IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA

FEDERAL TRADE COMMISSION Plaintiff, v. **TRONOX LIMITED** **NATIONAL INDUSTRIALIZATION COMPANY** **NATIONAL TITANIUM DIOXIDE COMPANY LIMITED** and **CRISTAL USA INC.** Defendants.	**CIVIL ACTION** **1:18-cv-01622 (TNM)** **REDACTED**

DEFENDANTS' OPPOSITION TO PRELIMINARY INJUNCTION

TABLE OF CONTENTS

Page

BACKGROUND 4

LEGAL STANDARD 6

ARGUMENT 7

I. The FTC Is Not Likely to Succeed on the Merits of Its Case. 7

A. The FTC Has Failed To Prove Its Proposed Relevant Market. 7

1. The FTC has Failed to Prove is Proposed Geographic Market 8

a. TiO2 Customers Can Turn To Global Trade In Response To a SSNIP. 9

b. Prices In North America Are Co-Integrated With Global Prices. 9

c. In The North America Geographic Market, A Hypothetical Monopolist Would Not Be Able To Impose A SSNIP. 11

2. The FTC Has Failed To Prove Its Proposed Product Market. 11

3. The FTC Cannot Show A Presumption Of Anticompetitive Effects. 14

B. The FTC Has Failed To Show That Post-Acquisition Unilateral Output Reduction Is Likely. 15

C. The FTC Has Failed To Show That Post-Transaction Coordination Is Likely. 18

1. Coordination is not possible because TiO2 prices are individually Negotiated with customers and subject to Fierce Competition. 19

2. Price increase announcements do not demonstrate coordination and are a legitimate part of the competitive process. 20

3. Output reductions do not demonstrate coordination and reflect sound business decisions. 21

4. The FTC's references to price-fixing cases are inapposite. 22

D. The Acquisition Will Result In Substantial Synergies That Enhance Output, Lower Costs, And Improve Competition For The Benefit Of Consumers 24

1. The proposed transaction is pro-competitive in an already fiercely competitive industry. 24

2. The transaction will reduce fixed costs through vertical integration. 26

3. The transaction's output-enhancing synergies are strong and "merger specific." 26

4. The transaction will result in significant cost-saving efficiencies. 28

5. The transaction's synergies have been validated by a third party. 29

E. Tronox Faces Intense and Growing Competition from Chinese Producers 29

F. Neither The FTC's Administrative Law Judge Nor The FTC Commissioners Are Likely To Find That The Proposed Transaction Is Anticompetitive..... 32

1. Chief Administrative Law Judge Chappell's on-the-record comments demonstrate his skepticism about the FTC's case. 32

2. Four out of five current FTC Commissioners did not vote to file the administrative complaint against Defendants. 33

II. The Equities Also Weigh Against A Preliminary Injunction. 34

CONCLUSION..... 41

TABLE OF AUTHORITIES

Page(s)

Cases

Brown Shoe Co. v. United States,
370 U.S. 294 (1962) 8

FTC v. Arch Coal, Inc.,
329 F. Supp. 2d 109 (D.D.C. 2004) ..... *passim*

FTC v. Cardinal Health, Inc.,
12 F. Supp. 2d 34 (D.D.C. 1998) 8

FTC v. CCC Holdings Inc.,
605 F. Supp. 2d 26 (D.D.C. 2009) 8

FTC v. H.J. Heinz Co.,
246 F.3d 708 (D.C. Cir. 2001) 6, 33, 34, 41

FTC v. R.R. Donnelley & Sons Co.,
No. CIV. A. 90-1619, 1990 WL 193674 (D.D.C. Aug. 27, 1990) 1, 7

FTC v. Staples, Inc. and Office Depot, Inc.,
No. 15-CV-02115 (D.D.C. Dec. 7, 2015), *available at* 2015 WL 10682935 36

FTC v. Steris Corp.,
133 F. Supp. 3d 962 (N.D. Ohio 2015) 1

FTC v. Sysco Corp.,
113 F. Supp. 3d 1 (D.D.C. 2015) 8

FTC v. Tenet Health Care Corp.,
186 F.3d 1045 (8th Cir. 1999) 1, 6

FTC v. Weyerhaeuser Co.,
No. 80-3175, 1981 WL 2059 (D.D.C. Mar. 25, 1981),
aff'd 665 F.2d 1072 (D.C. Cir. 1981) 1, 6

FTC v. Whole Foods Market, Inc.,
548 F.3d 1028 (D.C. Cir. 2008) 6

In re B.F. Goodrich Co.,
1988 WL 1025464 (FTC Mar. 15, 1988),
modified by 1989 WL 1126669 (FTC Apr. 5, 1989) 18

In re Polypore Int'l, Inc.,
No. 9327. 486, 2010 WL 9434806 (FTC Mar. 1, 2016) 7

In re Titanium Dioxide Antitrust Litig.,
959 F. Supp. 2d 799 (D. Md. 2013) 22

Tronox Limited v. FTC,
No. 1:18-cv-00010-SA-RP (N.D. Miss Jan. 23, 2018) 37

United States v. AT&T Inc.,
No. 17-2511(RJL), 2018 WL 2930849 (D.D.C. June 18, 2018) 2, 7

United States v. Baker Hughes, Inc.,
908 F.2d 981 (D.C. Cir. 1990) 14, 18

United States v. Falstaff Brewing Corp.,
410 U.S. 526 (1973) 30

United States v. General Dynamics, Corp.,
415 U.S. 486 (1974) 7

United States v. Oracle Corp.,
331 F. Supp. 2d 1098 (N.D. Cal. 2004) 7, 18

Valspar Corp. v. E.I. Du Pont De Nemours & Co.,
873 F.3d 185 (3d Cir. 2017) 22, 23

Valspar Corp. v. E.I. Du Pont De Nemours,
152 F. Supp. 3d 234 (D. Del. 2016), *aff'd*, 873 F.3d 185 22

Statutes

15 U.S.C. § 13(b) 1, 6, 34

15 U.S.C. § 18 7

15 U.S.C. § 53(b) 1

Other Authorities

2A Areeda & Hovenkamp, *Antitrust Law* ¶ 538b, ... 7

FTC, *The Evolving Approach to Merger Remedies*, May 1, 2000, *available at*
https://bit.ly/2O9WTnC 12

H.R.Rep.No. 624, 93d Cong., 1st Sess. 18 (1973) 6

Horizontal Merger Guidelines § 2.2.2 ..... 7, 8, 14, 30

Major Titanium Dioxide Companies, Federal Trade Commission (Dec. 5, 2017),
https://www.ftc.gov/news-events/press-releases/2017/12/ftc-challenges-proposed-merger-major-titanium-dioxide-companies 36

Press Release, *Staples Receives Approval from European Union to Acquire Office Depot* (Feb. 10, 2016), *available at* https://bit.ly/2uFOeAX 36

Press Release "Tronox Announces Extension to Cristal TiO2 Acquisition Agreement" 39

Tronox Submits Definitive Agreement to the European Commission Required for Approval of Cristal Acquisition, Tronox (July 16, 2018), http://investor.tronox.com/news-releases/news-release-details/tronox-submits-definitive-agreement-european-commission-required 39

Plaintiff Federal Trade Commission ("FTC") is not entitled to the extraordinary remedy of a preliminary injunction because it cannot demonstrate that it would be in the public interest to prevent Tronox Limited from acquiring the titanium-dioxide ("TiO2") business of the National Industrialization Company, the National Titanium Dioxide Company Limited, and Cristal USA Inc. (collectively "Cristal"). The FTC is not likely to succeed on the merits because this output-enhancing transaction benefits both consumers and competition. Nor can the FTC show that the equities weigh in favor of enjoining a procompetitive transaction. Where, as here, the FTC cannot meet its burden, courts do not hesitate to deny injunctive relief. *See, e.g.*, *FTC v. Arch Coal, Inc.*, 329 F. Supp. 2d 109 (D.D.C. 2004); *FTC v. R.R. Donnelley & Sons Co.*, No. CIV. A. 90-1619, 1990 WL 193674 (D.D.C. Aug. 27, 1990); *FTC v. Weyerhaeuser Co.*, No. 80-3175, 1981 WL 2059 (D.D.C. Mar. 25, 1981), *aff'd* 665 F.2d 1072 (D.C. Cir. 1981) (Ginsburg, J.); *see also FTC v. Steris Corp.*, 133 F. Supp. 3d 962 (N.D. Ohio 2015).

Having sought this extraordinary remedy in federal court, the FTC bears the burden under § 13(b) of the FTC Act to make a "proper showing that, weighing the equities and considering the Commission's likelihood of ultimate success, such action would be in the public interest." 15 U.S.C. § 53(b). Under this standard, the FTC bears the burden on every element of its challenge, "and a failure of proof in any respect will mean the transaction should not be enjoined." *Arch Coal*, 329 F. Supp. 2d at 116. Given the stakes, the FTC's burden is substantial: a "'showing of a fair or tenable chance of success on the merits will not suffice for injunctive relief.'" *Id.* (quoting *FTC v. Tenet Health Care Corp.*, 186 F.3d 1045, 1051 (8th Cir. 1999)).

The FTC cannot meet its burden. In the administrative proceedings, the FTC could not prove even a single element of its claims, much less all of them. It failed to demonstrate that customers in the United States and Canada (which it called "North America") constitute the

relevant geographic market or that sales of rutile titanium dioxide manufactured only through the chloride process constitute the relevant product market. As Chief Administrative Law Judge D. Michael Chappell helped to establish in the record, this failure means the FTC cannot establish a presumption of anticompetitive effects. *See* Tr. 3206:11-3206:20 ("JUDGE CHAPPELL: And what's the effect on an opinion when you draw the market too narrowly? … Doesn't it increase the HHI?") (Attached as Exhibit A). Despite that failing, the FTC made no effort to show that it is entitled to such a presumption if the relevant market is defined any other way.

