information and complaint calls or written correspondence and (B) be responsible for all reports relating thereto, including (without limitation) reports to any regulatory or governmental authority pursuant to any applicable Law;"
- Provide retailers "with detailed information concerning the characteristics, uses and availability of Roundup Products as shall be supplied by the Global Support Team;"
- Provide retailers "with detailed information concerning the advertising and promotional programs of Roundup Products and facilitate the use by its Customers of such programs to the fullest extent possible (as set forth in the Annual Business Plan);"
- "promote, in accordance with the Annual Business Plan or as directed by the Steering Committee, the sales and consumer acceptance of Roundup Products using messages and vehicles that are not inconsistent with the brand image established by Monsanto's Ag division in support of its Roundup branded products and seeds, including but not limited to:

    (i) Advertising in local and national media, subject to the approval of Monsanto;

(ii) Providing suitable training of the Agent's representatives or employees in the areas of product knowledge, product stewardship, sales training, display techniques, promotion and advertising;

(iii) Determining the description of consumer and trade communication programs to Customers regarding the sales and distribution of Roundup Products; and

(iv) The handling of product complaints with the intent of achieving consumer satisfaction and shall provide prompt notification to Monsanto of any significant complaints or significant number of similar complaints;"

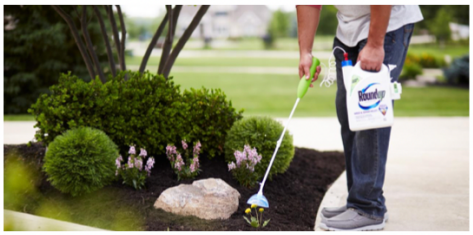
- "maintain retail relationships between" Scotts and retailers, "including relationships at headquarters and regional stores;"

- provide retailers "with full information concerning the merchandising and display techniques as set forth in the Annual Business Plan." Scotts "shall use, fully support and recommend, that [retailers] fully utilize all such merchandising and display techniques."

66. As a result, Scotts handles all advertising and in-store merchandising, store set-up, and other services related to the in-store promotion of the Roundup Lawn & Garden products. Scotts would have been responsible for all in-store merchandising and promotion of Lawn & Garden products, including the Roundup Weed & Grass Killer Super Concentrate and Round PRO, at Lowe's, Ace Hardware, Tractor Supply, and Home Depot stores in California. Scotts was responsible for all content and images on retailer websites offering the Roundup Weed & Grass Killer Super Concentrate and Roundup PRO for sale. Scotts also runs the consumer call center for the products. In doing so, Scotts works closely with Monsanto, and often independently, to develop packaging, advertising, and marketing materials, including whether those materials satisfy regulatory requirements.

67. Scotts also sells Roundup products directly to consumers via www.roundup.com (the "Website"), the official website where consumers can look at and purchase various Roundup products, including the Roundup Weed & Grass Killer Super Concentrate, and view tips on how to spray the products and select a product. Scotts hosts and manages the Website. Scotts has control over the content and images provided on the Website.

68. The Website includes various images of consumers using Roundup weed killers, including more concentrated products, around their lawns, driveways, and gardens. Below are some examples.



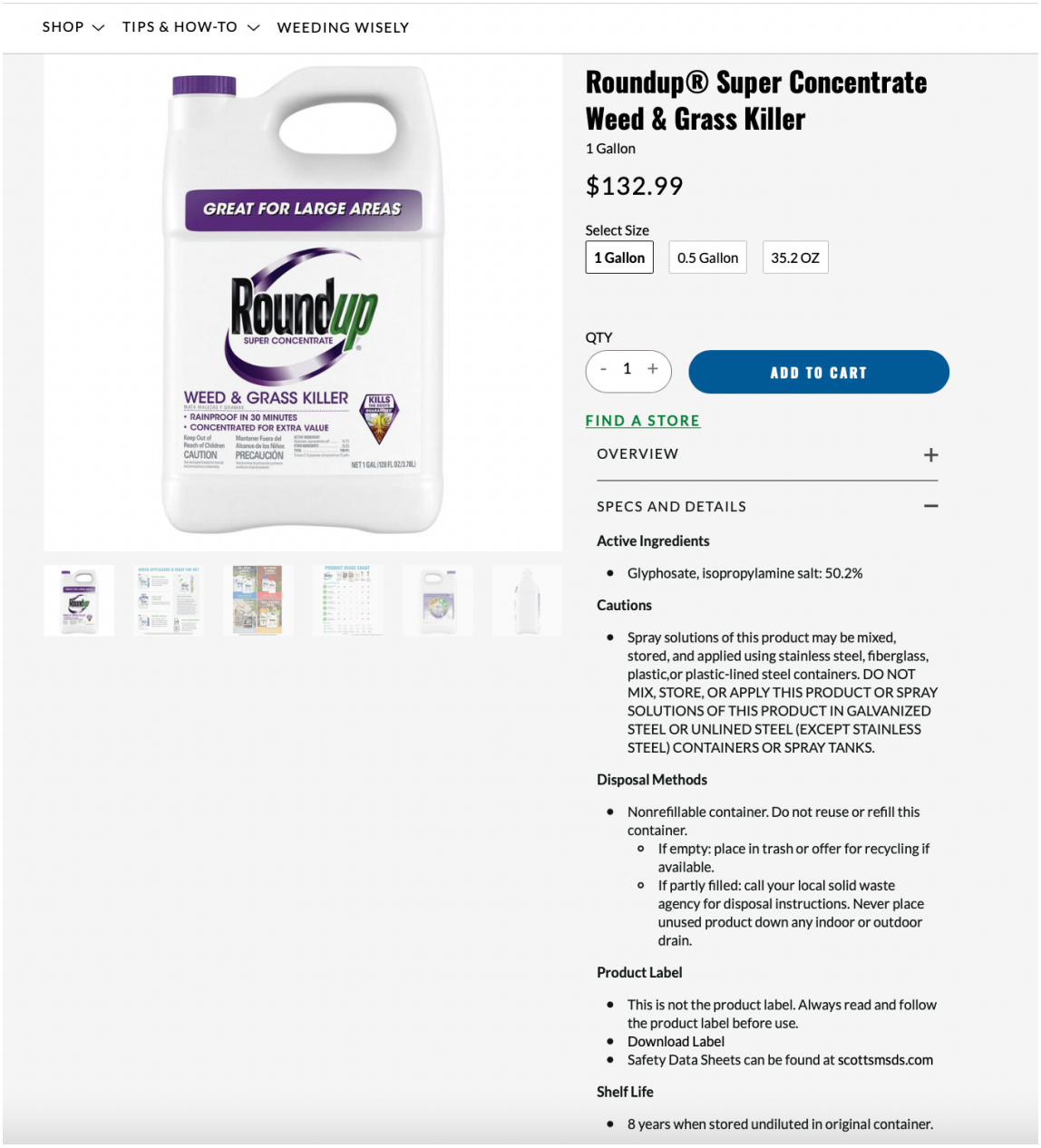
What's in Roundup® Ready-to-Use Weed & Grass Killer?

The ingredients explained.

How Do I Apply Roundup® Weed & Grass Killer Products?

Using Roundup® Weed amp; Grass Killer products the right way ensures that they work as effectively and safely as possible.

69. Scotts also makes the Roundup Weed & Grass Killer Super Concentrate available for purchase on the Website as shown below:



70. At all relevant times, Scotts knew that the Roundup Weed & Grass Killer Super Concentrate expired because the Website, which Scotts operates, specifically tells consumers that it has a shelf life of "8 years when stored undiluted in original container," as shown above. Scotts also drafted, possessed and distributed Material Safety Data Sheets regarding the Roundup Weed & Grass Killer Super Concentrate, which also disclosed a shelf life, as explained further below. Despite this acknowledgement on the Website and in the MSDSs, Scotts nonetheless continued

to sell and distribute the Roundup Weed & Grass Killer Super Concentrate knowing that the label never had an expiration date on the label, even though the label is where federal and California law require such information. Moreover, Scotts' point-of-sale advertisements and promotions in retail stores also failed to disclose the expiration date or provide any warnings about NNG formation.

71. Scotts also knew, or, at a minimum, should have known, that the Roundup Weed & Grass Killer Super Concentrate required an expiration date on the label and that Scotts could not legally sell or distribute it without an expiration date because Scotts manufacturers and registers its own pesticides and has also formulated Roundup. A search on EPA's website shows that Scotts has registered at least 1,000 of its own pesticides with EPA. It, therefore, had extensive knowledge about EPA and FIFRA requirements.

72. Moreover, given that Scotts has significant responsibilities and a financial interest in the Roundup Lawn & Garden business, Scotts employees work on and exercise unbridled control over labelling issues for Roundup products with Monsanto. It even frequently addresses legal issues with respect to labelling, advertising, and the Website with Monsanto. Specifically, both Monsanto and Scotts have repeatedly sought, shared, and discussed legal advice with respect to labeling, marketing, and advertising for the Lawn and Garden products. As Monsanto's General Counsel, Robyn Buck, put it in a declaration dated July 22, 2019 filed in state court:

> Both Monsanto and Scotts are deeply interested in avoiding potential violations of governing regulations, including EPA regulations, as neither party can legally sell products that do not conform with such regulations. Similarly, both companies have a legal interest in ensuring compliance with EPA reporting requirements for certain adverse incidents under the Federal Insecticide, Fungicide, and Rodenticide Act ("FIFRA") and its implementing regulations, since, as Scotts is Monsanto's exclusive agent for distribution of Roundup® Lawn and Garden products, the EPA may enforce violations of those reporting requirements against Scotts as well as Monsanto. See Guidance on Final FIFRA 6(a)(2) Regulations for Pesticide Product Registrants (April 3, 1998), https://www.epa.gove/sites/production/files/2014-04/documents/pr98-3.pdf. Ensuring regulatory compliance requires the two companies to communicate regularly regarding legal issues. Pursuant to the parties' agreements and practice, Monsanto has final approval authority for advertising and labeling for the products, and for approving any changes to consumer communications, mass media, packaging design, or any other marketing that impacts consumer perception and interface with the Roundup® brand…. Scotts employees that work on advertising, marketing, and labeling issues for Roundup

> products are therefore often required to seek legal and regulatory review, advice, and approval from Monsanto attorneys in order to protect the companies' common interest in regulatory compliance. Similarly, Monsanto completes the adverse event reporting required under FIFRA, but must communicate regarding such reporting requirements with Scotts, which often receives customer reports and complaints.

73. At least as of 2012, Scotts also formulated Monsanto's Lawn and Garden Products, which would have included the Roundup PRO and Roundup Weed & Grass Killer Super Concentrate. In that role, Scotts received, unloaded and stored the glyphosate salt that Monsanto supplied. It then mixed the glyphosate salt with the other ingredients, including water, put the formulated products into bottles, and performed testing on those products, which would have included testing for NNG. Scotts then stored the bottled products until they were shipped for sale.

74. Through this work, Scotts received the formula for each of the products and thereby would have known of the limit on NNG, given that there was a specification for NNG. The testing that Scotts performed also would have revealed that NNG could form above 1 ppm; otherwise, there would have been no need to test at all. It also would have known about critical information that relates to the storage of the glyphosate salt. Scotts' agreement with Monsanto required Monsanto to provide Scotts with sufficient technical information to enable Scotts to prepare each product. As explained further below, Monsanto learned through a study completed in 2004 that nitrites in the air can create unlawful levels of NNG in glyphosate salt. Given that Scotts was storing glyphosate salt and using it to formulate certain Products, Monsanto presumably shared its findings about the conditions that can cause NNG to form in glyphosate salt in storage with Scotts. This presumably included information about how exposure to nitrosating agents, such as exhaust, cause NNG to form in glyphosate.

75. Scotts' formulation work also required it to test the water that went into the Products it formulated. As a result, Scotts knew or should have known that external factors, such as nitrites in water, cause NNG to form. As explained below, Scotts and Monsanto agreed to keep nitrites below a certain level in the water Scotts used to formulate the products. However, for at least two years, in 2005 and 2006, Scotts sought and received waivers from Monsanto as to the nitrite levels in water. In doing so, Scotts actively elevated NNG levels in the Product.

76. Scotts also had direct knowledge of the defect and the problems associated the NNG through its relationship to Seamless Control. From 2018 to at least 2019, Scotts owned Seamless Control jointly with Monsanto. Specifically, Scotts owned 100% of a holding company that had a 51% ownership interest in Seamless Control. Upon information and belief, Monsanto owned the remaining interest. As explained further below, Seamless Control independently registered some of the Products, referred to herein as the "Joint Venture Products." As a registrant, Seamless Control had to "submit or cite data concerning the pesticide's impact on man and the environment, and must assume obligations required by section 3(c)(1)(D) with respect to data compensation." 52 Fed. Reg. 15952. This meant that Seamless Control had (or, at a minimum, should have had access to) data and research regarding NNG formation in the Joint Venture Products, including QuikPRO, since such data concerns "the pesticide's impact on man and the environment" and registration of the Joint Venture Products was conditioned on compliance with the limit for NNG. Because Scotts controlled Seamless Control, it had access to, and had, or should have had, knowledge of the data supporting the registrations for the Joint Venture Products.

77. Finally, at the absolute minimum, Scotts gained knowledge of the defect and problems associated with NNG when Plaintiffs served Scotts with the Complaint in this case on August 2, 2022. To date, it nonetheless continues to distribute the Roundup Weed & Grass Killer Super Concentrate and, upon information and belief, the Roundup PRO, despite that knowledge.

78. Further, Scotts had unbridled control over point-of-sale warnings and the labelling of the Roundup Weed & Grass Killer Super Concentrate and the Roundup PRO, as described above. It also had exclusive control over point-of-sale warnings and labelling for the Joint Venture Products sold through Seamless Control, described below since Seamless Control was a registrant for those Products, and Scotts had a controlling interest in Seamless Control from 2018-19. The EPA finds that registrants "must take responsibility for quality control of the product's composition and for adequate labeling describing the product, its hazards and uses." 52 Fed. Reg. 15952. Therefore, Seamless Control, as a registrant, had control over the labelling of the Joint Venture Products and a duty to ensure the Joint Venture Products' labelling adhered to EPA requirements. Because Scotts had a controlling ownership interest in Seamless Control, it also

had control over labelling decisions for the Joint Venture Products.

79. Scotts unlawfully formulated, distributed and offered for sale, through retailers, misbranded pesticides throughout the United States, including in California, as explained below.

80. Scotts unlawfully formulated, distributed and offered for sale, through retailers, unregistered pesticides and/or pesticides that differed in chemical composition from what was permitted under their registrations throughout the United States, including in California, as explained below.

81. Scotts unfairly formulated, distributed and offered for sale through retailers in the United States and California, pesticides that can exceed the 1 ppm limit for NNG over the course of their life cycle, even when used in accordance with the directions on the label. Scotts' conduct offends EPA's policy against the sale and distribution of herbicides that can form over 1 ppm nitrosamines absent proof that the nitrosamine is not carcinogenic as well as the federal and California statutes prohibiting the sale and distribution of pesticides that cannot ensure compliance with the limits set forth in their registrations and the requirement that only pesticides that do not pose "unreasonable adverse effects" may be registered and legally sold and/or distributed in the United States, as explained below.

82. Scotts' misrepresentations and omissions about the Roundup Weed & Grass Killer Super Concentrate, Roundup PRO, and Joint Venture Products misled reasonable consumers, as explained below.

83. By putting the Roundup Weed & Grass Killer Super Concentrate, Roundup PRO, and Joint Venture Products into the stream of commerce and offering those Products for sale in retail and online stores, Scotts fraudulently and deceptively represented to consumers and retailers that the Roundup Weed & Grass Killer Super Concentrate, Roundup PRO, and the Joint Venture Products as chemically identical to registered pesticides even though they were not. Scotts further fraudulently concealed (1) the defect with the Roundup Weed & Grass Killer Super Concentrate, Roundup PRO, and Joint Venture Products, (2) the fact that the Roundup Weed & Grass Killer Super Concentrate and Roundup PRO, and Joint Venture Products do not contain the registered pesticides they purport to contain, and (3) the expiration date for the Roundup Weed & Grass

Killer Super Concentrate, Roundup PRO, and Joint Venture Products.

D. SEAMLESS CONTROL

84. Beginning in 2018, Monsanto, and later on Bayer CropScience, expanded its relationship with Scotts and entered into a joint venture with Scotts to have Scotts sell, distribute and market some its more concentrated glyphosate-based products, which includes many of the Products. As part of the joint venture, Monsanto and Scotts formed Seamless Control, which they jointly owned either directly or indirectly through holding companies. After Bayer AG's acquisition of Monsanto, Bayer CropScience became part of the joint venture with Scotts. Eventually, Bayer AG took over ownership of Seamless Control either directly or through holding companies, and, as of December 31, 2019, Bayer AG disclosed it had a 100% interest in Seamless Control. Further, as of May 1, 2019, Seamless Control identified its three members, each of whom were senior executives with Bayer CropScience.

85. From 2018 to 2019 or 2020, Seamless Control distributed and marketed some of the Products to retailers for sales to consumers nationwide pursuant to the joint venture. Though Monsanto had initially registered the Products with EPA, EPA approved registrations for the following Products on the following dates with Seamless Control as the registrant (the "Joint Venture Products"). Copies of the labels for the Joint Venture Products are in the Exhibits identified below.

Ex. No.[6]	Product	Date registered for Seamless	New EPA Registration No.
17	Roundup Custom for Aquatic & Terrestrial Use	February 16, 2018	EPA Reg. No. 93236-2
18	Roundup QuikPRO Herbicide	February 22, 2018	EPA Reg. No. 93236-4
19	Roundup PROMAX Herbicide	April 18, 2018	EPA Reg. No. 93236-3
20	Roundup PRO Herbicide	April 20, 2018	EPA Reg. No. 93236-1

[6] These exhibits are attached to the Complaint filed in this case on July 22, 2022 (ECF No. 1). Plaintiffs incorporate them herein by reference.

21	Roundup PRO Concentrate Herbicide	May 25, 2018	EPA Reg No. 93236-6
22	Ranger Pro	May 25, 2018	EPA Reg. No. 93236-5

86. The Joint Venture Products' registrations with EPA were based on Monsanto's registrations of the Products and are subject to the same restrictions as to the formula and certified limits.

87. In connection with Seamless Control's sale, distribution and marketing of the Joint Venture Products, Seamless Control made express and implied warranties to consumers nationwide, including to California consumers, on the Joint Venture Products' labels. The labels in effect at the time Seamless Control sold and distributed the Joint Venture Products, which include the specific language of Seamless Control's express warranties, are attached to ECF 1 in this case as Exhibits 17 to 22. Seamless Control breached the Joint Venture Products' express and implied warranties, as explained below.

88. Upon information and belief, Monsanto, and, after its acquisition, Bayer CropScience, was responsible for coordinating the registration of the Joint Venture Products on behalf of Seamless Control. Stephen Adams, who was Monsanto's regulatory affairs manager at the time, filed the registration applications for each of the Joint Venture Products on behalf of Seamless Control. Adams also served as Senior Regulatory Affairs Manager for Bayer CropScience after Bayer AG's acquisition of Monsanto. As a regulatory affairs manager, Adams managed all aspects of the Products' registrations with EPA, which included data submission and regulatory compliance. As part of that job, he had to be familiar with the historic submissions to EPA and studies conducted in support of compliance for the Products. Because he was an agent for Seamless Control on Monsanto's and later Bayer CropScience's behalf, Seamless is imputed with Adams' knowledge about the Products.

89. Seamless Control cancelled the registrations for each of the Joint Venture Products on December 21, 2020 and, upon information and belief, has not sold, distributed, or marketed them since then.

90. During the joint venture with Seamless Control, Monsanto and, later on post-acquisition, Bayer CropScience, manufactured the Products that were still on the market at the time and distributed them to retailers through third-parties, which included shipping, holding for shipment, releasing for shipment, and holding for distribution, within the meaning of 7 U.S.C. § 136(gg). The retailers, in turn, sold the Products to consumers in the United States, including California.

91. All of the Joint Venture Products expressly warrant they "conform[] to the chemical description on the label."

92. Seamless Control expressly warranted that each of the Joint Venture Products contain registered pesticides by representing such on labels. For instance, the Roundup PRO Concentrate Herbicide provides that it contains "Roundup PRO Concentrate Herbicide." The label further states "This product is identified as **Roundup PRO® Herbicide, EPA Reg. No. 71995-25**." All of the Joint Venture Products uniformly made the same type of representation on the label that identifies the chemical name and EPA registration number.

93. Moreover, all of the Joint Venture Products come with implied warranties under California law that: "(a) [t]hat the pesticide corresponds to all claims and descriptions that the registrant has made in respect to it in print; (b) [t]hat the pesticide is reasonably fit for use for any purpose for which it is intended according to any printed statement of the registrant." Cal. Food & Ag. Code § 12854.

94. Seamless Control breached the Joint Venture Products' express and implied warranties, as explained below.

95. Seamless Control unlawfully sold and distributed, through third parties, misbranded pesticides throughout the United States, including in California, as explained below.

96. Seamless Control unlawfully sold and distributed, through third parties, unregistered pesticides and/or pesticides that differed in chemical composition from what was permitted under their registrations throughout the United States, including in California, as explained below.

97. Seamless Control unfairly sold and distributed in the United States and California,

either itself or through third parties, pesticides that can exceed the 1 ppm limit for NNG over the course of their life cycle, even when used in accordance with the directions on the label. Scotts' conduct offends EPA's policy against the sale and distribution of herbicides that can form over 1 ppm nitrosamines absent proof that the nitrosamine is not carcinogenic as well as the federal and California statutes prohibiting the sale and distribution of pesticides that cannot ensure compliance with the limits set forth in their registrations and the requirement that only pesticides that do not pose "unreasonable adverse effects" may be registered and legally sold in the United States, as explained below.

98. Seamless Control's labelling of the Joint Venture Products misled reasonable consumers, as explained below.

99. Seamless Control fraudulently and deceptively represented the Joint Venture Products as chemically identical to registered pesticides when they were not. Seamless Control further fraudulently concealed the defect with the Joint Venture Products, the fact that the Joint Venture Products do not contain the registered pesticides they purport to contain, and the Joint Venture Products' expiration date.

100. Plaintiffs sent Monsanto, Seamless Control and Bayer CropScience a letter on April 22, 2022 notifying them of the problems associated with NNG alleged herein. About two months later, Seamless Control merged into Monsanto.

101. Defendants uniformly represented that each of the Products contained an EPA-approved, registered pesticide at the time consumers' purchases, even though they did not. Defendants also actively concealed the safety hazard and defect with the Products from consumers and regulators alike. As the registrants and/or manufacturers of the Products, Monsanto, Seamless Control and Bayer CropScience had "a continuing obligation to adhere to FIFRA's labeling requirements." *Bates v. Dow Agrosciences LLC,* 544 U.S. 431, 438 (2005). Monsanto, Seamless Control, Bayer CropScience, and Scotts knowingly defied this fundamental requirement by failing to disclose a "Not for sale or use after [date]" and/or statement prohibiting use after a certain date for the Products, despite knowing the Products were substantially certain to develop unlawful levels of NNG, even when used and stored under ordinary conditions

consistent with the Products' labels.

102. The acts and omissions of Defendants concurred with and contributed to the various acts and omissions of each in proximately causing the injuries and damages as herein alleged.

JURISDICTION AND VENUE

103. This Court has jurisdiction over the subject matter of this action pursuant to 28 U.S.C. § 1332(d)(2). The aggregate amount in controversy exceeds $5,000,000, exclusive of interest and costs; and at least one class member and one Defendant are citizens of different states.

104. The Court further has subject matter jurisdiction over the Magnuson-Moss Warranty Act claim pursuant to 28 U.S.C. § 1331 and 28 U.S.C. § 1367 since it arises out of the same controversy.

105. The injuries, damages and/or harm upon which this action is based, occurred or arose out of activities engaged in by Defendants within, affecting, and emanating from, the State of California. Defendants regularly conduct and/or solicit business in, engage in other persistent courses of conduct in, and/or derive substantial revenue from Products provided to persons in the State of California. Defendants have engaged, and continue to engage, in substantial and continuous business practices in the State of California. Defendants know that the Products are and were sold throughout California, and caused the Products to be sold across the United States, including California.

106. Venue is proper in this District pursuant to 28 U.S.C. § 1391(b)(2) because a substantial part of the events or omissions giving rise to the claims occurred in the state of California, including within this District, including Plaintiffs' purchases of the Products.

107. In accordance with California Civil Code Section 1780(d), Plaintiff Koller concurrently files herewith a declaration establishing that, at various times throughout the class period, he purchased Roundup Weed & Grass Killer Super Concentrate from stores in the Brentwood and Antioch California during the last four years. (Plaintiff Koller's declaration is attached hereto as Exhibit 23.) More than thirty days prior to the filing of this Complaint, Plaintiff Koller further provided to Defendants Monsanto, Bayer CropScience, and Seamless Control

notice and demand that sales of the Products violated, *inter alia*, FIFRA, 41 C.F.R. §158.350, 40 C.F.R. § 156.10(g)(6), 40 C.F.R. § 156.10(a)(5)(ii), Cal. Food & Agric. Code §§ 12991, 12881, Cal. Civ. Code § 1770(a), the Magnuson-Moss Warranty Act, Consumers Legal Remedies Act of California, and California's Unfair Competition Law. They did nothing to cure the violations. Instead, they issued a blanket denial.

108. Plaintiffs accordingly allege that jurisdiction and venue are proper in this Court.

SUBSTANTIVE ALLEGATIONS

I. NITROSAMINES ARE A KNOWN CARCINOGENIC BY-PRODUCT OF GLYPHOSATE IN THE PRODUCTS.

109. Nitrosamines, as a class of molecules, are known carcinogens and/or convert readily to potent carcinogens. *See, e.g.*, A.R.Tricker and R.Preussmann, "Carcinogenic N-nitrosamines in the diet: occurrence, formation, mechanisms and carcinogenic potential," Mutation Research/Genetic Toxicology, Volume 259.3–4: 277-289 (March–April 1991); Mirvish, Sidney S., "Kinetics of dimethylamine nitrosation in relation to nitrosamine carcinogenesis." Journal of the National Cancer Institute 44.3: 633-639 (1970); Straif, Kurt, et al., "Exposure to high concentrations of nitrosamines and cancer mortality among a cohort of rubber workers." Occupational and Environmental Medicine, 57.3: 180-187 (2000); Loh, et al.; "N-nitroso compounds and cancer incidence: the European Prospective Investigation into Cancer and Nutrition (EPIC)–Norfolk Study," Am. J. Clin. Nutr. 93.5:1053-061 (May 2011); Bruning-Fann C.S., et al., "The effects of nitrate, nitrite and N-nitroso compounds on human health: a review." Vet. Hum. Toxicol., 35:521-538 (1993).

110. The vast majority of nitrosamines studied have been found to be carcinogenic. One study done in the 1970s found that, of the 80 nitrosamines tested, 80% of them were carcinogenic in a variety of species. *See* Montesano, R. and H. Bartsch, "Mutagenic and Carcinogenic N-nitroso compounds: Possible Environmental Hazards." Mutation Research. 32:197-228 (1976). The study did not find that the other 20% of nitrosamines were definitively safe; rather, the evidence regarding those nitrosamines was inconclusive as to whether or not they were in fact carcinogenic. It further determined that for 47 nitrosamines studied, 38 were

both carcinogens and mutagens, and 5 were carcinogens but not mutagens. The fact that 80% of the 47 nitrosamines studied were both carcinogenic and mutagenic makes nitrosamines even more dangerous. A mutagen is a chemical agent that induces genetic mutation, and genetic mutation is a mode of action that can cause cancer. A mutagenic carcinogen is a substance that can directly cause DNA damage when present at low levels leading to mutations and potentially cause cancer. The vast majority of nitrosamines studied are both mutagenic and carcinogenic, which means they are both toxic and capable of breaking down DNA and makes them an extreme hazard to human health, even at low exposure levels.

111. Subsequent studies have found that as much as 90% of nitrosamines studied are carcinogenic. *See* Straif, Kurt, et al. "Exposure to high concentrations of nitrosamines and cancer mortality among a cohort of rubber workers," Occupational & Environmental Medicine 57:180-187 (2000); Bogovski P., et al "Animal species in which N-nitroso compounds induce cancer" Int'l J. Cancer, 27(4):471-4 (1981); Preussmann, R.; Stewart, B. W. "N-Nitroso carcinogens; ACS Monogr."*, 182* (Chem. Carcinog.,2nd Ed., Vol. 2), 643-8 (1984).

112. Given the data, experts universally regard nitrosamines to be among the most potent carcinogens known to man.

113. As a result, the World Health Organization classifies nitrosamines as probable carcinogens. *See* WHO Information Note: Update on Nitrosamine Impurities (Nov. 20, 2019) ("Nitrosamines, or more correctly N-nitrosoamines, refer to any molecule containing the nitroso functional group. These molecules are of concern because ***nitrosamine impurities are probable human carcinogens***."), *available at*: https://cdn.who.int/media/docs/default-source/essential-medicines/medical-alert-2019/informationnotenitrosamine-impurities-nov2019en.pdf?sfvrsn=d189497f_21) (emphasis added); *see also* 85 FR 55017, 55018 ("Nitrosamines have been classified as probably carcinogenic to humans by the World Health Orgnanization.")

114. The Food and Drug Administration, too, has explained that "Nitrosamine compounds are potent genotoxic agents in several animal species and some are classified as probable or possible human carcinogens by the International Agency for Research on Cancer

(IARC). They are referred to as 'cohort of concern' compounds in the ICH guidance for industry *M7(R1) Assessment and Control of DNA Reactive (Mutagenic) Impurities in Pharmaceuticals To Limit Potential Carcinogenic Risk* (March 2018)." 88 FR 12384. Only five categories of chemicals are included within the cohort of concern: azoxy compounds, nitroso compounds, aflatoxin-like steroids, and dioxins. The groups of chemicals designated as "cohort of concern" compounds consist of highly potent carcinogens that can cause cancer at low levels.

115. To that end, FDA explained in 1983 that "[n]itrosamines are a group of chemicals which have long been known to be potent animal carcinogens and ***are widely accepted by the scientific community as probable human carcinogens***." 48 Fed. Reg. 56988 (Dec. 27, 1983) (emphasis added). The agency found that "[m]ost of the nitrosamines that have been tested are carcinogenic in laboratory animals." 48 Fed. Reg. 57014 (Dec. 27, 1983). It reiterated the position in 1993, finding that "[m]ost nitrosamines are mutagenic and carcinogenic in test systems." 58 Fed. Reg. 2622, 2625 (Jan. 6, 1993).

116. As a result, the FDA has found there is a clear need to address the risks associated with nitrosamine impurities. *See* 85 Fed. Reg. 55018 (Sept. 3, 2020) ("The recent unexpected finding of nitrosamine impurities, ***which are probable human carcinogens***, in drugs, such as angiotensin II receptor blockers, ranitidine, nizatidine, and metformin, has made clear the need for a risk assessment strategy to identify and minimize nitrosamines in any pharmaceutical product at risk for their presence.") (emphasis added).

117. The Environmental Protection Agency also has been deeply concerned with the cancer risks associated with nitrosamines and has consistently limited nitrosamines to 1 ppm or less in absence of data establishing the safety of the nitrosamine. In a final rule published on August 12, 1980, it stated, "***[n]-nitrosamines, characterized by the functional group N-N=O, are considered to be among the most potent carcinogenic agents*** (Ref. 20). As a chemical class, the N-nitrosamines have been demonstrated to induce tumors in many vital organs of a wide range of animals via various routes of administration (Refs. 5 and 20). ***Nearly 80 percent of all N-nitrosamines studied to date have been found to be carcinogenic in a wide range of***

laboratory animals including various aquatic organisms (Ref. 18).” 45 Fed. Reg. 53478 (emphasis added).

118. In a proposed rule in 1980, EPA found that “the manufacture, processing, use, and disposal” of a particular chemical “may present an unreasonable risk to human health due to oncogenic effects” because, among other things, “EPA has found that there are existing data which indicate a theoretical potential for the conversion of [the chemical] to nitrosamines in the environment and that persons may be exposed to these nitrosamines as a result of release of DETA to the environment. Nitrosamines have been shown to be carcinogenic.” 47 Fed. Reg. 18386.

119. Again, in another final rule published in 1985, EPA further stated “[m]any nitrosamines have been shown to be carcinogenic.” *See* 50 Fed. Reg. 21398 (May 23, 1985). In 2005, EPA reiterated the dangers associated with nitrosamines in a proposed rule, stating “Animal studies provide evidence that many nitrosamines, including all of those being proposed for UCMR 2, target the liver when ingested orally. Nitrosamines also produce carcinogenic effects in the esophagus, lung, nasal cavity, stomach, and elsewhere when administered to animal subjects in drinking water; and many nitrosamines target the liver when ingested orally (USEPA, 2003d).” 70 Fed. Reg. 49094, 49104.

120. Even Monsanto has historically acknowledged that most nitrosamines are carcinogenic. For instance, in 2015, William Heydens, Monsanto’s Product Safety Assessment Strategy Lead, wrote that “many N-Nitroso compounds are carcinogenic.”[7]

121. Dr. Andrew Dyszlewski, a Monsanto chemist who designed many glyphosate based herbicides sold under the Roundup brand, also agreed under oath that n-nitroso compounds belong to a class of chemicals known to be carcinogenic and testified that NNG “belongs to a class of chemicals that have been implicated as being carcinogenic.” He also was aware that more than 80 percent of studied nitrosamine compounds have been found to be carcinogenic.

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[7] https://usrtk.org/wp-content/uploads/bsk-pdf-manager/2019/04/Heydens-issues-with-glyphosate.pdf

122. Similarly, Dr. Richard Kramer, another Monsanto chemist, wrote in 2002 that "NNG is in the family of nitrous compounds that have the perception of being carcinogens."

123. In 2010 Martin Lasarte, who served as Monsanto's Crop Protection Manufacturing Lead at the time, wrote via email "Specifically we would need to understand: Why Roundup formulations are not carcinogenic:? … NNG and formaldehyde are the 2 impurities with ***known carcinogenic properties***…"[8] (emphasis added).

124. Monsanto's corporate representative further testified that Monsanto did not "have any reason to dispute" that most nitrosamines are carcinogenic. Monsanto Tr. 43:7-11

125. Scotts also has been aware. In 2003, a Monsanto employee forwarded an email to other Monsanto employees along and Jill Fairbrother, a Scotts employee.[9] The forwarded email was from a third-party who quoted a genetic toxicology consultant who stated "over 75% of all other N-nitroso compounds so tested have been shown to cause cancer by way of tumor formation."

II. NNG IS CARCINOGENIC.

126. Dr. Charles Jameson is a chemist and environmental toxicologist who specializes in cancer. A Declaration from Dr. Jameson ("Jameson Decl.") is attached hereto as Exhibit 27 and incorporated herein.

127. Dr. Jameson has more than forty years of toxicology experience and has worked for the National Cancer Institute and National Institute of Environmental Health Sciences. *See* Jameson Decl. He received his undergraduate degree in chemistry in 1970 from Mount Saint Mary's College, Emmitsburg, Maryland and his Ph.D in Organic Chemistry in 1975 from the University of Maryland. *Id*. For many years, he was responsible for the preparation of the Report on Carcinogens, a congressionally mandated public health report listing agents known or reasonably anticipated to cause cancer in humans. *Id*. He has also been a member of several

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[8] https://www.baumhedlundlaw.com/documents/pdf/monsanto-documents/28-internal-email-monsanto-employee-admits-company-has-not-tested-carcinogenicity-of-roundup-formulation.pdf

[9] https://www.baumhedlundlaw.com/assets/monsanto%20roundup%20pages/secret%20documents/Email-Showing-Monsanto-Had-Long-Known-of-N-ntirosoglyphosate-NNG-in-Roundup.pdf

IARC working groups, including the working group that assessed glyphosate as the chair of the experimental animal subgroup. *Id*.

128. Dr. Jameson has significant experience assessing the carcinogenicity with respect to Roundup, specifically. He served as a testifying expert on general causation for the plaintiffs in *In re Roundup Products Liability Litig*., MDL No. 2741 (N.D. Cal.). In that lawsuit, Judge Chhabria found his opinions pertaining to animal carcinogenicity studies admissible under *Daubert*. *See In re Roundup Products Liability Litig*., 390 F. Supp. 3d 1102, 1146-7 (N.D. Cal. July 10, 2018).

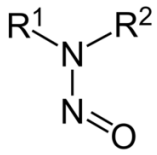
129. Here, Dr. Jameson examined available evidence and concluded that NNG is more likely than not carcinogenic and poses a safety hazard to consumers at levels of 1 ppm or higher in herbcides. *See* Jameson Decl. ¶ 13.

130. Dr. Jameson explained that he was aware of two animal studies (IR-77-223 1979, and IR-77-223 1984) attempted by contract laboratories hired by Monsanto company to study NNG." *Id*. ¶ 11. He "reviewed the details of both animal studies, however, only one of the studies was completed. The completed study revealed a statistically significant trend for the formation of lymphocytic lymphomas in mice exposed to NNG. This finding indicates NNG is an animal carcinogen, and therefore meets the criteria for listing as a reasonably anticipated human carcinogen." *Id*.

131. Dr. Jameson further explained that "[a]nother way toxicologists assess whether a molecule is likely to be carcinogenic, is by comparing the molecule's structure to molecules with known carcinogenic properties. Comparing molecular structures is a reliable method of determining whether a compound is reasonably anticipated to be carcinogenic." *Id*. ¶ 12. He "evaluated the molecular structure of NNG, which is highly similar in structure to N-nitrososarcosine." *Id*. Dr. Jameson explained that "N-nitrososarcosine is a known animal carcinogen and is listed by both IARC and the NTP as reasonably anticipated to be a human carcinogen." *Id*. He concluded that "Based on NNG's structural similarity to N-nitrososarcosine, it is reasonably anticipated that NNG is also carcinogenic." *Id*.

III. NNG FORMS AS A BYPRODUCT OF GLYPHOSATE IN THE PRODUCTS.

132. Nitrosamines are compounds with an amine (i.e., a nitrogen with three single bonds to other atoms) that is bonded directly to a nitroso group (i.e., a nitrogen and oxygen connected by a double-bond). This structure is sometimes referred to as ">N–N=O", where the lines represent electron bonds between the various nitrogen ("N") and oxygen ("O") atoms. Because the nitroso group (–N=O) is bonded to the amine nitrogen (>N–), these compounds are also called N-nitrosamines. An exemplary general nitrosamine structure is shown below:

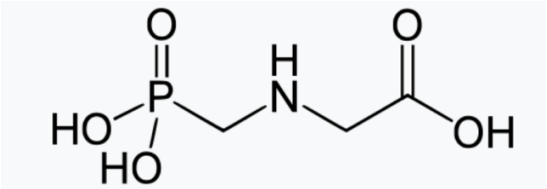


133. Each "R" in the figure above can be a wide variety of organic (i.e., carbon-based) structures.

134. Reaction of secondary amines (i.e., compounds with a nitrogen bonded to two carbons) with nitrous acid produces nitrosamines. Nitrous acid forms when nitrites are protonated, which occurs readily in the presence of water. Thus, exposure of secondary amines to nitrites produces nitrosamines.

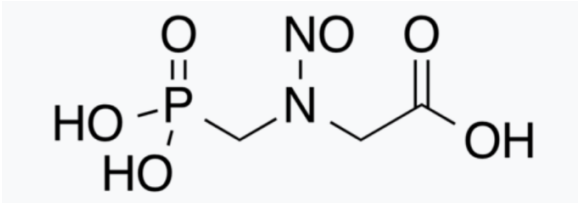
135. A nitrosamine formed by exposure of a secondary amine to nitrites is N-Nitrosoglyphosate.

136. Glyphosate is an organophosphate compound with the structure shown below:



137. The nitrogen structure in glyphosate is a secondary amine. It therefore reacts with nitrous acid and/or nitrites to form N-nitrosamines.

138. In the presence of nitrites (or other nitrosating compounds), the secondary amine in glyphosate is nitrosylated to become N-nitrosoglyphosate, with the structure shown below:



139. Glyphosate is the active ingredient of the Products. The above N-nitrosamine is thus a by-product formed by reaction of the Products with nitrites and any other nitrosating agents, such as nitrogen oxide (which can come from exhaust and other sources).

IV. EPA LIMITS NNG LEVELS TO 1 PPM IN THE PRODUCTS.

140. The EPA is charged with regulating the sale and distribution of pesticides in the United States. Due to the health risks associated with nitrosamines, the EPA has consistently found that herbicides "contaminat[ed] with *N*-nitroso compounds at levels of one ppm or greater would be cause for concern." 55 Fed. Reg. 17569.

141. EPA developed its policy addressing n-nitroso compounds in pesticides in 1980. *See* 45 Fed. Reg. 42854 (June 25, 1980). In that policy, EPA acknowledged that "[s]ome pesticides are contaminated with N-nitroso contaminants. These substances are not intentional additives of the pesticide product, but are rather chemical compounds formed during synthesis of the active ingredient, or during formulation or storage." 45 Fed. Reg. 42855.

142. EPA based its policy, in part, on a study that tested 80 n-nitrosamines, which found that 80% were carcinogenic. *See* 45 Fed. Reg. 42855, *citing* Montesano, R. et al., "Mutagenic and Carcinogenic N-nitroso compounds: Possible Environmental Hazards." *Mutation Research* 32:197-228 (1976).

143. In light of that scientific finding, EPA concluded that "[s]uch compounds therefore present a potential risk to the public health." 45 Fed. Reg. 42855.

144. EPA adopted a process to evaluate the risks associated with nitrosamines. First, the EPA requires applicants to submit chemistry data showing whether the product is

contaminated with N-nitroso compounds and, if so, at what levels. If the level is below 1 ppm, then the EPA may treat the product under the usual registration procedures. If the level is above 1 ppm, then the applicant must submit further exposure and risk data. Specifically, "[f]or each product shown to contain N-nitroso contamination above 1 ppm," EPA requires submission of data "on the potential oncogenic risk of the contaminant." 45 Fed. Reg. 42856.

145. EPA made clear that "[i]n the absence of acceptable oncogenic testing with the specific N-nitroso compound, the Agency ***will assume that the contaminant is as potent a carcinogen as N-nitrosodiethylamine (NDEA)***." 45 Fed. Reg. 42856 (emphasis added). EPA classifies NDEA as a probable carcinogen. EPA, therefore, presumes nitrosamines are carcinogenic unless the manufacturer provides acceptable oncogenic testing proving otherwise.

146. EPA's position is well-founded. Indeed, Monsanto's corporate representative testified under oath that ***Monsanto is not aware of a single regulatory body in the world that allows more than 1 ppm NNG in a glyphosate-based herbicide***. *See Evans v. Monsanto Co.*, No. 1722-CC01372-01, Cir. Ct. of Cty. of St. Louis Cty., April 21, 2022 ("Monsanto Tr.") 170:8-12 (Q. So Monsanto is unaware of any global regulatory body anywhere in the world that allows glyphosate based herbicide manufactures to sell formulated products that have NNG content in excess of 1 part per million? A. No, I'm not aware of any.")

147. Since 1980, the EPA has repeatedly acted in accordance with its June 1980 policy on nitrosamines and reiterated its findings.

148. For instance, the EPA stated in a final rule published on August 12, 1980, that, with respect to a nitrosamine at 2.1 ppm in pesticide formulation, "[t]he presence of the N-nitrosamine at this level is of concern since 80 percent of known N-nitrosamine compounds have been shown to be carcinogenic in a variety of species." 45 Fed. Reg. 53458 (August 12, 1980). The manufacturer "resolved" the concern "by submitting a revised formulation which contains less than 1 ppm" of the nitrosamine. *Id*. The "quantity of" the nitrosamine "is at the level of method sensitivity for N-nitrosamine analysis and represents a risk level which is acceptable to

the Agency, in accordance with the Agency's proposed policy on Pesticides Contaminated with N-nitroso compounds, published in Federal Register on June 25, 1980 (45 FR 42854)." *Id*.

149. With respect to another chemical, fluchloralin, the EPA stated in another final rule on March 27, 1981, that fluchloralin "contains a nitrosamine at levels of under 1 ppm. Based on the recent agency policy that was published in the Federal Register of June 15, 1980 (45 FR 42854) this falls below the currently acceptable risk criteria." 46 Fed. Reg. 18978.

150. In 1986, the EPA stated in a Notice and Emergency Order that another pesticide had "[p]otentially potent cancer-causing" nitrosamine levels above 1 ppm in data submitted from the registrant. 51 Fed. Reg. 36634 (Oct. 14, 1986). The EPA reiterated again that "According to the notice of Proposed Policy on Pesticides Contaminated With N-nitroso Compounds (45 FR 42854) issued on June 25, 1980, any level of nitrosamine contamination above 1 ppm must be mitigated, or a series of risk reduction measures must be initiated." *Id*.

151. The EPA has emphasized the standards set forth in the policy when addressing NNG specifically. In 1986, it stated "The Agency has determined that oncogenicity testing of nitroso contaminants will normally be required only in those cases in which the level of nitroso compounds exceeds 1.0 ppm (see 'Pesticide Contaminated with N-nitroso Compounds, proposed policy 45 FR 42854 (June 25, 1980)'). Therefore, although a chronic feeding study in rats was reviewed and found unacceptable, no additional studies are requested at this time." *See* Guidance for the Reregistration of Pesticide Products Containing Glyphosate as the Active Ingredient (June 1986) at 11.

152. The EPA, again, reiterated the applicable standards for NNG in a 1991 Second Peer Review of Glyphosate. It stated, "The Agency has determined that carcinogenicity testing of nitroso contaminants will normally be required only in those cases in which the level of nitroso compounds exceeds 1.0 ppm [see 'Pesticide Contaminated with N-nitroso Compounds, proposed policy 45 FR 42854 (June 25, 1980)']."

153. The EPA in the 1993 Reregistration Eligibility Decision (RED) for Glyphosate repeated its requirement that "[c]arcinogenicity testing of nitroso contaminants is normally required only in those cases in which the level of nitroso compounds exceeds 1.0 ppm."[10]

154. Consistent with EPA's policy on nitrosamines and by agreement with Monsanto, EPA limits NNG in glyphosate products to 1 part per million (ppm).

