#### UNITED STATES OF AMERICA BEFORE THE FEDERAL TRADE COMMISSION OFFICE OF ADMINISTRATIVE LAW JUDGES

9377

In the Matter of	
Tronox Limited a corporation,	
National Industrialization Company (TASNEE) a corporation,	Docket No.
National Titanium Dioxide Company Limited (Cristal) a corporation,	
And	
Cristal USA Inc. a corporation.	

### **COMPLAINT COUNSEL'S PRE-TRIAL BRIEF**

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## **TABLE OF AUTHORITIES**

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FTC

are no substitutes for TiO2. And North American customers cannot meaningfully substitute TiO2 manufactured through the **sattle** process ("sulfate TiO2") **f**ochloride TiO2. Chloride TiO2 provides superior opacity, durability, d whiteness compared to sulfate TiO2 and constitutes more tha ()% of North American TiO2 purchases. Moreover, the evidence shows that North American customers have not and **molt** switch to sulfate **T**O2 to any meaningful degree, even in the face of dram**attice** increases for chloride TiO2.

{ }

their rivals' competitive behavior—includingetailed information on competitors' pricing, operating costs, available capacity, and invento<sup>1</sup>ieSristal is the only major producer of TiO2 that is not a public company and thus doesprubticly announce its TiO2 revenue, pricing changes, and inventory levels on a quarterly basis. After the merger, such information will become available to the industry togon Tronox's detailed earnings statements.

By further facilitating coordination, the Acquisition will benefit not only Tronox, but also will benefit Tronox's competitors. Indeed, to after Respondents publicly announced the Acquisition, Peter Huntsman, the chairman **ef for**mer parent company of Venator, one of Tronox's direct competitors, emailed Tronox **Other** Tom Casey to congratulate him on the acquisition. Tom Casey responded that the **utsi** in Tom Casey to congratulate him on the for competitors Huntsman, Chemours and Kronos **ut** "very happy that we were able to put [the acquisition] together sind the will be very good for [Tonox's] shareholders – and if today's market reaction is an indication, **for** urs, and Chemours' and Kronos' too." PX1045 at 1 (Tronox). An acquisition that is good for **OT** or so competitors, though, **as** suredly not likely to benefit customers or consumers.

In addition to increasing the likelihood of our direction, the Acquisition will also increase Tronox's incentive and ability ounilaterally withhold output in **der** to drive up industry prices. For years, Tronox has consistive rand openly pursued a streagy of output management by shuttering plants and curtailing production:

And then the question is when will [prices] turn? We're addressing that by managing our production so that inventorigget reduced tonormal or below normal levels. And when that happens, prices will rise.

We -- from what we see with Chemours and presumably the others as well, they're doing the same thing. We see them acting in the same way." PX9005 at 10 (Tronox Q3 2015 Earnings Call).

the relevant market is primed for coordination that the Acquisition makes coordination more likely, and that the Acquisition also increasters nox's incentives to suppress output on its own—bolsters that presumption.

Section 7 of the Clayton Act prohibits mergers or acquisitions "the effect of [which] may be substantially to lessen competition, or **toche** create a monopoly" lany line of commerce or . . . activity affecting commerce in any **sec** tof the country." 15 U.S.C. § 18. "As the statutory language suggests of gress enacted Section curtail anticomptative harm in its incipiency." Polypore, 150 FTC at \*8 (citing Chicago Bridge & Iron Co. v. F. **5**34 F.3d 410, 423 (5th Cir. 2008)). "Congress used the wordaybe substantially to lessen competition' . . . to indicate that its concern was with obabilities, not certainties. Heinz, 246 F.3d at 713 (quoting Brown Shoe Co. v. United State **3**0 U.S. 294, 323 (1962) staples 2016, 190 F. Supp. 3dat 115; see California v. Am. Store **4**95 U.S. 271, 284 (1990) Stection 7 itself creates a relatively expansive definition of antitrust **likity**: To show that a merger is unlawful, a plaintiff need only prove that its effect 'may **be**bstantially to lessen competition.'"). As a result, "certainty, even a high **qu** rability, need not be shown."

