IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA

FEDERAL TRADE COMMISSION
600 Pennsylvania Avenue, N.W.
Washington, DC 20580

Plaintiff,

v.

TRONOX LIMITED
263 Tresser Boulevard, Suite 1100
Stamford, CT 06901

NATIONAL INDUSTRIALIZATION COMPANY
Building C3, Business Gate
Eastern Ring Road, Cordoba Area
Riyadh 11496, Kingdom of Saudi Arabia,

NATIONAL TITANIUM DIOXIDE COMPANY LIMITED
17th floor, King Road Tower
King Abdulaziz Street, Beach District
Jeddah 21414, Kingdom of Saudi Arabia,

and

CRISTAL USA INC.
6752 Baymeadow Drive
Glen Burnie, MD 21201

Defendants.

Case: 1:18-cv-01622 (D Deck)
Assigned To : McFadden, Trevor N.
Assign. Date : 7/10/2018
Description: TRO/Privacy Act

COMPLAINT FOR TEMPORARY RESTRAINING ORDER AND PRELIMINARY INJUNCTION PURSUANT TO SECTION 13(b) OF THE FEDERAL TRADE COMMISSION ACT

Plaintiff, the Federal Trade Commission ("FTC" or "Commission"), by its designated attorneys, petitions this Court for a temporary restraining order and preliminary injunction enjoining Defendant Tronox Limited ("Tronox") and Defendants National Industrialization

Company ("TASNEE"), National Titanium Dioxide Company Limited ("Cristal Global"), and Cristal USA Inc. ("Cristal USA") (collectively, "Cristal"), including Tronox's and Cristal's agents, divisions, parents, subsidiaries, affiliates, partnerships, or joint ventures, from consummating their proposed acquisition (the "Acquisition"). Plaintiff seeks this provisional relief pursuant to Section 13(b) of the Federal Trade Commission Act ("FTC Act"), 15 U.S.C. § 53(b). Absent such provisional relief, Tronox and Cristal (collectively, "Defendants") will likely be free to consummate the merger as soon as July 16, 2018, the earliest date it appears the European Commission ("EC") is likely to complete its process by approving a remedy package intended to address the EC's concerns about the Acquisition's effects in Europe. Approval from the European Commission is the only remaining hurdle preventing Defendants from consummating the Acquisition.

The Federal Trade Commission voted unanimously to issue an administrative complaint challenging the proposed transaction, and *has already completed a month-long trial* to adjudicate whether the Acquisition is unlawful. The Commission initiated that administrative proceeding pursuant to Sections 7 and 11 of the Clayton Act, 15 U.S.C. §§ 18, 21, and Section 5 of the FTC Act, 15 U.S.C. § 45, by filing an administrative complaint on December 5, 2017. The administrative trial on the merits began May 18, 2018 and concluded on June 22, 2018. The parties had a full opportunity to conduct discovery, including expert discovery, and to present testimony and other evidence regarding the likely competitive effects of the Acquisition. The Administrative Law Judge ("ALJ") heard live testimony from nineteen fact witnesses, four expert witnesses, and admitted thousands of documents into evidence. This extensive evidentiary record is now closed. The ALJ will issue a decision on that evidentiary record, and either party may then appeal to the Commission. The outcome of the agency's administrative

process will determine, subject to any further review before an appropriate court of appeals, whether the Acquisition is illegal and should be permanently enjoined. Plaintiff requires the aid of this Court to maintain the status quo and prevent interim harm to competition until a final decision on the merits can be issued by the Commission, and in the event that the Commission orders the parties to cease and desist from the acquisition, until any further federal court review is completed.

NATURE OF THE CASE

1. This is an action to temporarily restrain and preliminarily enjoin the consummation of Tronox's acquisition of Cristal's titanium dioxide business. The Defendants' proposed Acquisition would combine two of the three largest producers of titanium dioxide manufactured through the chloride process ("chloride TiO2") in the United States and Canada ("North America"). Titanium dioxide ("TiO2") is an industrial chemical primarily used as a pigment to provide white color and opacity for architectural paints, industrial and automotive coatings, plastics, and other products. TiO2 is manufactured using either the chloride process, which comprises the vast majority of TiO2 produced and purchased in North America, or the sulfate process ("sulfate TiO2").

2. Just last year, the U.S. Court of Appeals for the Third Circuit characterized the TiO2 industry as an "oligopoly" that is "dominated by a handful of firms" with "substantial barriers to entry." Absent injunctive relief, two firms, Tronox and Chemours Company ("Chemours"), would control the vast majority of chloride TiO2 sales to North American customers and more than 80 percent of overall North American chloride TiO2 manufacturing capacity. The proposed Acquisition would substantially increase concentration in an already concentrated market and would result in post-Acquisition market concentration levels for the sale

of chloride TiO2 to North American customers that exceed those presumed likely to result in anticompetitive effects under both the Federal Trade Commission and U.S. Department of Justice Horizontal Merger Guidelines ("Merger Guidelines") and the relevant case law.