155. Dr. Stephen Wratten confirmed this. He worked as a chemist for Monsanto for many years beginning in the 1980s and then served as Monsanto's registration manager for its glyphosate-based products. In his role as a registration manager, Dr. Wratten was the person in charge of interfacing with EPA about registration issues for Monsanto's glyphosate-based products. Dr. Wratten testified that the 1 ppm limit on NNG in glyphosate products is "a limit that we [Monsanto] agreed on with EPA." Wratten Tr., 154:23-24.

156. Stephen Adams, Monsanto's Regulatory Affairs Manager at the time, also stated in an email in 2014 that "formulations containing the ethanolamine salt form of Glyphosate…can be converted into N-nitroso-glyphosate (NNG), an impurity of toxicological significance with an upper concentration limit of 1 ppm in Glyphosate products."[11]

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[10] Although EPA stated in the 1993 Reregistration Eligibility Decision (RED) for Glyphosate that about "92% of the glyphosate samples tested were below 1ppm" the pure glyphosate samples EPA assessed were taken at the factory, before they were formulated to make Roundup, and before they were exposed to any of the normal conditions that invariably cause NNG to rise in the Products. Indeed, some of the samples tested as high as 3.2 ppm. Monsanto explained this variability by noting that the samples where NNG was not detected "were not exposed to sufficient nitrosylating agent to form a detectable level of NNG" while the samples above 3ppm "simply indicate that there was a nitrosylating agent somewhere in contact with that sample." Monsanto Tr. 101:5-15. In other words, the samples under 1ppm simply hadn't yet been exposed to enough nitrites to raise the levels of NNG above 1 ppm while others had. This is important, because Monsanto hid from EPA and consumers that NNG levels are not fixed at the time the Products are manufactured and are, as Dr. Wratten put it, instead greatly impacted by "subsequent formulation and handling steps." Moreover, Monsanto agrees that the RED "pertained only to glyphosate" and was not an assessment of any Roundup branded herbicide. Monsanto Tr. 156:11-19.

[11] https://www.baumhedlundlaw.com/assets/monsanto%20roundup%20pages/secret%20documents/Monsanto-Executive-Steven-Adams-on-NNG-Issue-Dont-Want-to-Draw-Attention-to-the-Toxicity-of-Our-Product.pdf

157. Donna Farmer –a Monsanto toxicologist and chief glyphosate spokesperson – reiterated this as well, stating in a July 31, 2015 email that the concept "we" (i.e. Monsanto) "rel[ies] on globally is" that EPA "has determined that even potent nitrosamine carcinogens would not be expected to create risk concerns if present in pesticides at levels of 1 ppm or lower."[12] According to Dr. Farmer, regulators like EPA "do not require special testing or risk assessment if the level's at 1 ppm or lower."

V. MONSANTO ABANDONED EFFORTS TO PROVE THAT NNG IS NOT CARCINOGENIC.

158. Because Monsanto, Bayer CropScience and Seamless Control maintain, and EPA has believed, that the Products do not and cannot develop NNG levels over 1 ppm, EPA has not required them to provide "acceptable oncogenic testing" in accordance with EPA's nitrosamine policy. To date, none of the Defendants have provided EPA with acceptable oncogenic testing establishing that NNG is not carcinogenic.

159. Rather, of the few toxicity studies that Monsanto has done for NNG, most of which are discussed in the June 1986 Guidance for Reregistration of Pesticide Products Containing Glyphosate as the Active Ingredient ("June 1986 Guidance"), almost all were conducted by IBT, a lab known for engaging in extensive scientific fraud. Beginning in 1976, FDA and EPA discovered serious deficiencies in tests conducted by IBT to support the registration of numerous pesticides. Among those deficiencies were major discrepancies between raw data and reports of pesticide toxicology studies conducted by IBT. EPA explained, "[t]he IBT scandal shook the industry and government regulators," and by 1977, EPA placed a moratorium on registrations involving data from IBT.[13] EPA then proceeded to launch a major audit of IBT tests and came to find the majority of them to be invalid.[14] Ultimately, EPA referred

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[12]https://www.baumhedlundlaw.com/assets/monsanto%20roundup%20pages/secret%20documents/Internal-Email-from-Donna-Farmer-Monsanto-Would-Rather-Keep-Roundup-NNG-Levels-Below-1ppm-Rather-Than-Debate-Biological-Activity.pdf

[13] https://usrtk.org/wp-content/uploads/2017/10/EPA-summary-of-IBT-review-program.pdf

[14] *Id.*

the matter to the Department of Justice which culminated in convictions of three IBT executives, including its president (who happened to be a former Monsanto employee), for mail fraud and making false statements to the U.S. Government.

160. EPA further determined that each of the IBT toxicity studies on NNG were inadequate. *See* June 1986 Guidance at 11-12. For example, EPA concluded that one chronic toxicity study conducted by IBT that was performed on rats was "invalid" due to "dosing of the control groups with an excessive amount of NaC1 which resulted in high mortality of control animals." *Id*. The other chronic toxicity study done on dogs was also inadequate because the study "lacked supporting raw data." *Id*.

161. A 90-day subchronic oral toxicity study performed on rats – also conducted by IBT – was also deficient "due to inadequate reporting of clinical signs and necropsy data, and inadequate identification of the test material." *Id*.

162. EPA also rejected the mechanistic studies submitted by Monsanto finding "no acceptable studies for mutagenic or reproductive effects are available at present for NNG." *Id.*

163. Despite the serious defects with the NNG toxicity studies, EPA "determined that oncogenicity testing of nitroso contaminants will normally be required only in those cases in which the level of nitroso compounds exceeds 1.0 ppm." *Id*. EPA further found that "[b]ecause the amount of N-nitroglyphosate is less than 1.0 ppm no additional toxicology data are required". *Id*.

164. Monsanto attempted to conduct one, non-IBT, long-term carcinogenicity lab test of NNG in mice. Monsanto hired a contract lab (International Research and Development Corporation) to conduct the study (IR-77-223, 1979), which was designed to observe mice exposed to NNG over 18 months to determine whether NNG caused cancer in laboratory animals.[15] The study failed because too many mice in the high-dose group died before the

[15] Rodent carcinogenicity studies typically consist of exposing rodents to the substance being tested and then examining the mice upon completion of the study for tumors or other signs of

completion date of the study. Because of the excessive deaths, the study was terminated. Monsanto never informed EPA of the results.[16]

165. Monsanto attempted to repeat the previously failed study in 1984 with the same contract laboratory, this time as a 24 month study. Like the first attempted study, the second study suffered from excessive early mortalities in the high-dose group. Although the second study (IR-77-223, 1984) was completed, it revealed a statistically significant increase in malignant lymphomas. A statistically significant increase in malignant lymphomas in mice indicates that NNG causes cancer. Monsanto never informed EPA about the study.

166. Due to the deficiencies in the studies, "Monsanto does not rely on them to support NNG safety," as Dr. Wratten wrote.

167. Indeed, based on EPA's own statements, it has not received any information from Monsanto related to NNG since 1993 or earlier.

168. EPA has, thus, operated with the understanding that the Products do not contain levels of NNG over 1 ppm. EPA reaffirmed this position as recently as May 18, 2021 in a brief it submitted to the 9th Circuit in a case successfully challenging EPA's January 2020 interim registration review decision determining that glyphosate does not pose "any unreasonable risk to man or the environment." *NRDC v. United States EPA*, Nos. 20-70787, 20-70801, ECF No. 80-1 at 36-7 (9th Cir. May 18, 2021).

169. In that brief, EPA explained that it rejected the challenge to glyphosate's registration based on NNG because it found "NNG content was not toxicologically significant." EPA based that conclusion on the fact that "[n]o new data have been presented to warrant a reevaluation of the Agency's conclusion." *Id*. at 36. Accordingly, EPA confirmed that, from at

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cancer. The rodents are typically segregated into four dose groups: a control group (which is not exposed to the chemical being tested at all), a low-dose, mid-dose, and a high-dose group.

[16] https://www.baumhedlundlaw.com/documents/pdf/monsanto-documents-2/letter-discussing-18-month-chronic-mouse-gavage-1979.pdf

least the 1993 re-registration of glyphosate to May 18, 2021, EPA has not received any new data suggesting that levels of NNG were above 1 ppm in glyphosate-based products.

170. EPA nonetheless made clear in the same brief that "[i]f individual products contain contaminants that exceed EPA's level of concern, these must be reported to EPA and are assessed on a case-by-case basis." *Id*. at 37.

171. Monsanto, however, has been aware for decades of incidents in which its glyphosate-based products, including QuikPRO, far surpassed the 1 ppm limit for NNG.

VI. NNG FORMS AS AN IMPURITY IN GLYPHOSATE-BASED PRODUCTS.

172. Monsanto initially registered the active ingredient in the Products, glyphosate, with EPA in 1974. The EPA has understood that NNG forms as an impurity in technical grade glyphosate.

173. EPA regulations require registration applicants to certify the ingredients and other substances within a pesticide. In particular, 41 C.F.R. § 158.350 requires registration applicants to set an upper certified limit for ingredients and certain impurities. *See* 41 C.F.R. § 158.350. An upper certified limit for certain impurities may also be set on a "case by case basis" pursuant to Section 158.350(a)(4). The upper certified limit represents the maximum amount of the impurity allowable within an ingredient or product.

174. EPA uses the certified limits to review the chemical composition of the pesticide and to evaluate whether the pesticide will cause unreasonable adverse effects on human health and the environment by looking at, among other things, the toxicity of the product if hazardous ingredients and impurities are present at their upper certified limits.

175. To that end, Monsanto proposed, and EPA accepted, an upper certified limit of NNG within glyphosate acid at 2.5 ppm and an upper certified limit of NNG in formulated end products at 1 ppm. Monsanto and EPA agreed to a 1 ppm limit for NNG in formulated end products in the early 2000s. Before that, Monsanto operated with the understanding that EPA's 1980 policy on nitrosamines set a limit of 1 ppm in formulated end product.

176. Though all the Products have glyphosate as their active ingredient, the amount of glyphosate acid within a Product depends on the type of glyphosate salt used and its concentration within the Product. The reason is because the Products are mixtures of different substances and contain other ingredients like surfactants or water in liquid products. The non-glyphosate ingredients dilute the amount of glyphosate, which, in turn, decrease the amount of NNG within the formulated product at manufacture**.**

177. At the time EPA and Monsanto set the limit on NNG in glyphosate acid, Monsanto's most concentrated product on the market was Rodeo, which was made of 40% glyphosate acid.

178. Dr. Stephen Wratten explained in an internal email, dated May 4, 2010, that Monsanto's rationale behind setting the limit of NNG at 2.5 ppm in glyphosate acid was that "2.5 parts per million NNG in pure glyphosate acid would lead to a level of 1 part per million in the most highly concentrated product Rodeo." Wratten Tr. 160:8-17.

179. Wratten later explained: "It's just math. .4 times 2.5 is 1. So if Rodeo is 40 percent glyphosate acid at a level of 2.5, that becomes 1 part per million in Rodeo." Wratten Tr. 160:23-25.

180. Thereby, Monsanto calculated, and EPA accepted, the limit of NNG for the glyphosate product(s) by multiplying the percent of glyphosate acid within the product by 2.5 (the upper limit for NNG in glyphosate acid). Wratten then confirmed this calculation applies to all of Monsanto's glyphosate-based products, which necessarily includes the Products at issue in this case. *Id.* 161:1-163:14.

181. The expected limit, or level, of NNG within any of the Products can accordingly be determined by simply multiplying the percentage of glyphosate acid in the Product by 2.5—i.e., [percent glyphosate acid in product] x 2.5 = ppm NNG.

VII. MONSANTO INTRODUCES PRODUCTS WITH HIGH CONCENTRATIONS OF GLYPHOSATE TO MARKET.

182. Since the initial registration of glyphosate in 1974, Monsanto registered with EPA the following salt forms of glyphosate on or around the following dates: isopropylamine salt (December 1, 1982), ammonium salt (March 22, 1982), and potassium salt (January 5, 1982).[17]

183. All of Monsanto's glyphosate-based products – including those consisting of salt forms of glyphosate – inherited the limits of glyphosate acid. So the upper limit of 2.5 ppm in glyphosate acid applied to all glyphosate-based products, irrespective of the form of glyphosate in the product. Wratten Tr. 165:23-166:1.

184. Since the launch of Rodeo, which has since been re-branded as Roundup Custom for Aquatic & Terrestrial Use, Monsanto has continued to manufacture, market, advertise and sell more and more concentrated formulations. In 1999, Monsanto registered with EPA Ranger Pro, which is 41% glyphosate. The following year, Monsanto added Pro Concentrate to its line, which is 50.2% glyphosate. By the early 2000s, Monsanto introduced a host of super-concentrated formulations, including Roundup ProDry Herbicide, which had 71.4% glyphosate, Roundup Ultra Dry Herbicide, which had 71.4% glyphosate, and Roundup QuikPRO Herbicide which has 73.3% glyphosate.

185. Increasing the amount of glyphosate within the Product necessarily means that levels of NNG within the Product concomitantly increase.

186. Monsanto knew this. It similarly knew that increasing the concentration of glyphosate acid above 40% in glyphosate-based products necessarily meant that the presumptive upper certified limit would exceed EPA's limit of 1 ppm of NNG for glyphosate-based products.

187. Roundup QuikPRO Herbicide ("QuikPRO"), for instance, has 73.3% glyphosate and 66.6% glyphosate acid. Applying Monsanto's own calculation of estimated NNG content, (i.e., 2.5 x .666) demonstrates that Monsanto itself expected QuikPRO to have much higher concentrations of NNG, and a presumptive upper limit of 1.665 ppm of NNG.

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[17] https://www.epa.gov/sites/default/files/2020-01/documents/glyphosate-interim-reg-review-decision-case-num-0178.pdf

188. As such, ***any product*** with over 40% glyphosate acid would presumptively have a limit above EPA's limit of 1 ppm. Monsanto accordingly knew that its products with over 40% glyphosate acid had higher levels of NNG at manufacture.

189. While Monsanto was aware that the Products had elevated levels of NNG and, accordingly, some of the Products had upper limits that exceeded EPA's limit of 1 ppm within the end product, "EPA never noticed this discrepancy," Wratten wrote in an internal email in 2010.[18]

190. Wratten never told EPA about the "discrepancy" and he was not aware of anyone else at Monsanto doing so either. Wratten Tr. 171:6-172:4. EPA's pubic statements, including those as recently as in 2018 and 2021, indicate that, to date, EPA is unaware of the "discrepancy."

VIII. THE PRODUCTS ARE DEFECTIVE AND POSE AN UNREASONABLE SAFETY HAZARD.

191. Glyphosate, whether it is in its pure form or mixed in a formulated product, is highly reactive when it comes in contact with nitrites.

192. NNG forms every time glyphosate in a Product comes in contact with nitrites or nitrosating agents. The formation of NNG is linear—the greater exposure to nitrites or nitrosating agents, the more NNG will form. As Dr. Wratten, who worked as a chemist for Monsanto before becoming the registration manager for glyphosate and holds a Ph.D, explained: "It's a chemical reaction. If you put nitrite and glyphosate together, I think it's an equilibrium reaction, but nevertheless, it could form NNG." Wratten Tr. 154:1-4. Once nitrites are introduced to a glyphosate formulation, "the reaction between glyphosate and nitrate is fast and complete, and should occur early…" *Id.* 135:14-18.

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[18] https://www.baumhedlundlaw.com/documents/pdf/monsanto-documents-2/email-between-heydens-and-wratten-discussing-nng-levels-in-glyphosate.pdf

193. Nitrites, which include nitrogen dioxide, are prevalent in air and water, so acts ***required to use*** the Products (such as opening the Product and exposing it to air or mixing them with water) cause NNG to form.

194. For example, nitrites are common in air due to emissions from cars, trucks, and buses, lawn mowers, and industrial sources such as power plants. Any time a consumer opens up a Product and exposes it to the air, NNG will form when nitrites in the air react with the Product.

195. One of the most common places for consumers to store the Products is in their garages. Unfortunately, the garage is one of the worst places for nitrite exposure because exhaust—a known source of nitrites—is often present there due to the vehicles, lawnmowers and other gas-powered lawn care equipment stored there. Thus, when a consumer simply opens a Product in a garage with exhaust in the air, which is common, NNG forms when the glyphosate in the Product reacts with the exhaust.

196. Indeed, Dr. Wratten testified that "it's just not a good idea" to store Roundup in a garage. Wratten Tr. 134:15.

197. Another common source of nitrites is water because nitrites from fertilizers, waste, or minerals are often present in water. Because the Products are concentrated formulations, the Products' labels instruct consumers to mix them with water. NNG will form every time a consumer mixes a Product with water that has nitrites in it.

198. Each exposure to nitrites causes more and more NNG to form, and NNG only increases over time.

199. Other factors make NNG levels even worse. Heat is one. Storing the Products in a hot location, such as in a garage, shed or barn, accelerates NNG formation. Humidity also increases NNG formation. Time is another factor. Storing the Products for long periods of time also makes NNG worse within the Products.

200. The Products, thus, share a common design defect: the Products are designed such that they are incapable of preventing NNG from forming at levels higher than legal limits, even under ordinary conditions *when used in accordance with the Products' labels*. Because

glyphosate degrades into NNG every time it comes in contact with nitrites and nitrites are commonly introduced to the Products through acts required to use them, it is substantially certain that the Products will develop NNG above 1 ppm over their life cycle.

IX. MONSANTO CONCEALED THAT THE PRODUCTS' NNG LEVELS INCREASE TO ILLEGAL LEVELS AFTER MANUFACTURE.

201. Monsanto has been aware for decades that external factors, like water, exhaust, heat, humidity, and long storage periods, cause NNG levels to increase in the Products post-manufacture and nothing in the Products prevents NNG from forming at levels above EPA limits, as evidenced by Monsanto's own 2004 study.

202. The question of whether NNG can form in the Products post-manufacture is not up for debate. Monsanto's corporate representative testified under oath in April 2022 that it's "correct" that "NNG can form if glyphosate reacts with nitrosating agents after manufacture." Monsanto Tr. 83:19-22.

203. As early as 1991, Monsanto saw high levels of NNG in samples of a glyphosate-based herbicide taken from the factory. The chart below shows that five out of the 19 batches tested all had over 1 ppm NNG. Some batches had as much as 6 ppm.

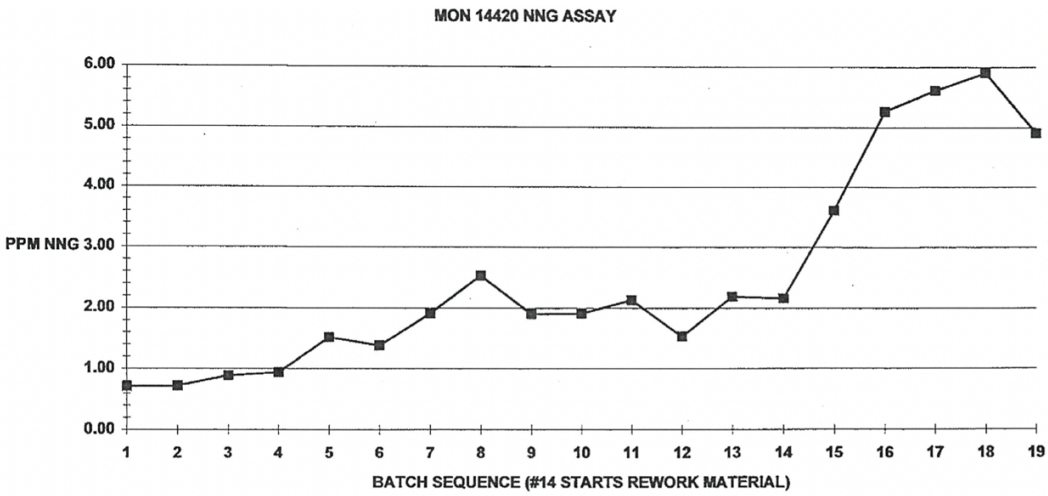

Figure 1.

204. Monsanto observed that the "reworked" batches, which had longer dwelling time, had much higher levels of NNG. But even the batches that were not "reworked" showed unlawful levels of NNG.

205. Monsanto, again, tested for NNG in lots of one of its glyphosate-based herbicides in January to February 1993. Samples from Monsanto's Helena plant ran an average of 1.2 ppm for NNG, with at least 24 lots testing above 1 ppm. Monsanto determined that it could expect that, even in the absence of nitrite-forming contaminants, NNG levels would be in the 0.6-1.2 ppm range *at manufacture* based on the process it used at its Helena plant.

206. Despite these alarming results, Monsanto ultimately decided that "with the pressure of other deadlines" it would defer working on possible solutions to the NNG problem "until at least mid-year." Even then, as Monsanto would later discover, none of the proposed "solutions", which included adding more sodium sulfite, could stop NNG from forming above 1 ppm in its highly concentrated glyphosate-based products once they reached consumers.

207. A few years later, in 1997, Monsanto tested another glyphosate-based product at the plant and found it had ***8 ppm*** after just 18 months in warehouse storage conditions and ***4 ppm*** after 18 months at room temperature. Despite this result, there was no requirement to test every lot for NNG at the time, or any effort to test formulations under real world aging conditions like the ones that generated a result over 8 times the legal limit. Further, Monsanto acknowledged at the time that that its dry formulations run closer to the 1 ppm at manufacture. Monsanto did not report the testing results to EPA.

208. Later on, in February 2001, Monsanto tested samples of glyphosate for NNG and found levels of NNG at 1.4 ppm at the point of manufacture. Eric Haupfear, a Monsanto employee, who, upon information and belief, worked on process chemistry at the time, reacted: "Thanks for the result…but actually this ***IS NOT*** a good result" since the specification of the product was 1 ppm.[19]

209. That afternoon, Mr. Haupfear emailed other Monsanto employees, stating "I wanted to ask everyone to please not forward the note below any further…" He claimed his response "could be interpreted as more 'alarming' than this really is" and he did not "want to start or imply an unnecessary fire drill."

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[19]https://www.baumhedlundlaw.com/assets/monsanto%20roundup%20pages/secret%20documents/Monsanto-Finds-Levels-of-N-ntirosoglyphosate-NNG-Exceed-the-Limit-of-1-ppm.pdf

210. Mr. Haupfear conveniently wrote off the high levels of NNG as "related to things that are coming into our system with the GI or with the W-building water supply rather than the process itself" and recommended to "just monitor it over the next few weeks."

211. Monsanto tried to control NNG formation by testing for nitrites in the water used to formulate the Products. However, it later discovered that NNG forms in glyphosate in other ways besides water during manufacture.

212. Dr. Wratten also testified about an incident involving high levels of NNG in bags of glyphosate in the early 2000s. At that time, Monsanto understood that exposure to "nitrogenous materials from exhaust fumes or other sources may seep into bags and cause NNG formation" in glyphosate products. Wratten Tr. 136:17-137:11. Dr. Wratten testified that the evidence was that "there had been some analysis of – of stored products in the warehouses" where "little tractors or trucks" were driven around "[a]nd maybe the NNG was somewhat higher than they thought it had been initially." *Id*.

213. The NNG issue came to a head when Monsanto found "***high levels of NNG (> 1.0 ppm) were reported in nearly all the production lots***" of QuikPRO in 2002 (emphasis added). For perspective on the magnitude of the issue, a single lot represents *an entire day's worth* of a factory's production. Monsanto found contamination in many days' worth of factory-produced product.

214. In a study that summarized the incident, Monsanto employees wrote that "[a]t first it was believed that nitrite contamination was coming from a combustion source" but "[a]fter further investigation it was discovered that the source of contamination was the ammonium glyphosate (MON 8750) starting material" (i.e., QuikPRO's glyphosate active ingredient).

215. Monsanto employee, Dr. Dyszlewski, learned this when he went down to the Memphis warehouse where the MON 8750 was stored to take samples. As he wrote in the study, analysis of those samples "showed a much more extensive problem." In fact, "***[n]early all the material was out of specification for NNG***", meaning it was all above 1 ppm NNG, with levels reaching as high as 8.8 ppm. (emphasis added).

216. The contaminated MON 8750 was stored in supersacks at the warehouse. Each supersack reached over six feet high and stored upwards of a thousand pounds of product. NNG formed so readily in the MON 8750 that NNG could "penetrate deep within a supersack of MON 8750 given enough exposure time." Monsanto took samples from both the surface and core of the supersacks. The surface samples had very high levels of NNG (with three samples reaching 7 ppm or above). But the NNG contamination spread far deeper than the surface. Monsanto found that levels of NNG as high as 2.91 ppm even at the core of the supersacks which was at least three feet below the surface.

217. Monsanto knew that the high levels of NNG in the MON 8750 did not form during the manufacturing process; rather, something else caused it. And, it was particularly odd because, up until that point, Monsanto did not believe that active ingredient could develop NNG by simply sitting in storage.

218. In an effort to understand "how NNG formed in MON 8750 sitting in storage," Monsanto conducted a study dated October 5, 2004 (the "2004 Study") that it never provided to EPA. The study, conducted by the inventors of QuikPRO, Monsanto employees Dr. Andrew Dyszlewski and Dr. Richard Kramer, was designed to measure formation of NNG in glyphosate and glyphosate and its formulations under a variety of conditions.

219. Indeed, Dr. Dyszlewski testified that, prior to the 2004 study "I don't think we had enough information – we had speculation of how NNG formed, but [the 2004 study] was to kind of address some hypothesis and see if there were ways of preventing any additional ways of how to prevent NNG from forming." Deposition of Dr. Andrew Dyszlewski ("Dyszlewski Tr."), *Evans v. Monsanto Co.*, No. 1722-CC01372-01, Cir. Ct. of Cty. of St. Louis Cty., June 23, 2022 at 114:10-17.

220. Monsanto definitively learned through the 2004 Study that NNG forms readily in glyphosate upon contact with nitrites, so much so that levels of NNG could reach levels as high as ***80 ppm*** (80 times over the legal limit). It also learned that the inert ingredient Monsanto uses to try to control NNG formation, sodium sulfite, cannot guarantee that NNG will stay below

1ppm. Making matters worse, the study shows that sodium sulfite degrades in the presence of humidity.

221. The 2004 Study conducted a series of tests of on QuikPRO's glyphosate-based active ingredient MON 8750. The study authors knew that water was a "key factor" in NNG formation which came from humidity in the air. The 2004 Study, accordingly, performed various tests on samples of the active ingredient in QuikPRO (MON 8750), either alone or blended with other ingredients found in the Products such as surfactant or sodium sulfite, an ingredient found in QuikPRO, to determine how much NNG forms when those samples are exposed to nitrogen oxides[20] at different levels of humidity. The answer: a lot.

222. The first test measured humidity's impact on NNG formation. It revealed "a dramatic response to NNG formation to relative humidity." It confirmed that water in humidity is key factor for NNG formation. It also showed that samples mixed with sodium sulfite reached levels above 1 ppm.

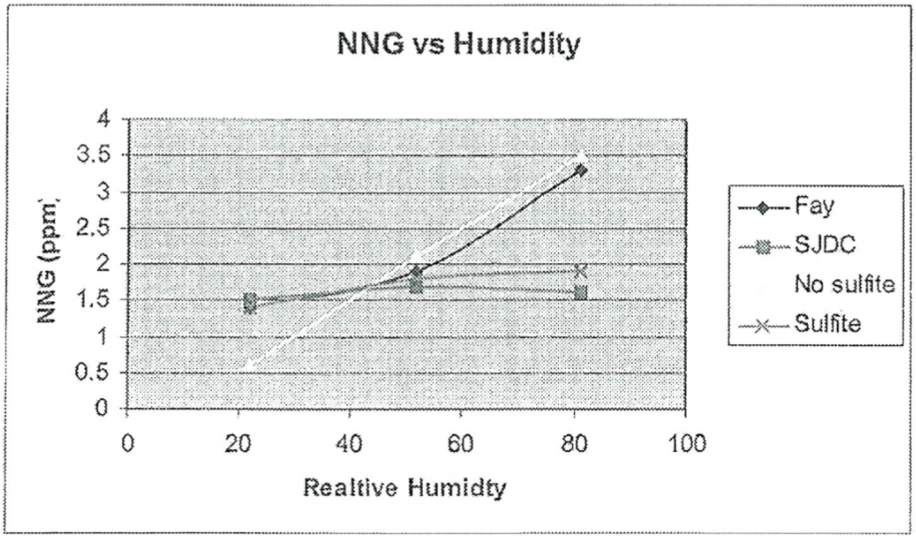

Figure 2 (Test 1).

[20] Nitrogen oxides are the most common nitrosating agent (i.e., nitrite). *See e.g.,* 48 Fed. Reg. 57014 ("Nitrosamine formation occurs as a result of a reaction between amines, which may be present in raw materials used in processing a variety of products, and a nitrosating agent, such as nitrogen oxides (NO[x]), which may be present in the air or may be formed as a result of chemical reactions that occur during processing.")

223. Dr. Dyszlewski acknowledged that at moderately high levels of relative humidity, sodium sulfite degrades "fairly rapidly." Dyszlewski Tr. at 131:08-12.

224. Test 2 measured less exposure to nitrites (5 ppm) at different levels of humidity. The first sample tested included a real world sample of MON 8750 from the factory (identified as Fay). Test 2, again, confirmed that higher levels of humidity result in higher levels of NNG, so much so that the real-world sample (Fay) reached NNG levels as high as 16 ppm. The samples mixed with sodium sulfite exceeded 1 ppm too.

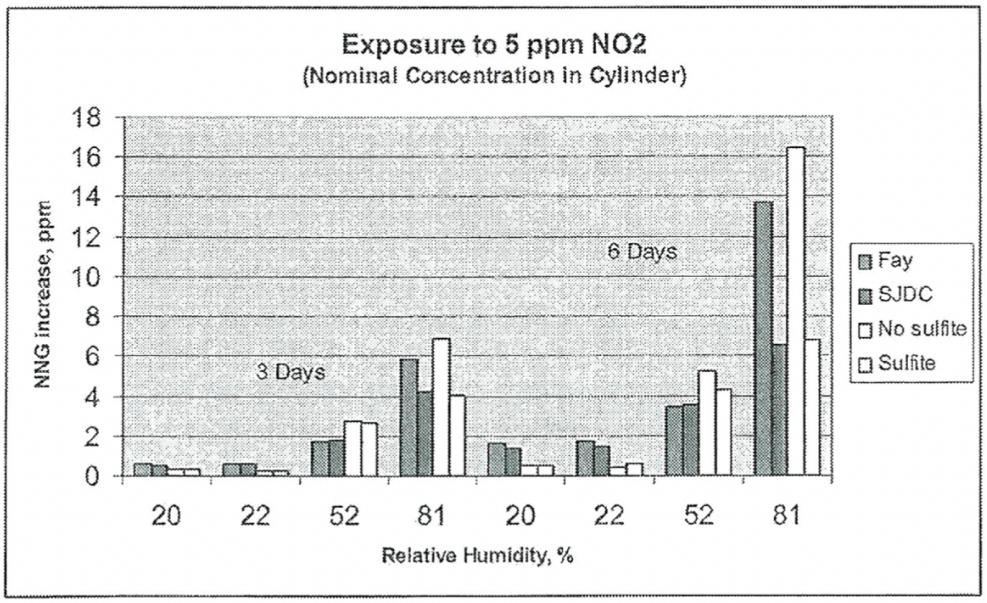

Figure 3 (Test 2).

225. Test 3 performed the same test as Test 2 except, instead of nitrite exposures of 5 ppm, exposures were reduced to 1 ppm of nitrites. Even with a lower concentration of nitrites, NNG still formed at levels well-above 1 ppm. In fact, ***all samples***, including those with sodium sulfite, developed NNG above 1 ppm when humidity was above 52%.

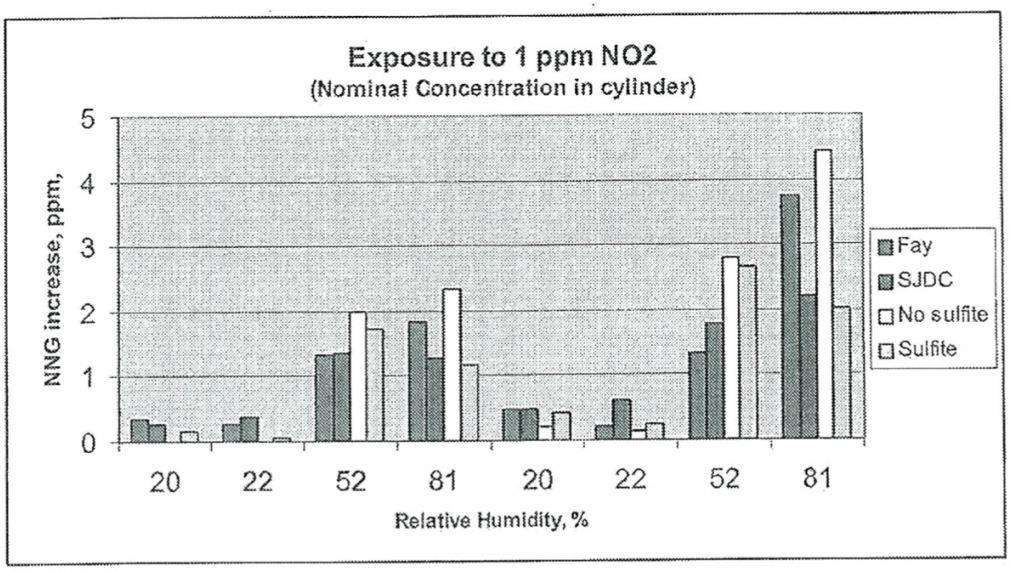

Figure 4 (Test 3).

226. In another test (Test 7), Monsanto tested samples mixed with .5% and 1% sodium sulfite. It found that "[a]fter 6 exposures, sodium sulfite at both levels appeared to have very little effect at controlling NNG when compared to the control sample."

227. The 2004 Study further found that NNG forms even when there are barriers in place. Test 5 exposed some samples of MON 8750 to nitrites that were placed in "a regular plastic bag." Although none of the real-world Products are sold in "a regular plastic bag," NNG ***still formed*** between .2 to .3 ppm, even when inside a sealed plastic bag.

228. The 2004 Study also showed that surfactants, which are found in the Products, increase NNG formation upon exposure to nitrites. Test 6, for example, measured surfactants' impact on NNG formation by adding 24% surfactant to the first three samples and 12% surfactant to the last sample of MON 8750 in the chart shown below. It found that "the addition of surfactant greatly enhances NNG growth." The first three samples in the chart shown below added 24% surfactant to samples of MON 8750. ***Every single sample reached levels of NNG above 1 ppm***. Even samples mixed with sodium sulfite reached levels above 50 ppm at 52% humidity. Similarly, samples of MON 8750 blended with just 12% surfactant had levels above 1 ppm for NNG.

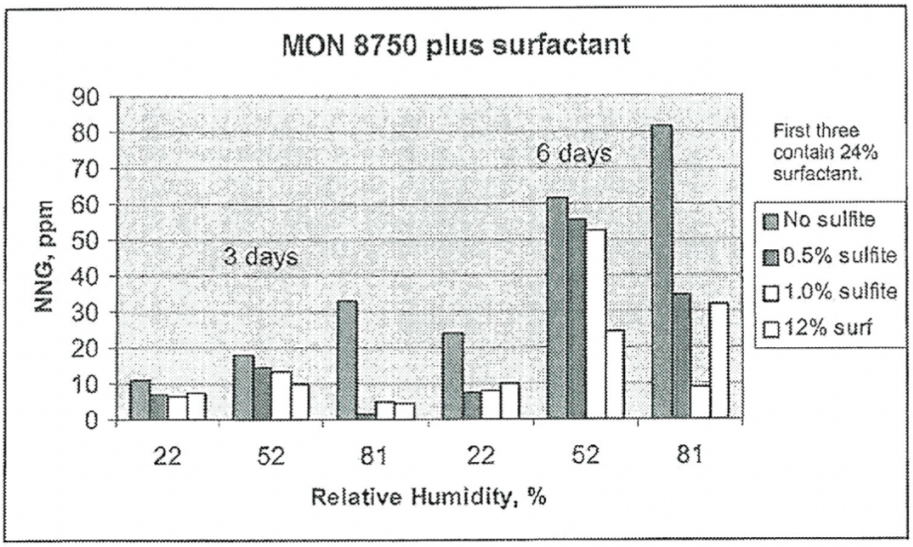

Figure 5 (Test 6).

229. Test 9 repeated Test 6 but with less exposure to nitrites, just 1 ppm in the air. Even then, the results were "very similar" and resulted in "significant generation of NNG" according to the 2004 Study.

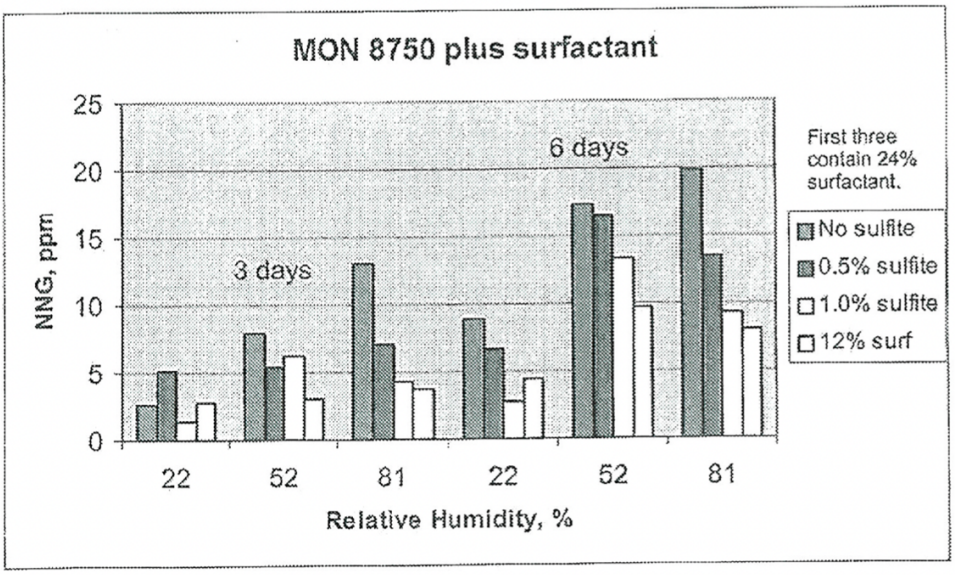

Figure 6 (Test 9).

230. The 2004 Study further demonstrated that long storage periods make NNG worse, and "[e]ven at relatively low levels of [nitrogen oxide], NNG will form in MON 8750 on-repeated exposure." Indeed, among the recommendations of the study was that inventories of MON 8750 "be minimized to prevent long storage times" and be stored "in a year round low humidity environment."

231. Despite establishing that the design of the Products cannot prevent NNG from forming at levels above EPA safety standards and, in fact, NNG forms readily in glyphosate formulations, Monsanto never performed any other studies on NNG formation. Rather, it, instead, continued to illegally sell and distribute the Products knowing that there was no way it could guarantee that NNG would stay below 1 ppm.

X. MONSANTO KNEW THAT NNG WAS SUBSTANTIALLY CERTAIN TO EXCEED 1 PPM DURING THE PRODUCTS' LIFE CYCLE.

232. Monsanto was aware that the Products were substantially certain to exceed 1 ppm for NNG over their life cycle.

233. Dr. Dyszlewski, one of the authors of 2004 Study and a Monsanto employee, took the stand in a trial in November 2, 2022. He testified that he agreed that sodium sulfite will "not completely stop" NNG from forming and conceded that Monsanto has not "proved it scientifically"; rather, Monsanto "just hypothetically think[s] it works." He further agreed that sodium sulfite "becomes less effective in humidity" since it "either breaks down or goes away somehow."

234. Dr. Dyszlewski confirmed that real-world humidity levels erode sodium sulfite. Anything over 52% humidity starts affecting the sodium sulfite. That means that sodium sulfite's ability to slow NNG growth in dry formulations of glyphosate is significantly reduced in places like California where the average annual percentage of humidity is 65%.

235. He further explained that the problems with NNG in the contaminated MON 8750 came from exposure to real-world elements, like air and combustion gas. He was asked at trial, "[w]hen it left – when it was originally manufactured, you had a sample that you put in a sealed box, and it left the factory in spec, very low, right?" He answered "correct, agreed." He was then asked, "And then it got out in the real world where there's air and combustion engines and things like that, and it got four times above the limit?" Dr. Dyszlewski testified, "correct, and out of specification."

236. It does not take much time to cause NNG to form above 1 ppm limit either.

237. NNG can form at levels above 1 ppm ***in a matter of minutes***. The tests for the 2004 Study show that the samples were exposed to nitrites for "3 days" or "6 days." In reality, the three day test exposed the samples nitrites for ***6 minutes*** per day, as Dr. Dyszlewski testified at trial, so the three-day tests show the results of a total of *18 min minutes of exposure time*. The six day test worked in a similar fashion, with six minute exposures each day for a total of *36 minutes*. As shown in Figures above, even samples taken at after just 18 minutes of exposure time exceeded 1 ppm for NNG.

238. It does not take a high concentration of nitrites to cause NNG to reach unlawful levels either. Barely traceable amounts of nitrites cause NNG to exceed 1 ppm.

239. Indeed, Dr. Dyszlewski observed in the 2004 Study that the warehouse that stored the contaminated MON 8750 did not have any "obvious sources of combustion or contamination sources."

240. Monsanto had two hypotheses as to what caused the MON 8750 to exceed above 1 ppm. One theory was that simply exposing the product to the city air in Memphis was enough to cause the product to exceed lawful limits of NNG. The other theory was that propane-powered forklifts that drove around the warehouse caused it. Neither source had a significant amount of nitrites.

241. Dr. Dyszlewski confirmed this by taking samples of the air and exhaust gas from the forklifts used at the warehouse storing the contaminated MON 8750. Though Dr. Dyszlewski was positive that there were nitrites in the warehouse air, the levels were so low that his testing device ***did not pick up any nitrites***. He also tested the air after the forklift drove by and still could not pick up any nitrites. It was not until he tested the air next to the forklift tailpipe when it was on idle that he got a read of .2 ppm, and 2 ppm when the tailpipe was revving as shown below.

Table 4: NOx Air Sampling Results at A&I Warehouse

Air sample	NOx (ppm)	Comments
Warehouse area (Southeast corner)	0	Forklift passed area about 3 minutes before sampling. No change in tube color after a total of 10 strokes.
Warehouse area (Southeast corner)	0	Forklift passed area about 5 minutes before sampling. No change in tube color after a total of 10 strokes.
Warehouse area (Northeast corner)	0	Forklift passed area about 1 minute before sampling. No change in tube color after a total of 10 strokes.
Forklift at idle	0	Air sampled 5 feet behind idling forklift at a height of 3 feet. No change in tube color after a total of 10 strokes.
Forklift at idle	0.2	Air sampled at exhaust pipe near ground level.
Forklift at high engine RPM	2	Air sampled at exhaust pipe near ground level.

Figure 7.

242. Monsanto's findings have multiple implications for NNG formation in real-world Products that consumers actually use.

243. The first is that exposing the Products to barely traceable levels of nitrites ***in the air*** for a matter of minutes can cause NNG to exceed lawful levels. Indeed, Dr. Dyszlewski agreed, while under oath, that Test 9 "was the test that [Monsanto] ran to try and as most closely as [Monsanto] could replicate what might be a warehouse environment with sodium sulfite in the glyphosate." In other words, it was the test designed to best replicate nitrite concentration found in the warehouse.

244. Test 9 also best approximates the Products themselves since they all have surfactant in them. Test 9 exposed samples of MON 8750 blended with surfactant to *just 1 ppm nitrites* – half the concentration of nitrites in the air when the tailpipe is revving – for *a total of 18 minutes over three days and 36 minutes over six days*. Samples with significantly less humidity than what is generally present in California (i.e., those exposed to ≥ 52% humidity) developed ***10 ppm or more NNG*** after 18 minutes of nitrite exposure. Samples exposed to 18 more minutes of nitrites (for a total of 36 minutes) got to at least 20 ppm NNG, with most surpassing 50 ppm (i.e., ***over 50 times the legal limit)***. The addition of more humidity generated even worse results and higher levels of NNG.

245. These results do not show slight deviations from the legal limit. They show that nitrite levels, lower than the levels a consumer would typically encounter in their own garage, can cause NNG to form at levels ten times the limit or even 50 times the limit after mere minutes of exposure at humidity levels less than what typically exists in California.

246. Products get exposed to the air every time consumers open them to use them and prepare them for use. By the time the consumer reads the label, measures out the amount of product, and mixes in the water, it can around ten minutes alone for a single spray. Given that it can take years to use a single Product, adding up all the times in which a consumer does this over the course of the Products' life cycle is substantially certain to exceed 18 minutes over the course of the Product's life cycle.

247. Moreover, the concentration of nitrites in ordinary consumers' garages is almost certainly higher than the warehouse conditions that caused the MON 8750 to develop unlawful levels of NNG. Monsanto believed that one of the sources of nitrites in the warehouse was the propane-powered forklifts that were being driven around. Propane, however, burns far cleaner and produces far less nitrites than the exhaust that comes out of vehicles, lawn mowers or other gas-powered products.[21] The forklifts also were not in the warehouse that often. In contrast, consumers typically drive their cars frequently, often everyday, and each time they drive into their garage and park, they are trapping nitrites in the garage. Thus, consumers who open and store their Products in garages (as most do) expose the Products to higher concentrations of nitrites than those found in the warehouse that caused the MON 8750 to go bad.

248. Indeed, when Monsanto had previously encountered problems with NNG formation in its glyphosate products, it responded by replacing forklifts powered by internal combustion engines with electric forklifts, so as to minimize NNG formation since electric forklifts do not generate exhaust.

249. Gas-powered lawnmowers, weed whackers, and leaf blowers, ordinary tools used by many consumers, generate far more nitrites than even car engines and are also typically stored in garages. According to EPA, gasoline-powered equipment, such as lawn mowers and leaf blowers, emit approximately 242 million tons of pollutants annually, just as much as cars and homes. Nationally, the equipment accounts for 12 percent of NOx emissions. *See* https://www.epa.gov/sites/default/files/2015-09/documents/banks.pdf

250. While the 2004 Study establishes that humidity and low nitrite exposure cause NNG to form at unlawful levels, it does not account for all the factors that cause NNG to form, including heat and the water that consumers use to mix the Products. *These factors make it even more certain that NNG will form at unlawful levels in real-world Products*.

