Timothy Strafford
+1 202 429 8170
tstrafford@Steptoe.com

1330 Connecticut Avenue, NW
Washington, DC 20036-1795
202 429 3000 main
www.steptoe.com

310330

ENTERED
Office of Chief Counsel
November 20, 2025
Part of
Public Record

Steptoe

PUBLIC VERSION

November 20, 2025

VIA E-FILING

Chief of Case Administration
Office of Chief Counsel
Surface Transportation Board
395 E Street, SW
Washington, DC 20423-0001

Re: ***Evergy, Inc., et al. v. BNSF Railway Company,***
STB Docket NOR 42180

Dear Chief of Case Administration:

Enclosed for e-filing in the above-referenced proceeding is a public version of BNSF Railway Company's Reply, with appropriate redactions that the Board can place on its docket. We are concurrently filing a highly confidential version of the Reply to be filed under seal.

Respectfully submitted,

/s/ Timothy J. Strafford
Timothy J. Strafford

Attorney for BNSF Railway Company

Enclosures

BEFORE THE
SURFACE TRANSPORTATION BOARD

DOCKET NO. NOR 42180

EVERGY, INC., EVERGY METRO, INC., and
EVERGY KANSAS CENTRAL, INC.
v.
BNSF RAILWAY COMPANY

REPLY OF BNSF RAILWAY COMPANY

Adam Weiskittel
Tyler White
Kevin W. Baldwin
BNSF Railway Company
2500 Lou Menk Drive
Fort Worth, Texas 76131
(817) 352-2383

Timothy J. Strafford
Anthony J. LaRocca
Steptoe LLP
1330 Connecticut Ave., NW
Washington, D.C. 20036
(202) 429-3000

Justin Waggoner
Alexander M. Wolf
Steptoe LLP
717 Texas Ave., Suite 2800
Houston, Texas 77002
(713) 221-2309

Counsel for BNSF Railway Company

Dated: November 20, 2025

Executive Summary

Evergy claims that BNSF violated its statutory common carrier obligations. But Evergy's opening evidence in support of that claim ignores the fundamental question established by over a hundred years of precedent: Did BNSF act reasonably under the circumstances in responding to Evergy's request for coal transportation? Evergy ignores the question because BNSF unquestionably did.

The circumstances influencing BNSF's 2022 service to Evergy are well established and can't seriously be disputed. In that year, BNSF and the rest of the rail industry faced persistent supply chain disruptions, wild swings in rail service demand, and historical shifts in labor markets in the wake of the COVID-19 pandemic ("COVID"). In the face of these unprecedented circumstances, BNSF acted aggressively, fairly, and reasonably to serve the needs of all of its customers, including Evergy, with its available capacity.

While {{ [redacted] }}[1] its complaint and opening evidence ignore them and fail to identify anything BNSF did that was unreasonable in that context. Instead, Evergy claims that under BNSF's 2022 tariff Evergy was entitled to get as much coal as it asked for, regardless of the circumstances, so long as the requested volume was roughly in line with volumes that historically moved under contracts. Specifically, Evergy insists that BNSF is liable for over $22 million in damages because BNSF delivered

[1] *See* Counsel's Executive Summary Exhibit 01, EVERGY-0052860.

{ [redacted] } coal than Evergy forecasted.[2] Evergy asks the Board to hold BNSF strictly liable for failing to deliver coal at historical volume levels, while at the same time leaving itself free of any delivery commitments or financial consequences when Evergy fails to meet its own forecasts. The unreasonableness of Evergy's position was apparent in 2024 when Evergy shipped { [redacted] } less coal than it told BNSF it would ship that year, including a period of { [redacted] } weeks when it shipped no coal at all to its Iatan plant.[3] Evergy's liability theory is not supported by agency or court precedent.

Evergy's damages claim is similarly flawed. Notwithstanding the COVID-related challenges that BNSF and other railroads faced in 2022, Evergy was never required to conserve coal, and Evergy's customers were never in danger of experiencing a power shortage. All of Evergy's alleged damages flow from Evergy's voluntary business decisions to conserve coal, which it did by charging higher prices for the electricity it generated. Not surprisingly, Evergy's own calculations show that its coal conservation measures actually resulted in *profits* for Evergy in some months during 2022. The true impact of Evergy's voluntary business decision to conserve coal can't be assessed by the Board because the models Evergy used to calculate damages are unreliable, use inputs for historical data that diverge significantly from actual historical data, are unnecessarily complex, and require in-

[2] *See* FTI Workpaper "2022 Declaration and Nominations.xlsx" at tab "2022 Declarations Fulfillment"

[3] *See* Counsel's Executive Summary Exhibit 02, BNSF_EVERGY_0026107.

depth understanding of heavily regulated electricity markets that the Board has already acknowledged are beyond its expertise. Finally, nearly half of the damages that Evergy seeks relate to service to the Lawrence plant—a plant that Evergy had previously informed BNSF it intended to retire in 2023—even though BNSF delivered { [redacted] }

Evergy wants the Board to make BNSF a financial guarantor for the effects of external factors like COVID that are beyond BNSF's reasonable control, and for the consequences of its own pricing and stockpiling decisions in complex electricity markets. The Board should not do so.

A. Like all links in the global supply chain, BNSF and other railroads faced capacity constraints in 2022 due to circumstances beyond their reasonable control.

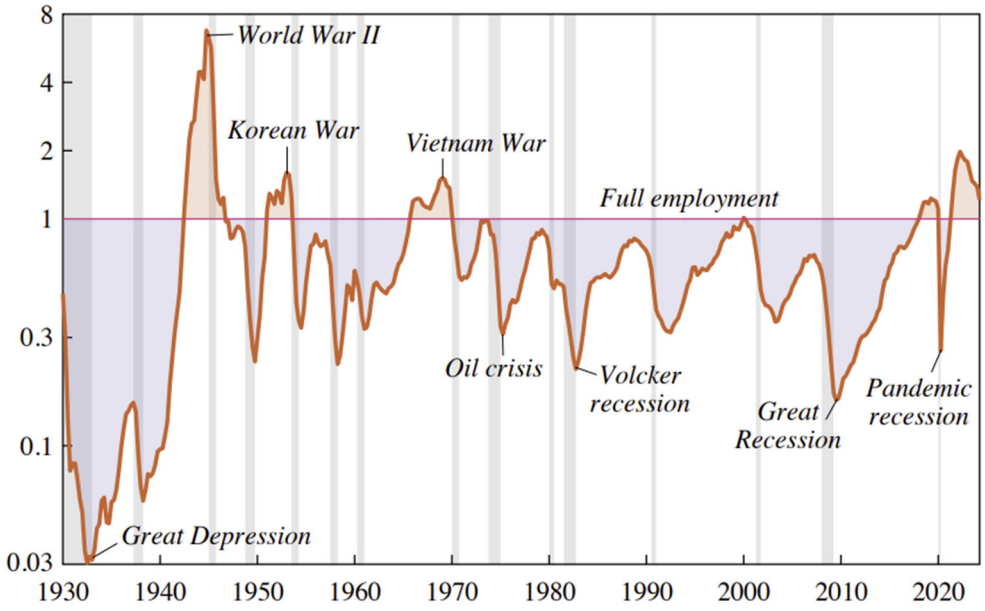
In the aftermath of the COVID pandemic, the global supply chain, including rail and other transportation modes across the United States, faced unprecedented challenges. The Board has already acknowledged the impacts of those challenges on rail transportation.[4] The pandemic directly caused a precipitous drop in economic activity worldwide and, along with it, a massive drop in demand for rail and other transportation service. Views of respected leaders across the world economy, backed by decades of historical experience, agreed that a full economic recovery—and thus a return to historical levels of demand for transportation services—would be years in the making. Yet, contrary to near-universal

[4] *See, e.g.*, *Reciprocal Switching for Inadequate Rail Service*, EP 711 (Sub-No. 2) (STB served Apr. 30, 2024) (recounting service issues across the rail industry).

expectations, demand up and down the global supply chain rebounded with unprecedented speed, which continued through 2022. The Russian invasion of Ukraine in February of 2022 sent further shocks through world agriculture and energy commodity markets, including triggering natural gas price surges that impacted demand for coal transportation. As described in the verified statements of Dr. Jeffrey Prince, Messrs. Michael Baranowski and Nathaniel Zebrowski, and Mr. Craig Morehouse, BNSF faced unpredictable and surging demand in 2021 and 2022.

At the same time, labor markets experienced historic shifts that undermined the ability of the global supply chain to ramp back-up to meet that demand. Several factors arising from the pandemic, including historically large direct stimulus payments, a desire for remote working made easier by technological advances, federal vaccine mandates (which were particularly controversial in BNSF's recruitment bases), and the so-called "Great Resignation," led to the tightest labor markets the United States had experienced in the better part of a century. As seen in the figure below, the last time that the labor market was as tight as it was post-COVID was during and immediately after World War II, and the only other somewhat comparable labor markets were during the Korean and Vietnam Wars.

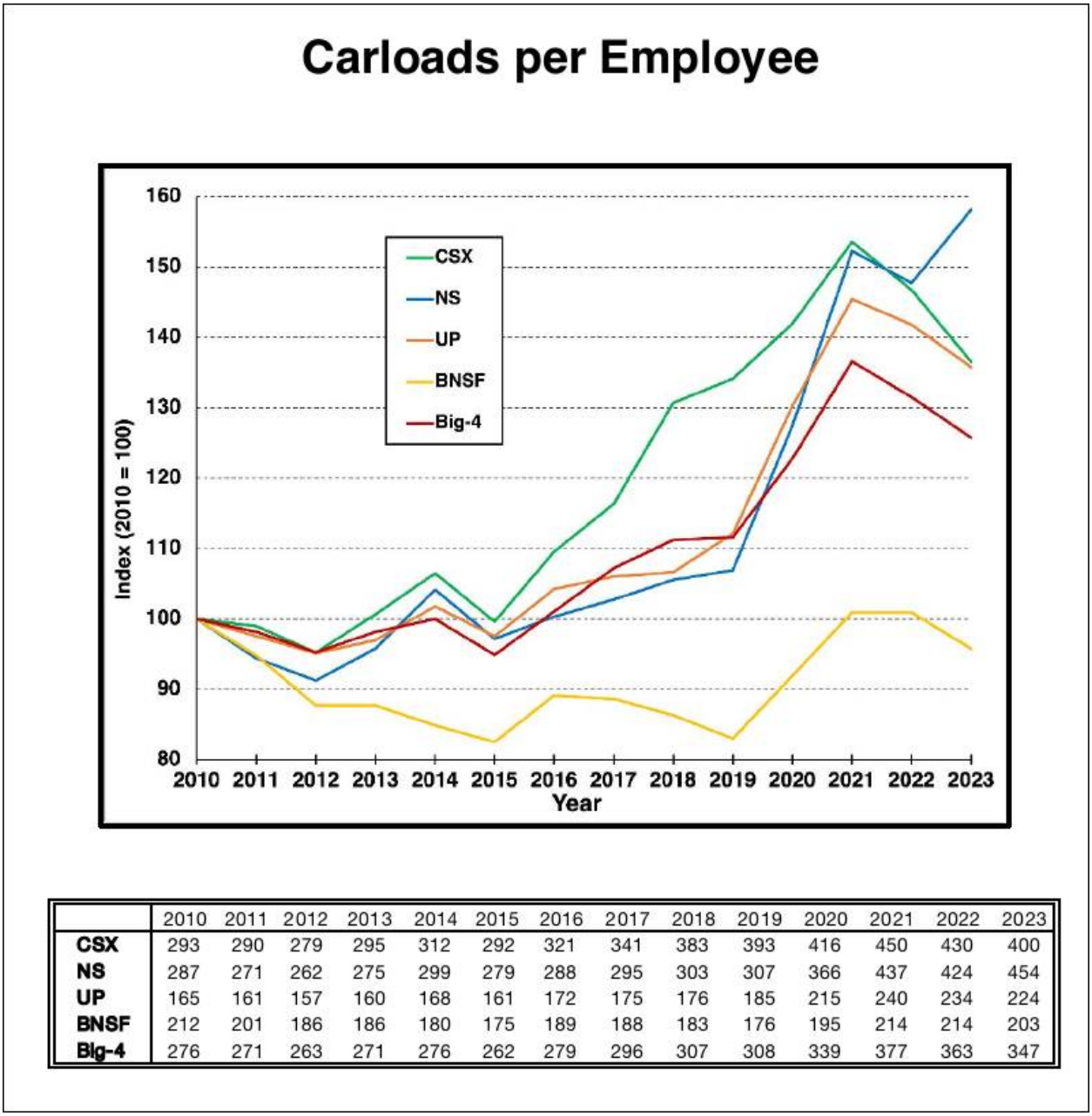
Johnson Figure 1: National Labor Market Tightness



As described in the verified statements of Dr. Erin Johnson and Ms. Judy Carter, BNSF faced unprecedented headwinds in trying to match employee headcount with demand in 2022. BNSF has always sought to maintain a workforce consistent with its current and forecasted traffic levels. In the years before 2020, BNSF's headcount varied in proportion to its declining volume levels, though BNSF did not reduce its headcount to the same degree as other Class I carriers. Even the testimony by representatives of organized labor in the EP 770 proceeding cited by Evergy demonstrates that BNSF did not dramatically cut headcount relative to traffic in the years prior to 2020 and that BNSF maintained significantly higher employee levels than other large railroads in this timeframe. As the yellow line in the chart submitted by the unions in EP 770 below shows, unlike other railroads, BNSF saw *decreased* carloads per employee in the years 2010 through 2020 (*i.e.*,

more employees per carload) and in 2022 had roughly the same number of carloads per employee as it did in 2010.

Johnson Figure 10: Carloads per Employee in the Class I Railroads 2010 – 2021



	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
CSX	293	290	279	295	312	292	321	341	383	393	416	450	430	400
NS	287	271	262	275	299	279	288	295	303	307	366	437	424	454
UP	165	161	157	160	168	161	172	175	176	185	215	240	234	224
BNSF	212	201	186	186	180	175	189	188	183	176	195	214	214	203
Big-4	276	271	263	271	276	262	279	296	307	308	339	377	363	347

Nevertheless, the "one-two punch" of surging demand and an absence of sufficient labor to fulfill it left global supply chains reeling. Rail carriers like BNSF

were no exception and, as a result, they faced deteriorating network fluidity in 2021 and 2022.[5]

B. BNSF acted reasonably under the circumstances to serve Evergy while protecting its broader network.

Recognizing that crew availability was a driving factor for service difficulties in 2021 and 2022, BNSF took substantial actions to quickly increase Train, Yard, and Engine ("TY&E") employment and succeeded in returning employment levels relative to volume back to historical ranges by the beginning of 2023. For a number of interrelated reasons, it took time for BNSF's efforts in 2021 and 2022 to come to fruition. First, the unique socioeconomic factors prompting the Great Resignation, as well as the rise of remote work opportunities in the post-COVID environment, rendered the perception of railroad jobs—which by necessity take workers away from their homes and families—less attractive than it once had been. Second, as a result, BNSF faced furlough recall rates that, through no fault of BNSF, were {{ [redacted] }} during this period than historical experience indicated BNSF should have expected. Third, because of the {{ [redacted] }} of recalls, BNSF was required to turn to new hires. Fourth, because of the necessity for extensive safety training, there are significant lags between when TY&E employees are hired and when they can be deployed in the field. Fifth, BNSF's efforts to expand its TY&E employee base were further slowed by the increased

[5] *See Grand Trunk Corp. v. STB*, 143 F.4th 741, 744 (7th Cir. 2025) ("Like many aspects of the American economy, railroads were not immune from the workforce challenges of the COVID-19 pandemic.").

levels of attrition that were ubiquitous throughout the economy in the wake of COVID.