3. The Acquisition would substantially lessen competition for the sale of chloride TiO2 to North American customers ("North American chloride TiO2 market") in at least two ways. First, the Acquisition would increase the likelihood of coordination in an already vulnerable oligopoly market with an extensive history of price-fixing litigation and settlements. It removes one of only a handful of remaining competitors; consolidates the overwhelming majority of North American TiO2 sales and production capacity in the hands of two large and disciplined TiO2 companies, Tronox and Chemours; and enhances market transparency among the few competitors that would remain. Second, by doubling the size of Tronox's North American chloride TiO2 business, the Acquisition would increase the incentive and ability of Tronox – a company long focused on reducing or restricting supply as a means of stabilizing or propping up TiO2 prices – to restrict its output to influence North American chloride TiO2 supply and increase prices. On Tronox's earnings call for the third quarter of 2015, Tronox's CEO told the company's investors that it manages its production of TiO2 because when inventories get reduced, "prices will rise." On Tronox's earnings call for the first quarter of 2016, Tronox's CEO said that a "very disciplined approach" to TiO2 production "is what has facilitated the [price] recovery in our market." On Tronox's earnings call for the fourth quarter of 2016, Tronox's CEO said the company has tried to be "economically rational" by reducing TiO2 and TiO2 feedstock production.

4. Following the announcement of the Acquisition in February 2017, market participants and observers recognized the potential anticompetitive impact of the Acquisition.

Industry publication *ICIS Chemical Business* observed that "Tronox's proposed acquisition of Cristal is the latest example of market consolidation that should lead to more price discipline in titanium dioxide." Indeed, Tronox acknowledges that the Acquisition will prove beneficial to its competitors and the industry as a whole. Shortly after the transaction was announced, Tronox's then-CEO wrote to competitor Huntsman's CEO, stating he was "very happy that we are able to put [the Acquisition] together since I think it will be very good for [Tronox's] shareholders – and if today's market reaction is an indication, for yours, and Chemour[s]'s and Kronos' too." Other major TiO2 suppliers similarly acknowledged in investor presentations that the Acquisition is likely to lead to increased supply constraints and higher prices.

5. New entry or expansion by existing producers would not be timely, likely, or sufficient to counteract the anticompetitive effects of the Acquisition. In public statements, Tronox and other market participants consistently confirm the Third Circuit's conclusion that the TiO2 industry is characterized by "substantial barriers to entry." Proprietary technology and the massive investment needed to build a new TiO2 plant render de novo entry unlikely to have any meaningful impact on the North American market. As Tronox noted during an earnings call, "running TiO2 plants is a capital-intensive undertaking" and mastering "complex, proprietary technology" remains a "major hurdle," particularly for chloride TiO2 plants. Expansion or repositioning by the remaining firms sufficient to offset the Acquisition's anticompetitive effects is also unlikely. Over the last decade, more North American TiO2 production capacity has been removed through plant and line closures than added by expansions. Nor are increases in TiO2 imports likely to offset the anticompetitive effects of the Acquisition.

6. Defendants cannot show cognizable and merger-specific efficiencies that would offset the likely and substantial competitive harm from the Acquisition.

7. On December 5, 2017, the Commission found reason to believe that the Acquisition would violate Section 7 of the Clayton Act and Section 5 of the FTC Act by substantially reducing competition. The Commission issued an administrative complaint and authorized staff to seek a temporary restraining order and preliminary injunction in federal court if, and when, necessary.

8. A temporary restraining order enjoining the Acquisition is necessary to preserve the Court's ability to afford full and effective relief after considering the Commission's application for a preliminary injunction. Preliminary injunctive relief is critical to preserve the status quo and protect competition while the ALJ and the Commission review the full record and rule on the antitrust merits of Defendants' proposed merger, and while any appeals are exhausted. The full trial on the merits in front of the ALJ was completed on June 22, 2018. Allowing the Acquisition to proceed prior to the ALJ and the Commission rendering their decisions on the merits, and prior to the exhaustion of any federal court review, would harm consumers and undermine the Commission's ability to remedy the anticompetitive effects of the Acquisition if it is found unlawful following the administrative process and any subsequent federal court review.

JURISDICTION AND VENUE

9. This Court's jurisdiction arises under Section 13(b) of the FTC Act, 15 U.S.C. § 53(b), and under 28 U.S.C. §§ 1331, 1337, and 1345. This is a civil action arising under the Acts of Congress protecting trade and commerce against restraints and monopolies, and is brought by an agency of the United States authorized by an Act of Congress to bring this action.

10. Section 13(b) of the FTC Act, 15 U.S.C. § 53(b), provides in pertinent part:

Whenever the Commission has reason to believe –

> (1) that any person, partnership, or corporation is violating, or is about to violate, any provision of law enforced by the Federal Trade Commission, and
>
> (2) that the enjoining thereof pending the issuance of a complaint by the Commission and until such complaint is dismissed by the Commission or set aside by the court on review, or until the order of the Commission made thereon has become final, would be in the interest of the public – the Commission by any of its attorneys designated by it for such purpose may bring suit in a district of the United States to enjoin any such act or practice. Upon a proper showing that weighing the equites and considering the Commission's likelihood of ultimate success, such action would be in the public interest, and after notice to the defendant, a temporary restraining order or a preliminary injunction may be granted without bond . . .