Further, the FTC's assertions of anticompetitive effects are artificial, largely academic, and inconsistent with real-world evidence. The FTC relies on theoretical modeling that contradicts real-world facts. In the absence of actual evidence, the FTC "relies upon random statements from defendants' 'ordinary course' business documents, including employees' emails and internal slide decks," in the same selective and unfair manner that has been recently criticized. *United States v. AT&T Inc.*, No. 17-2511(RJL), 2018 WL 2930849 at *36 (D.D.C. June 18, 2018); *see also id.* ("[W]hen live witnesses take the stand a trial by slide deck leaves much to be desired!"). The FTC also mischaracterizes two price-fixing cases arising from before Tronox emerged from bankruptcy—and during which the *defendants* (other TiO2 producers) were arguing the market had oligopolistic features in order to avoid liability under the Sherman Act—as a substitute for actual evidence of potential harm to competition. Chief Judge Chappell was justifiably skeptical of these claims. *See* Tr. 9:13-16 ("JUDGE CHAPPELL: I saw that in your briefing. Were either of these Respondents a party to that case? MR. VOTE: I believe Cristal was a party -— oh, not to the *Valspar* case, Your Honor. No, they were not.").

By contrast, Defendants' evidence proves the transaction will increase global production of TiO2. In fact, the entire purpose of the transaction is to increase output. Because the TiO2

industry has high capital and fixed costs, increased output reduces per unit costs to allow more competitive pricing, in addition to providing more product to consumers. The combination of Defendants' businesses will also achieve greater vertical integration, leading to a lower overall cost structure and more competitive position in the market. Tronox is uniquely capable of improving output at Cristal's underperforming TiO2 plant in Yanbu, Saudi Arabia and operationalizing Cristal's inoperative feedstock smelter in Jazan, Saudi Arabia. These merger-specific improvements at Yanbu and Jazan will increase the combined entity's output for the benefit of consumers. Moreover, the transaction will generate more than $200 million in cost-saving efficiencies, which will further benefit consumers and improve the ability of the combined entity to compete in the global TiO2 marketplace.

Chief Judge Chappell became increasingly and openly skeptical of the FTC's case as the administrative proceedings progressed. As detailed below, Chief Judge Chappell expressed his doubts on the record about the FTC's arguments and economic theories, calling further into question the FTC's likelihood of success on the merits. Moreover, on appeal to the full Commission of Chief Judge Chappell's initial decision, FTC staff will need to persuade an entirely new five-member Commission about the merits of its case, unlike the two-member Commission that voted to issue the original administrative complaint. The FTC thus cannot show a likelihood of success on the merits that would justify a preliminary injunction.

Finally, the equities here weigh strongly against an injunction. Because the proposed transaction is pro-competitive and pro-consumer, it is in the public interest for the transaction to proceed so that consumers can benefit from increased TiO2 production at lower costs. Moreover, because the FTC engaged in an unjustified and unprecedented tactic of delay, it would contravene the public's interest in effective enforcement of the antitrust laws to enjoin Tronox's acquisition

of Cristal. In the unlikely event the FTC would ultimately prevail in its challenge to this transaction, pre-merger competition can easily be restored by divesting Cristal's TiO2 plants in Ashtabula, Ohio. Because the requested preliminary injunction is not in the public interest, the Court should deny the FTC's motion and allow the transaction to proceed.

BACKGROUND

Defendants set forth relevant background in their opposition to the Plaintiff's Motion for a Temporary Restraining Order. *See* Dkt. 037. Defendants also demonstrated the significant issues with Plaintiff's factual assertions in their Summary of Genuine Issues of Material Fact submitted in support of Defendants' Response to Plaintiff's Proposed Briefing Schedule. *See* Dkt. 047-2 Ex. B. For purposes of this opposition, Defendants emphasize three facts:

First, the market for TiO2 is global. Tronox produces TiO2 at facilities in Hamilton, Mississippi; Kwinana, Australia; and Botlek, the Netherlands. Romano, 2231:9-13. Cristal produces TiO2 at facilities in Ashtabula, Ohio; Yanbu, Saudi Arabia; Stallingborough, in the U.K; Thann, in France; Bunbury, Australia; Bahia, in Brazil; and Tikon, in Fuzhou, China. Mancini, Tr. 2763:14-2764:19. These facilities produce TiO2 for customers all over the world. TiO2 is easily transported by truck, rail, or sea and has an infinite shelf-life. Stern, Tr. 3712:19-3713:7. It costs less to transport TiO2 from Tronox's plant in Australia to the Port of Los Angeles, California than it costs to transport TiO2 from the plant in Mississippi to the same destination. Mei, Tr. 3159:3-3160:4. More than two-thirds of all TiO2 sold crosses at least one national boundary before reaching its purchaser. Apr. 20, 2018 Stern Expert Report, ¶ 92 (citing RX1182, PCI Paint & Coatings Industry Article). In 2015 the United States exported [redacted] of its domestic production and imported [redacted] of its domestic consumption of TiO2. April 20, 2018 Stern Expert Report, ¶ 45 (citing RX1184, January 2017 U.S. Geological Survey, Mineral Commodity Summaries). Just

as suppliers can readily export TiO2 to customers around the world, customers can move TiO2 from one region to another [redacted].

Second, TiO2 made by the chloride- and sulfate-processes is readily substitutable. Chloride-process TiO2 can be used interchangeably with sulfate-process TiO2 in the vast majority of end-use applications. Stern, Tr. 3836:2-19; Christian, Tr. 893:13-896:14; [redacted]. High-end sulfate-process TiO2 competes head-to-head with chloride-process TiO2. Turgeon, Tr. 2676:3-2676:8. Customers regularly try to leverage sulfate-process TiO2 prices in negotiations with suppliers about chloride-process TiO2. Romano, Tr. 2241:12-16; [redacted]

Third, TiO2 producers need to maximize production at TiO2 plants. The market for TiO2 is highly competitive. Quinn, Tr. 2318:22-2319:8; Christian, Tr. 887:4-9. Producing TiO2 entails extremely high fixed costs, so suppliers have strong incentive to run their plants at capacity in order to minimize their unit costs and maximize their profits. Stern, Tr. 3712:9-18. The FTC claims Tronox may, unilaterally or in concert with other suppliers, reduce the production of TiO2 to increase prices. But reducing production imposes significant costs on TiO2 suppliers above and beyond high opportunity costs. Tronox reduced its production during periods of historically low demand, when inventories were excessive and credit agencies were downgrading Tronox's bonds. Romano, Tr. 2251:21-2252:18; Turgeon, Tr. 2637:20-25; Stern, Tr. 3748:22-3749:20. Tronox has not reduced production in order to support prices, and when Tronox has reduced production, it did not decrease sales, increase prices, or increase profits. [redacted], Tr. 2251:21-2252:18, 2253:2-5, [redacted]; Stern, Tr. 3768:3-13, 3770:8-25.

LEGAL STANDARD

Under § 13(b), this Court must "'exercise independent judgment on the propriety of issuance of a temporary restraining order or a preliminary injunction." *Weyerhaeuser*, 665 F.2d at 1082 (quoting H.R.Rep.No. 624, 93d Cong., 1st Sess. 18 (1973). Hence, a federal court evaluating whether to enjoin a merger must not "simply rubber-stamp an injunction whenever the FTC provides some threshold evidence." *FTC v. Whole Foods Market, Inc.*, 548 F.3d 1028, 1035 (D.C. Cir. 2008) (opinion of Brown, J.) (citing *Weyerhauser*, 665 F.2d at 1082); *see also Arch Coal*, 329 F. Supp. 2d at 116 ("Given the stakes, the FTC's burden is not insubstantial, and '[a] showing of a fair or tenable chance of success on the merits will not suffice for injunctive relief.'") (quoting *Tenet Health Care*, 186 F.3d at 1051). Rather, the Court must exercise independent judgment, which "is not exercised when a court responds automatically to the agency's threshold showings." *Weyerhauser*, 665 F.2d at 1082.

The standard for injunctive relief is substantial. The FTC must "raise 'questions going to the merits so serious, substantial, difficult and doubtful as to make them fair ground for thorough investigation, study, deliberation and determination by the FTC in the first instance and ultimately by the Court of Appeals.'" *Arch Coal*, 329 F. Supp. 2d at 116-17 (quoting *FTC v. H.J. Heinz Co.*, 246 F.3d 708, 719 (D.C. Cir. 2001)). The FTC can meet this burden only through the presentation of evidence. "Antitrust theory and speculation cannot trump facts, and even Section 13(b) cases must be resolved on the basis of the record evidence relating to the market and its probable future." *Id*. at 116. Although the FTC recently argued that "it is important for you to hear from the customers who actually spend hundreds of millions of dollars a year on this product and for them to weigh in on what's important for them," 7/20/18 Hr'g Tr. at 8, Judges of this District have recognized the "threat that such testimony reflects self-interest rather than genuine concerns about

harm to competition," *AT&T*, 2018 WL 2930849 at *33, *38; *see also Arch Coal*, 329 F. Supp. 2d at 145 (citing 2A Areeda & Hovenkamp, *Antitrust Law* ¶ 538b, at 239 ("'subjective testimony by customers" is "often unreliable"); Horizontal Merger Guidelines § 2.2.2 (noting customers may oppose merger "for reasons unrelated to the antitrust issues raised by that merger").

