IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA

FEDERAL TRADE COMMISSION,

Plaintiff,

v.

RAG-STIFTUNG,

EVONIK INDUSTRIES AG,

EVONIK CORPORATION,

EVONIK INTERNATIONAL HOLDING B.V.,

ONE EQUITY PARTNERS SECONDARY FUND, L.P.,

ONE EQUITY PARTNERS V, L.P.,

LEXINGTON CAPITAL PARTNERS VII (AIV I), L.P.,

PEROXYCHEM HOLDING COMPANY LLC,

PEROXYCHEM HOLDINGS, L.P.,

PEROXYCHEM HOLDINGS LLC,

PEROXYCHEM LLC,

AND

PEROXYCHEM COOPERATIEF U.A.,

Defendants.

Civil Action No. 19-cv-2337-TJK

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PLAINTIFF'S PROPOSED FINDINGS OF FACT
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GLOSSARY OF ABBREVIATED TERMS, DEFINED TERMS, AND WITNESSES

1. Exhibits and Transcripts

Abbreviation	Meaning
Decl.	Declaration
Dep. Tr.	Deposition Transcript
DX	Defendants' Exhibit
Hrg. Tr.	Preliminary Injunction Hearing Transcript
IH Tr.	Investigational Hearing Transcript
JX	Joint Exhibit
PX	Plaintiff's Exhibit
Rpt.	Report

2. Documents and Filings

Document	Full Reference
Compl.	Complaint for Temporary Restraining Order and Preliminary Injunction Pursuant to Section 13(b) of the Federal Trade Commission Act (ECF No. 1)
Defs.' Br.	Defendants' Memorandum in Opposition to Plaintiff's Motion for Preliminary Injunction (ECF No. 56)
Guidelines	U.S. Department of Justice and Federal Trade Commission Horizontal Merger Guidelines (August 19, 2010)

3. Names and Terms

Shortened Form	Full Form
Acquisition	The proposed acquisition of PeroxyChem by Evonik
Al-Pac	Alberta-Pacific Forest Industries, Inc.
Arkema	Arkema Inc.
Bergstrom	Bergstrom Nutrition
Canfor	Canfor Pulp Ltd.
CHS	CHS, Inc.
DOJ	United States Department of Justice Antitrust Division
Downhole	Downhole Chemical Solutions

EC	European Commission
FTC	Federal Trade Commission
Georgia-Pacific	Georgia-Pacific LLC
GPI	Graphic Packaging International, Inc.
GUPPI	Gross Upward Pricing Pressure Index
H2O2	Hydrogen peroxide
Harcros	Harcros Chemicals Inc.
HHI	Herfindahl-Hirschman Index
HMT	Hypothetical Monopolist Test
IHS	IHS Markit Ltd.
IP	International Paper Company
MGC	MGC Pure Chemicals America, Inc.
Nouryon	Nouryon Pulp and Performance Chemicals LLC
Paper Excellence	Paper Excellence Group
Procter & Gamble	Procter & Gamble Company
RFP	Request for Proposal
Resolute	Resolute Forest Products
RYAM	Rayonier Advanced Materials
Solugen	Solugen, Inc.
Solvay	Solvay USA Inc.
SSNIP	Small but Significant Non-Transitory Increase in Price
STERIS	STERIS Corporation
UI	United Initiators GmbH & Co., KG
UNIVAR	UNIVAR Solutions
USP	USP Technologies
Valtris	Valtris Specialty Chemicals
Verso	Verso Corporation
WestRock	WestRock Company

4. Hearing Witnesses (in order of appearance)

Name	Affiliation
Michael Maeder, Manager of Raw Materials	Verso Corporation
Clarke Anderson, Purchasing and Inventory Team Lead	Canfor Pulp Ltd.
Sadia Dumas, Sales Account Manager, Southeast Region	PeroxyChem
Michael Engram, Manager of Supply Chain and Quality	USP Technologies
Linda Myrick, General Manager, Americas Hydrogen Peroxide	Arkema Inc.
Joel Suter, North America Sales Leader	Solvay USA Inc.
Paul Radlinski, General Manager, Bleaching Chemicals, North America, Europe, and Asia	Nouryon Pulp and Performance Chemicals LLC
Marieke Corson, Marketing Manager, North America, Active Oxygens Business Line	Evonik
Dov Rothman, Ph.D.	Plaintiff's Expert
David Niessner, Director, Strategic Sourcing—Mill Raw Materials	Graphic Packaging International, Inc.
Claus Rettig, Chairman, Resource Efficiency	Evonik
Stephen Costanzo, VP & General Manager, Americas, Active Oxygens Business Line	Evonik
Ingo Hamann, VP of Production & Engineering, Americas, Active Oxygens Business Line	Evonik
Bruce Lerner, President & CEO	PeroxyChem
Stephanie Montag, Global Business Director	PeroxyChem
Walt Kramer, VP, North America Operations	PeroxyChem
Steve Gripp, Director of Materials Management	Harcros Chemicals Inc.
Jonathan Cummins, VP, USA Manufacturing	United Initiators GmbH & Co., KG
Noelle Shirley, Corporate Buyer, Raw Materials	International Paper Company
Chris Ewolski, Director, Strategic Sourcing	STERIS Corporation
Joel Hockenbury (by video), Vice President, Operations	Jasper Products
Nicholas Hill, Ph.D.	Defendants' Expert

5. Deponents and Declarants (in alphabetical order)

Name, Title	Affiliation
Thomas Ball, EVP Commercial Sales & Marketing	PeroxyChem
Ryan Bowen, Sales Manager US & Canada	PeroxyChem
Patricia Charns, Corporate Purchasing Manager for Commodity and Pulping Chemicals	WestRock Company
Cliff Cowan, Chemicals and Ingredients Purchases Associate	Procter & Gamble Company
Wayne Cutrer, Chairman, Board of Directors	Downhole Chemical Solutions
Hamish Doughty, Vice President of Supply Chain	Paper Excellence Group
Tim Gardner, VP, Operations	Bergstrom Nutrition
Gaurab Chakrabarti, CEO	Solugen, Inc.
Mark Gilbertson, Purchasing Specialist	Alberta-Pacific Forest Industries, Inc.
Amanda Goodchild, Processing and Food Ingredients Purchasing Manager	CHS, Inc.
Scott Hancock, VP and Chief Financial Officer	MGC Pure Chemicals America, Inc.
Patrick Hurd, Chemical Sourcing Director	Georgia-Pacific LLC
Steven Johnston, Senior Director of Strategic Sourcing	Rayonier Advanced Materials
Robert Katzer, Director of Strategic Marketing and Business Development	Evonik
Robert Kulp, North America Sales Director, Active Oxygens Business Line	Evonik
Roy Kyte, Eastern Canada Sales Manager, Active Oxygens Business Line	Evonik
Don Newman, Senior Product Manager	UNIVAR Solutions
Martin Senechal, Vice President of Procurement	Resolute Forest Products
Ajay Vashisht, Western Canada Sales Manager, Active Oxygens Business Line	Evonik
Jim Vick, Director, Procurement	Valtris Specialty Chemicals
Dave Willis, Sales Account Manager, Northwest Region	PeroxyChem

PLAINTIFF'S PROPOSED FINDINGS OF FACT

I. BACKGROUND

A. Evonik and PeroxyChem

1. Defendant RAG-Stiftung owns Defendant Evonik Industries AG, which in turn owns Defendant Evonik International Holding B.V., and Defendant Evonik Corporation (collectively, "Evonik"). Compl. ¶ 17. In 2006, RAG-Stiftung acquired Degussa GmbH ("Degussa") and renamed it Evonik. Rettig (Evonik) Hrg. Tr. 1040:23-1041:16. Evonik produces and sells hydrogen peroxide ("H2O2") through its Active Oxygen business line, operating 13 production plants around the world. JX0132 (Evonik) at 070; PX9005 (Evonik) at 001. Evonik reported worldwide revenues of €13.3 billion in 2018. Rettig (Evonik) Hrg. Tr. 1040:13-15. In 2017, Evonik reported [redacted] in H2O2 sales globally and [redacted] in H2O2 sales in North America. PX1287 (Evonik) at 010. Evonik operates three H2O2 plants in North America, located in Mobile, Alabama; Gibbons, Alberta; and Maitland, Ontario. PX1287 (Evonik) at 011.

2. Defendant Lexington Capital Partners VIII (AIV), L.P. indirectly holds a majority of the limited partnership interest in Defendant One Equity Partners Secondary Fund, L.P., which holds all of the limited partnership interests of Defendant One Equity Partners V, L.P. One Equity Partners owns Defendant PeroxyChem Holding Company LLC, which in turn owns Defendant PeroxyChem Holdings LLC, Defendant PeroxyChem Holdings, L.P., Defendant PeroxyChem LLC and Defendant PeroxyChem Cooperatief (collectively, "PeroxyChem"). Compl. ¶ 18. In 2014, One Equity Partners acquired FMC Global Peroxygens ("FMC") and renamed it PeroxyChem. JX0077 (PeroxyChem) at 039; PX2335 (PeroxyChem) at 001. In the twelve-month period ending on March 31, 2018, PeroxyChem reported [redacted] in revenue, [redacted] of which it derived from the sale of H2O2, and [redacted] of which it derived from the sale of H2O2 in North America. PX1141 (PeroxyChem) at 007, 011, 044. In North America,

PeroxyChem produces H2O2 at two plants, located in Bayport, Texas and Prince George, British Columbia. JX0077 (PeroxyChem) at 016. PeroxyChem also operates a purification plant in Saratoga Springs, New York, which purifies H2O2 produced at PeroxyChem's Bayport facility to create electronics grade H2O2. JX0077 (PeroxyChem) at 016.

B. The Acquisition

3. Pursuant to an Agreement and Plan of Merger dated November 7, 2018, Evonik proposes to acquire 100 percent of the voting securities in PeroxyChem for approximately $625 million in cash (the "Acquisition"). JX0078 (Evonik) at 011-13.

II. THE SALE OF H2O2 EXCLUDING ELECTRONICS-GRADE H2O2 IS A RELEVANT PRODUCT MARKET

4. The relevant product market is the sale of H2O2, excluding electronics-grade H2O2. JX0075 (Rothman Rpt.) ¶¶ 48, 58-81. H2O2 is a commodity chemical used in a range of industrial applications, including in the pulp and paper, textile, mining, energy, food and beverage, and consumer products industries. *See, e.g.*, PX1012 (Evonik) at 001.

A. Customers of H2O2 Would Not Substitute to Another Chemical or Product

5. Customers of H2O2 would not substitute to other chemicals from H2O2 if the prices of H2O2 were to rise by a small but significant non-transitory increase in price ("SSNIP"), or about 5 percent. Anderson (Canfor) Hrg. Tr. 192:18-25; Maeder (Verso) Hrg. Tr. 138:23-139:11; JX0075 (Rothman Rpt.) ¶¶ 59-61.

6. There are no functional substitutes for H2O2. Customers in a variety of industries have testified that they could not replace H2O2 with other chemicals. Anderson (Canfor) Hrg. Tr. 192:4-11 (no substitutes for pulp and paper applications); Engram (USP) Hrg. Tr. 329:11-14 (no substitutes for environmental applications); [redacted] (no substitutes for personal care applications); JX0006 (CHS Decl.) ¶¶ 7-8 (no substitutes for food applications).

7. Customers in a variety of industries have testified that they do not use the price of other chemicals when negotiating the price of H2O2. Anderson (Canfor) Hrg. Tr. 192:2-17 (pulp and paper customer); Maeder (Verso) Hrg. Tr. 136:17-24 (pulp and paper customer); Engram (USP) Hrg. Tr. 330:20-331:4 (environmental customer).

8. Suppliers of H2O2 have acknowledge that customers have never threatened to switch to other chemicals. *See, e.g.*, [redacted] (study [redacted] concluding that there is "no substitution risk" to other chemicals).

9. H2O2 is an environmentally friendly chemical that breaks down into water and oxygen. JX0081 (IHS) at 007. [redacted] executive testified that "there's nothing that really can do the same job in terms of bleaching like [H2O2] does that is also, you know, as – as friendly to the environment." [redacted]. Other customers and competitors have also testified that there is no alternative to H2O2 that is as environmentally friendly. JX0006 (CHS Decl.) ¶ 7; JX0005 (Arkema Decl.) ¶¶ 5-6.

10. Further, once a customer has designed a plant and production process around H2O2, switching to a different chemical would be prohibitively costly. [redacted]; [redacted]; JX0020 (Lerner (PeroxyChem) IH Tr. 190:13-20). Pulp and paper customers have testified that changing their bleaching processes would require significant capital investment and be economically unfeasible. JX0007 (Canfor Decl.) ¶¶ 4-5; JX0008 (Al-Pac Decl.) ¶ 5. Other customers have stated that they would not risk losing customers or jeopardizing quality by changing their formulations and switching to other chemicals. *See, e.g.*, [redacted] (H2O2 is used in formulations for personal care applications).

B. H2O2 Formulated for a Given End Use Is a Relevant Product Market According to the Hypothetical Monopolist Test

11. The FTC's expert, Dr. Rothman, conducted the hypothetical monopolist test ("HMT")

described in the Horizontal Merger Guidelines (*"Guidelines"*) and found that a hypothetical monopolist of H2O2 formulated for any given use would impose at least a SSNIP. Rothman Hrg. Tr. 730:13-23; JX0075 (Rothman Rpt.) ¶¶ 62-69.

12. The H2O2 production process is largely the same for each producer, and involves moving a working solution through three basic steps: 1) hydrogenation, 2) oxidation, and 3) extraction, which result in "crude" H2O2. Hamann (Evonik) Hrg. Tr. 1310:23-1311:19; Kramer (PeroxyChem) Hrg. Tr. 1624:8-1625:12; *see also* JX0100 (PeroxyChem) at 016 (diagramming production process). Crude H2O2 is then purified (through distillation or filtration), brought to a specific concentration level, and stabilized with chemical additives. Hamann (Evonik) Hrg. Tr. 1312:4-1313:6; Kramer (PeroxyChem) Hrg. Tr. 1625:17-1627:6; Suter (Solvay) Hrg. Tr. 406:16-407:6. The precise combination of purity level, concentration, and stabilization package varies depending on the formulation of H2O2, but within each formulation, H2O2 sold by each producer is very similar. JX0005 (Arkema Decl.) ¶ 5; JX0009 (Nouryon Decl.) ¶ 6; Solvay (Suter) Hrg. Tr. 408:25-409:2, 409:24-410:1, 410:6-22.

13. "Standard grade" H2O2, which has the highest level of impurities, is generally sold to pulp and paper customers, as well as customers in oil and gas, mining, and environmental end uses. Maeder (Verso) Hrg. Tr. 137:20-138:1; Dumas (PeroxyChem) Hrg. Tr. 224:2-10, 235:1-2; Montag (PeroxyChem) Hrg. Tr. 1600:23-1601:3. The substantial majority of H2O2 is sold as standard grade, in part due to market demand, Rothman Hrg. Tr. 755:19-25, but also because the production process requires firms to produce a significant amount of standard grade. *See* Kramer (PeroxyChem) Hrg. Tr. 1637:22-1638:8 (PeroxyChem's process produces [redacted] standard grade at Bayport due to limits on the amount of more highly purified H2O2 that can be produced from a given volume of crude H2O2); Hamann (Evonik) Hrg. Tr. 1279:5-1280:14

(Evonik's process must produce at least [redacted] standard grade).

14. Producers often refer to higher purity H2O2 as "specialty" grades, and these products may be finished with different chemical stabilizers depending on the specific end use. Hamann (Evonik) Hrg. Tr. 1278:11-12; 1281:7-10; Suter (Solvay) 406:16-407:14. Specialty grades of H2O2 are sold to customers in food, cosmetic, chemical, and environmental end-use applications. Suter (Solvay) 405:12-16; Corson (Evonik) 713:8-714:10.

C. Aggregating H2O2 Formulated for Different End Uses into the Same Market Is Appropriate

15. Dr. Rothman and Dr. Hill agree that the purpose of defining a relevant market is to illuminate competitive effects. Rothman Hrg. Tr. 728:18-729:7; Hill Hrg. Tr. 2100:16-2101:6. The most informative way to assess the competitive significance of each H2O2 supplier is to consider each supplier's total sales of all non-electronics formulations of H2O2 because each supplier is able to adjust their production between different formulations of non-electronics H2O2. JX0075 (Rothman Rpt.) ¶ 78; Rothman Hrg. Tr. 735:12-16. While H2O2 formulated for specific end uses could be defined as separate relevant product markets, this would be an inferior approach. Rothman Hrg. Tr. 730:13-23; JX0075 (Rothman Rpt.) ¶ 70. A supplier's sales into a particular end use could overstate or understate that particular supplier's competitive significance depending on how that supplier has allocated its production capacity and sales efforts at a particular moment in time. Rothman Hrg. Tr. 735:6-12; JX0075 (Rothman Rpt.) ¶ 78.

16. It is appropriate to aggregate different formulations of non-electronics H2O2 because suppliers of non-electronics H2O2 are "rapid entrants." Rothman Hrg. Tr. 732:19-733:11; JX0075 (Rothman Rpt.) ¶ 78; *see Guidelines* § 5.1. Suppliers of non-electronics H2O2 can easily and profitably swing capacity between different formulations of H2O2, and such supply-side substitution is nearly universal among producers of non-electronics H2O2. Rothman Hrg. Tr.

732:19-733:11. Defendants' expert, Dr. Hill, admitted that he did not see any "impediment" to swinging from specialty grade to standard grade, Hill Hrg. Tr. 2163:18-2164:6, and that putting aside opportunity cost, a supplier can move from specialty grade to standard grade and vice-versa. *Id.* at 2165:11-2166:4.

17. Testimony and documentary evidence from Evonik, PeroxyChem, and other producers of H2O2 show that it is easy to swing capacity between different formulations of H2O2 at little to no cost. Kramer (PeroxyChem) Hrg. Tr. 1653:11-15, 1685:4-14, 1685:21-1686:6, 1686:10-13; Hamann (Evonik) Hrg. Tr. 1322:3-1323:15; Suter (Solvay) Hrg. Tr. 406:9-14; [redacted]. [redacted] testified that a reduction in the output of specialty grades of H2O2 requires a simple valve change to disconnect some of the filters. [redacted]. [redacted] testified that it is easy to swing between any formulations of H2O2 as long as [redacted] has available capacity. [redacted].

18. [redacted] confirmed the ease of swinging capacity [redacted] "[a]n increase in the relative profitability of standard-grade would create incentives to divert some production from specialty-grade to standard-grade H2O2. And this diversion could be easily and quickly accomplished at no significant cost." [redacted]; JX0075 (Rothman Rpt.) ¶ 77.

19. Similarly, [redacted] "segmentation of H2O2 by end-use application is not appropriate." [redacted]. According to [redacted], aggregating H2O2 formulated for different end uses into the same market is appropriate because "[t]here is strong supply-side substitutability for all end-use applications for H2O2." [redacted].

20. [redacted] is appropriate to aggregate H2O2 formulated for different end uses into the same market because "[t]he concentration of H2O2 products can be rather easily manipulated (e.g., by purifying, concentrating, or diluting). Every H2O2 producer is therefore in principle capable of supplying H2O2 at various concentrations levels, thus being able to cater for multiple end use applications." [redacted]. Similarly, North American H2O2 producers purify, concentrate, and dilute H2O2 to cater to multiple end-use applications. JX0075 (Rothman Rpt.) ¶¶ 73-74; PX7102 (Rothman Rebuttal Rpt.) ¶ 17; Hamann (Evonik) Hrg. Tr. 1312:4-1313:6, 1315:18-1317:15, 1319:4-1320:15, 1322:3-1323:2; Kramer (PeroxyChem) Hrg. Tr. 1682:11-1684:12.

21. [redacted], it is appropriate to aggregate H2O2 formulated for different end uses into the same market because "H2O2 with a certain concentration level can often be used for several end use applications. For example, H2O2 with a 35% concentration can be used for Pulp, Textile, Mining as well as Environmental and Food applications. Thus, even if hypothetically a producer would only produce one concentration of H2O2, it would still be able to supply H2O2 for multiple end use applications." [redacted]. "[A] single H2O2 product can in principle be marketed and used for various uses in different industries." [redacted].

22. [redacted] confirm that chemically identical products can be sold into different end uses under different labels. [redacted]

[redacted]; *see also* [redacted].

23. [redacted] it is appropriate to aggregate H2O2 formulated for different end uses into the same market because "pulp, paper and packaging and chemical synthesis applications constitute almost 80% of the [European Economic Area]-wide H2O2 volume and all main competitors are active in these end-use applications." [redacted]. This is strikingly similar to North America, where pulp and paper and chemical synthesis applications constitute approximately 75% of volume, and where it is undisputed that all five H2O2 producers are active in those same end-use applications. JX0081 (IHS) at 017 (pulp/paper and chemical synthesis accounted for 489,000 metric tons out of total consumption of 656,000 metric tons in 2019); *see also* [redacted] (pulp and paper and chemicals accounted for 69 percent of H2O2 market in 2018).

24. H2O2 production plants are set up to seamlessly shift production between different formulations without incurring any significant costs or delays. Suter (Solvay) Hrg. Tr. 406:9-14; [redacted] *see also* [redacted]. This allows suppliers to produce different formulations according to customer demand. Suter (Solvay) Hrg. Tr. 406:1-8; [redacted]; [redacted]; [redacted]; [redacted]. [redacted] testified that [redacted] can "make X amount of a particular grade one month and two X the next month if – and cut back on something else. The overall capacity is – is limited, but we can – within that, we can go back and

forth between the different grades." [redacted].

25. [redacted] testified that [redacted] strategic plan projected increasing its sales into specialty markets from 2019 to 2020, without undertaking any significant expenditures on new capacity. [redacted]. [redacted] testified that [redacted] is currently selling some of its higher purity H2O2 into lower-margin end uses due to lack of customer demand, and that [redacted] would increase its sales into higher-margin specialty end uses if customer demand supported it. [redacted] ("Current product mix utilizing concentrate over spec for the production need.").

26. A [redacted] testified that he could not recall a single instance in which [redacted] declined to bid for a customer because [redacted] did not believe it could make an H2O2 formulation that would meet the specification. [redacted]

27. [redacted] testified that the process of purifying standard grade to specialty or pre-electronics grade takes just a matter of a few minutes. [redacted]. It would be easy for an engineer (or even a lawyer) to adjust the output of the different H2O2 formulations by turning a valve. [redacted]. [redacted] testified that [redacted] plants have capacity and flexibility to produce more high-purity grades, or instead make more standard grade products. [redacted].

i. Pre-Electronics Grade H2O2 Should Be Included in the Relevant Product Market

28. It is appropriate to include pre-electronics grade H2O2 in the relevant product market because all suppliers are present or would be rapid entrants for pre-electronics grade H2O2.