11. 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.

12. The FTC Act, 15 U.S.C. § 53(b), authorizes nationwide service of process, and personal jurisdiction exists where service is effected pursuant to a federal statute. Fed. R. Civ. P. 4(k)(1)(C). Defendants are therefore subject to personal jurisdiction in the District of Columbia. Moreover, Tronox has consented to personal jurisdiction in the District of Columbia. Venue is proper in the District of Columbia under 28 U.S.C. § 1391(c)(2), (c)(3) and 15 U.S.C. § 53(b).

THE PARTIES AND THE PROPOSED ACQUISITION

13. Plaintiff, the FTC, is an administrative agency of the United States government, established, organized, and existing pursuant to the FTC Act, 15 U.S.C. §§ 41 *et seq.*, with its principal offices at 600 Pennsylvania Avenue, N.W., Washington, D.C. 20580. The Commission is vested with authority and responsibility for enforcing, *inter alia*, Section 7 of the Clayton Act, 15 U.S.C. § 18, and Section 5 of the FTC Act, 15 U.S.C. § 45.

14. Defendant Tronox is a publicly traded company incorporated in Australia and headquartered in Stamford, Connecticut. Tronox is a vertically integrated company that mines

titanium ore and other minerals and manufactures and sells chloride TiO2 pigment. In 2016, Tronox's TiO2 business generated North American sales of approximately $410 million. Tronox operates one TiO2 pigment manufacturing plant in Hamilton, Mississippi, as well as plants in Botlek, the Netherlands, and Kwinana, Australia. All three plants produce exclusively chloride TiO2. Tronox also operates titanium feedstock facilities, including mines and mineral processing plants, in South Africa and Australia that provide the raw materials needed to produce TiO2 pigment.

15. Defendant TASNEE is a Saudi joint stock company headquartered in Riyadh, Saudi Arabia. It is the majority owner of Cristal Global and the ultimate parent entity of Cristal USA Inc. TASNEE is the legal entity that filed, along with Tronox, a Premerger Notification and Report Form with the FTC and the Department of Justice for the Acquisition—pursuant to the Hart-Scott-Rodino Antitrust Improvement Act of 1976, 15 U.S.C. § 18a—and responded to the Request for Additional Information and Documentary Material from the FTC. Since a recent restructuring, TANSEE, through its Titanium Strategic Business Unit, has consistently supervised and intervened in the affairs of Cristal Global and Cristal USA.

16. Defendant Cristal Global, headquartered in Jeddah, Saudi Arabia, is a privately held company, owned 79% by TASNEE, 20% by Gulf Investment Corporation, and 1% by a private investor. Cristal USA is an agent and alter ego of Cristal Global. In 2016, Cristal Global, which produces and sells TiO2, generated North American sales of approximately $300 million. Cristal Global produces TiO2 in Ashtabula, Ohio, and in the United Kingdom, Australia, Saudi Arabia, Brazil, China, and France. All of Cristal Global's TiO2 production in the U.S., and 80% of its TiO2 production overall, is chloride TiO2. Cristal Global's remaining TiO2 production is sulfate TiO2. Cristal Global also owns titanium feedstock facilities in

Australia, Brazil, and Saudi Arabia. Cristal Global is a named party to the Acquisition agreement.

17. Defendant Cristal USA, a Delaware corporation, operates a large chloride TiO2 manufacturing complex in Ashtabula, Ohio, and a research facility outside Baltimore, Maryland. Cristal USA's management, including strategy, sales and marketing, is fully integrated into the management and operation of Cristal Global.

18. Pursuant to a February 21, 2017 agreement, Tronox seeks to acquire Cristal's TiO2 business for $1.67 billion in cash and a 24% equity stake in the combined entity.

19. Pursuant to the Hart-Scott-Rodino Antitrust Improvements Act, 15 U.S.C. § 18a, and the expected timing of the EC's approval of the Acquisition, unless temporarily restrained and preliminarily enjoined by this Court, Defendants will likely be free to consummate the Acquisition as soon as July 16, 2018.

20. On December 5, 2017, the Commission found reason to believe that the Acquisition would substantially lessen competition in violation of Section 7 of the Clayton Act, 15 U.S.C. § 18, and Section 5 of the FTC Act, 15 U.S.C. § 45. On the same day, the Commission commenced an administrative proceeding on the antitrust merits of the Acquisition before an ALJ, and the merits trial began on May 18, 2018 and concluded on June 22, 2018. The administrative trial record is now closed, and the parties are actively engaged in post-trial briefing. The ALJ will then issue an Initial Decision on the legality of the proposed Acquisition. The decision of the ALJ may be reviewed by the Commission, which issues a final decision and order, which, in turn, may be reviewed by a United States Court of Appeals.

21. In authorizing the filing of this complaint, the Commission has determined that (1) it has reason to believe the Acquisition would violate the Clayton Act and the FTC Act by

substantially lessening competition in one or more lines of commerce, and (2) an injunction of the Acquisition pending the resolution of the Commission's proceedings and any subsequent review will promote the public interest. An injunction would minimize the potential harm to customers and preserve the Commission's ability to grant an adequate remedy if it concludes after the ongoing administrative proceeding that the Acquisition is unlawful.