For most customers in North America, sulfate TiO2 is not an effective substitute for
chloride TiO2. Chloride TiO2 provides distinperformance advantages over sulfate TiO2 that
are particularly important to North Americanstomers. Compared to sulfate TiO2, chloride
TiO2 provides superior lightness, durability, covege, and a blue tint. Sherwin-Williams, the
largest paint producer in North America, explating ([s]ulfate TiO2 has a yellow undertone
that makes it unsuitable for the whiteness anghtmiess of paints sold in North America," and
that "the chemistry of sulfate TiO2 may resul <b>ters</b> s coverage and lessrability than chloride
TiO2, {
(Young (Sherwin-Williams) Decl.) ¶ 12;g.,
}; PX7016 (DeCastro (RPMDep. at 96–97) (chloride
TiO2 is whiter and provides better glos
}

The very small amount of sulfate TiO2 that is in North America is limited primarily to less demanding coatings applications, such as ceiling paints and interiors, or traffic marking paint.

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}

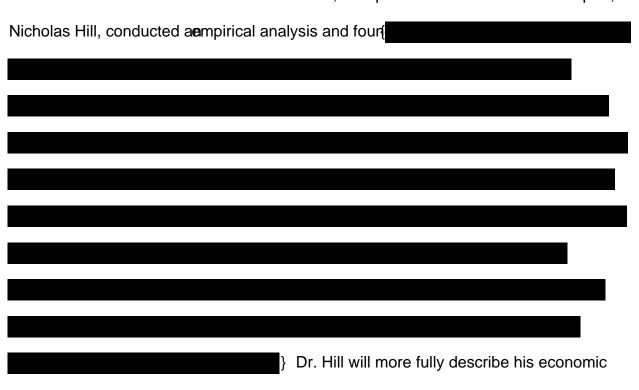
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TiO2 in North America from

{	
Likewise,{	} also recognize the important differences

over[]\$4,000 a ton, it istrue now." PX9012 at 8 (Tronox Q4 2013 Earnings Call).<sup>21</sup>

between chloride and sulfate TiO2, and recognitiat customers in North America do not



Consistent with the record described ab@emplaint Counsel's economic expert, Dr.

analysis of the relevant opduct market during trial.

2. The Relevant Geographic Market is North America.

"The boundaries of the relevant geograph**arkre**t, like the boundaries of the relevant product market, depend on reasonable interchai**ityeab**ad cross-elastity of demand." Polypore, 150 FTC at \*16 (citing Brown Shoe, 370 U.S. at 336). "Where suppliers can set prices based on customer location, and customers **tanvoid** targeted prie increases through arbitrage, suppliers may be abbeexercise market power over customers located in a particular geographic region, even if a price increaseustomers located in **be**r geographic regions would be unprofitable."Polypore, 150 FTC at \*16 (citing Merger Guidelines § 4.2.2).

Here, the relevant geographic market ising around the locations of chloride TiO2 customers in North Americ<sup>22</sup>. See Merger Guideline 4.2.2. This geographic market includes all sales of chloride TiO2 in North Americ—including imports by foreign suppliers—even

<sup>&</sup>lt;sup>22</sup> North America is defined as the United States and Car&eta supra note 1.

} As the evidence indicates, TiO2

though imports are limited{

producers price regionally, on a delivered basis a hypothetical mopolist controlling all sales of chloride TiO2 to North American consisters would not be defeated by those customers turning outside of North America to purchase **cidle** TiO2. As such, the geographic market is properly defined around North American customers See Polypor,e150 FTC at \*16; Merger Guidelines 4.2.2.

Notably, TiO2 producers price on a delive **basis**, and North American customers obtain nearly all of the TiO2 they consumeoutligh deliveries by suppliers to the customers' North American locations

	}	
{	} .	And
prices in North America than in other region		

}		

Х



Customers also recognize the regional nature of their chloride TiO2 purchases. *See* PX8003 (Young (Sherwin-Williams) Decl.) ¶ 27 ("North American TiO2 prices are traditionally higher than other regions due to supply and demand conditions. . . In other regions, customers use primarily sulfate TiO2, which has more supply options, such as sulfate TiO2 from China or Eastern Europe. TiO2 prices tend to fluctuate more in other regions than in North America, and can be higher than North American prices when supply is tight."); {

}; PX8000 (Malichky (PPG) Decl.) ¶ 7 ("Even

as a global purchaser, though, pricing and volume for TiO2 purchase[s] are negotiated and determined regionally. Between 2011 and 2016, PPG's price for TiO2 in the United State[s] tended to be more stable, and higher, on average, than in other parts of the world.").