251. For instance, Monsanto had discussions about the ways in which NNG increases in its glyphosate formulations. In 2003, in response to an email from a colleague about testing for

[21] *See e.g.,* https://afdc.energy.gov/vehicles/propane_emissions.html.

NNG, Dr. Wratten wrote "[i]t is of course the NNG that concerns me." Wratten Tr.143:19-144:9. Dr. Wratten testified that the concern he had was with heat. The email chain, in fact, flags that "at a higher temperature, NNG might increase." *Id.* at 144:5-9.

252. Dr. Wratten also knew that consumers who choose "to apply glyphosate in combination with fertilizers…might bring some nitrite into the mixture." *Id.* 141:3-7.

253. Dr. Wratten even testified that water, which is required to use the Products, was another source of nitrites. He testified: "People also, of course, dissolve the formulated product in water for spraying. If the water comes from groundwater, and fertilizers or something have leached, you – you just don't know what might be in the groundwater. So you're adding materials to the formulation of unknown purity and composition." *Id.* 141:12-19.

254. In agricultural areas, nitrogen-based fertilizers are a known major source of contamination for groundwater aquifers. *See* Dubrovsky, N.M., and Hamilton, P.A., 2010, Nutrients in the Nation's Streams and Groundwater: National Findings and Implications: U.S. Geological Survey Fact Sheet 2010, *available at* https://pubs.usgs.gov/fs/2010/3078/.

255. By 2007, Monsanto and Scotts faced problems caused by high nitrite levels in water. On June 29, 2007, Lynn Boyd, a Monsanto employee, wrote an internal email stating, "With summer upon us, once again, Scotts is faced with increasing nitrite levels in their city water supply." Ms. Boyd chose to "issue a change in the spec to increase nitrite level[s]". She noted that Monsanto "[f]or the past two summers" has "been issuing spec waivers for nitrite" even though Scotts tended to see high levels of nitrites in the water it used to formulate the glyphosate products nitrite levels.

256. Ms. Boyd proposed permanently changing the specifications for nitrite in formulation water at Scotts and reached out to Dr. Wratten to get his thoughts "from a registration perspective." Dr. Wratten explained "I do think this is important, because the nitrite level is linked to NNG, which a legal limit." He went on to say, "Since I think the reaction between nitrite and glyphosate is complete and instantaneous, and glyphosate is not limiting, for every unit of nitrite in the water, there is a roughly 4-times higher concentration of NNG produced." He recommended "maintain[ing] our standards" but noted that "[p]ractically

speaking, I'm pretty sure nobody is looking at this in products on the shelf, and it has been a very quiet issue for at least 15 years."

257. Indeed, the water used to formulate some of the Products is purified to reduce nitrites, but, as Dr. Dyszlewski testified, Monsanto knew that water that comes from a hose or is otherwise used to mix the Products, in all likelihood, has higher levels of nitrites.

258. More egregiously, as of April 2008, Monsanto itself did not appear to even have a firm grasp on how much NNG was in the Products ***before*** they were distributed to retailers.

259. In an email chain from April 2008, Monsanto employees discussed different techniques competitors used to avoid impurities like NNG from forming during manufacture.[22] A Monsanto employee advised other Monsanto employees, including Donna Farmer, William Heydens, Annette Kirk, and Stephen Waters, that "No 'route' really avoids NNG, since it is formed inadvertently directly from glyphosate, in the presence of nitrosating agents. If glyphosate is present, so may NNG be. Such nitrosating substances may occur from different reagent batches, shipping containers, water, etc." The employee conceded that while Monsanto "might say our route avoids NNG" because Monsanto checks for impurities in the water used for the products, it still forms. The employee then advised: "The only way to know for sure is to measure NNG in many batches over time and convince yourself empirically that [it] does not exceed your detection sensitivity or the legal 1 ppm limit."

260. On May 4, 2010, Dr. Wratten again raised problems with NNG. In an email to William Heydens, a Monsanto toxicologist, and Russell Schneider, a senior regulatory advisor for Monsanto, Dr. Wratten wrote: "NNG is an undesired and inadvertent contaminant that arises when glyphosate is exposed to a 'nitrosating material,' such as sodium nitrite. It can arise during manufacturing of the AI [active ingredient], but also post-production environments such as formulation components (including the water!) or even exposure of dry glyphosate to diesel exhaust."[23]

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[22] https://www.baumhedlundlaw.com/documents/pdf/monsanto-documents-2/mongly02530964-mongly02530966_redacted.pdf

[23] https://www.baumhedlundlaw.com/documents/pdf/monsanto-documents-2/email-between-heydens-and-wratten-discussing-nng-levels-in-glyphosate.pdf

261. In the same email thread, Dr. Wratten acknowledged that NNG's "level is not fixed at the time of acid manufacture, but instead is greatly impacted by subsequent formulation and handling steps." *Id*. He added "[b]ecause of these facts, it is also easily contaminated during sampling and analysis, and all high results need to be investigated and verified." *Id*.

262. In July 31, 2015, John Acquavella, a former Monsanto employee and paid epidemiology consultant at the time, asked Donna Farmer in an email whether "glyphosate [is] really nitrosable" and if NNG is "judged likely to be an animal human carcinogen."[24]

263. In response, Dr. Farmer acknowledged that glyphosate was, in fact, nitrosable. *Id*. She additionally wrote that regulators like EPA "do not require special testing or risk assessment if the levels are at 1 ppm or lower." *Id*. She then admitted that "***Monsanto therefore prefers to carefully control against NNG formation rather than to engage in scientific debate around its biological activity***" even though in the same email she admitted that "nitrosating agents" can arise "during or after manufacture." *Id*. (emphasis supplied).

264. More fundamentally, Monsanto knew that, once the Products reached consumers, there was nothing it could do to control against NNG formation, no matter what efforts the company took to keep the levels down during manufacture because glyphosate is inherently reactive with nitrites. Yet, it did nothing to inform consumers, EPA, or other regulators about the inherent risks of the Products. It did not add an expiration date to the Products via notification process. To the contrary, it did nothing.

XI. MONSANTO ACTIVELY CONCEALED THE SAFETY HAZARDS WITH THE PRODUCTS FROM REGULATORS AND CONSUMERS ALIKE.

265. Internally, Monsanto was deeply worried about what it might find if it tested older Products in the field, even though testing older products would inform Monsanto about the levels of NNG within the Products consumers use, and thus are exposed to, in the real world.

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[24] https://www.baumhedlundlaw.com/assets/monsanto%20roundup%20pages/secret%20documents/Internal-Email-from-Donna-Farmer-Monsanto-Would-Rather-Keep-Roundup-NNG-Levels-Below-1ppm-Rather-Than-Debate-Biological-Activity.pdf

266. As early as 1997, Dr. Wratten wrote in an internal email: "I find that Monsanto overlooked or ignored EPAs request to conduct nitroso analyses on aged samples of Roundup, MON 0139, Rodeo and Polado. There was no discussion with EPA about this omission, and they also appeared to overlook or ignore it." He further wrote, "EPA have published in the Federal Register a policy in 1980 regarding nitroso contaminants that requires such aged analyses, and they forwarded us a copy as part of the reviews of studies we did submit in 1988." Though EPA never explicitly demanded such studies, "it would have been an obvious request in light of the policy text." He further explained that "the last two occasions when EPA became concerned with nitroso impurities in glyphosate, they refused to issue new tolerances or approve new uses until the matter was resolved." Dr. Wratten was worried "they make take a similar step" if Monsanto were to point it out to EPA, which he thought "would be devastating for planned introduction of RR crops" (i.e., Monsanto's cash cow of Roundup Ready genetically modified seeds). His suggestion was to "let the whole matter of nitroso impurities lie quietly with no undo attention."

267. Another Monsanto employee, Paul Nord, rejected Dr. Wratten's suggestion, arguing that he thought Monsanto "should do something, to either get the data exactly as requested or respond with 1 year (or longer) data. This is something that should be wrapped up and not left hanging."

268. Dr. Wratten nonetheless urged the group to do otherwise, stating "we need to consider carefully the need to initiate the aging studies that EPA requested 10-15 years ago" since EPA had not mentioned it in recent communications. Monsanto chose to follow Dr. Wratten's recommended course of action and "let the whole matter of nitroso impurities lie quietly" rather than test aged, real world Products.

269. Monsanto revisited the issue on January 13, 2003 when Dr. Wratten wrote, "[f]ormation of NNG on aging of the formulation is one topic we have avoided carefully."

270. When asked why Monsanto avoided the topic, Dr. Wratten admitted that Monsanto simply did not want to know how much NNG was in the Products when consumers used them. He testified: "It's one of those things that you can't ever finish, because imagine we aged it for a year and everything was fine. Then someone says, Well, what about two years, or

what about five years. And it's -- once you start down that path, I don't see the end to it." *Id*. at 133:6-13. Monsanto, of course, knew that consumers in the real world store the Products for years. *Id*. at 133:14-18.

271. Instead of testing, Monsanto did the exact opposite; it intentionally avoided testing, for fear of the results. Dr. Wratten wrote, in that same January 13, 2003 email: "[t]here is a lingering concern about aged samples of dry products… *I would avoid sampling long-aged dry product from retail*." *Id*. at 136:6-11 (emphasis added).

272. When asked why he would avoid sampling long-aged dry product from retail, Wratten explained that Monsanto does not sample products from consumers because there are too "many variables." *Id*. 137:16-138:3. He would "avoid it just because you might find differences from when it was manufactured." *Id*. He conceded, with respect to NNG, "you might find more [NNG] than you started with." *Id*. at 138:6-7. Sampling long-aged dry product from retail also "***might result in you having to recall a bunch of product***." *Id*. at 138:18-139:2 (emphasis supplied).

273. When asked directly if Monsanto would have to recall product that had more than 1 ppm of NNG, he said "***yes***." *Id.* (emphasis supplied). Indeed, Dr. Wratten later admitted that Monsanto's U.S. business never received an NNG aging study. Wratten Tr. 133:1-5.

274. Dr. Wratten remained concerned about high levels of NNG in consumers' Products seven years later. In 2010, he wrote "it is a real concern that even our own material that was okay at the production plant could have higher levels later when sampled in the field." *Id*. at 154:5-9. Wratten testified that by "real concern" he meant "it's a real concern relative to the 1 ppm limit." *Id*. at 154:15-17. At that time, he again reiterated that NNG could arise during the manufacture of the active ingredient but also in "post-production environments" like adding water or exposure to diesel. *Id*. at 153:10-18.

275. To date, Monsanto has not tested samples of aged products from retail.

276. Despite knowing the problems with Products out "in the field" (i.e., with consumers), Defendants nonetheless sold and distributed the Products in quantities that are not

designed for a single use with one exception of which Plaintiffs are aware;[25] rather, the rest of the Products are marketed as bulk items designed to be used over multiple occasions and stored over long periods of time. Given that it can take up to a year for weeds to grow back after area has been sprayed, it can easily take consumers more than a year to use the entire bottle of any Product sold in quantities at or above a gallon, which are specified on Exhibit 1.

277. In choosing to manufacture, market, sell, and distribute the Products in large quantities, Defendants knew (or, at a minimum, should have known) that consumers would use the Products for multiple sprays over time. In doing so, they also knew that the Products were substantially certain to get more dangerous with each use. Not only would it increase the likelihood of exposure to nitrites, but age, humidity, hot temperatures and other exposures would lead to even more, unsafe levels of NNG in the Products.

278. In short, Defendants prioritized profits over its customers' safety, despite knowledge of the dangers of exposure to NNG in the Products. Simply put, Monsanto, Bayer CropScience, and Seamless Control did not want to recall Product or risk a fire drill; instead, they elected to hide the truth from everyone.

279. To date, Bayer AG, speaking on behalf of Monsanto and Bayer CropScience, insists that "[b]oth we and the relevant regulatory authorities continue to believe there are no safety concerns in connection with these products." *See* Bayer 2021 Annual Report, p. 72.

280. In the wake of trial losses in personal injury cases alleging that Roundup causes cancer, Monsanto and Bayer AG issued a series of statements assuring the public about the safety of its products, even though, at the time, it knew that glyphosate was prone to developing a presumably carcinogenic nitrosamine.

281. On August 16, 2018, Bayer AG told the public, "Bayer believes that the jury's decision is at odds with the weight of scientific evidence, decades of real world experience and

[25] The exception is QuikPRO which is also sold in a 6.8 lb jug and in packets of 5 of 1.5 oz each.

the conclusions of regulators around the world that all confirm glyphosate is safe and does not cause non-Hodgkin's lymphoma."[26]

282. On August 23, 2018, Bayer AG held a conference call to discuss the Roundup litigation. Werner Baumann, Bayer AG's Chief Executive Officer, told investors that the verdict is "completely inconsistent with all available facts," because Roundup was in "very good regulatory standing" and there was "strong science supporting" glyphosate's safety.[27]

283. Bayer AG reiterated this concept in October 2018 after it lost the *Johnson* trial. It assured consumers that "[g]lyphosate-based herbicides have been used safely and successfully for over four decades worldwide." It based this assertion on the supposed "extensive body of research on glyphosate and glyphosate-based herbicides, including more than 800 rigorous registration studies required by EPA, European and other regulators" that allegedly "confirm[] that these products are safe when used as directed."[28] But, at the time Bayer AG issued that statement, its subsidiaries, Monsanto and Bayer CropScience, knew that EPA did not have critical information about the inability to control NNG formation post-manufacture or the so-called "discrepancy" regarding the elevated levels of NNG in the Products – information that would have revealed the safety hazards posed by the Products.

284. To date, Bayer AG maintains a webpage for Monsanto and Bayer CropScience titled "Glyphosate is Safe" but does not mention anywhere that glyphosate is, by its nature, highly reactive to nitrites to form NNG, which poses a serious threat to consumers' safety in using the Products.[29]

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[26] https://media.bayer.com/baynews/baynews.nsf/id/Bayer-Conditions-for-beginning-Monsanto-integration-fulfilled

[27] https://www.bayer.com/sites/default/files/2020-11/ConferenceCall_2018-08-23_Transcript.pdf

[28] https://www.bayer.com/en/glyphosate/is-glyphosate-safe

[29] *Id.*

XII. FIFRA REQUIREMENTS ON LIMITS OF IMPURITIES.

285. FIFRA governs the sale, distribution and use of pesticides in the United States and establishes a federal registration framework that prohibits the distribution or sale of any unregistered pesticides. 7 U.S.C. § 136a(a). Specifically, Section 136a(a) provides "[e]xcept as provided by this subchapter, no person in any State may distribute or sell to any person any pesticide that is not registered under this subchapter." *See also* 7 U.S.C. § 136j(a)(1)(A) ("it shall be unlawful for any person in any State to distribute or sell to any person – (A) any pesticide that is not registered under section 136a of this title…").

286. FIFRA defines the term "pesticide" to include "any substance or mixture of substances intended for use as a plant regulator, defoliant, or desiccant." 7 U.S.C. § 136(u)(2). The Products are pesticides because they are herbicides intended to kill weeds.

287. One of the factors EPA evaluates during the registration process is whether the pesticide "will not cause unreasonable adverse effects on humans and the environment." *Bates v. Dow Agrosciences*, 544 U.S. 431, 438 (2005). *See also* 7 U.S.C. § 136a(c)(5)(C), (D), §§ 136(bb). EPA cannot register a pesticide unless it finds the pesticide "will not cause unreasonable adverse effects on humans and the environment." 7 U.S.C. § 136a(c)(5)(C), (D).

288. FIFRA defines "unreasonable adverse effects" to include "any unreasonable risk to man or the environment, taking into account the economic, social, and environmental costs and benefits of the use of any pesticide." 7 U.S.C. 136(bb).

289. A product's registration under FIFRA establishes the terms and conditions under which that product may be lawfully sold, distributed, and used. *See* 7 U.S.C. § 136j(a)(1)(A); *see also* 7 U.S.C. §§ 136a(c)(1)(A)-(F), 136a(c)(5) and 136a(d)(1). Because registration extends solely to the chemical composition that EPA approves, only pesticides that have the *exact same chemical composition* that EPA registered may be sold, distributed, and bear the registered product's label. *Id.*; *see also* 7 U.S.C. § 136(q)(1)(C); 7 U.S.C. § 136j(a)(1)(C), (E). EPA makes this requirement explicit in Section 152.130(a), where it states "[a] registrant may distribute or

sell a registered product with the composition, packaging and labeling currently approved by the Agency." 40 C.F.R. § 152.125.

290. California also requires manufacturers to register herbicides that are sold in the state with the Department of Pesticide Regulation. Specifically, Cal. Food & Agric. Code § 12811 provides that "[e]very manufacturer of, importer of, or dealer in any pesticide…shall obtain a certificate of registration from the department before the pesticide is offered for sale." Cal. Food & Agric. Code § 12993 further provides that "[i]t is unlawful for any person to manufacture, deliver, or sell any pesticide or any substance or mixture of substances that is represented to be a pesticide…which is not registered pursuant to this chapter…" Only EPA-approved herbicides may be sold and registered in California.

291. As part of the federal registration process, EPA must approve the chemical composition of the product, which is defined by limits on ingredients and impurities like NNG.[30] *See* 41 C.F.R. §158.350; 7 U.S.C. § 136a(c)(5). As to nitrosamines specifically, EPA has stated applicants "must certify the upper limit of the N-nitroso compound" in "all products containing a positive level of N-nitroso contaminant." 45 Fed. Reg. 42856.

292. The limits "become legally binding limits upon approval of the application" and apply "to the product from the date of production to date of use." 41 C.F.R. §158.350. In other words, certified limits define the precise contours of the product pesticide manufacturers are authorized to sell.

293. Applicants and registrants can shorten the applicable timeframe of the limits by putting "a statement prohibiting use after a certain date" at which point "the certified limits will apply only until that date." 41 C.F.R. §158.350.

294. However, if an applicant or registrant declines to put "a statement prohibiting use after a certain date" on the product, then an impurity within an herbicide can ***never*** exceed its

[30] EPA defines "impurity" to mean "any substance (or group of structurally similar substances if specified by the Agency), in a pesticide product other than an active ingredient or an inert ingredient, including unreacted starting materials, side reaction products, contaminants, and degradation products." 41 C.F.R. §158.300.

certified limit. In such circumstances, if an impurity exceeds its certified limit ***at any point in time***, the herbicide is and has always been unregistered and is illegal to sell or distribute.

XIII. DEFENDANTS UNLAWFULLY SOLD AND DISTRIBUTED UNREGISTERED HERBICIDES.

295. The upper certified limit for NNG in each of the Products is 1 ppm. The upper certified limit is a binding part of each Product's registration. At all times relevant hereto, none of the Products contained a statement prohibiting use after a certain date on the label.

296. Section 158.350(a)(4) provides that "Certified limits are required on the following ingredients of a pesticide product:… (4) On a case-by-case basis, certified limits for other ingredients or impurities as specified by EPA." 41 C.F.R. §158.350(a)(4).

297. The 1 ppm limit for NNG in the Products was one of the "case-by-case" instances in which EPA required a certified limit. EPA set a 1 ppm limit on NNG through its 1980 policy on nitrosamines and by an agreement with Monsanto in the early 2000s to limit NNG to 1 ppm in formulated end products.

298. Monsanto and its senior employees charged with managing the Products have repeatedly confirmed (and, in fact, testified under oath) that Monsanto agreed with EPA to set a certified limit for NNG of 1 ppm in its glyphosate-based products, including the Products.

299. Dr. Wratten, who was in charge of the registrations of all of Monsanto's glyphosate-based products, testified that the 1 ppm cap on NNG in glyphosate products is "a limit that we [Monsanto] agreed on with EPA." Wratten Tr., 154:23-24.

300. Dr. Dyszlewski also agreed under oath that "the legal limit for NNG is that it ought not exceed that 1 part per million." He further agreed under oath that it is a "legal limit applies throughout the product's entire life cycle," meaning the product needs to be under 1 ppm "from the time it's made to the time the last scoop comes out of that jug". When asked if the 1 ppm limit is "a rule laid down by EPA," he answered "correct."

301. Stephen Adams, Monsanto's Regulatory Affairs Manager, who assumed many of Dr. Wratten's responsibilities following his retirement, also confirmed the 1 ppm limit on NNG

in his sworn testimony. Adams testified that he understood that pesticide products cannot exceed 1 ppm of NNG pursuant to EPA's rules. Deposition of Stephen Adams, *Evans v. Monsanto Co.*, No. 1722-CC01372-01, Cir. Ct. of Cty. of St. Louis Cty., April 7, 2022 at 110:9-22.

302. On April 21, 2022, Monsanto's own corporate representative sat for a deposition in *Evans v. Monsanto Co.*, No. 1722-CC01372-01, Cir. Ct. of Cty. of St. Louis Cty., April 21, 2022 ("Monsanto Tr."). The deposition had a single topic: "Monsanto's actions and communications regarding N-nitrosoglyphosate in its Roundup branded herbicides." Monsanto's corporate representative prepared between 30 to 40 hours for the deposition and testified that he was "speaking for Monsanto Company" and understood that all answers "are binding on Monsanto."

303. During the deposition, Monsanto's corporate representative was shown a copy of 21 CFR § 158.350 and asked "So Monsanto has to set an upper certified limit for NNG in its Roundup branded herbicide:s, correct?" Monsanto answered, "Yes, we do." Monsanto Tr. 55:6-8.

304. Monsanto was further asked, "And what's that limit?" Monsanto testified "It's one part per million, and that applies whether it's the final product on the shelf or the technical material it manufactures, it applies of the whole life span." *Id*. 55:9-13.

305. Again, Monsanto was asked, "And we agreed that quantities of NNG greater that 1 part per million are not part of any Roundup branded herbicide's approved composition, true?" Monsanto answered, "So above 1 PPM, yeah, that's the limit. That's the limit we've set." *Id*. 64:18-23.

306. Monsanto further testified that EPA set the 1 ppm limit in 1980 via its policy on nitrosamines. Monsanto and the EPA agreed to set a 1 ppm limit for NNG on formulated end products in 2000. Monsanto was asked "whether or not Monsanto proposed that 1 PPM number to EPA." Monsanto testified, "So, again EPA number from 1980, that was one that EPA came up with and that they determined would be protected. The 1 PPM number that applies now after 2000 we did help to set that number." *Id*. 56:13-19.

307. When asked whether EPA's 1980 policy on nitrosamines "actually went into effect," Monsanto testified "yeah," even though the 1980 policy on nitrosamines was "proposed policy" it "is essentially how EPA has approached this situation." Monsanto Tr. 46:14-18. Monsanto also testified that the 2.5 ppm upper limit for NNG on glyphosate acid "comes from the 1980 proposed policy from EPA." *Id*. 98:06-09.

308. The Products, therefore, have an upper certified limit of 1 ppm for NNG. As a result, in order to legally sell or distribute any of the Products, the Products must come with a guarantee that NNG will not exceed 1 ppm for the entire life cycle of the Product.

309. The Products sold to consumers are unregistered because they cannot guarantee that NNG will stay below 1 ppm for the Products' entire life cycle. The design of the Products is such that they are incapable of preventing NNG from forming above 1 ppm, even when used in accordance with the label. Because glyphosate degrades into NNG every time it comes in contact with nitrites and nitrites are commonly introduced to the Products through acts required to use them, the Products can develop NNG above 1 ppm over their life cycle.The Products' certified limits, upon which the Products' registrations with EPA are based, however, do not allow the Products to have over 1 ppm NNG *at any point in time* since the Products do not include a statement prohibiting use after a certain date. As a result, the Products are and have always been unregistered pesticides and violate 41 C.F.R. §158.350.

310. Further, the sale and/or distribution of the Products was also prohibited because the Products' chemical composition differed at the time of their sale or distribution from what was allowed under their registrations. None of the Products' registrations permit NNG to exceed 1 ppm at any point in time during the Products' life cycle. And, none of the Defendants ever sought or received permission from EPA to sell or distribute pesticides that could exceed the 1 ppm limit for NNG. NNG in the Products, however, can exceed 1 ppm many times over even when used in accordance with the label. Accordingly, Defendants never had a right to sell or distribute the Products.

311. Monsanto and Bayer CropScience manufactured the Products. Monsanto, Bayer CropScience, and Seamless Control sold, offered for sale, delivered, and distributed the Products

through third parties. Scotts sold, distributed, offered for sale, and delivered at least two of the Products, the Roundup Weed & Grass Killer Super Concentrate and the Roundup PRO.

312. Defendants' sale and/or distribution[31] of the Products was illegal in violation of FIFRA, including but not limited to:

a. 7 U.S.C. § 136a(a) ("no person in any State may distribute or sell to any person any pesticide that is not registered under this subchapter);

b. 7 U.S.C. § 136j(a)(1)(A) ("it shall be unlawful for any person in any State to distribute or sell to any person— (A) any pesticide that is not registered under section 136a of this title or whose registration has been canceled or suspended, except to the extent that distribution or sale otherwise has been authorized by the Administrator under this subchapter");

c. 7 U.S.C. § 136j(a)(1)(C) ("it shall be unlawful for any person in any State to distribute or sell to any person— (C) any registered pesticide the composition of which at the time of its distribution or sale from its composition as described in the statement required in connection with registration under section 136a of this title");

d. 7 U.S.C. § 136j(a)(1)(E) ("it shall be unlawful for any person in any State to distribute or sell to any person—(E) any pesticide which is adulterated or misbranded");

e. 7 U.S.C. § 136(q)(1)(C) (a pesticide is misbranded if "it is an imitation of, or is offered for sale under the name of, another pesticide");

f. 7 U.S.C. § 136j(a)(2)(S) ("It shall be unlawful for any person—to violate any regulation issued under section 136a(a) or 136q of this title").

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[31] Section 152.3 provides "*[d]istribute or sell* and other grammatical variations of the term such as 'distributed or sold' and 'distribution or sale,' means the acts of distributing, selling, offering for sale, holding for sale, shipping, holding for shipment, delivering for shipment, or receiving and (having so received) delivering or offering to deliver, or releasing for shipment to any person in any State." 40 C.F.R. §152.3; *see also* 7 U.S.C. § 136(gg) (same definition).

313. Defendants' sale, offering for sale, delivery and/or distribution of the Products was also illegal in violation of parallel requirements under California law, including but not limited to:

a. Cal. Food & Agric. Code § 12811 ("[e]very manufacturer of, importer of, or dealer in any pesticide…shall obtain a certificate of registration from the department before the pesticide is offered for sale");

b. Cal. Food & Agric. Code § 12881(c) (a pesticide is misbranded if it "it is an imitation of, or offered for sale under the name of, another article");

c. Cal. Food & Agric. Code § 12991(c) (it is unlawful for any person in connection with a pesticide to "[e]ngage in illegitimate business or dishonest dealing");

d. Cal. Food & Agric. Code § 12991(d) (it is unlawful for any person in connection with a pesticide to "[c]ause to be published or distributed any false or misleading literature, or cause to be displayed any false or misleading advertisement")

e. Cal. Food & Agric. Code § 12992 ("[i]t is unlawful for any person to sell any adulterated or misbranded pesticide"); and

f. Cal. Food & Agric. Code § 12993 ("[i]t is unlawful for any person to manufacture, deliver, or sell any pesticide or any substance or mixture of substances that is represented to be a pesticide…which is not registered pursuant to this chapter…")

314. FIFRA sections 12(a)(1)(A) and (B) "make it unlawful for any person to 'offer for sale' any pesticide if it unregistered." 40 C.F.R. §168.22(a); *see also* 7 U.S.C. § 136j(a)(1)(A). EPA interprets this requirement as "extending to advertisements in any advertising medium to which pesticide users or the general public have access." *Id*. EPA "regards it as unlawful for any person who distributes, sells, offers for sale, holds for sale, ships, delivers for shipment, or receives… any pesticide, to place or sponsor advertisements which recommend or suggest the purchase or use of:…(4) [a]ny unregistered pesticide for any use unless the advertisement is one permitted by paragraph (b)(2) or (3) of this section." 40 C.F.R. §168.22(b)(4).

315. None of the Products were authorized for use under the emergency exemption or through a special local need registration.

316. Nonetheless, Scotts placed point-of-sale advertisements in online and retail stores that recommended or suggested the purchase or use of the Roundup Weed & Grass Killer Super Concentrate and the Roundup PRO, both of which are unregistered pesticides, as explained above. Scotts had unbridled control over such advertisements, as explained above. It further had unbridled control over the design and content of online retailers' webpages that offer the Roundup Weed & Grass Killer Super Concentrate and the Roundup PRO for sale. Such advertisements were unlawful under 40 C.F.R. §168.22(b)(4), Cal. Food & Agric. Code § 12991(c), (d), and Cal. Food & Agric. Code § 12993.

XIV. ALL DEFENDANTS UNLAWFULLY SOLD AND DISTRIBUTED MISBRANDED HERBICIDES.

317. The California Food & Agricultural Code and FIFRA further prohibit the sale or distribution of pesticides that are "misbranded." Section 136j(a)(1)(E) of FIFRA provides that "it shall be unlawful for any person in any State to distribute or sell to any person—(E) any pesticide which is adulterated or misbranded." Section 12991 of Cal. Food & Agric. Code also provides that "[i]t is unlawful for any person to sell any adulterated or misbranded pesticide".

318. A pesticide is misbranded under FIFRA if its labeling "bears any statement… which is false or misleading in any particular," 7 U.S.C. 136(q)(1)(A) and 40 C.F.R. § 156.10(a)(5), or if "it is an imitation of, or is offered for sale under the name of, another pesticide," 7 U.S.C. § 136(q)(1)(C).

319. California has parallel requirements that provide that a pesticide is misbranded if "[i]t is labeled or branded so as to deceive or mislead the purchaser", Cal. Food & Agric. Code § 12881(d), or "it is an imitation of, or offered for sale under the name of, another article," Cal. Food & Agric. Code § 12881(c). California also has further misbranding provisions that parallel FIFRA and provide:

a. Cal. Food & Agric. Code § 12881(a) (a pesticide is misbranded if "[t]he package or label bears any false or misleading statement, design, or device regarding the article or any ingredient or substance that is contained in it");

b. Cal. Food & Agric. Code § 12882(b) (a pesticide is misbranded if "[t]he contents of the package are of a quality below that of the guarantee on the label, on the application for registration of the pesticide, or of the analysis of the representative sample delivered in connection with the application for registration of the pesticide");

c. Cal. Food & Agric. Code § 12991(a)-(c) ("It is unlawful for any person, individually or through another, in connection with [a pesticide]… to (a) Make any material or substantial misrepresentation. (b) Make any false promises of a character likely to influence, induce, or deceive. (c) Engage in illegitimate business or dishonest dealing…");

d. Cal. Food & Agric. Code § 12992 ("[i]t is unlawful for any person to sell any adulterated or misbranded pesticide"); and

e. Cal. Food & Agric. Code § 12993 ("[i]t is unlawful for any person to manufacture, deliver, or sell any pesticide or any substance or mixture of substances that is represented to be a pesticide…which is not registered pursuant to this chapter…")

320. Defendants manufactured, sold, delivered and/or distributed the Products under the guise that they were registered, approved by EPA, and legal to sell, even though they were not. The Products uniformly at all relevant times bore labels representing to consumers that the Products contain EPA-approved, registered pesticides. The label for QuikPro, for instance, tells consumers that it contains "Roundup QuikPRO Herbicide." It also tells consumers "This product is identified as **Roundup QuikPRO™ herbicide, EPA Registration No. 524-535**." All other Products make similar representations identifying the chemical name of the pesticide and its EPA registration number on the label.

321. In reality, the chemical composition of the Products actually sold to consumers is not and never has been registered, approved by EPA, or legal to sell, as explained above. The registered versions of QuikPRO, and all the other Products, come with a guarantee that the Product will *never* exceed 1 ppm NNG for its entire life cycle. Thus, the only Product that could be sold under the labels for any of the Products are pesticides that are incapable of developing more than 1 ppm NNG through use. The Products actually sold to consumers, however, are designed such that they have no way of preventing NNG from forming above 1 ppm, and, in fact, ordinary use consistent with the label makes it substantially certain that NNG will form above 1 ppm before the Product is fully used. The Products are, therefore, misbranded, imitations of registered pesticides and falsely, unlawfully, and unfairly offered for sale under the name of registered pesticides.

322. Monsanto, Bayer CropScience, Seamless Control, and Scotts made material or substantial misrepresentations and false promises of character regarding the Products that were likely to influence, induce or deceive consumers by representing the Products to contain EPA-approved, registered pesticides. By marketing, selling, and/or distributing the Products under the names of registered pesticides, all Defendants misled consumers into believing they were buying EPA-approved herbicides that are registered and legal to sell when, in fact, they were not. Reasonable consumers believe when they see a Product bearing the EPA-approved label for product like "Roundup QuikPRO Herbicide" or "Roundup Weed & Grass Killer Super Concentrate" that they are buying a product that meets EPA's baseline safety standards and is chemically equivalent to the herbicides EPA approved to be sold as "Roundup QuikPRO Herbicide" or "Roundup Weed & Grass Killer Super Concentrate" respectively. The labels' inclusion of the EPA registration number further supports this belief.

323. Even Monsanto does not dispute this. During the April 21, 2022 deposition, Monsanto was asked, "Do you think consumers who buy Monsanto's Roundup branded herbicides should be able to assume that their products comply with the certified limits that EPA has approved?" Monsanto Tr. 78:11-17. Monsanto testified that "yeah, consumers have a reasonable expectation that they are in compliance with EPA rules." *Id*.

324. The Products, however, are not in compliance with EPA rules. In reality, the chemical composition within each Product is not approved by EPA and is not registered because the Products cannot prevent NNG, a probable carcinogen, from forming above the legal limit. In fact, as explained above, ordinary consumer use of the Products makes it substantially certain that the Products will exceed 1 ppm NNG over their life cycle. Because EPA never approved the Products' true chemical composition, Defendants' sale, distribution and/or marketing of the Products deprived consumers of the benefit of EPA's safety assessment. This information was material to consumers because it is a safety hazard for consumers.

325. Monsanto's, Bayer CropScience's, Seamless Control's, and Scotts' marketing, sale and/or distribution of the Products accordingly was unlawful, misleading and unfair and violated FIFRA and parallel requirements under the Cal. Food & Agric. Code, including: Cal. Food & Agric. Code §§ 12881(a), (c), (d), 12882 (b), 12991(a), (b), (c), (d), 12992 and 12993.

XV. THE PRODUCTS UNLAWFULLY AND DECEPTIVELY FAILED TO INCLUDE AN EXPIRATION DATE.

326. The EPA specifically requires pesticide manufacturers to put an expiration date on a product's label in certain circumstances. Specifically, when "a pesticide formulation changes chemical composition significantly," the product "must bear the following statement in a prominent position on the label: 'Not for sale or use after [date].'" 40 C.F.R. § 156.10(g)(6). Further, a pesticide product must comply with the certified limits for relevant impurities up to the expiration time indicated on the label. *See* 40 C.F.R. § 156.10(g)(6)(ii); 41 C.F.R. §158.350.

327. FIFRA defines "label" to mean "the written, printed, or graphic matter on, or attached to, the pesticide or device or any of its containers or wrappers." 7 U.S.C. § 136(p)(1).

328. As explained above, Monsanto, Bayer CropScience, Scotts and Seamless Control knew or should have known that the design of the Products could not guarantee that NNG would stay below the certified limit for NNG for the entire duration of their life cycle (even though that was a condition of the Products' registrations). As explained above, the defect in the Products made it substantially certain that the Products would exceed the limit for NNG over their life

cycle even when used in accordance with the label. An expiration date, thus, was required on the Products' labels pursuant to 41 C.F.R. §158.350 and 156.10(g)(6).

329. Monsanto understood the rules to work this way as well. Monsanto, through its corporate representative, testified that it agreed that a "product needs an expiration date" when "the composition is no longer accurate." Monsanto Tr. 90:14-17.

330. Monsanto, Bayer CropScience, Seamless Control, and Scotts knew the Products changed in chemical composition over time through the ordinary use of the Products, which invariably exposes the formulation to nitrites and causes NNG to form at levels exceeding permissible limits. The change in chemical composition in the Products due to an increase in NNG is significant because NNG is an impurity of toxicological significance, which is a term of art EPA uses to describe toxic chemicals. Rising levels of NNG beyond what EPA allows poses a safety hazard to consumers since NNG is a probable carcinogen.

331. Indeed, EPA caps NNG at 1 ppm in glyphosate-based products to address the cancer risk associated with nitrosamines. As explained above, EPA presumes that nitrosamines like NNG are carcinogenic unless a manufacturer provides acceptable oncogenic testing that establishes the particular nitrosamine is not carcinogenic in accordance with EPA's 1980 policy on nitrosamines, which is required when a manufacturer finds evidence of levels of NNG over 1 ppm. Monsanto never provided EPA with oncogenic testing that EPA deemed to be acceptable to establish that NNG is not carcinogenic, and, according to EPA's own statements, neither have any of the other Defendants.

332. By limiting NNG to 1 ppm in the Products, the EPA determined that NNG poses a serious hazard to human health above that limit. If a Product cannot guarantee that it will stay below 1 ppm for entire duration of its life cycle, the Product either needs to prohibit use after a certain date or stay off the market.

333. Because the Products can undergo a significant change in chemical composition such that NNG can form in excess of the regulatory limit, an expiration date was required on the Products' labels pursuant to 40 C.F.R. § 156.10(g)(6) and/or 40 C.F.R. § 158.350. Monsanto, Bayer CropScience, Scotts and Seamless Control had a duty to disclose the expiration date

pursuant to 40 C.F.R. § 156.10(g)(6) and 40 C.F.R. § 158.350. They also had a duty to disclose the expiration date because Monsanto, Bayer CropScience, Scotts and Seamless Control had exclusive knowledge about the reactivity of the Products when exposed to nitrites and the Products' inability to keep NNG below 1 ppm. The information was material because the Products' reactivity with nitrites poses a safety hazard to consumers since NNG is a probable carcinogen and EPA's safety assessment on nitrosamines has consistently found that nitrosamines above 1 ppm are unsafe in the absence of additional testing that was not done here. Consumers, including Plaintiffs, have no ability to know this information themselves because NNG is invisible and testing is not readily available, and Monsanto, Bayer CropScience, Scotts, and Seamless Control actively concealed this information from Plaintiffs, those similarly situated, and the general public. Further, when a product does not include an expiration date, reasonable consumers are led to believe that a product is safe to use until they finish using the entirety of the product, which can take over a decade. They also assume that the Product will not develop unlawful levels of a probable carcinogen as they use the Product.

334. Without an expiration date, consumers unknowingly take a gamble every time they use a Product; it could very well have unsafe levels of NNG or not; it could be the chemical EPA approved or not. But the EPA and parallel California law require that manufacturers bear that risk, not consumers, by requiring an expiration date when the Product cannot guarantee it will stay within the certified limit for the Product's entire life cycle. The expiration date tells consumers, at a minimum, when they should stop using the Product and prevents them from being misled as to the duration in which they can be assured that the Product complies with baseline safety standards.

335. Monsanto's, Bayer CropScience's, Scotts' and Seamless Control's failure to include a statement prohibiting use after a certain date on the Products misled consumers as to the time frame in which they could safely use the Products and created a safety hazard for consumers since in the absence of an expiration date, consumers may unknowingly use and expose themselves to a Product that has unlawfully high levels of a probable carcinogen. Scotts also misled consumers about the Roundup Weed & Grass Killer Super Concentrate, Roundup

PRO, and Joint Venture Products by offering them for sale and making them available for purchase by consumers from retailers despite knowing that none included an expiration date even though they expire.

336. Monsanto, Bayer CropScience and Seamless Control easily could have added an expiration date to the Products through the notification process in accordance with PR Notice 98-10 and 40 C.F.R. § 152.46, as EPA has allowed other manufacturers, like A-dec, Inc., to do.[32] *See Hardeman v. Monsanto Co.*, 997 F. 3d 941, 960-1 (9th Cir. 2021) ("Though Monsanto contends that '[a]dding a warning about cancer would hardly qualify as a 'minor modification,'' EPA has repeatedly permitted pesticide manufacturers to use the notification procedure to add notices related to cancer to their products' labels.") Scotts also could have, but did not, add an expiration date or similar statement to the advertising and marketing of the Products.

337. Instead, Monsanto, Bayer CropScience, and Seamless Control knowingly sold (and Monsanto and Bayer CropScience continue to sell) the Products without informing consumers as to the applicable expiration date on the Products' labels in violation of federal and California law, even though that is exactly where a reasonable consumer would look for such information. Further, Scotts illegally distributes and continues to distribute, market, advertise, and make available for purchase the Roundup Weed & Grass Killer Super Concentrate and Roundup PRO, even though neither Product includes an expiration date. Scotts also illegally failed to put an expiration date on the Joint Venture Products even though it had control over the labelling by virtue of its controlling interest in Seamless Control.

338. Monsanto, Bayer CropScience, Seamless Control, and Scotts did so because they know that consumers value herbicides with expiration dates as worth less than herbicides that do not have an expiration. By concealing that the Products do, in fact, expire and omitting the legally required expiration date from the Products, Defendants put profits over the safety of its consumers.

339. What's worse, Monsanto has acknowledged that some of the Products have a shelf life or expiration date but has failed to include this information on the Products' labels where it

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[32] A-Dec, Inc. is a manufacturer that added an expiration date via the notification process. *See* https://www3.epa.gov/pesticides/chem_search/ppls/079662-00001-20110915.pdf

is legally required to put it and where it would be most obvious to consumers. For example, the Material Safety Data Sheets (MSDS) for some of the Products identify a specified shelf life. For instance, the MSDS for Roundup PRO Concentrate Herbicide effective May 25, 2015 issued by Monsanto ("2015 MSDS") discloses that its "[r]ecommended maximum shelf life:" is "2 years." *See* Exhibit 24 (May 29, 2015 MSDS for Roundup PRO Concentrate Herbicide).[33]

340. Bayer CropScience later issued a version of the MSDS for the Roundup PRO Concentrate Herbicide in 2020 without that disclosure. *See* Exhibit 25 (August 12, 2020 MSDS for Roundup PRO Concentrate Herbicide).[34]

341. The older 2015 MSDS does not lawfully disclose an expiration date to consumers. First, the 2015 MSDS – and all the other MSDS's – do not qualify as "labels" under FIFRA because the MSDS does not come "attached to" the Products themselves. Nor are they included with the Products when purchased off-the-shelf from a retailer. Indeed, the rule requires placement of the "Not for sale or use after [date]" "in a ***prominent*** position ***on the label***" so that consumers can and will see the date every time they use it. 40 C.F.R. § 156.10(g)(6) (emphasis added). Section 150.350 similarly requires a "statement prohibiting use after a certain date" on "the product label." The point of the expiration date is to prevent consumers from using the Products after a certain time period. An expiration date that is buried in an MSDS, does not come attached to the Product, and is not *prominently* featured on the label defeats the point of this requirement. It is, however, evidence that Defendants knew the Product should have been marketed and sold with a clearly stated shelf life or expiration date.

342. Setting aside that it is atypical for consumers to even see the MSDS, reasonable consumers could see the MSDS and still reasonably believe they could safely use the Products after 2 years since they do not explicitly tell consumers not to *use* the product after a certain date. In fact, the 2015 MSDS for Roundup PRO Concentrate Herbicide expressly disclaims that it

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[33] This Exhibit is attached to the Complaint filed in this case on July 22, 2022 (ECF No. 1). Plaintiffs incorporate it herein by reference.

[34] This Exhibit is attached to the Complaint filed in this case on July 22, 2022 (ECF No. 1). Plaintiffs incorporate it herein by reference.

applies to consumer use of the Product and states the consumer should, instead, rely on the label for such purposes. Specifically, it states:

> This Material Safety Data Sheet (MSDS) serves different purposes than and DOES NOT REPLACE OR MODIFY THE EPA-APPROVED PRODUCT LABELING (attached to and accompanying the product container). This MSDS provides important health, safety, and environmental information for employers, employees, emergency responders and others handling large quantities of the product in activities generally other than product use, while the labeling provide information specifically for product use in the ordinary course. Use, storage, and disposal of pesticide products are regulated by the EPA under the authority of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) through the product labeling, and ***all necessary and appropriate precautionary use, storage, and disposal information is set forth on that labeling.*** It is a violation of federal law to use a pesticide product in any manner not prescribed on the EPA-approved label.

2015 MSDS (emphasis added).

343. The 2015 MSDS for Roundup PRO Concentrate Herbicide also contains representations that conceal the safety hazard posed by the products' propensity to react with nitrites and develop NNG. It provides that the product is "[s]table under normal conditions of handling and storage." Further, the section relating to the "[p]ossibility of hazardous reactions" does not disclose reactions with nitrites, or warnings to keep the product away from sources of nitrites.

344. Similarly, the 2003 MSDS for the Roundup Weed & Grass Killer Super Concentrate provides that "shelf life" is "currently under test" but then recommends a 2-year shelf life. Monsanto removed the reference to the shelf life in subsequent MSDSs for the Roundup Weed & Grass Killer Super Concentrate.

345. The MSDS is a document that Scotts would have seen and abided by since it was distributing the Roundup Weed & Grass Killer Super Concentrate during this time frame. Indeed, OSHA's hazard communication standard provides that "[t]he chemical manufacturer or importers shall either provide safety data sheets with the shipped containers or send them to the distributor or employer prior to or at the time of the shipment." 29 CFR § 1910.1200(g)(6)(ii). If a MSDS is not provided, then "the distributor…shall obtain one from the chemical manufacturer or importer as soon as possible." 29 CFR § 1910.1200(g)(6)(iii). Moreover, "distributors shall ensure that

material data sheets, and updated information, are provided to other distributors and employers with their initial shipment and with the first shipment after a safety data sheet is updated." 29 CFR § 1910.1200(g)(7)(i).

346. Scotts further runs www.scottsmsds.com where it hosts the MSDSs for the Products it distributes, including the Roundup Weed & Grass Killer Super Concentrate.