BACKGROUND — TITANIUM DIOXIDE

22. TiO2 is an essential pigment used to add whiteness, brightness, and opacity to paints, industrial and automotive coatings, plastics, and other specialty products. Primary customers include paint and coatings manufacturers and plastic producers, which account for approximately 60% and 25% of the TiO2 consumed in North America, respectively. Paper and other specialty products, such as ink, food, cosmetics, and pharmaceuticals, use the remainder. For nearly all customers, there are no commercially reasonable substitutes for TiO2.

23. TiO2 is produced from titanium-containing ores through one of two manufacturing processes that extract TiO2 from ore: (1) the chloride process that uses chlorine; and (2) the sulfate process that uses sulfuric acid. The chloride process is environmentally cleaner but technically more difficult to master and operate. The chloride process also generally produces higher quality TiO2 with a bluer tint, compared to a yellower tint for TiO2 manufactured from the sulfate process. Chloride TiO2 is also more durable than sulfate TiO2. The vast majority of TiO2 sold to and consumed by North American customers, as well as produced in North America, is chloride TiO2.

24. TiO2 can also have two different crystal structures—rutile and anatase. Rutile and anatase TiO2 have different physical characteristics and applications and are not substitutes for any use relevant to this matter. References in this Complaint to TiO2 are to rutile TiO2.

25. TiO2 is delivered to customers by rail or truck. In North America, customers purchase TiO2 either in a liquid slurry or a bagged dry powder form. TiO2 slurry is made by dispersing TiO2 powder in water with other additives. TiO2 slurry is then delivered by rail cars or tank trucks and pumped directly into customers' storage tanks, which simplifies handling and manufacturing. TiO2 slurry demand is much higher in North America than in other regions. Large paint and coatings manufacturers in North America generally purchase the majority of their TiO2 in a slurry form. North American slurry TiO2 is entirely made from chloride TiO2.

MARKET PARTICIPANTS AND INDUSTRY DYNAMICS

26. The North American TiO2 industry is an oligopoly dominated by five major producers: Tronox, Cristal, Chemours, Kronos, and Venator. These companies produce and sell TiO2 both in North America and in other regions. All North American production is chloride TiO2 with the exception of a small Kronos-owned sulfate TiO2 plant in Canada.

27. Chemours, a DuPont spin-off, is currently the largest TiO2 company in North America and globally. Chemours has two plants in the United States, one in DeLisle, Mississippi and the other in New Johnsonville, Tennessee. Chemours also has plants in Mexico and Taiwan. Chemours's plants produce only chloride TiO2.

28. The two other major North American TiO2 companies—Kronos and Venator—both own a 50-50 joint venture that operates a chloride TiO2 plant in Westlake, Louisiana. Kronos also operates a TiO2 plant in Canada and four plants in Europe. Venator, a Huntsman spin-off, operates six TiO2 plants in Europe and one plant in Asia. While Venator is the second largest TiO2 company in the world by capacity, its presence in North America—limited to half of the output of the joint venture plant in Louisiana—is the smallest among the five major North

American producers. Outside of the United States, Kronos and Venator produce both chloride TiO2 (rutile) and sulfate TiO2 (rutile and anatase).

29. Beyond the major North American TiO2 producers, there are smaller regional manufacturers of TiO2, primarily located in Eastern Europe and Asia. The TiO2 produced by these fringe manufacturers is virtually all sulfate TiO2, is generally lower quality than that manufactured by the five major North American TiO2 companies, and is mostly sold in local or regional markets outside North America. Over the last decade, producers in China have increased their exports of TiO2, primarily into markets in Asia, South America, Europe, and the Middle East. Almost all Chinese TiO2 has been lower quality sulfate TiO2, and very little has been exported to North America. Similarly, although a few Chinese manufacturers have recently begun producing chloride TiO2, their production has been limited, and only a very small amount has been imported to North America.

30. Over the past several years, there have been several civil antitrust suits brought in the United States alleging price fixing by the five major TiO2 companies. Most recently, the Third Circuit Court of Appeals concluded that "[t]here is little doubt that this highly concentrated market for a commodity-like product with no viable substitutes and substantial barriers to entry was conducive to price fixing." The court went on to state that the major TiO2 companies have already engaged in anticompetitive conduct, noting that "the market was primed for anticompetitive interdependence and that it operated in that manner," and that such "oligopolistic conscious parallelism is by nature anticompetitive." In a separate proceeding, in 2013, a federal district court in Maryland denied summary judgment for defendants, holding that "[t]he record contains ample evidence for concluding that the Defendants agreed to raise prices and shared

commercially sensitive information . . . to facilitate their conspiracy." That litigation concluded with the defendants collectively paying a nine-figure settlement.