Unsurprisingly in light of the foregoing, over at least a four-year period, Respondents recognized that prices for customers in North America were higher, by large amounts, than anywhere else in the world:

- Х
- X In March 2013: "Markets in North America are still under pressure to decline since they are so much higher than other regions of the world, however, we are trying to hold on to the current price levels." PX2030 at 3 (Cristal);



X	
X	
Consistent with Respondents' ordinary course documents, Dr. Hill analyzed pricing da	ata
}	
Moreover, customers have been unable to use arbitrage to defeat the higher prices in	
North America. {	
} Tronox admits the cost of	
shipping and duties adds at least { }% to the cost of imported TiO2 in the United States.	
}. These additional costs, which like	ely
exceed { }, make arbitrage	
particularly difficult. {	

 <sup>&</sup>lt;sup>28</sup> In the second quarter of 2017, prices in other regions began to exceed North American prices.
 The higher price levels in other regions coincided with reduced availability of TiO2 in those regions. In

} The lack of arbitrage is not surprising, given that it {

For all of these reasons, the North American market reflects the commercial realities of how TiO2 is bought and sold, how it is priced, and how producers analyze and organize their TiO2 businesses. Consequently, the sale of chloride TiO2 to North American customers is a properly defined relevant market.

#### **3.** The Proposed Acquisition Is Presumptively Unlawful Because It Would Substantially Increase Concentration In The Relevant Market.

Congress enacted the Clayton Act so that courts could prevent undue economic

concentration before a dominant firm could use its market power to harm customers. Brown

Shoe, 370 U.S. at 317-18; see Phila. Nat'l Bank, 374 U.S. at 363. In accordance with that

statutory directive, courts have made clear that acquisitions that significantly increase economic

concentration are presumptively unlawful:

[T]he government must show that the merger would produce a 'a firm controlling an undue percentage share of the relevant market, and [would] result[] in a significant increase in the concentration of firms in that market.' Such a showing establishes a 'presumption' that the merger will substantially lessen competition. *Heinz*, 246 F.3d at 715.

To assess an acquisition's presumptive illegality, courts first consider Defendants' shares

of the relevant market, and then employ a statistical measure of market concentration called the

Herfindahl-Hirschman Index ("HHI"). *Heinz*, 256 F.3d at 716; *Sysco*, 113 F. Supp. 3d at 52.

The HHI calculates market concentration by adding the squares of each market participant's

individual market share. See Staples 2016, 190 F. Supp. 3d at 128; Sysco, 113 F. Supp. 3d at 52.

"Sufficiently large HHI figures establish the FTC's prima facie case that a merger is anti-

competitive." *Heinz*, 246 F.3d at 716; *see Staples*, 190 F. Supp. 3d at 128; *Sysco*, 113 F. Supp. 3d at 52.

An acquisition is presumptively anticompetitive if it increases the HHI by more than 200 points and results in a "highly concentrated market" with a post-acquisition HHI exceeding 2,500. *See Staples 2016*, 190 F. Supp. 3d at 128; *Sysco*, 113 F. Supp. 3d at 52-53; *see also Merger Guidelines* § 5.3. This transaction would *triple* the increase that renders an acquisition presumptively unlawful. Post-merger, the combined firm would have a North American market share of { }% of North American sales of chloride process TiO2, and that the acquisition would increase the HHI by over 700 points, to a level of over 3000.

These market share statistics demonstrate this Acquisition is presumptively anticompetitive. *See Staples*, 190 F. Supp. 3d at 128; *Sysco*, 113 F. Supp. 3d at 52-53; *United States v. Aetna Inc.*, 240 F. Supp. 3d 1, 28 (D.D.C. 2017). "The presumption can only be rebutted by persuasive evidence showing that the merger is unlikely to enhance market power." *Merger Guidelines* §5.3. Courts consistently enjoin transactions with high changes in concentration, like this Acquisition. *E.g.*, *Heinz*, 246 F.3d at 716 (HHI increase of 510 "creates, by a wide margin, a presumption that the merger will lessen competition.").

# 4. The Documented History of Coordination in the TiO2 Industry Strengthens the Presumption.

The reason that Section 7 of the Clayton Act presumes a significant increase in concentration to be unlawful is that merger law "rests upon the theory that, where rivals are few, firms will be able to coordinate their behavior, either by overt collusion or implicit understanding, in order to restrict output and achieve profits above competitive levels." *Heinz*, 246 F.3d at 715 (internal quotation marks omitted). Coordination includes conduct ranging from outright collusion, to tacit coordination, to "parallel accommodating conduct," which "includes situations in which each rival's response to competitive moves made by others is individually

rational . . . but nevertheless emboldens price increases and weakens competitive incentives to reduce prices." *Merger Guidelines*, §7.0.