[redacted].

29. [redacted] "All North American producers of [H2O2] are in principle capable of producing pre-electronics grade [H2O2] today or with a relatively modest investment." [redacted]. [redacted] the technology to produce pre-electronics grade H2O2 "is attainable with relatively modest additional investment and time, and is attractive if there is customer demand." *Id.* [redacted] estimates an investment of no more than [redacted]. *Id.*

30. The process for purifying pre-electronics grade H2O2 is similar to other specialty grades. [redacted] produces specialty grades and pre-electronics H2O2 using the same reverse osmosis system to filter out impurities. [redacted]. The key difference between [redacted] production of pre-electronics grade H2O2 and specialty grades is that specialty grades are purified once and pre-electronics grade is purified a second time. *Id.*; [redacted]; PX7102 (Rothman Rebuttal Rpt.) ¶ 42.

31. Likewise, [redacted] testified that pre-electronics grade H2O2 is produced on the same equipment that they use to produce specialty grades of H2O2. [redacted]; [redacted]. [redacted] testified that H2O2 is purified into rectified product, which is then used to make specialty grades of H2O2, along with pre-electronics grade H2O2 (sometimes referred to as electronics grade "feedstock"). [redacted]; *see also*, [redacted].

32. Although PeroxyChem and Solvay do not sell pre-electronics grade H2O2 today, they produce significant volumes of pre-electronics grade H2O2 that are consumed internally in their production of electronics grade H2O2. Rothman Hrg. Tr. 788:5-8; [redacted]

[redacted]; [redacted]. In recent years, [redacted][1] [redacted]. [redacted]; [redacted]; JX0001 (MGC Decl.) ¶¶ 22-23.

33. In fact, [redacted] after MGC announced plans to build additional facilities in North America for purifying electronics-grade H2O2. [redacted].

34. Additionally, in 2016, [redacted] reached out to [redacted] about a potential opportunity to supply pre-electronics grade H2O2 to an on-site production facility at [redacted]. [redacted]. While the opportunity never

[1] MGC is the largest supplier of electronics grade H2O2 in North America. PX1025 (Evonik) at 009; PX2058 (PeroxyChem) at 014. MGC does not produce H2O2, but rather purchases it from H2O2 producers and further purifies it to produce electronics grade H2O2. Rothman Hrg. Tr. 793:14-794:1; [redacted].

materialized, [redacted] informed [redacted] that [redacted] "[was] very capable of being a feedstock supplier." [redacted]. [redacted] also attempted to supply pre-electronics grade H2O2 to [redacted] in 2016. [redacted].

35. Evonik's own strategic documents acknowledge [redacted]. PX1156 (Evonik) at 010. In contrast, [redacted] *Id.* [redacted] makes up the balance not supplied by [redacted] with the smallest share. *Id.*

36. Further, Evonik acknowledged that PeroxyChem has a product that could meet MGC's needs. [redacted] Hamann (Evonik) Hrg. Tr. 1326:25-1327:17. [redacted] *Id.* at 1327:18-1328:25.

37. Although Nouryon does not currently market pre-electronics grade H2O2, it does not mean that Nouryon could not do so if it so chose. Rothman Hrg. Tr. 788:8-11.

38. Dr. Hill is incorrect when he asserts that it would not be profitable for producers of pre-electronics grade H2O2 to swing to other grades of H2O2 because the average margins of pre-electronics grade H2O2 are higher than that of other grades. *See* Hill Hrg. Tr. 2081:21-2082:17; JX0066 (Hill Rpt.) ¶ 79, Figure 10. Average margins mask a lot of variation. For example, [redacted] of Evonik's sales of [redacted] H2O2 are at a higher margin than Evonik's average margin on [redacted] H2O2. Rothman Hrg. Tr. 791:24-792:10; PX7102 (Rothman Rebuttal

Rpt.) ¶ 40. Similarly, for every 100 units of pre-electronics grade H2O2 that Evonik produces, it sells [redacted] of standard grade H2O2 at a higher margin than its average margin of pre-electronics grade H2O2. Rothman Hrg. Tr. 792:11-19; PX7102 (Rothman Rebuttal Rpt.) ¶ 40.

ii. Other Specialty Grades (Excluding Electronics Grade) Should Be Included in the Relevant Product Market

39. All H2O2 suppliers currently compete in virtually all grades of H2O2, excluding electronics grade. Suter (Solvay) Hrg. Tr. 406:16-407:6, 408:4-7, 434:1-6; Corson (Evonik) Hrg. Tr. at 713:8-714:14; JX0075 (Rothman Rpt.) ¶ 73.

40. Dr. Hill notes that Evonik does not currently sell certain specialty H2O2 grades that PeroxyChem sells in the United States, such as aseptic packaging, "tin-free" formulations, propulsion grade, and EPA approved biocides. Hill Hrg. Tr. 2071:8-2072:3; JX0066 (Hill Rpt.) ¶¶ 42-45. However, the evidence indicates that Evonik should be considered a rapid entrant into those specialty grades.

41. As an initial matter, the majority of H2O2 by volume produced by all suppliers in North America is standard grade. JX0081 (IHS) at 010, 017, 021. [redacted] Dr. Hill admits that [redacted] make a significant amount of standard grade, Hill Hrg. Tr. 2193:21-2194:3, and that standard grade H2O2 is likely a relevant product market. *Id.* at 2103:7-12.

42. Additionally, many of the "specialty" end uses that PeroxyChem points to require standard grade H2O2. PeroxyChem also sells H2O2 to Downhole, for use as a breaker in the fracking process, a customer Defendants promised the Court it would hear from. Defs.' Op. Stmnt. Hrg. Tr. 89:9-90:7. Defense counsel represented that PeroxyChem performs services and techniques to Downhole that "our competitors simply cannot do." *Id.* In fact, Downhole's CEO

testified that Downhole alone came up with an additive pack of chemicals designed to improve the efficacy of H2O2 as a friction-reducing polymer breaker. JX0059 (Cutrer (Downhole) Dep. Tr. 34:18-19; 77:7-10; 77:11-18; 83:9-18; 83:23-84:3). Downhole approached PeroxyChem [redacted]. *Id.* at 36:20-37:12; 38:15-39:3; 62:20-63:2; 77:11-15; 78:24-79:10; 104:5-12. Downhole could "switch to a different [H2O2] provider to mix its breaker product," *id.* at 62:24-63:2. And PeroxyChem brings nothing to the partnership other than blending and packaging services. *Id.* at 72:21-24. Downhole was clear that if PeroxyChem did not exist, many other blenders and H2O2 suppliers could do exactly what PeroxyChem is currently doing. *Id.* at 68:12-18; 96:8-98:1. Indeed, such blenders and suppliers are "a dime-a-dozen." *Id.* at 96:13-17.

43. With respect to aseptic grade H2O2, Evonik could be a rapid entrant in that particular end use. Rothman Hrg. Tr. 794:8-18. Although Evonik does not currently have sales of aseptic grade H2O2 in the United States, it sells aseptic-grade H2O2 in much of the rest of the world. Corson (Evonik) Hrg. Tr. 596:9-14, 597:6-12; Rothman Hrg. Tr. 794:8-18. Indeed, Evonik's aseptic packaging H2O2, OXTERIL, is well-known globally. Corson (Evonik) Hrg. Tr. 596:9-14. Further, Evonik already produces two types of aseptic grade H2O2 (spray and bath formulations) at its Mobile, Alabama plant, and sells those products in Mexico today. *Id.* at 597:7-12; 598:2-4.

44. In December 2018, Evonik conducted a study on aseptic packaging H2O2 in North America. JX0115 (Evonik) at 003-04. According to the study, [redacted]. *Id.* at

031; Corson (Evonik) Hrg. Tr. at 604:25-605:9, 605:17-606:1.

45. [redacted]. Corson (Evonik) Hrg. Tr. at 610:3-9. [redacted]. *Id.* at 608:1-6, 608:20-24; JX0115 (Evonik) at 039-40. [redacted]. Corson (Evonik) Hrg. Tr. 609:18-23; JX0115 (Evonik) at 039.

46. The Evonik executive responsible for the aseptic packaging study concluded that [redacted]. Corson (Evonik) Hrg. Tr. 603:13-16; JX0115 (Evonik) at 040, 042. [redacted]. Corson (Evonik) Hrg. Tr. 706:19-707:7; JX0115 (Evonik) at 042.

47. While Defendants claim that Evonik is unable to produce "tin-free" H2O2, ordinary course documents suggest that if the market opportunity were attractive, [redacted]. PX1522 (Evonik) at 001. Further, [redacted]. Hamann (Evonik) Hrg. Tr. 1300:9-1301:3. Indeed, [redacted]. *See* DX0348 (Evonik) at 001-02 ([redacted]).

48. Further, Dr. Hamann, Evonik's VP of Production and Engineering, testified that [redacted]

[redacted]. Hamann (Evonik) Hrg. Tr. 1298:18-1299:22. [redacted] *Id.* at 1299:25-1300:7.

49. With respect to EPA registered biocides, Evonik already sells H2O2 for environmental applications in the United States via a distributor. Corson (Evonik) Hrg. Tr. 611:2-6. In fact, Evonik testified that [redacted]. *Id.* at 616:1-23; PX1342 (Evonik) at 065. An Evonik executive testified that it would take "a year or so" to get the EPA approval for products that Evonik is already capable of producing. Corson (Evonik) Hrg. Tr. 666:6-17.

50. Other specialty H2O2 applications, where Defendants claim Evonik does not currently serve customers in North America, Defs.' Br. at 11-12, serve niche end markets and account for only a tiny fraction of all H2O2 in North America. Propulsion-grade H2O2 represented less than one [redacted] of the total output ([redacted] out of more than [redacted]) of PeroxyChem's Bayport plant in 2018. PX2497 (PeroxyChem) at 003; Lerner (PeroxyChem) Hrg. 1409:1-11; *see also* Kramer (PeroxyChem) Hrg. Tr. 1678:13-25 (propulsion grade is "a very small percentage of [PeroxyChem's] overall production"). Similarly, H2O2 used for sterilization represents only a fraction of all H2O2 and accounted for about [redacted] of Bayport's revenues in 2018. *See* [redacted]; PX2497 (PeroxyChem) at 003 (Bayport revenues were

approximately [redacted] million in 2018). Even if these niche uses were to grow, Evonik's Marketing Manager for North America testified that the company will typically conduct a market study and consider entering any markets it sees growing. Corson (Evonik) Hrg. Tr. 623:7-13.

51. The record is clear that [redacted], like all suppliers, is making an effort to diversify from pulp and paper applications into a variety of growing standard grade and specialty end uses. [redacted] recently began selling to customers in new end-use applications, such as oil and gas, [redacted]. [redacted] has also begun marketing to mining customers and customers in other end uses. [redacted]

52. [redacted] admitted that developing new products and entering new markets "is definitely a big part of competition." [redacted]

D. The Sale of Electronics Grade H2O2 Should Not Be Included in the Same Market as Other Grades of H2O2

53. The sale of electronics grade H2O2 to semiconductor manufacturers should not be included in the same market as other formulations of H2O2. Rothman Hrg. Tr. 736:13-24; JX0075 (Rothman Rpt.) ¶¶ 79-81.

54. In contrast to other formulations, electronics grade H2O2 is produced by a different set of suppliers. Rothman Hrg. Tr. 737:15-21. The leading producer of electronics grade H2O2 is MGC. PX1025 (Evonik) at 009 (characterizing MGC as [redacted]); PX2058 (PeroxyChem) at 014 (MGC has [redacted] market share in electronics). The only other producers of electronics grade H2O2 are PeroxyChem, Solvay, and Honeywell. [redacted]; PX1025 (Evonik) at 008; PX2358 (PeroxyChem) at 021; PX2106 (PeroxyChem) at 003.

55. Evonik, Arkema, and Nouryon do not produce electronics grade H2O2, nor do they have the capability to do so. [redacted]; PX1025 (Evonik) at 008; Myrick (Arkema)

Hrg. Tr. 468:9-15; Radlinksi (Nouryon) Hrg. Tr. 542:14-543:8, 544:21-24; JX0075 (Rothman Rpt.) ¶ 79. [redacted] producing electronics grade H2O2 years ago, but concluded that it would not be feasible due to "significant patent protection," complexity, and cost. [redacted] ("[W]e decided – this was very complicated, costly, and so we decided not to pursue this further."); *see also* [redacted].

56. Electronics grade H2O2 is different from other formulations of H2O2. Semiconductor manufacturers have lower tolerances for impurities than other H2O2 customers, often not to exceed 1 part per trillion. [redacted]; JX0020 (Lerner (PeroxyChem) IH Tr. 32:22-33:8); JX0075 (Rothman Rpt.) ¶ 80.

57. Producing electronics grade H2O2 requires complex purification procedures that are highly confidential and proprietary to each supplier. *See, e.g.*, [redacted]; JX0020 (Lerner (PeroxyChem) IH Tr. 34:1-35:3). Producers of electronics grade H2O2 must use different equipment and purification techniques than other grades of H2O2. [redacted]; PX1232 (Evonik) at 002-004. This is in stark contrast to pre-electronics grade H2O2, which uses the exact same equipment as all other specialty grades. [redacted]. [redacted] testified that H2O2 is purified into rectified product, which is then used to make specialty grades of H2O2, along with pre-electronics grade. [redacted].

58. Customers of electronics grade H2O2 must also undergo a rigorous approval process. JX0020 (Lerner (PeroxyChem) IH Tr. 119:25-120:15). PeroxyChem's CEO, Mr. Lerner, testified that "[t]he approval process of electronics clients is much more rigorous than any other grade of any other client." JX0020 (Lerner (PeroxyChem) IH Tr. 119:25-120:15).

59. Unlike other types of H2O2, electronics grade H2O2 is frequently produced at separate facilities. PeroxyChem's Saratoga Springs, New York plant receives pre-electronics H2O2 from Bayport, which it further purifies into electronics grade H2O2 for its nearby customer. JX0020 (Lerner (PeroxyChem) IH Tr. 27:16-25). MGC's facilities in Mesa, Arizona; Killeen, Texas; and Forest Grove, Oregon process pre-electronics grade H2O2 into electronics grade H2O2. JX0001 (MGC Decl.) ¶ 4. MGC is not capable of manufacturing H2O2 or any other grades of H2O2. JX0001 (MGC Decl.) ¶ 4; JX0075 (Rothman Rpt.) ¶ 81.

III. THE SOUTHERN AND CENTRAL UNITED STATES AND THE PACIFIC NORTHWEST ARE RELEVANT GEOGRAPHIC MARKETS

A. Regional Geographic Markets Are Appropriate

60. **H2O2 is delivered to customers' locations.** Suppliers ship H2O2 by either truck or rail car. Dumas (PeroxyChem) Hrg. Tr. 227:4-12. Given the expense of shipping H2O2 by truck, suppliers often ship H2O2 via rail to terminals, and the repackage the product into smaller quantities. Maeder (Verso) Hrg. Tr. 146:5-23; Niessner (GPI) Hrg. Tr. 1011:12-23.

61. **H2O2 is shipped diluted with water, which makes shipping expensive relative to the value of the product.** As Nouryon's General Manager explained, "[o]ne of the major issues when selling [H2O2] is the freight cost to deliver [H2O2] to a customer. Since it's diluted with water that can – freight can dramatically affect the price of the product and your competitiveness." Radlinksi (Nouryon) Hrg. Tr. 541:7-13. Customers understand that it is "cost prohibitive to ship [H2O2] all that way across the country" given the high water content, and thus do not solicit bids from distant suppliers. Anderson (Canfor) Hrg. Tr. 199:17-200:4.

62. **H2O2 suppliers offer individually negotiated pricing to customers.** H2O2 producers individually negotiate prices with customers and prices can differ based on customer locations. Dumas (PeroxyChem) Hrg. Tr. 227:4-19; Maeder (Verso) Hrg. Tr. 146:24-147:1; JX0041

(Shirley (IP) Dep. Tr. 109:24-110:6). Given the high water content of H2O2, greater shipping distances add greater freight costs, which, in turn, affect the customer's delivered pricing for H2O2. Dumas (PeroxyChem) Hrg. Tr. 227:4-19; Myrick (Arkema) Hrg. Tr. 476:18-21.

63. One customer explained, "logistics costs can become a large component of the overall delivered price that we receive." JX0033 (Maeder (Verso) Dep. Tr. 106:3-6). Other market participants universally confirm the importance of freight and logistics costs in the customers' ultimate price for H2O2. *See* Anderson (Canfor) Hrg. Tr. 199:17-200:4; Corson (Evonik) Hrg. Tr. 651:22-652:4; Hamann (Evonik) Hrg. Tr. 1236:2-6; [redacted]; Engram (USP) Hrg. Tr. 332:11-14.

64. **H2O2 producers prefer to serve customers close to their plants.** Arkema prefers to serve customers located near Arkema's H2O2 plants in Memphis, Tennessee and Becancour, Quebec. Myrick (Arkema) Hrg. Tr. 476:18-21, 503:13-504:3. Likewise, Evonik targets customers with "the right locations," meaning customers closer to Evonik's plants. Corson (Evonik) Hrg. Tr. 651:22-652:4. Ms. Montag, PeroxyChem's Global Business Director, testified that customer location is a factor in determining a response to a Request for Proposal ("RFP"), as is the proximity of a competitor's supply location to a customer's receiving location. Montag (PeroxyChem) Hrg. Tr. 1539:15-25. Customers, in turn, recognize that geographic proximity to a supplier's plant can be advantageous. [redacted].

65. **H2O2 plant locations are important.** Plant locations are important both with respect to the price (given the importance of transportation costs) and security of supply (with additional plants providing additional supply options). H2O2 plants experience both planned and unplanned outages, and customers value a supplier that is able to guarantee consistent service in order to minimize disruptions to the customer's operations. *See, e.g.*, Maeder (Verso) Hrg. Tr. 143:6-8,

143:15-144:10; Anderson (Canfor) Hrg. Tr. 198:4-199:14; [redacted].

66. **Customers could not defeat a price increase by purchasing indirectly from or through other customers.** Due to the high cost of H2O2 delivery, customers within a region would not travel outside of it to procure H2O2. GPI would not consider purchasing H2O2 at a terminal and transporting it back to its own facility. Niessner (GPI) Hrg. Tr. 1011:24-1012:8.

67. **H2O2 producers recognize regional markets.** Ordinary course documents and testimony from Defendants' executives show that suppliers view the North American H2O2 markets as regional. *See, e.g.*, PX2058 (PeroxyChem) at 057; JX0020 (Lerner (PeroxyChem) IH Tr. 96:2-101:5). For example, PeroxyChem's CEO testified that there are "roughly, four regions that would encompass some local supply point freight logical . . . meaning reasonable equivalent logistics to those market spaces." JX0020 (Lerner (PeroxyChem) IH Tr. 96:21-97:1. Furthermore, [redacted] "competition for the sale of H2O2 varies significantly by customer location." [redacted]

68. **Different H2O2 producers serve different regions.** As one PeroxyChem presentation describing "Regional Supply Dynamics" illustrates, different H2O2 producers supply distinct regions within North America. PX2058 (PeroxyChem) at 057. All five suppliers serve the Southern and Central United States, while Evonik, PeroxyChem, and Solvay are the dominant suppliers in the Pacific Northwest. *See infra* Section IV; JX0075 (Rothman Rpt.) ¶ 95; Costanzo (Evonik) Hrg. Tr. 1158:17-1162:7.

69. Both Dr. Rothman and Dr. Hill agree that in theory, markets could be defined around individual customers. Rothman Hrg. Tr. 738:8-19; Hill Hrg. Tr. 2087:12-16; JX0075 (Rothman Rpt.) ¶¶ 84, 86. However, it is appropriate to group customers together if customers in a given area face largely the same competitive conditions. Rothman Hrg. Tr. 738:8-19; JX0075

(Rothman Rpt.) ¶ 86.

70. Dr. Rothman also described how if a customer only had one supplier, a geographic market defined around that customer location would generate a market share of 100%, even if other suppliers had actually bid. Rothman Hrg. Tr. 940:4-941:1 Thus, it is not just analytically convenient, but critical to generating the best measure of competitive significance and illumination of competitive effects, that we aggregate customers who face similar competitive conditions. Rothman Hrg. Tr. 941:2-8, 947:5-21, 997:25-998:8. Focusing too narrowly would lead to very noisy estimates, while broadening too much can create the illusion of harm where it otherwise does not exist. *See id.* at 947:5-21.

71. As such, Dr. Rothman has defined two relevant geographic markets, the Southern and Central United States and the Pacific Northwest. Rothman Hrg. Tr. 737:22-738:2; JX0075 (Rothman Rpt.) ¶¶ 87, 98. Dr. Hill admits that these two geographic markets likely pass the HMT, Hill Hrg. Tr. 2086:6-9, although he has not performed the HMT on any geographic markets in which Defendants propose that the Court should analyze the competitive effects of the Acquisition. *Id.* at 2101:19-2013:2.

B. The Sale of H2O2 to Customers in the Southern and Central United States Is a Relevant Geographic Market

72. Dr. Rothman analyzed the Acquisition's probable effect on competition for the sale of H2O2 to customers within the following states: Alabama, Arkansas, Arizona, California, Colorado, the District of Columbia, Delaware, Florida, Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maryland, Michigan, Minnesota, Missouri, Mississippi, North Carolina, North Dakota, Nebraska, New Mexico, Nevada, Ohio, Oklahoma, South Carolina, South Dakota, Tennessee, Texas, Utah, Virginia, Wisconsin, and West Virginia. JX0075 (Rothman Rpt.) ¶ 87; Rothman Hrg. Tr. 738:23-739:17. These states comprise the relevant geographic market referred

to as "the Southern and Central United States."

73. A hypothetical monopolist of H2O2 sold to customers that are located in these states likely would impose at least a SSNIP. Rothman Hrg. Tr. 741:7-25; JX0075 (Rothman Rpt.) ¶¶ 92-93. Dr. Hill agrees that a hypothetical monopolist in the Southern and Central United States would be able to implement significant price increases. Hill Hrg. Tr. 2194:20-2195:20.