31. Given relatively inelastic demand for chloride TiO2 in North America, the major North American TiO2 producers recognize that by limiting the supply of chloride TiO2 available in North America they are better able to stabilize or increase North American TiO2 prices. Several of these companies have curtailed or restricted their North American chloride TiO2 output over the past several years to prop up prices. Tronox publicly stated in an earnings call that it manages or restricts production to support higher TiO2 pricing and believes that the other major producers have done the same. In Tronox's earnings call for the first quarter of 2016, Tronox's CEO stated outright that Tronox, Venator, Cristal and Chemours all lowered their plant utilization rates in the prior year, that they had all talked about a goal of reducing inventories, and that they had all tried to accomplish this goal by reducing production and continuing to maintain sales. Tronox and other major North American TiO2 producers have curtailed output by temporarily idling production lines, lowering production rates, or permanently closing plants. They have also exported North American production and slowed or delayed production increases in an effort to increase or maintain higher prices.

32. In recent years, Tronox and Chemours have been particularly disciplined about their North American sales and production of TiO2. In 2015, Tronox reduced production at its Hamilton, Mississippi facility by temporarily shutting down a line, and Chemours closed its Edge Moor plant in Delaware and shut down a production line at its New Johnsonville, Tennessee plant.

RELEVANT MARKET

33. The sale of chloride TiO2 to North American customers is a relevant market. A hypothetical monopolist for the sale of chloride TiO2 to North American customers would find it profit-maximizing to impose at least a small but significant and non-transitory increase in price ("SSNIP").

A. Relevant Product Market

34. The sale of chloride TiO2 is a relevant product market.

35. Virtually all TiO2 customers have no viable substitutes for TiO2. While various products and technologies can be used to reduce the amount of TiO2 used by small percentages, they have limited applications and can degrade product performance.

36. Furthermore, TiO2 produced through the chloride process comprises the vast majority of TiO2 sold, consumed, and produced in North America. Most North American customers purchasing chloride TiO2, including virtually all of the largest customers, use chloride TiO2 because of its distinct characteristics versus sulfate TiO2, including its brighter tint and superior coverage and durability.

37. In order to even attempt switching to sulfate TiO2, North American customers currently purchasing chloride TiO2, including almost all coatings and plastics manufacturers, would need to reformulate their product lines and complete extensive testing to qualify the sulfate TiO2, a process that would be costly and could take several years to complete.

38. That chloride TiO2 and sulfate TiO2 are not close substitutes in North America is demonstrated by North American customers' consistent reliance on chloride TiO2, despite paying a premium for it. Indeed, despite significantly higher chloride TiO2 prices in recent years, North American customers switching away from chloride to sulfate TiO2 has been

limited. As Tronox's then-CEO told investors, "in the North American market . . . 95% or 98% or some[ ]very, very high number [is] chloride," and "[t]hat was true when prices were over[ ]$4,000 a ton," substantially higher than sulfate prices at that time.

39. In addition to the TiO2 differences due to the manufacturing process, TiO2 also has two distinct crystal forms—rutile and anatase—that impart different product characteristics to the TiO2 and make them suitable for different end uses. Rutile TiO2's crystal structure creates a pigment that is more durable than anatase TiO2. Rutile TiO2 is used in architectural paints, industrial and automotive coatings, and plastics. Rutile TiO2 can be produced using either the chloride or the sulfate process. Because all chloride TiO2 has a rutile crystal form, rutile TiO2 comprises the vast majority of the commercially available TiO2 in North America. In contrast, anatase TiO2 is softer and less abrasive than rutile TiO2, and is used for certain specialty applications such as ink, food, cosmetics, and pharmaceuticals. Anatase TiO2 can be manufactured only through the sulfate process. North American customers purchasing rutile TiO2 do not consider anatase TiO2 to be a substitute for rutile TiO2, nor does the supply of anatase TiO2 constrain rutile TiO2 prices. Accordingly, the sale of rutile TiO2 also constitutes a relevant product market in which to consider the effects of the Acquisition.

40. The relevant competitive dynamics in the North American rutile TiO2 market are substantially similar to those in the North American chloride TiO2 market. As a result, the Acquisition's harmful impact on competition in the rutile TiO2 market would be substantially similar to the competitive harm likely to occur in the chloride TiO2 market.

B. Relevant Geographic Market

41. The relevant geographic market in which to assess the Acquisition's effects is the sale of the relevant products to North American customers. A hypothetical monopolist supplier

of the relevant products to North American customers would find it profit-maximizing to impose at least a SSNIP.

42. Defendants, like the other major North American TiO2 producers, analyze the industry by geographic regions—consistently treating North America as its own region—and engage in price discrimination, including by setting different prices for each geographic region. This reflects the market reality that supply and demand dynamics vary by region. For example, Tronox noted during an earnings call that there are "different prices in the regional markets in which [Tronox] do[es] business." When TiO2 producers negotiate with a multinational customer buying in multiple regions, the customer's prices typically vary by region.

