



levels. This transaction will enable Tronox to achieve a lower cost position in the TiO<sub>2</sub> industry and to compete more aggressively with its rivals in the industry in order to serve a growing global customer base.

The allegations set forth by the FTC in its Complaint are substantively identical to those in the FTC's administrative complaint of December 5, 2017. Since that time, the parties have conducted extensive discovery and participated in a five-week trial before the FTC Administrative Law Judge ("ALJ"), and concluded that proceeding on June 22, 2018. As set forth in detail below, the FTC's allegations are contradicted by extensive evidence presented in the administrative proceeding before the ALJ. All record citations in the below responses are to trial testimony or trial exhibits from the FTC administrative proceeding before the ALJ.

#### 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 TiO<sub>2</sub>") in the United States and Canada ("North America"). Titanium dioxide ("TiO<sub>2</sub>") 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. TiO<sub>2</sub> is manufactured using either the chloride process, which comprises the vast majority of TiO<sub>2</sub> produced and purchased in North America, or the sulfate process ("sulfate TiO<sub>2</sub>").**

**ANSWER:** Tronox responds that many of the allegations in Paragraph 1, which consists largely of claims the FTC set forth in its administrative complaint on December 5, 2017, are contradicted by the evidence presented in the FTC's administrative proceeding. To the extent Paragraph 1 alleges that there is a relevant geographic market consisting solely of "North America" or a relevant product market consisting solely of "chloride TiO<sub>2</sub>," Tronox denies the allegations in Paragraph 1. Tronox states that Tronox's acquisition of Cristal is a "worldwide merger" (Hill, Tr. 1782) (Ex. A) (hereinafter all references to "Tr." are included in Exhibit A), and that as a result of the magnitude, elasticity, and variation over time of global trade in TiO<sub>2</sub>, the co-movement of

TiO<sub>2</sub> prices across regions globally, and other economic data and evidence, the relevant geographic market in this case is global (Shehadeh, Tr. 3204-05). To the extent Paragraph 1 alleges that North America consists solely of the United States and Canada, to the exclusion of Mexico, Tronox specifically denies this allegation (Shehadeh, Tr. 3261). Tronox further states that rutile TiO<sub>2</sub> produced by the chloride process is reasonably substitutable with rutile TiO<sub>2</sub> produced by the sulfate process for the vast majority of end-use applications (Stern, Tr. 3835; Shehadeh, Tr. 3319). Because the processes produce TiO<sub>2</sub> that is reasonably substitutable, and in light of the “statistically and economically significant” co-movement of chloride-process and sulfate-process rutile TiO<sub>2</sub> prices (Shehadeh, Tr. 3288) and other economic data and evidence, the relevant product market in this case includes both chloride-process and sulfate-process rutile TiO<sub>2</sub> (Shehadeh, Tr. 3283-86). Tronox further states that after its acquisition of Cristal, more than 36 major competitors will remain in the global TiO<sub>2</sub> market, with only 5 competitors having shares greater than five percent.

Tronox admits that TiO<sub>2</sub> 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. Tronox further admits that TiO<sub>2</sub> can be manufactured using either the chloride process or the sulfate process.

To the extent further response is required, Tronox denies the allegations in Paragraph 1.

**2. Just last year, the U.S. Court of Appeals for the Third Circuit characterized the TiO<sub>2</sub> 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 TiO<sub>2</sub> sales to North American customers and more than 80 percent of overall North American chloride TiO<sub>2</sub> 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 TiO<sub>2</sub> 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.**

**ANSWER:** Tronox denies the allegations in Paragraph 2 and responds that many of the allegations in Paragraph 2, which consists largely of claims the FTC set forth in its administrative complaint on December 5, 2017, are contradicted by the evidence presented in the FTC’s administrative proceeding. Tronox responds that to the extent Paragraph 2 purports to characterize a judicial opinion from the U.S. Court of Appeals for the Third Circuit—affirming summary judgment to defendants in a price-fixing case—as actual evidence in support of the FTC’s claims in this case, the selective quotations and allegations regarding the price-fixing litigation in *Valspar Corp. v. E. I. du Pont de Nemours & Co.*, Docket No. 16-1345 (3d Cir.), are inaccurate and misleading because the Third Circuit decision was on a motion for summary judgment and as a result the facts were “essentially undisputed” in the District Court (No. 16-1345 (slip op.), at \*4 (Oct. 2, 2017)).

Tronox further states that the FTC’s selective quotations are inaccurate and misleading because the parties did not address the question of whether the TiO<sub>2</sub> industry was an oligopoly, and that question was also not presented to the District Court or Third Circuit for decision. The selective quotations and allegations in Paragraph 2 are further inaccurate, misleading, and irrelevant because the Third Circuit litigation involved different allegations brought by a different, private plaintiff in a different case; the litigation focused on the time period 2000-2010; and the litigation dealt with allegations of a hub-and-spoke pricing conspiracy focused on a service provided by the Titanium Dioxide Manufacturers Association, a service which is no longer offered by that Association. Tronox was not even a party to the *Valspar* litigation. Tronox specifically denies that the Third Circuit found that the TiO<sub>2</sub> industry is an “oligopoly” that is “dominated by a handful of firms” with “substantial barriers to entry.”

By way of further response, Tronox states that the TiO<sub>2</sub> industry is “a very competitive industry” and that Tronox competes aggressively with other multinational TiO<sub>2</sub> producers everywhere in the world, including “significant, large competitors that have very low cost basis,” such as Chemours and Lomon Billions (Quinn, Tr. 2318-19). The transaction will enable Tronox to compete globally at a lower cost and more aggressively with its rivals in order to “serve a growing . . . global customer base” (Quinn, Tr. 2345-46; Romano, Tr. 2216-17).

Tronox further states that the post-merger Herfindahl-Hirschman Index (“HHI”), an index that measures market concentration, is “below 1,500 and in fact below 1,300 by any measure” (Shehadeh, Tr. 3326), and that according to the Federal Trade Commission and U.S. Department of Justice Horizontal Merger Guidelines (“Merger Guidelines”), these levels of concentration “are unlikely to raise the prospect of anticompetitive effects” (Shehadeh, Tr. 3325). Moreover, even these low levels of concentration and shares post-merger “would overstate the competitive significance” of the transaction because “shares and concentration are a static measure of competition” in an industry noted for the “dynamic nature of competition” among TiO<sub>2</sub> suppliers (Shehadeh, Tr. 3327-28).

To the extent Paragraph 2 alleges that there is a relevant geographic market consisting solely of “North America” or a relevant product market consisting solely of “chloride-process TiO<sub>2</sub>,” Tronox denies the allegations in Paragraph 2. Tronox states that Tronox’s acquisition of Cristal is a “worldwide merger” (Hill, Tr. 1782), that the relevant geographic market is global (Shehadeh, Tr. 3204-05), and that the relevant product market includes both chloride-process and sulfate-process rutile TiO<sub>2</sub> (Shehadeh, Tr. 3204-05, 3283-86).

To the extent further response is required, Tronox denies the allegations in Paragraph 2.

**3. The Acquisition would substantially lessen competition for the sale of chloride TiO<sub>2</sub> to North American customers (“North American chloride TiO<sub>2</sub> 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 TiO<sub>2</sub> sales and production capacity in the hands of two large and disciplined TiO<sub>2</sub> 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 TiO<sub>2</sub> 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 TiO<sub>2</sub> prices - to restrict its output to influence North American chloride TiO<sub>2</sub> 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 TiO<sub>2</sub> 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 TiO<sub>2</sub> 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 TiO<sub>2</sub> and TiO<sub>2</sub> feedstock production.

**ANSWER:** Tronox denies the allegations in Paragraph 3 and responds that many of the allegations in Paragraph 3, which consists largely of claims the FTC set forth in its administrative complaint on December 5, 2017, are contradicted by the evidence presented in the FTC's administrative proceeding. Tronox states that the transaction is pro-competitive and "will lead to significant output-enhancing efficiencies" at both the pigment level (i.e., production of TiO<sub>2</sub>) and at the feedstock level, as well as "significant cost reductions" (Shehadeh, Tr. 3441-42), and that the output-enhancing efficiencies of this transaction will have a "direct effect" in terms of "customer[] benefit" (Shehadeh, Tr. 3443). Tronox further states that the Tronox-Cristal transaction will enable Tronox to compete globally at a lower cost and more aggressively with its rivals in order to "serve a growing . . . global customer base" (Quinn, Tr. 2345-46; Romano, Tr. 2216-17).

Tronox also responds that the Tronox-Cristal transaction "decreases transparency in the market and increases the diversity of incentives" among TiO<sub>2</sub> suppliers, which indicate that the transaction will not increase the likelihood of coordinated interaction among TiO<sub>2</sub> suppliers post-merger (Shehadeh, Tr. 3409). Moreover, the TiO<sub>2</sub> industry is "a very competitive industry" and

that Tronox competes aggressively with other multinational TiO<sub>2</sub> producers everywhere in the world, including “significant, large competitors that have very low cost basis,” such as Chemours and Lomon Billions (Quinn, Tr. 2318-19). Tronox further responds that it has never restricted its output of TiO<sub>2</sub> in an effort to control the supply or price of TiO<sub>2</sub> feedstock or to raise the price of TiO<sub>2</sub> pigment in the market (Romano, Tr. 2254). Tronox states the evidence is undisputed that the combined company plans to run its TiO<sub>2</sub> feedstock and pigment facilities at full capacity after the Cristal transaction closes (Turgeon, Tr. 2654-55).

To the extent Paragraph 3 alleges that there is a “North American chloride TiO<sub>2</sub> market,” Tronox denies the allegations in Paragraph 3 and specifically states that Tronox’s acquisition of Cristal is a “worldwide merger” (Hill, Tr. 1782), that the relevant geographic market in this case is global (Shehadeh, Tr. 3204-05), and that the relevant product market in this case includes both chloride-process and sulfate-process rutile TiO<sub>2</sub> (Shehadeh, Tr. 3283-86). Furthermore, the FTC’s selective quotation of unidentified written material or communications in Paragraph 3, offered without context or associated testimony, is inaccurate and misleading as framed.

To the extent further response is required, Tronox denies the allegations in Paragraph 3.

**4. Following the announcement of the Acquisition in February 2017, market participants and observers recognized the potential anticompetitive impact of the Acquisition. Industry publication *JCJS 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 TiO<sub>2</sub> suppliers similarly acknowledged in investor presentations that the Acquisition is likely to lead to increased supply constraints and higher prices.**

**ANSWER:** Tronox denies the allegations in Paragraph 4 and responds that many of the allegations in Paragraph 4, which consists largely of claims the FTC set forth in its administrative

complaint on December 5, 2017, are contradicted by the evidence presented in the FTC's administrative proceeding. Tronox states that the transaction is pro-competitive and "will lead to significant output-enhancing efficiencies" at both the pigment level (i.e., production of TiO<sub>2</sub>) and at the feedstock level, as well as "significant cost reductions" (Shehadeh, Tr. 3441-42), and that the output-enhancing efficiencies of this transaction will have a "direct effect" in terms of "customer[] benefit" (Shehadeh, Tr. 3443).

Tronox further states that the Tronox-Cristal transaction "decreases transparency in the market and increases the diversity of incentives" among TiO<sub>2</sub> suppliers, which indicate that the transaction will not increase the likelihood of coordinated interaction among TiO<sub>2</sub> suppliers post-merger (Shehadeh, Tr. 3409). Tronox also states that the FTC's selective quotation of unidentified written material or communications in Paragraph 4, offered without context or associated testimony, is inaccurate and misleading as framed.

To the extent further response is required, Tronox denies the allegations in Paragraph 4.

**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 TiO<sub>2</sub> industry is characterized by "substantial barriers to entry." Proprietary technology and the massive investment needed to build a new TiO<sub>2</sub> plant render de novo entry unlikely to have any meaningful impact on the North American market. As Tronox noted during an earnings call, "running TiO<sub>2</sub> plants is a capital-intensive undertaking" and mastering "complex, proprietary technology" remains a "major hurdle," particularly for chloride TiO<sub>2</sub> 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 TiO<sub>2</sub> production capacity has been removed through plant and line closures than added by expansions. Nor are increases in TiO<sub>2</sub> imports likely to offset the anticompetitive effects of the Acquisition.**

**ANSWER:** Tronox denies the allegations in Paragraph 5 and responds that many of the allegations in Paragraph 5, which are substantively identical to claims the FTC set forth in its administrative complaint on December 5, 2017, are contradicted by the evidence presented in the FTC's administrative proceeding. Tronox states that the TiO<sub>2</sub> industry has seen "significant



capacity additions year-in and year-out” by TiO<sub>2</sub> producers “in order to serve new demand” in new and existing markets (Shehadeh, Tr. 3357-58). Tronox further states that the dynamic and competitive nature of the TiO<sub>2</sub> industry is reflected in “new capacity expansions, new plants coming online, high-cost capacity being driven out of the market, and . . . dynamic competition” between TiO<sub>2</sub> suppliers (Shehadeh, Tr. 3328). Tronox additionally states that in recent years, Chinese TiO<sub>2</sub> quality has markedly improved and the Chinese have made significant technological improvements, including developing chloride technology.