74. PeroxyChem's ordinary course business documents confirm that the Southern and Central United States is a nexus of competition among H2O2 producers with plants in the south. Rothman Hrg. Tr. 739:18-741:6. A PeroxyChem strategic presentation slide titled "Regional Supply Dynamics" shows a map of North America with four ovals superimposed on the map representing four areas in which to analyze the balance between supply and demand. PX2058 (PeroxyChem) at 057. One oval covers the Southeast, Mid-Continent, Mid-Atlantic, and the Southwest United States. PX2058 (PeroxyChem) at 057. Mr. Lerner, PeroxyChem's CEO, testified that this oval should also cover the West Coast of the United States. JX0020 (Lerner (PeroxyChem) IH Tr. 97:14-98:13); *see also* Lerner (PeroxyChem) Hrg. Tr. 1458:19-1459:21 (testifying that PeroxyChem's Bayport, Texas facility is freight-logical to both California and Delaware). This oval roughly corresponds to the Southern and Central United States region that Dr. Rothman has defined as a relevant geographic market. JX0075 (Rothman Rpt.) ¶ 90.

75. An Evonik strategic presentation from 2019 also supports Dr. Rothman's geographic market definition. JX0129 (Evonik) at 018-22. In this presentation, Evonik prepared maps identifying which Evonik or competitor plants supply individual H2O2 customer locations in the United States or Canada. *Id*. The map shows PeroxyChem serving customers in California and Nevada out of its Bayport, Texas plant instead of its plant in Prince George, BC. JX0129 (Evonik) at 021; *see also* Hill Hrg. Tr. 2172:4-15 (acknowledging that PeroxyChem's Bayport

plant serves customers in a variety of locations across the Southern and Central United States). Similarly, the Evonik presentation shows Solvay serving customers in California and Nevada out of its Deer Park, Texas plant rather than its Longview, Washington plant. JX0129 (Evonik) at 019. This presentation also shows that customers in Virginia, North Carolina and other locations in the southeast purchase primarily from the same plants. JX0129 (Evonik) at 018-022.

76. Customers in the Southern and Central United States receive shipments primarily from one of the five H2O2 plants in the south—Evonik's Mobile plant, PeroxyChem's Bayport plant, Solvay's Deer Park plant, Arkema's Memphis plant, and Nouryon's Columbus plant. JX0075 (Rothman Rpt.) ¶ 95. In total, [redacted] of the H2O2 volume purchased in the Southern and Central United States is from Evonik's, PeroxyChem's, Solvay's, Arkema's, or Nouryon's southern plants. JX0075 (Rothman Rpt.) ¶ 95.

77. Additionally, Dr. Rothman conducted sensitivity analyses to test whether measures of market share are materially different for narrower groupings of customers in the Southern and Central United States, including for customers in the Southern United States (Alabama, Arkansas, the District of Columbia, Delaware, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, and West Virginia), the Central United States (Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, North Dakota, Nebraska, Ohio, South Dakota, and Wisconsin), and the Western United States (Arizona, California, Colorado, New Mexico, Nevada, and Utah). JX0075 (Rothman Rpt.) ¶ 96. This sensitivity analysis confirms that customers in these regions face largely the same competitive conditions. Rothman Hrg. Tr. 977:9-13; JX0075 (Rothman Rpt.) ¶ 96, Exh. 2-3. Importantly, Evonik and PeroxyChem compete to supply customers in each of the narrower regions, so grouping customers throughout the Southern and Central United States does not

create an illusion of competition. Rothman Hrg. Tr. 797:6-798:11; 981:13-19.

C. The Sale of H2O2 to Customers in the Pacific Northwest Is a Relevant Geographic Market

78. The second geographic market that Dr. Rothman defined is the Pacific Northwest, which includes customers located in Idaho, Oregon, Montana, Washington, and Wyoming in the United States and Alberta, British Columbia, Manitoba, and Saskatchewan in Canada. Rothman Hrg. Tr. 742:8-22; JX0075 (Rothman Rpt.) ¶ 98.

79. A hypothetical monopolist of H2O2 sold to customers in the Pacific Northwest likely would impose at least a SSNIP. Rothman Hrg. Tr. 743:6-18; JX0075 (Rothman Rpt.) ¶ 100.

80. Dr. Rothman's definition of the Pacific Northwest as a relevant geographic market is consistent with how market participants view competition. The same PeroxyChem strategic presentation identifying "Regional Supply Dynamics" also includes an oval covering the Pacific Northwest and some of the central and western provinces of Canada in an area roughly analogous to Dr. Rothman's Pacific Northwest region. PX2058 (PeroxyChem) at 057. Mr. Lerner confirmed that the oval representing the Pacific Northwest includes states in the U.S. Pacific Northwest as well as provinces in Central and Western Canada. JX0020 (Lerner (PeroxyChem) IH Tr. 97:14-98:13).

81. Customers in the Pacific Northwest purchase almost exclusively from one of the three suppliers that have plants in the Pacific Northwest—Evonik, PeroxyChem, and Solvay—and receive shipments predominantly from these suppliers' plants in the Pacific Northwest. JX0075 (Rothman Rpt.) ¶ 102. In total, [redacted] of the H2O2 volume purchased in the Pacific Northwest comes from Pacific Northwest plants. JX0075 (Rothman Rpt.) ¶ 102.

82. [redacted] testified that [redacted] primarily serves customers in the Pacific Northwest from its plant in [redacted]

[redacted]; *see also* [redacted]. Likewise, Ms. Montag indicated that PeroxyChem [redacted]. PX2113 (PeroxyChem) at 001. Customers confirm that the competitive conditions in the Pacific Northwest are distinct. *See, e.g.*, [redacted] (noting that [redacted] pays higher prices in Eastern Canada with only two supply options when compared with Western Canada, where there are three suppliers).

IV. MARKET PARTICIPANTS

A. H2O2 Suppliers

83. Evonik operates three plants that manufacture H2O2 in North America, located in Mobile, Alabama; Gibbons, Alberta; and Maitland, Ontario. JX0132 (Evonik) at 006. The Mobile and Gibbons plants have annual nameplate capacities of [redacted] million pounds apiece and the Maitland plant has an annual nameplate capacity of [redacted] million pounds. *Id.* Evonik produces H2O2 for approximately all end uses except electronics grade in North America. *Id.* at 015.

84. PeroxyChem operates two H2O2 production plants in North America, located in Bayport, Texas and Prince George, British Columbia. PX2361 (PeroxyChem) at 032. The Bayport plant has an annual nameplate capacity of [redacted] million pounds and the Prince George plant has an annual nameplate capacity of [redacted] million pounds per year. *Id*. PeroxyChem produces H2O2 for virtually all end uses in North America, including electronics grade. *Id.*

85. In addition to Evonik and PeroxyChem, there are only three other producers of H2O2 in North America: Arkema, Solvay, and Nouryon.

i. Arkema

86. Headquartered in France, Arkema's 2018 total global revenues were €8.8 billion. PX9050

(Arkema) at 005, 038. In 2018, Arkema's North American revenues for H2O2 were approximately [redacted]. JX0151 (Arkema) at 018.

87. Arkema operates two H2O2 plants in North America, located in Memphis, Tennessee, and Becancour, Quebec. Myrick (Arkema) Hrg. Tr. 474:4-9; JX0005 (Arkema Decl.) ¶ 4. The annual nameplate capacities of the two plants are approximately [redacted] metric tons each. JX0005 (Arkema Decl.) ¶ 4.

88. Arkema produces H2O2 for substantially all end uses except electronics grade in North America. JX0028 (Hamann (Evonik) IH Tr. 64:25-65:11).

ii. Solvay

89. Headquartered in Brussels, Belgium, Solvay has annual revenues of €10.3 billion. PX9053 (Solvay) at 171, 280.

90. Solvay operates two H2O2 production plants in North America, located in Deer Park, Texas and Longview, Washington. Suter (Solvay) Hrg. Tr. 404:17-20. The Deer Park plant has a nameplate capacity of approximately [redacted] metric tons and the Longview plant has nameplate capacity of approximately [redacted]. Suter (Solvay) Hrg. Tr. 416:417:3.

91. Solvay produces H2O2 for substantially all end uses in North America, including electronics grade. Suter (Solvay) Hrg. Tr. 405:12-20.

iii. Nouryon

92. Formerly the Specialty Chemicals Group of AkzoNobel, Nouryon is headquartered in Amsterdam, Netherlands. JX0009 (Nouryon Decl.) ¶ 2. In 2017, Nouryon's revenues were approximately €5 billion. PX9052 (Nouryon) at 001; JX0009 (Nouryon Decl.) ¶ 2.

93. Nouryon operates one H2O2 plant in North America, located in Columbus, Mississippi, with an annual nameplate capacity of approximately [redacted] metric tons per year. JX0009 (Nouryon Decl.) ¶ 4.

94. Nouryon produces H2O2 for substantially all end uses in North America, except electronics grade. Radlinski (Nouryon) Hrg. Tr. 538:16-539:15, 540:16-25.

B. Evonik, PeroxyChem, Solvay, Arkema, and Nouryon Compete in the Southern and Central United States

95. There are five major firms supplying H2O2 in the Southern and Central United States: Evonik, PeroxyChem, Solvay, Arkema, and Nouryon. Rothman Hrg. Tr. 38:2-17; Myrick (Arkema) Hrg. Tr. 470:15-20; *see also* JX0081 (IHS) at 007.

96. About [redacted] of the H2O2 sold by Arkema in the United States supplies customers located east of or bordering the Mississippi River. JX0005 (Arkema Decl.) ¶ 11. However, Arkema also has customers in California and Arizona, Myrick (Arkema) Hrg. Tr. 475:1-6, and other states as far north as Minnesota and North Dakota. *See* PX7102 (Rothman Rebuttal Rpt.) Exh. 2, Exh. 4-3; [redacted].

97. Solvay's Deer Park facility serves customers throughout the Southern and Central United States, including customers in California, Nevada, Wisconsin, Illinois, Georgia and the Carolinas. JX0129 (Evonik) at 019.

98. Most of [redacted] customers are located in the southeastern United States or along the Gulf Coast. [redacted]; PX1342 (Evonik) at 076 (describing [redacted]). However, [redacted] also supplies customers outside of the southeastern United States in states including Utah, Minnesota, and Wisconsin. *See* PX7102 (Rothman Rebuttal Rpt.) Ex. 2, Ex. 4-4; [redacted] JX0083 (Evonik) at 021.

C. Only Evonik, PeroxyChem, and Solvay Compete in the Pacific Northwest

99. There are three firms supplying H2O2 in the Pacific Northwest: Evonik, PeroxyChem, and Solvay. Rothman Hrg. Tr. 742:8-22; Anderson (Canfor) Hrg. Tr. 194:17-195:10 (Canfor did

not solicit bids from Arkema or Nouryon because the plant locations of these firms are too distant from Canfor's British Columbia plants).

100. Due to the location of Arkema's plants, Arkema has no major direct customers in the Pacific Northwest, but may have minimal sales into the region via distributors. Myrick (Arkema) Hrg. Tr. 475:7-13, 476:6-17; [redacted].

101. Nouryon does not solicit customers in the Pacific Northwest because these customers are too far away from Nouryon's single plant in Columbus, Mississippi. [redacted]; *see also* Radlinski (Nouryon) Hrg. Tr. 541:7-13.

102. From 2016 to 2018, customers located in the Pacific Northwest purchased [redacted] of their H2O2 volume from Evonik's Gibbons plant, [redacted] from PeroxyChem's Prince George plant, and [redacted] from Solvay's Longview plant. JX0075 (Rothman Rpt.) ¶ 102.

V. THE ACQUISITION IS PRESUMPTIVELY UNLAWFUL

103. Dr. Rothman calculated market shares using supplier's sales (in dollars). JX0075 (Rothman Rpt.) ¶ 110. Using these market shares, Dr. Rothman calculated HHIs for non-electronics grade H2O2 in the Southern and Central United States and the Pacific Northwest. JX0075 (Rothman Rpt.) § V. Dr. Rothman's calculations demonstrate that the Acquisition is presumptively unlawful for non-electronics grade H2O2 in both the Southern and Central United States and the Pacific Northwest.

104. As a robustness check, Dr. Rothman also calculated HHIs for various alternate markets: (1) a product market consisting of only standard grade H2O2; (2) standard and specialty H2O2 excluding pre-electronics grade; (3) separate geographic markets for the Southern United States, Central United States, and Western United States; and (4) the United States and North America as a whole. JX0075 (Rothman Rpt.) ¶¶ 112-13; PX7102 (Rothman Rebuttal Rpt.) ¶¶ 23-24. The results of each of these calculations satisfy the thresholds set forth in the *Guidelines* by which the

Acquisition is presumptively unlawful.

105. The market shares used in Dr. Rothman's HHI analysis are consistent with those found in ordinary course documents. An Evonik presentation prepared in 2018 shows that Evonik had the largest market share in North America, based on production capacity, in a highly concentrated market. JX0132 (Evonik) at 006. A Solvay document shows similar market shares (based on capacity) in North America with Evonik, the industry leader, at [redacted] and PeroxyChem at [redacted]. JX0140 (Solvay) at 012.

106. Evonik also acknowledged that the Acquisition offers [redacted] opportunities. PX1321 (Evonik) at 008.

A. The Acquisition is Presumptively Unlawful in the Southern and Central United States

107. In the Southern and Central United States, Evonik's share of non-electronics H2O2 is [redacted] and PeroxyChem's share is [redacted]; the pre-merger HHI is 2,258. JX0075 (Rothman Rpt.) ¶ 111. Post-Acquisition, the combined firm would have a 49% share of sales of non-electronics H2O2 in the Southern and Central United States. Post-Acquisition, the HHI will be 3,335, an increase of 1,077. *Id.* ¶ 116. The Acquisition is presumptively illegal and likely to enhance market power in the sale of non-electronics grade H2O2 in the Southern and Central United States as the post-Acquisition HHI and change in HHI far exceed the thresholds outlined in the *Guidelines.* Rothman Hrg. Tr. 746:4-18.

108. Dr. Rothman conducted sensitivity tests that confirm that the Acquisition is also presumptively unlawful in the Southern and Central United States. Rothman Hrg. Tr. 800:25-802:16; JX0075 (Rothman Rpt.) ¶ 118. If the product market were to exclude pre-electronics grade, as Defendants suggest, the post-Acquisition HHI would be 3,188 with a change in HHI of 1,019, far in excess of the thresholds outlined in the *Guidelines*. PX7102 (Rothman Rebuttal

Rpt.) ¶ 24. If the product market were to include only standard grade H2O2, the post-Acquisition HHI would be 3,056 with an increase of 788, again far in excess of the thresholds outlined in the *Guidelines*. Rothman Hrg. Tr. 800:25-801:14; JX0075 (Rothman Rpt.) ¶ 118.

109. Dr. Rothman conducted additional sensitivity checks using alternate geographic markets defined separately as the Southern United States, Central United States, and Western United States. Rothman Hrg. Tr. 800:25-802:16; JX0075 (Rothman Rpt.) ¶ 118. In the Southern United States, the post-Acquisition HHI would be 3,153 with an increase of 967; in the Central United States, the post-Acquisition HHI would be 3,424 with an increase of 1,104; and in the Western United States, the post-Acquisition HHI would be 4,145 with a change in HHI of 1,317. Rothman Hrg. Tr. 799:7-19; JX0075 (Rothman Rpt.) Exh. 2-3. The Acquisition is also presumptively anticompetitive in the Southern, Central, and Western United States even if excluding pre-electronics grade H2O2. PX7102 (Rothman Rebuttal Rpt.) ¶ 48.

B. <u>The Acquisition is Presumptively Unlawful in the Pacific Northwest</u>

110. In the Pacific Northwest, Evonik's share of non-electronics H2O2 is [redacted] and PeroxyChem's share is [redacted]; the pre-Acquisition HHI is 3,344. JX0075 (Rothman Rpt.) ¶ 111. Post-Acquisition, the combined firm would have a [redacted] market share of sales of non-electronics H2O2 in the Pacific Northwest. Post-Acquisition, the HHI will be 4,918, an increase of 1,573. JX0075 (Rothman Rpt.) ¶ 117. The Acquisition is presumptively illegal and likely to enhance market power in the non-electronics H2O2 market in the Pacific Northwest as the post-Acquisition HHI and change in HHI far exceed the thresholds outlined in the *Guidelines.* Rothman Hrg. Tr. 746:11-18.

111. The Acquisition is also presumptively unlawful in the Pacific Northwest using alternate product markets as a robustness check. If the product market were to exclude pre-electronics

grade, as defendants suggest, the post-Acquisition HHI would remain exactly the same (4,918 with a change in HHI of 1,573) since there are no sales of pre-electronics H2O2 in the Pacific Northwest. PX7102 (Rothman Rebuttal Rpt.) ¶ 24. If the product market were to include only standard grade H2O2, it would result in, a post-Acquisition HHI of 4,918 and an increase of 1,539, exceeding the thresholds outlined in the *Guidelines*. JX0075 (Rothman Rpt.) ¶ 118; Rothman Hrg. Tr. 801:18-802:10.

VI. THE ACQUISITION INCREASES THE RISK OF COORDINATION

112. Coordinated interaction is one means by which the Acquisition likely lessens competition substantially. Rothman Hrg. Tr. 760:15-24. A merger is likely to increase the risk of coordinated interaction if three conditions are met: (1) the merger significantly increases concentration in a concentrated market; (2) the market is vulnerable to coordination; and (3) the merger enhances that vulnerability. *Id.* at 747:20-748:6; *see also* Guidelines § 7.2. The markets for non-electronics H2O2 in the Southern and Central United States and in the Pacific Northwest exhibit these characteristics. Rothman Hrg. Tr. 749:4-7.

A. The Markets for H2O2 Are Vulnerable to Coordination

i. The Quantities of H2O2 that Customers Purchase Are Not Very Sensitive to Changes in Price

113. Customers require H2O2 to produce their end-use products and are therefore unable to switch to another product, or reduce the amount of H2O2 used, in response to a price increase. Anderson (Canfor) Hrg. Tr. 191:20-192:6; [redacted] Engram (USP) Hrg. Tr. 329:11-14; JX0056 (Goodchild (CHS) Dep. Tr. 111:4-20); JX0037 (Senechal (Resolute) Dep. Tr. 84:2-85:08); *see also supra* Section II.

114. Overall, industry demand for H2O2 generally remains stable from year to year. *See* [redacted]; [redacted]; [redacted]

[redacted].

115. Elasticity of demand is an economics term that describes the responsiveness of unit sales to changes in price. JX0075 (Rothman Rpt.) ¶ 63. Because the quantities of H2O2 that customers purchase are not very sensitive to changes in price, Dr. Rothman describes H2O2 as having a low elasticity of demand. *Id.* ¶¶ 68-69.

116. Because the demand for H2O2 is not sensitive to fluctuations in price, H2O2 suppliers are largely competing for a "fixed pie" of sales. Rothman Hrg. Tr. 749:13-35. When suppliers compete for a fixed pie of sales, the "potential gains from avoiding aggressive competition for slices of the pie can be – can tend to be high." *Id*. at 749:13-25.

117. Dr. Hill did not calculate demand elasticity for any product in which to assess the competitive effect of the Acquisition, yet he acknowledges that the H2O2 market has features that tend to lead to lower elasticity of demand, which would tend to make a market more vulnerable to coordination. Hill Hrg. Tr. 2123:23-2124:11.

ii. H2O2 Products Are Largely Undifferentiated

118. Firms are better able to observe aggressive competition and respond to aggressive competition when their product offerings are similar. Rothman Hrg. Tr. 750:22-751:7. As many market participants testified, within any given end-use for H2O2, the product offerings of the five H2O2 suppliers are largely undifferentiated. [redacted] (distributor selling across end uses); Niessner (GPI) Hrg. Tr. 1010:4-17 (pulp and paper customer); JX0033 (Maeder (Verso) Dep. Tr. 21:8-21:16) (pulp and paper customer); [redacted] (food customer). While H2O2 is sold in different grades and concentrations, H2O2 is homogenous within each grade. Suter (Solvay) Hrg. Tr. 408:19-409:21; JX0023 (Montag (PeroxyChem) IH Tr. 114:8-115:14). Customers generally do

not have to qualify H2O2 suppliers. [redacted]

119. Because H2O2 does not differ among suppliers, customers store H2O2 from different suppliers in the same storage tank. [redacted]. Further, customers incur minimal costs in switching from one supplier to another. [redacted] ("no, there would not be any costs associated [with switching suppliers] other than just the minor paperwork that's required to set up a new supplier at a new location."); JX0037 (Senechal (Resolute) Dep. Tr. 84:22-85:8); [redacted]. When Evonik did not have H2O2 available to serve [redacted] was able to use product obtained from PeroxyChem and Solvay. [redacted].

120. H2O2 suppliers acknowledge that H2O2 is an undifferentiated commodity. [redacted] testified that [redacted] the industry still runs on "old school commodity" values. [redacted] ("The space continues to run on old school commodity supply/demand and market share grab dynamics."). [redacted], in an email to the Canadian government, acknowledged that H2O2 "is a commodity product which in turn means we compete on price." [redacted].

iii. The H2O2 Market is Highly Transparent and Suppliers Closely Monitor Their Competitor's Behavior

121. H2O2 suppliers can and do monitor each other's behavior closely, which contributes to firms' ability to maintain discipline through deterrence. Rothman Hrg. Tr. 753:2-11.

122. **H2O2 suppliers maintain detailed information on customers, competitors, and bid**

[2] [redacted] *see also* [redacted].

events. Evonik maintains multiple databases tracking [redacted] Corson (Evonik) Hrg. Tr. 617:4-16, 622:10-15, 626:13-627:5; Costanzo (Evonik) Hrg. Tr. 1157:7-1158:16; JX0111 (Evonik) at 001-020; JX0083 (Evonik) at 017-21, 065-118; PX1003 (Evonik) at 001-02.

123. Evonik also tracks the competitive activity of its rivals, including which customer accounts they won or lost, which supplier they competed against, and available volume. Corson (Evonik) Hrg. Tr. 617:4-16, 622:10-15, 626:13-627:5; Costanzo (Evonik) Hrg. Tr. 1157:7-1158:16, 1162:8-21; JX0111 (Evonik) at 001-020; JX0083 (Evonik) at 017-21, 065-118; PX1003 (Evonik) at 001-02.

124. In ordinary course documents, PeroxyChem also tracks demand trends, price trends, customer contract timing, and whether customers have switched suppliers. PX2330 (PeroxyChem) at 006-07; JX0102 (PeroxyChem) at 003.

125. The other H2O2 producers also track competition. For example, [redacted] keeps a working file that tracks each supplier's share and volume at each customer location. [redacted]. [redacted] testified that they draw on an array of sources to gather details about which of their competitors participate in bidding events. [redacted].