43. Competitive conditions differ by region, and TiO2 producers employ different pricing strategies for sales in the North American market than in other parts of the world. As a result, North American purchasers of TiO2 face different prices and terms than other regions. Over the past several years, North American prices and margins have generally been higher and more stable than other regions. Beyond pricing differences, North American purchasers of TiO2 also have a number of distinct demand characteristics compared to TiO2 purchasers in other regions. For example, most North American customers buy and strongly favor chloride TiO2 for the vast majority of applications. In contrast, customer demand in other regions of the world is more split between sulfate and chloride TiO2. Shifting from chloride to sulfate TiO2 is not commercially feasible for most North American customers. Notably, after acquiring a sulfate TiO2 plant in 2000, Tronox's predecessor company closed it a few years later, specifically citing lack of North American demand for sulfate TiO2. Another demand characteristic largely unique to North America is North American customers' preference for TiO2 sold in slurry form. The

vast majority of TiO2 sold in slurry form is consumed in North America by the large North American paint and coatings manufacturers.

44. North American customers facing a SSNIP from a hypothetical monopolist supplier of the relevant products would not be able to use arbitrage to defeat the price increase by buying TiO2 in a lower-priced region and transporting it to North America. Import duties, shipping and handling costs, and other logistical challenges would render such efforts both uneconomical and impractical.

MARKET STRUCTURE AND THE ACQUISITION'S PRESUMPTIVE ILLEGALITY

45. Post-Acquisition, each of the relevant markets would be highly concentrated and would become significantly more concentrated because of the Acquisition.

46. The federal antitrust agencies, consistent with the Merger Guidelines and courts, measure concentration using the Herfindahl-Hirschman Index ("HHI"). The HHI is calculated by totaling the squares of the market shares of each firm in the relevant market. Under the Merger Guidelines, a merger is presumed likely to create or enhance market power—and is presumptively illegal—when the post-merger HHI exceeds 2,500 and the merger increases the HHI by more than 200 points.

47. In the market for the sale of chloride TiO2 to North American customers, the Acquisition would result in a post-Acquisition HHI exceeding 3,000, with an increase in the HHI of more than 700. Thus, the Acquisition would result in a concentration level that establishes a presumption of competitive harm in the North American chloride TiO2 market.

48. In the market for the sale of rutile TiO2 to North American customers ("North American rutile TiO2 market"), the Acquisition would result in a post-Acquisition HHI exceeding 2,500, with an increase in the HHI of more than 550. Thus, the Acquisition would

result in a concentration level that establishes a presumption of competitive harm in the North American rutile TiO2 market.

49. Therefore, the Acquisition is presumptively unlawful under relevant case law and the Merger Guidelines.

ANTICOMPETITIVE EFFECTS

A. The Acquisition Would Increase the Likelihood of Anticompetitive Coordination

50. As the Third Circuit and the District Court in Maryland have observed, the TiO2 industry is "primed for anticompetitive interdependence" and "a text book example of an industry susceptible to efforts to maintain supracompetitive prices." This Acquisition would only exacerbate these market conditions, rendering anticompetitive coordination even more likely.

51. The market for the sale of chloride TiO2 to North American customers already has a number of characteristics that make it vulnerable to coordination. Those include a commodity-like product, a highly concentrated market with a limited number of competitors, significant transparency into the competitive and strategic decisions of rival firms, customers with long-term, stable supplier relationships allowing for easy detection of deviations from past practices, low elasticity of demand, and a history of strong interdependent behavior. Given those characteristics, it is not surprising that the industry has a history of price fixing allegations and settlements. Allowing Tronox to acquire Cristal would enhance that vulnerability and substantially increase the likelihood of anticompetitive coordination by eliminating a large, independent competitor and by placing more than 70% of sales and 80% of North American TiO2 capacity in the hands of the two most disciplined competitors—Tronox and Chemours.

52. The major North American chloride TiO2 companies have considerable visibility into their competitors' businesses. Competitors track a wealth of information about each other—

including plant-by-plant production capacities, production and inventory levels, costs, and strategic plans—by monitoring public statements such as earnings calls made by the publicly traded TiO2 companies, gathering competitive information from customers, and by relying on insight provided by Wall Street analysts and industry consulting firms such as TZ Minerals International Pty Ltd. ("TZMI").

53. North American chloride TiO2 companies also have significant awareness of their competitors' pricing. They all issue customer pricing letters and several make public price announcements. Moreover, because many customers have "meet or release" clauses in their contracts, customers often relay competitors' customer-specific pricing information to their TiO2 suppliers.

54. This transparency will only grow with the Acquisition. Today Cristal, unlike the other major North American TiO2 companies, is not a publicly traded company and discloses less detail about its operations. By incorporating Cristal's entire TiO2 production into Tronox, the Acquisition would not only eliminate an important competitor, it would also make information regarding Cristal's operations significantly more accessible to the remaining North American TiO2 companies. Thus, the Acquisition would further enhance the likelihood for coordination by, among other reasons, increasing market transparency among the remaining competitors and making coordination easier to maintain.

55. Having competed against each other in an oligopolistic market environment for many years, the major North American TiO2 companies recognize their mutual interdependence and aligned incentives. Tronox and the other publicly traded North American TiO2 producers openly discuss these market dynamics during their public earnings calls. For example, during an earnings call in 2016, Tronox's then-CEO explained the industry's strategy to manage

production to drive TiO2 prices higher as follows: "I can tell you that I thought last year Huntsman, I believe Cristal, Chemours, and we all lowered our plant utilization rates, and we all talked about declining inventories which we had set as a goal. That is that we wanted to reduce inventories. Clearly, the way that one reduces inventories is one reduces production and continues to maintain sales, which is what we have all tried to do." By eliminating a key competitor, especially an opaque one like Cristal, the Acquisition will exacerbate the anticompetitive effects of this interdependence.