347. Even more concerning, as of 2008, Monsanto set its own internal expiration dates for the raw materials used to create QuikPRO in its Quality Assurance Manual. The active ingredient in QuikPRO (MON 8750), for instance, had a three year expiration date, as did all of the other raw materials used to make QuikPRO. Despite setting these internal expiration dates and sharing them with its third-party formulator, Monsanto never told consumers that the Products expire.

348. The Products' failure to include a "Not for sale or use after [date]" and/or a statement prohibiting use after a certain date was unlawful and renders them misbranded in violation of FIFRA and the regulations promulgated pursuant to it, including, but not limited to:

a. 7 U.S.C. § 136(q)(1)(E) (a pesticide is misbranded if "any word, statement, or other information required by or under authority of this subchapter to appear on the label or labeling is not prominently placed thereon with such conspicuousness (as compared with other words, statements, designs, or graphic matter in the labeling) and in such terms as to render it likely to be read and understood by the ordinary individual under customary conditions of purchase and use");

b. 7 U.S.C. § 136j(a)(1)(E) ("it shall be unlawful for any person in any State to distribute or sell to any person—(E) any pesticide which is adulterated or misbranded"); and

c. 40 C.F.R. § 156.10(a)(5) (a pesticide is misbranded "if its labeling is false or misleading in any particular including both pesticidal and non-pesticidal claims").

349. Monsanto's, Bayer CropScience's, Scotts' and Seamless Control's sale and distribution of the Products was unlawful and deceptive and violates the California Food & Agricultural Code, including, but not limited to:

a. Cal. Food & Agric. Code § 12881(a) (a pesticide is misbranded if its package or label bears any false or misleading statement, design, or device regarding the article or any ingredient or substance that is contained in it);

b. Cal. Food & Agric. Code § 12881(d) (a pesticide is misbranded if it is labeled or branded so as to deceive or mislead the purchaser);

c. Cal. Food & Agric. Code § 12991 ("It is unlawful for any person, individually or through another, in connection with [a pesticide]… to (a) Make any material or substantial misrepresentation. (b) Make any false promises of a character likely to influence, induce, or deceive. (c) Engage in illegitimate business or dishonest dealing. (d) Cause to be published or distributed any false or misleading literature, or cause to be displayed any false or misleading advertisement."); and

d. Cal. Food & Agric. Code § 12992 ("[i]t is unlawful for any person to sell any adulterated or misbranded pesticide").

XVI. PLAINTIFFS' EXPERIENCES

A. Scott Koller

350. Plaintiff Scott Koller is a consumer who is interested in herbicide products to control weeds. He purchased Roundup Weed & Grass Killer Super Concentrate on several occasions from Lowe's, Ace Hardware, and Home Depot stores in the Brentwood, California and Antioch, California areas in the last decade, including at least two over the last four years for personal use around his home. Mr. Koller typically used the Product over the course of a year or two. He stored the Product in his garage or, during the summer, outside in his yard next to his lawn mower or in an adjacent plastic shed in Brentwood, California. Each location—his garage, side yard and plastic shed—are not temperature controlled, and all reach well over 100 degrees Fahrenheit in summer. Brentwood, California's average humidity ranges from an average of 53% in the summer to 71% in the winter.

351. Mr. Koller purchased the Roundup Weed & Grass Killer Super Concentrate for personal use around his household property. Mr. Koller made each of his purchases after reading and relying on the truthfulness of the Roundup Weed & Grass Killer Super Concentrate label,

which among other things, promised the Product contained "Roundup Weed & Grass Killer Super Concentrate" as registered with EPA. Mr. Koller believed the truth of the representation, i.e., that the Product was chemically identical to the "Roundup Weed & Grass Killer Super Concentrate" registered with EPA. The label also led him to believe that the Product contained a registered, EPA-approved herbicide. But, as explained above, the Product is not "Roundup Weed & Grass Killer Super Concentrate" as registered with EPA because the registered "Roundup Weed & Grass Killer Super Concentrate" can never exceed 1 ppm NNG at any point in time. The Products, by contrast, have a different chemical composition that enables them to develop NNG far in excess of the 1 ppm legal limit. EPA never approved or registered the Products' true chemical compositions. Had Mr. Koller known the truth, Mr. Koller would not have purchased the Roundup Weed & Grass Killer Super Concentrate.

352. Further, Mr. Koller made each of his purchases after reading and relying on the truthfulness of the Product's label, which did not include "Not for sale or use after [date]" or statement prohibiting use after a certain date. Because there was not a "Not for sale or use after [date]" disclaimer or statement prohibiting use after a certain date on the Roundup Weed & Grass Killer Super Concentrate, he believed that it could be used for an indefinite duration when used and stored in accordance with the label. When Mr. Koller bought the Roundup Weed & Grass Killer Super Concentrate, he did not see an expiration date or a "Not for sale or use after [date]" or statement prohibiting use after a certain date. Had there been an expiration date, he would have noticed it. The length of time in which he could use the Roundup Weed & Grass Killer Super Concentrate was important to him because it comes in a large quantity, and it typically takes him a year or more to use all of it. Had Defendants complied with the law, and put a "Not for sale or use after [date]" instruction or statement prohibiting use after a certain date on the Product's label, he would not have been drawn to the Product and would not have purchased it. At a minimum, he would have paid less for each Product. Indeed, the Products are worth less to consumers since the Products do not last for an indefinite duration, but, rather, can be used only for a limited period of time, if at all.

353. In addition, at the time of each of Mr. Koller's purchases of the Roundup Weed & Grass Killer Super Concentrate, he was not aware that it was defective because it was substantially certain to develop uncontrollable and unlawful levels of a probable carcinogen, even with use and storage consistent with the label. This information was material to Mr. Koller because it concerns his safety in using the Products. Mr. Koller would not have purchased the Products or would not have paid as much for them if he had known of the defect with the Products.

354. When Mr. Koller made his purchases of the Roundup Weed & Grass Killer Super Concentrate, he also did not see any point-of-sale warnings or advertisements disclosing that it is defective, expires, is an unregistered pesticide, or develops a probable carcinogen when exposed to nitrosating agents like exhaust. Had there been such point-of-sale warnings or advertisements, Mr. Koller would have noticed them since they concern his safety and would not have purchased the Roundup Weed & Grass Killer Super Concentrate or would have paid less for it as a result.

355. Mr. Koller continues to want to purchase products that control weeds, including Roundup Weed & Grass Killer Super Concentrate and other Products the Defendants manufacture, distribute or sell. He regularly visits online and brick and mortar stores where the Products are sold. Without purchasing and having the Products professionally tested or consulting scientific and regulatory experts, Mr. Koller will be unable to determine if representations that Defendants make regarding the properties and features of the Products are true and complete or the length of time in which he can safely use the Products. Because Mr. Koller does not know the formula for the Products, which can change over time, and cannot test whether the Products change in chemical composition over time and degrade into unlawful levels of NNG without first purchasing a Product, Mr. Koller will be unable to rely on the Products' labels and point-of-sale advertising when shopping for herbicide products in the future absent an injunction. In addition, at present Mr. Koller cannot rely on the accuracy of the labels and point-of-sale advertising for Defendants' entire line of glyphosate products, including glyphosate products that have more than 40% glyphosate, which Mr. Koller is also interested in purchasing with labeling that comports with regulations. Should Monsanto or Bayer CropScience begin to sell a new line of products, Mr. Koller could also be at risk for buying another one of their products in reliance on the same

or similar misrepresentation and omissions. And because of unlawful and misleading Product labels and point-of-sale advertisements, Mr. Koller cannot make informed choices between the herbicides manufactured by Monsanto and/or Bayer CropScience and herbicides offered by other manufacturers, such as choices based on price and length of time in which the product is suitable for consumer use.

B. Tim Ferguson

356. Plaintiff Tim Ferguson is a consumer who is interested in herbicide products. He purchased QuikPRO packets from Tractor Supply in Ripon, California on or around September 2021 for personal use around his home. He has stored the Product in the back of his truck where it can get very hot. Ripon, California's average humidity is 58% with humidity above 70% in the winter months. Ripon, California's average temperature in July and August is over 92 degrees.

357. Mr. Ferguson purchased the QuikPRO for personal use around his household property.

358. Mr. Ferguson made his purchase after reading and relying on the truthfulness of the QuikPRO label, which among other things, promised the Product contained "Roundup QuikPRO Herbicide" as registered with EPA. Mr. Ferguson believed the truth of the representation, i.e., that the Product was chemically identical to the "Roundup QuikPRO Herbicide" registered with EPA. The label also led him to believe that the Product contained a registered, EPA-approved herbicide. But, as explained above, the Product is not "Roundup QuikPRO Herbicide" as registered with EPA because the registered "Roundup QuikPRO Herbicide" can never exceed 1 ppm NNG at any point in time. The Products, by contrast, have a different chemical composition that enables them to develop NNG far in excess of the 1 ppm legal limit. EPA never approved or registered the Products' true chemical composition. Had Mr. Ferguson known the truth, he would not have purchased the QuikPRO.

359. Further, Mr. Ferguson made purchase after reading and relying on the truthfulness of the Product's label, which did not include "Not for sale or use after [date]" or statement prohibiting use after a certain date. Because there was not a "Not for sale or use after [date]" disclaimer or statement prohibiting use after a certain date on the Products, he believed that

QuikPRO could be used for an indefinite duration when used and stored in accordance with the label. When Mr. Ferguson bought the QuikPRO, he did not see an expiration date or a "Not for sale or use after [date]." Had there been an expiration date, he would have noticed it. The length of time in which he could use the QuikPRO was important to him because he did not plan to use all the packets in one use and intended to store unused packets for use even possibly years later. Had Defendants complied with the law, and put a "Not for sale or use after [date]" disclosure or statement prohibiting use after a certain date on the Product's label, he would not have been drawn to the Products and would not have purchased them. At a minimum, he would have paid less for each Product. Indeed, the Products are worth less to consumers since the Products do not last for an indefinite duration, but, rather, can be used only for a limited period of time, if at all.

360. In addition, at the time of Mr. Ferguson's purchase of the QuikPRO, he was not aware that it was defective because it was substantially likely to develop uncontrollable and unlawful levels of a probable carcinogen, even with use and storage consistent with the label. This information was material to Mr. Ferguson because it concerns his safety in using it. Mr. Ferguson would not have purchased the QuikPRO or would not have paid as much for it if he had known of the defect with the Product.

361. When Mr. Ferguson made his purchase of QuikPRO, he also did not see any point-of-sale warnings or advertisements disclosing that it is defective, expires, is an unregistered pesticide, or develops a probable carcinogen when exposed to nitrosating agents like exhaust. Had there been such point-of-sale warnings or advertisements, Mr. Ferguson would have noticed them since they concern his safety and would not have purchased the QuikPRO or would have paid less for it as a result.Mr. Ferguson continues to want to purchase products that control weeds, including QuikPRO and other Products the Defendants manufacture, distribute or sell. He regularly visits online and brick and mortar stores where the Products are sold. Without purchasing and having the Products professionally tested or consulting scientific and regulatory experts, Mr. Ferguson will be unable to determine if representations that Defendants make regarding the properties and features of the Products are true and complete or the length of time in which he can safely use the Products. Because Mr. Ferguson does not know the formula for the

Products, which can change over time, and cannot test whether the Products change in chemical composition over time and degrade into unlawful levels of NNG without first purchasing a Product, Mr. Ferguson will be unable to rely on the Products' labels and point-of-sale advertising when shopping for herbicide products in the future absent an injunction. In addition, at present Mr. Ferguson cannot rely on the accuracy of the labels and point-of-sale advertising for Defendants' entire line of glyphosate products, including glyphosate products that have more than 40% glyphosate, which Mr. Ferguson is also interested in purchasing with labeling that comports with regulations. Should Monsanto or Bayer CropScience begin to sell a new line of products, Mr. Ferguson could also be at risk for buying another one of their products in reliance on the same or similar misrepresentation and omissions. And because of unlawful and misleading Product labels and point-of-sale advertisements, Mr. Ferguson cannot make informed choices between the herbicides manufactured by Monsanto and/or Bayer CropScience and herbicides offered by other manufacturers, such as choices based on price and length of time in which the product is suitable for consumer use.

C. Ruby Cornejo

362. Plaintiff Ruby Cornejo is a consumer who is interested in herbicide products. Ms. Cornejo has purchased Roundup products for decades. More recently, she has purchased QuikPRO packets from Amazon which were sent to her home in Galt, California in April 2022, December 2021, and April 2021. She also purchased QuikPRO packets from Tractor Supply in June 2020 and from Doitonmyown.com in April 2021. She also purchased jugs of QuikPRO about four years ago from Horizon in Sacramento, California. She also has bought Roundup PROMAX jugs on multiple occasions from 2004 to 2020 from various stores, including Tractor Supply in Galt, California. Ms. Cornejo uses the Products to maintain her rural property. She typically stores the Products in her barn where she also has a tractor. Her barn can get hot in the summer. When she has bought the Products in the larger quantities, like the QuikPRO and PROMAX jugs, it can take her longer than a year to go through a bottle. Galt, California's average humidity is 59% with humidity above 70% in the winter months. Galt, California's average high temperature in July and August is over 90 degrees.

363. Ms. Cornejo purchased the QuikPRO and Roundup PROMAX for personal use around her household property.

364. Ms. Cornejo made each of her purchases after reading and relying on the truthfulness of the QuikPRO and PROMAX labels, which among other things, promised that the Product contained "Roundup QuikPRO Herbicide" and/or "Roundup PROMAX Herbicide" as registered with EPA. Ms. Cornejo believed the truth of the representation, i.e., that the Product was chemically identical to the "Roundup QuikPRO Herbicide" and "Roundup PROMAX Herbicide" registered with EPA. The label also led her to believe that the Products contained registered, EPA-approved herbicides. But, as explained above, the Products are not "Roundup QuikPRO Herbicide" and/or "Roundup PROMAX Herbicide" as registered with EPA because the registered "Roundup QuikPRO Herbicide" and "Roundup PROMAX Herbicide" can never exceed 1 ppm NNG at any point in time. The Products, by contrast, have a different chemical composition that enables them to develop NNG far in excess of the 1 ppm legal limit. EPA never approved or registered the Products' true chemical composition. Had Ms. Cornejo known the truth, she would not have purchased the Products.

365. Further, Ms. Cornejo made each of her purchases after reading and relying on the truthfulness of the Products' labels, which did not include "Not for sale or use after [date]" or statement prohibiting use after a certain date. Because there was not a "Not for sale or use after [date]" disclaimer or statement prohibiting use after a certain date on the Products, she believed that the Products could be used for an indefinite duration when used and stored in accordance with the label. When Ms. Cornejo bought the Products, she did not see an expiration date or a "Not for sale or use after [date]" on the Products' labels. Had there been an expiration date, she would have noticed it. The length of time in which she could store and use the Products was important to her because some of the Products come in large quantities, and it can take her years to use the Products. Further, when she buys the Products that come in packets, she does not use all the packets at once and stores unused packets for long periods of time as well, often for years. Had Defendants complied with the law, and put a "Not for sale or use after [date]" disclaimer or statement prohibiting use after a certain date on the Product's label, she would not have been

drawn to the Products and would not have purchased them. At a minimum, she would have paid less for each Product. Indeed, the Products are worth less to consumers since the Products do not last for an indefinite duration, but, rather, can be used only for a limited period of time, if at all.

366. In addition, at the time of each of Ms. Cornejo's purchases of the Products, she was not aware that the Products were defective because they are substantially likely to develop uncontrollable and unlawful levels of a probable carcinogen, even with use and storage consistent with the label. This information was material to Ms. Cornejo because it concerns her safety in using the Products. Ms. Cornejo would not have purchased the Products or would not have paid as much for them if she had known of the defect with the Products.

367. When Ms. Cornejo made her purchases of QuikPRO and Roundup PROMAX, she also did not see any point-of-sale warnings or advertisements disclosing that those Products are defective, expire, are unregistered pesticides, or develop a probable carcinogen when exposed to nitrosating agents like exhaust. Had there been such point-of-sale warnings or advertisements, Ms. Cornejo would have noticed them since they concern her safety and would not have purchased the QuikPRO or Roundup PROMAX or would have paid less for them as a result.

368. Ms. Cornejo continues to want to purchase products that control weeds, including QuikPRO and other products the Defendants manufacture, distribute or sell. She regularly visits online and brick and mortar stores where the Products are sold. Without purchasing and having the Products professionally tested or consulting scientific and regulatory experts, Ms. Cornejo will be unable to determine if representations that Defendants make regarding the properties and features of the Products are true and complete or the length of time in which she can safely use the Products. Because Ms. Cornejo does not know the formula for the Products, which can change over time, and cannot test whether the Products change in chemical composition over time and degrade into unlawful levels of NNG without first purchasing a Product, Ms. Cornejo will be unable to rely on the Products' labels and point-of-sale advertising when shopping for herbicide products in the future absent an injunction. In addition, at present Ms. Cornejo cannot rely on the accuracy of the labels and point-of-sale advertising for Defendants' entire line of glyphosate products, including glyphosate products that have more than 40% glyphosate, which Ms. Cornejo

is also interested in purchasing with labeling that comports with regulations. Should Monsanto or Bayer CropScience begin to sell a new line of products, Ms. Cornejo could also be at risk for buying another one of their products in reliance on the same or similar misrepresentation and omissions. And because of unlawful and misleading Product labels and point-of-sale advertisements, Ms. Cornejo cannot make informed choices between the herbicides manufactured by Monsanto and/or Bayer CropScience and herbicides offered by other manufacturers, such as choices based on price and length of time in which the product is suitable for consumer use.

D. John Lysek

369. Plaintiff John Lysek is a consumer who is interested in herbicide products. Mr. Lysek purchased a new jug of QuikPRO from eBay, which was sent to his home in Redding, California, about two years ago. One of the reasons he purchased the Product was because he believed it would last for years since it was sold in a large quantity. It typically takes him years to go through a jug of QuikPRO. Mr. Lysek also bought packets of QuikPRO from eBay that were sent to his home in Redding, California about four years ago. Redding, California's average humidity is 55% with humidity above 70% in the winter months. Average temperatures in Redding, California exceed 90 degrees in July and August.

370. Mr. Lysek purchased the QuikPRO for personal use around his household property.

371. Mr. Lysek made each of his purchases after reading and relying on the truthfulness of the QuikPRO label, which among other things, promised the Product contained "Roundup QuikPRO Herbicide" as registered with EPA. Mr. Lysek believed the truth of the representation, i.e., that the Product was chemically identical to the "Roundup QuikPRO Herbicide" registered with EPA. The label also led him to believe that the Product contained a registered, EPA-approved herbicide. But, as explained above, the Product is not "Roundup QuikPRO Herbicide" as registered with EPA because the registered "Roundup QuikPRO Herbicide" can never exceed 1 ppm NNG at any point in time. The Products, by contrast, have a different chemical composition that enables them to develop NNG far in excess of the 1 ppm legal limit. EPA never approved or registered the Products' true chemical composition. Had Mr. Lysek known the truth, he would not have purchased the QuikPRO.

372. Further, Mr. Lysek made each of his purchases after reading and relying on the truthfulness of the QuikPRO label, which did not include "Not for sale or use after [date]" or statement prohibiting use after a certain date. Because there was not a "Not for sale or use after [date]" disclaimer or statement prohibiting use after a certain date on the Products, he believed that QuikPRO could be used for an indefinite duration when used and stored in accordance with the label. When Mr. Lysek bought the QuikPRO, he did not see an expiration date or a "Not for sale or use after [date]" on the Products. Had there been an expiration date, he would have noticed it. The length of time in which he could store and use QuikPRO was important to him because it comes in a large quantity, and it can take him years to use the full jug. Further, when he buys QuikPRO in packets, he does not use all the packets at once and stores unused packets for long periods of time as well, often for years. Had Defendants complied with the law, and put a "Not for sale or use after [date]" disclaimer or statement prohibiting use after a certain date on the Product labels, he would not have been drawn to the Products and would not have purchased them. At a minimum, he would have paid less for each Product. Indeed, the Products are worth less to consumers since the Products do not last for an indefinite duration, but, rather, can be used only for a limited period of time, if at all.

373. In addition, at the time of each of Mr. Lysek's purchases of the QuikPRO, he was not aware that it was defective because it was substantially likely to develop uncontrollable and unlawful levels of a probable carcinogen, even with use and storage consistent with the label. This information was material to Mr. Lysek because it concerns his safety in using it. Mr. Lysek would not have purchased the QuikPRO or would not have paid as much for it if he had known of the defect with the Product.

374. When Mr. Lysek made his purchases of QuikPRO, he also did not see any point-of-sale warnings or advertisements disclosing that it is defective, expires, is an unregistered pesticide, or develops a probable carcinogen when exposed to nitrosating agents like exhaust. Had there been such point-of-sale warnings or advertisements, Mr. Lysek would have noticed them since they concern his safety and would not have purchased the QuikPRO or would have paid less as a result.

375. Mr. Lysek continues to want to purchase products that control weeds, including QuikPRO and other products the Defendants manufacture, distribute or sell. He regularly visits online and brick and mortar stores where the Products are sold. Without purchasing and having the Products professionally tested or consulting scientific and regulatory experts, Mr. Lysek will be unable to determine if representations that Defendants make regarding the properties and features of the Products are true and complete or the length of time in which he can safely use the Products. Because Mr. Lysek does not know the formula for the Products, which can change over time, and cannot test whether the Products change in chemical composition over time and degrade into unlawful levels of NNG without first purchasing a Product, Mr. Lysek will be unable to rely on the Products' labels and point-of-sale advertising when shopping for herbicide products in the future absent an injunction. In addition, at present Mr. Lysek cannot rely on the accuracy of the labels and point-of-sale advertising for Defendants' entire line of glyphosate products, including glyphosate products that have more than 40% glyphosate, which Mr. Lysek is also interested in purchasing with labeling that comports with regulations. Should Monsanto or Bayer CropScience begin to sell a new line of products, Mr. Lysek could also be at risk for buying another one of their products in reliance on the same or similar misrepresentation and omissions. And because of unlawful and misleading Product labels and point-of-sale advertisements, Mr. Lysek cannot make informed choices between the herbicides manufactured by Monsanto and/or Bayer CropScience and herbicides offered by other manufacturers, such as choices based on price and length of time in which the product is suitable for consumer use. The Products, in their current form, are worthless because Plaintiffs bargained for properly branded, EPA-approved herbicides that are chemically identical to the registered herbicides they purport to be and comport with limits EPA sets for toxicologically significant impurities like NNG. Instead, Plaintiffs received misbranded, unregistered herbicides that are not EPA-approved, have not undergone a safety assessment by EPA, are chemically different from their registrations and are illegal to sell or distribute.

376. On April 22, 2022, Mr. Koller and Mr. Ferguson notified Defendants Monsanto, Bayer CropScience, and Seamless Control by letter that the actions described above violated the

CLRA, UCL, Magnuson-Moss Warranty Act, Song-Beverly Warranty Act, and the Products' express and implied warranties and that they intended to represent a class of similarly situated person. Plaintiffs demanded that they, among other things, recall the Products and to cease misleading consumers.

377. Defendants Monsanto, Bayer CropScience, and Seamless Control refused to acknowledge any defects with the Products and dismissed it as "sheer speculation." Further, they staunchly refused to even inform consumers at large about the defect or otherwise address the failure to include a "Not for sale or use after [date]" disclaimer on the Products. In light of these failures, Plaintiffs Koller and Ferguson rejected Defendants' offer of refunds for the Products they purchased. Indeed, to date, Defendants have not initiated a recall of the Products.

XVII. THE PRODUCTS ARE CONSUMER GOODS.

378. Weed killers, including the Products, are primarily and normally intended for personal use around consumers' households and are "consumer goods" under the MMW and SBWA.

379. The regulatory regime defines the types of pesticides that are for professional purposes through its provisions related to restricted use pesticides. The EPA registers all pesticides as either restricted use or unclassified pesticides. 40 CFR §152.160. Unclassified pesticides, such as those at issue in this case, are available off-the-shelf to consumers. Restricted use pesticides are those that have restrictions on the areas in which they may be sprayed and require a license to spray or purchase. In order to obtain a license in California, the state requires applicants to pass a written exam that tests their knowledge on the label instructions and restrictions on use, worker protection, and environmentally sensitive areas. Cal. Food & Ag. Code § 14092.

380. Non-consumer "professional" products thus correspond to restricted use pesticides, which may only be used by professionals. Regular consumers cannot spray or buy restricted use pesticides. California law makes this explicit by making it unlawful to sell or apply any restricted use pesticide without a permit. Section 14015 of the Cal. Food & Ag. Code provides "a restricted material shall only be possessed or used by, or under the direct supervision of, a private applicator,

who is certified pursuant to Section 14093, or a certified commercial applicator, as defined by Section 6000 of Title 3 of the California Code of Regulations." California similarly makes it "unlawful for any person to sell or deliver any restricted material to any person that is required by regulations adopted by the director to have a permit to possess or use the restricted material unless the permittee, or the permittee's agent to whom delivery is made, provides to the seller or the person delivering the restricted material a copy of a permit which authorizes possession or use of the kind and quantity of the restricted material on the date the restricted material is delivered." Cal. Food & Ag. Code § 14010; *see also* Cal. Food & Ag. Code 14011.

381. Conversely, any pesticide not registered as "restricted use" is presumptively intended for consumers to use for household, personal, or family purposes.

382. Importantly, none of the Products are restricted use pesticides. The Products here are pesticides that consumers can buy off the shelf and spray on their lawns, gardens, fences, driveways, and patios without a license. They do not require any special training or knowledge about the product. Rather, the Products' labels tell consumers that they are appropriate for use for household purposes, including controlling weeds in home gardens, lawns, and other household areas (e.g., driveways and patios with cracks into which weeds can grow). For example, QuikPRO lists sites for use that include apartment complexes, driveways, fencerows, landscape areas, ornamental landscapes, parking areas, recreational areas, and residential areas. The instructions specifically state the product should not be used on plants grown for commercial sale or use.

383. Further, Defendants sell and/or distribute the Products to ordinary consumers via retail channels directed to consumers, not professionals. This includes both online retailers, including Amazon, DoMyOwn.com, and Forestrydistributing.com, that sell to California consumers. It also includes distribution through brick-and-mortar stores in California that sell primarily to consumers, including Lowes, Home Depot, Tractor Supply, Costco and Ace Hardware.

384. In prior litigation, Monsanto has admitted Roundup is a product it sells to consumers. *See Martin v. Monsanto Co.*, No. ED CV 16-2168-JFW (SPx), 2017 U.S. Dist. LEXIS 135351, at *21 (C.D. Cal. Mar. 24, 2017) ("***Monsanto concedes*** that 'How many gallons

of product you can make' is one of the reasons ***consumers purchase Roundup*** Concentrates . . . .'") (emphasis added).

385. Defendants Monsanto and Bayer CropScience also admitted that at least some of the Products at issue in this litigation are "consumer" products/goods. *See e.g.,* Tr. of Hearing on Motion to Dismiss, at page 25, lines 24-25 ("Then you have the Roundup Weed and Grass Killer Super Concentrate. That is a consumer product. We concede that.")

386. The CEO of Scotts has referred to Roundup as a "consumer" product.

> "We are glad to hear Bayer's strong public commitment to ***the consumer market and Roundup's continued place in it***," said Jim Hagedorn, chairman and chief executive officer of ScottsMiracle-Gro. "***Roundup*** is an iconic brand in the lawn and garden industry and ***has been trusted by consumers*** for decades. We are confident there are several options, including the use of effective alternative active ingredients, to ensure that remains the case while ***continuing to meet the needs of homeowners and retailers***.

387. Scotts also refers to pesticides that compete with Roundup as consumer products. *See* https://investor.scotts.com/news-releases/news-release-details/scottsmiracle-gro-announces-its-support-regarding-bayers. It stated: "In 2018, Scotts Miracle-Gro decided to provide consumers with a wider array of product options when it moved to create a full line of non-glyphosate products under the Ortho® GroundClear® brand. The GroundClear® line has grown significantly in recent years and has emerged as an important choice for consumers who participate in the non-selective weed control category." "We know many consumers have questions and concerns about many of the products they use around their home and our launch of the GroundClear line was designed to provide them more options," Hagedorn said. "GroundClear not only has proven to be an important consumer option but has enabled our retail partners to better meet the evolving needs of the marketplace and to position Scotts Miracle-Gro for continued success as the leader in the U.S. consumer lawn and garden market." If Roundup's competing products are consumer products, it follows that Roundup is as well, since they compete within the same market of consumers.

388. Neutral third party observers of the consumer pesticide market also characterize weed killers like Roundup as a "consumer" product/good. For example, when

ResearchAndMarkets.com published its "Global ***Consumer Pesticides*** Market 2022-2025" report, it publicized that "consumer concerns" will shape the market, and identified Bayer's reformulation of glyphosate-based Roundup as an example of how "consumer" demand is affecting formulations of "consumer pesticides."[35] Similarly, ConsumerNotice.org identifies Roundup as a "consumer" product:

> "Originally developed for large-scale farming operations, Roundup is now available in ***home*** and garden versions and has become a popular ***household*** weed killer among ***consumers***."

See https://www.consumernotice.org/environmental/pesticides/roundup/.

389. Although certain Products include "PRO" in their name and are labelled as "professional grade" herbicide, that is puffery, and does not change the fact that the products are normally and primarily sold to ordinary consumers for "personal, family, or household use." Monsanto, Bayer CropScience and Seamless Control sell and/or sold these putatively "professional grade" products, all of which are available in containers sized appropriately for consumers, through the same retail channels as their non-"professional" products.

390. Moreover, advertising a good or service as "professional" is puffery because it is not an objectively measurable characteristic. *See, e.g.*, *LegalForce RAPC Worldwide, P.C. v. Trademark Engine LLC*, No. 17-cv-07303-MMC, 2018 U.S. Dist. LEXIS 186769, at *10 (N.D. Cal. Oct. 31, 2018) ("Here, as in the great majority of the above-cited cases, the term "professional" is a "general assertion[ ] of superiority" that lacks "the kind of detailed or specific factual assertions that are necessary to state a false advertising cause of action."); *Griggs v. State Farm Lloyds*, 181 F.3d 694, 699, 701 (5th Cir. 1999) (claim of "professional service" held "non-actionable puffery" rather than "representation[ ] of specific material fact"); *McElroy v. Boise Cascade Corp*., 632 S.W. 2d 127, 134-135 (Tenn. Ct. App. 1982) ("use of the word 'professional' is, in and of itself, no guarantee of anything"); *Ludlow v. Lowe's Companies, Inc.*, 2014 U.S. Dist. LEXIS 200513, 2014 WL 12580233, at *12 (D. Haw. 2014) (sign advertising "professional

[35] *See* https://www.researchandmarkets.com/reports/5561923/global-consumer-pesticides-market-2022-2025.

delivery" made "no specific representations"); *Larobina v. Wells Fargo Bank, N.A.*, 2012 U.S. Dist. LEXIS 41992, 2012 WL 1032953, at *4 (D. Conn. March 27, 2012) (description as "professional" was a "statement[ ] of opinion — not fact"); *EarthCam, Inc. v. OxBlue Corp.*, 2012 U.S. Dist. LEXIS 191822, 2012 WL 12836518, at *6 (N.D. Ga. March 26, 2012) (finding "professional-quality," absent further elaboration was "vague" and "not quantifiable"); *In re Marsh & McLennan Companies, Inc. Sec. Litig.*, 2006 U.S. Dist. LEXIS 70476, 2006 WL 2789860, at *1-2 (September 27, 2006) (reference to meeting "professional standards" was puffery).

391. As a result, the Products are "consumer goods" within the meaning of the MMWA and SBWA.

XVIII. CLASS ALLEGATIONS

392. Plaintiffs bring this class action lawsuit on behalf of themselves and proposed class of similarly situated persons, pursuant to Rule 23(b)(2) and (b)(3) of the Federal Rules of Civil Procedure. Plaintiffs seek to represent the following group of similarly situated persons, defined as follows:

> **The Class**: All natural persons who purchased the Products in the United States other than for resale or distribution.
>
> **The California Subclass**: All Class Members who purchased the Products in California.

393. Excluded from the Class are Defendants and their subsidiaries and affiliates; all persons who make a timely election to be excluded from the Class; governmental entities; and the Judge to whom this case is assigned and his immediate family. Plaintiffs reserve the right to revise the Class definition based upon information learned through discovery.

394. This action has been brought and may properly be maintained as a class action against Defendants because there is a well-defined community of interest in the litigation and the proposed class is easily ascertainable.

395. Numerosity: Plaintiffs do not know the exact size the Class , but they estimate that it is composed of more than 100 persons. The persons in the Class are so numerous that the joinder

of all such persons is impracticable and the disposition of their claims in a class action rather than in individual actions will benefit the parties and the court.

396. Common Questions Predominate: This action involves common questions of law and fact to the potential classes because each class member's claims derive from the deceptive, unlawful and/or unfair statements, omissions, and/or acts that led consumers to believe that the Products could be safely used for an indefinite duration of time and contained registered pesticides and/or the breach of warranty obligations. The common questions of law and fact predominate over individual questions, as proof of a common or single set of facts will establish the right of each member of the Class and Subclass to recover. The questions of law and fact common for the Class and Subclass include:

- Whether the Products failed to have an expiration date on the label;
- Whether the chemicals within the Products are registered pesticides;
- Whether Defendants' actions violate Federal and California laws invoked herein;
- Whether the marketing and/or labeling for the Products was misleading;
- Whether Defendants misrepresented or omitted material facts in connection with the marketing, advertising, packaging, labeling and sale of the Products;
- Whether the failure to provide an expiration date on the Products was likely to deceive reasonable consumers;
- Whether Defendants' deceptive practices harmed Plaintiffs and the members of the Class;
- Whether there is a defect in the Products;
- The warranties that came with the Products;
- Whether Monsanto, Bayer CropScience, and/or Seamless Control breached the warranties for the Products;
- Whether Defendants engaged in the behavior knowingly, recklessly, or negligently;
- The amount of profits and revenues Defendants earned as a result of the conduct;
- Whether Class members are entitled to restitution, injunctive and other equitable relief and, if so, what is the nature (and amount) of such relief; and
- Whether Class members are entitled to payment of actual, incidental, consequential,

exemplary and/or statutory damages plus interest thereon, and if so, what is the nature of such relief.

397. Typicality: Plaintiffs' claims are typical of the claims of the other members of the Class and Subclass because, among other things, all such claims arise out of the same wrongful course of conduct engaged in by Defendants in violation of law as complained of herein. Further, the damages of each member of the Class and Subclass were caused directly by Defendants wrongful conduct in violation of the law as alleged herein

398. Adequacy of Representation: Plaintiffs will fairly and adequately protect the interests of all Class and Subclass members because it is in their best interests to prosecute the claims alleged herein to obtain full compensation due to them for the unfair and illegal conduct of which they complain. Plaintiffs also have no interests that are in conflict with, or antagonistic to, the interests of Class and Subclass members. Plaintiffs have retained highly competent and experienced class action attorneys to represent their interests and that of the Class and Subclass. By prevailing on their own claims, Plaintiffs will establish Defendants' liability to all Class and Subclass members. Plaintiffs and their counsel have the necessary financial resources to adequately and vigorously litigate this class action, and Plaintiffs and counsel are aware of their fiduciary responsibilities to the Class and Subclass members and are determined to diligently discharge those duties by vigorously seeking the maximum possible recovery for Class and Subclass.

399. Superiority: There is no plain, speedy, or adequate remedy other than by maintenance of this class action. The prosecution of individual remedies by members of the classes will tend to establish inconsistent standards of conduct for Defendants and result in the impairment of Class and Subclass members' rights and the disposition of their interests through actions to which they were not parties. Class action treatment will permit a large number of similarly situated persons to prosecute their common claims in a single forum simultaneously, efficiently, and without the unnecessary duplication of effort and expense that numerous individual actions would engender. Furthermore, as the damages suffered by each individual member of the classes may be relatively small, the expenses and burden of individual litigation

would make it difficult or impossible for individual members of the classes to redress the wrongs done to them, while an important public interest will be served by addressing the matter as a class action.

400. Plaintiffs are unaware of any difficulties that are likely to be encountered in the management of this action that would preclude its maintenance as a class action. Plaintiffs are, however, aware that, on June 21, 2022, Judge Chhabria, of the Northern District of California, entered an order preliminarily approving a class action settlement in *Gilmore v. Monsanto Company*, Case No. 21-8159 (N.D. Cal.) ("*Gilmore*").

401. The *Gilmore* class is distinct from the Class alleged herein for a number of reasons. First, the *Gilmore* class does not cover all of the Products at issue in this litigation; rather, only two products overlap—i.e., Roundup Weed & Grass Killer Super Concentrate and Roundup PRO Concentrate are also part of the *Gilmore* settlement. Second, the *Gilmore* settlement does not cover the claims at issue in this case. Accordingly, even as to the two overlapping products, Plaintiffs' claims are not released in *Gilmore*. The *Gilmore* release specifically covers claims regarding "any alleged omission, regarding the alleged carcinogenicity, toxicity, genotoxicity, endocrine disruptive effects, or any other alleged health effects of the Products or any ingredient or component thereof, including, but not limited to, glyphosate." The *Gilmore* release language does not include claims regarding the sale or distribution of unregistered pesticides, the sale or distribution of products that have different chemical compositions from what is allowed under their registrations, the sale or distribution of products that expire, or product defects that cause them to develop uncontrollable levels of NNG. Further, the *Gilmore* release does not discuss (or even mention) impurities like NNG; rather, it only relates to "any ingredient or components thereof." As set forth above, NNG is not an ingredient, or component of any ingredient, in the two overlapping products. Finally, the *Gilmore* class period is from August 19, 2017 to the date of preliminary approval—i.e., June 21, 2022. As discussed below, Defendants' fraudulent acts make tolling of the statute of limitations appropriate here, thus warranting a class period that both *ante* and *post*-dates the *Gilmore* class. Finally, the *Gilmore* class counsel did not investigate or

litigate about NNG or other impurities nor make the factual and legal allegations asserted by Plaintiffs here.

402. In any event, each of the named Plaintiffs opted-out of the *Gilmore* settlement.

XIX. ANY APPLICABLE STATUTE OF LIMITATIONS ARE TOLLED

A. THE DISCOVERY RULE

403. The tolling doctrine is designed for cases of concealment such as this. Plaintiffs and the Class members did not discover, and could not have discovered through the exercise of reasonable diligence, that Defendants were concealing and misrepresenting the Products' true chemical composition to regulators and the public. Indeed, Plaintiffs did not discover misrepresentations and omissions until 2022.

404. Plaintiffs and the Class members had no realistic ability to discover the fact that the ordinary use of the Products causes them to change in chemical composition over time and form a presumably carcinogenic chemical at impermissible levels because Defendants hid those facts from EPA and the public.

405. Any statutes of limitation otherwise-applicable to any claims asserted herein have thus been tolled by the discovery rule.

B. FRAUDULENT CONCEALMENT

406. Defendants' knowing, active and ongoing fraudulent concealment of the facts alleged herein also tolled all applicable statutes of limitation.

407. Monsanto has known of the Products' reactivity with nitrites and their propensity to form NNG at unlawful levels through ordinary use since at least 1997, when Monsanto had evidence of NNG forming above the 1 ppm limit in its glyphosate-based products. And it was certainly aware by 2004 when Monsanto conducted a study on the topic and had evidence of NNG levels at 80 times over the regulatory limit in glyphosate products. Since then, Defendants have intentionally concealed from, or failed to notify, regulators, Plaintiffs, Class members, and the consumers who buy Defendants' glyphosate products of the true nature of the Products and the fact that the Products should not be used after a certain date.

408. In furtherance of Monsanto's efforts to conceal the problems associated with

NNG, lawyers for Monsanto claimed that the levels of impurities in Roundup branded herbicides "are well within EPA safety standards." *See In re: Roundup Products Liability Litig*., No. 3:16-md-02741-VC, ECF No. 150-3 at 18 (N.D. Cal. Feb. 20, 2017). Only recently, discovery in a parallel state court action revealed that Monsanto knew (or, at a minimum, should have known) that the amount of NNG in older, concentrated products that consumers nationwide have in their garages is likely not "well within EPA safety standards." *See generally* Wratten Tr. In fact, Monsanto knew that the level of impurities in Roundup could, and, in fact, in instances dating back to 1997 actually did, exceed EPA levels, and, in 2004, had proof that the products were capable of reaching levels that were 80 times over the regulatory limit. More glaringly, Monsanto knew that it could not control NNG post-manufacture and that the Products' exposure to nitrites, which are widespread in water and air, causes more NNG to form, pushing levels over regulatory limits. Yet, Monsanto concealed this information from the MDL Court, the EPA, and consumers nationwide.

409. Despite knowing about the instability of glyphosate and the dangers posed by the Products' inability to keep NNG at lawful levels. Defendants did not acknowledge the problem, and in fact actively concealed it. Even to present day, Defendants have denied any wrongdoing and continue to conceal material facts, evidence and information from regulators in violation of their duty to report such information.

410. Any otherwise-applicable statutes of limitation have therefore been tolled by Defendants' exclusive knowledge and concealment of the facts alleged herein.

CAUSES OF ACTION

Plaintiffs do not plead, and hereby disclaim, causes of action under the FIFRA and regulations promulgated thereunder by the EPA. Plaintiffs rely on the FIFRA and EPA regulations only to the extent such laws and regulations have been separately enacted as state law or regulation or provide a predicate basis of liability under the state and common laws cited in

the following causes of action.

PLAINTIFFS' FIRST CAUSE OF ACTION
Violation of the Magnuson-Moss Warranty Act, 15 U.S.C. § 2301, *et seq.*
On Behalf of Plaintiffs

411. Plaintiffs reallege and incorporate by reference the above paragraphs of this Class Action Complaint as if set forth herein.

412. This cause of action is brought pursuant to the Magnuson-Moss Warranty Act, 15 U.S.C. § 2301, *et seq.* ("MMWA").

413. This claim is brought against Defendants Monsanto, Seamless Control, and Bayer CropScience (collectively, the "Warranty Defendants") on behalf of Plaintiffs.

414. This Court has jurisdiction to decide claims brought under 15 U.S.C. § 2301 by virtue of 28 U.S.C. § 1332 (a)-(d).

415. Plaintiffs are "consumers" within the meaning of 15 U.S.C. § 2301(3).

416. Each Warranty Defendant is a "supplier" and "warrantor" within the meaning of 15 U.S.C. § 2301(4) and (5), respectively.

417. The Products are "consumer products" within the meaning of 15 U.S.C. § 2301(1), as described above. The Products are consumer goods, used for household purposes, including controlling weeds in home gardens, lawns, and other household areas (e.g., driveways and patios with cracks into which weeds can grow), as alleged above. For example, QuikPRO lists sites for use that include apartment complexes, driveways, fencerows, landscape areas, ornamental landscapes, parking areas, recreational areas, and residential areas. The instructions specifically state the product should not be used on plants grown for commercial sale or use. Further, the Products are available for purchase by ordinary consumers via both online retailers, including Amazon, DoMyOwn.com, and Forestrydistributing.com, that sell to California consumers and brick-and-mortar stores in California that sell herbicides, including Lowes, Home Depot, Tractor Supply, Costco and Ace Hardware.

418. 15 U.S.C. § 2310(d)(1) provides a cause of action for any consumer who is damaged by the failure of a warrantor to comply with a written or implied warranty.

419. The amount in controversy of Plaintiffs' individual claims meet or exceed $25.00 in value. In addition, the amount in controversy meets or exceeds $50,000 in value (exclusive of interest and costs) on the basis of all claims to be determined in this lawsuit since each Plaintiff has over $50,000 in attorneys' fees.

420. Each Warranty Defendant provided Plaintiffs with "written warranties" and "implied warranties," which are covered under 15 U.S.C. § 2301(6) and (7) respectively.

421. All of the Products, except for the Roundup Weed & Grass Killer Super Concentrate, come with the express warranty that they "conform[] to the chemical description on the label." Each Warranty Defendant breached this warranty since the Products do not contain the chemical described on the label. For instance, QuikPRO proclaims that it contains "QuikPRO" as registered with EPA and specifically states "This product is identified as **Roundup QuikPRO™ herbicide, EPA Registration No. 524-535**."[36] However, the Product actually sold to consumers does not contain the QuikPRO as registered with EPA since it cannot guarantee that NNG will stay below the limit for its entire life cycle. This is a defect that exists within the Products at sale. As a result of the defect, the Products are substantially certain to exceed the legal limit for NNG during their life cycle.

422. Many of the Products come with the express warranty that the Product "is reasonably fit for the purposes set forth in the Complete Directions for Use label booklet ("Directions") when used in accordance with those Direction under the conditions described therein." The Products that make this warranty include, but are not limited to:

- Roundup PRO Concentrate Herbicide
- Roundup QuikPRO Herbicide
- Roundup PROMAX Herbicide
- Roundup Custom for Aquatic & Terrestrial Use
- Ranger Pro Herbicide

[36] Every Product contains a representation that identifies the name of the chemical within it and the EPA registration number in this manner.

- Roundup PRO Herbicide
- Roundup ProDry Herbicide

423. Monsanto and Bayer CropScience breached this warranty because the Products are incapable of ensuring that NNG will stay within the legal limit for the entire life cycle of the Product. Without this assurance, the Products are too unsafe to use at any point in time since consumers do not know when or if a Product has exceeded the legal limit for NNG. The defect presents a serious safety hazard to consumers because it can result in exposures to unlawful levels of a probable carcinogen. This defect, which was known by Monsanto and Bayer CropScience, was not reasonably discoverable prior to purchase by Plaintiffs or class members since nothing on the label indicates that NNG is in the Products, let alone that the Product can develop unlawful levels of NNG. Indeed, ordinary use makes the Products substantially certain to develop unlawful levels of NNG. Further, the Products were not reasonably fit because they were unregistered pesticides not approved by EPA and/or have chemical compositions that are different from what is allowed in their respective registrations at sale or distribution, which makes illegal to sell or distribute.