To protect service levels while hiring efforts continued, BNSF took operational steps to restore network fluidity that were consistent with recovery plans that BNSF shared with the Board and the public. Part of that plan was {{ [redacted] }} trainsets from service across the coal network in March 2022, since reducing cars online improves velocity—a dynamic familiar to anyone that has been stuck in a traffic jam. The coal set reductions were spread among BNSF's customers, and { [redacted] } sets was an Evergy set. Evergy's sets for its Lawrence plant were not impacted by the { [redacted] } at all; rather, BNSF left { [redacted] } sets in service to Lawrence from mid-January through the end of 2022.

While taking these measures to improve network fluidity, BNSF saw {{ [redacted] }} demand for coal transportation throughout 2022. Despite {{ [redacted] }} the short-term effort to decongest the coal network in the first half of 2022 worked, and, by July, velocity across the system, including {{ [redacted] }} had improved. Therefore, when Evergy { [redacted] }, BNSF was able to approve the { [redacted] } set for Iatan a mere two business days later.

As the Board has well documented in EP 770, recovery from the impacts of COVID was not linear. System demand continued increasing over the summer months, employee limitations were exacerbated further, and network velocity began

falling once again. Evergy nevertheless demanded that BNSF { [redacted] } trainset into service at Iatan. But as BNSF explained at the time, { [redacted] } set would have exacerbated the fall in velocity during the second half of 2022, hurting other shippers as well as Evergy in the process.[6] Accordingly, BNSF could not { [redacted] } trainset until December 2022, when velocities had increased and BNSF's extraordinary hiring efforts were beginning to bear fruit.

Over this entire period, BNSF was in close communication with Evergy and its other customers, carefully monitoring coal stockpile levels and prioritizing customers with the most critical needs. BNSF worked hard to deliver as much coal to as many customers as possible. And by carefully managing resources across its network—and not seeking to favor individual shippers like Evergy, even though Evergy's shipments generated {{ [redacted] }} for BNSF—BNSF succeeded in increasing its fluidity and moving more coal for its customers notwithstanding the severe challenges imposed by external forces.

As a result, Evergy's customers were never in any danger of experiencing a shortage in electricity. Indeed, as 2022 progressed, the rate of BNSF's deliveries to Evergy consistently increased. During the critical second half of 2022, when Evergy expressed the most concern, Evergy received service {{ [redacted] }} As shown below, relative to initial forecasts Evergy provided at the beginning of 2022, Evergy received {{ [redacted]

[6] *See* Counsel's Executive Summary Exhibit 03, BNSF_EVERGY_0005734.

[redacted] }} on average in the second half of 2022.

Baranowski/Zebrowski Figure 60: Fulfillment of Initial CFT Nominations for Second Half of 2022 - Evergy vs. Other BNSF-Served Coal Plants {{



}}

In fact, Evergy's Lawrence facility received {{ [redacted] }} coal in 2022 than it asked for at the beginning of the year, permitting the plant to generate electricity exceeding historical levels throughout the year. Iatan was likewise able to burn coal in the peak summer months consistent with historical levels and even exceeded historical levels in October. By September 2022, Iatan had also hit its {{ [redacted] }} for stockpile levels for the upcoming winter season.

C. BNSF responded reasonably to Evergy's unreasonable Coal Forecasting Tool nominations.

BNSF has a statutory obligation to provide common carrier service "upon reasonable request." BNSF knew that Evergy needed and requested coal transportation to serve the needs of Evergy's own customers, and BNSF acted reasonably to provide that coal transportation. But Evergy claims that BNSF had

an obligation to provide the specific amount of coal transportation that Evergy nominated in BNSF's Coal Forecasting Tool ("CFT") each month and that the failure to provide that specific level of service was a "default" on BNSF's obligations. But the treatment of Evergy's CFT nominations as creating some type of contractual volume obligation without any reciprocity on Evergy's part is clearly wrong.

To address the demands of managing a large and extensive coal transportation network, BNSF requires coal shippers (both contract and common carrier) to provide an annual volume declaration ("Annual Declaration") of the coal they intend to ship for the following year, broken down by month. BNSF uses these Annual Declarations to plan for and to allocate resources for the coming year. Shippers are then required to enter coal volume amounts, called "nominations," each month into BNSF's CFT to show details on coal mine supplier choices, anticipated fluctuations in monthly demand from the annual declaration, and to account for temporary maintenance outages or other changes. These monthly nominations help BNSF plan and manage the coal transportation network on an ongoing basis, but they do not amount to "requests" for service that create a legal obligation that a shipper can enforce through a damages action. Moreover, even if Evergy's CFT nominations could be considered "requests" for service under the governing statute (which would not be appropriate), they were far from reasonable.

Evergy's CFT entries { [redacted]

[redacted]

[redacted] } and, at times, {{ [redacted] }} Moreover, Evergy sought transportation service under a common carrier tariff which explicitly stated that requests for service must be { [redacted] } but Evergy repeatedly ignored the { [redacted] } despite being well aware of it.[7] Then, as natural gas prices rose, Evergy began burning far greater amounts of coal entering the summer of 2022 than {{ [redacted] }}—and significantly more than { [redacted] } In turn, Evergy's demand for coal deliveries { [redacted] } in the summer months {{ [redacted] }} than demand from other BNSF coal customers, as discussed below.

Baranowski/Zebrowski Figure 1: 2022 Monthly Burn—Percentage Over or Under Annual Average Monthly Burn (January 2022 - December 2022) {{

[redacted]

}}

[7] *See, e.g.*, Counsel's Executive Summary Exhibit 04, EVERGY-0082612.

As a responsible common carrier, BNSF took all reasonable measures to keep up with Evergy's { [redacted] } demand for coal, consistent with the needs of its broader coal transportation network. But BNSF was not obligated to meet the { [redacted] } of Evergy's CFT nominations, which { [redacted] } of the tariff under which the transportation was provided—a conclusion that {{ [redacted] }}[8]

Evergy's liability theory is founded on the premise that its ongoing communications to BNSF of varying forecasted coal needs create a strict legal obligation to transport the nominated amount of coal, but Evergy's own actions since 2022 prove that theory's weakness. For the year 2024, a mere two years after the events at issue in this case, Evergy told BNSF in its Annual Declaration that it would need a total of { [redacted] } tons of coal over the year. But Evergy later departed significantly from that Annual Declaration, including {{ [redacted] }}[9] Notably, the { [redacted] } in coal tonnage that Evergy eventually "requested" in 2024 mirrors closely the supposed shortfall in coal deliveries in 2022 that is the subject of Evergy's complaint. For Evergy, BNSF is obligated—on penalty of an eight-figure damages award—to provide the specific and variable level of service that Evergy forecasts; but Evergy is

[8] *See* Counsel's Executive Summary Exhibit 04, EVERGY-0082612 {{ [redacted] }}.

[9] Counsel's Executive Summary Exhibit 02, BNSF_EVERGY_0026107.

free to ignore those forecasts with no responsibility for any consequences BNSF and its other coal customers suffer as a result.

And what was Evergy's response when BNSF pointed out this inconsistency in Evergy's understanding of the common carrier obligation? {{ [redacted] }}[10] When it comes to its own obligations, Evergy acknowledges that numerous factors make it difficult to predict its future coal needs, including {{ [redacted] }}[11] But Evergy would like the Board to ignore such circumstances in assessing the adequacy of BNSF's coal transportation service. Evergy's approach to common carrier service is not merely unfair and inappropriate, it is also untethered to precedent.

D. Evergy has failed to prove its claims for damages.

In addition to the fatal flaws in Evergy's liability case, Evergy's damages claims are without merit. At the highest level, Evergy's damages claims suffer from the same problem as its liability case: Evergy fails to establish that it suffered any damage caused by a specific unlawful act or omission by BNSF under the circumstances existing in 2022. It is beyond dispute that numerous external factors, as well as factors associated with Evergy itself (including the constraints

[10] Counsel's Executive Summary Exhibit 05, BNSF_EVERGY_0026099 (emphasis added).

[11] Counsel's Executive Summary Exhibit 06, BNSF_EVERGY_0026104.

from its inefficient coal inventory infrastructure, its uniquely cumbersome unloading requirements at the Lawrence facility, and plant outages) impacted the level of coal transportation service Evergy received in 2022. But because Evergy completely ignored all circumstances in seeking to establish BNSF's liability, it also failed to consider the extent to which those circumstances might have contributed to any harm purportedly suffered by Evergy. Instead, Evergy's flawed damages theory is that BNSF is a financial guarantor of service to Evergy, and therefore responsible for the full extent of any harm supposedly suffered in 2022. That theory is unprecedented, and clearly inappropriate. Even if Evergy could identify an action or decision by BNSF that was unreasonable at the time—and it cannot—Evergy's legally recoverable damages would necessarily be limited to harm it can prove directly flowed from the allegedly unlawful act or omission and would not have been suffered in its absence. Evergy has not made any such showing.

Another fatal flaw in Evergy's damages claim flows from its decision to include alleged harm relating to service provided to the Lawrence facility. Even under Evergy's flawed liability theory, BNSF delivered coal volumes { [redacted] } for Lawrence in 2022. Moreover, BNSF maintained a { [redacted] } in service for Lawrence over the entire year. As a result of BNSF's actions, Lawrence was able to burn more coal in 2022 than it did in either 2020 or 2021. Evergy, nevertheless, chose to include the impact of alleged harm related to Lawrence service in its damages submission, and given Evergy's reliance on complicated electricity industry modeling in which the pricing decisions

of Evergy's plants have interrelated impacts on each other, those alleged harms cannot be separately identified in and excluded from Evergy's damages calculations. Therefore, Evergy's improper and overly aggressive decision to include Lawrence service in its case renders its damages calculations completely unusable, *for any purpose*.

An even greater problem with Evergy's damages claim is that Evergy's choice to conserve coal by charging higher prices for the electricity it generated meant that Evergy could earn higher profits. Evergy's own damages calculations reveal that there were several months in which Evergy made a larger profit than it would have earned absent coal conservation. The magnitude of the profits at issue cannot be doubted. Evergy's reduction in claimed damages from $55 million in its complaint to $22 million in its opening evidence is attributable entirely to its belated concession that it had to account for the increased revenues Evergy made at its other plants as a direct result of coal conservation at Iatan and Lawrence.

The final core problem with Evergy's damages claims is that the models it uses to calculate damages are wholly unreliable. Evergy's models are not capable of determining if *any* damages (as opposed to increased profits) actually occurred, let alone determining an accurate calculation of such damages. As the verified statement of Mr. Paul Hibbard explains, Evergy predicates its damages calculations on a comparison of two complex production cost model scenarios—one that supposedly models the actual generation and revenue results at Iatan and Lawrence and one that purportedly models what those results would have looked

like had those plants not conserved coal. Yet, Evergy's "actual" model scenario bears no relationship to reality as it predicts generation patterns and electricity prices that look nothing like what actually transpired in 2022.[12] Generation schedules and electricity prices are the fundamental inputs to Evergy's damages claims—as such, the problems with Evergy's modeling undermine Evergy's entire damages claim.

Evergy's damages claims necessarily rely on a long set of "ifs" that it assumes would have fallen perfectly into place to calculate what it now alleges to be its full damage potential. Investor-owned utilities like Evergy are sophisticated entities in the business of making decisions on when to procure fuel, at what price, and how to deploy their mix of generation resources in an energy marketplace into which railroads and the Board have no visibility. Evergy made business decisions relative to the size of its stockpiles and took a conservative approach to its coal inventories in 2022. Such was Evergy's prerogative, but no basis exists for its demand that the Board transform BNSF into Evergy's guarantor against any adverse financial consequences flowing from those voluntary business decisions.

E. Conclusion

The Board must reject Evergy's complaint and claimed damages. Evergy's strict liability approach to common carrier service is unprecedented, inappropriate,

[12] Evergy's modeling for the month of October 2022 illustrates this flaw. Evergy claims it suffered more damages in October than any other month, but its modeling deviates significantly from what actually happened. Evergy's modeling assumes very little generation at Iatan and none at Lawrence in October when both plants actually burned considerable amounts of coal that month—*96 percent more than Evergy's "actual generation" model*. Evergy's inflated claimed damages for October are thus built on an entirely fictitious base case.

and ignores the context in which BNSF's service was provided. And to the extent Evergy might later attempt to assess and condemn BNSF's service in light of the relevant facts and circumstances during the challenging year of 2022, that discussion is belied by its own real-time, internal assessment of circumstances:

- Internally, {{ [redacted] }} yet now Evergy asserts that BNSF should be held liable for them.[13]
- Internally, {{ [redacted] }} yet now, it seeks millions of dollars of damages due to alleged restrictions on trainsets.[14]
- Internally, {{ [redacted] }} yet now, it complains that BNSF did not provide a level of service sufficient to meet the dramatic fluctuations in Evergy's coal-burn pattern.[15]
- Internally, {{ [redacted] }} yet now, it suggests that it conserved coal exclusively to address regulatory concerns about reliability.[16]
- Internally, and even in communications with BNSF, Evergy {{ [redacted] }} yet now, it claims that "[d]espite our requests, however, BNSF repeatedly failed to take corrective action during the year."[17]
- Internally, {{ [redacted]

[13] *Compare* Counsel's Executive Summary Exhibit 01, EVERGY-0052860 *with* Evergy Opening Evidence at 37, 47.

[14] *Compare* Counsel's Executive Summary Exhibit 07, EVERGY-0082975 *with* Evergy Opening Evidence at 37.

[15] *Compare* Counsel's Executive Summary Exhibit 08, EVERGY-0082386 *with* Evergy Opening Evidence, Verified Statement of Jessica L. Tucker ("Tucker V.S.") at 8.

[16] *Compare* Counsel's Executive Summary Exhibit 09, EVERGY-0086316; Counsel's Executive Summary Exhibit 10, EVERGY-0082219 *with* Evergy Opening Evidence at 13.