56. Parallel pricing behavior has been commonplace in the North American chloride TiO2 market for years. The Third Circuit identified 31 separate instances of parallel price increase announcements over an eleven-year period, concluding that such "oligopolistic conscious parallelism is by nature anticompetitive." The District of Maryland described the pattern of parallel price increases in the TiO2 industry as "pervasive."

57. Additionally, Tronox and Cristal engage in other types of parallel accommodating conduct involving North American TiO2 competitors, including refraining from competing aggressively to win a new contract or more business for fear of provoking a competitive response from a rival. Tronox's then-CEO explained during an earnings call in 2014 that "[Tronox] ha[s] not gained market share by trying to reduce price. We don't think that's the appropriate strategy going forward. Although obviously, we're competitors, so we compete where we have to. But it's not a price-driven market share accretion." The Acquisition is likely to increase the level of anticompetitive conscious parallelism in the North American chloride TiO2 market, resulting in higher chloride TiO2 prices for consumers.

B. The Acquisition Would Increase Tronox's Incentive and Ability to Curtail Output

58. Tronox has consistently acknowledged the tight link between North American chloride TiO2 prices and North American production. In a 2015 earnings call, Tronox's CEO stated that Tronox was addressing declining prices "by managing our production, so that inventories get reduced to normal or below normal levels; and when that happens, prices will rise." Allowing Tronox to acquire Cristal, thereby doubling its size in North America, will increase Tronox's incentive and ability to decrease or restrict output intended for North American customers, thus leading to higher prices.

59. Tronox has a history of seeking to support North American chloride TiO2 prices by curtailing output in North America. These efforts include reducing production of both chloride TiO2 pigment and titanium feedstock—the input material that Tronox also manufactures as a vertically-integrated producer. Over the past several years, Tronox has closed titanium feedstock facilities and shut down TiO2 pigment production lines. In 2015, Tronox's CEO publically stated that "[i]t is our view that an upward move in [TiO2 pigment] selling prices will be predicated on a reduction of supply in the pigment market relative to demand, and/or an upward move in feedstock selling prices and we expect to see both." That year, Tronox cut its TiO2 pigment production by approximately 15% and suspended operations at two of its four titanium feedstock facilities.

60. In addition to North American production cuts, Tronox and the other major North American chloride TiO2 producers have also reduced North American supply in other ways in order to support the region's prices. This includes increasing exports of North American production, often to Latin America, despite lower prices there.

61. The Acquisition would make Tronox the largest TiO2 producer in the world and double its TiO2 production capacity in North America. The combined firm, with its larger size, would have a stronger incentive to curtail output in order to support higher prices. With more manufacturing facilities at its disposal, post-Acquisition Tronox would also have more ability to increase North American chloride TiO2 prices by curtailing its production.

62. Consistent with Merger Guidelines Section 6.3, this Acquisition is likely to incentivize the combined firm to engage in output curtailment because:

- the combined firm would have a relatively high market share (the merger doubles Tronox's North American market share);
- the combined firm would have relatively little output already committed at prices unaffected by the output curtailment (contract volume is allocated each year and prices are generally negotiated quarterly);
- the margin on the curtailed output would be relatively low (the foregone profits on the lost chloride TiO2 sales would be small relative to the increased profits on the retained sales);
- the supply responses of rivals would be relatively small (entry and expansion is slow, expensive, and unlikely); and
- the market elasticity of demand for chloride TiO2 is low (chloride TiO2 is an essential input for many products meaning that a small reduction in output results in a large price effect).

LACK OF COUNTERVAILING FACTORS

63. Defendants cannot demonstrate that new entry or expansion by existing firms would be timely, likely, or sufficient to offset the anticompetitive effects of the Acquisition.

64. The TiO2 industry is characterized by substantial barriers to entry. Building a new TiO2 plant would take multiple years and a large capital investment, and it is unlikely to occur in response to an increase in North American chloride TiO2 prices post-Acquisition. Expansion or repositioning by the remaining firms that would defeat anticompetitive effects in

the North American TiO2 market is also unlikely. During the last decade, more TiO2 production capacity in North America has been taken out because of plant or line closures by Tronox, Cristal, and Chemours than added by expansions.

65. TiO2 imports into North America, mostly sulfate TiO2 manufactured by smaller TiO2 companies, primarily from China, are limited and unlikely to provide a meaningful competitive restraint in the near future. Indeed, imported TiO2 from China or other countries does not meaningfully constrain prices to North American customers today. As Tronox noted during an earnings call in 2015, "[w]e do not see that exports from China or from Europe are playing a material role in the competitive balance in the North American market."