126. **H2O2 suppliers know their competitors' production capacity.** Evonik estimates the total H2O2 capacity of its competitors alongside the demand for H2O2 in North America. Costanzo (Evonik) Hrg. Tr. 1162:22-1163:12. PeroxyChem tracks its competitors' capacity, including any plans to expand. PX2188 (PeroxyChem) at 007; PX2194 (PeroxyChem) at 007; PX2059 (PeroxyChem) at 003.

127. **H2O2 suppliers know their competitors' production costs.** The major production costs in producing H2O2 are natural gas and electricity. JX0028 (Hamann (Evonik) IH Tr. 138:19-139:10). Producers can therefore estimate their competitors' costs based on the local rates prevailing at the location of competitor plants. *Id.* [redacted] testified that [redacted] is able to estimate total cash costs, including variable costs, at each H2O2 plant in North America based on publicly available information (about the cost of natural gas and electricity) and [redacted] own professional knowledge about the H2O2 industry. [redacted]; *see also* [redacted].

128. PeroxyChem's documents indicate that PeroxyChem also estimates production costs of its competitors. PX2344 (PeroxyChem) at 011-17; PX2084 (PeroxyChem) at 001.

129. **The RFP process provides H2O2 suppliers with market intelligence.** H2O2 producers learn the volumes each customer requires when that customer issues their RFP or otherwise solicits bids for their business. JX0018 (Kulp (Evonik) IH Tr. 65:18-22); PX1075 (Evonik) at 004-05; [redacted] ([redacted], which was sent to all five North American H2O2 suppliers, showed projected annual 2020 volume for [redacted]); JX0019 (Bowen (PeroxyChem) IH Tr. 215:13-25); JX0026 (Dumas (PeroxyChem) IH Tr. 93:6-19). Through the bid process, producers also learn customer locations, delivery requirements, and a rough estimate of the pricing sought. JX0018 (Kulp (Evonik) IH Tr. 92:15-95:21). Following the bid process, customers may tell bidders which H2O2 suppliers submitted bids and which supplier ultimately won the business. JX0025 (Willis (PeroxyChem) IH Tr. 165-15-167:19); [redacted]; JX0034 (Kyte (Evonik) Dep. Tr. 117:11-18, 119:16-22).

130. **Customers provide suppliers with market intelligence.** Evonik populates its databases

with information learned from customers. JX0027 (Costanzo (Evonik) IH Tr. 74:17-75:3); JX0050 (Corson (Evonik) Dep. Tr. 112:9-113:4). PeroxyChem similarly learns competitive intelligence from its customers. JX0099 (PeroxyChem) at 002. Customers will frequently tell H2O2 suppliers when they have received a lower bid from one of their competitors. [redacted]. While [redacted] will not share the exact bid they received from another competitor, they will indicate whether a supplier's pricing is competitive or not. [redacted]. While IP will not provide its suppliers with the exact prices of their competitors, they will use the terms "green light," "yellow light," and "red light" to communicate whether pricing is acceptable, close to acceptable, or unacceptable, respectively. Shirley (IP) Hrg. Tr. 1923:22-1924:25.

131. **Distributors provide suppliers with market intelligence.** Distributors regularly communicate with H2O2 suppliers regarding which other suppliers have bid for third-party business and the specific prices quoted. Dumas (PeroxyChem) Hrg. Tr. 269:18-270:11, 271:3-5; JX0027 (Costanzo (Evonik) IH Tr. 75:4-23); PX2115 (PeroxyChem) at 001; JX0133 (Evonik) at 001. For example, a commercial manager for UNIVAR told Ms. Dumas, PeroxyChem's Sales Account Manager for the Southeast, that Evonik was supplying UNIVAR's Cincinnati location and confirmed Evonik's price. Dumas (PeroxyChem) Hrg. Tr. 269:18-270:11; PX2247 (PeroxyChem) at 001. Additionally, in early 2016, PeroxyChem attempted to raise prices by [redacted] for UNIVAR's into-stock H2O2, and when UNIVAR accepted the price increase, PeroxyChem was able to infer that Evonik had also raised UNIVAR's into-stock prices. JX0032 (Ball (PeroxyChem) Dep. Tr. 75:5-76:25).

132. **Industry publications provide producers with market intelligence.** Industry publications such as IHS, Grant Thornton, and FisherSolve collect market information about the

H2O2 industry from suppliers then organize and publish that information. [redacted]; JX0018 (Kulp (Evonik) IH Tr. 65:4-13). The information published includes supply and demand trends, pricing trends, and changes in contract terms such as length. PX1297 (Evonik) at 001. Industry publications may also publish aggregate capacity and consumption figures, expansion plans, and details of corporate restructuring. JX0081 (IHS) at 016-19. For example, a December 2015 IHS report indicated that Solvay, PeroxyChem, and Evonik were all planning to pursue $0.05/lb increases in 2016. PX1297 (Evonik) at 001. H2O2 producers rely on these sources to understand the capacity utilization of the competitors, as well as to understand customer demand volumes and other details of customer operations. [redacted]; [redacted]; JX0023 (Montag (PeroxyChem) IH Tr. 19:13-20:25); [redacted].

133. **Other third parties provide suppliers with market intelligence.** Terminal operators and truck drivers, who often serve multiple H2O2 suppliers, will also provide suppliers with market intelligence. JX0018 (Kulp (Evonik) IH Tr. 63:24-65:3).

iv. Suppliers Recognize Their Strategic Interdependence

134. Firms can benefit from avoiding aggressive competition with one another, but doing so requires discipline. Discipline, in turn, can be enforced through deterrence, which is the expectation that aggressive competition will beget aggressive competition. Rothman Hrg. Tr. 746:25-747:19.

135. As Dr. Rothman testified, recognition of strategic interdependence is the "idea . . . that the firms understand that they are potentially better off if they can avoid getting [into] the things like price wars." Rothman Hrg. Tr. 754:7-22. Documentary and testimonial evidence makes clear that H2O2 suppliers recognize their strategic interdependence, which increases a market's

vulnerability to coordinated conduct. JX0075 (Rothman Rpt.) ¶ 150.

136. **H2O2 suppliers prefer long-term stable relationships with customers and would prefer to retain existing customers rather than acquire new customers.** As [redacted] testified, H2O2 suppliers able to achieve an acceptable level of capacity utilization have less of an incentive to cut prices in an effort to grab share from competitors. [redacted]. [redacted] Evonik, too, prefers to have long-term stable relationship with customers. Corson (Evonik) Hrg. Tr. 651:13-21. In fact, Ms. Corson, Evonik's Marketing Manager, testified that for Evonik's 10 top customers, [redacted]. Corson (Evonik) Hrg. Tr. 116:22-117:1.

137. PeroxyChem's executives recognize the risk that gaining a significant customer from a rival will cause the rival to compete more aggressively to make up for the lost volume. PeroxyChem's EVP testified that [redacted] *see also id.* at 84:6-85:24; PX2070 (PeroxyChem) at 002. This recognition impacts PeroxyChem's incentives and willingness to compete for rivals' customers; for example, in 2017, when considering whether to compete for a customer that was at the time supplied by Nouryon, PeroxyChem executives [redacted]

138. Evonik likewise recognized that taking a significant account from PeroxyChem would risk causing "[redacted]

[redacted] PX1027 (Evonik) at 008. Evonik's General Manager of the North American business acknowledged that this meant Evonik "would expect PeroxyChem to aggressively pursue other volume opportunities and if we weren't we would not be prepared." Costanzo (Evonik) Hrg. Tr. 1119:14.

139. Executives from competitors testified to a similar strategy. *See, e.g.*, [redacted]. Testimony from [redacted] is illustrative:

> Q. And in determining how to sell its capacity, does [redacted] prefer to retain customers it already has or would it prefer to go win new customers?
>
> A. Typically, **we would prefer to keep our customers that we already have.**
>
> Q. And why is that?
>
> A. We have a relationship -- a commercial relationship with the customer. We know that our product works well with those customers. We know what the process is for supplying them and their needs -- specific needs that they may have. So for us, that is one good reason why that we want to maintain our existing customers.
>
> The other reason would be, when you take a new customer, you have to develop the same relationship. You have to understand their specs, and also, what their delivery requirements are. So that's a little bit more effort.
>
> And, finally, **when you take somebody's other customer, you may have some sort of retaliation or reaction in the market at the next RFQ.**
>
> **Q. And if there's a response or retaliation in the market, what effect does that have on the market price?**
>
> **A. Typically, that could have a price that would usually lower the pricing into the market.**

[redacted] (emphasis added); *see also* [redacted] ("Typically we don't prefer churn where we take a customer and we lose a customer and we take a customer because that typically will drive the price of the product down in the marketplace because there will be a reaction for what happens into the market").

140. **H2O2 suppliers will decline to compete for rivals' customers to avoid price wars:**

- [redacted]: In [redacted] did not continue to pursue additional volume [redacted] to "avoid getting into a price war" with [redacted] was pretty confident [redacted] was lower, so I was backing off to avoid getting into a price war."). Similarly, [redacted] email chain includes the following: "Once [redacted] finds out they lost [redacted] I expect one more player getting aggressive." [redacted].
- **UNIVAR:** In 2016, a PeroxyChem sales manager escalated a pricing request from UNIVAR to Ms. Montag, PeroxyChem's Global Business Director, [redacted] PX2190 (PeroxyChem) at 001. Ms. Montag [redacted] *Id.* Further, in 2017, a PeroxyChem Sales Manager agreed to coordinate PeroxyChem's messaging with UNIVAR so as to avoid price competition with Evonik and risk dropping the customer's price "to the low end of the market." Dumas (PeroxyChem) Hrg. Tr. 273:23-274:23; PX2480 (PeroxyChem) at 001; *see also* PX2261 (PeroxyChem) at 001-06 (a PeroxyChem Sales Manager was disappointed to see that a representative from UNIVAR intended to play Evonik and PeroxyChem off one another to get lower prices).
- [redacted] In 2017, [redacted] tried to avoid a "small battle" over price with [redacted] in order to maintain its profit margin. [redacted].
- [redacted]: In 2018, [redacted] declined to bid on two mills [redacted] because [redacted] did not want to "piss off" [redacted]. [redacted].
- [redacted] declined to bid on an account in [redacted] where [redacted] was the incumbent supplier. [redacted]. [redacted] explained, "I don't

think we should set a new low for this product and I think it's highly unlikely that [redacted] will let this go." [redacted].

- [redacted]: In 2018, [redacted] considered bidding a "very high price" for [redacted] to "help [redacted] thinking they have a great deal in place" with their current supplier. [redacted].

141. One [redacted] executive described their strategy for customers served by [redacted] as follows: "historically, we have tried to stay in touch with these accounts to get information, but when it came to submitting bids we have said that we don't have product available to adequately service their needs." [redacted]; *see also* [redacted] ([redacted] submitted a bid that "was so high to be unrealistic, so [redacted] didn't consider them to competitively bid"). A [redacted] expressed similar reluctance to support a UNIVAR price request because it would [redacted].

v. The Markets Are Concentrated With Small Numbers of Competitors

142. The H2O2 market is highly concentrated with a small number of competitors. *See supra* Section V. As Dr. Rothman explained, "maintaining discipline through deterrence is more straightforward when there are fewer firms." Rothman Hrg. Tr. 750:20-21.

vi. There is a Past History of Collusion and Conditions in the Market Have Not Changed Significantly Since the Period of Collusion

143. **There is a past history of collusion in the H2O2 market.** In 2006, Evonik's predecessor, Degussa, entered into an antitrust leniency agreement with the Department of Justice ("DOJ"). PX1293 (Evonik) at 003; PX1294 (Evonik) at 008-09. Degussa's co-conspirators, Solvay and AkzoNobel (Nouryon's predecessor) entered guilty pleas for price fixing in the H2O2 market. PX9031 (DOJ) at 001-04; PX2348 (PeroxyChem) at 010-11; PX2347

(PeroxyChem) at 067. Following the guilty pleas in the DOJ's criminal price fixing investigation, H2O2 customers filed nearly three dozen private class action lawsuits against all producers of H2O2 in the United States, alleging antitrust harm from the price fixing conspiracy. PX2328 (PeroxyChem) at 001; *see also generally* DX0413 (PeroxyChem). Degussa settled the class action for $21 million, and PeroxyChem's predecessor, FMC, settled with direct purchaser plaintiffs for $10 million. PX9036 (Law360) at 001. Market conditions have not changed significantly since the period of express collusion.

144. **The H2O2 production plants are the same.** No new plants have come online since the collusive period. JX0109 (Evonik) at 020; JX0022 (Ball (PeroxyChem) IH Tr. 168:9-11).

145. **The H2O2 producers are the same.** To the extent the market has changed since 2006, there are even fewer firms producing H2O2 since Kemira exited North America in 2011 by selling its H2O2 plant to Evonik. Rothman Hrg. Tr. 755:8-18; PX9033 (Kemira) at 001-02; PX1277 (Evonik) 004; JX0081 (IHS) at 033.

146. **North American H2O2 capacity is roughly the same.** IHS reports capacity remaining relatively consistent between 2000 and 2018. JX0109 (Evonik) at 019-20; JX0081 (IHS) at 016. The only example of capacity expansion over the last decade was Solvay's expansion at Longview in 2016. JX0127 (Evonik) at 001; [redacted]. While initially the expansion added additional capacity to the market, Solvay acknowledges that, since then, [redacted] and [redacted]. [redacted]; JX0127 (Evonik) at 001; *see also* [redacted]; *infra* Section IX.A. IHS also predicts that H2O2 capacity will remain the same at all H2O2 plants in North America. JX0081 (IHS) at 018.

147. **End-use applications for H2O2 are largely the same.** Many of the end uses for H2O2

today were present during the price fixing period. PX9031 (DOJ) at 002 (noting the following applications for H2O2: electronics, energy production, mining, cosmetics, food processing, textiles, and pulp and paper manufacturing).

148. While there are some additional uses for H2O2 since the period of explicit price fixing, the majority of H2O2 sales continue to be of standard grade product. Rothman Hrg. Tr. 755:19-756:4. In the period of express collusion, approximately 67% of H2O2 sales were standard grade while today 61% of H2O2 sales are standard grade. *Id.*

149. **H2O2 producers still make some public price increase announcements.** H2O2 producers occasionally make public price increases. A PeroxyChem document from 2016 noted that Solvay announced a $0.05/lb. price increase in North America and [redacted]. PX2055 (PeroxyChem) at 004. A [redacted] executive also testified that he was aware of a price increase [redacted] communicated to customers in 2018. [redacted]. When the same firms issue public price announcements in Europe, they are closely monitored by rivals—when PeroxyChem received Evonik's July 2018 European price increase announcement, a senior PeroxyChem executive [redacted] PX2420 (PeroxyChem) at 001; *see also* PX2135 (PeroxyChem) at 001 ([redacted]); PX2140 (PeroxyChem) at 001 ([redacted]).

150. **There is a past history of collusion in Europe as well.** The EC has twice found price fixing behavior in the H2O2 market in Europe, in 1984 and 2006. PX9032 (EC) at 001-03. PeroxyChem's predecessor was found guilty of price fixing in 2006, while Evonik's predecessor

received immunity for providing information about the behavior. *Id.* The participants in the price fixing conspiracy paid combined fines of over €338 million. *Id.*

B. The Acquisition Would Increase the Risk of Coordination

i. The Acquisition Would Reduce the Number of Competitors and Eliminate the Competitive Pressure From PeroxyChem

151. As Dr. Rothman explained, reaching an explicit or tacit agreement is more straightforward among a smaller number of competitors. JX0075 (Rothman Rpt.) ¶ 175. This merger will eliminate PeroxyChem as an independent competitor and significantly increase concentration in already concentrated markets, thereby enhancing vulnerability to coordination. Rothman Hrg. Tr. 756:14-757:5; *see also* Hill Hrg. Tr. 2123:19-22.

152. [redacted] acknowledges that, "[t]he number of viable competitors impacts the pricing in a region. . . ." [redacted]. Further, [redacted] acknowledged that "the smaller the number of competitors, the more likely that lawful oligopoly results can be achieved." [redacted]. In a strategy presentation analyzing the Acquisition, [redacted] acknowledged that the H2O2 market in the United States was oligopolistic. [redacted].

153. An Evonik document prepared prior to its acquisition of Kemira's Maitland plant acknowledges that the rationale behind the deal was to [redacted] and [redacted] PX1488 (Evonik) at 046. Indeed, following the Maitland acquisition in 2011, Evonik successfully increased prices to customers between [redacted] noting that there was [redacted] PX1277 (Evonik) at 017.

ii. The Acquisition Would Create a Market Leader

154. Post-Acquisition, Evonik will be the largest producer of H2O2 in North America. JX0075 (Rothman Rpt,) ¶¶ 178-82. Evonik will have more to gain from coordination and more to lose

from a breakdown in coordination. JX0075 (Rothman Rpt.) ¶¶ 178-82.

155. **Evonik has historically maintained a strategy of prioritizing price over volume.** Evonik [redacted] JX0134 (Evonik) at 001. Mr. Costanzo testified that one of the key elements for Evonik's competitive strategy is to [redacted] Costanzo (Evonik) Hrg. Tr. 1121:8-13. [redacted] *Id.*

156. In a 2019 Evonik presentation, Evonik recognized that [redacted]. JX0129 (Evonik) at 037-38. As Mr. Costanzo explained the analysis, "[redacted] JX0027 (Costanzo (Evonik) IH Tr. 164:4-6, 164:123-125).

157. Following the Maitland acquisition 2011, Evonik pursued a [redacted] strategy, which led to [redacted] PX1277 (Evonik) at 018.

158. **PeroxyChem's strategy has been similar.** A PeroxyChem presentation notes, [redacted] and that [redacted] PX2412 (PeroxyChem) at 002. Likewise a PeroxyChem executive testified that [redacted] JX0032 (Ball (PeroxyChem) Dep. Tr. 26:20-24.

159. **The industry recognizes that market leaders set price.** During the price fixing litigation, [redacted] acknowledged that, "as a market leader," [redacted] "was in a

position to exert unilateral price leadership when market conditions favored higher prices and margins." [redacted]. On a public earnings call, Solvay's CEO observed that Solvay has "been able to increase our prices" and that she was "very, very glad to see that [Solvay is] leading the way. [Solvay is a] market leader[] and what market leaders do is that they go and they can increase prices whenever supply demand is tight and that is exactly what [the Solvay] team did." PX9007 (Solvay) at 007.

160. **The remaining firms are more likely to follow Evonik than they are likely to act as disruptive competitors.** While Dr. Hill testified that Nouryon is positioned to disrupt any potential coordination in the H2O2 industry, Hill Hrg. Tr. 2063:2-13, this contradicts Defendants' prior advocacy to the FTC that suggested [redacted] was the most likely maverick. PX0019 (Evonik) at 010. However, documentary and testimonial evidence shows that none of the remaining firms is likely to act as a disruptive competitor.

161. [redacted] documents note that the Acquisition "[m]ay lead to market stabilization opportunities," [redacted], and "could have a silver lining on pricing," [redacted]. [redacted] testified that [redacted] would consider raising its price if it learned that all the other H2O2 suppliers were charging prices 5% higher than [redacted] price. [redacted] *see also* [redacted] ("If we found that the market was going up by 5 percent across the board, we would have to seriously consider whether or not we would also raise our prices in order to get the most value for our produce based on the supply and demand."). Finally, a third-party consultant retained by [redacted] concluded that the Acquisition "would result in a price increase that would benefit to all players in the market." [redacted]. The consultant further found that the merged firm "should have an interest to behave rationally to get more synergies and

higher EBITDA. All competitors would benefit from this merger." [redacted]

[redacted]

VII. THE MERGER WOULD SUBSTANTIALLY LESSEN HEAD-TO-HEAD COMPETITION

162. The record shows that customers benefit from competition between Evonik and PeroxyChem in both the Southern and Central United States and in the Pacific Northwest.

163. H2O2 customers typically use a combination of formal bidding and informal negotiation to source H2O2, through contracts of one to five years. JX0075 (Rothman Rpt.) ¶ 43; *see also* Maeder (Verso) Hrg. Tr. 141-15-18; JX0008 (Al-Pac Decl.) ¶ 10. Customers typically issue a RFP that outlines its H2O2 needs—concentration, purity, stability, volume, and delivery locations. JX0075 (Rothman Rpt.) ¶ 43; *see also* Maeder (Verso) Hrg. Tr. 140:7-141:14, 143:1-24; [redacted]. After customers receive bids, they may proceed with additional rounds of bidding and negotiation, where they try to play competing suppliers against each other to get the best deal possible. JX0075 (Rothman Rpt.) ¶ 43; *see also* Maeder (Verso) Hrg. Tr. 140:7-23; [redacted]. When evaluating bids, customers consistently value price and security of supply above other factors. Maeder (Verso) Hrg. Tr. 143:1-146:2; [redacted].

A. <u>The Acquisition Would Substantially Lessen Competition in the Southern and Central United States</u>

i. Evonik and PeroxyChem Compete Across End Use Applications for H2O2 in the Southern and Central United States

164. **Evonik's Mobile plant and PeroxyChem's Bayport plant produce H2O2 to serve substantially the same end-use applications.** Evonik's Marketing Manager testified that [redacted] of Evonik's H2O2 production at the Mobile plant is a mix of standard and specialty grades sold into various non-pulp and paper end-use applications, including pre-electronics,

chemicals, environmental, textiles, food/aseptic, distribution, home and personal care, mining, and oil and gas. Corson (Evonik) Hrg. Tr. at 713:4-714:14; *see also* JX0083 (Evonik) at 016. The remaining H2O2 produced at Mobile is standard grade H2O2 sold to pulp and paper customers. *Id.*

165. PeroxyChem's Vice President of North America Operations testified that the Bayport plant can currently allocate a maximum of [redacted] of its output to rectified product, the raw material for H2O2 used in specialty end-use applications, including food safety, cosmetic, environmental, and energy grades. Kramer (PeroxyChem) Hrg. Tr. 132:1-5, 134:3-135:4, 137:22-138:8; *see also* PX2361 (PeroxyChem) at 032. The remaining [redacted] of Bayport's output is standard grade H2O2. Kramer (PeroxyChem) Hrg. Tr. 1632:1-5, 1634:3-1635:4, 1637:22-1638:8.

166. Dr. Hill admits that both PeroxyChem's Bayport plant and Evonik's Mobile plant make a significant amount of standard grade H2O2. Hill Hrg. Tr. 2193:21-2194:3.