"Tacit coordination 'is feared by antitrust policy even more than express collusion, for tacit coordination, even when observed, cannot easily be controlled directly by the antitrust laws. *It is a central object of merger policy to obstruct the creation or reinforcement by merger of such oligopolistic market structures in which tacit coordination can occur.*" *Heinz*, 246 F.3d at 725 (emphasis added) (quoting 4 Phillip E. Areeda, Herbert Hovenkamp & John L. Solow, Antitrust Law ¶ 901b2, at 9 (rev. ed. 1998)).

The conclusions that the courts have drawn in the two previous TiO2 price fixing cases confirm the strong presumption that this merger will increase the likelihood of coordination. In *Valspar*, the U.S. Court of Appeals for the Third Circuit found insufficient evidence of overt price fixing by TiO2 producers, but highlighted the oligopolistic market conditions that underpin Complaint Counsel's concern that this Acquisition will result in reduced competition: "There is no dispute that the market was primed for anticompetitive interdependence and that it operated in that manner. Valspar's expert evidence confirming these facts mastered the obvious." 873 F.3d at 197. In *In re Titanium Dioxide*, the District Court concluded that the plaintiffs had provided enough evidence to support their allegations of a TiO2 price fixing conspiracy:

Having carefully considered the sheer number of parallel price increase announcements, the structure of the titanium dioxide industry, the industry crisis in the decade before the Class Period, the Defendants' alleged acts against their selfinterest, and the myriad non-economic evidence implying a conspiracy, this Court finds that the Plaintiffs put forward sufficient evidence tending to exclude the possibility of independent action. 959 F. Supp. 2d at 830.

This well-documented history of coordination described by the courts builds on the inferences to be drawn from the market share statistics, and demonstrates that the competitive concerns in this case are particularly strong. Indeed, as the 7<sup>th</sup> Circuit observed: "The theory of

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competition and monopoly that has been used to give concrete meaning to section 7 teaches that an acquisition which reduces the number of significant sellers in a market already highly concentrated and prone to collusion by reason of its history and circumstances is unlawful *in the absence of special circumstances.*" *Elders Grain*, 868 F. 2d. at 906 (emphasis added).

#### C. Evidence of Likely Harm Bolsters the Presumption.

Instead of the "special circumstances" required by *Elders Grain*, there is extensive evidence that the Acquisition would likely result in harm to competition. Whether in coordination with the remaining competitors—Chemours, Kronos and Venator—or acting unilaterally, the merged firm would likely succeed in curtailing output in order to raise prices or prevent them from falling. This "additional proof that the merger would harm competition" further strengthens the presumption, thus increasing the burden Defendants must shoulder on rebuttal. *Sysco*, 113 F. Supp. 3d at 71-72; *see id.* at 72 ("The more compelling the [FTC's] *prima facie* case, the more evidence the defendant must present to rebut [the presumption] successfully.") (*quoting Baker Hughes*, 908 F.2d at 991).

In this case, there is direct evidence that the merger is likely to lead to anticompetitive effects. The Court need not guess whether Tronox intends to raise prices after the merger: Tronox has explicitly stated that it intends to do so. Tronox met with PPG, one of Tronox and Cristal's largest customers, and explained that it intends to raise PPG's North American chloride TiO2 prices after the merger because "Cristal is selling TiO2 too low in the market; [] they're undercutting the market." PX7025 (Malichky (PPG) Dep. at 146). The message from Tronox was clear: "We're going to consolidate the price,' meaning that the Cristal price is going to go up." *Id.* That Tronox believes the merger will result in higher prices is further confirmed in its own internal documents. Ian Mouland, a senior Tronox sales executive who participated in the meeting with PPG, {

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Finally, other TiO2 suppliers have similarly acknowledged the Acquisition's likely effect on competition, noting that it will contribute to { 29 and "continued capacity constraints."<sup>30</sup> This evidence, as well as the extensive evidence described below, both strengthens the presumption that the Acquisition will lead to anticompetitive effects and serves as direct evidence of likely effects.