Tronox further states that the transaction is pro-competitive and “will lead to significant output-enhancing efficiencies” at both the pigment level (i.e., production of TiO<sub>2</sub>) and at the feedstock level, as well as “significant cost reductions” (Shehadeh, Tr. 3441-42), and that the output-enhancing efficiencies of this transaction will have a “direct effect” in terms of “customer[] benefit” (Shehadeh, Tr. 3443).

To the extent further response is required, Tronox denies the allegations in Paragraph 5.

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

**ANSWER:** Tronox denies the allegations in Paragraph 6 and responds that the allegations in Paragraph 6, which are substantively identical to the claims the FTC set forth in its administrative complaint on December 5, 2017, are contradicted by the evidence presented in the FTC’s administrative proceeding. Tronox states that the transaction is pro-competitive and “will lead to significant output-enhancing efficiencies” at both the pigment level (i.e., production of TiO<sub>2</sub>) and at the feedstock level, as well as “significant cost reductions” (Shehadeh, Tr. 3441-42), and that the output-enhancing efficiencies of this transaction will have a “direct effect” in terms of “customer[] benefit” (Shehadeh, Tr. 3443). Tronox further states that the efficiencies of the Tronox-Cristal acquisition are both cognizable and merger-specific.

By way of further response, Tronox states that “[t]his combination would increase [Tronox’s] pigment production to approximately 1.25 million tons and [its] high grade feedstock SR and slag production to approximately 1.1 million tons (not including rutile)” and that “by increasing our footprint in the pigment plants, it would allow [Tronox] to run [its] mineral sands operations and [its] smelters sort of at full capacity—or all out,” which would maximize the efficiency of both the TiO<sub>2</sub> pigment and feedstock operations (Quinn, Tr. 2316-18).

Tronox also responds that a key goal for the Tronox-Cristal transaction is to improve the performance of Cristal’s Yanbu plant, specifically to “get the plant to its nameplate capacity of 210,000 tons of titanium dioxide” (Dean, Tr. 2979-80). Further, Tronox states that as soon as the merger consummates, Tronox will be in a “short-position” with respect to high-grade feedstock, so it would need the additional feedstock from the Jazan slagger to feed its newly acquired pigment plants (Van Niekerk, Tr. 3901-02, 3945-46). Furthermore, the cost-savings efficiencies from this transaction would “increase[] the incentives of the postmerger firm to expand output and, as a result,” cause an “incentive to supply more to its customers, to the benefit of those customers” (Shehadeh, Tr. 3444-45).

To the extent further response is required, Tronox denies the allegations in Paragraph 6.

**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.**

**ANSWER:** To the extent Paragraph 7 alleges that Tronox has violated any provisions of Section 7 of the Clayton Act or Section 5 of the FTC Act, or any other provisions of law, Tronox denies the allegations in Paragraph 7. Tronox admits on information and belief that only two FTC commissioners, no longer serving in that capacity, voted on December 5, 2017, to allow FTC staff

to begin an administrative proceeding related to Tronox's acquisition of Cristal, and that FTC staff commenced an administrative proceeding related to Tronox's acquisition of Cristal on that date.

To the extent Paragraph 7 contains additional allegations, Tronox denies, or lacks knowledge or information sufficient to form a belief as to and therefore denies, these remaining allegations.

**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.**

**ANSWER:** Tronox denies the allegations in Paragraph 8. Tronox states that the allegations in Paragraph 8 are contradicted by statements by Administrative Law Judge Chappell. At the December 20, 2017 scheduling hearing, Judge Chappell stated on the record, "We were talking about how this case is going to proceed and why. It is true we could have a trial on the merits and we could start next week, but to work through the system, this takes months. Preliminary injunction, usually a week, maybe two, and you can have a ruling, and, you know, if there's an injunction, that could end it. So even though we could proceed headstrong and knock this thing out and even move the date up, it's just—it's still—it just takes so much more time for this system to work, not that one's right or wrong or one's better than the other, but the PI system is much more efficient to get to a conclusion of whether some district court judge thinks that the merger should be blocked" (J. Chappell, Tr. 32, Dec. 20, 2017) (Ex. B). At the same hearing, again discussing scheduling, Judge Chappell stated, "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" (J. Chappell, Tr. 77, Dec. 20, 2017) (Ex. B).

Judge Chappell put a finer point on these statements regarding the efficiency of a preliminary injunction process near the end of the administrative trial. During testimony on June 22, 2018, he said, "All right. Let me just talk about some timing. 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. The last two cases here, between the end of trial and my decision, about six months. In 1-800 Contacts, that decision was issued in May 2018. They haven't even had closing arguments yet on the appeal to the commission. And there's the pretty much automatic appeal of my decision to the commission. Once the commission gets a case, it's anybody's guess when you'll get a decision. I don't do preliminary injunctions downtown. I've done them in the past before I wore this robe, from your side and from this side, not this particular government entity but another one. And I know, because I had many cases with a parallel track, I know how fast that works. We're talking from the time you finish the injunction hearing, you have arguments, you have—it's expedited—sometimes a matter of weeks, no more than a couple of months, depending on the judge. There 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*" (J. Chappell, Tr. 3810-11) (emphasis added).

## 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.**

**ANSWER:** The allegations contained in Paragraph 9 state a legal conclusion to which no response is required. To the extent a response is required, Tronox denies, or lacks knowledge or information sufficient to form a belief about and therefore denies, the allegations in Paragraph 9. Tronox admits on information and belief that the FTC purports to bring this civil action pursuant to Section 13 of the FTC Act, Section 16 of the Clayton Act, and 28 U.S.C. §§ 1331, 1337, and 1345, and admits that the FTC is an agency of the United States.

To the extent Paragraph 9 contains additional allegations, Tronox denies, or lacks knowledge or information sufficient to form a belief about and therefore denies, these allegations.

**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 equities 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 . . .**

**ANSWER:** Paragraph 10 does not contain any allegations, and therefore no response is required. To the extent Paragraph 10 alleges that Tronox violated any provisions of Section 13(b) of the FTC Act, 15 U.S.C. § 53(b), or any other provisions of law, Tronox denies these allegations. To the extent further response is required, Tronox denies the allegations in Paragraph 10.

**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.**

**ANSWER:** Tronox admits that it engages in "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. To the extent Paragraph

11 alleges that Tronox has violated any provisions of Section 4 of the FTC Act, 15 U.S.C. § 44, or Section 1 of the Clayton Act, 15 U.S.C. § 12, or any other provisions of law, Tronox denies these allegations.

To the extent further response is required, Tronox denies the allegations in Paragraph 11.

**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).**

**ANSWER:** The allegations contained in Paragraph 12 state a legal conclusion to which no response is required. To the extent Paragraph 12 contains any allegations and a response is required, Tronox states that it has expressly consented to personal jurisdiction in the District of Columbia in this case.

To the extent Paragraph 12 contains additional allegations, Tronox denies, or lacks knowledge or information sufficient to form a belief as to and therefore denies, the remaining allegations in Paragraph 12.

#### **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.**

**ANSWER:** To the extent Paragraph 13 alleges that Tronox violated Section 7 of the Clayton Act, 15 U.S.C. § 18, or Section 5 of the FTC Act, 15 U.S.C. § 45, or any other provision of law, Tronox denies the allegations in Paragraph 13.

Tronox admits on information and belief the remaining allegations in Paragraph 13.

**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 TiO<sub>2</sub> pigment. In 2016, Tronox's TiO<sub>2</sub> business generated North American sales of approximately \$410 million. Tronox operates one TiO<sub>2</sub> pigment manufacturing plant in Hamilton, Mississippi, as well as plants in Botlek, the Netherlands, and Kwinana, Australia. All three plants produce exclusively chloride TiO<sub>2</sub>. 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 TiO<sub>2</sub> pigment.**

**ANSWER:** Tronox admits that it is a publicly traded company headquartered in Stamford, Connecticut, with manufacturing plants and other facilities around the world, including plants in Hamilton, Mississippi; Botlek, the Netherlands; and Kwinana, Australia, that produce TiO<sub>2</sub>. Tronox also admits that it operates titanium feedstock facilities, including mines and mineral processing plants, in South Africa and Australia. Tronox further admits that it supplies TiO<sub>2</sub> to multinational and global customers. Moreover, Tronox admits that it is a vertically integrated company, and that as a result of this transaction, the combined entity would become an even better vertically integrated company, thus enabling it to produce more TiO<sub>2</sub> pigment and enhance competition while benefiting customers.

To the extent further response is required, Tronox denies the allegations in Paragraph 14.

**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.**

**ANSWER:** Tronox admits on information and belief that TASNEE is a Saudi joint stock company headquartered in Riyadh, Saudi Arabia. Tronox further admits on information and belief that TASNEE is the majority owner of Cristal.

Tronox lacks knowledge or information sufficient to form a belief as to the additional allegations in Paragraph 15, and therefore denies them.

**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 TiO<sub>2</sub>, generated North American sales of approximately \$300 million. Cristal Global produces TiO<sub>2</sub> in Ashtabula, Ohio, and in the United Kingdom, Australia, Saudi Arabia, Brazil, China, and France. All of Cristal Global's TiO<sub>2</sub> production in the U.S., and 80% of its TiO<sub>2</sub> production overall, is chloride TiO<sub>2</sub>. Cristal Global's remaining TiO<sub>2</sub> production is sulfate TiO<sub>2</sub>. Cristal Global also owns titanium feedstock facilities in Australia, Brazil, and Saudi Arabia. Cristal Global is a named party to the Acquisition agreement.**

**ANSWER:** Tronox admits on information and belief that Cristal is a privately held company headquartered in Jeddah, Saudi Arabia, with manufacturing plants around the world. Tronox further admits on information and belief that Cristal supplies TiO<sub>2</sub> to multinational and global customers, and sells feedstock.

Tronox lacks knowledge or information sufficient to form a belief as to the additional allegations in Paragraph 16, and therefore denies them.

**17. Defendant Cristal USA, a Delaware corporation, operates a large chloride TiO<sub>2</sub> 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.**

**ANSWER:** Tronox admits on information and belief that Cristal USA Inc. is a Delaware corporation that operates two TiO<sub>2</sub> plants in Ashtabula, Ohio, which supply TiO<sub>2</sub> to multinational and global customers.

Tronox lacks knowledge or information sufficient to form a belief as to the additional allegations in Paragraph 17, and therefore denies them.

**18. Pursuant to a February 21, 2017 agreement, Tronox seeks to acquire Cristal's TiO<sub>2</sub> business for \$1.67 billion in cash and a 24% equity stake in the combined entity.**

**ANSWER:** Tronox admits that, pursuant to a February 21, 2017 agreement, Tronox and Cristal announced that Tronox would acquire Cristal's TiO<sub>2</sub> business for \$1.673 billion of cash plus Class A ordinary shares representing 24% ownership in pro forma Tronox.



To the extent further response is required, Tronox denies the allegations in Paragraph 18.

**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.**

**ANSWER:** Tronox admits that the European Commission (“EC”) has approved Tronox’s acquisition of Cristal, subject to the condition that Tronox sells its global business in titanium dioxide pigment for paper laminate comprising the required technology and other intangibles to an experienced manufacturer with chloride-based production technology active in the European Economic Area (EEA). Tronox admits on information and belief that, upon meeting the condition, the EC would not prevent Tronox and Cristal from consummating the acquisition. Tronox further states that when it announced conditional clearance, the EC stated in its press release: “The Commission’s investigation found no competition concerns regarding the following: titanium dioxide pigment for use in other products [besides ink], in particular paints and plastics. The Commission found that there are many suppliers active in Europe and that customers can and do use a wider variety of titanium dioxide pigments, including those with sulfate-based production process” (Press Release, European Commission, *Mergers: Commission approves Tronox’s acquisition of Cristal, subject to conditions*, 4 July 2018, available at [http://europa.eu/rapid/press-release\\_IP-18-4361\\_en.htm](http://europa.eu/rapid/press-release_IP-18-4361_en.htm)).

To the extent further response is required, Tronox denies the allegations in Paragraph 19.

**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.**

**ANSWER:** To the extent that Paragraph 20 alleges that Tronox violated Section 7 of the Clayton Act, 15 U.S.C. § 18, or Section 5 of the FTC Act, 15 U.S.C. § 45, or any other provision of law, or that Tronox's acquisition of Cristal would substantially lessen competition, Tronox denies the allegations in Paragraph 20. Tronox states that the transaction is pro-competitive and "will lead to significant output-enhancing efficiencies" at both the pigment level (i.e., production of TiO<sub>2</sub>) and at the feedstock level, as well as "significant cost reductions" (Shehadeh, Tr. 3441-42), and that the output-enhancing efficiencies of this transaction will have a "direct effect" in terms of "customer[] benefit" (Shehadeh, Tr. 3443).

Tronox further admits on information and belief that only two FTC commissioners, no longer serving in that capacity, voted on December 5, 2017, to allow FTC staff to begin an administrative proceeding related to Tronox's acquisition of Cristal, and that FTC staff commenced an administrative proceeding related to Tronox's acquisition of Cristal on that date. Tronox also admits that it has participated, with Cristal, in a hearing before the FTC ALJ that began on May 18, 2018 and that will conclude at some point in 2019. Tronox also admits that the time for submitting evidence has closed; however, the parties are actively engaged in post-trial briefing and the parties' closing arguments have not occurred. Finally, Tronox admits on information and belief that the ALJ may eventually issue an initial decision, which may be reviewed *de novo* by the Commission before the Commission issues a final order, and that the Commission's final order would be subject to review by a United States Court of Appeals.