167. **However, Evonik and PeroxyChem compete across grades.** Testimony from both Evonik and PeroxyChem executives shows they compete against each other across a wide array of H2O2 end-use applications, including both standard and specialty grades. Lerner (PeroxyChem) Hrg. Tr. 1431:3-1432:5, 1455:2-18; PX2187 (PeroxyChem) at 040, 056, 061; Corson (Evonik) Hrg. Tr. 646:22-647:5; Montag (PeroxyChem) Hrg. Tr. 1552:6-17. In fact, Evonik's General Manager for North America confirmed that [redacted]

Costanzo (Evonik) Hrg. Tr. 1186:19-1189:17; PX1055 (Evonik) at 001-02.

- **Environmental Applications:** Evonik and PeroxyChem compete against one another to supply customers with environmental grade H2O2. Corson (Evonik) Hrg. Tr. 611:2-6;

Montag (PeroxyChem) Hrg. Tr. 1558:9-15. In fact, [redacted] Corson (Evonik) Hrg. Tr. 616:1-23; PX1342 (Evonik) at 065.

- **Chemical Synthesis:** Evonik and PeroxyChem compete against each other for customers using H2O2 for chemical synthesis. PX2001 (PeroxyChem) at 001 (Galta); DX0636 (PeroxyChem) at 015 (Chemours).
- **Cosmetic and Personal Care Applications:** PeroxyChem considers Evonik a key competitor for customers using H2O2 for cosmetic applications. Dumas (PeroxyChem) Hrg. Tr. 231:16-232:9; PX2119 (PeroxyChem) at 002; [redacted] purchases from both suppliers).
- **Distribution:** PeroxyChem referred to Evonik as its "key competitor" for business at its distribution account UNIVAR. Dumas (PeroxyChem) Hrg. Tr. 234:1-13; PX2289 (PeroxyChem) at 016. Ordinary course documents confirm that PeroxyChem competes against Evonik for business at UNIVAR both for UNIVAR's stock locations and at third-party direct accounts, often resulting in lower prices. PX2309 (PeroxyChem) at 001; PX2221 (PeroxyChem) at 001.

168. While Defendants have pointed to a few of end-use applications where Evonik does not currently sell H2O2 in North America, *see supra* Section II.C, Evonik's Marketing Manager admitted that developing new products and entering new markets "is definitely a big part of competition." Corson (Evonik) Hrg. Tr. 706:25-707:1. For example, Evonik's Marketing Manager concluded that aseptic packaging H2O2 [redacted] *Id.* at 603:13-16; JX0115 (Evonik) at 040, 042. Evonik will typically conduct a market study and consider entering any markets it sees growing. Corson

(Evonik) Hrg. Tr. 623:7-13.

ii. Evonik and PeroxyChem are Close Competitors in the Southern and Central United States

169. Evonik and PeroxyChem are close competitors, for many customers in the Southern and Central United States. [redacted], a pulp and paper customer, described Evonik and PeroxyChem as its "two primary suppliers." [redacted] another pulp and paper customer, sources its H2O2 from Evonik and PeroxyChem. [redacted]. [redacted], a wastewater treatment customer, procures 70 percent of its H2O2 from Evonik and PeroxyChem. [redacted].

170. Numerous customers across end-use applications have expressed concern over the loss of competition between Evonik and PeroxyChem in the Southern and Central United States. [redacted] (environmental customer testifying to a concern that the transaction will increase Evonik's leverage in contract negotiations); [redacted]; [redacted] (pulp and paper customer testifying that it is "concerned that a reduction in the number of available [H2O2] suppliers may lead to less competition in the [H2O2] market"); [redacted] (pulp and paper customer testifying that it sees the Acquisition as "a reduction in the competitive field, which could impact [redacted] ability to procure [H2O2] at competitive prices"); [redacted] (pulp and paper customer expressing concern "that the proposed acquisition of PeroxyChem by Evonik could cause harmful competitive impacts to purchasers of [H2O2]"); [redacted] (pulp and paper customer testifying that it is concerned "that the merger could result in higher prices in [H2O2] for [redacted]"); JX0006 (CHS Decl.) ¶ 12 (food customer expressing concern "that prices may increase due to a reduction in the number of [H2O2] producers").

iii. Evonik and PeroxyChem are Frequently the Two Lowest Bidders, and

Sometimes the Only Bidders, for Particular Customers

171. In [redacted] 2019 RFP, Evonik and PeroxyChem were the only two bidders for [redacted]. [redacted]. Evonik was the only supplier to bid on all five of the mills [redacted] put out for bid; PeroxyChem bid on four mills and Solvay on two mills. [redacted]. In [redacted] 2017 RFP, Evonik and PeroxyChem were the two lowest bidders at four out of five of [redacted] mills in the Southern and Central United States; at the fifth mill, Evonik was tied with Solvay for the second lowest price. [redacted].

172. Evonik and PeroxyChem had the two lowest bids for [redacted] during [redacted] 2019 RFP. [redacted]. [redacted] did not consider Solvay's bid for the [redacted] mill to be competitive. [redacted] ("[W]e got an offer, but it was so high to be unrealistic, so we didn't consider them to competitively bid"); [redacted] (noting that Solvay "is not even close" to Evonik or PeroxyChem).

173. Evonik and PeroxyChem were the only two bidders for [redacted] in 2017. [redacted].

174. PeroxyChem describes Evonik as a "key competitor" for business at distribution account UNIVAR. Dumas (PeroxChem) Hrg. Tr. 234:1-13; PX2289 (PeroxyChem) at 016. PeroxyChem and Evonik competed at UNIVAR's Cincinnati, Ohio stock location. Dumas (PeroxyChem) Hrg. Tr. 269:18-270:8; PX2247 (PeroxyChem) at 001; [redacted].

iv. Customers Have Benefited From Competition Between Evonik and PeroxyChem in the Form of Lower Prices

175. Head-to-head competition between Evonik and PeroxyChem leads to lower prices for H2O2 customers in the Southern and Central United States. In fact, Defendants' expert, Dr. Hill,

acknowledged that the North American H2O2 industry is competitive, and that customers are able to play suppliers off against one another to get lower prices. Hill Hrg. Tr. 2025:8-14.

176. Customers in the Southern and Central United States testified that they use competitive bidding events to play H2O2 producers off of one other to achieve the lowest possible price. [redacted]; [redacted]; [redacted] [redacted].

177. Examples of customers who have benefitted from head-to-head competition between Evonik and PeroxyChem include:

- [redacted] In 2017, [redacted] saved more than $600,000 compared to its existing contract by negotiating with Evonik and PeroxyChem. [redacted] [redacted] ("The [H2O2 RFP] turned out to be much more competitive than expected, chiefly between the two incumbents of PeroxyChem and Evonik, resulting in a $613,000 in annualized savings."); *see also* PX2002 (PeroxyChem) at 003 (citing "competitive bidding process" and noting "pricing declined about 10% from current pricing"). At its [redacted] [redacted] mill, [redacted] switched from Evonik to PeroxyChem, resulting in an estimated $145,000 in savings. [redacted]; *see also* [redacted] (PeroxyChem offers additional discounts to pick up mill previously supplied by Evonik).
- [redacted] used a competitive offer from Evonik to negotiate a lower price from PeroxyChem during its 2019 RFP for its [redacted] mill. [redacted]. [redacted] benefited from having both Evonik and PeroxyChem quote this mill. [redacted].
- [redacted] saved nearly $15,000 due to competitive bidding between Evonik and PeroxyChem at its [redacted] mill in 2017. [redacted] [redacted] ("PeroxyChem ceases to retain volume in [redacted] because of noncompetitive pricing

. . . ."). This marked a 22 percent price reduction. [redacted]

- **Covidien:** PeroxyChem rolled back a [redacted] price increase at Covidien, a medical customer in Augusta, Georgia in early 2016 after learning through a distributor that the customer was threatening to switch to Evonik. Dumas (PeroxyChem) Hrg. Tr. 279:22-289:11; PX2243 (PeroxyChem) at 001.
- **UNIVAR:** PeroxyChem lowered its prices at two UNIVAR stock locations, in Houston, Texas, and City of Commerce, California to maintain business at those locations against competition from Evonik in late 2017 or early 2018. Montag (PeroxyChem) Hrg. Tr. 1576:25-1577:10; PX2004 (PeroxyChem) at 007; PX2183 (PeroxyChem) at 006 ("Competitive offers from Evonik to several UNIVAR locations have led us to offer reduced 'into stock' prices to UNIVAR Commerce and Houston in order to maintain our majority share position.").

178. Defendants' own executives recognize head-to-head competition between Evonik and PeroxyChem increases customers' leverage. *See* Dumas (PeroxyChem) Hrg. Tr. 278:4-20 (discussing email from UNIVAR suggesting they "play PeroxyChem versus Evonik").

v. Other H2O2 Suppliers Cannot Constrain a Post-Acquisition Evonik

179. **Nouryon is smaller than Evonik and PeroxyChem and does not pursue new H2O2 customers.** Nouryon testified that it is the smallest H2O2 producer in North America by both capacity and sales. Radlinski (Nouryon) Hrg. Tr. 538:7-15. Nouryon's competitive strategy is to [redacted]. *Id.* at 545:15-21 [redacted] *Id.* at 547:9-11.

180. Some customers in the Southern and Central United States do not consider Nouryon to be a major supplier. [redacted] (environmental customer considers Nouryon "second tier" based on "limited supply network, limited material availability"); [redacted] ("The major suppliers in the US market have been Evonik (Degussa), PeroxyChem, Solvay, and Arkema"). Other customers acknowledge that Nouryon is "not very well positioned" to serve certain mill locations, depending on geography. [redacted] (Nouryon is better able to compete for a mill in [redacted] than it is to serve a mill in [redacted]).

181. **H2O2 suppliers are operating at or near their capacity limitations in the Southern and Central United States.** Solvay's Deer Park, Texas production plant is currently operating above [redacted] of its capacity. [redacted].

182. [redacted]. JX0046 (Myrick (Arkema) Dep. Tr. 68:19-21). Customers in the Southern and Central United States do not believe that Arkema has the capacity available to meet their needs. *See* [redacted] (environmental customer does not believe Arkema could supply enough material to bring the combined Evonik-PeroxyChem share of its business below 50 percent); [redacted] ("Arkema will not participate in [redacted] business because they are sold out").

183. Ordinary course documents confirm that H2O2 suppliers see less available capacity in the market. [redacted] ("It really appears that our three primary competitors are generally at capacity").

B. <u>The Merger Would Substantially Lessen Competition in the Pacific Northwest</u>

i. Evonik and PeroxyChem are Each Other's Closest Competitors for Many Customers in the Pacific Northwest

184. **Customers in the Pacific Northwest primarily purchase standard grade H2O2.** The

Pacific Northwest is a major geographic center for the pulp and paper industry in North America. Corson (Evonik) Hrg. Tr. 637:23-638:24; JX0141 (UI) at 004. Pulp and paper customers purchase standard grade H2O2. Corson (Evonik) Hrg. Tr. 638:1-2; Dumas (PeroxyChem) Hrg. Tr. 224:8-10. Accordingly, the predominant grade of H2O2 sold into the Pacific Northwest is standard grade. JX0075 (Rothman Rpt.) ¶ 102; Kramer Hrg. Tr. 1680:1-3; JX0024 (Vashisht (Evonik) IH Tr. 21:4-12). In fact, [redacted]. Lerner (PeroxyChem) Hrg. Tr. 1430:5-17; JX0024 (Vashisht (Evonik) IH Tr. 21:4-12).

185. **Defendants are significant competitors in the Pacific Northwest.** Evonik and PeroxyChem executives testified that they have taken significant business from each other in this region. Lerner (PeroxyChem) Hrg. Tr. 1456:13-20 (PeroxyChem lost the large-volume Suncor account to Evonik), 1445:16-21 (competitive offers from Evonik at [redacted] reduced PeroxyChem's profitability in the region by [redacted]), 1446:10-17 (Evonik competed head to head with PeroxyChem at [redacted]); Corson (Evonik) Hrg. Tr. 648:22-649:1 (Evonik has lost multiple top 10 customers to PeroxyChem, including a pulp and paper customer in Western Canada).

186. Ordinary course documents confirm that Evonik and PeroxyChem compete directly at major accounts. PX2002 (PeroxyChem) at 003 ("Evonik was able to leverage their substantial majority position [redacted] . . . to gain additional volume"); JX0098 (PeroxyChem) at 008 (PeroxyChem and Evonik competed against each for business at [redacted]).

187. **Third parties confirm that Defendants are close competitors in the Pacific Northwest.** One pulp and paper customer in the Pacific Northwest, Canfor, has switched back

and forth between Evonik and PeroxyChem as their H2O2 supplier. Anderson (Canfor) Hrg. Tr. 191:9-19. Other customers have split their H2O2 business between Evonik and PeroxyChem. JX0048 (Gilbertson (Al-Pac) Dep. Tr. 44:8-21); [redacted].

188. Customers have expressed concern about the loss of competition in the Pacific Northwest due to the Acquisition. Anderson (Canfor) Hrg. Tr. 200:18-24 (the Acquisition would "reduce the number of players in the [H2O2] market," which "would make it more challenging for [Canfor]"); JX0049 (Gilbertson (Al-Pac) Dep. Tr. 85:14-86:23) ("There wouldn't be any competition, there would just be one supplier, and they would dictate the market price, and that would be that."); JX0012 (Paper Excellence Decl.) ¶ 28 ("Based on recent sourcing exercises and contract negotiations, there is serious concern that if Evonik acquires PeroxyChem, it would lead to a lack of competition and increased prices.").

ii. Customers Have Benefited from Competition between Evonik and PeroxyChem

189. **Evonik and PeroxyChem are frequently the only two bidders for particular customers.** Evonik and PeroxyChem were the only two bidders for three of Canfor's four mills in its 2019 RFP. Anderson (Canfor Pulp) Hrg. Tr. 196:1-4. Likewise, Evonik and PeroxyChem were the only competitive bidders in [redacted] 2016 RFP for three mills [redacted]. [redacted]. They were also the only two bidder's for Al-Pac's mill in 2012. JX0048 (Gilbertson (Al-Pac) Dep. Tr. 47:8-16).

190. **Competition between Evonik and PeroxyChem benefits customers in the Pacific Northwest.** Canfor benefitted from competitive pressure from Evonik, which helped Canfor achieve savings in its 2019 RFP for its four mills. Anderson (Canfor) Hrg. Tr. 200:5-9. PeroxyChem executives concede that competition from Evonik constrained their ability to raise Canfor's prices. Lerner (PeroxyChem) Hrg. Tr. 1445:9-15; PX2076 (PeroxyChem) at 032 ([redacted]

[redacted]

191. In 2019, Suncor switched H2O2 supply from PeroxyChem to Evonik. Montag (PeroxyChem) Hrg. Tr. 1559:25-1560:12. The switch occurred despite PeroxyChem not increasing Suncor's prices given Evonik's spare capacity in the region. *Id.* at 1560:13-18.

192. In 2016, PeroxyChem lowered its pricing to [redacted] by [redacted] to retain the business against a competitive threat from Evonik. Lerner (PeroxyChem) Hrg. Tr. 1444:5-13; JX0023 (Montag (PeroxyChem) IH Tr. 106:19-107:9); PX2000 (PeroxyChem) at 004 ("[redacted] price will be reduced by [redacted] in 2 stages once a new contract is signed."); PX2003 (PeroxyChem) at 006 ("Evonik competitive at [redacted] led to substantial price reduction").

193. In 2012, Al-Pac switched from a 50/50 split between PeroxyChem and Evonik to sole sourcing with Evonik and saved close to $1 million. JX0048 (Gilbertson (Al-Pac) Dep. Tr. 97:13-98:3); JX0008 (Al-Pac Decl.) ¶¶ 10-11.

194. Evonik and PeroxyChem both supply [redacted] mills. [redacted]. In 2018, PeroxyChem specifically targeted Evonik's volume at [redacted], offering a lower price, PX2130 (PeroxyChem) at 002, and gaining share at Evonik's expense. PX2120 (PeroxyChem) at 008.

iii. Other H2O2 Suppliers are Inferior Options

195. **Nouryon is a distant competitor.** Nouryon's General Manager testified that Nouryon has no customers in the Pacific Northwest and no plans to serve customers in the Pacific Northwest. Radlinski (Nouryon) Hrg. Tr. 541:14-542:3; *see also* JX0051 (Radlinski (Nouryon) Dep. Tr. 56:4-10 [redacted]

[3] [redacted]

[redacted]). Customers in the Pacific Northwest universally report that Nouryon has not bid on their business and would not be competitive due to freight costs. Anderson (Canfor) Hrg. Tr. 195:2-9; JX0048 (Gilbertson (Al-Pac) Dep. Tr. 82:8-83:9); [redacted].

196. **Arkema is a distant competitor.** Arkema has no significant direct customers in the Pacific Northwest. Myrick (Arkema) Hrg. 476:6-17. Customers in the Pacific Northwest report that Arkema has not bid on their business and that Arkema would not be competitive due to distance. Anderson (Canfor) Hrg. Tr. 541:14-542:3; JX0048 (Gilbertson (Al-Pac) Dep. Tr. 82:8-83:9); [redacted].

197. **Solvay cannot constrain a post-Aquisition Evonik.** While Solvay will still be a competitive presence in the Pacific Northwest post-Acquisition, Solvay has declined to bid on major business in the Pacific Northwest during recent RFPs. *See* Anderson (Canfor) Hrg. Tr. 195:14-196:5 (in Canfor's 2019 RFP, Evonik and PeroxyChem submitted bids for all four of Canfor's mills, while Solvay bid to supply one mill); [redacted] (Solvay did not bid on [redacted] mills during [redacted] 2019 RFP).

198. Some customers in the Pacific Northwest believe Solvay lacks capacity to meet their H2O2 needs. Anderson (Canfor) Hrg. Tr. 78:13-17 ("Solvay didn't have enough volume for all of our mills"); [redacted] ("[redacted] learned from its discussions with Solvay that Solvay does not have enough volume to supply the [redacted] mills.").

iv. Canadian Pacific Northwest Customers Sell into the United States

199. Many of Defendants' Canadian customers in the Pacific Northwest make substantial sales to the United States. *See* Anderson (Canfor) Hrg. Tr. 190:21-191:4 (approximately 30 percent of the pulp that Canfor produces is sold into the United States); JX0008 (Al-Pac Decl.) ¶ 3

(approximately 75 percent of Al-Pac's customers are located in North America, and of those customers, nearly all are located in the United States); JX0012 (Paper Excellence Decl.) ¶ 3 (Paper Excellence acquired Catalyst in 2019, and Catalyst's mills sell extensively into the United States). These three customers alone account for approximately 25 percent of sales of H2O2 in the Canadian Pacific Northwest. PX7102 (Rothman Rebuttal Rpt.) ¶ 57 n. 56.

C. Economic Analysis Confirms Likely Unilateral Effects in Both the Southern and Central United States and the Pacific Northwest

i. Dr. Rothman's Analysis Demonstrates that Elimination of Head-to-Head Competition will Lead to Price Increases

200. To study the likely effect of the proposed merger, Dr. Rothman used two models of head-to-head competition, one of which was the Gross Upward Pricing Pressure Index methodology ("GUPPI"). Rothman Hrg. Tr. 761:18-762:12; JX0075 (Rothman Rpt.) ¶ 191. The GUPPI is a standard methodology, which is discussed in the *Guidelines* and accepted by the antitrust agencies. Rothman Hrg. Tr. 762:1-17; JX0075 (Rothman Rpt.) ¶ 193. The GUPPI model predicts how the merger will change Evonik's incentive to compete aggressively. Rothman Hrg. 762:18-763:4.

201. As described in detail in his reports and summarized in his testimony, Dr. Rothman performed the GUPPI analysis using multiple reasonable estimates of the necessary inputs to ensure the robustness of his results. JX0075 (Rothman Rpt.) ¶¶ 196-206; Rothman Hrg. Tr. 767:24-768:6. Across all the input estimates he analyzed, Dr. Rothman found that the GUPPI for H2O2 are well above zero, confirming that the merged firm will have strong incentives to raise prices. JX0075 (Rothman Rpt.) ¶¶ 214-15.

202. When combined with a reasonable estimate of the rate at which H2O2 suppliers pass through cost changes into prices. Dr. Rothman's GUPPI model implies the merger will lead to

customer harm of $14.5 million to $15.2 million per year in the Southern and Central United States. Rothman Hrg. Tr. 771:20-25; JX0075 (Rothman Rpt.) ¶ 211.

203. Similarly, the GUPPI model combined with a pass-through rate implies that the merger will lead to customer harm in the Pacific Northwest ranging from $11.6 million to $13.1 million per year. Rothman Hrg. Tr. 771:20-25; JX0075 (Rothman Rpt.) ¶ 215.

ii. Dr. Rothman's Second-Score Procurement Model Demonstrates that Post-Acquisition Prices Will Increase

204. Dr. Rothman also employed a second-score procurement model, which has been accepted by the antitrust agencies and the courts, and is generally described in the *Guidelines*. Rothman Hrg. Tr. 769:16-21. The second-score procurement model quantifies the magnitude of likely competitive harm without the need for additional assumptions about the pass-through rate. Rothman Hrg. Tr. 769:11-15.

205. As described in detail in his reports and summarized in his testimony, Dr. Rothman employed the second-score procurement model to measure the effect that the Acquisition would have on the pricing of H2O2 in the Southern and Central United States and the Pacific Northwest. JX0075 (Rothman Rpt.) ¶¶ 229-251; PX7102 (Rothman Rebuttal Rpt.) ¶¶ 118, 122-131; Rothman Hrg. Tr. 768:7-771:25.

206. The second score procurement model predicts that the loss of head-to-head competition between Evonik and PeroxyChem in the Southern and Central United States would cause prices to rise by approximately 12 percent, resulting in harm of $13.3 million to $14.1 million per year. JX0075 (Rothman Rpt.) ¶ 241.

207. The second score procurement model predicts the loss of head-to-head competition between Evonik and PeroxyChem in the Pacific Northwest would cause prices to rise by 17-29 percent, resulting in harm of $11.6 million to $ 19.3 million per year. JX0075 (Rothman Rpt.) ¶

243.

iii. Dr. Hill's Relative Distance Model is Ad-Hoc and Unreliable, and Cannot Measure the Effect of the Acquisition on H2O2 Pricing

208. Dr. Hill used a regression analysis to model the relationship between the price that a customer pays for H2O2 and the locations of its actual and potential suppliers, and then attempted to infer the likely effects of the Acquisition from the estimates produced by that regression. Hill Hrg. Tr. 2033:1-2035:23; JX0066 (Hill Rpt.) ¶ 132. However, this "relative-distance model" cannot reliably predict the effects of the Acquisition because it dramatically oversimplifies the manner in which customers select suppliers, causing it to make incorrect predictions about the frequency that Evonik and PeroxyChem will be customers' top alternatives. PX7102 (Rothman Rebuttal Rpt.) ¶¶ 102-114.

