COMPETITION TRIBUNAL
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CT-2021-002

THE COMPETITION TRIBUNAL

IN THE MATTER OF the *Competition Act,* R.S.C. 1985, c. C-34, as amended;

AND IN THE MATTER OF the acquisition of Tervita Corporation by SECURE Energy Services Inc;

AND IN THE MATTER OF an Application by the Commissioner of Competition for an order pursuant to section 92 of the *Competition Act*;

BETWEEN

THE COMMISSIONER OF COMPETITION

Applicant

- and -

SECURE ENERGY SERVICES INC.

Respondent

ORAL COMPENDIUM OF THE RESPONDENT SECURE ENERGY SERVICES INC.

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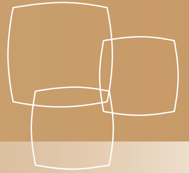
Competition Bureau Canada | Bureau de la concurrence Canada



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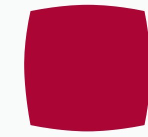

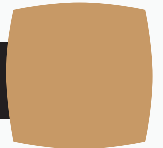

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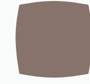

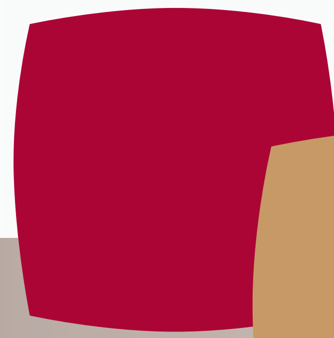

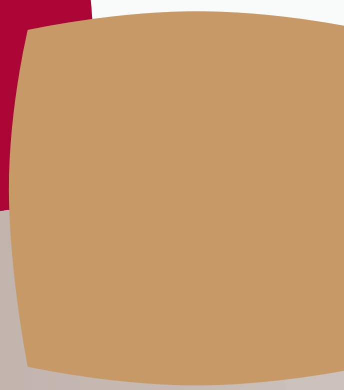

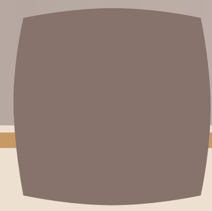

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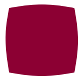
term contractual arrangements or pre-existing long-term business relationships) may constitute a merger within the meaning of section 91.

1.19 When determining whether an acquisition or establishment of a significant interest constitutes a merger, the Bureau examines the relationship between the parties prior to the transaction or event establishing the interest, the likely subsequent relationship between the parties, the access that an acquirer has and obtains to confidential business information of the target business, and evidence of the acquirer's intentions to affect the behaviour of that business.



PART 2: THE ANTI-COMPETITIVE THRESHOLD

Overview

2.1 As set out in section 92(1) of the Act, the Tribunal may make an order when it finds that a merger "prevents or lessens, or is likely to prevent or lessen, competition substantially." A substantial prevention or lessening of competition results only from mergers that are likely to create, maintain or enhance the ability of the merged entity, unilaterally or in coordination with other firms, to exercise market power.

2.2 In general, when evaluating the competitive effects of a merger, the Bureau's primary concerns are price and output. The Bureau also assesses the effects of the merger on other dimensions of competition, such as quality, product choice, service, innovation and advertising—especially in markets in which there is significant non-price competition. To simplify the discussion, unless otherwise indicated, the term "price" in these guidelines refers to all aspects of firms' actions that affect the interests of buyers. References to an increase in price encompass an increase in the nominal price, but may also refer to a reduction in quality, product choice, service, innovation or other dimensions of competition that buyers value.

2.3 These guidelines describe the analytical framework for assessing market power from the perspective of a seller of a product or service ("product," as defined in section 2(1) of the Act). Market power of sellers is the ability of a firm or group of firms to profitably maintain prices above the competitive level for a significant period of time. The jurisprudence establishes that it is the *ability* to raise prices, not whether a price increase is likely, that is determinative.

2.4 The Bureau also applies this analytical framework to its assessment of the market power of the buyers of a product. Market power of buyers is the ability of a single firm (monopsony power) or a group of firms (oligopsony power)[10] to profitably depress prices paid to sellers (by reducing the purchase of inputs, for example) to a level that is below the competitive price for a significant period of time. Part 9, below, sets out the Bureau's approach to situations of monopsony power.

10 Oligopsony power occurs where market power in the relevant purchasing market is exercised by a coordinated group of buyers. Except where otherwise indicated in these guidelines, the term "monopsony" includes situations of oligopsony.

Types of Efficiencies Generally Included in the Trade-Off: Gains in Dynamic Efficiency

12.17 The Bureau also examines claims that the merger has or is likely to result in gains in dynamic efficiency, including those attained through the optimal introduction of new products, the development of more efficient productive processes, and the improvement of product quality and service. When possible, the assessment of dynamic efficiencies is conducted on a quantitative basis. This is generally the case if there is information presented by the parties to suggest that a decrease in production costs as a result of an innovation in production technology or an increase in demand for the parties' products as a result of product innovation (leading to a new or improved product) is likely. To supplement quantitative information or where quantitative information is absent, the Bureau conducts a qualitative assessment.

12.18 The specific environment of the industry in question is important in the Bureau's analysis of the competitive effects of a merger on innovation. In light of the complexities and uncertainties associated with the assessment of dynamic efficiency claims, irrespective of the industry, certain types of industry information (in addition to that considered in paragraphs 12.10 and 12.11, above) can be particularly beneficial to the Bureau's assessment of a merger's impact on innovation as they relate to, for example, verifiability, likelihood of success and timeliness. Historical information on the effect of previous mergers in the industry on innovation may be insightful.[60] Such information may relate to a merger's impact on the nature and scope of research and development activities, innovation successes relating to new or existing products or production processes, and the enhancement of dynamic competition.[61] In addition, and only when applicable, the Bureau encourages parties to provide detailed explanations regarding plans to utilize substitute or complementary technologies so as to increase innovation.

Types of Efficiencies Generally Included in the Trade-Off: Deductions to Gains

12.19 Once all efficiency claims have been valued, the costs of retooling and other costs that must be incurred to achieve efficiency gains are deducted from the total value of the efficiency gains that are considered pursuant to section 96(1). Integrating two complex, ongoing operations with different organizational cultures can be a costly undertaking and ultimately may be unsuccessful. Integration costs are deducted from the efficiency gains.[62]

Types of Efficiencies Generally Excluded from the Trade-Off

12.20 Not all efficiency claims qualify for the trade-off analysis. The Bureau excludes the following:

60 Such information may be useful even when previous mergers did not necessarily involve any of the merging parties, since Bureau staff will examine the effect of past industry mergers on innovation through various sources of information, including industry experts and interviews with competitors.

61 In this context, dynamic competition refers to competition based on the successive introduction of new or better products over time.

62 Losses in dynamic efficiency described in paragraph 12.31, below, may also be deducted from gains in efficiency at this stage of the analysis, provided they are not double-counted.

- gains that would likely be attained in any event through alternative means if the potential orders were made (examples include internal growth, a merger with a third party,[63] a joint venture, a specialization agreement, and a licensing, lease or other contractual arrangement);[64]
- gains that would not be affected by an order, when the order sought is limited to part of a merger;
- gains that are redistributive in nature, as provided in section 96(3) of the Act (examples include gains anticipated to arise from increased bargaining leverage that enables the merging parties to extract wage concessions or discounts from suppliers that are not cost-justified, and tax-related gains);[65]
- gains that are achieved outside Canada (examples include productive efficiency gains arising from the rationalization of the parties' facilities located outside Canada that do not benefit the Canadian economy);[66] and
- savings resulting from a reduction in output, service, quality or product choice.

Anti-Competitive Effects

12.21 Section 96(1) requires efficiency gains to be evaluated against "the effects of any prevention or lessening of competition that will result or is likely to result from the merger or proposed merger." The effects to be considered are not limited to resource allocation effects and include all the anti-competitive effects that are likely to arise from a merger, having regard to all of the objectives of the Act. Determination of the relevant anti-competitive effects depends upon the particular circumstances of the merger in question and the markets affected by the merger.

12.22 The Bureau examines all relevant price and non-price effects, including negative effects on allocative, productive and dynamic efficiency; redistributive effects; and effects on service, quality and product choice.

12.23 In addition to direct effects in the relevant market, the Bureau also considers price and non-price effects in interrelated markets. For example, mergers that are likely to

63 Consideration will only be given to alternative merger proposals that could reasonably be considered practical given the business realities faced by the merging firms.

64 The market realities of the industry in question will be considered in determining whether particular efficiencies could reasonably be expected to be achieved through non-merger alternatives. This includes growth prospects for the market in question, the extent of excess capacity in the market, and the extent to which the expansion can be carried out in increments.

65 Discounts from a supplier resulting from larger orders that would enable the supplier to achieve economies of scale, reduced transaction costs or other savings may qualify, to the extent that the savings by the supplier can be substantiated. Mere redistribution of income from the supplier to the merged firm in the form of volume or other discounts is not an efficiency.

66 A rationalization of the parties' facilities located outside of Canada where it could be established that these efficiencies would likely result in lower prices in Canada is an example of how such gains in efficiency from non-Canadian sources could accrue to the Canadian economy. The issue is whether the efficiency gains will benefit the Canadian economy rather than the nationality of ownership of the company.

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Parliament's intention that section 96 only becomes operative, (i.e., section 92 is only contravened), where the merger in question is likely to have, as a bare minimum, non-transitory and non *de minimus* market power effects.

A conclusion that the "substantial prevention or lessening" threshold could be found to be contravened in the absence of market power implications that can be assessed by reference to concrete benchmarks such as a price increase, an output restriction, or other[243] exercise of market power would not only create significant scope for arbitrary decisions but would also impose significant costs on the economy by blocking transactions that business persons implicitly consider to be efficient, without any corresponding tangible or intangible gain to society. Such a view would imply that the Government has a legitimate role to play in the marketplace even where there are no likely negative resource allocation consequences associated with the mergers being blocked. It is difficult to see what the policy justification for such a position could be, and there is nothing to suggest that this is what Parliament had in mind when it enacted the current merger provisions. In fact, in none of the jurisdictions that have been reviewed in this work are mergers that are not believed to be likely to have market power consequences challenged for competition reasons.[244]

The "welfare economics", or market power/efficiency, approach to mergers appears to have attracted the support of "a generation of academic theorists",[245] who believe that because of the "intractability of non-

243 Cf. note 241, *supra*. Consider also, for example, Areeda's recent observation that non-price competition:

> . . . can be intense although the number of firms is too few to maintain price competition. Fierce rivalry is often observed in such matters as product innovation, product design, packaging, advertising, service, and marketing generally. The possible explanations are several. Non-price rivalry can offer an oligopolist a greater hope of expanding his market share than a price cut could. Rivals, who can match a price cut immediately and perfectly, may not be able to imitate or offset a new product, or even a clever advertising campaign, quickly or at all. Non-price competition may raise costs by less than an across-the-board price reduction would reduce revenues. Finally, to the extent that it increases real or perceived value to consumers, it supports the oligopoly price more firmly, or even a higher price.

Areeda, P., *Antitrust Law: An Analysis of Antitrust Principles and Their Application* (Boston: Little Brown & Co., 1986) p. 156.

244 Cf. discussion *supra* at pp. 371-375. See also discussion in Chapter 2 at pp. 104-120; 130-135; 150-156; 168-173; 179-185; and 194-203; and in Chapter 3 at p. 235 *et seq.*

245 Baker & Blumenthal, *supra*, Chapter 2, note 111, at 391. This paradigm clearly underlies the U.S. Department of Justice 1984 *Merger Guidelines* and prevails among U.S. enforcement authorities. See for example, Baxter, *supra*, Chapter 2, note 247, at 621. Cf. the expression of similar views by Clanton, D.I. "Focusing the Inquiry: Specificity in the Merger Guidelines and Elsewhere" (1983), 71 *Cal. L.R.* 430, at 438. (Mr. Clanton was a Federal Trade Commissioner at the time of writing and a former Acting Chairman

THE COMPETITION TRIBUNAL

IN THE MATTER OF the *Competition Act*, R.S.C. 1985, c.C-34, as amended;

AND IN THE MATTER OF the proposed acquisition of Tervita Corporation by Secure Energy Services Inc.;

AND IN THE MATTER OF an Application by the Commissioner of Competition for an order pursuant to 92 of the *Competition Act*;

AND IN THE MATTER OF an Application by the Commissioner of Competition for an interim order pursuant to section 104 of the *Competition Act*;

B E T W E E N:

COMMISSIONER OF COMPETITION

Applicant

- and -

SECURE ENERGY SERVICES INC

Respondents

EXPERT REPORT OF NATHAN H. MILLER, PH.D.

February 25, 2022

customers but not to others, or raise prices to some customers by more than for others. The *Guidelines* explain:

> [W]hen price discrimination is feasible, it may be appropriate to define relevant markets with reference to the characteristics of the buyers who purchase the product (assuming they can be delineated) or to the particular locations of the targeted buyers.[158]

71. Price discrimination is feasible when sellers can identify targeted customers based on their observable characteristics (e.g., location) and targeted customers cannot switch easily to other suppliers in response (e.g., due to transportation costs) and cannot engage in arbitrage.[159] As I described in Section 3.4, these conditions are met in the relevant product markets here and, as reflected in their transaction data, the Parties are able to and do charge different prices to customers depending on customers' locations and proximity to competing facilities. Therefore, I use the customer-based approach to geographic market definition.[160]

72. I define a customer-based geographic market around a set of customers that are likely to be similarly impacted by the transaction, and I then calculate the Parties' market shares based on these.[161] In particular, for each product market, I define customer-based relevant geographic markets comprised of regions from which both Parties' facilities draw waste services revenues (i.e., "overlapping draw areas").[162] Customers in this region may have distinct preferences for the facilities but roughly share the same competitive conditions. The process of defining a customer-based geographic market starts by

[158] Competition Bureau Canada, "Merger Enforcement Guidelines," October 6, 2011, ¶ 4.8.

[159] Competition Bureau Canada, "Merger Enforcement Guidelines," October 6, 2011, ¶ 4.8.

[160] This approach was used and analyzed in academic literature. See, for example, Coate, Malcolm, and Jeffrey H. Fischer, "A Practical Guide to the Hypothetical Monopolist Test for Market Definition," *Journal of Competition Law & Economics,* Vol. 4 no.4 (April 2008): pp. 1031–1063, at pp. 1036, 1057; Bailey, DeeVon, B. Wade Brorsen, and Michael R. Thomsen, "Identifying Buyer Market Areas and the Impact of Buyer Concentration in Feeder Cattle Markets Using Mapping and Spatial Statistics," *American Journal of Agricultural Economics*, Vol. 77 (1995): pp.309–318.

[161] As characterized by my model of customers' preferences presented in Section 5.3 and detailed in the Appendix (Section 7.4), underlying the market share calculations are individualized preferences based on how an oil and gas producer that operates a specific well site values a facility different than another nearby operator might. Customers' values for facilities that are part of the same customer-defined market include a common component that is shared across all customers in the same market and an idiosyncratic component that explains why one customer chooses a particular facility for a transaction and another customer does not. My market share analysis assumes that these customers, while acting based on individual preferences, behave similarly in aggregate because they face similar competitive conditions for waste services and would incur similar levels of transportation costs to any given facility located in the relevant market.

[162] In my Initial Affidavit, I confirmed that a facility-based market definition results in similar conclusions to those reached using a customer-based approach. See Miller June Expert Report, RCFC00001_000000015 p. 2716 at section 5.2, p. 2748.

5. COMPETITIVE EFFECTS

79. In the preceding section, I discussed the relevant antitrust markets. In this section, I turn to assessing the competitive impact of the merger on competition in the relevant antitrust market.

80. First, I show that the merger substantially increased the Parties' combined market shares, which suggests that the merger is likely to be anticompetitive. In particular, the post-merger market shares within the relevant antitrust markets far exceed the Guidelines' "safe harbour" threshold. (**Section 5.1)**

81. Second, I show that there was robust competition between Secure and Tervita. Documents show that the Parties are each other's closest competitor and, prior to the transaction, actively competed to provide waste services to oil and gas companies in relevant markets (**Section 5.2.1**). Customers view Secure and Tervita facilities as close substitutes, and, as such, they are better able to negotiate discounted rates by leveraging a nearby Party facility against the other facility (**Section 5.2.2**). The merger will hinder customers' ability to negotiate better rates (**Section 5.2.3**). These findings suggest that the merger will likely lead to higher levels of concentration and allow the merged entity to raise prices.

82. Third, I quantify the price impact of the merger using a merger simulation that accounts for the industry's salient characteristics such as pricing practices (**Section 5.3**). The simulation suggests that prices on average could increase by approximately 11 to 25 percent, depending on the product market.

5.1. High post-merger market shares indicate a likely anticompetitive impact

83. My analysis indicates that, in many local markets, the market shares of the merging firms exceed the threshold of 35 percent mentioned in the *Guidelines* as a safe harbour metric. Specifically, the *Guidelines* state that a merger is unlikely to have anti-competitive consequences due to unilateral exercise of market power if the post-merger market share of the merged firm would be less than 35 percent.[170]

[170] Competition Bureau Canada, "Merger Enforcement Guidelines," October 6, 2011, ¶ 5.9.

84. Based on the market shares I calculate, the merger between Secure and Tervita leads to increased market concentration for TRD, landfill, and water disposal services in many locally-defined geographic markets spread across the WCSB. **Exhibit 9** summarizes the Parties' combined shares within the relevant markets.

85. In particular, Exhibit 9 reports the Parties' combined revenue, number of affected customers, and weighted-average market shares across all customer-based markets that experience a reduction in competition from the merger separately for each product market. My analysis includes third-party waste service providers, and, conservatively, also includes municipal landfills and facilities operated by oil and gas producers that take in waste from other producers, even though these facilities are not viable alternatives for third-party facilities and thus not in defined product markets.[171] The summaries are reported separately for markets that will experience a 2-to-1 reduction in waste service providers (i.e., merger to monopoly), 3-to-2, 4-to-3, and 5-to-4 (or higher-level changes in competition), and then for the total across all market types.[172]

86. Customers with well sites in a geographic market may send a small share of their waste to facilities that are outside of the geographic market (i.e., facilities that do not comprise the set of overlapping draw areas). In my calculation, I assume that customers in the relevant market spend 10 percent of the waste service revenue at facilities that do not have a draw area that overlaps with a local geographic market.[173] For example, while Secure and Tervita are the only two facilities that have overlapping draw areas in 2-to-1 markets, I assume that Secure and Tervita only capture a 90 percent of revenue share in these markets. As I discuss in the Appendix (Section 7.3), this assumption conservatively underestimates the Parties' market shares, rendering the analyses in my report conservative.[174]

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[171] See Section 7.7 for details about the data I received from third-party waste service providers, oil and gas producers, and the AEP, which provided volumes taken in by municipal landfills.

[172] The estimated market shares are all based on the revenue-weighted average shares across all affected customer-based markets that are of a specific market type, as are the total combined share for each of the TRD, landfill, water well markets.

[173] Note that the expenditures that occur outside of the defined geographic market can be captured by Secure, Tervita, or other competitors' third-party waste service facilities that are outside of the geographic market.

[174] For example, based on the Parties' transaction data, assuming that 10 percent of waste service expenditures are outside of relevant geographic markets results in outside-market revenue that is, on average, between 50 and 80 percent higher (depending on the product market) than the amount of expenditure that is actually spent at Secure and Tervita facilities outside of the market. My calculation includes markets in which one of the Parties

94. Internal individual facility analysis documents also indicate that Tervita and Secure compete head-to-head in local markets. For example, a Tervita document analyzing the competitive conditions in local markets identifies Secure facilities as competitors to its facilities:[181]

- "Competition [at the Silverberry landfill] is moderate in the area. Secure Saddle Hills Landfill and CNRL's Peejay landfill, which is not operational as they have recently been acquired by CNRL"
- "Judy Creek TRD is in a highly competitive market area with Secure being 15km away."
- "Secure Fox Creek Landfill 25km North on the Highway and has an average disposal rate of $18/t on soil & cuttings and is selling clean clay from their site at $3/t."
- "High competition in area with Secure & Pembina across the road from the [La Glace TRD] facility."

95. A Tervita "facility metrics breakdown" presents a list of competing facilities and their market shares for 26 Tervita facilities. According to this document, 17 of the 26 Tervita facilities face competition from a Secure facility.[182]

96. In another example, when discussing the pricing at their facilities, a Tervita employee identifies Secure as their "main competition" for these sites and quotes Secure's pricing for consideration.[183]

97. Other documents show Tervita and Secure personnel request discounts to be competitive with each other's prices. For example, a 2016 Tervita email identifies Secure Dawson Creek and Newalta Valleyview (now part of Tervita) as closest competitors and requests lower prices to compete against Secure.[184] Another Tervita email from 2018 requests a discount to win Torc Oil & Gas's

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[181] RCFC00001_000000002 - Supplementary Record - July 23, 2021 v2.pdf, pp. 349, 361, 368, 378.

[182] Tervita, "Facility Metrics Breakdown – TRDs and Disposal Wells," 2016/2017, TER_00085702. See also examples in SESL0004441; SES0037940; SES0052305; SES0050636.

[183] Email chain from Shane Nelson to Curtis Benson, "FW: Deliverable due Wednesday- Pricing Strategy Documents," January 11, 2017, TER_00057979 ("Our current main competition is Secure Energy at Mile 100. They are commonly offering produced and waste water at anywhere from $18-22/m3, they don't differentiate costs between the two streams… There are a few other sites in the region run by companies for their own injection needs that occasionally received third party water.").

[184] See TEV00000285 ("I have spoke to the field sales rep in the Willesden Green and he is aware that Secure is offering customers in the area 17.75/ Tonne. He recommended matching or going to 17/Tonne to make sure that we receive the soil."); TEV00000460 ("We recently lost to Secure for Sinopec on a similar job at $17.50 so trying $17.00 as per discussions with Jesse, Tim Link and Shaun Tuck."); TEV00000673 ("In order to win this work we will need to be aggressive. Secure has offered as low as $55/tonne. I have contacted Brent and he is good with this price.").

drill cuttings business away from Secure's Pembina facility.[185] A 2018 Secure email compares Tervita's and Secure's rates and requests discounted rates to key clients to win business back from Tervita.[186] A Secure email from 2020 requests a discount for a customer to match an offer from Tervita. In the email discussion, a Secure employee indicated that "we would be at risk of losing it if we didn't match it."[187] A Secure analysis recommended not raising rates at South Grande Prairie landfill because of Tervita's and Newalta's pricing pressures.[188] Tervita employees also refer to "price battles" with Secure and Newalta.[189]

98. In 2018, Tervita described Secure in its submissions to the Bureau in the context of its Newalta acquisition as "one of the most prominent remaining competitors," stating:

> Both parties [Tervita and Newalta] identify Secure as their principal third-party competitor, suggesting that they lose business more often to Secure than to each other. From Tervita's perspective, Secure is viewed as the stronger competitor because of its stronger financial position, in that Newalta's recent financial strains have limited its ability to compete on price, whereas Secure tends to be more aggressive on pricing.[190]

99. In their submission, Tervita identified "competing facilities in numerous local markets." In their analysis, Tervita identified 39 third-party TRD facilities

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[185] Email from Lori Lambert, "EXTERNAL - DOA Level- TORC Oil & Gas Ltd Torc - Drill Program 18/19," August 24, 2018, TEV00219518. ("I went out to see Shane last week in Edson to discuss drill cuttings as he is taking them to Secure Pembina facility near Cynthia. Shane told me that if we can match the price of $21/tonne which is where Secure is in Cynthia, he will take his last hole to Judy Creek LF as well as the 8 holes he will be drilling in Fox instead of going to our Fox Creek LF which is at $18/tonne.").

[186] Email from Ryley Pierson, "RE: South GP Discounted Vac Waste Rates," June 16, 2020, SES0024264. ("We'd like to offer a few key clients discounted vac waste rates at South GP for about 3 months in order to get more waste in. Yesterday Tanner was able get the exact pricing Tervita is charging Paramount and we are a decent amount higher now which is contributing to a lot lower waste volumes…").

[187] Email chain from Ed Guenther, "RE: Discount approval at 101," March 24, 2020, SES0026223. ("As we discussed yesterday as a group, Hayden mentioned that we would be at risk of losing it if we didn't match it. So as a one off I would be comfortable with matching for the three months, providing we keep all their work. I am worried long term that Tervita will keep undercutting us on pricing though…").

[188] See SES0026580, p. 8. ("Tipping Fee at South GP LF – NOT Rising due to Tervita and Newalta continually dropping their rates…").

[189] Email chain from Michael Bongfeldt to Troy Waltz and Lynsey Price, "RE: Lindbergh Sludge Campaign," October 6, 2016, TER_00091578 ("As this is not dis-similar to what we went through at the beginning of the year when we jockeyed with Newalta and Secure trying to regain some volumes and as of late there has been some degree of normality in a way. In going to $38-42/m for any client……contractual, volume driven, or not…..we are going to re-ignite the price battle unequivocally, but still fall well short of what we are trying to achieve by year end. And wind up losing margin with all other clients we [sic] currently as we move forward.").

[190] Letter from Kevin Ackhurst (Norton Rose Fulbright) to Commissioner John Pecman (Competition Bureau of Canada), March 1, 2018 [RBBA00008_000000023], p. 22.

within 110 kilometers. 21 of the competing TRD facilities (54%) were Secure facilities. Tervita's counsel includes a section where competitive overlap between TRD facilities is identified by indicating Tervita TRDs and third-party TRDs within 110 kilometers of Newalta TRDs. There are 39 third-party TRDs identified as competitive alternatives to Tervita and Newalta: 21 were Secure TRDs.

5.2.2. *Customers in the relevant markets view Secure and Tervita facilities as each other's closest substitutes relative to other facilities*

100. The locations of Secure, Tervita, and competitor facilities, confirms that Secure and Tervita are each other's closest competitors for many waste service customers. As discussed in Section 3.3, transportation costs are high in this industry and are a key consideration for customers when choosing a waste-service facility. Thus, the location of Secure and Tervita facilities lends insight into the extent to which customers view the Parties' facilities as substitutes.

101. Indeed, the proximity of Tervita's facilities to Secure's facilities indicate that Tervita is Secure's nearest competitor. **Exhibit 10** summarizes the count of Secure customers with Tervita as the next nearest facility and the average distances to those Tervita facilities compared to other third-party facilities. Between 63 and 84 percent of Secure customers are located in regions where Tervita operates the next nearest facility to them. These customers are located within 76 kilometers of the Tervita landfill facility, on average, while their average distance to a competitor facility is 140 kilometers.

EXHIBIT 10
Secure customers' next nearest facility is often operated by Tervita

	Market participant	Count of transactions	Count of customer wells	Transactions for whom the nearest non-Secure facility is Tervita...		If the nearest non-Secure facility is Tervita, mean distance to...	
				Count	Percentage	Tervita facility (km)	Nearest third party facility (km)
1.	Landfill	38,074	1,306	24,326	63.9%	75.87	140.42
2.	TRD	211,928	10,539	178,874	84.4%	55.29	201.10
3.	Water, TRD	157,780	6,178	104,719	66.4%	49.23	95.84

Source: Tervita Transaction Data; Secure Transaction data; Secure Facilities Data (4 210422 - Revenues and Volumes.xlsx): RBEJ00002_000000306; Tervita Facilities Data (PROTECTED & CONFIDENTIAL Facility List - FINAL – 05282021.xlsx: RBEK00004_000000068; Appendix (Section 7.7); GridAtlas; ArcGIS

Note: Secure transactions were excluded from this analysis if the customer was Secure; if they had blank, industrial landfill, terminalling, or "Other Revenue" general ledger names; or indicated credits (i.e. negative revenue). Moreover, this sample does not include transactions missing travel data due to unconvertable UWI or undefined travel routes (e.g. off-road terrain). Statistics are weighted by the number of transactions associated with each facility type.

the following section, distance is also not the only differentiating factor between facilities for customers that are located in similar geographic locations.

5.3. Merger simulation results indicate that the merger will likely result in higher prices

116. In this section, I use a merger simulation model to quantify the magnitude of the likely price increases resulting from the merger.

117. As discussed in Section 3.4, a key feature in this industry is that waste service facilities can and do charge customers different prices for waste services—i.e., the market for waste services resembles that of a price discrimination market. To reflect this fact, I consider a second-score auction model of price discrimination to model the industry.[207] This model has been used in academic studies as well as in prior merger reviews involving price discrimination in other jurisdictions.[208]

118. The second-score auction model corresponds to a bargaining framework in which a waste service provider's price depends on the incremental value of its facility relative to what the next-best facility has to offer to a customer, and evidence in record confirms that this framework reflects the structure of this industry.[209] As I described above, the Parties consider the locations of alternative facilities that a customer may use and set their prices accordingly.

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a few other competitors. I also note that other factors (such as type of waste facilities take in, wait times, etc.) may also prevent other third-party facilities from effectively constraining the pricing of Secure and Tervita.

[207] Miller, Nathan H. "Modeling the effects of mergers in procurement." International Journal of Industrial Organization 37 (2014): 201-208.

[208] Examples of merger review matters include U.S. health insurer mergers in the Anthem-Cigna matters and U.S. mergers of vessel ship cleaning suppliers in the recent Drew-Wilhelmsen matter. See United States v. Anthem, Inc., 236 F. Supp. 3d 171 (D.D.C. 2017), aff'd, 855 F.3d 345 (D.C. Cir.), available at https://www.justice.gov/atr/case-document/file/940946/download (accessed February 21, 2022); Federal Trade Commission v. Wilh. Wilhelmsen Holding ASA, et al., "Plaintiff's proposed findings of fact and conclusions of law," Civil Action No. 18-cv-00414-TCS, July 13, 2018, available at https://appliedantitrust.com/14_merger_litigation/cases_ftc/wilhelmsen/2_13b/wilhelmsen_ddc_pff_ftc7_13_2018.pdf (accessed February 21, 2022). See also Sweeting, Andrew et al., "Economics at the FTC: Fertilizer, Consumer Complaints, and Private Label Cereal," *Review of Industrial Organization* 55 (2020):751–781; Beckert, Walter, Howard Smith, and Yuya Takahashi, "*Competition in a spatially-differentiated product market with negotiated prices*," University of Oxford : Economics, Department of Economics Discussion Paper Series (2020); Miller, Nathan H., Matthew Osborne, Gloria Sheu, and Gretchen Sileo, "The Evolution of Concentration and Markups in the United States Cement Industry," February 2022, available at http://www.nathanhmiller.org/cementmarkups.pdf (accessed February 21, 2022).

[209] The second-score auction approach is realistic for this industry. As an alternative, one can use a bargaining parameter to divide the surplus between the customer and the waste service provider. Customers' bargaining power depends on their alternative options. For example, customers who have access to other nearby facilities may have higher bargaining power. However, the merger reduces the bargaining power of customers because, as I described above, for many customers the next-best alternative to a Party's facility is a facility owned by the other Party.

For example, if the next best facility is farther away, the facility may quote a higher price to take advantage of its proximity to the customer location.[210] Testimony on behalf of oil and gas producers suggests that, indeed, waste service providers are often aware of customers' "next-closest option" and offer waste services prices accordingly.[211] Furthermore, there may be other physical characteristics of the drilling site and the waste produced at it that requires specialized services, and thus specialized pricing.[212] Even in instances when the oil and gas producers sign MSAs with the Parties, producers are able to negotiate and obtain lower unit pricing for specific jobs or in response to competing rates from competitors, for example.[213]

119. The following hypothetical example illustrates how competitive conditions at a producer's well site may determine the Parties' pricing behavior, independent of any other factors that may inform the outcomes of price negotiations. Suppose an oil and gas producer considers waste services across all facilities to be of the same quality and that transportation costs and prices are the only two factors it considers. Furthermore, suppose that the customer considers three competing locations, a Secure site, a Tervita site, and a Ridgeline site, each with a per-unit cost of $15 to dispose of one cubic-meter of waste. Therefore, each company would be willing to serve the customer if the price is at least $15.

120. Additionally, assume that Secure has the nearest facility, followed by Tervita and then Ridgeline, with transportation costs given by $10, $20, and $30, respectively, which are often paid by the customer independent of the price paid for waste services. The diagram in **Exhibit 19** captures the costs across three facilities that may inform the customer's decision. The gray segments of each bar capture the minimum price any customer might pay for waste services, i.e., the price at which the facility covers its variable costs and

[210] See also Section 3.3, fn. 56, which describe Tervita's Trucking differential analysis.

[211] Witness Statement of Petronas Energy Canada LTD., Carl Lammens, February 3, 2022, ¶ 44 ("In PECL's experience, companies offering waste disposal services are aware of their customers' transportation costs and offer specific customers prices that are comparable with the next-closest option, taking into account those transportation costs.").

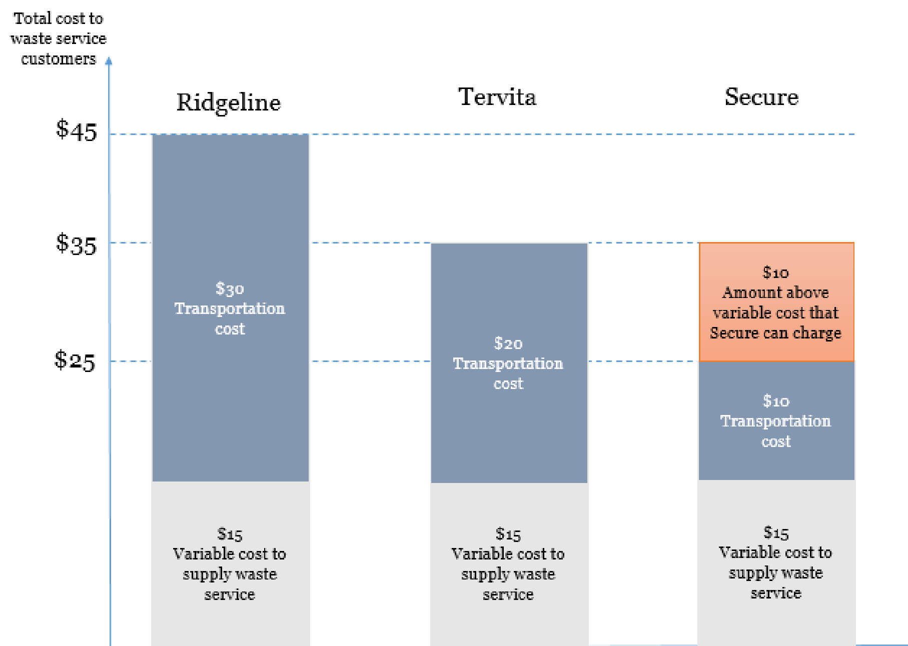
[212] Engel testimony, December 20, 2021, p. 48-50, questions 122-123 ("Q. Okay. Does Secure agree that it can and does adjust the tipping fees it may charge a customer based on the competitive options it believes the customer has? A. That is one consideration among many. Q. Okay. Can you tell me what other considerations go into this analysis?... A. Well, different customers, firstly, operate across different geographies. They also handle different services, so each customer is unique in that way. The specific waste streams are unique, so not all soil is created equal, and there are times operationally where at a landfill specifically a waste that maybe has better stacking or handling capabilities could be more advantageous for the operations of the site versus, you know, if you were bringing soil that was maybe from a spill onto, say, muskeg or a wet material versus a dry material or more gravel and rock....).

[213] See Section 3.4. MSA SES0089949; SES0064462.; SES0084905.

does not earn any profit from the transaction. The blue segments capture the customer's transportation costs to transport waste to each facility. If only considering costs, the customers select the facility with the lowest overall costs, i.e., transportation costs plus price for waste services.

121. Since Secure has the nearest facility to the oil and gas producer's well site, the model predicts that Secure wins the contract at a price slightly below $25, captured by the sum of the $15 variable costs and $10 profit in the orange segment in **Exhibit 19**. At that price, the total costs to the buyer of picking Secure is just below $35, whereas the total cost of picking Tervita, even at the lowest price that Tervita would consider, is $35 (sum of the $15 variable cost and $20 transportation costs). Thus, Tervita constrains the price that Secure is able to obtain—if Secure charges a price that is higher than $25, Tervita (the next-closest facility) can win the contract.

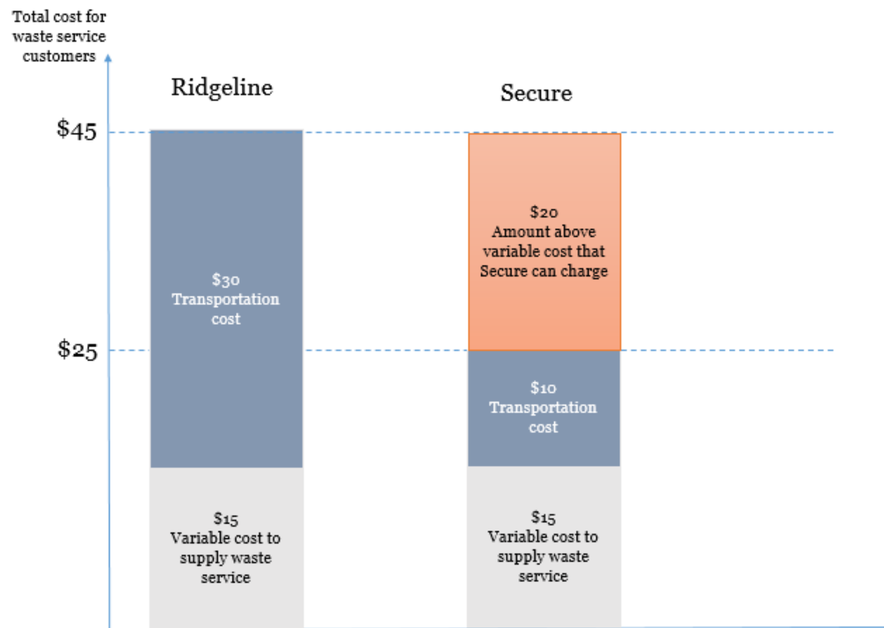
EXHIBIT 19
Illustrative pre-merger pricing behavior



122. Now consider a merger between Secure and Tervita. In the model, the merged firm does not bid against its own facilities. Therefore, the competitor nearest to the customer is the Ridgeline facility. Captured in Exhibit 20, Ridgeline can offer its services at cost, which results in a total waste service cost of $45 to the customer. Therefore, Secure can now charge up to $35 (sum of $15

variable costs and $20 in profit) without causing the customer to switch to Ridgeline.

EXHIBIT 20
Illustrative post-merger pricing behavior



123. In the illustrative example above, I assume that oil and gas producers view the services supplied by the facilities as the same (i.e., of equal quality) and that location is the only characteristic of the waste service facility valued by the customers. However, in my merger simulation model, I relax this assumption and allow for product differentiation. Specifically, I allow for the possibility that other facility characteristics may factor into how oil and gas producers value facilities, including expected wait times to unload the waste at the facility,[214]

[214] Witness Statement of Shanley Bowersock, February 23, 2022, ¶ 13 ("Where LB Energy is asked to find a disposal site, disposal fees, wait times at the facility, and distance from the producer's location to the facility are important factors in selecting a facility. As trucking costs are often higher than disposal fees, distance and wait times are significant factors.").

available waste capacity at the facility,[215] and types of wastes accepted,[216] among other potential factors.[217]

124. More formally, I model an oil and gas producer's choice of waste service facility using a discrete choice framework, particularly the often used conditional logit model.[218, 219] Under this framework, oil and gas producers choose among a number of potential waste service facilities in each of the three

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[215] Witness Statement of Crew Energy Inc., James Taylor, February 14, 2022, ¶ 11 ("Another important factor in deciding which site to choose for disposal is capacity at the facility. Pricing is typically determined by phoning the representatives at each facility on an as-needed basis. Generally speaking, when a facility is capacity-constrained, prices to dispose of waste will be higher, and when there is enough capacity, the prices will be lower."); Witness Statement of Chad Hayden, February 9, 2022, ¶ 11 ("Higher tipping fees, longer waittimes, or limited capacity may result in a customer optimally choosing a site that is further from the waste's origin."); Witness Statement of David Hart (Canadian Natural Resources Limited), February 22, 2022, ¶ 16.

[216] Witness Statement of Crew Energy Inc., James Taylor, February 14, 2022, ¶ 12 ("Further, Crew Energy's choice of a facility also depends on the characteristics of the waste that is acceptable to a particular waste company."); Witness Statement of Petronas Energy Canada LTD., Carl Lammens, February 3, 2022, ¶ 75 ("The vast majority of solid oilfield waste produced by PECL contains less than the threshold amount of NORM allowing it to be disposed of at the Tervita Silverberry Landfill. This waste volume cannot be accommodated at the Secure Saddle Hills landfill."); Witness Statement of Paul Dziuba, February, 24, 2022, p. 6 ("Chevron chooses a disposal facility based on waste type and distance from Chevron's relevant operations. As long as the facility can legally accept the waste type, distance (or travel time) typically determines which facility will get our business."). Tervita describes how it requires that customers characterize the waste they want to dispose of in a landfill and how samples of the waste may be tested in an analytical lab to ensure landfill compliance and, if not in compliance, offer alternative services to the customer. See Tervita Annual Information Form for the fiscal year ended December 31, 2020 [RBBC00003_000000017], p. 17.

[217] One witness describes how the road conditions are another factor considered. See Witness Statement of David Hart (Canadian Natural Resources Limited), February 22, 2022, ¶ 15 ("As a result, the distance to the waste disposal facility, wait times at the facility, the transportation route and road conditions to and from a waste disposal facility can have a significant impact on CNRL's transportation costs. For example, trucks can typically travel faster on higher grade highways than on gravel roads."). Secure documents reference "truck turnaround time" guarantees, as well as the "all-weather tipping pads" that are intended to "ensure the upmost safely for truckdrivers and operators while guaranteeing the quick turnaround of trucks at the facility." See SES0045741.

[218] This widely adopted method of analyzing consumer choice was pioneered by Professor Daniel McFadden, who in 2000 received the Nobel Prize in Economics for developing these methods. See The Nobel Prize Press Release "The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel 2000," October 11, 2000, available at https://www.nobelprize.org/prizes/economic-sciences/2000/press-release/, accessed on September 4, 2019 ("Citation of the Academy: 'to James Heckman for his development of theory and methods for analyzing selective samples and to Daniel McFadden for his development of theory and methods for analyzing discrete choice.'"); McFadden, Daniel , "Conditional Logit Analysis of Qualitative Choice Behavior," *Frontiers in Econometrics*, ed. Paul Zarembka (New York: Academic Press, 1974), pp. 105–142 at p. 106 ("This paper outlines a general procedure for formulating econometric models of population choice behavior from distributions of individual decision rules. […] The relevance of these methods to economic analysis can be indicated by a list of the consumer choice problems to which conditional logit analysis has been applied: choice of college attended, choice of occupation, labor force participation, choice of geographical location and migration, choice of number of children, housing choice, choice of number and brand of automobiles owned, choice of shopping travel mode and destination.").

[219] Raval, Devesh, Ted Rosenbaum, and Steven A. Tenn. "A semiparametric discrete choice model: An application to hospital mergers." *Economic Inquiry* 55, no. 4 (2017): 1919-1944. See Sections 7.5, 7.6, 7.7 for estimation details. Miller, Nathan, and Gloria Sheu, "Quantitative Methods for Evaluating the Unilateral Effects of Mergers," *Review of Industrial Organization* 58 (2021):143–177, at p. 150 ("More recently, the antitrust agencies have relied on more sophisticated simulations, which approach the structures that are commonly seen in the scholarly literature, where complex demand and supply functions are the norm: In *AT&T/DirecTV* (2015), experts who worked on behalf of the FCC and those who worked on behalf of the merging firms both constructed simulation models with nested logit demands that were estimated with the use of detailed, geographically disaggregated data. Based in part on these results, the FCC decided to approve the transaction. During the litigation of *Aetna/Humana* (2016), the DOJ's expert also used a merger simulation with nested logit demand.").

6. WELFARE LOSS DUE TO THE MERGER

133. In economic theory, deadweight loss ("DWL") arises when the merger results in a loss of trade between customers (e.g., oil and gas producers), and producers, (e.g., waste service suppliers). This is because a transaction between a supplier and producer generates value to consumers (i.e., the consumer surplus) and profits to the producers (i.e., the producer surplus). The Secure and Tervita merger results in loss of efficient trade through a variety of ways.

- First, I understand that the Parties intend to fully or partially close at least 35 facilities.[234] Mr. Harington claims that these facilities are redundant, and facility closures will "allow [the Parties] to cease operations at certain locations in whole or in part without any reduction in total output."[235] Even if the facility closures do not reduce total output, they create loss in consumer surplus because customers will now have fewer waste service options, lose access to their most preferred facilities, and lose the incremental value that these options generate for them. I estimate the DWL arising from lost choice to be $78 million. (**Section 6.1**)
- Second, as discussed in Section 5.3, oil and gas producers are likely to face average price increases for waste services between 11 and 25 depending on the product market. Higher prices result in a loss in trade between oil and gas producers and the merging Parties as follows. (**Section 6.2**)
    - » Oil and gas producers may respond to such price increases by choosing another less efficient option outside the relevant markets, such as bioremediation, municipal landfills, or forms of self-supply or self-storage.[236] I am not able to estimate fully this DWL. But my illustrative calculations show that the loss could range between $0.5 million and $2.4 million for solid waste and between $0.5 million and $2.0 million for water

[234] Harington Affidavit, Table 7, "Summary of Full-Service Integration Groupings Facility Rationalization Decisions," [RCFD00001_000000014] p. 142; Harington Affidavit, Table 8, "Summary of LF Integration Groupings Rationalization Decision," [RCFD00001_000000014] p. 143; SESL0039221.xlsx; SESL0034121.pdf.

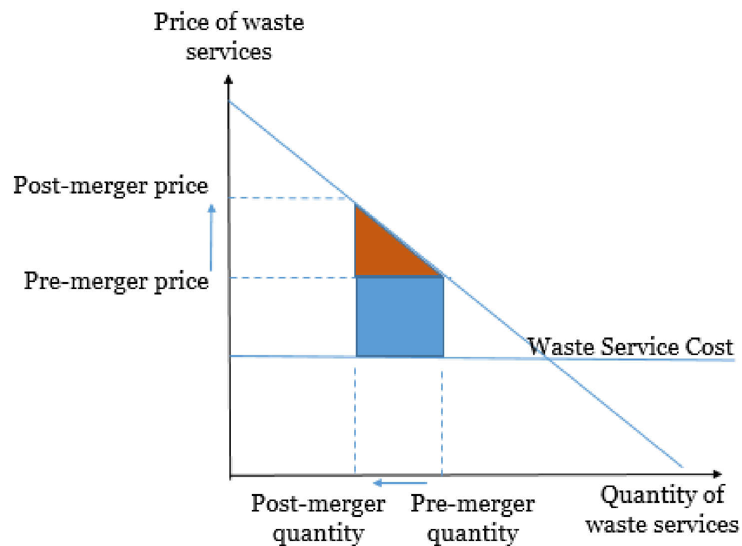
[235] Harington Affidavit, [RCFD00001_000000014] p. 131.

[236] As I described above, alternatives such as bioremediation and on-site storage are not large-scale substitutes for waste services and customers would not switch to them in large volumes in response to small price increases. As the magnitude of price increases grow, use of these alternatives would increase.

6.2. Price increases will result in DWL because there will be less aggregate demand for waste services

160. Price increases resulting from the merger ultimately will decrease the aggregate demand for waste services. DWL arises when higher prices due to increased market power result in lower quantity demanded (i.e., loss of trade). **Exhibit 26** illustrates the DWL created when waste service prices increase.

EXHIBIT 26
Illustrative market demand for waste services and sources of changes to consumer and producer surplus



161. Pre-merger, the supplier charges the "pre-merger price" and quantity demanded is "pre-merger quantity," as depicted in Exhibit 26. Total surplus is then the area below the aggregate demand curve, above the "waste services cost" curve, and to the left of "pre-merger quantity." This surplus is created because the supplier's cost of providing waste services (as indicated by "waste service cost") is lower that the value customers' place on the services (as indicated by the demand curve). After the merger, when prices increase, the surplus shrinks to the area below the demand curve, above the "waste service cost" and to the left of the "post-merger quantity." The change in total surplus (i.e., the DWL) is the area between the "pre-merger quantity" and the "post-merger quantity," below the demand curve and above the "waste service cost." This area is depicted by the orange-shaded triangle and the blue-shaded rectangle. Conceptually, the DWL represents the transactions that would create a surplus but are not realized because the supplier charges a higher price. The

size of the DWL depends on the elasticity of demand, which captures how responsive customers are to a price change.

162. I have identified three potential sources of why a price increase will reduce the quantity demanded for third-party waste services:

- Oil and gas producers may use alternatives such as bioremediation, municipal landfill disposal, or temporary on-site storage instead of delivering their wastes to third-party disposal facilities.
- Oil and gas producers may decide to drill fewer oil and natural gas wells, forgoing any drilling projects that may not be profitable at higher waste service costs.
- Less legacy waste (accumulated waste that has been left at older drilling sites) may be processed, particularly at abandoned wells in Alberta that require closing and remediation services provided by the Orphan Well Association.

163. As I discussed in Section 4.1 there are alternatives to disposing waste at third-party facilities, such as bioremediation, on-site storage, using municipal landfills or first party facilities. Although these methods are not large scale viable substitutes for third-party facilities (i.e., customers cannot turn to them in sufficient quantities to defeat a small significant non-transitory price increase), oil and gas producers may use them more as prices of waste services increase.[267] For example, oil and gas producers may turn to more inefficient bioremediation (e.g., bioremediate certain types of waste that are less successfully remediated or use bioremediation in less ideal situations) or construct costly water disposal ponds or wells I am not aware of data or elasticity estimates that would allow me to fully quantify the DWL that would be created to the extent that customers turn to these less optimal alternatives. I am aware that Dr. Henry J. Kahwaty, who was CCS Corporation's expert witness in Commissioner of Competition v. CCS Corporation et al., provided an estimate of producer surplus gains if disposal costs decreased and landfill waste

[267] Witness testimony suggests that oil and gas producers that own self-disposal facilities use a cost-benefit analysis when considering whether to deliver waste to their own facilities or a third-party facility. Witness Statement of David Hart (Canadian Natural Resources Limited), February 22, 2022, ¶ 21 ("In particular, CNRL charges itself internally for waste disposal and considers transportation costs and capacity in choosing whether to use its own facilities. Once a CNRL-owned facility is at capacity, CNRL must use a third-party facility. Companies like Secure know where third party owned facilities (including CNRL-owned facilities) are located relative to their own facilities and the estimated trucking costs, and may price their services based on this knowledge.").

volume increased in Northeastern British Columbia.[268] Dr. Kahwaty's analysis implies an elasticity of 0.87. I calculate DWL based on various elasticities, using elasticities ranging from 0.2 to 0.87 (elasticity implied by Dr. Kahwaty's estimates). This illustrative calculation yields DWL between $0.5 million and $2.4 million for landfill waste, and DWL between $0.5 million and $2.0 million for waste water.[269]

164. The second source of DWL may come from oil and gas producers choosing to drill fewer wells and thus producing less waste. Specifically, before drilling a well, oil and gas producers weigh the costs to drill and operate it, which includes the costs to dispose of oilfield wastes, against the expected profits from selling extracted oil and gas. Economically, wells that are minimally profitable—or the "marginal wells"—are less likely to be drilled when any part of the costs increase. While increased costs of waste services may not affect producers' decisions to drill most future wells, it may cause them to forgo drilling *marginal wells*. When oil and gas producers reduce their drilling activity, the demand for waste services decreases, and producers experience a surplus loss as depicted by the orange triangle in Exhibit 26 while the waste service providers experience a loss as depicted by the blue triangle in Exhibit 27. I am not aware of data or estimates that would allow me to quantify this DWL.[270] However, academic studies show that drilling activity is responsive to changes in oil prices. Since costs and prices both affect profits from drilling activity, economics suggests that cost increases will also impact the number of wells drilled.[271]

165. The third source of DWL may result from lower quantities of legacy waste delivered to landfills and TRDs, particularly from abandoned wells to be reclaimed by the Orphan Well Association ("OWA"). I understand that oil and gas producers have a responsibility to close and reclaim well sites once they cease producing minerals from them according to regulations enforced by the

[268] Expert Report of Henry J. Kahwaty, Ph.D. October 7, 2011 in "The Commissioner of Competition v. CCS Corporation et al.," 2012 Comp. Trib. 14 File No.: CT-2011-002 [RBBA00007_000000025]. Dr. Kahwaty uses 14 thousand tonnes increase (18% increase) and $5.84 per ton price decrease (20% decrease). See p. 23.

[269] See Workpaper 16 for the details of my calculations and estimates at other elasticity levels.

[270] Quantification of this reduction in volume would require knowing a number of detailed industry factors that inform oil and gas producers' drilling and production decisions. These factors include how much oil and gas producers pay in waste service costs to produce a barrel of oil (or cubic-meter of natural gas), how producers account for those costs over the life of a well, measure of producers' drilling rates in the WCSB, and a measure of their cost elasticity, among others.

[271] For example, Newell and Prest estimate the elasticity of conventional drilling in the U.S. as 1.3. Richard G. Newell and Brian C. Prest, "The Unconventional Oil Supply Boom: Aggregate Price Response from Microdata," The Energy Journal, Vol. 40, No. 3, 2019.

Alberta Energy Regulator.[272] If producers go bankrupt and abandon well sites, this responsibility falls to the OWA. In response to predicted waste service price increases from the merger, I understand that the OWA may be able to close and reclaim fewer abandoned wells because of the relationship between the number of reclaimed wells in a year and the costs to reclaim them.[273]

166. Delegated by the Alberta Energy Regulator, I understand that the OWA mandate is to "decommission and reclaim oil and gas wells, facilities, and pipelines in Alberta that do not have a solvent and responsible owner."[274] The funds used to pursue this work largely come from the Orphan Fund Levy paid by the oil and gas industry participants in Alberta and through government loans.[275] Based on the OWA's abandoned well inventory, they estimate around $350 million in remediation costs, of which approximately 15% will pay tipping fees to landfills operated by companies such as the Parties.[276]

167. The Parties were the top two vendors used by the OWA for both landfill and TRD services in 2020 and 2021.[277] Because of the types of solid waste disposal required, the OWA does not consider bioremediation or municipal landfills to be viable alternatives.[278] Moreover, the Parties are the only two companies that operate facilities that can dispose of NORM wastes, which the OWA will use to close some well sites.[279]

168. The OWA testimony confirms that the number of reclaimed wells is linked to the costs of waste services, and with price increases, the OWA will be unable to close as many wells per year.[280] However, OWA does not provide data or

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[272] Alberta Energy Regulator, Directive 088 Licensee Life-Cycle Management, available at https://www.aer.ca/regulating-development/rules-and-directives/directives/directive-088 (accessed February 25, 2022) ("It outlines how information, particularly financial, reserves, closure, and compliance information, will be used to enable the AER to assess the capabilities of licensees to meet their regulatory and liability obligations throughout the energy development life cycle; administer our liability management programs; and ensure the safe, orderly, and environmentally responsible development of energy resources in Alberta throughout their life cycle.").

[273] Witness Statement of the Orphan Well Association, February 22, 2022, ¶ 41.

[274] Witness Statement of the Orphan Well Association, February 22, 2022, ¶ 10.

[275] Witness Statement of the Orphan Well Association, February 22, 2022, ¶¶ 12-13.

[276] Witness Statement of the Orphan Well Association, February 22, 2022, ¶¶ 23.

[277] Witness Statement of the Orphan Well Association, February 22, 2022, ¶¶ 28-29.

[278] Witness Statement of the Orphan Well Association, February 22, 2022, ¶ 25 ("We send most solid waste to Class 2 landfills. The solid waste the OWA disposes of in Secure facilities may be contaminated with salts, heavy end hydrocarbons, or heavy metals. As a result, disposal into Class 2 landfills is the only viable option as bioremediation cannot be used to effective remediate solid waste with some or all of these contaminants."); Witness Statement of the Orphan Well Association, February 22, 2022, ¶ 30.

[279] Witness Statement of the Orphan Well Association, February 22, 2022, ¶ 32.

[280] Witness Statement of the Orphan Well Association, February 22, 2022, ¶ 41.

estimates of how responsive their volume would be to price increases. Therefore, I am not able to quantify the DWL generated when OWA is able to close and reclaim fewer wells as waste management costs increase.

169. However, the OWA explains that they spent $145 million in fiscal year ending March 31, 2021 and approximately half of its remaining closure costs are for remediation expenditures.[281] OWA further explains that 15 percent of remediation costs are for landfill tipping fees and Tervita and Secure combined accounted for 40 percent of landfill expenditures in the period from January 1, 2020 to November 30, 2021.[282] That means the OWA spent approximately $4.35 million on Secure's and Tervita's landfills.[283] At an average tipping fee of $23.25, this translates to 187 thousand tonnes of waste.[284] If I assume that OWA's annual spending remains constant and Parties' tipping fees increase by 12 percent (my estimated average price increase),[285] the annual reduction of landfill waste that OWA can process decreases by approximately 20 thousand tonnes.[286] This reduction translates to around $150 thousand in annual DWL, excluding any additional DWL from lower volumes of waste sent to TRDs.[287]

7. **APPENDIX**

7.1. Section 104 analysis updates

170. Since submitting my expert report dated June 29, 2021 ("June Expert Report"), I have incorporated into my competitive analysis additional third-party data and facility locations, as well as relevant first-party data and facility locations. My overall conclusions hold—the transaction between Secure and Tervita will likely lead to increased prices for many customers that purchase the Parties' waste services.[288]

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[281] Witness Statement of the Orphan Well Association, February 22, 2022, ¶¶ 16, 23.

[282] Witness Statement of the Orphan Well Association, February 22, 2022, ¶¶ 23, 28.

[283] Calculated as $145 million x ½ x 15% x 40%.

[284] I calculate the average tipping fee from Secure's and Tervita's transaction data. See Workpaper 16.

[285] See my backup to Exhibit 16.

[286] Witness Statement of the Orphan Well Association, February 22, 2022, ¶ 41 ("The number of orphan sites that the OWA can reclaim and close in a year is directly tied to the cost of services and landfill costs are anticipated to be a material part of our future expenditures as I described in paragraph 23 above. If landfill costs increase then this decrease the number of sites that the OWA can close in a given year.").

[287] See Workpaper 15.

[288] Miller June Expert Report, RCFC00001_000000015 p. 2716 at 2763, 2768.

Competitor's revenue to the second market, 20 percent to the third, and 40 percent to the fourth. Note that this is a conservative approach as I apportion all of the Competitor's revenue to one of the markets where it competes with Secure or Tervita. I do not apportion any revenue to the red area that does not overlap with Secure and Tervita draw areas. This approach is conservative because it likely overstates the Competitor's presence in the relevant markets.

186. Because my markets are customer-based markets, market shares represent the share of revenues that the customers spend on any waste service facility. A small amount of revenue may be spent on facilities that are not part of the customer-defined markets. These facilities are farther away and their draw areas do not overlap with the particular customer-defined markets. These "outside" facilities can be owned by Secure, Tervita or competitors. I observe the spending by Secure and Tervita customers at "outside" Secure and Tervita facilities. However, I do not observe the Secure and Tervita customers' spending at "outside" competitor facilities nor do I observe the spending oil and gas producers that are not Secure and Tervita customers.

187. As noted in Section 5.1 and described in fn. 173 and 174, I account for waste revenue spent on "outside" facilities by assuming that customers that comprise the local market spend 10 percent of their waste service expenses on facilities outside the market. **Exhibit 47**, the assumed outside revenue could have been spent at Secure or Tervita facilities located far away, or at a facility operated by a competitor such as Rush. This assumption is likely to be conservative.

188. Assuming 10 percent of revenue is captured by outside facilities is likely to be conservative because Secure and Tervita data indicate that customer well sites that are located in relevant markets spend smaller amounts of their waste service expenditures on facilities located outside of the market (i.e., at a Secure or Tervita facility represented by the blue star in Exhibit 47). Specifically, compared to the Parties' transaction data, assuming that customers spend 10 percent of waste service expenditures outside of relevant geographic markets results in "outside revenue" that is, on average, between 30 and 40 percent higher (depending on the product market) than the amount of expenditure that is actually spent at Secure and Tervita facilities outside of the market.[304]

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[304] See Workpaper 9.

CT-2021-002

THE COMPETITION TRIBUNAL

IN THE MATTER OF the *Competition Act*, R.S.C. 1985, c.C-34, as amended;

AND IN THE MATTER OF the ~~proposed~~ acquisition of Tervita Corporation by Secure Energy Services Inc.;

AND IN THE MATTER OF an Application by the Commissioner of Competition for an order pursuant to 92 of the *Competition Act*;

BETWEEN:

COMMISSIONER OF COMPETITION

Applicant

- and -

SECURE ENERGY SERVICES INC.
~~TERVITA CORPORATION~~

Respondent~~s~~

AMENDED ~~AMENDED~~ NOTICE OF APPLICATION

TAKE NOTICE that the Commissioner of Competition (the "**Commissioner**") will make an application to the Competition Tribunal (the "**Tribunal**"), on a day and place to be determined by the Tribunal, pursuant to section 92 of the *Competition Act,* R.S.C. 1985, c. C- 34, as amended (the "**Act**") for an order:

~~(a) directing the Respondents not to proceed with the proposed acquisition of Tervita Corporation ("**Tervita**") by Secure Energy Service Inc. ("**Secure**") (the "**Proposed Transaction**");~~

~~(b) in the alternative, requiring Secure not to proceed with the acquisition of such assets as are required for an effective remedy in all the circumstances;~~

~~(a) to dissolve Secure Energy Services Inc.'s ("**Secure**") acquisition of Tervita Corporation ("**Tervita**") (the "**Transaction**") in such manner as the Tribunal directs;~~

(a) <u>dispose of such assets of Secure Energy Services Inc. ("**Secure**") as are required for an effective remedy in all the circumstances as a result of Secure's acquisition of Tervita Corporation ("**Tervita**") (the "**Transaction**");</u>

(b) requiring the Respondent~~s~~ to provide the Commissioner with at least 30 days advance written notice of any future proposed merger, as such term is defined by section 91 of the Act, involving ~~either~~ the Respondent for a period of five years, where the proposed merger would not otherwise be subject to notification pursuant to Part IX of the Act;

(c) requiring the Respondent~~s~~ pay the costs of this proceeding; and

(d) such further and other relief as the Commissioner may request and this Tribunal may consider appropriate.

AND TAKE NOTICE that if you do not file a response with the Registrar of the Tribunal within 45 days of the date upon which this Application is served upon you, the Tribunal may, upon application by the Commissioner and without further notice, make such Order or Orders as it may consider just, including the Orders sought in this Application.

AND TAKE FURTHER NOTICE that the Applicant will rely on the Statement of Grounds and Material Facts below in support of this Application and on such further or other material as counsel may advise and the Tribunal may permit.

AND TAKE FURTHER NOTICE that a concise statement of the economic theory of the case is attached hereto as Schedule “A”.

THE ADDRESSES FOR SERVICE ARE:

For Secure Energy Services Inc.:

Blakes, Cassels & Graydon
199 Bay Street
Suite 4000, Commerce Court West
Toronto ON M5L 1A9
Tel: 416-863-2400
Fax: 416-863-2653

Attention: Brian Facey

~~For Tervita Corporation:~~

~~Bennett Jones~~
~~1730 Pennsylvania Ave~~
~~Suite 875~~

~~Washington, DC~~
~~District of Columbia 20006~~
~~USA~~
~~Tel: 416-777-4855~~
~~Fax: 1-202-204-0498~~

~~Attention: Melanie Aitken~~

The Applicant proposes that the hearing of this matter be held in Ottawa, Ontario and heard in English.

For the purposes of this Application, service of all documents on the Commissioner may be served upon:

Department of Justice Canada
Competition Bureau Legal Services
Place du Portage, Phase I
50 Victoria Street, 22nd Floor
Gatineau QC K1A OC9
Tel: 819.997.2837
Fax: 819.953.9267

Attention: Jonathan Hood
Paul Klippenstein
Ellé Nekiar

STATEMENT OF GROUNDS AND MATERIAL FACTS

I. OVERVIEW

1. Secure competed vigorously with Tervita to provide oil and gas waste services ("**Waste Services**") in the Western Canadian Sedimentary Basin ("**WCSB**"). ~~If Secure is permitted to acquire Tervita~~ After acquiring Tervita, ~~the merged entity will have~~ Secure has significantly enhanced market power that is unlikely to be constrained. Oil and gas producers will likely pay materially higher prices and experience a deterioration in the quality of service to dispose of waste at a time when the oil and gas industry, an important sector of the Canadian economy, is struggling.

2. ~~The merged entity would~~ Secure controls the vast majority of supply of Waste Services in the WCSB and ~~will be~~ is the only reasonable option for many customers in an industry with high barriers to entry for competitors and high transportation costs for customers. Maps are attached as Appendix 1 showing the locations of facilities used to provide Waste Services including industrial landfills, treatment recovery and disposal facilities ("**TRDs**"), and water disposals wells.

3. The ~~Proposed~~ Transaction eliminates the fierce competition that existed between Secure and Tervita. ~~The Respondents have~~ Secure and Tervita had developed competing Waste Services facilities in close proximity to each other – sometimes opening facilities right across the road from one another, leading to decreased prices and service improvements. For a significant number of customers, Secure and Tervita ~~are~~ were the only or the two closest geographic options for Waste Services. Proximity is critical to oil and gas customers when choosing a Waste Services vendor due to the high costs of transportation.

4. The Waste Services business is characterized by high barriers to entry, including regulatory, financial and reputational barriers as well as a mature market. In addition, given the significant size of Secure post-transaction, new entry or

expansion would not be timely, is unlikely, and would be insufficient to constrain an exercise of market power.

5. Oil and gas producers in the WCSB may also retain environmental consulting and waste management companies (referred to in this Application as "**Environmental Management Companies**") to provide a portfolio of environmental services associated with drilling for oil and gas including environmental consulting services, solids control, demolition & decommissioning, and equipment rentals ("**Environmental Services**"). Secure and Tervita also offered Environmental Services and may sometimes bundle them with Waste Services.~~ Through its dominance in Waste Services, the Proposed Transaction is likely to provide Secure with the ability and incentive to foreclose Environmental Management Companies. This will likely lead to higher prices and degraded services for Environmental Services customers.~~

6. ~~The Proposed Transaction is also likely to substantially prevent competition in Northeastern British Columbia ("**NEBC**"), where Secure had planned to open an industrial landfill in Wonowon, BC. But for the Proposed Transaction, Secure's landfill in Wonowon would have competed with Tervita's Silverberry and Northern Rockies landfills for Waste Services. Customers in NEBC would have benefited from the likely decreased prices and increased quality of service had Secure's Wonowon landfill opened.~~

II. THE PARTIES

7. The Applicant, the Commissioner, is responsible for the administration and enforcement of the Act.

8. Secure is a publicly traded company headquartered in Calgary, Alberta and listed on the Toronto Stock Exchange. Secure owns and operates 18 TRDs, 6 industrial landfills (as well as one it does not own but operates under contract), and 15 standalone water disposal wells in the WCSB that provide Waste Services. Secure also offers a wide range of Environmental Services associated with oil and gas

drilling including: the sale of drilling fluids, production chemicals, and water services, and demolition, decommissioning, remediation, and reclamation of oil and gas wells.

9. Tervita ~~is~~ was a publicly traded company based in Calgary, Alberta. Its common shares ~~are~~ were listed on the Toronto Stock Exchange. Among other assets, Tervita owned and operated 44 TRDs, 22 industrial landfills (18 of which ~~are~~ were owned by Tervita, one of which it operated under a contract, and three sites that Tervita marketed under contract for other landfill operators), 3 cavern disposal facilities, and 8 standalone water disposal wells in the WCSB. Tervita ~~also~~ offered a range of Environmental Services including the demolition, decommissioning, remediation, and reclamation of oil and gas wells.

III. THE ~~PROPOSED~~ TRANSACTION

10. Secure acquired all the issued and outstanding shares of Tervita on July 2, 2021.

10. ~~Pursuant to an Arrangement Agreement, dated March 8, 2021, Secure and Tervita intend to carry out an all-share transaction. Under the Plan of Arrangement, Secure will acquire all of the issued and outstanding shares of Tervita and upon completion of the transaction, Secure and Tervita shareholders will own approximately 52% and 48%, respectively of Secure.~~

IV. INDUSTRY BACKGROUND

11. The WCSB is a vast sedimentary basin in Western Canada, including southwestern Manitoba, southern Saskatchewan, Alberta, northeastern British Columbia and the southwest corner of the Northwest Territories. The WCSB contains one of the world's largest reserves of petroleum and natural gas.

12. Various forms of waste are produced in connection with the development, operation, remediation and reclamation of oil and gas wells including produced water, waste water, sludge, drill cuttings, contaminated soil and other chemicals.

Oil and gas customers, which includes a number of small to medium sized enterprises, generally pay third parties to take this waste, depending on its composition, to three types of facilities: TRDs, industrial landfills, and standalone water disposal wells.

13. TRDs process contaminated fluids that contain mixtures of solids, oil and water. At the TRD, each of the solids, water, and oil components are separated using centrifuges or other thermal processes. If the TRD facility contains a terminal with a pipeline connection, the oil recovered from the waste will be delivered via pipeline to an oil and gas plant. If the TRD is not connected via terminal to a pipeline, the oil will be trucked to a facility which has a terminal. The water is disposed of at a disposal well, often co-located at the TRD, and the solids are separately disposed of at an industrial landfill.

14. Industrial landfills are engineered sites that dispose of solid waste. As discussed above, industrial landfills receive solid waste produced from TRDs but also receive solid waste directly from oil and gas customers, particularly contaminated soil and drill cuttings. In Alberta and Saskatchewan, industrial landfills that receive oilfield waste streams fall into two categories, Class I (hazardous oilfield waste) and Class II (nonhazardous oilfield waste) industrial landfills. The majority of solid oil and gas waste in Alberta and Saskatchewan is nonhazardous and is disposed of in Class II landfills. In British Columbia, both hazardous and nonhazardous solid oilfield waste is disposed of in secure landfills.

15. Solid waste that has been contaminated with naturally occurring radioactive materials ("**NORM Waste**") can only be disposed of in a landfill licensed to accept NORM Waste. In the WCSB, the only two landfills that can accept solid waste contaminated with NORMs are ~~Tervita's~~ Silverberry landfill in NEBC (formerly owned by Tervita) and Secure's Pembina landfill in Alberta.

16. Standalone disposal wells are used to dispose of produced or waste water.

17. Once produced, the various types of waste streams are trucked to the appropriate type of Waste Services facility. Typically, trucking costs constitute a high percentage of disposal costs and are paid by the oil and gas producer. Therefore, hauling distance is a key factor in a customer's decision as to which facility to send waste. Some oil and gas customers can avoid trucking produced water if they are connected by pipeline to a facility with a disposal well.

18. While oil and gas companies are responsible for the waste produced while drilling for oil and gas, there are a large number of orphaned and abandoned well sites across the WCSB. Regulatory authorities in Alberta, British Columbia and Saskatchewan are responsible for remediation and reclamation for these well sites. They purchase Waste Services to dispose of certain types of waste during the remediation and reclamation process.

19. In 2020, the federal government announced a $1.7 billion stimulus package to help fund the closure of orphan and inactive wells in the WCSB. A portion of these funds will be used to purchase Waste Services that Secure and Tervita ~~currently~~ previously competed to provide. Both Secure and Tervita had publicly referenced the importance of this stimulus package to their future revenues prior to Secure's acquisition of Tervita. An increase in the price of Waste Services will decrease the number of orphaned and abandoned sites that can be remediated and reclaimed pursuant to this stimulus package.

20. In addition to Waste Services, there is a comprehensive portfolio of Environmental Services associated with drilling for oil and gas, including environmental consulting services, solids control, demolition & decommissioning, and equipment rentals. Environmental Management Companies that offer these Environmental Services may also require Waste Services from Tervita or Secure. Tervita and Secure also competed to offer several of the Environmental Services listed above prior to Secure's acquisition of Tervita.

21. The ~~Proposed~~ Transaction ~~will~~ results in Secure owning the vast majority of TRDs, industrial landfills, and third-party standalone disposal wells in the WCSB. No other company who provides Waste Services comes close to having the geographic range and breadth of facilities that Secure now has after acquiring Tervita ~~will have if it acquires Tervita~~.

V. THE RELEVANT MARKETS

A. Relevant Product Market

22. The relevant product markets for assessing the effects of the ~~Proposed~~ Transaction are: (i) the supply of waste processing and treatment services by TRDs; (ii) the disposal of solid oil and gas waste into industrial landfills, (iii) the disposal of produced and waste water into water disposal wells owned by third party Waste Service providers; and (iv) the disposal of NORM Waste into landfills permitted to accept this type of solid waste; ~~and (v) the provision of Environmental Services~~.

23. Customer switching between different types of Waste Services listed above is generally not possible due to federal and provincial regulations that restrict disposal of certain waste streams to certain types of facilities, as well as the technical capabilities of facilities.

24. Caverns can take certain types of waste streams that can be disposed of at TRDs and disposal wells. As such, caverns can be considered a functional substitute for TRDs and disposal wells. There are five operating caverns in the WCSB that accept third-party waste – three ~~are~~ were owned by Tervita, one is owned by White Swan Environmental Ltd. ("**White Swan**") and one is owned by Plains Environmental.

25. Solid NORM Waste can only be disposed of in landfills permitted to accept this type of waste. There are no functional substitutes for the disposal of solid NORM Waste into permitted landfills.

26. Produced water and waste water can only be disposed of in disposal wells.

27. Other waste management options such as on-site storage or bioremediation are not close substitutes for the services provided by landfills, TRDs, and disposal wells. On-site storage for long periods is neither practical nor economically feasible. Bioremediation may only be practical for a narrow range of contaminated soil not impacted by salts, heavy metal, or heavy end hydrocarbons.

28. Environmental Services are not a functional substitute for the provision of Waste Services. Environmental Management Companies may need to purchase Waste Services to offer certain Environmental Services. For example, an Environmental Services Company remediating a well site may need to dispose of contaminated soil in an industrial landfill.

B. Relevant Geographic Market

29. The relevant geographic market for this Application is the aggregated locations of customers for Waste Services in the WCSB that ~~currently~~ previously benefited from the competition between Secure and Tervita. Waste Services customers most affected are located generally in NEBC, Northwestern Alberta, Western Alberta, the conventional heavy oil region, Lloydminster and Kindersley.

30. Suppliers of Waste Services can and do price discriminate among their customers. They identify and charge different prices to customers based on, among other factors, the customer's geographic location. Because transportation costs constrain the ability of customers to haul waste to disposal facilities that are distant from the location where the waste is produced, the geographic location of where the waste is produced is an important factor to determine the price of disposal.

31. Because the Respondent~~s have~~ has the ability to price discriminate, when defining geographic markets it is appropriate to aggregate the oil and gas customers based on ~~their~~ its location and the number of competitive options available to it ~~them~~. Two sets of oil and gas customers that will experience the largest impact from the

~~Proposed~~ Transaction are: (1) those oil and gas customers whose location means that the ~~Proposed~~ Transaction effectively resulted in a merger to monopoly; and (2) those oil and gas customers whose location means that the ~~Proposed~~ Transaction ~~will~~ reduced their competitive options from 3 to 2. Even those oil and gas customers that ~~will~~ have more than two competitive options will still be affected by the ~~Proposed~~ Transaction.

VI. THE ~~PROPOSED~~ TRANSACTION IS LIKELY TO SUBSTANTIALLY LESSEN ~~AND PREVENT~~ COMPETITION

32. The ~~Proposed~~ Transaction ~~will~~ eliminates the competitive rivalry between Secure and Tervita, the two largest suppliers of Waste Services in the WCSB and by far each other's closest competitor. For some customers of Waste Services in the WCSB, the ~~Proposed~~ Transaction will result in a merger to monopoly, as the next closest facility may be hundreds of kilometers away. For example, oil and gas customers with wells between Tervita's Silverberry landfill and Secure's Saddle Hills landfill (now both owned by Secure) would have to travel well over 400 kilometers to get to the next closest third party landfill.