[17] *Compare* Counsel's Executive Summary Exhibit 11, BNSF_EVERGY_0005730 *with* Evergy Opening Evidence, Tucker V.S. at 36.

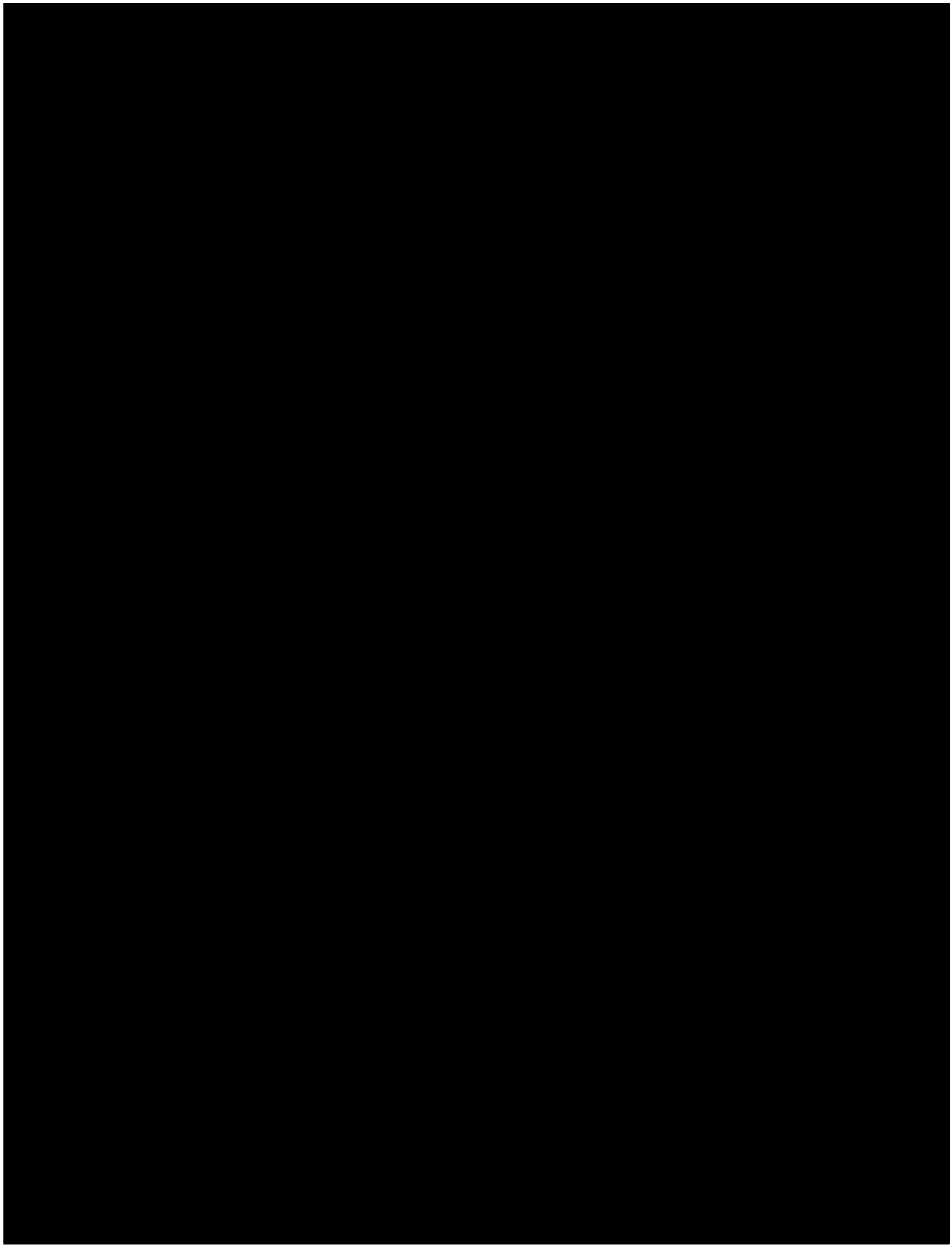
[redacted] }} yet, nearly half of the damages that Evergy seeks in this case are directly related to coal transportation to Lawrence.[18]

Throughout 2022, BNSF acted reasonably to provide Evergy and its other coal shippers with coal transportation service in the face of unique and unprecedented challenges beyond BNSF's control, and Evergy has failed to show otherwise. Evergy's efforts to make BNSF a financial guarantor for coal-fired electric generating facilities is unprecedented, opportunistic, and inappropriate. The Board should deny Evergy's complaint.

[18] *Compare* Counsel's Executive Summary Exhibit 04, EVERGY-0082612 *with* Evergy Opening Evidence, Verified Statement of Michael Crosby ("Crosby V.S.") at 18.