209. Dr. Rothman and Dr. Hill agree that the key question regarding the extent of unilateral harm from the Acquisition is identifying the proportion of customers that consider Evonik and PeroxyChem to be their two best alternatives. PX7102 (Rothman Rebuttal Rpt.) ¶ 110; Hill Hrg. Tr. 2038:19-2039:8. Furthermore, Dr. Rothman and Dr. Hill agree that numerous factors, including distance, influence a customer's selection of a supplier. PX7102 (Rothman Rebuttal Rpt.) ¶ 110; JX0066 (Hill Rpt.) ¶ 120.

210. However, the only way the Acquisition changes customers' rankings of suppliers in Dr. Hill's relative distance model is through the relative distance variables. Hill Hrg. Tr. 2038:19-24. This approach is ad hoc and unreliable—Dr. Hill is assuming that after a customer has chosen its given supplier, its ranking of remaining suppliers is determined entirely by distance. PX7102 (Rothman Rebuttal Rpt.) ¶¶ 105, 110; Rothman Hrg. Tr. 772:25-773:22.

211. While Dr. Rothman agrees with Dr. Hill that distance is important to customer choice, it is certainly not deterministic. Rothman Hrg. Tr. 773:19-774:4; *see also* Hill Hrg. Tr. 2036:17-

2037:7. The evidence shows that suppliers can be competitive for customers even when they are far away, and even when multiple rivals may be closer. PX7102 (Rothman Rebuttal Rpt.) ¶¶ 106-109. The approach of focusing so heavily on distance as a determinant of supplier choice leads Dr. Hill to dramatically understate the likelihood that customers view Evonik and PeroxyChem as their two best alternatives, and hence dramatically understate the unilateral harm that would be caused by the Acquisition. PX7102 (Rothman Rebuttal Rpt.) ¶¶ 110. By contrast, Dr. Rothman employs two distinct approaches—one with diversion proportional to market share, and one estimating demand (including the effect of distance) directly via a multinomial logit choice model—to calculate the proportion of customers who view Evonik and PeroxyChem as their top two choices. JX0075 (Rothman Rpt.) ¶¶ 235-238.

212. Dr. Hill's relative distance model suffers from additional flaws, because his model does not incorporate any variable cost information for any supplier aside from Evonik and PeroxyChem. Hill Hrg. Tr. 2206:14-17. Further, Dr. Hill's relative distance model does not make any attempt to model or predict any post-Acquisition price increases that might arise from coordinated effects, or from unilateral effects. *See* JX0066-078 (Hill Rpt.) ¶ 160 (Dr. Hill's "relative distance" model makes price predictions *without* "accounting for any merger-specific increase in prices").

iv. Dr. Hill's Bidding Analysis in Unreliable and Cannot Measure the Closeness of Competition Between Evonik and PeroxyChem

213. Dr. Hill also attempted to analyze bidding data to study the Acquisition's likely effect on prices. JX0066 (Hill Rpt.) ¶ 163. The numerous ways in which Dr. Hill misrepresented some of the bidding events in this analysis are addressed in Dr. Rothman's Reply Report. PX7102 (Rothman Rebuttal Rpt.) ¶¶ 115-16.

214. Dr. Hill considered bid data for just five customers and 25 bidding events that account for

approximately 10 percent of sales in the United States. Hill Hrg. Tr. 2204:23-2205:8; PX7102 (Rothman Rebuttal Rpt.) ¶ 115. While most of Dr. Hill's sample of five customers are large customers, Dr. Hill made no effort to account for this when predicting average harm to all customers in the Southern and Central United States (most of which are not large "powerful buyers"). Hill Hrg. Tr. 2205:9-19.

215. A number of these bidding events occurred outside of the relevant market in the Southern and Central United States, including customers in Tacoma, Washington; Androscoggin, Maine; and Ticonderoga, New York. In all three instances, Dr. Hill found zero harm, which reduced the average harm he calculated for the customer locations that are actually in the Southern and Central United States. Hill Hrg. Tr. 2199:5-2200:23, 2201:20-2202:2.

216. Finally, Dr. Hill's bidding analysis did not address how often PeroxyChem lowered its price in response to competition from Evonik and retained the business. Hill Hrg. Tr. at 2197:16-22. Nor did Dr. Hill conduct any analysis of the volume of product on which PeroxyChem cut its prices in order to retain business in response to competition from Evonik. *Id.* at 2197:23-2198:4.

VIII. UI'S PURCHASE OF PRINCE GEOGRE WILL NOT SUFFICIENTLY REMEDY THE LOSS OF COMPETITION IN THE PACIFIC NORTHWEST

217. UI agreed to purchase PeroxyChem's Prince George plant, pursuant to a Share Purchase Agreement executed on August 11, 2019, if Evonik succeeded in acquiring PeroxyChem. Cummins (UI) Hrg. Tr. 1862:15-1863:6, 1906:25-1907:13; *see also generally* JX0147 (UI); PX1518 (Evonik).

218. UI employs Jonathan Cummins as the Vice President of Manufacturing for the Americas, and he is UI's most senior employee located in the United States. Cummins (UI) Hrg. Tr. 1721:6-10, 1722:22-24. Mr. Cummins reports to the CEO of UI. *Id.* at 1722:25-1723:1. UI designated Mr. Cummins to testify as its corporate representative on UI's decision to purchase

the Prince George business. *Id.* at 1777:18-22; PX5039 (FTC) at 008; JX0058 (Cummins (UI) Dep. Tr. 25:13-26:4, 116:10-117:5).

A. UI Lacks Relevant Experience in the Production and Sale of H2O2

219. UI used to produce H2O2 in Germany, but stopped producing H2O2 anywhere in the world around the end of World War II. Cummins (UI) Hrg. Tr. 1897:21-1898:4. UI completed its acquisition of a single H2O2 plant located in Turkey in the middle of August 2019. *Id* at 1737:23-25. The Turkish H2O2 plant is the only H2O2 business UI operates anywhere. *Id.* at 1897:8-12. Prior to this acquisition, UI has no experience producing H2O2 since the end of World War II. *Id.* at 1898:5-12.

220. UI has never produced H2O2 in North America. Cummins (UI) Hrg. Tr. 1897:5-7. UI currently sells organic peroxides and persulfates in North America, and H2O2 is neither an organic peroxide nor a persulfate. *Id.* at 1796:17-25. UI's North American sales team includes ten to twelve people, but none of them has ever sold H2O2. *Id.* at 1896:24-1897:4.

221. Mr. Cummins has limited experience with H2O2 manufacturing. He worked on shipping, receiving, and stabilizing H2O2 at AkzoNobel from 2000 to 2001.[4] Cummins (UI) Hrg. Tr. 1894:5-19. He was not involved with H2O2 from 2001 to 2003. *Id.* at 1894:20-22. Starting in 2003, Mr. Cummins divided his attention between H2O2 and sodium chlorate manufacturing. *Id.* at 1894:23-1895:1. Mr. Cummins' last experience with H2O2 ended in 2010, *id.* at 1895:5-7, and he has no experience in H2O2 sales. *Id.* at 1895:5-2.

222. The only experience anyone at UI has with the sale or marketing of H2O2 relates solely to the recent Turkish acquisition. Cummins (UI) Hrg. Tr. at 1897:13-17. There is no evidence of any shipments of H2O2 from the Turkish plant to any customer in North America. *Id.* at

[4] AkzoNobel is now Nouryon, the smallest H2O2 producer in North America. *See supra* Section IV.

1898:23-1899:1. [redacted]. *Id.* at 1889:14-1900:3; JX0058 (Cummins (UI) Dep. Tr. 150:24-151:5).

B. UI Agreed to Purchase Prince George Without Sufficient Due Diligence

223. UI first learned of the Prince George opportunity in [redacted]. Cummins (UI) Hrg. Tr. 1777:23-1778:1. UI began due diligence after its CEO signed a non-disclosure agreement on [redacted]. PX2504 (PeroxyChem) at 001; Cummins (UI) Hrg. Tr. 1780:1-16. At this time, UI had [redacted] PX2504 (PeroxyChem) at 001; Cummins (UI) Hrg. Tr. 1780:17-1781:3. UI submitted a final offer letter for Prince George on [redacted]. PX1515 (Evonik) at 002-056; Cummins (UI) Hrg. Tr. 1783:22-25. UI, Evonik and PeroxyChem executed the Share Purchase Agreement for the purchase of Prince George as of [redacted]. JX0147 (UI) at 001-105; Cummins (UI) Hrg. Tr. 1784:1-3. This was approximately [redacted] after UI's CEO said [redacted]. Cummins (UI) Hrg. Tr. 1784:4-10.

224. Mr. Cummins recommended that UI purchase the Prince George plant. Cummins (UI) Hrg. Tr. at 1748:17-24, 1777:3-10. The basis for his recommendation was [redacted] *Id.* at 1748:25-1749:5, 1777:11-17. However, [redacted]. JX0058 (Cummins (UI) Dep. Tr. 114:7-9).

225. [redacted]. Cummins (UI) Hrg. Tr. at 1795:12-16. [redacted]. *Id.* at 1749:10-16, 1785:24-1786:7; JX0142 (UI) at 001-36; JX0146 (UI) at 001-26.

226. [redacted]. Cummins (UI) Hrg. Tr. 1781:7-17. [redacted]. *Id.* at 109:18-23. [redacted]. *Id.* at 1781:18-23. [redacted] *Id.* at 1782:13-14, 1783:15-16.

227. [redacted] JX0146 (UI) at 003. [redacted]. Cummins (UI) Hrg. Tr. 1874:19-21.

228. [redacted]. JX0142 at 002-03; Cummins (UI) Hrg. Tr. 1787:25-1788:6, 1789:17-21, 1790:1-6. [redacted]. PX1515 at 002; Cummins (UI) Hrg. Tr. 1790:11-13.

C. <u>Serious and Substantial Questions Remain as to Prince George's Viability</u>

229. **Prince George is losing its largest and most profitable customer**. In the second half of 2019, Prince George's will lose its single largest customer—Suncor. Cummins (UI) Hrg. Tr. 1804:12-18, 1805:11-14. Suncor was Prince George's highest profit margin customer and comprised [redacted] of Prince George's revenues in 2019. JX0141 (UI) at 017; Cummins (UI) Hrg. Tr. 1785:3-10, 1807:3-7. Evonik will now supply Suncor with H2O2. JX0141 (UI) at 055; Lerner (PeroxyChem) Hrg. Tr. 1431:19-25. [redacted] Prince George would be able to replace the lost Suncor volume. Cummins (UI) Hrg. Tr. 1809:15-1810:3.

230. [redacted] **is not joining UI should UI obtain the Prince George business**. [redacted]

Cummins testified [redacted]. Cummins (UI) Hrg. Tr. 1823:22-25. However, [redacted] will not be joining UI if it acquires Prince George. [redacted]; Cummins (UI) Hrg. Tr. 1831:17-25. [redacted] PX1515 (UI) at 004. Mr. Cummins offered no basis to disagree with UI's CEO and CFO's assessment of [redacted]. Cummins (UI) Hrg. Tr. 1905:4-7. [redacted]. *Id.* at 1832:1-5; *see also* PX1519 (UI) at 001.

231. [redacted] will transfer to UI if it acquires Prince George, [redacted] PX1515 (UI) at 003; Cummins (UI) Hrg. Tr. 1767:15-17.

232. **UI expressly stated that** [redacted]**.** [redacted] PX1515 (UI) at 003. Mr. Cummins offered no basis for disagreeing with the statement [redacted]. Cummins (UI) Hrg. Tr. 1829:5-12.

233. **raise concerns about UI's ability to maintain or win customers following acquisition of Prince George.** . JX0147 (UI) at 038, 039-040.

234. . JX0147 (UI) at 057; Cummins (UI) Hrg. Tr. 1864:19-1866:5.

235. JX0147 (UI) at 058.

D. UI Has No Concrete Business Plans for Prince George

236. . Cummins (UI) Hrg. Tr. 1890:16-1891:1. . *Id.* at 1891:2-24. . *Id.* at 1891:25-1892:10.

237. [redacted]. Cummins (UI) Hrg. Tr. at 1804:1-9.

238. [redacted]. Cummins (UI) Hrg. Tr. at 1823:10-13. [redacted]. *Id.* at 1892:11-16.

239. [redacted]. Cummins (UI) Hrg. Tr. at 1892:17-20.

240. [redacted]. *Id.* at 1812:2-1820:8. [redacted]. *Id.* at 1817:16-20. [redacted]. *Id.* at 1816:13-23. [redacted], *see supra* Section III.A, and [redacted]. Cummins (UI) Hrg. Tr. 1818:8-18. [redacted]. *Id.* at 1819:6-8.

E. <u>UI Has Ongoing Commercial Relationships With Evonik and PeroxyChem</u>

241. Evonik and UI both derive from the same predecessor company, Degussa. Cummins (UI) Hrg. Tr. 1741:20-25. UI and Evonik continue to have commercial relationships, including buying products from one another. *Id.* at 1742:8-10, 1774:22-1775:3, 1775:10-12. UI's sales to Evonik are worth [redacted] to UI. *Id.* at 1775:10-18. UI also has ongoing commercial relationships with PeroxyChem. *Id.* at 1742:21-23.

242. Additionally, UI [redacted]

[redacted] Cummins (UI) Hrg. Tr. at 1775:24-1776:2. [redacted] [redacted] *Id.* at 1776:3-5. [redacted] [redacted] *Id.* at 1776:6-9. [redacted] [redacted] [redacted]. *Id.* at 1776:10-20.

F. UI Is Purchasing Prince George for Well Below Fair Value

243. UI engaged [redacted], an investment bank with expertise in pricing and valuing assets and advising companies on mergers and acquisitions, to advise it in connection with the Prince George transaction. Cummins (UI) Hrg. Tr. 1792:25-1793:12. [redacted] [redacted] [redacted] [redacted] JX0146 (UI) at 004; Cummins (UI) Hrg. Tr. 1761:14-22.

244. [redacted] [redacted].

Cummins (UI) Hrg. Tr. 1877:13-1878:20; JX0058 (Cummins (UI) Dep. Tr. 221:19-222:2). Mr. Cummins admitted that he does not have any basis to disagree with the work [redacted] did in producing the summary valuation assessment. Cummins (UI) Hrg. Tr. 1885:23-1886:9.

245. UI has agreed to pay [redacted] for Prince George, less other amounts specified in the Share Purchase Agreement. JX0147 (UI) at 017. [redacted] [redacted] [redacted]. Cummins (UI) Hrg. Tr. 1893:4-10.

G. Other Bidders for the Prince George Business Declined Due to Risk

246. [redacted] declined Evonik's invitation to submit a bid for the Prince George plant.

[redacted]. A [redacted] executive testified that the company declined to bid because "there were too many risks that were involved with the business . . ." including the loss of Suncor. [redacted]. [redacted] concluded "it would be very difficult" to make up the business lost at Suncor in the near term. *Id.* at 552:8-17. Even with these risks attached, however, [redacted] internal valuation of Prince George placed the plant's value at [redacted].

IX. DEFENDANTS FAILED TO REBUT THE STRONG PRESUMPTION OF ILLEGALITY

A. Entry and Expansion Are Unlikely to be Timely, Likely and Sufficient to Mitigate the Anticompetitive Effect of the Acquisition

247. Dr. Rothman concluded that *de novo* entry of a new H2O2 firm would not be timely, likely or sufficient to mitigate the effect of the Acquisition. Rothman Hrg. Tr. 776:22-777:3; JX0075 (Rothman Rpt.) ¶ 255. Similarly, Dr. Rothman concluded that expansion by the current suppliers of H2O2 would be unlikely to mitigate the anticompetitive effects of the Acquisition. Rothman Hrg. Tr. 778:3-6; JX0075 (Rothman Rpt.) ¶ 262.

248. **The prospect of new entry in North America is remote.** A new entrant would need to build at least one H2O2 plant to compete in the Southern and Central United States or the Pacific Northwest. Building a new H2O2 plant would take an investment of upwards of $100 million. Rothman Hrg. Tr. 777:10-13. Evonik estimates that the cost of building a new production plant would be approximately [redacted] million per [redacted] metric tons of annual H2O2 capacity, not including the cost of land and infrastructure. PX0002 (Evonik) at 030. Likewise, PeroxyChem estimates that the replacement cost of its Prince George plant is [redacted] and its Bayport plant [redacted] million. JX0077 (PeroxyChem) at 014. Other market participants make similar assessments. *See* [redacted] ("My understanding is that building a new [H2O2] plant would be

very capital intensive."); [redacted] ("I estimate that the addition of another line would cost $1-1.2 million per 1,000 metric tons of additional expansion."). Further, building a new production plant would take several years. Rothman Hrg. Tr. 777:14-17; PX0002 (Evonik) at 030; JX0077 (PeroxyChem) at 014. There has been no new entry in North America since the 1990s. JX0018 (Kulp (Evonik) IH Tr. at 150:19-22); JX0025 (Willis (PeroxyChem) IH Tr. 179:12-180:6); JX0075 (Rothman Rpt.) ¶ 256.

249. **Customers are unlikely to vertically integrate.** While H2O2 is an important product for customers, it represents a relatively small portion of their overall spending. Rothman Hrg. Tr. 780:2-12; JX0075 (Rothman Rpt.) ¶¶ 259-60; Maeder (Verso) Hrg. Tr. 138:23-139:1 (H2O2 accounts for less than five percent of Verso's spend); Niessner (GPI) Hrg. Tr. 1007:19-23 (H2O2 accounts for less than two percent of GPI's total chemical spend). As a result, it is unlikely that customers would be willing to make the necessary investments of time and capital to construct a H2O2 plant. *See, e.g.*, [redacted] ([redacted] "has never considered producing its own [H2O2]"); [redacted] ("I understand that [redacted] conducted research into buying a small-scale [H2O2] satellite plant, located at a mill, but that the investment required for even a small plant was estimated at approximately $15 million. [redacted] would not consider this investment unless [H2O2] was no longer available from domestic suppliers."); [redacted] (vertical integration in the North American market is not likely to be viable).

250. **H2O2 production in North America has expanded minimally over the last decade.** According to IHS, North American production of H2O2 has varied little since around 2000. JX0081 (IHS) at 019-21, 034.

251. The only expansion within the last decade was in 2016, when Solvay expanded capacity

at its Longview, Washington plant. [redacted]. [redacted] Suter (Solvay) Hrg. Tr. 442:20-443:3. However, [redacted] Suter (Solvay) Hrg. Tr. 443:18-444:1; JX0118 (Evonik) at 003. [redacted] Suter (Solvay) Hrg. Tr. 444:2-4.

252. Aside from the Longview expansion, the only H2O2 capacity expansion has been the result of debottlenecking efforts. JX0102 (PeroxyChem) at 003; [redacted]

253. **None of the major North American suppliers of H2O2 have plans to expand H2O2 capacity.** [redacted] has no plans to build a new plant or to do any major capital expansions. [redacted]. Similarly, [redacted] has no plans to expand capacity [redacted] 6. [redacted] has no plans to expand its capacity [redacted]. While [redacted] could engage in debottlenecking efforts, this would increase [redacted] capacity by [redacted] at most. [redacted].

254. **Expanding capacity would be costly and time consuming, and a supplier would be unlikely to recover the investment at current prices.** Any expansion efforts would cost suppliers "in the double digit millions." Rothman Hrg. Tr. 779:15-23. Solvay's Longview expansion provides a prime example of this costliness: Solvay invested approximately $23 million to increase Longview's capacity by 20 percent. JX0077 (PeroxyChem) at 014; [redacted]. Further, expansions of existing plants take years. Rothman Hrg. 779:24-780:1; [redacted].

255. [redacted] notes that the H2O2 market has no need for additional capacity

and that an additional plant will bring prices down. [redacted]. Likewise, an [redacted] document advises against expanding [redacted] capacity at [redacted] because demand is unlikely to increase beyond the industry's current capacity. [redacted]. [redacted] does not believe that current capacity warrants expansion at any plant in North America. [redacted]. A study commissioned by [redacted] similarly concluded that capacity expansion by Evonik, post-Acquisition would be unlikely at current prices. [redacted]

256. **There is no evidence of imports.** Due to freight and logistics costs, imports of H2O2 are very rare and industry participants do not view imports as a competitive threat. Costanzo (Evonik) Hrg. Tr. 1106:25-1107:23; Maeder (Verso) Hrg. Tr. 147:2-10; JX0025 (Willis (PeroxyChem) IH Tr. 181:12-18); [redacted]; JX0002 (RYAM Decl.) ¶ 8; [redacted]; JX0005 (Arkema Decl.) ¶ 9; [redacted]; JX0007 (Canfor Decl.) ¶ 6; JX0009 (Nouryon Decl.) ¶ 10.

257. **There is recent history of market participants exiting, not entering, the H2O2 market.** In 2011, Kemira exited the H2O2 market by selling its Maitland plant to Evonik. JX0077 (PeroxyChem) at 039. Similarly, PeroxyChem closed a H2O2 production facility in South Charleston, West Virginia in the late 1990s. JX0018 (Kulp (Evonik) IH Tr. 151:5-13). In 2009, PeroxyChem closed a plant located in Santa Clara, Mexico, which had a capacity of approximately [redacted] million pounds per year. JX0032 (Ball (PeroxyChem) Dep. Tr. 8:5-9:10).

258. **Solugen, a small, specialty chemicals company in Houston, Texas, in unlikely to be a viable option for many customers.** Solugen produces virtually no H2O2 for sale today. JX0057 (Chakrabarti (Solugen) Dep. Tr. 9:23-25, 31:6-32:18 85:6-11). In fact, Solugen currently

purchases H2O2 from Arkema to resell to customers. *Id.* at 19:3-20:11, 21:25-22:20. At most, Solugen believes it might be able to produce as much as 30 metric tons by 2024, which Solugen's CEO testified was "very optimistic." *Id.* at 121:18-123:18. This is less than PeroxyChem's Prince George facility, the smallest H2O2 facility in North America, which produces [redacted] metric tons annually. JX0077 (PeroxyChem) at 016. Therefore, even if Solugen's full plans comes to fruition without delay, Solugen will continue to be a very small producer of H2O2 for the foreseeable future. JX0057 (Chakrabarti (Solugen) Dep. Tr. 106:14-107:5). Further, PeroxyChem's Global Business director evaluated Solugen as follows: [redacted] PX2342 (PeroxyChem) at 002. Similarly, one Evonik executive was not even aware of whether Solugen produced H2O2 in North America. JX0028 (Hamann (Evonik) IH Tr. 127:24-128:13).