ARGUMENT

I. THE FTC IS NOT LIKELY TO SUCCEED ON THE MERITS OF ITS CASE.

A. The FTC Has Failed To Prove Its Proposed Relevant Market.

Before this Court can issue a preliminary injunction, the FTC must demonstrate that it is likely to prove a violation of Section 7 of the Clayton Act, which prohibits a corporation from acquiring another where "the effect of such acquisition may be substantially to lessen competition, or to tend to create a monopoly." 15 U.S.C. § 18. Section 7 cases begin by determining the relevant product and geographic markets. *See. e.g., Arch Coal*, 329 F. Supp. 2d at 116; *United States v. Oracle Corp.*, 331 F. Supp. 2d 1098, 1110 (N.D. Cal. 2004). This is an essential first step because "only a further examination of the particular market—its structure, history, and probable future—can provide the appropriate setting for judging the probable anticompetitive effects of the merger." *United States v. General Dynamics, Corp.*, 415 U.S. 486, 498 (1974). In keeping with Complaint Counsel's overall burden in Section 7 cases, "Complaint Counsel bears the burden of proving [the] relevant market within which" the transaction is likely to have "anticompetitive effects." *In re Polypore Int'l, Inc.*, No. 9327. 486, 2010 WL 9434806, at *165 (FTC Mar. 1, 2016) (citation omitted); *see also R.R. Donnelley & Sons Co.*, Civ. A. No. 90-1619 SSH 1990 WL 193674, at *2 ("As with other issues in this proceeding, the FTC bears the burden of proof with respect to the relevant product market.").

In an effort to create a presumption of anticompetitive harm, the FTC alleges an artificially narrow market confined to chloride-process TiO2 sold in the United States and Canada (what the FTC calls "North America"). As the facts demonstrate, however, all rutile TiO2, whether produced by the chloride- or the sulfate-process, competes in a global market.

1. The FTC has Failed to Prove is Proposed Geographic Market

A properly defined geographic market charts "the region in which the seller operates, and to which the purchaser can practicably turn for supplies." *FTC v. Cardinal Health, Inc.*, 12 F. Supp. 2d 34, 49 (D.D.C. 1998). The market "must both 'correspond to the commercial realities of the industry and be economically significant.'" *Arch Coal*, 329 F. Supp. 2d at 123 (quoting *Brown Shoe Co. v. United States*, 370 U.S. 294, 336-37 (1962)). When the FTC proposes a market, courts apply the "hypothetical monopolist test" to ask whether a "hypothetical profit-maximizing firm . . . that was the only present and future seller of [the relevant] products . . . likely would impose at least a small but significant and non-transitory increase in price ('SSNIP')." *FTC v. Sysco Corp.*, 113 F. Supp. 3d 1, 33 (D.D.C. 2015) (quoting the Merger Guidelines § 4.1.1). The ability to impose a SSNIP "depends on interchangeability and . . . cross-elasticity of demand." *FTC v. CCC Holdings Inc.*, 605 F. Supp. 2d 26, 38 n.12 (D.D.C. 2009). "If buyers would respond to the SSNIP by shifting to products produced *outside* the proposed geographic market, and this shift were sufficient to render the SSNIP unprofitable, then the proposed geographic market would be too narrow." *Arch Coal*, 329 F. Supp. 2d at 123.

The FTC's claim that the relevant geographic market is limited to North America (meaning the United States and Canada) ignores that TiO2 is a globally-traded commodity. Hill, Tr. 1782:20-1783:5; 1900:14-16. [redacted]. Yet North American consumers already purchase a significant and varying

percentage of TiO2 from other parts of the world. Prices are closely correlated around the globe, and the evidence confirms that global trade flows shift in response to dynamic regional price and demand changes. Moreover, even the FTC's economic modeling shows that a hypothetical monopolist could not profitably impose a SSNIP in North America, confirming that the FTC's North American (U.S./Canadian) market is improperly narrow.

a. TiO2 Customers Can Turn To Global Trade In Response To a SSNIP.

The FTC's gerrymandered geographic market ignores trade flows in the North American supply of TiO2. TiO2 is convenient and inexpensive to ship, has essentially an infinite shelf life, and can be used to serve international customers at a low cost. Stern, Tr. 3840:13-3841:3; Mei, Tr. 3157:8-3158:3. TiO2 producers in every region of the world, including North America, supply their products globally. Trade flows in and out of North America amply demonstrate this point. The United States itself exports more than half of its TiO2 production and imports almost a third of its consumption. Stern, Tr. 3817:2-12. Each year, Tronox exports approximately [redacted] of the production at its Hamilton, Mississippi plant to foreign nations. Mei, Tr. 3161:5-8. Furthermore, the amount of TiO2 imported to North America is rising year by year. From 2010 to 2016, Chinese imports of TiO2 into North America increased by "approximately [redacted] times." Shehadeh, Tr. 3220:2-3221:2. Although no Chinese producers make TiO2 in North America, Chinese producers now account for [redacted] of TiO2 consumed in North America.

b. Prices In North America Are Co-Integrated With Global Prices.

The global flow of the TiO2 trade is reflected in global TiO2 prices. While prices sometimes vary among geographic regions in *absolute* terms, the evidence shows that TiO2 prices *relatively* move and adjust on a global, not a North American, scale. [redacted] TiO2 prices are "co-integrated" because "they move together and, when they deviate, they

ultimately return to a long-term equilibrium relationship." RX0170 (May 2, 2018 R. Shehadeh Expert Report) at ¶204. The FTC contends that, over the last five-year period, TiO2 prices in North America have been higher than in the rest of the world. Yet since August of 2017, TiO2 prices in North America have been the lowest relative to the rest of the world. Romano, Tr. 2236:13-24. The FTC thus misses the point entirely: differences between average prices in North America and other regions are not persistent—sometimes average North America prices are higher than the rest of the world, and sometimes they are lower. [redacted]

Furthermore, contrary to the assertions of the FTC, there is no "regional price" for TiO2. Romano, Tr. 2233:13-18. [redacted]

Even still, the facts (using techniques published by the FTC's own economists) demonstrate that TiO2 prices averaged by geographic region move together in a way that is "statistically and economically significant" and confirm "that the relevant market is broader than North America." Shehadeh, Tr. 3229:15-3231:24.

The trade flows of TiO2 respond to even small variations in price among regions, consistent with a global market for TiO2. When prices rise in the U.S. relative to other regions, net imports also increase soon thereafter, as TiO2 producers respond to price by selling more product in the U.S. Despite this real-world evidence, [redacted]

[redacted] Despite the artificial limits the FTC tries to impose, the record evidence is overwhelming that the production, supply, trade, and sale of TiO2 are all global.

c. In The North America Geographic Market, A Hypothetical Monopolist Would Not Be Able To Impose A SSNIP.

Applying the hypothetical monopolist test confirms that the FTC failed to define its geographic market properly. North American customers have the incentive and ability to purchase from the significant quantities of TiO2 already moving in global trade flows, which would render a SSNIP by a hypothetical monopolist unprofitable. RX0170 (May 2, 2018 R. Shehadeh Expert Report) at ¶ 169. The FTC's economist, Dr. Nicholas Hill, reaches the opposite conclusion based on flawed assumptions. As Tronox's expert, Dr. Ramsey Shehadeh, demonstrates, Hill's model gives the hypothetical monopolist control over supply both inside *and outside* the proposed relevant market. Shehadeh, Tr. 3205:7-3206:1. Based on this assumption, Hill concludes that North American customers will not be able to respond to the hypothetical monopolist's SSNIP by seeking supply from plants outside the proposed geographic market or by accessing any of the significant volume of TiO2 currently produced in North America that is currently exported from North America. *Id.* With this flawed assumption, Hill draws his market too narrowly, which is why his model results conflict with real-world evidence about TiO2 markets. Shehadeh, Tr. 3206:2-19.

2. The FTC Has Failed To Prove Its Proposed Product Market.

The FTC maintains that the relevant product market is TiO2 produced using the chloride-process and sold to customers in North America, which excludes sulfate-process TiO2. But

chloride- and sulfate-process TiO2 are interchangeable in the vast majority of applications, and there are strong cross-elasticities of demand for TiO2 produced with either process.

As an initial matter, the FTC's claim here regarding the product market for TiO2 cannot be reconciled with the FTC's own past positions. When reviewing TiO2 producer DuPont's proposed acquisition of the TiO2 division of Imperial Chemical Industries ("ICI") in 1998, the FTC found direct competition between chloride and sulfate process TiO2. In the merger review, the Commission found a single TiO2 market that included both sulfate- and chloride-process TiO2 and acknowledged the significant global trade in TiO2. *See* FTC, *The Evolving Approach to Merger Remedies*, May 1, 2000, *available at* https://bit.ly/2O9WTnC.

Evidence presented at the administrative proceeding demonstrated that North American TiO2 customers use both sulfate and chloride process TiO2 in their products in North America. [redacted] Third-party analysts recognize that chloride- and sulfate-process TiO2 are interchangeable and affect the price of each other. Barclays noted in 2016 that both processes create TiO2 that is fungible, whether produced in China or by Western producers. Turgeon, Tr. 2736:10-17. Approximately [redacted] of TiO2 end-use products can be made with either sulfate- or chloride-process TiO2; only about [redacted] of products are more compatible with one process or the other. Turgeon, Tr. 2622:8-2623:2; Engle, Tr. 2505:11-15; *see also* Stern, Tr. 3836:2-19, PX9020-007, [redacted] Stern, Tr. 3838:2-7.

The FTC argues that chloride- and sulfate-process TiO2 have different properties—such as durability, tint strength and opacity—affecting their interchangeability in some applications. Defendants refuted this assertion through testimony and the presentation of real evidence at the administrative proceeding, showing that producers may control these properties through the finishing process, regardless of how the TiO2 is produced. Engle, Tr. 2433:11-14, 2453:7-2454:5, 2480:5-9, 2444:3-11. Coatings produced with chloride- and sulfate-process TiO2 can look the same. Engle, Tr. 2446:21-2467:10 (referring to RXD0016). [redacted]

Testimony from the administrative proceeding demonstrates that chloride-process TiO2 competes both directly and indirectly with sulfate-process TiO2. Romano, Tr. 2242:3-5; 2241:5-9; Turgeon, Tr. 2673:25-2674:14; [redacted] Customers also routinely leverage prices for sulfate-process grades in price negotiations about chloride-process grades. Romano, Tr. 2241:12-16.