# 1. The Proposed Acquisition Would Increase the Likelihood of Coordination in an Already Vulnerable Market.

"[T]he market for titanium dioxide is an oligopoly. Titanium dioxide is a commoditylike product with no substitutes, the market is dominated by a handful of firms, and there are substantial barriers to entry." *Valspar*, 873 F.3d at 190. Indeed, the Acquisition would leave Tronox and Chemours in control of  $\{\begin{bmatrix} \begin{bmatrix} \begin{bmatrix} \begin{bmatrix} \begin{bmatrix} \begin{bmatrix} no substantial string strin$ 

Under the *Merger Guidelines*, a market is more vulnerable to coordination where: 1) firms are aware of their mutual interdependence; 2) there are only a small number of competing firms; 3) the products are relatively homogenous; 4) the market is transparent enough for firms to monitor their competitors' behaviors; 5) price elasticity of demand is low; and/or 6) there is a past history of actual or attempted coordination among the firms. *See Merger Guidelines* §7.2. This market is vulnerable to coordination, whether by express collusion, tacit collusion, or

 $<sup>^{29}</sup>$  { } }

<sup>&</sup>lt;sup>30</sup> PX3011 at 38 (Kronos).

} And Cristal

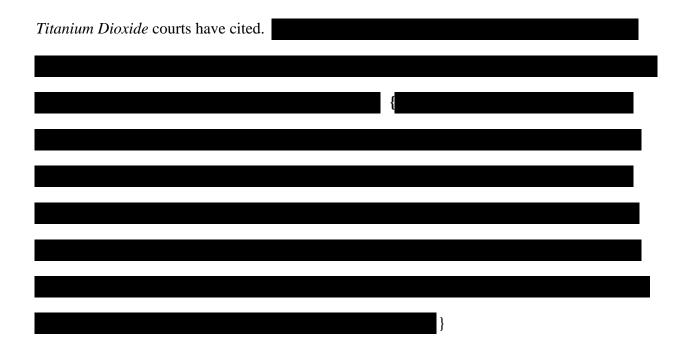
similarly understood the price increase announcement as "an initiative to taste the market readiness to accept this announced increase." PX2035 at 2 (Cristal). Pricing transparency allowed the producers to coordinate price increase attempts. And as Tronox recognized, the success of those attempts is determined by the competitive response, or lack thereof, of the few other competitors.

The Valspar court further acknowledged this competitive dynamic:

DuPont does not claim that the competitors' numerous parallel price increases were discrete events – nor could it do so with a straight face. But it doesn't need to. The theory of interdependence recognizes that price movement in an oligopoly will be just that: *inter*dependent. And that phenomenon frequently will lead to successive price increases, because oligopolists may "conclude that the industry as a whole would be better off by raising prices." *Valspar*, 873 F.3d at 195.

More generally, the producers have the opportuni

### Additionally, the Acquisition will likely increas



will hear about Tronox's efforts to reduce production in 2015. Tronox has contended that this was an effort to decrease its high levels of inventory and save money. But Tronox could have cut price to sell more product into the market. For example, in 2015, Tronox had the opportunity to gain additional business with {
Image: Tronox is a selected or content of the selected or content or content

At every turn, Tronox opts not to undercut competitors, even where it has product available to sell to its customers.



Tronox's former CEO plainly (and publicly) summarized their approach: "As you saw, we have not gained market share by trying to reduce price. We don't think that's the appropriate strategy going forward . . . ." PX9010 at 5 (Tronox Q2 2014 Earnings Call). And Tronox has

publicly recognized coordinated actions taken with its competitors to reduce output and maintain

prices:

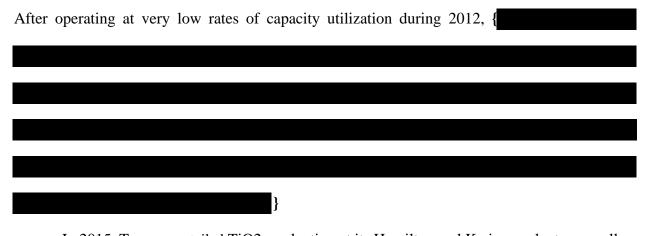
I can tell you that . . . last year, Huntsman [now Venator], . . . Cristal, Chemours, and we all lowered our plant utilization rates. And we all talked about declining75 Tc 0wsne

Removing Cristal as a competitor will eliminate opportunities for it to compete aggressively and to disrupt Tronox's strategy of pricing discipline and avoiding driving down price. Fundamentally, Tronox has adopted a strategy that is consistent with facilitating coordination among its rivals. The Acquisition would place even more capacity under its purview and eliminate a rival that, at times, has refused to cooperate. And it would eliminate a competitor for whom customers "might turn for succor if the other sellers tried to jack prices above the competitive level." *Elders Grain*, 868 F.2d at 907.