33. Customers ~~are~~ were able to play Secure and Tervita ~~the Respondents~~ off one another to get the best price and the highest quality services. ~~Currently, when a customer switches from one Respondent that will result in a loss of profit to the other Respondent. If~~ Because Secure acquired Tervita, ~~then~~ the profit Secure would have lost from a customer switching to Tervita pre-Transaction will be recaptured, giving Secure an ability to raise prices ~~once it acquires Tervita~~.

34. The removal of Tervita as a competitor coupled with, among other things, high barriers to entry, increased concentration and limited remaining competition, is likely to allow Secure to exercise new or enhanced market power resulting in a likely substantial lessening of competition, to the detriment of Waste Services customers which includes a number of small to medium sized enterprises.

35. The new or increased exercise of market power by Secure is likely to take the form of an increase in prices for Waste Services and/or a decrease in Waste Services service quality. An increase in the price of Waste Services will also likely decrease the number of orphaned and abandoned sites that can be remediated and reclaimed based on the current stimulus package.

36. ~~The Proposed Transaction is also likely to prevent or substantially lessen competition in two additional ways~~.

37. ~~First, Secure has submitted an application to the British Columbia Environmental Assessment Office to construct a secure landfill near Wonowon in NEBC. As of June 2020, Secure's representatives publicly projected that this landfill would be operational by the third quarter of 2021. If it had been opened, this new landfill would have competed with Tervita's Silverberry and Northern Rockies landfills. Competition between these landfills would have likely decreased price and increased quality of service for customers in NEBC. With the Proposed Transaction, Secure no longer plans to open this landfill.~~

38. ~~Second, as described above, Secure will be~~ is ~~by far the largest provider of Waste Services in the WCSB which may be bundled with Environmental Services. Secure will have~~ has ~~the incentive and ability to increase price and/or degrade service quality of Waste Services to Environmental Services competitors who cannot offer bundled services, leading to new or increased market power in the provision of Environmental Services. This will likely lead to higher prices and degraded services for Environmental Services customers.~~

VII. SECTION 93 FACTORS SUPPORT LIKELY SUBSTANTIAL LESSENING ~~AND/OR PREVENTION~~ OF COMPETITION

39. A number of section 93 factors support the conclusion that the ~~Proposed~~ Transaction is likely to lessen ~~or prevent~~ competition substantially in the provision of Waste Services and Environmental Services in the WCSB.

A. Barriers to Entry

40. Secure's dominant position in the provision of Waste Services in certain areas of the WCSB will not likely be constrained by entry or expansion as barriers to building a facility that provides Waste Services are high. Therefore, timely entry by potential competitors is unlikely to occur on a sufficient scale and with sufficient scope to constrain a material price increase.

41. Barriers to entry include regulatory and permitting requirements for establishing a waste disposal site; high capital costs; reputational barriers; high sunk costs; market maturity; and limits on the number of available geologically suitable sites for waste disposal.

42. Secure's entry demonstrates the high barriers to entry. Secure was started in 2007 by former employees and contractors of Tervita. After Secure entered the market, there were multiple lawsuits between Secure and Tervita. Tervita (which, at the time, was called CCS) alleged that a number of its former employees conspired to take Tervita's confidential information and formed Secure for the purpose of taking certain business opportunities from Tervita. Specifically, in its Statement of Claim, Tervita alleged that if Secure had not taken this confidential information Secure would not have been able to establish itself as a competitor as quickly as it did.

43. Finally, given the absolute size of Secure ~~if it~~ after acquiring Tervita, entry is unlikely to occur on a sufficient scale or scope, or within the time required to constrain an exercise of market power by Secure.

B. Removal of a Vigorous and Effective Competitor

44. The ~~Proposed~~ Transaction ~~will~~ eliminates the head-to-head rivalry between Secure and Tervita, who are the two largest providers of Waste Services in WCSB. For a significant number of customers, Secure and Tervita ~~are~~ were the two closest geographic options for Waste Services.

45. Since its creation in 2007, the rivalry between Secure and Tervita had been intense, extending to every aspect of their business leading to better price and

service outcomes for customers of Waste Services. In an effort to win back business that has been lost to Secure, Tervita had, for example, increased spending on promotional items, increased advertising in newspapers and at a public venues, become a sponsor of the Calgary Stampede, and increased spending at client events, such as hockey games and golf tournaments.

46. Tervita had built facilities close to new Secure facilities including its South Grand Prairie landfill, Fox Creek TRD, and Willesden Green landfill. Oil and gas companies ~~would~~ benefited from decreased prices and better service where Secure and Tervita operated facilities in close proximity to each other. The direct competition between these facilities, and others, is eliminated with the ~~Proposed~~ Transaction.

C. Insufficient Effective Remaining Competition

47. There is insufficient remaining competition to constrain an exercise of market power by Secure. The remaining competitors may follow price increases by Secure ~~if~~ as there is one less competitor in the market.

48. As described above, and evident from the maps attached at Appendix 1, no other company comes close to having the facilities to match the geographic scope and product depth of Secure~~ and Tervita~~. Combining the assets of Secure and Tervita ~~would~~ results in one entity owning 62 TRDs, 24 landfills, 3 caverns, and 8 standalone disposal wells in the WCSB. Post transaction, remaining competitors ~~may~~ include:

a. Wolverine Energy and Infrastructure, which operates five TRDs in Alberta and one industrial landfill in Saskatchewan;
b. Aqua Terra Water Management ("**Aqua Terra**"), which operates eight standalone disposal wells – two in British Columbia, five in Alberta, and one in Saskatchewan;

c. Ridgeline Canada Inc., which accepts certain types of solid waste at municipal landfills in Alberta and Saskatchewan;
d. RemedX, which operates one industrial landfill in Breton, Alberta;
e. Catapult Water Midstream ("**Catapult**"), which operates two standalone disposal wells in Alberta and one in British Columbia;
f. Medicine River Oil Recyclers ("**MROR**"), which operates one TRD in Drayton Valley, Alberta; and
g. White Swan, which operates one cavern and one TRD in Alberta.

49. The scope and scale of Secure's operations after it acquired Tervita, including the breadth of its facility infrastructure, ability to service multiple well sites for larger customers, diverse customer relationships, and organizational advantages, provides a significant advantage over its rivals. Rival firms are unlikely be to be able to constrain an exercise of market power following the ~~Proposed~~ Transaction.

50. Some municipal landfills may accept volumes of contaminated soil and drill cuttings. However, the volume of this type of waste accepted by municipal landfills is insignificant relative to the volumes of contaminated soil and drill cuttings produced in the WCSB and collected by Secure and Tervita at their landfills prior to the acquisition. Municipal landfills are often not located as close to oil and gas wells as the Respondent's landfills.

51. Oil and gas producers may have internal waste disposal capabilities. Even oil and gas producers that have some self-disposal capacity still rely on third party water disposal wells, TRDs and landfills to dispose of their waste. Facilities owned by oil and gas producers are generally not permitted to offer Waste Services to other third parties. Waste Services are not the core competencies of oil and gas customers who prefer to use their capital to produce oil and gas.

52. Oil and gas customers do own and operate a number of water disposal wells that can receive water produced in the ordinary operation of a well. However, even oil and gas customers that operate their own water disposal wells typically need third

party water disposal wells because their own wells cannot handle the volume of water that is needed to complete the drilling of a well. As well, these oil and gas customers may not have internal water disposal capacity available for all of their well locations, and must rely on third party disposal capacity from vendors such as the Respondent~~s~~.

53. Secure and Tervita ~~are~~ were by far the largest third party operators of water disposal wells. In February 2021, Secure and Tervita combined to inject over 20,000 cubic meters of waste water. By comparison, in that same month, the next three largest competitors (Aqua Terra, MROR, and Catapult) combined to inject less than 6,000 cubic meters.

VIII. RELIEF SOUGHT

54. As described in detail above, the ~~Proposed~~ Transaction is likely to result in a substantial lessening and/or prevention of competition in many different relevant markets across the WCSB. Therefore the Commissioner requests the relief sought in the Notice of Application above.

DATED AT Ottawa, Ontario, this 29th day of June, 2021

Original signed by Matthew Boswell

Commissioner of Competition

SCHEDULE "A" – CONCISE STATEMENT OF ECONOMIC THEORY

1. Secure and Tervita competed vigorously to provide Waste Services in the WCSB prior to the Transaction.

2. The development, operation, remediation and reclamation of oil and gas wells produces various forms of waste that depending on the wastes composition must be disposed of at a specialized facility. These services are not functional substitutes for each other. Therefore, relevant product markets are (i) the supply of waste processing and treatment services by TRDs; (ii) the disposal of solid oil and gas waste into industrial landfills; (iii) the disposal of produced and waste water into water disposal wells owned by third party Waste Service providers; and (iv) the disposal of NORM Waste into landfills permitted to accept this type of solid waste.

3. A functional substitute for some Waste Services at these facilities would be disposal in caverns, as such caverns can be considered substitutes in the relevant product market for TRDs and disposal wells. A hypothetical monopolist of any of these four types of services could profitably impose a small but significant and non-transitory price increase.

4. Suppliers of Waste Services price discriminate among their customers. They identify and charge different prices to customers, based on, among other factors, the customer's geographic location. Because transportation costs constrain the ability of customers to haul waste to disposal facilities that are distant from the location where the waste is produced, the geographic location of where the waste is produced is an important factor to determine the price of disposal.

5. Therefore, the relevant geographic market is the aggregated locations of customers for Waste Services in the WCSB that ~~currently~~ previously benefited from the competition between Secure and Tervita. Waste Services customers most

affected are located in NEBC, Northwestern Alberta, Western Alberta, the conventional heavy oil region, Lloydminster and Kindersley.

6. The ~~Proposed~~ Transaction causes the loss of competition between Secure and Tervita for Waste Services, ~~likely~~ increasing prices and decreasing the quality of Waste Services. Secure and Tervita ~~are~~ were by far the two largest suppliers of Waste Services in the WCSB and each other's closest competitor. The ~~Proposed~~ Transaction will increase the ability for the merged entity to raise prices, since profit that would otherwise have been lost by customers' ability to switch between ~~the Respondents'~~ Secure and Tervita's competing facilities will be recaptured by the merged firm.

7. Entry or expansion by competitors is unlikely to occur in a timely and sufficient manner due to high barriers to entry. The barriers to entry faced by a potential entrant include regulatory and permitting requirements, high capital costs, reputational barriers, high sunk costs, market maturity, and limits on the number of geologically suitable sites for waste disposal.

8. The remaining competition, including any competition from customers' ability to leverage or build its own facilities, ~~would~~ is not likely to be an effective constraint on an exercise of market power by ~~if~~ Secure ~~acquires Tervita~~.

9. The ~~Proposed~~ Transaction increases concentration for the provision of Waste Services in the WCSB.

10. Based on the above, it is likely that the ~~Proposed~~ Transaction ~~would~~ provides Secure with a new or increased ability to exercise market power. Therefore, the ~~Proposed~~ Transaction will likely lead to a substantial lessening of competition for the provision of Waste Services in WCSB.

11. ~~The Proposed Transaction is also likely to prevent competition for the disposal of solid waste into industrial landfills in NEBC. But for the Proposed Transaction,~~

~~Secure would have opened an industrial landfill in NEBC in competition with Tervita's Silverberry and Northern Rockies landfills. This new competition would have likely decreased prices and increased quality of service for customers in NEBC. With the Proposed Transaction, Secure no longer plans to open this landfill.~~

12. ~~The Respondents~~ Secure and Tervita ~~also compete~~d ~~to provide Environmental Services. Environmental Services include environmental consulting services, solids control, demolition & decommissioning, and equipment rentals~~.

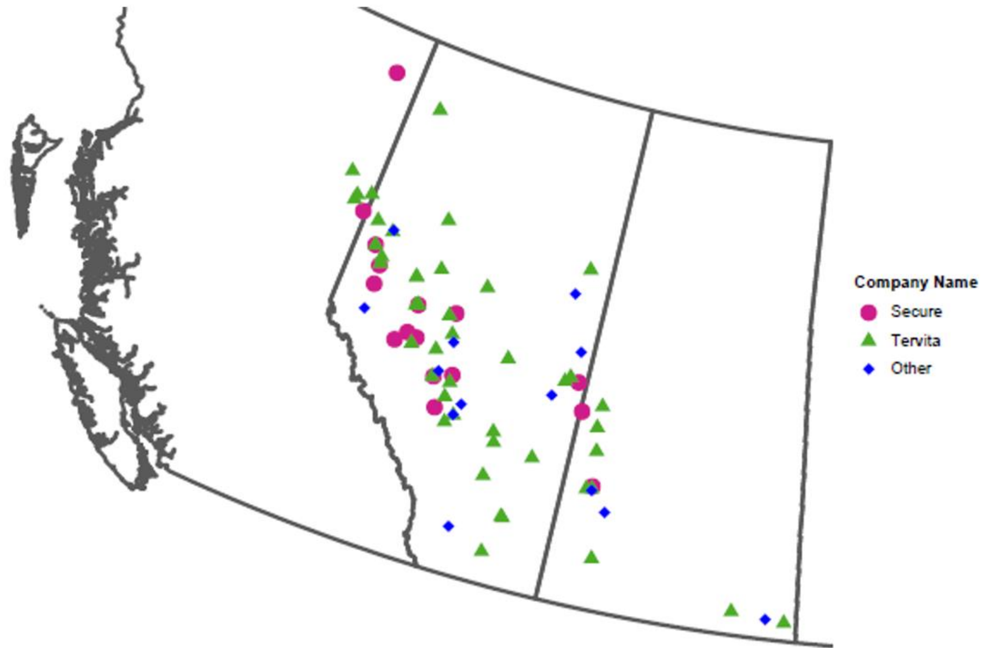
13. ~~Certain Environmental Services require access to facilities that provide Waste Services. For example, an Environmental Services Company remediating a well site may need to dispose of contaminated soil in an industrial landfill.~~

14. ~~As described above, the Proposed Transaction provides Secure with the ability to exercise market power in the provision of Waste Services in certain areas of the WCSB. Secure will have~~ has ~~the ability and incentive to extend its dominance in Waste Services to i) foreclose rival Environmental Services providers from accessing Secure's Waste Services and/or ii) drive customers to use Secure's Environmental Services through bundling with Waste Services.~~

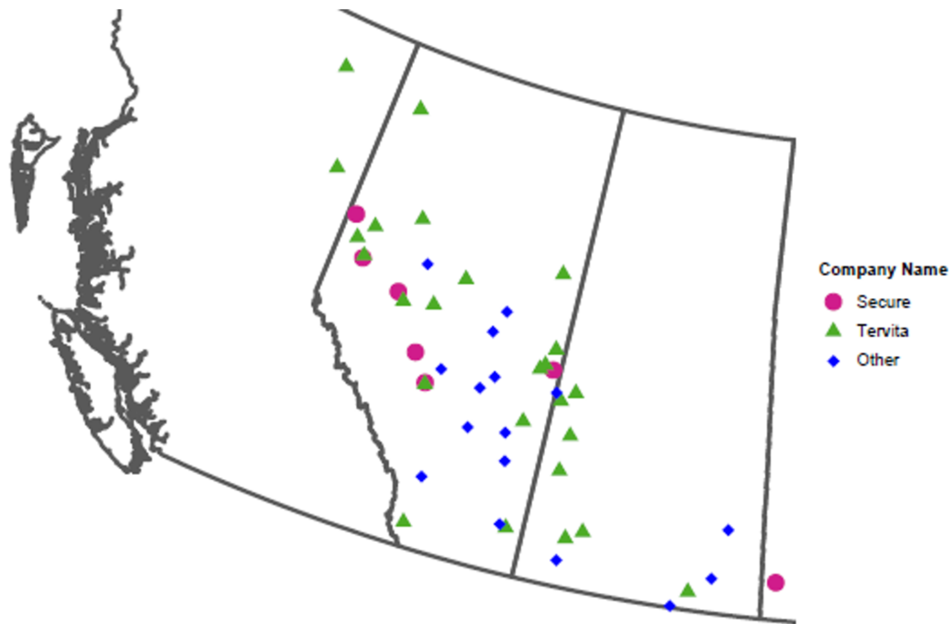
15. ~~This will result in a likely substantial lessening of competition for the provision of Environmental Services. Oil and gas companies will likely pay higher prices or receive decreased quality of service for Environmental Services.~~

Appendix 1

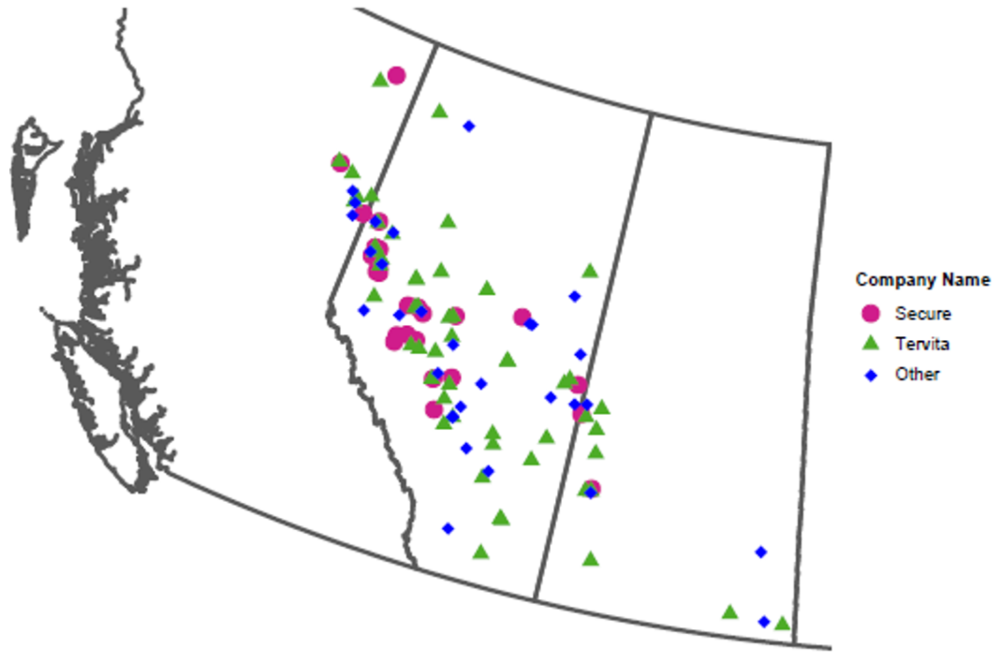
Map of TRD facilities operated by Tervita, Secure, and competitors in the WCSB



Map of landfill facilities operated by Tervita, Secure, and competitors in the WCSB



Map of water disposal facilities operated by Tervita, Secure, and competitors in the WCSB



File No. / Dossier no. CT-2021-002

COMPETITION TRIBUNAL

IN THE MATTER OF the *Competition Act*, R.S.C., 1985, c. C-34 as amended;

AND IN THE MATTER OF the acquisition by SECURE Energy Services Inc. of Tervita Corporation;

AND IN THE MATTER OF an application by the Commissioner of Competition for one or more orders pursuant to section 92 of the *Competition Act*.

BETWEEN:

THE COMMISSIONER OF COMPETITION

Applicant

- and -

SECURE ENERGY SERVICES INC.

Respondent

BEFORE:

The Honourable Mr. Chief Justice Paul Crampton	**Presiding**
The Honourable Mr. Justice Denis Gascon	**Member**
Dr. Ted Horbulyk	**Member**

HELD VIA VIDEOCONFERENCE

18 May 2022

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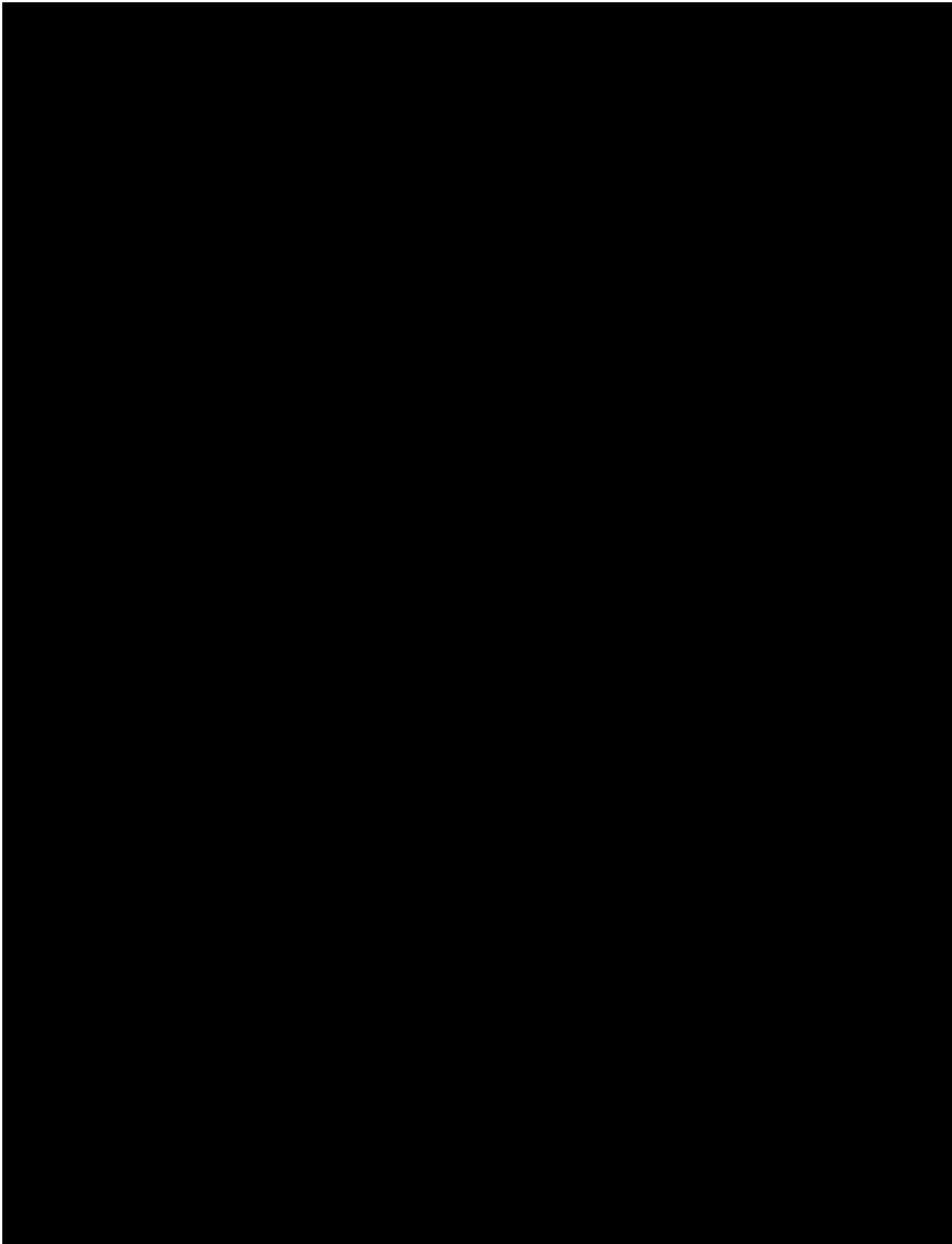

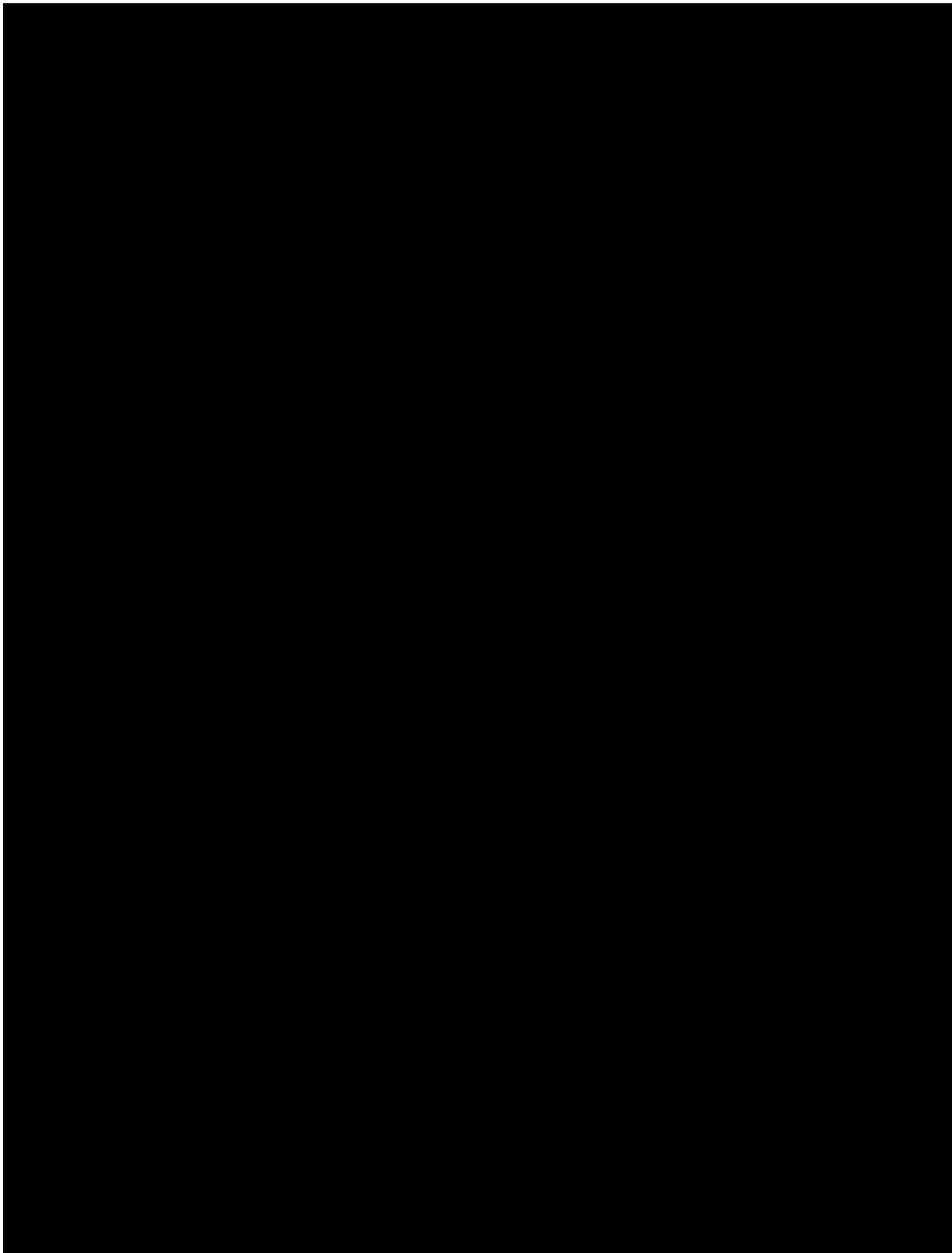

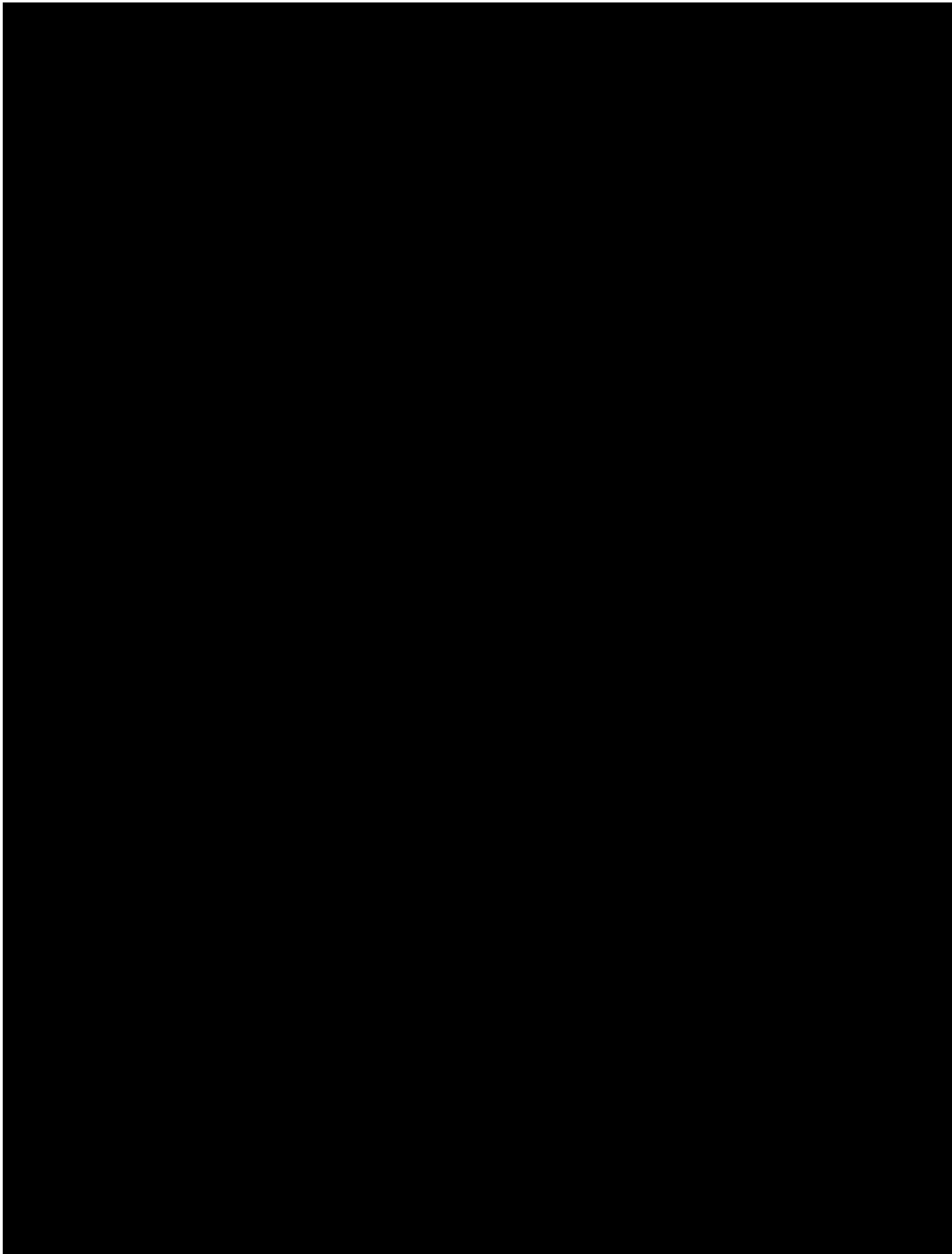

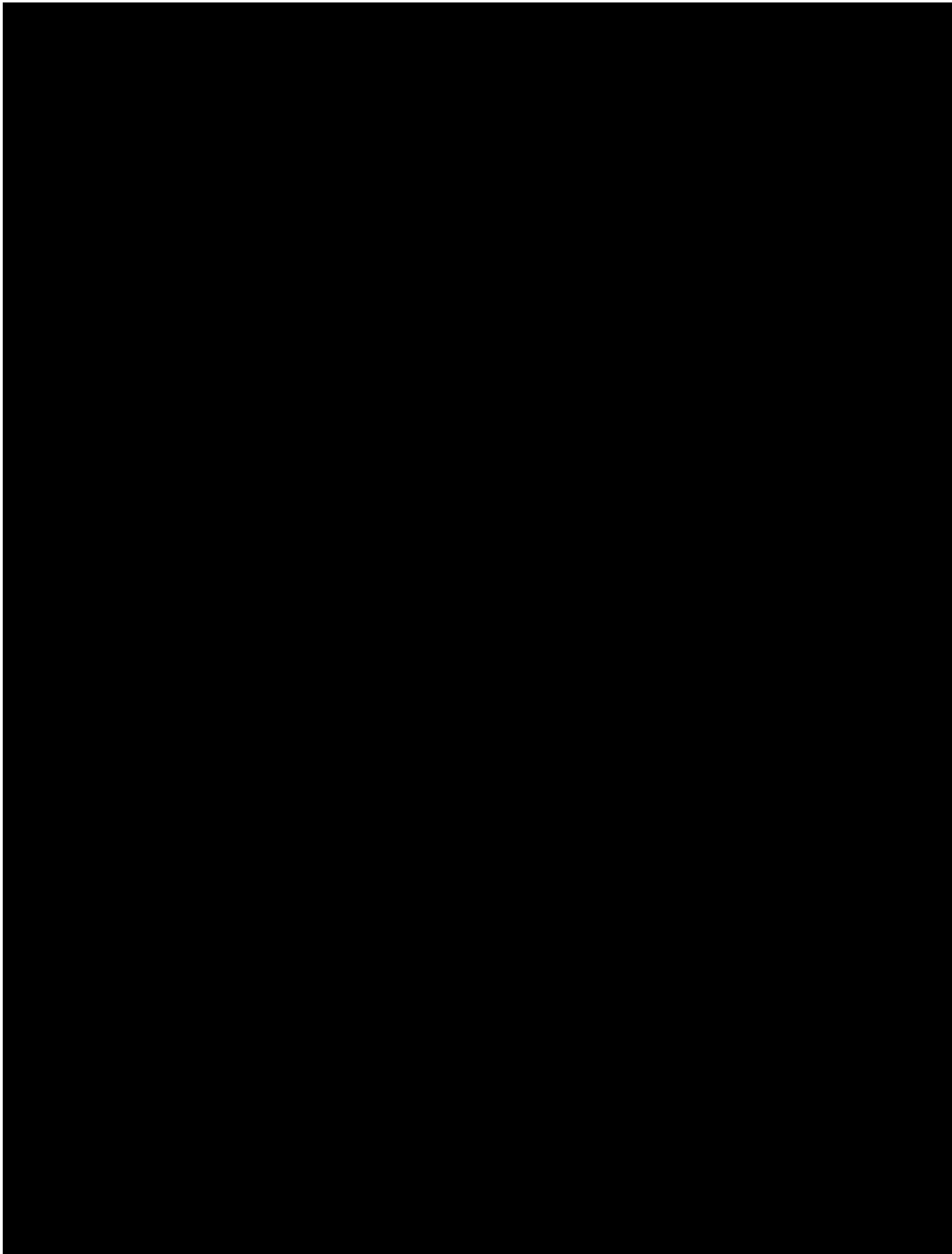

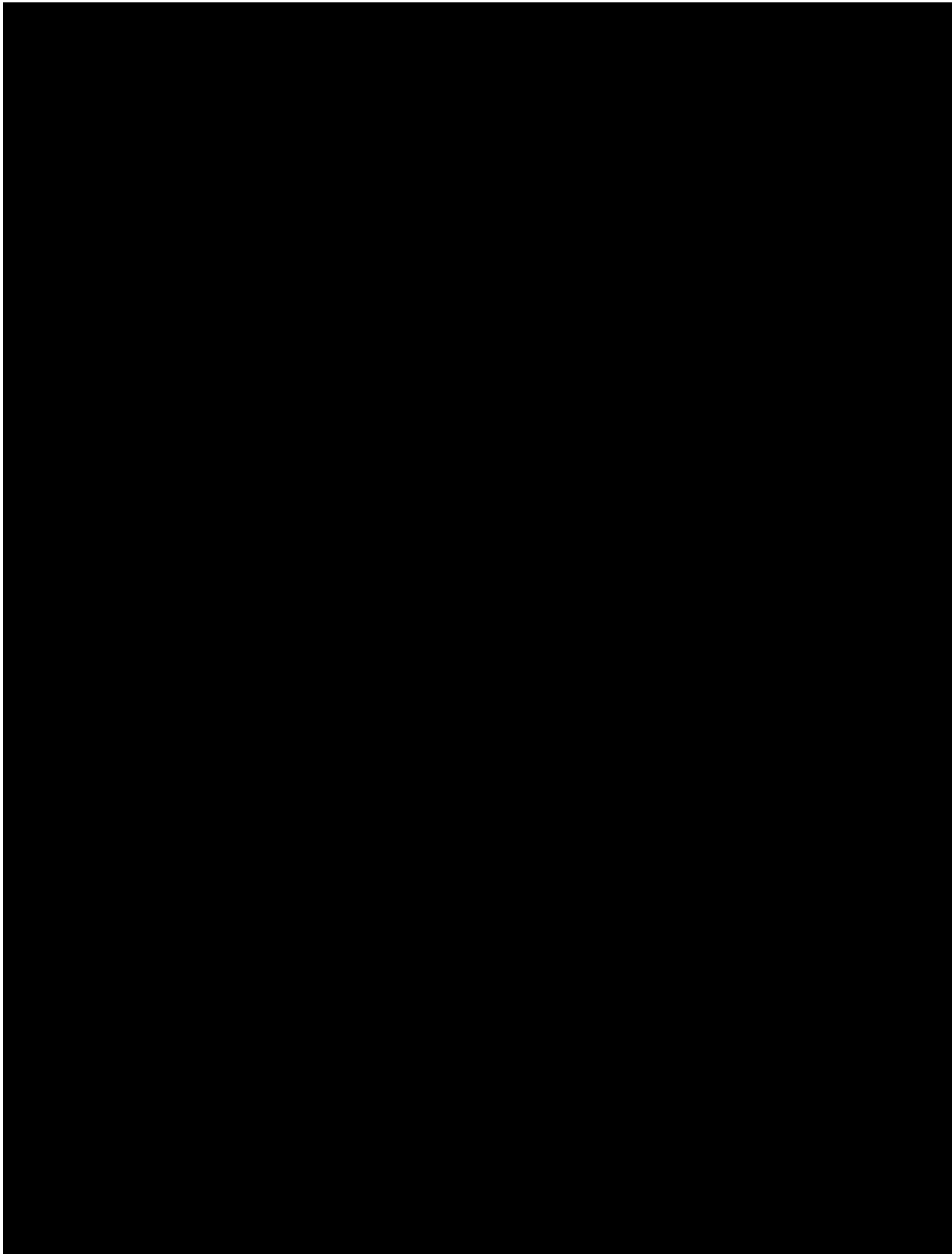

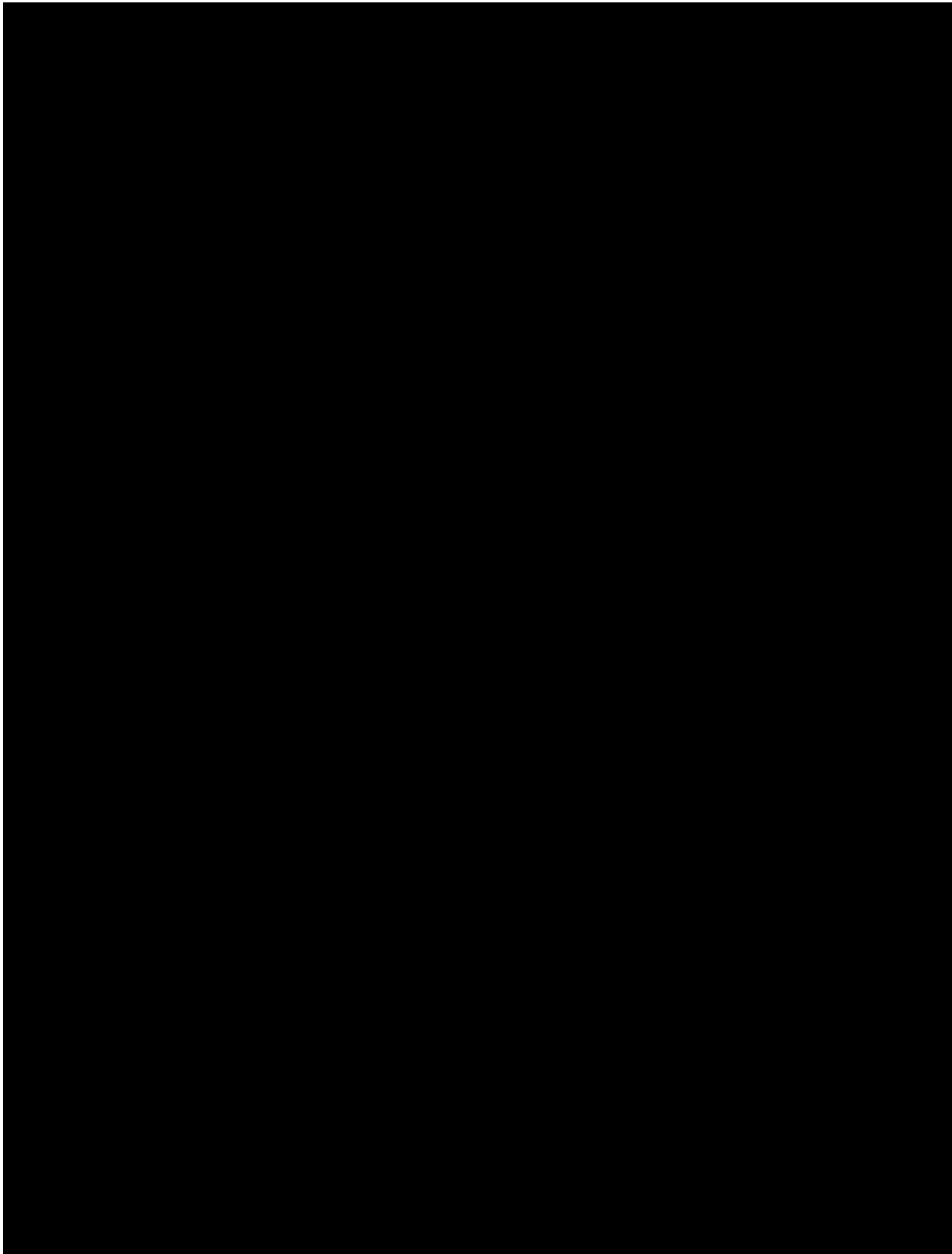

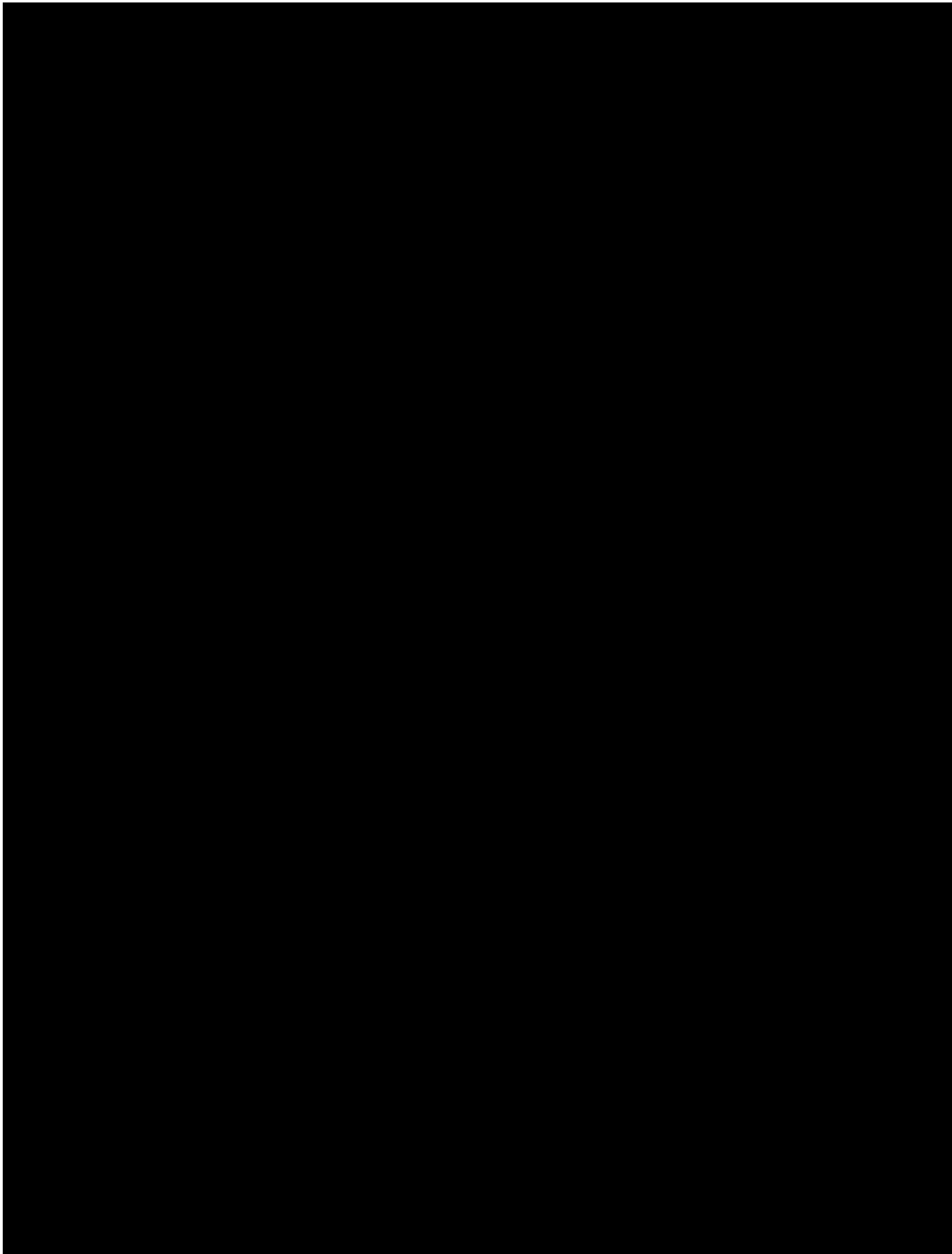

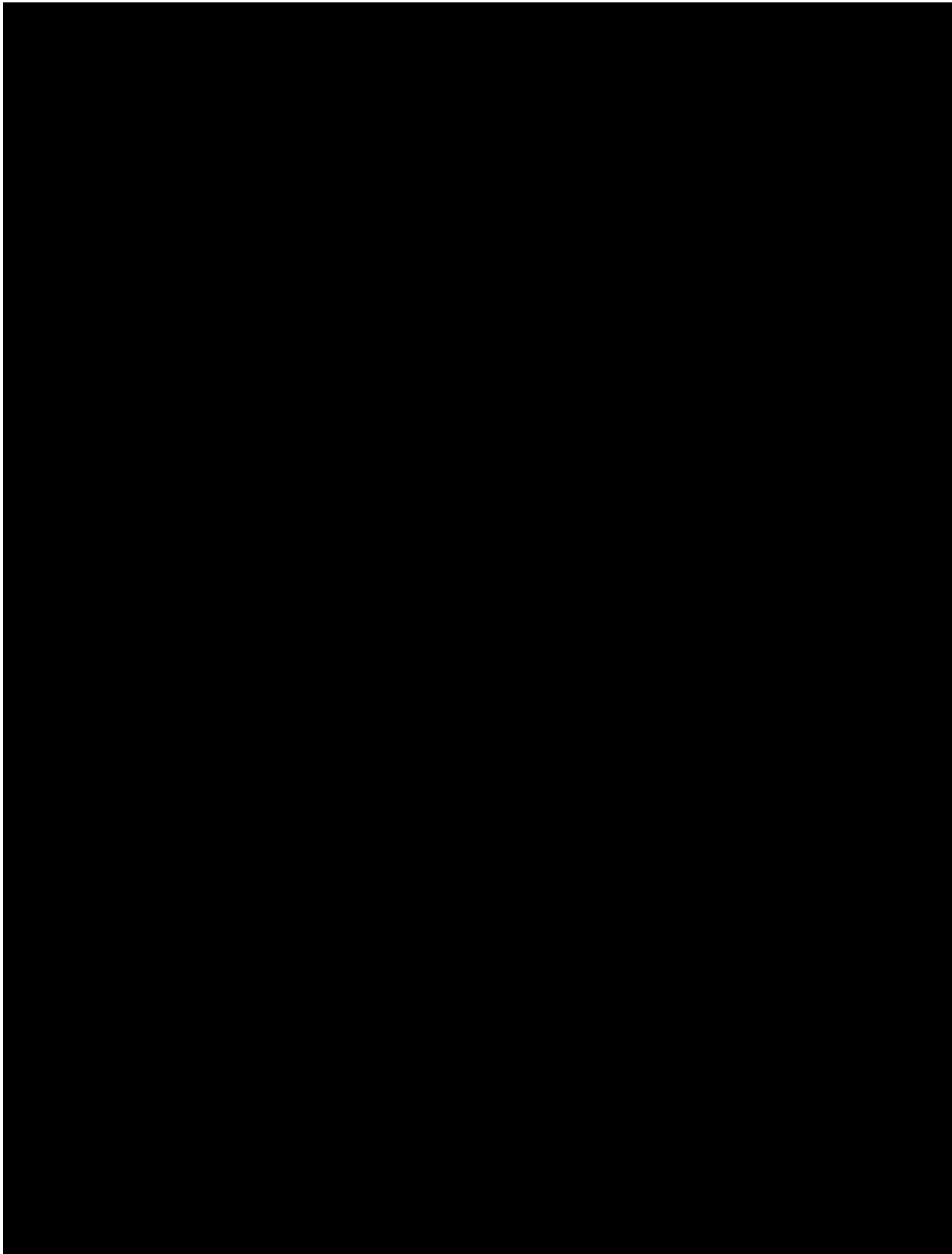

1 --- Upon resuming at 10:34 a.m. /
2 Reprise à 10 h 34
3 **DEPUTY REGISTRAR:** I can confirm we are now in
4 a public session.
5 **MS. HENDERSON:** Thank you very much, Madam
6 Registrar.
7 I want to turn away from pricing to discuss
8 integration planning, that is, you spoke about your role in
9 planning the integration of the former Tervita business
10 into Secure's operations.
11 Specifically, can you just summarize for the
12 Tribunal how Secure approached the issue of facility
13 rationalization?
14 **MR. ENGEL:** Sure. And I'll start with the
15 underlying driver for the transaction was that, you know,
16 our industry -- call it this midstream industry sector --
17 was significantly overcapitalized. So there was a lot of
18 facilities that had been built out probably largely leading
19 up to 2014, and with that seismic change in level of
20 investment and activity, utilization of most of these
21 facilities was quite low. Lots of cases, you know, between
22 10 and 40 percent utilized. And with their high fixed
23 costs, that's really a problem.
24 So the approach -- the approach for the
25 integration really started with taking a look at

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BETWEEN

THE COMMISSIONER OF COMPETITION

Applicant

\- and -

SECURE ENERGY SERVICES INC.

Respondent

AFFIDAVIT OF DAVID ENGEL
(Affirmed March 25, 2021)

I, David Engel, of the City of Calgary, in the Province of Alberta,

AFFIRM AND SAY:

11. The WCSB's production can be divided into heavy oil production (the majority of which is produced in the oil sands), and light or conventional oil. Approximately 77% of total production is heavy oil, and 23% is light or conventional oil. SECURE's outlook is that most future growth of WCSB production is expected to come from heavy oil production.

12. SECURE's oil driven activity is driven primarily by conventional production activity and has lower exposure to heavy oil production. SECURE had no assets which directly served oil sands pre-Transaction,[1] and acquired only a small number of oil-sands assets in the Transaction. SECURE's outlook on the future growth of WCSB output is that most growth is expected in heavy oil. SECURE management analyzes expected growth in conventional oil on a regional basis, and expects growth in certain areas, but not others.

13. WCSB conventional activity is traditionally driven by natural gas production. 85 of 223 rigs currently active are drilling for gas (38%). Of the 138 rigs (62%) currently drilling for oil, 45 are drilling for heavy oil (20%), leaving only 93 42% of all active rigs drilling for conventional oil. Attached as Exhibit 12 to my affidavit is an RBC Capital Markets equity research report summarizing the active rig count in the WCSB.

14. I am informed by counsel that the Competition Bureau's investigation and Commissioner's application identifies concerns with respect to (i) landfills; (ii) waste disposal at TRDs and full-service terminals ("**FST**s"); and (iii) produced water disposal. These service lines together represent only [redacted] percent of the former Tervita business's revenues for 2020.

---

[1] A small number of SECURE facilities received waste volumes from the oil sands region (Athabasca and Tulliby), however these constituted a small portion of the facilities' total volumes.

to third-party competitors. In areas where SECURE facilities are the closest facilities to customer sites, third-party competition remains a constraint. Attached as Exhibits 54 to 61 of my affidavit are internal SECURE (and formerly Tervita) communications and documents that demonstrate the extent to which third-party competitors – including Medicine River Oil Recyclers ("**MROR**"), Aqua Terra, Catapult, Clean Harbors, RemedX and municipal landfills – are a competitive constraint.

66. Second, many of SECURE's customers are large, sophisticated oil and gas producers with significant buyer power. That power is derived from the volume of business that they provide to SECURE, their ability to punish any attempted price increases across multiple product lines and geographies by diverting volumes either to third-party competitors or through self-supply.

67. Nearly all SECURE's revenue comes from servicing producers that utilize multiple facilities and multiple waste disposal services. SECURE faces high fixed costs to operate facilities; ensuring a steady volume of waste to process is critical to their profitability. The volume of waste that these customers provide to the facilities, the incremental volume they could provide, and the risk of losing volume across products and facilities provides customers with significant bargaining leverage.

68. In addition, due to contraction in the oil and gas sector, SECURE's waste and landfill facilities are highly underutilized, with average utilization of less than [redacted] with some facilities below [redacted] for both 2020 and 2021 for legacy SECURE sites. Maintaining waste volumes from customers is critical to SECURE's business.

81. SECURE has been able and will further be able to improve its level of service following the Transaction due to synergies with the former Tervita business. Most notably:

a [redacted]

[5] SECURE generally considers trucking costs to be [redacted] km per m3 on average.

d) *Single Point of Contact:* Customers who were previously using both SECURE and Tervita facilities now have a single point of contact at SECURE. Post-Transaction, it is more efficient for customers to receive quotes, book disposal, and track volumes through SECURE's expanded facility network. SECURE's expanded capacity also reduces uncertainty for customers regarding whether sufficient capacity exists across multiple facilities, as SECURE can provide faster quotes and capacity estimates across its expanded facility network. This is critical for customers with time-sensitive disposal needs such as in the case of spills or pipeline breaks, which also provides ESG benefits.

e) *Redeployment of Assets to Improve Capacity:* SECURE is able to redeploy equipment from closing facilities to remaining facilities in its expanded network, which increases the capacity and throughput of these facilities (e.g., through the installation of centrifuges at FST or SWD facilities).

f) *Sharing of Best Practices*: SECURE is improving its operational excellence by applying best practices from both SECURE and Tervita across all combined facilities. Examples of these best practices are:

i. Waste placement and leachate management practices to prevent waste instability learned by Tervita through their longer lifecycle experience with landfills have been shared and adopted by SECURE. This will reduce the risk of large-scale repairs at the former SECURE landfills, which have historically cost between [redacted] to fix.

ii. Chemical Injection Programs: SECURE has a more robust chemical injection program which helped disposal wells operate more at their maximum steady state. This practice is being implemented at former Tervita facilities and improving the throughput and operational efficiency of these sites.

iii. Best practices for waste unloading and placement developed by SECURE that is being implemented at former Tervita landfills, which has resulted in ability to handle more waste types and larger volumes without requiring additional staff or extra or unnecessary equipment, resulting in less customer interruptions and reduced wait times, trucking and emissions. For example, SECURE has been able to reduce the amount of heavy equipment such as bulldozers and

excavators at former Tervita landfills, with over [redacted] in equipment being redeployed or sold.

iv. Adoption by former SECURE sites of legacy Tervita landfill capping practices, [redacted] This strategy is more effective than SECURE's [redacted] and has created immediate expense savings and allows waste to stabilize prior to final capping to reduce potential repairs to clay capping. Attached as Exhibit 179 to my affidavit is a presentation on the benefits of Tervita's staged capping strategy.

v. Employing SECURE's best practices at former Tervita sites, as well as having a more experienced regulatory group following the Transaction, enables SECURE to ensure regulatory compliance with regulators like the Alberta Energy Regulator.

g) *Landfill Capacity Benefits*: Given the expanded volumes SECURE is processing at its landfills post-merger, it is able to benefit from building landfill cells adjacent to each other, as opposed to being separate (one cell at a SECURE facility, and a second at a Tervita facility). The adjacency of landfill cells provides greater capacity over the same footprint due to the ability to share "airspace" between the two adjacent cells (i.e., the ability to fill in the vertical space between piles of waste in each adjacent cell). This

improves capital efficiency and reduces the amount of leachate collected by the cells, reducing expenses.

h) *Optimized Landfill Capacity:* SECURE can now more accurately invest in landfill capacity to respond to market demand. Prior to the Transaction, there was significant overcapitalization in landfill capacity in the WCSB, as both SECURE and Tervita were required to construct sufficient capacity to credibly bid for larger contracts, much of which went unused. Post-Transaction, SECURE can optimize landfill size to accommodate the market's need, while reducing total capital spend and leachate generation costs. SECURE will also benefit by being able to construct larger cells due to increased volumes, which can absorb higher volumes in a shorter time period-post merger, further reducing costs.

i) *Improved Capital Planning:* With the additional scale and financial stability generated by the Transaction, SECURE is now able to pursue capital investment programs to improve efficiencies and reduce costs, which were not feasible prior to the Transaction. Tervita had not been actively pursuing certain capital and maintenance projects recently, and SECURE is undertaking those projects now. For example,

82. The Transaction also improves SECURE's financial stability, enabling it to continue to dispose of its customers' waste in an environmentally safe fashion in full compliance with provincial regulations and to engage in the necessary long-term monitoring and containment of its customer's waste. Oil and gas producers retain responsibility and potential liability for their waste, even after it is disposed of by third parties, and face significant reputational risk if their waste is not disposed of properly and causes environmental harm. This risk to customers would be exacerbated in the event that their third-party waste disposal supplier faces financial distress or bankruptcy. SECURE's improved financial stability and longevity from the Transaction are significant benefits to customers for this reason.

TERVITA/NEWALTA TRANSACTION

83. On March 1, 2018, Tervita and Newalta entered into an arrangement agreement to amalgamate the businesses of Tervita and Newalta (the "**2018 Newalta Transaction**").

84. Similar to Tervita, Newalta was a midstream oil and gas services provider focusing on waste disposal and related services in Western Canada. As the price of oil fell after 2014 and drilling activity slowed, Newalta's financial position deteriorated rapidly. It suffered significant financial losses in the years leading up to the 2018 Newalta Transaction.

85. Similar to the Tervita-SECURE Transaction, Tervita's amalgamation with Newalta sought to achieve significant efficiencies by eliminating redundancies in the parties' combined

Sierra, Spirit River bio pad, Unity landfill, West Stoddard, Willow Creek landfill, and Zama TRD.

b) *Partially Suspended*: Brooks West, Fort St. John, Gull Lake landfill, Kindersley East, Kindersley landfill, Rainbow Lake landfill, and Valleyview West.

90. I am informed that these suspensions and the other synergies achieved through the 2018 Newalta Transaction have saved the combined entity approximately C$45 million annually. Attached as Exhibit 182 to my affidavit is a synergies tracking document created by Tervita following the Tervita/Newalta acquisition. Attached as Exhibit 183 to my affidavit is a reconciliation of former Newalta product and service categories with those of SECURE.

SECURE FINANCIAL AND P&L STATEMENTS AND LIFETIME FACILITY COSTS

91. SECURE tracks certain operating costs and revenues at a facility level, which are recorded in "profit and loss" statements for each facility ("**P&Ls**"). Facility revenues are comprised of payments made by customers for the waste, water, and solid disposal, as well as oil handling, treating, and processing (depending on the facility). SECURE also tracks costs at a facility level, including wages and salary expenses (including training, overtime, and benefits), facility expenses (including expenses for tanks, centrifuges, pumps, office expenses, safety equipment, maintenance, etc.), utilities, trucking and disposal charges, equipment rentals, costs for purchasing supplies such as fuel, chemicals, safety supplies, as well as compliance and regulatory costs, IT costs, insurance, and taxes.

92. The purpose of SECURE's facility-level P&Ls is to track and assess the operating costs and revenues of a facility to inform business decisions with respect to the facility**.** Facility P&L's feed into SECURE's broader financial tracking and reporting and are one of many pieces required to create an accurate financial report on the performance of the business. SECURE does not use facility P&Ls or other financial statements to measure or calculate a customer's valuation of the service it is purchasing, nor is SECURE able to do so.

93. Variable margins of facilities can vary from year to year, while the services provided at the facilities remain unchanged. Many external factors can influence the variable margin of a facility for a given year, including weather events (e.g., high rain volumes can increase leachate costs for landfills), one-time cleaning costs (for example, a wax clean-out or other maintenance events, such as a well flushing), or any other large sustaining expenditures that do not meet the definition of a capital expense. Increases in any of the costs outlined above (e.g., fuel costs, input costs, wages, trucking costs, etc.) will also impact the variable margin of any facility from year to year, with no change to the services provided to customers.

94. Facility-based P&L statements do not accurately capture or reflect the true cost of constructing, owning, or operating a facility, or its long-term profitability; these costs are critical to SECURE's evaluation and accounting of the viability and profitability of its facilities. Many costs associated with a given facility are tracked by SECURE centrally, and are not reflected in individual, facility-level financial statements. Others may be reflected as capital costs (i.e., depreciation or depletion), and may not be reflected in a facility's variable margin, depending on how it is calculated. Put another way, any variable

margin or profitability calculation created using facility-level P&L data does not accurately reflect a facility's profitability.

95. There are several forms of costs that may not be reflected in a variable margin based on facility level P&L's, depending on how it is calculated. Key buckets of such costs include:

a) *Upfront capital costs*: waste disposal facilities (SWDs, FSTs, terminals, landfills, etc.) require up front capital investments to open. These can include (i) land purchase costs; (ii) regulatory and legal fees; and (iii) capital costs of constructing the facilities themselves. These costs would be included as depreciation expenses on facility-level P&L's**,** and factor into SECURE's assessment of the long-run profitability of constructing a facility.

b) *Periodic capital costs*: facilities require ongoing capital investments to maintain their operations. Examples of this include landfill cell capping costs, the cost of constructing new cells when cells are filled, maintenance and flushing of disposal wells, etc. These costs may be characterized as either a capital cost or a one-time expense depending on their nature (and according to the IFRS rules of accounting, which SECURE follows for the preparation of its financial statements) and may not be reflected in the variable margin of a facility based on P&L data alone.

c) *End of life capital costs*: all facilities carry "end of life" remediation costs (commonly called asset retirement obligations ("**ARO**"), which

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AND IN THE MATTER OF an Application by the Commissioner of Competition for an order pursuant to section 92 of the *Competition Act***.**
BETWEEN:

THE COMMISSIONER OF COMPETITION

Applicant

\- and -

SECURE ENERGY SERVICES INC.

Respondent

AFFIDAVIT OF CHRIS HOGUE
(Sworn March 24, 2022)

I, **CHRIS HOGUE**, of the City of Calgary, in the Province of Alberta, **MAKE OATH AND SAY**:

1. I am the Senior Vice President, Canada at International Petroleum Corp. ("**IPC**") and President of IPC Canada Ltd. ("**IPC Canada**"). As such, I have knowledge of the matters contained in this affidavit. Where I rely on information received from others, I state the source of that information and believe it to be true.

2. I joined IPC in my current role in 2018 following IPC's acquisition of BlackPearl Resources Inc., where I served as Vice President, Operations. I have over 25 years of diversified heavy oil experience.

3. IPC Canada supports the merger of SECURE Energy Services Inc. ("**SECURE**") and Tervita Corporation ("**Tervita**") (the "**Transaction**"). I wrote a letter to Rene Amirault,

9. With or without the Transaction, IPC Canada would have taken the vast majority of its waste to SECURE facilities for disposal. The reason for our decision to routinely go with SECURE is that it is consistently our most cost-effective option, due primarily to the proximity of SECURE's facilities to our operations. Transportation costs are the primary driver of IPC's decision of where to dispose of our waste. Based on my own experience, SECURE strategically constructs facilities close to its customers operations for this reason. For example, when SECURE wants to build a new landfill or facility, it seeks feedback from producers, especially staff in the field, to ensure that it is choosing a location that would be good for them.

THE TRANSACTION

A. The Importance of a Financially Stable Waste Disposal Provider

10. Prior to the Transaction, IPC Canada was concerned that the clock was ticking on SECURE and Tervita and, the way the business was going, one or both of them would not have survived. The Canadian oil and gas industry has faced significant challenges over the last several years and producer activity (i.e., new drilling, well workovers, recompletions, and optimization) has been limited and declining due to numerous years of a challenging pricing environment. This reduced activity directly impacts service companies like SECURE and Tervita, and we were concerned that both SECURE and Tervita were losing money. SECURE today is a financially stronger partner for IPC Canada and other producers in the Western Canadian Sedimentary Basin ("**WCSB**") because of the Transaction.

11. Financial stability in a waste disposal service provider is important for multiple reasons. First, producers want to partner with a company that is focused on sustainability and managing waste in a way that has less environmental risk. A financially strained waste disposal services provider could go out of business or cut corners by disposing of waste in a manner that

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BEFORE:

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The Honourable Mr. Justice Denis Gascon	**Member**
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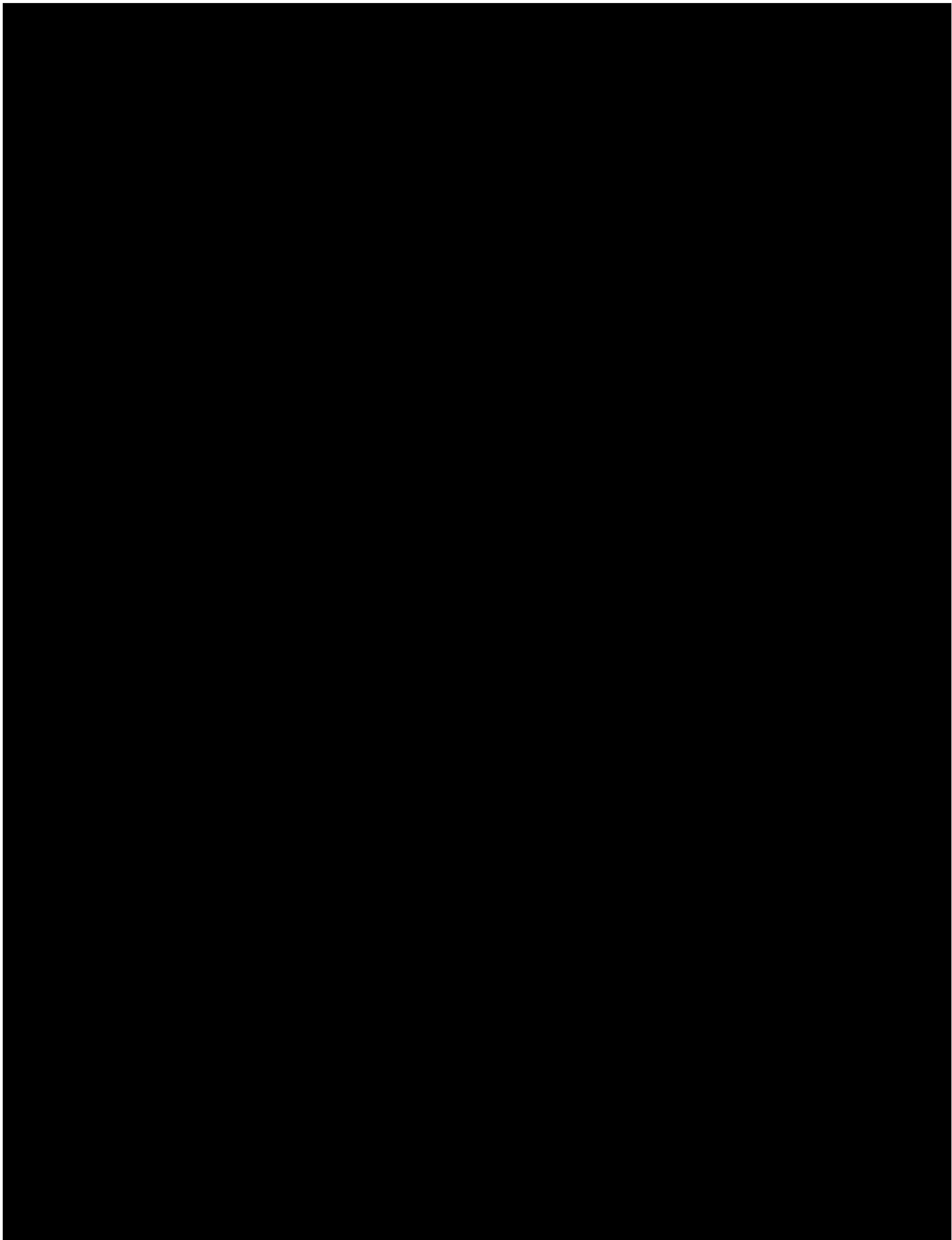