To the extent further response is required, Tronox lacks knowledge or information sufficient to form a belief as to the remaining allegations in Paragraph 20, and therefore denies them.

**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.**

**ANSWER:** To the extent Paragraph 21 alleges that the Tronox-Cristal acquisition would substantially lessen competition or that an injunction of the acquisition would promote the public interest, Tronox denies the allegations in Paragraph 21. Tronox states that the transaction is pro-competitive and “will lead to significant output-enhancing efficiencies” at both the pigment level (i.e., production of TiO<sub>2</sub>) and at the feedstock level, as well as “significant cost reductions” (Shehadeh, Tr. 3441-42), and that the output-enhancing efficiencies of this transaction will have a “direct effect” in terms of “customer[] benefit” (Shehadeh, Tr. 3443).

To the extent further response is required, Tronox denies, or lacks knowledge or information sufficient to form a belief as to and therefore denies, the remaining allegations in Paragraph 21.

#### **BACKGROUND - TITANIUM DIOXIDE**

**22. TiO<sub>2</sub> 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 TiO<sub>2</sub> 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 TiO<sub>2</sub>.**

**ANSWER:** Tronox denies Paragraph 22 and responds that many of the allegations in Paragraph 22, which are substantively identical to claims the FTC set forth in its administrative complaint on December 5, 2017, are contradicted by the evidence presented in the FTC’s administrative proceeding. Tronox specifically denies that there are no commercially reasonable

substitutes for TiO<sub>2</sub>. Tronox further states that coatings producers can reduce, and have reduced, the amount of TiO<sub>2</sub> they use by substituting it for extenders, like clay and resins.

Tronox admits that TiO<sub>2</sub> is a pigment used to add whiteness, brightness, and opacity to paints, industrial and automotive coatings, plastics, paper, and other products. Further, Tronox states that TiO<sub>2</sub> end-use applications are approximately 60 percent paint and coatings, approximately 25 percent plastics, approximately 10 percent paper, and the remainder other end uses (Mouland, Tr. 1211).

To the extent further response is required, Tronox denies the allegations in Paragraph 22.

**23. TiO<sub>2</sub> is produced from titanium-containing ores through one of two manufacturing processes that extract TiO<sub>2</sub> 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 TiO<sub>2</sub> with a bluer tint, compared to a yellower tint for TiO<sub>2</sub> manufactured from the sulfate process. Chloride TiO<sub>2</sub> is also more durable than sulfate TiO<sub>2</sub>. The vast majority of TiO<sub>2</sub> sold to and consumed by North American customers, as well as produced in North America, is chloride TiO<sub>2</sub>.**

**ANSWER:** Tronox admits that TiO<sub>2</sub> can be produced from titanium-containing ores through one of two manufacturing processes: the chloride process and the sulfate process. Tronox denies, or lacks knowledge or information sufficient to form a belief as to and therefore denies, the remaining allegations contained in Paragraph 23.

Tronox further states that “80 percent of end applications are indifferent towards chloride and sulfate, provided quality is the same” (Shehadeh, Tr. 3319) and that “[m]ost TiO<sub>2</sub> customers do not have a preference for the process that produces the product they desire” (Shehadeh, Tr. 3311). Tronox further states that the color and durability properties of TiO<sub>2</sub> are primarily impacted by the finishing process, which is identical for chloride-process and sulfate-process TiO<sub>2</sub>, as opposed to the manufacturing process, i.e., chloride vs. sulfate process (Engle, Tr. 2444).

To the extent further response is required, Tronox denies the allegations in Paragraph 23.

**24. TiO<sub>2</sub> can also have two different crystal structures—rutile and anatase. Rutile and anatase TiO<sub>2</sub> have different physical characteristics and applications and are not substitutes for any use relevant to this matter. References in this Complaint to TiO<sub>2</sub> are to rutile TiO<sub>2</sub>.**

**ANSWER:** Tronox admits that TiO<sub>2</sub> can have two different crystal structures—rutile and anatase. Tronox further admits that rutile and anatase TiO<sub>2</sub> can have different physical characteristics and applications. Tronox further states that both the chloride and sulfate process yield rutile TiO<sub>2</sub>, and the sulfate process additionally yields anatase TiO<sub>2</sub>.

Tronox denies, or lacks knowledge or information sufficient to form a belief as to and therefore denies, the remaining allegations contained in Paragraph 24.

**25. TiO<sub>2</sub> is delivered to customers by rail or truck. In North America, customers purchase TiO<sub>2</sub> either in a liquid slurry or a bagged dry powder form. TiO<sub>2</sub> slurry is made by dispersing TiO<sub>2</sub> powder in water with other additives. TiO<sub>2</sub> slurry is then delivered by rail cars or tank trucks and pumped directly into customers' storage tanks, which simplifies handling and manufacturing. TiO<sub>2</sub> 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 TiO<sub>2</sub> in a slurry form. North American slurry TiO<sub>2</sub> is entirely made from chloride TiO<sub>2</sub>.**

**ANSWER:** Tronox admits that TiO<sub>2</sub> is generally delivered to customers by rail or truck. Tronox further admits that customers purchase TiO<sub>2</sub> in either a slurry or bagged dry powder form, and that delivery of TiO<sub>2</sub> in slurry form is generally more prevalent in North America than other parts of the world. Tronox further admits that slurry consists of TiO<sub>2</sub> powder combined with water and other additives. Tronox denies, or lacks knowledge or information sufficient to form a belief as to and therefore denies, the allegations in Paragraph 25. Tronox further states that TiO<sub>2</sub> slurry can be made with either chloride-process or sulfate-process titanium dioxide; the only necessary ingredients for slurry are TiO<sub>2</sub> and a stir tank, and it can be produced via both processes (Stern, Tr. 3845-46). Tronox additionally states that the market for TiO<sub>2</sub> slurry accounts for only a third of the TiO<sub>2</sub> consumed in North America, and it is a market generally participated in by large paint and coatings companies (Stern, Tr. 3845).

To the extent further response is required, Tronox denies the allegations in Paragraph 25.

#### **MARKET PARTICIPANTS AND INDUSTRY DYNAMICS**

**26. The North American TiO<sub>2</sub> industry is an oligopoly dominated by five major producers: Tronox, Cristal, Chemours, Kronos, and Venator. These companies produce and sell TiO<sub>2</sub> both in North America and in other regions. All North American production is chloride TiO<sub>2</sub> with the exception of a small Kronos-owned sulfate TiO<sub>2</sub> plant in Canada.**

**ANSWER:** Tronox admits that Tronox, Cristal, Chemours, Kronos, and Venator produce and sell TiO<sub>2</sub>. Tronox denies the remaining allegations contained in Paragraph 26, and specifically denies that the TiO<sub>2</sub> industry is an “oligopoly dominated by five major producers.” To the extent Paragraph 26 alleges that there is a separate “North American TiO<sub>2</sub> industry” or that it constitutes the relevant market for this case, these allegations in Paragraph 26 are specifically denied. Tronox states that Tronox’s acquisition of Cristal is a “worldwide merger” (Hill, Tr. 1782), that the relevant geographic market is global (Shehadeh, Tr. 3204-05), and that the relevant product market includes both chloride-process and sulfate-process rutile TiO<sub>2</sub> (Shehadeh, Tr. 3204-05, 3283-86). Tronox further states that Lomon Billions, not mentioned in Paragraph 26, is the fourth-largest TiO<sub>2</sub> supplier in the world—larger than Tronox. Tronox also states that Tronox competes aggressively with other multinational TiO<sub>2</sub> producers everywhere in the world, including “significant, large competitors that have very low cost basis,” such as Chemours and Lomon Billions (Quinn, Tr. 2318-19; Mouland Tr. 1207-09). Moreover, Tronox competes throughout the world with a number of mid-sized Chinese producers and regional producers in Eastern Europe, India, and Japan (Mouland Tr. 1209-10).

To the extent further response is required, Tronox denies the allegations in Paragraph 26.

**27. Chemours, a DuPont spin-off, is currently the largest TiO<sub>2</sub> 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 TiO<sub>2</sub>.**

**ANSWER:** Tronox admits on information and belief that Chemours is the world's largest TiO<sub>2</sub> producer. Tronox also admits on information and belief that Chemours has the lowest cost production in the industry (Stern, Tr. 3783).

Tronox lacks knowledge or information sufficient to form a belief as to the remaining allegations in Paragraph 27, and therefore denies them.

**28. The two other major North American TiO<sub>2</sub> companies—Kronos and Venator—both own a 50-50 joint venture that operates a chloride TiO<sub>2</sub> plant in Westlake, Louisiana. Kronos also operates a TiO<sub>2</sub> plant in Canada and four plants in Europe. Venator, a Huntsman spin-off, operates six TiO<sub>2</sub> plants in Europe and one plant in Asia. While Venator is the second largest TiO<sub>2</sub> 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 TiO<sub>2</sub> (rutile) and sulfate TiO<sub>2</sub> (rutile and anatase).**

**ANSWER:** Tronox admits on information and belief that Kronos and Venator are both global TiO<sub>2</sub> companies that produce TiO<sub>2</sub>, with a joint venture in Louisiana.

Tronox lacks knowledge or information sufficient to form a belief as to the remaining allegations in Paragraph 28, and therefore denies them.

**29. Beyond the major North American TiO<sub>2</sub> producers, there are smaller regional manufacturers of TiO<sub>2</sub>, primarily located in Eastern Europe and Asia. The TiO<sub>2</sub> produced by these fringe manufacturers is virtually all sulfate TiO<sub>2</sub>, is generally lower quality than that manufactured by the five major North American TiO<sub>2</sub> 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 TiO<sub>2</sub>, primarily into markets in Asia, South America, Europe, and the Middle East. Almost all Chinese TiO<sub>2</sub> has been lower quality sulfate TiO<sub>2</sub>, and very little has been exported to North America. Similarly, although a few Chinese manufacturers have recently begun producing chloride TiO<sub>2</sub>, their production has been limited, and only a very small amount has been imported to North America.**

**ANSWER:** Tronox admits that there are manufacturers of TiO<sub>2</sub> outside of North America, including Chinese manufacturers. Tronox denies, or lacks knowledge or information sufficient to form a belief as to and therefore denies, the remaining allegations in Paragraph 29. Tronox specifically denies that almost all Chinese TiO<sub>2</sub> exported has been “lower quality sulfate TiO<sub>2</sub>,” and also specifically denies that “very little” Chinese TiO<sub>2</sub> has been exported into North America.

Tronox states that from 2010 to 2016, Chinese imports of TiO<sub>2</sub> into North America increased by “approximately five times” as North American customers have increasingly made use of Chinese TiO<sub>2</sub> product (Shehadeh, Tr. 3220-21). Tronox further states that Lomon Billions, on information and belief the largest Chinese TiO<sub>2</sub> producer, recently announced its intent “is to dominate [the titanium dioxide] industry within the next few years” (Quinn, Tr. 2347). Tronox also states that Chinese product has been rapidly improving over recent years (Stern, Tr. 3745), and that today there are some Chinese grades of TiO<sub>2</sub> that are better than Tronox’s grades of TiO<sub>2</sub> (Romano, Tr. 2238-39).

To the extent further response is required, Tronox denies the allegations in Paragraph 29.

**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 TiO<sub>2</sub> 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 TiO<sub>2</sub> 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.**

**ANSWER:** Paragraph 30 purports to characterize judicial records and opinions, which speak for themselves. Therefore, no response is required. To the extent a response is required, Tronox denies the allegations in Paragraph 30.

Tronox states that the FTC’s selective quotations from the price-fixing litigation, offered without context, are inaccurate and misleading in part because the Third Circuit decision was on a motion for summary judgment and the facts were “essentially undisputed” in the District Court. 873 F.3d at 190. Tronox further states that the FTC’s selective quotations are inaccurate and misleading because the parties did not brief the question of whether the TiO<sub>2</sub> industry was an



oligopoly, and that question was also not presented to the District Court or Third Circuit for decision. Tronox additionally states that the selective quotations and allegations in Paragraph 30 regarding the price-fixing litigation in *In re Titanium Dioxide Antitrust Litigation*, 959 F. Supp. 2d 799 (D. Md. 2013), are inaccurate and misleading because the District Court of Maryland's decision was on a motion for summary judgment in which the court reviewed "the facts and all reasonable inferences in the light most favorable to the [plaintiffs]," 959 F. Supp. 2d at 803. Furthermore, the selective quotations and allegations in Paragraph 30 are inaccurate, misleading, and irrelevant because the price-fixing litigation involved different allegations brought by a different, private plaintiff in a different case; Tronox was not a party to the litigation; the litigation focused on the time period 2000-2010; and the litigation dealt with allegations of a hub-and-spoke pricing conspiracy focused on a service provided by the Titanium Dioxide Manufacturers Association, a service which is no longer offered by that Association.

To the extent further response is required, Tronox denies the allegations in Paragraph 30.