Counsel's Executive Summary Exhibit 01

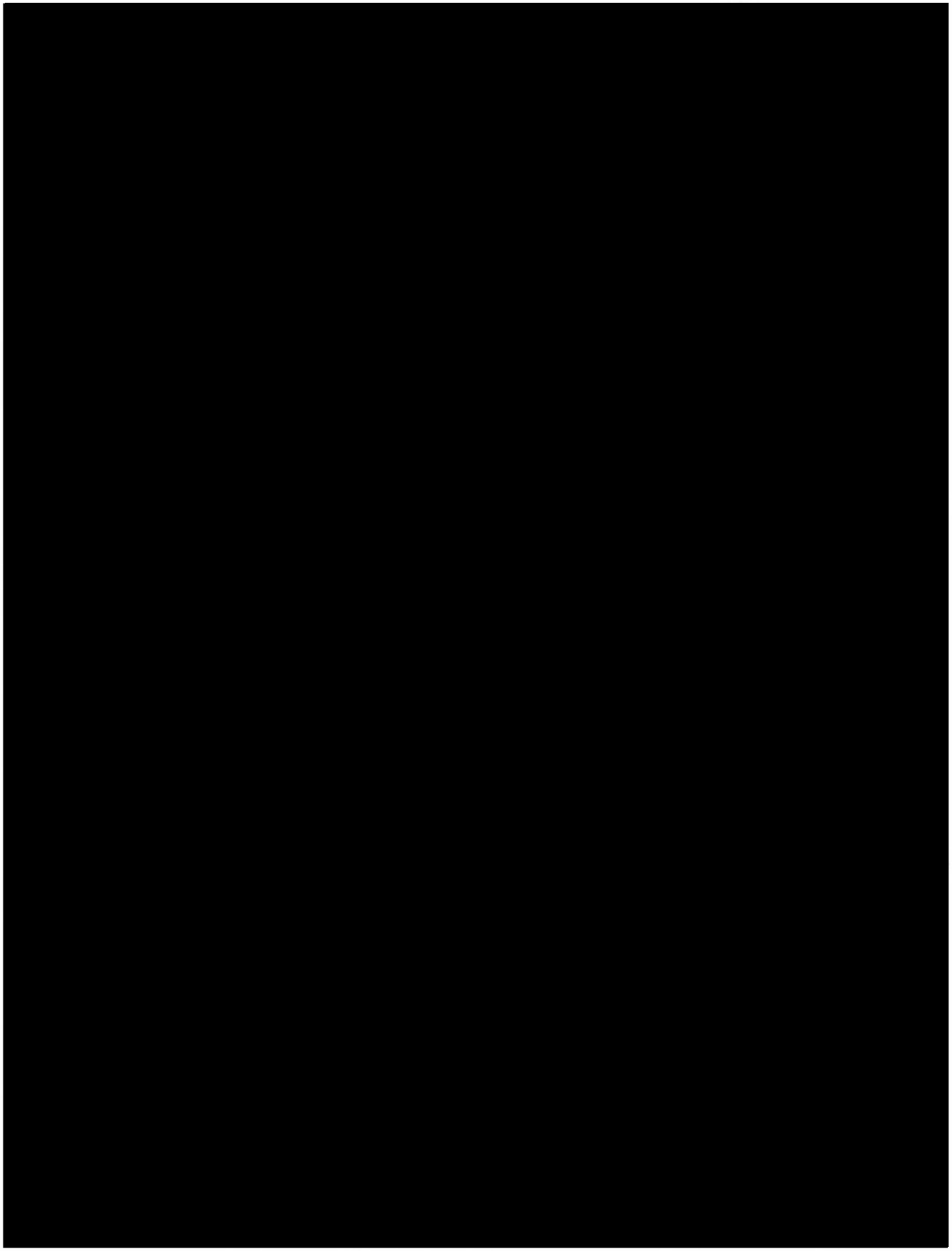
{





Counsel's Executive Summary Exhibit 02

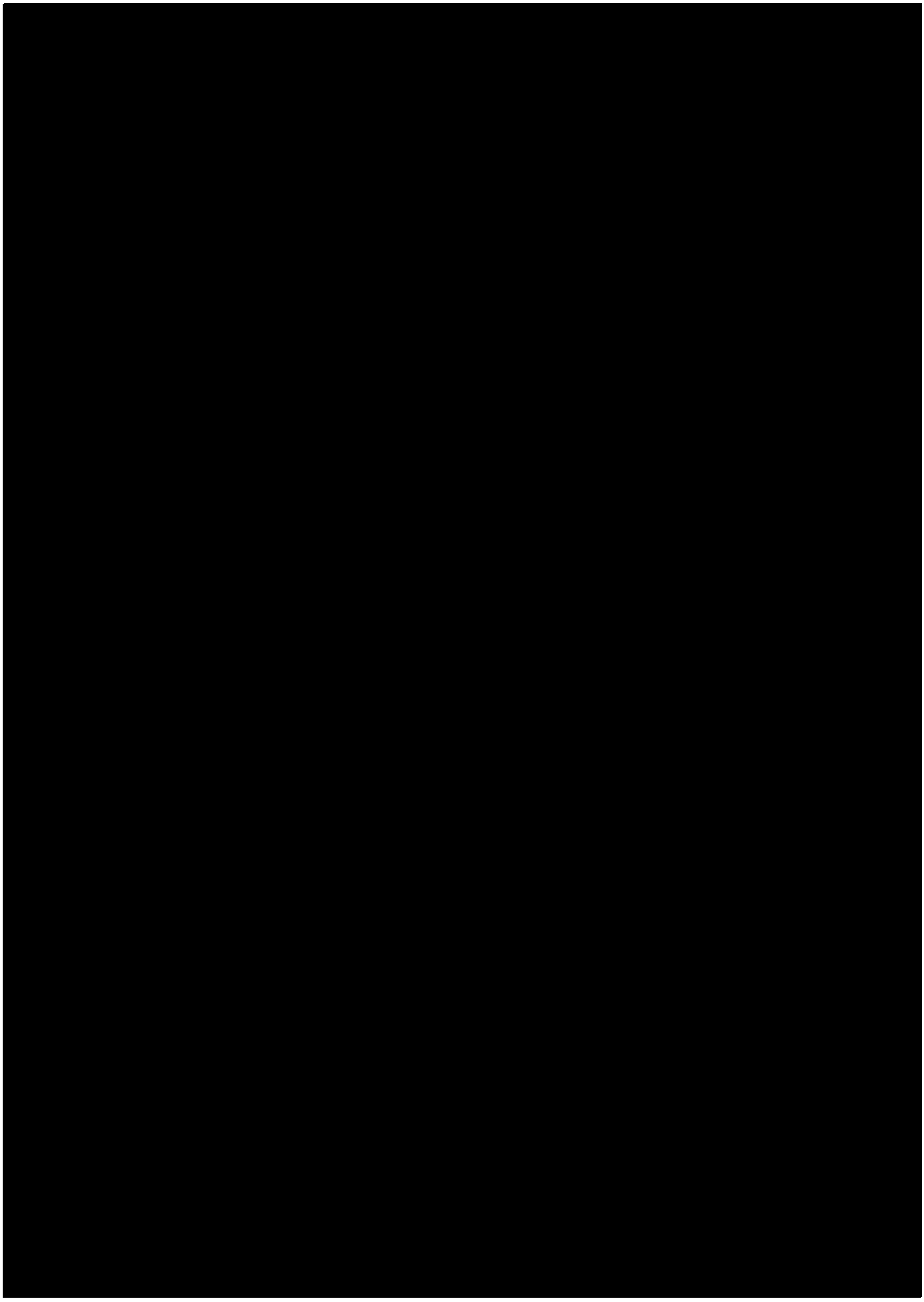
{





Counsel's Executive Summary Exhibit 03

{

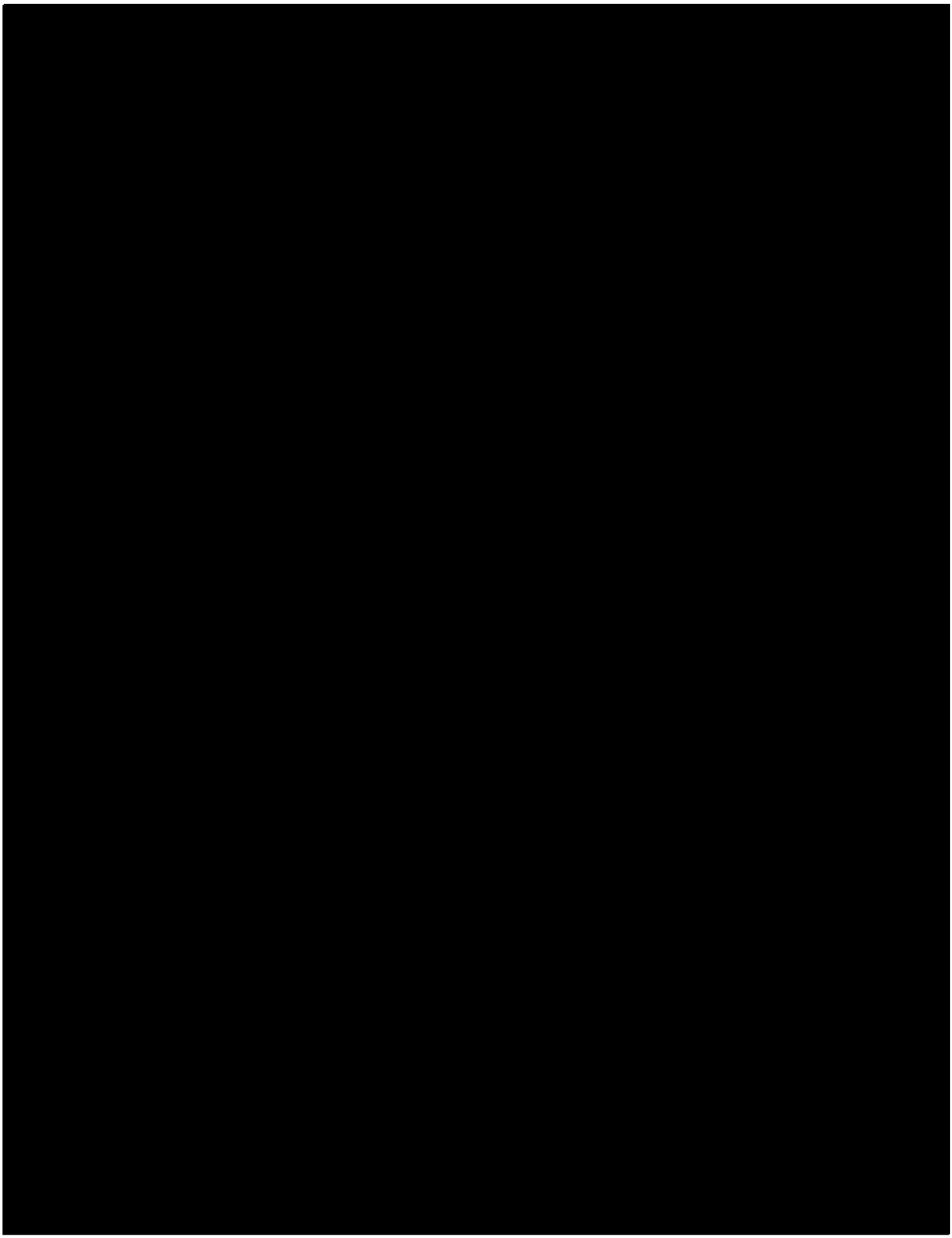


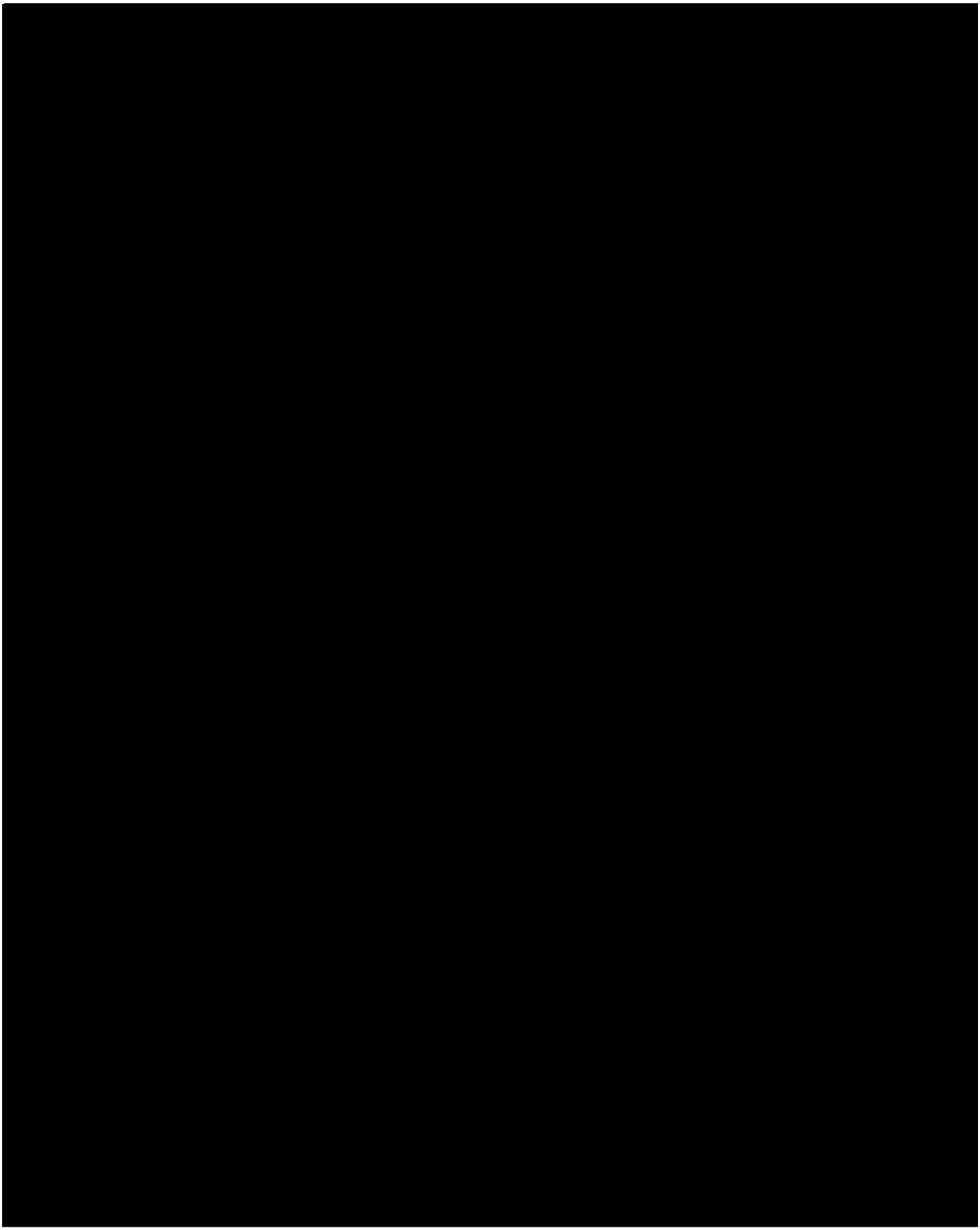
[redacted]

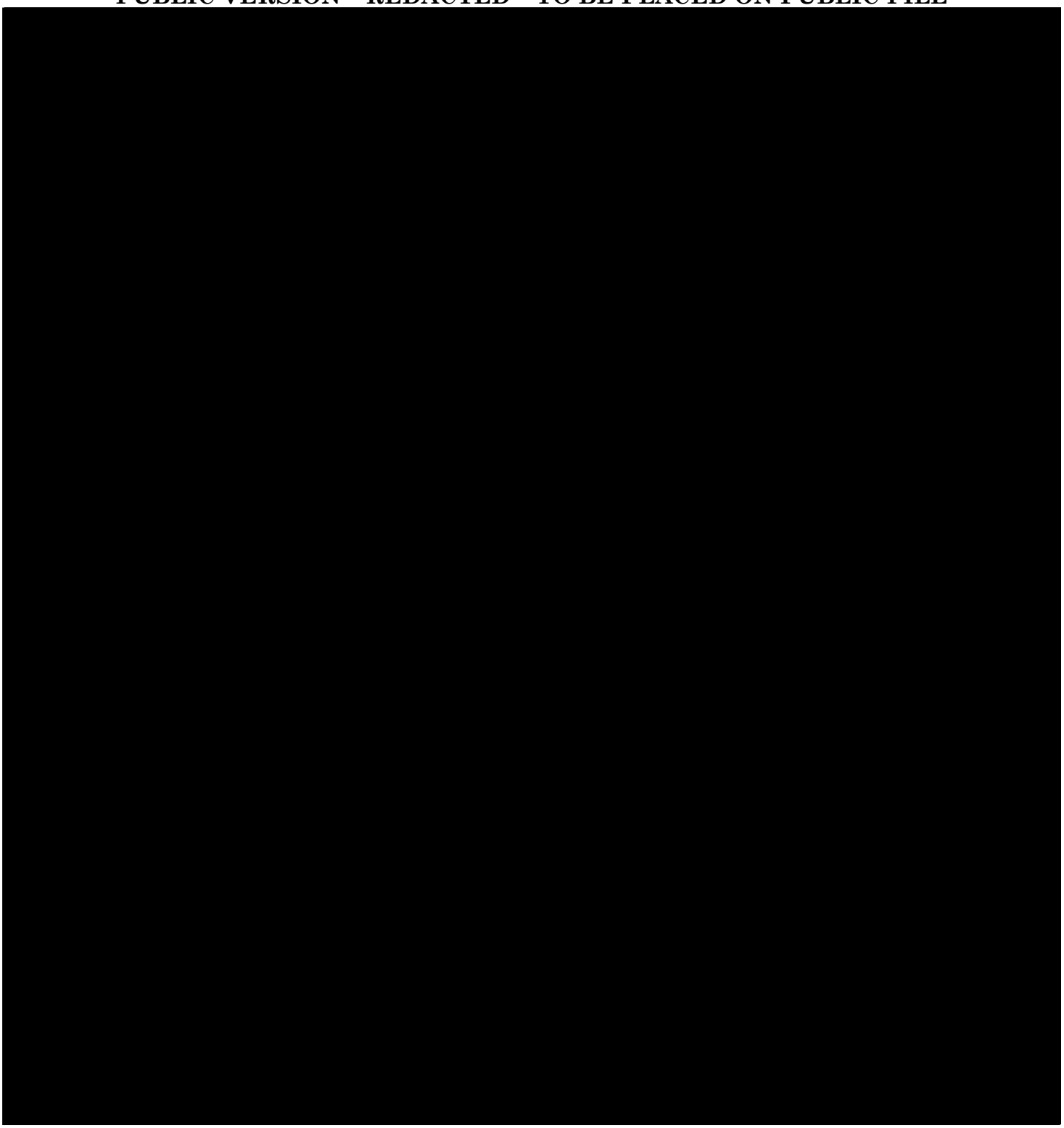
}

Counsel's Executive Summary Exhibit 04

{{ [redacted]