424. The Products' labels expressly warrant that they: (1) contain pesticides registered with EPA, and (2) contain the chemical described on the label. For instance, QuikPRO proclaims that it contains "QuikPRO" as registered with EPA and specifically states "This product is identified as **Roundup QuikPRO™ herbicide, EPA Registration No. 524-535**." [37] The Warranty Defendants' affirmative description of each Product was part of the basis of the bargain and thereby created an express warranty that the Products conformed to that description and an implied warranty of merchantability, created by law. Each Warranty Defendant breached these warranties since the Products do not contain the chemical described on their labels and do not contain pesticides registered with EPA, as explained above.

425. Each Product sold by Warranty Defendants comes with an implied warranty that

[37] Every Product contains a representation that identifies the name of the chemical formulation within it and the EPA registration number in this manner.

it will merchantable and fit for the ordinary purpose for which it would be used that are "implied warranties" within the meaning of 15 U.S.C. § 2301(7). Each Warranty Defendant has breached its implied warranty of merchantability because the Products were not in merchantable condition when sold, were defective when sold, and/or do not possess even the most basic degree of fitness for ordinary use, as described above and below.

426. Each Product sold by the Warranty Defendants in California further comes with implied warranties that "(a) [t]hat the pesticide corresponds to all claims and descriptions that the registrant has made in respect to it in print; (b) [t]hat the pesticide is reasonably fit for use for any purpose for which it is intended according to any printed statement of the registrant." Cal. Food & Ag. Code § 12854. These are "implied warranties" within the meaning of 15 U.S.C. § 2301(7). Each Warranty Defendant breached the warranty that "the pesticide corresponds to all claims and descriptions that the registrant has made in respect to it in print" because the Products do not contain the registered pesticides they purport to contain. For instance, QuikPRO proclaims that it contains "QuikPRO" as registered with EPA and specifically states "This product is identified as **Roundup QuikPRO™ herbicide, EPA Registration No. 524-535**."[38] However, the Product actually sold to consumers does not contain the QuikPRO that is actually registered with EPA since it cannot guarantee that NNG will stay below the limit for its entire life cycle. This is a defect that exists within the Products at sale. As a result of the defect, the Products are substantially certain to exceed the legal limit for NNG during their life cycle.

427. Further, each Warranty Defendant breached the warranty that "[t]hat the pesticide is reasonably fit for use for any purpose for which it is intended according to any printed statement of the registrant" since the Products did not contain registered pesticides that are permitted to be sold and distributed and are incapable of ensuring that NNG will stay below the legal limit for their entire life cycle. Moreover, because consumers are not aware of when the Products develop unlawful levels of NNG, they are never safe to use.

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[38] Every Product contains a representation that identifies the name of the chemical within it and the EPA registration number in this manner.

428. The terms of these warranties became part of the basis of the bargain when Plaintiffs purchased a Product.

429. Plaintiffs have had sufficient direct dealings with the Warranty Defendants via their agents (including distributors, dealers, and sellers authorized by the Warranty Defendants) to establish privity of contract between the Warranty Defendants, on the one hand, and Plaintiffs, on the other hand.

430. Nonetheless, privity is not required since there is an exception for pesticides. Privity is also not required here since Plaintiffs and each member of the Class were third-party beneficiaries of the Warranty Defendants' agreements with distributors and sellers for the distribution, dealing, and sale of the Warranty Defendants' Products to consumers. Specifically, Plaintiffs are the intended beneficiaries of the Warranty Defendants' implied warranties. The Products are manufactured with the express purpose an intent of being sold to consumers, and the distributors and sellers were not the intended ultimate consumers of the Products.

431. Plaintiffs Koller and Ferguson have met all requirements for pre-suit notice. However, pursuant to 15 U.S.C. § 2310(e), Plaintiffs are entitled to bring this class action and are not required to give the Warranty Defendants notice and an opportunity to cure until such time as the Court determines the representative capacity of Plaintiffs pursuant to Rule 23 of the Federal Rules of Civil Procedure.

432. Furthermore, affording the Warranty Defendants a reasonable opportunity to cure their breach of the warranties would be unnecessary and futile. At the time of sale of each Product, the Warranty Defendants knew, or should have known that the Products were not merchantable, but nonetheless failed to rectify the situation and/or disclose the defects. In addition, despite receiving notice of the breach, the Warranty Defendants have not made any effort to resolve the defect with the Products, and, in fact, deny that there is any defect at all. Under the circumstances, the remedies available under any informal settlement procedure would be inadequate and any requirement that Plaintiffs resort to an informal dispute resolution procedure and/or afford the Warranty Defendants a reasonable opportunity to cure its breach of warranties is excused and thereby deemed satisfied.

433. In addition, given the conduct described herein, any attempts by the Warranty Defendants, in their capacity as warrantors, to limit the implied warranties in a manner that would exclude coverage of the defects in Product is unconscionable and any such effort to disclaim, or otherwise limit, liability for the defects is null and void, especially since the Products themselves were illegal to sell or distribute. Further, California provides that "[n]o limitations of warranty by the seller shall exclude or waive either of the following warranties: (a) [t]hat the pesticide corresponds to all claims and descriptions that the registrant has made in respect to it in print; (b) [t]hat the pesticide is reasonably fit for use for any purpose for which it is intended according to any printed statement of the registrant." Cal. Food & Ag. Code § 12854. Thus, both of the warranties provided under Cal. Food & Ag. Code § 12854 were made for the Products. The Warranty Defendants' breaches of the express and implied warranties, as described above, breached both of the warranties provided under Cal. Food & Ag. Code § 12854 for all the Products.

434. As a direct and proximate result of the Warranty Defendants' breach of the written and implied warranties, Plaintiffs have suffered damages, in that the Products they purchased were so inherently flawed, unfit, or unmerchantable as to have significantly diminished or no intrinsic market value. Plaintiffs seek all damages permitted by law, including compensation for the cost of purchasing Products, along with all other incidental and consequential damages, statutory attorney fees, equitable relief, and all other relief allowed by law.

PLAINTIFFS' SECOND CAUSE OF ACTION

Violation of the Song-Beverly Consumer Warranty Act For Breach of Express Warranties, Cal. Civ. Code §§ 1791.2 & 1793.2(d)

On Behalf of Plaintiffs and the California Subclass Against Defendants Monsanto, Seamless Control and Bayer CropScience

435. Plaintiffs reallege and incorporate by reference the above paragraphs of this Class Action Complaint as if set forth herein.

436. Plaintiffs and members of the Subclass are "buyers" within the meaning of Cal. Civ. Code § 1791(b).

437. The Products are "consumer goods" within the meaning of Cal. Civ. Code § 1791(a), as described above.

438. Defendants Monsanto and Bayer CropScience are "manufacturers" within the meaning within the meaning of Cal. Civ. Code § 1791(j).

439. Defendant Seamless Control is a "distributor" within the meaning of Cal. Civ. Code § 1791(e).

440. Plaintiffs and the Subclass members bought new Products manufactured by Monsanto and Bayer CropScience and/or distributed by Seamless Control.

441. The Warranty Defendants made express warranties to Plaintiffs and the Subclass within the meaning of Cal. Civ. Code §§ 1791.2 and 1793.2, as described above.

442. All of the Products, except for the Roundup Weed & Grass Killer Super Concentrate, come with the express warranty that they "conform[] to the chemical description on the label." Each Warranty Defendant breached this warranty since the Products do not contain the chemical described on the label. For instance, QuikPRO proclaims that it contains "QuikPRO" as registered with EPA and specifically states "This product is identified as **Roundup QuikPRO™ herbicide, EPA Registration No. 524-535**."[39] However, the Product actually sold to consumers does not contain the QuikPRO as registered with EPA since it cannot guarantee that NNG will stay below the limit for its entire life cycle. This is a defect that exists within the Products at sale. As a result of the defect, the Products are substantially certain to exceed the legal limit for NNG during their life cycle.

443. The Products that come with the express warranty that the Product "is reasonably fit for the purposes set forth in the Complete Directions for Use label booklet ("Directions") when used in accordance with those Direction under the conditions described therein" are identified in Paragraph 422 above. Monsanto and Bayer CropScience breached this warranty because the Products are incapable of ensuring that NNG will stay within the legal limit for the entire life cycle of the Product. Without this assurance, the Products are too unsafe to use at any point in time since consumers do not know when or if a Product has exceeded the legal limit for NNG.

[39] Every Product contains a representation that identifies the name of the chemical within it and the EPA registration number in this manner.

The defect presents a serious safety hazard to consumers because it can result in exposures to unlawful levels of a probable carcinogen. This defect, which was known by Monsanto and Bayer CropScience, was not reasonably discoverable prior to purchase by Plaintiffs or Subclass members since nothing on the label indicates that NNG is in the Products, let alone that the Product can develop unlawful levels of NNG. Indeed, ordinary use makes the Products substantially certain to develop unlawful levels of NNG. Further, the Products were not reasonably fit because they were unregistered pesticides not approved by EPA and/or have chemical compositions that are different from what is allowed in their respective registrations at sale or distribution, which makes illegal to sell or distribute.

444. The Products' labels expressly warrant that they: (1) contain pesticides registered with EPA, and (2) contain the chemical described on the label. Each Warranty Defendant breached these warranties since the Products do not contain the chemical described on their labels and do not contain pesticides registered with EPA. For instance, QuikPRO proclaims that it contains "QuikPRO" as registered with EPA and specifically states "This product is identified as **Roundup QuikPRO™ herbicide, EPA Registration No. 524-535**."[40] However, the QuikPRO actually sold to consumers does not contain the QuikPRO that is actually registered with EPA, as described above. In fact, none of the Products contain the pesticide represented on the label, or even a pesticide that is registered with EPA.

445. The Warranty Defendants provided these warranties to Plaintiffs and the Subclass. These warranties formed the basis of the bargain that was reached when Plaintiffs and the Subclass purchased of the Products.

446. However, the Warranty Defendants knew or should have known that the warranties were false and/or misleading. The Warranty Defendants were aware that the Products were incapable of ensuring NNG would stay within legal limits and that ordinary conditions make it substantially certain that NNG will develop above legal limits. This defect poses a safety hazard

[40] Every Product contains a representation that identifies the name of the chemical within it and the EPA registration number in this manner.

to consumers since it exposes consumers to unsafe levels of NNG, a probable carcinogen. The Warranty Defendants further knew that the Products do not contain pesticides registered with EPA, as explained above. The Warranty Defendants, therefore, knew the Products contained a defect, and notice of the breach is not required.

447. Plaintiffs and the Subclass reasonably relied on the Warranty Defendants' express warranties concerning the chemical composition of the Products and/or the Products' fitness for the purposes set forth in the Directions for Use when making their purchases. Plaintiffs reasonably relied on the Warranty Defendants' express warranties on the labels of the Products concerning their registration with EPA and the chemical contained within each Product. However, the Products were not as warranted. Unbeknownst to Plaintiffs and the Subclass, the Products were designed such that they cannot prevent NNG from forming at levels above legal limits, even with normal use and storage consistent with the label. This was a defect. The Warranty Defendants, therefore breached their express warranties by providing Products that contained a defect that were never disclosed to Plaintiffs and the Subclass, even though the defects were only known to Defendants and not reasonably discoverable prior to purchase by Plaintiffs or class members.

448. Further, the Warranty Defendants breached their express warranties because each Product's true chemical composition is not and has never been registered with EPA and is different from what is allowed in its respective registrations at sale or distribution since the Products can and are substantially certain to develop levels of NNG above the legal limit and, therefore, may not be lawfully sold or distributed.

449. Any opportunity to cure the express breach is unnecessary and futile.

450. As a direct and proximate result of the Warranty Defendants' breach of express warranties, Plaintiffs and the Subclass suffered significant damages, in that the Products they purchased were so inherently flawed, unfit, or unmerchantable as to have significantly diminished or no intrinsic market value, and seek damages in an amount to be determined at trial.

451. Pursuant to Cal. Civ. Code §§ 1793.2 and 1794, Plaintiffs and the Subclass members seek an order enjoining the Warranty Defendants' illegal acts or practices, damages,

punitive damages, and any other just and proper relief available under the Song-Beverly Consumer Warranty Act.

PLAINTIFFS' THIRD CAUSE OF ACTION

Violation of the Song-Beverly Consumer Warranty Act For Breach of Implied Warranty of Merchantability, Cal. Civ. Code §§ 1791.1 and 1792

On Behalf of Plaintiffs and the California Subclass Against Defendants Monsanto and Bayer CropScience

452. Plaintiffs reallege and incorporate by reference the above paragraphs of this Class Action Complaint as if set forth herein.

453. Plaintiffs and members of the Subclass are "buyers" within the meaning of Cal. Civ. Code § 1791(b).

454. The Products are "consumer goods" within the meaning of Cal. Civ. Code § 1791(a).

455. Defendants Monsanto and Bayer CropScience are "manufacturers" within the meaning within the meaning Cal. Civ. Code § 1791(j).

456. Monsanto and Bayer CropScience impliedly warranted to Plaintiffs and the Subclass that the Products were "merchantable" within the meaning of Cal. Civ. Code §§ 1791.1(a) and 1792; however, the Products do not have the quality that a buyer would reasonably expect, and were therefore not merchantable.

457. Cal. Civ. Code § 1791.1(a) states:

> "Implied warranty of merchantability" or "implied warranty that goods are merchantable" means that the consumer goods meet each of the following:
>
> (1) Pass without objection in the trade under the contract description.
> (2) Are fit for the ordinary purposes for which such goods are used.
> (3) Are adequately contained, packaged, and labeled.
> (4) Conform to the promises or affirmations of fact made on the container or label.

458. The Products would not pass without objection in the trade due to the defect in the Products, as described above, and because they are illegal to sell or distribute since they are unregistered pesticides and/or have different chemical compositions from what is allowed in their respective registrations at the time of their sale or distribution.

459. Because of the defect in the Products as well as their status as illegal pesticides that cannot be sold or distributed, the Products are not in merchantable condition and thus not fit for ordinary purposes. Unbeknownst to Plaintiffs and the Sublass, the Products were designed such that they are incapable of stopping a probable carcinogen from forming at levels higher than legal limits, even with normal use and storage consistent with the label. Without this assurance, the Products are unsafe to use at any point in time since consumers do not know when or if a Product has exceeded the legal limit for NNG. The defect presents a serious safety hazard to consumers because it can result in exposures to unlawful levels of a probable carcinogen. Indeed, as a result of the defect, the Products are substantially certain to exceed the legal limit for NNG during their life cycle. This defect, which was known by Monsanto and Bayer CropScience, was not reasonably discoverable prior to purchase by Plaintiffs or Subclass members since nothing on the label indicates that NNG is in the Products, let alone that the Product can develop unlawful levels of NNG. Indeed, ordinary use makes the Products substantially certain to develop unlawful levels of NNG. Further, the Products were not fit for use as herbicides because they were unregistered pesticides not approved by EPA and/or have chemical compositions that are different from what is allowed in their respective registrations at sale or distribution, which makes illegal to sell or distribute.

460. The Products are not adequately labeled because the labels fail to include a "Not for sale or use after [date]" disclosure pursuant to 40 C.F.R. § 156.10(g)(6) and/or a statement prohibiting use after a certain date pursuant to 40 C.F.R. § 158.350. The labels also represent that the Products contain registered pesticides even though they do not. The labels further make it appear as if they are chemically equivalent to registered pesticides when they are not. Rather, the Products are imitations of registered pesticides.

461. Monsanto and Bayer CropScience breached the implied warranty of merchantability and caused damage to Plaintiffs and the Subclass members who purchased the Products since they did not receive the benefit of their bargain.

462. Notice of breach is not required because the Plaintiffs and the Subclass did not purchase the Products directly from Monsanto and/or Bayer CropScience. Further, Monsanto and Bayer CropScience had notice of these issues by its knowledge of the issues as described above.

463. Any effort by Monsanto and Bayer CropScience to disclaim the implied warranty of merchantability was null and void because the Products were purchased off-the-shelf from brick and mortar or online retailers not sold on an "as is" or "with all faults" basis per Cal. Civ. Code § 1792.3. Further, because Monsanto and Bayer CropScience made express warranties as described above, they could not disclaim the implied warranty of merchantability under Cal. Civ. Code § 1793. Finally, any effort to disclaim implied warranties is null and void because the Products were illegal to sell or distribute, as explained above.

464. As a direct and proximate result of Monsanto's and Bayer CropScience's breach of implied warranty of merchantability, Plaintiffs and the Subclass received goods whose dangerous condition substantially impairs their value.

465. Pursuant to Cal. Civ. Code §§ 1791.1(d) & 1794, Plaintiffs and the Subclass seek an order enjoining Monsanto's and Bayer CropScience's illegal acts or practices, damages, punitive damages, and any other just and proper relief available under the Song-Beverly Consumer Warranty Act.

PLAINTIFFS' FOURTH CAUSE OF ACTION

Breach of Implied Warranty, Cal. Com. Code § 2314

On Behalf of Plaintiffs and the California Subclass Against Monsanto, Seamless Control and Bayer CropScience

466. Plaintiffs reallege and incorporate by reference the above paragraphs of this Class Action Complaint as if set forth herein.

467. The Warranty Defendants were at all relevant times "merchants" with respect to the Products under Cal. Com. Code § 2104(1) and "sellers" of the Products under § 2103(1)(d).

468. The Products are and were at all relevant times "goods" within the meaning of Cal. Com. Code § 2105(1).

469. A warranty that the Products were in merchantable condition and fit for the ordinary purpose for which the Products are used is implied by law pursuant to Cal. Com. Code § 2314.

470. Each Product sold by the Warranty Defendants in California further comes with implied warranties that "(a) [t]hat the pesticide corresponds to all claims and descriptions that the registrant has made in respect to it in print; (b) [t]hat the pesticide is reasonably fit for use for any purpose for which it is intended according to any printed statement of the registrant." Cal. Food & Ag. Code § 12854.

471. The Warranty Defendants sold Products that were not in merchantable condition and/or fit for their ordinary purpose in violation of Cal. Com. Code § 2314 and Cal. Food & Ag. Code § 12854. Unbeknownst to Plaintiffs and the Subclass, the Products were designed such that they are incapable of preventing NNG from forming at levels higher than legal limits, even with normal use and storage consistent with the label. Without this assurance, the Products are unsafe to use at any point in time since consumers do not know when or if a Product has exceeded the legal limit for NNG. The defect presents a serious safety hazard to consumers because it can result in exposures to unlawful levels of a probable carcinogen. Indeed, as a result of the defect, the Products are substantially certain to exceed the legal limit for NNG during their life cycle. This defect was only known to Defendants and not reasonably discoverable prior to purchase by Plaintiffs or Subclass members, as explained above. The Products were not in merchantable condition due to the defect, as explained above, and because they are unregistered pesticides and/or have different chemical compositions from what is allowed in their respective registrations, which made them illegal to sell or distribute. The Products were not fit for their ordinary purpose as they are substantially certain to develop unlawful levels of a carcinogenic impurity that creates a safety hazard for consumers. The Products were also not fit for their ordinary purpose because they are unregistered pesticides and/or have different chemical compositions from what was allowed in their respective registrations, which made them illegal to sell or distribute.

472. Each Warranty Defendant breached the warranty that "the pesticide corresponds

to all claims and descriptions that the registrant has made in respect to it in print" because the Products do not contain the registered pesticides they purport to contain. For instance, QuikPRO proclaims that it contains "QuikPRO" as registered with EPA and specifically states "This product is identified as **Roundup QuikPRO™ herbicide, EPA Registration No. 524-535**." However, the Products actually sold to consumers do not contain pesticides registered with EPA since they cannot guarantee that NNG will stay below the 1 ppm limit for their entire life cycle. This is a defect that exists within the Products at sale. As a result of the defect, the Products are substantially certain to exceed the legal limit for NNG during their life cycle.

473. Further, each Warranty Defendant breached the warranty that "[t]hat the pesticide is reasonably fit for use for any purpose for which it is intended according to any printed statement of the registrant" since the Products did not contain registered pesticides that are permitted to be sold and distributed and/or could not guarantee that NNG would stay below the limit for their entire life cycle. Moreover, because consumers are not aware of when the Products develop unlawful levels of NNG, they are never safe to use, as explained above.

474. Any attempt to disclaim the implied warranties provided in Cal. Food & Ag. Code § 12854 is unlawful and improper since it provides that "[n]o limitations of warranty by the seller shall exclude or waive either of the following warranties: (a) [t]hat the pesticide corresponds to all claims and descriptions that the registrant has made in respect to it in print; (b) [t]hat the pesticide is reasonably fit for use for any purpose for which it is intended according to any printed statement of the registrant." Cal. Food & Ag. Code § 12854. Thus, both of the warranties provided under Cal. Food & Ag. Code § 12854 were made for the Products. The Warranty Defendants' breaches of the implied warranties, as described above, breached both of the warranties provided under Cal. Food & Ag. Code § 12854 for all the Products.

475. The Warranty Defendants' breaches of the implied warranty of merchantability caused damage to the Plaintiffs and the Subclass. The amount of damages due will be proven at trial.

PLAINTIFFS' FIFTH CAUSE OF ACTION
Breach of Express Warranty, Cal. Com. Code § 2313
On Behalf of Plaintiffs and the California Subclass Against Monsanto, Seamless Control and Bayer CropScience

476. Plaintiffs reallege and incorporate by reference the above paragraphs of this Class Action Complaint as if set forth herein.

477. The Warranty Defendants were at all relevant times "merchants" with respect to the Products under Cal. Com. Code § 2104(1) and "sellers" of the Products under § 2103(1)(d).

478. The Products are and were at all relevant times "goods" within the meaning of Cal. Com. Code § 2105(1).

479. The Warranty Defendants made express warranties on the labels of the Products, as explained above.

480. All of the Products, except for the Roundup Weed & Grass Killer Super Concentrate, come with the express warranty that the Products "conform[] to the chemical description on the label." Each Warranty Defendant breached this warranty since the Products do not contain the chemical described on the label. For instance, QuikPRO proclaims that it contains "QuikPRO" as registered with EPA and specifically states "This product is identified as **Roundup QuikPRO™ herbicide, EPA Registration No. 524-535**."[41] However, the QuikPRO actually sold to consumers do not contain the QuikPRO that is registered with EPA since it cannot guarantee that NNG will stay below the 1 ppm limit for their entire life cycle. This is a defect that exists within the Products at sale and the symptoms of the defect (i.e., unlawful levels of NNG) are substantially certain to manifest over the life cycle of the Product.

481. The Products that come with the express warranty that the Product "is reasonably fit for the purposes set forth in the Complete Directions for Use label booklet ("Directions") when used in accordance with those Direction under the conditions described therein" are identified in Paragraph 422 above. Monsanto and Bayer CropScience breached this warranty because the

[41] Every Product contains a similar representation that identifies the chemical as the name of the Product and its EPA registration number.

Products are incapable of ensuring that NNG will stay within the legal limit for the entire life cycle of the Product. Without this assurance, the Products are too unsafe to use at any point in time since consumers do not know when or if a Product has exceeded the legal limit for NNG. The defect presents a serious safety hazard to consumers because it can result in inadvertent exposures to unlawful levels of a probable carcinogen. This defect, which was known by Monsanto and Bayer CropScience, was not reasonably discoverable prior to purchase by Plaintiffs or Subclass members because consumers are not aware of when the Products develop unlawful levels of NNG. The Products are, therefore, never safe to use. Indeed, the Products are substantially certain to develop unlawful levels of NNG over their life cycles. Further, the Products were not reasonably fit because they were unregistered pesticides not approved by EPA and/or have chemical compositions that are different from what is allowed in their respective registrations at sale or distribution, which makes illegal to sell or distribute.

482. The labels for each Product expressly warrant that they: (1) contain pesticides registered with EPA, and (2) contain the chemical described on the label. For instance, QuikPRO proclaims that it contains "QuikPRO" as registered with EPA and specifically states "This product is identified as **Roundup QuikPRO™ herbicide, EPA Registration No. 524-535**." Every Product contains a representation that identifies the name of the chemical within it and the EPA registration number in this manner. The Warranty Defendants' affirmative description of each Product was part of the basis of the bargain and thereby created an express warranty that the Products conformed to that description and an implied warranty of merchantability, created by law. Each Warranty Defendant breached these warranties since the Products do not contain the chemical described on their labels and do not contain pesticides registered with EPA, as explained above.

483. The Warranty Defendants provided these warranties to Plaintiffs and Subclass. These warranties formed the basis of the bargain that was reached when Plaintiffs and the Subclass purchased the Products.

484. However, the Warranty Defendants knew or should have known that the warranties were false and/or misleading. The Warranty Defendants were aware that the Products

were incapable of ensuring NNG would stay within legal limits and that ordinary conditions make it substantially certain that NNG will develop above legal limits. This defect poses a safety hazard to consumers since it exposes consumers to unsafe levels of NNG, a probable carcinogen. The Warranty Defendants, therefore, knew the Products contained a defect, and notice of the breach is not required..

485. Plaintiffs and the Subclass reasonably relied on the Warranty Defendants' express warranties concerning the chemical composition of the Products and/or the Products' fitness for the purposes set forth in the Directions for Use when making their purchases. However, the Products were not as warranted. Unbeknownst to Plaintiffs and the Subclass, the Products were designed such that they cannot prevent NNG from forming at levels above legal limits, even with normal use and storage consistent with the label. This was a defect. The Warranty Defendants, therefore breached their express warranties by providing Products that contained a defect that were never disclosed to Plaintiffs and the Subclass, even though the defects were only known to the Warranty Defendants and not reasonably discoverable prior to purchase by Plaintiffs or Subclass members..

486. Further, the Warranty Defendants breached their express warranties because each Product's true chemical composition is not and has never been registered with EPA and is different from what is allowed in its respective registrations at sale or distribution since the Products can and are substantially certain to develop levels of NNG above the legal limit and, therefore, may not be lawfully sold or distributed.

487. Any opportunity to cure the express breach is unnecessary and futile.

488. As a direct and proximate result of the Warranty Defendants' breach of express warranties, Plaintiffs and the Subclass suffered significant damages, in that the Products they purchased were so inherently flawed, unfit, or unmerchantable as to have significantly diminished or no intrinsic market value, and seek damages in an amount to be determined at trial.

PLAINTIFFS' SIXTH CAUSE OF ACTION
Fraudulent Concealment
On Behalf of Plaintiffs and the Class Against all Defendants

489. Plaintiffs reallege and incorporate by reference the above paragraphs of this Class Action Complaint as if set forth herein.

490. Plaintiffs bring this cause of action on behalf of themselves and on behalf of the Class against each of the Defendants.

491. Each Defendant committed fraud by intentionally concealing, suppressing, and failing to disclose material facts, including that (i) the Products were defective; (ii) the Products are unregistered pesticides; (iii) the Products do not contain EPA-approved herbicides; (iv) the Products are not the registered herbicides they purport to be; (iv) the Products expire; and (v) the Products should not be used after a certain period of time.

492. Specifically, Monsanto and Bayer CropScience, as manufacturers and registrants, fraudulently and deceptively represented to consumers that the Products contain herbicides that are approved and registered by EPA on the Products' labels and, in doing so, concealed the fact that the Products (i) are unregistered pesticides; (ii) do not contain EPA-approved herbicides; and (iii) are not the registered herbicides they purport to be. Monsanto and Bayer CropScience, as manufacturers and registrants also failed to provide an expiration date and/or statement prohibiting use after a certain date on the Products' labels, as they were required to do. Monsanto and BayerCropScience also concealed from consumers that the Products were defective, as explained above.

493. Seamless Control, as a registrant and distributor, fraudulently and deceptively represented to consumers that the Joint Venture Products contain herbicides that are approved and registered by EPA on the Products' labels and, in doing so, concealed the fact that the Joint Venture Products (i) are unregistered pesticides; (ii) do not contain EPA-approved herbicides; and (iii) are not the registered herbicides they purport to be. Seamless Control, as a registrant and distributor, also failed to provide an expiration date and/or statement prohibiting use after a certain date on the Products' labels, as it was required to do. Seamless Control also concealed

from consumers that the Products were defective, as explained above.

494. Scotts misrepresented the Roundup Weed & Grass Killer Super Concentrate, Roundup PRO, and possibly other Products, as containing registered pesticides when it placed them into the stream of commerce and made them available for purchase by consumers in online and brick and mortar retailers knowing that the Products' labels represented that they contained EPA-approved, registered pesticides. In doing so, it concealed the fact that those Products (i) are unregistered pesticides; (ii) do not contain EPA-approved herbicides; and (iii) are not the registered herbicides they purport to be. Scotts, along with Monsanto and Bayer CropScience, also failed to disclose these facts in point-of-sale advertisements, including in-store signage, retailer webpages, point-of-sale shelf tags, and posters, online and in brick and mortar stores.

495. Scotts also concealed that the Roundup Weed & Grass Killer Super Concentrate, Roundup PRO, and possibly other Products expire and should not be used after a certain date and that they were defective by distributing and making such Products available for purchase by consumers in online and brick and mortar retail stores despite knowing that the Roundup Weed & Grass Killer Super Concentrate and Roundup PRO did not have an expiration date on the label, which was where it was legally required, and that neither Product warns of the defect. Scotts, along with Monsanto and Bayer CropScience, also failed to disclose these facts as well in point-of-sale advertisements, including in-store signage, retailer webpages, point-of-sale shelf tags, and posters, online and in brick and mortar stores.

496. Monsanto, Bayer CropScience and Seamless Control knew or should have known the true facts since they are or were registrants for the Products with knowledge of the formula and data supporting the purported registrations of the Products. Monsanto and Bayer CropScience knew or should have known the true facts given that they designed and manufactured the Products. Indeed, as explained above, Monsanto and Bayer CropScience had significant knowledge about the problems associated with NNG, as discussed above.

497. Scotts, as a distributor and formulator, also knew or should have known the truth. Scotts participated in labelling and advertising decisions and ran the day-to-day affairs of Monsanto's Lawn and Garden business, which included the Roundup Weed & Grass Killer

Super Concentrate and Roundup PRO. It should have known the responsibilities under federal and California law that come with advertising and labelling pesticides, especially since it manufactured and registered its own pesticides with EPA. Among those duties include not advertising unregistered pesticides. 40 C.F.R. §168.22(a) and (b)(4). As a result, it had a responsibility to ensure it was not distributing, advertising, or selling unregistered pesticides. Scotts had knowledge of the formula for certain Products, including the Roundup Weed & Grass Killer Super Concentrate and Roundup PRO. As a formulator, Scotts was responsible for mixing the ingredients together and bottling of those Products. Part of its duties in this role included testing them for NNG and ensuring the water that went into those Products did have excessive levels of nitrites. As a result, it knew there was a limit for NNG and knew that those Products were capable of exceeding the limit since otherwise there would be no need to control nitrites in the water or test for NNG.

498. At a minimum, Scotts knew or should have known that the Roundup Weed & Grass Killer Super Concentrate expires because it received and circulated the MSDS for that Product, which had a shelf life but was later removed. It even told consumers on the website that it ran, roundup.com, that the Roundup Weed & Grass Killer Super Concentrate had a shelf life. Yet, it continued to distribute the Roundup Weed & Grass Killer Super Concentrate knowing that it did not have an expiration date on the label, which was where it was legally required to go. Finally, Scotts gained awareness of the problems associated with NNG when Plaintiffs served the Complaint in this case on it in August 2, 2022. Nonetheless it continues to distribute and market the Roundup Weed & Grass Killer Super Concentrate and Roundup PRO to date.

499. Despite Defendants' knowledge, at no time did any of these Defendants reveal the truth to Plaintiffs, or the Class, whether on the Products' labels or in point-of-sale advertisements or warnings. Defendants, instead, concealed the truth, intending for Plaintiffs and the Class to rely – which they did. In fact, Monsanto took steps to ensure that their employees did not reveal the known defect to regulators or consumers. Consumers had no way of knowing the truth because, among other things, they do not know that NNG is in the Products, let alone that it can form at levels above regulatory limits through common uses consistent with the label, as

explained above.

500. These omitted and concealed facts were material because they would be relied on by a reasonable person purchasing an herbicide and pose a serious safety hazard to consumers. They also were material because they directly impact the value of the Products purchased and the legality of Defendants' sale and/or distribution of the Products. Plaintiffs and Class Members trusted Defendants not to sell them safe Products that were unsafe, defective or that were illegal to sell or distribute.

501. A reasonable consumer would not have expected the Products to be unfit for use because they develop unlawful levels of a probable carcinogen under real world conditions. A reasonable consumer also would not have expected the Products to be unregistered pesticides, not approved by EPA that could not be lawfully sold. Reasonable consumers also would not expect the Products to expire and be unfit for use after a certain period of time in the absence of a "Not for sale or use after [date]" and/or statement prohibiting use after a certain date. Rather, reasonable consumers would expect the Products to be chemically equivalent to the registered pesticides the Products purport to be. Plaintiffs and the members of the Class did not know of the facts which were concealed from them by Defendants. Moreover, as consumers, Plaintiffs and the members of the Class did not, and could not, find out the truth on their own.

502. Defendants had a duty to disclose that the Products expired; should not be used after a certain period of time; were unregistered pesticides; do not contain EPA-approved herbicides; the Products were not the registered pesticides they claimed to be; and are defective. Defendants had such a duty because it poses a safety hazard to consumers. Defendants also had a duty because the true facts were known and/or accessible only to them and because these facts were not known to or reasonably discoverable by Plaintiffs or the members of the Class. Defendants were also legally required to disclose the facts under federal law. Defendants also had a duty to disclose the aforementioned facts the because Defendants actively concealed the facts and made representations otherwise, as explained above.

503. Had the truth been revealed, Plaintiffs and the Class would not have purchased the Products, or would have paid less for them. Plaintiffs and the members of the Class sustained

damage because they own the Products that never should have been placed in the stream of commerce. Accordingly, Defendants are liable to Plaintiffs and the members of the Class for damages in an amount to be proven at trial.

504. Defendants' acts were done wantonly, maliciously, oppressively, deliberately, with intent to defraud; in reckless disregard of the rights of Plaintiffs and the Class; and to enrich themselves. Their misconduct warrants assessment of punitive damages in an amount sufficient to deter such conduct in the future, which shall be determined at trial.

PLAINTIFF'S SEVENTH CAUSE OF ACTION
Common Law Fraud, Deceit and/or Misrepresentation
On Behalf of Plaintiffs and the Class Against all Defendants

505. Plaintiffs reallege and incorporate by reference the above paragraphs of this Class Action Complaint as if set forth herein.

506. Plaintiffs bring this claim individually and on behalf of the other members of the Class.

507. Defendants Monsanto, Bayer CropScience, and Seamless Control fraudulently and deceptively represented on the Products' labels that they contain EPA-approved, registered pesticides. For instance, QuikPRO proclaims that it contains "QuikPRO" as registered with EPA and specifically states "This product is identified as **Roundup QuikPRO™ herbicide, EPA Registration No. 524-535**."[42] In truth, the Product does not contain QuikPRO or a registered pesticide approved by EPA. All of the Products similarly represent that they contain registered pesticides in the same way. But none of the Products contain the pesticides they purport to contain, are not registered pesticides, and differ in chemical composition from the registered pesticides they purport to be. They are, accordingly, illegal to sell or distribute.

508. Defendant Scotts misrepresented the Roundup Weed & Grass Killer Super Concentrate, Roundup PRO, and possibly other Products, as containing registered, EPA-

[42] Every Product contains a representation that identifies the chemical as the name of the Product and its EPA registration number in this manner.

approved pesticides when it placed those Products into the stream of commerce and made them available for purchase by consumers in online and brick and mortar retailers under the labels of registered pesticides. But none of those Products contained the pesticides they purport to contain, are not registered pesticides, and differ in chemical composition from the registered pesticides they purport to be.

509. Scotts, along with Monsanto and Bayer CropScience, also fraudulently placed advertisements for the Roundup Weed & Grass Killer Super Concentrate, Roundup PRO, and possibly other Products that represented those Products as registered, EPA-approved pesticides, including in-store signage, retailer webpages, point-of-sale shelf tags, and posters, online and in stores, even though EPA regulations impose a duty not to "place or sponsor advertisements which recommend or suggest the purchase or use of:…(4) [a]ny unregistered pesticide for any use" unless an exception exists, none of which apply here. 40 C.F.R. §168.22(b)(4).

510. These misrepresentations and omissions were known exclusively to, and actively concealed by, Defendants, not reasonably known to Plaintiffs, and material at the time they were made. As explained above, Defendants knew or should have known the composition of the Products, and knew or should have known that the Products are unregistered pesticides; are chemically different from what is allowed in their registrations; continue to form NNG post-sale; and are illegal to sell or distribute, as explained above. Defendants' misrepresentations concerned material facts that were essential to the analysis undertaken by Plaintiffs as to whether to purchase the Products. In misleading Plaintiffs and not so informing Plaintiffs, Defendants breached their duty to them. Defendants also gained financially from, and as a result of, their breach.

511. Plaintiffs and those similarly situated relied to their detriment on Defendants' misrepresentations. Had Plaintiffs and those similarly situated been adequately informed and not intentionally deceived by Defendants, they would have acted differently by, without limitation: (i) declining to purchase the Products, (ii) purchasing less of them, or (iii) paying less for the Products.

512. By and through such fraud, deceit, misrepresentations and/or omissions, Defendants intended to induce Plaintiffs and those similarly situated to alter their position to their

detriment. Specifically, Defendants fraudulently and deceptively induced Plaintiffs and those similarly situated to, without limitation, purchase the Products.

513. Plaintiffs and those similarly situated justifiably and reasonably relied on Defendants' misrepresentations, and, accordingly, were damaged by Defendants.

514. As a direct and proximate result of Defendants' misrepresentations, Plaintiffs and those similarly situated have suffered damages, including, without limitation, the amount they paid for the Products.

515. Defendants' conduct as described herein was willful and malicious and was designed to maximize Defendants' profits even though Defendants knew that it would cause loss and harm to Plaintiffs and those similarly situated.

PLAINTIFFS' EIGHTH CAUSE OF ACTION

Violations of the Consumer Legal Remedies Act, Cal. Civil Code § 1750, *et seq*

On Behalf of Plaintiffs and the California Subclass Against all Defendants

516. Plaintiffs reallege and incorporate by reference the above paragraphs of this Class Action Complaint as if set forth herein.

517. This cause of action is brought pursuant to the California Consumers Legal Remedies Act, California Civil Code § 1750, *et seq*. ("CLRA") by Plaintiffs and is brought against Defendants Monsanto, Bayer CropScience, Scotts and Seamless Control.

518. Monsanto, Bayer CropScience, Seamless Control, Scotts, Plaintiffs, and the Subclass members are "persons" within the meaning of Cal. Civ. Code § 1761(c). Plaintiffs and the Subclass members are "consumers" within the meaning of Cal. Civ. Code § 1761(d).

519. The Products that Plaintiffs and members of the Subclass purchased are "goods" within the meaning of California Civil Code § 1761.

520. Defendants' actions, representations, omissions, and conduct have violated, and continue to violate the CLRA, because they extend to transactions that are intended to result, or which have resulted, in the sale of goods or services to consumers.

521. The CLRA prohibits "unfair or deceptive acts or practices undertaken by any person in a transaction intended to result or which results in the sale of goods or services to any

consumer[.]" Cal. Civ. Code § 1770(a).

522. In the course of their business, Monsanto and Bayer CropScience, through their agents, employees, and subsidiaries, violated the CLRA as detailed above. They did so by, among other things: (i) misrepresenting the Products to contain registered pesticides; (ii) misrepresenting the Products to contain pesticides approved by EPA; (iii) omitting that the Products expire and should not be used after a certain date; (iv) concealing that the Products were defective and pose a safety hazard to consumers; (v) marketing and offering for sale, through third-parties, the Products as registered, EPA-approved pesticides in point-of-sale advertisements, including in-store signage, retailer webpages, point-of-sale shelf tags, and posters, online and in stores; and (vi) concealing the defect and safety hazard posed to consumers in point-of-sale advertising.

523. In the course of its business, Seamless Control, through its agents, employees, and subsidiaries, violated the CLRA as detailed above. It did so by, among other things: (i) misrepresenting the Joint Venture Products to contain registered pesticides; (ii) misrepresenting the Joint Venture Products to contain pesticides approved by EPA; (iii) omitting that the Joint Venture Products expire and should not be used after a certain date; and (iv) concealing that the Joint Venture Products were defective and pose a safety hazard to consumers

524. In the course of its business, Scotts, through its agents, employees, and subsidiaries, violated the CLRA as detailed above. It did so by, among other things: (i) misrepresenting the Roundup Weed & Grass Killer Super Concentrate, Roundup PRO, and possibly other Products, as containing registered, EPA-approved pesticides when it placed those Products into the stream of commerce and made them available for purchase by consumers in online and brick and mortar retailers under the labels of registered pesticides; (ii) concealing that the Weed & Grass Killer Super Concentrate, Roundup PRO, and possibly other Products expire and should not be used after a certain date when it placed those Products into the stream of commerce and made them available for purchase by consumers in online and brick and mortar retailers knowing that none included an expiration date on the label; (iii) concealing that the Weed & Grass Killer Super Concentrate, Roundup PRO, and possibly other Products were

defective and pose a safety hazard to consumers when it placed those Products into the stream of commerce and made them available for purchase by consumers in online and brick and mortar retailers knowing that none included warning about the defect; (iv) misrepresenting the Roundup Weed & Grass Killer Super Concentrate, Roundup PRO, and possibly other Products as EPA-approved, registered pesticides in point-of-sale advertisements, including in-store signage, retailer webpages, point-of-sale shelf tags, and posters, online and in stores; and (v) concealing the defect, expiration date, and safety hazard associated with the Roundup Weed & Grass Killer Super Concentrate, Roundup PRO, and possibly other Products in point-of-sale advertisements, including in-store signage, retailer webpages, point-of-sale shelf tags, and posters, online and in stores.

525. In committing these acts, Monsanto, Bayer CropScience, Scotts, and Seamless Control engaged in one or more of the following unfair or deceptive acts or practices as defined in Cal. Civ. Code § 1770(a):

a. Misrepresenting the source, sponsorship, approval, or certification of goods or services;

b. Representing that the Products have approval, characteristics, ingredients, uses, or benefits that they do not have;

c. Representing that the Products are of a particular standard, quality and grade when they are not; and/or

d. Advertising the Products with the intent not to sell or lease them as advertised.

526. As explained above, Defendants had knowledge of the defect with the Products, that the Products did not contain registered pesticides, and that the Products expire.

527. Defendants' concealment of the true characteristics of the Products was material to Plaintiffs and the Subclass. Had they known the truth, Plaintiffs and the Subclass would not have purchased the Products, or—if the Products' true nature had been disclosed, and the Products rendered legal to sell—would have paid significantly less for them.

528. Plaintiffs and the Subclass members had no way of discerning that representations from Defendants were false and misleading, or otherwise learning the facts that Defendants had

concealed or failed to disclose, because the Products are complex chemical formulations whose composition is unknown to consumers. Consumers also are not aware that the Products have NNG in them, let alone that NNG continues to form over time. Further, testing is not readily available. Plaintiffs and the Subclass members did not, and could not, unravel Defendants' deception on their own.

529. Defendants, as explained above, had an ongoing duty to Plaintiffs and the Subclass to refrain from unfair and deceptive practices under the CLRA in the course of their business. Specifically, Defendants owed Plaintiffs and the Subclass members a duty to disclose material facts concerning the Products because their concealment poses a safety hazard to consumers, they possessed exclusive knowledge, they intentionally concealed it from Plaintiffs and the Subclass, and/or they made misrepresentations that were rendered misleading because they were contradicted by withheld facts.

530. Plaintiffs and the Subclass members suffered ascertainable loss and actual damages as a direct and proximate result of the concealment, misrepresentations, and/or failure to disclose material information from Defendants.

531. Defendants' violations present a continuing risk to Plaintiffs and the Subclass, as well as to the general public. The unlawful acts and practices complained of herein affect the public interest.

532. Under Cal. Civ. Code § 1780(b), Plaintiffs seek an additional award against Monsanto, Bayer CropScience, and Seamless Control of up to $5,000 for each Subclass member who qualifies as a "senior citizen" or "disabled person" under the CLRA, which includes Plaintiff Cornejo. Monsanto, Bayer CropScience, Scotts, and Seamless Control knew or should have known that their conduct was directed to one or more Subclass members who are senior citizens or disabled persons. Monsanto's, Bayer CropScience's, Scotts' and Seamless Control's conduct caused one or more of these senior citizens or disabled persons to suffer a loss of property set aside for retirement or for personal or family care and maintenance, or assets essential to the health or welfare of the senior citizen. One or more Subclass members who are senior citizens or disabled persons are substantially more vulnerable to Monsanto's, Scotts',

Bayer CropScience's, and Seamless Control's conduct because of age, poor health, infirmity and/or sensitivity to toxic substances, and each of them suffered economic damage resulting from their conduct.

533. More than thirty days prior to the filing of this Complaint, Plaintiffs Koller and Ferguson provided Monsanto, Bayer CropScience, and Seamless Control with notice and demand that Defendants correct, repair, replace or otherwise rectify the unlawful, unfair, false and/or deceptive practices complained of herein. Despite receiving the aforementioned notice and demand, Monsanto, Bayer CropScience, and Seamless Control failed to do so in that, among other things, they failed to identify similarly situated customers, notify them of their right to correction, repair, replacement or other remedy, and/or to provide that remedy. Accordingly, Plaintiffs seek, pursuant to California Civil Code § 1780(a)(3), on behalf of themselves and those similarly situated Subclass members, compensatory damages, punitive damages and restitution of any ill-gotten gains due to Defendants' acts and practices.

534. **CLRA § 1782 NOTICE TO SCOTTS.** Irrespective of any representations to the contrary in this Class Action Complaint, Plaintiffs specifically disclaims\, at this time, any request for damages under any provision of the CLRA against Scotts. Plaintiffs, however, hereby provide Scotts with notice and demand that within thirty (30) days from that date, Scotts correct, repair, replace or otherwise rectify the unlawful, unfair, false and/or deceptive practices complained of herein. Scotts' failure to do so will result in Plaintiffs further amending this First Amended Class Action Complaint to seek, pursuant to California Civil Code § 1780(a)(3), on behalf of themselves and those similarly situated class members, compensatory damages, punitive damages and restitution of any ill-gotten gains due to Scotts' acts and practices. In particular, Plaintiffs will seek to recover on behalf of themselves and those similarly situated, a full refund or, at a minimum, the price premium paid for the Products, i.e., the difference between the price consumers paid for the Products and the price that they would have paid but for Scotts' misrepresentation and omissions This premium can be determined by using econometric or statistical techniques such as hedonic regression or conjoint analysis.