**31. Given relatively inelastic demand for chloride TiO<sub>2</sub> in North America, the major North American TiO<sub>2</sub> producers recognize that by limiting the supply of chloride TiO<sub>2</sub> available in North America they are better able to stabilize or increase North American TiO<sub>2</sub> prices. Several of these companies have curtailed or restricted their North American chloride TiO<sub>2</sub> 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 TiO<sub>2</sub> 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 TiO<sub>2</sub> 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.**

**ANSWER:** Tronox denies the allegations in Paragraph 31 and responds that many of the allegations in Paragraph 31, which are largely similar to claims the FTC set forth in its administrative complaint on December 5, 2017, are contradicted by the evidence presented in the

FTC's administrative proceeding. Tronox states that it has never restricted its output of TiO<sub>2</sub> in an effort to control the supply or price of TiO<sub>2</sub> feedstock or to raise the price of TiO<sub>2</sub> pigment in the market (Romano, Tr. 2254). Tronox further states that it plans to run its TiO<sub>2</sub> feedstock and pigment facilities at full capacity after the Cristal transaction closes (Turgeon, Tr. 2654-56). Tronox additionally states that TiO<sub>2</sub> producers have incentive in most market condition to run their plants at maximum capacity, or "flat-out," because the TiO<sub>2</sub> industry is a high fixed cost industry and there are significant "costs involved in curtailing capacity" at TiO<sub>2</sub> plants, including substantial "opportunity costs" and "dislocation involving technology, workers and facilities" (Christian, Tr. 864-66). Tronox additionally states that the FTC's selective reference to unidentified written material or communications in Paragraph 31, offered without context, is inaccurate and misleading as framed.

To the extent further response is required, Tronox denies the allegations in Paragraph 31.

**32. In recent years, Tronox and Chemours have been particularly disciplined about their North American sales and production of TiO<sub>2</sub>. 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.**

**ANSWER:** Tronox denies the allegations contained in Paragraph 32 and responds that many of the allegations in Paragraph 32, which are substantively identical to claims the FTC set forth in its administrative complaint on December 5, 2017, are contradicted by the evidence presented in the FTC's administrative proceeding. Tronox states that, in 2015, it temporarily shut down a line at its Hamilton, Mississippi facility due to a substantial reduction in demand and related economic considerations resulting from an industry-wide downturn.

Tronox cannot admit or deny facts pertaining to Chemours, a third party, but states that on information and belief, Chemours closed its Edge Moor plant in Delaware and shut down a production line at its New Johnsonville, Tennessee plant in or around 2015. Tronox further states

on information and belief that, around the same time, Chemours increased its net TiO<sub>2</sub> production as a result of its expansion of TiO<sub>2</sub> production at its plant in Altamira, Mexico.

To the extent further response is required, Tronox denies the allegations in Paragraph 32.

### **RELEVANT MARKET**

**33. The sale of chloride TiO<sub>2</sub> to North American customers is a relevant market. A hypothetical monopolist for the sale of chloride TiO<sub>2</sub> to North American customers would find it profit-maximizing to impose at least a small but significant and non-transitory increase in price (“SSNIP”).**

**ANSWER:** Tronox denies the allegations in Paragraph 33 and responds that the allegations in Paragraph 33, which are substantively identical to claims the FTC set forth in its administrative complaint on December 5, 2017, are contradicted by the evidence presented in the FTC’s administrative proceeding. Tronox specifically denies that there is a market for the “sale of chloride TiO<sub>2</sub> to North American customers” or that it constitutes a relevant market. Tronox states that Tronox’s acquisition of Cristal is a “worldwide merger” (Hill, Tr. 1782), that the relevant geographic market is global (Shehadeh, Tr. 3204-05), and that the relevant product market includes both chloride-process and sulfate-process rutile TiO<sub>2</sub> (Shehadeh, Tr. 3204-05, 3283-86). Tronox further states that the application of the hypothetical monopolist test using critical loss analysis confirms that “the relevant market [is] broader than sales to customers in North America and, in fact, [is] global” as a result of the economic constraints from international trade (Shehadeh, Tr. 3203-04). Tronox states that the relevant product market is broader than the sale of chloride-produced TiO<sub>2</sub> because customers have the incentive and ability to substitute between chloride- and sulfate-produced rutile TiO<sub>2</sub> in response to relative price changes, and in fact do substitute between chloride- and sulfate-produced rutile TiO<sub>2</sub> (Shehadeh, Tr. 3283-85).

To the extent further response is required, Tronox denies the allegations in Paragraph 39.

#### **A. Relevant Product Market**

**34. The sale of chloride TiO<sub>2</sub> is a relevant product market.**

**ANSWER:** Tronox denies the allegations in Paragraph 34 and responds that the allegations in Paragraph 34, which are identical to claims the FTC set forth in its administrative complaint on December 5, 2017, are contradicted by the evidence presented in the FTC's administrative proceeding. Tronox specifically denies that there is a market for the "sale of chloride TiO<sub>2</sub>" or that it constitutes the "relevant product market." Tronox further states that as a result of the reasonably substitutable nature of chloride-process and sulfate-process rutile TiO<sub>2</sub> for the vast majority of end-use applications (Stern, Tr. 3835), the "statistically and economically significant" co-movement of chloride-process and sulfate-process rutile TiO<sub>2</sub> prices (Shehadeh, Tr. 3288), and other economic data and evidence, the relevant product market in this case is broader than just chloride-process TiO<sub>2</sub>, and includes both chloride-process and sulfate-process rutile TiO<sub>2</sub> (Shehadeh, Tr. 3283-86). Tronox also states that "80 percent of end applications are indifferent towards chloride-process and sulfate-process, provided quality is the same" (Shehadeh, Tr. 3319), and that "[m]ost TiO<sub>2</sub> customers do not have a preference for the process that produces the product they desire" (Shehadeh, Tr. 3311).

To the extent further response is required, Tronox denies the allegations in Paragraph 34.

**35. Virtually all TiO<sub>2</sub> customers have no viable substitutes for TiO<sub>2</sub>. While various products and technologies can be used to reduce the amount of TiO<sub>2</sub> used by small percentages, they have limited applications and can degrade product performance.**

**ANSWER:** Tronox denies the allegations in Paragraph 35 and responds that the allegations in Paragraph 35, which are substantively identical to claims the FTC set forth in its administrative complaint on December 5, 2017, are contradicted by the evidence presented in the FTC's administrative proceeding. Tronox states that customers can and do use extenders to reduce TiO<sub>2</sub> usage without compromising quality (Turgeon, Tr. 2664-65). Tronox further states that customers of TiO<sub>2</sub> have in the past reformulated its products to make them more efficient so that the products

could use less TiO<sub>2</sub>. Customers can also decrease their TiO<sub>2</sub> use as much as 20 percent with low-density silica and alumina surface treatments, which provide more opacity (Engle, Tr. 2453-54).

To the extent further response is required, Tronox denies the allegations in Paragraph 35.

**36. Furthermore, TiO<sub>2</sub> produced through the chloride process comprises the vast majority of TiO<sub>2</sub> sold, consumed, and produced in North America. Most North American customers purchasing chloride TiO<sub>2</sub>, including virtually all of the largest customers, use chloride TiO<sub>2</sub> because of its distinct characteristics versus sulfate TiO<sub>2</sub>, including its brighter tint and superior coverage and durability.**

**ANSWER:** Tronox denies the allegations in Paragraph 36 and responds that the allegations in Paragraph 36, which are substantively identical to claims the FTC set forth in its administrative complaint on December 5, 2017, are contradicted by the evidence presented in the FTC's administrative proceeding. Tronox states that "80 percent of end applications are indifferent towards chloride and sulfate, provided quality is the same" (Shehadeh, Tr. 3319), and that "[m]ost TiO<sub>2</sub> customers do not have a preference for the process that produces the product they desire" (Shehadeh, Tr. 3311). Tronox further states that the color and durability properties of TiO<sub>2</sub> are primarily impacted by the finishing process, which is identical for chloride-process and sulfate-process TiO<sub>2</sub>, as opposed to the manufacturing process, i.e., chloride vs. sulfate process (Engle, Tr. 2444).

To the extent further response is required, Tronox denies the allegations in Paragraph 36.

**37. In order to even attempt switching to sulfate TiO<sub>2</sub>, North American customers currently purchasing chloride TiO<sub>2</sub>, including almost all coatings and plastics manufacturers, would need to reformulate their product lines and complete extensive testing to qualify the sulfate TiO<sub>2</sub>, a process that would be costly and could take several years to complete.**

**ANSWER:** Tronox denies the allegations in Paragraph 37 and responds that many of the allegations in Paragraph 37, which are largely similar to claims the FTC set forth in its administrative complaint on December 5, 2017, are contradicted by the evidence presented in the FTC's administrative proceeding. Tronox specifically denies that most North American customers

have preferences for chloride-process TiO<sub>2</sub> such that chloride-process and sulfate-process TiO<sub>2</sub> are not reasonably interchangeable substitutes. Tronox states that the relevant product market is broader than the sale of chloride-produced TiO<sub>2</sub> because customers have the incentive and ability to substitute between chloride- and sulfate-produced rutile TiO<sub>2</sub> in response to relative price changes, and in fact do substitute between chloride- and sulfate-produced rutile TiO<sub>2</sub> (Shehadeh, Tr. 3283-85). Tronox further states that the reformulation process is not unique to the switching between sulfate-process and chloride-process grades; rather, it is required for any switching, including a switch from chloride to chloride grades (Vanderpool, Tr. 186). Tronox further states that for some customers, the reformulation process to qualify a switch from grade to grade, including from sulfate-process to chloride-process, can take anywhere from three to six months.

To the extent further response is required, Tronox denies the allegations in Paragraph 37.

**38. That chloride TiO<sub>2</sub> and sulfate TiO<sub>2</sub> are not close substitutes in North America is demonstrated by North American customers ‘consistent reliance on chloride TiO<sub>2</sub>, despite paying a premium for it. Indeed, despite significantly higher chloride TiO<sub>2</sub> prices in recent years, North American customers switching away from chloride to sulfate TiO<sub>2</sub> 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.**

**ANSWER:** Tronox denies the allegations in Paragraph 38 and responds that many of the allegations in Paragraph 38, which are largely similar to claims the FTC set forth in its administrative complaint on December 5, 2017, are contradicted by the evidence presented in the FTC’s administrative proceeding. Tronox specifically denies that most North American customers have preferences for chloride-process TiO<sub>2</sub> such that chloride-process and sulfate-process TiO<sub>2</sub> are not reasonably interchangeable substitutes. Tronox states that the relevant product market is broader than the sale of chloride-produced TiO<sub>2</sub> because customers have the incentive and ability to substitute between chloride- and sulfate-produced rutile TiO<sub>2</sub> in response to relative price

changes, and in fact do substitute between chloride- and sulfate-produced rutile TiO<sub>2</sub> (Shehadeh, Tr. 3283-85). Tronox further states that the co-movement of chloride-process and sulfate-process rutile TiO<sub>2</sub> prices shows a “statistically and economically significant” relationship, demonstrating that the relevant market includes both chloride-process and sulfate-process rutile TiO<sub>2</sub> (Shehadeh, Tr. 3289-90).

Tronox further states that the FTC’s selective quotation of unidentified written material or communications in Paragraph 38, offered without context, is misleading as framed. Tronox additionally states that the FTC’s selective quotation of unidentified communications ignores “the comparison to what the price of sulfate-produced titanium dioxide was at the time, and so this says nothing about changes in relative prices”; thus, it “would not be informative about the likelihood or actuality of substitution” (Shehadeh, Tr. 3293-95).

To the extent further response is required, Tronox denies the allegations in Paragraph 38.

**39. In addition to the TiO<sub>2</sub> differences due to the manufacturing process, TiO<sub>2</sub> also has two distinct crystal forms—rutile and anatase—that impart different product characteristics to the TiO<sub>2</sub> and make them suitable for different end uses. Rutile TiO<sub>2</sub>’s crystal structure creates a pigment that is more durable than anatase TiO<sub>2</sub>. Rutile TiO<sub>2</sub> is used in architectural paints, industrial and automotive coatings, and plastics. Rutile TiO<sub>2</sub> can be produced using either the chloride or the sulfate process. Because all chloride TiO<sub>2</sub> has a rutile crystal form, rutile TiO<sub>2</sub> comprises the vast majority of the commercially available TiO<sub>2</sub> in North America. In contrast, anatase TiO<sub>2</sub> is softer and less abrasive than rutile TiO<sub>2</sub>, and is used for certain specialty applications such as ink, food, cosmetics, and pharmaceuticals. Anatase TiO<sub>2</sub> can be manufactured only through the sulfate process. North American customers purchasing rutile TiO<sub>2</sub> do not consider anatase TiO<sub>2</sub> to be a substitute for rutile TiO<sub>2</sub>, nor does the supply of anatase TiO<sub>2</sub> constrain rutile TiO<sub>2</sub> prices. Accordingly, the sale of rutile TiO<sub>2</sub> also constitutes a relevant product market in which to consider the effects of the Acquisition.**

**ANSWER:** Tronox admits that TiO<sub>2</sub> has two distinct crystal forms called rutile and anatase. Tronox further admits that rutile TiO<sub>2</sub> can be produced using both the chloride or sulfate processes, and that anatase TiO<sub>2</sub> can be produced using only the sulfate process.

Tronox denies, or lacks knowledge or information sufficient to form a belief as to and therefore denies, any remaining allegations in Paragraph 39. Tronox further states that the relevant product market may be broader than rutile TiO<sub>2</sub>, but that the relevant product market includes all rutile TiO<sub>2</sub>, whether from the chloride process or sulfate process.

To the extent further response is required, Tronox denies the allegations in Paragraph 39.