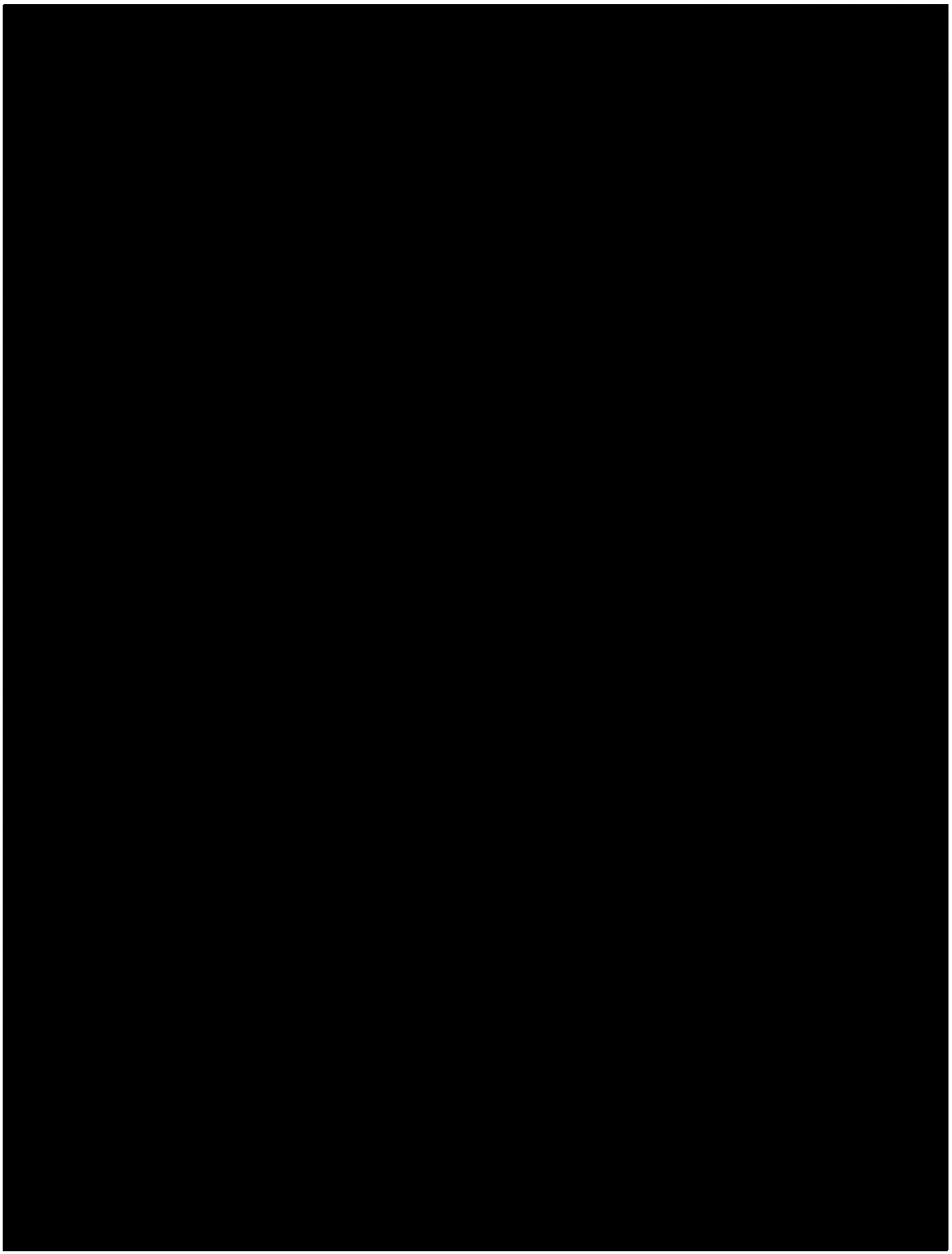


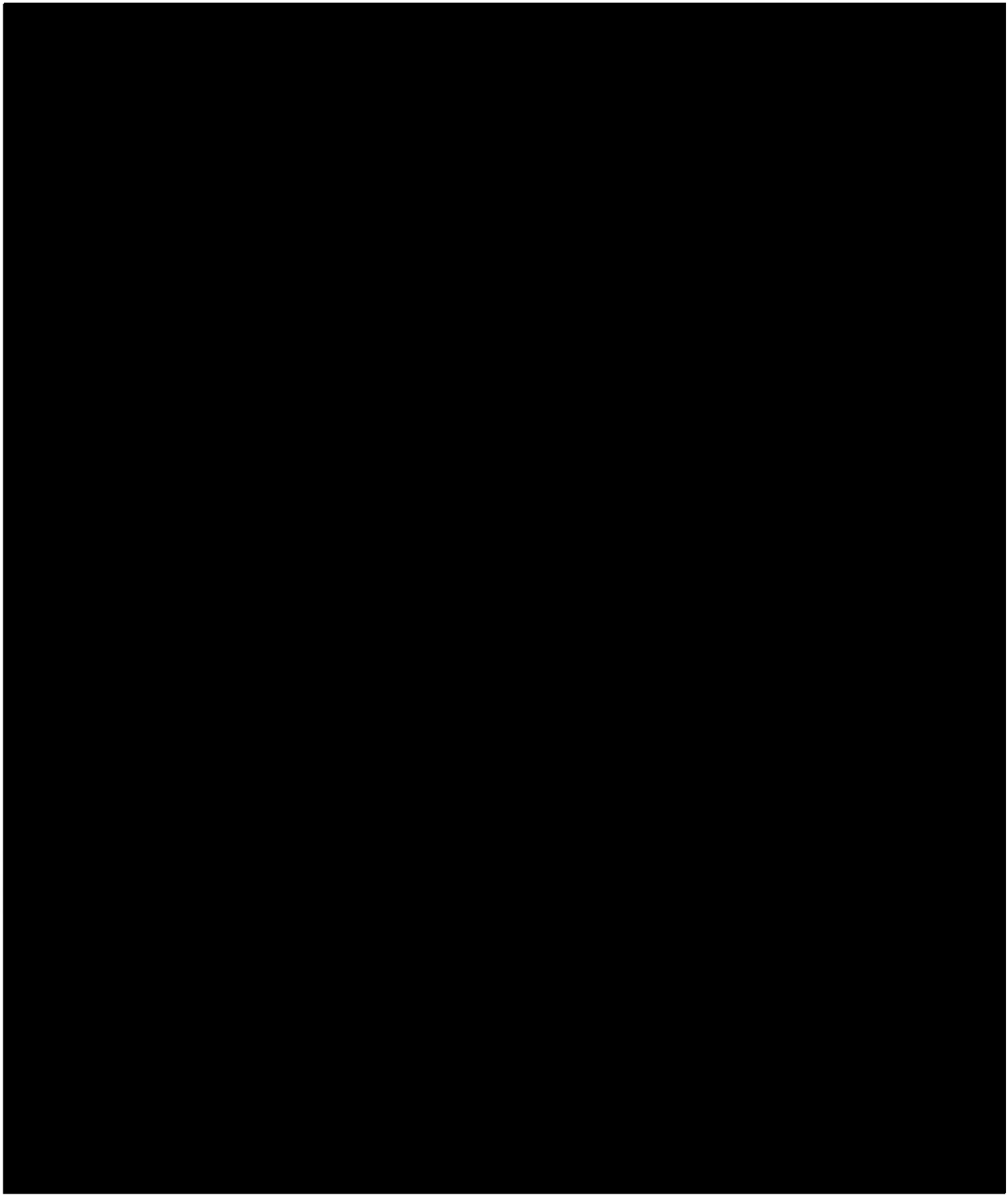


}}

Counsel's Executive Summary Exhibit 05

{



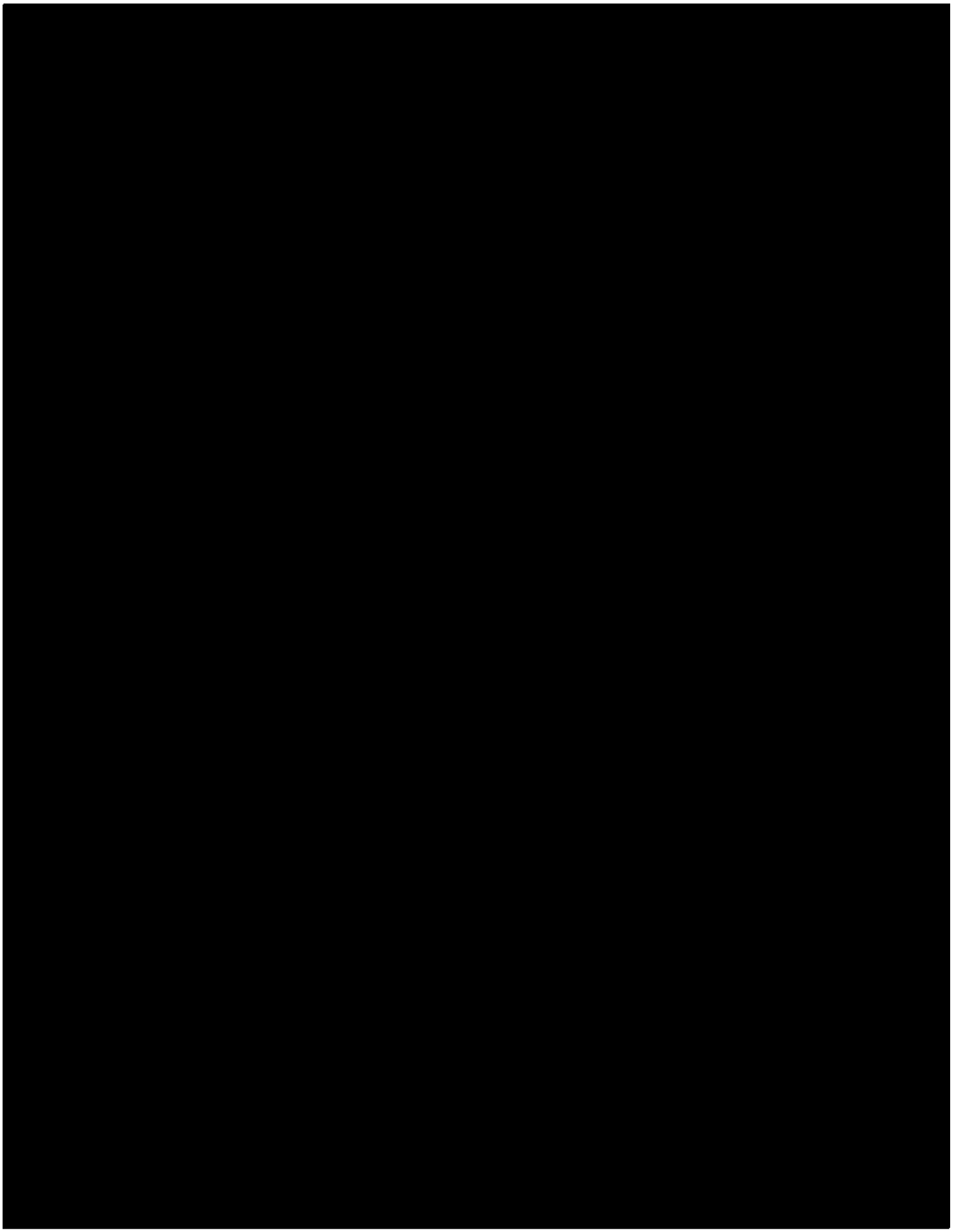


}

Counsel's Executive Summary Exhibit 06

{{

[redacted]

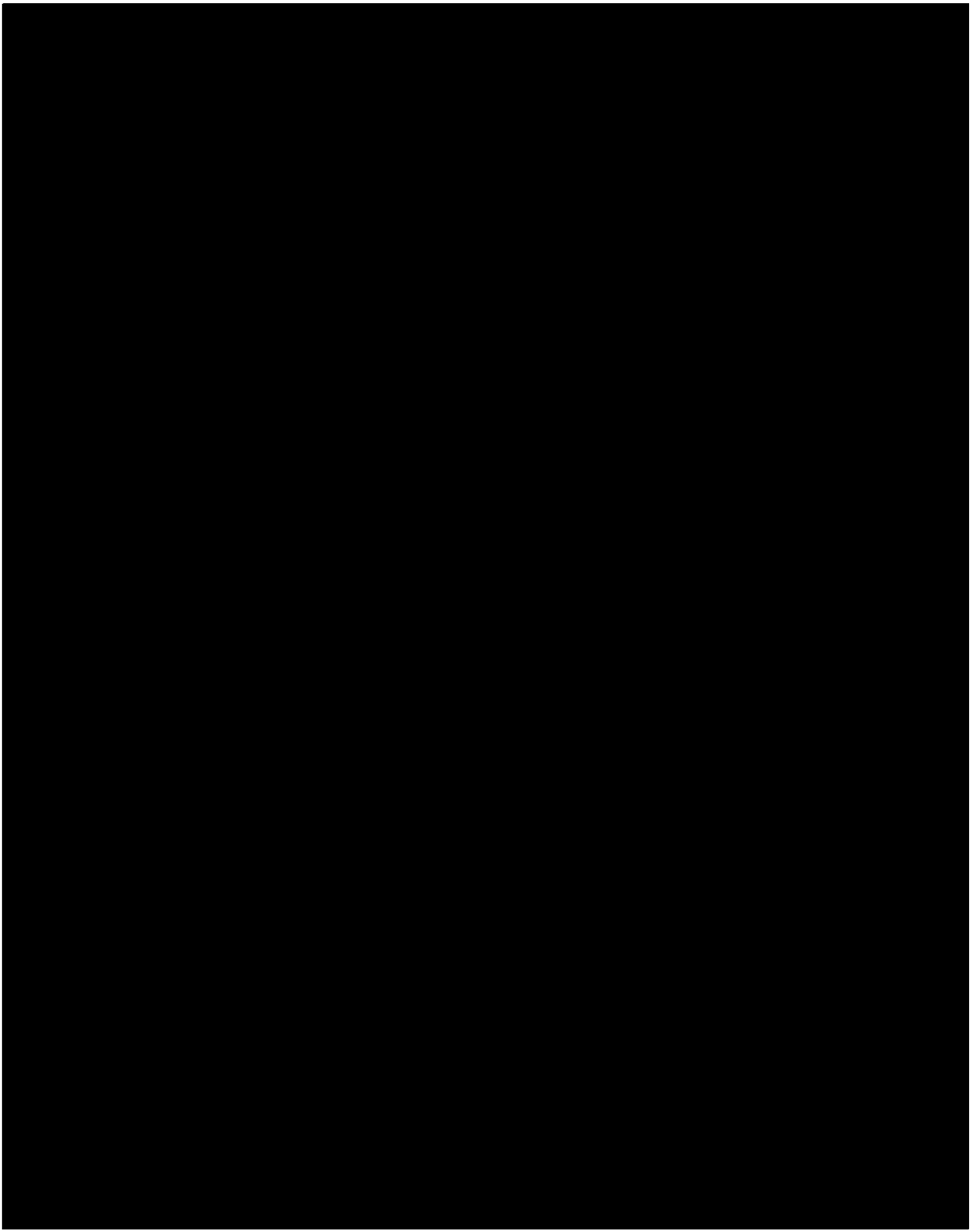


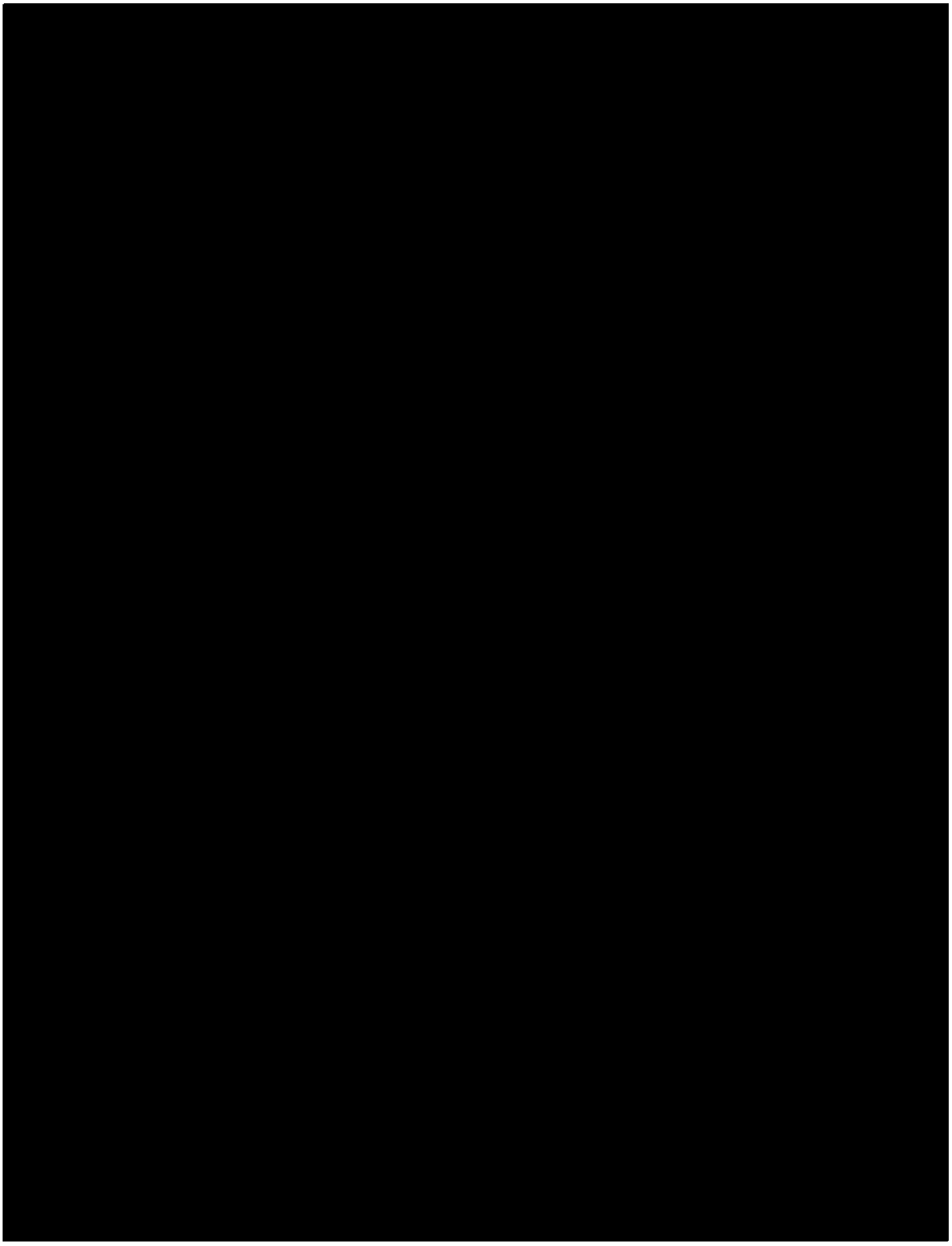
[redacted]