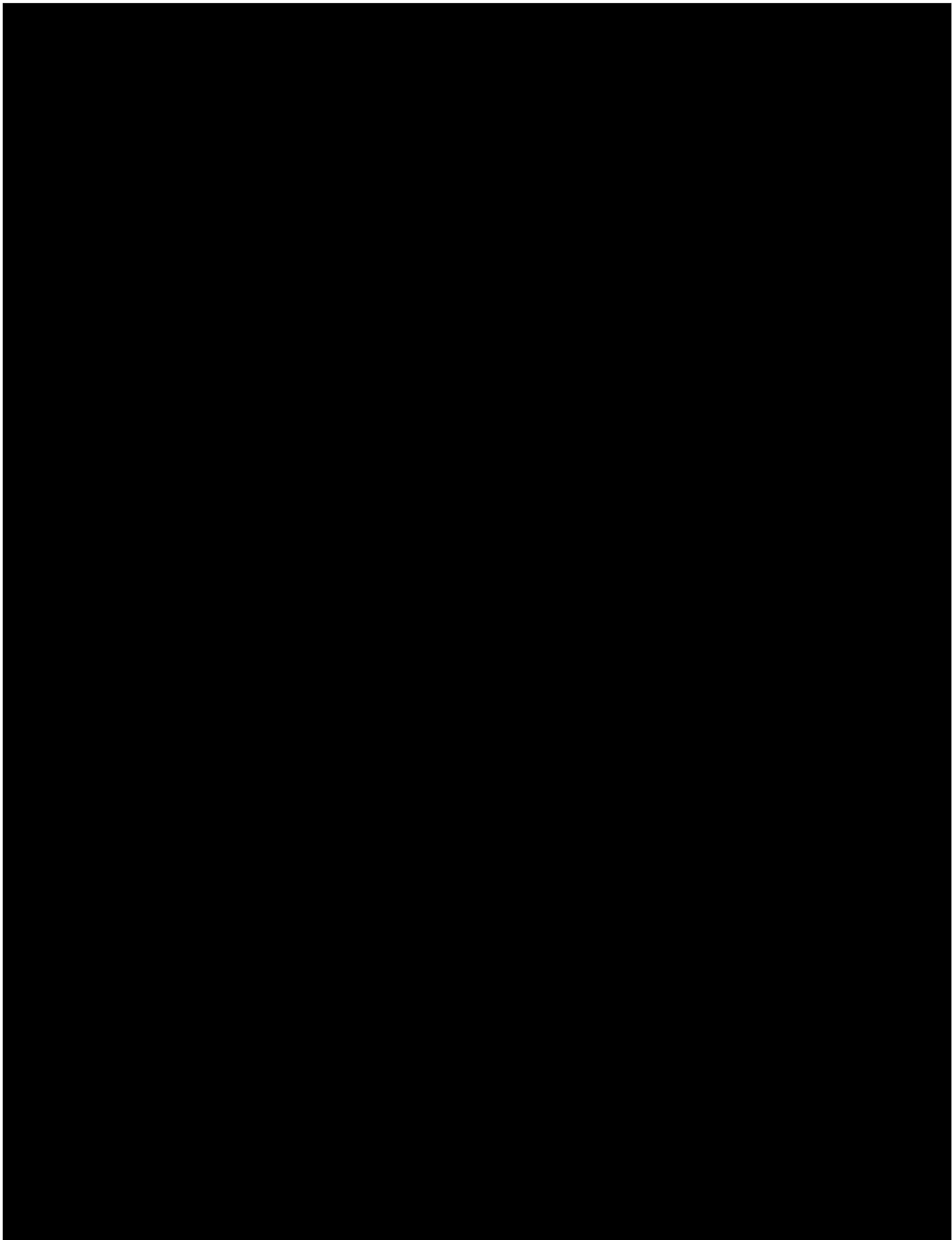

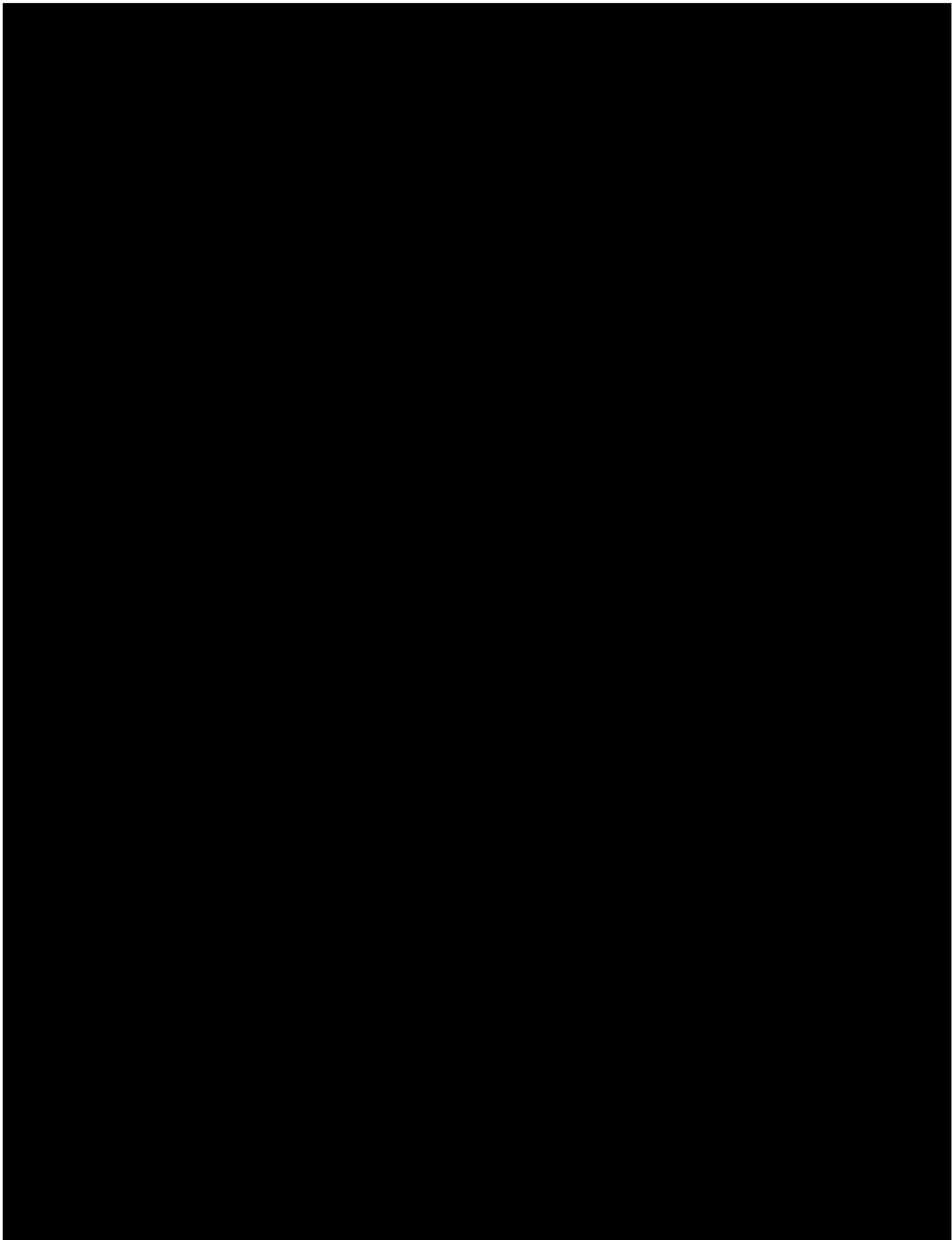

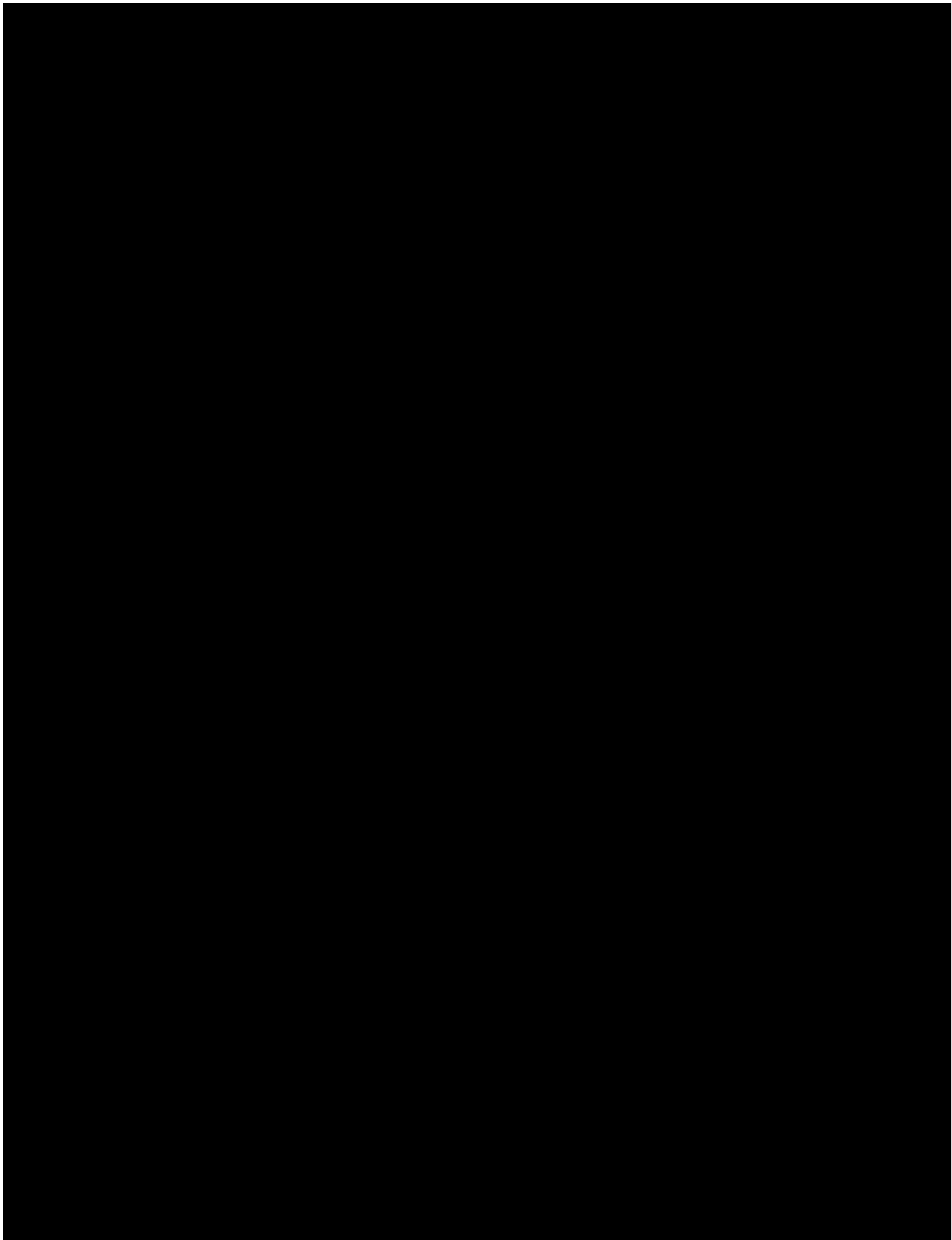

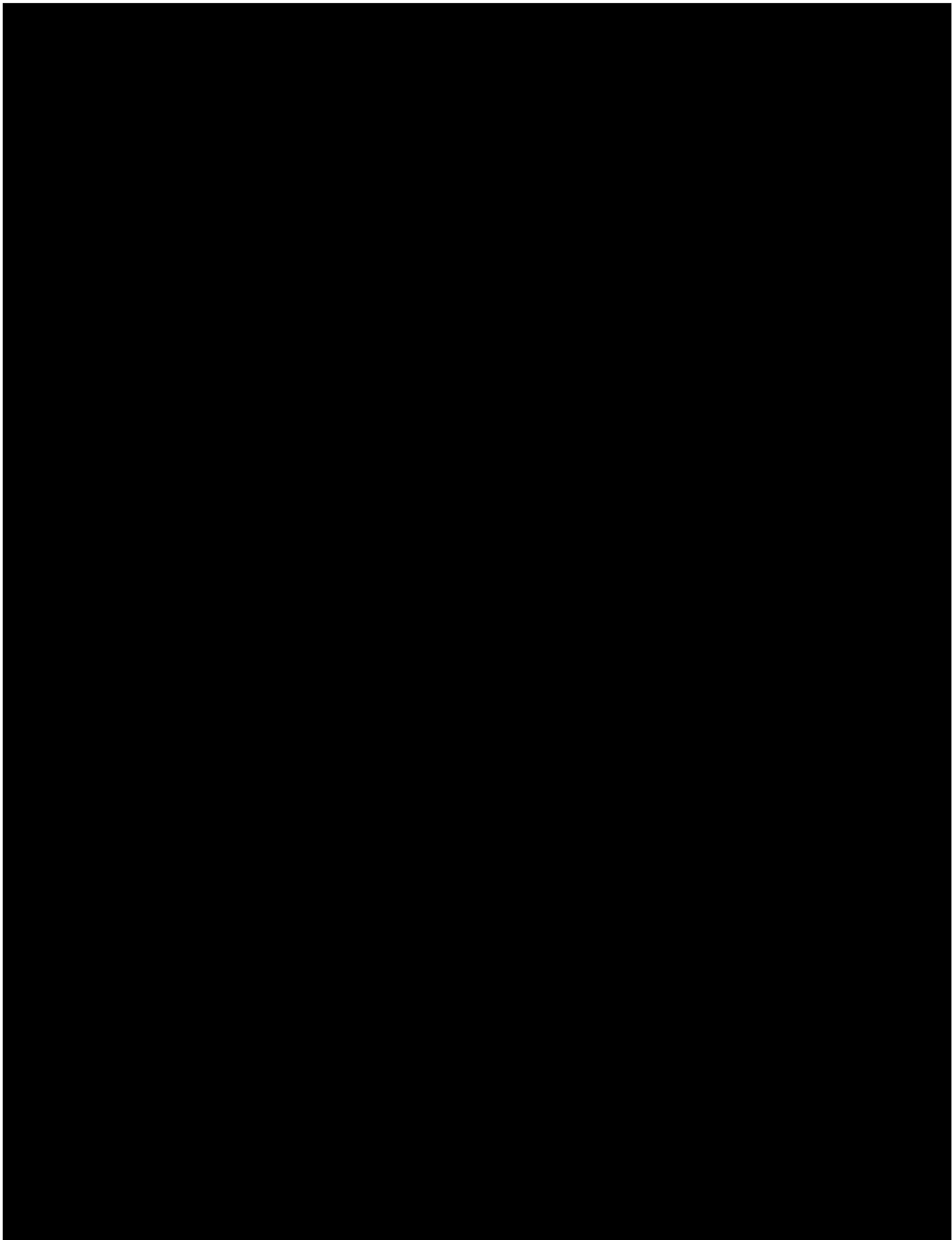

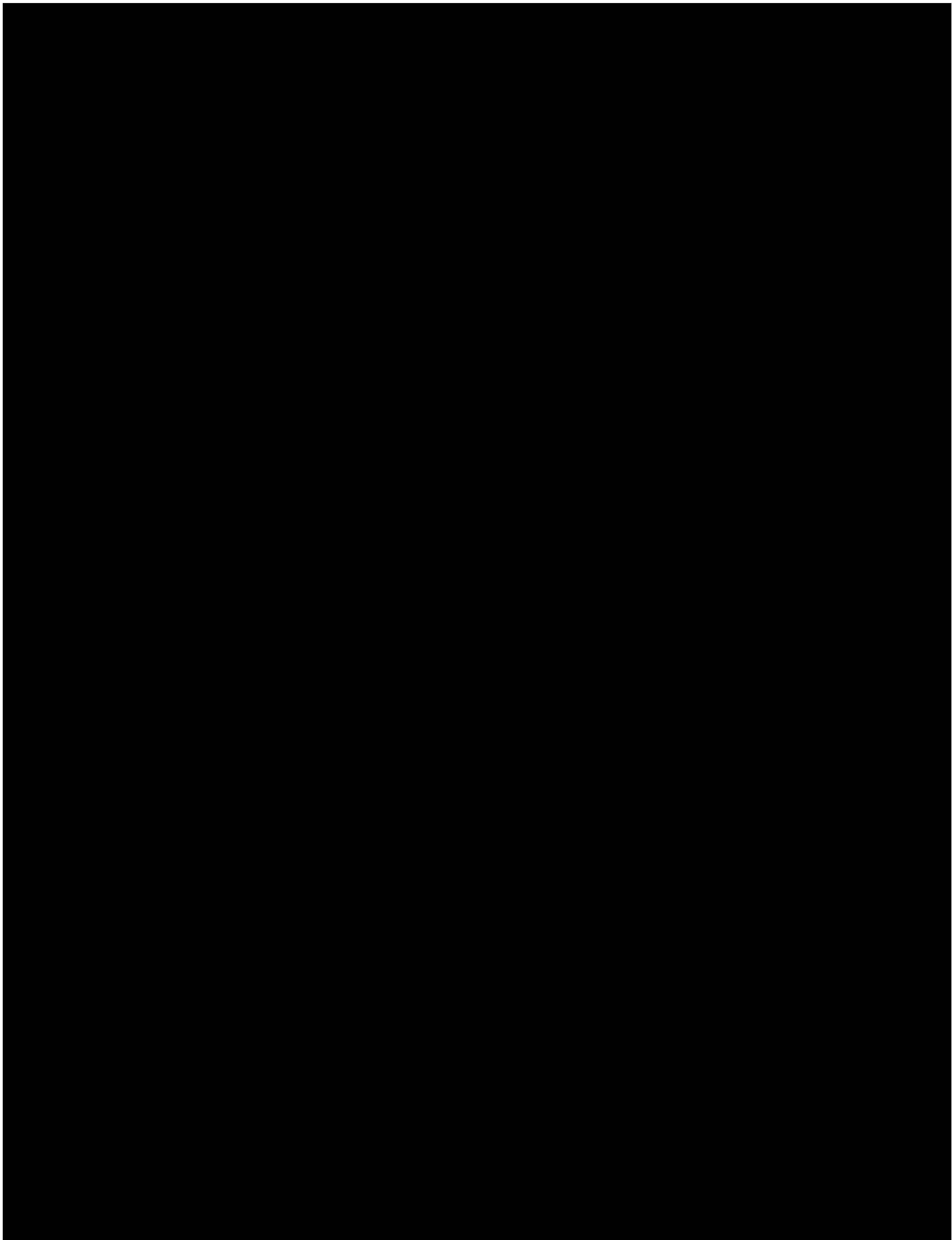

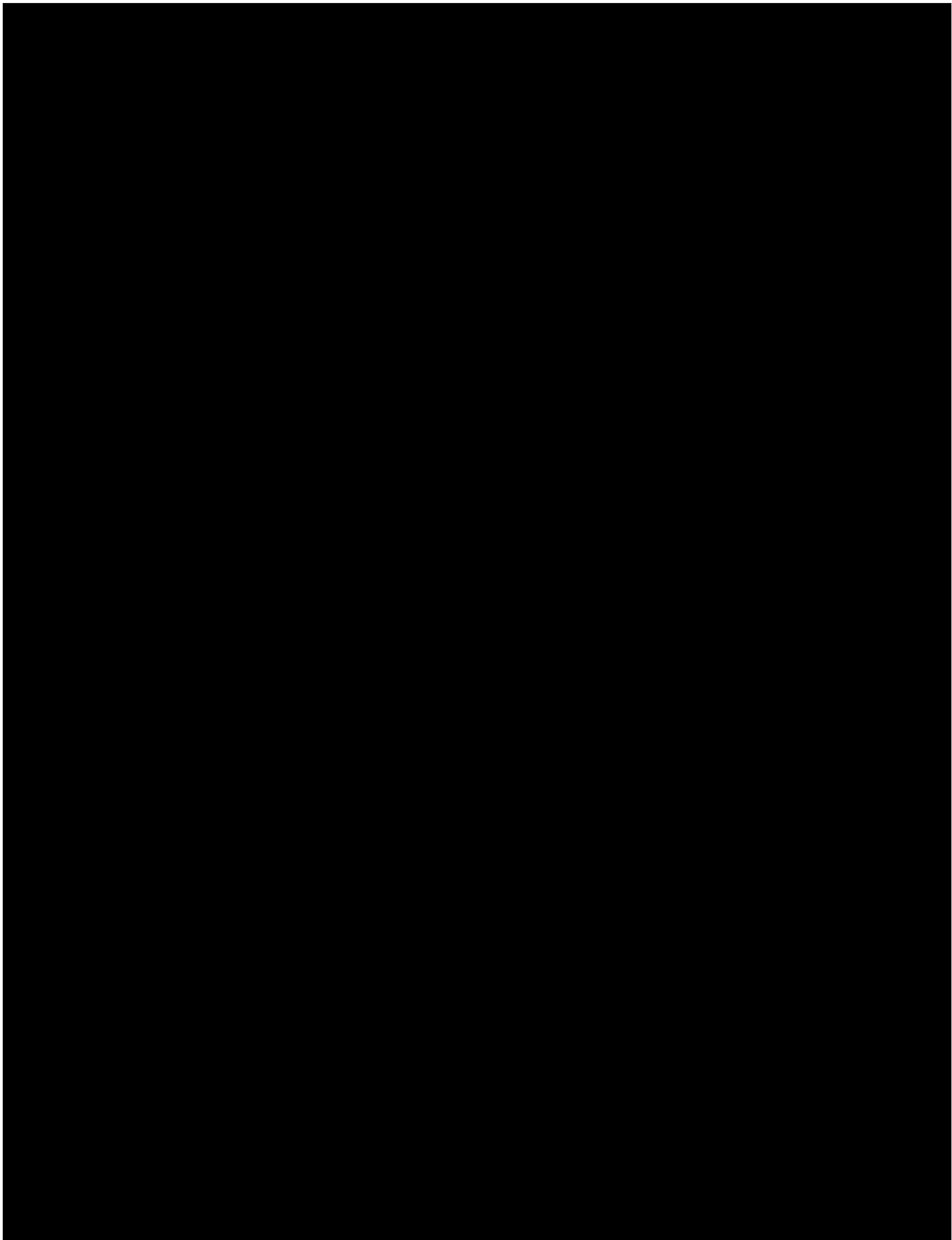

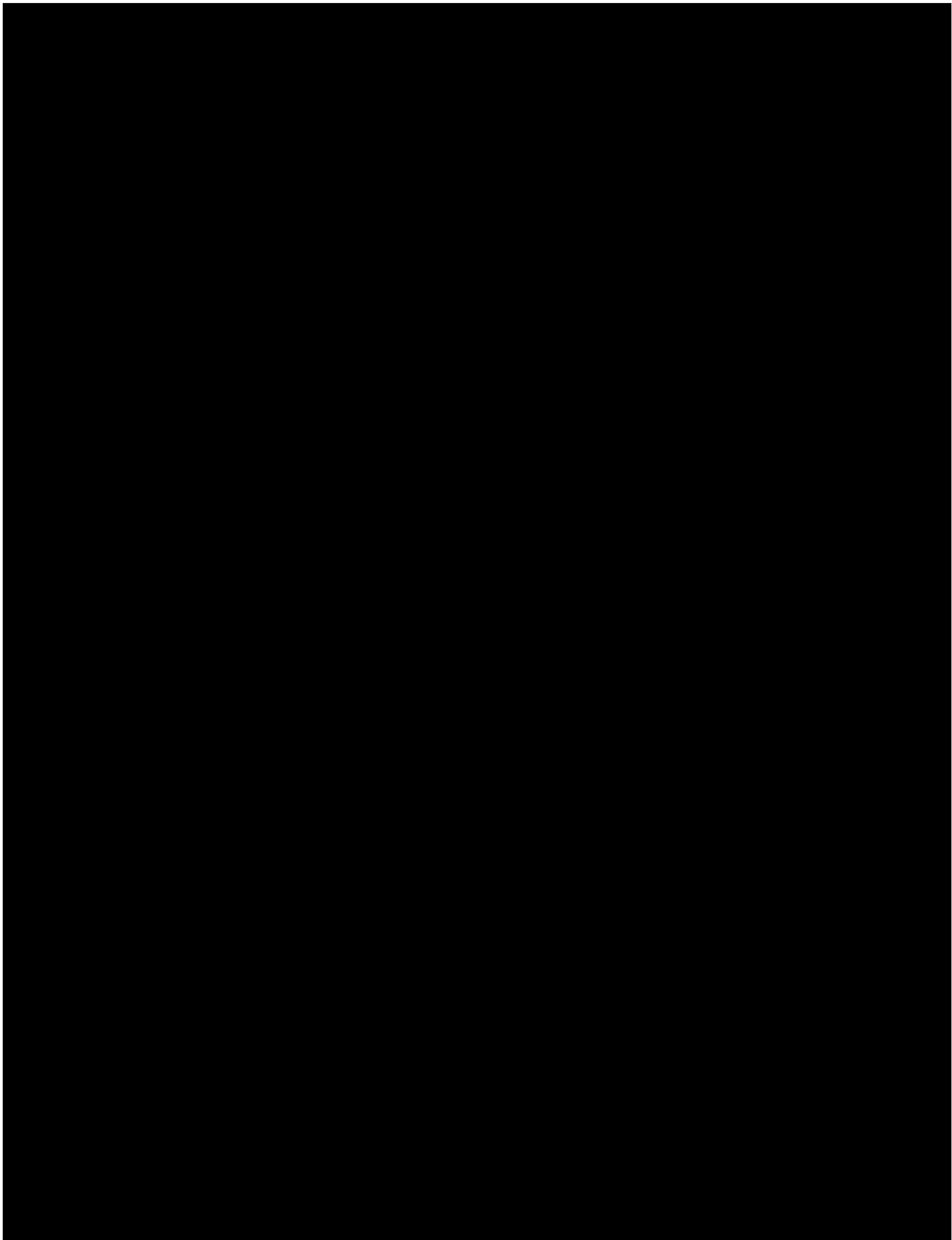

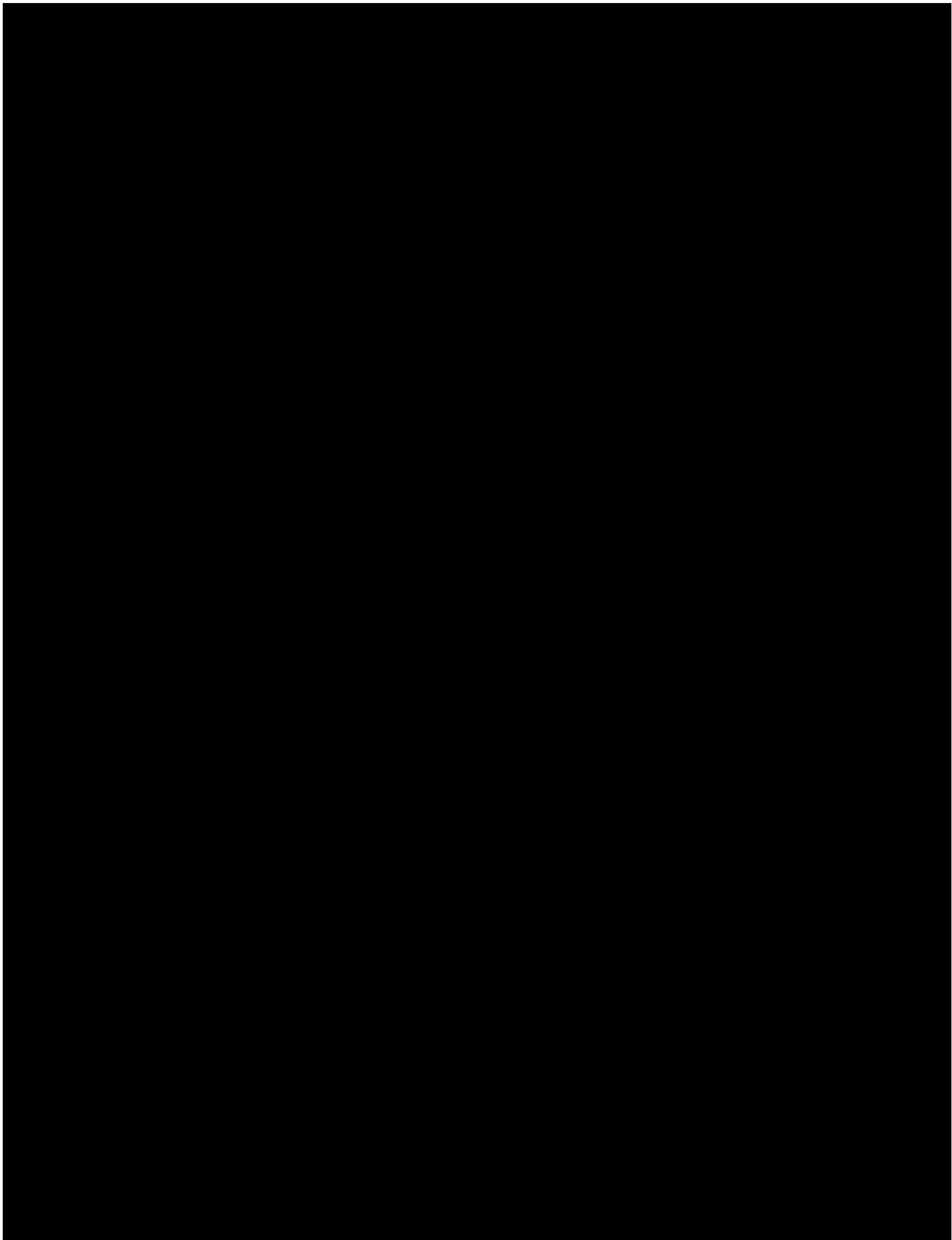

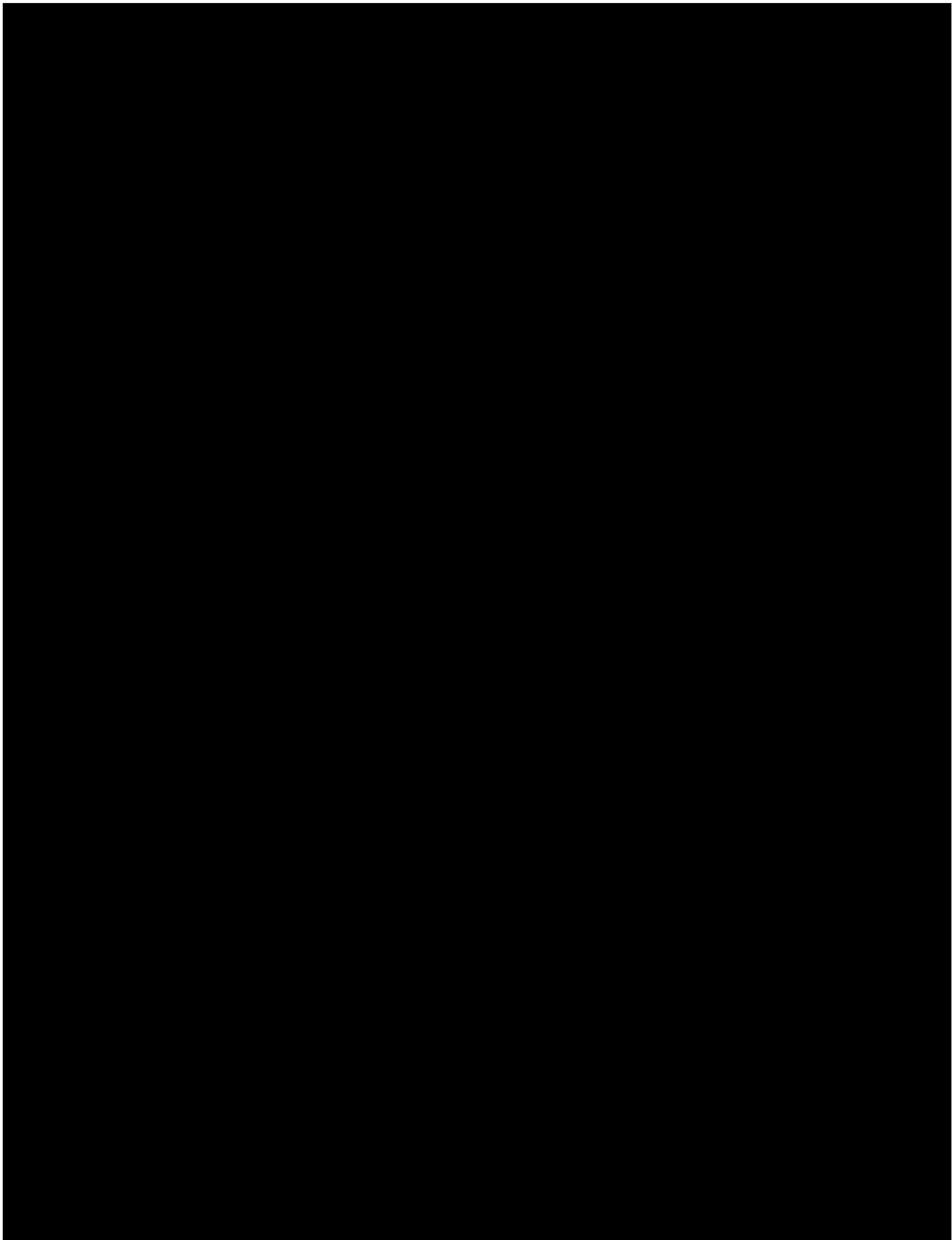

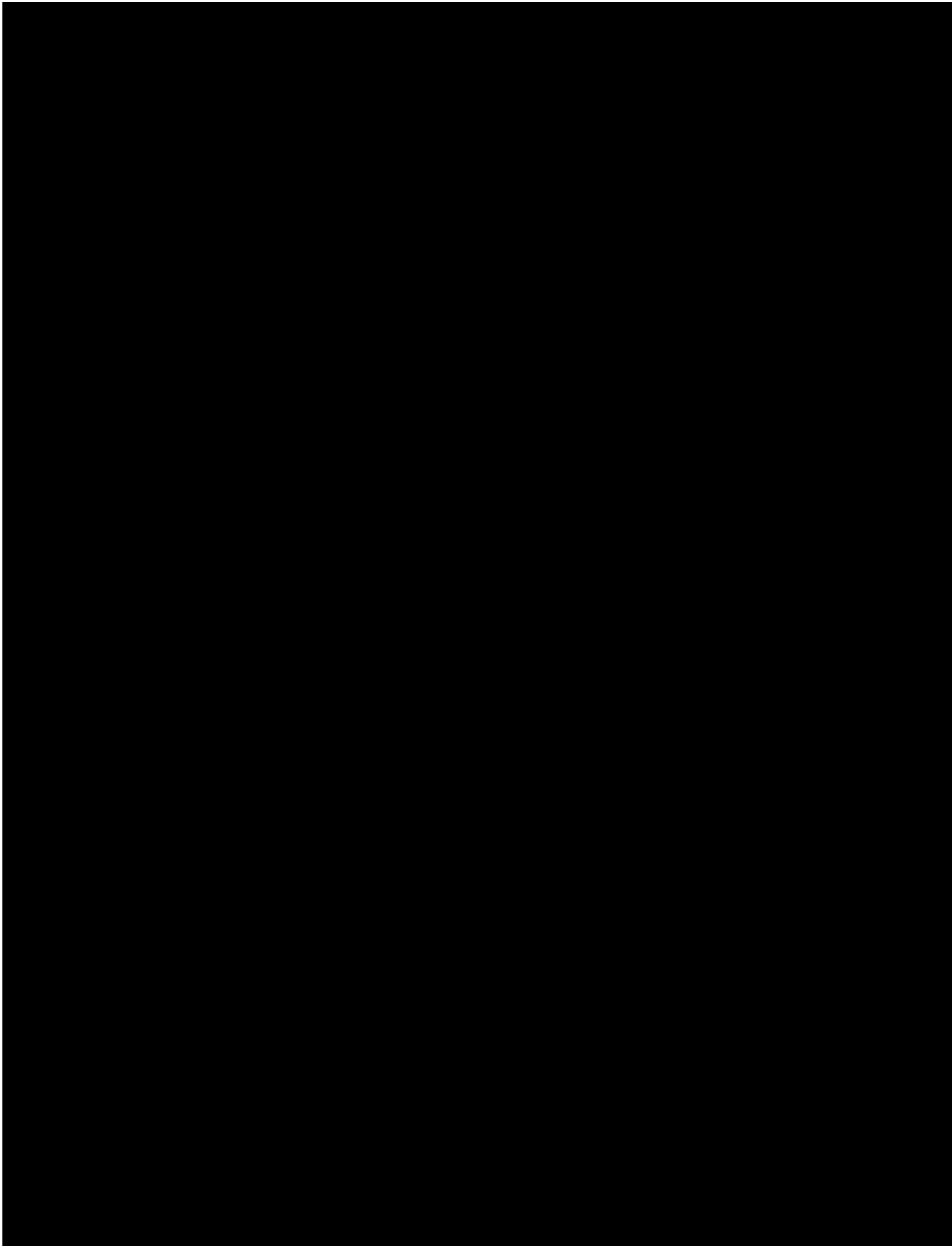

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BETWEEN:

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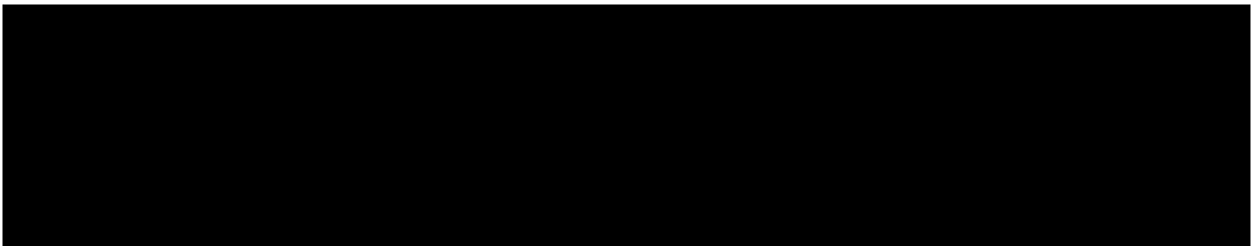
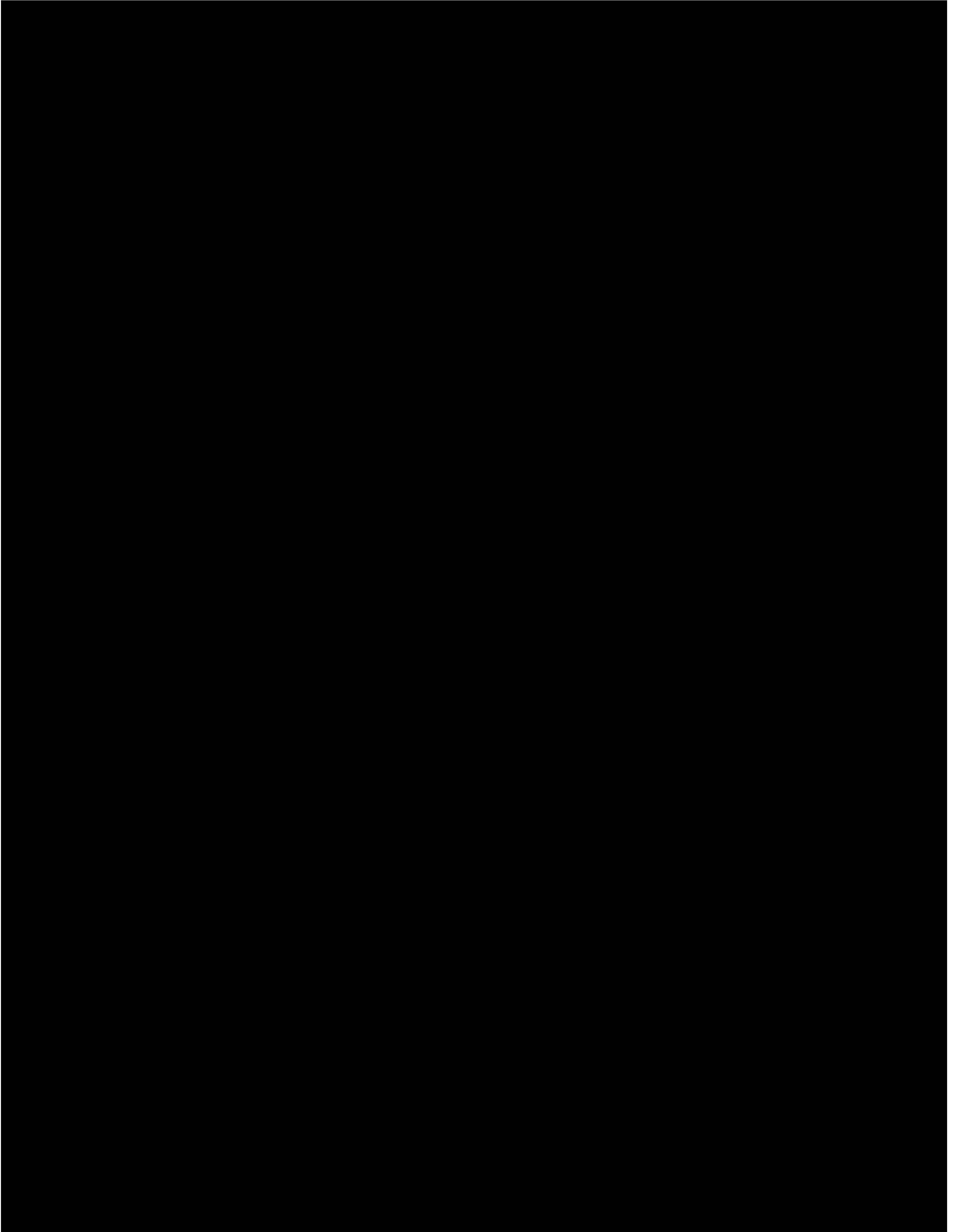
SECURE ENERGY SERVICES INC.

Respondent

REPLY WITNESS STATEMENT OF PAUL DZIUBA

CHEVRON HAS EXPERIENCED COST INCREASES AND DECREASED SERVICE SINCE SECURE ACQUIRED TERVITA





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COMPETITION TRIBUNAL

IN THE MATTER OF the *Competition Act*, R.S.C., 1985, c. C-34 as amended;

AND IN THE MATTER OF the acquisition by SECURE Energy Services Inc. of Tervita Corporation;

AND IN THE MATTER OF an application by the Commissioner of Competition for one or more orders pursuant to section 92 of the *Competition Act*.

BETWEEN:

THE COMMISSIONER OF COMPETITION

Applicant

- and -

SECURE ENERGY SERVICES INC.

Respondent

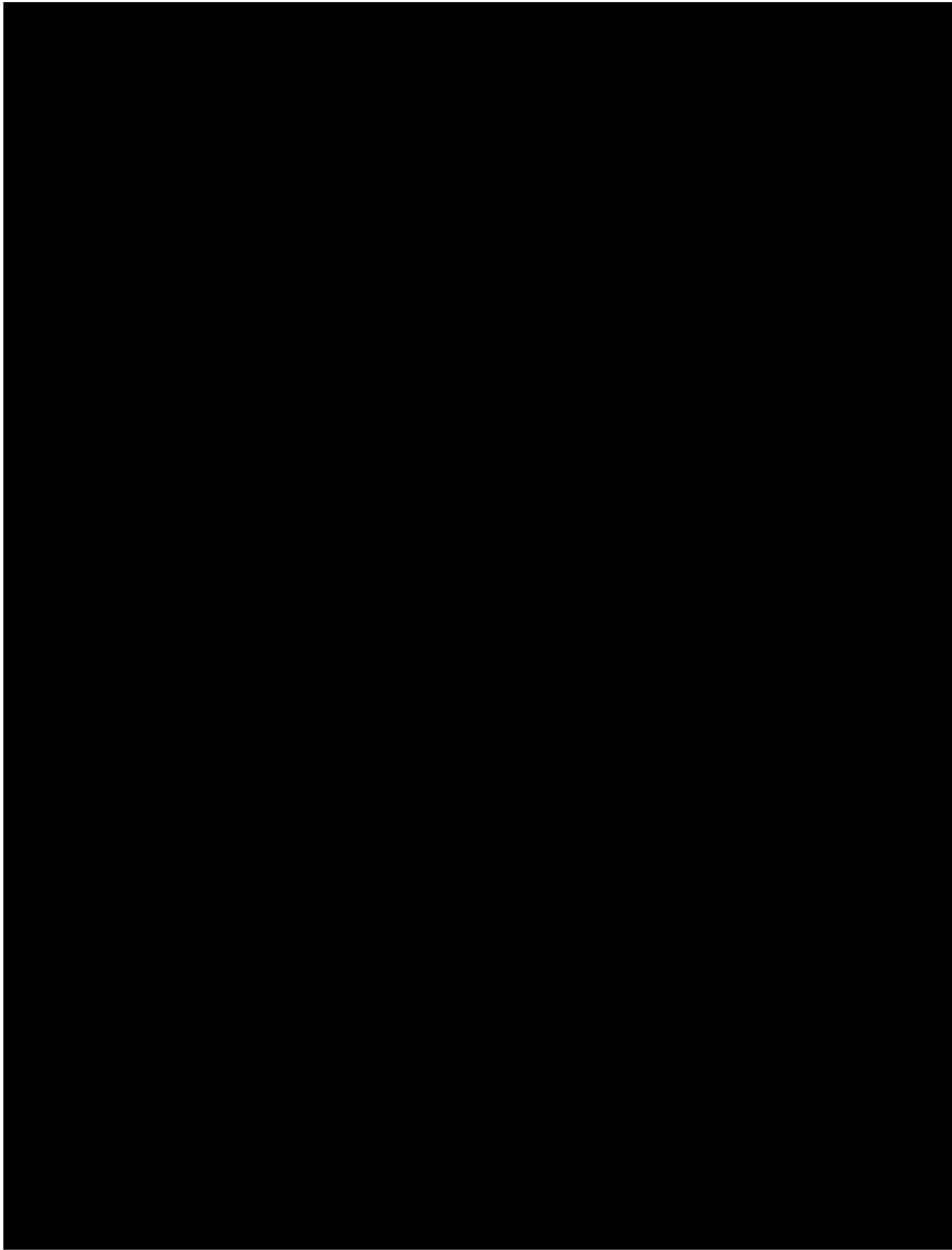
BEFORE:

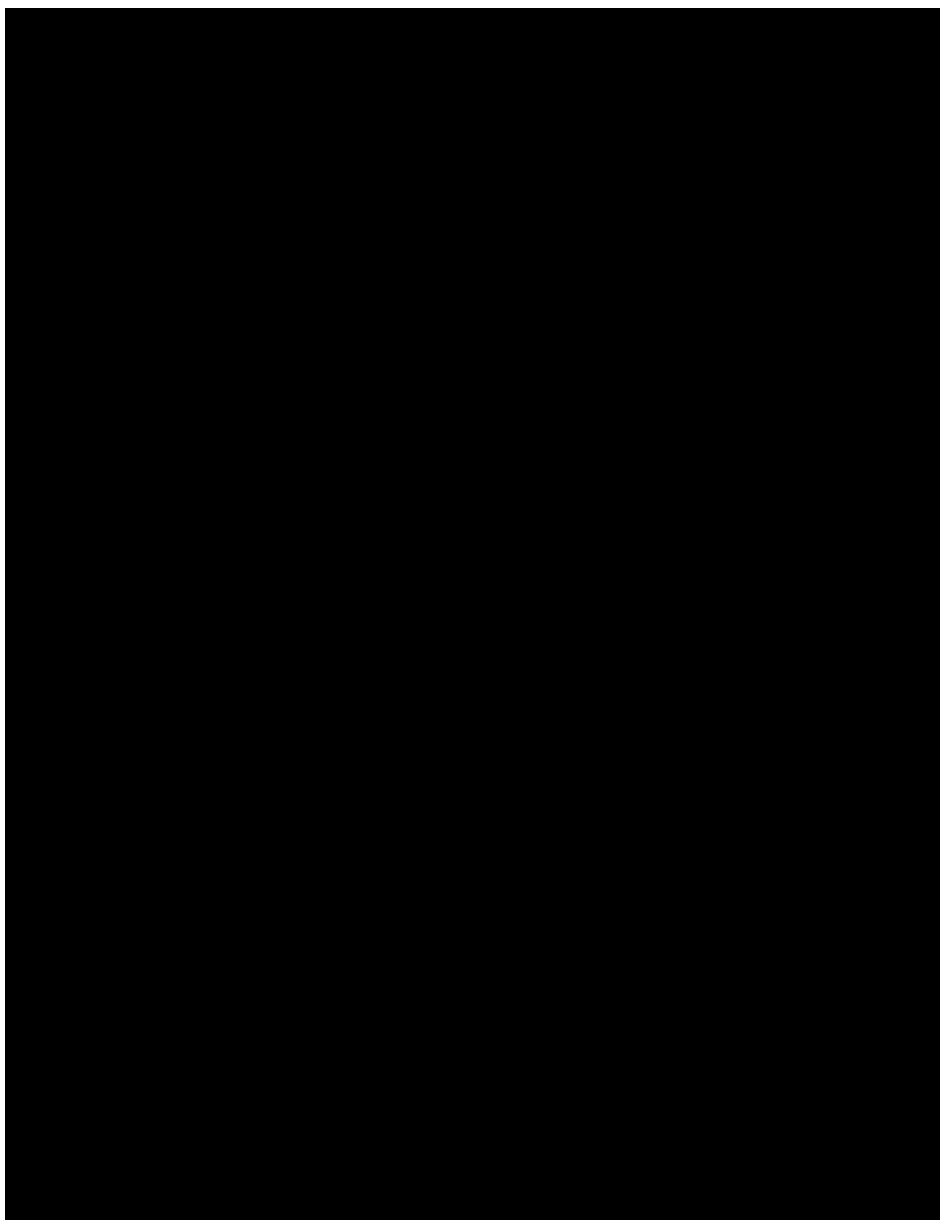
The Honourable Mr. Chief Justice Paul Crampton	**Presiding**
The Honourable Mr. Justice Denis Gascon	**Member**
Dr. Ted Horbulyk	**Member**

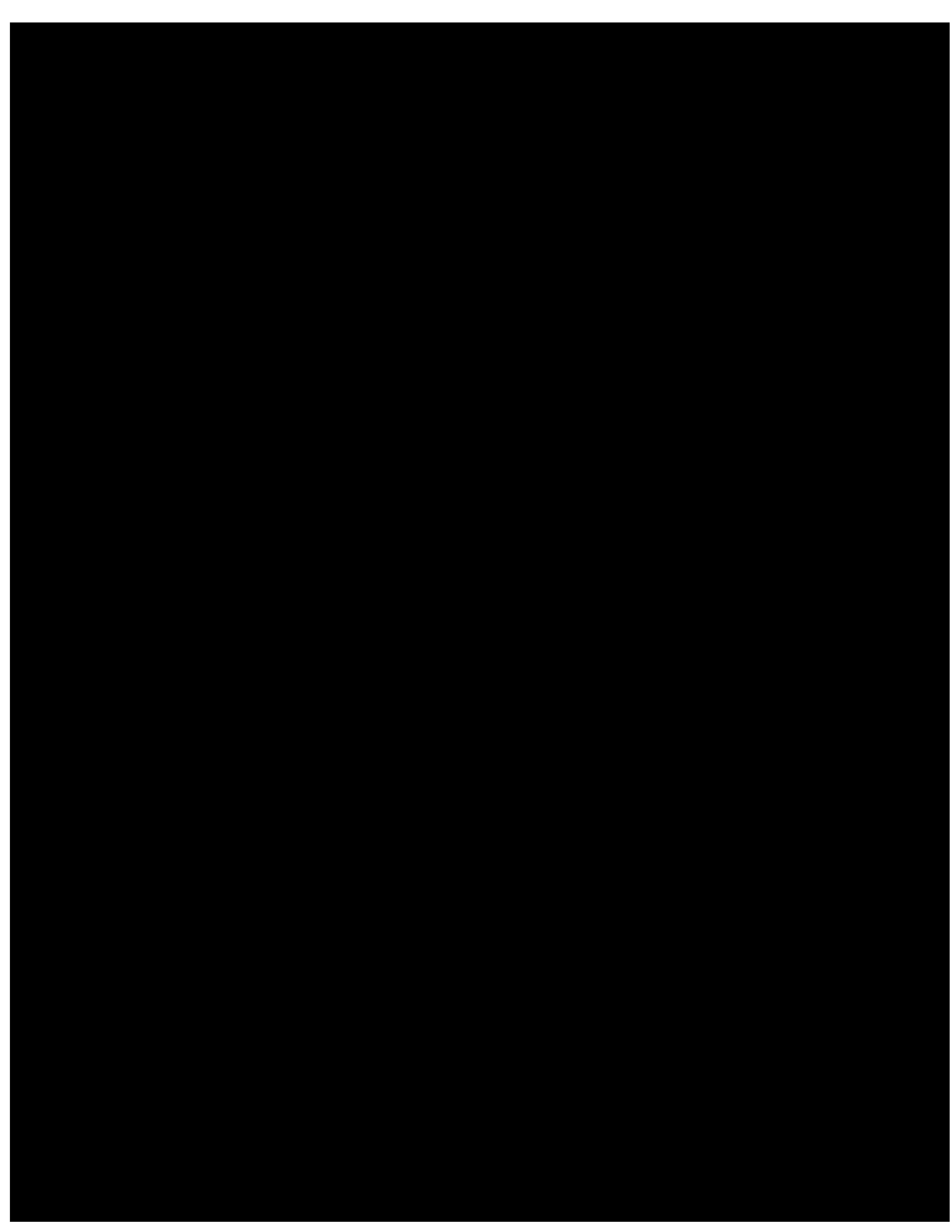
HELD VIA VIDEOCONFERENCE

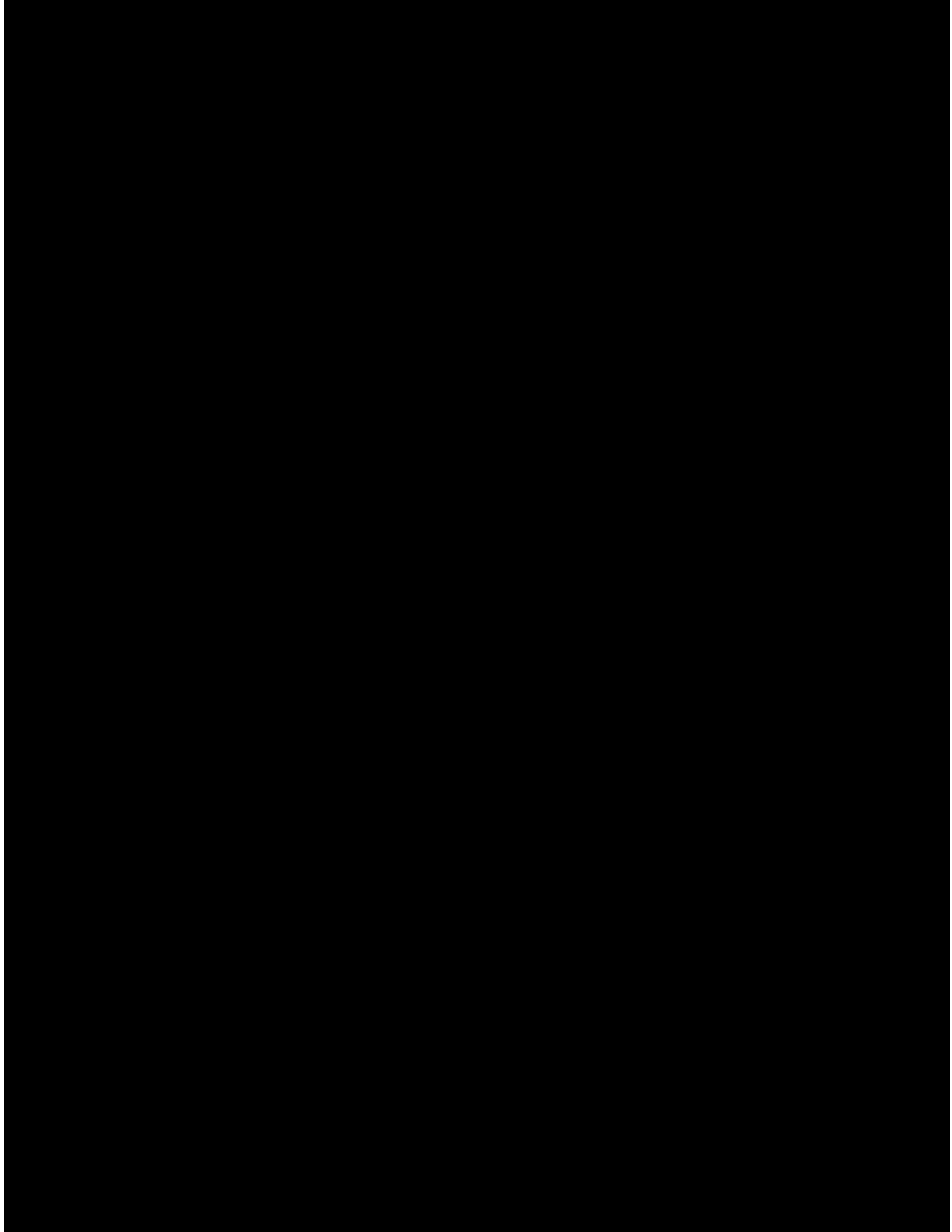
10 May 2022

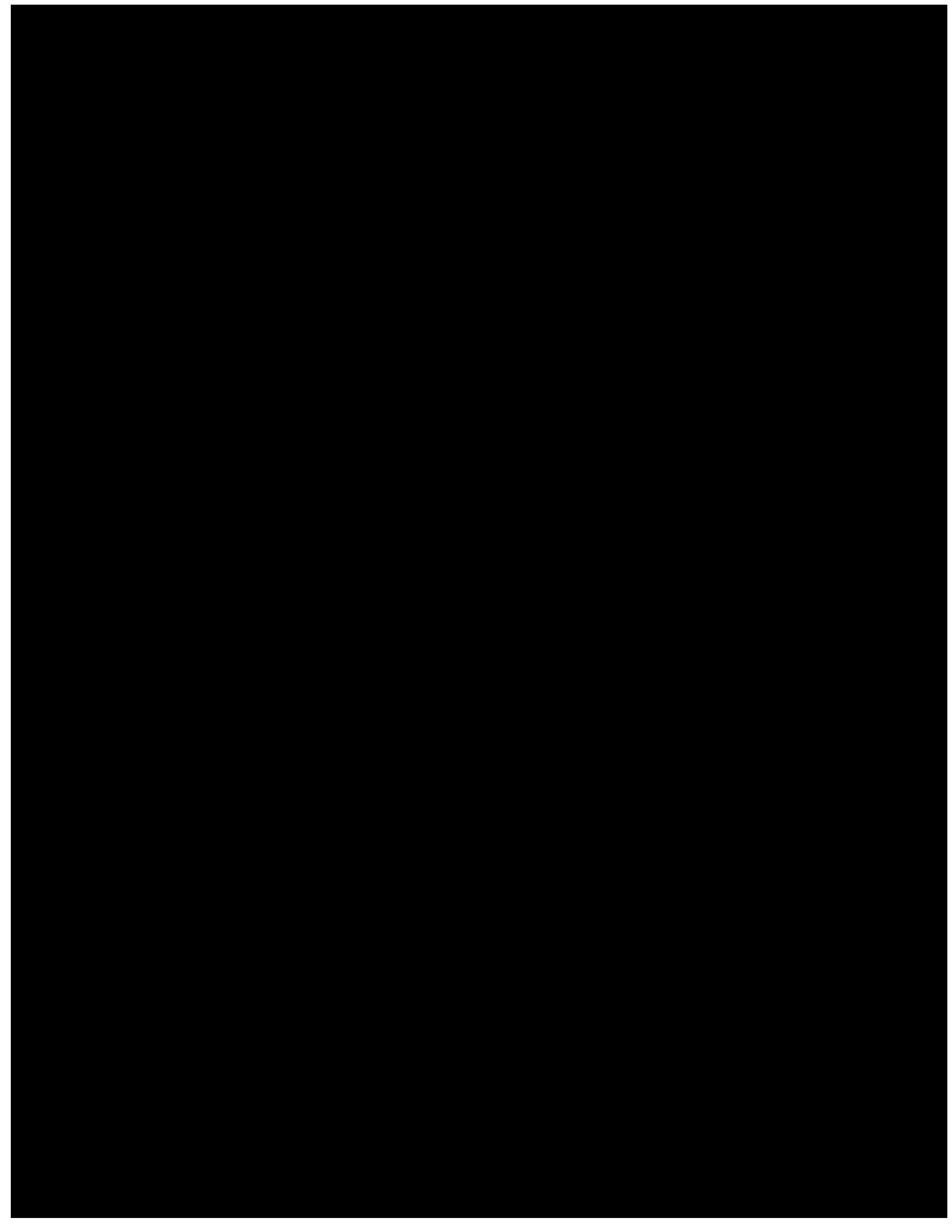
Volume 2
Combined

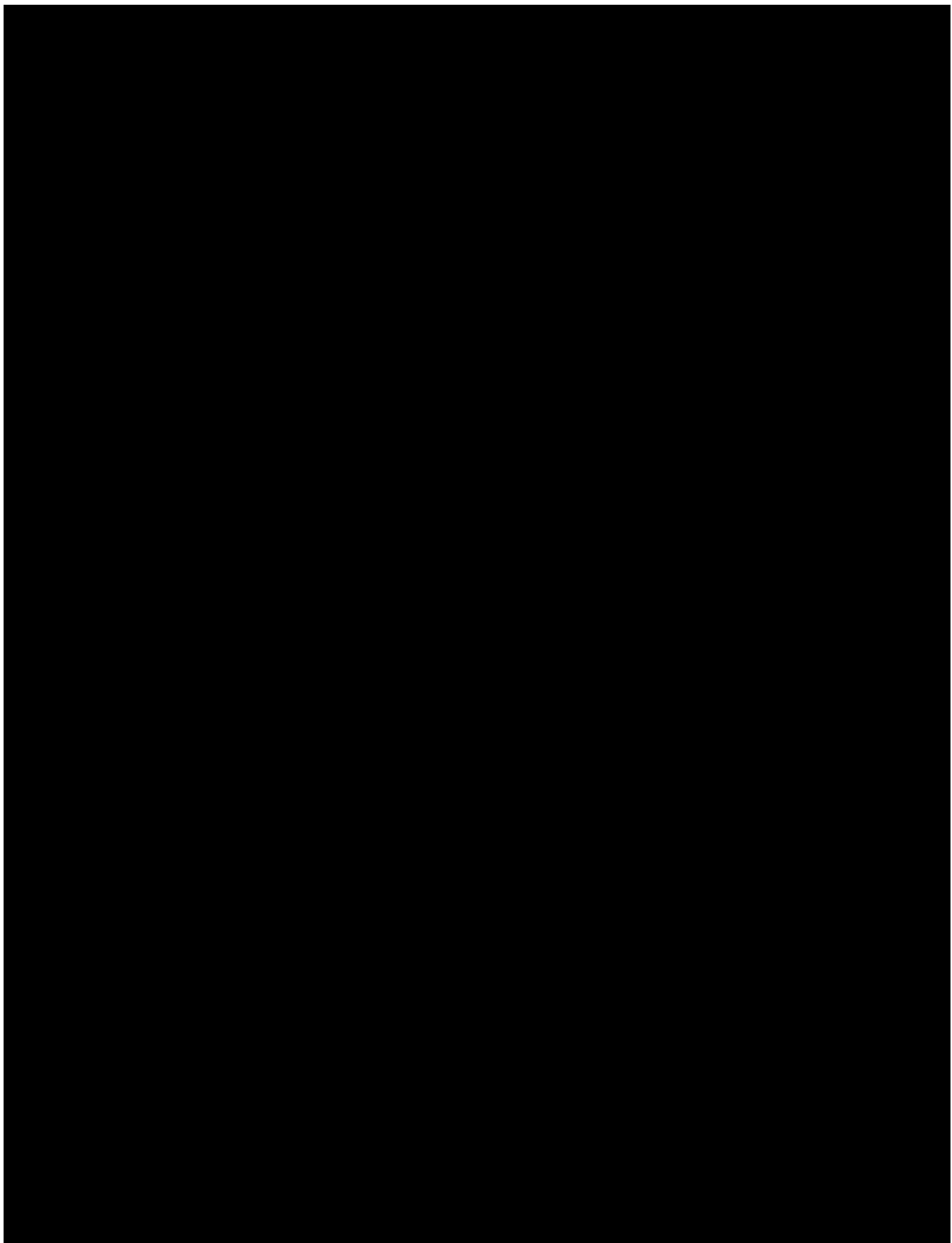


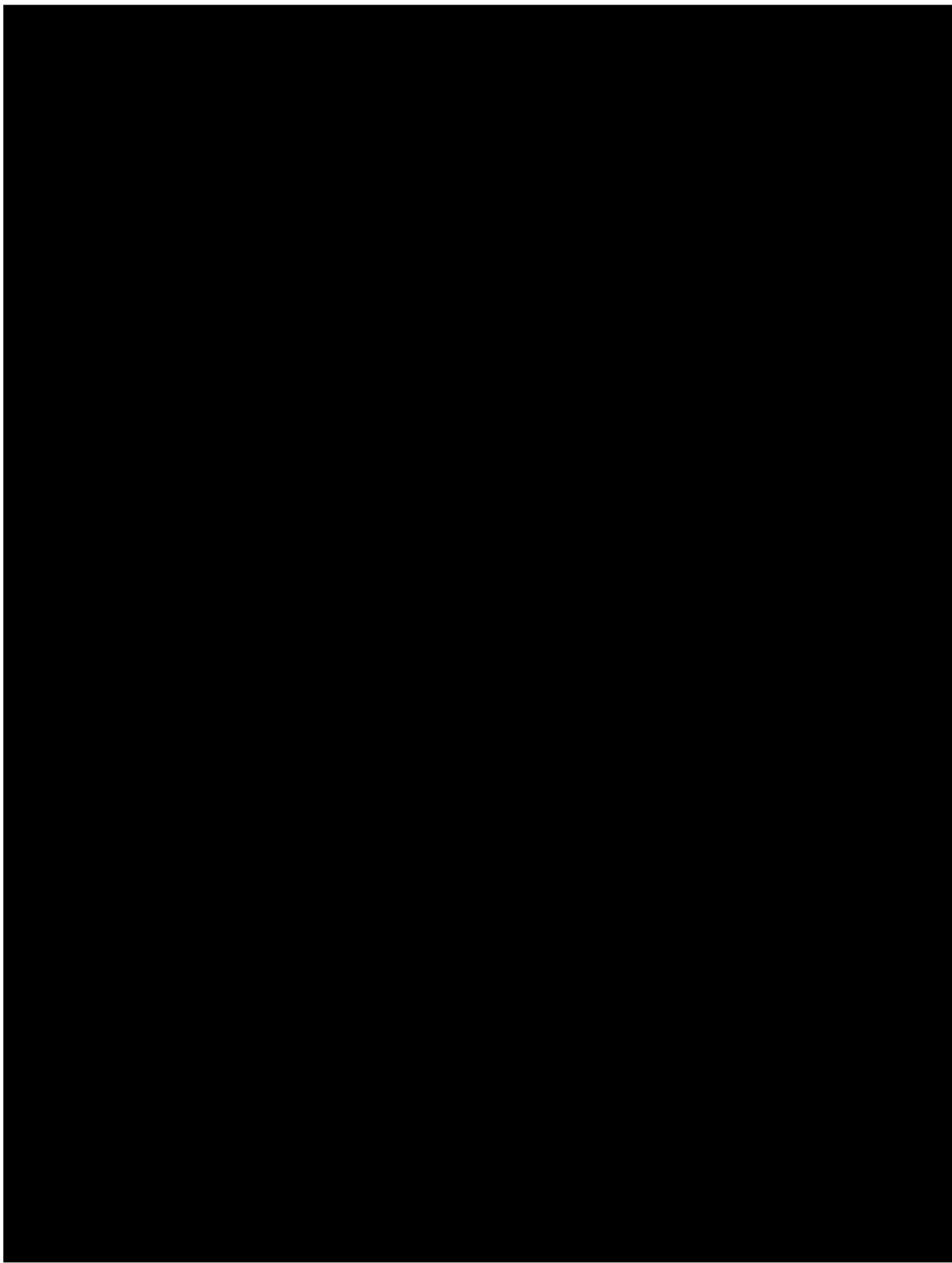


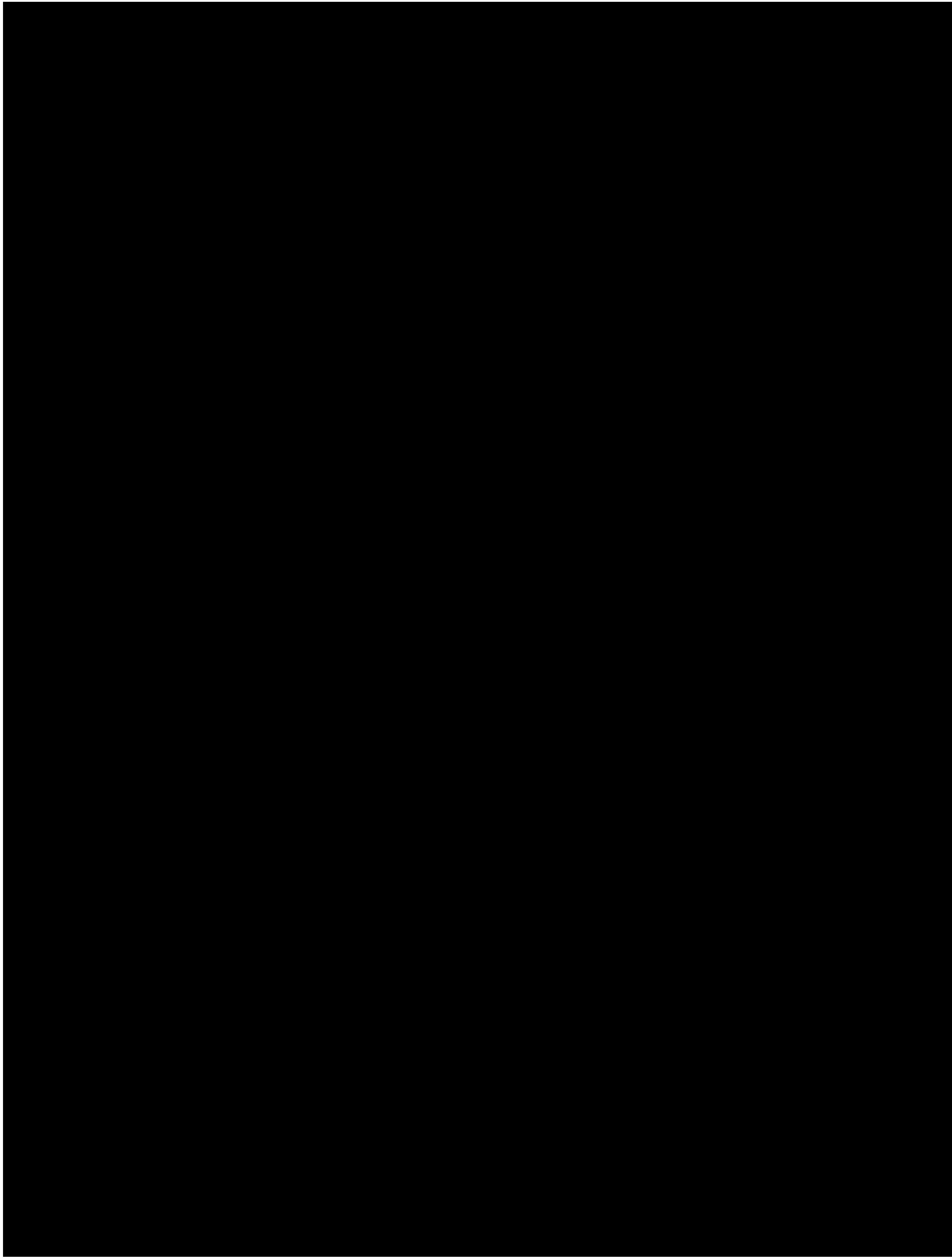












CT-2021-002

THE COMPETITION TRIBUNAL

IN THE MATTER OF the Competition Act, R.S.C. 1985, c. C-34, as amended;

AND IN THE MATTER OF the acquisition by Secure Energy Services Inc. of all of the issued and outstanding shares of Tervita Corporation;

AND IN THE MATTER OF an application by the Commissioner of Competition for one or more orders pursuant to section 92 of the Competition Act.

BETWEEN:

THE COMMISSIONER OF COMPETITION

Applicant

– and –

SECURE ENERGY SERVICES INC.

Respondent

REPLY WITNESS STATEMENT OF DAVID HART
(CANADIAN NATURAL RESOURCES LIMITED)

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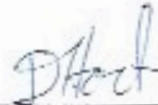
15) As described in paragraph 21 of my February 22, 2022 Witness Statement, the decision to use CNRL's own waste disposal facilities versus third party facilities is primarily based upon cost (trucking and disposal) and capacity of applicable disposal facilities.

16) CNRL continues to dispose of solid waste at the Bonnyville landfill, and has seen no reduction in the rate it paid for disposal at the Bonnyville landfill after CNRL's acquisition of the Manatokan landfill.

17) CNRL recently obtained new disposal rates from Secure that took effect on April 1, 2022. Secure did not agree to negotiate any of the rates imposed in the new rate sheets despite requests from CNRL.

Signed this 7th day of April, 2022.



David Hart

File No. / Dossier no. CT-2021-002

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Dr. Ted Horbulyk	**Member**

HELD VIA VIDEOCONFERENCE

16 May 2022

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1 know, a 4:3 with a really nice, good third competitor
2 rather than say, maybe something more like a municipal
3 landfill.
4 So I was able to look at her slide deck and my
5 understanding of her slide deck is that she has done an
6 additional analysis in which she pulls out all of the
7 markets where Secure presented at all, and that would
8 alleviate some of my concern, but I haven't had a chance to
9 vet it. So I don't know how to weigh in on that. So
10 that's concern number one, is that the mergers are just not
11 very comparable and efforts to identify local markets
12 are -- that might be difficult would be hard. Okay? And
13 of course, if we're not -- if Secure's a competitive force
14 in this area, then we're going to understate the price
15 effects, we would think.
16 So the second reason why I think that the
17 estimates might be low is that it analyzes nine months of
18 data after the transaction. And it makes sense that it
19 only analyses nine months, because nine months after the
20 transaction is when Covid hit, and the economy just
21 changed. But it's potentially troublesome when you only
22 have nine months of data in a setting in which contracts
23 are signed that are of a somewhat longer duration.
24 You know, I don't have great insights into the
25 contracts and the duration of them, but I'll point out that

1 I'll just say what I think. The result is right. I think
2 ultimately my estimates flow from the data on margins, and
3 diversions, and shares, and so I think it's a result that's
4 sort of broader than what applies in a particular modelling
5 context. So that's how I think about Keith Ware's work.
6 Okay. There's only two more slides. Maybe we
7 can go to the next one?
8 This can be brief because, you know, I've
9 already sort of mentioned the high level that when
10 academics are trying to value a product, we tend to look at
11 the decisions that market participants make, you know, the
12 price the firms set and what they buy given those prices.
13 And that's my approach, is to lean in and look at the
14 shares and the margins, the diversion. And the reason
15 that's the preferred approach is that it just can be hard
16 to quantify some aspects of differentiation, either because
17 the data don't exist or because it's inherently intangible.
18 One thing I've done here is try to put some
19 numbers on some things and they're not intended to be, you
20 know, specific estimates, but rather sort of more thought
21 experiments, and these I pulled from the Reply Report.
22 And so the second bullet point posits that
23 perhaps the closures are going to increase wait times at
24 the absorbing facilities. And that might be due because --
25 it might happen, for example, if those are in greater

1 demand afterwards. If you assume that the increase is 30
2 minutes per trip, the additional cost could be $14 million
3 to $20 million, depending on the range of hourly trucking
4 rates you use. And that's quantified only for the
5 customers, the facilities that are closed, and so it
6 doesn't include any effect on the customers that are using
7 the facility that is now busier.
8 So the point is just to say, if we are to look
9 at this, like how big could the number be, and it seems
10 like, you know, you can get some reasonably large numbers
11 with these. Now, in the Reply Report, I also consider
12 15-minute increases in the wait times and an hour increase
13 in the wait times. So the numbers are available there.
14 In my Reply Report -- in my original report, I
15 quantified the increase in the trucking cost due to longer
16 distances, as I believe around $7 million. And that used
17 sort of a trucking cost per hour, or per minute, that was
18 sort of on the lower range of what we see in the record,
19 and if you move it to the higher range, then you get
20 something closer to $10 million. Even that it requires --
21 even there, where we think it might be easier to quantify,
22 there's some trouble spots with it.
23 I mean, for example, when we do this
24 calculation, both as I've done it and Mr. Harington has
25 done it, we assume that the customer goes to the next

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17 May 2022

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1 loss of the value associated with the choice of their
2 preferred facility, right?
3 **DR. MILLER:** Yes, that's correct.
4 **MR. KWINTER:** And as you told the Tribunal
5 yesterday, every customer of a closed facility loses the
6 value of their choice, whether their closed facility was in
7 a market that competed with a Tervita or Secure facility
8 prior to the merger or not, right?
9 **DR. MILLER:** I would recast that a little bit
10 because my markets are defined around the location of
11 customers. So I think what I would say that gets to your
12 point is that some of the customers that experience harm
13 due to having fewer options do not -- are not located
14 inside the antitrust markets that I define.
15 **MR. KWINTER:** Right. So just to state it
16 again. Whether the customers of a closed facility are in a
17 market that competed with a Tervita/Secure facility or not
18 prior to the merger, you say they lose the value of their
19 choice, right?
20 **DR. MILLER:** That's correct.
21 **MR. KWINTER:** Now, yesterday we had your
22 presentation slides up, and of course we had them before.
23 Those slides refer to a figure of $72 million rather than
24 $78 million, right?
25 **DR. MILLER:** That's correct.

1 **MR. KWINTER:** And so the $72 million figure is
2 based on the pre-transaction variable profits in the
3 closing facilities; correct?
4 **DR. MILLER:** That's correct.
5 **MR. KWINTER:** And you would also agree with me
6 that the customers would not have any knowledge of the
7 variable profit associated with the closing facilities, or
8 you wouldn't expect them to. Right?
9 **DR. MILLER:** I don't know the answer to that
10 question. I -- I don't have an expectation that they do,
11 but I don't know what they know.
12 **MR. KWINTER:** But you'd agree with me that it
13 wouldn't matter. The customers -- from the customer's
14 perspective, whatever Secure-Tervita's books and records
15 say is a matter of indifference to them in relation to the
16 facility closure effect; correct?
17 **DR. MILLER:** Yes, I agree with that.
18 **MR. KWINTER:** Right. The customers would lose
19 any value they placed on their choice of the closing
20 facilities regardless of what the financial statements say
21 or don't say; right?
22 **DR. MILLER:** That's correct.
23 **MR. KWINTER:** As we've just said, this
24 transaction closed on July 2nd, 2021, so any alleged price
25 effects arising from the merger had to have occurred after

1 that date; right?
2 **DR. MILLER:** Yeah, I think that's -- that's the
3 way I would interpret it.
4 **MR. KWINTER:** So by definition, sir, the $78
5 million figure is unaffected by any of the price effects
6 you address elsewhere in your report because apart from
7 anything else, any alleged price effects couldn't have
8 happened before the December 31, 2019 financial statements
9 were prepared; correct?
10 **DR. MILLER:** That's right.
11 **MR. KWINTER:** And nowhere do you say that the
12 $78 million figure has to be adjusted in any way -- sorry.
13 I apologize.
14 Nowhere do you say the $72 million figure has
15 to be adjusted in any way to account for the post closing
16 price increases you discuss elsewhere; right?
17 **DR. MILLER:** It does not have to be adjusted.
18 **MR. KWINTER:** Right. And I mean, we've just
19 said it, but just to be clear, the loss of value associated
20 with the closing of the facilities is distinct from the
21 increases in prices you claim elsewhere in your report;
22 right?
23 **DR. MILLER:** Yes, it's distinct.
24 **MR. KWINTER:** Now, your calculation of the $78
25 million figure also did not require you to calculate price

1 elasticity of demand; right?

2 **DR. MILLER:** That's correct.

3 **MR. KWINTER:** And as I understand it, the $72

4 million figure is the total of the lost value to all

5 customers of all closed facilities; right?

6 **DR. MILLER:** No, that's not right. It also

7 captures -- it captures the change in the total surplus due

8 to the closure of the facilities.

9 **MR. KWINTER:** But in terms of the -- wait a

10 moment.

11 So the $72 million figure is the variable

12 profit as shown in the books and records of the closed

13 facilities. We've already talked about that; right?

14 **DR. MILLER:** That's right.

15 **MR. KWINTER:** And it represents the total of

16 the lost value to all customers of all closed facilities;

17 right? That's the point.

18 **DR. MILLER:** No, it represents the incremental

19 surplus created by the facilities, including the

20 incremental surplus as it's distributed between customers

21 and producers.

22 **MR. KWINTER:** Right. But all of that is

23 reflected in the variable profit figure, you say; right?

24 **DR. MILLER:** Yes. You know, in the

25 second-score model specifically, the variable profit will

1 be equal to the incremental surplus that's created by the
2 facility above and beyond the other options that are in the
3 market.
4 **MR. KWINTER:** Right. But the point is, is that
5 the full $72 million figure captures all customers of all
6 closed facilities; correct?
7 **DR. MILLER:** That's right.
8 **MR. KWINTER:** And necessarily, the $72 million
9 figure represents the aggregate variable profit of every
10 closed facility and, therefore, captures all revenues from
11 all customers of all closing facilities; correct?
12 **DR. MILLER:** It would -- the revenues less the
13 variable costs of all the closed facilities. I agree with
14 that.
15 **MR. KWINTER:** Right. Now, if I can ask you to
16 turn up paragraph 153 of your report.
17 Sir, I think what I'm about to ask you, I
18 think, actually, you more or less said the same thing a
19 moment ago, but just so we have it.
20 In paragraph 153, you say that the profit-based
21 method assumes firms are able to extract the surplus from
22 negotiating waste service prices with individual customers
23 and the closed facilities' profits quantify that surplus.
24 Is that fair?
25 **DR. MILLER:** Yes, that's correct.

1 bit.

2 **DR. MILLER:** That's fine.

3 **MR. KWINTER:** But you agree with the premise?

4 **DR. MILLER:** Yes.

5 **MR. KWINTER:** And as you say in the following
6 paragraphs in your report, the share-based method is
7 restricted to only those customers in locations who you say
8 will have a reduction in competition as a result of the
9 merger, right? And that's what you told the Tribunal
10 yesterday, right?

11 **DR. MILLER:** Yes.

12 **MR. KWINTER:** And obviously the profit-based
13 method does not have any such restriction. Right?

14 **DR. MILLER:** That's correct.

15 **MR. KWINTER:** But whether the customers faced a
16 reduction in competition from the merger or not, the effect
17 on them of the closure of their preferred facility is the
18 same. You say they will have lost the incremental value
19 they attributed to the facility, right?

20 **DR. MILLER:** I would not characterize it as the
21 same. I'm trying to get, you know, the amount of loss will
22 depend on where the customer is and where their options
23 are, and that sort of thing. But there would be a loss to
24 the customer and to total surplus that spans beyond the
25 antitrust markets that I define.