**40. The relevant competitive dynamics in the North American rutile TiO<sub>2</sub> market are substantially similar to those in the North American chloride TiO<sub>2</sub> market. As a result, the Acquisition's harmful impact on competition in the rutile TiO<sub>2</sub> market would be substantially similar to the competitive harm likely to occur in the chloride TiO<sub>2</sub> market.**

**ANSWER:** Tronox denies the allegations in Paragraph 40 and responds that many of the allegations in Paragraph 40, which are largely similar to claims the FTC set forth in its administrative complaint on December 5, 2017, are contradicted by the evidence presented in the FTC's administrative proceeding. Tronox specifically denies that there is a separate "North American rutile TiO<sub>2</sub> market" or "North American chloride TiO<sub>2</sub> market," and specifically denies that the Acquisition would have any harmful impact on competition however the market is defined. Tronox states that as a result of the reasonably substitutable nature of chloride-process and sulfate-process rutile TiO<sub>2</sub> for the vast majority of end-use applications, the "statistically and economically significant" co-movement of chloride-process and sulfate-process rutile TiO<sub>2</sub> prices (Shehadeh, Tr. 3288-89), and other economic data and evidence, the relevant product market in this case includes both chloride-process and sulfate-process rutile TiO<sub>2</sub> (Shehadeh, Tr. 3283-86).

Tronox further states that the transaction is pro-competitive and "will lead to significant output-enhancing efficiencies" at both the pigment level (i.e., production of TiO<sub>2</sub>) and at the feedstock level, as well as "significant cost reductions" (Shehadeh, Tr. 3441-42), and that the output-enhancing efficiencies of this transaction will have a "direct effect" in terms of "customer[] benefit" (Shehadeh, Tr. 3443).



To the extent further response is required, Tronox denies the allegations in Paragraph 40.

## **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.**

**ANSWER:** Tronox denies the allegations in Paragraph 41 and responds that the allegations in Paragraph 41, which are largely similar to claims the FTC set forth in its administrative complaint on December 5, 2017, are contradicted by the evidence presented in the FTC's administrative proceeding. Tronox states that Tronox's acquisition of Cristal is a "worldwide merger" (Hill, Tr. 1782), and that as a result of the magnitude, elasticity, and variation over time of global trade in TiO<sub>2</sub>, the co-movement of TiO<sub>2</sub> prices across regions globally, and other economic data and evidence, the relevant geographic market in this case is global (Shehadeh, Tr. 3204-05). Tronox states that the application of the hypothetical monopolist test using critical loss analysis confirms that "the relevant market [is] broader than sales to customers in North America and, in fact, [is] global" as a result of the economic constraints from international trade (Shehadeh, Tr. 3203-04).

To the extent further response is required, Tronox denies the allegations in Paragraph 41.

**42. Defendants, like the other major North American TiO<sub>2</sub> 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 TiO<sub>2</sub> producers negotiate with a multinational customer buying in multiple regions, the customer's prices typically vary by region.**

**ANSWER:** Tronox denies the allegations in Paragraph 42 and responds that many of the allegations in Paragraph 42, which are largely similar to claims the FTC set forth in its administrative complaint on December 5, 2017, are contradicted by the evidence presented in the

FTC's administrative proceeding. Tronox specifically denies that it "set[s] different prices for each geographic region"; instead, Tronox sets different prices for different TiO<sub>2</sub> customers based on negotiations with each individual customer (Romano, Tr. 2236-37). Tronox further states that global prices move within a band and sometimes prices may move outside that band, but overtime prices tend to equilibrate. Additionally, Tronox states that prices for "TiO<sub>2</sub> across regions are interdependent of one another in different parts of the world" (Romano, Tr. 2237). Furthermore, Tronox states that the FTC's selective quotation of unidentified written material or communications in Paragraph 42, offered without context, is inaccurate and misleading as framed.

To the extent further response is required, Tronox denies the allegations in Paragraph 42.

**43. Competitive conditions differ by region, and TiO<sub>2</sub> 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 TiO<sub>2</sub> 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 TiO<sub>2</sub> also have a number of distinct demand characteristics compared to TiO<sub>2</sub> purchasers in other regions. For example, most North American customers buy and strongly favor chloride TiO<sub>2</sub> for the vast majority of applications. In contrast, customer demand in other regions of the world is more split between sulfate and chloride TiO<sub>2</sub>. Shifting from chloride to sulfate TiO<sub>2</sub> is not commercially feasible for most North American customers. Notably, after acquiring a sulfate TiO<sub>2</sub> plant in 2000, Tronox's predecessor company closed it a few years later, specifically citing lack of North American demand for sulfate TiO<sub>2</sub>. Another demand characteristic largely unique to North America is North American customers' preference for TiO<sub>2</sub> sold in slurry form. The vast majority of TiO<sub>2</sub> sold in slurry form is consumed in North America by the large North American paint and coatings manufacturers.**

**ANSWER:** Tronox responds that many of the allegations in Paragraph 43, which are largely similar to claims the FTC set forth in its administrative complaint on December 5, 2017, are contradicted by the evidence presented in the FTC's administrative proceeding. Tronox denies that most North American customers have preferences for chloride-process TiO<sub>2</sub> such that chloride-process and sulfate-process TiO<sub>2</sub> are not reasonably interchangeable substitutes. Tronox states that "80 percent of end applications are indifferent towards chloride and sulfate, provided

quality is the same” (Shehadeh, Tr. 3319) and that “[m]ost TiO<sub>2</sub> customers do not have a preference for the process that produces the product they desire” (Shehadeh, Tr. 3311).

Moreover, Tronox states that the color and durability properties of TiO<sub>2</sub> are primarily impacted by the finishing process, which is identical for chloride-process and sulfate-made TiO<sub>2</sub>, as opposed to the manufacturing process, i.e., chloride vs. sulfate process (Engle, Tr. 2444). Tronox further responds that the relevant product market is broader than the sale of chloride-produced TiO<sub>2</sub> because customers have the incentive and ability to substitute between chloride- and sulfate-produced rutile TiO<sub>2</sub> in response to relative price changes, and in fact do substitute between chloride- and sulfate-produced rutile TiO<sub>2</sub> (Shehadeh, Tr. 3283-85). Additionally, Tronox responds that the market for TiO<sub>2</sub> slurry accounts for only a third of the TiO<sub>2</sub> consumed in North America, and it is a market generally participated in by large paint and coatings companies (Stern 3845-46).

By way of further response, Tronox states that prices for TiO<sub>2</sub> across regions are interdependent of one another in different parts of the world (Romano, Tr. 2237). Furthermore, since August of 2017, prices in North America have been the lowest in the world (Romano, Tr. 2236). Tronox further states that global prices move within a band and sometimes prices may move outside that band, but overtime prices tend to equilibrate. Finally, Tronox admits that its predecessor company acquired a sulfate-process TiO<sub>2</sub> plant in 2000, but denies that it closed that plant due to “lack of North American demand for sulfate TiO<sub>2</sub>.”

To the extent the allegations in Paragraph 43 relate to other TiO<sub>2</sub> producers, Tronox lacks knowledge or information sufficient to form a belief as to those allegations and therefore denies those allegations. To the extent further response is required, Tronox denies the allegations in Paragraph 43.

**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 TiO<sub>2</sub> 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.**

**ANSWER:** Tronox denies the allegations contained in Paragraph 44 and responds that many of the allegations in Paragraph 44, which are largely similar to claims the FTC set forth in its administrative complaint on December 5, 2017, are contradicted by the evidence presented in the FTC’s administrative proceeding. Tronox states that the FTC’s artificially narrow definition of “arbitrage” is inconsistent with economic literature and industry realities, and improperly “restricts the scope of substitution and the scope of . . . arbitrage relative to what is properly considered in the Merger Guidelines” (Shehadeh, Tr. 3260). Tronox further states that TiO<sub>2</sub> end customers can and will switch to a producer with a different technology if the right arbitrage exists for the substitute product and the product is capable of meeting the customer’s requirements (Shehadeh, Tr. 3535). Tronox also states that import duties, shipping and handling costs, and other logistical challenges would not be uneconomical and impractical for arbitrage because TiO<sub>2</sub> transports as general cargo and does not require any specialized handling (Mei, Tr. 3156).

To the extent further response is required, Tronox denies the allegations in Paragraph 44.

#### **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.**

**ANSWER:** Tronox denies the allegations in Paragraph 45 and responds that the allegations in Paragraph 45, which are substantively identical to claims the FTC set forth in its administrative complaint on December 5, 2017, are contradicted by the evidence presented in the FTC’s administrative proceeding. Tronox states that the post-merger Herfindahl-Hirschman Index (“HHI”) for the Tronox-Cristal acquisition is “below 1,500 and in fact below 1,300 by any

measure” (Shehadeh, Tr. 3326), and that according to the Federal Trade Commission and U.S. Department of Justice Horizontal Merger Guidelines (“Merger Guidelines”), these levels of concentration “are unlikely to raise the prospect of anticompetitive effects” (Shehadeh, Tr. 3325). Further, the post-merger Tronox and concentration overall “would be too low to be consistent with either unilateral or coordinated competitive effects in the properly defined relevant market” (Shehadeh, Tr. 3325). Tronox further states that even these low levels of concentration and shares post-merger “would overstate the competitive significance” of the transaction because “shares and concentration are a static measure of competition” in an industry noted for the “dynamic nature of competition” among TiO<sub>2</sub> suppliers (Shehadeh, Tr. 3327-28). To the extent Paragraph 45 alleges that there are multiple “markets” for TiO<sub>2</sub>, as distinct from a single, global market for TiO<sub>2</sub>, the allegations are denied.

To the extent further response is required, Tronox denies the allegations in Paragraph 45.

**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.**

ANSWER: Paragraph 46 purports to characterize the Merger Guidelines, which speak for themselves. Therefore, no response is required. To the extent Paragraph 46 contains any allegations and a response is required, Tronox admits that the Herfindahl-Hirschman Index (“HHI”) is a measure of concentration calculated by summing the squares of the market share of each firm for the relevant market. Tronox denies, or lacks knowledge or information sufficient to form a belief as to and therefore denies, any remaining allegations in Paragraph 46.

To the extent further response is required, Tronox denies the allegations in Paragraph 46.

**47. In the market for the sale of chloride TiO<sub>2</sub> 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 TiO<sub>2</sub> market.**

**ANSWER:** Tronox denies the allegations in Paragraph 47 and responds that many of the allegations in Paragraph 47, which are largely similar to claims the FTC set forth in its administrative complaint on December 5, 2017, are contradicted by the evidence presented in the FTC's administrative proceeding. Tronox states that the post-merger Herfindahl-Hirschman Index ("HHI") for the Tronox-Cristal acquisition is "below 1,500 and in fact below 1,300 by any measure" (Shehadeh, Tr. 3326), and that according to the Federal Trade Commission and U.S. Department of Justice Horizontal Merger Guidelines ("Merger Guidelines"), these levels of concentration "are unlikely to raise the prospect of anticompetitive effects" (Shehadeh, Tr. 3325). Further, the post-merger Tronox and concentration overall "would be too low to be consistent with either unilateral or coordinated competitive effects in the properly defined relevant market" (Shehadeh, Tr. 3325). Tronox also states that even these low levels of concentration and shares post-merger "would overstate the competitive significance" of the transaction because "shares and concentration are a static measure of competition" in an industry noted for the "dynamic nature of competition" among TiO<sub>2</sub> suppliers (Shehadeh, Tr. 3327-28).

To the extent Paragraph 47 alleges that the relevant antitrust market is "the market for the sale of chloride TiO<sub>2</sub> to North American customers," Tronox denies the allegations in Paragraph 47 and specifically states that Tronox's acquisition of Cristal is a "worldwide merger" (Hill, Tr. 1782), that the relevant geographic market in this case is global (Shehadeh, Tr. 3204-05), and that the relevant product market in this case includes both chloride-process and sulfate-process rutile TiO<sub>2</sub> (Shehadeh, Tr. 3283-86). Tronox states that the transaction is pro-competitive and "will lead to significant output-enhancing efficiencies" at both the pigment level (i.e., production of TiO<sub>2</sub>) and at the feedstock level, as well as "significant cost reductions" (Shehadeh, Tr. 3441-42), and

that the output-enhancing efficiencies of this transaction will have a “direct effect” in terms of “customer[] benefit” (Shehadeh, Tr. 3443).

To the extent further response is required, Tronox denies the allegations in Paragraph 47.

**48. In the market for the sale of rutile TiO<sub>2</sub> to North American customers (“North American rutile TiO<sub>2</sub> 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 TiO<sub>2</sub> market.**

**ANSWER:** Tronox denies the allegations in Paragraph 48 and responds that many of the allegations in Paragraph 48, which are largely similar to claims the FTC set forth in its administrative complaint on December 5, 2017, are contradicted by the evidence presented in the FTC’s administrative proceeding. Tronox states that the post-merger Herfindahl-Hirschman Index (“HHI”) for the Tronox-Cristal acquisition is “below 1,500 and in fact below 1,300 by any measure” (Shehadeh, Tr. 3326), and that according to the Federal Trade Commission and U.S. Department of Justice Horizontal Merger Guidelines (“Merger Guidelines”), these levels of concentration “are unlikely to raise the prospect of anticompetitive effects” (Shehadeh, Tr. 3325). Further, the post-merger Tronox and concentration overall “would be too low to be consistent with either unilateral or coordinated competitive effects in the properly defined relevant market” (Shehadeh, Tr. 3325). Tronox further states that even these low levels of concentration and shares post-merger “would overstate the competitive significance” of the transaction because “shares and concentration are a static measure of competition” in an industry noted for the “dynamic nature of competition” among TiO<sub>2</sub> suppliers (Shehadeh, Tr. 3327-28).