Customers also switch between chloride- and sulfate-process TiO2. They can and do reformulate their products to use TiO2 from either process. [redacted]

[redacted]

Prices for chloride- and sulfate-process TiO2 are tied to each other, further indicating a single product market. "[T]here is a long-term relationship between sulfate and chloride titanium dioxide prices" characterized by "statistically and economically significant co-movement of prices. Shehadeh, Tr. 3288:21-3289:12. [redacted] At bottom, the different processes for producing TiO2 do not define different products. Rather, TiO2 from either process competes within the same global product market.

3. The FTC Cannot Show A Presumption Of Anticompetitive Effects.

It is the FTC's burden to show that the challenged transaction will result in "undue concentration in the market." *United States v. Baker Hughes, Inc.*, 908 F.2d 981, 984 (D.C. Cir. 1990). "Market concentration is a function of the number of firms in a market and their respective market shares." *Id.* (citing *Merger Guidelines* § 1.5). The FTC has failed to meet its burden to show the relevant market is limited to chloride-process TiO2 sold in the United States and Canada. When measured against a global market for rutile TiO2, the proposed transaction does not raise any market-concentration concerns. Shehadeh, Tr. 3325:5-11. In fact, the combined entity will be [redacted] major competitors, with an approximate [redacted] share of production and [redacted] share of capacity. RX0170 (May 2, 2018 R. Shehadeh Expert Report) at ¶ 272 & Figure 87. That market share does not create any presumption of anticompetitive effects or concentration.

The same conclusion would hold even if the FTC were able to prove the relevant market is limited to sales to customers in the United States. Section 5.2 of the Merger Guidelines explains that in a commodity market, market share should be calculated based on capacity *readily available* to serve the market. That capacity is global in this case, not limited to North America. [redacted]

[redacted]. This principle recognizes that buyers would adjust their sources of supply in response to a price increase. Although the FTC's economist made no effort to propose an alternative to the FTC's alleged North American market, he conceded that market concentration almost certainly would not be problematic in a global TiO2 market. Hill, Tr. 1946:16-19.

Having failed to establish its proposed geographic and and product markets, and having declined to propose any alternative markets for either, the FTC is left without any presumption that this transaction will have anticompetitive effects. Instead the FTC needs to demonstrate a likelihood of actual anticompetitive effects in order to prevail on the merits of its case.

B. The FTC Has Failed To Show That Post-Acquisition Unilateral Output Reduction Is Likely.

In order to try to demonstrate anticompetitive effects, the FTC offers the thesis that the combined entity will reduce output in order to raise prices after the transaction closes. The FTC's economist relies on his "Capacity Closure Model"—a model he developed himself—to claim that the combined company is likely to decrease production in order to raise prices. The model is flawed as a matter of theory and also as a matter of fact. In this highly competitive market, even a small competitive response would make an attempt to reduce supply unprofitable.

The "Capacity Closure Model" is unreliable. It (i) has not been peer reviewed or tested; (ii) contains artificial constraints biased in favor of the FTC case; and (iii) generates outcomes that are inconsistent with actual results. The "Capacity Closure Model" is not widely accepted in the economic community, and it has never been subject to peer-review and publication. Hill, Tr. 1961:23-1962:2. It assumes that no matter how high North American prices might increase: (i) North American producers of titanium dioxide will never redirect exports to be sold instead within North America; (ii) domestic producers will never increase output; and (iii) major titanium dioxide

producers will never increase imports into North America.[1] Shehadeh, Tr. 3331:11-3333:9. Hill calls these assumptions "intentional modeling choices." Hill, Tr. 1980:22-1981:1. By assuming away the very possibility of a competitive reaction by rivals, Hill's model finds it would be profitable for the combined company to reduce output unilaterally. Hill, Tr. 1760:20-1761:17. But these "modeling choices" are entirely counter-factual.

Nor is the "Capacity Closure Model" even a good fit for assessing the real-world TiO2 industry. Hill explains that an "important feature of the capacity closure model is that it can also be applied to the world but for the merger." Hill, Tr. 2000:25-2001:5. In particular, he testified that "you can check whether [the] model predicts that stand-alone firms have an incentive to withhold output and thereby confirm that the model's predictions are consistent with observed behavior in the real world." Hill, Tr. 2001:6-11. Hill's validity test fails for Chemours, a multi-billion-dollar U.S. chemical company and the world's largest TiO2 producer. When Hill's model is run "for Chemours using his model and his data, it shows that Chemours' behavior predicted by the model is inconsistent with the behavior of Chemours as reflected in the" real world, and thus is not "attuned to industry reality." Shehadeh, Tr. 3330:18-3338:17. This is a fatal flaw in the FTC's whole case; "if a model can't explain the world as it is today, then it can't be relied on to explain the world as it could be with a change or could be in the future." Shehadeh, Tr. 3334:15-22.

The Capacity Closure Model is not only flawed as a matter of theory, but it is also vulnerable to slight changes in sales of TiO2. The model shows that even a small response from rivals would wipe out any benefit from decreasing output. In particular, the model predicts that if

[1] After receiving Shehadeh's criticisms, Hill re-ran his model to allow imports, but still assumed away any possible export repatriation and output expansion. Hill, Tr. 1982:18-1983:4.

rival TiO2 suppliers increased production by just [redacted], then there would be no advantage from decreasing TiO2 production. Hill, Tr. 1986:10-14. To put that amount in perspective, from 2002 to 2016, annual imports of rutile titanium dioxide into North America alone varied from [redacted] metric tons per year. Hill, Tr. 1901:5-11; [redacted] Between 2002 and 2016, North American exports of chloride ranged from over [redacted] to almost [redacted] metric tons per year. Hill, Tr. 1902:5-9; [redacted] When the availability of TiO2 supply from other regions is considered, as would be in the real world, the total amount of product in the marketplace expands even more.

The FTC is also incorrect when it claims that Defendants have reduced—or even that Defendants could reduce—output in the TiO2 industry in order to increase price:

- Even after extensive discovery, the FTC could not identify a *single* example where *any* TiO2 producer adjusted output "for the purpose of supporting higher prices rather than maintenance or operational issues." FTC Response to Cristal Interrogatory No. 1.

- Their own model shows that pre-merger Tronox and [redacted] do not have "an incentive to withhold output" [redacted] Hill, Tr. 2001:16-23; [redacted]

- TiO2 suppliers do not reduce output to support prices. Any reduction in output is a matter of last resort because TiO2 production is a high fixed-cost operation in which profitability depends on *full-capacity* utilization. Christian, Tr. 864:16-23; Stern, Tr. 3712:9-18. Because of this high fixed cost structure, "the harder you run [the plants], the lower the fixed costs per pound of product produced." Stern, Tr. 3712:9-18.

- Those periods when Defendants did reduce output were during historically severe price declines, including from 2012 to early 2016. Stern, Tr. 3731:6-24. TiO2 producers' prices and margins, including Tronox and Cristal's, dropped sharply during this period. Stern, Tr. 3730:25-3731:24. The situation continued to deteriorate from 2015 to 2016, with Tronox experiencing an income loss from operations in each quarter from Q3 2015 to Q2 2016. Stern, Tr. 3768:3-9. [redacted]

- Finally, historic price data shows that any output reductions by Cristal or Tronox did not affect plummeting prices. Stern, Tr. 3770:11-25 Despite variability in Tronox's production at its Hamilton plant, prices continued to move on an independent, downward trajectory. *Id.*

In the final analysis, the FTC is not likely to show there is a risk of unilateral anticompetitive effects arising from the transaction. Chief Judge Chappell understood the role that assumptions and counterfactuals played in the opinions of the FTC's economist. Chief Judge Chappell's own questioning forced the FTC's economist to admit that the model already assumed the very coordination it set out to "prove." Hill, Tr. 1815:16-25 ("JUDGE CHAPPELL: So you are assuming coordination as well."). The FTC's untested theories and economic models do not support the claims about this transaction the FTC set out to prove.

C. The FTC Has Failed To Show That Post-Transaction Coordination Is Likely.

The FTC's theory of coordinated effects—the theory that post-transaction, the marketplace will be more concentrated and thus more susceptible to coordinated pricing—is as flawed as its theory of unilateral effects. Price coordination does not occur in the TiO2 market, and coordination will not become more likely as a result of the transaction. Where a regulator asserts that coordinated effects will be likely post-transaction, it must prove that such effects are probable. *See Baker Hughes*, 908 F.2d at 984; *Oracle Corp.*, 331 F. Supp. 2d at 1109 (rejecting Section 7 claim where government failed to prove market participants "would *likely* engage in coordinated interaction" post-merger) (emphasis added). The FTC cannot satisfy that burden here. Coordination, at a minimum, "requires harmonizing the incentives of participating firms and mitigating firm uncertainty concerning rival firms, so that they can effectively coordinate their behavior." *In re B.F. Goodrich Co.*, 1988 WL 1025464, at *65 (FTC Mar. 15, 1988), *modified by* 1989 WL 1126669 (FTC Apr. 5, 1989). Coordination also requires the ability effectively to enforce the consensus. In other words, firms will not coordinate production or pricing unless they can "retaliate effectively if and when cheating occurs." *Id.* at *65.

1. Coordination is not possible because TiO2 prices are individually Negotiated with customers and subject to Fierce Competition.

Despite the FTC's characterizations, there are no "list" prices for TiO2. Customers for TiO2—including large, sophisticated buyers, many of whom dwarf Tronox and Cristal by any measure of corporate size—negotiate the prices they pay. Mouland, Tr. 1747:16-25; Stern, Tr. 3728:5-10. Accordingly, prices charged by producers are a function of a multitude of factors. [redacted] Many customers negotiate annual contracts with producers to govern terms of their purchases, but these contracts almost never set the price the customer must pay throughout the life of the contract. Stern, Tr. 3727:1-3729:17. Instead, most contracts provide for *negotiated* prices and customers typically have the option under the contracts to switch suppliers if they find a better price. *Id.* These contract provisions leave substantially all of the risk created by changes in TiO2 prices with the producers, not the customers.