1 **MR. KWINTER:** Sorry. I didn't hear the last
2 part.
3 **DR. MILLER:** Oh. The last part was just a
4 statement that we both, I think agree on, which is that the
5 model incorporates a loss to surplus that accrues due to
6 transactions that are made before the merger from customers
7 that do not -- are not located in the antitrust markets
8 that I defined. But I'm trying to say that it's not
9 necessarily the same effects for all the customers.
10 **MR. KWINTER:** The only difference is the amount
11 of variable profit attributable to them, right?
12 **DR. MILLER:** That's correct.
13 **MR. KWINTER:** Right. Now, in paragraph 154,
14 there's a formula cited just about, I don't know, just near
15 the top of the page, change in total surplus. Do you see
16 that?
17 **DR. MILLER:** Yes, I do.
18 **MR. KWINTER:** And in brackets there, there's a
19 reference to "Share of the Closed Facility". Right?
20 **DR. MILLER:** Yes, that's right.
21 **MR. KWINTER:** And that share figure that you're
22 talking about there obviously references the market share
23 that was held by each closed facility prior to the merger;
24 correct?
25 **DR. MILLER:** We're in the shared-based

1 approach. This is within a specific market and, yes, I
2 agree with that.
3 **MR. KWINTER:** So, again, by definition, your
4 market-share approach doesn't reflect any increases in
5 market share as a result of the merger, it's based on
6 pre-transaction shares; correct?
7 **DR. MILLER:** That's correct.
8 **MR. KWINTER:** So neither the calculations in
9 your profit-based model or your share-based model, reflect
10 or depend on any concentration resulting from the merger.
11 They're based on premerger market shares; correct?
12 **DR. MILLER:** And margins, but, yes.
13 **MR. KWINTER:** Correct.
14 **DR. MILLER:** Yes.
15 **MR. KWINTER:** And because of that it wouldn't
16 matter if the acquirer had a post transaction share of 10
17 percent of the market or a 99 percent share of the market.
18 In either case, the customers lose the value they associate
19 with their preferred facility, right?
20 **DR. MILLER:** Can you be more specific in your
21 example? Which firm is getting shut down?
22 **MR. KWINTER:** It doesn't matter.
23 **DR. MILLER:** Oh, it doesn't matter? Well, the
24 share will affect the loss of surplus.
25 **MR. KWINTER:** Not -- well, sir, you've just

1 **DR. MILLER:** Yes, that's right.
2 **MR. KWINTER:** So it's unrelated to any increase
3 in market share. You've calculated the share or the
4 number; right?
5 **DR. MILLER:** Oh. I think I understand the
6 question now. Yes, this is correct. It would not matter
7 if the share of the remaining facility is, you know, 20 or
8 30 percent. I agree with this.
9 **MR. KWINTER:** Right. And it wouldn't matter to
10 the effect whether the acquirer had a post transaction
11 share of 10 percent or 99 percent, right? I think that's
12 what you've just said.
13 **DR. MILLER:** Yes. It would be hard to get --
14 well, we'll leave it aside. I agree with this.
15 **MR. KWINTER:** Now, your fundamental point, as I
16 understand it, is that the selection of a facility reveals
17 the customer's preference for a facility based on whatever
18 collection of attributes forms the basis of that choice.
19 Is that a fair summary?
20 **DR. MILLER:** That's right.
21 **MR. KWINTER:** And you say that some of those
22 attributes may be unobservable, right?
23 **DR. MILLER:** Yes, especially to me.
24 **MR. KWINTER:** Right. But they're, more
25 importantly, unobservable to the waste service providers,

1 right?

2 **DR. MILLER:** I'm not sure -- that might be in

3 some cases, but it might not be as well.

4 **MR. KWINTER:** When you say that the attributes

5 are unobservable --

6 **DR. MILLER:** M'hmm.

7 **MR. KWINTER:** -- you agree that they may be

8 unobservable by the waste service providers?

9 **DR. MILLER:** I'm sorry, I was meaning

10 unobservable to me as an economist evaluating the market.

11 **MR. KWINTER:** We'll come back to this.

12 **DR. MILLER:** Some of them may also be

13 unobservable. I didn't want to disagree that that can't be

14 the case. But I was trying to say unobservable to me.

15 **MR. KWINTER:** Fair enough. In any event, you

16 say the choice has value to the customer and you say that

17 value is lost when their chosen facility closes; correct?

18 **DR. MILLER:** That's right.

19 **MR. KWINTER:** And we just spoke about it a

20 moment ago. Neither of your theories depend on any

21 increase in market share or concentration, right? We just

22 went through that; correct?

23 **DR. MILLER:** That's right.

24 **MR. KWINTER:** And as such they don't require an

25 increase in market power because an acquirer who acquired

1 no additional market share could nevertheless close
2 facilities, right?
3 **DR. MILLER:** They could, yes.
4 **MR. KWINTER:** Right. And if one of your
5 customers -- sorry, not one of your customers -- one of the
6 customers, had value in their chosen facility, they would
7 lose that value even if the acquirer had no market power,
8 right?
9 **DR. MILLER:** Yes, that's true.
10 **MR. KWINTER:** Now, we spoke a moment ago about
11 the variable profit figures being drawn from the books and
12 records of the closed facilities. Remember that?
13 **DR. MILLER:** Yes.
14 **MR. KWINTER:** But I'm just -- I was kind of
15 reflecting on a comment you made yesterday, so I just want
16 to confirm this. You couldn't rely just on the financial
17 statements to support your theory. I mean, that's why you
18 had to rely on your second-score auction model. If you
19 could just look at the financial records to find the
20 variable profit and rely on that, we would have spent a lot
21 less time talking about this case. Is that fair?
22 **DR. MILLER:** Yeah, I think -- and to be clear,
23 I think one of the difficulties is that the accounting data
24 and cost is measured at the facility level and not at the
25 customer level.

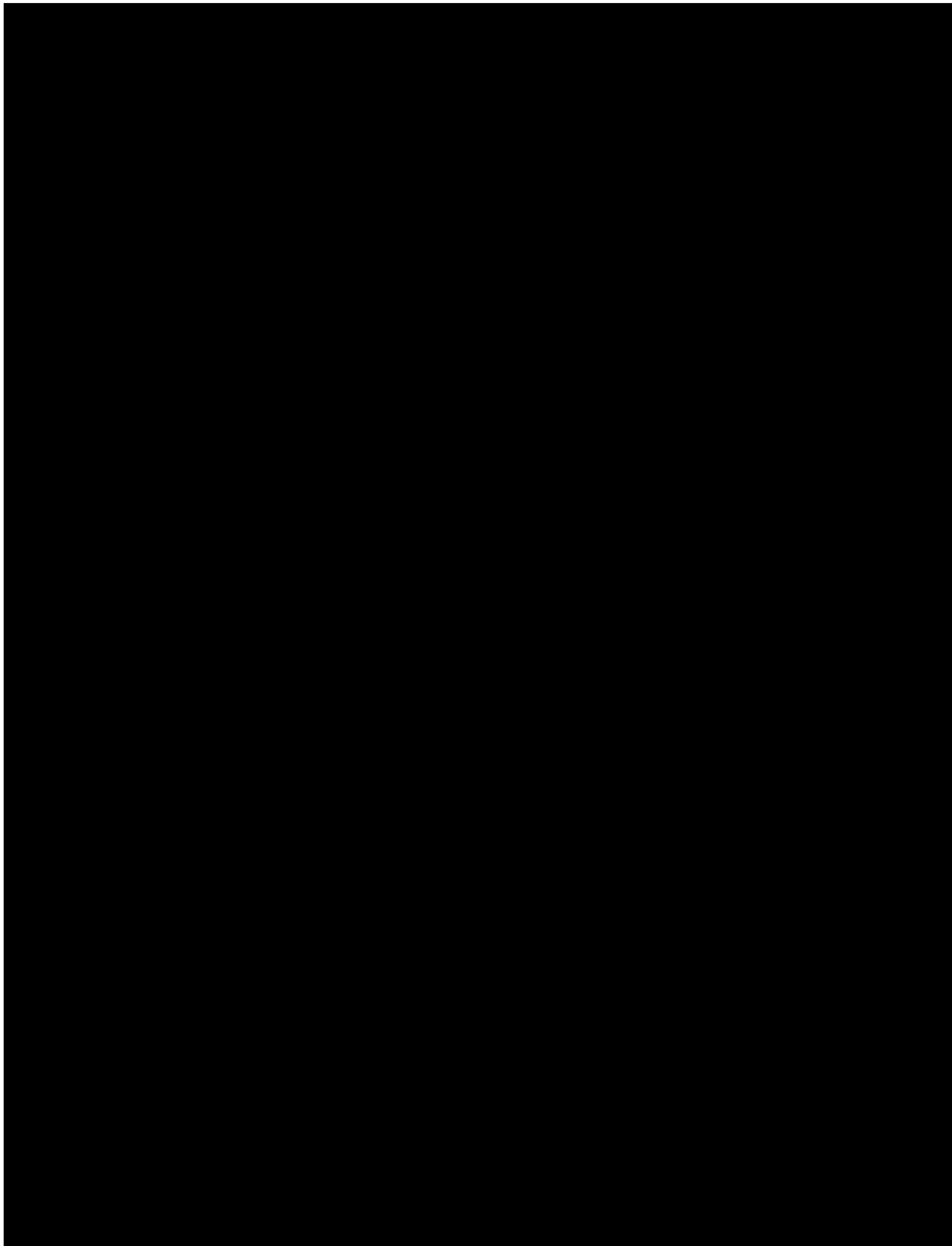
1 plays an important role in the first report. So the full
2 characterization doesn’t seem accurate to me.
3 **MR. KWINTER:** You will recall the discussion we
4 had earlier, where Dr. Duplantis had expressed concern
5 about your second-score auction model --
6 **DR. MILLER:** That’s right.
7 **MR. KWINTER:** -- because it was based on
8 perfect price discrimination. Do you recall that?
9 **DR. MILLER:** Yes.
10 **MR. KWINTER:** And your response to her, and
11 what you told us this morning, was that that’s fine because
12 there is nevertheless widespread price discrimination in
13 these markets; correct?
14 **DR. MILLER:** That’s right.
15 **MR. KWINTER:** All right. Now, you told us
16 yesterday that the Bertrand model is okay and relevant here
17 because it involves some price discrimination. Do you
18 remember saying that yesterday?
19 **DR. MILLER:** Yeah, and specifically geographic
20 based price discrimination, but not discrimination within
21 markets.
22 **MR. KWINTER:** Right. But to be clear, the
23 Bertrand model is based on a single posted price with no
24 negotiation between the suppliers and their customers;
25 correct? That’s how it works.

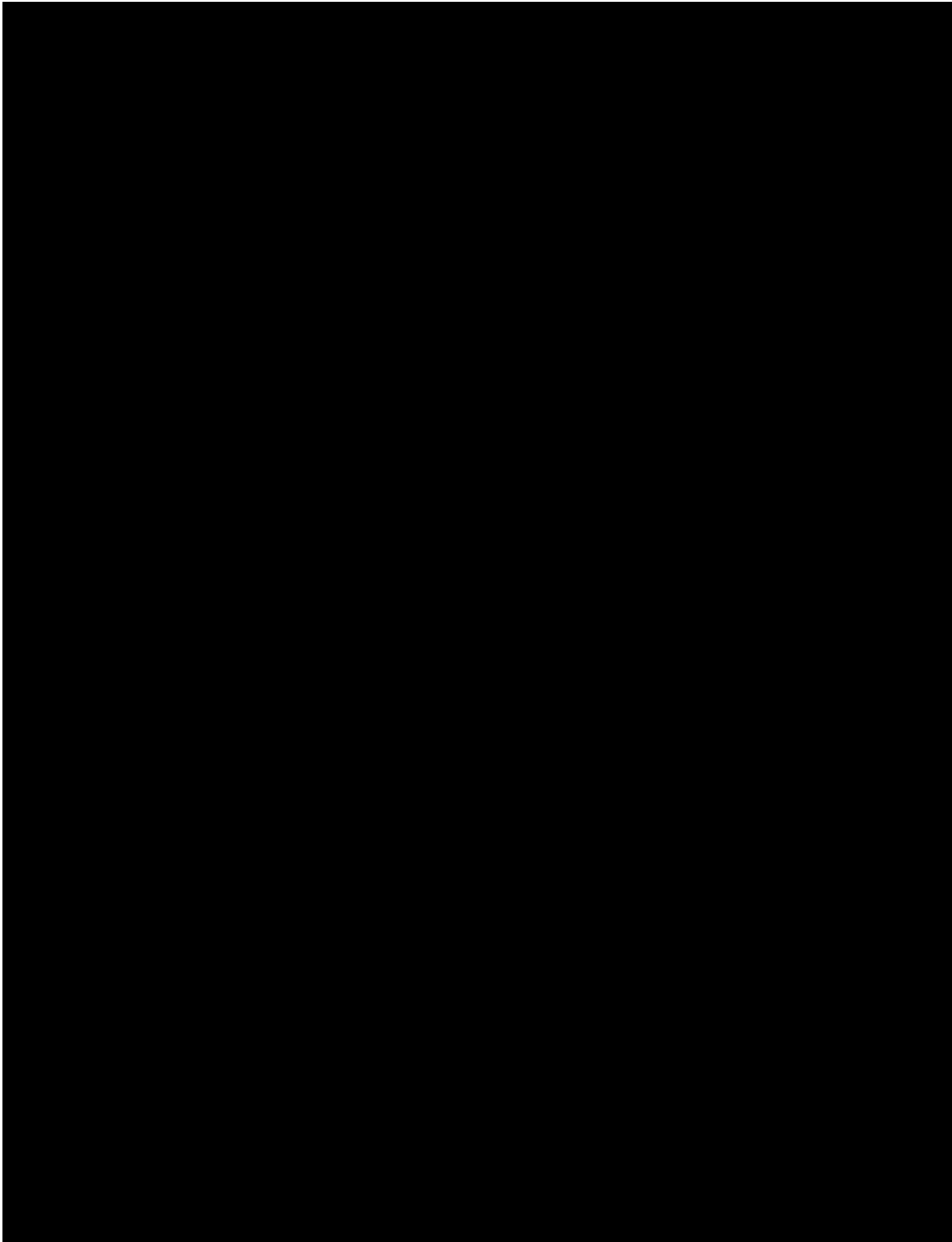
1 **DR. MILLER:** That's correct.
2 **MR. KWINTER:** Right. And you say that it
3 incorporates price discrimination because the posted prices
4 are different in different markets; correct?
5 **DR. MILLER:** That's right.
6 **MR. KWINTER:** All right. But you've already
7 told the Tribunal that the geographic markets around which
8 your report is built are local in nature. Do you remember
9 saying that yesterday?
10 **DR. MILLER:** Yes, I do.
11 **MR. KWINTER:** Right. And in every one of those
12 local markets, the Bertrand model assumes no price
13 discrimination at all, right?
14 **DR. MILLER:** That's correct.
15 **MR. KWINTER:** Right. In this case, there are
16 no posted prices, whether within markets or between
17 markets; correct?
18 **DR. MILLER:** That's right. That's right.
19 **MR. KWINTER:** And you've never suggested in
20 this case that cross-market trade is a significant factor;
21 correct?
22 **DR. MILLER:** Could you clarify what you mean by
23 "cross-market trade"?
24 **MR. KWINTER:** Well, your theory is based, and
25 your markets are based, on local geographic markets, right?

1 buyer power.
2 **DR. MILLER:** That's right.
3 **MR. KWINTER:** Right. And in -- you outline in
4 paragraph, beginning at paragraph 94 of your rebuttal
5 report, an example drawn on this revised version, if you
6 will, of the second-score auction model that allows for
7 buyer power; correct?
8 **DR. MILLER:** Yes, that's right.
9 **MR. KWINTER:** But you had already agreed with
10 me that you do not think that buyer power is a particularly
11 relevant factor in this industry and that's what you told
12 the Tribunal yesterday, right?
13 **DR. MILLER:** Yeah, I don't think it's likely to
14 be significant in most situations.
15 **MR. KWINTER:** And the one thing we learn from
16 this example is that you could have, in your initial
17 report, used a second-score auction model that included
18 buyer power; correct? You knew it existed, you knew it was
19 possible, right?
20 **DR. MILLER:** I could have used that model, yes.
21 **MR. KWINTER:** And if you thought it better fit
22 the industry, presumably you would have, right?
23 **DR. MILLER:** That's right.
24 **MR. KWINTER:** And it's also the case, sir, that
25 a second-score auction model that incorporated significant

1 buyer power would have predicted lower price increases than
2 the second-score auction model that you used, right?
3 **DR. MILLER:** Yes. Lower price increases,
4 higher deadweight loss.
5 **MR. KWINTER:** And the fact is, sir, that, as
6 we've talked about, your assumption is that buyer power,
7 countervailing buyer power, is not a significant factor in
8 this market; correct?
9 **DR. MILLER:** In most situations, I think that's
10 most accurate.
11 **MR. KWINTER:** So when you prepare your model,
12 as you've done at paragraph 94, you're basing it on an
13 assumed market power that you say doesn't actually exist in
14 these markets; it's theoretical. Fair enough?
15 **DR. MILLER:** I think there likely is some buyer
16 power, I just don't think it's very large, and so -- that's
17 right.
18 **MR. KWINTER:** And my point is that once we're
19 in the world of theory, your conception of what constitutes
20 an amount of buyer power is no better than mine; right?
21 We're in the world of theory. Correct?
22 **DR. MILLER:** Okay. I don't know exactly what
23 you mean by that, but...
24 **MR. KWINTER:** Well, the point is this. You
25 would agree that there could be sufficient buyer power to

1 eliminate any price effects; right? If there's enough
2 buyer power, there would be no price effects resulting from
3 a merger; correct?
4 **DR. MILLER:** That's a limit case. If there's
5 enough, there is no price effect.
6 **MR. KWINTER:** Right. But if that were true,
7 nevertheless, if the facilities in such a market were
8 closed, the customers who preferred the closed facilities
9 would suffer the facility closure effect you've identified;
10 correct?
11 **DR. MILLER:** Yes, that's true.
12 **MR. KWINTER:** Now, let's go to paragraph 90 of
13 your rebuttal report, I think. Yes.
14 And you say there that your initial affidavit
15 obtains an estimate of DWL due to facility closures of 40
16 million with the Bertrand model using the market
17 share-based approach. You say the estimate represents
18 effects within the geographic markets "that I delineate and
19 so are comparable to results from applying the second-score
20 auction model", which is $55 million.
21 Do you see that?
22 **DR. MILLER:** Yes, I do.
23 **MR. KWINTER:** And you've further adjusted the
24 $40 million figure based on the discussion we had at the
25 very beginning of this cross-examination to reflect Mr.





1 **DR. MILLER:** That's a very broad statement.
2 And for example, it would depend on the ability to expand
3 capacity constraints to the extent that those are needed to
4 eliminate wait times.
5 And I would also say with less competition
6 there's less incentive to invest in quality improvements
7 for your customers because your customers don't need to
8 come to the facility. And so I think this is quite a bit
9 of speculation that you're asking me to engage in.
10 **MR. KWINTER:** I didn't mean to interrupt. But
11 just on that point --
12 **DR. MILLER:** M'hmm.
13 **MR. KWINTER:** -- to the extent that the
14 contention is that, as a result of this merger, Secure has
15 less incentive to provide service improvements or the like,
16 that would have been reflected in your price effects
17 analysis; correct?
18 **DR. MILLER:** Yes, that's right. Yeah.
19 **MR. KWINTER:** Now, the facts of this case are
20 that every single customer who gave evidence in this case
21 historically used both Secure and Tervita facilities and,
22 for the most part, they had done so for many years. Fair
23 enough?
24 **DR. MILLER:** I've read a lot. I don't want to
25 make a characterization about everybody, but it's certainly

1 evidence that you calculated the DWA based on various
2 elasticities ranging from 0.2 to 0.87; correct?
3 **DR. MILLER:** Yes. That reflects my thinking
4 that Dr. Kahwaty may have overstated the elasticity of
5 demand.
6 **MR. KWINTER:** You've said, sir, you had no data
7 upon which you could estimate elasticities, and yet you've
8 come up with elasticities other than the 0.87 which you say
9 is based on Dr. Kahwaty's work. I'm just trying to
10 understand how you could possibly come up with any
11 estimates if you said you don't have the information to do
12 it.
13 **DR. MILLER:** We have a general understanding
14 for, you know, what 0.87 implies and it's inelastic demand,
15 but you wouldn't characterize it as highly inelastic
16 demand. And when I look at this market, especially for
17 TRDs, but with the others as well, I don't see that
18 customers have really good options to turn to, and so I
19 think the demand is likely to be highly inelastic here.
20 And so that's why I took the 0.87 and I
21 considered a number all the way down to 0.2 and then did a
22 range of illustrative calculations to show the sort of
23 implications that flow from that range.
24 **MR. KWINTER:** But the bottom line is, sir,
25 you've said in your own report that you didn't have the

1 data that would allow you to do an elasticity calculation;
2 correct?
3 **DR. MILLER:** Yes, I haven't estimated an
4 elasticity, to be clear, using econometrics.
5 **MR. KWINTER:** Now, at paragraph 164, you
6 identify a second source of potential deadweight loss.
7 Again, this is what we referred to a moment ago.
8 This is the potential deadweight loss resulting
9 from producers -- sorry, the diminution in the amount or
10 type of drilling; correct? That's your 164.
11 **DR. MILLER:** Yeah, that's right.
12 **MR. KWINTER:** And you say there in 164, you
13 say:
14 "While increased costs of waste [water]
15 services may not affect producers'
16 decisions to drill most future wells,
17 it may cause them to forego drilling
18 *marginal wells*."
19 Right?
20 **DR. MILLER:** Yes.
21 **MR. KWINTER:** And then you say, "I am not aware
22 of data or estimates that would allow me to quantify" the
23 deadweight loss. Right?
24 **DR. MILLER:** That's correct.
25 **MR. KWINTER:** But then you say:

1 report from Dr. Kahwaty.
2 I just want to understand, in that paragraph
3 you say that Dr. Kahwaty's analysis implied an elasticity
4 of 0.87 and then you did some calculation of the deadweight
5 loss based on a range of 0.2 to 0.87. How did you select
6 the 0.2?
7 **DR. MILLER:** It was a round number that was
8 close to zero. You know, when I looked at the 0.87, it
9 felt larger than it should be just based on my
10 understanding of the market and the ability of -- you know,
11 what the likely substitution away would be. It felt like
12 this, looking at the options that customer have, it was
13 more inelastic than that or less elastic is what I mean to
14 say. And so I used a range -- I used the 0.87 which felt
15 too large in magnitude and I just went down -- economic
16 theory is not going to tell you zero, so I'm going to use a
17 number bigger than zero and I used 0.2.
18 You know, an interesting thing is that we have
19 an econometric trick, estimate, that's actually been
20 presented -- I think it's in the -- I don't know how to say
21 it. But Dr. Yatchew, who I think is going to testify, took
22 a stab at getting this elasticity, and it's a hard thing to
23 get at well. But his estimate, depending on whether he's
24 using sort of a point estimate from all of the market, or
25 whether he's using sort of a blended average for wastewater

1 disposal, and TRDs, and landfills. The first is 0.15 and
2 the second one is 0.22. And so those numbers are actually
3 pretty close to the bottom of the range that I ended up
4 with here. And that gives me comfort that the range that
5 I'm using is not an unreasonable one.
6 In my Reply Report, I take that elasticity and,
7 you know, use it with a little more confidence and apply it
8 over a greater range of output, and show that depending on
9 the price effects that you get, this deadweight loss can be
10 a little bit larger than the -- you know, what do we
11 have -- the 2 to 4 million or so that -- maybe even less
12 than that, 0.5 to 2 that I estimate here.
13 **MR. JUSTICE GASCON:** It's one to 4.4.
14 **DR. MILLER:** Yeah, it's small.
15 So if you were to take the elasticity of Dr.
16 Yatchew and apply a price effect that Dr. Duplantis obtains
17 from the regression analysis, the price effect is about 11
18 percent, you get a deadweight loss of maybe $1 million or
19 $2 million. If you were to take an average of her price
20 effects and the price effects of my merger simulation, and
21 Justice -- then you would get a number that would be $6
22 million.
23 **MR. JUSTICE GASCON:** I was going to ask you.
24 So that -- only to understand because the 6 million that
25 you refer to in your Reply Report and in your presentation

1 Ah, here we go.
2 I'm not going to give you a precise number
3 because I'm getting something that's not right.
4 He's not going to be able to rule out demand
5 elasticity that is less than one in magnitude, and he's not
6 going to be able to rule out demand that's considerably
7 upward sloping, just statistically speaking. So the point
8 estimate of 0.2 is actually consistent with the way I see
9 the market. I think it's highly inelastic.
10 Dr. Yatchew arrives at that conclusion both
11 with a regression analysis and with a qualitative analysis
12 of the market. But the particular point estimate is
13 estimated with a very wide degree of statistical
14 uncertainty to the point that he can't rule out -- you
15 know, if he's at 0.2, he can't rule out, you know, almost
16 1.5 maybe or, you know, like demand elasticity of negative
17 1, which would be sort of very upward sloping demand, like
18 consumers will buy more, for example, if price goes higher.
19 And so this is why I say that, you know, my
20 initial concerns about the ability to do something with the
21 econometrics were borne out in his exercise, although
22 ultimately I think we agree on the conclusion, which is
23 that demand is pretty highly inelastic.
24 **CHIEF JUSTICE CRAMPTON:** Thank you.
25 Justice Gascon took you to paragraph 129. I

1 just want to make sure I understand whether what you said
2 applies to the other places where you used the word "may".
3 For example, you do that at paragraph 162 and 163, 164,
4 165, and then you do it again at paragraph 74 of your
5 Rebuttal Report.
6 So where you use that term "may", did you mean
7 may because you weren't sure or did you mean something
8 else?
9 **DR. MILLER:** Yeah. So let me just talk about
10 this in the context of the volume-based deadweight loss,
11 which I think all the paragraphs you mentioned are in that
12 context. And I just want to clarify that this is what I'm
13 talking about is the volume-based measures of deadweight
14 loss.
15 What we know is that economic theory tells us
16 that if prices go up, there will be a volume response and,
17 therefore, there will be a deadweight loss. And the
18 question is how much certainty you can have.
19 And I think the use of "may" in my sections
20 there reflects that when I wrote the report, I had a fair
21 amount of uncertainty. And in the volume response to
22 higher prices, for the reasons that we've just been talking
23 about, it doesn't mean it's not real, but I think there is
24 sort of a difficulty to have full confidence in a precise
25 number.

1 And that would be true even with Dr. Yatchew's
2 estimate. I mean, there's just more imprecision there than
3 we might like.
4 We know that even with an inelastic demand of
5 0.2 and reasonable sized price increases that we're getting
6 deadweight loss that's not negligible. You know, it's 6
7 million or more if you want to apply the full price
8 increase that I obtain. But getting the elasticity in this
9 exercise is actually incredibly difficult and challenging,
10 and even with the amount of data that Dr. Yatchew started
11 with, I don't think it's possible to get a precise estimate
12 and, you know, that's why I didn't make the effort in the
13 first place.
14 **CHIEF JUSTICE CRAMPTON:** Okay. Well then, how
15 would you modify or not what you just said when it comes to
16 the 72 million from the plant closure effects? Are those
17 likely?
18 **DR. MILLER:** No, I'm confident in those. There
19 I'm certain there will be a loss of surplus.
20 **CHIEF JUSTICE CRAMPTON:** Of 72 million, not
21 just --
22 **DR. MILLER:** No, within a range. You know,
23 within some range and you know, a range that I can't -- you
24 know, I don't know if -- I don't know what to tell you, is
25 it 65 to 75, you know, or 60 to 80? I don't want to -- I

1 don't think it would be appropriate to me to narrow it down
2 for you and I don't want to overstate what I can accomplish
3 there.
4 But it's going to be a big number, and that's
5 what economic theory tells us. And you know, again, it
6 just flows from what we see from the shares and the
7 margins.
8 **CHIEF JUSTICE CRAMPTON:** Right. But you know,
9 our challenge is that, you know, the law requires us to
10 balance in the trade-off analysis the likely effects of any
11 prevention or lessening of competition against any
12 efficiencies likely to be achieved, right. And so we have
13 to work in terms of likelihoods and in terms of the
14 evidence that's before us.
15 And so your ranges, are you talking about the
16 37 to 51 range, which was, you know, a different way --
17 that's your market share-based approach because I don't
18 think there was a range for the other approach. It was
19 just 72.
20 So when you talk about a range, I saw you
21 nodding your head saying, yeah, that's the range you're
22 talking about.
23 **DR. MILLER:** Yeah, I feel comfortable with the
24 range of 37 to 51 and I also feel comfortable with 72 being
25 my best estimate of the full effect.

1 **CHIEF JUSTICE CRAMPTON:** Because, without
2 putting words in your mouth, you know the distance, you
3 know -- the waste services supplier knows the difference --
4 knows the distance, sorry, knows the -- has a sense of the
5 trucking cost, and so you would say that's coming close to
6 posted pricing. Is that what you're saying?
7 **DR. MILLER:** Yeah. The posted pricing within a
8 local market. And there's something that Tervita has, I
9 think it's called sort of a differential calculator or
10 something, where it's sort of a worksheet that they do that
11 puts in the distance to their facility and the distance to
12 a competitor's facility and spits out the price that should
13 be quoted, and that's what I have in mind with the Bertrand
14 model.
15 **CHIEF JUSTICE CRAMPTON:** Okay. If you don't
16 mind -- thank you very much for that. I'm going to take
17 you back to the Coke and Pepsi slide there. So I'll ask
18 the Registrar to pull up PA-062, Slide -- I've written over
19 the page number -- 41.
20 **DR. MILLER:** We have it on the slide.
21 **CHIEF JUSTICE CRAMPTON:** Yeah, so I'm still
22 having personally, difficulty just understanding how the
23 total variable profits -- and maybe I just need to
24 understand what the total variable profits are. So you
25 have a plant that's going to get closed and it has costs,

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Applicant

- and -

SECURE ENERGY SERVICES INC.
Respondent

BEFORE:

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The Honourable Mr. Justice Denis Gascon — **Member**
Dr. Ted Horbulyk — **Member**

HELD VIA VIDEOCONFERENCE

10 May 2022

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1 is that right, to minimize transport costs?
2 **MR. McSWEEN:** Depending on what the processing
3 and treating cost is, yes.
4 **MR. McGRADE:** Right. And aside from the total
5 cost of the service, you don't have a preference for one
6 facility versus another, as long as the disposal gets done,
7 right?
8 **MR. McSWEEN:** Pending the cost.
9 **MR. McGRADE:** Yeah, pending the costs, you're
10 indifferent between one facility or another, as long as the
11 disposal happens?
12 **MR. McSWEEN:** Pending the cost, yeah.
13 **MR. McGRADE:** Right. So aside from costs,
14 these facilities are essentially interchangeable to you.
15 You don't care where it goes, as long as the cost is good?
16 **MR. McSWEEN:** Yeah, as long as the cost is
17 good, yeah. That's where we make our decision, yeah.
18 **MR. McGRADE:** Right. So if a trucker, say,
19 diverted a load to a different facility, you know, you
20 wouldn't -- apart from any costs, that would be no
21 difference to you, which facility it went to?
22 **MR. McSWEEN:** No, because we have to forecast
23 our volumes into these facilities through our marketers.
24 So if a load is supposed to go to that facility, it has to
25 go to that facility. It's not the trucker's decision where

1 to take it.
2 **MR. McGRADE:** Okay. But you don't -- so you
3 don't view these facilities as differentiated aside from
4 where the load has to go, right? One facility is the same
5 as the other in terms of the disposal they do?
6 **MR. McSWEEN:** Yeah, I would agree, yeah.
7 **MR. McGRADE:** Great. And my last question for
8 you is that DEL operates its own disposal wells; is that
9 correct?
10 **MR. McSWEEN:** We have our own disposal wells
11 for certain properties, yeah.
12 **MR. McGRADE:** Great. So you're able to dispose
13 of some of your own water volumes?
14 **MR. McSWEEN:** At those properties, yeah.
15 **MR. McGRADE:** Great. Thank you. Those are all
16 the questions I had.
17 **CHIEF JUSTICE CRAMPTON:** Thank you, Mr.
18 McGrade, and thank you, Mr. McSween.
19 Mr. Klippenstein, did you have any further
20 questions?
21 **MS. NEKIAR:** Chief Justice, I have --
22 **CHIEF JUSTICE CRAMPTON:** Sorry.
23 **MS. NEKIAR:** That's quite all right, quite all
24 right.
25 **CHIEF JUSTICE CRAMPTON:** Looking at his name up

1 minimizing your overall cost of disposal? I'm sorry, I
2 didn't hear you. Did you say yes, sir?
3 **MR. HART:** Yes.
4 **MS. HENDERSON:** It may be the audio on my end.
5 I apologize if it is. Just to make sure I'm clear, if your
6 truck gets to a facility and it turns out there's no
7 capacity, that truck will either have to drive to another
8 facility or theoretically bring the waste back to CNRL. Is
9 that right?
10 **MR. HART:** No. We will wait till all the other
11 trucks are through, if that facility has capacity, or haul
12 to an alternative facility.
13 **MS. HENDERSON:** And either way, that costs CNRL
14 more money, more trucking time; fair?
15 **MR. HART:** Yes.
16 **MS. HENDERSON:** Would you agree with me that
17 transportation costs can be a very significant component of
18 your overall total waste disposal cost?
19 **MR. HART:** Yes.
20 **MS. HENDERSON:** And given the discussion we've
21 just had, I take it that for CNRL's purposes, the waste
22 disposal service provided by Secure at its facilities and
23 Tervita at its facilities were really interchangeable.
24 Your concern was about the total cost?
25 **MR. HART:** Yes.

1 **MS. HENDERSON:** In other words, they provided
2 the same waste disposal services, and CNRL would choose one
3 or the other based on total trucking time or other
4 cost-related factors?
5 **MR. HART:** Total trucking time and total
6 disposal cost.
7 **MS. HENDERSON:** Just circling back to capacity
8 issues for a moment, is it fair to say that CNRL disposes
9 of significant volumes of waste?
10 **MR. HART:** I don't really like -- "significant"
11 is not a number. Yes.
12 **MS. HENDERSON:** Fair enough. Let me put it
13 this way, do you understand that CNRL is one of the largest
14 producers of oilfield waste in the Western Canadian
15 Sedimentary Basin?
16 **MR. HART:** Yes.
17 **MS. HENDERSON:** At paragraph 16 of your Witness
18 Statement -- and I take it, sir, that you have an
19 unredacted copy of that in front of you?
20 **MR. HART:** Yes.
21 **MS. HENDERSON:** So in paragraph 16, you say
22 that CNRL's practice has been to contact waste disposal
23 facilities up to a month in advance to communicate your
24 anticipated volume and timing requirements.
25 Do you see that?

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10 May 2022

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1 So there’s comments of those, and if all parts
2 of the equation financially are equal, then there’s
3 consideration or, I guess, latitude in terms of location to
4 terminate the load.
5 **MS. HENDERSON:** And that’s all I'm suggesting
6 to you is that the free hot dog that a driver might get is
7 not going to drive Halo’s decision-making. It’s about
8 cost.
9 **MR. CAIN:** Correct.
10 **MS. HENDERSON:** Prior to the merger of Secure
11 and Tervita, I understand from your witness statement that
12 Halo used both Secure and Tervita facilities for waste
13 disposal?
14 **MR. CAIN:** Among others, yes.
15 **MS. HENDERSON:** You used Secure and Tervita for
16 both liquid and solid waste?
17 **MR. CAIN:** I -- I actually can’t comment on the
18 solid waste. Certainly on our produced fluid, produced
19 water, I would say yes, emphatically. I just -- I’d have
20 to undertake as far as solids to Tervita are concerned.
21 **MS. HENDERSON:** You agree that both Secure and
22 Tervita before the merger had facilities available to you
23 to dispose of solid waste if you needed them.
24 **MR. CAIN:** Yes.
25 **MS. HENDERSON:** And prior to the merger, Halo

1 used TRDs belonging to both Secure and Tervita.
2 **MR. CAIN:** Correct.
3 **MS. HENDERSON:** And as between Secure and
4 Tervita, and I'm talking before the merger, fair to assume
5 that Halo would choose the facility that would get you the
6 overall lowest net cost.
7 **MR. CAIN:** Correct.
8 **MS. HENDERSON:** Taking into account the factors
9 we just talked about that go into that.
10 **MR. CAIN:** Correct.
11 **MS. HENDERSON:** And I take it aside from that
12 issue of costs, you know, you said a couple times costs
13 being equal, you viewed the actual waste disposal services
14 provided by Secure on one hand and Tervita on the other as
15 essentially interchangeable.
16 **MR. CAIN:** Yeah, I would have no reason to
17 prefer one over the other outside of those cost
18 considerations.
19 **MS. HENDERSON:** And you alluded to this a
20 moment ago, but Halo has also used other service providers
21 besides Secure and Tervita for waste disposal.
22 **MR. CAIN:** For produced water, certainly. I
23 would have to just confirm on other waste disposal. I
24 don't recall.
25 **MS. HENDERSON:** And I apologize. I'm using the

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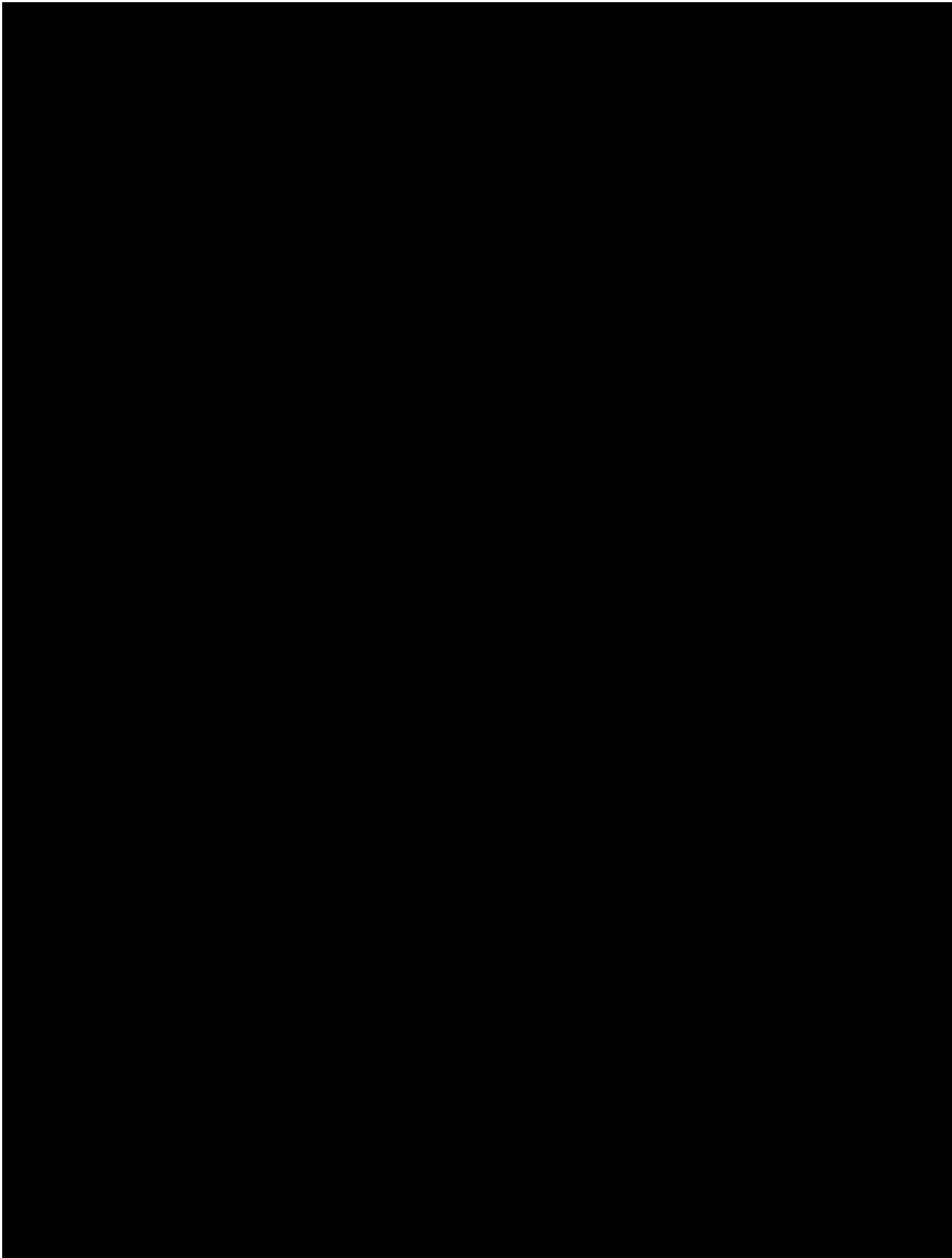

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1 trying to get at, that the prime contractor has quite a bit
2 of discretion about who they're going to use for waste
3 disposal.
4 **MR. DePAUW:** Correct.
5 **MS. HENDERSON:** And I take it, based on what
6 you've just said, that overall cost would be a primary
7 driver for the prime contractors making those decisions.
8 **MR. DePAUW:** Specifically around waste, yes.
9 **MS. HENDERSON:** And I take it that from OWA's
10 perspective, given that Secure and Tervita were both
11 suppliers of choice and given the discretion that the prime
12 contractors had to select a waste disposal company in any
13 given instance, as far as OWA was concerned, the services
14 provided by Secure on one hand and Tervita on the other
15 were essentially interchangeable, by which I mean one
16 landfill is the same as another, one TRD is the same as
17 another. Would you agree?
18 **MR. DePAUW:** (No audible response)
19 **MS. HENDERSON:** I'm sorry, sir, I may have just
20 missed your answer again.
21 **MR. DePAUW:** Yes.
22 **CHIEF JUSTICE CRAMPTON:** I'll just intervene
23 for one second.
24 So I think this is the third or fourth time
25 where, for some reason, on your short answers your mic

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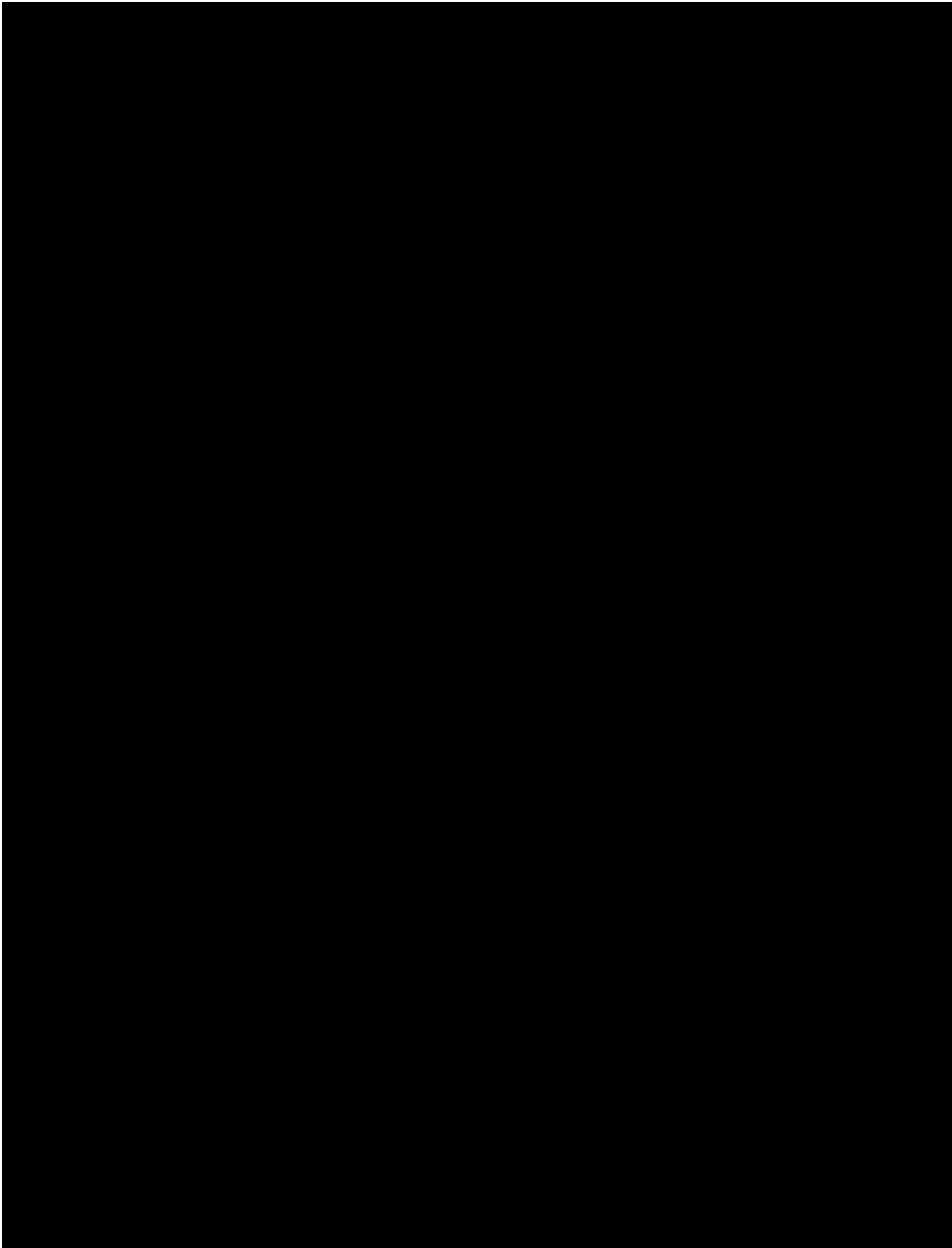

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THE COMMISSIONER OF COMPETITION

Applicant

- and -

SECURE ENERGY SERVICES INC.

Respondent

BEFORE:

The Honourable Mr. Chief Justice Paul Crampton	**Presiding**
The Honourable Mr. Justice Denis Gascon	**Member**
Dr. Ted Horbulyk	**Member**

HELD VIA VIDEOCONFERENCE

12 May 2022

Volume 4
Combined

1 total cost is made up of the disposal fees charged by the
2 facility as well as the transportation costs associated
3 with trucking the waste there. Is that fair?
4 **MR. LAMMENS:** Yeah, those are the key -- the
5 main two factors. Health and safety, you know, more time
6 of the road is involved a bit too but, yeah, those are the
7 main two.
8 **MS. HENDERSON:** Of course. And for that
9 reason, I take it that Petronas usually tries to use the
10 closest facility to its operations to dispose of waste?
11 **MR. LAMMENS:** Typically, yeah.
12 **MS. HENDERSON:** Sorry. I take it that you'd
13 agree with me that transportation costs are a significant
14 component of the overall cost of waste disposal?
15 **MR. LAMMENS:** They are.
16 **MS. HENDERSON:** And really a key driver of your
17 choice in that regard?
18 **MR. LAMMENS:** Yeah.
19 **MS. HENDERSON:** And that's because from your
20 perspective -- and I'm talking prior to the merger --
21 Secure and Tervita basically provide the same service at
22 their facilities. It's really -- provided the same service
23 at their facilities. It's really an issue of the
24 economics.
25 **MR. LAMMENS:** Yeah. Typically, I mean, the

1 Silverberry facility can sometimes take some things that
2 the other ones could not. But, yeah, that's correct
3 generally, yeah.
4 **MS. HENDERSON:** Understood. I guess what I'm
5 getting at is, aside from the facilities' ability to handle
6 your waste and the total overall cost, you don't really
7 have a preference for disposal happening at one facility
8 rather than another, as long as it gets done on the most
9 economic basis for your company, right?
10 **MR. LAMMENS:** That's right.
11 **MS. HENDERSON:** As I understand it, Petronas
12 generates produced water through its operations in B.C.?
13 **MR. LAMMENS:** There is some definitely
14 generated, yeah.
15 **MS. HENDERSON:** And I understand that your
16 practice is to recycle produced water for use in fracking?
17 **MR. LAMMENS:** We try and do that where we have
18 room in our ponds, yeah. So the majority of it gets
19 recycled into our pond system, which is all interconnected
20 with pipelines.
21 **MS. HENDERSON:** Right. What I'm getting at is
22 that involves, to some extent, Petronas taking produced
23 water and storing it on site for some future use as opposed
24 to taking it to a disposal facility?
25 **MR. LAMMENS:** (no audible response).

Competition Tribunal **Tribunal de la Concurrence**

PUBLIC VERSION

Reference: *The Commissioner of Competition v. Superior Propane Inc.*, 2000 Comp. Trib. 15
File no.: CT1998002
Registry document no.: 192b

IN THE MATTER OF the *Competition Act, R.S.C. 1985, c. C-34, and the Competition Tribunal Rules, SOR/94-290*, as amended;

AND IN THE MATTER OF an inquiry pursuant to subsection 10(1)(b) of the *Competition Act* relating to the proposed acquisition of ICG Propane Inc. by Superior Propane Inc.;

AND IN THE MATTER OF an application by the Commissioner of Competition under section *92 of the Competition Act.*

B E T W E E N:

The Commissioner of Competition
(applicant)

and

Superior Propane Inc.
ICG Propane Inc.
(respondents)

Dates of hearing:	19990923, 24, 27-29; 19991004-08, 13-15, 18-21, 25-29; 19991101-03, 23, 25, 29, 30; 19991201-03, 06-09, 13, 14; 20000119, 24, 31; 20000201-04, 07-09
Members:	Nadon J. (presiding); L.R. Bolton (19990923 to 19991103); C. Lloyd (19991129 to 20000209); and L.P. Schwartz
Date of order:	20000830
Order signed by:	Nadon J.

REASONS AND ORDER

[409] For example, small businesses are not protected under the Act. The purpose clause indicates only that the opportunities for small businesses to participate in economic activity will result from maintaining and encouraging competition. Hence, no other powers are needed to realize this objective.

[410] Accordingly, the listing of objectives of competition policy simply presents the rationale for maintaining and encouraging competition. No hierarchy among the listed objectives is indicated and hence no meaning can be taken from the order in which the listed objectives of competition policy appear in the purpose clause. Under the purpose clause, all of the objectives flow from competition.

[411] There are, of course, other objectives that could be sought, one such being the proper distribution of income and wealth in society. It is clear, however, that when competition is maintained and encouraged, the resulting distribution of income and wealth may not be the proper one depending on one's political or social outlook. By not including distributional considerations in the list of objectives in the purpose clause, Parliament appears to have recognized this. Indeed, if distributional issues were a concern, Parliament might have felt it necessary to restrict or place limits on competition in order to achieve the proper distribution of income and wealth in society. However, such limits would place competition policy at war with itself.

[412] Turning to section 96 of the Act, the "efficiency exception", the Tribunal notes that this section contains the only provision in the Act which limits or restricts the pursuit of competition. As noted above, section 1.1 states that competition should, in and of itself, promote efficiency; normally there will be no conflict between the statutory means (encouraging competition) and the desired end (efficiency). However, the existence of section 96 makes it clear that if competition and efficiency conflict in merger review, the latter is to prevail. Thus, an anti-competitive merger that created or increased market power but also increased efficiency could be approved. Addressing this possibility, the MEG's, cited above at paragraph [57], state at paragraph 5.1:

> One such circumstance is highlighted in section 96 of the Act, where it is recognized that some mergers may be both anticompetitive and efficiency enhancing. When a balancing of the anticompetitive effects and the efficiency gains likely to result from a merger demonstrates that the Canadian economy as a whole would benefit from the merger, section 96(1) explicitly resolves the conflict between the competition and efficiency goals in favor of efficiency.

The Tribunal cannot but agree with this view of section 96.

[413] The existence of section 96 signals the importance that Parliament attached to achieving efficiency in the Canadian economy. Indeed, in the view of the Tribunal, section 96 makes efficiency the paramount objective of the merger provisions of the Act and this paramountcy means that the efficiency exception cannot be impeded by other objectives, particularly when those other objectives are not stated in the purpose clause. To be more explicit, if, pursuant to the purpose clause, the pursuit of competition is not to be limited by distributional concerns, then as a matter of both law and logic, the attainment of efficiency in merger review cannot be limited thereby when competition and efficiency conflict.

effects not taken into account by weighing only changes in allocative and productive efficiency. If the reader will look once more at Figure 4 he will see that at the competitive price, P1, there is a large area under the demand curve that lies above the market price. This area represents the amount above the actual price that consumers would be willing to pay rather than go without the product; it is generally called the "consumer's surplus," perhaps on some notion that the consumer gets surplus value for his money.

Those who continue to buy after a monopoly is formed pay more for the same output, and that shifts income from them to the monopoly and its owners, who are also consumers. This is not dead-weight loss due to restriction of output but merely a shift in income between two classes of consumers. The consumer welfare model, which views consumers as a collectivity, does not take this income effect into account. If it did, the results of trade-off calculations would be significantly altered. As Williamson notes, referring to his diagram: "The rectangle ... bounded by *P2* and *P1* at the top and bottom respectively and o and *Q2* on the sides represents a loss of consumers' surplus (gain in monopoly profits) that the merger produces. ... Inasmuch as the income distribution which occurs is usually large relative to the size of the dead-weight loss, attaching even a slight weight to income distribution effects can sometimes influence the overall valuation significantly."

The issue is not crucial, perhaps, since most antitrust cases do not involve trade-off. The law's mistake has generally consisted of seeing restriction of output where there is none, and in such cases there will be no loss of consumer surplus. But even in cases where the trade-off issue must be faced, it seems clear the income distribution effects of economic activity should be completely excluded from the determination of the antitrust legality of the activity. It may be sufficient to note that the shift in income distribution does not lessen total wealth, and a decision about it requires a choice between two groups of consumers that should be made by the legislature rather than by the judiciary. (reference omitted)

(b) Standard for Merger Review

[427] Assessing a merger's effects in this way is generally called the "total surplus standard". As discussed by the Commissioner's expert, Professor Townley (expert affidavit (16 August 1999): exhibit A-2081), and in a recent article by Michael Trebilcock and Ralph Winter, transfers from consumers to shareholders are not counted as losses under the total surplus standard. The anti-competitive effect of the merger is measured solely by the deadweight loss (M. Trebilcock and R. Winter, "The State of Efficiencies in Canadian Merger Policy" (1999-2000) 19:4 Canadian Competition Record 106). Under the total surplus standard, efficiencies need only exceed the deadweight loss to save an anti-competitive merger.

[428] Other standards have been proposed. Under a "price standard", efficiencies are not recognized as a justification for a merger which results in a price increase to consumers. Under a "consumer surplus standard", efficiencies can be considered in merger review only if they are sufficiently large as to prevent a price increase. Effectively, this means that transfers of income are considered as losses; hence efficiencies must exceed the sum of the transfer of income and the deadweight loss.

[429] From an economic point of view, the cost to society of an anti-competitive merger is the deadweight loss which measures lost economic resources. If, on the other hand, the merger generates efficiencies, it creates economic resources and hence the net economic effect of the merger in terms of resources may be much less than the deadweight loss. Indeed, the merger could be economically positive if efficiencies were sufficiently large, in which case society would benefit economically from allowing the merger.

[430] This possibility is the basis for considering efficiencies in merger review. It is not to determine whether shareholders will be better off at the expense of consumers, but rather whether the economy gains more resources than it loses through the transaction. For this reason, it is important to distinguish true efficiencies, those savings that enable the firm to produce the same amount with fewer inputs, from "pecuniary" economies, those savings that increase shareholder profits but do not allow the firm to be more productive. This distinction is recognized in subsection 96(3) which excludes pecuniary efficiencies from consideration. The only standard that addresses solely the effects of a merger on economic resources is the total surplus standard.

(c) Reasons for Total Surplus Standard

[431] Professor Townley offers an approach ("balancing weights") in which the members of the Tribunal are invited to use their individual judgment and discretion to evaluate whether the gains to shareholders are more or less important to society than the losses of surplus imposed on consumers by the exercise of market power. However, the members of the Tribunal are selected for their expertise and experience in order to evaluate evidence that is economic or commercial in nature, not to advance their views on the social merit of various groups in society. As noted by Iacobucci J. in the Supreme Court's decision in *Southam*, cited above at paragraph [48], at pages 773 and 774:

> As I have already said, the Tribunal's expertise lies in economics and in commerce. The Tribunal comprises not more than four judicial members, all of whom are judges of the Federal Court -- Trial Division, and not more than eight lay members, who are appointed on the advice of a council of persons learned in "economics, industry, commerce or public affairs". See *Competition Tribunal Act,* s.3. The preponderance of lay members reflects the judgment of Parliament that, for purposes of administering the *Competition Act*, economic or commercial expertise is more desirable and important than legal acumen.

[432] First, the Tribunal is of the view, as already stated, that distributional concerns do not fall within the ambit of the merger provisions of the Act. If Parliament had intended that transfers from consumers to shareholders be considered, it would no doubt have clearly stated this intent in the Act.

[433] Second, merger review must be predictable. Adopting Professor Townley's approach would result in decisions that vary from case to case depending on the views of the sitting members of the Tribunal regarding the groups affected by the mergers.

[434] Third, the deadweight loss resulting from a price increase is typically quite small as Professors Trebilcock and Winter note in their article, cited above at paragraph [427]. On the other hand, as the Commissioner observes, the transfer is much larger than the deadweight loss resulting from the instant

merger. This being the case, a standard that includes the transfer as an effect under subsection 96(1) would effectively result in the unavailability of the section 96 defence.

[435] Professor Ward's evidence makes this clear. Using the calculations in table 8 of his initial report (exhibit A-2059 at 34), consider a large price increase of 15 percent. The resulting deadweight loss is 1.7 percent of sales but the transfer is 11.6 percent of sales when the price-elasticity of demand is -1.5. Accordingly, a merger that offered gains in efficiency of at least 1.7 percent of sales would be approved under a total surplus standard. However, under a consumer surplus standard, the efficiency gains would have to be at least 13.3 percent of sales.

[436] When the elasticity of demand is -2.5, the deadweight loss and transfer are 2.8 percent and 9.4 percent of sales respectively. Accordingly, the total surplus standard would approve a merger if efficiency gains were at least 2.8 percent of sales. However, a consumer surplus standard would reject a merger unless efficiency gains were at least 12.2 percent of sales.

[437] In an *obiter dictum in the Hillsdown* decision, cited above at paragraph [127], Reed J. appeared to favour the consumer surplus standard. However, as the above numbers indicate, applying a consumer surplus standard would lead the Tribunal to reject many efficiency-enhancing mergers on distributional grounds. As noted above, efficiency was Parliament's paramount objective in passing the merger provisions of the Act and it intended the efficiency exception in subsection 96(1) to be given effect. Accordingly, the Tribunal is not prepared to adopt a standard that frustrates the attainment of that objective.

[438] Fourth, omitting income and wealth redistributional concerns from merger review does not mean that these concerns are to be ignored by public policy. Indeed, governments at all levels have adopted specific tax and social policy measures to address their distributional objectives. The Tribunal regards these measures as more effective ways of meeting social policy goals. Blocking efficiency-enhancing mergers to achieve the same ends is, in our view, contrary to the Act.

[439] Fifth, the MEG's, cited above at paragraph [57], endorse the total surplus standard. Although the Tribunal is not bound by these guidelines, it recognizes that they contain a substantial degree of economic expertise and it agrees with the observation at footnote 57 therein that "[w]hen a dollar is transferred from a buyer to a seller, it cannot be determined a priori who is more deserving, or in whose hands it has a greater value".

(d) Other Effects

[440] The Commissioner submits that the ordinary meaning of "effect/effet", that is, something which flows causally from something else, is the most logical to apply to interpret that language used in section 96. The parties referred to The Shorter Oxford Dictionary, 3rd ed. (Oxford: Clarendon Press, 1973) at 631, which defines "effect" as "[s]omething caused or produced; a result, consequence. Correl. w. cause." Similarly, they referred to the *Larousse de la Langue Française* (Paris: Librairie Larousse, 1979) at 605, which defines "effet" as "[c]e qui est produit, entraîné par l'action d'une chose."

[441] The Commissioner further submits that, provided the effects flow from a prevention or lessening of competition resulting from the merger, section 96 does not place any other limitations upon the scope

or range of "effects" to be considered, which includes detrimental effects of a merger that will affect consumers such as an increase in prices, a decrease in service, product choice or quality.

[442] The respondents submit that the test to be met under section 96 is that the efficiencies must offset any *substantial lessening of competition*. They further argue that a substantial lessening of competition is permitted provided it is outweighed by the efficiencies attributable to the merger. They also submit that *the effects of the substantial lessening of competition* are measured by the deadweight loss to the economy and exclude wealth transfers between consumers and producers, which are neutral to the economy.

[443] The Tribunal observes that an anti-competitive merger may well have other important economic and social effects. Job terminations and plant closures are often emphasized in the press, presumably because of their immediacy and significance to the people and communities involved.

[444] While not seeking to minimize the importance of these effects on those affected, the Tribunal wishes to point out that they are not restricted to anti-competitive mergers. Layoffs and closures often result from mergers and business restructurings that are not offensive and the Commissioner may take no notice thereof under the Act. Accordingly, the Tribunal is of the view that these effects are not to be considered when they result from anti-competitive mergers.

[445] As a result, the Tribunal cannot accept the Commissioner's submission that section 96 does not place any other limitations upon the scope or range of "effects" to be considered.

(e) Conclusion

[446] In final argument, the Commissioner refers to the "anti-competitive effects" of the merger as including the redistributive effects of the transfer. The Tribunal does not regard the redistributive effects of a merger as anti-competitive.

[447] The Tribunal further believes that the only effects that can be considered under subsection 96(1) are the effects on resource allocation, as measured in principle by the deadweight loss which takes both quantitative and qualitative effects into account. Accordingly, the Tribunal believes that the total surplus standard is the correct approach for analysing the effects of a merger under subsection 96(1).

[448] As a practical matter, the effects of an anti-competitive merger include effects that are difficult to quantify and may not be captured through statistical estimation of the deadweight loss. Subsection 96(1) specifically provides that gains in efficiency must both be greater than and offset the effects of any lessening of competition. Thus, it may be that, in a strict quantitative comparison of efficiencies and the estimated deadweight loss, the former exceeds the latter, yet the requirement to be "greater than" may not be met because of unmeasured qualitative effects.

[449] If the word "offset" (or in French, "neutraliseront") were taken to mean "prevent" or "neutralize", this would imply that efficiency gains had to prevent the estimated deadweight loss and the other effects of prevention or lessening of competition from occurring or to neutralize these effects. Such interpretation would be inconsistent with the existence of the efficiency exception which clearly allows

> The Director's position is that cost savings that do not arise *uniquely* out of the merger are not to be considered as efficiency gains. The respondents' position is that the test to be applied is whether the efficiency gains would *likely* have been realized in the absence of the merger. The tribunal accepts the respondents' position.

[463] The Tribunal finds that the estimated gains in efficiency from this merger are $29.2 million per year over 10 years and these gains in efficiency would not likely be attained if the order for total divestiture were made. The Tribunal finds that the estimated deadweight loss is approximately $3.0 million per year over the same ten-year period.

[464] The Commissioner submits that qualitative effects include distributional impacts and other qualitative elements including changes to levels of service, product quality and product choice, increased probability of coordinated behaviour, and innovation. For the reasons already given, the Tribunal will not consider distribution impacts.

[465] The Tribunal took into account the increased probability of coordinated behaviour in its consideration of the evidence regarding a substantial lessening of competition. To the extent that the effect of such anti-competitive behaviour is a higher price, then it has already been reflected in the deadweight loss estimate. If there are other effects of coordinated behaviour to be considered under section 96, further and better evidence about those effects is required. It cannot suffice simply to restate the concern under section 92.

[466] A decline in service levels, holding quality of service constant, is also reflected in the deadweight loss estimate. However, the evidence indicates that ICG had established certain services and pricing arrangements (e.g., the Golf-Max program) that Superior and other propane marketers did not offer. Their removal or reduction would reduce the real output of the industry. Although no evidence was given on the likelihood or scope of the reduction or removal of these product offerings following the merger, the exercise of market power might take such forms together with, or instead of, a direct increase in price.

[467] The Tribunal must determine whether all of the gains in efficiency brought about or likely to be brought about by the instant merger are greater than the estimated deadweight loss and the negative qualitative effects resulting or likely to result therefrom. As noted above, this determination requires that the latter two components be combined and then compared with total efficiency gains. The Tribunal views the impact on resource allocation of the negative qualitative effects as minimal and as most unlikely to exceed in amount the estimated deadweight loss. Thus, the combined effects of lessening or prevention of competition from the instant merger cannot exceed, in the Tribunal's opinion, $6 million per year for 10 years. On this basis, the Tribunal finds that the gains in efficiency are greater than those effects.

[468] The Tribunal must also determine whether all of the gains in efficiency will offset those effects. Gains in efficiency exceed those effects by at least $23.2 million per year for 10 years and, in the Tribunal's opinion, adequately compensate society for those effects. Accordingly, the Tribunal finds that the gains in efficiency will offset those effects.

Competition Tribunal Tribunal de la Concurrence

Reference: *The Commissioner of Competition v. Superior Propane Inc.,* 2002 Comp. Trib. 16
File no.: CT1998002
Registry document no.: 238a

IN THE MATTER OF the *Competition Act*, R.S.C. 1985, c. C-34, and the *Competition Tribunal Rules,* SOR/94-290, as amended;

AND IN THE MATTER OF an inquiry pursuant to subsection 10(1)(b) of the *Competition Act* relating to the proposed acquisition of ICG Propane Inc. by Superior Propane Inc.;

AND IN THE MATTER OF an application by the Commissioner of Competition under section 92 of the *Competition Act.*

B E T W E E N:

The Commissioner of Competition
(applicant)

and

Superior Propane Inc.
ICG Propane Inc.
(respondents)

Dates of hearing: 20011009 to12, 20011015
Members: Nadon J. (presiding); L.P. Schwartz and C. Lloyd
Date of order: 20020404
Order signed by: Nadon J.

REASONS AND ORDER FOLLOWING THE REASONS FOR JUDGMENT OF THE FEDERAL COURT OF APPEAL DATED APRIL 4, 2001

[234] The Commissioner argues now that the redistribution of income arising from the coordinated pricing behaviour of competitors should be considered as a qualitative effect by the Tribunal.

[235] The Commissioner did not propound this effect at the first hearing.

> MEMBER SCHWARTZ: Apart from Dr. Ward's testimony here, which I don't want to minimize, I don't recall that the Commissioner advocated it in the first hearing that these were sources of deadweight loss and transfer that needed to be considered. Rather that the Commissioner said, as I understood it, that interdependence and coordination were themselves, I suppose, so important that they needed to be given a qualitative consideration outside of any deadweight loss or transfer issues.
>
> So am I wrong when I say the Commission did not seek to have deadweight loss and transfer from the coordinated effects considered?
>
> MS. STREKAF: Well, I think that – I guess two responses.
>
> First of all, there was no calculation put forward with respect to what the deadweight loss and transfer would be with respect to category two and three markets in the original case. I think the second response, and that relates to – part of the scope of this hearing is to now focus in and drill down very specifically in accordance with what the Federal Court of Appeals direction has been and to examine the effects in their totality. And in looking –
>
> ...
>
> MS. STREKAF: In this context here, we are not – we had not put forward a specific number as to what those deadweight loss and transfers would be. But relying on the evidence that was at the hearing of Professor Ward, he recognized that there would be an additional deadweight loss and a transfer, and in discussing the coordination effects more specifically later on in the brief, we attempt to try and put some boxes around what those numbers might be to give you kind of an order of magnitude of how you might view that from a qualitative perspective rather than trying to quantify those numbers.
>
> MEMBER SCHWARTZ: Thank you very much.
>
> (Transcript, vol. 1, October 9, 2001, at 116, line 25 to 118, line 22)

[236] In the Tribunal's view, the same evidentiary issues that attend the claim of deadweight loss from interdependent and coordinated behaviour attend the claim of redistributional effect. There is no evidence thereof on the record. Again, Professor Ward did not address this redistributional effect in his expert report. His oral evidence is, as noted above, speculative. Indeed, his oral evidence cited by the Commissioner addresses the possibility of loss of producer surplus by the competing independent

firms, not the possible loss of consumer surplus by migrating customers (Commissioner's Memorandum on Redetermination Proceedings, paragraph 24 at 15).

[237] Since the Tribunal had adopted the Total Surplus Standard, it would not have considered the redistributional effect of interdependent and coordinated behaviour by competitors had it been propounded at the first hearing. In light of the Appeal Judgment, the Tribunal is of the view that it should consider the submissions of the parties in this matter. However, as there is no evidence on which the Tribunal could assess the claimed redistributive effect of interdependent and coordinated behaviour, the Tribunal rejects the Commissioner's submission.

C. SERVICE QUALITY AND PROGRAMMES

[238] The Commissioner maintains that the Tribunal, while it considered the deadweight loss effect of the removal or reduction of services and pricing arrangements offered by ICG, should now consider the redistribution of income associated with that exercise of market power. It should further consider the qualitative impacts associated with the elimination of or reduction in consumer choice in, for example, the national account coordination services product market (Commissioner's Memorandum on Redetermination Proceedings, paragraphs 34-41 at 19-21).

[239] The respondents point out that the Tribunal stated in its Reasons that there was no evidence regarding the scope of any program removal or service reduction. In addition, they argue that the Commissioner has not explained why consumers value choice *per se*, i.e. beyond the effect it has on price or quality of service, which matters have already been considered by the Tribunal (Respondents' Memorandum on Redetermination Proceedings, paragraphs 68-73 at 31-34).

[240] The Tribunal recognized that ICG had established certain services and pricing arrangements that Superior and other propane marketers did not offer. (However the Commissioner notes that, in western Canada, Superior offers a program similar to ICG's "Cap-It" arrangement.) In the Tribunal's view, GolfMax and similar arrangements are specialized marketing arrangements and represent ways in which ICG has sought to differentiate itself from its competition in selling propane. The removal of certain specialized marketing arrangements by the merged company would cause a buyer for whom that arrangement was its preferred way of acquiring propane, to select a less-preferred arrangement. As with switching induced by a direct increase in price, this change of arrangements would entail a loss of efficiency as measured, in principle at least, by the deadweight loss and a redistribution of income from buyer to seller. If estimates of these effects could be made, the effects of reduced choice would be captured in the conventional way. If such estimates could not be made, then the effects would have to be established in some other way per the evidence.

[241] On the evidence that propane demand was inelastic, the Tribunal concluded that propane consumption would not decline significantly if those marketing arrangements were eliminated. On the evidence, the Tribunal concluded that to the extent that certain marketing arrangements were removed, the deadweight loss therefrom would be "minimal" and "...most unlikely to exceed in amount the estimated deadweight loss..." of $3 million. (Reasons, paragraphs 466-467). In this way, the Tribunal used the available evidence to place an upper bound on the effect on efficiency brought about by the reduction or removal of certain marketing arrangements argued by the Commissioner as a qualitative factor.

Tervita Corporation,
Complete Environmental Inc. and
Babkirk Land Services Inc. *Appellants*

v.

Commissioner of Competition *Respondent*

Indexed as: Tervita Corp. *v.* Canada (Commissioner of Competition)

2015 SCC 3

File No.: 35314.

2014: March 27; 2015: January 22.

Present: McLachlin C.J. and Abella, Rothstein, Cromwell, Moldaver, Karakatsanis and Wagner JJ.

ON APPEAL FROM THE FEDERAL COURT OF APPEAL

Competition — Mergers — Review — Commissioner of Competition opposing merger on ground that merger likely to prevent competition substantially — Merged parties raising statutory efficiencies defence — Competition Tribunal rejecting defence and making divestiture order — Proper legal test for determining when merger gives rise to substantial prevention of competition under Competition Act — Proper approach to statutory efficiencies defence — Content of Commissioner's burden for purposes of efficiencies defence — Whether merger likely to prevent competition substantially — Whether gains in efficiency resulting from merger greater than and offset anti-competitive effects of merger — Competition Act, R.S.C. 1985, c. C-34, ss. 92, 96.

Administrative law — Appeals — Standard of review — Competition Tribunal — Standard of review applicable to tribunal's determinations of questions of law arising under Competition Act, R.S.C. 1985, c. C-34 — Whether statutory language in appeal provision rebuts presumption that standard of reasonableness applies to tribunal's interpretation of own statute — Competition Tribunal Act, R.S.C. 1985, c. 19 (2nd Supp.), s. 13(1).

Tervita Corporation,
Complete Environmental Inc. et
Babkirk Land Services Inc. *Appelantes*

c.

Commissaire de la concurrence *Intimé*

Répertorié : Tervita Corp. *c.* Canada (Commissaire de la concurrence)

2015 CSC 3

N° du greffe : 35314.

2014 : 27 mars; 2015 : 22 janvier.

Présents : La juge en chef McLachlin et les juges Abella, Rothstein, Cromwell, Moldaver, Karakatsanis et Wagner.

EN APPEL DE LA COUR D'APPEL FÉDÉRALE

Concurrence — Fusionnements — Examen — Opposition de la commissaire de la concurrence à un fusionnement au motif qu'il aura vraisemblablement pour effet d'empêcher sensiblement la concurrence — Défense fondée sur les gains en efficience prévue par la loi invoquée par les parties fusionnées — Rejet de la défense par le Tribunal de la concurrence et prononcé d'une ordonnance de dessaisissement — Quel est le bon critère juridique pour déterminer si le fusionnement empêche sensiblement la concurrence aux termes de la Loi sur la concurrence? — Comment faut-il envisager la défense fondée sur les gains en efficience prévue par la loi? — En quoi consiste le fardeau qui incombe à la commissaire relativement à la défense fondée sur les gains en efficience? — Le fusionnement aura-t-il vraisemblablement pour effet d'empêcher sensiblement la concurrence? — Les gains en efficience résultant du fusionnement surpassent-ils et neutralisent-ils les effets anticoncurrentiels du fusionnement? — Loi sur la concurrence, L.R.C. 1985, c. C-34, art. 92, 96.

Droit administratif — Appels — Norme de contrôle — Tribunal de la concurrence — Norme de contrôle applicable aux décisions du tribunal sur des questions de droit qui concernent la Loi sur la concurrence, L.R.C. 1985, c. C-34 — Le libellé de la disposition d'appel réfute-t-il la présomption selon laquelle la norme de la décision raisonnable s'applique à l'interprétation par le tribunal de sa loi constitutive? — Loi sur le Tribunal de la concurrence, L.R.C. 1985, c. 19 (2ᵉ suppl.), art. 13(1).

a number of factors relevant to the efficiencies defence and its application.

[89] The *Superior Propane I* case confirmed that s. 96 is a defence to the application of s. 92 (paras. 398-99). As such, the onus of alleging and proving that efficiency gains from the merger will be greater than and will offset the effects of any prevention or lessening of competition resulting from the merger falls upon the merging parties (*Superior Propane I*, at para. 399; *Superior Propane II*, at para. 154; *Superior Propane IV*, at para. 64).

[90] The s. 96 efficiencies defence requires an analysis of whether the efficiency gains of the merger, which result from the integration of resources, outweigh the anti-competitive effects, which result from the decrease in or absence of competition in the relevant geographic and product market. As the Federal Court of Appeal explained in *Superior Propane II*, "This is, in substance, a balancing test that weighs efficiencies on one hand, against anti-competitive effects on the other" (para. 95).

(3) Methodological Approaches to Section 96

[91] There are different possible methodologies for the comparative exercise under s. 96 (Facey and Brown, at pp. 256-57). In Canada, two main standards have been the subject of judicial consideration: the "total surplus standard" and the "balancing weights standard". For both standards, two types of economic surplus are relevant: producer surplus and consumer surplus.

[92] Producer surplus "measures how much more producers are able to collect in revenue for a product than their cost of producing it" (Facey and Brown, at p. 256). Producer surplus therefore represents the wealth that accrues to producers. Consumer surplus is "a measure of how much more the consumers of a product would have been willing to pay to purchase the product compared to the prevailing market price" (*ibid.*). Consumer surplus therefore represents the

ces décisions, il reste que celles-ci traitent un certain nombre de facteurs pertinents quant à la défense fondée sur les gains en efficience et à son application.

[89] *Supérieur Propane I* a confirmé que l'art. 96 établit une défense à l'application de l'art. 92 (par. 398-399). Pour cette raison, il incombe aux parties au fusionnement de l'invoquer et de prouver que les gains en efficience entraînés par le fusionnement surpasseront et neutraliseront les effets de tout empêchement ou de toute diminution de la concurrence résultant du fusionnement (*Supérieur Propane I*, par. 399; *Supérieur Propane II*, par. 154; *Supérieur Propane IV*, par. 64).

[90] La défense que prévoit l'art. 96 commande une analyse visant à déterminer si les gains en efficience qu'entraîne le fusionnement, résultant de l'intégration des ressources, surpassent les effets anticoncurrentiels qui découlent de la diminution ou de l'absence de concurrence dans le marché géographique et dans celui du produit en cause. Pour reprendre les propos exprimés par la Cour d'appel fédérale dans l'affaire *Supérieur Propane II*, « [i]l s'agit, en substance, d'un critère de pondération qui met en balance les gains en efficience d'un côté et les effets anticoncurrentiels de l'autre » (par. 95).