B. Efficiency Claims Are Insufficient to Offset the Competitive Harm From the Acquisition

259. **Defendant's efficiencies arguments are speculative and unsubstantiated.** Evonik executives admit that the efficiencies estimates for this Acquisition were done at a very high level, without a great deal of analysis. Rettig (Evonik) Hrg. Tr. 1054:14-1055:6; [redacted]. Indeed, in an Evonik document, one Evonik executive admits some of the projected efficiencies resulting from the acquisition are [redacted] PX1067 (Evonik) at 001.

260. Many of Evonik's estimates are based on assumptions that are not subject to reasonable verification. While preparing its efficiencies analysis, Evonik lacked information concerning PeroxyChem's delivery methods, logistics setup, equipment, utility prices, and consumption figures, so instead relied on assumptions based on previous acquisitions. JX0028 (Hamann (Evonik) IH Tr. 37:10-38:9); JX0021 (Katzer (Evonik) IH Tr. 83:23-84:10, 90:16-91:8).

261. Dr. Rothman also testified that the claimed cost savings are not substantiated. Rothman Hrg. Tr. 783:5-16. While Defendants produced an Excel spreadsheet with claimed efficiencies, many of the numbers were "hard-coded," thereby making it impossible to determine how the number was calculated or to verify the assumptions that went into the calculation. *Id.*

262. **Defendants' claimed efficiencies are not merger specific.** PeroxyChem could realize many of these cost-savings on its own in the absence of the merger. JX0075 (Rothman Rpt.) ¶ 278. For example, a PeroxyChem executive testified that that PeroxyChem would be able to optimize its logistics network independently, but, in anticipation of the merger, has declined to do so. JX0022 (Ball (PeroxyChem) IH Tr. 38:6-39:20).

263. **The claimed efficiencies are unlikely to be passed onto customers.** Defendants have failed to make any showing that the claimed cost-savings will benefit customers. In fact, when Evonik acquired the Maitland plaint in 2011, Evonik raised customer prices. PX1277 (Evonik) at 017-18, 021-22. One Evonik executive testified that [redacted]. JX0021 (Katzer (Evonik) IH Tr. 139:13-141:8).

264. **Some of the claimed efficiencies are outside the relevant markets.** Many of Defendants' claimed efficiencies relate to cost savings outside of the relevant product market (in the peracetic acid business and) outside of the relevant geographic market (in Brazil, Europe, or Asia). JX0027 (Costanzo (Evonik) IH Tr. 202:22-203:8); JX0021 (Katzer (Evonik) IH Tr. 26:23-27:7, 38:13-39:13); JX0079 (Evonik) at 008-10.

265. **Dr. Hill's predicted logistics savings are not grounded in reality.** As part of his relative distance model, Dr. Hill predicted logistics savings as a result of the merged entity serving customers from the closest plant. Hill Hrg. Tr. 2041:1-12. However, Dr. Hill's predicted

savings are higher than the logistics savings that Evonik calculated. *Id.* at 2209:18-2212:10 (Dr. Hill's predicted logistics savings were in excess of [redacted], compared to [redacted] in 2020 predicted by Evonik). Finally, Dr. Hill [redacted]. *Id.* at 2213:2-17.

266. **The harm resulting from the Acquisition outweighs the benefit of any claimed efficiencies.** Dr. Rothman testified that, even putting aside the other flaws in Defendants' efficiencies claims, the claimed efficiencies do not outweigh his estimate of the competitive harm resulting from this merger. Rothman Hrg. Tr. 784:5-22; JX0075 (Rothman Rpt.) ¶ 330. Dr. Rothman predicts harm in the range of $25 million to $33 million per year, which is considerably larger than any estimate of efficiencies. Rothman Hrg. Tr. 784:5-22.

C. Defendants Failed to Show that Customers have the Power to Discipline a Post-Acquisition Price Increase

267. Dr. Hill testified that powerful buyers create incentives for firms to cheat on a common understanding because each supplier has an incentive to try to win that large buyer. Hill Hrg. Tr. 2058:8-17. However, this ignores market realities.

268. Even large pulp and paper customers, who purchase the most H2O2, testified that while they typically conduct RFPs for all of their mills simultaneously, they award business on a mill-by-mill basis. Maeder (Verso) Hrg. 140:7-14; [redacted]; [redacted]. Thus, different suppliers often supply the same customer at different mills, and are competing for portions of that customer's total volume. [redacted]; [redacted]; [redacted]; [redacted]; [redacted]; [redacted]; [redacted].

PLAINTIFF'S PROPOSED CONCLUSIONS OF LAW

I. THE COURT HAS JURISDICTION OVER THIS ACTION

1. This action seeks a preliminary injunction pending an administrative adjudication on the merits of whether the proposed transaction violates Section 7 of the Clayton Act, 5 U.S.C. § 18, and Section 5 of the Federal Trade Commission Act ("FTC Act"), 15 U.S.C. § 45. This Court has subject matter jurisdiction pursuant to 15 U.S.C. § 53(b).

2. Defendants are, and at all relevant times have been, engaged in activities in or affecting "commerce" as defined in Section 4 of the FTC Act, 15 U.S.C. § 44, and Section 1 of the Clayton Act, 15 U.S.C. § 12.

3. Defendants Evonik and PeroxyChem have consented to personal jurisdiction in the District of Columbia. Venue is proper in this District under 28 U.S.C. § 1391(b) and (c), as well as under 15 U.S.C. § 53(b).

II. THE STANDARD FOR A PRELIMINARY INJUNCTION IS MET

4. Plaintiff "seek[s] a preliminary injunction to prevent a merger pending the Commission's administrative adjudication of the merger's legality." *FTC v. H.J. Heinz Co.*, 246 F.3d 708, 714 (D.C. Cir. 2001) (internal quotations omitted). Preliminary injunctions are "readily available" under Section 13(b) of the FTC Act "to preserve the status quo while the FTC develops its ultimate case." *FTC v. Whole Foods Mkt., Inc.*, 548 F.3d 1028, 1036 (D.C. Cir. 2008); *see* 15 U.S.C. § 53(b).

5. The Court should issue a preliminary injunction under Section 13(b) "where such action would be in the public interest—as determined by a weighing of the equities and a consideration of the Commission's likelihood of success on the merits." *Heinz*, 246 F.3d at 714. Under Section 13(b)'s "unique public interest standard," the FTC is "not held to the high thresholds applicable

where private parties seek interim restraining orders." *FTC v. Tronox Ltd.*, 332 F. Supp. 3d 187, 197 (D.D.C. 2018) (quoting *Heinz*, 246 F.3d at 714).

6. To evaluate the FTC's "likelihood of success on the merits," this Court need only "measure the probability that, after an *administrative hearing on the merits*, the [FTC] will succeed in proving that the effect of the [proposed transaction] may be substantially to lessen competition . . . in violation of the Clayton Act." *Tronox*, 332 F. Supp. 3d at 197 (quoting *FTC v. Sysco Corp.*, 113 F. Supp. 3d 1, 22 (D.D.C. 2015)) (emphasis added). The FTC "is not required to *establish* that the proposed merger would in fact violate" the Act, *Heinz*, 246 F.3d at 714, as the district court "is not authorized to determine whether the antitrust laws . . . are about to be violated. That responsibility lies with the FTC." *Whole Foods*, 548 F.3d at 1035.

7. The district court "balance[s] the likelihood of the FTC's success against the equities, under a sliding scale." *Whole Foods*, 548 F.3d at 1035. "The equities will often weigh in favor of the FTC, since the public interest in effective enforcement of the antitrust laws was Congress's specific public equity consideration in enacting" Section 13(b). *Id.* (internal quotations omitted).

8. If the FTC demonstrates a likelihood that it will prevail after an administrative hearing on the merits, an injunction should issue, as the "public interest in effective enforcement of the antitrust laws is of primary importance," and "a showing of likely success on the merits will presumptively warrant an injunction." *Tronox*, 332 F. Supp. 3d at 198.

9. Here, Plaintiff has demonstrated a strong likelihood of success on the merits, and the equities weight strongly in favor of relief under Section 13(b).

III. THE PLAINTIFF HAS SHOWN A LIKELIHOOD OF SUCCESS ON THE MERITS

A. The Proposed Acquisition is Presumptively Unlawful

10. Plaintiff's underlying antitrust claims, to be adjudicated in an administrative hearing, are

brought under Section 7 of the Clayton Act, 15 U.S.C. § 18, and Section 5 of the FTC Act, 15 U.S.C. § 45.[5] Section 7 of the Clayton Act prohibits mergers and acquisitions whose "effect . . . may be substantially to lessen competition, or to tend to create a monopoly" in "any line of commerce . . . in any section of the country." 15 U.S.C. § 18.

11. Congress intended Section 7 to stop anticompetitive mergers "in their incipiency," *Brown Shoe v. United States*, 370 U.S. 294, 318, 346 (1962) and "used the words '*may* be substantially to lessen competition' . . . to indicate that its concern was with probabilities, not certainties." *Id.* at 323 (quoting 15 U.S.C. § 18). As a result, "[a] certainty, even a high probability, need not be shown," and "doubts are to be resolved against the transaction." *FTC v. Elders Grain*, 868 F.2d 901, 906 (7th Cir. 1989).

12. At the merits stage, courts typically assess whether a merger violates Section 7 of the Clayton Act by determining: (1) the "line of commerce," or relevant product market; (2) the "section of the country," or relevant geographic market; and (3) the merger's probable effect on competition in the relevant product and geographic markets. *See United States v. Marine Bancorp., Inc.*, 418 U.S. 602, 618-23 (1974).

13. Courts in this Circuit employ a burden-shifting approach to determine if a merger violates Section 7. The government bears the initial burden of "showing that a transaction will lead to undue concentration in" the relevant product and geographic markets, which "establishes a presumption that the merger will substantially lessen competition." *United States v. Baker Hughes*, 908 F.2d 981, 982 (D.C. Cir. 1990). By meeting its initial burden, the government makes out a *prima facie* case. *United State v. Anthem, Inc.*, 855 F.3d 345, 349 (D.C. Cir. 2017).

14. Once the government makes out its *prima facie* case, the burden shifts to the defendant to

[5] An acquisition that violates the Clayton Act also violates Section 5 of the FTC Act. *FTC v. Indiana Fed'n of Dentists*, 476 U.S. 447, 454 (1986).

produce evidence rebutting the presumption of illegality. *Marine Bancorp*, 418 U.S. at 631. A presumptively unlawful merger "must be enjoined," *United States v. Phila. Nat'l Bank*, 374 U.S. 321, 363 (1963), unless the defendants produce evidence "that the market-share statistics [give] an inaccurate account of the [merger's] probable effects on competition in the relevant market." *Heinz*, 246 F.3d at 715. A "more compelling . . . prima facie case" increases the amount of "evidence the defendant must present to rebut it successfully." *Baker Hughes*, 908 F.2d at 991.

15. Only "[i]f the defendant successfully rebuts the presumption" does "the burden of producing additional evidence of anticompetitive effect [shift] to the government," where it "merges with the ultimate burden of persuasion, which remains with the government at all times." *Baker Hughes*, 908 F.2d at 983.

i. The Relevant Product Market Is the Sale of Non-Electronics H2O2

16. A product market's "outer boundaries . . . are determined by the reasonable interchangeability of use or the cross-elasticity of demand between the product itself and substitutes for it." *Brown Shoe*, 370 U.S. at 325. A properly defined antitrust product market includes "all goods that are reasonable substitutes, even though the products themselves are not entirely the same." *Sysco*, 113 F. Supp. 3d at 25.

17. To determine if products are reasonable substitutes, courts consider "the extent to which buyers view similar products as substitutes and thus can substitute the use of one for the other" and "the extent to which variations in the price of one product . . . affects demand for another." *FTC v. Wilh. Wilhelmsen Holding ASA*, 341 F. Supp. 3d 27, 45-46 (D.D.C. 2018).

18. In addition to demand side factors, courts consider supply-side substitution—the ability of production facilities to adjust product mix—when defining the relevant market. *Brown Shoe*, 370 U.S. at 325 n.42. When suppliers can easily adjust their output to produce different products in response to changes in market conditions, a relevant product market should comprise those

products even though they are not demand substitutes. *Elders Grain*, 868 F.2d at 907; *Rebel Oil Co. v. Atl. Richfield Co.*, 51 F.3d 1421, 1436 (9th Cir. 1995).

19. Indeed, "[i]f producers of Product X can readily switch their production facilities to produce Product Y, then both should be included in the same product market." *Rebel Oil*, 51 F.3d at 1436. A proposed market definition that fails to account for supply-side substitutes is "erroneous because such an approach fails to consider the supply side of the market." *Virtual Maintenance, Inc. v. Prime Computer, Inc.*, 11 F.3d 660, 665 (6th Cir. 1993).

20. Firms "who, given product similarity, have the ability to take significant business from each other" compete in the same product market. *FTC v. CCC Holdings, Inc.*, 605 F. Supp. 2d 26, 38 (D.D.C. 2009). A firm that can "easily and profitably" shift its production to supply the relevant market "may be a rapid entrant" in that market. U.S. Dep't of Justice & Fed. Trade Comm'n, *Horizontal Merger Guidelines* § 5.1 (hereinafter *Guidelines*).[6] The *Guidelines* allow for some flexibility and allow for aggregation of different products in the same market when supply side substitution is "nearly universal." *Id.* at fn 8.

21. In assessing the boundaries of an antitrust relevant product market, ordinary course business documents, testimony from market participants, and economic analysis can all guide the court's inquiry. *See United States v. H&R Block, Inc.*, 833 F. Supp. 2d 36, 52 (D.D.C. 2011).

22. Courts employ the Hypothetical Monopolist Test ("HMT") to test if a candidate product market accounts for all reasonable substitutes. *Wilhelmsen*, 341 F. Supp. 3d at 47; *FTC v. Staples, Inc.*, 190 F. Supp. 3d 100, 121 (D.D.C. 2016) ("*Staples II*"); *Whole Foods*, 548 F.3d at 1038; *see also Guidelines* § 4.1. The test is an analytical method that "queries whether a

[6] Although the Guidelines are not binding, "they have been repeatedly relied on by the courts" in evaluating merger challenges. *FTC v. Tronox Ltd.*, 332 F. Supp. 3d 187, 206 (D.D.C. 2018); *accord FTC v. Staples*, 190 F. Supp. 3d 100, 117 (D.D.C. 2016) ("*Staples II*") ; *United States v. H&R Block, Inc.*, 833 F. Supp. 2d 36, 52 (D.D.C. 2011) .

hypothetical monopolist who has control over the products in an alleged market could profitably raise prices on those products." *Staples II*, 190 F. Supp. 3d at 121. If a firm with a monopoly over a set of products in a candidate market could profitably impose a small but significant non-transitory increase in price ("SSNIP"), those products constitute a relevant product market. *Guidelines* § 4.1.1. A SSNIP is normally 5% of the prevailing price. *Id.* § 4.1.2.

23. The relevant product market is the sale of H2O2, excluding electronics-grade H2O2. H2O2 is a commodity chemical with a range of end-use applications for which there are no "reasonable substitutes." *See Sysco*, 113 F. Supp. 3d at 25. Unrebutted testimony from customers across industry segments demonstrates that other chemicals cannot perform the same function as H2O2. PFF ¶¶ 5-9. Many customers design their processes around the use of H2O2 and report that it would be prohibitively expensive to switch to another chemical. *Id.* ¶ 10.

24. Grouping both standard and specialty grades of non-electronics H2O2 into the same product market is appropriate in light of strong supply-side substitutability between grades. *See Rebel Oil*, 51 F.3d at 1436; *Elders Grain*, 868 F.2d at 907; *Guidelines* § 5.1. Evidence from Defendants' own executives and ordinary course documents show that all H2O2 producers can easily alter their production facilities to swing capacity into virtually all H2O2 grades. PFF ¶¶ 17-21. Competitor testimony confirms that producers' emphases on different grades reflect their varying competitive strategies and not technical limitations. *Id.* ¶¶ 24-26. Defendants' expert has argued that swinging capacity from a higher grade to a lower grade would not be "profitable" because producers' *average* margins on certain H2O2 grades such as pre-electronics are higher than *average* margins on other grades. This argument fails, as it is contradicted by Defendants' prior admissions, *see* PFF ¶¶ 19-22, and by Dr. Rothman's demonstration that *average* margins mask considerable variation, as significant quantities of standard grade and

other specialty grades generate higher margins than pre-electronics sales. PFF ¶ 38. Moreover, as Judge Posner recognized, Defendants' argument "is based on a misunderstanding of competition." *Elders Grain*, 868 F.2d at 907. As long as H2O2 producers compete for customers who "might be lured away by a better offer," they might potentially find it profitable to swing capacity into any grade should market conditions warrant it. *Id.* Case law and antitrust principles dictate that both demand- and supply-side substitution should inform market definition. *See id.*; *Rebel Oil*, 51 F.3d at 1436. When all H2O2 producers may be rapid entrants for virtually all grades of H2O2, ignoring supply-side substitution between H2O2 grades would be legal error. *Rebel Oil*, 51 F.3d at 1436 ("defining a market on the basis of demand considerations alone is erroneous"); *Guidelines* § 5.1.

25. A product market defined as the sale of non-electronics H2O2 passes the HMT. *See Guidelines* § 4.1.1. Unrebutted economic analysis shows that a hypothetical monopolist of non-electronics H2O2 could profitably impose a SSNIP. PFF ¶¶ 11-14.

26. Electronics-grade H2O2 is not in the relevant market. In contrast to non-electronics H2O2, industry participants recognize the production and sale of electronics grade H2O2 as distinct, facing unique conditions. PFF ¶¶ 53-59; *see Brown Shoe*, 370 U.S. at 325. Producing electronics-grade H2O2 involves proprietary technology that is not shared by all H2O2 producers. PFF ¶¶ 55-57. H2O2 producers that do not make electronics grade cannot easily adjust their product mix to supply electronics grade customers, and therefore are not rapid entrants into the market for those customers. *See Guidelines* § 5.1.

ii. Defendants' Current Product Mixes Do Not Disprove the Relevant Market

27. While Defendants have advanced no product market in which to analyze the competitive effects of the transaction, they criticize the FTC's product market based on an argument that

H2O2 products and Defendants' competitive strategies are differentiated. This argument fails, as significant evidence contradicts Defendants' claims that Evonik and PeroxyChem pursue different competitive strategies. Evonik's ordinary course documents demonstrate that it is pursuing a competitive strategy of expanding its specialty output, just like PeroxyChem, Arkema, and Solvay. PFF ¶ 51. In addition, ordinary course documents show that Defendants view each other as competitors across nearly all grades of non-electronics H2O2. PFF ¶¶ 33-52. *FTC v. Cardinal Health, Inc.*, 12 F. Supp. 2d 34, 46 (D.D.C. 1998) ("the determination of the relevant market in the end is a matter of business reality—[ ]of how the market is perceived by those who strive for profit in it.") (internal quotations omitted).

28. Even if the Court credits Defendants' suggestion that they currently sell different product mixes, the evidence shows that competition in the H2O2 industry occurs between all producers across virtually all grades. PFF ¶¶ 39, 167. Moreover, H2O2 producers' efforts to expand into new end uses is a critical element of competition between them, PFF ¶ 51, confirming that a snapshot of the end uses an H2O2 producer serves at a particular moment is an inappropriate basis on which to reject the FTC's product market. *See Whole Foods*, 548 F.3d at 1039 ("As always in defining a market, we must take into account the realities of competition.").

29. Unable to rebut the evidence of supply-side substitutability, Defendants ask the Court to ignore it. Case law and antitrust principles dictate that both demand- and supply-side substitution should inform market definition. *See Elders Grain*, 868 F.2d at 907; *Rebel Oil*, 51 F.3d at 1436. When all H2O2 producers may be rapid entrants for virtually all grades of H2O2, ignoring supply-side substitution between H2O2 grades would be legal error. *Id.* ("defining a market on the basis of demand considerations alone is erroneous"); *Guidelines* § 5.1.

iii. The Relevant Geographic Markets are the Southern and Central United States and the Pacific Northwest

30. The relevant geographic market is "the region in which the seller operates, and to which the purchaser can practicably turn for supplies." *Cardinal Health*, 12 F. Supp. 2d at 49. Courts take a "pragmatic, factual approach" to defining a geographic market that "correspond[s] to the commercial realities of the industry and [is] economically significant." *Brown Shoe*, 370 U.S. at 336-37.

31. As they do when analyzing the relevant product market, courts use the HMT to define the bounds of the relevant geographic market. *See Tronox*, 332 F. Supp. 3d at 204. "That test asks what would happen if a single firm became the only seller in a candidate geographic region." *FTC v. Advocate Health Care Network*, 841 F.3d 460, 468 (7th Cir. 2016) (citing *Whole Foods*, 548 F.3d at 1038). "If that hypothetical monopolist could profitably raise prices above competitive levels, the region is a relevant geographic market . . . But if customers would defeat the attempted price increase by buying from outside the region, it is not a relevant market; the test should be rerun using a larger candidate region." *Advocate*, 841 F.3d at 468.

32. When suppliers set prices based on customer location, it is appropriate to define the relevant market as the geographic region where those customers are located. *Sysco*, 113 F. Supp. 3d at 50-52; *Guidelines* § 4.2.2. Such regional markets "often apply when suppliers deliver their products or services to customers' locations." *Id.* If a hypothetical monopolist in a region can impose a SSNIP that "would not be defeated by substitution away from the relevant product or by arbitrage," that region would be a relevant geographic market. *Guidelines* § 4.2.2.

33. Here, the FTC has shown, and Defendants agree, that markets defined around customer location are appropriate. H2O2 producers set individual prices for each of their customers, and these prices include the cost of freight. PFF ¶¶ 62-63. Because H2O2 is shipped diluted in water, shipping costs are high, and customers cannot avoid targeted price increases through arbitrage.