Counsel's Executive Summary Exhibit 07

{{





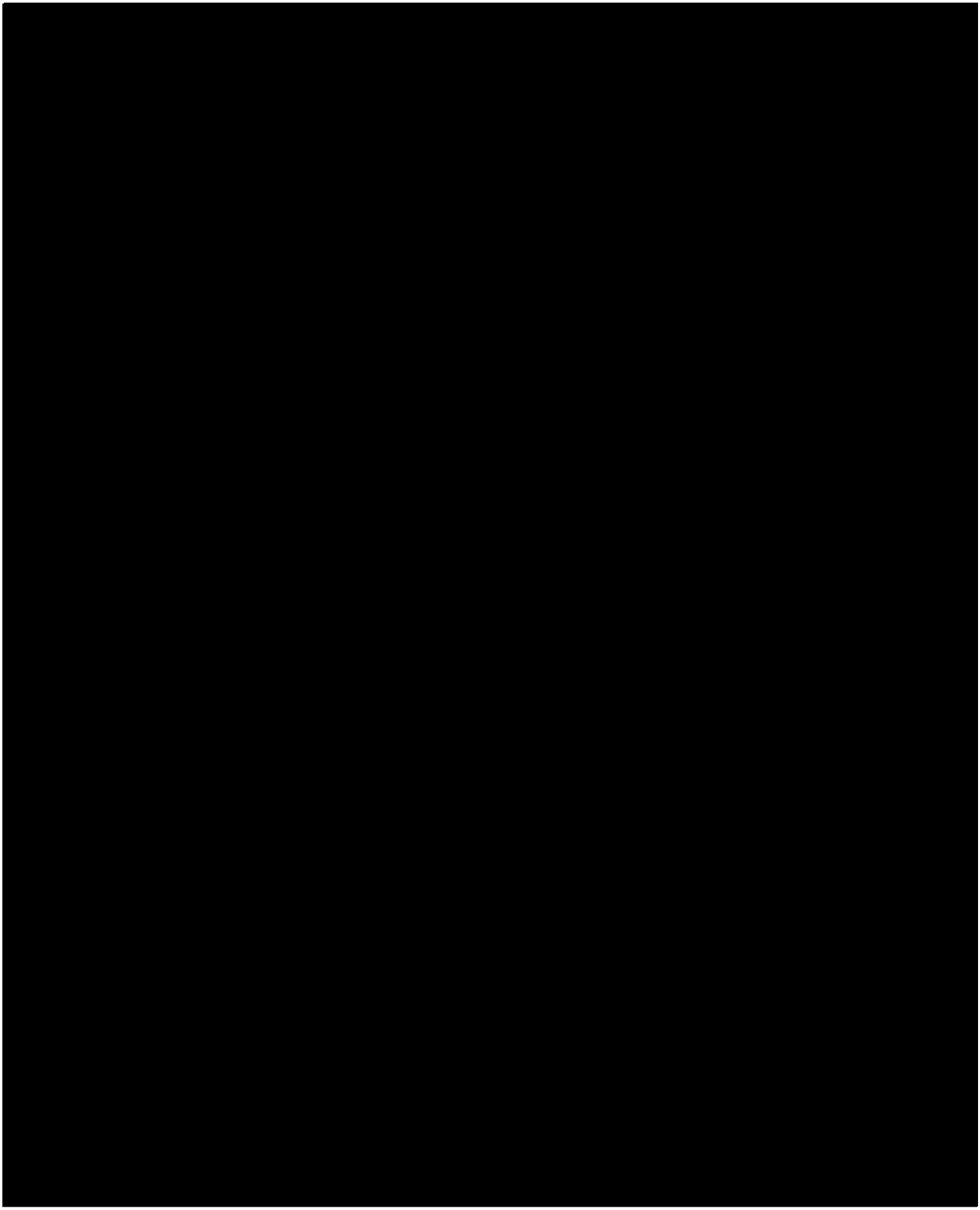


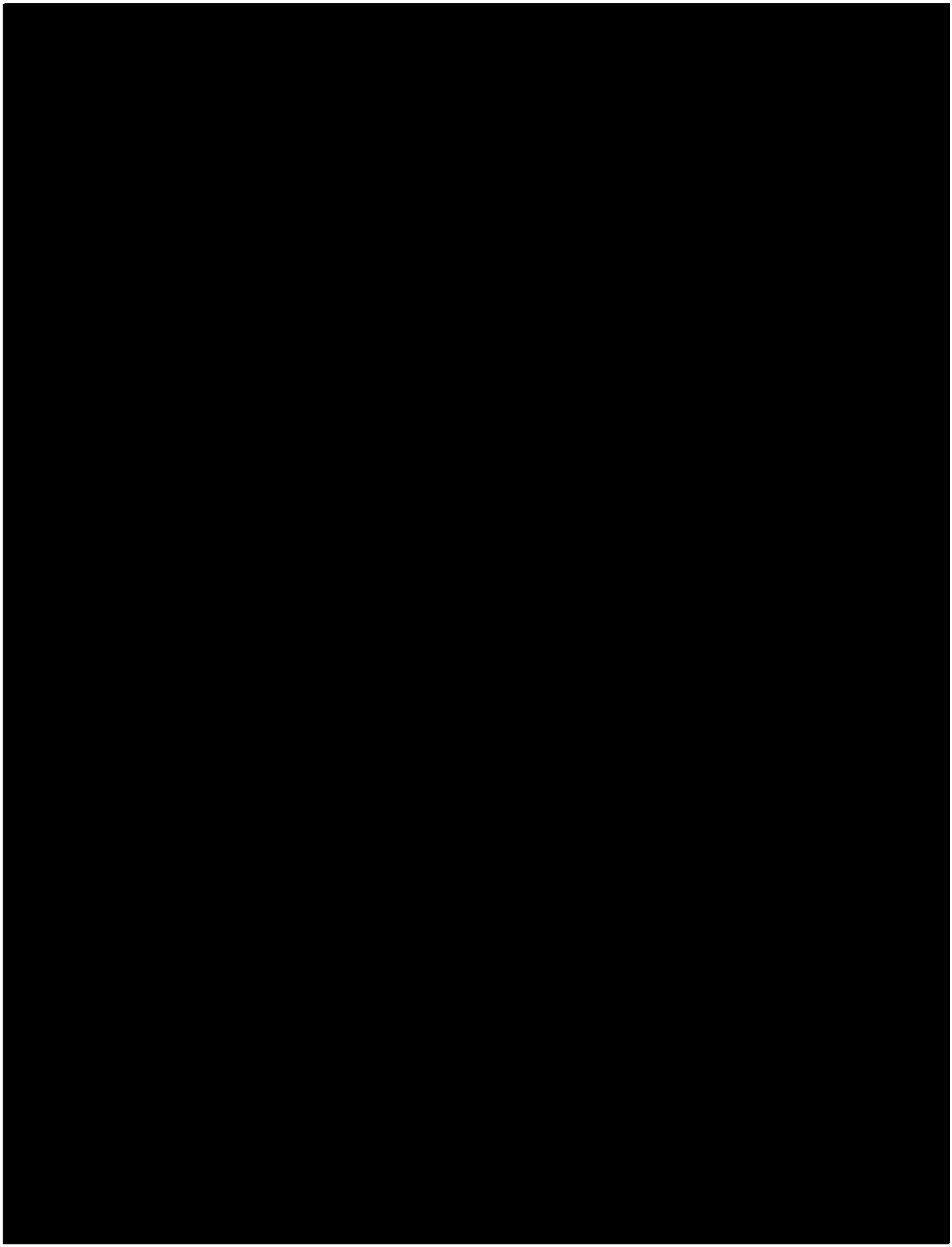


}}

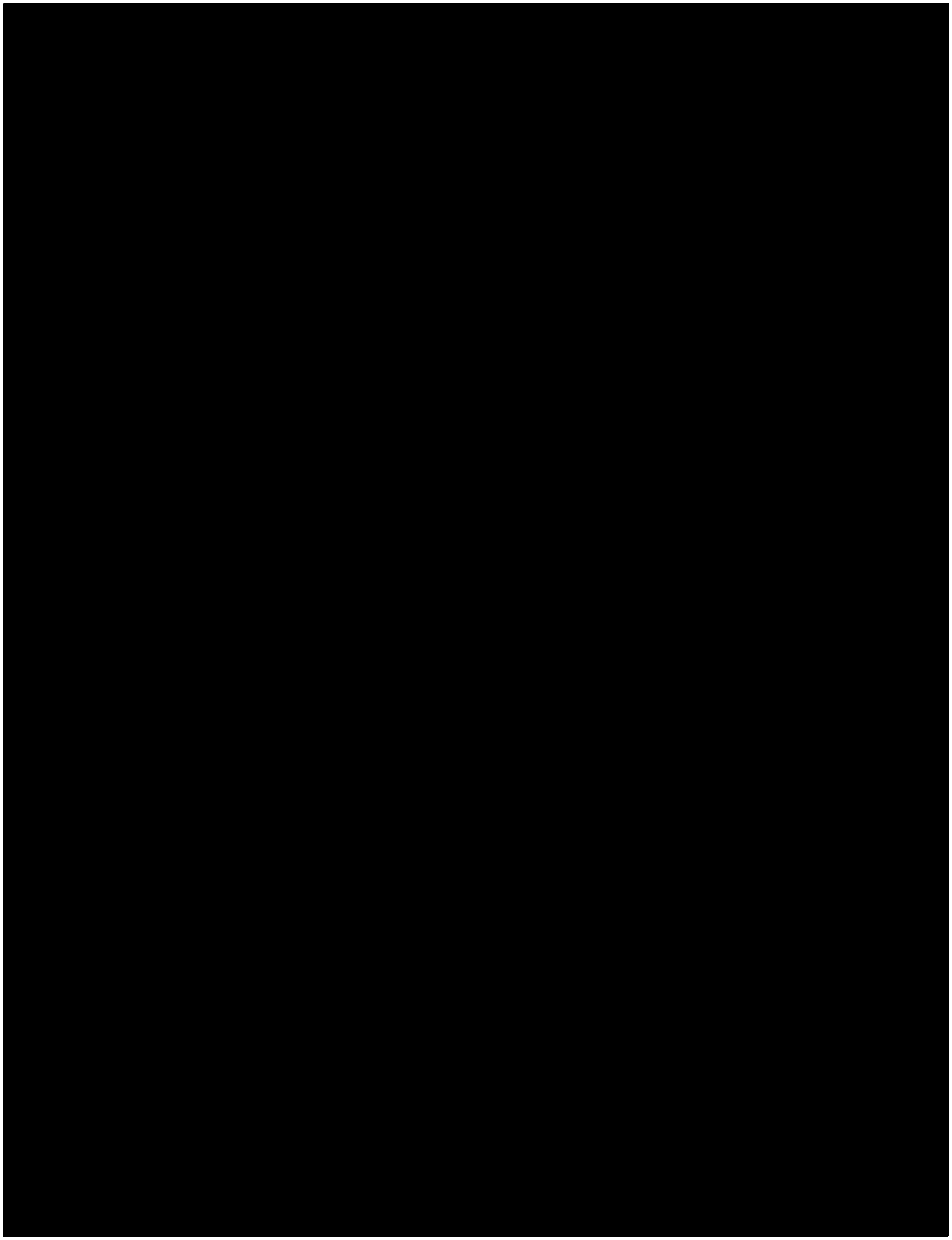
Counsel's Executive Summary Exhibit 08

{{







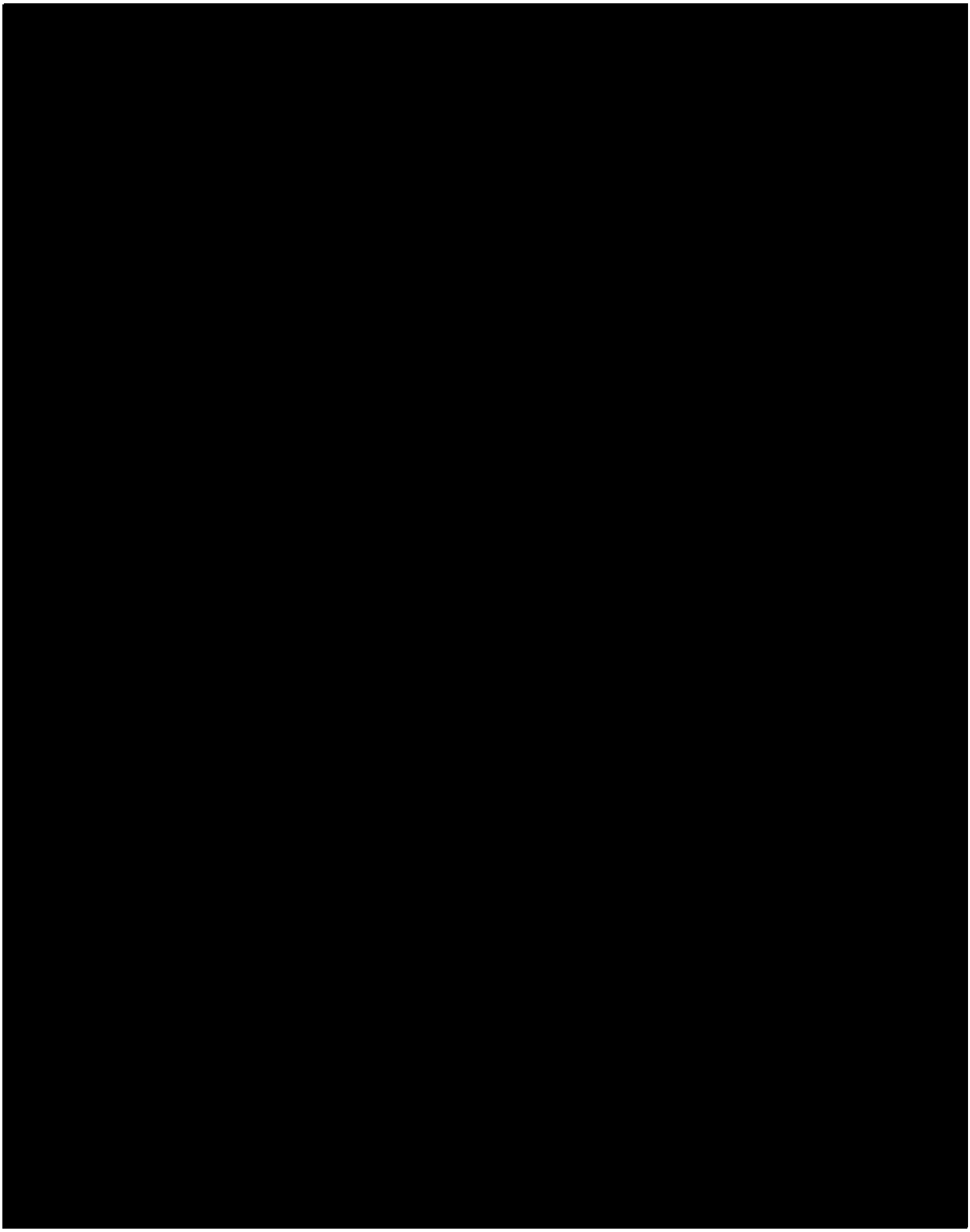


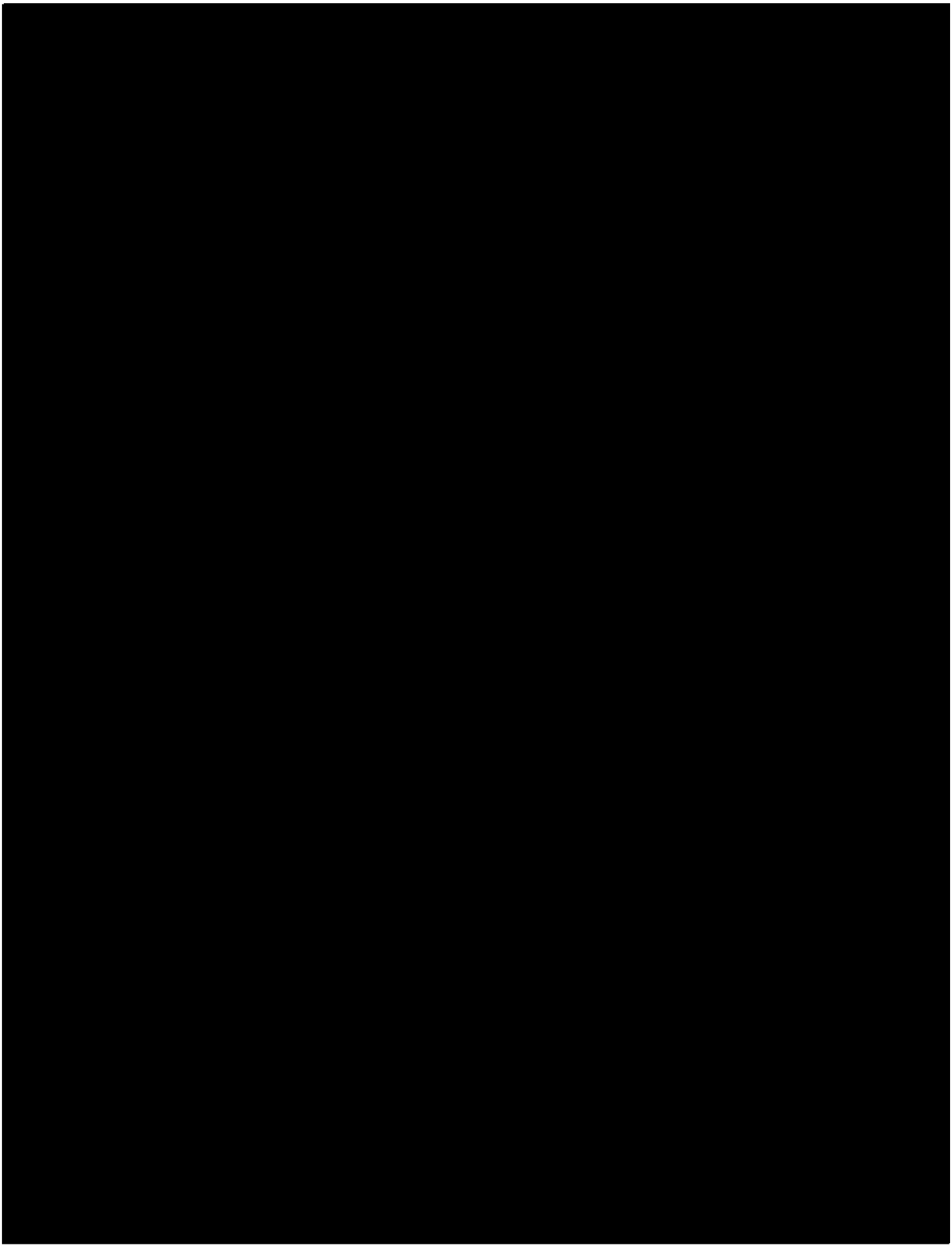


}}

Counsel's Executive Summary Exhibit 09

{{



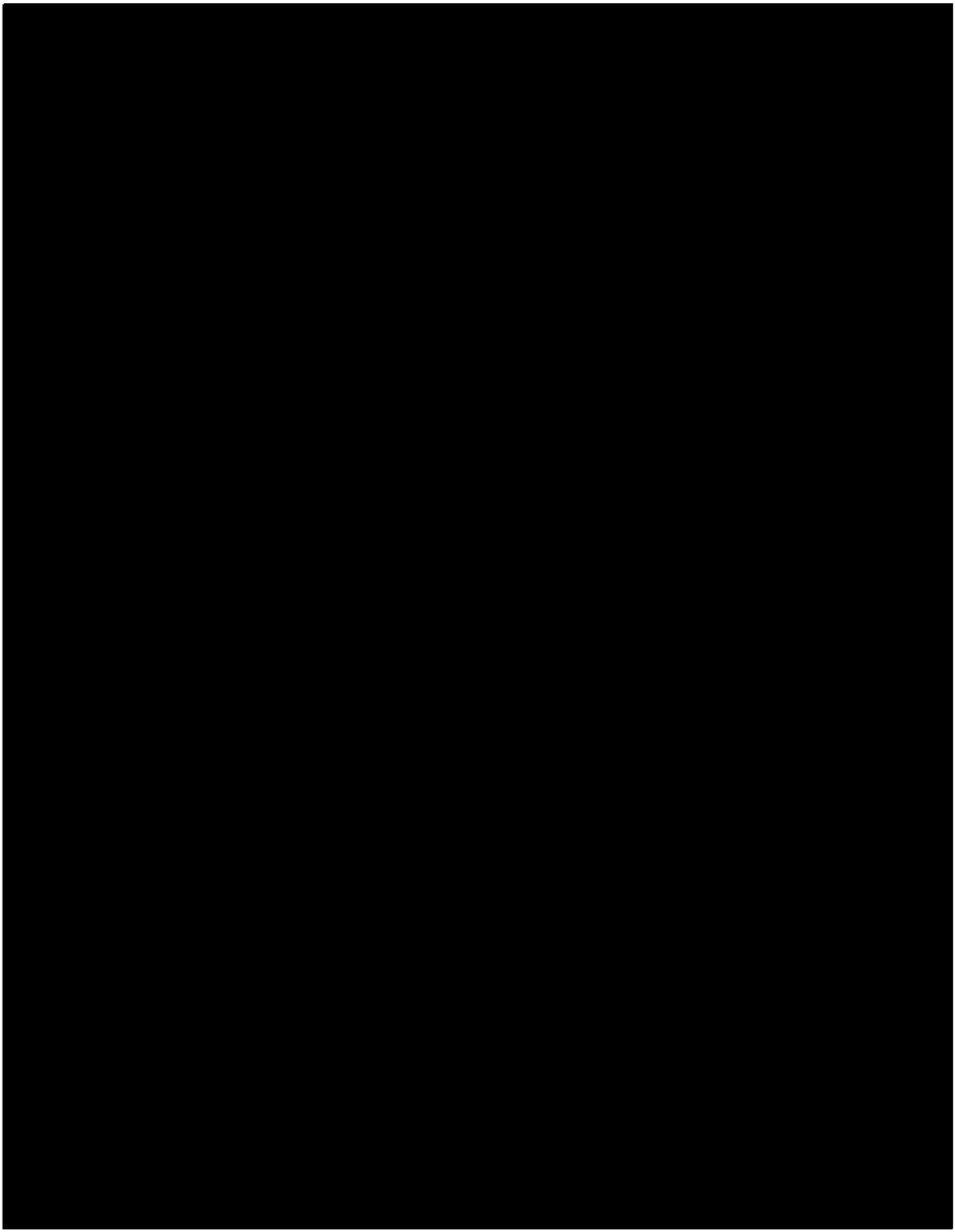


[redacted]

}}

Counsel's Executive Summary Exhibit 10

{{

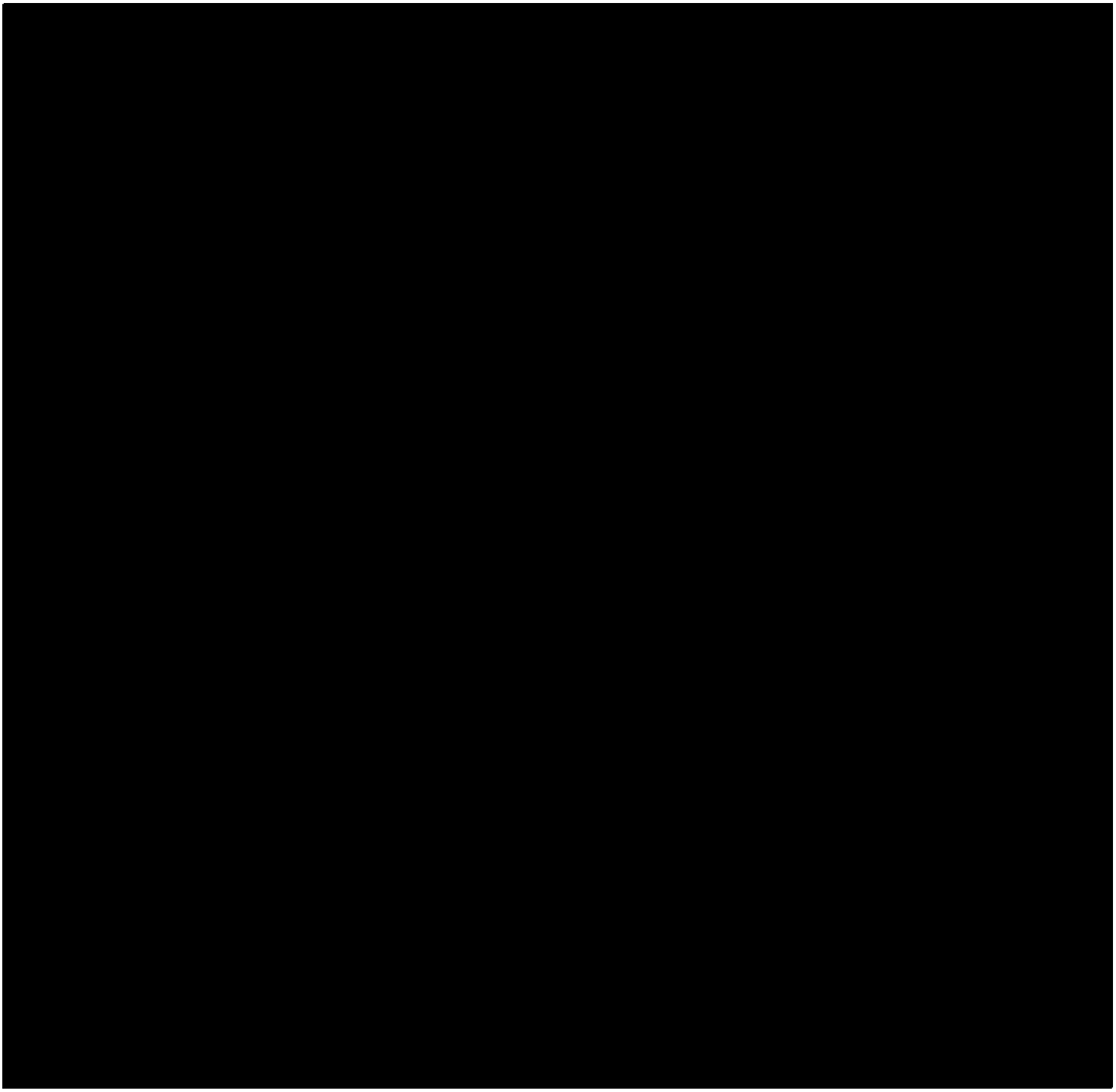


[redacted]

}}

Counsel's Executive Summary Exhibit 11

{



}

TABLE OF CONTENTS

I. Argument 1

A. Evergy's claims must be denied because they are based on a flawed and incorrect understanding of the governing law. 1

1. 49 U.S.C. § 11101 2

2. 49 U.S.C. § 11121 9

3. 49 U.S.C. § 10702 13

B. Under the correct legal standards applicable to BNSF's common carrier service in 2022, BNSF satisfied its statutory obligations. 14

1. Evergy's CFT nominations were neither statutory requests for service within the meaning of 49 U.S.C. § 11101(a) nor reasonable under the then-existing circumstances. 14

2. BNSF's capacity in 2022 was constrained by unforeseen events outside of its control 32

3. BNSF acted reasonably in allocating transportation services during a time when demand exceeded available capacity. 52

4. Evergy's other claims are unavailing. 77

C. Evergy is not entitled to damages under 49 U.S.C. § 11704(b). . 81

1. Any harm that Evergy suffered in 2022 was not due to an act or omission by BNSF. 81

2. Evergy is not entitled to any damages for service to Lawrence. 85

3. Evergy's claimed damages were the result of voluntary business decisions, not BNSF's service. 94

4. Evergy's damage calculations are unreliable, and Evergy has failed to prove damages. 109

5. In addition to their overall unreliability, Evergy's damages are overstated in various respects due to specific errors. 122

6. Evergy is not entitled to compensatory damages for bulldozer fuel costs or trainset storage costs. 132