# 2. The Proposed Acquisition Would Increase Tronox's Incentive to Unilaterally Reduce Output.

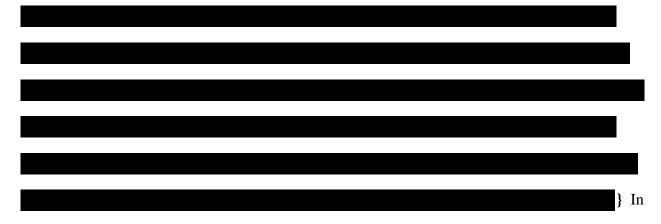
In addition to increasing the likelihood of coordinated effects, the Proposed Acquisition will increase Tronox's incentive and ability to reduce TiO2 output.<sup>37</sup> Tronox has a history of curtailing production and taking capacity offline in order to support higher chloride TiO2 pricing. As discussed below, the Proposed Acquisition will increase Tronox's incentive to engage in this unilateral output suppression. The Proposed Acquisition will also increase Tronox's ability to unilaterally suppress output, both by giving Tronox more capacity to manage, and by eliminating an independent com()TSecity offlinte

Tronox's history of reducing output to improve supply/demand dynamics and support pricing
is well documented. In 2009, Tronox closed its chloride TiO2 facility in Savannah, Georgia, {
) Indeed the
} Indeed, the
closure of Tronox's Savannah facility was part of a reduction in industry capacity that led to
large price increases over the next several years. <sup>38</sup>
Since closing the Savannah plant, Tronox has at different times reduced production at its
TiO2 plants with an objective of increasing price. {
۲ ۲
38 }; PX2083 at 2 (Cristal) ("The pricing
momentum began when significant capacity was taken off line in 2008 and 2009 during the financial crisis.").



In 2015, Tronox curtailed TiO2 production at its Hamilton and Kwinana plants, as well as reduced feedstock production, in order to "balance the market," even though these curtailments caused it to absorb about \$30 million in fixed costs. PX9003 at 11 (Tronox Q1 2016 Earnings Call). Tronox's then CEO explained its rationale:

x "It is our view that an upward move in Pigment selling prices will be predicated on a reduction of supply in the pigm



a recent investor presentation, Kronos observed that "structural improvements" drove a \$250 million increase in EBITDA and that "baseline TiO2 capacity has been permanently reduced with limited near-term ability to increase capacity." PX3011 at 15, 38.

The Proposed Acquisition will increase Tronox's incentives to withhold TiO2 output in North America. Dr. Hill modeled how the Proposed Acquisition will affect Tronox's incentives regarding production. {

}

#### D. Respondents Cannot Rebut The Strong Presumption Of Illegality.

With the presumption of illegality firmly established, the burden shifts to Defendants to rebut the presumption by "produc[ing] evidence that 'shows that the market-share statistics [give] an inaccurate account of the [acquisition's] probable effects on competition' in the

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relevant market." *Heinz*, 246 F.3d at 715 (quoting *United States v. Citizens & S. Nat'l Bank*, 422 U.S. 86, 120 (1975)); *Staples 2016*, 190 F. Supp. 3d at 115; *Sysco*, 113 F. Supp. 3d at 23.<sup>43</sup> Here, Defendants carry a heavy burden given the strength of the *prima facie* case. *See Staples 2016*, 190 F. Supp. 3d at 115 ("The more compelling the prima facie case, the more evidence the defendants must present to rebut it successfully."") (*quoting Baker Hughes*, 902 F.2d at 991). As shown *supra*, significant evidence of competitive harm—in a market pervaded by coordinated conduct—corroborates the presumption. Respondents will be unable to rebut the presumption, as neither the possibility of entry

market as a competitive alternative to our supply. And as I've said, we don't. . . . [T]he kind of customers that will buy our high-quality pigments are not simultaneously looking at for the same supply need Chinese product."); PX9006 at 6 (Tronox Q2 2015 Earnings Call) ("We do not see that exports from China or from Europe are playing a material role in the competitive balance in the North American market."); {

Most Chinese production, and almost all sales of Chinese TiO2 into North America, consists of sulfate TiO2, which, as discussed above in Section B.1., does not provide meaningful competition to chloride TiO2 in North America.<sup>44</sup>

Although chloride TiO2 exported from China currently makes up less than { }% of the North American market,<sup>45</sup> Respondents nevertheless speculate that expansion by Chinese manufacturers of chloride TiO2, such as Lomon Billions, may provide a future competitive constraint. There are significant barriers to Chinese chloride TiO2 becoming a meaningful competitive presence in North America, however. These barriers include the "proprietary technology," "operating expertise," and "highly skilled workforce" necessary to run a chloride TiO2 facility (PX1001 at 14 (Tronox)), {