The competitiveness of the TiO2 market is further intensified by the buying power of TiO2 customers. TiO2 customers obtain lower prices by soliciting multiple bids for purchases, qualifying multiple suppliers for the same applications, leveraging producers against one another, and qualifying new suppliers. *E.g.*, Romano, Tr. 2241:12-16; [redacted] Customers, in other words, pit competitors against each other. Stern, Tr. 3847:21-3848:5. Because producers must remain cost-competitive and produce as much TiO2 as possible, even small reductions in sales can have a disproportionate negative impact. Stern, Tr. 3773:3-12. At the same time, shipping TiO2 is inexpensive, and Defendants face competition from Western and Chinese suppliers in every corner of the globe. Stern, Tr. 3832:14-3833:16; Mouland, Tr. 1206:6-1209:23. Ordinary course documents from Defendants and non-parties alike

show the fierce competition among TiO2 producers. RX0170 (Shehadeh Expert Rep.) at ¶ 267 n.328; [redacted] Coordination is implausible and unsustainable in this market. Shehadeh, Tr. 3429:14-3432:9.

2. Price increase announcements do not demonstrate coordination and are a legitimate part of the competitive process.

As a fallback, the FTC points to public price increase announcements, some of which occurred close in time and were similar in amount, as evidence that TiO2 producers tacitly coordinate price. In a global, cyclical market such as the TiO2 market, however, supply and demand drives prices to trend in the same direction and relative magnitude in every region of the world simultaneously. Turgeon, Tr. 2672:1-12. [redacted]

Furthermore, price change announcements are necessary because they serve as ninety-day notices for customers who bargain for price-protection. Stern, Tr. 3729:8-11. While some producers historically made their price increase announcements public, several producers, including Tronox and Cristal, no longer do so. [redacted]. The FTC misconstrues price changes as anticompetitive, when in fact they reflect the pro-competitive desire of producers to compete vigorously in the face of shifting supply and demand conditions.

3. Output reductions do not demonstrate coordination and reflect sound business decisions.

Similarly, suppliers' behavior regarding output and plant capacity is inconsistent with tacit coordination. Although the FTC argues that examples of plant closures indicate a coordinated attempt to curtail output, closures in fact reflect efforts to lower the overall cost of production by shuttering high cost, outdated, or obsolete assets. [redacted]. Stern, Tr. 3771:13-3773:12; [redacted] In addition, such closures are more than offset by close-in-time and ongoing investments in debottlenecking and line additions at other plants and greenfield capacity construction efforts to *increase* capacity, as well as decisions to optimize supply globally through international trade. Dean, Tr. 2960:13-19; Stern, Tr. 3773:19-3775:2**.** All of these efforts to lower cost and increase capacity contravene the FTC's allegations that the suppliers in this industry are coordinating on price or output reductions.

The varied incentives and cost structures of suppliers in the TiO2 industry, as well as the lack of transparency regarding actual pricing and output, render any potential effort to coordinate pricing pricing or production behavior extremely difficult to conceive, monitor, and enforce. Shehadeh, Tr. 3201:10-3202:2; Stern, Tr. 3800:5-3801:14. Unsurprisingly then, the evidence of what actually happens in the market is inconsistent with coordination. *Id.* Instead, by expanding capacity, lowering the costs of production and expansion, and increasing the extent of vertical integration, the proposed transaction creates even greater diversity in incentives and further reduces transparency in the cost structure and incentives of the post-transaction entity. Shehadeh, Tr. 3201:10-3202:2; Stern, Tr. 3800:5-3801:14; Turgeon, Tr. 2642:7-2643:3.

4. The FTC's references to price-fixing cases are inapposite.

In an effort to prove coordination within the industry, the FTC refers repeatedly to two price-fixing cases to which Tronox was not a party: *Valspar Corp. v. E.I. Du Pont De Nemours & Co.*, 873 F.3d 185 (3d Cir. 2017), and *In re Titanium Dioxide Antitrust Litig.*, 959 F. Supp. 2d 799, 823 (D. Md. 2013). These citations only underscore the weakness of the FTC's litigation positon.

To begin, the passages on which the FTC relies are not *holdings* on coordinated effects in the TiO2 industry. In *In re Titanium Dioxide*, the FTC's quoted language merely describes a *disputed issue of material fact* that precluded summary judgment. 959 F. Supp. 2d at 823. By definition, that is not evidence of anything. The decisions in *Valspar* specifically reject coordination, granting summary judgment in favor of DuPont and concluding that no reasonable jury could find "express collusion" in the industry. *Valspar Corp. v. E.I. Du Pont De Nemours*, 152 F. Supp. 3d 234, 250, 252 (D. Del. 2016), *aff'd*, 873 F.3d 185. Indeed, the Third Circuit's conclusion on this point is clear. *See* 873 F.3d at 202. These courts were not even asked to rule on whether there was tacitly coordinated pricing or production among TiO2 producers.

The FTC quotes the *Valspar* decision out of context: "the market was primed for anticompetitive interdependence and… it operated in that manner" FTC Br. at 12. This quotation misleads this Court in at least two respects. First, the court was merely observing that for purposes of granting *summary judgment* in favor of defendant DuPont, the facts must be accepted as true. *Valspar*, 873 F.3d at 190. No court made a factual finding that Valspar's assertion was correct. Second, had the district court not granted summary judgment, defendants were prepared to show that the allegations were baseless; [redacted]

The FTC's citation of these cases is also factually inapposite. The decisions concerned conduct beginning in 2001 and ending in 2013 involving a program developed through the Titanium Dioxide Manufacturers Association ("TDMA"), a European trade association. *Valspar*, 873 F.3d at 190. That program involved the blind aggregation of producer production, inventory, and sales volumes on a confidential basis, and the dissemination of the *aggregated* information. *Id.* at 238, 245. The plaintiffs alleged that this statistics program helped TiO2 producers coordinate public price increase announcements. While the Third Circuit ultimately rejected the argument that this program was unlawful, it is worth noting that the program has not existed since 2013. *Valspar*, 873 F.3d at 190 ("Valspar claims the conspiracy ended in late 2013 when DuPont exited the TDMA.") Given how the claims about these price-fixing cases fall apart on review, it should come as no surprise that the FTC hardly mentioned them in the administrative proceeding. The price-fixing cases came up only twice during the hearing: first during the FTC's opening statement, which is not evidence at all; and second as an oblique reference during the direct examination of the FTC's economic expert. Vote, Tr. 9:8-19; 22:18-23:25; Hill, Tr. 1808:7-21.

5. Tronox has no incentive to coordinate with competitors as a result of the proposed acquisition.

The FTC's purported evidence of coordinated anticompetitive effects also defies reality. To bolster its contention that Tronox will coordinate with competitors post-merger, the FTC doubles down on Hill's "Capacity Closure Model." Hill, Tr. 1961:23-1962:5. In addition to the flaws discussed above, [redacted] and that his model assumes "perfect communication" between post-merger Tronox and competitor Chemours while ignoring "free rider" incentives the companies would face. [redacted] Shehadeh, Tr. 3412:5-3413:18. Simply put, Hill's model predicts behavior divorced from the real world. Shehadeh, Tr. 3412:20-3413:11; Stern, Tr. 3854:6-15. Defendants' chemicals

industry expert, who has spent four decades in the field, testified that in all of his experience, he had *never* seen the type of coordinating behavior predicted by Hill's model, branding it a "ridiculous theory." Stern, Tr. 3801:3-14. In reality, TiO2 competitors do not possess the tools or incentives to prevent each other from competing as vigorously as possible. *Id.*

When viewed in reality, rather than through the prism of the FTC's hypothetical theories, the transaction incentivizes the merged company to compete fiercely by producing maximum product in order to distribute fixed-costs across the broadest base possible. Stern, Tr. 3852:12-25. Such a strategy allows Tronox to fulfill its ultimate goal in the transaction: improving its cost-position against low-cost producers such as Chemours and Lomon Billions. Quinn, Tr. 2345:24-2346:11; Turgeon, Tr. 2642:7-2643:3. The transaction's output-enhancing efficiencies create an increase of TiO2 in the market. Shehadeh, Tr. 3443:2-14. This is why Tronox executives anticipate that the price of their product will *decrease* as a result of increased production. Mouland, Tr. 1224:1-12. Consumers and customers therefore win.

D. The Acquisition Will Result In Substantial Synergies That Enhance Output, Lower Costs, And Improve Competition For The Benefit Of Consumers.

The transaction will also result in verified, merger-specific synergies that will increase TiO2 output, benefitting consumers. The FTC has not rebutted (because it cannot) these synergies.

1. The proposed transaction is pro-competitive in an already fiercely competitive industry.

The proposed transaction is pro-competitive because it will expand output and make the parties' TiO2 plants more competitive in an already competitive marketplace. Tronox produces more TiO2 feedstock than its TiO2 pigment plants can consume, while Cristal's TiO2 production exceeds its feedstock production. Turgeon, Tr. 2593:17-2595:6. Combining the two companies' feedstock and TiO2-producing capabilities will create greater vertical integration, leading to lower costs, expanded output, and lower pricing. Shehadeh, Tr. 3444:8-17; Stern, Tr. 3851:1-3852:3.

Further, while Tronox has a consistent record of operating its plants at or near the limits of their design capabilities, Cristal has not been able to achieve that level of production, dogged instead by chronically underperforming plants that rarely produce TiO2 anywhere near their "name plate" capacity or design capabilities. Thus, the transaction presents important and procompetitive opportunities to increase production at Cristal's plants. Tronox is the ideal acquirer to increase Cristal's output. The technology and plant design of Cristal's Yanbu facility is identical to that of Tronox's Hamilton facility. Moreover, Tronox has developed internal best practices that, when applied to Cristal, will ensure that Cristal plants operate at similarly high levels of utilization. Quinn, Tr. 2349:23-2350:8; Dean, Tr. 2994:19-2995:23 (discussing Yanbu Transformation plan). Tronox has already proven its ability to increase plant output by establishing a long record of doing so at its own facilities.