(3) Méthodologies applicables à l'art. 96

[91] Il existe diverses manières de procéder à l'exercice de comparaison qu'appelle l'art. 96 (Facey et Brown, p. 256-257). Au Canada, les tribunaux ont examiné deux grands critères : celui du « surplus total » et celui des « coefficients pondérateurs ». Pour chacun, deux types de surplus économique sont pertinents : le surplus du producteur et le surplus du consommateur.

[92] Le surplus du producteur [TRADUCTION] « mesure la différence entre les recettes attribuables à un produit et ses coûts de production » (Facey et Brown, p. 256). Le surplus du producteur représente donc les richesses qui reviennent aux producteurs. En revanche, le surplus du consommateur « mesure la différence entre le prix que les consommateurs d'un produit auraient été disposés à payer par rapport au prix du marché courant » (*ibid.*). Le surplus du

savings that accrue to consumers from what they would have been willing to pay.

consommateur représente donc les économies qui reviennent aux consommateurs par rapport à ce que ces derniers auraient été disposés à payer.

[93] The term "total surplus" refers to the sum of producer and consumer surplus (see Facey and Brown, at p. 256). If a producer covers its costs, including its cost of capital, by selling a unit of a product at $20 and a consumer is willing to buy the unit for $40, then the total surplus created by the unit is $20. If the eventual sale price is $30, for example, then each of producer and consumer surplus is increased by $10 as a result of the transaction. The total surplus in the economy represents the aggregate of the total surplus created by each unit produced.

[93] Le terme « surplus total » renvoie à la somme du surplus du producteur et du surplus du consommateur (voir Facey et Brown, p. 256). Si un producteur fait ses frais, y compris le coût du capital, en vendant un produit 20 $ et qu'un consommateur est disposé à l'acheter 40 $, le surplus total créé par l'article est égal à 20 $. Si le prix de vente est de 30 $, par exemple, le surplus du producteur et le surplus du consommateur augmentent chacun de 10 $ par suite de l'opération. Le surplus total à l'échelle de l'économie représente la somme du surplus total créé par chaque article produit.

[94] The total surplus standard involves quantifying the deadweight loss which will result from a merger — "the amount by which total surplus is reduced under certain market conditions that reduce the quantity of a good that is supplied" (Facey and Brown, at pp. 256-57). Deadweight loss "results from the fall in demand for the merged entities' products following a post-merger increase in price, and the inefficient allocation of resources that occurs when, as prices rise, consumers purchase a less suitable substitute" (*Superior Propane IV*, at para. 13). Estimates of the elasticity of demand — or the degree to which demand for a product varies with its price — are necessary to calculate the deadweight loss (Tribunal decision, at para. 244).

[94] Le critère du surplus total implique une quantification de la perte sèche qui découlera d'un fusionnement — [TRADUCTION] « ce qui est retranché au surplus total dans certaines conditions du marché ayant pour effet de réduire la quantité d'un bien qui est fourni » (Facey et Brown, p. 256-257). La perte sèche « résulte de la chute de la demande des produits des entités fusionnées par suite d'une hausse de prix intervenue après le fusionnement et de l'affectation inefficiente des ressources qui se produit lorsque, par suite de la hausse des prix, les consommateurs achètent un produit de substitution convenant moins bien » (*Supérieur Propane IV*, par. 13). L'estimation de l'élasticité de la demande — ou la mesure dans laquelle la demande d'un produit varie selon son prix — est nécessaire aux fins du calcul de la perte sèche (décision du Tribunal, par. 244).

[95] Under the total surplus standard, equal weight is given from a welfare perspective to changes in producer and consumer surplus (Facey and Brown, at p. 257). The decrease in total surplus resulting from decreased competition is balanced against any offsetting increase in total surplus resulting from more efficient production. The focus of this method is purely on the magnitude of the total surplus: the degree to which total surplus is allocated between producers and consumers is not considered. In other words, the total surplus standard measures

[95] Suivant le critère du surplus total, une valeur égale est attribuée, du point de vue du bien-être, aux changements du surplus du producteur et du surplus du consommateur (Facey et Brown, p. 257). La réduction du surplus total qui découle d'une concurrence réduite est compensée par toute hausse du surplus total découlant de l'optimisation de la production. Cette méthode s'intéresse exclusivement à la valeur du surplus total : le rapport entre le surplus des producteurs et le surplus des consommateurs ne joue pas dans la balance. Autrement dit, le critère

[107] A distinction should be drawn between efficiencies claimed because a merging party would be able to bring those efficiencies into being faster than would be the case but for the merger (what could be called “early-mover” efficiencies), and efficiencies that a merging party could realize sooner than a competitor only because the competitor would be delayed in implementing those efficiencies because of legal proceedings associated with a divestiture order (what the Tribunal identified as OIEs). While, as will be discussed, OIEs are not cognizable efficiencies under s. 96, early-mover efficiencies are real economic efficiencies that are caused by the merger, and not by delays associated with legal proceedings; were it not for the merger, the economy would not gain the benefit of those efficiencies that would have accrued in the time period between the merger and the actions of a future competitor.

[107] Il y a lieu de distinguer entre les gains en efficience qu’une partie au fusionnement prétend être en mesure de réaliser plus rapidement qu’en l’absence du fusionnement (ce que l’on pourrait appeler les gains en efficience « du premier arrivé ») et les gains en efficience qu’une partie au fusionnement pourrait réaliser plus tôt qu’un concurrent pour la seule raison que ce dernier devrait attendre la fin de la procédure de dessaisissement (ce que le Tribunal a appelé les GEEO). Si, comme nous le verrons, les GEEO ne sont pas admissibles pour l’application de l’art. 96, les gains en efficience du premier arrivé constituent en revanche des gains en efficience économiques qui résultent véritablement du fusionnement, et non pas du délai d’exécution associé à une instance judiciaire. N’eût été le fusionnement, l’économie n’aurait tiré aucun profit de ces gains en efficience qui auraient été réalisés entre la date du fusionnement et celle des actions d’un concurrent futur.

[108] Though the Tribunal held that the one-year efficiencies claimed by Tervita were OIEs, the Tribunal’s reasons also appear to suggest that those efficiencies could have been classified as early-mover efficiencies. The Tribunal noted that Tervita would have been prepared to operate the Babkirk site as a secure landfill by the summer of 2012 (para. 269), and also found that, under its “but for” analysis in which the merger would not have occurred, the site would not have been operated as a secure landfill accepting significant quantities of waste until the spring of 2013 (para. 207). Thus, it would appear that any transportation and market expansion efficiencies arising from the operation of the Babkirk site as a secure landfill from 2012 to 2013 under Tervita’s plans could have arisen not due to delays caused by legal proceedings, but by Tervita’s ability to bring the site into operation sooner than a potential competitor.

[108] S’il a qualifié de GEEO les gains en efficience que Tervita a prétendu pouvoir réaliser durant la période d’un an, le Tribunal laisse toutefois entendre qu’il aurait pu s’agir de gains en efficience du premier arrivé. Selon lui, Tervita aurait été prête à exploiter un site d’enfouissement sécuritaire au site Babkirk à l’été 2012 (par. 269). En outre, suivant son analyse axée sur l’absence hypothétique — où il n’y a pas de fusionnement —, le site d’enfouissement sécuritaire n’aurait pas été prêt à accepter des quantités importantes de déchets avant le printemps 2013 (par. 207). Il semblerait donc que les gains en efficience liés au transport et à l’expansion du marché susceptibles de découler de l’exploitation d’un site d’enfouissement sécuritaire au site Babkirk de 2012 à 2013 selon les plans de Tervita auraient pu être attribuables non pas aux délais associés à une instance judiciaire, mais à la capacité de Tervita d’exploiter le site plus rapidement qu’un concurrent éventuel.

[109] The Tribunal’s reasons appear inconsistent on whether the facts as found by the Tribunal would properly support the classification of the one-year efficiencies at issue as early-mover efficiencies or as OIEs. However, as will be discussed below, the classification of these efficiencies in this case would

[109] Les motifs du Tribunal semblent indécis quant à savoir si les faits tels qu’il les a admis permettent d’assimiler les gains en efficience réalisables pendant la période d’un an à des gains du premier arrivé ou à des GEEO. Cependant, comme nous le verrons, la classification de ces gains dans

permit the Commissioner to meet her burden without at least establishing estimates of the quantifiable anti-competitive effects fails to provide the merging parties with the information they need to know the case they have to meet.

par. 38). Une approche selon laquelle la commissaire pourrait s'acquitter de son obligation sans avoir donné au moins une estimation des effets anticoncurrentiels quantifiables ne permettrait pas aux parties au fusionnement de connaître la preuve qui leur est opposée.

[125] The Commissioner's burden is to quantify by estimation all quantifiable anti-competitive effects. Estimates are acceptable as the analysis is forward-looking and looks to anti-competitive effects that will or are likely to result from the merger. The Tribunal accepts estimates because calculations of anti-competitive effects for the purposes of s. 96 do not have the precision of history. However, to meet her burden, the Commissioner must ground the estimates in evidence that can be challenged and weighed. Qualitative anti-competitive effects, including lessening of service or quality reduction, are only assessed on a subjective basis because this analysis involves a weighing of considerations that cannot be quantified because they have no common unit of measure (that is, they are "incommensurable"). Due to the uncertainty inherent in economic prediction, the analysis must be as analytically rigorous as possible in order to enable the Tribunal to rely on a forward-looking approach to make a finding on a balance of probabilities.

[125] Le fardeau de la commissaire consiste à quantifier au moyen d'estimations tous les effets anticoncurrentiels quantifiables. Les estimations sont acceptables, car l'analyse est prospective et s'intéresse aux effets anticoncurrentiels qui résulteront ou résulteront vraisemblablement du fusionnement. En outre, le calcul des effets anticoncurrentiels qu'exige l'art. 96 n'a pas la précision avec laquelle on peut examiner un fait survenu. Toutefois, pour s'acquitter de son fardeau, la commissaire doit fonder ses estimations sur une preuve qui peut être attaquée et soupesée. Les effets anticoncurrentiels qualitatifs, dont la diminution du service ou de la qualité, ne sont appréciés que sur un fondement subjectif, car une telle analyse fait appel à l'examen de considérations qui ne peuvent être quantifiées parce qu'elles n'ont aucune commune unité de mesure (à savoir elles sont « incommensurables »). En raison de l'incertitude inhérente aux prédictions économiques, l'analyse doit être aussi rigoureuse que possible du point de vue analytique afin de permettre au Tribunal de tirer une conclusion prospective selon la prépondérance des probabilités.

[126] In this case, the Commissioner did not quantify quantifiable anti-competitive effects and therefore failed to meet her burden under s. 96.

[126] Dans le présent pourvoi, la commissaire n'a pas quantifié les effets anticoncurrentiels quantifiables et, partant, elle ne s'est pas acquittée du fardeau que lui impose l'art. 96.

(ii) <u>What Consequences Flow From a Failure to Meet the Burden?</u>

(ii) <u>Quelles sont les conséquences de l'omission de s'acquitter du fardeau?</u>

[127] The question concerns the legal implications of a failure by the Commissioner to quantify quantifiable anti-competitive effects. The Federal Court of Appeal recognized that "[a] quantitative effect which has not in fact been quantified should not be considered as a qualitative effect" (para. 158) but went on to hold that the non-quantified deadweight loss should be assigned a weight of "undetermined" (paras. 130 and 167).

[127] La question touche aux conséquences juridiques de l'omission par la commissaire de quantifier les effets anticoncurrentiels quantifiables. La Cour d'appel fédérale a reconnu qu'un « effet quantitatif qui n'a pas été en réalité quantifié ne devrait pas être considéré comme un effet qualitatif » (par. 158), mais elle a ensuite conclu qu'il y a lieu de donner une valeur « indéterminée » à la perte sèche non quantifiée (par. 130).

In this case, the Tribunal itself found that estimates of market elasticity [the change over the market as a whole] and the merged entity's own-price elasticity of demand [the degree to which demand is effected by a change in price by the merged entity] are necessary in order to calculate the "deadweight loss". The Tribunal also recognized that a range of plausible elasticities are required in order to understand the sensitivity of the Commissioner's estimates. Without those estimates, the "deadweight loss" could not be properly calculated by the Commissioner, and Tervita could not adequately challenge the calculations. [Emphasis deleted; para. 124.]

[133] In his reply expert report, the Commissioner's expert did submit estimates of potential market expansion. However, these estimates were based on Tervita's expert's calculations of Tervita's claimed market expansion efficiencies, which were themselves based on unsupported assumptions. As Tervita's expert testified before the Tribunal, these calculations could not be used to calculate the deadweight loss in the absence of an adequate market demand elasticity study. In response to questioning from the Tribunal, Tervita's expert testified that it is not possible to calculate the deadweight loss without customer-specific elasticity or market elasticity numbers: "You need the shape of the demand curve to figure out dead weight loss" (testimony of Dr. Kahwaty, F.C.A. decision, at para. 125).

[134] Without estimates of elasticity, the "deadweight loss" could not be properly calculated by the Commissioner, and Tervita could not adequately challenge the calculations (F.C.A. decision, at para. 124). Indeed, the proven facts serve to demonstrate that the anti-competitive effects might well have been estimated, but were not estimated due to the absence of the critical component of elasticity measure. An inference based on the 10 percent finding and the unknown potential elasticity is not a substitution for quantification.

[135] The Commissioner submits in the alternative that the Tribunal did not breach procedural fairness in relying upon the rough estimate of the Commissioner's expert of the deadweight loss flowing from

Dans ce cas, le Tribunal a lui-même estimé que, pour calculer la « perte sèche », il était nécessaire de disposer d'estimations de l'élasticité du marché [le changement subi par le marché dans son ensemble] et des données d'élasticité de la demande par rapport au prix établi par l'entité fusionnée [la mesure dans laquelle la demande varie par suite de la modification des prix par l'entité fusionnée]. Le Tribunal a également reconnu qu'il fallait disposer d'une gamme d'élasticités plausibles pour comprendre la sensibilité des estimations de la commissaire. Sans ces estimations, la commissaire ne pouvait calculer convenablement la « perte sèche » et Tervita ne pouvait contester adéquatement les calculs. [Soulignement omis; par. 124.]

[133] Dans son rapport produit en réplique, l'expert de la commissaire a bien présenté des estimations relatives à l'expansion possible du marché. Or, ces estimations reposaient sur les calculs, par l'expert de Tervita, des gains en efficience liés à l'expansion du marché, invoqués par cette dernière, qui reposaient eux-mêmes sur des hypothèses non étayées. Ainsi que l'expert de Tervita l'a déclaré devant le Tribunal, ces calculs ne pouvaient servir à évaluer la perte sèche sans une véritable analyse de l'élasticité de la demande dans le marché. Répondant à une question du Tribunal, l'expert de Tervita a dit qu'il était impossible de calculer la perte sèche sans données sur l'élasticité du marché ou l'élasticité qui se rapporte aux consommateurs : « Pour déterminer la perte sèche, il faut tracer la courbe de demande » (témoignage de M. Kahwaty, décision de la C.A.F., par. 125).

[134] Sans une estimation de l'élasticité, la commissaire ne pouvait calculer convenablement la « perte sèche », et Tervita ne pouvait contester adéquatement les calculs (décision de la C.A.F., par. 124). Effectivement, les faits prouvés démontrent que les effets anticoncurrentiels auraient pu être estimés, mais ne l'ont pas été, vu l'absence de la mesure de l'élasticité, qui est essentielle. L'inférence reposant sur la baisse des prix de 10 p. 100 et sur une élasticité potentielle inconnue ne saurait se substituer à une quantification.

[135] La commissaire soutient à titre subsidiaire que le Tribunal n'a pas manqué à l'équité procédurale en admettant l'estimation approximative faite par son expert de la perte sèche découlant d'une baisse

[145] Together, the terms "greater than" and "offset" mandate that the Tribunal determine both quantitative and qualitative aspects of the merger, and then weigh and balance these aspects. This approach is supported by the common understanding of the word "offset". *The Oxford English Dictionary* (2nd ed. 1989) defines the verb "offset" to mean "[t]o set off as an equivalent against something else . . .; to balance by something on the other side or of contrary nature" (p. 738). Similarly, the *Merriam-Webster's Collegiate Dictionary* (11th ed. 2003) entry defines it to mean "to serve as a counterbalance for" (p. 862). This understanding supports the interpretation of the "offset" requirement in s. 96 as imposing a consideration of the qualitative aspects of the merger and a balancing of those qualitative aspects against the quantitative effects of the merger.

[146] This is a flexible balancing approach, but the Tribunal's conclusions must be objectively reasonable. As the Federal Court of Appeal held, the overall analysis "must be as *objective* as is reasonably possible, and where an objective determination cannot be made, it must be *reasonable*" (para. 147 (emphasis in original)). As such, in most cases the qualitative effects will be of lesser importance. In addition, the statutory requirement that efficiencies be greater than *and* offset the anti-competitive effects would in most cases require a showing that the quantitative efficiencies exceed the quantitative anti-competitive effects as a necessary element of the defence.

[147] In light of this recognition, the balancing test under s. 96 may be framed as a two-step inquiry. First, the quantitative efficiencies of the merger at issue should be compared against the quantitative anti-competitive effects (the "greater than" prong of the s. 96 inquiry). Where the quantitative anti-competitive effects outweigh the quantitative efficiencies, this step will in most cases be dispositive, and the defence will not apply. There may be unusual situations in which there are relatively few quantified efficiencies, yet where truly significant qualitative efficiencies would support the application

[145] Ensemble, les verbes « surpasseront » et « neutraliseront » obligent le Tribunal à déterminer les aspects tant quantitatifs que qualitatifs du fusionnement, puis à les soupeser. Ce point de vue est étayé par le sens ordinaire du verbe « neutraliser », que *Le Grand Robert de la langue française* (version électronique) définit en ces termes : « Empêcher d'agir, par une action contraire qui tend à annuler les efforts ou les effets » et, dans sa forme pronominale : « S'équilibrer ». De même, *Le Petit Larousse illustré* (2013) donne : « Annuler l'effet de l'action de qqn, qqch », et dans sa forme pronominale, « S'annuler réciproquement, se contrebalancer » (p. 735). Ces définitions étayent l'interprétation selon laquelle la condition de neutralisation établie à l'art. 96 exige que les aspects qualitatifs du fusionnement soient examinés et mis en balance avec les effets quantitatifs de ce dernier.

[146] Il s'agit d'une méthode de pondération souple, qui appelle toutefois des conclusions objectivement raisonnables. Ainsi que la Cour d'appel fédérale l'a statué, l'analyse globale « doit être aussi *objective* que possible et, lorsqu'il est impossible de faire une appréciation objective, cette appréciation se doit d'être *raisonnable* » (par. 147 (en italique dans l'original)). Ainsi, dans la plupart des cas, les aspects qualitatifs joueront un rôle moins important. En outre, la condition légale selon laquelle les gains en efficience doivent surpasser *et* neutraliser les effets anticoncurrentiels exigera presque toujours la preuve que les gains quantitatifs surpassent les effets anticoncurrentiels quantitatifs pour que la défense s'applique.

[147] À la lumière de ce qui précède, on peut concevoir la pondération qu'exige l'art. 96 comme une analyse en deux étapes. Dans un premier temps, il faut comparer les gains en efficience quantitatifs du fusionnement à ses effets anticoncurrentiels quantitatifs (le volet de l'analyse relatif au surpassement). Si les effets anticoncurrentiels quantitatifs dépassent les gains en efficience quantitatifs, l'analyse prend alors fin dans la plupart des cas, et la défense ne s'appliquera pas. Il se peut que dans une situation exceptionnelle caractérisée par des gains en efficience quantitatifs relativement peu élevés

Competition Tribunal **Tribunal de la concurrence**

PUBLIC VERSION

Citation: *Canada (Commissioner of Competition) v Secure Energy Services Inc*, 2021 Comp Trib 7
File No.: CT-2021-002
Registry Document No.:53

IN THE MATTER OF an application by the Commissioner of Competition under section 104 of the *Competition Act*, RSC 1985, c C-34 for an interim order pending the hearing of an application for permanent relief under section 92 of the *Competition Act* ;

BETWEEN:

Commissioner of Competition
(applicant)

and

SECURE Energy Services Inc.
(respondent)

Date of hearing: August 4, 2021
Before: Chief Justice Paul Crampton
Date of reasons and order: August 16, 2021

REASONS FOR ORDER AND ORDER REGARDING THE COMMISSIONER'S REQUEST FOR AN INTERIM ORDER

[40] The Commissioner's failure to address the section 96 defence in his Section 104 Application would make it impossible for the Tribunal to conclude, based on the evidentiary record as it stands, that he has a strong likelihood of prevailing with respect to that defence. Among other things, overcoming that defence will require the Commissioner to prove the extent of the anti-competitive effects that he alleges are likely to result from the Merger: *Tervita Corp v Canada (Commissioner of Competition)*, 2015 SCC 3 at paras 122-126, 128, and 136 ("***Tervita***"). In turn, this will require the Commissioner to provide evidence regarding price-elasticities of demand and estimates of the deadweight loss that will likely result from the Merger: *Tervita* at paras 132, 134 and 139. Since no such evidence was provided in the Section 104 Application, I am unable to conclude that the Commissioner "is very likely to succeed at trial": *CBC* at para 17.

[41] The Commissioner maintains that he should not have been expected to provide this type of evidence on the Section 104 Application because Secure has not yet provided its Response to the Section 92 Application. Therefore, Secure has not yet invoked the efficiencies defence contemplated by section 96 and he has no obligation to provide evidence regarding the extent of the anti-competitive effects he alleges are likely to result from the Merger: *Tervita* at para 166. I disagree.

[42] The Commissioner has been on notice since March 12, 2021, when Secure made its request for an advance ruling certificate, that Secure intends to take the position that the Merger will generate substantial efficiencies. At the very latest, the Commissioner was made aware of Secure's intention to rely on section 96 on June 3, 2021, when it informed the Commissioner in writing that the efficiencies generated by the merger would be significant, likely and cognizable under Section 96. In Mr. Harington's Report of that same date, which was enclosed with Secure's letter, numerous references to section 96 were made. Secure also explicitly invoked section 96 in a letter to the Commissioner dated June 25, 2021.

[43] Notwithstanding the foregoing, I consider that it would not be in the interests of justice to permit Secure to benefit from the more stringent "strong *prima facie* case" test in the particular circumstances of this case.

[44] I recognize that the Commissioner could have ensured that he would obtain the benefit of the less stringent "serious issue to be tried" test by filing the Section 104 Application sooner. As an alternative, he could also have filed an application under section 100 to obtain additional time to complete his inquiry and simultaneously prepare an application under section 104. Among other things, this would have given him time to prepare at least a rough estimate of a plausible range of anti-competitive effects. Although the Commissioner was still in ongoing discussions with the parties in the week leading up to the filing of the Section 104 Application, it would have been prudent for him to have better protected his position before he ultimately filed that application on June 29, 2021.

[45] I also acknowledge that Secure had a legal right to close its transaction after defeating the Commissioner's attempts to obtain an "interim interim" application from the Tribunal and then from the Federal Court of Appeal. In addition, I recognize that Secure appears to have underscored to the Commissioner, on multiple occasions over the course of his review of the Merger, that time is of the essence to close the Merger.

THE COMPETITION TRIBUNAL

IN THE MATTER OF the *Competition Act*, R.S.C. 1985, c.C-34, as amended;

AND IN THE MATTER OF the proposed acquisition of Tervita Corporation by Secure Energy Services Inc.;

AND IN THE MATTER OF an Application by the Commissioner of Competition for an order pursuant to 92 of the *Competition Act*;

AND IN THE MATTER OF an Application by the Commissioner of Competition for an interim order pursuant to section 104 of the *Competition Act*;

B E T W E E N:

COMMISSIONER OF COMPETITION

Applicant

- and -

SECURE ENERGY SERVICES INC

Respondent

EXPERT REBUTTAL REPORT OF NATHAN H. MILLER, PH.D.

April 11, 2022

parties do not find it profitable to close a facility in the second-score auction model without any additional variable cost savings—to argue that my DWL estimates are internally inconsistent. As I noted in my Initial Affidavit, I view the second-score auction as a providing a reasonable way to estimate DWL from plant closures in this matter. Still, in my Initial Affidavit, I also calculated the DWL using another standard modeling framework (Bertrand), and, this estimate shows a comparable amount of DWL from facility closures. Ultimately, the DWL that I estimate is driven by market facts—in particular that many of the closing facilities have high market shares despite having prices that, on average, well exceed variable cost, which indicate that customers view facilities as differentiated and value this differentiation.

78. Third, Dr. Duplantis appears to suggest that the fact the Parties are viewed by many customers as close substitutes implies that there is very little, if any, differentiation between facilities beyond distance. This is a misguided inference. I have discussed other sources of differentiation above and in my Initial Affidavit. Further, it is a widely accepted notion in the econometric and industrial organization literature that sources of differentiation need not be directly observable to be quantifiable. My method leverages information from the data (which reflects the actual behavior of customers) to quantify the value of product differentiation.

5.1. Potential DWL from loss of options that customers view as differentiated is well established

79. Dr. Duplantis seems to question that there is a DWL from the closure of facilities and claims that my approach is "novel" and "a notable departure from standard methodologies."[124] I disagree with her. Welfare effects due to a loss of product choice is firmly founded in the economic theory of consumer choice. The economics literature and antitrust agencies have widely acknowledged this source of welfare effects.

80. First, to illustrate the DWL from a decrease in volume, consider a market with one firm. A transaction or trade between a customer and the supplier takes place when the value a customer places on the product or the service (or

[124] Duplantis Affidavit, ¶ 16. ("Dr. Miller purports to estimate what he refers to as 'social loss' or 'deadweight loss' from facility closures (what I will refer to in this report as his 'facility closure effect') using novel methods. His facility closure effect is a notable departure from standard methodologies for estimating deadweight loss based on predicted price increases and a resulting output effect that depends, among other things, on the elasticity of demand."). Dr. Duplantis labels my estimate as "facility closure effect" seemingly to distinguish it from "deadweight loss" that she seems to view as limited to "a price increase bring[ing] about a negative resource allocation." See Duplantis Affidavit, fn. 5.

83. In the context of the present merger, different customers may prefer different facilities for a variety of reasons, and indeed prices adjust with some of the differentiating factors.[128] If a facility closes, its customers could be worse off even if they send waste to a different facility at the same price they were paying before, because the next-best facility simply provides less value to them. This is the source of the DWL due to plant closures that I quantified in my Initial Affidavit.[129]

84. Potential welfare losses from the removal of products (or welfare gains from new products) is extensively studied in the economic literature. Empirical work also quantifies these effects. In a strand of the literature, researchers estimate models of demand and supply based on observed consumer choices, and product or service characteristics.[130] The resulting demand and supply models allow the researcher to value customer preferences for different products or services, such as preference for vehicle horsepower, mileage, type, or size in the market for automobiles. Researchers can then compare the utility a customer derives from an initial choice set to the utility from an alternative choice set that may have new products added or some products removed. The difference in utility approximates the value (i.e., consumer welfare) a customer derives from the added or removed choice. Examples of empirical work that estimated welfare effects of new product include Petrin's study of the introduction of minivans, Goolsbee and Petrin's study of direct broadcast satellites, Brynjolfsson et al.'s study of increased variety at online booksellers, Hausman and Leonard's study of the introduction of Kleenex Bath Tissue, Hausman's study of the introduction of Apple Cinnamon Cheerios, and Gentzkow's study of the introduction of an online newspaper in Washington D.C.[131]

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[128] See Section 3.1.1 and Section 3.1.2.

[129] For a technical discussion of the DWL from loss of options, see Section 7.6 in my Initial Affidavit. This formula is derived from consumer demand behavior and does not depend on whether customers are price takers (as in a posted-price market) or negotiate prices (as in price discrimination markets).

[130] Some papers also use other factors such as customer characteristic.

[131] Amil Petrin, "Quantifying the Benefits of New Products: The Case of Minivan," *Journal of Political Economy*, 2002, vol. 110, no. 4. ("My results suggest that the introduction generated large welfare gains for consumers…") Goolsbee, Austan, and Amil Petrin. "The consumer gains from direct broadcast satellites and the competition with cable TV." *Econometrica* 72, no. 2 (2004): 351-381; Brynjolfsson, Erik, Yu Hu, and Michael D. Smith. "Consumer surplus in the digital economy: Estimating the value of increased product variety at online booksellers." *Management science* 49, no. 11 (2003): 1580-1596. Hausman, J., Leonard, G. "The Competitive effects of new product introduction: A case study," The Journal of Industrial Economics, vol L, no. 3, September 2002. Gentzkow, Matthew, "Valuing New Goods in a Model with Complementarity: Online Newspapers," American Economic Review, 97 no. 3 (2007): pp. 713–744. ("For consumers, the online edition generated a per-reader surplus of $.30 per day, implying a total welfare gain of $45 million per year.") Hausman, Jerry A. 1997. "Valuation of New Goods under Perfect and Imperfect Competition." In *The Economics of New Goods*, ed. Timothy F. Bresnahan and Robert J. Gordon. 209–37. ("I also find that consumers highly value new goods, which provide significant consumer's surplus despite the existence of other brands which compete closely with the new brand.")

85. Antitrust agencies have recognized that mergers may have anticompetitive non-price effects, including the effects of removal of products from the market. For example, Canadian Merger Enforcement Guidelines state that "[t]he Bureau also assesses the effects of the merger on other dimensions of competition, such as quality, product choice, service, innovation and advertising—especially in markets in which there is significant non-price competition."[132] The 2010 U.S. Horizontal Merger Guidelines explain that "[e]nhanced market power can also be manifested in non-price terms and conditions that adversely affect customers, including reduced product quality, reduced product variety, reduced service, or diminished innovation. Such non-price effects may co-exist with price effects, or can arise in their absence.[133]

86. In her past writings, Dr. Duplantis also recognized that mergers may have non-price effects, including loss of consumer choice, which would create welfare losses. In her 2017 article "The importance of quantifying non-price effects in Canada," she discusses the welfare losses from non-price effects, such as the elimination of a product resulting from a merger. She explains that these effects are well-recognized and can be quantified using economic models, and she summarizes some of the prior economic literature that estimated non-price effects.[134] She in fact proposes approaches to quantify the effects from "the elimination of a product as a result of a merger" that can be incorporated in merger review analysis comparing anti-competitive effects against claimed efficiencies in Canada.[135]

5.2. Responses to Dr. Duplantis' claims that my DWL estimates from facility closures are unreliable due to my use of the second-score auction model

87. Dr. Duplantis claims that my DWL estimation is unreliable because it relies on the second-score auction model. She points to her criticism related to the use of the second-score auction model to estimate price effects, and also to a

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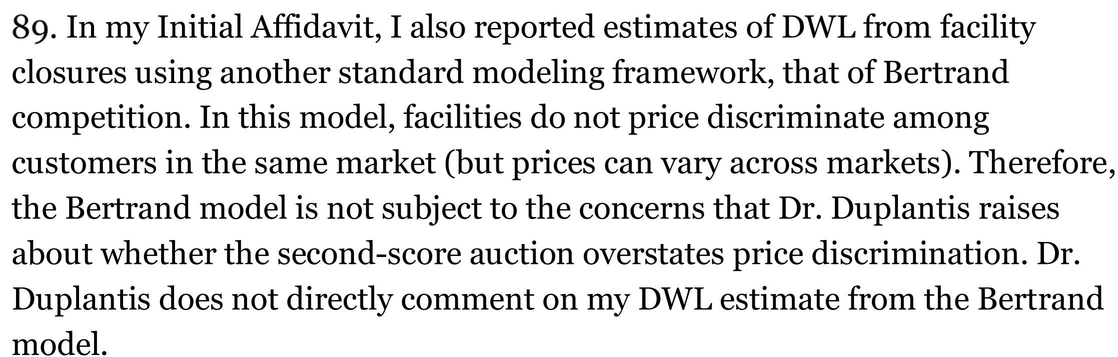
[132] Canadian Merger Enforcement Guidelines, Section 2.2.

[133] Duplantis, R., Cass, I. "The importance of quantifying non-price effects in Canada," Law and Economics Concurrences No. 2- 2017.

[134] Duplantis, R., Cass, I. "The importance of quantifying non-price effects in Canada," Law and Economics Concurrences No. 2- 2017, pp. 55-56.

[135] Duplantis, R., Cass, I. "The importance of quantifying non-price effects in Canada," Law and Economics Concurrences No. 2- 2017, p. 57 ("Another possible means for quantifying non-price effects in a merger context would be to use properly defined consumer surveys or conjoint studies… Conjoint analyses could be used to quantify a consumer's willingness to pay for the introduction of a new product feature or to prevent the elimination of a product as a result of a merger. This quantification of willingness to pay could be incorporated into the quantified trade-off analysis required in Canada.").



89. In my Initial Affidavit, I also reported estimates of DWL from facility closures using another standard modeling framework, that of Bertrand competition. In this model, facilities do not price discriminate among customers in the same market (but prices can vary across markets). Therefore, the Bertrand model is not subject to the concerns that Dr. Duplantis raises about whether the second-score auction overstates price discrimination. Dr. Duplantis does not directly comment on my DWL estimate from the Bertrand model.

90. My Initial Affidavit obtains an estimate of DWL due to facility closures of $40 million with the Bertrand model using the market share-based approach. This estimate represents effects within the geographic markets that I delineate, and so are comparable to results from applying the second-score auction model in the share-based approach (which yields DWL estimate of $55 million).[138] If I adjust margins for the additional variable costs claimed by Mr. Harington, then the DWL estimate from the Bertrand model is $37 million (see Exhibit 2).

91. It is not surprising that both the second-score auction model and the Bertrand model obtain comparable levels of DWL from facility closures ($55 million versus $40 million). Both estimates are driven by the fact that many of the closing facilities have large market shares and set prices that are well above

[138] These estimates only measure the DWL in the relevant markets (facilities overlapping draw areas). It does not consider the DWL to customers who may be outside the closed facility's draw area or customers who may be located in parts of the closed facility's draw area that do not overlap with the other merging party's draw areas.

related to the incremental value the firm creates for customers (a value that is lost if the firm is closed).[142]

5.3. Responses to Dr. Duplantis' claims that there is little to no product differentiation besides the location of plants

98. Dr. Duplantis appears to suggest that my DWL estimate is overstated using two arguments: (1) transportation cost is a primary driver of choices that is observable and (2) the increase in transportation cost I calculated only accounts for less than 10 percent of my DWL estimate.

99. With respect to her first argument, I have discussed other factors that appear to differentiate facilities in the eyes of customers, both in my Initial Affidavit and above (Section 3.2.1).

100. I also explained that differentiation can be inferred from observed data. For example, high markups are an indication of differentiation. Facilities are able to maintain high markups if they provide to customers different features than their competitors. Customers would accept a facility's higher prices if they derive incremental value from that facility. As another empirical observation indicating differentiation between facilities, data show that customers often choose facilities that are not the closest. Based on the Secure and Tervita transaction data, I find that large percentages of transactions for customers (defined as well sites) are for waste sent to farther away facilities when there is a closer facility.[143]

101. Further, the industrial organization and econometric literature has long recognized that there may be characteristics of a product that are valued by customers but may not be observable to the researcher or individually quantifiable. This does not mean, however, that they do not exist. As I explain in Section 4.2, my approach leverages information on observed customer choices and margins to quantify the overall value of closed facilities even with

[142] When a customer trades with the producer she values higher, the trade creates additional social surplus compared to when she trades with another producer that she values less. This additional social surplus is the difference between her valuation of her first and second choices. The price at which the trade occurs only determines the division of this incremental surplus. Under a pricing model that posits that the producer captures all the incremental surplus (e.g., second-score auction), variable profits are an exact estimate of the additional social surplus created. Under other pricing models, variable profits are a lower bound estimate of the additional social surplus (because some of the social surplus is captured by the customer).

[143] I find that ██ percent of landfill, ██ percent of TRD, and ██ percent of water disposal transactions are at facilities operated by one of the Party facilities that are not the nearest facilities to the well sites generating the waste. See my workpapers.

all characteristics of a facility cannot be observed by the researcher or their values individually quantified. This is a standard approach in the industrial organization literature.[144]

102. I now address Dr. Duplantis' claim that my DWL estimates from facility closures are too large in comparison to my estimate of DWL from increased transportation costs.[145] First, as there appear to be many relevant sources of differentiation that are relevant for customers, it would not be surprising if DWL well exceeds the increase in transportation costs. Still, the approach I took to estimate increased transportation costs in my Initial Affidavit used conservative assumptions that may have led to an understated estimate. For example, I used a conservative assumption on hourly truck rates.[146] I used $███ per hour even though many documents indicate that trucking costs can be as high as $███ (current costs may be even higher with more expensive price of gasoline and diesel). Using $███ per hour would increase the estimate by approximately 42 percent, resulting in predicted transportation costs increases of between $9.2 and $10.2 million.

103. I also note that estimates based only on travel distances do not account for any additional trucking fees incurred due to longer wait-times at the waste service facility, even though trucking fees are paid by the hour and not based on distance.[147] Longer wait-times may occur if the closures increase congestion at

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[144] See, e.g., Berry, Steven T. "Estimating discrete-choice models of product differentiation." *The RAND Journal of Economics* (1994): 242-262; Berry, Steven, James Levinsohn, and Ariel Pakes. "Automobile prices in market equilibrium." *Econometrica: Journal of the Econometric Society* (1995): 841-890; Berry, Steven, James Levinsohn, and Ariel Pakes. "Differentiated products demand systems from a combination of micro and macro data: The new car market." *Journal of political Economy* 112, no. 1 (2004): 68-105; Nevo, Aviv. "Measuring market power in the ready - to - eat cereal industry." *Econometrica* 69, no. 2 (2001): 307-342.

[145] Duplantis Affidavit, Section IV.C.1.

[146] Miller Initial Affidavit, ¶ 226, Exhibit 25. Documentary evidence suggests that the fees may range from $███ to $220. For example, one document assumes a $███ per hour fee to rent a truck in Alberta and $███ in BC. See Email from tnickel@tervita.com to cmacmullin@tervita.com and lgailey@tervita.com, "RE: ████ Volumes," October 15, 2020, TEV00223412, attachment "Trucking Differential – ██████.xlsx," TEV00223413. See also TEV00045140 ($190 per hour in BC, else $150); Witness Statement of David Hart (Canadian Natural Resources Limited), February 22, 2022, ¶ 15 ("In deciding which facility to use, CNRL considers the total cost of disposal, which is the cost of trucking plus tipping fees at the applicable waste disposal facility. Trucking costs include time required for loading, unloading and standby/wait times. Trucking costs vary due to a number of factors such as truck availability, fuel and maintenance costs and road conditions (amongst other things) but typically range from $██████ per hour in western Canada.").

[147] Several witness statements confirm that wait-times and "turnaround" times are considerations when deciding to which facility they should send waste. Witness Statement of Paul Dziuba, (Chevron), February 24, 2022, ¶ 16 ("These delays increase transportation costs, as transportation costs are charged for both travel time and wait times. They also result in delayed operations at Chevron's sites if waste trucks are not available when required."); Witness Statement of Shanley Bowersock, February 23, 2022, ¶ 13 ("A rate for any additional wait time is usually built into LB Energy's contracts with the producers. In other words, once LB Energy's trucks get to the facility, if there are additional wait times, the producer is charged on a per hour basis for that time. In LB Energy's experience, some facilities have wait times in excess of 6 hours when they are busy."); Witness Statement of ConocoPhillips, February 23, 2022, ¶ 16; SES0045741 ("SECURE is willing to guarantee truck turnaround times

Horizontal Merger Guidelines

U.S. Department of Justice

and the

Federal Trade Commission

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1. Overview

These Guidelines outline the principal analytical techniques, practices, and the enforcement policy of the Department of Justice and the Federal Trade Commission (the "Agencies") with respect to mergers and acquisitions involving actual or potential competitors ("horizontal mergers") under the federal antitrust laws.[1] The relevant statutory provisions include Section 7 of the Clayton Act, 15 U.S.C. § 18, Sections 1 and 2 of the Sherman Act, 15 U.S.C. §§ 1, 2, and Section 5 of the Federal Trade Commission Act, 15 U.S.C. § 45. Most particularly, Section 7 of the Clayton Act prohibits mergers if "in any line of commerce or in any activity affecting commerce in any section of the country, the effect of such acquisition may be substantially to lessen competition, or to tend to create a monopoly."

The Agencies seek to identify and challenge competitively harmful mergers while avoiding unnecessary interference with mergers that are either competitively beneficial or neutral. Most merger analysis is necessarily predictive, requiring an assessment of what will likely happen if a merger proceeds as compared to what will likely happen if it does not. Given this inherent need for prediction, these Guidelines reflect the congressional intent that merger enforcement should interdict competitive problems in their incipiency and that certainty about anticompetitive effect is seldom possible and not required for a merger to be illegal.

These Guidelines describe the principal analytical techniques and the main types of evidence on which the Agencies usually rely to predict whether a horizontal merger may substantially lessen competition. They are not intended to describe how the Agencies analyze cases other than horizontal mergers. These Guidelines are intended to assist the business community and antitrust practitioners by increasing the transparency of the analytical process underlying the Agencies' enforcement decisions. They may also assist the courts in developing an appropriate framework for interpreting and applying the antitrust laws in the horizontal merger context.

These Guidelines should be read with the awareness that merger analysis does not consist of uniform application of a single methodology. Rather, it is a fact-specific process through which the Agencies, guided by their extensive experience, apply a range of analytical tools to the reasonably available and reliable evidence to evaluate competitive concerns in a limited period of time. Where these Guidelines provide examples, they are illustrative and do not exhaust the applications of the relevant principle.[2]

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[1] These Guidelines replace the Horizontal Merger Guidelines issued in 1992, revised in 1997. They reflect the ongoing accumulation of experience at the Agencies. The Commentary on the Horizontal Merger Guidelines issued by the Agencies in 2006 remains a valuable supplement to these Guidelines. These Guidelines may be revised from time to time as necessary to reflect significant changes in enforcement policy, to clarify existing policy, or to reflect new learning. These Guidelines do not cover vertical or other types of non-horizontal acquisitions.

[2] These Guidelines are not intended to describe how the Agencies will conduct the litigation of cases they decide to bring. Although relevant in that context, these Guidelines neither dictate nor exhaust the range of evidence the Agencies may introduce in litigation.

The unifying theme of these Guidelines is that mergers should not be permitted to create, enhance, or entrench market power or to facilitate its exercise. For simplicity of exposition, these Guidelines generally refer to all of these effects as enhancing market power. A merger enhances market power if it is likely to encourage one or more firms to raise price, reduce output, diminish innovation, or otherwise harm customers as a result of diminished competitive constraints or incentives. In evaluating how a merger will likely change a firm's behavior, the Agencies focus primarily on how the merger affects conduct that would be most profitable for the firm.

A merger can enhance market power simply by eliminating competition between the merging parties. This effect can arise even if the merger causes no changes in the way other firms behave. Adverse competitive effects arising in this manner are referred to as "unilateral effects." A merger also can enhance market power by increasing the risk of coordinated, accommodating, or interdependent behavior among rivals. Adverse competitive effects arising in this manner are referred to as "coordinated effects." In any given case, either or both types of effects may be present, and the distinction between them may be blurred.

These Guidelines principally describe how the Agencies analyze mergers between rival suppliers that may enhance their market power as sellers. Enhancement of market power by sellers often elevates the prices charged to customers. For simplicity of exposition, these Guidelines generally discuss the analysis in terms of such price effects. Enhanced market power can also be manifested in non-price terms and conditions that adversely affect customers, including reduced product quality, reduced product variety, reduced service, or diminished innovation. Such non-price effects may coexist with price effects, or can arise in their absence. When the Agencies investigate whether a merger may lead to a substantial lessening of non-price competition, they employ an approach analogous to that used to evaluate price competition. Enhanced market power may also make it more likely that the merged entity can profitably and effectively engage in exclusionary conduct. Regardless of how enhanced market power likely would be manifested, the Agencies normally evaluate mergers based on their impact on customers. The Agencies examine effects on either or both of the direct customers and the final consumers. The Agencies presume, absent convincing evidence to the contrary, that adverse effects on direct customers also cause adverse effects on final consumers.

Enhancement of market power by buyers, sometimes called "monopsony power," has adverse effects comparable to enhancement of market power by sellers. The Agencies employ an analogous framework to analyze mergers between rival purchasers that may enhance their market power as buyers. See Section 12.

2. Evidence of Adverse Competitive Effects

The Agencies consider any reasonably available and reliable evidence to address the central question of whether a merger may substantially lessen competition. This section discusses several categories and sources of evidence that the Agencies, in their experience, have found most informative in predicting the likely competitive effects of mergers. The list provided here is not exhaustive. In any given case, reliable evidence may be available in only some categories or from some sources. For each category of evidence, the Agencies consider evidence indicating that the merger may enhance competition as well as evidence indicating that it may lessen competition.

2.1 Types of Evidence

2.1.1 Actual Effects Observed in Consummated Mergers

When evaluating a consummated merger, the ultimate issue is not only whether adverse competitive effects have already resulted from the merger, but also whether such effects are likely to arise in the future. Evidence of observed post-merger price increases or other changes adverse to customers is given substantial weight. The Agencies evaluate whether such changes are anticompetitive effects resulting from the merger, in which case they can be dispositive. However, a consummated merger may be anticompetitive even if such effects have not yet been observed, perhaps because the merged firm may be aware of the possibility of post-merger antitrust review and moderating its conduct. Consequently, the Agencies also consider the same types of evidence they consider when evaluating unconsummated mergers.

2.1.2 Direct Comparisons Based on Experience

The Agencies look for historical events, or "natural experiments," that are informative regarding the competitive effects of the merger. For example, the Agencies may examine the impact of recent mergers, entry, expansion, or exit in the relevant market. Effects of analogous events in similar markets may also be informative.

The Agencies also look for reliable evidence based on variations among similar markets. For example, if the merging firms compete in some locales but not others, comparisons of prices charged in regions where they do and do not compete may be informative regarding post-merger prices. In some cases, however, prices are set on such a broad geographic basis that such comparisons are not informative. The Agencies also may examine how prices in similar markets vary with the number of significant competitors in those markets.

2.1.3 Market Shares and Concentration in a Relevant Market

The Agencies give weight to the merging parties' market shares in a relevant market, the level of concentration, and the change in concentration caused by the merger. See Sections 4 and 5. Mergers that cause a significant increase in concentration and result in highly concentrated markets are presumed to be likely to enhance market power, but this presumption can be rebutted by persuasive evidence showing that the merger is unlikely to enhance market power.

2.1.4 Substantial Head-to-Head Competition

The Agencies consider whether the merging firms have been, or likely will become absent the merger, substantial head-to-head competitors. Such evidence can be especially relevant for evaluating adverse unilateral effects, which result directly from the loss of that competition. See Section 6. This evidence can also inform market definition. See Section 4.

2.1.5 Disruptive Role of a Merging Party

The Agencies consider whether a merger may lessen competition by eliminating a "maverick" firm, i.e., a firm that plays a disruptive role in the market to the benefit of customers. For example, if one of the merging firms has a strong incumbency position and the other merging firm threatens to

disrupt market conditions with a new technology or business model, their merger can involve the loss of actual or potential competition. Likewise, one of the merging firms may have the incentive to take the lead in price cutting or other competitive conduct or to resist increases in industry prices. A firm that may discipline prices based on its ability and incentive to expand production rapidly using available capacity also can be a maverick, as can a firm that has often resisted otherwise prevailing industry norms to cooperate on price setting or other terms of competition.

2.2 Sources of Evidence

The Agencies consider many sources of evidence in their merger analysis. The most common sources of reasonably available and reliable evidence are the merging parties, customers, other industry participants, and industry observers.

2.2.1 Merging Parties

The Agencies typically obtain substantial information from the merging parties. This information can take the form of documents, testimony, or data, and can consist of descriptions of competitively relevant conditions or reflect actual business conduct and decisions. Documents created in the normal course are more probative than documents created as advocacy materials in merger review. Documents describing industry conditions can be informative regarding the operation of the market and how a firm identifies and assesses its rivals, particularly when business decisions are made in reliance on the accuracy of those descriptions. The business decisions taken by the merging firms also can be informative about industry conditions. For example, if a firm sets price well above incremental cost, that normally indicates either that the firm believes its customers are not highly sensitive to price (not in itself of antitrust concern, see Section 4.1.3[3]) or that the firm and its rivals are engaged in coordinated interaction (see Section 7). Incremental cost depends on the relevant increment in output as well as on the time period involved, and in the case of large increments and sustained changes in output it may include some costs that would be fixed for smaller increments of output or shorter time periods.

Explicit or implicit evidence that the merging parties intend to raise prices, reduce output or capacity, reduce product quality or variety, withdraw products or delay their introduction, or curtail research and development efforts after the merger, or explicit or implicit evidence that the ability to engage in such conduct motivated the merger, can be highly informative in evaluating the likely effects of a merger. Likewise, the Agencies look for reliable evidence that the merger is likely to result in efficiencies. The Agencies give careful consideration to the views of individuals whose responsibilities, expertise, and experience relating to the issues in question provide particular indicia of reliability. The financial terms of the transaction may also be informative regarding competitive effects. For example, a purchase price in excess of the acquired firm's stand-alone market value may indicate that the acquiring firm is paying a premium because it expects to be able to reduce competition or to achieve efficiencies.

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[3] High margins commonly arise for products that are significantly differentiated. Products involving substantial fixed costs typically will be developed only if suppliers expect there to be enough differentiation to support margins sufficient to cover those fixed costs. High margins can be consistent with incumbent firms earning competitive returns.

2.2.2 Customers

Customers can provide a variety of information to the Agencies, ranging from information about their own purchasing behavior and choices to their views about the effects of the merger itself.

Information from customers about how they would likely respond to a price increase, and the relative attractiveness of different products or suppliers, may be highly relevant, especially when corroborated by other evidence such as historical purchasing patterns and practices. Customers also can provide valuable information about the impact of historical events such as entry by a new supplier.

The conclusions of well-informed and sophisticated customers on the likely impact of the merger itself can also help the Agencies investigate competitive effects, because customers typically feel the consequences of both competitively beneficial and competitively harmful mergers. In evaluating such evidence, the Agencies are mindful that customers may oppose, or favor, a merger for reasons unrelated to the antitrust issues raised by that merger.

When some customers express concerns about the competitive effects of a merger while others view the merger as beneficial or neutral, the Agencies take account of this divergence in using the information provided by customers and consider the likely reasons for such divergence of views. For example, if for regulatory reasons some customers cannot buy imported products, while others can, a merger between domestic suppliers may harm the former customers even if it leaves the more flexible customers unharmed. See Section 3.

When direct customers of the merging firms compete against one another in a downstream market, their interests may not be aligned with the interests of final consumers, especially if the direct customers expect to pass on any anticompetitive price increase. A customer that is protected from adverse competitive effects by a long-term contract, or otherwise relatively immune from the merger's harmful effects, may even welcome an anticompetitive merger that provides that customer with a competitive advantage over its downstream rivals.

> *Example 1:* As a result of the merger, Customer C will experience a price increase for an input used in producing its final product, raising its costs. Customer C's rivals use this input more intensively than Customer C, and the same price increase applied to them will raise their costs more than it raises Customer C's costs. On balance, Customer C may benefit from the merger even though the merger involves a substantial lessening of competition.

2.2.3 Other Industry Participants and Observers

Suppliers, indirect customers, distributors, other industry participants, and industry analysts can also provide information helpful to a merger inquiry. The interests of firms selling products complementary to those offered by the merging firms often are well aligned with those of customers, making their informed views valuable.

Information from firms that are rivals to the merging parties can help illuminate how the market operates. The interests of rival firms often diverge from the interests of customers, since customers normally lose, but rival firms gain, if the merged entity raises its prices. For that reason, the Agencies do not routinely rely on the overall views of rival firms regarding the competitive effects of the

merger. However, rival firms may provide relevant facts, and even their overall views may be instructive, especially in cases where the Agencies are concerned that the merged entity may engage in exclusionary conduct.

> *Example 2:* Merging Firms A and B operate in a market in which network effects are significant, implying that any firm's product is significantly more valuable if it commands a large market share or if it is interconnected with others that in aggregate command such a share. Prior to the merger, they and their rivals voluntarily interconnect with one another. The merger would create an entity with a large enough share that a strategy of ending voluntary interconnection would have a dangerous probability of creating monopoly power in this market. The interests of rivals and of consumers would be broadly aligned in preventing such a merger.

3. Targeted Customers and Price Discrimination

When examining possible adverse competitive effects from a merger, the Agencies consider whether those effects vary significantly for different customers purchasing the same or similar products. Such differential impacts are possible when sellers can discriminate, e.g., by profitably raising price to certain targeted customers but not to others. The possibility of price discrimination influences market definition (see Section 4), the measurement of market shares (see Section 5), and the evaluation of competitive effects (see Sections 6 and 7).

When price discrimination is feasible, adverse competitive effects on targeted customers can arise, even if such effects will not arise for other customers. A price increase for targeted customers may be profitable even if a price increase for all customers would not be profitable because too many other customers would substitute away. When discrimination is reasonably likely, the Agencies may evaluate competitive effects separately by type of customer. The Agencies may have access to information unavailable to customers that is relevant to evaluating whether discrimination is reasonably likely.

For price discrimination to be feasible, two conditions typically must be met: differential pricing and limited arbitrage.

First, the suppliers engaging in price discrimination must be able to price differently to targeted customers than to other customers. This may involve identification of individual customers to which different prices are offered or offering different prices to different types of customers based on observable characteristics.

> *Example 3:* Suppliers can distinguish large buyers from small buyers. Large buyers are more likely than small buyers to self-supply in response to a significant price increase. The merger may lead to price discrimination against small buyers, harming them, even if large buyers are not harmed. Such discrimination can occur even if there is no discrete gap in size between the classes of large and small buyers.

In other cases, suppliers may be unable to distinguish among different types of customers but can offer multiple products that sort customers based on their purchase decisions.

Second, the targeted customers must not be able to defeat the price increase of concern by arbitrage, e.g., by purchasing indirectly from or through other customers. Arbitrage may be difficult if it would void warranties or make service more difficult or costly for customers. Arbitrage is inherently impossible for many services. Arbitrage between customers at different geographic locations may be

impractical due to transportation costs. Arbitrage on a modest scale may be possible but sufficiently costly or limited that it would not deter or defeat a discriminatory pricing strategy.

4. Market Definition

When the Agencies identify a potential competitive concern with a horizontal merger, market definition plays two roles. First, market definition helps specify the line of commerce and section of the country in which the competitive concern arises. In any merger enforcement action, the Agencies will normally identify one or more relevant markets in which the merger may substantially lessen competition. Second, market definition allows the Agencies to identify market participants and measure market shares and market concentration. See Section 5. The measurement of market shares and market concentration is not an end in itself, but is useful to the extent it illuminates the merger's likely competitive effects.

The Agencies' analysis need not start with market definition. Some of the analytical tools used by the Agencies to assess competitive effects do not rely on market definition, although evaluation of competitive alternatives available to customers is always necessary at some point in the analysis.

Evidence of competitive effects can inform market definition, just as market definition can be informative regarding competitive effects. For example, evidence that a reduction in the number of significant rivals offering a group of products causes prices for those products to rise significantly can itself establish that those products form a relevant market. Such evidence also may more directly predict the competitive effects of a merger, reducing the role of inferences from market definition and market shares.

Where analysis suggests alternative and reasonably plausible candidate markets, and where the resulting market shares lead to very different inferences regarding competitive effects, it is particularly valuable to examine more direct forms of evidence concerning those effects.

Market definition focuses solely on demand substitution factors, i.e., on customers' ability and willingness to substitute away from one product to another in response to a price increase or a corresponding non-price change such as a reduction in product quality or service. The responsive actions of suppliers are also important in competitive analysis. They are considered in these Guidelines in the sections addressing the identification of market participants, the measurement of market shares, the analysis of competitive effects, and entry.

Customers often confront a range of possible substitutes for the products of the merging firms. Some substitutes may be closer, and others more distant, either geographically or in terms of product attributes and perceptions. Additionally, customers may assess the proximity of different products differently. When products or suppliers in different geographic areas are substitutes for one another to varying degrees, defining a market to include some substitutes and exclude others is inevitably a simplification that cannot capture the full variation in the extent to which different products compete against each other. The principles of market definition outlined below seek to make this inevitable simplification as useful and informative as is practically possible. Relevant markets need not have precise metes and bounds.

Defining a market broadly to include relatively distant product or geographic substitutes can lead to misleading market shares. This is because the competitive significance of distant substitutes is unlikely to be commensurate with their shares in a broad market. Although excluding more distant substitutes from the market inevitably understates their competitive significance to some degree, doing so often provides a more accurate indicator of the competitive effects of the merger than would the alternative of including them and overstating their competitive significance as proportional to their shares in an expanded market.

> *Example 4:* Firms A and B, sellers of two leading brands of motorcycles, propose to merge. If Brand A motorcycle prices were to rise, some buyers would substitute to Brand B, and some others would substitute to cars. However, motorcycle buyers see Brand B motorcycles as much more similar to Brand A motorcycles than are cars. Far more cars are sold than motorcycles. Evaluating shares in a market that includes cars would greatly underestimate the competitive significance of Brand B motorcycles in constraining Brand A's prices and greatly overestimate the significance of cars.

Market shares of different products in narrowly defined markets are more likely to capture the relative competitive significance of these products, and often more accurately reflect competition between close substitutes. As a result, properly defined antitrust markets often exclude some substitutes to which some customers might turn in the face of a price increase even if such substitutes provide alternatives for those customers. However, a group of products is too narrow to constitute a relevant market if competition from products outside that group is so ample that even the complete elimination of competition within the group would not significantly harm either direct customers or downstream consumers. The hypothetical monopolist test (see Section 4.1.1) is designed to ensure that candidate markets are not overly narrow in this respect.

The Agencies implement these principles of market definition flexibly when evaluating different possible candidate markets. Relevant antitrust markets defined according to the hypothetical monopolist test are not always intuitive and may not align with how industry members use the term "market."

Section 4.1 describes the principles that apply to product market definition, and gives guidance on how the Agencies most often apply those principles. Section 4.2 describes how the same principles apply to geographic market definition. Although discussed separately for simplicity of exposition, the principles described in Sections 4.1 and 4.2 are combined to define a relevant market, which has both a product and a geographic dimension. In particular, the hypothetical monopolist test is applied to a group of products together with a geographic region to determine a relevant market.

4.1 Product Market Definition

When a product sold by one merging firm (Product A) competes against one or more products sold by the other merging firm, the Agencies define a relevant product market around Product A to evaluate the importance of that competition. Such a relevant product market consists of a group of substitute products including Product A. Multiple relevant product markets may thus be identified.

4.1.1 The Hypothetical Monopolist Test

The Agencies employ the hypothetical monopolist test to evaluate whether groups of products in candidate markets are sufficiently broad to constitute relevant antitrust markets. The Agencies use the

hypothetical monopolist test to identify a set of products that are reasonably interchangeable with a product sold by one of the merging firms.

The hypothetical monopolist test requires that a product market contain enough substitute products so that it could be subject to post-merger exercise of market power significantly exceeding that existing absent the merger. Specifically, the test requires that a hypothetical profit-maximizing firm, not subject to price regulation, that was the only present and future seller of those products ("hypothetical monopolist") likely would impose at least a small but significant and non-transitory increase in price ("SSNIP") on at least one product in the market, including at least one product sold by one of the merging firms.[4] For the purpose of analyzing this issue, the terms of sale of products outside the candidate market are held constant. The SSNIP is employed solely as a methodological tool for performing the hypothetical monopolist test; it is not a tolerance level for price increases resulting from a merger.

Groups of products may satisfy the hypothetical monopolist test without including the full range of substitutes from which customers choose. The hypothetical monopolist test may identify a group of products as a relevant market even if customers would substitute significantly to products outside that group in response to a price increase.

> *Example 5:* Products A and B are being tested as a candidate market. Each sells for $100, has an incremental cost of $60, and sells 1200 units. For every dollar increase in the price of Product A, for any given price of Product B, Product A loses twenty units of sales to products outside the candidate market and ten units of sales to Product B, and likewise for Product B. Under these conditions, economic analysis shows that a hypothetical profit-maximizing monopolist controlling Products A and B would raise both of their prices by ten percent, to $110. Therefore, Products A and B satisfy the hypothetical monopolist test using a five percent SSNIP, and indeed for any SSNIP size up to ten percent. This is true even though two-thirds of the sales lost by one product when it raises its price are diverted to products outside the relevant market.

When applying the hypothetical monopolist test to define a market around a product offered by one of the merging firms, if the market includes a second product, the Agencies will normally also include a third product if that third product is a closer substitute for the first product than is the second product. The third product is a closer substitute if, in response to a SSNIP on the first product, greater revenues are diverted to the third product than to the second product.

> *Example 6:* In Example 5, suppose that half of the unit sales lost by Product A when it raises its price are diverted to Product C, which also has a price of $100, while one-third are diverted to Product B. Product C is a closer substitute for Product A than is Product B. Thus Product C will normally be included in the relevant market, even though Products A and B together satisfy the hypothetical monopolist test.

The hypothetical monopolist test ensures that markets are not defined too narrowly, but it does not lead to a single relevant market. The Agencies may evaluate a merger in any relevant market

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[4] If the pricing incentives of the firms supplying the products in the candidate market differ substantially from those of the hypothetical monopolist, for reasons other than the latter's control over a larger group of substitutes, the Agencies may instead employ the concept of a hypothetical profit-maximizing cartel comprised of the firms (with all their products) that sell the products in the candidate market. This approach is most likely to be appropriate if the merging firms sell products outside the candidate market that significantly affect their pricing incentives for products in the candidate market. This could occur, for example, if the candidate market is one for durable equipment and the firms selling that equipment derive substantial net revenues from selling spare parts and service for that equipment.

satisfying the test, guided by the overarching principle that the purpose of defining the market and measuring market shares is to illuminate the evaluation of competitive effects. Because the relative competitive significance of more distant substitutes is apt to be overstated by their share of sales, when the Agencies rely on market shares and concentration, they usually do so in the smallest relevant market satisfying the hypothetical monopolist test.

> *Example 7:* In Example 4, including cars in the market will lead to misleadingly small market shares for motorcycle producers. Unless motorcycles fail the hypothetical monopolist test, the Agencies would not include cars in the market in analyzing this motorcycle merger.

4.1.2 Benchmark Prices and SSNIP Size

The Agencies apply the SSNIP starting from prices that would likely prevail absent the merger. If prices are not likely to change absent the merger, these benchmark prices can reasonably be taken to be the prices prevailing prior to the merger.[5] If prices are likely to change absent the merger, e.g., because of innovation or entry, the Agencies may use anticipated future prices as the benchmark for the test. If prices might fall absent the merger due to the breakdown of pre-merger coordination, the Agencies may use those lower prices as the benchmark for the test. In some cases, the techniques employed by the Agencies to implement the hypothetical monopolist test focus on the difference in incentives between pre-merger firms and the hypothetical monopolist and do not require specifying the benchmark prices.

The SSNIP is intended to represent a “small but significant” increase in the prices charged by firms in the candidate market for the value they contribute to the products or services used by customers. This properly directs attention to the effects of price changes commensurate with those that might result from a significant lessening of competition caused by the merger. This methodology is used because normally it is possible to quantify “small but significant” adverse price effects on customers and analyze their likely reactions, not because price effects are more important than non-price effects.

The Agencies most often use a SSNIP of five percent of the price paid by customers for the products or services to which the merging firms contribute value. However, what constitutes a “small but significant” increase in price, commensurate with a significant loss of competition caused by the merger, depends upon the nature of the industry and the merging firms’ positions in it, and the Agencies may accordingly use a price increase that is larger or smaller than five percent. Where explicit or implicit prices for the firms’ specific contribution to value can be identified with reasonable clarity, the Agencies may base the SSNIP on those prices.

> *Example 8:* In a merger between two oil pipelines, the SSNIP would be based on the price charged for transporting the oil, not on the price of the oil itself. If pipelines buy the oil at one end and sell it at the other, the price charged for transporting the oil is implicit, equal to the difference between the price paid for oil at the input end and the price charged for oil at the output end. The relevant product sold by the pipelines is better described as “pipeline transportation of oil from point A to point B” than as “oil at point B.”

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[5] Market definition for the evaluation of non-merger antitrust concerns such as monopolization or facilitating practices will differ in this respect if the effects resulting from the conduct of concern are already occurring at the time of evaluation.

Example 9: In a merger between two firms that install computers purchased from third parties, the SSNIP would be based on their fees, not on the price of installed computers. If these firms purchase the computers and charge their customers one package price, the implicit installation fee is equal to the package charge to customers less the price of the computers.

Example 10: In Example 9, suppose that the prices paid by the merging firms to purchase computers are opaque, but account for at least ninety-five percent of the prices they charge for installed computers, with profits or implicit fees making up five percent of those prices at most. A five percent SSNIP on the total price paid by customers would at least double those fees or profits. Even if that would be unprofitable for a hypothetical monopolist, a significant increase in fees might well be profitable. If the SSNIP is based on the total price paid by customers, a lower percentage will be used.

4.1.3 Implementing the Hypothetical Monopolist Test

The hypothetical monopolist's incentive to raise prices depends both on the extent to which customers would likely substitute away from the products in the candidate market in response to such a price increase and on the profit margins earned on those products. The profit margin on incremental units is the difference between price and incremental cost on those units. The Agencies often estimate incremental costs, for example using merging parties' documents or data the merging parties use to make business decisions. Incremental cost is measured over the change in output that would be caused by the price increase under consideration.

In considering customers' likely responses to higher prices, the Agencies take into account any reasonably available and reliable evidence, including, but not limited to:

- how customers have shifted purchases in the past in response to relative changes in price or other terms and conditions;
- information from buyers, including surveys, concerning how they would respond to price changes;
- the conduct of industry participants, notably:
  - sellers' business decisions or business documents indicating sellers' informed beliefs concerning how customers would substitute among products in response to relative changes in price;
  - industry participants' behavior in tracking and responding to price changes by some or all rivals;
- objective information about product characteristics and the costs and delays of switching products, especially switching from products in the candidate market to products outside the candidate market;
- the percentage of sales lost by one product in the candidate market, when its price alone rises, that is recaptured by other products in the candidate market, with a higher recapture percentage making a price increase more profitable for the hypothetical monopolist;
- evidence from other industry participants, such as sellers of complementary products;

- legal or regulatory requirements; and
- the influence of downstream competition faced by customers in their output markets.

When the necessary data are available, the Agencies also may consider a "critical loss analysis" to assess the extent to which it corroborates inferences drawn from the evidence noted above. Critical loss analysis asks whether imposing at least a SSNIP on one or more products in a candidate market would raise or lower the hypothetical monopolist's profits. While this "breakeven" analysis differs from the profit-maximizing analysis called for by the hypothetical monopolist test in Section 4.1.1, merging parties sometimes present this type of analysis to the Agencies. A price increase raises profits on sales made at the higher price, but this will be offset to the extent customers substitute away from products in the candidate market. Critical loss analysis compares the magnitude of these two offsetting effects resulting from the price increase. The "critical loss" is defined as the number of lost unit sales that would leave profits unchanged. The "predicted loss" is defined as the number of unit sales that the hypothetical monopolist is predicted to lose due to the price increase. The price increase raises the hypothetical monopolist's profits if the predicted loss is less than the critical loss.

The Agencies consider all of the evidence of customer substitution noted above in assessing the predicted loss. The Agencies require that estimates of the predicted loss be consistent with that evidence, including the pre-merger margins of products in the candidate market used to calculate the critical loss. Unless the firms are engaging in coordinated interaction (see Section 7), high pre-merger margins normally indicate that each firm's product individually faces demand that is not highly sensitive to price.[6] Higher pre-merger margins thus indicate a smaller predicted loss as well as a smaller critical loss. The higher the pre-merger margin, the smaller the recapture percentage necessary for the candidate market to satisfy the hypothetical monopolist test.

Even when the evidence necessary to perform the hypothetical monopolist test quantitatively is not available, the conceptual framework of the test provides a useful methodological tool for gathering and analyzing evidence pertinent to customer substitution and to market definition. The Agencies follow the hypothetical monopolist test to the extent possible given the available evidence, bearing in mind that the ultimate goal of market definition is to help determine whether the merger may substantially lessen competition.

4.1.4 Product Market Definition with Targeted Customers

If a hypothetical monopolist could profitably target a subset of customers for price increases, the Agencies may identify relevant markets defined around those targeted customers, to whom a hypothetical monopolist would profitably and separately impose at least a SSNIP. Markets to serve targeted customers are also known as price discrimination markets. In practice, the Agencies identify price discrimination markets only where they believe there is a realistic prospect of an adverse competitive effect on a group of targeted customers.

> *Example 11:* Glass containers have many uses. In response to a price increase for glass containers, some users would substitute substantially to plastic or metal containers, but baby food manufacturers would not. If a

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[6] While margins are important for implementing the hypothetical monopolist test, high margins are not in themselves of antitrust concern.

> hypothetical monopolist could price separately and limit arbitrage, baby food manufacturers would be vulnerable to a targeted increase in the price of glass containers. The Agencies could define a distinct market for glass containers used to package baby food.

The Agencies also often consider markets for targeted customers when prices are individually negotiated and suppliers have information about customers that would allow a hypothetical monopolist to identify customers that are likely to pay a higher price for the relevant product. If prices are negotiated individually with customers, the hypothetical monopolist test may suggest relevant markets that are as narrow as individual customers (see also Section 6.2 on bargaining and auctions). Nonetheless, the Agencies often define markets for groups of targeted customers, i.e., by type of customer, rather than by individual customer. By so doing, the Agencies are able to rely on aggregated market shares that can be more helpful in predicting the competitive effects of the merger.

4.2 Geographic Market Definition

The arena of competition affected by the merger may be geographically bounded if geography limits some customers' willingness or ability to substitute to some products, or some suppliers' willingness or ability to serve some customers. Both supplier and customer locations can affect this. The Agencies apply the principles of market definition described here and in Section 4.1 to define a relevant market with a geographic dimension as well as a product dimension.

The scope of geographic markets often depends on transportation costs. Other factors such as language, regulation, tariff and non-tariff trade barriers, custom and familiarity, reputation, and service availability may impede long-distance or international transactions. The competitive significance of foreign firms may be assessed at various exchange rates, especially if exchange rates have fluctuated in the recent past.

In the absence of price discrimination based on customer location, the Agencies normally define geographic markets based on the locations of suppliers, as explained in subsection 4.2.1. In other cases, notably if price discrimination based on customer location is feasible as is often the case when delivered pricing is commonly used in the industry, the Agencies may define geographic markets based on the locations of customers, as explained in subsection 4.2.2.

4.2.1 Geographic Markets Based on the Locations of Suppliers

Geographic markets based on the locations of suppliers encompass the region from which sales are made. Geographic markets of this type often apply when customers receive goods or services at suppliers' locations. Competitors in the market are firms with relevant production, sales, or service facilities in that region. Some customers who buy from these firms may be located outside the boundaries of the geographic market.

The hypothetical monopolist test requires that a hypothetical profit-maximizing firm that was the only present or future producer of the relevant product(s) located in the region would impose at least a SSNIP from at least one location, including at least one location of one of the merging firms. In this exercise the terms of sale for all products produced elsewhere are held constant. A single firm may operate in a number of different geographic markets, even for a single product.

> *Example 12:* The merging parties both have manufacturing plants in City X. The relevant product is expensive to transport and suppliers price their products for pickup at their locations. Rival plants are some distance away in City Y. A hypothetical monopolist controlling all plants in City X could profitably impose a SSNIP at these plants. Competition from more distant plants would not defeat the price increase because supplies coming from more distant plants require expensive transportation. The relevant geographic market is defined around the plants in City X.

When the geographic market is defined based on supplier locations, sales made by suppliers located in the geographic market are counted, regardless of the location of the customer making the purchase.

In considering likely reactions of customers to price increases for the relevant product(s) imposed in a candidate geographic market, the Agencies consider any reasonably available and reliable evidence, including:

- how customers have shifted purchases in the past between different geographic locations in response to relative changes in price or other terms and conditions;
- the cost and difficulty of transporting the product (or the cost and difficulty of a customer traveling to a seller's location), in relation to its price;
- whether suppliers need a presence near customers to provide service or support;
- evidence on whether sellers base business decisions on the prospect of customers switching between geographic locations in response to relative changes in price or other competitive variables;
- the costs and delays of switching from suppliers in the candidate geographic market to suppliers outside the candidate geographic market; and
- the influence of downstream competition faced by customers in their output markets.

4.2.2 Geographic Markets Based on the Locations of Customers

When the hypothetical monopolist could discriminate based on customer location, the Agencies may define geographic markets based on the locations of targeted customers.[7] Geographic markets of this type often apply when suppliers deliver their products or services to customers' locations. Geographic markets of this type encompass the region into which sales are made. Competitors in the market are firms that sell to customers in the specified region. Some suppliers that sell into the relevant market may be located outside the boundaries of the geographic market.

The hypothetical monopolist test requires that a hypothetical profit-maximizing firm that was the only present or future seller of the relevant product(s) to customers in the region would impose at least a SSNIP on some customers in that region. A region forms a relevant geographic market if this price increase would not be defeated by substitution away from the relevant product or by arbitrage,

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[7] For customers operating in multiple locations, only those customer locations within the targeted zone are included in the market.

e.g., customers in the region travelling outside it to purchase the relevant product. In this exercise, the terms of sale for products sold to all customers outside the region are held constant.

> *Example 13:* Customers require local sales and support. Suppliers have sales and service operations in many geographic areas and can discriminate based on customer location. The geographic market can be defined around the locations of customers.

> *Example 14:* Each merging firm has a single manufacturing plant and delivers the relevant product to customers in City X and in City Y. The relevant product is expensive to transport. The merging firms' plants are by far the closest to City X, but no closer to City Y than are numerous rival plants. This fact pattern suggests that customers in City X may be harmed by the merger even if customers in City Y are not. For that reason, the Agencies consider a relevant geographic market defined around customers in City X. Such a market could be defined even if the region around the merging firms' plants would not be a relevant geographic market defined based on the location of sellers because a hypothetical monopolist controlling all plants in that region would find a SSNIP imposed on all of its customers unprofitable due to the loss of sales to customers in City Y.

When the geographic market is defined based on customer locations, sales made to those customers are counted, regardless of the location of the supplier making those sales.

> *Example 15:* Customers in the United States must use products approved by U.S. regulators. Foreign customers use products not approved by U.S. regulators. The relevant product market consists of products approved by U.S. regulators. The geographic market is defined around U.S. customers. Any sales made to U.S. customers by foreign suppliers are included in the market, and those foreign suppliers are participants in the U.S. market even though located outside it.

5. Market Participants, Market Shares, and Market Concentration

The Agencies normally consider measures of market shares and market concentration as part of their evaluation of competitive effects. The Agencies evaluate market shares and concentration in conjunction with other reasonably available and reliable evidence for the ultimate purpose of determining whether a merger may substantially lessen competition.

Market shares can directly influence firms' competitive incentives. For example, if a price reduction to gain new customers would also apply to a firm's existing customers, a firm with a large market share may be more reluctant to implement a price reduction than one with a small share. Likewise, a firm with a large market share may not feel pressure to reduce price even if a smaller rival does. Market shares also can reflect firms' capabilities. For example, a firm with a large market share may be able to expand output rapidly by a larger absolute amount than can a small firm. Similarly, a large market share tends to indicate low costs, an attractive product, or both.

5.1 Market Participants

All firms that currently earn revenues in the relevant market are considered market participants. Vertically integrated firms are also included to the extent that their inclusion accurately reflects their competitive significance. Firms not currently earning revenues in the relevant market, but that have committed to entering the market in the near future, are also considered market participants.

Firms that are not current producers in a relevant market, but that would very likely provide rapid supply responses with direct competitive impact in the event of a SSNIP, without incurring

significant sunk costs, are also considered market participants. These firms are termed "rapid entrants." Sunk costs are entry or exit costs that cannot be recovered outside the relevant market. Entry that would take place more slowly in response to adverse competitive effects, or that requires firms to incur significant sunk costs, is considered in Section 9.

Firms that produce the relevant product but do not sell it in the relevant geographic market may be rapid entrants. Other things equal, such firms are most likely to be rapid entrants if they are close to the geographic market.