PFF ¶¶ 60-66. Accordingly, customers in regions around H2O2 plants are likely to face the same competitive conditions. *Id.*

34. Ordinary course documents, customer testimony, and economic analysis demonstrate that the Southern and Central United States is a relevant market. PFF ¶¶ 72-76. Defendants offered no rebuttal to ordinary course documents showing that PeroxyChem has long defined a Southern and Central United States market similar to the one the FTC proposes. *Id.*

35. Defendants argue that the Southern and Central United States market is too broad because H2O2 producers' share of sales vary in different particular states within it, but propose no subset of states in which the competitive effects of the transaction appear any different. Dr. Rothman's sensitivity analyses show that the merger's effect on sub-regions within the Southern and Central United States is comparable to its effect on the market as a whole. PFF ¶ 77. Economic analysis based on actual customers in the Southern and Central United States shows that all customers in the market can turn to the same set of suppliers. *Id.* ¶ 76. The purpose of geographic market definition is not to draw a map "by metes and bounds as a surveyor would lay off a plot of ground," but to ensure "that the Court understands in which part of the country competition is threatened." *Cardinal Health*, 12 F. Supp. 2d at 49. *Cf. FTC v. Advocate Health Care*, 2017 WL 1022015 (N.D. Ill. March 16, 2017) (following remand, the district court concluded that the FTC's expert in that case "appropriately delineated the relevant geographic market," *id.* at *6, when he concluded that while "six party hospitals alone constitute a relevant geographic market in which it would be appropriate to assess the transaction," "in an effort to be "conservative," he "focus[ed] [his] analysis on a broader geographic market," defined to include [five] additional competing hospitals," *id.* at *3-4).

36. Ordinary course evidence, customer testimony, and economic analysis demonstrate that

the Pacific Northwest is a relevant market. PFF ¶¶ 78-82.

37. Defendants do not refute the evidence of unique competitive conditions in the Pacific Northwest, but instead urge the Court to ignore the transaction's effect on competition there because most of the customers in the market are located in Canada. The Court should reject this argument because such considerations relate to agency discretion, and not the application of the antitrust laws to this Acquisition. Moreover, the evidence shows that the Canadian customers transact a significant volume of business in the United States. PFF ¶¶ 199.

iv. The Acquisition is Presumptively Illegal Because it Would Lead to Undue Concentration in the Relevant Markets

38. A merger that significantly increases market shares and concentration levels is presumptively unlawful under Section 7 of the Clayton Act. *Phila. Nat'l Bank*, 374 U.S. at 362-63; *Heinz*, 246 F.3d at 716. Such a merger "is so inherently likely to lessen competition substantially that it must be enjoined" unless defendants successfully rebut the presumption. *Phila. Nat'l Bank*, 374 U.S. at 363.

39. Courts use the Herfindahl-Hirshman Index ("HHI") to measure concentration in a market. *Wilhelmsen*, 341 F. Supp. 3d at 58; *Heinz*, 246 F.3d at 716; *FTC v. Swedish Match*, 131 F. Supp. 2d 151, 166-67 (D.D.C. 2000). HHIs are calculated by summing the squares of each market participant's individual market shares both pre- and post- acquisition. *Tronox*, 332 F. Supp. at 207; *Sysco*, 113 F. Supp. 3d at 52-53; *Heinz*, 246 F.3d at 716; *Guidelines* § 5.3. Market share calculations are necessarily approximate, as "[t]he FTC need not present market shares and HHI estimates with the precision of a NASA scientist." *Sysco*, 113 F. Supp. 3d at 54.

40. Under the *Guidelines*, a market with an HHI above 2,500 is considered "highly concentrated." A merger that that increases the HHI by more than 200 points and results in a highly concentrated market is "presumed to be likely to enhance market power" in the absence of

"persuasive evidence showing that the merger is unlikely to enhance market power." *Guidelines* § 5.3. An acquisition resulting in such a market "establish[es] the government's prima facie case that a merger is anticompetitive." *H&R Block*, 833 F. Supp. 2d at 71.

41. The evidence shows that Evonik, PeroxyChem, Solvay, Arkema, and Nouryon compete for non-electronics H2O2 in the Southern and Central United States. PFF ¶¶ 95-98. Dr. Rothman calculated market shares using supplier sales data. The pre-Aquisition HHI in the Southern and Central United States is 2,258. *Id.* ¶ 107. The post-Aquisition HHI is 3,335, with an increase of 1,077. *Id.*

42. The evidence shows that Evonik, PeroxyChem, and Solvay compete in the Pacific Northwest. PFF ¶¶ 99-102. Dr. Rothman calculated market shares using supplier sales. The pre-Acquisition HHI in the Pacific Northwest is 3,344. *Id.* ¶ 110. The post-Acquisition HHI is 4,918, an increase in 1,573. *Id.*

43. The post-Acquisition HHIs indicate that the Acquisition will result in highly concentrated markets in both the Southern and Central United States and the Pacific Northwest. *Guidelines* § 5.3. The changes in HHI exceed the threshold necessary to trigger a presumption of illegality by a factor of five in the Southern and Central United States and by a factor of seven in the Pacific Northwest. *Id.* These increases in concentration are in line with recent cases that courts in this Circuit have enjoined. *See, e.g.*, *Tronox*, 332 F. Supp. 3d 187; *Anthem*, 885 F.3d 345; *H&R Block*, 833 F. Supp. 2d 36; *Heinz*, 246 F.3d 708; *Swedish Match*, 131 F. Supp. 2d 151; *Cardinal Health*, 12 F. Supp. 2d 34.

44. It is Defendants' burden "to produce evidence that shows that the market-share statistics give an inaccurate account of the merger's probable effects on competition." *Heinz*, 246 F.3d at 715. Nevertheless, Dr. Rothman conducted sensitivity analyses to determine if the presumption

of illegality depends on the precise definition of the relevant market. PFF ¶¶ 104, 108-09, 111. Across a variety of hypothetical product and geographic markets, both broader and narrower than the markets that the FTC defined, the presumption holds. *Id.*

v. Evidence of Competitive Effects Corroborates the Presumption of Illegality

45. Plaintiff bolsters its *prima facie* case with direct evidence that the merger will substantially lessen competition. The Acquisition would increase the market's vulnerability to coordination and eliminate beneficial head-to-head competition between Evonik and PeroxyChem.

1. The Merger Will Increase the Potential for Coordinated Interaction in a Market Vulnerable to It

46. "Merger law rests upon the theory that where rivals are few, firms will be able to coordinate their behavior" in anticompetitive ways. *Heinz*, 246 F.3d at 715 (internal quotations omitted). Coordination refers to "conduct by multiple firms that is profitable for each of them only as a result of the accommodating reactions of the others." *Guidelines* § 7. Coordinated interaction may entail an "explicit negotiation of a common understanding" or a tacit agreement "enforced by the detection and punishment of deviations." *Id.*

47. Precisely because "there is nothing improper" about firms making independent decisions to increase profits, tacit coordination poses an especially potent threat to competition. *Tronox*, 332 F. Supp. 3d at 208; *see also Guidelines* § 7 ("Coordinated interaction includes conduct not otherwise condemned by the antitrust laws."). For this reason, "[i]t is a central object of merger policy to obstruct the creation or reinforcement by merger of such oligopolistic market structures in which tacit coordination can occur." *Heinz*, 246 F.3d at 725.

48. However, it is not necessary for the FTC to demonstrate that market participants can form and enforce an agreement. *In re Tronox Ltd.*, Dkt. No. 9377, 2018 WL 6630200, at *29, (F.T.C.

Dec. 14, 2018); *see also FTC v. OST Healthcare Sys.*, 822 F. Supp. 2d 1069, 1088 (N.D. Ill. 2012) ("To be clear, the court is not finding that the hospitals would necessarily collude after the merger, only that this merger adds to the risk of such behavior.").

49. A market "prone to collusion by reason of its history and circumstances is unlawful in the absence of special circumstances." *Elders Grain*, 868 F.2d at 906. Markets with a history of express collusion are presumed vulnerable to coordination "unless competitive conditions in the market have since changed significantly." *Guidelines* § 7.2. When the FTC shows that an industry is so concentrated as to raise the potential for coordinated interaction, "the burden is on the Defendants to demonstrate 'structural barriers,' unique to this industry, that are sufficient to defeat" the presumption of vulnerability. *CCC Holdings*, 605 F. Supp. 2d at 60.

50. Beyond the market's structure and history, the *Guidelines* detail several attributes of markets that are typically more vulnerable to collusion, including homogenous products, low elasticity of demand, and transparency in the "terms of dealing" or "the identities of firms serving particular customers." *Guidelines* § 7.2.

51. Courts assessing if a market is vulnerable to coordination ask if "producers recognize their shared economic interests and their interdependence with respect to price and output decisions." *FTC v. Arch Coal*, 329 F. Supp. 2d 109, 131 (D.D.C. 2004) (internal quotations omitted). Further, courts have found a market vulnerable to coordination where competitors are "able to maintain price discipline and control supply in a post-merger market simply by competing less vigorously against each other for major accounts." *Tronox*, 332 F. Supp. 3d at 210. Further, if producers in a market "have already shown an awareness that implicit coordination would be beneficial," an acquisition will make it "easier to coordinate through implicit understanding and sheer market power." *Id.* at 209.

52. Courts in this Circuit look to "[t]he available real-world evidence" to evaluate whether the "merger raises serious and substantial questions about likely anticompetitive effects." *Tronox*, 332 F. Supp. 3d at 210.

53. Here, the FTC has established that the H2O2 market is vulnerable to coordinated interaction. High levels of concentration and a history of industry price-fixing, including an admission of guilt by Evonik's predecessor, create a presumption that the market is vulnerable to coordinated interaction. PFF ¶¶ 142-43. Defendants argue that the market has changed since the price-fixing era, but the relevant changes actually render the market more conducive to coordination, with one competitor from that era having exited the market. *Id.* ¶¶ 147-49; *Heinz*, 246 F.3d at 715-16 ("Increases in concentration above certain levels are thought to raise a likelihood of interdependent anticompetitive conduct.") (internal quotations omitted).

54. Ordinary course documents and testimony from competitors and customers reinforce the market's vulnerability to coordination. Relying on third party sources, H2O2 suppliers track each other's price and supply decisions. PFF ¶¶ 121-33. Producers have declined to pursue business that could lead to retaliation and drive down prices, a sign that producers recognize their interdependence. PFF ¶¶ 133-40; *Tronox*, 332 F. Supp. 33 at 209.

55. Defendants point to other industry attributes that they claim hinder coordination, but none of their arguments rise to the level of the "special circumstances" they need to overcome the presumption of vulnerability. *Elders Grain*, 868 F.2d at 906. Moreover, in assessing the likelihood of coordinated interaction, courts do not require that the factors point universally toward coordination. *See id.* ("Granted, the factors that make a market more or less amenable to being cartelized are not all on one side in this case."); *CCC Holdings*, 605 F. Supp. 2d at 67. At this stage, the FTC need only show a sufficient likelihood of success on the merits to carry its

burden. *Tronox*, 332 F. Supp. 3d at 212.

2. The Merger Would Eliminate Significant and Beneficial Price Competition Between Defendants

56. The loss of head-to-head competition between merging firms can bolster a presumption of competitive harm arising from market concentration levels. *Heinz Co.*, 246 F.3d at 716-17. When the eliminated competition "is an important feature of the relevant market, a merger is likely to have unilateral anticompetitive effect if the acquiring firm will have the incentive to raise prices or reduce quality after the acquisition." *Wilhelmsen*, 341 F. Supp. 3d at 59.

57. The merging entities "need not be the top two firms to cause unilateral effects." *Sysco*, 113 F. Supp. 3d at 62; *United States v. Aetna*, 240 F. Supp. 3d 1, 43 (D.D.C. 2017) .

58. To determine if the elimination of head-to-head competition between two firms will adversely affect competition, courts look to bidding data, ordinary course documents, and testimony from market participants. *See, e.g.*, *Staples II*, 190 F. Supp. 3d at 131-33; *Sysco*, 113 F. Supp. 3d at 62-65. While a merger of two firms is more likely to result in unilateral harm if more customers of one merging firm view the other firm's products "as their next best choice," a merger may still reduce competition "even though many more sales are diverted to products sold by non-merging firms." *Guidelines* § 6.1.

59. Courts also look at economic evidence to estimate the effect of lost competition resulting from a merger. A common method of modeling such effects is the Gross Upward Pricing Pressure Index ("GUPPI") methodology. *Wilhelmsen*, 341 F. Supp. 3d at 64; *see also Guidelines* § 6.1. The GUPPI "is essentially a bargaining framework that quantifies a firm's change in incentive to raise prices following a merger." *Wilhelmsen*, 341 F. Supp. 3d at 64. Another model, the second-score procurement model, can be appropriate in markets where customers' bargaining power is significant. *See Guidelines* § 6.2.

60. Ordinary course documents and customer testimony show that Defendants are close competitors in both the Southern and Central United States and the Pacific Northwest. PFF ¶¶ 169-74. Customers use bidding processes designed to play suppliers off each other for better prices. *Id.* ¶ 176. For these customers, head-to-head competition between Evonik and PeroxyChem led to significant price concessions. *Id.* ¶¶ 177-78, 189-94; *Sysco*, 113 F. Supp. 3d at 62 ("If two competitors merge, buyers will be prevented from playing the sellers off one another in negotiations."). Dr. Rothman predicts significant price effects from the loss of this-head-to-head competition under both the GUPPI and second-score procurement models. PFF ¶¶ 200-07. Competitor and customer testimony indicates a lack of additional capacity in the market, making it unlikely that other producers could constrain price increases from the merged firm. PFF ¶¶ 181-87.

B. Defendants Failed to Rebut the Presumption of Illegality

61. Having shown that the Acquisition will result in undue concentration in the relevant markets, and buttressed that conclusion with evidence of competitive effects, the FTC has carried its burden in making out a *prima facie* case. *Heinz*, 246 F.3d at 715-16. Because the government's *prima facie* case is compelling, Defendants must produce a greater quantum of evidence to carry their burden of production to rebut the presumption. *Baker Hughes*, 908 F.2d at 991. Defendants have not met this burden.

i. The Proposed Divestiture Fails to Address Competitive Concerns

62. Defendants' proposal to divest PeroxyChem's Prince George plant to UI does not remedy the loss of competition that will result from the Acquisition. Defendants bear the burden of showing that "a proposed divestiture would restore the competition lost by the merger counteracting the anticompetitive effects of the merger." *Aetna*, 240 F. Supp. 3d at 60.

63. To evaluate the sufficiency of a proposed divestiture, courts ask if the divestiture will replace the "competitive intensity lost as a result of the merger." *Sysco*, 113 F. Supp. 3d at 72 (internal quotations omitted). A divestiture will not be accepted unless it is "made to a new competitor that is in fact . . . a willing, independent competitor capable of effective production in the . . . market." *CCC Holdings*, 605 F. Supp. 2d at 59. Additionally, "[d]ivestiture of an existing business entity might be more likely to effectively preserve the competition that would have been lost through the merger." *Aetna*, 240 F. Supp. 3d at 60.

64. Further, a "low purchase price" can "[raise] concerns" about a divestiture buyer's ability to restore competitive intensity because "it reveals the divergent interest between the divestiture purchaser and the consumer." *Aetna*, 240 F. Supp. 3d at 72. Moreover, courts will consider the divestiture buyer's history in the relevant market. *Id.* at 72-73.

65. Defendants do not come close to carrying their burden on the sufficiency of the Prince George divestiture. Testimony by UI's corporate representative demonstrates that the company has no concrete plans for running the Prince George plant or competing in the H2O2 market. PFF ¶¶ 236-40. Given that the company's last significant experience in the H2O2 industry ended after World War II, UI's vague notions about Prince George are unsurprising. *Id.* ¶¶ 219-22. UI's experience and capacity pale in comparison to the proposed buyers in the *Aetna* and *Sysco* divestitures, both of which were held insufficient. *See Aetna*, 240 F. Supp. 3d at 64-72 (divestiture buyer had experience in adjacent markets and brand recognition); *Sysco*, 113 F. Supp. 3d at 73 (divestiture buyer had decades of experience in industry and a commitment to a $490 million expansion plan).

66. The low purchase price that UI agreed to pay for the Prince George plant also casts doubt on its commitment to replacing competitive intensity. The [redacted] purchase price falls far

below the independent valuations of the plant prepared by [redacted]. PFF ¶¶ 243-45. Coupled with the rushed timeline of the sale, the purchase price is indicative of the sort of "fire sale price" suggesting that UI "has doubts about its own ability to manage" the Prince George plant. *See Aetna*, 240 F. Supp. 3d at 72 (D.D.C. 2017).

67. Finally, Defendants have presented no evidence that the proposed divestiture would replace the competitive intensity lost to the merger in the Southern and Central United States.

ii. There Is No Likelihood of Entry or Expansion in the Market

68. Entry of a new competitor into the relevant market "will alleviate concerns about adverse competitive effects only if such entry will deter or counteract any competitive effects of concern so the merger will not substantially harm customers." *Sysco*, 113 F. Supp. 3d at 80 (quoting *Guidelines* § 9). "Defendants bear the burden of demonstrating" that new entrants will "fill the competitive void that will result from the proposed merger." *Id.*

69. Entry or expansion must be timely, likely, and sufficient to mitigate the loss of competition resulting from the merger. *Guidelines* § 9.

70. There is no likely entrant into this market, and Defendants have abandoned the argument.

71. There is no reasonable likelihood of expansion by existing H2O2 producers. [redacted]. PFF ¶¶ 250-52. [redacted]. PFF ¶¶253.

iii. Defendants' Claimed Efficiencies Are Not Cognizable

72. Defendants bear the burden of demonstrating that claimed efficiencies rebut the presumption of illegality. *Aetna*, 240 F. Supp. 3d at 94. Where the merger will result in high levels of concentration, "defendants must present proof of extraordinary efficiencies to rebut the

government's *prima facie* case." *Sysco*, 113 F. Supp. 3d at 81. "[C]ourts have rarely, if ever, denied a preliminary injunction solely based on the likely efficiencies," *CCC Holdings*, 605 F. Supp. 2d at 72, and "the Supreme Court has never recognized the so-called 'efficiencies' defense in a Section 7 case." *Wilhelmsen*, 341 F. Supp. 3d at 71.

73. Defendants "must demonstrate that their claimed efficiencies would benefit customers, and, more particularly, the customers in the challenged markets." *Aetna*, 240 F. Supp. 3d at 94. The Court should only credit claimed efficiencies to the extent that they are cognizable, meaning that they "represent a type of cost saving that could not be achieved without the merger" and that "the estimate of the predicted saving must be reasonably verifiable by an independent party." *Id.*

74. Under the *Guidelines*, efficiencies resulting from a merger are cognizable if they are verifiable, merger-specific, and not the result of anticompetitive reductions in output or service. *Guidelines* § 10. For efficiencies to be verifiable, the merging parties have to substantiate the assumptions that go into their efficiencies calculations. *Id.* For efficiencies to be merger-specific, efficiencies must be likely to happen with the merger, and unlikely to happen in the absence of a merger. *Id.*

75. "[T]he Agencies consider whether cognizable efficiencies likely would be sufficient to reverse the merger's potential harm to customers in the relevant market." *Guidelines* § 10.

76. At the outset, Defendants' claimed efficiencies are smaller than the predicted harm in the relevant markets. PFF ¶¶ 266.

77. In addition, Defendants have failed to demonstrate that any claimed efficiencies resulting from the Acquisition are merger-specific. PFF ¶¶ 262; *see Guidelines* § 10.

78. Under the *Guidelines*, efficiencies can only offset the competitive harm resulting from a merger if those efficiencies will pass through to customers. *Guidelines* § 10. [redacted]

[redacted]. PFF ¶¶ 263.

iv. Large Buyers Do Not Rebut the Presumption of Harm

79. "[C]ourts have not typically held that power buyers alone enable a defendant to overcome the government's presumption of anticompetitiveness." *Wilhelmsen*, 341 F. Supp. 3d 27 at 70. Large buyers' ability to constrain price increases "depends on the alternatives these large buyers have available to them." *Sysco*, 113 F. Supp. 3d at 48.

80. Here, even large-volume buyers frequently award H2O2 supply positions on a mill-by-mill basis, so their presence does not inherently impede coordinated conduct. PFF ¶¶ 268; *see CCC Holdings*, 605 F. Supp. 2d at 64-65 (large buyers evidence of static and transparent market). Additionally, the evidence shows that the merger will reduce the number of competitive options and leave even large customers with inadequate alternatives. PFF ¶¶ 200-07.

IV. THE EQUITIES FAVOR A PRELIMINARY INJUNCTION

81. A preliminary injunction is in the public interest. *See generally* PFF §§ I-VII. No court has denied relief in a Section 13(b) proceeding in which the FTC "has demonstrated a likelihood of success on the merits." *FTC v. ProMedica Health Sys.*, 3:11-cv-47, 2011 WL 1219281, at *60 (N.D. Ohio Mar. 29, 2011); *see also FTC v. PPG Indus.*, 798 F.2d 1500, 1508 (D.C. Cir. 1986).

82. "[P]ublic interest in effective enforcement of the antitrust laws" is "[t]he principal public equity weighing in favor of issuance of preliminary injunctive relief." *Heinz*, 246 F.3d at 726. After all, "competition is our fundamental national economic policy, offering as it does the only alternative to the cartelization or governmental regimentation of large portions of the economy." *Phila. Nat'l Bank*, 374 U.S. at 372; *see also Whole Foods*, 548 F.3d at 1035. An equally important public equity is the preservation of the FTC's ability to obtain effective relief if the

Acquisition is ultimately found to violate Section 7 of the Clayton Act. Without a preliminary injunction Defendants can "scramble the eggs"—that is, combine their operations and make it difficult, if not impossible, for competition to be restored to its previous state. *Heinz*, 246 F.3d at 726 (citing *FTC v. Dean Foods Co.*, 384 U.S. 597, 606 n.5 (1966)). This equity is especially important in cases, such as this one, where the parties contemplate a divestiture order such that the "proposed merger involves two transactions, not just one." *Sysco*, 113 F. Supp. 3d at 87.

83. Private equities are "subordinate to public interests and cannot alone support the denial of preliminary relief." *FTC v. Illinois Cereal Mills, Inc.*, 691 F. Supp. 1131, 1146 (N.D. Ill. 1988). Indeed, "[o]nly 'public equities' that benefit consumers" can trump the FTC's showing of likely success on the merits. *CCC Holdings*, 605 F. Supp. 2d at 75-76 (citing *Whole Foods*, 548 F.3d at 1041 (Brown, J.)). The "'risk that the transaction will not occur at all,' by itself, is a private consideration that cannot alone defeat the preliminary injunction." *Whole Foods*, 548 F.3d at 1041 (citing *Heinz*, 246 F.3d at 726). Defendants' assertion that they will abandon the Acquisition and not proceed with the administrative trial on the merits if a preliminary injunction issues does not elevate the FTC's burden under Section 13(b). *See Heinz*, 246 F.3d at 727 ("[T]hat is at best a 'private' equity which does not affect our analysis . . . .").

* * * * * * *

84. Weighing the FTC's likelihood of success and the relevant equities, a preliminary injunction enjoining Evonik's acquisition of PeroxyChem pending a full administrative hearing on the merits is in the public interest.

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Respectfully Submitted,

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