535. Plaintiffs seek, on behalf of themselves and the Subclass, an injunction. Absent an

injunction, Monsanto, Scotts and Bayer CropScience will continue to cause injury in fact to the general public and the loss of money and property in that Monsanto, Scotts and Bayer CropScience will continue to violate the laws of California, unless specifically ordered to comply with the same. This expectation of future violations will require current and future consumers to repeatedly and continuously seek legal redress in order to recover monies paid to Monsanto, Scotts and Bayer CropScience to which it is not entitled. Plaintiffs, those similarly situated and/or other consumers have no other adequate remedy at law to ensure future compliance with the California Civil Code alleged to have been violated herein.

536. Plaintiffs also request that this Court award their costs and reasonable attorneys' fees pursuant to California Civil Code § 1780(d).

PLAINTIFFS' NINTH CAUSE OF ACTION

(False Advertising, Business and Professions Code § 17500, *et seq.* ("FAL"))

On Behalf of Plaintiffs and the California Subclass Against Defendants

537. Plaintiffs reallege and incorporate by reference the above paragraphs of this Class Action Complaint as if set forth herein.

538. Plaintiffs bring this claim against Monsanto, Seamless Control and Bayer CropScience.

539. California Bus. & Prof. Code § 17500 states: "It is unlawful for any person, ... corporation ...or any employee thereof with intent directly or indirectly to dispose of real or personal property... or to induce the public to enter into any obligation relating thereto, to make or disseminate or cause to be made or disseminated ... before the public in this state or from this state before the public in any state, in any newspaper or other publication, or any advertising device, ... or in any other manner or means whatever, including over the Internet, any statement ... which is untrue or misleading, and which is known, or which by the exercise of reasonable care should be known, to be untrue or misleading."

540. Beginning at an exact date unknown to Plaintiffs, but within three (3) years preceding the filing of this Complaint, Monsanto, Seamless Control, Scotts and Bayer CropScience made or caused to be made and disseminated throughout California and the United

States untrue, false, deceptive and/or misleading statements in connection with the advertising and marketing of the Products.

541. Specifically, the Products are sold and distributed under the labels of registered pesticides. The labels state the name of the chemical within the Product and its EPA registration number, even though they do not contain such registered, EPA-approved chemicals. None of the Products included an expiration date on the label. Further, Scotts, along with Monsanto and Bayer CropScience, placed in-store and online point-of-sale advertisements that represented that the Roundup Weed & Grass Killer Super Concentrate, Roundup PRO, and possibly other Products contained registered, EPA-approved pesticides and failed to disclose the Products' expiration date and defect, as described above.

542. As alleged above, Monsanto, Seamless Control, Scotts and Bayer CropScience made representations and statements (by omission) that led reasonable customers to believe that the Products that they were purchasing (i) were registered pesticides; (ii) contained EPA-approved herbicides; (iii) were chemically identical to registered pesticides; (iv) did not expire; (v) were safe to use for the entire life cycle of the Product if used and stored in accordance with the label instructions; and/or (vi) meet EPA's safety standards. Further, Monsanto, Seamless Control, Scotts, and Bayer CropScience had a duty to disclose the omitted facts, which they failed to do.

543. Plaintiffs, and Subclass members relied to their detriment on Monsanto's, Seamless Control's, Scotts' and Bayer CropScience's false, misleading and deceptive advertising and marketing practices, including each of the omissions and misrepresentations set forth above. Had Plaintiffs and those similarly situated been adequately informed and not intentionally deceived by Monsanto, Seamless Control, Scotts and Bayer CropScience, they would have acted differently by, without limitation, refraining from purchasing the Products or paying less for them.

544. Monsanto's, Seamless Control's, Scotts' and Bayer CropScience's acts and omissions are likely to deceive the general public.

545. Monsanto, Seamless Control, Scotts and Bayer CropScience engaged in these

false, misleading and deceptive advertising and marketing practices to increase their profits. Accordingly, Monsanto, Seamless Control, Scotts and Bayer CropScience has engaged in false advertising, as defined and prohibited by section 17500, *et seq.* of the California Business and Professions Code.

546. The aforementioned practices, which Monsanto, Seamless Control, Scotts, and Bayer CropScience used, and continues to use, to their significant financial gain, also constitute unlawful competition and provide an unlawful advantage over Monsanto's, Seamless Control's, Scotts', and Bayer CropScience's competitors as well as injury to the general public.

547. As a direct and proximate result of such actions, Plaintiffs and the other Subclass members have suffered, and continue to suffer, injury in fact and have lost money and/or property as a result of such false, deceptive and misleading advertising in an amount which will be proven at trial, but which is in excess of the jurisdictional minimum of this Court. Plaintiffs seek, on behalf of themselves and the Subclass full restitution of monies, as necessary and according to proof, to restore any and all monies acquired by Monsanto, Seamless Control, Scotts, and Bayer CropScience from Plaintiffs, the general public, or those similarly situated by means of the false, misleading and deceptive advertising and marketing practices complained of herein, plus interest thereon. Pursuant to Federal Rule of Civil Procedure 8(e)(2), Plaintiffs make the following allegations in this paragraph only hypothetically and as an alternative to any contrary allegations in their other causes of action, in the event that such causes of action will not succeed. Plaintiffs, the Subclass seek restitution in the alternative because they have no adequate remedy at law. To obtain a full refund as damages, Plaintiffs must show that the Products they received have essentially no market value. In contrast, Plaintiffs can seek restitution for a full refund without making this showing. This is because Plaintiffs purchased Products that they would not otherwise have purchased but for the misrepresentations and omissions. Restitution, therefore, could cover the full price paid by the Plaintiffs and the Subclass, whereas damages may amount to less than the full purchase price. As a result, damages may be insufficient to make Plaintiffs or the Subclass whole.

548. Further, pursuant to Federal Rule of Civil Procedure 8(e)(2), Plaintiffs and the

Subclass, may be unable to obtain monetary, declaratory and/or injunctive relief directly under other causes of action and will lack an adequate remedy at law, if the Court requires them to show classwide reliance and materiality beyond the objective reasonable consumer standard applied under the FAL, because Plaintiffs may not be able to establish each Subclass member's individualized understanding of the misleading representations as described in this Complaint, but the FAL does not require individualize proof of deception or injury by absent class members. *See, e.g., Ries v. Ariz. Bevs. USA LLC*, 287 F.R.D. 523, 537 (N.D. Cal. 2012) ("restitutionary relief under the UCL and FAL 'is available without individualized proof of deception, reliance, and injury.'"). In addition, Plaintiffs and the Subclass may be unable to obtain such relief under other causes of action and will lack an adequate remedy at law, if Plaintiffs are unable to demonstrate the requisite *mens rea* (intent, reckless, and/or negligence), because the FAL imposes no such *mens rea* requirement and liability exists even if Monsanto, Seamless Control, Scotts, and Bayer CropScience acted in good faith. Plaintiffs seek, on behalf of themselves and the Subclass a declaration that the above-described practices constitute false, misleading and deceptive advertising.

549. In addition, Plaintiffs and the Subclass do not have an adequate remedy at law against Seamless Control since it merged into Monsanto in July 2022 and because Monsanto maintains that Seamless Control no longer exists. Plaintiffs, on behalf of themselves and the Subclass, accordingly, seek a constructive trust over certain funds acquired by Monsanto from Seamless Control when it merged into Monsanto. Specifically, Plaintiffs and the Subclass paid specific sums of money to retailers for the Joint Venture Products, who, in turn, paid a portion of those funds to Seamless Control. Seamless Control wrongfully acquired those funds as described above (including the fact that Joint Venture Products were not registered, misbranded, and were illegal to sell or distribute) and is not entitled to possession of those funds. Since Seamless Control merged into Monsanto, Monsanto now possesses Seamless Control's wrongfully acquired funds. A constructive trust is thus necessary to prevent Monsanto, the entity that now holds the property, from benefiting from the wrongfully acquired funds and to ensure the return of Plaintiffs' and the Subclass' property.

550. Plaintiffs seek, on behalf of themselves and the Subclass, an injunction. Absent an injunction, Monsanto, Scotts and Bayer CropScience will continue to cause injury in fact to the general public and the loss of money and property in that Monsanto, Scotts and Bayer CropScience will continue to violate the laws of California, unless specifically ordered to comply with the same. This expectation of future violations will require current and future consumers to repeatedly and continuously seek legal redress in order to recover monies paid to Monsanto, Scotts and Bayer CropScience to which it is not entitled. Plaintiffs, those similarly situated and/or other consumers have no other adequate remedy at law to ensure future compliance with the California Business and Professions Code alleged to have been violated herein.

PLAINTIFFS' TENTH CAUSE OF ACTION

(Unlawful, unfair, and fraudulent trade practices violation of Business and Professions Code § 17200, *et seq*)

On Behalf of Plaintiffs and the California Subclass Against all Defendants

551. Plaintiffs reallege and incorporate by reference the above paragraphs of this Class Action Complaint as if set forth herein.

552. Within four (4) years preceding the filing of this lawsuit, and at all times mentioned herein, Defendants have engaged, and continue to engage, in unlawful, unfair, and fraudulent trade practices in California by engaging in the unlawful, unfair, and fraudulent business practices outlined in this Complaint.

553. Monsanto, Bayer CropScience and Seamless Control have engaged, and continue to engage, in unlawful practices by, without limitation, violating the following state and federal laws: (i) the CLRA as described herein; (ii) the FAL as described herein; (iii) the California Food & Agriculture Code, including without limitation Cal. Food & Agric. Code § 12811; § 12881 generally, including (a), (c), (d); § 12882(b); § 12911(a); § 12991 generally, including (a), (b), (c), (d); § 12992; § 12993; § 12996, and (iii) and federal laws regulating the advertising and branding of pesticides in 21 U.S.C. § 343(a), *et seq.*, including but not limited to 7 U.S.C. § 136(q)(1)(A), (C), (E), (F), (G); § 136a(a); § 136j(a)(1)(A), (C), and (E); § 136j(a)(2)(S), and EPA regulations, including but not limited to 40 C.F.R. § 156.10(a)(5), § 156.10(g)(6),

§158.350, 40 C.F.R. §168.22(b)(4), and 40 C.F.R. §168.22(a). As explained above, Monsanto, Bayer CropScience and Seamless Control unlawfully (i) sold, distributed and offered for sale unregistered pesticides; (ii) sold, distributed and offered for sale pesticides that differ in chemical composition from what is allowed under their registrations at the time of their sale or distribution; (iii) sold, distributed and offered for sale misbranded pesticides. Monsanto and Bayer CropScience also unlawfully placed advertisements for unregistered pesticides.

554. Scotts has engaged, and continues to engage, in unlawful practices by, without limitation, violating the following state and federal laws: have engaged, and continue to engage, in unlawful practices by, without limitation, violating the following state and federal laws: (i) the California Food & Agriculture Code, including without limitation Cal. Food & Agric. Code § 12811; § 12881 generally, including (a), (c), (d); § 12882(b); § 12911(a); § 12991 generally, including (a), (b), (c), (d); § 12992; § 12993; § 12996, and (ii) and federal laws regulating the advertising and branding of pesticides in 21 U.S.C. § 343(a), *et seq.*, including but not limited to 7 U.S.C. § 136(q)(1)(A), (C), (E), (F), (G); § 136a(a); § 136j(a)(1)(A), (C), and (E); § 136j(a)(2)(S), and EPA regulations, including but not limited to 40 C.F.R. § 156.10(a)(5), § 156.10(g)(6), §158.350, 40 C.F.R. §168.22(b)(4), and 40 C.F.R. §168.22(a). As explained above, Scotts unlawfully (i) distributed and offered for sale unregistered pesticides; (ii) distributed and offered for sale pesticides that differ in chemical composition from what is allowed under their registrations at the time of their sale or distribution; (iii) distributed and offered for sale misbranded pesticides; and (iv) placed advertisements for unregistered pesticides.

555. Monsanto and Bayer CropScience have engaged, and continues to engage, in fraudulent practices by, without limitation, the following: (i) misrepresenting the Products to contain registered pesticides; (ii) misrepresenting the Products to contain pesticides approved by EPA; (iii) omitting that the Products expire and should not be used after a certain date; (iv) concealing that the Products were defective and pose a safety hazard to consumers; (v) marketing and offering for sale, through third-parties, the Products as registered pesticides in point-of-sale advertisements, including in-store signage, retailer webpages, point-of-sale shelf tags, and

posters, online and in stores; and (vi) concealing the defect and safety hazard posed to consumers in point-of-sale advertising.

556. Seamless Control has engaged in fraudulent practices by, without limitation, the following: (i) misrepresenting the Joint Venture Products to contain registered pesticides; (ii) misrepresenting the Joint Venture Products to contain pesticides approved by EPA; (iii) omitting that the Joint Venture Products expire and should not be used after a certain date; and (iv) concealing that the Joint Venture Products were defective and pose a safety hazard to consumers.

557. Scotts has engaged, and continues to engage, in fraudulent practices by, without limitation, the following: (i) misrepresenting the Roundup Weed & Grass Killer Super Concentrate, Roundup PRO, and possibly other Products, as containing registered, EPA-approved pesticides when it placed those Products into the stream of commerce and made them available for purchase by consumers in online and brick and mortar retailers under the labels of registered pesticides; (ii) concealing that the Weed & Grass Killer Super Concentrate, Roundup PRO, and possibly other Products expire and should not be used after a certain date when it placed those Products into the stream of commerce and made them available for purchase by consumers in online and brick and mortar retailers knowing that none included an expiration date on the label; (iii) concealing that the Weed & Grass Killer Super Concentrate, Roundup PRO, and possibly other Products were defective and pose a safety hazard to consumers when it placed those Products into the stream of commerce and made them available for purchase by consumers in online and brick and mortar retailers knowing that none included warning about the defect; (iv) misrepresenting the Roundup Weed & Grass Killer Super Concentrate, Roundup PRO, and possibly other Products as EPA-approved, registered pesticides in point-of-sale advertisements, including in-store signage, retailer webpages, point-of-sale shelf tags, and posters, online and in stores; and (v) concealing the defect, expiration date, and safety hazard associated with the Roundup Weed & Grass Killer Super Concentrate, Roundup PRO, and possibly other Products in point-of-sale advertisements, including in-store signage, retailer webpages, point-of-sale shelf tags, and posters, online and in stores.

558. In committing the aforementioned fraudulent acts, Defendants Monsanto, Bayer

CropScience, Scotts and Seamless Control knew or should have known the true facts, due to their involvement in the design, testing, manufacture, sale, distribution, and/or registration of the Products and due to their obligations under FIFRA and California law, as explained above. Yet, at no time did any of these Defendants reveal the truth Plaintiffs or the Subclass. Defendants, instead, concealed the truth, intending for Plaintiffs and the Subclass to rely – which they did. In fact, Monsanto took steps to ensure that their employees did not reveal known the defect to consumers.

559. In addition to the unlawful and deceptive acts described above, Monsanto, Bayer CropScience, Scotts, and Seamless Control engaged, and continue to engage in, unfair practices by selling and/or distributing the Products that pose an unreasonable danger to consumers without warning consumers of the danger. Monsanto, Bayer CropScience, Scotts, and Seamless Control unfairly violated the EPA's policy on nitrosamines by selling and/or distributing pesticides that could and invariably would exceed the regulatory limit for NNG, without oncogenic testing acceptable to EPA. *See* 45 Fed. Reg. 42855-6. EPA enacted the policy to ensure that any exposure to nitrosamines remains within limits or is a nitrosamine that is conclusively not carcinogenic. As explained above, the EPA has reiterated throughout the years that acceptable oncogenic testing is required when there is evidence a product can exceed 1 ppm for NNG. The policy is tethered to federal and state statues prohibiting the sale and distribution of products that do not conform to the limits set forth in their registrations and the requirement that only pesticides that do not pose "unreasonable adverse effects" may be registered and legally sold in the United States. Moreover, manufacturers have a "continuing obligation to adhere to FIFRA's labeling requirements," which includes "seek[ing] approval to amend a label that does not contain all 'necessary warnings or cautionary statements.'" *Hardeman v. Monsanto Co*., 997 F.3d 941, 951 (9th Cir. 2021), Any utility of Monsanto's, Bayer CropScience's, Scotts' and Seamless Controls' conduct (if any) is far outweighed by the harm caused to consumers by the risk of exposure to a probable carcinogen at levels above regulatory limits.

560. In addition to the unlawful and deceptive acts described above, Monsanto, Bayer CropScience, Scotts, and Seamless Control engaged in unfair practices by violating the Federal

Trade Commission's guides against bait advertising. 16 C.F.R. §§ 238.1-4. The policy provides that "No statement or illustration should be used in any advertisement which creates a false impression of the grade, quality, make, value, currency of model, size, color, usability, or origin of the product offered, or which may otherwise misrepresent the product in such a manner that later, on disclosure of the true facts, the purchaser may be switched from the advertised product to another." 16 C.F.R. § 238.2(a). Monsanto, Bayer CropScience, and Seamless Control violated 16 C.F.R. § 238.2(a) by (1) unfairly representing the Products to contain registered pesticides approved by EPA to consumers on their labels and (2) unfairly omitting that the Products expire. Scotts violated 16 C.F.R. § 238.2(a) by unfairly representing the Roundup Weed & Grass Killer Super Concentrate and Roundup PRO, and possibly other Products, to contain registered pesticides approved by EPA that do not expire when it introduced them into the stream of commerce and made them available for purchase by consumers in online and brick and mortar stores. Scotts, Monsanto, and Bayer CropScience further violated 16 C.F.R. § 238.2(a) by unfairly advertising the Roundup Weed & Grass Killer Super Concentrate and Roundup PRO, and possibly other Products, as registered pesticides that do not expire in point-of-sale advertisements. These representations created a false impression for consumers that the Products contained registered pesticides approved by EPA and are of a quality that meets EPA's safety standards. As explained above, had Plaintiffs known they truth, they would not have purchased the Products or would have paid less. Any utility of Monsanto's, Bayer CropScience's, Scotts' and Seamless Controls' conduct (if any) is far outweighed by the harm caused to consumers through their use of pesticides that do meet regulatory safety standards.

561. As explained above, Defendants had or should have had knowledge of the defect with the Products.

562. Plaintiffs and those similarly situated relied to their detriment on Defendants' unlawful, unfair, and fraudulent business practices. Had Plaintiffs and those similarly situated been adequately informed and not deceived by Defendants, they would have acted differently by, without limitation: (i) declining to purchase the Products, or (ii) paying less for the Products.

563. Defendants' acts and omissions are likely to deceive the general public.

564. Defendants engaged in these deceptive, unfair and unlawful practices to increase its profits. Accordingly, Defendants have engaged in unlawful trade practices, as defined and prohibited by section 17200, *et seq.* of the California Business and Professions Code.

565. The aforementioned practices, which Defendants have used to its significant financial gain, also constitute unlawful competition and provide an unlawful advantage over Defendants' competitors as well as injury to the general public.

566. As a direct and proximate result of such actions, Plaintiffs and the other Subclass members, have suffered and continue to suffer injury in fact and have lost money and/or property as a result of such deceptive and/or unlawful trade practices and unfair competition in an amount which will be proven at trial, but which is in excess of the jurisdictional minimum of this Court. Among other things, Plaintiffs, Subclass members lost the amount they paid for the Products.

567. As a direct and proximate result of such actions, Defendants have enjoyed, and continues to enjoy, significant financial gain in an amount which will be proven at trial, but which is in excess of the jurisdictional minimum of this Court. Plaintiffs seek, on behalf of themselves and those similarly situated, equitable relief, including the restitution for the premium and/or full price that they or others paid to Defendants as a result of Defendants' unlawful conduct.

568. The UCL provides for separate and independent cause of actions for "unlawful," "unfair," and "fraudulent" conduct. *See Rubio v. Capital One Bank*, 613 F.3d 1195, 1203 (9th Cir. 2010) ("Each of these three adjectives captures "a separate and distinct theory of liability.")

569. Plaintiffs and the Subclass lack an adequate remedy at law to obtain relief with respect to their claims under the "unlawful" prong of the UCL. The "unlawful" prong of the UCL makes the violation of a statute or regulation actionable. None of Plaintiffs' damages claims provide a remedy for the harm caused by violation of a statue or regulation itself, whereas the UCL provides a remedy through its "unlawful" prong. Plaintiffs' damages causes of action provide remedies for harm caused by the deception of consumers or breach warranty obligations, which is a different type of harm from the harm Plaintiffs and Subclass members sustained as a result of the unlawful sale and/or distribution of unregistered and/or misbranded pesticides.

Indeed, the violation of a statue or regulation – alone – does not mean the act was deceptive or resulted in a breach of warranties. *See e.g.*, *Victor v. R.C. Bigelow, Inc.*, No. 13-cv-02976-WHO, 2014 U.S. Dist. LEXIS 203331, at *15 (N.D. Cal. July 18, 2014) ("The mere fact that a statement violates a regulation is insufficient to show that it is also misleading. Victor's argument would effectively render every violation of the "unlawful" prong of the UCL a violation of the "fraudulent" prong as well—an untenable result without any legal basis.") Therefore, even if the CLRA and Plaintiffs' other fraud-based claims provide a remedy for harm that would also be subject to the fraud prong of the UCL, those causes of action do not provide a remedy for the harm sustained under the "unlawful" or "unfair" prongs of the UCL. Plaintiffs' warranty claims also do not provide a remedy for the harm sustained under the "unlawful" or "unfair" prongs of the UCL since warranty claims provide a remedy for breach of contractual duties, not violations of the law or for unfair conduct. Finally, the California Food & Agriculture Code and federal regulations and statutes cited above do not provide a private right of action, so Plaintiffs and the Subclass members must allege those violations as predicate acts under the UCL to obtain relief. Plaintiffs, therefore, do not have a legal remedy for their "unlawful" prong claim.

570. Even setting that aside, Plaintiffs and the Subclass seek restitution for the unlawful prong claim because damages may be inadequate to make them whole. As explained above, damages may be inadequate because, to obtain a full refund as damages, Plaintiffs must show that the Products received have essentially no market value. In contrast, Plaintiffs can seek restitution for a full refund without making this showing. Restitution, therefore, is necessary to cover the full price paid by the Plaintiffs and the Subclass, whereas damages may amount to less than the full purchase price. As a result, damages may be insufficient to make Plaintiffs or the Subclass whole. Further, to the extent the Court finds that Plaintiffs' fraud-based claims against Scotts fail, Plaintiffs will lack a remedy at law for the claims against Scotts and, thus, may only bring claims in equity, including their claims under the unlawful and unfair prongs of the UCL.

571. Plaintiffs further seek, on behalf of themselves and those similarly situated, equitable relief, including the restitution for the premium and/or full price that they or others paid to Defendants as a result of Defendants' unfair conduct. Plaintiffs lack an adequate remedy at

law to obtain relief with respect to their claims under the "unfair" prong of the UCL. "The 'unfair' prong of the UCL creates a cause of action for a business practice that is unfair even if not proscribed by some other law." *Cappello v. Walmart Inc*., 394 F.Supp. 3d 1015, 1023 (N.D. Cal. 2019). All of Plaintiffs' damages claims require a violation of common, statutory, or warranty law. As a result, none of Plaintiffs' damages claims provide a remedy for the harm caused by unfair conduct, whereas the UCL provides a remedy through its "unfair" prong. Therefore, even if Plaintiffs' damages claims provide a remedy for harm that would also be subject to the fraud prong of the UCL, those causes of action do not provide a remedy for the harm sustained under the "unfair" prong of the UCL. Plaintiffs' warranty claims also do not provide a remedy for the harm sustained under the "unfair" prong of the UCL since warranty claims provide a remedy for breach of contractual duties, not for harm sustained as a result of unfair conduct.

572. Plaintiffs also seek equitable relief, including restitution, with respect to their UCL "fraudulent" prong claims. Pursuant to Federal Rule of Civil Procedure 8(e)(2), Plaintiffs make the following allegations in this paragraph only hypothetically and as an alternative to any contrary allegations in their other causes of action, in the event that such causes of action do not succeed. Plaintiffs and the Subclass may be unable to obtain monetary, declaratory and/or injunctive relief directly under other causes of action and will lack an adequate remedy of law, if the Court requires them to show classwide reliance and materiality beyond the objective reasonable consumer standard applied under the UCL, because Plaintiffs may not be able to establish each Subclass member's individualized understanding of Defendants' misleading representations and omissions as described in this Complaint, but the UCL does not require individualized proof of deception or injury by absent class members. *See, e.g., Stearns v Ticketmaster*, 655 F.3d 1013, 1020, 1023-25 (9th Cir. 2011) (distinguishing, for purposes of CLRA claim, among class members for whom website representations may have been materially deficient, but requiring certification of UCL claim for entire class). Plaintiffs also may lack an adequate remedy at law for a full refund, as explained above.

573. Plaintiffs seek, on behalf of those similarly situated, a declaration that the above-

described trade practices are fraudulent, unfair, and/or unlawful.

574. In addition, Plaintiffs and the Subclass do not have an adequate remedy at law against Seamless Control since it merged into Monsanto in July 2022, and Monsanto maintains that Seamless Control no longer exists. Plaintiffs, on behalf of themselves and the Subclass, accordingly, seek a constructive trust over certain funds acquired by Monsanto from Seamless Control when it merged into Monsanto. Specifically, Plaintiffs and the Subclass paid specific sums of money to retailers for the Joint Venture Products, who, in turn, paid a portion of those funds to Seamless Control. Seamless Control wrongfully acquired those funds as described above (including the fact that Joint Venture Products were not registered, misbranded and were illegal to sell or distribute) and is not entitled to possession of those funds. Since Seamless Control merged into Monsanto, Monsanto now possesses Seamless Control's wrongfully acquired funds. A constructive trust is thus necessary to prevent Monsanto, the entity that now holds the property, from benefiting from the wrongfully acquired funds and to ensure the return of Plaintiffs' and the Subclass's property.

575. Finally, in the event the Court finds that Scotts did not act fraudulently, Plaintiffs will lack a remedy at law against Scotts and will only be able to pursue causes of action for unfair or unlawful conduct under the UCL.

576. Plaintiffs seek, on behalf of those similarly situated, an injunction. Absent an injunction, Bayer CropScience, Scotts and Monsanto will continue to cause injury in fact to the general public and the loss of money and property in that they will continue to violate the laws of California, unless specifically ordered to comply with the same. This expectation of future violations will require current and future consumers to repeatedly and continuously seek legal redress in order to recover monies paid to Bayer CropScience, Scotts, and Monsanto to which they were not entitled. Plaintiffs, those similarly situated and/or other consumers nationwide have no other adequate remedy at law to ensure future compliance with the California Business and Professions Code alleged to have been violated herein.

PLAINTIFF'S ELEVENTH CAUSE OF ACTION
(Unjust Enrichment)
On Behalf of Plaintiffs and the Class Against all Defendants

577. Plaintiffs reallege and incorporate by reference all paragraphs alleged herein.

578. Plaintiffs brings this claim individually and on behalf of the other members of the Class.

579. Plaintiffs and members of the Class conferred a benefit on the Defendants by purchasing the Products.

580. Defendants have been unjustly enriched in retaining the revenues from Plaintiffs and members of the Class's purchases of the Products, which retention is unjust and inequitable, because the Products were illegal to sell and Defendants falsely represented that the Products contained registered, EPA-approved herbicides even though they did not. Defendants also hid the defect and the fact that the Products expire from Plaintiffs and members of the Class. These actions harmed Plaintiffs and members of the Class because they paid a price premium as a result.

581. Because Defendants' retention of the non-gratuitous benefit conferred on it by Plaintiffs and members of the Class is unjust and inequitable, Defendants must pay restitution to Plaintiffs and members of the Class for its unjust enrichment, as ordered by the Court. Plaintiffs and those similarly situated have no adequate remedy at law to obtain this restitution. Damages may be inadequate because, to obtain a full refund as damages, Plaintiffs must show that the Products received have essentially no market value. In contrast, Plaintiffs can seek restitution for a full refund without making this showing. Restitution, therefore, is necessary to cover the full price paid by the Plaintiffs and the Class, whereas damages may amount to less than the full purchase price. As a result, damages may be insufficient to make Plaintiffs or the Class whole. Further, to the extent the Court finds that Plaintiffs' fraud-based claims against Scotts fail, Plaintiffs will lack a remedy at law for the claims against Scotts and, thus, may only bring claims in equity, including their claim for unjust enrichment.

582. In addition, Plaintiffs and the Class do not have an adequate remedy at law against Seamless Control since it merged into Monsanto in July 2022, and Monsanto maintains

that Seamless Control no longer exists. Plaintiffs, on behalf of themselves and the Class, accordingly, seek a constructive trust over certain funds acquired by Monsanto from Seamless Control when it merged into Monsanto. Specifically, Plaintiffs and the Class paid specific sums of money to retailers for the Joint Venture Products, who, in turn, paid a portion of those funds to Seamless Control. Seamless Control wrongfully acquired those funds as described above (including the fact that Joint Venture Products were not registered, misbranded, and were illegal to sell or distribute) and is not entitled to possession of those funds. Since Seamless Control merged into Monsanto, Monsanto now possesses Seamless Control's wrongfully acquired funds. A constructive trust is thus necessary to prevent Monsanto, the entity that now holds the property, from benefiting from the wrongfully acquired funds and to ensure the return of Plaintiffs' and the Class's property.

583. Plaintiffs, therefore, seek an order requiring Defendants to make restitution to them and other members of the Class.

PRAYER FOR RELIEF

WHEREFORE, Plaintiffs, on behalf of themselves and those similarly situated, respectfully request that the Court enter judgement against Defendants as follows:

A. Certification of the proposed Class/Subclass including appointment of Plaintiffs' counsel as class counsel;

B. An order temporarily and permanently enjoining Defendants Monsanto, Scotts and Bayer CropScience from continuing the unlawful, deceptive, fraudulent, and unfair business practices alleged in this Amended Complaint;

C. An award of compensatory damages in an amount to be determined at trial, except for those causes of action where compensatory damages are not legally available;

D. An award of statutory damages in an amount to be determined at trial, except for those causes of action where statutory damages are not legally available;

E. An award of punitive damages in an amount to be determined at trial, except for those causes of action where punitive damages are not legally available;

F. An award of treble damages, except for those causes of action where treble

damages are not legally available;

G. An award of restitution in an amount to be determined at trial;

H. An order for a constructive trust over wrongly held funds that Seamless Control acquired that Monsanto now possesses;

I. An order requiring Defendants to pay both pre- and post-judgment interest on any amounts awarded;

J. For reasonable attorneys' fees and the costs of suit incurred; and

K. For such further relief as this Court may deem just and proper.

JURY TRIAL DEMANDED

Plaintiffs hereby demand a trial by jury.

Dated: March 29, 2022

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TABLE OF EXHIBITS

Exhibit	Description
1	Product Chart
2*	Monsanto label for Roundup Weed & Grass Killer Super Concentrate
3*	Monsanto label for Roundup PRO Concentrate Herbicide
4*	Monsanto label for Roundup QuikPRO Herbicide
5*	Monsanto label for Roundup PROMAX Herbicide
6*	Monsanto label for Roundup Custom for Aquatic & Terrestrial Use
7 *	Monsanto label for Ranger Pro Herbicide
8*	Monsanto label Roundup PRO Herbicide
9*	Monsanto label Roundup EasyMix Dry Concentrate Weed & Grass Killer
10*	Monsanto label for Roundup Quik Stik
11*	Monsanto label for Roundup ProDry Herbicide
12*	Bayer CropScience label for Roundup PRO Concentrate Herbicide
13*	Bayer CropScience label for Roundup QuikPRO Herbicide
14*	Bayer CropScience label for Roundup PROMAX Herbicide
15*	Bayer CropScience label for Roundup Custom for Aquatic & Terrestrial Use
16*	Bayer CropScience label for Ranger Pro Herbicide
17*	Seamless Control label for Roundup Custom for Aquatic & Terrestrial Use
18*	Seamless Control label for Roundup QuikPRO Herbicide
19*	Seamless Control label for Roundup PROMAX Herbicide
20*	Seamless Control label for Roundup PRO Herbicide
21*	Seamless Control label for Roundup PRO Concentrate Herbicide
22*	Seamless Control label for Ranger Pro
23	Koller CLRA declaration
24	May 25, 2015 Material Safety Data Sheet for Roundup PRO Concentrate Herbicide

25	August 12, 2020 Material Safety Data Sheet for Roundup PRO Concentrate Herbicide
26	Webpage from the Ohio Secretary of State for Seamless Control, LLC
27	Declaration of Dr. Charles W. Jameson

*These Exhibits were filed in this case on July 22, 2022 (ECF 1) with the original Complaint and are incorporated here by reference.

EXHIBIT 1

	Product Name	% of glyphosate	EPA Reg. No.	Date of EPA Registration	Current Registrant with EPA	CA Reg. No.	Date of CA Reg.	Size
1	**Roundup Weed & Grass Killer Super Concentrate**	50.2%	71995-25	12/03/1999	Monsanto Company Lawn & Garden Products	71995-25-ZA 71995-25-AA	07/08/21 11/27/00	1 QT 0.5 GAL 1 GAL
2	**Roundup PRO Concentrate Herbicide**	50.2%	524-529	10/05/2000	Bayer CropScience LP	524-529-AA 524-529-ZA	06/01/01 04/12/21	2.5 GAL
3	**Roundup QuikPRO Herbicide**	73.3%	524-535	10/31/2001	Bayer CropScience LP	524-535-ZA 524-535-ZB	07/06/11 04/29/21	5 x 1.5 OZ Packet 6.8 LBS
4	**Roundup PROMAX Herbicide**	48.7%	524-579	06/20/2007	Bayer CropScience LP	524-579-AA 524-579-ZA	10/29/08 04/19/21	1.67 GAL 2.5 GAL
5	**Roundup Custom for Aquatic & Terrestrial Use**	53.8%	524-343	06/14/1982	Bayer CropScience LP	524-343-ZG 524-343-ZI	01/01/13 05/17/21	2.5 GAL
6	**RangerPro Herbicide**	41.0%	524-517	09/27/1999	Bayer CropScience LP	524-517-ZB 524-517-ZC	12/01/03 04/12/21	2.5 GAL
7	**Roundup PRO Herbicide**	41.0%	524-475	08/10/1994	Bayer CropScience LP	524-475-ZA 524-475-ZF	10/26/95 04/19/21	2.5 GAL

8	**Roundup EasyMix Dry Concentrate Weed & Grass Killer**	73.3%	71995-61	12/18/2019	Monsanto Company Lawn & Garden Products	71995-61-AA	01/01/21	Unknown
9	**Roundup Quik Stik**	60.0%	71995-9	07/11/1991	Monsanto Company Lawn & Garden Products	524-452-ZA 524-452-AA	12/31/92 12/31/97	Unknown
10	**Roundup ProDry Herbicide**	71.4%	524-505	03/31/1999	Bayer CropScience LP	524-505-AA	12/31/17	Unknown

EXHIBIT 23

I, Scott Koller, declare as follows:

1. I am a plaintiff in this action. If called upon to testify, I could and would competently testify to the matters contained herein based upon my personal knowledge.

2. I submit this Declaration pursuant to California Code of Civil Procedure section 1780(d).

3. As set forth in my complaint, I purchased the Weed & Grass Killer Super Concentrate on several occasions from Lowe's, Ace Hardware, and Home Depot stores in the Brentwood, California and Antioch, California areas in the last decade, including at least two over the last four years.

I declare under penalty of perjury under the laws of California that the foregoing is true and correct.

Executed this 11th day of July 2022 in Brentwood, California

DocuSigned by:

C798B33521BB458...

Scott Koller

EXHIBIT 24

MONSANTO COMPANY

Safety Data Sheet
Commercial Product

1. PRODUCT AND COMPANY IDENTIFICATION

1.1. Product identifier

Roundup PRO® Concentrate Herbicide

1.1.1. Chemical name
Not applicable.
1.1.2. Synonyms
None.
1.1.3. EPA Reg. No.
524-529

1.2. Company

MONSANTO COMPANY, 800 N. Lindbergh Blvd., St. Louis, MO, 63167
Telephone: 800-332-3111, **Fax:** 314-694-5557
E-mail: safety.datasheet@monsanto.com

1.3. Emergency numbers

FOR CHEMICAL EMERGENCY, SPILL LEAK, FIRE, EXPOSURE, OR ACCIDENT Call CHEMTREC - Day or Night: 1-800-424-9300 toll free in the continental U.S., Puerto Rico, Canada, or Virgin Islands. For calls originating elsewhere: 703-527-3887 (collect calls accepted).
FOR MEDICAL EMERGENCY - Day or Night: +1 (314) 694-4000 (collect calls accepted).

2. HAZARDS IDENTIFICATION

2.1. Classification

OSHA Hazard Communication Standard, 29 CFR 1910.1200 (2012)
Not classified as hazardous.

2.2. Appearance and odour (colour/form/odour)

Pale amber-Pale brown /Liquid, (viscous) / Slight

2.3. OSHA Status

This product is not hazardous according to the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Refer to section 11 for toxicological and section 12 for environmental information.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Active ingredient
Isopropylamine salt of N-(phosphonomethyl)glycine; {Isopropylamine salt of glyphosate}

Composition

COMPONENT	CAS No.	% by weight (approximate)

Isopropylamine salt of glyphosate	38641-94-0	50.2
Ethoxylated tallowamine	61791-26-2	13
Other ingredients		36.8

The specific chemical identity is being withheld because it is trade secret information of Monsanto Company.

4. FIRST AID MEASURES

Use personal protection recommended in section 8.

4.1. Description of first aid measures

4.1.1. Eye contact: If in eyes, hold eye open and rinse slowly and gently for 15-20 minutes. Remove contact lenses, if present, after first 5 minutes, then continue rinsing. Call a poison control center or doctor for treatment advice.

4.1.2. Skin contact: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

4.1.3. Inhalation: If inhaled, move person to fresh air. If person is not breathing, call emergency number or ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible. Call a poison control center or doctor for treatment advice.

4.1.4. Ingestion: Call poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison center or doctor. Do not give anything by mouth to an unconscious person.

4.2. Most important symptoms and effects, both acute and delayed

4.2.1. Eye contact, short term: Causes moderate but temporary eye irritation.

4.2.2. Skin contact, short term: Not expected to produce significant adverse effects when recommended use instructions are followed.

4.2.3. Inhalation, short term: Not expected to produce significant adverse effects when recommended use instructions are followed.

4.2.4. Single ingestion: Not expected to produce significant adverse effects when recommended use instructions are followed.

4.3. Indication of any immediate medical attention and special treatment needed

4.3.1. Advice to doctors: This product is not an inhibitor of cholinesterase.

4.3.2. Antidote: Treatment with atropine and oximes is not indicated.

5. FIRE-FIGHTING MEASURES

5.1. Extinguishing media

5.1.1. Recommended: Water, foam, dry chemical, carbon dioxide (CO2)

5.2. Special hazards

5.2.1. Unusual fire and explosion hazards

Minimise use of water to prevent environmental contamination.
Environmental precautions: see section 6.

5.2.2. Hazardous products of combustion

Carbon monoxide (CO), nitrogen oxides (NOx), phosphorus oxides (PxOy)

5.3. Fire fighting equipment: Self-contained breathing apparatus. Equipment should be thoroughly decontaminated after use.

5.4. Flash point

Does not flash.

6. ACCIDENTAL RELEASE MEASURES

6.1. Environmental precautions

SMALL QUANTITIES:
Low environmental hazard.
LARGE QUANTITIES:
Minimise spread.
Keep out of drains, sewers, ditches and water ways.

6.2. Methods for cleaning up

Contain spillage with sand bags or other means.
Absorb in earth, sand or absorbent material.
Dig up heavily contaminated soil.
Collect in containers for disposal.
Refer to section 7 for types of containers.
Flush residues with small quantities of water.
Minimise use of water to prevent environmental contamination.

Refer to section 13 for disposal of spilled material.
Use handling recommendations in Section 7 and personal protection recommendations in Section 8.

7. HANDLING AND STORAGE

Good industrial practice in housekeeping and personal hygiene should be followed.

7.1. Precautions for safe handling

Avoid contact with eyes, skin and clothing. When using do not eat, drink or smoke. Wash hands thoroughly after handling or contact. Wash contaminated clothing before re-use. Thoroughly clean equipment after use. Do not contaminate drains, sewers and water ways when disposing of equipment rinse water. Refer to section 13 of the safety data sheet for disposal of rinse water.

7.2. Conditions for safe storage

Compatible materials for storage: stainless steel, fibreglass, plastic, glass lining
Incompatible materials for storage: unlined mild steel, galvanised steel, see section 10.
Keep out of reach of children.
Keep away from food, drink and animal feed.
Keep only in the original container.
Keep container tightly closed in a cool, well-ventilated place.
Recommended maximum shelf life: 2 years.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Airborne exposure limits

Components	Exposure Guidelines
Isopropylamine salt of glyphosate	No specific occupational exposure limit has been established.
Ethoxylated tallowamine	No specific occupational exposure limit has been established.
Other ingredients	No specific occupational exposure limit has been established.

8.2. Engineering controls: No special requirement when used as recommended.

8.3. Recommendations for personal protective equipment

8.3.1. Eye protection: If there is significant potential for contact: Wear chemical goggles.

8.3.2. Skin protection: If repeated or prolonged contact: Wear chemical resistant gloves. Applicators and other handlers must wear: Wear long sleeved shirt, long pants and shoes with socks.

8.3.3. Respiratory protection: No special requirement when used as recommended.

When recommended, consult manufacturer of personal protective equipment for the appropriate type of equipment for a given application.

9. PHYSICAL AND CHEMICAL PROPERTIES

These physical data are typical values based on material tested but may vary from sample to sample. Typical values should not be construed as a guaranteed analysis of any specific lot or as specifications for the product.

Colour/colour range:	Pale amber - Pale brown
Odour:	Slight
Form:	Liquid, (viscous)
Physical form changes (melting, boiling, etc.):	
Melting point:	Not applicable.
Boiling point:	No data.
Flash point:	Does not flash.
Explosive properties:	No data.
Auto ignition temperature:	No data.
Self-accelerating decomposition temperature (SADT):	No data.
Oxidizing properties:	No data.
Specific gravity:	1.199 @ 20 °C /@ 15.6 °C
Vapour pressure:	No significant volatility; aqueous solution.
Vapour density:	Not applicable.
Evaporation rate:	No data.
Dynamic viscosity:	No data.
Kinematic viscosity:	No data.
Density:	1.199 g/cm3
Solubility:	Water: Soluble
pH:	4.8
Partition coefficient:	log Pow: -3.2 @ 25 °C (glyphosate)

10. STABILITY AND REACTIVITY

10.1. Reactivity
Reacts with galvanised steel or unlined mild steel to produce hydrogen, a highly flammable gas that could explode.

10.2. Stability
Stable under normal conditions of handling and storage.

10.3. Possibility of hazardous reactions
Reacts with galvanised steel or unlined mild steel to produce hydrogen, a highly flammable gas that could explode.

10.4. Incompatible materials
unlined mild steel;galvanised steel;see section 10.;
Compatible materials for storage: see section 7.2.

10.5. Hazardous decomposition
Thermal decomposition: Hazardous products of combustion: see section 5.

11. TOXICOLOGICAL INFORMATION

This section is intended for use by toxicologists and other health professionals.

Likely routes of exposure: Skin contact, eye contact, inhalation

Potential health effects
Eye contact, short term: Causes moderate but temporary eye irritation.
Skin contact, short term: Not expected to produce significant adverse effects when recommended use instructions are followed.
Inhalation, short term: Not expected to produce significant adverse effects when recommended use instructions are followed.
Single ingestion: Not expected to produce significant adverse effects when recommended use instructions are followed.

Data obtained on similar products and on components are summarized below.

Similar formulation

Acute oral toxicity
Rat, LD50: > 5,000 mg/kg body weight
Practically non-toxic.
Acute dermal toxicity
Rat, LD50: > 5,000 mg/kg body weight
Practically non-toxic.
Skin irritation
Rabbit, 6 animals, OECD 404 test:
Days to heal: 10
Primary Irritation Index (PII): 1.7/8.0
Slight irritation.
Eye irritation
Rabbit, 6 animals, OECD 405 test:
Days to heal: 7
Moderate irritation.
Acute inhalation toxicity
Rat, LC50, 4 hours, aerosol:
Practically non-toxic. No 4-hr LC50 at the maximum achievable concentration.
Skin sensitization
Guinea pig, 3-induction Buehler test:
Positive incidence: 0 %
Negative.
No skin sensitization

N-(phosphonomethyl)glycine; { glyphosate acid}

Genotoxicity
Not genotoxic.

Carcinogenicity
Not carcinogenic in rats or mice.

Reproductive/Developmental Toxicity

Developmental effects in rats and rabbits only in the presence of significant maternal toxicity.
Reproductive effects in rats only in the presence of significant maternal toxicity.

12. ECOLOGICAL INFORMATION

This section is intended for use by ecotoxicologists and other environmental specialists.

Data obtained on similar products and on components are summarized below.

Similar formulation

Aquatic toxicity, fish

Rainbow trout (Oncorhynchus mykiss):
Acute toxicity, 96 hours, static, LC50: 5.4 mg/L
Moderately toxic.

Bluegill sunfish (Lepomis macrochirus):
Acute toxicity, 96 hours, static, LC50: 7.3 mg/L
Moderately toxic.

Aquatic toxicity, invertebrates

Water flea (Daphnia magna):
Acute toxicity, 48 hours, static, EC50: 11 mg/L
Slightly toxic.

Avian toxicity

Mallard duck (Anas platyrhynchos):
Dietary toxicity, 5 days, LC50: > 5,620 mg/kg diet
Practically non-toxic.

Bobwhite quail (Colinus virginianus):
Dietary toxicity, 5 days, LC50: > 5,620 mg/kg diet
Practically non-toxic.

Arthropod toxicity

Honey bee (Apis mellifera):
Oral/contact, 48 hours, LD50: > 100 µg/bee
Practically non-toxic.