> *Example 16:* Farm A grows tomatoes halfway between Cities X and Y. Currently, it ships its tomatoes to City X because prices there are two percent higher. Previously it has varied the destination of its shipments in response to small price variations. Farm A would likely be a rapid entrant participant in a market for tomatoes in City Y.

> *Example 17:* Firm B has bid multiple times to supply milk to School District S, and actually supplies milk to schools in some adjacent areas. It has never won a bid in School District S, but is well qualified to serve that district and has often nearly won. Firm B would be counted as a rapid entrant in a market for school milk in School District S.

More generally, if the relevant market is defined around targeted customers, firms that produce relevant products but do not sell them to those customers may be rapid entrants if they can easily and rapidly begin selling to the targeted customers.

Firms that clearly possess the necessary assets to supply into the relevant market rapidly may also be rapid entrants. In markets for relatively homogeneous goods where a supplier's ability to compete depends predominantly on its costs and its capacity, and not on other factors such as experience or reputation in the relevant market, a supplier with efficient idle capacity, or readily available "swing" capacity currently used in adjacent markets that can easily and profitably be shifted to serve the relevant market, may be a rapid entrant.[8] However, idle capacity may be inefficient, and capacity used in adjacent markets may not be available, so a firm's possession of idle or swing capacity alone does not make that firm a rapid entrant.

5.2 Market Shares

The Agencies normally calculate market shares for all firms that currently produce products in the relevant market, subject to the availability of data. The Agencies also calculate market shares for other market participants if this can be done to reliably reflect their competitive significance.

Market concentration and market share data are normally based on historical evidence. However, recent or ongoing changes in market conditions may indicate that the current market share of a particular firm either understates or overstates the firm's future competitive significance. The Agencies consider reasonably predictable effects of recent or ongoing changes in market conditions when calculating and interpreting market share data. For example, if a new technology that is important to long-term competitive viability is available to other firms in the market, but is not available to a particular firm, the Agencies may conclude that that firm's historical market share

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[8] If this type of supply side substitution is nearly universal among the firms selling one or more of a group of products, the Agencies may use an aggregate description of markets for those products as a matter of convenience.

overstates its future competitive significance. The Agencies may project historical market shares into the foreseeable future when this can be done reliably.

The Agencies measure market shares based on the best available indicator of firms' future competitive significance in the relevant market. This may depend upon the type of competitive effect being considered, and on the availability of data. Typically, annual data are used, but where individual transactions are large and infrequent so annual data may be unrepresentative, the Agencies may measure market shares over a longer period of time.

In most contexts, the Agencies measure each firm's market share based on its actual or projected revenues in the relevant market. Revenues in the relevant market tend to be the best measure of attractiveness to customers, since they reflect the real-world ability of firms to surmount all of the obstacles necessary to offer products on terms and conditions that are attractive to customers. In cases where one unit of a low-priced product can substitute for one unit of a higher-priced product, unit sales may measure competitive significance better than revenues. For example, a new, much less expensive product may have great competitive significance if it substantially erodes the revenues earned by older, higher-priced products, even if it earns relatively few revenues. In cases where customers sign long-term contracts, face switching costs, or tend to re-evaluate their suppliers only occasionally, revenues earned from recently acquired customers may better reflect the competitive significance of suppliers than do total revenues.

In markets for homogeneous products, a firm's competitive significance may derive principally from its ability and incentive to rapidly expand production in the relevant market in response to a price increase or output reduction by others in that market. As a result, a firm's competitive significance may depend upon its level of readily available capacity to serve the relevant market if that capacity is efficient enough to make such expansion profitable. In such markets, capacities or reserves may better reflect the future competitive significance of suppliers than revenues, and the Agencies may calculate market shares using those measures. Market participants that are not current producers may then be assigned positive market shares, but only if a measure of their competitive significance properly comparable to that of current producers is available. When market shares are measured based on firms' readily available capacities, the Agencies do not include capacity that is committed or so profitably employed outside the relevant market, or so high-cost, that it would not likely be used to respond to a SSNIP in the relevant market.

> *Example 18:* The geographic market is defined around customers in the United States. Firm X produces the relevant product outside the United States, and most of its sales are made to customers outside the United States. In most contexts, Firm X's market share will be based on its sales to U.S. customers, not its total sales or total capacity. However, if the relevant product is homogeneous, and if Firm X would significantly expand sales to U.S. customers rapidly and without incurring significant sunk costs in response to a SSNIP, the Agencies may base Firm X's market share on its readily available capacity to serve U.S. customers.

When the Agencies define markets serving targeted customers, these same principles are used to measure market shares, as they apply to those customers. In most contexts, each firm's market share is based on its actual or projected revenues from the targeted customers. However, the Agencies may instead measure market shares based on revenues from a broader group of customers if doing so would more accurately reflect the competitive significance of different suppliers in the relevant market. Revenues earned from a broader group of customers may also be used when better data are thereby available.

5.3 Market Concentration

Market concentration is often one useful indicator of likely competitive effects of a merger. In evaluating market concentration, the Agencies consider both the post-merger level of market concentration and the change in concentration resulting from a merger. Market shares may not fully reflect the competitive significance of firms in the market or the impact of a merger. They are used in conjunction with other evidence of competitive effects. See Sections 6 and 7.

In analyzing mergers between an incumbent and a recent or potential entrant, to the extent the Agencies use the change in concentration to evaluate competitive effects, they will do so using projected market shares. A merger between an incumbent and a potential entrant can raise significant competitive concerns. The lessening of competition resulting from such a merger is more likely to be substantial, the larger is the market share of the incumbent, the greater is the competitive significance of the potential entrant, and the greater is the competitive threat posed by this potential entrant relative to others.

The Agencies give more weight to market concentration when market shares have been stable over time, especially in the face of historical changes in relative prices or costs. If a firm has retained its market share even after its price has increased relative to those of its rivals, that firm already faces limited competitive constraints, making it less likely that its remaining rivals will replace the competition lost if one of that firm's important rivals is eliminated due to a merger. By contrast, even a highly concentrated market can be very competitive if market shares fluctuate substantially over short periods of time in response to changes in competitive offerings. However, if competition by one of the merging firms has significantly contributed to these fluctuations, perhaps because it has acted as a maverick, the Agencies will consider whether the merger will enhance market power by combining that firm with one of its significant rivals.

The Agencies may measure market concentration using the number of significant competitors in the market. This measure is most useful when there is a gap in market share between significant competitors and smaller rivals or when it is difficult to measure revenues in the relevant market. The Agencies also may consider the combined market share of the merging firms as an indicator of the extent to which others in the market may not be able readily to replace competition between the merging firms that is lost through the merger.

The Agencies often calculate the Herfindahl-Hirschman Index ("HHI") of market concentration. The HHI is calculated by summing the squares of the individual firms' market shares,[9] and thus gives proportionately greater weight to the larger market shares. When using the HHI, the Agencies

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[9] For example, a market consisting of four firms with market shares of thirty percent, thirty percent, twenty percent, and twenty percent has an HHI of 2600 ($30^2 + 30^2 + 20^2 + 20^2 = 2600$). The HHI ranges from 10,000 (in the case of a pure monopoly) to a number approaching zero (in the case of an atomistic market). Although it is desirable to include all firms in the calculation, lack of information about firms with small shares is not critical because such firms do not affect the HHI significantly.

consider both the post-merger level of the HHI and the increase in the HHI resulting from the merger. The increase in the HHI is equal to twice the product of the market shares of the merging firms.[10]

Based on their experience, the Agencies generally classify markets into three types:

- Unconcentrated Markets: HHI below 1500
- Moderately Concentrated Markets: HHI between 1500 and 2500
- Highly Concentrated Markets: HHI above 2500

The Agencies employ the following general standards for the relevant markets they have defined:

- *Small Change in Concentration:* Mergers involving an increase in the HHI of less than 100 points are unlikely to have adverse competitive effects and ordinarily require no further analysis.
- *Unconcentrated Markets:* Mergers resulting in unconcentrated markets are unlikely to have adverse competitive effects and ordinarily require no further analysis.
- *Moderately Concentrated Markets:* Mergers resulting in moderately concentrated markets that involve an increase in the HHI of more than 100 points potentially raise significant competitive concerns and often warrant scrutiny.
- *Highly Concentrated Markets:* Mergers resulting in highly concentrated markets that involve an increase in the HHI of between 100 points and 200 points potentially raise significant competitive concerns and often warrant scrutiny. Mergers resulting in highly concentrated markets that involve an increase in the HHI of more than 200 points will be presumed to be likely to enhance market power. The presumption may be rebutted by persuasive evidence showing that the merger is unlikely to enhance market power.

The purpose of these thresholds is not to provide a rigid screen to separate competitively benign mergers from anticompetitive ones, although high levels of concentration do raise concerns. Rather, they provide one way to identify some mergers unlikely to raise competitive concerns and some others for which it is particularly important to examine whether other competitive factors confirm, reinforce, or counteract the potentially harmful effects of increased concentration. The higher the post-merger HHI and the increase in the HHI, the greater are the Agencies' potential competitive concerns and the greater is the likelihood that the Agencies will request additional information to conduct their analysis.

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[10] For example, the merger of firms with shares of five percent and ten percent of the market would increase the HHI by 100 ($5 \times 10 \times 2 = 100$).

6. Unilateral Effects

The elimination of competition between two firms that results from their merger may alone constitute a substantial lessening of competition. Such unilateral effects are most apparent in a merger to monopoly in a relevant market, but are by no means limited to that case. Whether cognizable efficiencies resulting from the merger are likely to reduce or reverse adverse unilateral effects is addressed in Section 10.

Several common types of unilateral effects are discussed in this section. Section 6.1 discusses unilateral price effects in markets with differentiated products. Section 6.2 discusses unilateral effects in markets where sellers negotiate with buyers or prices are determined through auctions. Section 6.3 discusses unilateral effects relating to reductions in output or capacity in markets for relatively homogeneous products. Section 6.4 discusses unilateral effects arising from diminished innovation or reduced product variety. These effects do not exhaust the types of possible unilateral effects; for example, exclusionary unilateral effects also can arise.

A merger may result in different unilateral effects along different dimensions of competition. For example, a merger may increase prices in the short term but not raise longer-term concerns about innovation, either because rivals will provide sufficient innovation competition or because the merger will generate cognizable research and development efficiencies. See Section 10.

6.1 Pricing of Differentiated Products

In differentiated product industries, some products can be very close substitutes and compete strongly with each other, while other products are more distant substitutes and compete less strongly. For example, one high-end product may compete much more directly with another high-end product than with any low-end product.

A merger between firms selling differentiated products may diminish competition by enabling the merged firm to profit by unilaterally raising the price of one or both products above the pre-merger level. Some of the sales lost due to the price rise will merely be diverted to the product of the merger partner and, depending on relative margins, capturing such sales loss through merger may make the price increase profitable even though it would not have been profitable prior to the merger.

The extent of direct competition between the products sold by the merging parties is central to the evaluation of unilateral price effects. Unilateral price effects are greater, the more the buyers of products sold by one merging firm consider products sold by the other merging firm to be their next choice. The Agencies consider any reasonably available and reliable information to evaluate the extent of direct competition between the products sold by the merging firms. This includes documentary and testimonial evidence, win/loss reports and evidence from discount approval processes, customer switching patterns, and customer surveys. The types of evidence relied on often overlap substantially with the types of evidence of customer substitution relevant to the hypothetical monopolist test. See Section 4.1.1.

Substantial unilateral price elevation post-merger for a product formerly sold by one of the merging firms normally requires that a significant fraction of the customers purchasing that product view

products formerly sold by the other merging firm as their next-best choice. However, unless pre-merger margins between price and incremental cost are low, that significant fraction need not approach a majority. For this purpose, incremental cost is measured over the change in output that would be caused by the price change considered. A merger may produce significant unilateral effects for a given product even though many more sales are diverted to products sold by non-merging firms than to products previously sold by the merger partner.

> *Example 19:* In Example 5, the merged entity controlling Products A and B would raise prices ten percent, given the product offerings and prices of other firms. In that example, one-third of the sales lost by Product A when its price alone is raised are diverted to Product B. Further analysis is required to account for repositioning, entry, and efficiencies.

In some cases, the Agencies may seek to quantify the extent of direct competition between a product sold by one merging firm and a second product sold by the other merging firm by estimating the diversion ratio from the first product to the second product. The diversion ratio is the fraction of unit sales lost by the first product due to an increase in its price that would be diverted to the second product. Diversion ratios between products sold by one merging firm and products sold by the other merging firm can be very informative for assessing unilateral price effects, with higher diversion ratios indicating a greater likelihood of such effects. Diversion ratios between products sold by merging firms and those sold by non-merging firms have at most secondary predictive value.

Adverse unilateral price effects can arise when the merger gives the merged entity an incentive to raise the price of a product previously sold by one merging firm and thereby divert sales to products previously sold by the other merging firm, boosting the profits on the latter products. Taking as given other prices and product offerings, that boost to profits is equal to the value to the merged firm of the sales diverted to those products. The value of sales diverted to a product is equal to the number of units diverted to that product multiplied by the margin between price and incremental cost on that product. In some cases, where sufficient information is available, the Agencies assess the value of diverted sales, which can serve as an indicator of the upward pricing pressure on the first product resulting from the merger. Diagnosing unilateral price effects based on the value of diverted sales need not rely on market definition or the calculation of market shares and concentration. The Agencies rely much more on the value of diverted sales than on the level of the HHI for diagnosing unilateral price effects in markets with differentiated products. If the value of diverted sales is proportionately small, significant unilateral price effects are unlikely.[11]

Where sufficient data are available, the Agencies may construct economic models designed to quantify the unilateral price effects resulting from the merger. These models often include independent price responses by non-merging firms. They also can incorporate merger-specific efficiencies. These merger simulation methods need not rely on market definition. The Agencies do not treat merger simulation evidence as conclusive in itself, and they place more weight on whether their merger simulations consistently predict substantial price increases than on the precise prediction of any single simulation.

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[11] For this purpose, the value of diverted sales is measured in proportion to the lost revenues attributable to the reduction in unit sales resulting from the price increase. Those lost revenues equal the reduction in the number of units sold of that product multiplied by that product's price.

A merger is unlikely to generate substantial unilateral price increases if non-merging parties offer very close substitutes for the products offered by the merging firms. In some cases, non-merging firms may be able to reposition their products to offer close substitutes for the products offered by the merging firms. Repositioning is a supply-side response that is evaluated much like entry, with consideration given to timeliness, likelihood, and sufficiency. See Section 9. The Agencies consider whether repositioning would be sufficient to deter or counteract what otherwise would be significant anticompetitive unilateral effects from a differentiated products merger.

6.2 Bargaining and Auctions

In many industries, especially those involving intermediate goods and services, buyers and sellers negotiate to determine prices and other terms of trade. In that process, buyers commonly negotiate with more than one seller, and may play sellers off against one another. Some highly structured forms of such competition are known as auctions. Negotiations often combine aspects of an auction with aspects of one-on-one negotiation, although pure auctions are sometimes used in government procurement and elsewhere.

A merger between two competing sellers prevents buyers from playing those sellers off against each other in negotiations. This alone can significantly enhance the ability and incentive of the merged entity to obtain a result more favorable to it, and less favorable to the buyer, than the merging firms would have offered separately absent the merger. The Agencies analyze unilateral effects of this type using similar approaches to those described in Section 6.1.

Anticompetitive unilateral effects in these settings are likely in proportion to the frequency or probability with which, prior to the merger, one of the merging sellers had been the runner-up when the other won the business. These effects also are likely to be greater, the greater advantage the runner-up merging firm has over other suppliers in meeting customers' needs. These effects also tend to be greater, the more profitable were the pre-merger winning bids. All of these factors are likely to be small if there are many equally placed bidders.

The mechanisms of these anticompetitive unilateral effects, and the indicia of their likelihood, differ somewhat according to the bargaining practices used, the auction format, and the sellers' information about one another's costs and about buyers' preferences. For example, when the merging sellers are likely to know which buyers they are best and second best placed to serve, any anticompetitive unilateral effects are apt to be targeted at those buyers; when sellers are less well informed, such effects are more apt to be spread over a broader class of buyers.

6.3 Capacity and Output for Homogeneous Products

In markets involving relatively undifferentiated products, the Agencies may evaluate whether the merged firm will find it profitable unilaterally to suppress output and elevate the market price. A firm may leave capacity idle, refrain from building or obtaining capacity that would have been obtained absent the merger, or eliminate pre-existing production capabilities. A firm may also divert the use of capacity away from one relevant market and into another so as to raise the price in the former market. The competitive analyses of these alternative modes of output suppression may differ.

A unilateral output suppression strategy is more likely to be profitable when (1) the merged firm's market share is relatively high; (2) the share of the merged firm's output already committed for sale at prices unaffected by the output suppression is relatively low; (3) the margin on the suppressed output is relatively low; (4) the supply responses of rivals are relatively small; and (5) the market elasticity of demand is relatively low.

A merger may provide the merged firm a larger base of sales on which to benefit from the resulting price rise, or it may eliminate a competitor that otherwise could have expanded its output in response to the price rise.

> *Example 20:* Firms A and B both produce an industrial commodity and propose to merge. The demand for this commodity is insensitive to price. Firm A is the market leader. Firm B produces substantial output, but its operating margins are low because it operates high-cost plants. The other suppliers are operating very near capacity. The merged firm has an incentive to reduce output at the high-cost plants, perhaps shutting down some of that capacity, thus driving up the price it receives on the remainder of its output. The merger harms customers, notwithstanding that the merged firm shifts some output from high-cost plants to low-cost plants.

In some cases, a merger between a firm with a substantial share of the sales in the market and a firm with significant excess capacity to serve that market can make an output suppression strategy profitable.[12] This can occur even if the firm with the excess capacity has a relatively small share of sales, if that firm's ability to expand, and thus keep price from rising, has been making an output suppression strategy unprofitable for the firm with the larger market share.

6.4 Innovation and Product Variety

Competition often spurs firms to innovate. The Agencies may consider whether a merger is likely to diminish innovation competition by encouraging the merged firm to curtail its innovative efforts below the level that would prevail in the absence of the merger. That curtailment of innovation could take the form of reduced incentive to continue with an existing product-development effort or reduced incentive to initiate development of new products.

The first of these effects is most likely to occur if at least one of the merging firms is engaging in efforts to introduce new products that would capture substantial revenues from the other merging firm. The second, longer-run effect is most likely to occur if at least one of the merging firms has capabilities that are likely to lead it to develop new products in the future that would capture substantial revenues from the other merging firm. The Agencies therefore also consider whether a merger will diminish innovation competition by combining two of a very small number of firms with the strongest capabilities to successfully innovate in a specific direction.

The Agencies evaluate the extent to which successful innovation by one merging firm is likely to take sales from the other, and the extent to which post-merger incentives for future innovation will be lower than those that would prevail in the absence of the merger. The Agencies also consider whether the merger is likely to enable innovation that would not otherwise take place, by bringing together

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[12] Such a merger also can cause adverse coordinated effects, especially if the acquired firm with excess capacity was disrupting effective coordination.

complementary capabilities that cannot be otherwise combined or for some other merger-specific reason. See Section 10.

The Agencies also consider whether a merger is likely to give the merged firm an incentive to cease offering one of the relevant products sold by the merging parties. Reductions in variety following a merger may or may not be anticompetitive. Mergers can lead to the efficient consolidation of products when variety offers little in value to customers. In other cases, a merger may increase variety by encouraging the merged firm to reposition its products to be more differentiated from one another.

If the merged firm would withdraw a product that a significant number of customers strongly prefer to those products that would remain available, this can constitute a harm to customers over and above any effects on the price or quality of any given product. If there is evidence of such an effect, the Agencies may inquire whether the reduction in variety is largely due to a loss of competitive incentives attributable to the merger. An anticompetitive incentive to eliminate a product as a result of the merger is greater and more likely, the larger is the share of profits from that product coming at the expense of profits from products sold by the merger partner. Where a merger substantially reduces competition by bringing two close substitute products under common ownership, and one of those products is eliminated, the merger will often also lead to a price increase on the remaining product, but that is not a necessary condition for anticompetitive effect.

> *Example 21:* Firm A sells a high-end product at a premium price. Firm B sells a mid-range product at a lower price, serving customers who are more price sensitive. Several other firms have low-end products. Firms A and B together have a large share of the relevant market. Firm A proposes to acquire Firm B and discontinue Firm B's product. Firm A expects to retain most of Firm B's customers. Firm A may not find it profitable to raise the price of its high-end product after the merger, because doing so would reduce its ability to retain Firm B's more price-sensitive customers. The Agencies may conclude that the withdrawal of Firm B's product results from a loss of competition and materially harms customers.

7. Coordinated Effects

A merger may diminish competition by enabling or encouraging post-merger coordinated interaction among firms in the relevant market that harms customers. Coordinated interaction involves conduct by multiple firms that is profitable for each of them only as a result of the accommodating reactions of the others. These reactions can blunt a firm's incentive to offer customers better deals by undercutting the extent to which such a move would win business away from rivals. They also can enhance a firm's incentive to raise prices, by assuaging the fear that such a move would lose customers to rivals.

Coordinated interaction includes a range of conduct. Coordinated interaction can involve the explicit negotiation of a common understanding of how firms will compete or refrain from competing. Such conduct typically would itself violate the antitrust laws. Coordinated interaction also can involve a similar common understanding that is not explicitly negotiated but would be enforced by the detection and punishment of deviations that would undermine the coordinated interaction. Coordinated interaction alternatively can involve parallel accommodating conduct not pursuant to a prior understanding. Parallel accommodating conduct includes situations in which each rival's response to competitive moves made by others is individually rational, and not motivated by

retaliation or deterrence nor intended to sustain an agreed-upon market outcome, but nevertheless emboldens price increases and weakens competitive incentives to reduce prices or offer customers better terms. Coordinated interaction includes conduct not otherwise condemned by the antitrust laws.

The ability of rival firms to engage in coordinated conduct depends on the strength and predictability of rivals' responses to a price change or other competitive initiative. Under some circumstances, a merger can result in market concentration sufficient to strengthen such responses or enable multiple firms in the market to predict them more confidently, thereby affecting the competitive incentives of multiple firms in the market, not just the merged firm.

7.1 Impact of Merger on Coordinated Interaction

The Agencies examine whether a merger is likely to change the manner in which market participants interact, inducing substantially more coordinated interaction. The Agencies seek to identify how a merger might significantly weaken competitive incentives through an increase in the strength, extent, or likelihood of coordinated conduct. There are, however, numerous forms of coordination, and the risk that a merger will induce adverse coordinated effects may not be susceptible to quantification or detailed proof. Therefore, the Agencies evaluate the risk of coordinated effects using measures of market concentration (see Section 5) in conjunction with an assessment of whether a market is vulnerable to coordinated conduct. See Section 7.2. The analysis in Section 7.2 applies to moderately and highly concentrated markets, as unconcentrated markets are unlikely to be vulnerable to coordinated conduct.

Pursuant to the Clayton Act's incipiency standard, the Agencies may challenge mergers that in their judgment pose a real danger of harm through coordinated effects, even without specific evidence showing precisely how the coordination likely would take place. The Agencies are likely to challenge a merger if the following three conditions are all met: (1) the merger would significantly increase concentration and lead to a moderately or highly concentrated market; (2) that market shows signs of vulnerability to coordinated conduct (see Section 7.2); and (3) the Agencies have a credible basis on which to conclude that the merger may enhance that vulnerability. An acquisition eliminating a maverick firm (see Section 2.1.5) in a market vulnerable to coordinated conduct is likely to cause adverse coordinated effects.

7.2 Evidence a Market is Vulnerable to Coordinated Conduct

The Agencies presume that market conditions are conducive to coordinated interaction if firms representing a substantial share in the relevant market appear to have previously engaged in express collusion affecting the relevant market, unless competitive conditions in the market have since changed significantly. Previous express collusion in another geographic market will have the same weight if the salient characteristics of that other market at the time of the collusion are comparable to those in the relevant market. Failed previous attempts at collusion in the relevant market suggest that successful collusion was difficult pre-merger but not so difficult as to deter attempts, and a merger may tend to make success more likely. Previous collusion or attempted collusion in another product market may also be given substantial weight if the salient characteristics of that other market at the time of the collusion are closely comparable to those in the relevant market.

A market typically is more vulnerable to coordinated conduct if each competitively important firm's significant competitive initiatives can be promptly and confidently observed by that firm's rivals. This is more likely to be the case if the terms offered to customers are relatively transparent. Price transparency can be greater for relatively homogeneous products. Even if terms of dealing are not transparent, transparency regarding the identities of the firms serving particular customers can give rise to coordination, e.g., through customer or territorial allocation. Regular monitoring by suppliers of one another's prices or customers can indicate that the terms offered to customers are relatively transparent.

A market typically is more vulnerable to coordinated conduct if a firm's prospective competitive reward from attracting customers away from its rivals will be significantly diminished by likely responses of those rivals. This is more likely to be the case, the stronger and faster are the responses the firm anticipates from its rivals. The firm is more likely to anticipate strong responses if there are few significant competitors, if products in the relevant market are relatively homogeneous, if customers find it relatively easy to switch between suppliers, or if suppliers use meeting-competition clauses.

A firm is more likely to be deterred from making competitive initiatives by whatever responses occur if sales are small and frequent rather than via occasional large and long-term contracts or if relatively few customers will switch to it before rivals are able to respond. A firm is less likely to be deterred by whatever responses occur if the firm has little stake in the status quo. For example, a firm with a small market share that can quickly and dramatically expand, constrained neither by limits on production nor by customer reluctance to switch providers or to entrust business to a historically small provider, is unlikely to be deterred. Firms are also less likely to be deterred by whatever responses occur if competition in the relevant market is marked by leapfrogging technological innovation, so that responses by competitors leave the gains from successful innovation largely intact.

A market is more apt to be vulnerable to coordinated conduct if the firm initiating a price increase will lose relatively few customers after rivals respond to the increase. Similarly, a market is more apt to be vulnerable to coordinated conduct if a firm that first offers a lower price or improved product to customers will retain relatively few customers thus attracted away from its rivals after those rivals respond.

The Agencies regard coordinated interaction as more likely, the more the participants stand to gain from successful coordination. Coordination generally is more profitable, the lower is the market elasticity of demand.

Coordinated conduct can harm customers even if not all firms in the relevant market engage in the coordination, but significant harm normally is likely only if a substantial part of the market is subject to such conduct. The prospect of harm depends on the collective market power, in the relevant market, of firms whose incentives to compete are substantially weakened by coordinated conduct. This collective market power is greater, the lower is the market elasticity of demand. This collective market power is diminished by the presence of other market participants with small market shares and little stake in the outcome resulting from the coordinated conduct, if these firms can rapidly expand their sales in the relevant market.

Buyer characteristics and the nature of the procurement process can affect coordination. For example, sellers may have the incentive to bid aggressively for a large contract even if they expect strong responses by rivals. This is especially the case for sellers with small market shares, if they can realistically win such large contracts. In some cases, a large buyer may be able to strategically undermine coordinated conduct, at least as it pertains to that buyer's needs, by choosing to put up for bid a few large contracts rather than many smaller ones, and by making its procurement decisions opaque to suppliers.

8. Powerful Buyers

Powerful buyers are often able to negotiate favorable terms with their suppliers. Such terms may reflect the lower costs of serving these buyers, but they also can reflect price discrimination in their favor.

The Agencies consider the possibility that powerful buyers may constrain the ability of the merging parties to raise prices. This can occur, for example, if powerful buyers have the ability and incentive to vertically integrate upstream or sponsor entry, or if the conduct or presence of large buyers undermines coordinated effects. However, the Agencies do not presume that the presence of powerful buyers alone forestalls adverse competitive effects flowing from the merger. Even buyers that can negotiate favorable terms may be harmed by an increase in market power. The Agencies examine the choices available to powerful buyers and how those choices likely would change due to the merger. Normally, a merger that eliminates a supplier whose presence contributed significantly to a buyer's negotiating leverage will harm that buyer.

> *Example 22:* Customer C has been able to negotiate lower pre-merger prices than other customers by threatening to shift its large volume of purchases from one merging firm to the other. No other suppliers are as well placed to meet Customer C's needs for volume and reliability. The merger is likely to harm Customer C. In this situation, the Agencies could identify a price discrimination market consisting of Customer C and similarly placed customers. The merger threatens to end previous price discrimination in their favor.

Furthermore, even if some powerful buyers could protect themselves, the Agencies also consider whether market power can be exercised against other buyers.

> *Example 23:* In Example 22, if Customer C instead obtained the lower pre-merger prices based on a credible threat to supply its own needs, or to sponsor new entry, Customer C might not be harmed. However, even in this case, other customers may still be harmed.

9. Entry

The analysis of competitive effects in Sections 6 and 7 focuses on current participants in the relevant market. That analysis may also include some forms of entry. Firms that would rapidly and easily enter the market in response to a SSNIP are market participants and may be assigned market shares. See Sections 5.1 and 5.2. Firms that have, prior to the merger, committed to entering the market also will normally be treated as market participants. See Section 5.1. This section concerns entry or adjustments to pre-existing entry plans that are induced by the merger.

As part of their full assessment of competitive effects, the Agencies consider entry into the relevant market. The prospect of entry into the relevant market will alleviate concerns about adverse competitive effects only if such entry will deter or counteract any competitive effects of concern so the merger will not substantially harm customers.

The Agencies consider the actual history of entry into the relevant market and give substantial weight to this evidence. Lack of successful and effective entry in the face of non-transitory increases in the margins earned on products in the relevant market tends to suggest that successful entry is slow or difficult. Market values of incumbent firms greatly exceeding the replacement costs of their tangible assets may indicate that these firms have valuable intangible assets, which may be difficult or time consuming for an entrant to replicate.

A merger is not likely to enhance market power if entry into the market is so easy that the merged firm and its remaining rivals in the market, either unilaterally or collectively, could not profitably raise price or otherwise reduce competition compared to the level that would prevail in the absence of the merger. Entry is that easy if entry would be timely, likely, and sufficient in its magnitude, character, and scope to deter or counteract the competitive effects of concern.

The Agencies examine the timeliness, likelihood, and sufficiency of the entry efforts an entrant might practically employ. An entry effort is defined by the actions the firm must undertake to produce and sell in the market. Various elements of the entry effort will be considered. These elements can include: planning, design, and management; permitting, licensing, or other approvals; construction, debugging, and operation of production facilities; and promotion (including necessary introductory discounts), marketing, distribution, and satisfaction of customer testing and qualification requirements. Recent examples of entry, whether successful or unsuccessful, generally provide the starting point for identifying the elements of practical entry efforts. They also can be informative regarding the scale necessary for an entrant to be successful, the presence or absence of entry barriers, the factors that influence the timing of entry, the costs and risk associated with entry, and the sales opportunities realistically available to entrants.

If the assets necessary for an effective and profitable entry effort are widely available, the Agencies will not necessarily attempt to identify which firms might enter. Where an identifiable set of firms appears to have necessary assets that others lack, or to have particularly strong incentives to enter, the Agencies focus their entry analysis on those firms. Firms operating in adjacent or complementary markets, or large customers themselves, may be best placed to enter. However, the Agencies will not presume that a powerful firm in an adjacent market or a large customer will enter the relevant market unless there is reliable evidence supporting that conclusion.

In assessing whether entry will be timely, likely, and sufficient, the Agencies recognize that precise and detailed information may be difficult or impossible to obtain. The Agencies consider reasonably available and reliable evidence bearing on whether entry will satisfy the conditions of timeliness, likelihood, and sufficiency.

9.1 Timeliness

In order to deter the competitive effects of concern, entry must be rapid enough to make unprofitable overall the actions causing those effects and thus leading to entry, even though those actions would be profitable until entry takes effect.

Even if the prospect of entry does not deter the competitive effects of concern, post-merger entry may counteract them. This requires that the impact of entrants in the relevant market be rapid enough that customers are not significantly harmed by the merger, despite any anticompetitive harm that occurs prior to the entry.

The Agencies will not presume that an entrant can have a significant impact on prices before that entrant is ready to provide the relevant product to customers unless there is reliable evidence that anticipated future entry would have such an effect on prices.

9.2 Likelihood

Entry is likely if it would be profitable, accounting for the assets, capabilities, and capital needed and the risks involved, including the need for the entrant to incur costs that would not be recovered if the entrant later exits. Profitability depends upon (a) the output level the entrant is likely to obtain, accounting for the obstacles facing new entrants; (b) the price the entrant would likely obtain in the post-merger market, accounting for the impact of that entry itself on prices; and (c) the cost per unit the entrant would likely incur, which may depend upon the scale at which the entrant would operate.

9.3 Sufficiency

Even where timely and likely, entry may not be sufficient to deter or counteract the competitive effects of concern. For example, in a differentiated product industry, entry may be insufficient because the products offered by entrants are not close enough substitutes to the products offered by the merged firm to render a price increase by the merged firm unprofitable. Entry may also be insufficient due to constraints that limit entrants' competitive effectiveness, such as limitations on the capabilities of the firms best placed to enter or reputational barriers to rapid expansion by new entrants. Entry by a single firm that will replicate at least the scale and strength of one of the merging firms is sufficient. Entry by one or more firms operating at a smaller scale may be sufficient if such firms are not at a significant competitive disadvantage.

10. Efficiencies

Competition usually spurs firms to achieve efficiencies internally. Nevertheless, a primary benefit of mergers to the economy is their potential to generate significant efficiencies and thus enhance the merged firm's ability and incentive to compete, which may result in lower prices, improved quality, enhanced service, or new products. For example, merger-generated efficiencies may enhance competition by permitting two ineffective competitors to form a more effective competitor, e.g., by combining complementary assets. In a unilateral effects context, incremental cost reductions may reduce or reverse any increases in the merged firm's incentive to elevate price. Efficiencies also may lead to new or improved products, even if they do not immediately and directly affect price. In a

coordinated effects context, incremental cost reductions may make coordination less likely or effective by enhancing the incentive of a maverick to lower price or by creating a new maverick firm. Even when efficiencies generated through a merger enhance a firm's ability to compete, however, a merger may have other effects that may lessen competition and make the merger anticompetitive.

The Agencies credit only those efficiencies likely to be accomplished with the proposed merger and unlikely to be accomplished in the absence of either the proposed merger or another means having comparable anticompetitive effects. These are termed merger-specific efficiencies.[13] Only alternatives that are practical in the business situation faced by the merging firms are considered in making this determination. The Agencies do not insist upon a less restrictive alternative that is merely theoretical.

Efficiencies are difficult to verify and quantify, in part because much of the information relating to efficiencies is uniquely in the possession of the merging firms. Moreover, efficiencies projected reasonably and in good faith by the merging firms may not be realized. Therefore, it is incumbent upon the merging firms to substantiate efficiency claims so that the Agencies can verify by reasonable means the likelihood and magnitude of each asserted efficiency, how and when each would be achieved (and any costs of doing so), how each would enhance the merged firm's ability and incentive to compete, and why each would be merger-specific.

Efficiency claims will not be considered if they are vague, speculative, or otherwise cannot be verified by reasonable means. Projections of efficiencies may be viewed with skepticism, particularly when generated outside of the usual business planning process. By contrast, efficiency claims substantiated by analogous past experience are those most likely to be credited.

Cognizable efficiencies are merger-specific efficiencies that have been verified and do not arise from anticompetitive reductions in output or service. Cognizable efficiencies are assessed net of costs produced by the merger or incurred in achieving those efficiencies.

The Agencies will not challenge a merger if cognizable efficiencies are of a character and magnitude such that the merger is not likely to be anticompetitive in any relevant market.[14] To make the requisite determination, the Agencies consider whether cognizable efficiencies likely would be sufficient to reverse the merger's potential to harm customers in the relevant market, e.g., by preventing price

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[13] The Agencies will not deem efficiencies to be merger-specific if they could be attained by practical alternatives that mitigate competitive concerns, such as divestiture or licensing. If a merger affects not whether but only when an efficiency would be achieved, only the timing advantage is a merger-specific efficiency.

[14] The Agencies normally assess competition in each relevant market affected by a merger independently and normally will challenge the merger if it is likely to be anticompetitive in any relevant market. In some cases, however, the Agencies in their prosecutorial discretion will consider efficiencies not strictly in the relevant market, but so inextricably linked with it that a partial divestiture or other remedy could not feasibly eliminate the anticompetitive effect in the relevant market without sacrificing the efficiencies in the other market(s). Inextricably linked efficiencies are most likely to make a difference when they are great and the likely anticompetitive effect in the relevant market(s) is small so the merger is likely to benefit customers overall.

increases in that market.[15] In conducting this analysis, the Agencies will not simply compare the magnitude of the cognizable efficiencies with the magnitude of the likely harm to competition absent the efficiencies. The greater the potential adverse competitive effect of a merger, the greater must be the cognizable efficiencies, and the more they must be passed through to customers, for the Agencies to conclude that the merger will not have an anticompetitive effect in the relevant market. When the potential adverse competitive effect of a merger is likely to be particularly substantial, extraordinarily great cognizable efficiencies would be necessary to prevent the merger from being anticompetitive. In adhering to this approach, the Agencies are mindful that the antitrust laws give competition, not internal operational efficiency, primacy in protecting customers.

In the Agencies' experience, efficiencies are most likely to make a difference in merger analysis when the likely adverse competitive effects, absent the efficiencies, are not great. Efficiencies almost never justify a merger to monopoly or near-monopoly. Just as adverse competitive effects can arise along multiple dimensions of conduct, such as pricing and new product development, so too can efficiencies operate along multiple dimensions. Similarly, purported efficiency claims based on lower prices can be undermined if they rest on reductions in product quality or variety that customers value.

The Agencies have found that certain types of efficiencies are more likely to be cognizable and substantial than others. For example, efficiencies resulting from shifting production among facilities formerly owned separately, which enable the merging firms to reduce the incremental cost of production, are more likely to be susceptible to verification and are less likely to result from anticompetitive reductions in output. Other efficiencies, such as those relating to research and development, are potentially substantial but are generally less susceptible to verification and may be the result of anticompetitive output reductions. Yet others, such as those relating to procurement, management, or capital cost, are less likely to be merger-specific or substantial, or may not be cognizable for other reasons.

When evaluating the effects of a merger on innovation, the Agencies consider the ability of the merged firm to conduct research or development more effectively. Such efficiencies may spur innovation but not affect short-term pricing. The Agencies also consider the ability of the merged firm to appropriate a greater fraction of the benefits resulting from its innovations. Licensing and intellectual property conditions may be important to this enquiry, as they affect the ability of a firm to appropriate the benefits of its innovation. Research and development cost savings may be substantial and yet not be cognizable efficiencies because they are difficult to verify or result from anticompetitive reductions in innovative activities.

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[15] The Agencies normally give the most weight to the results of this analysis over the short term. The Agencies also may consider the effects of cognizable efficiencies with no short-term, direct effect on prices in the relevant market. Delayed benefits from efficiencies (due to delay in the achievement of, or the realization of customer benefits from, the efficiencies) will be given less weight because they are less proximate and more difficult to predict. Efficiencies relating to costs that are fixed in the short term are unlikely to benefit customers in the short term, but can benefit customers in the longer run, e.g., if they make new product introduction less expensive.

11. Failure and Exiting Assets

Notwithstanding the analysis above, a merger is not likely to enhance market power if imminent failure, as defined below, of one of the merging firms would cause the assets of that firm to exit the relevant market. This is an extreme instance of the more general circumstance in which the competitive significance of one of the merging firms is declining: the projected market share and significance of the exiting firm is zero. If the relevant assets would otherwise exit the market, customers are not worse off after the merger than they would have been had the merger been enjoined.

The Agencies do not normally credit claims that the assets of the failing firm would exit the relevant market unless all of the following circumstances are met: (1) the allegedly failing firm would be unable to meet its financial obligations in the near future; (2) it would not be able to reorganize successfully under Chapter 11 of the Bankruptcy Act; and (3) it has made unsuccessful good-faith efforts to elicit reasonable alternative offers that would keep its tangible and intangible assets in the relevant market and pose a less severe danger to competition than does the proposed merger.[16]

Similarly, a merger is unlikely to cause competitive harm if the risks to competition arise from the acquisition of a failing division. The Agencies do not normally credit claims that the assets of a division would exit the relevant market in the near future unless both of the following conditions are met: (1) applying cost allocation rules that reflect true economic costs, the division has a persistently negative cash flow on an operating basis, and such negative cash flow is not economically justified for the firm by benefits such as added sales in complementary markets or enhanced customer goodwill;[17] and (2) the owner of the failing division has made unsuccessful good-faith efforts to elicit reasonable alternative offers that would keep its tangible and intangible assets in the relevant market and pose a less severe danger to competition than does the proposed acquisition.

12. Mergers of Competing Buyers

Mergers of competing buyers can enhance market power on the buying side of the market, just as mergers of competing sellers can enhance market power on the selling side of the market. Buyer market power is sometimes called “monopsony power.”

To evaluate whether a merger is likely to enhance market power on the buying side of the market, the Agencies employ essentially the framework described above for evaluating whether a merger is likely to enhance market power on the selling side of the market. In defining relevant markets, the Agencies

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[16] Any offer to purchase the assets of the failing firm for a price above the liquidation value of those assets will be regarded as a reasonable alternative offer. Liquidation value is the highest value the assets could command for use outside the relevant market.

[17] Because the parent firm can allocate costs, revenues, and intra-company transactions among itself and its subsidiaries and divisions, the Agencies require evidence on these two points that is not solely based on management plans that could have been prepared for the purpose of demonstrating negative cash flow or the prospect of exit from the relevant market.

focus on the alternatives available to sellers in the face of a decrease in the price paid by a hypothetical monopsonist.

Market power on the buying side of the market is not a significant concern if suppliers have numerous attractive outlets for their goods or services. However, when that is not the case, the Agencies may conclude that the merger of competing buyers is likely to lessen competition in a manner harmful to sellers.

The Agencies distinguish between effects on sellers arising from a lessening of competition and effects arising in other ways. A merger that does not enhance market power on the buying side of the market can nevertheless lead to a reduction in prices paid by the merged firm, for example, by reducing transactions costs or allowing the merged firm to take advantage of volume-based discounts. Reduction in prices paid by the merging firms not arising from the enhancement of market power can be significant in the evaluation of efficiencies from a merger, as discussed in Section 10.

The Agencies do not view a short-run reduction in the quantity purchased as the only, or best, indicator of whether a merger enhances buyer market power. Nor do the Agencies evaluate the competitive effects of mergers between competing buyers strictly, or even primarily, on the basis of effects in the downstream markets in which the merging firms sell.

> *Example 24:* Merging Firms A and B are the only two buyers in the relevant geographic market for an agricultural product. Their merger will enhance buyer power and depress the price paid to farmers for this product, causing a transfer of wealth from farmers to the merged firm and inefficiently reducing supply. These effects can arise even if the merger will not lead to any increase in the price charged by the merged firm for its output.

13. Partial Acquisitions

In most horizontal mergers, two competitors come under common ownership and control, completely and permanently eliminating competition between them. This elimination of competition is a basic element of merger analysis. However, the statutory provisions referenced in Section 1 also apply to one firm's partial acquisition of a competitor. The Agencies therefore also review acquisitions of minority positions involving competing firms, even if such minority positions do not necessarily or completely eliminate competition between the parties to the transaction.

When the Agencies determine that a partial acquisition results in effective control of the target firm, or involves substantially all of the relevant assets of the target firm, they analyze the transaction much as they do a merger. Partial acquisitions that do not result in effective control may nevertheless present significant competitive concerns and may require a somewhat distinct analysis from that applied to full mergers or to acquisitions involving effective control. The details of the post-acquisition relationship between the parties, and how those details are likely to affect competition, can be important. While the Agencies will consider any way in which a partial acquisition may affect competition, they generally focus on three principal effects.

First, a partial acquisition can lessen competition by giving the acquiring firm the ability to influence the competitive conduct of the target firm. A voting interest in the target firm or specific governance rights, such as the right to appoint members to the board of directors, can permit such influence. Such

influence can lessen competition because the acquiring firm can use its influence to induce the target firm to compete less aggressively or to coordinate its conduct with that of the acquiring firm.

Second, a partial acquisition can lessen competition by reducing the incentive of the acquiring firm to compete. Acquiring a minority position in a rival might significantly blunt the incentive of the acquiring firm to compete aggressively because it shares in the losses thereby inflicted on that rival. This reduction in the incentive of the acquiring firm to compete arises even if cannot influence the conduct of the target firm. As compared with the unilateral competitive effect of a full merger, this effect is likely attenuated by the fact that the ownership is only partial.

Third, a partial acquisition can lessen competition by giving the acquiring firm access to non-public, competitively sensitive information from the target firm. Even absent any ability to influence the conduct of the target firm, access to competitively sensitive information can lead to adverse unilateral or coordinated effects. For example, it can enhance the ability of the two firms to coordinate their behavior, and make other accommodating responses faster and more targeted. The risk of coordinated effects is greater if the transaction also facilitates the flow of competitively sensitive information from the acquiring firm to the target firm.

Partial acquisitions, like mergers, vary greatly in their potential for anticompetitive effects. Accordingly, the specific facts of each case must be examined to assess the likelihood of harm to competition. While partial acquisitions usually do not enable many of the types of efficiencies associated with mergers, the Agencies consider whether a partial acquisition is likely to create cognizable efficiencies.

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The importance of quantifying non-price effects in Canada

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ABSTRACT

Evaluer les effets non tarifaires est un sujet international qui retient une attention particulière dans le contrôle des concentrations au Canada depuis les décisions Tervita et Treb, et particulièrement les affaires où des gains d'efficacité sont soulevés. Cet article traite de l'importance de cette évaluation au Canada et des moyens pour quantifier ces effets lorsque les méthodes classiques du droit de la concurrence ne sont pas suffisantes.

Quantifying non-price effects is a topic with global appeal in antitrust that has garnered particular interest in merger reviews in Canada in light of the recent decisions in Tervita and TREB, especially in cases that involve an efficiencies defence. We discuss the importance of quantifying non-price effects in Canada and some ways to quantify these effects when standard competition models are not helpful.

*While seconded to the Canadian Competition Bureau, Dr. Duplantis provided advice to the Competition Bureau on both the Tervita and TREB cases discussed below.
The views expressed in this paper are strictly those of the authors and do not necessarily state or reflect the views of The Brattle Group, Inc. or its clients. The authors would like to thank Dan Gaynor and Jim Reitzes for their helpful comments.

The importance of quantifying non-price effects in Canada

I. Introduction

1. When we think about anti-competitive effects, whether they arise from a merger or anti-competitive behaviour by firms, we generally think in terms of price competition. In other words, we ask whether the merger or conduct will lead to higher prices for consumers. However, rivalry among firms is not limited to price. In fact, many factors other than price, such as service, variety and quality, are valued by consumers and can alter demand for a product. Further, and perhaps most importantly in today's economy, firms compete by innovating, whether it be by developing new technologies or reaching consumers in ways that improve a product's overall value proposition. Forms of competition that manifest in ways other than price are commonly referred to as non-price competition.

2. Interest in non-price effects is present in many jurisdictions, as evidenced, for example, by the American Antitrust Institute's recent Invitational Symposium on the Non-Price Effects of Mergers, which took place in June 2016,[1] as well as a 2016 Workshop on Emerging Competition Issues[2] hosted by the Canadian Competition Bureau ("Bureau"), which noted that "*there is a growing interest in developing methods to incorporate non-price effects into competition assessment frameworks*" and that price alone "*may not capture all of the outcomes flowing from competition.*"[3]

3. The 2010 US Horizontal Merger Guidelines stress the importance of non-price effects by acknowledging that "[e]*nhanced market power can also be manifested in non-price terms and conditions that adversely affect customers, including reduced product quality, reduced product variety, reduced service, or diminished innovation. Such non-price effects may co-exist with price effects, or can arise in their absence.*"[4] Several recent US merger cases have highlighted the inclusion of non-price effects when assessing anti-competitive effects, including reductions in product quality in *H&R Block* and reduced innovation in the proposed AMAT/Tokyo Electron

1 G. Gundlach, Non-Price Effects of Mergers: A Primer, American Antitrust Institute, Invitational Symposium on the Non-Price Effects of Mergers (June 15, 2016), Washington, DC, available at http://www.antitrustinstitute.org/sites/default/files/Gundlach%20 2016%20NON-PRICE%20EFFECTS%20OF%20MERGERS.%20A%20PRIMER.pdf. For a summary of the event, *see*: http://www.antitrustinstitute.org/events/invitational-symposium-non-price-effects-mergers. As outlined in an overview on the event's website, "[e]*xperts from law, economics, and the business schools convened to offer insights on the nature and prospective role of non-price effects in merger analysis, challenges that they pose for antitrust enforcement, and suggested approaches for highlighting and integrating such analysis into enforcement decisions and competition policy.*"

2 Competition Bureau, Workshop Summary Report: Highlights from the Competition Bureau's Workshop on Emerging Competition Issues, March 4, 2016, available at http://www.competitionbureau.gc.ca/eic/site/cb-bc.nsf/eng/04030.html.

3 The Bureau's Merger Enforcement Guidelines ("MEGs") and Enforcement Guidelines - The Abuse of Dominance Provisions ("AOD Guidelines") note that factors other than price, such as service, quality, and innovation, are also important determinants of whether a merger or anti-competitive conduct is likely to substantially lessen or prevent competition. *See* MEGs at § 2.2 and AOD Guidelines at footnote 5.

4 US Department of Justice and Federal Trade Commission, Horizontal Merger Guidelines (August 19, 2010), section 1.

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Modeling the effects of mergers in procurement ☆

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In procurement settings, mergers among suppliers reduce buyers' choice sets and can harm buyers by eliminating their preferred supplier or reducing their negotiating leverage. I develop a stochastic economic model that predicts the effects of mergers based on information that commonly is available to antitrust authorities. I derive general expressions for the ex ante expected changes in price, buyer utility, and supplier profit. Each becomes tractable under certain distributional assumptions. The model predicts that average prices will increase by more than 40% due to the recently litigated acquisition of Power Reviews by Bazaarvoice, in the absence of an effective remedy.

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1. Introduction

Firms engaged in procurement typically evaluate the prices and other contract terms of prospective suppliers in conjunction with non-price considerations such as reputation and quality. When more than one supplier is available, the buyer can play each others off to obtain more favorable terms of trade. Mergers among suppliers reduce the buyer's choice set and, unless sufficient efficiencies arise, can harm the buyer by eliminating its preferred offer or relaxing a binding constraint on the terms of trade with its preferred supplier.

This theory of harm was employed by the U.S. Department of Justice (DOJ) in its challenge of the consummated acquisition of Power Reviews, Inc. ("Power Reviews") by Bazaarvoice, Inc. ("Bazaarvoice").[1] The products at issue are ratings and review (PRR) platforms that enable clients to collect and display consumer-generated product ratings and reviews online. According to court documents, Bazaarvoice employs "value based pricing" in which contract terms are negotiated based on clients' perceived willingness to pay, taking into account the competitive alternatives. The DOJ alleged, and the district court agreed, that buyers of PRR platforms benefited from the ability to play Bazaarvoice and Power Reviews off each other to obtain improved terms of trade, and that, absent relief, the acquisition would reduce the negotiating leverage of many buyers and possibly lead to the discontinuation of the Power Reviews product.

In this article, I develop a stochastic economic model of procurement that predicts the likely price effects of mergers involving the combination of suppliers in procurement markets. The model can be calibrated with information that commonly is available to antitrust authorities, such as market shares, average prices, and margins. To demonstrate, I glean estimates of the requisite data from court documents and the 2013 Annual Report of Bazaarvoice, and calibrate the model to match the facts of the PRR market. The model predicts average price increases of $65 (42%) for Bazaarvoice and $84 for Power Reviews. If instead the Power Reviews product is discontinued, the model predicts an average utility loss of $79,000 annually for the clients of Power Reviews.[2]

The model itself is a stochastic version of the canonical scoring auction model in which buyers "score" the offers of prospective suppliers and award a contract to the supplier with the highest score (e.g., Che, 1993; Laffont and Tirole, 1987). Since scoring incorporates price and non-price information, the model is well suited for the competitive

☆ I developed the model described herein while employed at the U.S. Department of Justice Antitrust Division. Many of my former colleagues offered constructive comments and suggestions. I thank especially David Balan, Carl Shapiro, and Charles Taragin for their insights and encouragement. The views expressed here are not purported to reflect those of the U.S. Department of Justice.

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[1] Bazaarvoice purchased Power Reviews on June 12, 2012. The parties were not required to file with the antitrust agencies because the revenues of Power Reviews fell just below the Hart–Scott–Rodino thresholds. Nonetheless, the DOJ opened an investigation two days after the transaction closed and filed a Complaint on January 10, 2013, alleging a violation of Section 7 of the Clayton Act. Arguments started in September 2013. The district court ruled in favor of the DOJ on January 8, 2014.

[2] Computer code is posted on the author's personal website.

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interplay that arises in procurement settings. The stochastic element allows the possibility that buyers disagree about the relative desirability of the suppliers, conveying realism to the model and allowing the model to be calibrated from market-level data.

Prospective suppliers in the model are endowed with (i) a marginal cost of supply and (ii) a value that can be provided to the buyer. The difference between the value and the cost is the surplus that a supplier can create. I treat surplus as an exogenous stochastic variable that varies over suppliers and auctions. This departs from the theoretical literature on scoring auctions, which typically treats value as a choice variable of suppliers (e.g., Asker and Cantillon, 2008, 2010; Branco, 1997; Che, 1993; Ganuza and Pechlivanos, 2000; Laffont and Tirole, 1987). The restriction avoids complications due to the potential non-contractability of quality (Che and Gale, 2003; Klein and Leffler, 1981; Taylor, 1993) and the impact of moral hazard and renegotiation (Bajari and Tadelis, 2001; Bajari et al., 2009).

In this context, the outcome of the scoring auction and the transaction price that arises is fully determined by the surplus created by the suppliers. I derive general expressions for the ex ante expected changes in price, buyer utility, and supplier profit that arise due to a merger between two suppliers. I consider separately the cases in which (i) the merged entity retains both of its products post-merger and (ii) the merged entity discontinues one of its products. In practice, whether mergers result in product discontinuation depends heavily on the fixed costs of maintaining a product line, which are outside the model developed here. I then show how the general expressions can be made tractable by invoking a stochastic process for surplus that falls either within the location-scale or power-related families of distributions. Closed-form expressions are available when surplus arises from the Gumbel distribution.

The prices are set so that buyer utility, in a transaction with the highest-surplus supplier, just exceeds the surplus that could have been created by the second-best supplier. This “second-score” approach is strategically equivalent to a specific form of bargaining in which buyers play suppliers off against each other, up to the point at which the utility offered by the highest-surplus supplier cannot be matched profitably by the next best supplier. At that point, buyers have no more leverage and negotiations end. This conveys tractability to the analysis and is reasonable for many markets with either (i) merging suppliers that are much larger than most buyers, or (ii) buyers that have sizable negotiating costs. If buyers exercise leverage above-and-beyond the competitive alternative, then the fit of the model is less good. Nonetheless, I show that the model generalizes easily to Nash-in-Nash bargaining (e.g., Horn and Wolinsky, 1988), which features more extensive bargaining between buyers and the highest-surplus suppliers. I also develop results for first-score auctions, which feature none of the “back-and-forth” between buyers and sellers that characterize procurement markets, and draw analogies to Nash–Bertrand pricing in consumer products markets.

The model nests as special cases a number of previously developed models that examine mergers among undifferentiated suppliers with heterogeneous production costs. For instance, Froeb et al. (1999) and Waehrer and Perry (2003) develop results based on power-related distributions and Froeb et al. (1998, 2000) develop results based on location-scale distributions. That these results generalize to conditions with differentiated suppliers is anticipated by the theoretical literature on scoring auctions (e.g., Che, 1993), on the basis that surplus fully characterizes equilibrium outcomes: it is immaterial whether heterogeneity in surplus arises from cost heterogeneity alone or from heterogeneity in both cost and value. Thus, a primary contribution of this article is that it unifies the applied antitrust literature on auctions, which emphasizes stochastic elements in undifferentiated settings, with the theoretical literature on scoring auctions, which is more general but lacks the stochastic elements that are necessary for calibration.

The model also can be related to a growing empirical literature on auctions and negotiations when supplier quality matters (e.g., Gowrisankaran et al., forthcoming; Grennan, 2013; Krasnokutskaya et al., 2014; Lewis and Bajari, 2011). These articles use structural techniques, supported by large datasets, to (i) recover the supplier qualities that rationalize the data; and (ii) identify buyer tastes for price and quality.[3] Grennan (2013) is of particular relevance because it considers mergers, albeit on the buyer-side of procurement, in the context of the market for medical devices. The emphasis here is complementary, in the sense that the model facilitates analysis of supply-side mergers with much less data, relying on the scoring rule formulation to create a unidimensional choice problem. That said, I show that it is straightforward to extend the model to accommodate arbitrary patterns of customer substitution, along the lines of Berry et al. (1995) and Nevo (2001), which could provide a useful framework for future empirical research.

Important caveats apply. First, the model leverages distributional assumptions to make predictions based on limited data. These assumptions help determine the magnitude of predicted price changes, as they do in consumer products settings (Crooke et al., 1999; Miller et al., 2014). I discuss in the text how, with increasing amounts of data, these assumptions can be checked or relaxed. Second, the model treats supplier value as exogenous. This eliminates interesting strategic interactions that otherwise could arise. How predictions would be affected by relaxing this assumption is a matter I leave to future research. Third, I assume throughout that buyers have perfect information about surplus. While this treatment is consistent with the published literature, recent research also examines scoring auctions in which buyers are imperfectly informed (Geibe and Schweinzer, 2014). Finally, the application to the Bazaarvoice/Power Reviews merger gleans information on average prices and costs from accounting reports of Bazaarvoice. The reported price effects are subject to the additional caveat that it is difficult to assess whether these inputs are appropriate based only on publicly-available information.

The article proceeds as follows. Section 2 contains a discussion of merger enforcement in procurement auctions. Section 3 develops notation and sketches the model. Section 4 derives general expressions for the effects of mergers on market outcomes. Section 5 shows how employing distributions from location-scale and power-related families can sharpen predictions, and provide closed-form solutions for the case of the Gumbel distribution. Section 6 provides extensions to Nash-in-Nash bargaining and first-score auctions. Section 7 concludes.

2. Merger enforcement in procurement markets

It generally is thought that the overall volume of business-to-business transactions far exceeds that of business-to-consumer transactions (e.g., Sandhusen, 2008) because supply-chains typically feature multiple exchanges between businesses, but only a single final sale. Of the three fully litigated merger challenges by the DOJ since 2000, two involved business-to-business procurement markets. The most recent, Bazaarvoice/Power Reviews, is discussed in some detail above. The other, Oracle/Peoplesoft, concerned the sale of high-functionality software for human resources and financial management to large business and government customers.[4] The DOJ challenge of AT&T/T-Mobile similarly involved, in part, sales to large enterprise customers. In each of these cases, contract terms were determined in private negotiations between buyers and sellers, and non-price considerations related to the quality of the products and the reputation of the suppliers were important.

[3] These articles treat quality as exogenous. The exception is Lewis and Bajari (2011), which examines highway repair contracts in California over 2003–2008. This allows for a richer strategic environment but also places more demands on the variation that must be present in the data.

[4] The third fully litigated merger challenge, H&R Block/TaxAct, involved the sale of tax preparation software to consumers.

Exhibit A

UPDATED EXPERT REPORT OF RENÉE M. DUPLANTIS, PHD

COMMISSIONER OF COMPETITION V SECURE ENERGY SERVICES INC., CT-2021-002

MARCH 25, 2022
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to offer to a customer."[62] In this model, "the Parties consider the locations of alternative facilities that a customer may use and set their prices accordingly."[63] Dr. Miller's model assumes that waste service suppliers can perfectly price discriminate. He notes, in particular, "[p]rice discrimination is feasible when sellers can identify targeted customers based on their observable characteristics (e.g., location) and targeted customers cannot switch easily to other suppliers in response (e.g., due to transportation costs) and cannot engage in arbitrage."[64]

58. He claims this framework "reflects the structure of this industry."[65] On that basis, he simulates the Transaction using a second-score auction model and predicts price effects at an individual customer-well location level that range, on average by facility type and market structure, from 10.5% to 51.7%.[66]

III.A.2. Dr. Miller's model requires unrealistic assumptions about differentiation of waste services facilities and their ability to price discriminate

59. Dr. Miller's second-score auction model is not a realistic representation of how prices are set in the waste services industry, and as a result, it cannot accurately predict the Transaction's price effects. He assumes (and his model reflects) that waste services facilities are significantly differentiated from one another from the customer's perspective (even those of the same company), and that these facilities can price discriminate by charging different prices to individual customer locations. He also assumes that facilities have all the bargaining power in negotiations with customers. Dr. Miller makes these strong assumptions in order to justify, for purposes of his theoretical model, the profits that facilities earn. In Dr. Miller's model, positive profits for a facility (after covering fixed and variable costs) come from the differentiation of waste services facilities and their ability to price discriminate across individual customer locations.

60. These are highly theoretical assumptions that are impractical in reality, inconsistent with SECURE's pricing philosophy, and inconsistent with how customers actually pay for and use

[62] Miller Report, ¶ 118.

[63] Miller Report, ¶ 118.

[64] Miller Report, ¶ 71.

[65] Miller Report, ¶ 118.

[66] Miller Report, Exhibit 21.

waste services facilities (most notably that customers often use multiple facilities interchangeably).

61. Dr. Miller observes that SECURE facilities are generally profitable, and for that to be the case in his model the profits must be derived from the facility's ability to extract from the customer the full amount that the customer values the facility over its next best option. However, as I will explain in detail later in this report, this is not what a facility's margin represents in reality. A facility's profits must cover more than just variable costs and facility-level fixed cost savings quantified in the Harington Report.[67] They must also cover what Mr. Harington refers to as "lifetime" capital costs, which reflect the reality that waste services do not end when a customer drops off waste but continue over the lifecycle of the waste.

62. Price discrimination of the sort Dr. Miller models is impractical. For one, SECURE and Tervita customers often have many well locations from which they deliver waste to the Parties' facilities, and as noted in the Engel Affidavit, "customers do not necessarily negotiate different prices for waste from each of their well locations for disposal at our facilities."[68] The business reality is that some customers negotiate prices across many well locations for delivery to one or many waste services facilities.[69]

63. Another reason it is impractical for waste services providers to price discriminate separately for each individual customer well location as Dr. Miller assumes is that waste services providers cannot observe how each customer values one facility relative to other options for each of its well locations, aside from perhaps distance and associated transportation cost differentials.[70]

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[67] In Section IV.C.2, I discuss that variable profits must cover more than the fixed cost savings quantified in the Harington Report.

[68] Engel Affidavit, ¶ 56.

[69] Engel Affidavit, ¶ 56. *See*, for example,

[70] Dr. Miller's model relies on the so-called "revelation principle" from auction theory, which states that "efficient auctions" can be designed in a way that makes it individually rational and incentive compatible for suppliers to elicit "truth telling", and have suppliers "reveal" (directly or otherwise) their cost structure to buyers. *See*, e.g., Vijay Krishna, *Auction Theory*, "Chapter 5: Mechanism Design," 2nd Ed., Oxford: Elsevier, 2009, pp. 61-83. However, the second-score framework envisioned by Dr. Miller, whereby prospective suppliers submit bids (including both the price required as well as the various product attributes that will be

While distance and transportation costs are readily observable and quantifiable, other factors that Dr. Miller claims affect customer facility choice are not observable, let alone quantifiable.[71] Indeed, Dr. Miller only attempts to individually quantify the increase in transportation costs component of his claimed facility closure effect which calls into question whether the rest of his facility closure effect could reflect customer value at all (as I discuss in detail below in Section IV.C.1).

64. Dr. Miller's model does not reflect how SECURE operates.

SECURE's pricing philosophy is broadly inconsistent with Dr. Miller's model.

provided) that can be "scored" under a known set of criteria, does not accurately represent the marketplace realities of waste-disposal services. For example, while distances between the customer location and competing facilities may be estimable, a supplier cannot observe and thus reasonably assess how it will be scored in terms of any other dimensions that a customer may value.

[71] Dr. Miller notes that other factors can affect how oil and gas producers value facilities, such as wait times to unload waste, available capacity, and types of waste accepted, among other potential factors. However, Dr. Miller does not explain how any of these can be observed and quantified by waste-service providers. *See*, e.g., Miller Report, ¶ 123.

[72] *See*, for example,

[73] Engel Affidavit, ¶ 54. *See*, for example,

[74]

also assign products (substance-service combinations) into product markets using Dr. Miller's classifications.[114]

94. I provide the technical details of the analysis in Appendix D, but at a high level, there are four main steps in the analysis I undertake to examine the prior Tervita/Newalta transaction:

a. Assess the market structure around each customer-well location for each product purchased before and after the merger.[115] (This step is identical to Dr. Miller's approach to customer-centric geographic markets).

b. Aggregate customer well locations up to the level of an individual customer at a given facility for each product purchased, and calculate the weighted average price and market structure (weighted by revenue) for each customer-facility-substance combination. This aggregation allows me to assess prices for each type of waste delivered by a customer to each facility for disposal. For example, if a customer well location disposes of its waste at two different facilities, that customer would have two prices (one for each facility) factoring into the analysis.

c. For each type of waste delivered by a customer to a facility, those customers that experienced a change in market structure due to the Tervita/Newalta merger form the "treatment" observations in the difference-in-differences framework. The "control" observations are the customers that saw no change in market structure for each product purchased.

d. Calculate the change in prices for each customer-facility-substance combination between 2017/2018 and 2019/2020. The post period chosen consists of August 2019 through March 2020 to cover the time period after the Bureau's investigation of the transaction had been concluded up to the beginning of the COVID time period.[116] So that the comparison of

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[114] Miller Report, Section 4.1 and Appendix Section 7.7. *See also*, Miller Report backup, "service_classification_secure_tervita.xlsx," which I have extended to also cover products sold by Tervita during the period 2017/2018 in the file "Tervita Product xWalk.xlsx" available in my backup materials.

[115] As discussed in Appendix D, the transaction-level data record the customer well location, the facility used and the product purchased (i.e., product and substance combination). My analysis is conducted at the customer, facility and substance combination.

[116] Tervita announced the Bureau's investigation of the transaction had concluded on the one-year anniversary of the closing of the transaction. *See*, Tervita, "Tervita Corporation Announces End of Competition Bureau Review Period for the Newalta Transaction," July 22, 2019, https://tervita.com/news/article/tervita-corporation-announces-end-of-competition-bureau-review-p/.

I end the post period through March 2020 as there is a large decrease in sales beginning in April 2020 following the onset of COVID restrictions, which could potentially bias the analysis if prices were affected in any way from the reduced volumes.

before and after price changes is undertaken over a consistent set of months and thereby not affected by the possibility of seasonality, the pre-period includes the time period August 2017 to March 2018.

e. Compare the before-and-after change in prices among treatment observations to the change in prices among control observations to determine the overall effect of the merger. I define separate treatment and control groups for each pre-merger market structure. For example, I compare the "3-to-2" treatment group to observations that remained in a 3-competitor market structure from 2017/2018 to 2019/2020. I also account for markets where SECURE was a remaining competitor after the Tervita/Newalta transaction.

95. As discussed below and in Appendix D, I first conduct the analysis by looking at simple averages to illustrate the DiD methodology and then extend it to a regression analysis, which allows me to control for other important factors, like cost changes. Finally, I conducted numerous robustness checks on the regression specification, which are discussed in Appendix D and detailed in my backup.

III.B.4. The natural experiment results confirm that Dr. Miller's auction model is not reflective of likely competitive effects

96. In Figure 14, Figure 15, and Figure 16 below, I provide visual illustrations of the natural experiment analysis using simple averages, limiting the analysis to customers who pre-merger had two suppliers to choose from, for ease of illustration.[117] Each circle in the plot is the price change calculated between 2017/2018 and 2019/2020 for a given customer-facility-substance combination that had two competitors in their market in 2017/2018, and the size of the circle represents the relative revenue for that customer.

97. In Figure 14, for each customer-facility-substance combination, I show those observations that did not experience a change in their available suppliers as a result of the Tervita/Newalta merger. These are instances where the pre-merger market structure was two competitors in 2017/2018, and remained that way in 2019/2020 (or the customer experienced almost no

[117] The illustrative figures below incorporate all natural experiments, but the analysis is conducted several different ways as outlined in Appendix D.

FIGURE 17: SUMMARY OF PRICE INCREASES FROM TERVITA/NEWALTA NATURAL EXPERIMENT

# of Competitors Prior to Newalta Acquisition		Difference-in-Differences Price Effect [A]	No. Observations [B]	R^2 [C]
Across Customers, Facilities and Substance-Services				
Two Competitors	[1]	6.4%**	1,526	0.966
Three Competitors	[2]	2.2% to 5.7%	1,216	0.966
Four or More Competitors	[3]	1.3% to 2.1%	798	0.974
Across Customers, Facilities and Substances				
Two Competitors	[4]	3.1% to 11.0%*	646	0.912
Three Competitors	[5]	9.8%	586	0.940
Four or More Competitors	[6]	0.9%	444	0.946

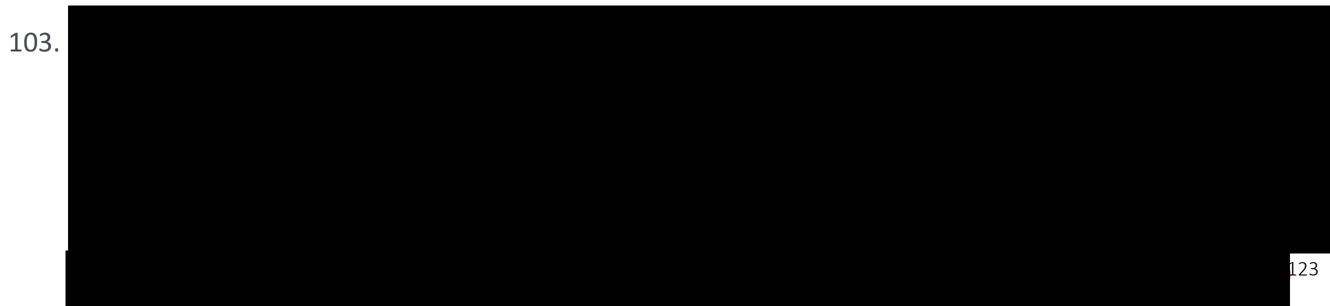
Sources: See material provided in my backup, "Newalta Analysis Backup."
Notes: *, **, *** indicates statistical significance at 10%, 5% at 1% levels, with standard errors corrected for clustering at the facility level.

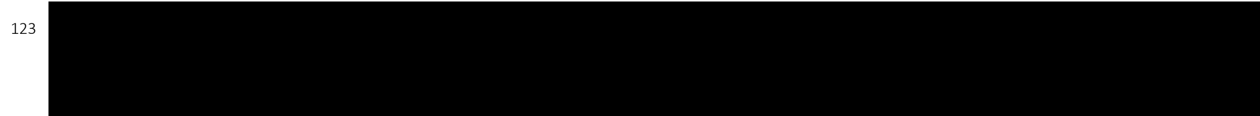
1. Market structure before Newalta acquisition is calculated for each customer, UWI and product (substance-service). These are then aggregated across UWIs to the customer-facility-substance level, weighting by sales.

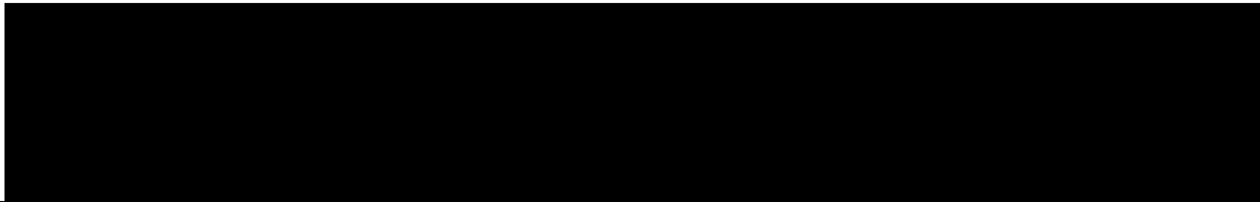
2. Analysis excludes natural experiments with prices changes that exceed the 99th percentile or are less than the 1st percentile.

3. Regressions include Facility & Product fixed effects.

102. As described in more detail in Appendix D, these estimates are robust to various other specifications for undertaking the analysis, including different aggregation methodologies and the inclusion of other explanatory variables, like costs. In all instances, the results are holistically consistent and the estimated effect of the Tervita/Newalta merger is less than or equal to the estimates noted in the table above.

103.  [123]

123 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104. Dr. Miller's modelling predicts price effects that do not account for important market dynamics that influence prices, and for this reason (among others) his predicted price increases are unrealistic. Predicting price effects based on appropriate natural experiments, as I have done, intrinsically accounts for such factors by analyzing actual pricing outcomes.

III.C. Dr. Miller's model would have shown effects in the Tervita/Newalta merger that did not occur

105. Dr. Miller uses a merger simulation model to predict the price effects from the Transaction. While in concept, I do not criticize the use of a simulation model to predict potential price increases, any predicted price increases must be considered carefully. Not only does the model have to fit the industry, but every simulation model will predict price increases as long as margins are positive and there is some diversion between the merging firms.

106. To test the reliability of Dr. Miller's simulation model, I take his model, along with his market definition approach, and apply it analogously to the Tervita/Newalta merger to predict the price

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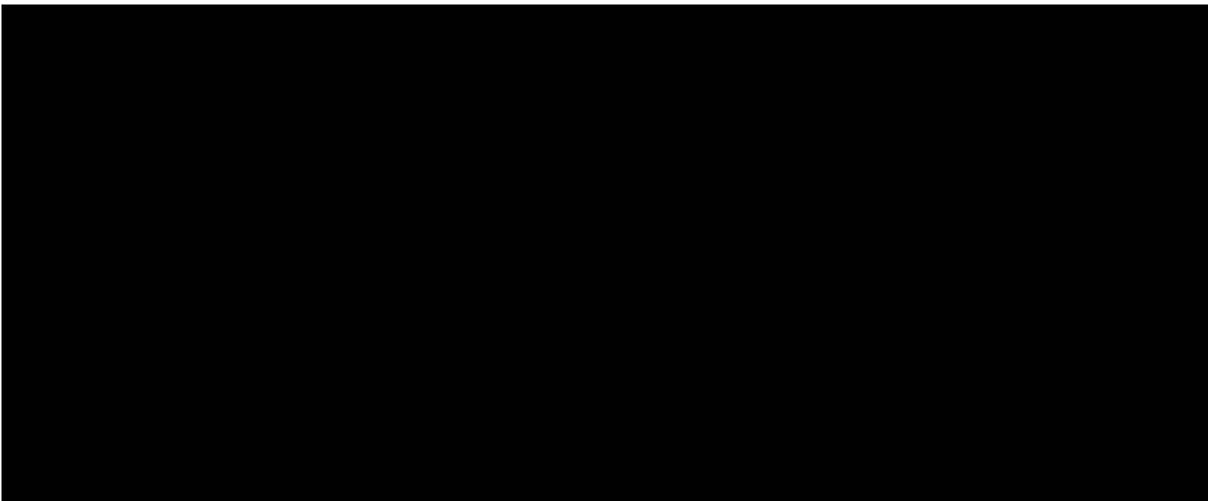

IV.C. Dr. Miller's facility closure effect (if any) is substantially overestimated

134. In this section, for completeness, I explain why Dr. Miller's facility closure effect is substantially overestimated (accepting, for argument's sake, that there could be a loss from facility closures).[160]

135. In particular, I outline several reasons why Dr. Miller's facility-level variable margins are not an accurate representation of consumer "value" of a facility, and therefore they overstate any facility closure effect.

IV.C.1. It is inconsistent with the evidence that incremental transportation costs account for less than 10% of Dr. Miller's purported facility closure effect

136. The proportion of the total facility closure effect accounted for by increased transportation costs also illustrates the flaw in Dr. Miller's assertion that facility-level variable margins are an appropriate representation of customer surplus. Out of the $78 million in lost value that Dr. Miller quantifies in facility-level variable profits, he quantifies one individual component: increased transportation costs for customers of the closed facilities who are currently using their closest facility and will thus face increased transportation costs post-Transaction.[161] He quantifies this component as between [REDACTED] or approximately [REDACTED] of his claimed facility closure effect.[162]

137. This result is inconsistent with the way Dr. Miller describes the industry throughout his report. Dr. Miller devotes most of his discussion on industry background to the implications of high

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[160] Note that Dr. Miller does not properly account for partial facility closures and thus overstates his facility closure effect. When adjusting for partial closures by multiplying Dr. Miller's facility level variable margin by only the revenues associated with aspects of the facility that are closing, $78 million decreases to $68 million. Throughout my report, I continue to refer to Dr. Miller's $78 million for clarity. See Workpaper 2.