	}, and that "superior chloride technology [is] closely	
44 {		
	}	

guarded by Western producers." PX3011 at 19 (K

Similarly, recent Tronox strategy documents obs
In addition, Tronox documents indica

The difficulty Chinese producers face in prointing chloride TiO2 is illustrated by the
experience of China's largest TiO2 pr <b>odu</b> , Lomon Billions. Although Lomon Billions
successfully operates sulfate TiO2 facilities, chloride TiO2 plaetsignificantly more
complex, and Lomon Billions has struggled tet its existing chloride TiO2 facilit
Respondents will likely point to Lomon Billions publicly announced plans to build
additional chloride capacity over the next few yea
}
Chinese manufacturers have also been untableoduce chloride TiO2 thatenets the

quality requirements of North Aenican customers for anything botw-end applications, and it

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Tronox and Cristal documents refer to the ongoing dispute between Lomon Billions and Ti-Cons based on Lomon Billions' claim that the inadequacy of the Ti-Cotteschnology is to blame for the "failure" its chloride plant. PX2072 at 23 (Cristal).

is highly uncertain when, or if, they will ever be able to produce chloride TiO2 that will be commercially acceptable for most applications in North Amer }

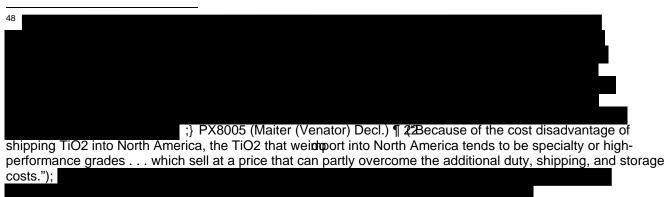
Even if Chinese producers aræetually able to improve thquality of their chloride TiO2 and operate their chloride TiO2 plantsiably—both of which ær uncertainties—there will still be barriers to Chinese chloride TiO2 becoming a meaningful competitive constraint in North America in a timely and sufficient mannel Chinese producers do someday produce chloride TiO2 that meets customers' performance standards for broad usage in North America,

} Moreover, import duties
and the high cost of overseas shipping are also barriers to Chinoelse ers expanding their
sales in North America{
} <sup>48</sup>
Finally, given recent reductions in Cleise TiO2 production capacity and increasing
demand for TiO2 within China, it is uncertain orther there will be any Chinese TiO2 available
for export to North America in the years to comever the past several years, many of the old

for export to North America in the years to condever the past several years, many of the older TiO2 plants in China have closed due to hight positions, government initiatives to address pollution, and limited availability of feedstocks, and more are projected to closeePX9001 at 9 (Tronox Q3 2016 Earnings Call) (observing that Chinese production was down in 2015 and

would be down again in 2016 and 2017) At the same time, demand for chloride and sulfate

TiO2 within China has contiued to increase at a higheterathan in other regions



Seealso PX2072 at 23 (Cristal) (reporting 10-15 plants idled, some expected to remain closed, and others expected to close due to environmental issues); PX8000m(g/(Sherwin-Williams) Decl.) ¶ 24 ("Over the last year or so, a substantial amount of TiO2 capacity in China has closed.").

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2d 36, 89 (D.D.C. 2011) (quotiningerger Guidelines § 10); Staples 199770 F. Supp. at 1089-90; Staples 201,6190 F. Supp. 3d at 137-38 n.15. Moreoveig/filmarket concentration levels," like those presented by the Proposed uisition, require "proof of extraordinary efficiencies." Heinz, 246 F.3d at 720. No court has ever permitted an otherwise unlawful transaction to proceed as a result of claimed efficiencies id at 720-21, Sysco 113 F. Supp. 3d at 82, CC Holdings 605 F. Supp. 2d at 72. The result should differ here, as Respondents have failed to substantiate their efficiencies claims.