Soil organism toxicity, invertebrates

Earthworm (Eisenia foetida):
Acute toxicity, 14 days, LC50: > 1,250 mg/kg soil
Practically non-toxic.

Similar formulation

Aquatic toxicity, algae/aquatic plants

Green algae (Selenastrum capricornutum):
Acute toxicity, 72 hours, static, EbC50 (biomass): 12.4 mg/L
Slightly toxic.

Green algae (Selenastrum capricornutum):
Acute toxicity, 72 hours, static, NOEC: 6.3 mg/L

N-(phosphonomethyl)glycine; { glyphosate acid}

Bioaccumulation

Bluegill sunfish (Lepomis macrochirus):
Whole fish: BCF: < 1
No significant bioaccumulation is expected.

Dissipation

Soil, field:

Half life: 2 - 174 days
Koc: 884 - 60,000 L/kg
Adsorbs strongly to soil.

Water, aerobic:
Half life: < 7 days

13. DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

13.1.1. Product

Keep out of drains, sewers, ditches and water ways. Recycle if appropriate facilities/equipment available. Burn in proper incinerator. Follow all local/regional/national/international regulations.

13.1.2. Container

See the individual container label for disposal information. Triple or pressure rinse empty containers. Pour rinse water into spray tank. Store for collection by approved waste disposal service. Recycle if appropriate facilities/equipment available. Emptied containers retain vapour and product residue. Observe all labeled safeguards until container is cleaned, reconditioned or destroyed. Follow all local/regional/national/international regulations. Do NOT re-use containers for any purpose other than for the storage of pesticides, if allowed by label.

Use handling recommendations in Section 7 and personal protection recommendations in Section 8.

14. TRANSPORT INFORMATION

The data provided in this section is for information only. Please apply the appropriate regulations to properly classify your shipment for transportation.

14.1. US Dept. of Transportation (DOT) Hazardous Materials Regulations (49 CFR Parts 105-180)

Proper Shipping Name (Technical Name if required):	Not regulated for domestic ground transportation. ()

14.2. IMDG Code

Proper Shipping Name (Technical Name if required):	Not regulated for transport under IMO Regulations ()

14.3. IATA/ICAO

Proper Shipping Name (Technical Name if required):	Not regulated for transport under IATA/ICAO Regulations ()

15. REGULATORY INFORMATION

15.1. Environmental Protection Agency

15.1.1. TSCA Inventory

All components are on the US EPA's TSCA Inventory

15.1.2. SARA Title III Rules

Section 311/312 Hazard Categories: Immediate
Section 302 Extremely Hazardous Substances: Not applicable.
Section 313 Toxic Chemical(s): Not applicable.

15.1.3. CERCLA Reportable quantity

Not applicable.

15.1.4. Federal Insecticide, Fungicide, Rodenticide Act (FIFRA)

This chemical is a pesticide product registered by the United States Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS), and for workplace labels of non-pesticide chemicals. The hazard information required on the pesticide label is reproduced below. The pesticide label also includes other important information, including directions for use.

CAUTION!
CAUSES MODERATE EYE IRRITATION

Acute oral toxicity: FIFRA category IV.
Acute dermal toxicity: FIFRA category IV.
Acute inhalation toxicity: FIFRA category IV.
Skin irritation: FIFRA category IV.
Eye irritation: FIFRA category III.Skin sensitization: No skin sensitization

16. OTHER INFORMATION

The information given here is not necessarily exhaustive but is representative of relevant, reliable data.
Follow all local/regional/national/international regulations.
Please consult supplier if further information is needed.
In this document the British spelling was applied.
|| Significant changes versus previous edition.

	Health	Flammability	Instability	Additional Markings
NFPA	1	1	1	

0 = Minimal hazard, 1 = Slight hazard, 2 = Moderate hazard, 3 = Severe hazard, 4 = Extreme hazard

Full denomination of most frequently used acronyms. BCF (Bioconcentration Factor), BOD (Biochemical Oxygen Demand), COD (Chemical Oxygen Demand), EC50 (50% effect concentration), ED50 (50% effect dose), I.M. (intramuscular), I.P. (intraperitoneal), I.V. (intravenous), Koc (Soil adsorption coefficient), LC50 (50% lethality concentration), LD50 (50% lethality dose), LDLo (Lower limit of lethal dosage), LEL (Lower Explosion Limit), LOAEC (Lowest Observed Adverse Effect Concentration), LOAEL (Lowest Observed Adverse Effect Level), LOEC (Lowest Observed Effect Concentration), LOEL (Lowest Observed Effect Level), MEL (Maximum Exposure limit), MTD (Maximum Tolerated Dose), NOAEC (No Observed Adverse Effect Concentration), NOAEL (No Observed Adverse Effect Level), NOEC (No Observed Effect Concentration), NOEL (No Observed Effect Level), OEL (Occupational Exposure Limit), PEL (Permissible Exposure Limit), PII (Primary Irritation Index), Pow (Partition coefficient n-octanol/water), S.C. (subcutaneous), STEL (Short-Term Exposure Limit), TLV-C (Threshold Limit Value-Ceiling), TLV-TWA (Threshold Limit Value - Time Weighted Average), UEL (Upper Explosion Limit)

This Material Safety Data Sheet (MSDS) serves different purposes than and DOES NOT REPLACE OR MODIFY THE EPA-APPROVED PRODUCT LABELING (attached to and accompanying the product container). This MSDS provides important health, safety, and environmental information for employers, employees, emergency responders and others handling large quantities of the product in activities generally other than product use, while the labeling provides that information specifically for product use in the ordinary course. Use, storage and disposal of pesticide products are regulated by the EPA under the authority of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) through the product labeling, and all necessary and appropriate precautionary, use, storage, and disposal information is set forth on that labeling. It is a violation of federal law to use a pesticide product in any manner not prescribed on the EPA-approved label.

Although the information and recommendations set forth herein (hereinafter "Information") are presented in good faith and believed to be correct as of the date hereof, MONSANTO Company or any of its subsidiaries makes no representations as to the completeness or accuracy thereof. Information is

supplied upon the condition that the persons receiving same will make their own determination as to its suitability for the purposes prior to use. In no event will MONSANTO Company or any of its subsidiaries be responsible for damages of any nature whatsoever resulting from the use of or reliance upon information. NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OF ANY OTHER NATURE ARE MADE HEREUNDER WITH RESPECT TO INFORMATION OR TO THE PRODUCT TO WHICH INFORMATION REFERS.

000000004948 End of document

EXHIBIT 25

SAFETY DATA SHEET

ROUNDUP PRO® CONCENTRATE HERBICIDE

Version 1.0 / USA
102000037604

Revision Date: 08/12/2020
Print Date: 08/17/2020

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product identifier

Trade name	ROUNDUP PRO® CONCENTRATE HERBICIDE
Product code (UVP)	86288818
SDS Number	102000037604
EPA Registration No.	524-529

Relevant identified uses of the substance or mixture and uses advised against

Use	Herbicide
Restrictions on use	See product label for restrictions.

Information on supplier

Supplier	Bayer Environmental Science A division of Bayer CropScience LP 500 Centregreen Way, Suite 400 Cary, NC 27513 USA
Responsible Department	Email: SDSINFO.BCS-NA@bayer.com

Emergency telephone no.

Emergency Telephone Number (24hr/ 7 days)	1-800-334-7577
Product Information Telephone Number	1-800-331-2867

SECTION 2: HAZARDS IDENTIFICATION

Classification in accordance with regulation HCS 29CFR §1910.1200
This material is not hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29CFR 1910.1200.

Hazards Not Otherwise Classified (HNOC)
No physical hazards not otherwise classified.
No health hazards not otherwise classified.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Component Name	CAS-No.	Concentration % by weight
Isopropylamine salt of glyphosate	38641-94-0	50.2
Surfactant blend (proprietary)		13.0

The specific chemical identity and/or concentration range is being withheld because it is trade secret information.

SECTION 4: FIRST AID MEASURES

Description of first aid measures

General advice	When possible, have the product container or label with you when calling a poison control center or doctor or going for treatment.
Inhalation	Move to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a physician or poison control center immediately.
Skin contact	Wash off immediately with plenty of water for at least 15 minutes. Take off contaminated clothing and shoes immediately. Call a physician or poison control center immediately.
Eye contact	Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a physician or poison control center immediately.
Ingestion	Call a physician or poison control center immediately. Rinse out mouth and give water in small sips to drink. DO NOT induce vomiting unless directed to do so by a physician or poison control center. Never give anything by mouth to an unconscious person. Do not leave victim unattended.

Most important symptoms and effects, both acute and delayed

Symptoms	To date no symptoms are known.

Indication of any immediate medical attention and special treatment needed

Risks	This product is not a cholinesterase inhibitor.
Treatment	Treatment with atropine and oximes is not indicated. Appropriate supportive and symptomatic treatment as indicated by the patient's condition is recommended.

SECTION 5: FIREFIGHTING MEASURES

Extinguishing media

Suitable	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Unsuitable	High volume water jet

Special hazards arising from the substance or mixture	In the event of fire the following may be released:, Carbon monoxide (CO), Carbon dioxide (CO2), Nitrogen oxides (NOx), Oxides of phosphorus
Advice for firefighters	
Special protective equipment for firefighters	In the event of fire and/or explosion do not breathe fumes. Firefighters should wear NIOSH approved self-contained breathing apparatus and full protective clothing. Equipment should be thoroughly decontaminated after use.
Further information	Keep out of smoke. Fight fire from upwind position. Cool closed containers exposed to fire with water spray. Do not allow run-off from fire fighting to enter drains or water courses.
Flash point	does not flash
Auto-ignition temperature	No data available
Lower explosion limit	Not applicable
Upper explosion limit	Not applicable
Explosivity	Not explosive

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Precautions	Use personal protective equipment. Keep unauthorized people away. Avoid contact with spilled product or contaminated surfaces.

Methods and materials for containment and cleaning up

Methods for cleaning up	Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Collect and transfer the product into a properly labelled and tightly closed container. Keep in suitable, closed containers for disposal. Clean contaminated floors and objects thoroughly, observing environmental regulations.
Additional advice	Use personal protective equipment. If the product is accidentally spilled, do not allow to enter soil, waterways or waste water canal. Do not allow product to contact non-target plants.
Reference to other sections	Information regarding safe handling, see section 7. Information regarding personal protective equipment, see section 8. Information regarding waste disposal, see section 13.

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling	Avoid contact with skin, eyes and clothing. Ensure adequate ventilation.

Hygiene measures	Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, using the toilet or applying cosmetics. Remove Personal Protective Equipment (PPE) immediately after handling this product. Remove soiled clothing immediately and clean thoroughly before using again. Wash thoroughly and put on clean clothing. Keep working clothes separately. Garments that cannot be cleaned must be destroyed (burnt).

Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers	Store in original container. Store in a cool, dry place and in such a manner as to prevent cross contamination with other crop protection products, fertilizers, food, and feed. Store in a place accessible by authorized persons only. Reacts with galvanised steel or unlined mild steel to produce hydrogen, a highly flammable gas that could explode. Protect from freezing. Partial crystallization may occur on prolonged storage below the minimum storage temperature. Freezing will affect the physical condition but will not damage the material. Thaw and mix before using.
Advice on common storage	Keep away from food, drink and animal feedingstuffs.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

No known occupational limit values.

Exposure controls

Personal protective equipment
In normal use and handling conditions please refer to the label and/or leaflet. In all other cases the following recommendations would apply.

Respiratory protection	When respirators are required, select NIOSH approved equipment based on actual or potential airborne concentrations and in accordance with the appropriate regulatory standards and/or industry recommendations.
Hand protection	Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time. Chemical-resistant gloves (barrier laminate, butyl rubber, nitrile rubber or Viton) Wash gloves when contaminated. Dispose of when contaminated inside, when perforated or when contamination on the outside cannot be removed. Wash hands frequently and always before eating, drinking, smoking or using the toilet.
Eye protection	Use tightly sealed goggles and face protection.

Skin and body protection	Wear long-sleeved shirt and long pants and shoes plus socks.
General protective measures	Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and warm/tepid water. Keep and wash PPE separately from other laundry.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Form	Liquid, clear
Colour	light yellow to amber
Odour	slight
Odour Threshold	No data available
pH	4.4 - 5.1 (6.25 %) (23 °C) (deionized water)
Melting point/range	No data available
Boiling Point	No data available
Flash point	does not flash
Flammability	No data available
Auto-ignition temperature	No data available
Minimum ignition energy	Not applicable
Self-accelarating decomposition temperature (SADT)	No data available
Upper explosion limit	Not applicable
Lower explosion limit	Not applicable
Vapour pressure	No data available
Evaporation rate	No data available
Relative vapour density	No significant volatility.
Relative density	1.199 (20 °C)
Density	1.20 g/cm³ (20 °C)
Water solubility	soluble
Partition coefficient: n-octanol/water	Glyphosate: log Pow: -3.2
Viscosity, dynamic	No data available
Viscosity, kinematic	No data available

Oxidizing properties	No data available
Explosivity	Not explosive
Other information	Further safety related physical-chemical data are not known.

SECTION 10: STABILITY AND REACTIVITY

Reactivity

Thermal decomposition	Stable under normal conditions.
Chemical stability	Stable under recommended storage conditions.
Possibility of hazardous reactions	Reacts with galvanised steel or unlined mild steel to produce hydrogen, a highly flammable gas that could explode.
Conditions to avoid	Extremes of temperature and direct sunlight.
Incompatible materials	Galvanised steel, Unlined mild steel
Hazardous decomposition products	No decomposition products expected under normal conditions of use.

SECTION 11: TOXICOLOGICAL INFORMATION

Exposure routes	Skin contact, Eye contact, Inhalation
Immediate Effects	
Eye	Causes moderate eye irritation.
Skin	May cause slight irritation.
Ingestion	Not expected to produce significant adverse effects when recommended use instructions are followed.
Inhalation	Not expected to produce significant adverse effects when recommended use instructions are followed.

Information on toxicological effects

Acute oral toxicity	LD50 (Rat) > 5,000 mg/kg
Acute inhalation toxicity	LC50 (Rat) Exposure time: 4 h Determined in the form of liquid aerosol. Highest attainable concentration.
Acute dermal toxicity	LD50 (Rat) > 5,000 mg/kg No deaths
Skin corrosion/irritation	Slight irritant effect - does not require labelling. (Rabbit)
Serious eye damage/eye irritation	Moderate eye irritation. (Rabbit)

Respiratory or skin sensitisation	Skin: Non-sensitizing. (Guinea pig) OECD Test Guideline 406, Buehler test

Assessment STOT Specific target organ toxicity – single exposure

Glyphosate: Based on available data, the classification criteria are not met.

Assessment STOT Specific target organ toxicity – repeated exposure

Glyphosate did not cause specific target organ toxicity in experimental animal studies.

Assessment mutagenicity

Glyphosate was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.

Assessment carcinogenicity

Glyphosate was not carcinogenic in lifetime feeding studies in rats and mice.
Important comment to IARC Listing:, Our expert opinion is that classification as a carcinogen is not warranted.

ACGIH

None.

NTP

None.

IARC

Isopropylamine salt of glyphosate	38641-94-0	Overall evaluation: 2A

OSHA

None.

Assessment toxicity to reproduction

Glyphosate did not cause reproductive toxicity in a two-generation study in rats.

Assessment developmental toxicity

Glyphosate did not cause developmental toxicity in rats and rabbits.

Further information

The toxicological data refer to a similar formulation.

SECTION 12: ECOLOGICAL INFORMATION

Toxicity to fish	LC50 (Oncorhynchus mykiss (rainbow trout)) 5.4 mg/l static test; Exposure time: 96 h Test conducted with a similar formulation.
Chronic toxicity to fish	Oncorhynchus mykiss (rainbow trout) flow-through test NOEC: >= 9.63 mg/l The value mentioned relates to the active ingredient glyphosate.

Toxicity to aquatic invertebrates	EC50 (Daphnia magna (Water flea)) 11 mg/l static test; Exposure time: 48 h Test conducted with a similar formulation.
Chronic toxicity to aquatic invertebrates	EC50 (Daphnia magna (Water flea)): 12.5 mg/l Exposure time: 21 d The value mentioned relates to the active ingredient glyphosate.
Toxicity to aquatic plants	EbC50 (Raphidocelis subcapitata (freshwater green alga)) 12.4 mg/l static test; Exposure time: 72 h Test conducted with a similar formulation.
	NOEC (Raphidocelis subcapitata (freshwater green alga)) 6.3 mg/l static test; Exposure time: 72 h Test conducted with a similar formulation.
Biodegradability	Glyphosate: Not rapidly biodegradable
Koc	Glyphosate: Koc: 6920
Bioaccumulation	Glyphosate: Does not bioaccumulate.
Mobility in soil	Glyphosate: Immobile in soil

Results of PBT and vPvB assessment

PBT and vPvB assessment	Glyphosate: This substance is not considered to be persistent, bioaccumulative and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulative (vPvB).
Additional ecological information	No further ecological information is available.
Environmental precautions	Apply this product as specified on the label. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate surface or ground water by cleaning equipment or disposal of wastes, including equipment wash water. Retain and dispose of contaminated wash water.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment methods

Product	It is best to use all of the product in accordance with label directions. If it is necessary to dispose of unused product, please follow container label instructions and applicable local guidelines. Do not contaminate water, food, or feed by disposal. Follow all local/regional/national/international regulations.
Contaminated packaging	Follow advice on product label and/or leaflet. Do not re-use empty containers.

	Triple rinse containers. Puncture container to avoid re-use. Completely empty container into application equipment, then dispose of empty container in a sanitary landfill, by incineration or by other procedures approved by state/provincial and local authorities. If burned, stay out of smoke.
RCRA Information	Characterization and proper disposal of this material as a special or hazardous waste is dependent upon Federal, State and local laws and are the user's responsibility. RCRA classification may apply.

SECTION 14: TRANSPORT INFORMATION

According to national and international transport regulations this material is not classified as dangerous goods / hazardous material.

Freight Classification:	COMPOUNDS, TREE OR WEED KILLING, N.O.I. other than poison, HAVING A DENSITY OF 20 LBS OR GREATER PER CUBIC FOOT

SECTION 15: REGULATORY INFORMATION

EPA Registration No. 524-529
US Federal Regulations
TSCA list

Water	7732-18-5
1,2-Propanediol	57-55-6

US. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpt D)
No export notification needs to be made.
SARA Title III - Section 302 - Notification and Information
Not applicable.
SARA Title III - Section 313 - Toxic Chemical Release Reporting
None.

US States Regulatory Reporting
CA Prop65
This product does not contain any substances known to the State of California to cause cancer.

This product does not contain any substances known to the State of California to cause reproductive harm.

US State Right-To-Know Ingredients

1,2-Propanediol	57-55-6	MN, RI

Environmental
CERCLA

None.
Clean Water Section 307(a)(1)
None.
Safe Drinking Water Act Maximum Contaminant Levels
None.

EPA/FIFRA Information:
This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information required on the pesticide label:

Signal word: Caution!

Hazard statements: Causes moderate eye irritation.

SECTION 16: OTHER INFORMATION

Abbreviations and acronyms

49CFR	Code of Federal Regulations, Title 49
ACGIH	US. ACGIH Threshold Limit Values
ATE	Acute toxicity estimate
CAS-Nr.	Chemical Abstracts Service number
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
EINECS	European inventory of existing commercial substances
ELINCS	European list of notified chemical substances
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
N.O.S.	Not otherwise specified
NTP	US. National Toxicology Program (NTP) Report on Carcinogens
OECD	Organization for Economic Co-operation and Development
TDG	Transportation of Dangerous Goods
TWA	Time weighted average
UN	United Nations
WHO	World health organisation

NFPA 704 (National Fire Protection Association):

Health - 1	Flammability - 1	Instability - 1	Others - none

HMIS (Hazardous Materials Identification System, based on the Third Edition Ratings Guide)

Health - 2	Flammability - 1	Physical Hazard - 1	PPE -

0 = minimal hazard, 1 = slight hazard, 2 = moderate hazard, 3 = severe hazard, 4 = extreme hazard

Reason for Revision: New Safety Data Sheet.

SAFETY DATA SHEET

ROUNDUP PRO® CONCENTRATE HERBICIDE

Version 1.0 / USA
102000037604

Revision Date: 08/12/2020
Print Date: 08/17/2020

Revision Date: 08/12/2020

This information is provided in good faith but without express or implied warranty. The customer assumes all responsibility for safety and use not in accordance with label instructions. The product names are registered trademarks of Bayer.

EXHIBIT 26

Frank LaRose
Ohio Secretary of State

Sun Mar 26 2023

Entity#:	4032681
Filing Type:	FOREIGN LIMITED LIABILITY COMPANY
Original Filing Date:	05/23/2017
Location:	--
Business Name:	SEAMLESS CONTROL LLC
Status:	Active
Exp. Date:	-

Agent/Registrant Information

CT CORPORATION SYSTEM
4400 EASTON COMMONS WAYSTE 125
COLUMBUS OH 43219
05/23/2017
Active

Filings

Filing Type	Date of Filing	Document ID
FOREIGN LLC – CERTIFICATE OF REGISTRATION	05/23/2017	201714500696

UNITED STATES OF AMERICA
STATE OF OHIO
OFFICE OF SECRETARY OF STATE

I, Frank LaRose, Secretary of State of the State of Ohio, do hereby certify that this is a list of all records approved on this business entity and in the custody of the Secretary of State.

Witness my hand and the seal of the Secretary of State at Columbus, Ohio this 26th of March, A.D. 2023

Ohio Secretary of State

EXHIBIT 27

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UNITED STATES DISTRICT COURT FOR THE

NORTHERN DISTRICT OF CALIFORNIA

SCOTT KOLLER, TIM FERGUSON, RUBY CORNEJO and JOHN LYSEK, individually, and on behalf of the general public and those similarly situated,

Plaintiffs,

v.

MONSANTO COMPANY, BAYER CROPSCIENCE LP; THE SCOTTS COMPANY LLC; and SEAMLESS CONTROL LLC,

Defendants

CASE NO. 3:22-cv-04260-MMC

DECLARATION OF DR. CHARLES W. JAMESON

Hon. Maxine M. Chesney

I, Dr. Charles W. Jameson, declare as follows:

1. I am over the age of 21 and am fully competent to make this declaration. The facts stated herein are true and correct and are based on my personal knowledge under penalty of perjury.

2. I obtained my undergraduate degree in chemistry in 1970 from Mount Saint Mary's College, Emmitsburg, Maryland. I obtained my Ph.D. in Organic Chemistry in 1975 from the University of Maryland, College Park. Upon completion of my Ph.D. and a brief post-doc at the University of Maryland, I began working in 1976 as a contractor to the National Institutes of Health's (NIH) National Cancer Institute (NCI), serving as a senior chemist in support of NCI's Rodent Bioassay Program.

3. In 1979 I was recruited by the NCI and joined them to serve as the chief chemist for their Rodent Bioassay Program. I was responsible for directing and monitoring all chemistry activities of the Program, participating in the development of experimental protocols for the 2-year rodent bioassays conducted at the contract laboratories, and doing on-site inspections of all bioassay contract labs to insure they were following our protocols. In addition, I took over the responsibility as secretary for the NCI's Chemical Selection Working Group (CSWG) where I coordinated all activities for the identification of new substances to be studied in the Bioassay Program, including the oversight of the scientific literature searching, gathering and summarization process, documentation of the CSWG's review of the data, making recommendations for study by the NCI, and the forwarding of the recommendation to the Director of the NCI Bioassay Program.

4. In 1980 I transferred to and assumed the responsibility for all chemistry aspects of the National Institute of Environmental Health Sciences ("NIEHS") Division of Toxicology Research and Testing. I served as the program leader for chemistry in the National Toxicology Program (NTP) from 1978 until 1990. While chemistry program leader, I developed chemistry standards for bioassay studies that were widely accepted as an integral part of many toxicology-testing programs. I am listed as a contributor for the evaluation, interpretation and reporting of results for more than 100 chemicals studied in chronic two-year bioassay studies by the National Toxicology

Program as published in the Technical Report Series (1980-1990). These bioassay studies were peer reviewed by the NTP Board of Scientific Counselors.

5. In 1990, I transferred to the NIEHS Director's Office and became involved with the NTP's Report on Carcinogens (RoC), working on it for more than 18 years, serving as its Director for 13 years before retiring from the NIEHS in February of 2008. The RoC is prepared in response to Section 301(b)(4) of the Public Health Service Act, which stipulates that the Secretary of the Department of Health and Human Services (DHHS) shall publish a report which contains a list of all substances which either are known or may reasonably be anticipated to be human carcinogens; and to which a significant number of persons residing in the United States are exposed. The responsibility for the preparation of this Report was delegated by the Secretary to the NTP.

6. As Director of the RoC, I was responsible for the report's overall preparation, review and approval by the Director, NIEHS/NTP and ultimately the DHHS Secretary. In this capacity, I coordinated all review activities related to the RoC, which is one of the most visible and highly scrutinized activities of the NTP and the DHHS. I oversaw the identification and review of all new nominations for listing and delisting in upcoming editions of the RoC. I served as Chairman of the NIEHS RoC Review Committee, Chairman of the NTP Executive Committee's Interagency Working Group for the RoC, and Advisor to the NTP's Board of Scientific Counselors' Subcommittee for the RoC. I supervised the review of each nomination to the RoC, ensuring all relevant information and data for each nomination was available for the review committees and managed the reviews by the three scientific review committees. Shortly after I became Director of the RoC in 1995, the Director, NTP, ordered that a review of the RoC be done to broaden input into its preparation, broaden the scope of scientific review associated with the Report, and provide review of the criteria used for inclusion of substances in the RoC. I coordinated this activity, which lead to revised criteria for the RoC being approved by the Secretary, DHHS in July of 1996. I served as Project Officer for the resource support contract for the preparation of the RoC, which included providing technical direction and coordination of the preparation of the

documents prepared for each new nomination to the RoC as well as the preparation of 4 editions of the RoC (8th through 11th Editions) for submission to the DHHS Secretary for approval.

7. I am the Senior Author for 69 NTP Report on Carcinogens Background Documents, which contained all available data concerning the exposure and potential carcinogenic activity of the substance being reviewed for possible listing in the RoC. I maintained a continuing liaison with other government agencies, private industries, other non-government research organizations and international organizations to keep abreast of work being done in chemical carcinogenesis, priorities for the listing of substances in the RoC, and resources available for the review of substances nominated for listing in the RoC. I served as the point of contact and focus for all RoC activities which included interacting with stakeholders from national and international government, industry, legal, consumer advocate, and other private concerns. I responded to requests for information from both the national and international press and private individuals on a routine basis.

8. A true and correct copy of my CV is attached to this declaration.

9. N-nitrosoglyphosate ("NNG") is an N-nitroso compound. N-Nitroso compounds are formed when nitrites, which can be formed from nitrates, react with a secondary or tertiary amine and are often referred to as "nitrosamines."

10. As a class of chemicals, the overwhelming majority of nitrosamines studied have been found to be carcinogenic and mutagenic. *See* Straif, Kurt, et al. "Exposure to high concentrations of nitrosamines and cancer mortality among a cohort of rubber workers," Occupational & Environmental Medicine 57:180-187 (2000); Bogovski P., et al "Animal species in which N-nitroso compounds induce cancer" Int'l J. Cancer, 27(4):471-4 (1981); Preussmann, R.; Stewart, B. W. "N-Nitroso carcinogens; ACS Monogr.", 1984,*182* (Chem. Carcinog.,2nd Ed., Vol. 2), 643-8. It should be noted that N-nitrososarcosine, an N-nitrosoamino acid structurally related to N-nitrosoglyphosate, has been reported by the International Agency for Research on Cancer (IARC) that there is sufficient evidence of a carcinogenic effect of N-nitrsosarcosine in laboratory animals and should be regarded for practical purposes as if it was carcinogenic to humans (IARC Monograph 17 (1978).

11. I am aware of two animal studies (IR-77-223 1979, and IR-77-223 1984) attempted by contract laboratories hired by Monsanto company to study NNG. I have reviewed the details of both animal studies, however, only one of the studies was completed. The completed study revealed a statistically significant trend for the formation of lymphocytic lymphomas in mice exposed to NNG. This finding indicates NNG is an animal carcinogen, and therefore meets the criteria for listing as a reasonably anticipated human carcinogen.

12. Another way toxicologists assess whether a molecule is likely to be carcinogenic, is by comparing the molecule's structure to molecules with known carcinogenic properties. Comparing molecular structures is a reliable method of determining whether a compound is reasonably anticipated to be carcinogenic. I have evaluated the molecular structure of NNG, which is highly similar in structure to N-nitrososarcosine. As indicated above, N-nitrososarcosine is a known animal carcinogen and is listed by both IARC and the NTP as reasonably anticipated to be a human carcinogen. Based on NNG's structural similarity to N-nitrososarcosine, it is reasonably anticipated that NNG is also carcinogenic.

13. Based on the results of study IR-77-223, as well as its structural similarity to N-nitrososarcosine, it is more likely than not that NNG is a human carcinogen and therefore a safety hazard to consumers when present in herbicides at levels above 1ppm.

I declare under penalty of perjury under the laws of the United States that the foregoing declaration is true and correct.

Executed on March 23, 2023.

Respectfully Submitted,

Charles W. Jameson, Ph.D.

C W Jameson - Curriculum Vitae and Bibliography
August 2022

Name	Charles William Jameson
Mailing Address:	2828 NW 46th Ave Cape Coral, Florida 33993
Date and Place of Birth:	February 3, 1948, La Plata, Maryland
Citizenship:	United States
Marital Status:	Married, four children
Education:	B.S. 1970 Chemistry, Mount Saint Mary's College, Emmitsburg, Maryland Ph.D. 1975 Organic Chemistry, Physical Chemistry minor University of Maryland, College Park, Maryland

Brief Chronology of Employment:

1965	Chemistry Laboratory Technician, Bionetics Research Laboratories, Falls Church, Virginia
1968 – 1969:	Organic Chemistry Laboratory Assistant, Mount Saint Mary's College, Emmitsburg, Maryland
1969 – 1970:	Organic Chemistry Laboratory Instructor, Mount Saint Mary's College, Emmitsburg, Maryland
1970 – 1973:	Graduate Teaching Assistant, Chemistry Dept., University of Maryland College Park, Maryland
1973 – 1975:	Graduate Research Assistant, Center of Materials Research, University of Maryland, College Park, Maryland
1975 – 1976	Faculty Graduate Assistant, Chemistry Dept., University of Maryland, College Park, Maryland
1976 – 1979:	Senior Chemist, Tracor Jitco, Inc., Rockville, Maryland
1979 – 1980:	Chemist, Carcinogenesis Testing Program, National Cancer Institute, National Institutes of Health (NIH), Bethesda, Maryland
1980 – 1983:	Head, Chemistry Section, Program Resources Branch, National Toxicology Program (NTP), National Institute of Environmental Health Sciences (NIEHS), NIH, Research Triangle Park, North Carolina

1983 – 1985:	Acting Chief, Program Resources Branch, NTP, NIEHS, NIH, Research Triangle Park, North Carolina
1985 – 1989:	Head, Program Resources Group, Carcinogenesis and Toxicologic Evaluation Branch, NTP, NIEHS, NIH, Research Triangle Park, North Carolina
1989 – 1990:	Supervisory Chemist, Experimental Toxicology Branch, NTP, NIEHS, NIH, Research Triangle Park, North Carolina
1990 – 1995:	Senior Chemist, Office of the Senior Scientific Advisor to the Director NIEHS, NIH, Research Triangle Park, North Carolina
1995 – 2008	Director, Report on Carcinogens, NTP, NIEHS, NIH, Research Triangle Park, North Carolina
2008 – present	Principal, CWJ Consulting, LLC, Cape Coral, Florida

Department of Health and Human Services Activities

Chairman, National Toxicology Program's Executive Committee's Interagency Working Group for the Report on Carcinogens, 1995 to 2005

National Institutes of Health Activities

NIEHS Representative to the Deafness and Other Communication Disorders Interagency Coordination Committee, 1990 - 1996.

NIEHS Representative on the Task Force on Aging Research, 1990-1994.

National Institutes of Environmental Health Sciences Activities

Chairman, NIEHS/NTP Review Committee for the Report on Carcinogens, 1995 to 2005

Chairman, Search Committee for NIEHS Tenure / Tenure Track Staff Epidemiologist 1998

Peer-Review Panel Member for Draft Report on Carcinogens Monograph on Cobalt and Certain Cobalt Compounds. July 2015

Member and Chairman for the Special Emphasis Panel to review proposals responding to RFP ES2015038, "Scientific Information Management and Literature-Based Evaluations for the National Toxicology Program (NTP)." The objective of this contract is to provide scientific and technical expertise and support for the NTP to compile, review, and analyze information and data from the scientific literature and other sources regarding the effects of environmental substances and other issues that may impact public health. October 2015

North American Insulation Manufacturers Association (NAIMA)

Member of Scientific Advisory Panel, 2019 - present

International Activities

Member, WHO Task Group on Environmental Health Criteria for Fully Halogenated Chlorofluorocarbons, Neuherberg, Federal Republic of Germany, November 21 – 25, 1988.

Member, WHO Task Group on Environmental Health Criteria for Partially Halogenated Chlorofluorocarbons (Ethane Derivatives), Carshalton, Surrey, United Kingdom, September 30 – October 5, 1991.

NIEHS representative to the WHO's International Agency for Research on Cancer (IARC) Workgroup preparing Monograph Vol. 82 on the Carcinogenic Risks to Humans of Some Traditional Herbal Medicines, Some Mycotoxins, Naphthalene and Styrene, Lyon, France, February 11 – 20, 2002

Member, IARC *Monographs* Advisory Group for Five Year Plan, Lyon, France, 18-21 February 2003

NIEHS representative to the WHO's International Agency for Research on Cancer (IARC) Workgroup preparing Monograph Vol. 87 on The Carcinogenic Risks to Humans of Lead and Lead Compounds, Lyon, France, February 8 – 18, 2004

NIEHS representative to the WHO's International Agency for Research on Cancer (IARC) Workgroup preparing Monograph Vol. 91 on The Carcinogenic Risks to Humans of Combined Oral Contraceptives and Estrogen-Progestogen Replacement Therapy, Lyon, France, June 4-15, 2005.

NIEHS representative to the WHO's International Agency for Research on Cancer (IARC) Workgroup preparing Monograph Vol. 93 on The Carcinogenic Risks to Humans of Carbon Black, Titanium Dioxide and Non-Asbestiform Talc, Lyon, France, February 4 – 15, 2006

Member, WHO's International Agency for Research on Cancer (IARC) Workgroup preparing Monograph Vol. 97 on The Carcinogenic Risks to Humans Of 1,3 –Butadiene, Ethylene Oxide, And Vinyl Halides (Vinyl Fluoride, Vinyl Chloride and Vinyl Bromide), Lyon, France, June 6-15, 2007.

Member and Chair of Experimental Animal Data Subgroup, WHO's International Agency for Research on Cancer (IARC) Workgroup preparing Monograph Vol. 99 on The Carcinogenic Risks to Humans of Some Industrial and Cosmetic Dyes and Related Exposures, Lyon, France, February 4-13, 2008.

Member, WHO's International Agency for Research on Cancer (IARC) Workgroup preparing Monograph 100A on A Review of Human Carcinogens - Pharmaceuticals (Anti-Cancer Drugs – Hormonal Drugs & Therapies – Others), Lyon, France, October 14 – 21, 2008.

Member and Chair of Experimental Animal Data Subgroup, WHO's International Agency for Research on Cancer (IARC) Workgroup preparing Monograph Vol. 100F on A Review of Human Carcinogens - Chemical Agents and Related Occupations, Lyon, France, October 20 – 27, 2009.

Member and Chair of Experimental Animal Data Subgroup, WHO's International Agency for Research on Cancer (IARC) Workgroup preparing Monograph Vol. 103 on Bitumen and Bitumen Fumes, And Some Heterocyclic Aromatic Hydrocarbons, Lyon, France, October 11 - 18, 2011.

Member and Chair of Experimental Animal Data Subgroup, WHO's International Agency for Research on Cancer (IARC) Workgroup preparing Monograph Vol. 105 on Diesel and Gasoline Exhausts and Some Nitroarenes, Lyon, France, June 5 - 12, 2012.

Member WHO's International Agency for Research on Cancer (IARC) Workshop on Tumour Concordance and Mechanisms of Carcinogenesis: Lessons Learned from Volume 100 of the IARC Monographs, Lyon, France: April 16-18, 2012 and November 28-30, 2012

Member and Chair of Experimental Animal Data Subgroup, WHO's International Agency for Research on Cancer (IARC) Workgroup preparing Monograph Vol. 108 On Some Drugs and Herbal Medicines, Lyon, France, June 4 - 11, 2013

Member and Chair of Experimental Animal Data Subgroup, WHO's International Agency for Research on Cancer (IARC) Workgroup preparing Monograph Vol. 112 on Some Organophosphate Insecticides and Herbicides, Lyon, France, March 3-10, 2015.

Member and overall Chair, WHO's International Agency for Research on Cancer (IARC) Workgroup preparing Monograph Vol. 115 on Some Industrial Chemicals, Lyon, France, February 2-9, 2016.

Member, WHO's International Agency for Research on Cancer (IARC) Workgroup preparing Monograph 116 on Coffee, Mate and Very Hot Beverages, Lyon, France, May 24 – 31, 2016.

Member, WHO's International Agency for Research on Cancer (IARC) Workgroup preparing Monograph 119 on Some Chemicals in Food and Consumer Products, Lyon, France, June 6 – 13, 2017.

Member, WHO's International Agency for Research on Cancer (IARC) Workgroup preparing Monograph 122 on Isobutyl Nitrite, β-Picoline, and Some Acrylates, Lyon, France, June 5–12, 2018.

Honors and Awards

President, Student Affiliate Chapter of the American Chemical Society, Mount Saint Mary's College, 1969; Vice President, 1968.

National Toxicology Program Representative to American Chemical Society's Committee on Regulatory Affairs 1982 – 1992.

National Institutes of Health Special Achievement Cash Award (Spy Dust Project): 1986.

Merit Pay Cash Award for Sustained High Quality Work Performance, NIEHS: 1982, 1989

Performance Award for Sustained High Quality Work Performance, NIEHS: 1991, 1992, 1993, 1995, 1996, 2001, 2002, 2003, 2004, 2006, 2007.

Special Act or Service Award, NIEHS: 1996 (Review of Report on Carcinogens criteria); 1997 (Publication of 8th Report on Carcinogens); 1998 (Recruitment of NTP Staff Epidemiologist), 1998 (Restructuring of lead biokinetics contract and establishment of new Report on Carcinogens support contract)

Staff Recognition Award, NIEHS: 1999 (Preparation of final draft of 9th Report on Carcinogens)

NIEHS Director's Award, NIEHS: 2000 (Review of nominations for the 9th Report on Carcinogens)

Special Training

American Chemical Society, Short Course: "Chemical Carcinogenesis," 1978.

National Institutes of Health (NIH) Training Course: "Project Officers Civil Rights Contract Compliance," 1979.

Department of Health and Human Services Training (DHHS) Course: "Program Officials Guide to Contracting," 1980.

U. S. Office of Personnel Management (OPM) Training Course: "EEO - Its Place in the Federal Government," 1983.

U. S. OPM Training Course: "Introduction to Supervision," 1984.

NIH Training Course: "Employee Performance Management System Training," 1984.

DHHS Training Course: "Advanced Project Officer Training," 1985.

National Institute of Environmental Health Sciences Training Course: "Care and Handling of Laboratory Animals," 1986.

Rockhurst College Continuing Education Center: "How to Manage Projects, Priorities and Deadlines," 1992.

NIH Training Course: "PHS Animal Welfare Policy for HSA's," 1993.

Fred Pryor Seminars: "Total Quality Management," 1994.

Fred Pryor Seminars: "How to Manage Priorities and Meet Deadlines," 1994.

NIH Training Course: "Workplace Violence," 1994.

NIH Training Course: "NIH Guidelines on the Inclusion of Women and Minorities as Subjects in Clinical Research," 1994.

NIH Training Course: "Workplace Issues Associated with HIV/AIDS," 1994.

The Brookings Institution Course: "Issues in Science and Technology Policy", 1996

Professional Society Memberships and Activities

American Chemical Society

- Division of Analytical Chemistry
- Division of Chemical Health and Safety
- National Toxicology Program Representative to American Chemical Society's Committee on Regulatory Affairs 1982 – 1992
- Overall Co-Organizer and Co-Chairman of a symposium entitled "Chemistry and Safety for Toxicity Testing of Environmental Chemicals," sponsored by the Divisions of Chemical Health and Safety, Analytical Chemistry and Environmental Chemistry at the 183rd National American Chemical Society Meeting, Las Vegas, NV, March 1982.

Society of Toxicology

North American Insulation Manufacturers Association (NAIMA)

- Member, Scientific Advisory Board (2020 - present)

Research interests:

Environmental Cancer
Chemical Carcinogenesis
Analytical chemistry methods development to support toxicology studies.

Reviewer for Scientific Journals

Analytical Chemistry
Bulletin of Environmental Contamination & Toxicology (Member of Editorial Board)
Environmental Health Perspectives (Contributing Editor)
Fundamental and Applied Toxicology
Journal of the National Cancer Institute
Science

Invited Papers

Invited to be Session Chairman and to present paper entitled "Analytical Chemistry Requirements for Toxicity Testing of Environmental Chemicals" at the Symposium on Chemistry and Safety for Toxicity Testing of Environmental Chemicals, at the 183rd National American Chemical Society Meeting, Las Vegas, NV, March 1982.

Invited to serve as a panelist on the NBC nationally televised series "Health Field" with Dr. Frank Field. A two-day series was filmed on Environmental Chemistry and Chemical Health Concerns, 1982.

Invited to give a seminar entitled "Analytical Chemistry Requirements for Toxicity Testing." Duke University, Durham, NC, July 1982.

Invited to present a paper entitled "Practical Aspects of Analytical Chemistry Support for Toxicity Testing" at the Symposium on the Role of the Analytical Chemist in Animal and Molecular Toxicology, at the Federation of Analytical Chemistry and Spectroscopy Societies Meeting XI, Philadelphia, PA. September 16-21, 1984.

Invited to present a paper entitled "Application of Microencapsulation in Toxicity Testing" at the NIEHS Center Directors Meeting, Research Triangle Park, North Carolina, November 1984.

Invited to be Session Chairman and to present paper entitled "Chemical Quality Assurance Techniques for Toxicity Testing of Environmental Chemicals" at the Symposium on Accurate Measurements of Environmental Pollutants, at the 1984 International Chemical Congress of Pacific Basin Societies, Honolulu, Hawaii, December 16-21, 1984.

Invited to present a paper entitled "Lack of Evidence for Involvement of Cyanide in Methyl Isocyanate (MIC) Toxicity" at the Society of Toxicology Meeting, New Orleans, LA, March 3-7, 1986.

Invited to present a paper entitled "Toxicology from A Chemist's Viewpoint" at the Mount Saint Mary's College Science Alumni Homecoming, Emmitsburg, Maryland, October 23-26, 1986.

Invited to be Session Chairman and to present paper entitled "Application of Microencapsulation for Toxicity Studies" at the Symposium on Techniques for Microencapsulation of Chemicals at the 198th National Meeting of the American Chemical Society, Dallas, Texas, April 10-14, 1989.

Invited to be Session Chairman and to present paper entitled "Application of a Fischer Rat Leukemia Transplant Model as a Screen for the Leukemogenic Potential of Chemicals" at the International Symposium on Toxicology, Beijing, P. R. China, October 16-19, 1990.

Invited to present a paper entitled "Investigation of Alternative Vehicles for Use in Toxicology Research: Use of Microencapsulated and Molecular Encapsulated Chemicals in Toxicity Studies" at the Institute of Pharmacology and Toxicology, Academy of Military Medical Sciences, Beijing, P. R. China, October 20, 1990.

Invited to present a paper entitled "Toxicology and Carcinogenicity Studies of d- Limonene in Male and Female F344 Rats and B6C3F1 Mice" at the Symposium on Food Phytochemicals for Cancer Chemoprevention at the 204th National Meeting of the American Chemical Society, Washington, D.C., August 23-28, 1992.

Invited to be a Faculty Member and to present talk entitled " The National Toxicology Program's Report on Carcinogens " at the Toxicology Forum, Washington, DC, February 1995.

Invited to be a Faculty Member and to present talk entitled " The Report on Carcinogens (RoC): Status of The Review of The Criteria for Listing Substances in The RoC " at the Toxicology Forum, Washington, DC, February 1996.

Invited to be a Faculty Member and to present talk entitled " Update of 1997 review of Nominations for the 9th Report on Carcinogens " at the Toxicology Forum, Washington, DC, February 1998.

Invited to be a Faculty Member and to present talk entitled " NTP Report on Carcinogens: History and the Process " at the Toxicology Forum, Aspen, CO, July 1999.

BIBLIOGRAPHY

Publications

1. Mazzocchi PH, Ammon HL, **Jameson CW**. Lanthanide Shift Reagents III: Errors Resulting from the Neglect of Angle Dependence, Tetrahedron Letters, 573, 1973.

2. **Jameson CW**. I. Study of Lanthanide Shift Reagent - Substrate Interaction in Solution. II. Competitive Photochemical Type I and Type II Reactions of Amides and Imides. Dissertation Abstracts, 1975.

3. Ennis DM, Kramer A, Mazzocchi PH, **Jameson CW**, Bailey WJ. Synthetic N-Releasing Biodegradable Soil Conditioners I, Hort Science, 10, 505, 1975.

4. Ammon HL, Mazzocchi PH, Colicelli E, **Jameson CW**, Liu L. A Convenient Method for Mixing ^{2}H and ^{13}C Lanthanide Induced Shift (LIS) Calculations, A Technique for Facilitating ^{13}C Assignments, Tetrahedron Letters, 1745, 1976.

5. Ennis DM, Kramer A, **Jameson CW**, Mazzocchi PH, Bailey WJ. Structural Factors Influencing the Biodegradation of Imides, Appl Environ Microbiology, 35, 51, 1978.

6. Murrill EA, Woodhouse EJ, Olin SS, **Jameson CW**. Carcinogenesis Testing and Analytical Chemistry, Analytical Chemistry, 52, 1188A, 1980.