[161] I note that to the extent some customers who do not currently use their closest facility divert to a more proximate facility post-Transaction, this would result in transportation cost savings for those customers.

[162] Note that Mr. Harington has done a similar calculation to Dr. Miller and he has reflected incremental transportation costs in the Harington Report as a negative efficiency.

In Appendix F to my report, I show the incremental distance and transportation costs that stem from the most recent facility closures in SECURE's integration plan, using the same approach as Dr. Miller. Counsel has asked me to perform this calculation, using Dr. Miller's approach, for the purpose of the incremental transportation cost calculation in the Harington Report.

transportation costs and the relevance of distance between facilities in firm pricing decisions.[163] He also illustrates the workings of his second-score model with reference only to transportation costs (though his model ultimately relaxes this assumption).[164] Seldom does he refer to, or provide any evidence of, the importance of other factors customers consider in choosing between facilities.

138. Dr. Miller makes numerous statements that suggest he views facility proximity and transportation costs as the most important drivers of facility choice, and hence also the most important determinants of customer value of a given facility:

a. "I understand that transportation costs are one of the single-largest components of waste disposal costs for a producer."[165]

b. "[C]ompany documents show that transportation costs are often a significant factor considered by the Parties when quoting disposal fees to customers."[166]

c. "The locations of Secure, Tervita, and competitor facilities, confirms that Secure and Tervita are each other's closest competitors for many waste service customers."[167]

d. "[T]ransportation costs comprise a significant portion of the customer's overall waste service costs, so the facility locations are an important driver of customers' choices."[168]

e. "Transportation costs are a significant component of the total money oil and gas producers spend on waste services."[169]

139. Dr. Miller's assertion that facility variable margins are an appropriate representation of customer value is also inconsistent with the Commissioner's witness statements that transportation costs are an important determinant of facility choice.

[163] Miller Report, Sections 3.3 and 3.4.

[164] Miller Report, Exhibits 19 and 20, and ¶ 123.

[165] Miller Report, ¶ 28.

[166] Miller Report, ¶ 30.

[167] Miller Report, ¶ 100.

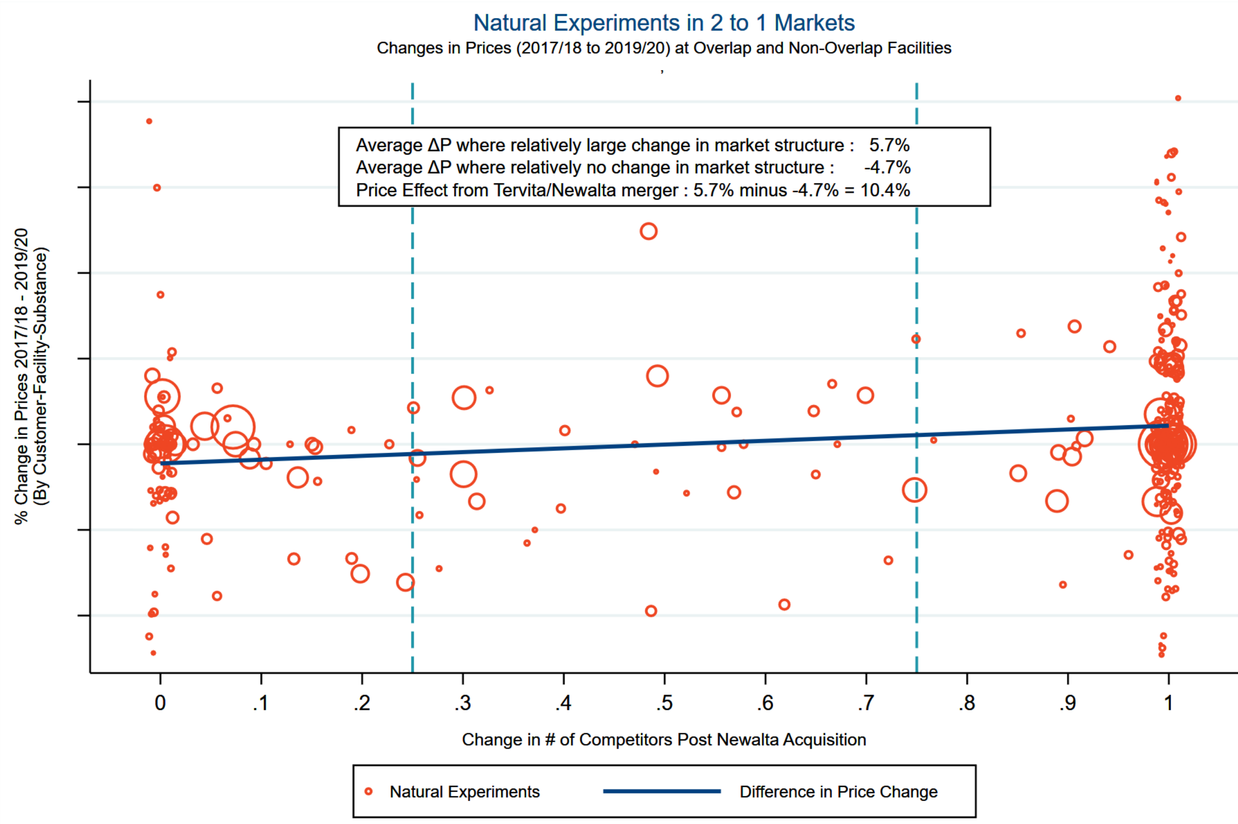
[168] Miller Report, ¶ 107.

[169] Miller Report, ¶ 157.

where customers had two supply options before the merger but only one option after, i.e., "2-to-1s", the average before-and-after price change for which being 5.7%.

193. The DiD analysis is conducted by comparing the price changes between these two groups, and subtracting the average price increase for those customers who did not experience a change in market structure from the average price increase for those customers who did experience a change in market structure. Accordingly, the average effect of the Transaction is 5.7% - (-4.7%) = 10.4%.

FIGURE 26: PLOT OF DIFFERENCE IN AVERAGE PRICE CHANGES



Sources: See material provided in my backup, "Newalta Analysis Backup."

D.2 Regression analysis

194. The simple averages analysis described above is a useful way to illustrate how the DiD model is implemented, but it does not provide us with comfort as to whether or not the results are statistically significant. Therefore, I perform the analysis using a standard difference-in-differences regression model framework. The regression framework also allows me to control for factors that did not change over time (such as the identity of facilities and products) using

"fixed effects," as well as account for observable factors whose changes over time could have also impacted prices (such as costs, which I have considered as a robustness check).

195. In Figure 27 below, I provide the price effects that the natural experiment shows occurred following the Tervita/Newalta merger using the regression methodology. Moreover, to account for the potential that the results would be affected by having SECURE as a remaining competitor to the merged Tervita/Newalta entity, I restrict attention to natural experiments where SECURE was not an alternative for most customers so as to provide a better comparison to the current Transaction. The baseline model is specified at the customer-facility- substance level, with the analysis also being undertaken at the customer-facility-substance service level as an alternative.[207]

196. As shown in Figure 27, prices increased on average as a result of the Tervita/Newalta transaction by up to 11% for customers who experience a change in the number of suppliers from "2-to-1", up to 9.8% for customers who experience a change in the number of suppliers from "3-to-2" and 0.9% for customers who experience a change in the number of suppliers from "4-to-3" or more competitors. As noted in the table, the results in the "3-to-2" categories and the "4-to-3" or more competitors categories are not statistically significant. This means that the model cannot determine with statistical precision whether or not the estimates are actually different from zero.[208]

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[207] Formally, the baseline regression model in mathematical notation is as follows:

$$\ln P_{ijkt} = \beta_0 + \beta_1 \mathrm{T}_t + \beta_2 \mathrm{D}_{ijk}^{\mathrm{Low}} + \beta_3 \mathrm{D}_{ijk}^{\mathrm{Full}} + \delta_{\mathrm{Low}} \mathrm{T}_t \mathrm{D}_{ijk}^{\mathrm{Low}} + \delta_{\mathrm{Full}} \mathrm{T}_t \mathrm{D}_{ijk}^{\mathrm{Full}} + \mathrm{x}'_{ijkt}\gamma + \varepsilon_{ijkt}$$

where i indexes customers, j indexes Tervita facilities, k indexes substances, and t indexes time (either 2017/2018 or 2019/2020). Here, T_t is a indicator variable for the post-Tervita/Newalta merger period (i.e., 2019/2020), $\mathrm{D}_{ijk}^{\mathrm{Low}}$ and $\mathrm{D}_{ijk}^{\mathrm{Full}}$ are indicators for whether the customer was either in the relatively low-treatment or full-treatment groups, and x'_{ijkt} is a vector of other control variables that includes, for example, facility-fixed effects and substance-fixed effects. The parameters δ_{Low} and δ_{Full} on the interaction terms for the post-Tervita/Newalta merger period and the treatment group indicators provided the DiD estimates of the effect of the merger on prices. There is one such regression equation for each of the various possibilities for pre-merger market structures.

[208] Specifically, within a 95% confidence interval, I am unable to reject the null hypothesis that the coefficient on the merger effect is not statistically different from zero. Even though the estimates cannot be differentiated from zero, I continue to use the point estimates in my analyses to be conservative.

CT-2021-002

THE COMPETITION TRIBUNAL

IN THE MATTER OF the *Competition Act*, R.S.C. 1985, c. C-34, as amended;

AND IN THE MATTER OF the acquisition by Secure Energy Services Inc. of all of the issued and outstanding shares of Tervita Corporation;

AND IN THE MATTER OF an application by the Commissioner of Competition for one or more orders pursuant to section 92 of the *Competition Act*.

BETWEEN:

THE COMMISSIONER OF COMPETITION

Applicant

– and –

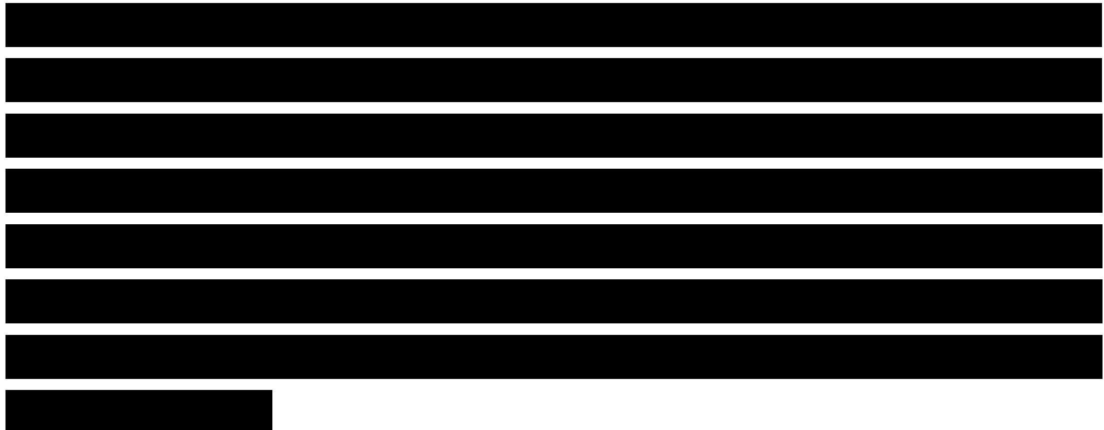
SECURE ENERGY SERVICES INC.

Respondent

WITNESS STATEMENT OF PAUL DZIUBA

USE OF SERVICES FROM SECURE / TERVITA

10. In the course of its oil production activities, Chevron engages with waste disposal service companies including Secure and the former Tervita. Chevron disposes of solid waste from drill cuttings and contaminated materials at Secure and Tervita-owned landfills. Chevron disposes of solids, drilling muds, water and oil emulsions, liquid solid emulsions, most chemicals and some of its saline water at the Tervita Treatment Recovery and Disposal Facilities ("**TRDs**") and Secure's Full Service Terminals ("**FST**"). Chevron also disposes of some of its saline water at Secure's Saline Water Disposal Facilities ("**SWD**"). With the exception of certain water emulsions that Secure and the Tervita are not capable of disposing, Chevron disposes its hazardous waste almost exclusively at the Secure or the former Tervita facilities.

11. 

CHOICE OF DISPOSAL SITE

12. Chevron chooses a disposal facility based on waste type and distance from Chevron's relevant operations. As long as the facility can legally accept the waste type, distance (or travel time) typically determines which facility will receive Chevron's business. Distance is an important factor as it has a direct impact on Chevron's transportation costs. Chevron utilizes third-party trucking providers to transport its waste.

Combined **Combiné**

File No. / Dossier no. CT-2021-002

COMPETITION TRIBUNAL

IN THE MATTER OF the *Competition Act*, R.S.C., 1985, c. C-34 as amended;

AND IN THE MATTER OF the acquisition by SECURE Energy Services Inc. of Tervita Corporation;

AND IN THE MATTER OF an application by the Commissioner of Competition for one or more orders pursuant to section 92 of the *Competition Act*.

BETWEEN:

THE COMMISSIONER OF COMPETITION

Applicant

- and -

SECURE ENERGY SERVICES INC.

Respondent

BEFORE:

The Honourable Mr. Chief Justice Paul Crampton	**Presiding**
The Honourable Mr. Justice Denis Gascon	**Member**
Dr. Ted Horbulyk	**Member**

HELD VIA VIDEOCONFERENCE

16 May 2022

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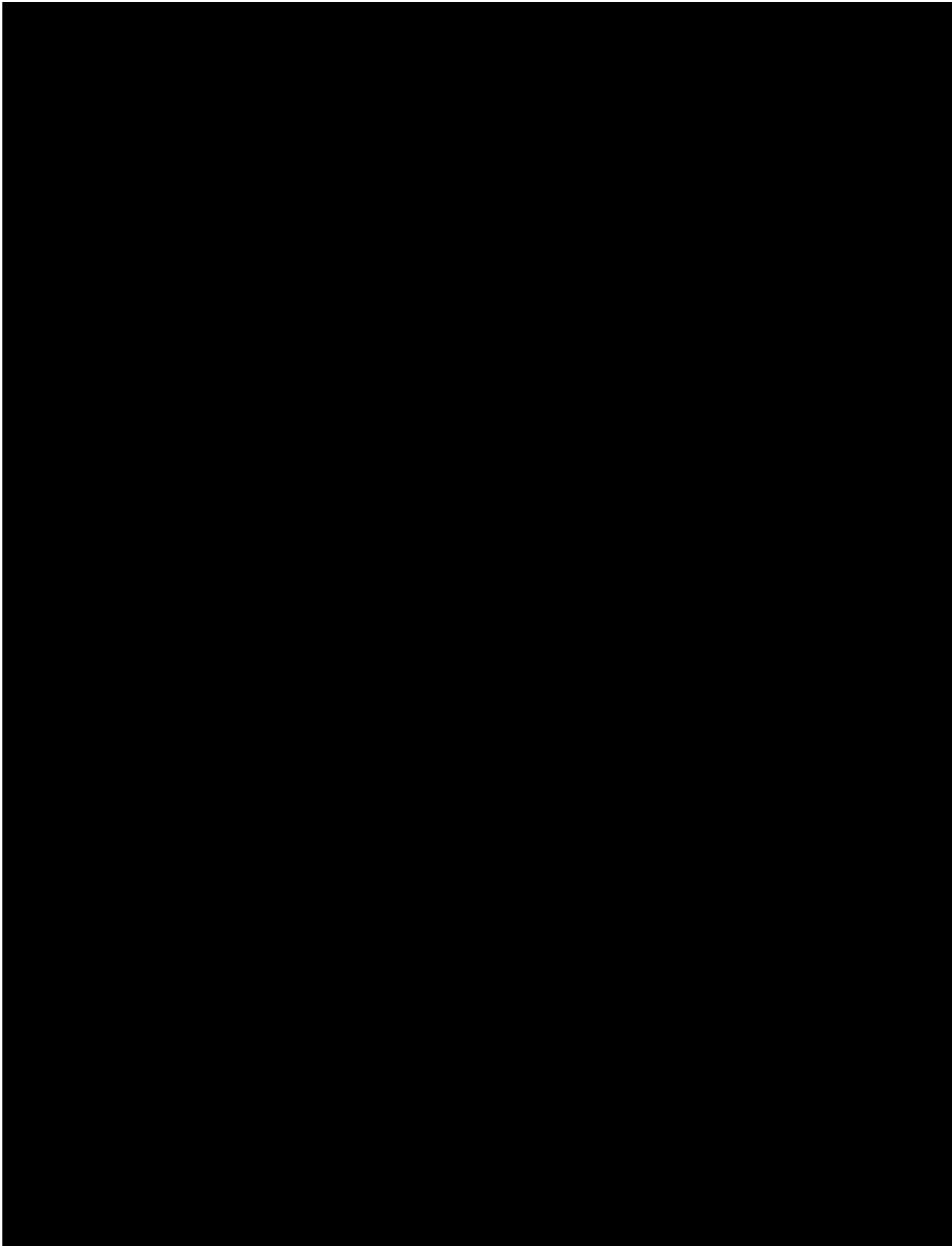
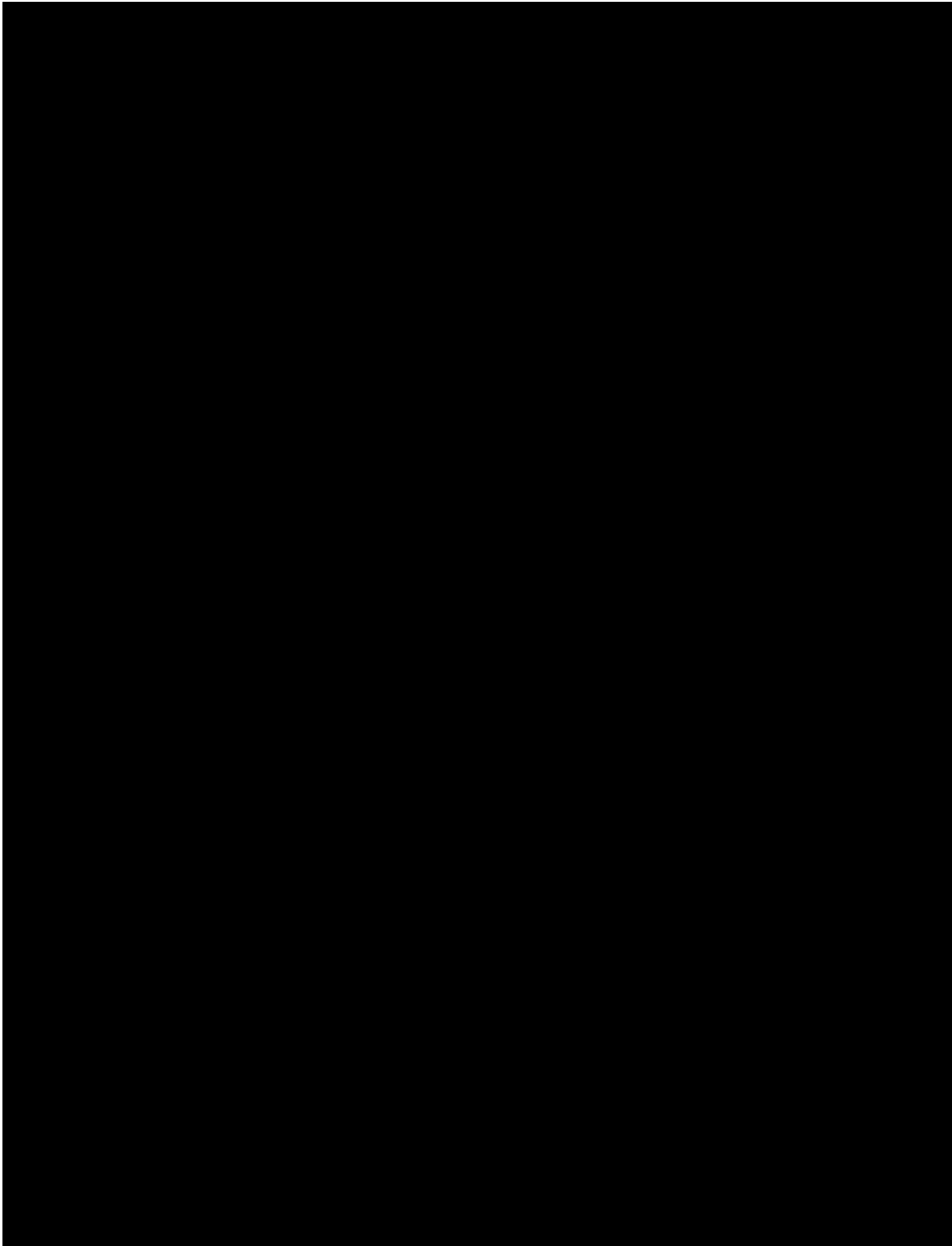
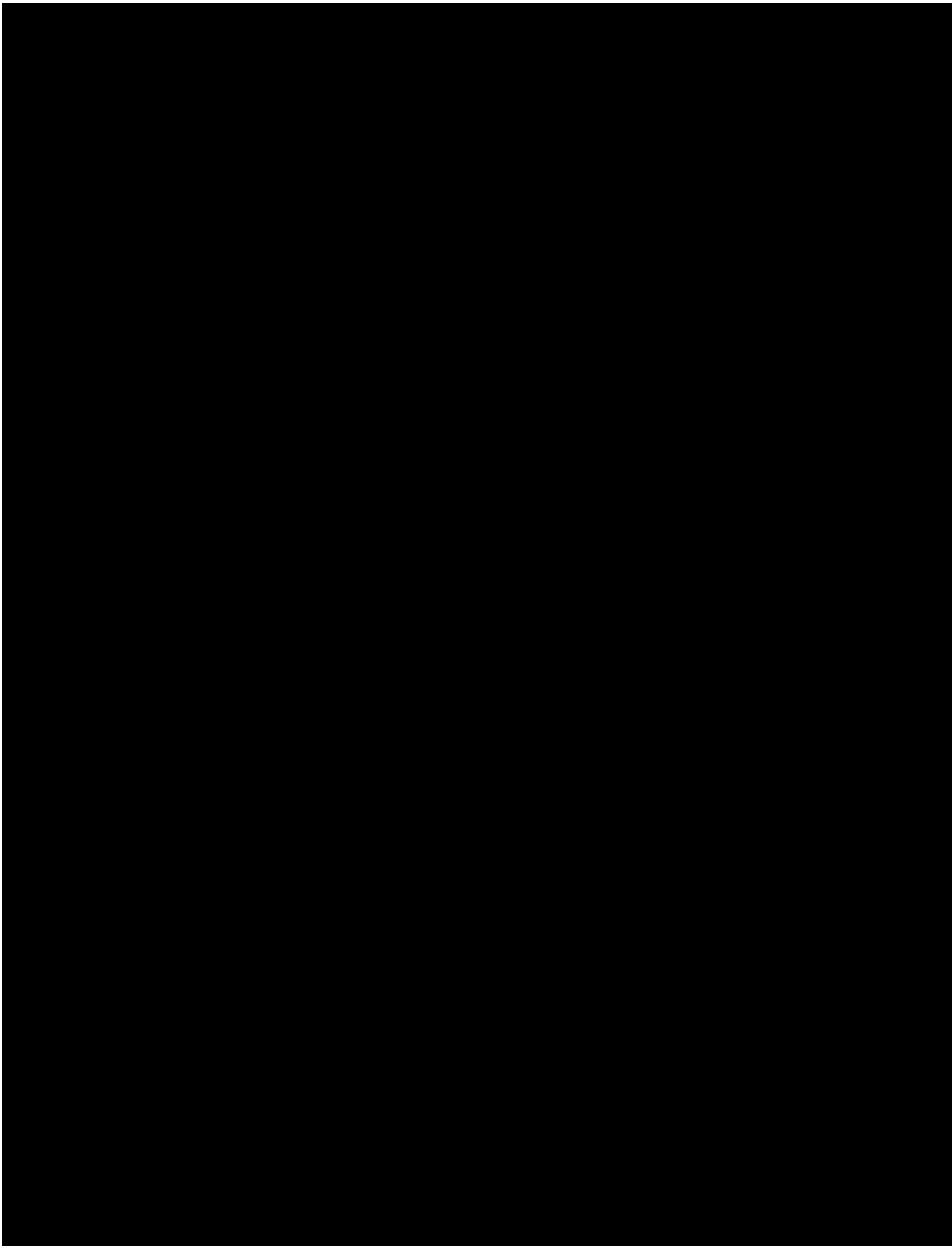
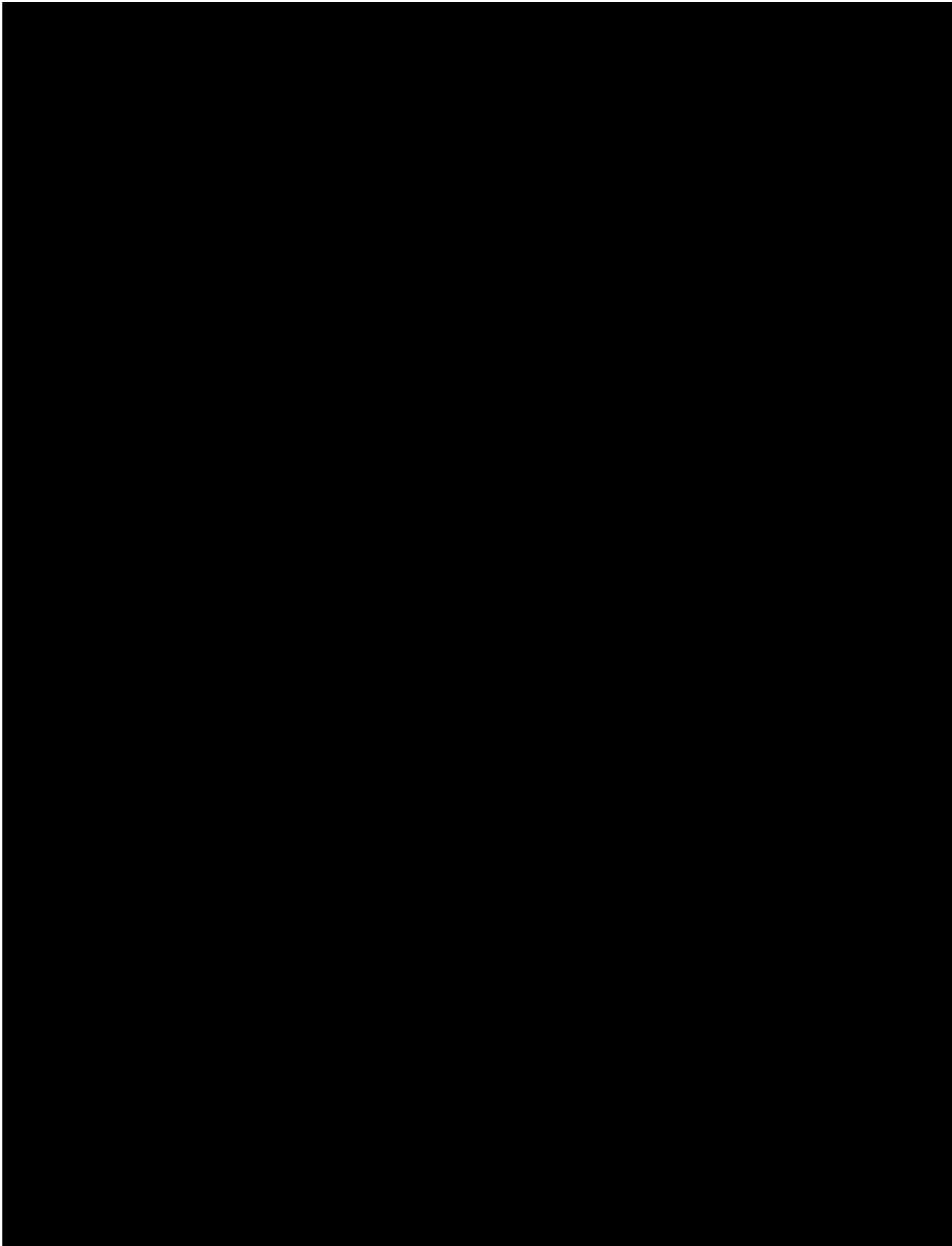
1 **MR. HART:** Say that again, please.
2 **MS. HENDERSON:** Yeah. I take it -- given that
3 when things fell apart with Tervita, CNRL decided to build
4 its own landfill, I take it you went that route because you
5 were also not able to get a better price from Secure. Is
6 that fair?
7 **MR. HART:** Secure doesn't have a landfill in
8 the area.
9 **MS. HENDERSON:** So Secure wouldn't be an option
10 for you in that area anyway?
11 **MR. HART:** No, because of the trucking to their
12 closest facility.
13 **MS. HENDERSON:** Fair enough. So is it fair to
14 say that the presence of Secure one way or another didn't
15 have anything to do with your calculus, or CNRL's calculus,
16 that is, about whether to build the landfill at
17 Woodenhouse? Secure was essentially a non-factor?
18 **MR. HART:** Yes.
19 **MS. HENDERSON:** And as I understand it, before
20 the merger, CNRL would from time to time leverage the fact
21 that it could build its own landfills in negotiations with
22 Tervita?
23 **MR. HART:** Yes.
24 **MS. HENDERSON:** And essentially, as I
25 understand it, that discussion would be that CNRL would say

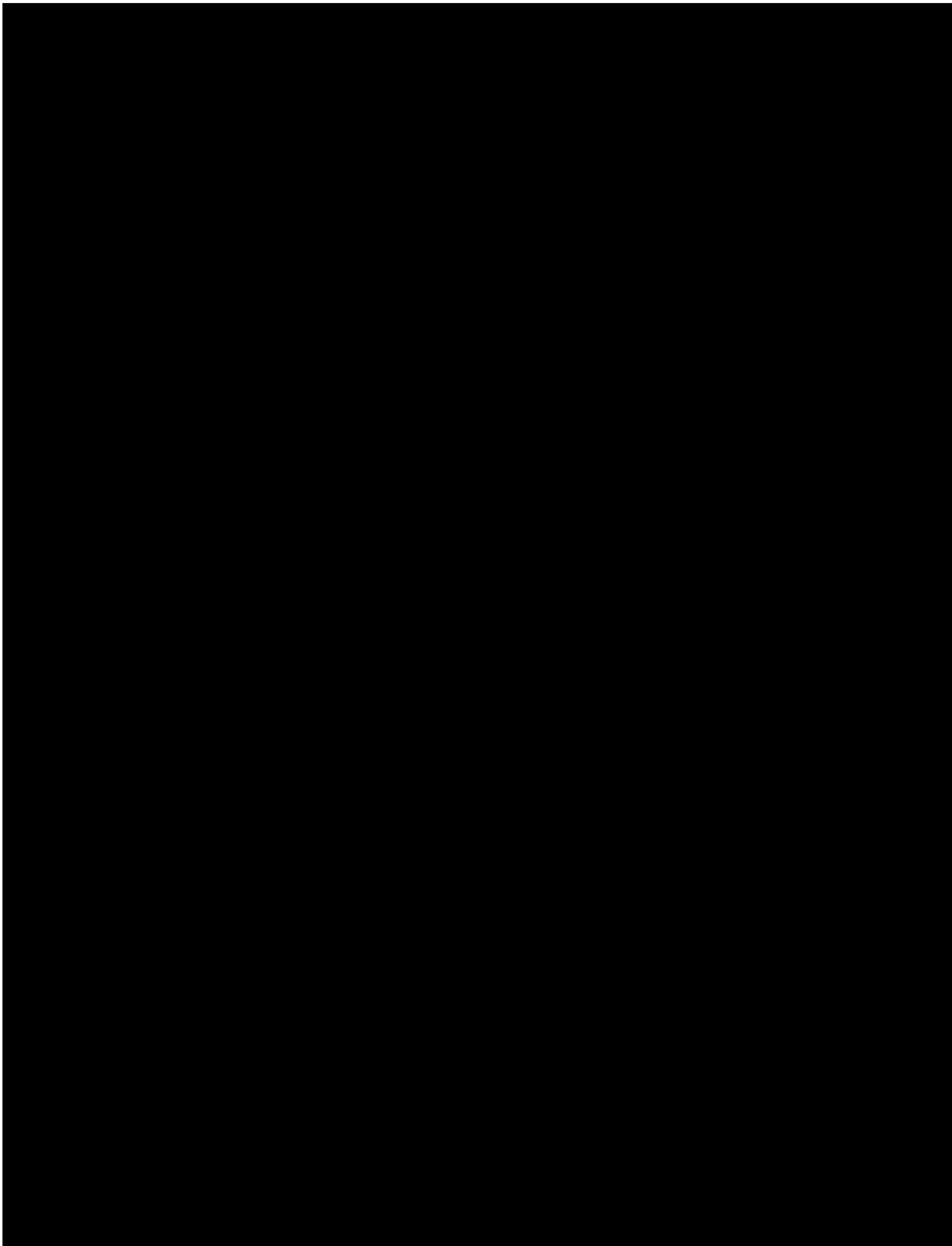
1 to Tervita, "Look, if you can give us a deal that makes
2 economic sense, we won't build a landfill in some market,
3 but if we can't come to terms, we probably will". Is that
4 a fair summary of how that went?
5 **MR. HART:** That's negotiations, yes.
6 **MS. HENDERSON:** I'm not suggesting it's
7 anything else, sir. I'm just trying to summarize to keep
8 this as brief as we can.
9 And my question is really just that that was a
10 way that CNRL would essentially discipline Tervita in its
11 pricing. Is that fair?
12 **MR. HART:** No, I don't think -- I can't use the
13 word "discipline". Negotiate.
14 **MS. HENDERSON:** Negotiating. It was a way of
15 exercising leverage in that negotiation. Is that fair?
16 **MR. HART:** Yes.
17 **MS. HENDERSON:** I want to ask about a related
18 issue in your Reply Witness Statement. Do you have that in
19 front of you, sir?
20 **MR. HART:** I do.
21 **MS. HENDERSON:** In paragraph 6 and following of
22 your Witness Statement, you talk about an issue related to
23 Painted Pony. You see that?
24 **MR. HART:** Yes.
25 **MS. HENDERSON:** And I know that paragraph 8 is

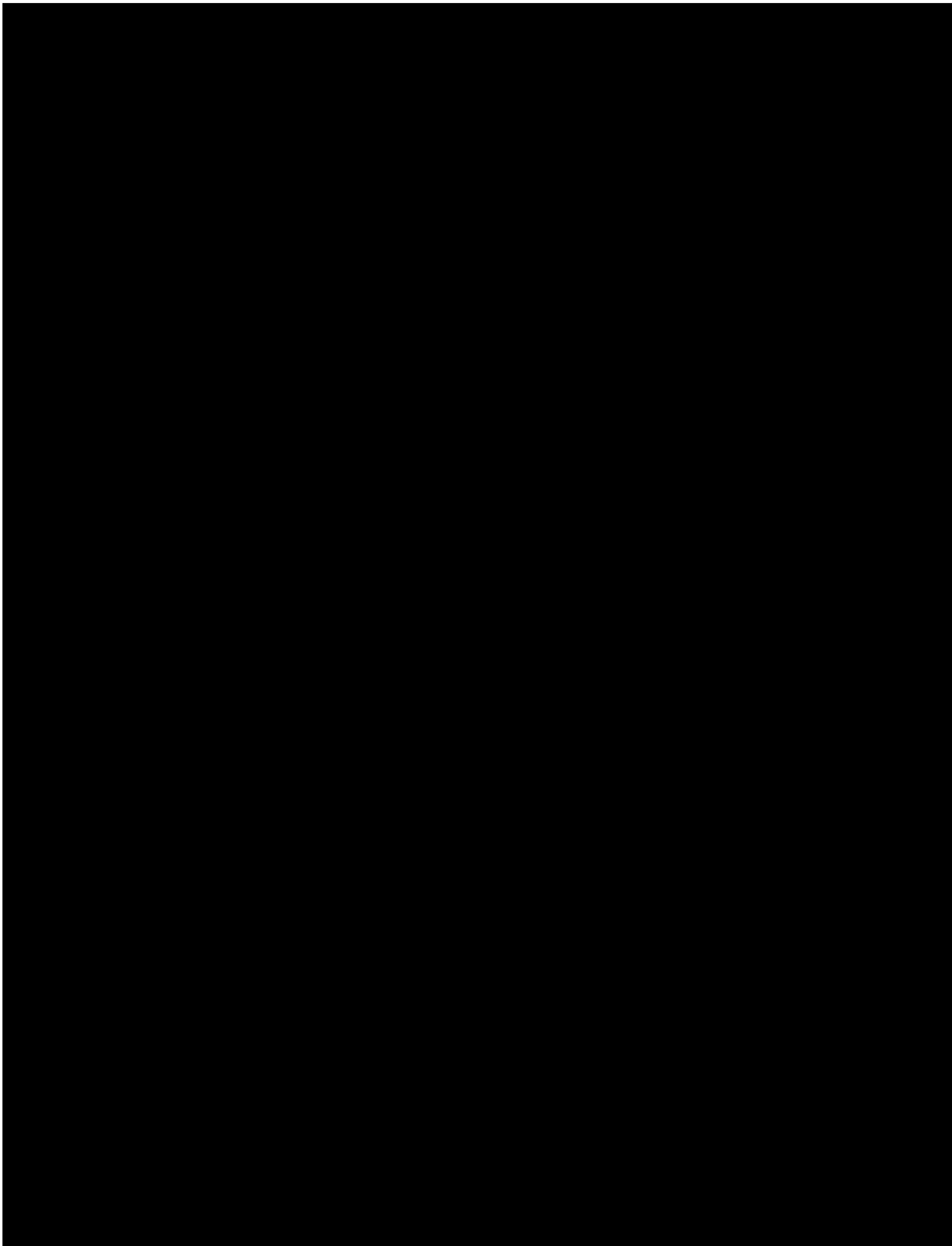












File No. / Dossier no. CT-2021-002

COMPETITION TRIBUNAL

IN THE MATTER OF the *Competition Act*, R.S.C., 1985, c. C-34 as amended;

AND IN THE MATTER OF the acquisition by SECURE Energy Services Inc. of Tervita Corporation;

AND IN THE MATTER OF an application by the Commissioner of Competition for one or more orders pursuant to section 92 of the *Competition Act*.

BETWEEN:

THE COMMISSIONER OF COMPETITION

Applicant

- and -

SECURE ENERGY SERVICES INC.

Respondent

BEFORE:

The Honourable Mr. Chief Justice Paul Crampton	**Presiding**
The Honourable Mr. Justice Denis Gascon	**Member**
Dr. Ted Horbulyk	**Member**

HELD VIA VIDEOCONFERENCE

26 May 2022

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1 disagree with the concerns he raises. He raises them as a
2 theoretical basis, but he's not undertaken any analysis to
3 show that they hold. But I'm happy to walk through each of
4 them separately.
5 **MS. HENDERSON:** That would be terrific. Could
6 we go to the next slide, please?
7 And Dr. Duplantis, can you walk us through your
8 responses to Dr. Miller's criticisms of your natural
9 experiment?
10 **DR. DUPLANTIS:** Yes. So Dr. Miller has raised
11 a criticism with regards to my controlling for Secure in my
12 analysis, that I've allowed them to have up to a 25 percent
13 share in the analysis. And I just note that, as I noted in
14 my report, I think it's footnote 206, the vast majority of
15 the observations do not suffer from his concern, and Secure
16 is either in the market or not in the market. But if I
17 were to restrict the sample to exclude those observations
18 where Secure had a minimal presence in markets, the results
19 would continue to hold. So I find that criticism
20 unfounded.
21 The second criticism is that I aggregated at
22 the customer level, whereas he's done the analysis on a
23 well-by-well basis. My view is that actually customer
24 aggregation is appropriate in this industry, because
25 customers routinely negotiate their contracts across their

1 And then lastly, Dr. Miller also raised some
2 other theoretical concerns with regards to, I believe the
3 common trends assumption, small sample size, and noisy
4 estimates. But none of those have any merit and I think
5 that he's not done any analysis to show that there are any
6 concerns there, they're all very theoretical concerns. But
7 I had looked at the common trends assumption and we do have
8 quite a few observations. So I'm not concerned about some
9 of those theoretical criticisms he has raised.
10 **MS. HENDERSON:** Just before we move on from
11 this, Dr. Duplantis. With respect to the point you made a
12 moment ago about Dr. Miller's critique of the time period
13 that you used for your natural experiment, the nine months.
14 Did you run your model with any other time periods as a
15 check?
16 **DR. DUPLANTIS:** Yes, I did. As I noted in my
17 appendix, I did consider the full year of 2019 too, as a
18 robustness check, and the results were consistent there as
19 well.
20 **MS. HENDERSON:** Does that give you any comfort
21 in the analysis you performed in the first place?
22 **DR. DUPLANTIS:** It does. I mean, I think, you
23 know, you should always check and verify your results, and
24 I think that the natural experiment analysis is a useful
25 comparison for assessing whether or not Dr. Miller's

1 prospective analysis should be accepted. And so I think
2 the fact that my natural experiment analysis shows price
3 effects, and price effects that are consistent with what
4 was actually found in the prior Tervita/CCS transaction, I
5 take great comfort in that in my estimates.
6 **MS. HENDERSON:** Dr. Duplantis, I want to turn
7 now to a discussion of Dr. Miller's facility closure
8 effect, as you called it. If we could go to slide 22,
9 please? Slide 21 is just a header slide.
10 Dr. Duplantis, I take it you're aware that Dr.
11 Miller has opined that a loss of total surplus arises from
12 the closure, or planned closure of waste disposal
13 facilities in this case, right?
14 **DR. DUPLANTIS:** Yes.
15 **MS. HENDERSON:** And what is your opinion on
16 whether facility closures result in any loss of surplus?
17 **DR. DUPLANTIS:** Dr. Miller has assumed a model
18 that allows him to -- well, he's chosen a model that allows
19 him to assume that the annual variable accounting profits
20 of a facility that closes, is equal to the welfare loss
21 from that closure. I disagree with the applicability of
22 that model to this industry, and I disagree that these
23 variable accounting profits reflect the value that oil and
24 gas producers derive from delivering waste to one facility
25 over another.

1 please?
2 I would like to turn to discuss variable profit
3 margins and the way that Dr. Miller uses them in his
4 analysis.
5 Do you agree that the variable profit margins
6 that Secure and Tervita own for their waste disposal
7 services -- and I think we're talking here from an
8 accounting perspective -- but that those variable profits
9 earned prior to the merger, can provide an accurate or
10 reliable estimate of lost social value or lost welfare
11 arising from the merger?
12 **DR. DUPLANTIS:** No. I mean, in Dr. Miller's
13 model the variable profit margins solely reflect
14 differentiation. And the entire variable profit margin he
15 assumes solely reflects that differentiation.
16 There could be many reasons for positive profit
17 margins, especially in an industry with high fixed costs,
18 where a supplier would need to earn a rate of return on
19 their cost of capital. So I think as an initial matter,
20 these are accounting margins, and accounting margins,
21 especially the per-period P&L accounting margins of a
22 facility could vary year to year with nothing to do with
23 differentiation.
24 Additionally, this is not a consumer-facing
25 product. These are, you know, these are facilities

1 disposing of -- they are serving as long-term waste storage
2 disposal places for these oil and gas customers, and these
3 oil and gas producers remain liable for their waste, even
4 after it's been disposed of in a facility. And in a
5 facility like a landfill, there needs to be maintenance and
6 monitoring of those -- of that location for up to 25 years
7 after the closure of the facility. So it's not surprising
8 to see variable profit margins that are positive, but I
9 don't agree that they solely reflect differentiation, as
10 Dr. Miller has asserted.
11 **MS. HENDERSON:** Can we go to the next slide,
12 please?
13 In response to that last point in particular, I
14 understand that Dr. Miller has attempted to fold in asset
15 depletion costs, or asset retirement obligations into his
16 analysis.
17 In your opinion, Dr. Duplantis, does that
18 address or solve the problem you've just talked about?
19 **DR. DUPLANTIS:** No. I think the issue is not
20 so much the arithmetic of the margin and how it's
21 calculated, but it's rather what the margin actually
22 represents. Dr. Miller is assuming that those variable
23 profit margins, as I said, solely reflect facility
24 differentiation, and profit margins can reflect -- positive
25 profit margins can reflect many other things not related to

1 differentiation.
2 For example, it could reflect pre-existing
3 market power, or oligopolistic pricing, or barriers to
4 entry, just to mention a couple of things. We even see
5 profit margins in homogeneous products' industries as well.
6 So a positive profit margin doesn't allow one to decipher
7 between differentiation and non-differentiation. So I
8 think the uniqueness of this industry, in terms of the
9 dynamic nature of the services offered, the long-term
10 storage of that waste, and the risks associated are not
11 surprising that we have positive profit margins and it
12 doesn't necessarily reflect differentiation, as Dr. Miller
13 assumes.
14 **MS. HENDERSON:** Can we go to the next slide,
15 please?
16 Dr. Duplantis, how do transportation costs --
17 we've heard a lot about transportation costs over the
18 course of this proceeding -- how do those costs factor into
19 your analysis, and in particular, your critique of Dr.
20 Miller?
21 **DR. DUPLANTIS:** Yes. So the incremental
22 transportation costs or hauling costs, my understanding
23 have been calculated by both Dr. Miller and Mr. Harington.
24 In my report I calculate the distance, but Mr. Harington is
25 the one who ultimately calculated the actual incremental

File No. / Dossier no. CT-2021-002

COMPETITION TRIBUNAL

IN THE MATTER OF the *Competition Act*, R.S.C., 1985, c. C-34 as amended;

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AND IN THE MATTER OF an application by the Commissioner of Competition for one or more orders pursuant to section 92 of the *Competition Act*.

BETWEEN:

THE COMMISSIONER OF COMPETITION

Applicant

- and -

SECURE ENERGY SERVICES INC.

Respondent

BEFORE:

The Honourable Mr. Chief Justice Paul Crampton	**Presiding**
The Honourable Mr. Justice Denis Gascon	**Member**
Dr. Ted Horbulyk	**Member**

HELD VIA VIDEOCONFERENCE

27 May 2022

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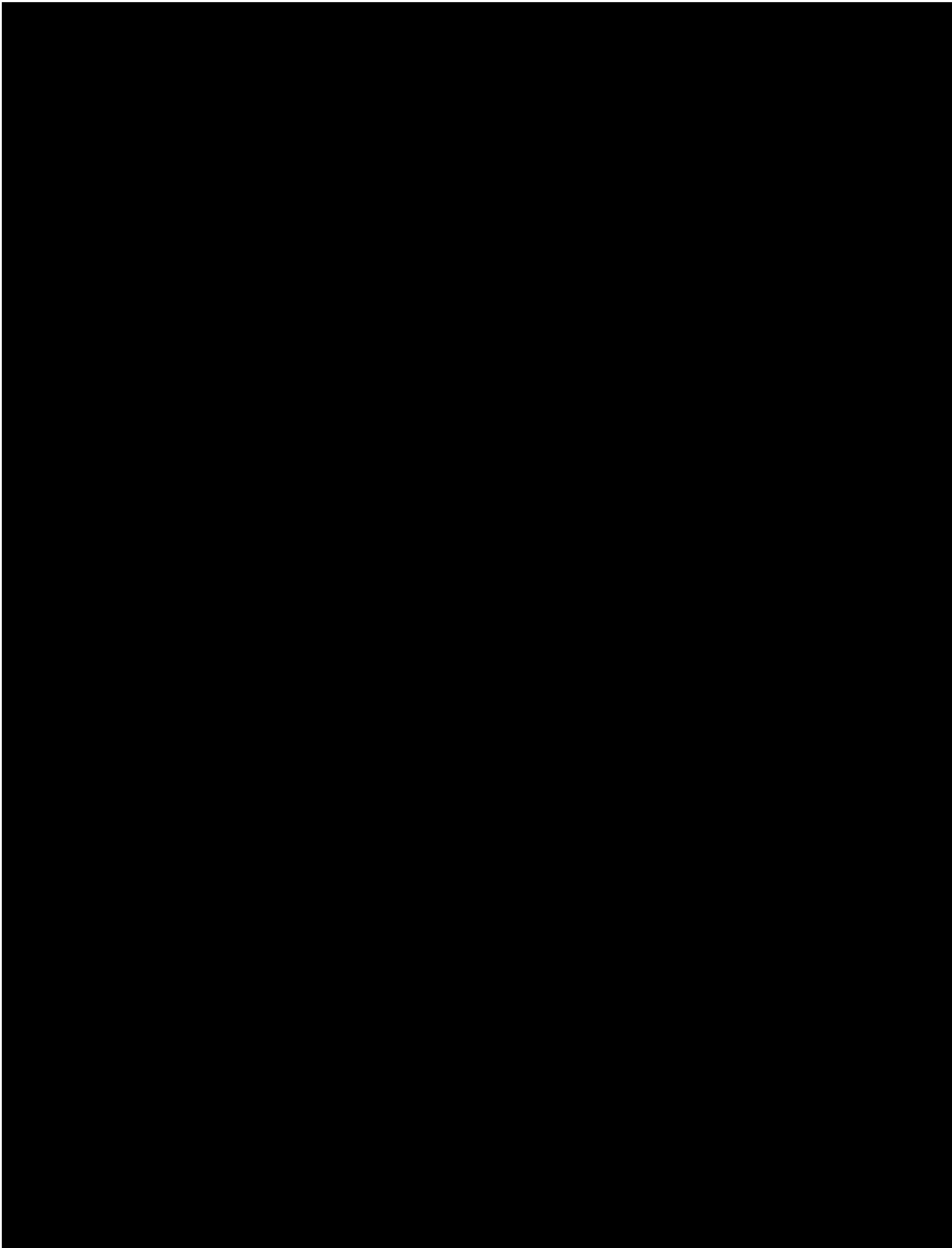

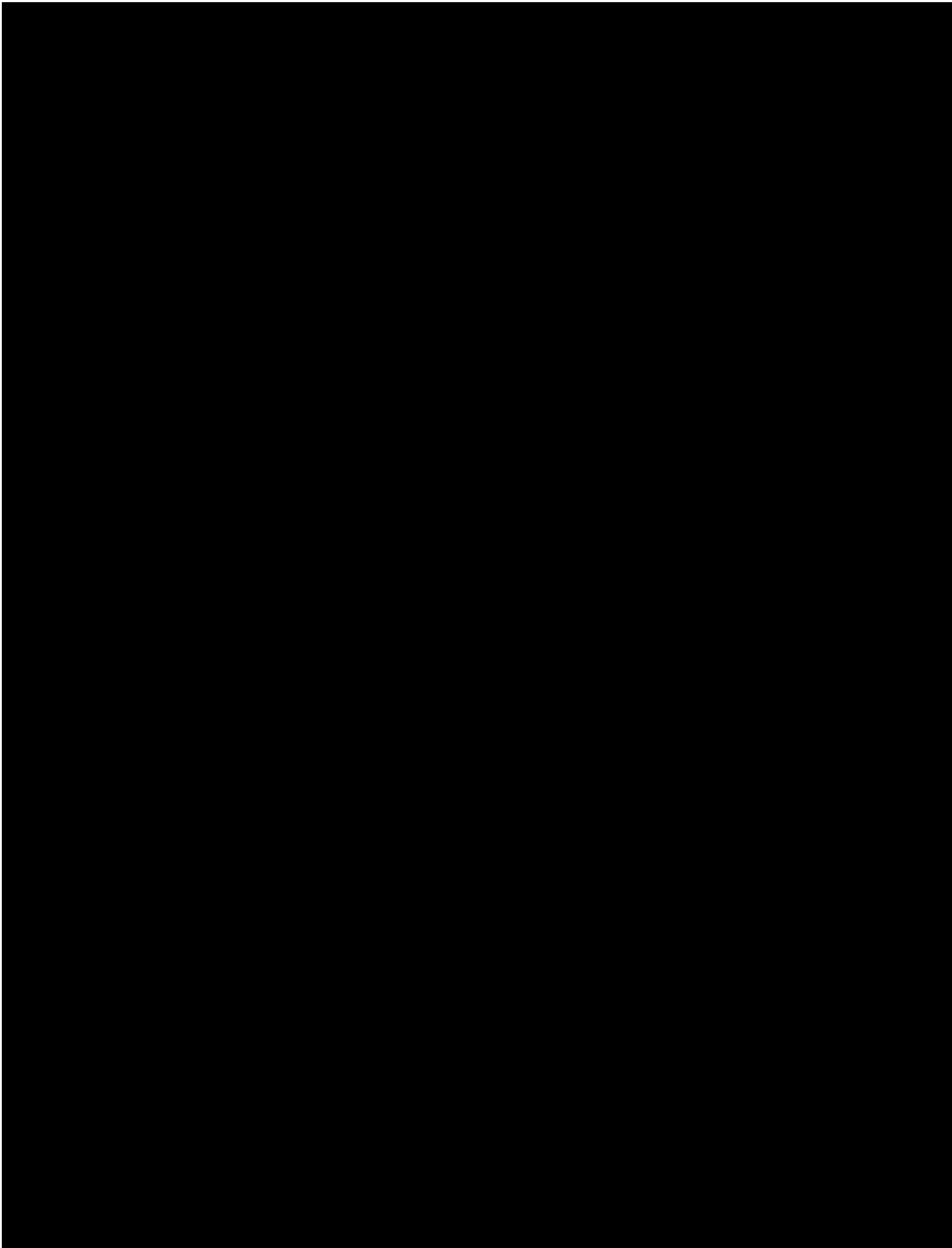

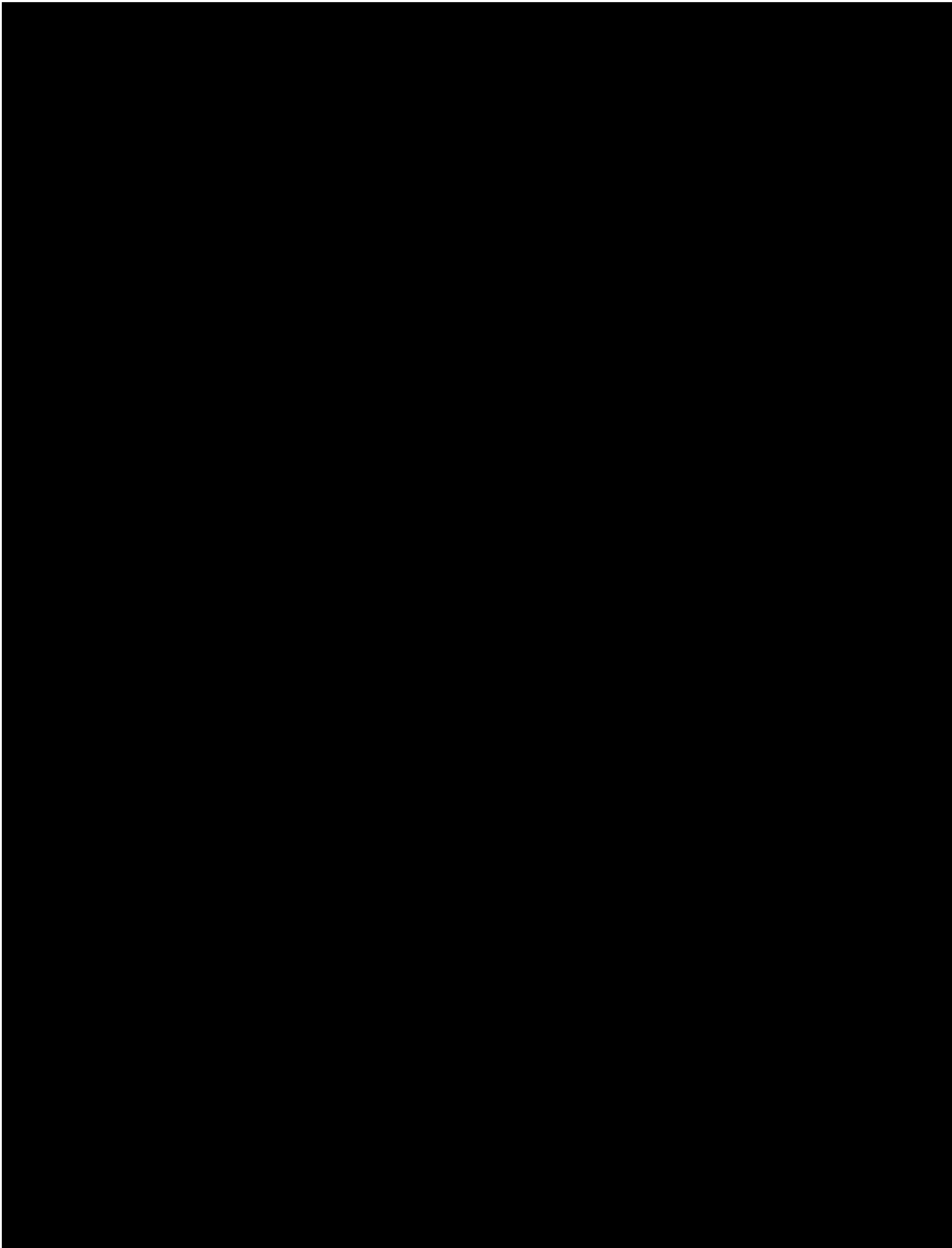

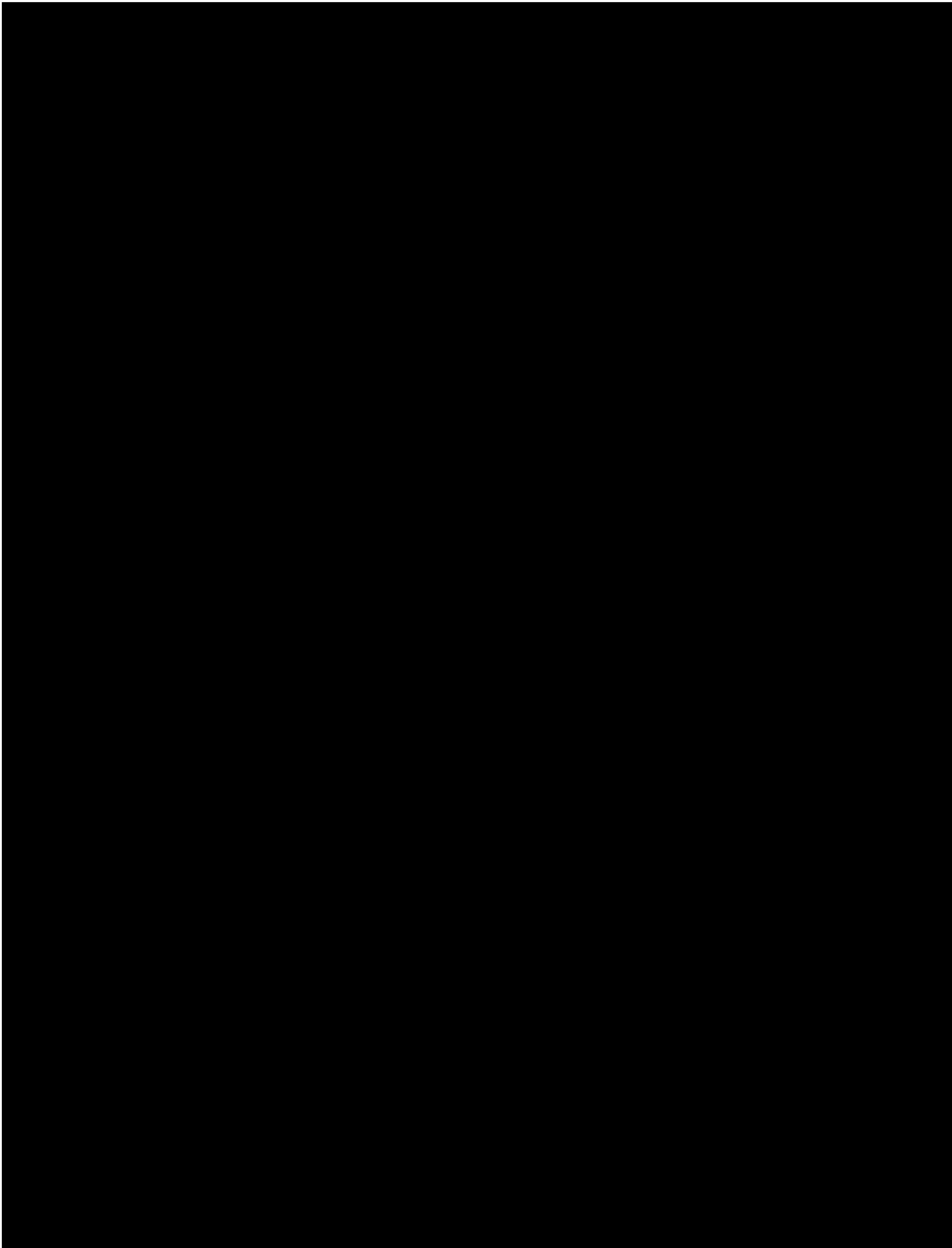

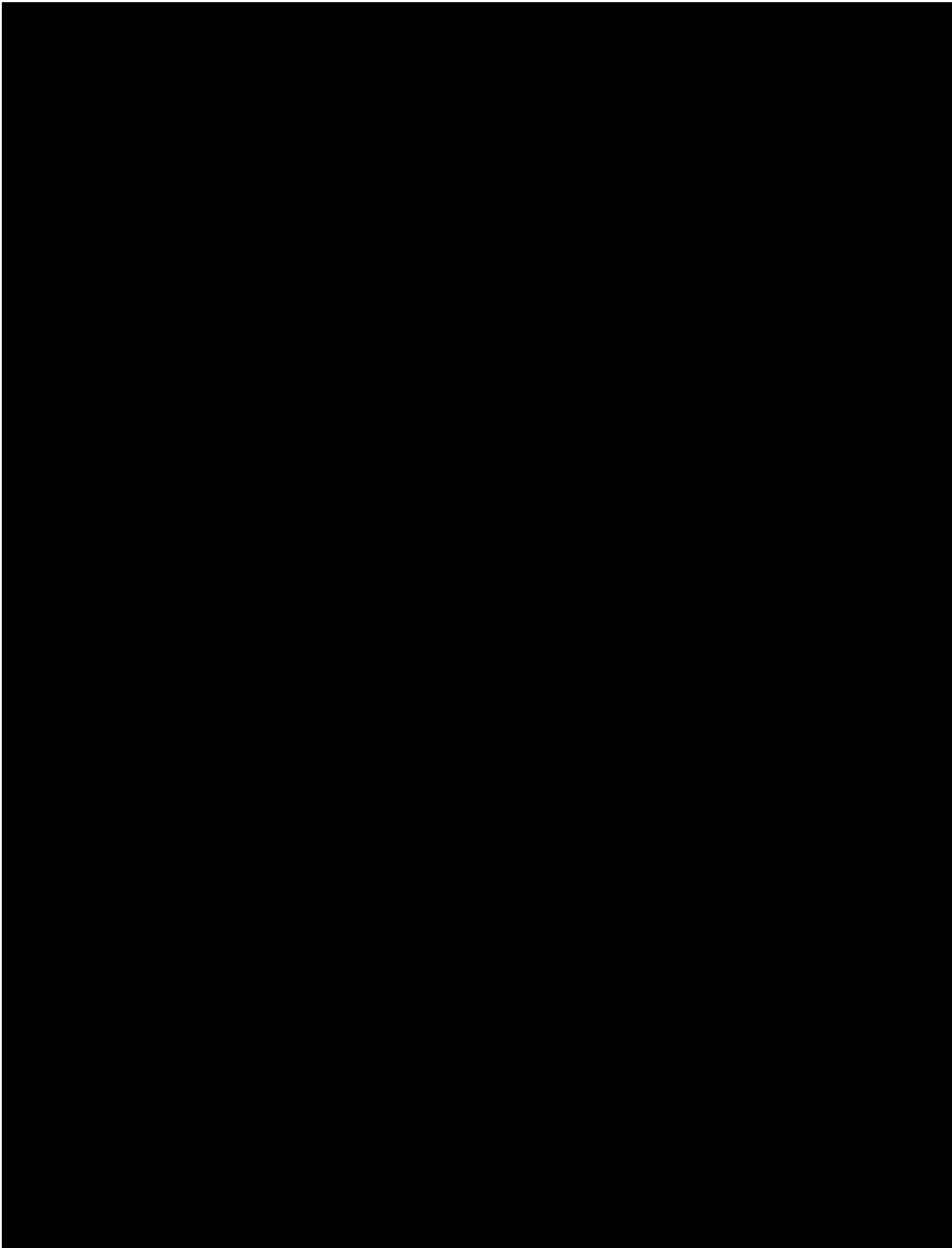

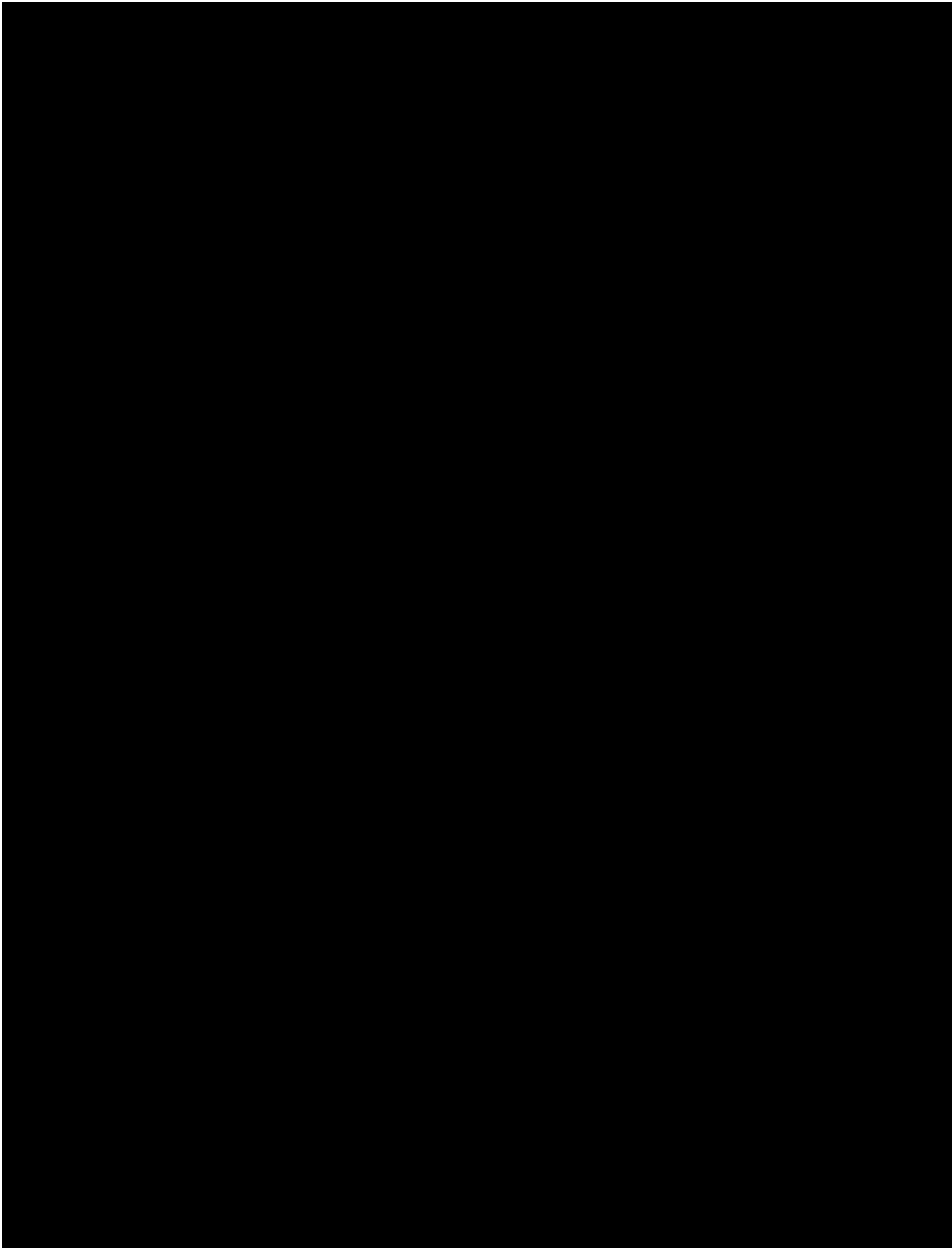

Examination in Chief of Dr. Renée M. Duplantis

Presentation Prepared on May 2, 2022

Updated May 20, 2022

Estimation of Competitive Effects

Dr. Miller's Rebuttal Points (Cont.)

- Dr. Miller's criticisms are unfounded:
  - I control for remaining competition from SECURE in analysis of effects from Tervita/Newalta merger – results would be robust even if were to restrict to sub-sample of customers that did not have SECURE as an available option at all.
  - Customer-level aggregation is appropriate for this industry, and analysis provides average price effect across all well locations of an oil and gas customer.
  - Dr. Miller's buyer power and geographic leveraging critiques apply even more strongly against his modelling and price discrimination hypothesis than they do to my analysis.
  - Dr. Miller's other putative "weaknesses" of the analysis have no merit.

Price effect estimates from natural experiments analysis can rightfully be compared to estimates from Dr. Miller's simulation model, and the large discrepancy illustrates the flaws of applying his theory to this case.

Reference: Miller Rebuttal Report, Section 3.3.

Tervita/Newalta Natural Experiment Analysis

PUBLIC

Robustness Check of Threshold for SECURE Competition (Cont.)

Results from analysis would be robust even if were to restrict analysis to sub-sample of observations that did not have SECURE as an available option at all.

Average Post-Merger Change in Tervita Prices between 2017/18 and 2019/20

# of Competitors Prior to Newalta Acquisition		Secure a Competitor for At Most 25% of Sales: Difference-in-Differences Price Effect [A]	No. Observations [B]	R^2 [C]	Secure Not a Competitor for Any Sales: Difference-in-Differences Price Effect [D]	No. Observations [E]	R^2 [F]
Across Customers, Facilities and Substance-Services							
Two Competitors	[1]	6.4%**	1,526	0.966	6.2%**	1,444	0.966
Three Competitors	[2]	2.2% to 5.7%	1,216	0.966	4.4%	1,056	0.967
Four or More Competitors	[3]	1.3% to 2.1%	798	0.974	0.6%	648	0.972
Across Customers, Facilities and Substances							
Two Competitors	[4]	3.1% to 11.0%*	646	0.912	4.2% to 11.7%*	604	0.911
Three Competitors	[5]	9.8%	586	0.940	10.3%	484	0.942
Four or More Competitors	[6]	0.9%	444	0.946	-	356	0.944

Notes: *, **, *** indicates statistical significance at 10%, 5% at 1% levels, with standard errors corrected for clustering at the facility level.

References: Reply to Miller Rebuttal Report, Section 3.3; Duplantis Report, Appendix D

CT-2021-002

THE COMPETITION TRIBUNAL

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BETWEEN:

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Applicant

- and -

SECURE ENERGY SERVICES INC.

Respondent

AFFIDAVIT OF ANDREW HARINGTON
(Sworn May 20, 2022)

I, **Andrew Harington**, of the City of **Toronto**, in the Province of Ontario, **MAKE OATH AND SAY**:

1. I am a Chartered Professional Accountant (formerly referred to as a Chartered Accountant), Chartered Financial Analyst charterholder, and Chartered Business Valuator. I am a Principal in the Toronto office of The Brattle Group. I have been retained by Blake, Cassels & Graydon LLP, counsel for the respondent, to provide my expert opinion regarding productive efficiencies that would be lost in the event that the Competition Tribunal were to issue an order

IX.D. Conclusion

~~88.~~87. Reflecting the above, with respect to both the FST/SWD integration plans and the landfill integration plans, I conclude that SECURE management are likely to undertake the integration activities set out herein

~~89.~~88. Reflecting the above, I have quantified the Productive Efficiencies likely to arise as a result of the anticipated integration plan as indicated in the sections below. Where possible I have verified all quantitative inputs but, where my analysis is forward looking, there are necessarily certain items for which I have relied upon the representations of management of SECURE. For example, decisions to close facilities, as well as the timing thereof, depend on expected future customer volumes. In situations such as these, I have described the assumption, assessed its reasonableness relative to historic volumes, and ensured that it has been consistently applied with and without the Transaction (or with and without the Hypothetical Divestiture Orders, as applicable).

[60] See Appendix F.

While SECURE management consider this a cold shut down cost, the cost is already embedded in the labour costs and no incremental cost is deducted.

~~131.~~130. The aggregate labour savings from the facilities that have been closed as of February 28, 2022 (which is set out in Schedule 3.1.1(a) and summarized in Table 10 above) and the facilities that are still to be closed as of February 28, 2022 (which is set out in Schedule 3.1.1(b) and summarized in Table 11 above) are combined in Schedule 3.1.1.

~~132.~~131. The labour cost savings are then included under each relevant facility and geographic grouping in Schedule 3.1.

X.A.3. Incremental customer transport costs

~~133.~~132. As customers typically incur the costs of transporting product, any increase in customer transport costs as a result of facility closure will represent a "negative Efficiency" and has been reflected as such. In this section I describe how these incremental transportation costs are estimated and incorporated as negative Efficiencies in my analysis.

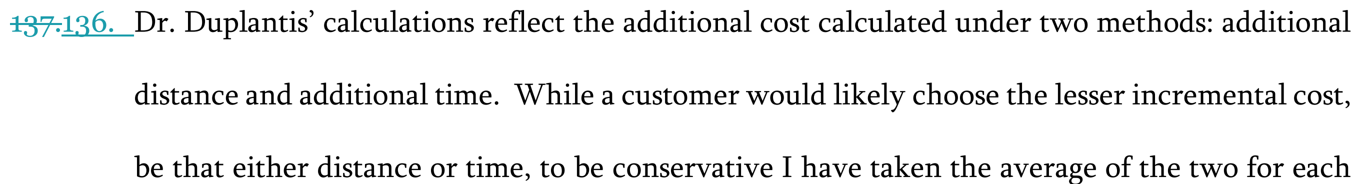
~~134.~~133. Dr. Renee Duplantis, also of The Brattle Group, has calculated, based on the planned facility closures, (1) the distance that product is currently transported from customer locations to SECURE and Tervita facilities and (2) the distance that the product will be transported once the facility is closed, assuming that the customer selects the closest alternate party facility. This analysis is conducted based on customer shipment data for ~~2020~~2019.

~~135.~~134. See Schedule 3.1.3(a) for more detail.

~~136.~~135. The data that Dr. Duplantis' calculations are based on indicate that, in some cases, customers do not currently deliver product to the nearest location. For the purposes of computing the

incremental driving distance, only those transactions where the analysis indicates that the customers will be transporting product further than they are currently transporting it. In other words, to be conservative, if a facility closure results in a customer diverting to a facility closer to the customer, I have not included this as a Productive Efficiency from the Transaction.

~~137.~~136. Dr. Duplantis' calculations reflect the additional cost calculated under two methods: additional distance and additional time. While a customer would likely choose the lesser incremental cost, be that either distance or time, to be conservative I have taken the average of the two for each



~~138.~~137. The conclusions as to these negative Productive Efficiencies are likely to be conservative as third party facilities have been excluded from the analysis. To the extent that waste will be diverted to third party facilities because they are close to the customer facilities, the incremental customer driver costs (negative Efficiency) will be lower than the amounts set out herein as the incremental driving distances will be lower than those set out herein.

X.A.4. Avoided capital expenditures

~~139.~~138. Certain closing facilities would have required one-time capital expenditures that are avoided as a result of the closure of those facilities. These one time saves are described in detail in Appendix F, set out in columns [D], [E] and [F] on Schedule 3.1.4 and summarized in Table 17 below.

~~200.~~199. I have analyzed the nature of each of the savings and have excluded the entirety of any item for any of the following reasons:

a. The savings is on account of a reduction in the services purchased

b. The savings reflect a pecuniary cost saving in that, while SECURE has achieved a synergy saving, there is no economic benefit to the Canadian economy (e.g.

c. The savings are on account of the internalization of a cost previously outsourced (e.g. This adjustment is likely conservative as the savings are on account of both the elimination of duplicate services and the internalization of margin previously paid to third parties; and

d. The savings was on account of saving of items relating to the Transaction (e.g.