Needless to say, increasing output of TiO2 will benefit customers. Turgeon, Tr. 2655:7-19; Romano, Tr. 2216:6-2217:6. Indeed, Tronox's customers "are much bigger" than Tronox, "especially in the coatings industry, [where] the paint companies are multiple times" Tronox's size. Quinn, Tr. 2345:24-2346:11. Tronox's customers have been growing and "wanted Tronox to grow with them," and the Cristal transaction was an "obvious way for [Tronox] to meet [its] customer requirement" and grow along with its customers. Turgeon, Tr. 2645:7-20. To succeed in the modern marketplace, Tronox must lower its costs to serve its customers and compete with the larger players, like low-cost producer Chemours. Quinn, Tr. 2346:1-11. Increasing output will allow the combined company to move "towards the lower cost end of the curve" which will "enable

the merged entity to more effectively compete against Chemours and other low-cost producers like the Chinese." Stern, Tr. 3790:15-24.

2. The transaction will reduce fixed costs through vertical integration.

The combined company will also realize significant synergies by reducing fixed costs through vertical integration. This too benefits consumers. *First*, vertical integration eliminates one or two levels of margins from the production costs of TiO2 pigment — the feedstock producer's margin, and if the feedstock producer did not have its own source of ilmenite (a key raw material), the margin from the mine owner. Shehadeh, Tr. 3420:6-3421:4. S*econd*, vertical integration ensures a stable and steady supply of feedstock, incentivizing the combined entity to invest in its mining operations and eliminating volatility introduced by third-party feedstock providers.

Again, the transaction with Cristal is "a perfect fit because [Tronox] will be able to use that excess feedstock" that Tronox already has to feed Cristal's pigment plants. Turgeon, Tr. 2604:1-25. The combined company will be capable of supplying the majority of its own feedstock needs. Stern, Tr. 3851:1-3852:3. At the same time, output-expanding efficiencies at the feedstock level will both "enhance the incentives of the postmerger Tronox to expand output of pigment" as well as "free up" additional sources of feedstock supply "for other competitors." Those efficiencies almost certainly will increase total pigment production and total feedstock supply in the market. Shehadeh, Tr. 3444:8-17.

3. The transaction's output-enhancing synergies are strong and "merger specific."

Importantly, these synergies are "merger specific," i.e., they not would occur if the transaction were blocked. Simply put, the proposed transaction presents a unique opportunity to enhance TiO2 output by improving Cristal's TiO2 plant in Yanbu, Saudi Arabia, and improving

Yanbu production is a key goal of the proposed transaction. Dean, Tr. 2917:17-22. Yanbu's current performance is "[e]xtremely subpar," producing TiO2 at levels well below its nameplate capacity. Dean, Tr. 2979:19-2980:1. Cristal's efforts to bring in outside expertise to improve the Yanbu facility have not resulted in sustainable improvements. Dean, Tr. 2984:4-2985:8; 2980:18-2981:13; [redacted] The planned enhanced output of TiO2 production post-transaction at Yanbu is a merger-specific synergy that will benefit customers by increasing TiO2 pigment available in the market. Mancini, Tr. 2782:24-2785:4. [redacted]

Tronox's predecessor, Kerr McGee, built Yanbu with its *own* technology. Dean, Tr. 2979:4-5. The Yanbu plant is nearly identical in every material way to Tronox's TiO2 plants, including Tronox's Botlek, Kwinana, and Hamilton facilities. Dean, Tr. 2977:11-14; 2979:6-8. As the legacy company of Kerr McGee, Tronox is the best operator of Kerr McGee technology and has a "unique skill set to be able to bring to [Yanbu] that no other company in the world possesses." Quinn, Tr. 2354:25-2356:12. Cristal, by contrast, lacks that expertise. Dean, Tr. 2930:9-2931:3; Turgeon, Tr. 2657:23-2659:2. The proposed transaction therefore will enhance TiO2 output by lending Tronox's particular expertise to the Yanbu plant, increasing that facility's production and succeeding where Cristal's many attempts at output enhancement have failed.

A similar story can be told about the "Jazan slagger," a Cristal-owned (but non-operating) feedstock-producing facility. The benefits of vertical integration will be further enhanced by the repair and restart of the defunct Jazan slagger, enabling Tronox to run its "feedstock assets at full rates." Quinn, Tr. 2361:11-2363:6. Again, no entity other than Tronox can and will fix the Jazan slagger. Only Tronox has the incentive and interest in operationalizing Jazan to increase feedstock

production for TiO2. Van Niekerk, Tr. 3961:6-15. Cristal encountered significant problems when it attempted to commission the Jazan slagger in 2015 and those issues have continue to today. Van Niekerk, Tr. 3900:16-24. Hence, from the inception of the transaction, Tronox has "always considered" the Jazan slagger as being a "part of the Transaction." Quinn, Tr. 2316:15-20. The Jazan slagger is by virtue of an Option Agreement and Technical Service Agreement ("TSA"). Incorporating the Jazan slagger in this way is a standard design for a transaction of this size. Quinn, Tr. 2312:23-2313:8.

Tronox will make the Jazan slagger operational. The Option Agreement and TSA are concrete and certain agreements to purchase the Jazan slagger, both finalized and signed by May, 2018. Thus, Tronox has agreed to invest substantial financial resources in addition to its technical knowledge. Furthermore, "almost immediately after [the TSA] agreement was signed, [Tronox] began training personnel;" maintaining onsite presence; consulting with Cristal on Jazan's design issues; and "Ma[king] several significant contributions and suggestions for doing things differently." Quinn, Tr. 2426:6-15.

4. The transaction will result in significant cost-saving efficiencies.

In addition to operational and output enhancing synergies, there are also sizable cost savings synergies. These include categories such as: (1) Selling, General, and Administrative (SG&A), and (2) procurement, supply chain, and logistics. Mancini, Tr. 2768:23-2769:15.

The estimated SG&A cost savings primarily result from the reduction in personnel and so-called "third party spend," i.e., contracts for third parties to provide needed services to the combined company. Mancini, Tr. 2775:8-9. Because the combination of two global organizations with corporate staffs causes "an enormous amount of overlap," the companies can eliminate much of that overlap and generate significant savings. Mancini, Tr. 2773:3-7; 2773:18-2774:3.

Tronox also expects cost saving from supply chain synergies, including volume purchase discounts. Mancini, Tr. 2775:10-2776:5. Both Tronox and Cristal purchase the same products at the scale of their respective businesses, while the combined entity will make those same purchases but at far greater volumes. Mancini, Tr. 2775:25-2776:3. Tronox expects that the combined company will obtain global supply agreements that will significantly reduce costs. Mancini, Tr. 2775:10-2776:11.

5. The transaction's synergies have been validated by a third party.

Not only are these synergy estimates based on extensive due diligence by both Tronox and Cristal, but they have also been subject to third-party review. Mancini, Tr. 2801:1-6. Tronox hired KPMG to verify the synergy estimates, specifically a team that specializes in synergy and assessment validation, which includes both operational and financial personnel, to look at Tronox's synergy estimates. Mancini, Tr. 2802:2-12. After performing extensive review of the Tronox and Cristal transaction, with access to the "entire data room" in this matter, the KPMG synergy team provided Tronox with a report that "demonstrated [KPMG] had assessed and validated the synergies that [Tronox] had publicly communicated." Mancini, Tr. 2803:7-16; 2804:10-14. The banks that financed Tronox's transaction with Cristal required third-party validation of synergies and relied on the KPMG report to make their lending decisions with regard to the deal. KPMG permitted Tronox to share that report with its lenders. Mancini, Tr. 2804:7-14.

E. Tronox Faces Intense and Growing Competition from Chinese Producers

The FTC ignores the most significant driver of change in the TiO2 industry: the rise of Chinese market entrants who are disrupting competition globally, including in North America. This competition is good for consumers; it drives down prices. To compete in this new

marketplace, producers like Defendants must improve by lowering their cost position. This transaction is a key part of Defendants' ability to remain competitive.

Contrary to the FTC's assertions, the evidence shows that competition in the TiO2 industry is fierce and that the ongoing threat of low-cost production from Chinese rivals threatens both Tronox and Cristal. Chinese producers—and one in particular, Lomon Billions—benefit from low labor costs and low capital costs. Quinn, Tr. 2347:11-24. Some Lomon Billions products are already as good as or better than Tronox products and are capable of competing directly with them. Romano, Tr. 2238:18-2239:21. The proposed transaction will allow the combined company to compete more effectively. Quinn, Tr. 2324:12-23.

The FTC wrongly dismisses the importance of Chinese TiO2 producers, particularly Lomon Billions, the fourth largest TiO2 supplier in the world by capacity. Romano, Tr. 2243:14-2244:2. The evidence clearly shows that Chinese producers are significant and fierce competitors globally in the North American TiO2 market and must be deemed, *at least*, to be "rapid entrants"—suppliers with "readily available 'swing' capacity currently used in adjacent markets that can easily and profitably be shifted to serve" North American customers. PX9085; see (Aug. 19, 2010 Merger Guidelines) at § 5.1; *see also United States v. Falstaff Brewing Corp.*, 410 U.S. 526, 531-32 (1973) (recognizing the importance of entrants).