66. In 2016, Chinese TiO2 imports accounted for less than 1% of North American chloride TiO2 sales and less than 8% of North American rutile TiO2 sales. In their public statements, the major North American TiO2 companies have repeatedly minimized the significance of the competitive threat posed by Chinese TiO2 imports into North America. In 2016, Tronox stated that it does not view Chinese TiO2 as a competitive alternative to its product because of the inferior quality of the Chinese imports. Moreover, because of increased environmental enforcement by the Chinese government over the last two years, many sulfate TiO2 plants in China have been either permanently or temporarily shut down. Those closures, coupled with rising domestic demand in China and elsewhere in Asia, have resulted in very tight TiO2 supply in China and recent prices that are even higher than those in North America. Consequently, Chinese exports to North America are unlikely to increase substantially for the foreseeable future.

67. Defendants also cannot demonstrate cognizable efficiencies that would be sufficient to rebut the strong presumption and evidence that the Acquisition likely would

substantially lessen competition in the North American chloride TiO2 market and in the North American rutile TiO2 market.

LIKELIHOOD OF SUCCESS ON THE MERITS, BALANCE OF EQUITIES, AND NEED FOR RELIEF

68. Section 13(b) of the FTC Act, 15 U.S.C. § 53(b), authorizes the Commission, whenever it has reason to believe that a proposed acquisition is unlawful, to seek preliminary injunctive relief to prevent consummation of the acquisition until the Commission has had an opportunity to adjudicate the acquisition's legality in an administrative proceeding. In deciding whether to grant relief, the Court must balance the likelihood of the Commission's ultimate success on the merits against the public equities. The principal public equity weighing in favor of the issuance of preliminary injunctive relief is the public interest in effective enforcement of the antitrust laws. Private equities affecting only Defendants' interests cannot defeat a preliminary injunction.

69. The Commission is likely to succeed in proving that the effect of the Acquisition may be substantially to lessen competition or tend to create a monopoly in violation of Section 7 of the Clayton Act, 15 U.S.C. § 18, or Section 5 of the FTC Act, 15 U.S.C. § 45. In particular, the Commission is likely to succeed in demonstrating, among other things, that:

a. The Acquisition would have anticompetitive effects in the North American chloride TiO2 market and in the North American rutile TiO2 market;

b. Substantial and effective entry or expansion in these markets is difficult and would not be timely, likely, and sufficient to offset the anticompetitive effects of the Acquisition; and

c. The efficiencies asserted by Defendants are insufficient as a matter of law to justify the Acquisition.

70. Preliminary relief is warranted and necessary. Should the ALJ, Commission, or an appeals court rule, based on the record of the completed administrative trial, that the

Acquisition is unlawful, reestablishing the status quo ante of vigorous competition between Tronox and Cristal would be difficult, if not impossible, if the Acquisition has already occurred in the absence of preliminary relief. Moreover, in the absence of relief from this Court, substantial harm to competition would likely occur in the interim, even if suitable divestiture remedies were obtained later.

71. Accordingly, the equitable relief requested here is in the public interest.

Wherefore, the Commission respectfully requests that the Court:

1. Temporarily restrain and preliminarily enjoin Defendants from taking any further steps to consummate the Acquisition, or any other acquisition of stock, assets, or other interests of one another, either directly or indirectly;

2. Retain jurisdiction and maintain the status quo until the Commission's administrative complaint is dismissed by the Commission or set aside by an appeals court on review, or the order of the Commission made thereon has become final pursuant to 15 U.S.C. § 45; and

3. Award such other and further relief as the Court may determine is appropriate, just, and proper.

Dated: July 10, 2018

Respectfully Submitted,

DOMINIC VOTE (D.C. Bar 985637)
Deputy Assistant Director
Federal Trade Commission
Bureau of Competition
400 Seventh Street, S.W.
Washington, D.C. 20024
202-326-3505
dvote@ftc.gov

Counsel for Plaintiff Federal Trade Commission

Of counsel:

D. BRUCE HOFFMAN (D.C. Bar 495385)
Director
Federal Trade Commission
Bureau of Competition

HAIDEE L. SCHWARTZ (D.C. Bar 980754)
Acting Deputy Director
Federal Trade Commission
Bureau of Competition

ALDEN F. ABBOTT (D.C. Bar 938688)
General Counsel
Federal Trade Commission

CHARLES A. LOUGHLIN (D.C Bar 448219)
Chief Trial Counsel
Bureau of Competition
Federal Trade Commission

CEM AKLEMAN
ALICIA BURNS-WRIGHT (D.C. Bar 1008939)
KRISHA CERILLI (D.C. Bar 983281)
STEVEN A. DAHM
ERIC D. EDMONDSON (D.C. Bar 450294)
E. ERIC ELMORE
PEGGY FEMENELLA (D.C. Bar 472770)
SEAN HUGHTO (D.C. Bar 421224)
JANET KIM (D.C. Bar 489075)
JOONSUK LEE
MEREDITH R. LEVERT (D.C. Bar 498245)
DAVID MORRIS
JON J. NATHAN (D.C. Bar 484820)
ROHAN PAI (D.C. Bar 1015652)
BLAKE RISENMAY
KRISTIAN ROGERS
Z. LILY RUDY (D.C. Bar 1023073)
ROBERT S. TOVSKY
CECELIA WALDECK (D.C. Bar 443969)

Attorneys
Federal Trade Commission
Bureau of Competition
Mergers II Division