~~201.~~200. With respect to the former Head Office lease that Tervita had in the Palliser Building in Calgary:

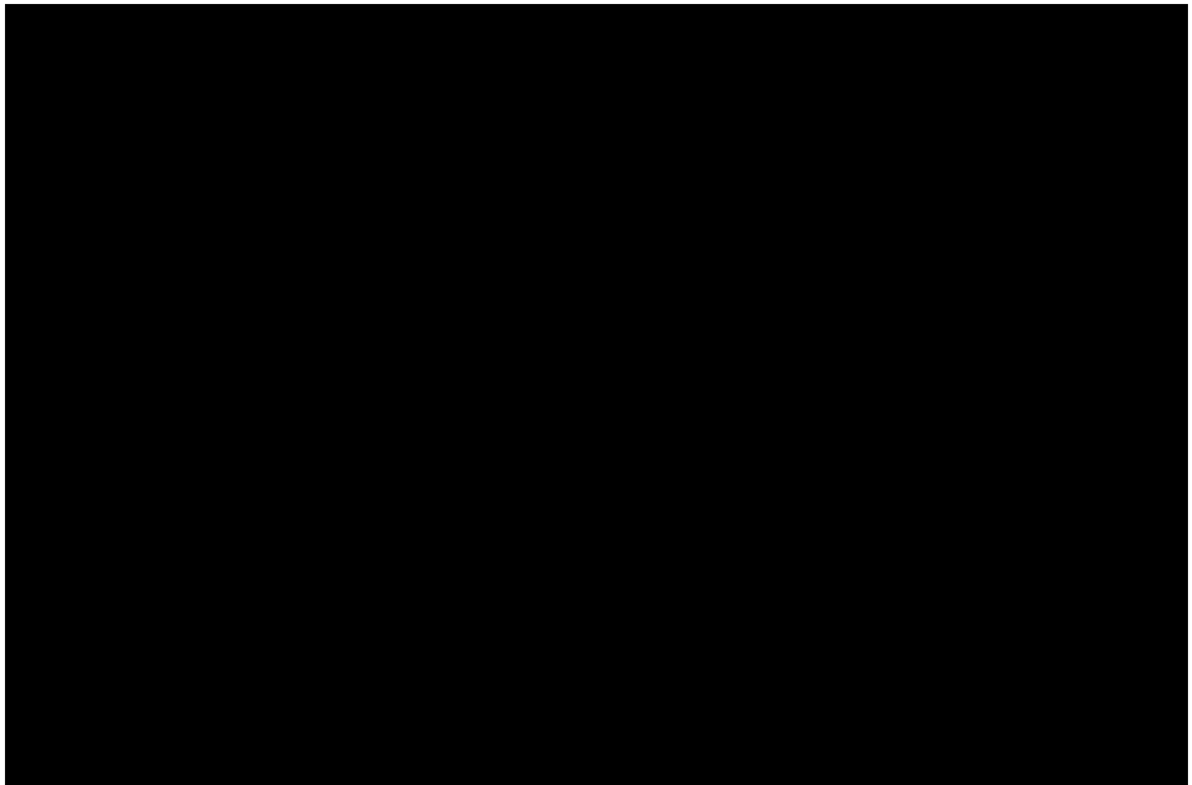
a.

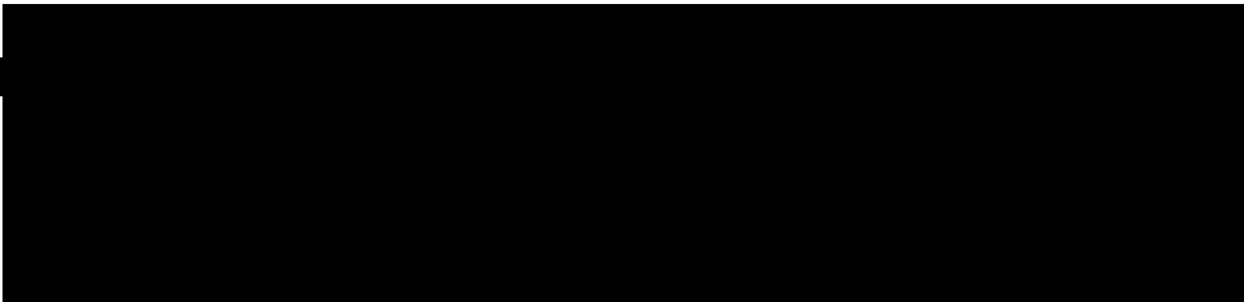
b.

~~202.~~201. The corporate non-labour Productive Efficiencies are set out on Schedule 3.4.2 and the total included in Schedule 3.4.

X.E. Other Qualitative Benefits

~~203.~~202. SECURE has other plans arising from the Transaction to increase Productive Efficiencies that I have not accounted for in my conclusions. These plans are set out in the Affidavit of Dave Engel[85] and summarized below:

a. 

85 

b. [redacted] SECURE will be able to more efficiently manage what it refers to as "swing volumes." In the event capacity is limited at a facility or wait times are higher, SECURE can direct the customer to travel to an alternative nearby facility with lower wait times or more capacity and, with the benefit of more facilities as a result of the Transaction, SECURE will be able to direct customers to the optimal facility of the merged firm;

c. [redacted]

d. SECURE and Tervita each had relative best practices at their facilities and with the Transaction have been able to share these best practices and improve operational efficiency in different areas;

e. SECURE will achieve economies of scale benefits from increased volumes at remaining facilities. See, for example, Section X.B.2 above; and

f. With multiple facilities SECURE will be able to optimize its capital spending plan.

XI. Efficiencies Lost In The Event of A Hypothetical Divestiture Order

~~204.~~203. As noted in paragraph 9 above, Counsel has requested me to provide my opinions as to the Productive Efficiencies lost under ~~both~~each of the Hypothetical Divestiture Orders as at each of:

a. The date of closing of the Transaction (the "Date of Closing Approach" as previously defined); and

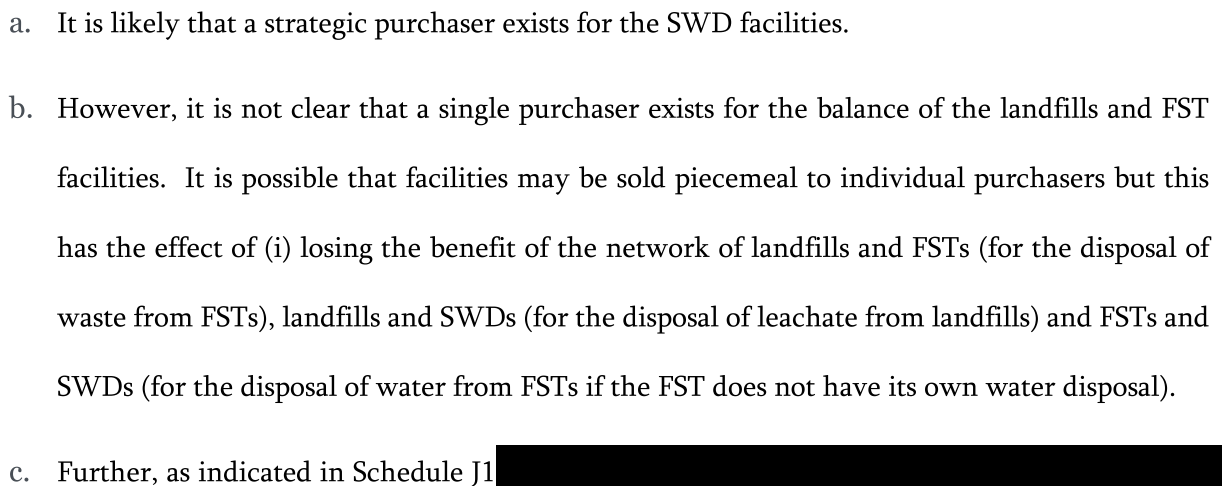
Company	Existing Relevant Geography	Existing Services	Recent Acquisitions	Comments
Wolverine Energy and Infrastructure, Inc.	NA	NA	NA	Exited midstream operations via sale to GIP in 2021

~~217.~~216. Based on my review, I have concluded that this "intermediate" position is the most likely. Specifically, in my opinion:

a. It is likely that a strategic purchaser exists for the SWD facilities.

b. However, it is not clear that a single purchaser exists for the balance of the landfills and FST facilities. It is possible that facilities may be sold piecemeal to individual purchasers but this has the effect of (i) losing the benefit of the network of landfills and FSTs (for the disposal of waste from FSTs), landfills and SWDs (for the disposal of leachate from landfills) and FSTs and SWDs (for the disposal of water from FSTs if the FST does not have its own water disposal).

c. Further, as indicated in Schedule J1



~~218.~~217. Accordingly, I believe it is most likely that a divestiture of at least the FST facilities, which comprise the majority of the assets subject to a Hypothetical Divestiture Order, would be to a financial purchaser or a strategic purchaser that effectively has limited existing presence in the geographic market in which the assets subject to a Hypothetical Divestiture Order reside.

~~219.~~218. To be conservative, for purposes of my conclusions as to the corporate infrastructure required by a prospective purchaser, I have assumed that such a purchaser would be a hypothetical strategic purchaser, with some existing infrastructure but not in the Western Canadian market such that that

the addition of the facilities subject to a Hypothetical Divestiture Order would require the addition of some significant infrastructure.

~~220.~~219. Reflecting the above, I have summarized, in columns [N] and [O], for rows [1] to [122] of Schedule 6.2, the headcount that a potential purchaser or purchasers would, in aggregate, require to support the acquisition of the assets listed in Appendix C as set out in the Affidavit of Mr. Keith Blundell.[90]

~~221.~~220. Similarly, in columns [P] and [Q] of Schedule 3.4.2, I have identified the incremental non-labour costs that I believe potential purchasers would, in aggregate, require to support the acquisition of the assets listed in Appendix C.

221. I include the corporate cost savings under the Commissioner's Proposed May 9th Order in column [O] of Schedule 3 set out at row [4]

222. The net present value of these Productive Efficiencies that would be lost in the event of a Hypothetical Divestiture Order is summarized on Schedule 3.4.

[90] Affidavit of Keith Blundell, paragraphs 122 to 124.

227. The Tribunal Order Date Approach considers the prospective Productive Efficiencies that would be lost from the assumed date of a Tribunal Order[92] and, in my opinion, better reflects the real economic impact. This is because any reduction on account of delay or implementation costs incurred to that point will have already occurred and those deductions are appropriately considered “sunk” costs at that point.

228. For purposes of my conclusions as to the Productive Efficiencies lost in this approach, I have been instructed to assume that the Tribunal would require that the divestiture occur within 6 months of the date of the Order. I further assume that:

    a. A purchaser (and presumably the Competition Tribunal) would require that, at the time of the divestiture, the divested assets should be in full operation so as to be able to supply customers and compete with SECURE; and

    b. The purchaser will require operational due diligence on the facilities prior to completing its acquisition and therefore the facilities will need to have been made operational well before the required divestiture date.

229. The effect of the above is that, immediately after Tribunal ruling, SECURE management will need to commence hiring and incur costs relating to that hiring, training, and re-start costs.

230. Accordingly, to reflect the above, I have made the assumption that run rates costs for the 6 month period commencing the date of the Tribunal ruling until the date of the sale are a proxy for all the hiring, training, restart and operating costs in that period. This may be a conservative assumption.

[92] Which I have been instructed to assume would occur on July 1, 2023.

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Applicant

- and -

SECURE ENERGY SERVICES INC.
Respondent

BEFORE:

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The Honourable Mr. Justice Denis Gascon **Member**
Dr. Ted Horbulyk **Member**

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Dr. Ted Horbulyk	**Member**

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2 June 2022

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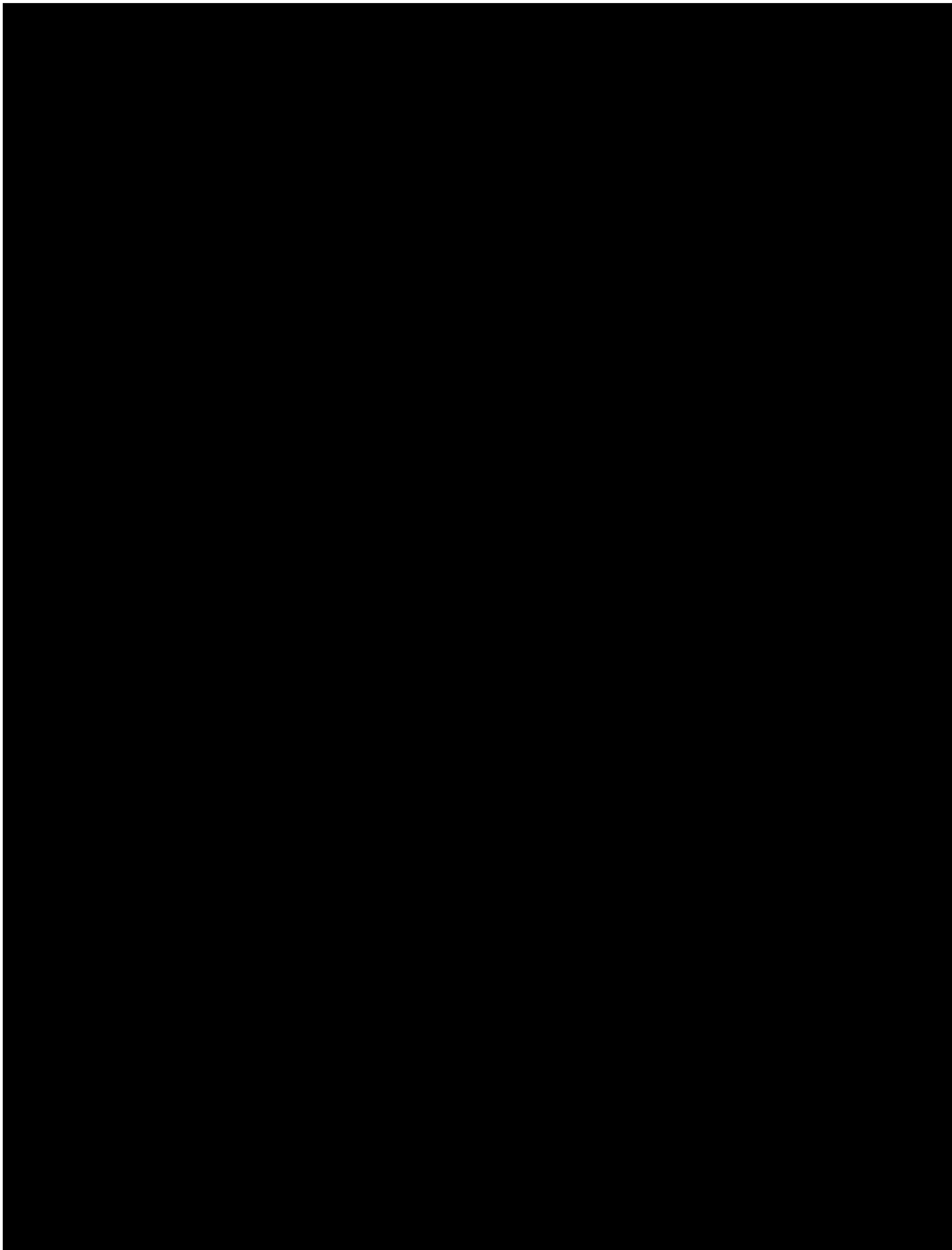
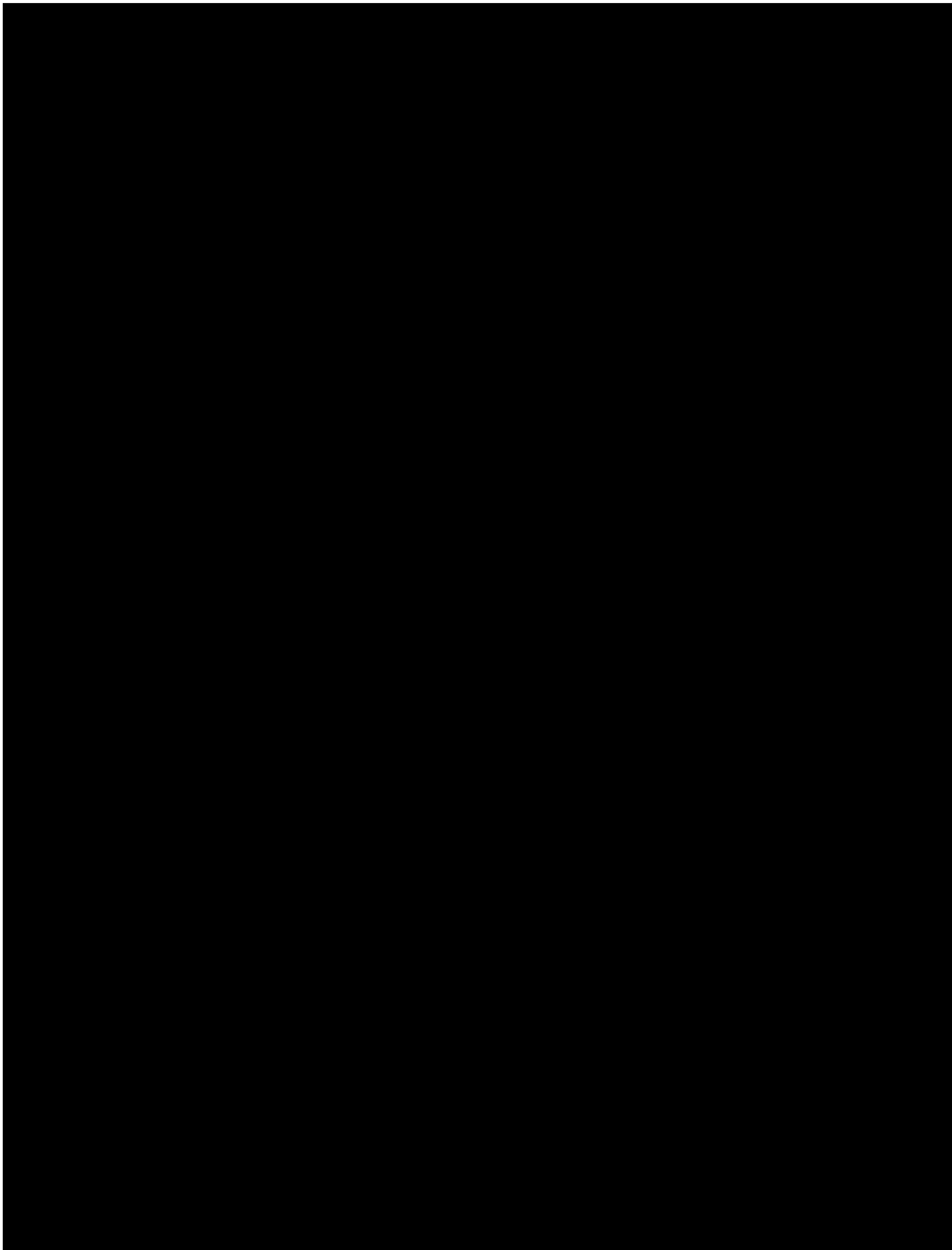
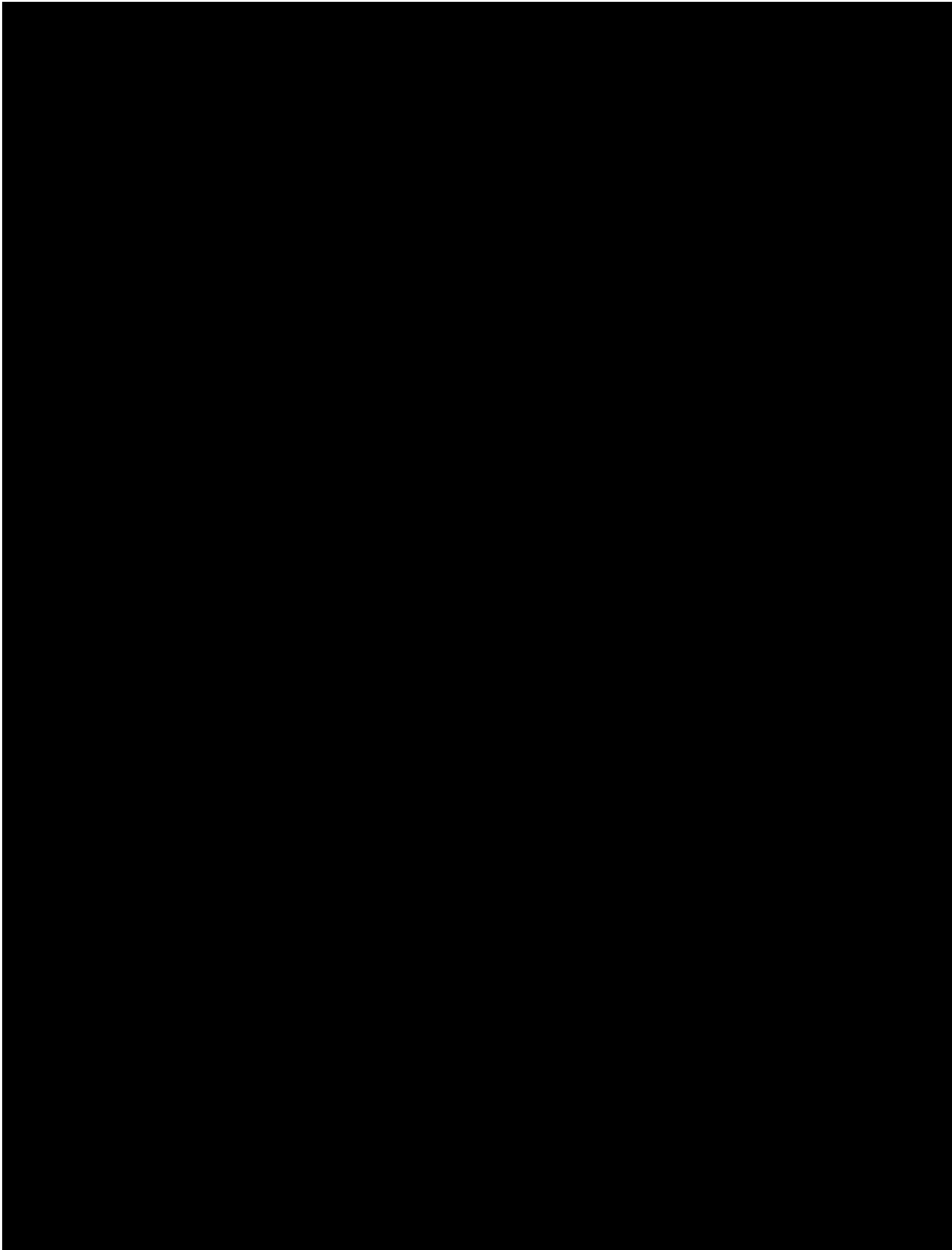
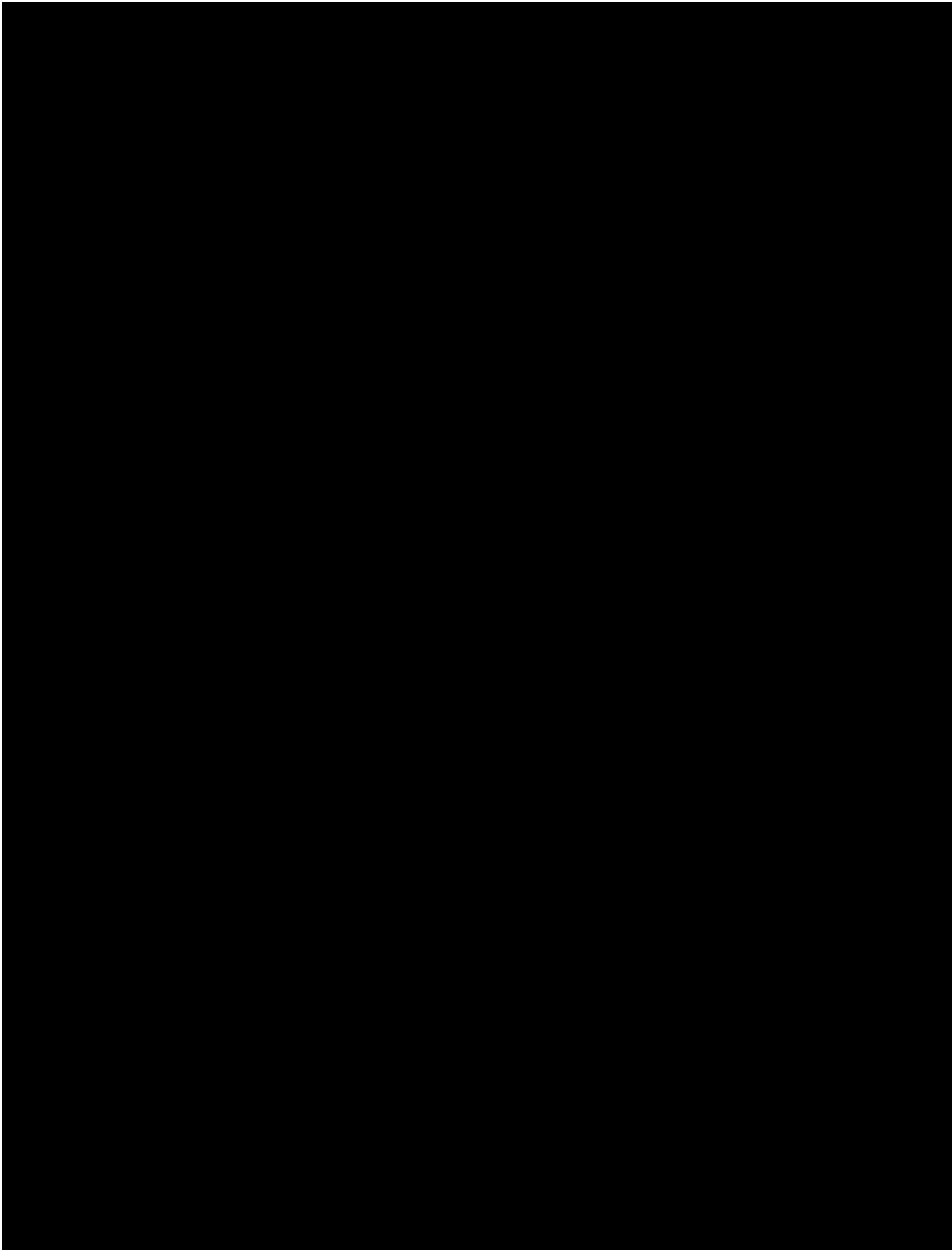
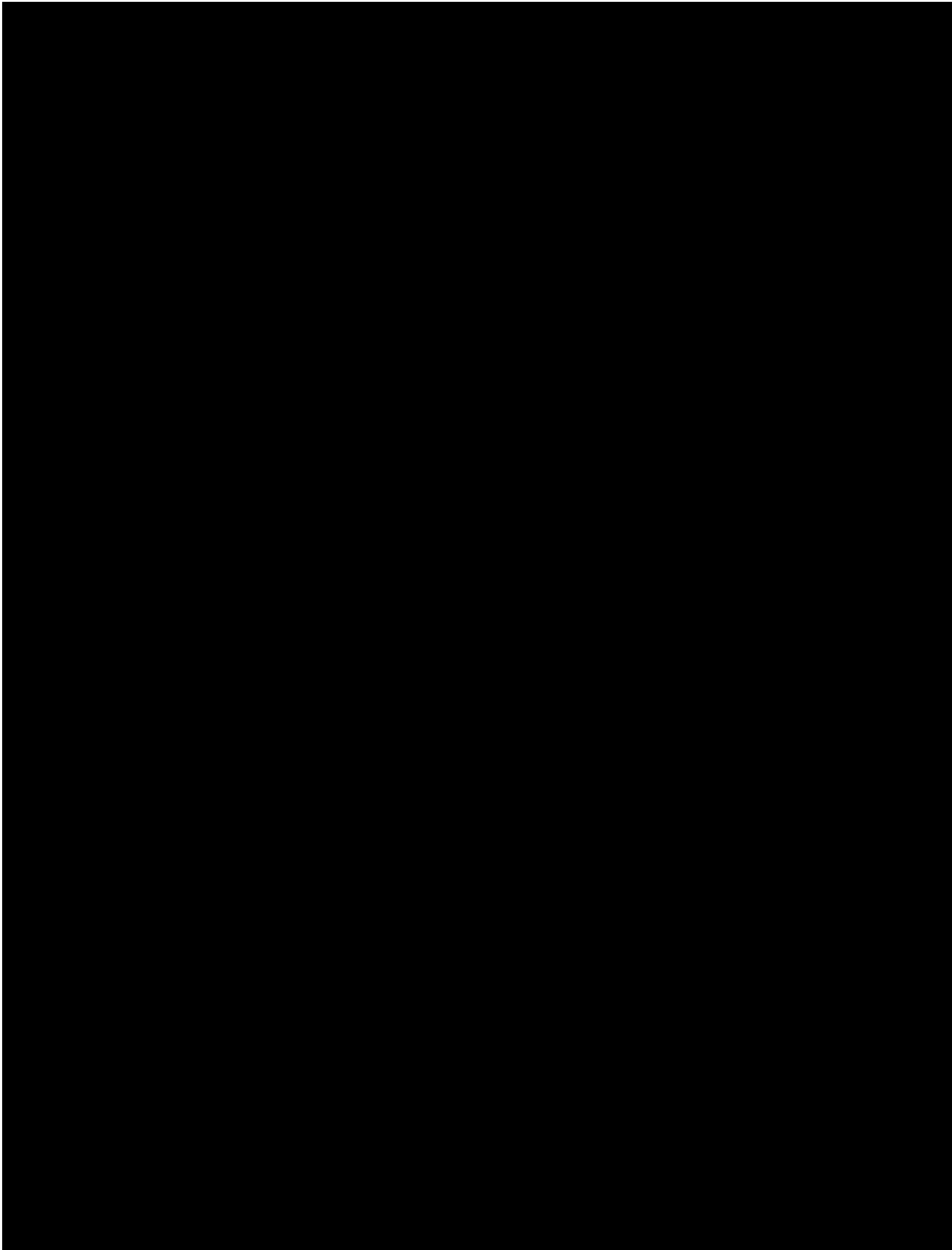
1 --- Upon resuming at 10:47 a.m. /
2 Reprise à 10 h 47
3 **THE REGISTRAR:** We are in public session.
4 Thank you.
5 **MEMBER HORBULYK:** If we can go to page 36,
6 paragraph 57? Mr. Harington, my question here is about the
7 portion about benefits and efficiencies which are expected
8 to accrue to the Canadian economy. The issue also comes up
9 later in paragraph 59(C) and we can scroll ahead to check
10 that one too. I guess my question is, if Secure as a
11 publicly traded company, has foreign shareholders, and they
12 lose or benefit from these transactions, how has that
13 factored into any of your analysis?
14 **MR. HARINGTON:** So I have not analyzed the
15 shareholders because the efficiencies are about the output
16 of the Canadian economy itself. So to the extent that the
17 Canadian economy utilizes its own domestic resources more
18 efficiently, that is what I have used.
19 You sort of think about it in the GDP context.
20 The productivity and output of the Canadian economy. So in
21 this case here, all of the operations of Secure and Tervita
22 other than de minimis which are not affected by the
23 efficiencies, are within Canada. This is a more efficient
24 use of Canadian resources that benefit the Canadian
25 economy.











Commissioner of Competition v. SECURE Energy Services Inc.

REPLY TO THE REBUTTAL REPORTS OF DR. J. GREGORY EASTMAN AND DR. NATHAN MILLER

PREPARED BY
Andrew C. Harington
CPA, CA, CFA, CBV

APRIL 26, 2022

52. Accordingly, even if Dr. Eastman's comments as to variability across facilities were valid, by selecting the lower of the SECURE and Tervita figures, I have made a conservative estimate of the portion of costs that are fixed when I could quite reasonably have selected, for example, an average of the two percentages, and there is no reason to believe that the Productive Efficiencies would likely be lower than the figure that I have calculated.

53. Reflecting the above, nothing arises from this aspect of the Eastman Rebuttal Report that leads me to revise my conclusions in the Harington Efficiencies Report.

My correlation analysis and my selection of the fixed/variable aspect of certain costs based on the nature of the cost for FSTs

54. My methodology for selecting the extent to which cost categories are fixed for closing facilities, and therefore the cost is avoided by closing the facility, is described in detail in the Harington Efficiencies Report in section X.A.2.b for FSTs.

55. As noted above, Dr. Eastman states that "it is not possible to verify whether there will be any productive efficiencies arising from shifting volumes from closed or closing facilities to absorbing facilities."[35] Dr. Eastman undertakes no analysis of his own in this regard.

[33] Harington Efficiencies Report, Table 12.

[34] Harington Efficiencies Report, Table 13.

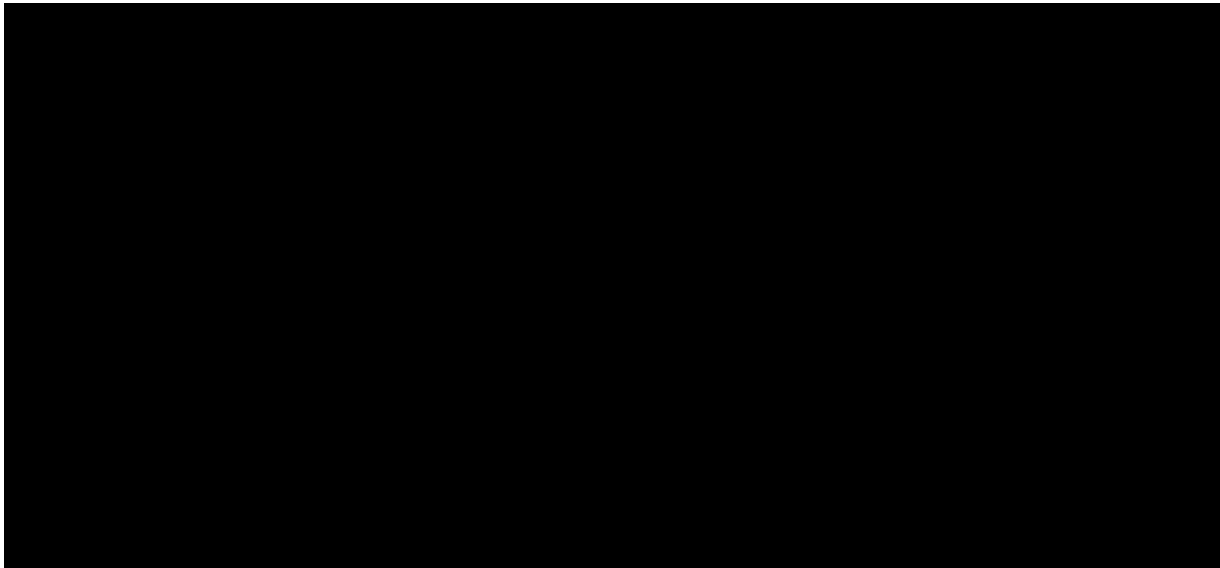
[35] Eastman Rebuttal Report, paragraph 53.

70. Dr. Eastman is correct that I have not undertaken my analysis on a location-by-location basis but the most likely effect of this is that my conclusion as to Productive Efficiencies is understated for the following reasons:

   a. As described in Section X.A.2 of the Harington Efficiencies Report and at paragraphs 48 to 58, above:

      i. For cost categories for which I relied upon a correlation methodology, I selected a conservative estimate for the fixed cost component;

      ii. For cost categories which could reasonably be expected to be predominantly variable, I assumed that 100% of the costs would be variable;



71. Reflecting the above, nothing arises from this aspect of the Eastman Rebuttal Report that leads me to revise my conclusions in the Harington Efficiencies Report.

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HELD VIA VIDEOCONFERENCE

11 May 2022

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1 That's why I was not sure.
2 **MS. HENDERSON:** Understood, sir. Thank you for
3 that clarification.
4 Just so, then, I have the size of it, in terms
5 of waste disposal facilities that accept oilfield waste
6 directly from producers, my understanding is that there are
7 essentially two that Clean Harbors operates in the Western
8 Canadian Sedimentary Basin, the Ryley landfill that we
9 talked about, and the Calmar well. Is that a fair summary?
10 I understand that --
11 **MR. McLEAN:** It is --
12 **MS. HENDERSON:** I'm sorry, sir. I didn't mean
13 to cut you off.
14 **MR. McLEAN:** That's okay.
15 **MS. HENDERSON:** I think you said it was a fair
16 summary.
17 **MR. McLEAN:** I believe it is, yeah. The other
18 ones tend to be more the hubs and the -- once again, yeah,
19 the on-site locations and distribution centres, yeah.
20 **MS. HENDERSON:** Right. And as I think you said
21 before, midstream infrastructure isn't really Clean
22 Harbors' core business, and I take it that operating, you
23 know, standalone waste disposal facilities for oilfield
24 waste really isn't the core of your business either.
25 **MR. McLEAN:** No, not the core at this time, no.

1 **MS. HENDERSON:** No. I understand you provide
2 many other services to oil and gas companies operating in
3 Western Canada, but your focus isn't on standalone disposal
4 facilities, is my only question.
5 **MR. McLEAN:** The focus -- I'm just repeating.
6 Our focus isn't on standalone facilities. Is that the
7 question?
8 **MS. HENDERSON:** That's the question.
9 **MR. McLEAN:** Yeah. The standalone facilities
10 are one of the services we have, correct.
11 **MS. HENDERSON:** Sorry. My question was a
12 little bit rambling there. Thank you for untying it.
13 **MR. McLEAN:** I just want to make sure I get it
14 right. It's no problem at all.
15 **MS. HENDERSON:** Appreciate that.
16 And in your reply affidavit, you mention a few
17 acquisitions that Clean Harbors has completed in the energy
18 sector, and let me just pause there.
19 I take it that a lot of -- my understanding is
20 that a lot of Clean Harbors' growth in the oil and gas
21 industry in Western Canada generally has been through --
22 you know, mainly accomplished through acquisitions. Is
23 that fair?
24 **MR. McLEAN:** That's fair.
25 **MS. HENDERSON:** And the three acquisitions that

1 that just no matter what you do, just grumble about it,
2 right?
3 **MR. McLEAN:** That's correct also, yes.
4 **MS. HENDERSON:** Even if you've done all the
5 math, you can't make everyone happy all the time, right?
6 **MR. McLEAN:** Correct again.
7 **MS. HENDERSON:** So I'd like to turn to a new
8 topic. You told my friend -- and it says in your witness
9 statements -- that Clean Harbors would potentially be
10 interested in acquiring any waste disposal facilities that
11 the Tribunal might order Secure to divest as a result of
12 this proceeding, right?
13 **MR. McLEAN:** Correct. I just have it in front
14 of me. So if I look to my right, it's because I do have
15 the statement in front of me.
16 **MS. HENDERSON:** Yeah, and please feel free to
17 do that. I know you have your statement in front of you,
18 so if you need paragraph numbers or anything like that,
19 just let me know.
20 And that interest in purchasing facilities is
21 subject of course to the purchase price and Clean Harbors
22 doing its own due diligence?
23 **MR. McLEAN:** That's correct, yes.
24 **MS. HENDERSON:** You have to do that for any
25 acquisition, of course?

1 **MR. McLEAN:** Of course, absolutely, yes.
2 **MS. HENDERSON:** And I take it that those
3 things -- so the purchase price and the result of the due
4 diligence -- could affect how many, if any, facilities
5 Clean Harbors would be interested in acquiring?
6 **MR. McLEAN:** Absolutely, yeah.
7 **MS. HENDERSON:** Is it fair to say that one
8 thing you would probably want to do is to satisfy
9 yourselves that there's enough demand for oilfield waste
10 disposal in a particular area to make sure that your
11 investment in a facility there would be profitable?
12 **MR. McLEAN:** Return on investment, of course,
13 is part of the due diligence process, absolutely.
14 **MS. HENDERSON:** Another form of doing the math,
15 right?
16 **MR. McLEAN:** Exactly.
17 **MS. HENDERSON:** Right. And I take it that at
18 least sometimes it's possible that there's just not enough
19 appetite for a facility in some area to make it worth Clean
20 Harbors' time or money. Is that fair?
21 **MR. McLEAN:** Once again, all part of the due
22 diligence. Correct, yeah.
23 **MS. HENDERSON:** Got it. And with respect to
24 oilfield waste disposal, specifically in doing that due
25 diligence, I imagine that one of the inputs you'd want to

1 consider is what oil production is forecasted to look like
2 in the region around a facility going forward. Is that
3 fair?
4 **MR. McLEAN:** That's one of them, yes.
5 **MS. HENDERSON:** You want to make sure there's
6 production in the area generating waste that people are
7 going to pay you to dispose of?
8 **MR. McLEAN:** It is certainly one of the things
9 you would look at, correct.
10 **MS. HENDERSON:** And of course, you haven't had
11 an opportunity to do any of that due diligence at this
12 phase?
13 **MR. McLEAN:** Specifically, to the Secure issue,
14 we have not done that as part of this phase of the process,
15 no.
16 **MS. HENDERSON:** And then in your Reply Witness
17 Statement, and if you want to look at it just to refresh
18 yourself, it's page 3 of your Reply Witness Statement,
19 paragraph 11. I just want to make sure I have this right.
20 You say that the Commissioner asked you for the
21 purposes of this proceeding to consider a scenario in which
22 Clean Harbors would acquire five to 10 landfills, up to
23 five water disposal wells, and 20 to 25 TRDs. Do you see
24 that?
25 **MR. McLEAN:** I do.

1 **MS. HENDERSON:** And did the Commissioner
2 provide you with a specific list of facilities or just
3 those numbers?
4 **MR. McLEAN:** We were not -- to the best of my
5 knowledge, we were not provided a specific list, no.
6 **MS. HENDERSON:** Okay. So you're considering
7 this scenario without regard, for instance, to geography,
8 like where -- whether the facilities are located close
9 together, far apart, anything like that?
10 **MR. McLEAN:** Yeah. When considering this
11 question -- if this question is brought to you, there are a
12 number of factors that would have to be considered, and
13 that's why it's a very challenging exercise.
14 The staffing of a landfill varies from, you
15 know, it could be four people at a landfill or it could be
16 hundreds of people at a landfill. As I used the analogy to
17 someone else, it's like a restaurant. How many people do
18 you need to staff a restaurant? Well, it's completely
19 dependent on the size of the restaurant and whether you're
20 a 24-hour restaurant or not. So the question's very
21 similar. The amount of staff needed for a landfill is
22 completely dependent on the scope and size.
23 **MS. HENDERSON:** Right. And is your restaurant
24 located, you know, right in the middle of downtown Calgary
25 or is it a -- you know, a rest stop on some quiet highway;

1 right?

2 **MR. McLEAN:** Exactly. There's been landfills

3 that have part-time staff only and they're only open two

4 days a week and they arrange disposal locations and people

5 will drive to that landfill, open it on Tuesday-Thursday,

6 and come back to it next Tuesday and Thursday as an

7 example, correct.

8 **MS. HENDERSON:** So as a general proposition,

9 you'd really need to know what facilities you would be

10 acquiring to make informed judgments about staffing needs.

11 **MR. McLEAN:** It's part of the due diligence,

12 exactly, yeah.

13 **MS. HENDERSON:** Got it. And I won't force you

14 to do much more arithmetic than this, sir, but just summing

15 those numbers up, the scenario we're talking about in

16 paragraph 11 of your reply affidavit would be an

17 acquisition of up to 40 waste disposal facilities?

18 **MR. McLEAN:** So if you added the five to 10,

19 the five, and the 25?

20 **MS. HENDERSON:** Yeah.

21 **MR. McLEAN:** That's approximately in that

22 range. That's correct.

23 **MS. HENDERSON:** Glad I got it right. I'm

24 adding 10, five and 25, and I think that gets us to 40.

25 Last question, last bit of arithmetic. Earlier

Combined **Combiné**

File No. / Dossier no. CT-2021-002

COMPETITION TRIBUNAL

IN THE MATTER OF the *Competition Act*, R.S.C., 1985, c. C-34 as amended;

AND IN THE MATTER OF the acquisition by SECURE Energy Services Inc. of Tervita Corporation;

AND IN THE MATTER OF an application by the Commissioner of Competition for one or more orders pursuant to section 92 of the *Competition Act*.

BETWEEN:

THE COMMISSIONER OF COMPETITION

Applicant

- and -

SECURE ENERGY SERVICES INC.

Respondent

BEFORE:

The Honourable Mr. Chief Justice Paul Crampton **Presiding**
The Honourable Mr. Justice Denis Gascon **Member**
Dr. Ted Horbulyk **Member**

HELD VIA VIDEOCONFERENCE

10 May 2022

Volume 2
Combined

1 **MR. McGRADE:** Okay.
2 **MR. HALL:** But it's been shut down, but I
3 believe that one is still owned by Aquatera.
4 **MR. McGRADE:** Okay. So there are seven active
5 wells for Aquatera in Western Canada?
6 **MR. HALL:** That's correct.
7 **MR. McGRADE:** Great. So the majority of
8 Aquatera's facilities are located in the United States?
9 **MR. HALL:** That's correct.
10 **MR. McGRADE:** Okay. And Aquatera does not
11 operate any landfills?
12 **MR. HALL:** No, we do not.
13 **MR. McGRADE:** None of its facilities can accept
14 solid waste; is that right?
15 **MR. HALL:** To a point, yeah, that's correct.
16 **MR. McGRADE:** Okay. And when you say, "to a
17 point," is it fair to say that Aquatera's facilities
18 dispose of water and they don't dispose of solid waste at
19 the Aquatera facilities?
20 **MR. HALL:** That's correct. That's correct.
21 **MR. McGRADE:** Thank you.
22 **MR. HALL:** We do get -- every now and then we
23 get stuff that we don't want but ---
24 **MR. McGRADE:** Right.
25 **MR. HALL:** --- that we have to dispose of, but

1 effectively we're supposed to only be receiving water.
2 **MR. McGRADE:** Thank you. And Aquatera doesn't
3 operate any full-service terminals, so no terminals that
4 can accept liquid waste such as sludges or emulsions?
5 **MR. HALL:** No. No, we don't.
6 **MR. McGRADE:** And none of Aquatera's facilities
7 offer oil terminalling or oil treating services?
8 **MR. HALL:** No, we do not.
9 **MR. McGRADE:** Thank you. So my next set of
10 questions will address Confidential Level A information, so
11 I suggest that we go *in camera* for the next portion of the
12 examination, if that's all right with the Court.
13 **CHIEF JUSTICE CRAMPTON:** That's fine. So,
14 Annie?
15 **DEPUTY REGISTRAR:** Give me one moment, please.
16 --- Upon recessing at 9:52 a.m., to resume
17 immediately in Confidential Level A /
18 Suspension à 9 h 52 pour reprendre immédiatement
19 en session confidentielle niveau A
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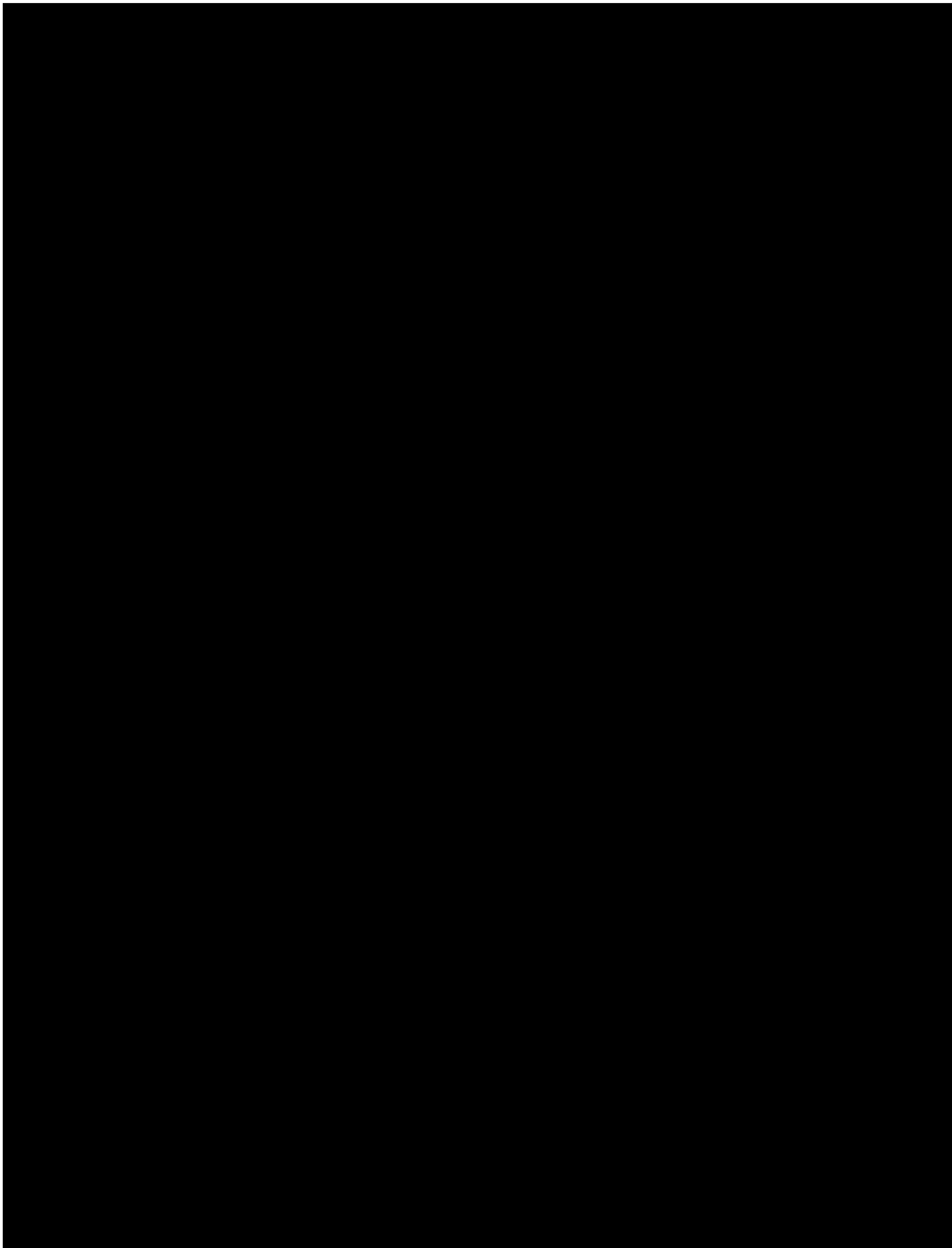

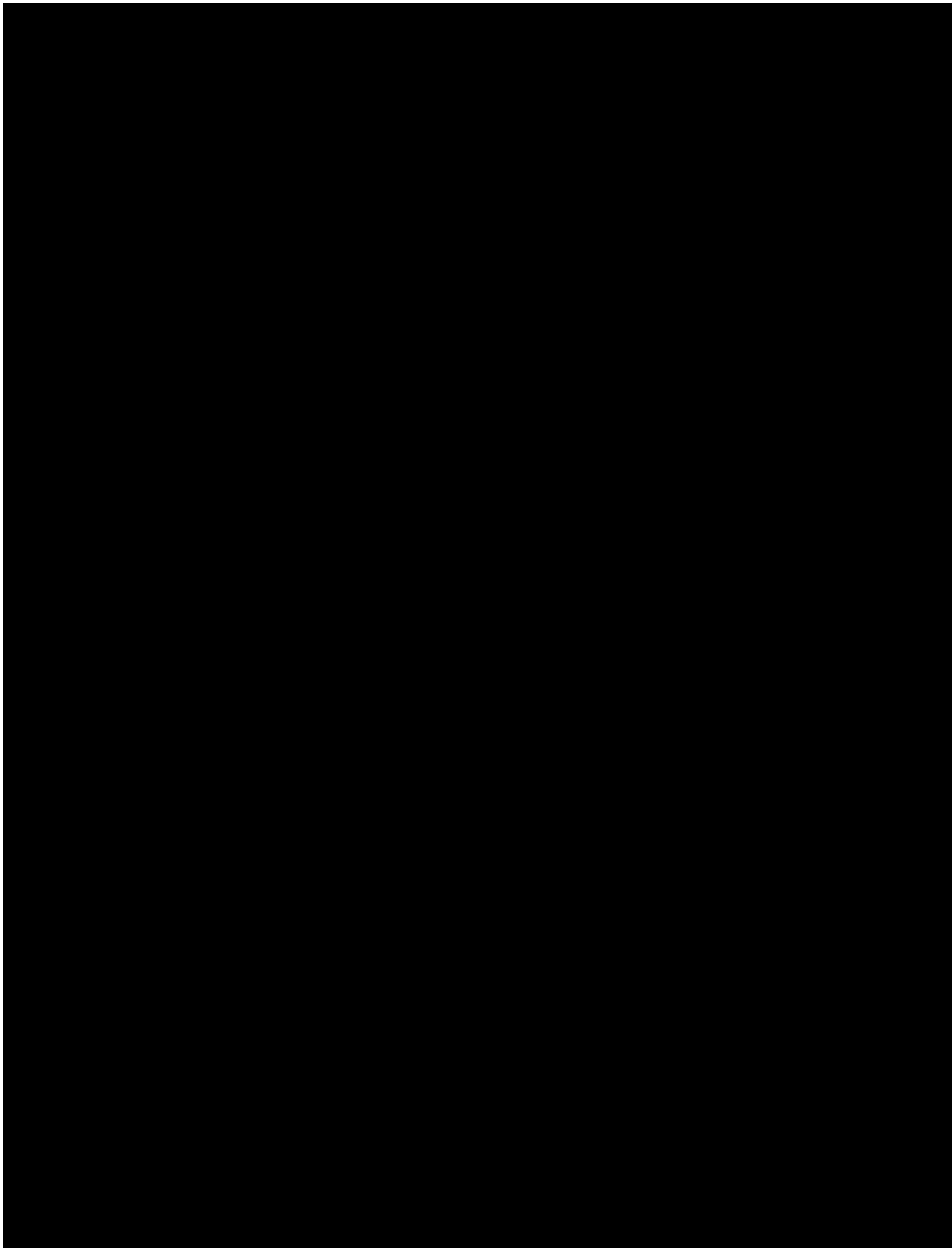

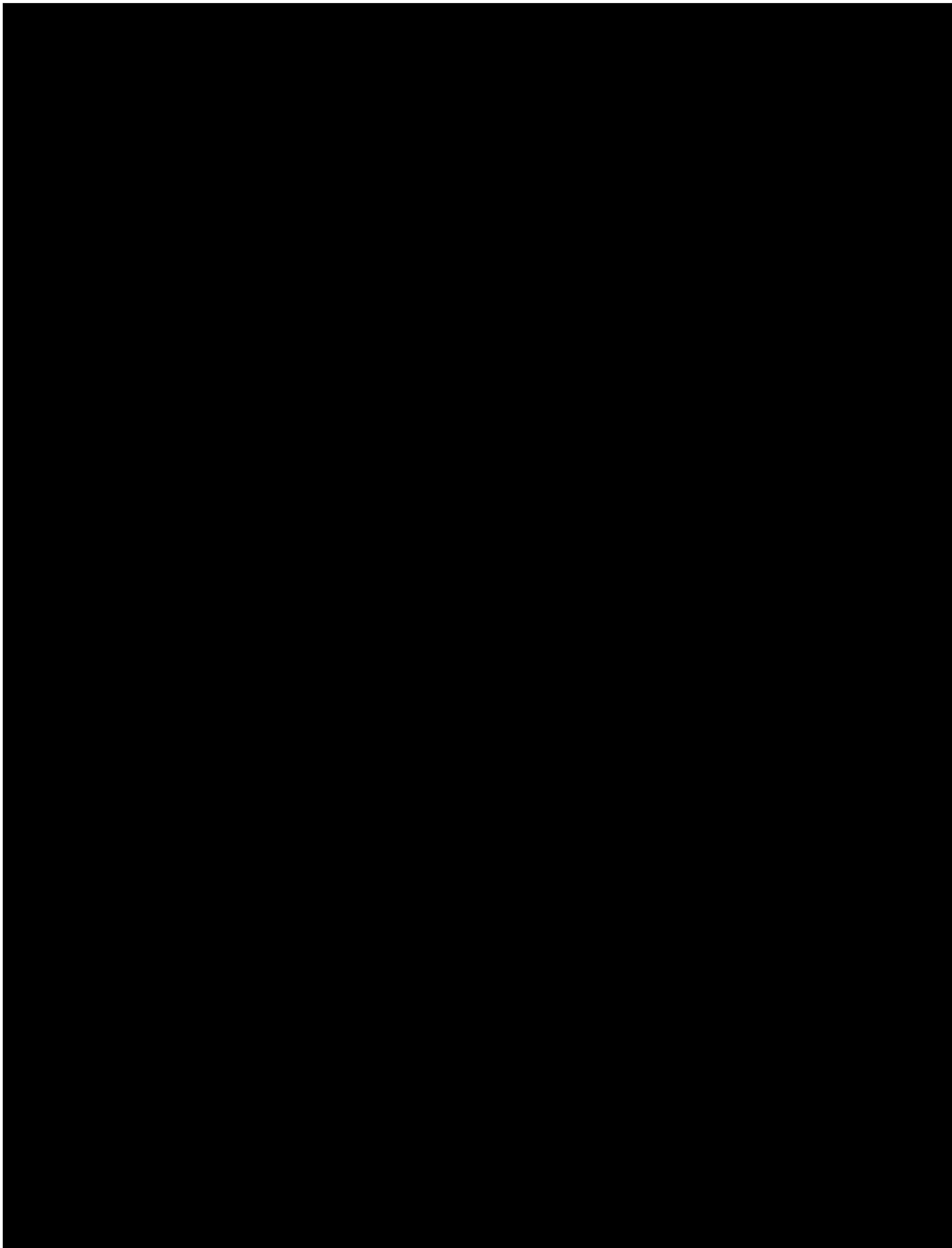

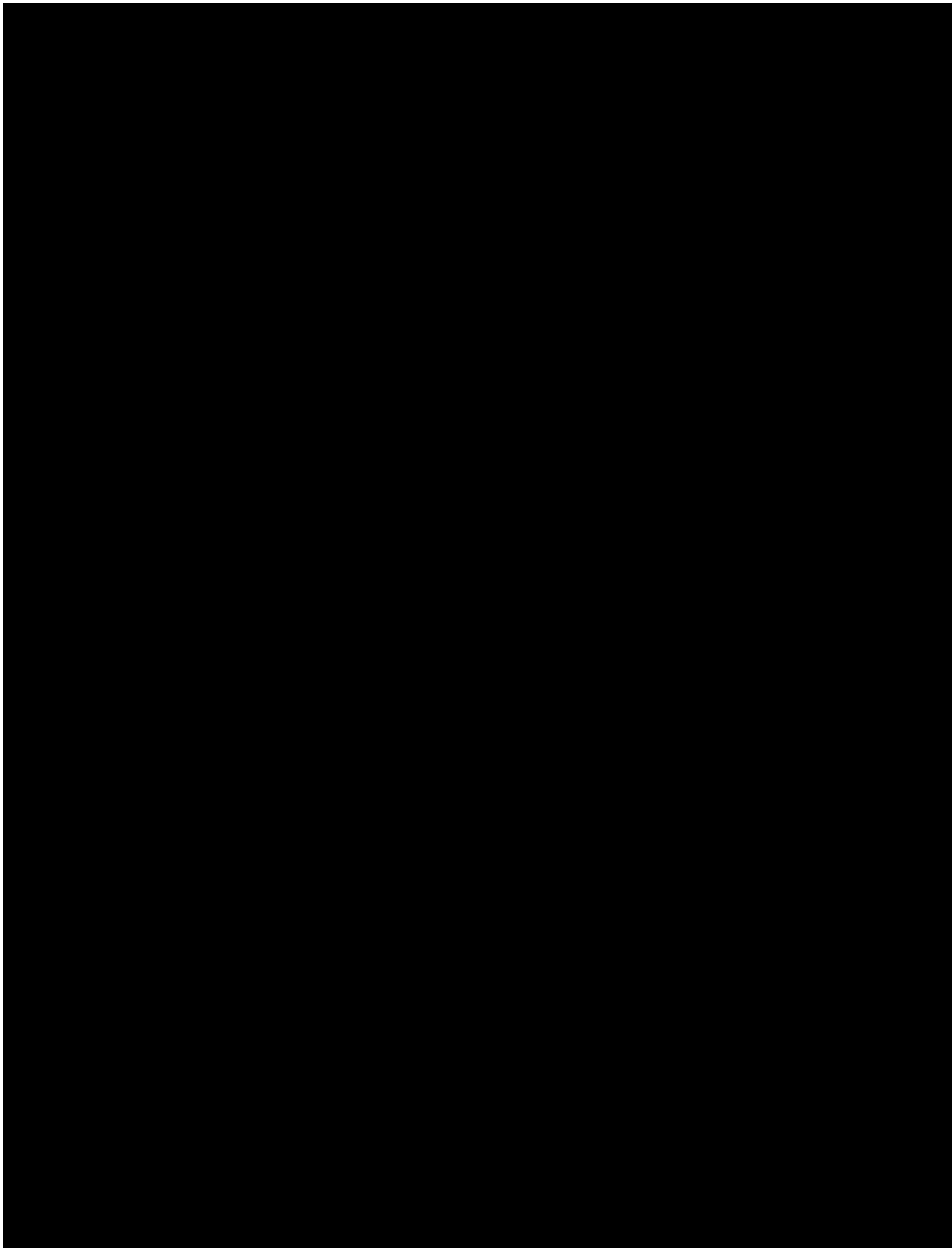

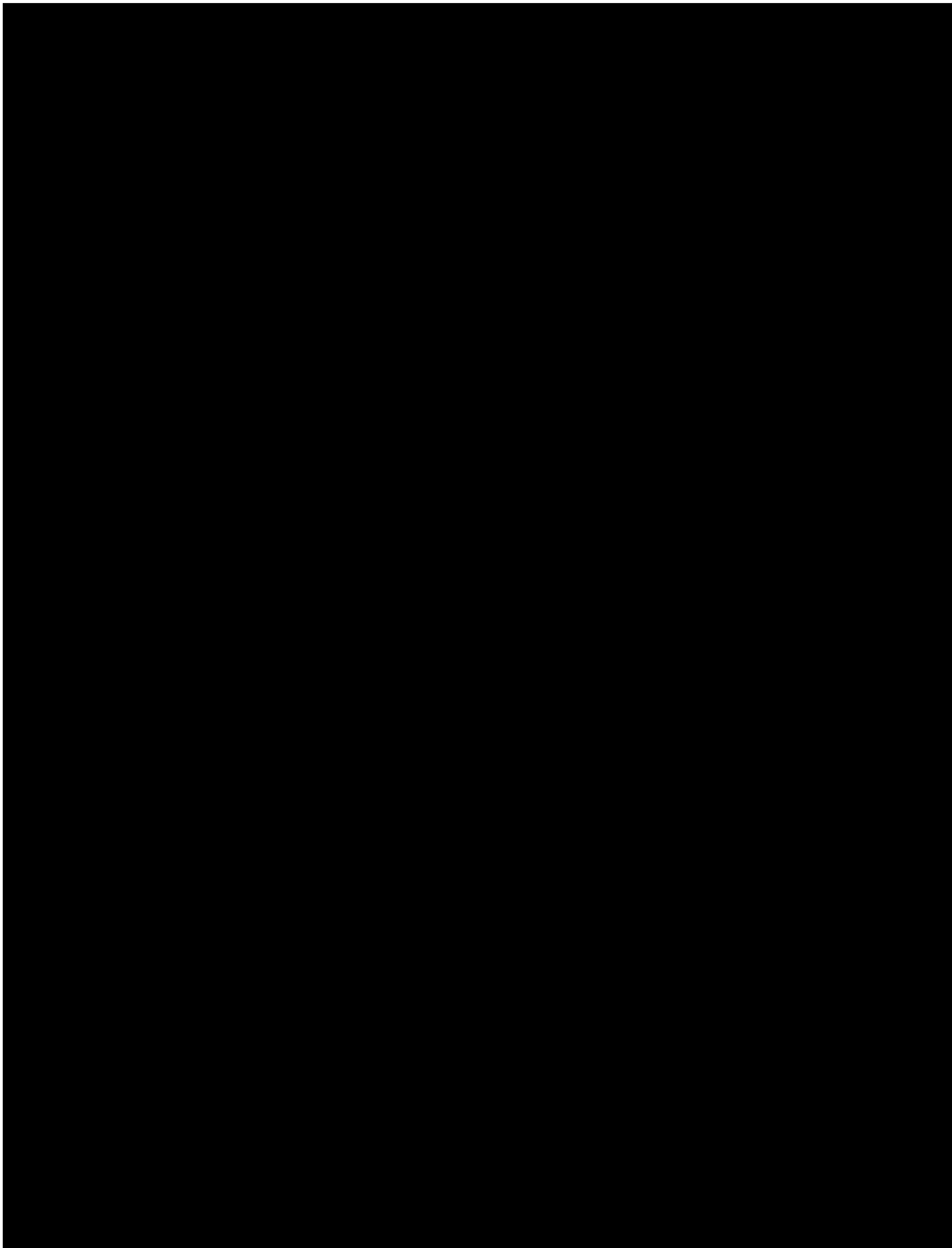

Competition Tribunal Tribunal de la Concurrence

PUBLIC VERSION

Reference: *The Commissioner of Competition v. CCS Corporation et al.,* 2012 Comp. Trib. 14
File No.: CT-2011-002
Registry Document No.: 189

IN THE MATTER OF the *Competition Act*, R.S.C. 1985, c. C-34, as amended;

AND IN THE MATTER OF an Application by the Commissioner of Competition for an Order pursuant to section 92 of the *Competition Act*;

AND IN THE MATTER OF the acquisition by CCS Corporation of Complete Environmental Inc.

B E T W E E N:

The Commissioner of Competition
(applicant)

and

CCS Corporation, Complete Environmental Inc., Babkirk Land Services Inc., Karen Louise Baker, Ronald John Baker, Kenneth Scott Watson, Randy John Wolsey, and Thomas Craig Wolsey
(respondents)

Dates of hearing: Nov.16-18, Nov.22-25, Nov.29 - Dec.2, and Dec.13&14, 2011
Before: S. Simpson J. (Chairperson), P. Crampton C.J. and Dr. W. Askanas
Date of reasons and order: May 29, 2012
Reasons and order signed by: S. Simpson J. (Chairperson), P. Crampton C.J. and Dr. W. Askanas
Concurring reasons signed by: P. Crampton C.J.

REASONS FOR ORDER AND ORDER

[256] Dr. Kahwaty also stated that some or all of the efficiencies identified above would likely be achieved sooner by CCS than by Complete or by any third-party who might acquire the Babkirk Facility pursuant to an order of the Tribunal.

[257] In addition, Dr. Kahwaty stated that CCS should be given credit for some of the efficiencies that it has already achieved in respect of the Roll-off Bin Business.

[258] Finally, Dr. Kahwaty provided reasoned estimates about the extent to which the above-mentioned trucking and market expansion efficiencies would increase under market growth scenarios of 1%, 2% and 4% compounded annually over the next 10 years. Based on this work, he suggested that these increased efficiencies ought to be considered by the Tribunal.

[259] After providing his annual estimates of the quantifiable efficiencies, Dr. Kahwaty calculated the net present value of those efficiencies as of January 1, 2012 using three different discount rates: (i) a risk-free interest rate of 1%, which he described as being the annual yield on one to three year government of Canada marketable bonds over the 10 week period preceding the date of his report (October 7, 2011); (ii) an interest rate of 10%, which he described as being "roughly equivalent to rates prevailing in the oil and gas industry"; and (iii) an intermediate rate of 5.5%.

[260] The Tribunal accepts the evidence of Mr. Harrington, the Commissioner's expert, that, in broad terms, the discount rate used in calculating the net present value of efficiencies typically does not matter, so long as the same discount rate is used to calculate the net present value of the Effects. That said, the Tribunal also accepts Mr. Harrington's evidence that, (i) as a general principle, the appropriate discount rate to use in discounting a set of future cash flows is a function of the risk of those cash flows being wrong, (ii) there is some uncertainty associated with the efficiencies identified and estimated by Dr. Kahwaty and CCS, and therefore (iii) the midpoint (5.5%) of the three discount rates identified by Dr. Kahwaty is the most defensible of the three rates to use in calculating efficiencies and Effects in this case.

The assessment of the claimed efficiencies

[261] In the initial stage of assessing efficiencies claimed under section 96 of the Act, the Tribunal applies five screens to eliminate efficiencies that are not cognizable under that section.

[262] The first screen eliminates claims that do not involve a type of productive or dynamic efficiency, or that are not otherwise likely to result in any increase in allocative efficiency. The second screen narrows the claimed efficiencies to those that the Tribunal is satisfied are *likely* to be brought about by the Merger. Efficiencies that cannot be demonstrated to be more likely than not to be attained in the Merger are filtered out at this stage. The third screen filters out claimed efficiency gains that would be brought about by reason only of a redistribution of income between two or more persons, as contemplated by subsection 96(3). These types of gains include savings that result solely from a reduction in output, service, quality or product choice, as well as from increases in bargaining leverage and reductions in taxes. The fourth screen filters out claimed efficiency gains that would be achieved outside Canada and would not flow back to

shareholders in Canada as well as any savings from operations in Canada that would flow through to foreign shareholders.

[263] In the case at bar, the application of the first four screens does not result in the elimination of any of the claimed efficiencies.

[264] The fifth screen filters out claimed efficiencies that either (a) would likely be attained through alternative means if the Tribunal were to make the order that it determines would be necessary to ensure that the merger in question does not prevent or lessen competition substantially, or (b) would likely be attained through the Merger even if that order were made. This screen has a critical role to play in the case at bar.

[265] In this case, the fifth screen eliminates most of the efficiencies claimed by CCS. With three exceptions, being the one year of transportation efficiencies and the one year of market expansion efficiencies discussed at paragraph 269 below, as well as the overhead efficiencies discussed above, virtually all of the efficiencies claimed by CCS would likely be achieved even if the order referred to in the preceding paragraph is made. That order is an order for the divestiture of the shares or assets of BLS (the "Order").

[266] Although there is currently some uncertainty regarding the identity of a prospective purchaser, the Tribunal is satisfied that a divestiture will ultimately be made to a purchaser who will operate the Babkirk Facility and attract essentially the same volumes of Hazardous Waste as were assumed by Dr. Kahwaty in arriving at his estimates of transportation and market expansion efficiencies.

[267] The Tribunal has decided that, absent exceptional circumstances, it will not be prepared to conclude that the claimed efficiencies that would be realized by any acceptable alternative purchaser should be included in the trade-off assessment, on the basis that it is not possible to identify any particular *likely* purchaser of the shares or assets contemplated by the divestiture order.

Transportation and Market Expansion Efficiencies

[268] Based on the reasonable assumption that a purchaser under the Order will emerge and attract, in its first year of operation, the volume of Hazardous Waste that formed the basis for Dr. Kahwaty's estimates of CCS' claimed transportation and market expansion efficiencies, those efficiencies cannot be considered in the section 96 assessment because they are likely to be achieved even if the Order is made.

[269] A noteworthy exception to this conclusion concerns the transportation and market expansion efficiencies that CCS claims would be achieved more quickly by CCS than by a purchaser. In this regard, CCS asserted that it would already have been operating at Babkirk but for the Commissioner's intervention and that, in any event, it is likely to be in a position to operate a Secure Landfill at the Babkirk Site by the summer of 2012. In contrast, CCS stated that a purchaser following a divestiture is unlikely to be in a position to operate a Secure Landfill facility at the Babkirk Site before mid-2013, having regard to the time required (i) for the

[388] There may well be situations in which any cost reductions or other efficiencies likely to be attained through a merger will increase rivalry, and thereby increase competition, in certain ways. These include: (i) by enabling the merged entity to better compete with its rivals, for example, by assisting two smaller rivals to achieve economies of scale or scope enjoyed by one or more larger rivals, (ii) by increasing the merged entity's incentive to expand production and to reduce prices, thereby reducing its incentive to coordinate with other firms in the market post-merger, and (iii) by leading to the introduction of new or better products or processes.

[389] There is no "double counting" of such efficiencies when it is determined that the merger in question is likely to prevent or lessen competition substantially and a trade-off assessment is then conducted under section 96. This is because, in that assessment, such efficiencies would only be considered on the "efficiencies" side of the balancing process contemplated by section 96. They would not directly or indirectly be considered on the "effects" side of the balancing process, because they would not be part of any cognizable (i) quantitative effects (e.g., the DWL or any portion of the wealth transfer that may be established to represent socially adverse effects), or (ii) qualitative effects (e.g., a reduction in dynamic competition, service or quality). Moreover, at the section 92 stage of the analysis, they typically would not be found to be a source of any new, increased or maintained market power that must be identified in order to conclude that the merger is likely to prevent or lessen competition substantially.

E. THE EFFICIENCIES DEFENCE

[390] The analytical framework applicable to the assessment of the efficiencies defence has been set forth in significant detail in the Panel's decision. I simply wish to make a few additional observations.

(i) Conceptual framework

[391] In broad terms, section 96 contemplates a balancing of (i) the "cost" to the economy that would be associated with making the order that the Tribunal has determined should otherwise be made under section 92 (the "Section 92 Order"), and (ii) the "cost" to the economy of not making the Section 92 Order. The former cost is the aggregate of the lost efficiencies that otherwise would likely be attained as a result of the merger. The latter cost is the aggregate of the effects of any prevention or lessening of competition likely to result from the merger, if the Section 92 Order is not made.

[392] Section 96 achieves this balancing of "costs" by (i) confining efficiencies that are cognizable in the trade-off assessment to those that "would not likely be attained if the [Section 92 Order] were made", as contemplated by subsection 96(1), and (ii) confining the effects that may be considered in the trade-off assessment to "the effects of any prevention or lessening of competition that will result or is likely to result from the merger or proposed merger".

[393] In short, the efficiencies that are eliminated by this language in subsection 96(1), which is referred to at paragraph 264 of the Panel's decision as the fifth "screen" established by section 96, are not considered in the trade-off assessment because they would not represent a "cost" to society associated with making the Section 92 Order. That is to say, the efficiencies excluded by

1 his loss of consumer choice through
2 facility closures as the 'facility
3 closure effect' and the loss of
4 allocative efficiency (whereby a price
5 increase brings about a negative
6 resource allocation) as [a] 'deadweight
7 loss.'"
8 Dr. Duplantis, in your footnote you seem to be
9 implying that the loss of producer choice through facility
10 closure cannot contribute to deadweight loss. Is that
11 fair?
12 **DR. DUPLANTIS:** I wouldn't agree with that
13 statement, no.
14 **MR. HOOD:** Dr. Duplantis, I understand that you
15 disagree that facility closures have -- I understand you
16 disagree that facility closures have resulted in a
17 deadweight loss. Is that fair?
18 **DR. DUPLANTIS:** In this instance, Dr. Miller's
19 facility closure effect I do not think is representative of
20 deadweight loss. But I'm not -- I'm saying in a general
21 matter I wouldn't agree that loss could not be considered
22 that. I'm just saying in this instance.
23 **MR. HOOD:** That's helpful. So at a theoretical
24 level then, you would agree that the loss of product choice
25 can result in a deadweight loss even if there's no

1 reduction in output?

2 **DR. DUPLANTIS:** I would agree that the loss of

3 choice could be a non-price effect. I think the question

4 is whether or not it stems from a change -- is an

5 anticompetitive effect and how that relates. But I think

6 in my writings I've illustrated that loss of choice could

7 be considered an effect of a merger, yes.

8 **MR. HOOD:** And just to confirm then, so there

9 can be a deadweight loss even if there is no reduction in

10 output? Is that fair?

11 **DR. DUPLANTIS:** In theory, there could, but

12 again you have to look at the specifics of the case to know

13 whether that's true in any instance.

14 **MR. HOOD:** But at a theoretical level, if I

15 have a town with two grocery stores at either end of the

16 town, and as a result of a merger one is closed, that could

17 result in a loss of consumer surplus even if the volume of

18 groceries purchased remains the same; fair?

19 **DR. DUPLANTIS:** It could in theory, yes.

20 **MR. HOOD:** And as a consumer, I may have a

21 greater willingness to pay for groceries at a grocery store

22 that's closer to me?

23 **DR. DUPLANTIS:** In theory, yes, you could.

24 **MR. HOOD:** And I could have a greater

25 willingness to pay at a grocery store because it has