Chinese expansion in the TiO2 industry is real and unspeculative. Today, Lomon Billions is the fourth largest producer in the world, Turgeon, Tr. 2659:20-2660:20; Romano, Tr. 2243-44, and has the capacity to produce over 705,000 tons of TiO2 pigment, compared to Tronox's current global capacity of 465,000 tons. Engle, Tr. 2491:18-2492:7 (citing RX1642, Lomon Billions Investor Presentation). By contrast, standalone Tronox is the world's sixth-largest TiO2 producer. Recently, Lomon Billions publicly announced plans to expand its

chloride capacity, including by adding 200,000 tons per year during the year 2019 (nearly as much capacity as Tronox's entire Hamilton facility) and 300,000 tons per year sometime in the mid-2020s, amounting to an additional 500,000 tons of chloride capacity. Stern, Tr. 3781:4-18. Lomon Billions has announced expansion plans for its total capacity, publicly stating that it intends to become the world's largest producer of TiO2 pigment capacity of 1.3 million tons by mid-2020s. Engle, Tr. 2493:5-21. Customers and producers alike have been put on notice about Lomon Billions' substantial chloride TiO2 expansions. Quinn, Tr. 2347:10-24; Mouland, Tr. 1209:14-23; [redacted] Chinese producers are vigorously expanding their presence in the global and North American TiO2 market, even seeking to "dominate" the TiO2 industry. Quinn, Tr. 2347:10-24. They benefit from low capital costs, support from the Chinese government, and from inherited intellectual property. Quinn, Tr. 2347:10-24; 2353:14-22, Stern, Tr. 3786:16-20.

Evidence presented at trial also showed that Chinese producers are already an active competitive force in the global TiO2 market, using swing capacity to respond rapidly to supply shortfalls around the world. For example, after Venator's TiO2 plant in Pori Finland shut down due to fire, the large gap in supply in Europe caused by the Pori plant fire was filled by a rapid increase of exports from China into Europe. RX1643, Feb. 2018 TZMI TiO2 Pigment Supply/Demand Report at 63 ("The increase in Chinese exports is approximately consistent with the timing of the Pori fire" and that "additional supply" from China "into Europe is thought to be as a backfill for Pori."); [redacted]

F. Neither The FTC's Administrative Law Judge Nor The FTC Commissioners Are Likely To Find That The Proposed Transaction Is Anticompetitive.

For all the foregoing reasons, Defendants submit that this transaction cannot possibly harm consumers but will certainly benefit them. Defendants' assessment is supported by the FTC's own Chief Administrative Law Judge. In predicting the FTC's likelihood of success on the merits of its administrative complaint, the Court should consider Chief Judge Chappell's actual on-the-record comments about the FTC's case, and the composition of the Commission that will decide any appeal of the administrative decision. These facts further demonstrate that the FTC is unlikely to succeed on the merits of its administrative complaint.

1. Chief Administrative Law Judge Chappell's on-the-record comments demonstrate his skepticism about the FTC's case.

In evaluating the FTC's likelihood of success on the merits, the Court can take into account that Chief Judge Chappell repeatedly expressed skepticism about the FTC's claims at trial. At times, Chief Judge Chappell was incredulous about positions the FTC had taken for purposes of the administrative proceedings. *See, e.g.*, Judge Chappell, Tr. 3245:11-3246:2 (Shehadeh) ("Let me get this right. You, representing the Government, are objecting to a witness talking about the FTC/DOJ Merger Guidelines? Do I understand that correctly?"). But most importantly of all, Judge Chappell's questions and observations revealed his doubts about the merits of the FTC's allegations about the transaction.

From the opening of the administrative proceeding, Judge Chappell questioned the premise of the FTC's claim that Defendants would improperly reduce production in an effort to increase the price of TiO2. 12/20/2017 Sched. Conf. Tr. at 31:7-16 ("Those three bullets at the top, plant closures, shutdowns, are you saying those are not things that any business may do to make a profit?") (Attached as Exhibit B). He questioned whether the FTC's economist's model—i.e., the

"Capacity Closure Model" — "has… been accepted by appellate courts," to which the economist acknowledged, "I don't believe so." Judge Chappell, Tr. 1771:3-13. Chief Judge Chappell observed on the record that the FTC's economist "seem[ed] to be posing somewhat of a hypothetical with missing information." Judge Chappell, Tr. 1378:16-1379:103. He pressed him about why he did not run his economic model for a worldwide market even though he admitted that the transaction was global in nature. Judge Chappell, Tr. 1783:13-17 ("[Y]ou were talking about North America, then you said this is a worldwide merger. Why wouldn't you apply what's happening in the real world? Why wouldn't you plug that into your model?"). Chief Judge Chappell asked Hill whether his model was "front-running" because the expert applied it only to his preferred market, and not to other possible markets. Judge Chappell, Tr. 1783:23-24 ("Isn't that front-running? You thought it was likely before you even ran the model?").

Chief Judge Chappell's skepticism is relevant to the FTC's likelihood of success on the merits. It underscores the FTC's failure in the administrative proceeding to "raise 'questions going to the merits so serious, substantial, difficult and doubtful as to make them fair ground for thorough investigation, study, deliberation and determination by the FTC in the first instance and ultimately by the Court of Appeals.'" *Arch Coal*, 329 F. Supp. 2d at 116 (quoting *Heinz*, 246 F.3d at 719).

2. Four out of five current FTC Commissioners did not vote to file the administrative complaint against Defendants.

After Chief Judge Chappell's initial decision in the administrative proceeding, the losing party has an automatic appeal to the full Commission, and there again, the FTC faces significant obstacles. When the Commission "voted unanimously to issue an administrative complaint challenging the proposed transaction," Compl. at 2, it was composed of only *two* members, both held over from the previous Administration. Now, the Commission is comprised of a full five members, four of whom are newly appointed to the Commission since the "unanimous" vote to

issue the administrative complaint in this case. Of those four new Commissioners, two have already gone on record to advocate *against* precisely the tactics the FTC has employed in litigating this case, including the new FTC Chairman. *See, e.g.*, Confirmation Hearing, Testimony of Joseph Simons ("In terms of where the FTC files its merger challenges, I think generally it should be in federal court. There should be one bite at the apple. The litigation should occur in federal court …."); Testimony of Rohit Chopra ("As a general matter, … I take your point that these issues may be best suited for federal court."). A fifth new Commissioner has already been confirmed by the Senate and is likely to be seated by the time of any appeal, and she too has gone on record advocating *against* the FTC's tactics in this litigation. Confirmation Hearing, Testimony of Christine Wilson ("As a general rule, seeking a PI in federal court would be the right way to go for unconsummated mergers.").

Accordingly, not only has the FTC failed to prove the merits of its case in administrative proceedings, but it also faces the likely prospect of needing to convince five *new* Commissioners of the merits of its case in the event of an appeal. The FTC will have to do so even though a majority of those Commissioners will have already denounced the tactics the FTC has used here. Suffice it to say, the FTC's path to success is steep and highly uncertain.

II. THE EQUITIES ALSO WEIGH AGAINST A PRELIMINARY INJUNCTION.

Section 13(b) "provides for the grant of a preliminary injunction 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." *Arch Coal*, 329 F. Supp. 2d at 159 (quoting *Heinz*, 246 F.3d at 714); *see* 15 U.S.C. §13(b). The equities weigh strongly against injunctive relief for at least three reasons: (1) as detailed above, this transaction is pro-competitive and is therefore in the public interest; (2) the public interest favors the timely, efficient resolution of

disputes over unconsummated mergers; and (3) the transaction is particularly suited to divestiture as a post-closure remedy if the FTC prevails in the administrative proceeding.

The FTC has unreasonably delayed its request for a preliminary injunction, and it has done so for no purpose besides using the administrative process to prevent the merger without regard for the merits of the FTC's allegations under the Clayton Act. Although the FTC has tried to deny it in this Court, the FTC's tactics with respect to this transaction have been unprecedented and unfair—and the statements by Chief Judge Chappell confirm this to be the case. With the FTC having leveraged its administrative process to impose maximum costs and burdens on the parties before asking this Court for equitable relief, the Court should require the FTC to continue to follow its administrative process and seek the remedy of post-closing divestiture. As detailed below, a straightforward divestiture after the closing of the transaction would address all of the antitrust concerns the FTC has raised with the transaction. This approach—allowing the transaction to close while the FTC continues the administrative process it started—makes much more sense than laying waste to the entire global transaction, especially in light of the FTC's conduct here.

This Court asked the FTC two questions that go to the heart of the equities in this case: "why not do it through the District Court, in the first instance? That was an alternative, yes?" 7/13/18 Hr'g Tr. at 27:21-23 (Attached as Exhibit C). The FTC did not provide a straight answer to either question. Counsel for the FTC denied it could have sought an injunction sooner in the District Court, claiming the Court "would have a good argument to say, there is no jurisdiction there for a TRO, there is no jurisdiction there for a PI, because there is nothing to enjoin from happening, and that's why we don't do it that way, Your Honor." *Id.* at 28:6-10. This explanation is simply untrue, and it is contradicted by the FTC's ordinary practice in seeking injunctions and

the criticisms that Chief Judge Chappell repeatedly directed at the FTC in the administrative proceeding.

First, it was certainly an alternative for the FTC to proceed in the District Court in the first instance. In truth, the ordinary and expected practice would have been for the FTC to seek a preliminary injunction in the District Court before forcing the parties through the administrative process. The Commissioners authorized the FTC to seek a preliminary injunction in this Court *more than seven months ago*, when the two-member Commission approved the complaint on December 5, 2017. *FTC Challenges Proposed Merger of Major Titanium Dioxide Companies*, Federal Trade Commission (Dec. 5, 2017), https://www.ftc.gov/news-events/press-releases/2017/12/ftc-challenges-proposed-merger-major-titanium-dioxide-companies. Although the FTC did not promptly seek injunctive relief in the District Court then, that was a tactical decision and not because there would be "no jurisdiction there for a PI." Nothing prevents the FTC from requesting injunctive relief even when regulatory approvals are pending in other jurisdictions. In the seeking to enjoin the 2015 acquisition of by Staples of Office Depot, for example, the FTC sought an injunction as soon as it received the requisite authorization from the Commission, even though European regulators had net yet even conditionally approved the transaction. Motion for Preliminary Injunction, *FTC v. Staples, Inc. and Office Depot, Inc*., No. 15-CV-02115 (D.D.C. Dec. 7, 2015), *available at* 2015 WL 10682935; *see* Press Release, *Staples Receives Approval from European Union to Acquire Office Depot* (Feb. 10, 2016), *available at* https://bit.ly/2uFOeAX. The FTC did not have to contend with any argument that there was "no jurisdiction there for a PI" in that case.