7. Douglas JF, Hamm TE, **Jameson CW**, Mahar H, Stinson S, Whitmire CE. Monitoring Guidelines for the Conduct of Carcinogen Bioassays. US Department of Health and Human Services. DHHS Publication No. (NIH) 81-1774. Washington, DC, US Government Printing Office, 80 pp., 1981.

8. Dieter MP, Luster MI, Boorman GA, **Jameson CW**, Dean JH, Cox JW. Immunological and Biochemical Responses in Mice Treated with Mercuric Chloride, Toxicol Appl Pharmachol, 68, 218, 1983.

9. **Jameson CW**, Dunnick JK, Brown RD, Murrill EA. Chemical Characterization of Psoralens Used in the National Toxicology Program Research Projects, National Cancer Institute Monograph, 66, 103, 1984.

10. Timmons L, Cannon M, Grese D, Brown R, Haile C, Murrill E, **Jameson CW**. Identification of Chlorinated Phenyl and Phenoxy Substituted Dibenzodioxin, Dibenzofuran and Diphenyl Ether Homologs in Commercial Grade Pentachlorophenol, Analytical Letters, 17(A4), 277-296, 1984.

11. Timmons L, Steel D, Cannon M, Grese D, Brown R, Murrill E, **Jameson CW**. Identification of Bromotertrachlorophenol in Commercial Pentachlorophenol Samples, Journal of Chromatography, V 314, 476-481, 1984.

12. Dunnick JK, **Jameson CW**, Benson JM. Toxicology and Carcinogenesis Studies of Nickel Oxide, Nickel Subsulfide and Nickel Sulfate. Annals of Clinical and Laboratory Science. V14.N5. 400-401, 1984.

13. Lamb JC, IV, **Jameson CW**, Choudury H, Gulati D K. Fertility Assessment by Continuous Breeding: Evaluation of Diethylstilbestrol and a Comparison of Results from Two Laboratories. J Amer Coll Toxicol 4, 173, 1985.

14. Thigpen JE, Liu LA, Richter CB, Lebetkin EH, Haseman JK, **Jameson CW**. The Comparative Estrogenic Activity of Semipurified, Certified, Standard and Open Formula Rodent Diets. Laboratory Animal Science, V35, N5, 526-527, 1985.

15. Kline DA, Hanna GR, Kuhn GO, Honaker CB, **Jameson CW**. Preparation and Stability of Animal Feed Mixtures Dosed with Rotenone, J Asso Off Anal Chem, Vol. 69, #4, 660-663, 1986.

16. **Jameson CW**, Moseman RF, Collins BJ, Hooper ND. Spy Dust: Methods for the Detection and Cleanup of a Chemical Tracking Agent. Analytical Chemistry, 58, 915A, 1986.

17. Agarwal DK, Eustis S, Lamb JC, **Jameson CW**, Kluwe WM. Influence of Dietary Zinc on Di(2-ethylhexyl)phthalate-Induced Testicular Atrophy and Zinc Depletion in Adult-Rats. Toxicology and Applied Pharmacology, V84, N1, 12-24, 1986.

18. Boorman GA, Hong HL, **Jameson CW**, Yoshitomi K, Maronpot, RP. Regression of Methyl Bromide Induced Forestomach Lesions in the Rat. Toxicology and Applied Pharmacology, 86, 131-139, 1986.

19. Collins B, Goehl TJ, **Jameson CW**, Kuhn G, Dux T. Analytical Methods for the Analysis of Microencapsulated Trichloroethylene in Corn Oil, Feed Dosage Formulations and Rat Whole Blood. J. of Analytical Toxicology, 10, 236, 1986.

20. **Jameson CW**, NTP Technical Report on the Toxicology and Carcinogenesis Studies of Tetrakis(hydroxymethyl)phosphonium sulfate (THPS) and Tetrakis(hydroxymethyl)phosphonium Chloride (THPC) in F344/N Rats and B6C3F1 Mice (Gavage Studies). NIH Publication No. 296, 1987.

21. Dunnick J K, **Jameson CW**, Montgomery CA. Subchronic Toxicity of Propantheline Bromide Administered in the Feed to Fischer 344/N Rats and B6C3F1 Mice. Fundamental and Applied Toxicology, V9, N3, 496-503, 1987.

22. Germolec DR, Burleson GR, **Jameson CW**, Ackermann MF, Lamm KR, Hayes HT, Luster MI. Depression of Natural-Killer Cell-Activity by Ochratoxin-A. Environmental Health Perspectives, V75, No. 5, 145-145, 1987.

23. **Jameson CW**, Moseman RF, Hooper ND, Collins BJ. Spy Dust - Detecting a Chemical Tracking Agent. Environmental Health Perspectives, V75, No. 5, 143-143, 1987.

24. Melnick RL, **Jameson CW**, Goehl TJ. Application of Microencapsulation for Toxicology Studies - Stability, Bioavailability, and Toxicity of Microencapsulated Trichloroethylene. Environmental Health Perspectives, V75, No. 5, 142-142, 1987.

25. Melnick RL, **Jameson CW**, Goehl TJ, Kuhn GO. Application of Microencapsulation for Toxicology Studies. 1. Principles and Stabilization of Trichloroethylene in Gelatin-Sorbitol Microcapsules. Fundamental and Applied Toxicology, V8, N4, 425-431, 1987.

26. Melnick RL, **Jameson CW**, Goehl TJ, Maronpot RR, Collins BJ, Greenwell A, Harrington FW, Wilson RE, Tomaszewski KE, Agarwal DW. Application of Microencapsulation for Toxicology Studies. 2. Toxicity of Microencapsulated Trichloroethylene in Fischer 344 Rats. Fundamental and Applied Toxicology, V8, N4, 432-442, 1987.

27. Thigpen JE, Lung-An L, Richter CB, Lebetkin, EH, Haseman, JK, **Jameson CW**. The Mouse Bioassay Test for the Detection of Estrogenic Activity in Feeds and Foodstuffs. Part I: A Standardized Method for Conducting the Mouse Bioassay using the CD-1 Mouse. Laboratory Animal Science, V37, N5, 596-601, 1987.

28. Thigpen JE, Lung-An L, Richter CB, Lebetkin EH, **Jameson CW**. The Mouse Bioassay Test for the Detection of Estrogenic Activity in Feeds and Foodstuffs. Part II: The Comparative Estrogenic Activity of Purified, Certified Standard, Open and Closed Formula Rodent Diets. Laboratory Animal Science, V37, N5, 602-605, 1987.

29. Bucher JR, Gupta BN, Adkins B, Thompson M, **Jameson CW**, Thigpen J E, Schwetz BA. The Toxicity of Inhaled Methyl Isocyanate in F344/N Rats and B6C3F1 Mice. I: Acute Exposure and Recovery Studies. Environmental Health Perspectives, V72, 53-61, 1987.

30. Luster MI, Germolec DR, Burleson GR, **Jameson CW**, Ackermann MF, Lamm KR, Hayes HT. Selective Immunosuppression in Mice of Natural Killer Cell Activity by Ochratoxin A. Cancer Research, Vol. 47, 2259-2263, 1987.

31. Dieter MP, **Jameson CW**, Tucker AN, Luster MI, French JE, Hong, HL, Boorman, GA. Evaluation of Tissue Disposition, Myelopoietic and Immunologic Responses in Mice After Long-term Exposure to Nickel Sulfate in the Drinking Water. Journal of Toxicology and Environmental Health, V24, 357-372, 1988.

32. Huff JE, McConnell EE, Haseman JK, Boorman GA, Eustis SL, Schwetz BA, Rao GN, **Jameson CW**, Hart LG, Rall DP. Carcinogenesis Studies Results of 398 Experiments on 104 Chemicals from the U. S. National Toxicology Program. Annuals of the New York Academy of Sciences V534, 1-30, 1988.

33. Shan A, Harben D, **Jameson CW**. Analyses of Two Azo Dyes by High Performance Liquid Chromatography. Journal of Chromatographic Science, V26, 439-442, 1988.

34. Hong HL, Canipe J, **Jameson CW**, Boorman GA: Comparative Effects of Ethylene Glycol and Ethylene Glycol Monomethyl Ether Exposure on Hematopoiesis and Histopathology in B6C3F1 Mice. Journal of Environmental Pathology, Toxicology, and Oncology, V8, N7, 27-38, 1988.

35. Hong HL, **Jameson CW**, Boorman GA. Residual Hematopoietic Effect of Ochratoxin A in Mice Exposed to Irradiation. Toxicology, V53, 57-67, 1988.

36. Dieter MP, **Jameson CW**, French JE, Gangjee S, Stefanski SA, Chan, PC. Development and Validation of a Cellular Transplant Model for Leukemia in Fischer Rats: A Short-term Assay for Potential Anti-Leukemic Chemicals. Leukemia Research, V13, 841-849, 1989.

37. Timmons L, Brown R, Arneson DW, **Jameson CW**. Rapid Determination of Low pg/mg Amounts of N-Nitrosodiethylamine in Rodent Body Fluid and Tissue Samples by Isotope-Dilution High Resolution Mass Spectrometry. J. Anal. Tox., V13, N6, 333-336, 1989.

38. Heindel JJ, Lamb JC, Chapin RE, Gulati DK, Hope E, George J, **Jameson CW**, Teague J, Schwetz BA. Reproductive Toxicity Testing by Continuous Breeding Test Protocol in CD-1 Mice. DHHS Publication No. (NIH) 89 Washington, DC, US Government Printing Office, 1989.

39. Cannon JM, Brown D, Murrill EM, **Jameson CW**. Identification of Components in Iodinated Glycerol. Journal of Pharmaceutical Sciences, V78, N1, 48-51, 1989.

40. Morgan DL, **Jameson CW**, Mennear JH, Prejean JD. 14-Day and 90-Day Toxicity Studies of C.I. Pigment Red 3 in Fischer 344 Rats and B6C3F1 Mice. Fd. Chem. Toxic., V27, N12, 793-800, 1989.

41. Morgan DL, **Jameson CW**, Mennear JH, Ulland BM. Thirteen-Week Toxicity Studies of CI Direct Blue 15 and 3,3'-Dimethoxybenzidine in the Fischer 344 Rat. Toxicology, V59, 297-309, 1989.

42. Dieter MP, **Jameson CW**, Maronpot RR, Langenbach RJ, Braun AG. The Chemotherapeutic Potential of Glycol Alkyl Ethers: Structure-Activity Studies of Nine Compounds in a Fischer Rat Leukemia Transplant Model. Cancer Chemother. Pharmacol., 26, 173-180, 1990.

43. Gorski T, Goehl TJ, **Jameson CW**, Collins BJ. Sources of Error in the Determination of Trichloroethylene in Blood. Bull. Environ. Contam. Toxicol., V45, 1-5, 1990.

44. Dieter MP, Boorman GA, **Jameson CW**, Matthews HB, Huff JE. The Carcinogenic Activity of Commercial Grade Toluene Diisocyanate in Rats and Mice in Relation to the Metabolism of the 2,4- and 2,6-TDI Isomers. Toxicology and Industrial Health, V6, No. 6, 599-621, 1990.

45. Morrissey RE, Fowler BA, Harris MA, Moorman MP, **Jameson CW**, Schwetz BA. Arsine: Absence of Developmental Toxicity in Rats and Mice. Fundamental and Applied Toxicology 15, 350-356, 1990.

46. **Jameson CW**, NTP Technical Report on the Toxicology and Carcinogenesis Studies of d-Limonene in F344/N Rats and B6C3F1 Mice (Gavage Studies). NIH Publication No. 347, 1990.

47. Gorski T, Goehl TJ, **Jameson CW**, Collins BJ, Bursey J, Moseman R. Gas Chromatic Determination of 2-Ethylhexanol and 2-Ethylhexanoic Acid as Derivatives suitable for Electron Capture and Nitrogen-Phosphorus Detection After Single Reaction with Heptafluorobutyrlimidazole. Journal of Chromatography, 509, 383-389, 1990

48. Yuan J, **Jameson CW**, Goehl TJ, Collins BJ, Corniffee G, Kuhn G, Castro C. Effects of Physical Binding of o-Nitroanisole with Feed Upon its Systemic Availability in Male F344 Rats. Bulletin of Environmental Contamination and Toxicology, 47: 152-159, 1991.

49. Yuan J, **Jameson CW**, Goehl TJ, Collins BJ, Purde W, Judd L. Application of Molecular Encapsulation for Toxicity Studies: Toxicokinetics of p-Chloro-α,α,α-trifluorotoluene in β-Cyclodextrin or Corn Oil Vehicles in Male F344 Rats. Toxicology and Applied Pharmacology, 111, 107-115, 1991.

50. Dieter MP, **Jameson CW**, Elwell M, Lodge JW, Hejtmancik M, Grumbein SL, Ryan M, Peters AC. Comparative Toxicity and Tissue Distribution of Antimony Potassium Tartrate in Rats and Mice Dosed by Drinking Water and Intraperitoneal Injection. Journal of Toxicology and Environmental Health, 34, 51-82, 1991.

51. Yuan J, Bucher JR, Goehl TJ, Dieter MP, **Jameson CW**. Quantitation of Cinnamaldehyde and Cinnamic Acid in Blood by HPLC. Journal of Analytical Toxicology, 16, N6: 359-362, 1992.

52. Yuan J, **Jameson CW**, Goehl TJ, Elwell MR, Leininger JR, Thompson MB, Corniffe G, Carleton T. Application of Molecular Encapsulation for Toxicology Studies: Comparative Toxicity of p-Chloro-α,α,α-trifluorotoluene in β-Cyclodextrin Vehicle versus Corn Oil Vehicle in Male and Female Fischer 344 Rats and B6C3F1 Mice. Fundamental and Applied Toxicology, 18, 460-470, 1992.

53. Dieter MP, Maronpot RR, **Jameson CW**, Ward SM. The Effects of Iodinated Glycerol, Trichlorfon, Acetaminophen on Tumor Progression in a Fischer Rat Leukemia Transplant Model. Cancer Detection and Prevention, V16, No. 3, 173-183, 1992.

54. Yuan J, Dieter MP, Bucher JR, **Jameson CW**. Toxicokinetics of Cinnamaldehyde in F344 Rats. Food and Chemical Toxicology, 30, N12: 997-1004, 1992.

55. Yuan J, **Jameson CW**, Goehl TJ, Collins BJ. Molecular Encapsulator: A Novel Vehicle for Toxicology Studies. Toxicology Methods, V1, No.4, 231-241, 1992.

56. Dieter MP, Boorman GA, **Jameson CW**, Eustis SL. Development of Renal Toxicity in F344 Rats gavaged with Mercuric Chloride for 2 Weeks, or 2, 4, 6, 15, and 24 Months. Journal of Toxicology and Environmental Health, 36, 319-340, 1992.

57. Yuan J, Dieter MP, Bucher JR, **Jameson CW**. Application of Microencapsulation for Toxicology Studies III, Bioavailability of Microencapsulated Cinnamaldehyde. Fundamental and Applied Toxicology, 20, N1: 83-87, 1993.

58. Dieter MP, Goehl TJ, **Jameson CW**, Elwell MR, Hildebrant PK, Yuan J. Comparison of the Toxicity of Citral in F344 Rats and B6C3F1 Mice When Administered by Microencapsulation in Feed or by Corn Oil Gavage. Food and Chemical Toxicology, 31, N7: 463-474, 1993.

59. Arneson DA, Kuhn GO, **Jameson CW**. Analysis of Feed Blends Containing Microencapsulated 2-Ethyl-1-hexanol: Verification of Homogeneity and Stability. Journal of Applied Toxicology, 15 (1), 1-4, 1995.

60. **Jameson CW**, Ed. Conference on Beryllium Related Diseases. Environmental Health Perspectives, Vol. 104, S5, 935-998, 1996.

61. **Jameson CW**. Introduction to the Conference on Beryllium Related Diseases. Environmental Health Perspectives, Vol. 104, S5, 935-936, 1996.

62. Gulson BL, **Jameson CW**, Mahaffey KR, Mizon KJ, Korsch MJ, Vimpani, G. Pregnancy increases mobilization of lead from maternal skeleton. J Lab Clin Med., 130, 51-62, 1997.

63. Gulson BL, Gillings BR, **Jameson CW**. Stable lead isotopes in teeth as indicators of past domicile - a potential new tool in forensic science. J Forensic Sciences, 42, 787-791, 1997.

64. Gulson BL, Mahaffey KR, **Jameson CW**, Vidal M, Law AJ, Mizon KJ, Korsch MJ. Dietary Intake for Mother-Child Pairs and Implications for Pharmacokinetic Models. Environ Health Persp., 105, 1334-1342, 1997.

65. Gulson BL, Cameron MA, Smith AJ, Mizon KJ, Korsch MJ, Vimpani G, McMichael AJ, Pisaniello D, **Jameson CW**, Mahaffey KR. Blood lead-urine relationships in adults and children. Environ Res. Section A 78, 152-160, 1998.

66. Gulson BL, **Jameson CW**, Mahaffey KR, Mizon KJ, Korsch MJ, Cameron MA, Eisman JA. Mobilization of lead from the skeleton during the post-natal period is larger than during pregnancy. J Lab Clin Med., 131, 324-329, 1998.

67. Gulson BL, **Jameson CW**, Mahaffey KR, Mizon KJ, Patison N, Law JL, Korsch MJ, Salter MA. Relationship of Lead in Breast Milk to Lead in Blood, Urine, and Diet of the Infant and Mother. Environ Health Persp., 106, 667-674, 1998.

68. Gulson BL, Gray B, Mahaffey KR, **Jameson CW**, Mizon KJ, Patison N, Korsch MJ. Comparison of the rates of exchange of lead in the blood of newly born infants and their mothers with lead from their current environment, J Lab Clin Med., 133, Vol. 2, 171-178, 1999.

69. Gulson BL, Mahaffey KR, **Jameson CW**, Patison N, Law JL, Mizon KJ, Korsch MJ, Pederson, D. Impact of Diet on Lead in Blood and Urine in Female Adults and Relevance to Mobilization of Lead from Bone Stores. Environ Health Persp., 107, N4, 257-263, 1999.

70. Bucher JR, **Jameson CW**. Environmental tobacco smoke epidemiology. Environ Health Perspect. 107(8): A395, 1999.

71. Waalkes, M. P. and **Jameson, C. W**.: Evaluation of nickel compounds for listing in the Report on Carcinogens. In: Vernet, P. G. (ed.). *Proceedings of the Sixth International Symposium on Metal Ions in Biology and Medicine.* Montrouge, France, John Libby Eurotext, Ltd. 2000.

72. Gulson BL, Mizon KJ, Palmer JM, Korsch MJ, Patison N, **Jameson CW**, Donnelly JB. Urinary lead isotopes during pregnancy and postpartum indicate no preferential partitioning of endogenous lead into plasma. J Lab Clin Med., 136(3): 236-42, 2000.

73. Portier CJ, et al. Differences in the carcinogenic evaluation of glyphosate between the International Agency for Research on Cancer (IARC) and the European Food Safety Authority (EFSA) J Epidemiol Community Health August Vol 70 No 8: 741-745, 2016.

Listed as a contributor for the evaluation, interpretation and reporting of results for more than 100 chemicals studied in chronic two-year bioassay studies by the National Toxicology Program as published in the Technical Report Series (1980-1990).

Listed as a contributor to the World Cancer Report 2020, Published by the International Agency for Research on Cancer. WHO Press, World Health Organization, 20 Avenue Appia, 1211 Geneva 27, Switzerland, 2020

BOOKS

Jameson CW and Walters DB, Eds. Chemistry for Toxicity Testing, Butterworth Publishers, Boston, MA, 1984.

Walters DB and **Jameson CW**, Eds. Health and Safety for Toxicity Testing, Butterworth Publishers, Boston, MA, 1984.

REPORTS

Jameson CW, Editor, Report on Carcinogens, Eighth Edition, U.S. Department of Health and Human Services, Public Health Service, 1998.

Jameson CW, Editor, Report on Carcinogens, Ninth Edition, U.S. Department of Health and Human Services, Public Health Service, 2000.

Jameson CW, Editor, Report on Carcinogens, Tenth Edition, U.S. Department of Health and Human Services, Public Health Service, 2002.

Jameson CW, Editor, Report on Carcinogens, Eleventh Edition, U.S. Department of Health and Human Services, Public Health Service, 2004.

Jameson CW, Senior Author for following NTP Report on Carcinogens Background Documents:

1. Alcoholic Beverage Consumption - 1999
2. 1-Amino-2,4,dibromoanthraquinone - 2002
3. 2-Amino-3,4-dimethylimidazo[4-5-f]quinoline (MeIQ) - 2002

4. 2-Amino-3,8-dimethylimidazo[4-5-f]quinoxaline (MeIQx) - 2002
5. 2-Amino-1-methyl-6-phenylimidazo[4,5-b]pyridine (PhIP) - 2002
6. 2-Amino-3-methylimidazo[4,5-f]quinoline (IQ) - 2002
7. Azacitidine - 1996
8. Beryllium and Beryllium Compounds - 2000
9. 2,2-bis-(bromomethyl)-1,3-propanediol (BBMP) (Technical Grade) - 2000
10. Boot & Shoe Manufacturing - 1998
11. 1,3- Butadiene - 1997
12. Cadmium and Cadmium Compounds - 1997
13. Chloramphenicol - 2000
14. Chloroprene - 1997
15. Chlorozotocin - 1996
16. p -Chloro-o-toluidine and its Hydrochloride Salt - 1996
17. Cobalt Sulfate - 2002
18. Cyclosporin A - 1996
19. Danthron (1,8-Dihydroxyanthraquinone) - 1996
20. Diazoaminobenzene - 2002
21. 2,3-Dibromo-1-propanol - 2000
22. Diesel Exhaust Particulates - 1998
23. Diethanolamine - 2002
24. 1,6-Dinitropyrene & 1,8-Dinitropyrene - 1996
25. Disperse Blue I - 1996
26. Dyes Metabolized to Benzidine (Benzidine Dyes as a Class) - 1997
27. Dyes metabolized to 3,3'-Dimethoxybenzidine (DMOB) - 2000
28. Dyes metabolzed to 3,3'-Dimethylbenzidine (DMB) - 2000
29. Environmental Tobacco Smoke - 1998
30. Estrogens, Steriodal - 2000
31. Ethyl Acrylate - 1998
32. Ethylene Oxide - 1998
33. Furan - 1996
34. Hepatitis B Virus (HBV) - 2003
35. Hepatitis C Virus (HCV) - 2003
36. Human Papillomaviruses (HPV): Some Genital-Mucosal Types - 2003
37. Isoprene - 1998
38. Lead and Lead Compound - 2003
39. Methyleugenol - 2000
40. Methyl-t-Butyl Ether (MtBE) - 1998
41. Naphthalene - 2002
42. Nickel Compounds - 1998
43. Nickel (Metallic) and Certain Nickel Alloys - 2000
44. o-Nitroanisole - 1996
45. Nitrobenzene - 2002
46. 6-Nitrochrysene - 1996
47. Nitromethane - 2002
48. 1-Nitropyrene - 1996
49. 4-Nitropyrene - 1996
50. Phenolphthalein - 1997
51. Saccharin - 1997

52. Silica, Crystalline (Respirable Size) - 1998
53. Smokeless Tobacco - 1997
54. Solar Radiation & Exposure to Sunlamps or Sunbeds - 1997
55. Strong Inorganic Acid Mists Containing Sulfuric Acid - 1997
56. Styrene-7,8-oxide - 2000
57. Tamoxifen - 1997
58. 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD) - 1997
59. Tetrafluoroethylene - 1997
60. 4,4'-Thiodianiline - 2002
61. Thiotepa - 1996
62. Tobacco Smoking - 1997
63. 1,2,3-Trichloropropane - 1996
64. Trichloroethylene - 1997, 2000
65. Ultraviolet (UV) Radiation, Broad Spectrum and UVA, UVB, and UVC - 2000
66. Vinyl Bromide - 2000
67. Vinyl Fluoride - 2000
68. Wood Dust - 2000
69. X-Radiation & Gamma Radiation and Neutrons – 2003

Jameson CW Contributor to the following NTP Report on Carcinogens Background Documents:

1. Aristolochic Acid Related Exposures (2 Candidate Substances) - 2008
    a. Botanical Products Containing Aristolochic Acid
    b. Aristolochic Acid
2. Captafol – 2008
3. ortho-Nitrotoluene – 2008
4. Riddelliine - 2008
5. Styrene - 2008
6. Cobalt – Tungsten Carbide; Powders and Hard Metals – 2009
7. Glass Wool Fibers – 2009

BOOK CHAPTERS

1. **Jameson CW**. Analytical Chemistry Requirements for Toxicity Testing of Environmental Chemicals, in Chemistry for Toxicity Testing, pp. 3-14, Butterworth Publishers, Boston, MA, 1984.

2. **Jameson CW**, Rollheiser JJ, Kuhn GO. Stability Determinations of Chemical/Vehicle Mixtures, in Chemistry for Toxicity Testing, pp. 107-114, Butterworth Publishers, Boston, MA, 1984.

3. Kuhn GO, Rollheiser JJ, Schworer BA, **Jameson CW**. Methods Development for Mixing Chemicals in Rodent Feed, in Chemistry for Toxicity Testing, pp. 59-81, Butterworth Publishers, Boston, MA, 1984.

4. Murrill EA, Kuhn GO, Rollheiser JJ, **Jameson CW**. Analysis of Dose Feed Mixtures, in Chemistry for Toxicity Testing, pp. 91-106, Butterworth Publishers, Boston, MA, 1984.

5. Woodhouse EJ, Murrill EA, Stelting KM, **Jameson CW**. Problems of Testing Commercial-Grade Chemicals, in Chemistry for Toxicity Testing, pp. 31-50, Butterworth Publishers, Boston, MA, 1984.

6. Graves SW, Woodhouse EJ, Stelting KM, **Jameson CW**: Bulk Chemical Management for chronic Toxicity Studies, in Health and Safety for Toxicity Testing, pp. 221-240, Butterworth Publishers, Boston, MA, 1984.

7. Huff JE, McConnell EE, Haseman JK, Boorman GA, Eustis SL, Schwetz BA, Rao GA, **Jameson CW**, Hart LG, Rall DP. Carcinogenesis Studies: Results of 398 Experiments on 104 Chemicals from the U. S. National Toxicology Program, in Living in a Chemical World, Occupational and Environmental Significance of Industrial Carcinogens, Annals of the New York Academy of Sciences, V 534, pp. 1-31, 1988.

8. Fouts JR, **Jameson CW**. Hazard Identification, The First Step, in Proceedings of the National Minority Health Conference, Atlanta GA, December 1990.

9. **Jameson CW**, Goehl TJ. Chemistry Requirements for the Toxicologic and Carcinogenicity Evaluation of Chemicals, in the Handbook of Carcinogen Testing, Second Edition, pp. 286-297, Noyes Publications, Park Ridge, NJ, 1994.

10. **Jameson CW.** Polycyclic Aromatic Hydrocarbons and Associated Occupational Exposures, Chapter 7 in Tumour Site Concordance and Mechanisms of Carcinogenesis, Edited by Baan RA, Stewart BW, Straif K. IARC Scientific Publication No. 165, 2019

ABSTRACTS/PRESENTATIONS

1. Mazzocchi PH, **Jameson CW**, Nishiyama T. Competing Processes in the Photochemistry of Alkyl Imides. Proceedings of the 178th National Meeting of the American Chemical Society, Washington, DC, September 1979.

2. **Jameson CW**. An Overview of Analytical Chemistry Requirements for Toxicity Testing. Proceedings of the 183rd National Meeting of the American Chemical Society, Las Vegas, NV, March 1982.

3. **Jameson CW**, Rollheiser JJ, Kuhn GO. Stability Determinations of Chemical/Vehicle Mixtures. Proceedings of the 183rd National Meeting of the American Chemical Society, Las Vegas, NV, March 1982.

4. **Jameson CW**, Grieshaber CK, Whitmire CE. Effect of GLPs on Chemistry Requirements for Toxicity Testing. Proceedings of the 183rd National Meeting of the American Chemical Society, Las Vegas, NV, March 1982.

5. Kuhn GO, Rollheiser JJ, Schworer BA, **Jameson CW**. Methods Development for Mixing Chemicals in Rodent Feed. Proceedings of the 183rd National Meeting of the American Chemical Society, Las Vegas, NV, March 1982.

6. Murrill EA, Kuhn GO, Rollheiser JJ, **Jameson CW**. Analysis of Dose Feed Mixtures. Proceedings of the 183rd National Meeting of the American Chemical Society, Las Vegas, NV, March 1982.

7. Woodhouse EJ, Murrill EA, Brown RD, **Jameson CW**. The Problems of Testing Commercial Grade Chemicals. Proceedings of the 183rd National Meeting of the American Chemical Society, NV, March 1982.

8. Graves SW, Woodhouse EJ, Stelting KM, **Jameson CW**. Bulk Chemical Management for Chronic Toxicity Studies. Proceedings of the 183rd National Meeting of the American Chemical Society, Las Vegas, NV, March 1982.

9. **Jameson CW**, Castro CA, Kuhn GO, Murrill EA. Quality Assurance Techniques for Reference laboratory Analysis of Dosage Formulations. Proceedings of the 184th National Meeting of the American Chemical Society, Kansas City, MO, September 1982.

10. Pallas FE, DuSold DE, Murrill EA, **Jameson CW**. HPLC Determination of Benzidine and its Congeners in Direct Dyes. Proceedings of the 184th National Meeting of the American Chemical Society, Kansas City, MO, September 1982.

11. Rollheiser JJ, Stelting KM, Woodhouse EJ, **Jameson CW**. Microcomputer Applications in a Bioanalytical Chemistry Laboratory. Proceedings of the 184th National Meeting of the American Chemical Society, Kansas City, MO, September 1982.

12. Fanska CB, Pittman LW, Murrill EA, **Jameson CW**, Dieter MP. HPLC Determination of Benzo(a)pyrene and Benzo(e)pyrene in Mouse Tissues. Proceedings of the 184th National Meeting of the American Chemical Society, Kansas City, MO, September 1982.

13. Cannon JM, Wyatt LL, Brown RD, Murrill EA, **Jameson CW**, Dieter MP. Analysis of Titanium in Tissues by IP Spectroscopy. Proceedings of the 184th National Meeting of the American Chemical Society, Kansas City, MO, September 1982.

14. Pittman LW, Lillich MA, Walters KM, Murrill EA, **Jameson CW**. HPLC Purity Analysis of Benzidine Congener-Based Dyes. Proceedings of the 184th National Meeting of the American Chemical Society, Kansas City, MO, September 1982.

15. Brown RD, Murrill EA, Stelting KM, Woodhouse EJ, **Jameson CW**. Selection of Analytical Methods for Characterization of Commercial Chemicals. Proceedings of the 184th National Meeting of the American Chemical Society, Kansas City, MO, September 1982.

16. Dieter MP, Luster MI, Dean JH, Boorman GA, **Jameson CW**. Immunotoxicity of Mercuric Chloride in B6C3F1 Mice. The Toxicologist, 2, 92, 1982.

17. Rollheiser JJ, Stelting KM, Woodhouse EJ, Kuhn GO, **Jameson CW**. A Systematic Procedure for the Development of Chromatographic Methods of Analysis of Dosed Feed Mixtures. Proceedings of the 184th National Meeting of the American Chemical Society, Seattle, WA, March 1983.

18. Minor CM, Graves SW, Stelting KM, Woodhouse EJ, **Jameson CW**. Microcomputer Uses in Quality Assurance. Proceedings of the 184th National Meeting of the American Chemical Society, Seattle, WA, March 1983.

19. Fanska CB, Shan A, Murrill EA, **Jameson CW**. HPLC Determination of Chloramphenicol and its Monosuccinate Esters in Rat and Mouse Sera. Proceedings of the 186th National Meeting of the American Chemical Society, Washington, DC, August 1983.

20. Kuhn GO, Stelting KM, Dux T, **Jameson CW**. Analysis of o-Nitroanisole in Aged Feed Blends. Proceedings of the 186th National Meeting of the American Chemical Society, Washington, DC, August 1983.

21. Kuhn GO, Stelting KM, Kline DA, Murrill EA, **Jameson CW**. Determination of Sub-PPB Levels of Diethylstilbestrol in Feeds. Proceedings of the 184th National Meeting of the American Chemical Society, Washington, DC, August 1983.

22. Cannon JM, Brown RD, Fanska C, Woodhouse EJ, Murrill EA, **Jameson CW**. Chemical Characterization of a Commercial Dye for Use in Bioassay Studies. Proceedings of the 186th National Meeting of the American Chemical Society, Washington, DC, August 1983.

23. Timmons L, Cannon M, Grese D, Brown RD, Murrill EA, **Jameson CW**. Identification of Chlorinated Phenyl Ethers of Dibenzodioxins and Diphenyl Ethers in Commercial Grade Pentachlorophenol. Proceedings of the 186th National Meeting of the American Chemical Society, Washington, DC, August 1983.

24. Melnick RL, **Jameson CW**, Goehl TJ, Kuhn GO. Microencapsulation of Chemicals for Toxicologic Studies. The Toxicologist, 4, 49, 1984.

25. Onstot J, Timmons L, Murrill E A, **Jameson CW**. HRGC/HRMS Identification of Chlorinated Phenyl and Phenoxy Substituted Dioxins, Furans and Diphenyl Ethers in Commercial Grade Pentachlorophenol. Proceedings of the American Society for Mass Spectrometry Symposium, San Antonio, TX, May 1984.

26. Rollheiser J, Buchanan RC, Maune C, **Jameson CW**. Determination of Salicylazosulfapyridine in Rodent Feed. Proceedings of the 189th National Meeting of the American Chemical Society, Philadelphia, PA, August 1984.

27. Kuhn GO, Ridlen RL, Dix TP, Stelting, KM, **Jameson CW**. Conformance Testing of Microencapsulated Chemicals for Use in Bioassay Studies. Proceedings of the 189th National Meeting of the American Chemical Society, Philadelphia, PA, August 1984.

28. Kuhn GO, Arneson D, Kline DA, Shan YA, Nguyen PTH, **Jameson CW**. Determination of Metabolites of Benzidine-Based Dyes in Rodent Urine. Proceedings of the 189th National Meeting of the American Chemical Society, Philadelphia, PA, August 1984.

29. Dunnick JK, **Jameson CW**, Benson JM. Toxicology and Carcinogenesis Studies of Nickel Oxide, Nickel Subsulfide and Nickel Sulfate. Proceedings of the Third International Conference on Nickel Metabolism and Toxicology, Paris, France, September 1984.

30. **Jameson CW**. Practical Aspects of Analytical Chemistry Support for Toxicity Studies. Proceedings of the XI Federation of Analytical Chemistry and Spectroscopy Societies, Meeting, Philadelphia, PA, September 1984.

31. Brown RD, Arneson DW, Stelting KM, **Jameson CW**. The Importance of Complementary Techniques in the Analysis of Commercial Chemicals for Toxicity Testing. Proceedings of the XI Federation of Analytical Chemistry and Spectroscopy Societies Meeting, Philadelphia, PA, September 1984.

32. Ridlen RL, Castro C, Rollheiser JJ, Kuhn GO, **Jameson CW**. Development of Analytical Methods for a Referee Dosage Analysis Program. Proceedings of the XI Federation of Analytical Chemistry and Spectroscopy Societies Meeting, Philadelphia, PA, September 1984.

33. **Jameson CW**, Goehl TJ, Davies CL. Chemical Quality Assurance Techniques for Toxicity Testing of Environmental Chemicals. Proceedings of the 1984 International Chemical Congress of Pacific Basin Societies, American Chemical Society, Honolulu, HI, December 1984.

34. Melnick RL, **Jameson CW**, Goehl TJ, Collins BJ, Maronpot RR, Greenwell A, Harrington F, Wilson R, Tomaszewski K, Agarwal D. Microencapsulation of Trichloroethylene: Stability, Bioavailability and Toxicity. North Carolina Chapter of the Society of Toxicology Annual Meeting, Research Triangle Park, NC, February 1985.

35. Dieter MP, **Jameson CW**, French JE, Brown RD, Lilya H. Target Organ Accumulation and Toxicity of Titanocene Dichloride (TDC) in F344 Rats. The Toxicologist, 5, 89, 1985.

36. Melnick RL, Goehl TJ, Collins B, **Jameson CW**, Maronpot R, Greenwell A, Harrington F, Wilson R, Tomaszewski K, Agarwal D. Toxicity of Microencapsulated Trichloroethylene (TCE) in Rats. The Toxicologist, 5, T228, 1985.

37. Kuhn GO, Dux TP, Ridlen RL, Stelting KM, **Jameson CW**. Analytical Procedures for Microencapsulated Trichloroethylene (TCE) In Rodent Feed. Proceedings of the 191st National Meeting of the American Chemical Society, Chicago, IL, September 1985.

38. Thigpen JE, Li LA, Richter CB, Lebetkin EH, Haseman JK, **Jameson CW**. The Comparative Estrogenic Activity of Semipurified, Certified, Standard and Open Formula Rodent Diets. American Association for Laboratory Animal Science, Baltimore, MD, November 1985.

39. **Jameson CW**, Schwetz BA, Goehl TJ, Moorman CR, Collins BJ. Lack of Evidence for Involvement of Cyanide in Methyl Isocyanate (MIC) Toxicity. The Toxicologist, 6, 76, 1986.

40. Dieter MP, **Jameson CW**, Tucker AN, Luster MI, French JE, Boorman GA. Immunotoxic Effects of Nickel Sulfate in Mice. The Toxicologist, 6, 263, 1986.

41. Ridlen RL, Kuhn GO, Arneson DW, **Jameson CW**. Effect of Microencapsulation Processes on Chemicals for Toxicology Studies. The Toxicologist 6, 304, 1986.

42. **Jameson CW**, Moseman RF, Collins BJ, Hooper ND. Spy Dust: Detection and Cleanup. Proceedings of the 193rd National Meeting of the American Chemical Society, Anaheim, CA, September 1986.

43. Moseman RF, **Jameson CW**, Hooper ND, Collins BJ. Analysis and Stability of 5-(4-Nitrophenyl)-pentadienal (NPPD) in Various Sample Materials. Proceedings of the 193rd National Meeting of the American Chemical Society, Anaheim, CA, September 1986.

44. Dieter MP, French JE, **Jameson CW**, Stefanski SA, Chhabra RS. Evaluation of Mononuclear Cell Leukemia Using a Cellular Transplant Model in Rats: Studies of Pyridine, Trichlorophenol, Ethoxyethanol and Hexylresorcinol. J. Cell. Biochem., 12C, 86, 1988.

45. **Jameson CW**, Goehl TJ, Gorski T, Collins BJ, Melnick RN, Kuhn GO, Harrington F. Microencapsulation of 1,1,1-Trichloroethane (TCE) and 2-Ethylhexanol (2 EH) for Toxicity Studies; Stability, Palatability and Evaluation of Chemical Availability. The Toxicologist, 8, 264, 1988.

46. Dieter MP, **Jameson CW**, Lodge JW, Hejtmancik M, Grumbein SL, Peters. Comparative Toxicity and Tissue Distribution of Antimony Potassium Tartrate in Rats and Mice Dosed by Drinking Water (DW) or Intraperitoneal Injection (IP). The Toxicologist, 8, 20, 1988.

47. Abdo KM, Thompson M, Bucher J, **Jameson CW**, Seely JC, Seilkop S, Prillaman J. Influence of Diet and Route of Administration on Vitamin E Toxicity in Male 344 Rats. FASEB Journal, V2, N5, 1097, 1988.

48. Yang RSH, Goehl TJ, **Jameson CW**, Germolec D, Luster MI, Chapin R, Morressey RE, Schwetz BA, Harris R, Chatham A, Arneson DW, Moseman R, Collinsworth N, Bigelow D. Chemical Stability and Biological Suitability of a 25-Chemical Mixture of Groundwater Contaminants for Animal Toxicology Studies. The Toxicologist, 9, 216, 1989.

49. Dieter MP, **Jameson CW**, French JE, Maronpot RR, Chhabra RS, Chan PC. Investigation of Structure Activity Relationships Between NTP Test Chemicals and Mononuclear Cell Leukemia Using a Cellular Transplant Model. The Toxicologist, 9, 124, 1989.

50. Michael LC, Martin-Goldberg M, Handy RW, **Jameson CW**. Determination of Lead and Cadmium in Rat Liver by Square Wave Stripping Voltammetry. Pittsburgh Conference, 1989.

51. Dieter MP, **Jameson CW**, Maronpot RR, Braun AG. The Chemotherapeutic Potential of Glycol Ethers. Structure Activity Studies with a Cellular Transplant Model of Leukemia in Rats. Proc. Amer. Assoc. Cancer Res., 30, 615, 1989.

52. Bursey J, Moseman R, Parker C, Tomer K, **Jameson CW**. GC/MS and LC/MS in the Analysis of NPPD (Spy Dust). Proceedings of the Annual Meeting of The American Society of Mass Spectrometry, 1989.

53. Dieter MP, **Jameson CW**, Maronpot RR, French JE. Utilization of a Fischer Rat Leukemia Transplant Model as a Short-Term Assay to Screen Chemicals for Leukemogenesis or for Potential Anti-Leukemic Activity. Proceedings, XIVth International Symposium for Comparative Research on Leukemia and Related Disease, 1989.

54. Dieter MP, **Jameson CW**, Elwell MR. Structural Alerts for Leukemia: The Alkyl Phosphonic Ester (APE) Structure. Proc. Amer. Assoc. Cancer Res., 1990.

55. **Jameson CW**, Eustis SL, Hong LH. Toxicology and Carcinogenicity Studies of d-Limonene in Male and Female F344 Rats and B6C3F1 Mice. The Toxicologist, 10, 142, 1990.

56. Yuan J, **Jameson CW**, Goehl TJ, Collins BJ, Corniffee G. Systemic Availability of o-Nitroanisole in Male F344 Rats from Aged and Fresh Feed Formulations. The Toxicologist, 10, 337, 1990.

57. Dieter MP, Matthews HB, **Jameson CW**, Jeffcoat AR. Comparative Metabolism of 2,4- and 2,6-Isomers of Toluene Diisocyanate in F344 Rats. The Toxicologist, 10, 334, 1990.

58. Graves S, LeMunyon JM, Hardbeck EC, Arnold WT, Karrenbrock AH, Arneson DW, **Jameson CW**. Dose Formulation Studies of Microencapsulated 1,1,2,2,-Tetrachloroethane. The Toxicologist, 10, 255, 1990.

59. Abu-Shakra A, Johnson L, Earley K, Gupta R, **Jameson CW**, Kari F, Langenbach R. Separation of the Mutagenic Components from the Carcinogen HC Blue 1. Proc. Environ. Mutagen. Soc. Annual Meeting, 1990.

60. **Jameson CW**, Dieter MP, Maronpot RR, French JE. "Application of a Fischer Rat Leukemia Transplant Model as a Screen for the Leukemogenic Potential of Chemicals". Proc. of The International Symposium on Toxicology, Beijing, P. R. China, October 16-19, 1990.

61. Elwell MR, **Jameson CW**, Thompson MB, Yuan J, Carleton T. Toxicity of 4-Chloro- α,α,α--trifluorotoluene. Proc. American College of Veterinary Pathologists Annual Meeting, 1990.

62. Yuan J, **Jameson CW**, Goehl TJ, Elwell MR, Thompson MB, Corniffe G, Carleton T. Application of Molecular Encapsulation for Toxicology Studies I: Molecular Encapsulation of 4-Chloro-α,α,α-trifluoro-toluene with β Cyclodextrin. The Toxicologist, 11, 1991.

63. **Jameson CW**, Yuan J, Goehl TJ, Elwell MR, Thompson MB, Corniffe G, Carleton T. Application of Molecular Encapsulation for Toxicology Studies II: 14 Day Toxicity Study of 4-Chloro- α,α,α-trifluoro-toluene in Male and Female F344 rats and B6C3F1 Mice Using β Cyclodextrin and Corn Oil Vehicles. The Toxicologist, 11, 1991.

64. Moseman RF, Brink RE, **Jameson CW**, Treinen KA, Chapin RE. Methods Development and Validation for the Determination of ppm Levels of Boron in Rat Tissues. The Toxicologist, 11, 1991.

65. Dixon DB, Moseman RF, **Jameson CW**, DeMartin FL, Heil TP, Foster SC. Method Development and Validation for the Determination of ppm Levels of Hildebrant Acid in Blood. The Toxicologist, 11, 1991.

66. **Jameson CW**, Elwell M, Eustis SL, Hong LH. Toxicology and Carcinogenicity Studies of d- Limonene in Male and Female F344 Rats and B6C3F1 Mice. Proceedings of the 204th National Meeting of the American Chemical Society, Washington, DC, August 23-28, 1992.

67. **Jameson CW**, Lucier GW, Barrett J C. The Biennial Report on Carcinogens (BRC): Review and Revision of the Criteria for Listing Substances in the BRC. The Toxicologist, 30, No.1, 1996.

68. Mahaffey K, Gulson B, **Jameson CW**, Vidal M, Law A, Mizon K, Smith A, Korsch M. Dietary Lead Intakes for Mother-Child Pairs and Relevance to Pharmacokinetic Models. The Toxicologist, 42, No.1-S, 1998.

69. Gulson B, Mahaffey K, **Jameson CW**, Mizon K, Korsch M, Cameron M, Eisman, J. Lead Mobilisation from The Maternal Skeleton Is Greater During the Post-Pregnancy Period Than During Pregnancy. The Toxicologist, 42, No.1-S, 1998.

70. Gulson BL, Mizon KJ, Patison N, Law AJ, Korsch MJ, **Jameson CW**, Mahaffey KR, Donnelly J. Contribution of Lead from Formula and Food to Lead in Blood and Urine of Newly Born Infants and Relationship to Skeletal Mobilization. The Toxicologist, 48, No.1-S, 1999.

71. **Jameson CW**. Report on Carcinogens: History and Process. Abstracts of Papers of the American Chemical Society, 228: U303-U303, 2004.

72. **Jameson CW.** Discussion of Alternative Animal Testing in the US and EU, Redefining the Three Rs. Presentation at the NAIMA/EURIMA Winter Meeting, February 6, 2020.