To the extent Paragraph 48 alleges that the relevant antitrust market is “the market for the sale of rutile TiO<sub>2</sub> to North American customers,” Tronox denies the allegations in Paragraph 48 and specifically states that Tronox’s acquisition of Cristal is a “worldwide merger” (Hill, Tr. 1782) and that the relevant geographic market in this case is global (Shehadeh, Tr. 3204-05). Tronox

further states that the transaction is pro-competitive and “will lead to significant output-enhancing efficiencies” at both the pigment level (i.e., production of TiO<sub>2</sub>) and at the feedstock level, as well as “significant cost reductions” (Shehadeh, Tr. 3441-42), and that the output-enhancing efficiencies of this transaction will have a “direct effect” in terms of “customer[] benefit” (Shehadeh, Tr. 3443).

To the extent further response is required, Tronox denies the allegations in Paragraph 48.

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

**ANSWER:** Tronox denies the allegations in Paragraph 49 and responds that many of the allegations in Paragraph 49, which are largely similar to claims the FTC set forth in its administrative complaint on December 5, 2017, are contradicted by the evidence presented in the FTC’s administrative proceeding. Tronox states that according to the Merger Guidelines, the levels of concentration resulting from the Tronox-Cristal acquisition “are unlikely to raise the prospect of anticompetitive effects” (Shehadeh, Tr. 3325). Tronox further states that the transaction is pro-competitive and “will lead to significant output-enhancing efficiencies” at both the pigment level (i.e., production of TiO<sub>2</sub>) and at the feedstock level, as well as “significant cost reductions” (Shehadeh, Tr. 3441-42), and that the output-enhancing efficiencies of this transaction will have a “direct effect” in terms of “customer[] benefit” (Shehadeh, Tr. 3443).

To the extent further response is required, Tronox denies the allegations in Paragraph 49.

## **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 TiO<sub>2</sub> 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.**



**ANSWER:** Tronox denies the allegations in Paragraph 50 and responds that many of the allegations in Paragraph 50, which are largely similar to claims the FTC set forth in its administrative complaint on December 5, 2017, are contradicted by the evidence presented in the FTC's administrative proceeding. To the extent Paragraph 50 purports to characterize a judicial opinion from the U.S. Court of Appeals for the Third Circuit, the opinion speaks for itself and no response is required. Tronox specifically denies that the Third Circuit found that the TiO<sub>2</sub> industry is "primed for anticompetitive interdependence." Tronox further states that the selective quotations and allegations in Paragraph 50 regarding the price-fixing litigation in *Valspar Corp. v. E. I. du Pont de Nemours & Co.*, Docket No. 16-1345 (3d Cir.), are inaccurate and misleading because the Third Circuit decision was on a motion for summary judgment and as a result the facts were "essentially undisputed" in the District Court (No. 16-1345 (slip op.), at \*4 (Oct. 2, 2017)). Tronox further responds that the FTC's selective quotations are inaccurate and misleading because the parties did not brief the question of whether the TiO<sub>2</sub> industry was an oligopoly, and that question was also not presented to the District Court or Third Circuit for decision.

To the extent that Paragraph 50 purports to characterize a judicial decision from the U.S. District Court for the District of Maryland, the decision speaks for itself and no response is required. Tronox specifically denies that the District of Maryland found that the TiO<sub>2</sub> industry is "a text book example of an industry susceptible to efforts to maintain supracompetitive prices." Tronox further states that the selective quotations and allegations in Paragraph 50 regarding the price-fixing litigation in *In re Titanium Dioxide Antitrust Litigation*, 959 F. Supp. 2d 799 (D. Md. 2013), are inaccurate and misleading because the District Court of Maryland's decision was on a motion for summary judgment in which the reviewed "the facts and all reasonable inferences in the light most favorable to the [plaintiffs]," 959 F. Supp. 2d at 803, and because the question of

whether the TiO<sub>2</sub> industry was “a text book example of an industry susceptible to efforts to maintain supracompetitive prices” was not presented to the District Court for a decision on the merits. Tronox additionally responds that the selective quotations and allegations in Paragraph 50 are inaccurate, misleading, and irrelevant because the price-fixing litigation involved different allegations brought by a different, private plaintiff in a different case; Tronox was not a party to the litigation; the litigation focused on the time period 2000-2010; and the litigation dealt with allegations of a hub-and-spoke pricing conspiracy focused on a service provided by the Titanium Dioxide Manufacturers Association, a service which is no longer offered by that Association.

To the extent that Paragraph 50 states that Tronox’s acquisition of Cristal renders “anticompetitive coordination” more likely, Tronox states that the transaction is pro-competitive and “will lead to significant output-enhancing efficiencies” at both the pigment level (i.e., production of TiO<sub>2</sub>) and at the feedstock level, as well as “significant cost reductions” (Shehadeh, Tr. 3441-42), and that the output-enhancing efficiencies of this transaction will have a “direct effect” in terms of “customer[] benefit” (Shehadeh, Tr. 3443).

To the extent further response is required, Tronox denies the allegations in Paragraph 50.

**51. The market for the sale of chloride TiO<sub>2</sub> 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 TiO<sub>2</sub> capacity in the hands of the two most disciplined competitors- Tronox and Chemours.**

**ANSWER:** Tronox denies the allegations in Paragraph 51 and responds that many of the allegations in Paragraph 51, which are largely similar to claims the FTC set forth in its

administrative complaint on December 5, 2017, are contradicted by the evidence presented in the FTC's administrative proceeding. Tronox specifically denies that the relevant market for TiO<sub>2</sub> is limited to "the sale of chloride TiO<sub>2</sub> to North American customers." To the extent that Paragraph 51 states that Tronox's acquisition of Cristal increases the likelihood of coordination in the TiO<sub>2</sub> industry, Tronox states that "the combined share of the postmerger Tronox and concentration overall would be too low to be consistent with either unilateral or coordinated competitive effects in the properly defined relevant market" (Shehadeh, Tr. 3325). Tronox further states that diversity of incentives between TiO<sub>2</sub> producers "frustrates the ability of rivals to reach terms of agreement, to monitor terms of agreement and ultimately to enforce the terms of the agreement to punish, which are the requirements for sustaining tacit coordination" (Shehadeh, Tr. 3410). Tronox additionally states that the transaction "decreases transparency in the market and increases the diversity of incentives in the relevant market," which indicate that the transaction will not increase the likelihood of coordinated interaction post-merger (Shehadeh, Tr. 3409). Tronox also states that diversity of incentives between TiO<sub>2</sub> producers "frustrates the ability of rivals to reach terms of agreement, to monitor terms of agreement and ultimately to enforce the terms of the agreement to punish, which are the requirements for sustaining tacit coordination" (Shehadeh, Tr. 3410).

To the extent that Paragraph 51 is referencing the price-fixing litigation in the Third Circuit in *Valspar Corp. v. E. I. du Pont de Nemours & Co.*, 873 F.3d 185 (3d Cir. 2017) or the District of Maryland in *In re Titanium Dioxide Antitrust Litigation*, 959 F. Supp. 2d 799 (D. Md. 2013), such references are inaccurate, misleading, and irrelevant because those cases were decided at the summary judgment stage where the facts and all reasonable inferences were viewed in the light most favorable to the plaintiffs. 873 F.3d at 192; 959 F. Supp. 2d at 803.

To the extent that Paragraph 51 states that the transaction is anticompetitive, Tronox responds that the transaction is pro-competitive and “will lead to significant output-enhancing efficiencies” at both the pigment level (i.e., production of TiO<sub>2</sub>) and at the feedstock level, as well as “significant cost reductions” (Shehadeh, Tr. 3441-42), and that the output-enhancing efficiencies of this transaction will have a “direct effect” in terms of “customer[] benefit” (Shehadeh, Tr. 3443).

To the extent further response is required, Tronox denies the allegations in Paragraph 51.

**52. The major North American chloride TiO<sub>2</sub> 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 TiO<sub>2</sub> 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”).**

**ANSWER:** Tronox denies the allegations in Paragraph 52 and responds that many of the allegations in Paragraph 52, which are largely similar to claims the FTC set forth in its administrative complaint on December 5, 2017, are contradicted by the evidence presented in the FTC’s administrative proceeding. To the extent Paragraph 52 alleges that Tronox coordinates with its competitors to influence TiO<sub>2</sub> prices, Tronox specifically denies these allegations. Tronox further states that the TiO<sub>2</sub> industry is “a very competitive industry” and that Tronox competes aggressively with other multinational TiO<sub>2</sub> producers everywhere in the world, including “significant, large competitors that have very low cost basis,” such as Chemours and Lomon Billions (Quinn, Tr. 2318-19). Tronox further states that the transaction will enable Tronox to compete globally at a lower cost and more aggressively with its rivals in order to “serve a growing . . . global customer base” (Quinn, Tr. 2345-46; Romano, Tr. 2216-17).

Tronox states that diversity of incentives between TiO<sub>2</sub> producers “frustrates the ability of rivals to reach terms of agreement, to monitor terms of agreement and ultimately to enforce the

terms of the agreement to punish, which are the requirements for sustaining tacit coordination” (Shehadeh, Tr. 3410). Tronox further states that the Tronox-Cristal transaction “decreases transparency in the market and increases the diversity of incentives” among TiO<sub>2</sub> suppliers, which indicate that the transaction will not increase the likelihood of coordinated interaction among TiO<sub>2</sub> suppliers post-merger (Shehadeh, Tr. 3409). Tronox admits that in the fiercely competitive TiO<sub>2</sub> industry, it tracks publicly available information and information provided by its customers to stay competitive in the conduct of its businesses, and that it receives data and information from independent consulting firms such as TZ Minerals International Pty. Ltd. (“TZMI”).

To the extent Paragraph 52 contains allegations that refer to the practices of other TiO<sub>2</sub> producers, Tronox lacks knowledge or information sufficient to form a belief as to those allegations and therefore denies them. To the extent further response is required, Tronox denies the allegations in Paragraph 52.

**53. North American chloride TiO<sub>2</sub> 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 TiO<sub>2</sub> suppliers.**

**ANSWER:** Tronox denies the allegations in Paragraph 53 and responds that many of the allegations in Paragraph 53, which are largely similar to claims the FTC set forth in its administrative complaint on December 5, 2017, are contradicted by the evidence presented in the FTC’s administrative proceeding. To the extent Paragraph 53 specifically alleges that Tronox coordinates with its competitors to influence TiO<sub>2</sub> prices, Tronox denies the allegations in Paragraph 53. Tronox states that the TiO<sub>2</sub> industry is “a very competitive industry” and that Tronox competes aggressively with other multinational TiO<sub>2</sub> producers everywhere in the world, including “significant, large competitors that have very low cost basis,” such as Chemours and Lomon Billions (Quinn, Tr. 2318-19). Tronox further states that the transaction will enable Tronox

to compete globally at a lower cost and more aggressively with its rivals in order to “serve a growing . . . global customer base” (Quinn, Tr. 2345-46; Romano, Tr. 2216-17). Tronox additionally responds that diversity of incentives between TiO<sub>2</sub> producers “frustrates the ability of rivals to reach terms of agreement, to monitor terms of agreement and ultimately to enforce the terms of the agreement to punish, which are the requirements for sustaining tacit coordination” (Shehadeh, Tr. 3410). Furthermore, the Tronox-Cristal transaction “decreases transparency in the market and increases the diversity of incentives” among TiO<sub>2</sub> suppliers, which indicate that the transaction will not increase the likelihood of coordinated interaction among TiO<sub>2</sub> suppliers post-merger (Shehadeh, Tr. 3409).

By way of further response, Tronox notes that it does not receive complete information from customers regarding competitors price increases (Romano Tr., 2256). Tronox admits that in the fiercely competitive TiO<sub>2</sub> industry it issues non-public customer pricing letters. To the extent Paragraph 53 contains allegations that refer to the practices of other TiO<sub>2</sub> producers, Tronox lacks knowledge or information sufficient to form a belief as to those allegations and therefore denies them.

To the extent further response is required, Tronox denies the allegations in Paragraph 53.

**54. This transparency will only grow with the Acquisition. Today Cristal, unlike the other major North American TiO<sub>2</sub> companies, is not a publicly traded company and discloses less detail about its operations. By incorporating Cristal’s entire TiO<sub>2</sub> 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 TiO<sub>2</sub> 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.**

**ANSWER:** Tronox denies the allegations in Paragraph 54 and responds that many of the allegations in Paragraph 54, which are largely similar to claims the FTC set forth in its administrative complaint on December 5, 2017, are contradicted by the evidence presented in the

FTC's administrative proceeding. To the extent Paragraph 54 specifically alleges that Tronox coordinates with its competitors to influence TiO<sub>2</sub> prices, Tronox specifically denies these allegations. Tronox admits that Cristal is not a publicly traded company, but Tronox specifically denies the allegation that a publicly traded company's purchase of a privately owned company is anti-competitive or enhances the likelihood of coordination.