So the record is clear, the Defendants would not have objected—for lack of "jurisdiction" or otherwise— to the FTC seeking an injunction promptly after the Commissioners authorized this

litigation in December 2017. To the contrary, Defendants did everything they could to urge the FTC to bring its preliminary-injunction request so the Court could resolve this matter efficiently and expeditiously. After the FTC refused Defendants' requests that the FTC file its preliminary-injunction complaint, Defendants brought a declaratory-judgment action in federal court in Mississippi in an effort to force the FTC to bring this lawsuit. Compl. *Tronox Limited v. FTC*, No. 1:18-cv-00010-SA-RP (N.D. Miss Jan. 23, 2018) (ECF No. 1). After filing the declaratory-judgment complaint, Defendants asked the FTC to agree to a two-day preliminary-injunction hearing to resolve the matter, so Defendants could efficiently resolve the regulatory uncertainty the FTC's action had created. Letter from Michael F. Williams, Tronox Counsel, to Dominic Vote and Charles Loughlin, FTC Counsel (Feb. 5, 2018) (Attached as Exhibit D). The FTC opposed Defendants' lawsuit and denied Defendants' requests, but these were tactical measures intended to impose greater costs and time pressures on the transaction, not decisions based upon legal or jurisdictional considerations, as the FTC represented to this Court.

The Court does not have to take Defendants' word for it. Chief Judge Chappell was incredulous that the FTC was proceeding with the administrative process instead of the more efficient alternative of seeking an injunction in federal court. Counsel for the FTC accused Defendants of trying "to sort of deride the part 3 [administrative] process and suggest it is not a real trial," 7/13/18 Hr'g Tr. 26:6-7, but the record shows that Chief Judge Chappell was actually the most vocal critic of the FTC's tactics at every stage of the administrative process:

- At the initial status conference in the administrative proceeding on December 20, 2017, Chief Judge Chappell repeatedly called the FTC to task for taking the position it offers in this Court that it could not seek a preliminary injunction at that time. 12/20/17 Hr'g Tr. 8:12-9:12 (explaining that he has never seen a nonconsummated merger case go to trial once there is an injunction ruling, "and what that means is it's a tremendous waste of resources for the taxpayers of America and for Respondents, for attorneys' fees, to try this case to completion;" continuing, "the bottom line is, whether there is an injunction proceeding or not, I expect the parties to work together to delay the start date of this trial until we know

something."); 12/20/17 Hr'g Tr., 32:10-25 ("[T]he PI system is much more efficient to get to a conclusion of whether some district court judge thinks that the merger should be blocked."); 12/20/17 Hr'g. Tr. 77:21-78:2 (JUDGE CHAPPELL: "But everybody involved in these proceedings knows that there's no way to get this through the system before the merger would be -- the merger would be consummated. I mean, it just -- it's impossible to have a trial, get a decision out. It's never going to happen. It's a worthy goal, but it's unrealistic.").

- During the final pretrial conference in the administrative proceeding on May 16, 2018, Chief Judge Chappell continued questioning the FTC about why it was forcing the parties into an administrative proceeding instead of seeking a preliminary injunction. 05/16/18 Hr'g Tr. 11:25-12:7 (JUDGE CHAPPELL: "Because this is the first case I'm aware of, in a nonconsummated merger, where we're in this position, going to trial, where the Government has not moved for a preliminary injunction. It's never happened as far as I know. Oh, I'm sure I read about something that was before I was born and probably three rule changes ago, but in recent history, there has never been. So let's do it.") (Attached as Exhibit E).

- During the opening statements in the administrative proceeding on May 18, 2018, Chief Judge Chappell returned to questioning the FTC about not having filed its motion for a preliminary injunction.

- During the last day the parties presented record evidence in the administrative proceeding on June 22, 2018, Chief Judge was even more skeptical of the FTC's tactical decision not to seek a preliminary-injunction in federal court. 06/22/18 Hr'g Tr. 3810:21-3811:24 (JUDGE CHAPPELL: "In the event anyone here would suffer from the delusion that this process would finish up much quicker than a preliminary injunction proceeding in federal court, let me disabuse you of that fantasy. . . [t]here is no way that this process ends before a preliminary injunction proceeding would end in district court. And if anybody represents to a district court judge that this process will probably end sooner, I'd like somebody to report that to my office.")

Over and over again, Chief Judge Chappell observed on the record that the FTC had taken an approach to these proceedings that was "unprecedented," 05/16/18 Hr'g Tr. 11:25-12:7 and also unfair to the Defendants and the taxpayers, 12/20/17 Hr'g Tr. 8:12-9:12.

Second, the FTC has never provided a good explanation for why it chose to force the parties through extended administrative proceedings, despite the criticism from Chief Judge Chappell and the repeated objections by the parties. The only plausible explanation is that the FTC was using its regulatory processes to increase the costs and burdens of moving forward with the transaction instead of seeking a fair and expeditious resolution of the legal issues. On this point, the FTC has succeeded. The parties had to renegotiate the transaction in on March 1, 2018 in order to extend

the expiration date of the transaction from May 21, 2018 until March 31, 2019. March 1, 2018 Press Release "Tronox Announces Extension to Cristal TiO2 Acquisition Agreement" accessible at:http://investor.tronox.com/node/11546/pdf. In this renegotiation, Cristal insisted on additional consideration from Tronox, requiring payment of an additional $60 million to address the FTC's delays in the regulatory process. More recently, Tronox has had to negotiate with potential counterparties for a divestiture of North American assets in an effort to prepare the deal to move forward before the extended March 31, 2019 deadline. In these negotiations, Tronox has had to agree to pay a break-up fee of $75 million to a counterparty as a price for moving forward with the transaction in the event the Court denies the FTC's request for a preliminary injunction. *Tronox Submits Definitive Agreement to the European Commission Required for Approval of Cristal Acquisition*, Tronox (July 16, 2018), http://investor.tronox.com/news-releases/news-release-details/tronox-submits-definitive-agreement-european-commission-required. In other words, Tronox has had to agree to more than $130 million in additional consideration that it would not have had to pay if the FTC had promptly sought injunctive relief months ago. These costs are separate and independent of the harms from uncertainty the FTC has caused, negatively affecting employee morale, creating customer and supplier uncertainty, and costing Tronox excess interest payments on loans entered into when the transaction was announced in February 2017.

In short, the FTC has tried to run down the clock on this transaction without giving Defendants a fair chance at proving the merits. The FTC is now asking the Court to enjoin the transaction (on an abbreviated evidentiary hearing) because the administrative process will not conclude until months after the transaction expires. But the record demonstrates the FTC has chosen a conscious strategy of delay. The FTC could have sought its injunctive relief in December 2017 when it received authorization from the Commission, and the parties would have resolved

any legal questions about this transaction months ago, before Tronox needed to agree to pay tens of millions of dollars in additional consideration to address the FTC's delay tactics.

With the FTC having chosen to pursue its challenge to this transaction in administrative proceedings, including a full administrative trial on the merits, the only equitable result would be to require the FTC to seek administrative remedies through those proceedings. Specifically, the FTC should seek post-closing divestiture (instead of pre-closing injunctive relief) through the administrative process if the FTC does prevail on its challenge to the lawfulness of the transaction. The FTC's own economic evidence from the Part 3 proceedings, if credited, would show that unilateral output reduction and coordinated effects are possible only when the same producer owns both the Hamilton (currently Tronox) TiO2 plant and the two Ashtabula (currently Cristal) plants. The combined company could completely address the FTC's alleged anticompetitive concerns post-closing by divesting the Ashtabula plants it has acquired from Cristal.

This Court should not reward the FTC's delay with the equitable relief of a preliminary injunction in federal court, particularly when the FTC's administrative process—which *it* has chosen to pursue exclusively up until this point—is fully capable of remedying the FTC's anticompetitive concerns about this transaction, should the FTC ever successfully prove them in its administrative forum. The FTC can seek divestiture of the Ashtabula plants post-transaction in the unlikely event that it ultimately prevails. Divesting the Ashtabula plants is a narrow remedy tailored to the alleged "North American" market on which the FTC has premised its case. Such a remedy would permit the rest of this transaction, which even the FTC's own economic expert admits is a global transaction, to proceed unimpeded by regulatory concerns limited to the United States and Canada. Hill, Tr. 1903:6-8; 1782:6-19. Divesting the Ashtabula plants would entirely resolve the anticompetitive concerns of the FTC's economic expert, Hill, Tr. 1826:7-1828:23; Hill,

Tr. 1910:13-1911:17; PX5000 at 088-089. (Dr. Hill's analysis looked at North American chloride plants and for the parties, which included Tronox's plant at Hamilton and Cristal's plants in Ashtabula). Unlike *FTC v. Heinz*, 246 F.3d at 726, a case in which it was "impossible to recreate pre-merger competition" post-transaction, this is a case where divestiture would work. The Ashtabula plants could easily be separated from the rest of the transaction because they are discrete physical assets that could even be operated as a standalone venture. Because the FTC can obtain all the relief it requires by seeking post-transaction divestiture in its own administrative proceedings, the equities weigh strongly against issuing a preliminary injunction to restrain this global transaction.

CONCLUSION

For the foregoing reasons, Defendants respectfully request that the Court deny the FTC's motion for a preliminary injunction.

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