II. Conclusion 134

EXPERT VERIFIED STATEMENTS

- Dr. Jeffrey Prince, Professor of Business Economics and Public Policy at the Kelley School of Business, Indiana University
- Dr. Erin Johnson, Director at NERA
- Mr. Michael Baranowski, Senior Managing Director at FTI Consulting, Inc., and Mr. Nathaniel Zebrowski, Senior Managing Director at FTI Consulting, Inc.
- Mr. Paul Hibbard, Principal at Analysis Group, Inc.

BNSF WITNESS STATEMENTS

- Ms. Judy Carter, Senior Vice President and Chief Human Resources Officer at BNSF Railway Company
- Mr. Craig Morehouse, Vice President of South Region Operations, Transportation at BNSF Railway Company

EXHIBITS

TABLE OF AUTHORITIES

Page(s)

Cases

Atchison, Topeka & Santa Fe Ry. Co. v. ICC,
607 F.2d 1199 (7th Cir. 1979) 8, 10

Atchison, Topeka & Santa Fe Ry. Co. v. United States,
232 U.S. 199 (1914) 53

The Atchison, Topeka & Santa Fe Ry. Co.-Abandonment Exemption-In Lyon Cnty., KS, AB-52 (Sub-No. 71X), 1991 WL 120344
(ICC served June 17, 1991) 15

B.J. Alan Co., Inc. v. United Parcel Service,
5 I.C.C. 2d 700 (1989) 4

Bhd. of Ry. & Steamship Clerks, Freight Handlers, Express & Station Emps., AFL-CIO v. Fla. E. Coast Ry. Co.,
384 U.S. 238 (1966) 3

Chi. & N.W. Transp. Co. v. Kalo Brick & Tile Co.,
450 U.S. 311, 325 (1981) 12

Douglas v. Washington Terminal Co.,
298 F. 199 (D.C. Cir. 1924) 83

Exxon Co., U.S.A. v. Sofec, Inc.,
517 U.S. 830 (1996) 83, 91

Grand Trunk Corp. v. STB,
143 F.4th at 744 28

Granite State Concrete Co. v. STB,
417 F.3d 85 (1st Cir. 2005) 2, 7, 8

Groome & Assocs., Inc. v. Greenville Cnty. Econ. Dev. Corp.,
NOR 42087 (STB served July 27, 2005) 84

GS Roofing Prods. Co. v. Arkansas Midland R.R. Co. & Pinsly R.R. Co.,
NOR 41230 (STB served May 5, 2000) 84

I.C.C. v. Martin Bros. Box Co.,
219 F.2d 811 (9th Cir. 1955) 12, 32

Ill. Cent. R.R. v. Cobb, Christy & Co.,
64 Ill. 128 (1872) 53, 78

Industries, Inc. v. Ind. & Ohio Ry., Point Comfort & N. Ry., & The Mich. Shore R.R.—Petition for Declaratory Order,
FD 35517 (STB served Nov. 28, 2012) 79