Tronox states that there is significant diversity of incentives between TiO<sub>2</sub> producers, and that this diversity of incentives "frustrates the ability of rivals to reach terms of agreement, to monitor terms of agreement and ultimately to enforce the terms of the agreement to punish, which are the requirements for sustaining tacit coordination" (Shehadeh, Tr. 3410). Tronox further states that the Tronox-Cristal transaction "decreases transparency in the market and increases the diversity of incentives in the relevant market," which indicate that the transaction will not increase the likelihood of coordinated interaction postmerger (Shehadeh, Tr. 3409).

Tronox additionally responds that the TiO<sub>2</sub> industry is "a very competitive industry" and that Tronox competes aggressively with other multinational TiO<sub>2</sub> producers everywhere in the world, including "significant, large competitors that have very low cost basis," such as Chemours and Lomon Billions (Quinn, Tr. 2318-19).

To the extent Paragraph 54 contains allegations that refer to the practices of other TiO<sub>2</sub> producers, Tronox lacks knowledge or information sufficient to form a belief as to those allegations and therefore denies them. To the extent further response is required, Tronox denies the allegations in Paragraph 54.

**55. Having competed against each other in an oligopolistic market environment for many years, the major North American TiO<sub>2</sub> companies recognize their mutual interdependence and aligned incentives. Tronox and the other publicly traded North American TiO<sub>2</sub> 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 TiO<sub>2</sub> 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.**

**ANSWER:** Tronox denies the allegations in Paragraph 55 and responds that many of the allegations in Paragraph 55, which are largely similar to claims the FTC set forth in its administrative complaint on December 5, 2017, are contradicted by the evidence presented in the FTC’s administrative proceeding. Tronox specifically denies that the TiO<sub>2</sub> industry is an “oligopolistic market environment” and that TiO<sub>2</sub> producers “recognize their mutual interdependence and aligned incentives.” Tronox states that there is significant diversity of incentives between TiO<sub>2</sub> producers, and that this diversity of incentives “frustrates the ability of rivals to reach terms of agreement, to monitor terms of agreement and ultimately to enforce the terms of the agreement to punish, which are the requirements for sustaining tacit coordination” (Shehadeh, Tr. 3410). Tronox further states that the Tronox-Cristal transaction “decreases transparency in the market and increases the diversity of incentives in the relevant market,” which indicate that the transaction will not increase the likelihood of coordinated interaction postmerger (Shehadeh, Tr. 3409).

Tronox additionally states that there is no history of coordinated interaction among TiO<sub>2</sub> suppliers and that the historical data on pricing and input costs are “inconsistent with a conclusion that . . . suggests coordination and in fact, to the contrary, reflects competition” among TiO<sub>2</sub> suppliers (Shehadeh, Tr. 3512). Moreover, the FTC’s selective quotation of unidentified written material or communications in Paragraph 55, offered without context or associated testimony, is inaccurate and misleading as framed.

To the extent further response is required, Tronox denies the allegations in Paragraph 55.



**56. Parallel pricing behavior has been commonplace in the North American chloride TiO<sub>2</sub> 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 TiO<sub>2</sub> industry as “pervasive.”**

**ANSWER:** Tronox denies the allegations in Paragraph 56 and responds that many of the allegations in Paragraph 56, which are largely similar to claims the FTC set forth in its administrative complaint on December 5, 2017, are contradicted by the evidence presented in the FTC’s administrative proceeding. Tronox states that the “diversity of prices” among TiO<sub>2</sub> suppliers is inconsistent with anti-competitive coordination, and “would frustrate coordination both today and post transaction” (Shehadeh, Tr. 3417). Tronox responds that it sets different prices for different TiO<sub>2</sub> customers based on negotiations with each individual customer (Romano, Tr. 2236-37), and that individual contracts between TiO<sub>2</sub> suppliers and their customers are individualized, complex, and confidential, such that price increase announcements provide insufficient insight into the actual price negotiation process. Moreover, Tronox states that the selective quotations and allegations in Paragraph 56 regarding price-fixing litigation, offered without context or associated testimony, are inaccurate and misleading as framed.

To the extent further response is required, Tronox denies the allegations in Paragraph 56.

**57. Additionally, Tronox and Cristal engage in other types of parallel accommodating conduct involving North American TiO<sub>2</sub> 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 TiO<sub>2</sub> market, resulting in higher chloride TiO<sub>2</sub> prices for consumers.**

**ANSWER:** Tronox denies the allegations in Paragraph 57 and responds that many of the allegations in Paragraph 57, which are largely similar to claims the FTC set forth in its administrative complaint on December 5, 2017, are contradicted by the evidence presented in the

FTC's administrative proceeding. Tronox states that the TiO<sub>2</sub> industry is "a very competitive industry" and that Tronox competes aggressively with other multinational TiO<sub>2</sub> producers everywhere in the world, including "significant, large competitors that have very low cost basis," such as Chemours and Lomon Billions (Quinn, Tr. 2318-19). Tronox further states that the transaction is pro-competitive and "will lead to significant output-enhancing efficiencies" at both the pigment level (i.e., production of TiO<sub>2</sub>) and at the feedstock level, as well as "significant cost reductions" (Shehadeh, Tr. 3441-42), and that the output-enhancing efficiencies of this transaction will have a "direct effect" in terms of "customer[] benefit" (Shehadeh, Tr. 3443).

To the extent Paragraph 57 alleges that there is a "North American chloride TiO<sub>2</sub> market," Tronox denies the allegations in Paragraph 57 and specifically states that Tronox's acquisition of Cristal is a "worldwide merger" (Hill, Tr. 1782), that the relevant geographic market in this case is global (Shehadeh, Tr. 3204-05), and that the relevant product market in this case includes both chloride-process and sulfate-process rutile TiO<sub>2</sub> (Shehadeh, Tr. 3283-86).

To the extent further response is required, Tronox denies the allegations in Paragraph 57.

**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 TiO<sub>2</sub> 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.**

**ANSWER:** Tronox denies the allegations in Paragraph 58 and responds that many of the allegations in Paragraph 58, which are largely similar to claims the FTC set forth in its administrative complaint on December 5, 2017, are contradicted by the evidence presented in the FTC's administrative proceeding. Tronox specifically denies that it has "consistently

acknowledged that there is a tight link between North American chloride TiO<sub>2</sub> prices and North American production.” Tronox states that it has never restricted its output of TiO<sub>2</sub> in an effort to control the supply or price of TiO<sub>2</sub> feedstock or to raise the price of TiO<sub>2</sub> pigment in the market (Romano, Tr. 2254). Tronox further states that it plans to run its TiO<sub>2</sub> feedstock and pigment facilities at full capacity after the Cristal transaction closes (Turgeon, Tr. 2654-56).

Moreover, Tronox states that the FTC’s quotation from an unidentified source offered without context is inaccurate and misleading as framed. To the extent Paragraph 58 alleges that there is a relevant geographic market consisting solely of “North America” or a relevant product market consisting solely of “chloride TiO<sub>2</sub>,” Tronox denies the allegations in Paragraph 58. Tronox states that Tronox’s acquisition of Cristal is a “worldwide merger” (Hill, Tr. 1782), and that as a result of the magnitude, elasticity, and variation over time of global trade in TiO<sub>2</sub>, the co-movement of TiO<sub>2</sub> prices across regions globally, and other economic data and evidence, the relevant geographic market in this case is global (Shehadeh, Tr. 3204-05). Additionally, Tronox responds that as a result of the reasonably substitutable nature of chloride-process and sulfate-process rutile TiO<sub>2</sub> for the vast majority of end-use applications, the “statistically and economically significant” co-movement of chloride-process and sulfate-process rutile TiO<sub>2</sub> prices (Shehadeh, Tr. 3288), and other economic data and evidence, the relevant product market in this case includes both chloride-process and sulfate-process rutile TiO<sub>2</sub> (Shehadeh, Tr. 3283-86).

Tronox states that the transaction is pro-competitive and “will lead to significant output-enhancing efficiencies” at both the pigment level (i.e., production of TiO<sub>2</sub>) and at the feedstock level, as well as “significant cost reductions” (Shehadeh, Tr. 3441-42), and that the output-enhancing efficiencies of this transaction will have a “direct effect” in terms of “customer[] benefit” (Shehadeh, Tr. 3443). Tronox further states that the Tronox-Cristal transaction will

enable Tronox to compete globally at a lower cost and more aggressively with its rivals in order to “serve a growing . . . global customer base” (Quinn, Tr. 2345-46; Romano, Tr. 2216-17). Tronox further states that the TiO<sub>2</sub> industry is “a very competitive industry” and that Tronox competes aggressively with other multinational TiO<sub>2</sub> producers everywhere in the world, including “significant, large competitors that have very low cost basis,” such as Chemours and Lomon Billions (Quinn, Tr. 2318-19).

To the extent further response is required, Tronox denies the allegations in Paragraph 58.

**59. Tronox has a history of seeking to support North American chloride TiO<sub>2</sub> prices by curtailing output in North America. These efforts include reducing production of both chloride TiO<sub>2</sub> 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 TiO<sub>2</sub> pigment production lines. In 2015, Tronox’s CEO publically stated that “[i]t is our view that an upward move in [TiO<sub>2</sub> 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 TiO<sub>2</sub> pigment production by approximately 15% and suspended operations at two of its four titanium feedstock facilities.**

**ANSWER:** Tronox responds that many of the allegations in Paragraph 59, which are largely similar to claims the FTC set forth in its administrative complaint on December 5, 2017, are contradicted by the evidence presented in the FTC’s administrative proceeding. To the extent Paragraph 59 alleges that Tronox closed facilities or reduced production of either chloride-process TiO<sub>2</sub> pigment or titanium feedstock to influence TiO<sub>2</sub> prices, Tronox denies the allegations in Paragraph 59. Tronox states that it has never restricted its output of TiO<sub>2</sub> in an effort to control the supply or price of TiO<sub>2</sub> feedstock or to raise the price of TiO<sub>2</sub> pigment in the market (Romano, Tr. 2254). Tronox further states that it plans to run its TiO<sub>2</sub> feedstock and pigment facilities at full capacity after the Cristal transaction closes (Turgeon, Tr. 2654-56). Moreover, Tronox responds that the transaction is pro-competitive and “will lead to significant output-enhancing efficiencies” at both the pigment level (i.e., production of TiO<sub>2</sub>) and at the feedstock level, as well

as “significant cost reductions” (Shehadeh, Tr. 3441-42), and that the output-enhancing efficiencies of this transaction will have a “direct effect” in terms of “customer[] benefit” (Shehadeh, Tr. 3443).

To the extent that Paragraph 59 alleges that Tronox reduced production of TiO<sub>2</sub> pigment or feedstock in 2015 to influence prices, Tronox specifically denies those allegations. Tronox states that in 2015, Tronox feared that its financial situation could push it back into bankruptcy (Turgeon, Tr. 2638). As a result, Tronox states that in 2015 it focused on cutting costs to survive, including a major restructuring of Tronox’s operating and corporate hierarchy, reducing labor costs by 15%, running its plants at cost and attempting to free up cash that was tied up in inventory (Dean, Tr. 2962-63; Turgeon, Tr. 2637). Finally, Tronox states that the FTC’s selective quotation of unidentified written material or communications in Paragraph 57, offered without context, is misleading as framed.

To the extent further response is required, Tronox denies the allegations in Paragraph 59.

**60. In addition to North American production cuts, Tronox and the other major North American chloride TiO<sub>2</sub> 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.**

**ANSWER:** Tronox denies the allegations in Paragraph 60 and responds that many of the allegations in Paragraph 60, which are largely similar to claims the FTC set forth in its administrative complaint on December 5, 2017, are contradicted by the evidence presented in the FTC’s administrative proceeding. To the extent that Paragraph 60 alleges that average prices for titanium dioxide are lower in Latin America than the average price in North America, Tronox denies that allegation.

Tronox states the relevant market in this case is global, in part because of “global trade and global trade patterns” (i.e., the magnitude of global trade, the elasticity of global trade, and the

variation in global trade over time) (Shehadeh, Tr. 3204-05). Tronox states that total exports of TiO<sub>2</sub> from North America are “around 600 to 700,000 kilotons per year” (Shehadeh, Tr. 3214). Tronox also states that total imports of TiO<sub>2</sub> into North America are “around 150 to 200,000 kilotons per year” (Shehadeh, Tr. 3214).

To the extent further response is required, Tronox denies the allegations in Paragraph 60.

**61. The Acquisition would make Tronox the largest TiO<sub>2</sub> producer in the world and double its TiO<sub>2</sub> 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 TiO<sub>2</sub> prices by curtailing its production.**

ANSWER: Tronox responds that many of the allegations in Paragraph 61, which are largely the same as claims the FTC set forth in its administrative complaint on December 5, 2017, are contradicted by the evidence in the FTC’s administrative proceeding. Tronox specifically denies that the relevant market for TiO<sub>2</sub> is limited to North America, which the FTC defines as excluding Mexico. Tronox states that after its acquisition of Cristal, more than 36 major competitors will remain in the global TiO<sub>2</sub> market, with only 5 competitors having shares greater than five percent. Tronox further states that the combined firm does not present prospects for likely unilateral anticompetitive effects (Shehadeh, Tr. 3329).

To the extent further response is required, Tronox denies the allegations in Paragraph 61.