Respondents' primary assertef@iciencies fall into thee categories: (1) alleged expansion of TiO2 feedstock at Cristal's highrade feedstock manufacinung facility in Jazan, Saudi Arabia<sup>5,4</sup>

That the Jazan facility is not a parttbé Proposed Transaction should, by itself, doom these claims. Respondents have failed to ideatify case that has credited efficiencies when the purported efficiencies were generated not by the transaction station, but by some separate acquisition of assets. To the contrarvets that have considered an efficiencies defense presume that the claims relate toiefficies generated by the quisition in question. See, e.g., Penn State Hershey, 838 F.3d at 347 (efficiencies defense entails a showing by defendants that "the anticompetitive effects of the merger will be offset by extraordinary efficiencies resulting from the merger (citation omitted and emphasis added): Alphonsus Med. Ctr.–Nampa Inc. v. St. Luke's Health Sys., L778 F.3d 775, 790 (9th Cir. 2015) (efficiencies defense entails bowing by defendants that "tbeoposed merger will create a more efficient combined entity and thus increase competition") (emphasis added); University Health 938 F.2d 1206, 1222-23 (11th Cir. 1991 ficencies defense requires a showing that "thentended merger would create significant efficies in the relevant market") (emphasis added). The Merger Guidelines presume the same-considering "efficiencies generated through merger" in evaluating the effts of the merger in guestioMerger Guidelines 10 (emphasis added). Residents' claimed Jazan effecticies are not generated by the acquisition of assets in the soposed Transaction. Thus, there not a cognizable defense in this matter.

Regardless, even accepting that Responde azsin claims should be considered in evaluating this transaction, they if for lack of merger specificity. First, the Jazan claims are not merger specific because, not being a path is proposed acquisition, they are not "accomplished with the proposed merger." Merger Guidel (defining a "mergerspecific" efficiency as one that is "likely to be accomplished with the proposed merger and

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unlikely to be accomplished in the absence **th**færithe proposed merger or another means having comparable anticompetitive effects").

Second, a potential future acquisition of the an facility by Tronois not the only wa
the Jazan facility will become operational. While Trof
}, <sup>56</sup> Cristal has every incentive to fix{
}
56 {
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See ale PX2203 (Cristal) (describing ongoing talks with Tizegarding strategic collaboration on Jazan facility).

Respondents' Jazan claims also fail because a here yot verifiable. To start, these claims are rife with uncertainty, and thus are specule atind unverifiable, given that Respondents have yet to even sign the Option

}	Therefore, despite its confident pronouncements, it is clear from Tronox's own

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} Because Cristal can and taking steps to reach Yanbu's
full output potential on its own, Respondents' alleged efficiencies with respect to Yanbu are no
merger specific.
Respondents' Yanbu efficiency claims also are not verifia
} Tronox bases the Yanbu efficiencies claims on the assum
}

Moreover, Tonox's projections of increased output Yanbu post-acquisitiomppear to be based

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; PX2379 at 4-6 (Cristal) (describing Yanbu organizational changes, including addition of several experts in low-pressure technology).

on little more than managerial business juegthand therefore should be rejecte

}; see also H&R Block833 F. Supp. 2d at 91

(rejecting efficiencies based on managers' judgments rather thailed enalysis of data).

Third, Respondents further allege a number of cost saving efficiencies relating to optimizing various operations and processes. **Casimt**pCounsel's efficiencies expert, Dr. Mark E. Zmijewski, has reviewed Respondents' efficiencies submissions with respect to the Jazan facility, the Yanbu facility, an**c**he claimed cost saving efficiencies. Dr. Zmijewski concludes

that{

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Finally, Respondents' efficiencies defentiates because any post-acquisition output increases at Jazan or Yanbu (both in Saudi iA) abid any post-acquitisin cost savings, would be unlikely to materially impact the North American TiO2 markSeteUniversity Health, 938 F.2d at 1222-23 (defendant asing tefficiency defense "must demonstrate" that the claimed efficiencies "ultimately would benefit ompetition and, hence, consumerSiysco, 113 F. Supp. 3d at 82 (defendants must "demonstrate that their claimed efficiencies would benefit customers"),CCC Holdings 605 F. Supp. 2d at 74 (same). Indeed, the bulk of Respondents' claims are outside of the relevant marketsate here. Tronox CEO Jeffry Quinn appears to concede as much, observing to analysts that/amiwhelming portion of the synergies are ex U.S." PX9101 at 7 (Tronox Q4 2017 Earnings Call) particular, the Jazan efficiencies concern the production of festock—not TiO2—outside of North America, and Respondents have failed to show how these purported benefitshave any effect inside the relevant market at issue here. Although related to TiO2 protitor; the Yanbu efficiencies claims likewise are

there was surplus supply in the market wasvedown our production and we did that with

respect to pigment. We also did it with spect to mineral sands [feedstock]<sup>(n)</sup>.</sup>

CONCLUSION CONCLUS

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