**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 TiO<sub>2</sub> 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 TiO<sub>2</sub> is low (chloride TiO<sub>2</sub> is an essential input for many products meaning that a small reduction in output results in a large price effect).**

**ANSWER:** Tronox denies the allegations in Paragraph 62 and responds that many of the allegations in Paragraph 62, which are largely the same as claims the FTC set forth in its administrative complaint on December 5, 2017, are contradicted by the evidence in the FTC’s administrative proceeding. Tronox states that “the combined share of the postmerger Tronox and concentration overall would be too low to be consistent with either unilateral or coordinated competitive effects in the properly defined relevant market” (Shehadeh, Tr. 3325). Tronox further states that the market for TiO<sub>2</sub> is global and includes TiO<sub>2</sub> produced using both the chloride and sulfate processes. Additionally, Tronox states that after its acquisition of Cristal, more than 36 major competitors will remain in the global TiO<sub>2</sub> market, with only 5 competitors having shares greater than five percent.

To the extent further response is required, Tronox denies the allegations in Paragraph 62.

### **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.**

**ANSWER:** Tronox denies the allegations in Paragraph 63 and responds that many of the allegations in Paragraph 63, which are largely the same as claims the FTC set forth in its administrative complaint on December 5, 2017, are contradicted by the evidence in the FTC’s administrative proceeding. Tronox responds that the TiO<sub>2</sub> industry is characterized by the “dynamic nature of competition in demand for and supply of titanium dioxide,” and that this

dynamic nature of the industry is evident in “new capacity expansions, new plants coming online, high-cost capacity being driven out of the market, and . . . dynamic competition” between TiO<sub>2</sub> suppliers (Shehadeh, Tr. 3328). Tronox further states that Lomon Billions, the largest Chinese TiO<sub>2</sub> producer, recently announced its intent “is to dominate [the titanium dioxide] industry within the next few years” (Quinn, Tr. 2347). Tronox responds that Lomon Billions has announced plans to expand its chloride-process capacity, and announced that they are building an additional 200,000 tons per year during the year 2019 (Stern, Tr. 3781). Tronox further responds that Chinese product has been rapidly improving over recent years (Stern, Tr. 3745:15-18), and that today there are some Chinese grades of TiO<sub>2</sub> that are better than Tronox’s grades of TiO<sub>2</sub> (Romano, Tr. 2238-39).

To the extent further response is required, Tronox denies the allegations in Paragraph 63.

**64. The TiO<sub>2</sub> industry is characterized by substantial barriers to entry. Building a new TiO<sub>2</sub> 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 TiO<sub>2</sub> prices post-Acquisition. Expansion or repositioning by the remaining firms that would defeat anticompetitive effects in the North American TiO<sub>2</sub> market is also unlikely. During the last decade, more TiO<sub>2</sub> production capacity in North America has been taken out because of plant or line closures by Tronox, Cristal, and Chemours than added by expansions.**

**ANSWER:** Tronox denies the allegations in Paragraph 64 and responds that many of the allegations in Paragraph 64, which are largely the same as claims the FTC set forth in its administrative complaint on December 5, 2017, are contradicted by the evidence in the FTC’s administrative proceeding. Tronox states that any alleged “barriers to entry” are inconsistent with the “significant capacity additions year-in and year-out” undertaken by TiO<sub>2</sub> producers “in order to serve new demand.” (Shehadeh, Tr. 3357-58.) Tronox further states that the dynamic nature of the TiO<sub>2</sub> industry is evident in “new capacity expansions, new plants coming online, high-cost capacity being driven out of the market, and . . . dynamic competition” between TiO<sub>2</sub> suppliers. (Shehadeh, Tr. 3328.) Tronox further responds that in recent years, Chinese TiO<sub>2</sub> quality has



markedly improved, and the Chinese have made significant technological improvements, including developing chloride-process technology.

Tronox further states that the transaction is pro-competitive and “will lead to significant output-enhancing efficiencies” at both the pigment level (i.e., production of TiO<sub>2</sub>) and at the feedstock level, as well as “significant cost reductions” (Shehadeh, Tr. 3441-42), and that the output-enhancing efficiencies of this transaction will have a “direct effect” in terms of “customer[] benefit” (Shehadeh, Tr. 3443).

To the extent further response is required, Tronox denies the allegations in Paragraph 64.

**65. TiO<sub>2</sub> imports into North America, mostly sulfate TiO<sub>2</sub> manufactured by smaller TiO<sub>2</sub> companies, primarily from China, are limited and unlikely to provide a meaningful competitive restraint in the near future. Indeed, imported TiO<sub>2</sub> 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.”**

**ANSWER:** Tronox denies the allegations in Paragraph 65 and responds that many of the allegations in Paragraph 65, which are largely the same as claims the FTC set forth in its administrative complaint on December 5, 2017, are contradicted by the evidence in the FTC’s administrative proceeding. Tronox specifically denies that the TiO<sub>2</sub> manufactured by Chinese companies are “limited” and “unlikely to provide a meaningful competitive restraint in the near future.” Tronox states that Chinese imports of TiO<sub>2</sub> into North America have increased by “approximately five times” between 2010 and 2016 (Shehadeh, Tr. 3220-21). Tronox further states that these imports of TiO<sub>2</sub> into North America from China represent a “relatively small portion of total exports from China,” meaning that there is even more “potential that’s out there for that substitution by North American customers to alternative sources of supply” (Shehadeh, Tr. 3224-25). Tronox additionally responds that customers in North America have begun to use Chinese product to lower their costs; particularly, as the quality of the TiO<sub>2</sub> produced in China has

increased, customers have increased the amount of Chinese TiO<sub>2</sub> they are purchasing (Turgeon, Tr. 2670).

To the extent further response is required, Tronox denies the allegations in Paragraph 65.

**66. In 2016, Chinese TiO<sub>2</sub> imports accounted for less than 1% of North American chloride TiO<sub>2</sub> sales and less than 8% of North American rutile TiO<sub>2</sub> sales. In their public statements, the major North American TiO<sub>2</sub> companies have repeatedly minimized the significance of the competitive threat posed by Chinese TiO<sub>2</sub> imports into North America. In 2016, Tronox stated that it does not view Chinese TiO<sub>2</sub> 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 TiO<sub>2</sub> 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 TiO<sub>2</sub> 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.**

**ANSWER:** Tronox denies the allegations in Paragraph 66 and responds that many of the allegations in Paragraph 66, which are largely the same as claims the FTC set forth in its administrative complaint on December 5, 2017, are contradicted by the evidence in the FTC's administrative proceeding. Tronox states that Chinese sales of North American rutile TiO<sub>2</sub> were approximately 8% in 2016 even though Chinese producers had not yet established North American production facilities. Tronox further states that Chinese imports of TiO<sub>2</sub> into North America have increased by "approximately five times" between 2010 and 2016 (Shehadeh, Tr. 3220-21). Tronox further states that customers in North America have begun to use Chinese product to lower their costs; particularly, as the quality of the TiO<sub>2</sub> produced in China has increased, customers have increased the amount of Chinese TiO<sub>2</sub> they are purchasing (Turgeon, Tr. 2670).

To the extent further response is required, Tronox denies the allegations in Paragraph 66.

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

**ANSWER:** Tronox responds that many of the allegations in Paragraph 67, which are largely the same as claims the FTC set forth in its administrative complaint on December 5, 2017, are contradicted by the record evidence in the FTC’s administrative proceeding.

Tronox specifically denies that it cannot demonstrate cognizable efficiencies sufficient to rebut the FTC’s evidence. Tronox states that the proposed transaction is pro-competitive and “will lead to significant output-enhancing efficiencies” at both the pigment level (i.e., production of TiO<sub>2</sub>) and at the feedstock level, as well as “significant cost reductions” (Shehadeh, Tr. 3441-3442). Tronox further states that output-expanding efficiencies at the TiO<sub>2</sub> pigment level have a “direct effect” in terms of “customer[ ] benefit” (Shehadeh, Tr. 3443). By way of further response, Tronox states that the company publicly communicated to the market a realization of \$100 million of EBITDA synergies by the end of year 1, and \$200 million by the end of year 3 (Mancini, Tr. 2800). Tronox and Cristal, working with outside third parties like KPMG, have continued to perform confirmatory due diligence to pressure test these synergies and have concluded that there is a “strong level of confidence that . . . Tronox could deliver these estimated synergies” (Mancini, Tr. 2802); indeed, Tronox states that that confirmatory due diligence and pressure testing has indicated that Tronox will very likely exceed the publicly communicated synergy numbers, in particular with respect to output expansions at Yanbu and Jazan (Mancini, Tr. 2795).

To the extent further response is required, Tronox denies the allegations in Paragraph 67.

**LIKELIHOOD OF SUCCESS ON THE MERITS,  
BALANCE OF THE 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 in, 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.**

**ANSWER:** The allegations contained in Paragraph 68 contain legal conclusions. Therefore, no response is required. To the extent further response is required, Tronox denies the allegations in Paragraph 68.

**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 TiO<sub>2</sub> market and in the North American rutile TiO<sub>2</sub> 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.**

**ANSWER:** Tronox denies the allegations in Paragraph 69 and responds that many of the allegations in Paragraph 69, which consists largely of claims the FTC set forth in its administrative complaint on December 5, 2017, are contradicted by the evidence presented in the FTC's administrative proceeding. To the extent the allegations contained in Paragraph 69 contain a legal conclusion, no further response is required.

Tronox specifically denies that the relevant market is the "North American chloride TiO<sub>2</sub> market" or the "North American rutile TiO<sub>2</sub> market," which the FTC defines geographically to exclude Mexico. Tronox also denies that the acquisition will have anti-competitive effects in the market even as defined by the FTC because the objective of the acquisition is to increase the production of lower-cost TiO<sub>2</sub> sold in the global market.

Tronox also specifically denies that substantial and effective entry or expansion in these markets would not offset anticompetitive effects because the acquisition will not have anticompetitive effects. Moreover, Tronox responds that the FTC's allegations ignore the current state of competition in the market for TiO<sub>2</sub>, including fierce competition among competitors, and the significant and increasing impact of low-cost Chinese competition.

Tronox denies that the efficiencies asserted by the FTC are insufficient to offset anticompetitive effects because the acquisition will not have anticompetitive effects. Moreover, Tronox responds that the acquisition will increase the production of TiO<sub>2</sub> pigment and the production of TiO<sub>2</sub> feedstock in the global market, lower Tronox's costs in producing TiO<sub>2</sub> pigment, and generate hundreds of millions of dollars in cost-saving efficiencies over three years (Mancini, Tr. 2769-71, 2800).

To the extent further response is required, Tronox denies the allegations in Paragraph 69.

**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.**

**ANSWER:** Tronox denies the allegations in Paragraph 70. Tronox specifically denies that the acquisition is unlawful, that preliminary relief is warranted or necessary, and that substantial harm to competition would occur in the absence of any such relief. Tronox further states the FTC unreasonably delayed in bringing this request for the injunction, which the FTC now argues is necessary for maintaining the status quo. Moreover, because the acquisition contemplates the transfer of physical assets, including production plants and facilities, the FTC is incorrect that establishing the status quo ante would be difficult if not impossible. The allegations in Paragraph 70 also ignore that the "Circuit Court has never hesitated to unwind an unblocked merger if the

law and facts warrant doing so ....” *United States v. AT&T Inc., et al.*, No. 17-2511-RJL (June 12, 2018), slip op. at 170.

To the extent further response is required, Tronox denies the allegations in Paragraph 70.

**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.**

**ANSWER:** Tronox denies the allegations in Paragraph 71. Tronox specifically denies that any such requested relief is warranted, necessary, or in the public interest.

### **DEFENSES**

Tronox asserts the following defenses, without assuming the burden of proof on such defenses that would otherwise rest with the FTC. Tronox reserves the right to assert any other defenses as they become known to Tronox:

1. The Complaint fails to state a claim on which relief can be granted.
2. Granting the relief sought is contrary to the public interest.
3. Plaintiff has unreasonably delayed its request for an injunction.
4. The Complaint fails to allege a plausible relevant product market.
5. The Complaint fails to allege a plausible relevant geographic market.
6. The Complaint fails to allege undue share in the relevant market.

7. The Complaint fails to allege any plausible harm to competition.
8. The Complaint fails to allege any plausible harm to any consumers.
9. The alleged harm to consumer welfare fails because the acquisition will result in output-enhancing synergies, which will benefit consumers.
10. The proposed transaction will be pro-competitive, and will result in substantial merger-specific output-enhancing synergies and production efficiencies.
11. These benefits of the proposed transaction significantly outweigh any alleged anti-competitive effects.
12. Plaintiff has in its conduct of this investigation and lawsuit acted in a manner contrary to the Constitution of the United States, federal statutes, federal regulations, and/or the public interest.
13. The relief sought would violate Defendant's constitutional right to due process.
14. The relief sought would contravene the federal Appointments Clause.
15. The relief sought would be arbitrary and capricious under the Administrative Procedure Act.

#### **PRAYER FOR RELIEF**

Tronox denies that the allegations in Paragraphs 1-71 of the Complaint entitle the FTC to any relief. Tronox further requests that the Court enter judgment in its favor as follows:

- A. The Complaint be dismissed with prejudice;
- B. None of the Complaint's contemplated relief issues to the FTC;
- C. Costs incurred in defending this action be awarded to Tronox; and
- D. Any and all other relief as the Court may deem just and proper.

Dated: July 12, 2018

Respectfully submitted,

By: /s/ Michael F. Williams

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