Investigation of R.R. Freight Serv., 345 I.C.C. 1223 (1976) 10

LI Acquisition Corp.-Abandonment Exemption-In Montgomery Cnty., PA, AB-405 (Sub-No. 1X),
1994 WL 450369 (ICC served Aug. 23, 1994) 15

Livestock, S., Sw., Cent. & W. Territories,
346 I.C.C. 418 (1974) 3

Maislin Indus. U.S. v. Primary Steel,
497 U.S. 116 (1990) 13

Major Rail Consolidation Procs.,
5 S.T.B. 539 (2001) 3

Midland Valley R.R. Co. v. Barkley,
276 U.S. 482 (1928) 8, 12, 32

Milmine Grain Co. v. Norfolk & W. Ry. Co.,
352 I.C.C. 575 (1976) 12

Minneapolis & St. Louis Ry. Co. v. Pac. Gamble Robinson Co.,
215 F.2d 126 (8th Cir. 1954) 2

In re Mirant Corp.,
334 B.R. 800 (Bankr. N.D. Tex. 2005) 114

Mo. Pac. R.R. v. Norwood,
283 U.S. 249 (1931) 50

Mont. v. BNSF Ry.,
NOR 42124, slip op. at 7 n.28 (STB served Apr. 26, 2013) 3

Navajo Transitional Energy Co.-Ex Parte Petition for Emergency Service Order, NOR 42178 (STB served June 23, 2023) 33

Navajo Transitional Energy Co., LLC—Ex Parte Petition for Emergency Service Order, NOR 4217 77

N. Am. Freight Car Ass'n et al. v. Union Pac.,
NOR 42144 (STB served Jan. 15, 2025) 13

N. Am. Freight Car Ass'n v. STB,
529 F.3d 1166 (2008) 79

N. Indiana Pub. Serv. Co. v. Colorado Westmoreland, Inc.,
667 F. Supp. 613 (N.D. Ind. 1987) 114, 115

Nat G. Harrison Overseas Corp. v. Am. Tug Titan,
516 F.2d 89 (5th Cir. 1975), modified,
520 F.2d 1104 (5th Cir. 1975) 83, 91, 101

Norton Lbr. Co. v. C., M. & St. P. Ry.,
81 I.C.C. 749, 755-56 (1923) 15

Pa. Paraffine Works v. P.R.R.,
34 I.C.C. 179 (1915) 2

Pa. R.R. Co. v. Puritan Coal Mining Co.,
237 U.S. 121 (1915) 3, 8

Parrish & Heimbecker, Inc.—Petition for Declaratory Order,
4 S.T.B. 866 (2000) 5, 30

Pejepscot Indus. Park, Inc.-Pet. For Decl. Order,
FD 33989 (STB served May 15, 2003) 81

Peoria & Pekin Union Ry. Co. v. United States,
263 U.S. 528 (1924) 10

Potomac Elec. Power Co. v. United States,
584 F.2d 1058 (D.C. Cir. 1978) 22

Reciprocal Switching for Inadequate Rail Service, EP 711 (Sub-No. 2)
(STB served Apr. 30, 2024) 27

Sample v. A., T. & S. F. Ry.,
139 I.C.C. 324 (1928) 15

Savannah Port Terminal R.R.-Pet. for Declaratory Order-Certain Rates & Practices as Applied to Cap. Cargo, Inc.,
FD 34920 (STB served May 30, 2008) 3, 53, 78

Schlicher v. Dir. Gen.,
62 I.C.C. 181 (1921) 13

Sherwin Alumina Co. v. Union Pac. R.R.,
NOR 42143 (STB served Sept. 29, 2015) 3, 8, 15

Shippers Committee, OT-5 v. The Ann Arbor R.R.,
5 I.C.C.2d 856 (1989), *aff'd sub nom, Shippers Committee, OT-5 v. I.C.C.*, 968 F.2d 75 (D.C. Cir. 1992) 12, 53, 79

Tex. Mun. Power Agency v. Burlington N. & Santa Fe Ry. Co.,
7 S.T.B. 803 (2004) 3, 78

Petition of the Association of American Railroads to Institute a Rulemaking Proceeding to Reintroduce Indirect Competition as a Factor Considered in Market Dominance Determinations for Coal Transported to Utility Generation Facilities,
EP 717 (STB served Mar. 19, 2013) 113, 115

United States v. Allegheny-Ludlum Steel Corp.,
406 U.S. 742 (1972) 11

Use of Multi-Stage Discounted Cash Flow Model in Determining R.R. Indus.'s Cost of Capital, EP 664 (Sub-No. 1)
(STB served Jan. 28, 2009). 121

Winnebago Farmers Elevator Co. v. Chi. & N. W. Transp. Co.,
354 I.C.C. 859 (1978) 8

Statutes

49 U.S.C. § 10102(2) 10

49 U.S.C. § 10702 ..... 1, 13

49 U.S.C. § 11101 ..... 1, 2, 13

49 U.S.C. § 11101(a) 2

49 U.S.C. § 11101(b) 2

49 U.S.C. § 11121 ..... *passim*

49 U.S.C. § 11704(b) 82, 84

49 U.S.C. § 11705(c) 49

49 U.S.C. § 11706 7

Other Authorities

49 C.F.R. pt. 1035 App. B 7

Ann Kellett, "The Texas A&M Professor Who Predicted 'The Great Resignation'," Texas A&M University, Feb. 11, 2022 40

Bill Stephens, "Norfolk Southern warns that COVID-19 vaccine mandate poses risks to service (updated)," *Trains*, Oct. 27, 2021 41

David Autor, Arindrajit Dube, and Annie McGrew, "The Unexpected Compression: Competition at Work in the Low Wage Labor Market," *National Bureau of Economic Research* (Revised March 2024) 41

David Shepardson, "U.S. passenger railroad Amtrak suspends vaccine mandate for employees," *Reuters*, Dec. 14, 2021 41

Energy Ventures Analysis, U.S. Coal Markets and the Current Coal Supply Shortage, PJM Stakeholder Process Presentation Prepared for America's Power (July 2022) 62

Josh Funk, "Railroads fight with unions in court over vaccine mandates," *AP News*, Nov. 8, 2021 41

Kara Larson, "Kara Larson Alumni Spotlight | Associate General Counsel, Evergy," posted Mar 21, 2022, by Husch Blackwell, YouTube 33

Lisa Curtis, "Why The Big Quit Is Happening And Why Every Boss Should Embrace It," *Forbes*, June 30, 2021 41

RETAC, Utility Update Presentation (Oct. 26, 2022) 29

Ryan Michaels, "What Explains the Great Resignation," *Federal Reserve Bank of Philadelphia*, 2024 41

Stephanie Ferguson Melhorn, Understanding America's Labor Shortage: The Most Impacted Industries," *U.S. Chamber of Commerce,* Nov. 21, 2023 41

U.S. Energy Information Administration, "What is the shoulder season in electricity markets?" (Dec. 16, 2024), ... 125

I. Argument

A. Evergy's claims must be denied because they are based on a flawed and incorrect understanding of the governing law.

The fundamental premise of Evergy's complaint and opening evidence is that BNSF had an obligation to provide the specific volume of service Evergy entered into BNSF's CFT tool because those amounts were { [redacted] } and the consequences to BNSF's other customers.[19] Evergy thus posits a strict-liability common carrier regime whereby the railroad is liable for damages if it cannot deliver historical volumes of service. But Evergy fails to acknowledge that this standard has never been the law and that Evergy's theory of the common carrier obligation would be an unsound expansion of regulation under 49 U.S.C. § 11101 and a departure from precedent. Moreover, Evergy tries to shoehorn its novel theory of railroad obligations into the statutory provisions related to car service, 49 U.S.C. § 11121, and railroad practices, 49 U.S.C. § 10702, which do not apply. Because of these fundamental misstatements of the law alone, Evergy's complaint should be denied. Viewed through the lens of the appropriate legal standard, it is clear that BNSF satisfied its statutory obligations by acting reasonably under the circumstances.

[19] *See* Evergy Opening Evidence at 21-24.

1. 49 U.S.C. § 11101

Evergy's common carrier claim under 49 U.S.C. § 11101 is fatally flawed because it is based on an unfounded assumption that BNSF, as a common carrier, was a guarantor of service regardless of external circumstances. Indeed, Evergy's complaint and opening evidence all but ignore the historic circumstances confronting world supply chains and the national rail network in 2022. Instead, Evergy focuses myopically on its entries into BNSF's CFT tool at { [redacted] } and argues that this is the only circumstance that matters.

Section 11101 requires that a common carrier establish a rate and service terms and provide service pursuant to those terms in response to a reasonable request for service.[20] What constitutes a reasonable request for service is not statutorily defined but depends on all the relevant facts and circumstances.[21]

If a shipper makes a reasonable request for service, the railroad must provide service, but the carrier is not subject to liability simply because it does not provide the exact service level the shipper demands; it need only take reasonable actions to provide "adequate" service under the circumstances.[22] Thus, evaluation of whether a railroad has complied with its common carrier obligation requires analysis first of

---

[20] 49 U.S.C. §§ 11101(a) & (b).

[21] *Granite State Concrete Co. v. STB*, 417 F.3d 85, 92 (1st Cir. 2005); *Pa. Paraffine Works v. P.R.R.*, 34 I.C.C. 179, 186-87 (1915); *Minneapolis & St. Louis Ry. Co. v. Pac. Gamble Robinson Co.*, 215 F.2d 126, 132 (8th Cir. 1954) ("[T]he carrier has the right to responsibly evaluate, on all its elements . . . whether the situation . . . fairly constitutes the shipper's demand for service from the carrier as one of 'reasonable request' under the statute.").

[22] *Granite State Concrete Co.*, 417 F.3d at 92 n.10 ("'Adequate service' (as opposed to just 'service') is not in the language of section 11101, but it is a part of the general definition of common carrier obligations.").

whether the shipper's request for service is reasonable and second whether the railroad acted reasonably in the circumstances in responding to reasonable requests for service.[23]

The case law recognizes that given the complexity of rail operations, the Board will not second guess reasonable choices made by a railroad in satisfying service requests. "[H]ow a railroad satisfies its common carrier obligation is left to the railroad to decide in the first instance."[24] Railroads must have flexibility "to adjust the level of train traffic over particular line segments in response to changes in shipper demands and in other market conditions" in order "to retain the ability to carry out their statutory obligation to provide common carrier service."[25] Moreover, the Board has emphasized that "common carriers serve[d] the public generally, and the common carrier obligation does not require a carrier to maintain service levels for one shipper that will degrade service overall."[26]

Contrary to the assumptions underlying Evergy's common carrier claim, neither Section 11101 nor the common law of the common carrier obligation

---

[23] *Pa. R.R. Co. v. Puritan Coal Mining Co.*, 237 U.S. 121 (1915); *Livestock, S., Sw., Cent. & W. Territories*, 346 I.C.C. 418, 435 (1974) (The common carrier duty "is not absolute.").

[24] *Tex. Mun. Power Agency v. Burlington N. & Santa Fe Ry. Co.*, 7 S.T.B. 803, 807 (2004); *see also Mont. v. BNSF Ry.*, NOR 42124, slip op. at 7 n.28 (STB served Apr. 26, 2013) (noting that in general, "[t]he Board tries to avoid micromanaging a carrier's operational decisions").

[25] *Major Rail Consolidation Procs.*, 5 S.T.B. 539, 578 (2001); *see also Sherwin Alumina Co. v. Union Pac. R.R.*, NOR 42143, slip op. at 6 n.12 (STB served Sept. 29, 2015) (noting that the agency avoids bright line rules regarding the common carrier obligation).

[26] *Savannah Port Terminal R.R., Inc.*, FD 34920, slip op. at 9 (STB served May 30, 2008); *see also Bhd. of Ry. & Steamship Clerks, Freight Handlers, Express & Station Emps., AFL-CIO v. Fla. E. Coast Ry. Co.*, 384 U.S. 238, 244-45 (1966) (explaining that the common carrier obligation "runs not to shippers alone but to the public").

establishes a legal obligation on the part of the common carrier to provide a particular level or volume of service. Any service obligation that applies to a common carrier is, like the common carrier obligation itself, governed by a reasonableness standard that turns on the circumstances.[27]

Specific service obligations can be established through contract. But absent a contract, there is no obligation on the part of the shipper concerning minimum volumes that would support imposing an obligation on the railroad to go beyond the requirement to act reasonably under the circumstances. Thus, in common carrier service, the shipper has no obligation to tender shipments under a tariff, and the railroad has no obligation to provide a specified level of service when traffic is tendered. Rather, the railroad need only respond reasonably under the prevailing circumstances at the time of the tender.

As explained by Dr. Prince, contracts allow the opportunity for parties to evaluate and allocate risk by creating mutual obligations.[28] Evergy's prior contract service was governed by specific contractual provisions whereby { [redacted] }[29]

[27] *See, e.g.*, *B.J. Alan Co., Inc. v. United Parcel Service*, 5 I.C.C. 2d 700, 711 (1989) ("the determination of what level of service is reasonable under the prevailing circumstances can vary depending on what the prevailing circumstances are").

[28] Verified Reply Statement of Dr. Jeffrey T. Prince ("Prince V.S.") ¶ 36.

[29] Prince V.S. ¶¶ 57-59.

It would be contrary to Congress' strongly stated intent to promote contracts in rail transportation markets if the Board treated a common carrier's service obligation the same as the obligations that exist under contracts, where both parties make reciprocal commitments. "The authority to contract was one of the more significant aspects of the new freedoms granted by the Staggers Act because it allowed rail carriers to tailor rail service more individually and thereby market transportation services more effectively."[30] Shippers would not enter contracts, with the necessary reciprocal commitments, if they could get contract-level service (enforced through damages actions at the Board) under common carrier tariffs.

It was Evergy, not BNSF, that initiated the process that ultimately led to the { [redacted] } In the spring of 2020, Evergy { [redacted] }[31]

When crafting its portfolio proposal in 2020, BNSF noted that {{ [redacted] }}[32] This was so because prior to the 2020 portfolio negotiations, Evergy had { [redacted] }[33]

---

[30] *Parrish & Heimbecker, Inc.—Petition for Declaratory Order*, 4 S.T.B. 866, 870-71 (2000).

[31] *See* Counsel's Exhibit 01, BNSF_EVERGY_0005447.

[32] *See* Evergy Opening Evidence Counsel's Ex. 1.

[33] *See, e.g.*, Counsel's Exhibit 02, EVERGY-0034260-63; Counsel's Exhibit 03, EVERGY-0028051-52; Counsel's Exhibit 04, EVERGY-0079892; Counsel's Exhibit 04, EVERGY-0079892, at 895.

Days after BNSF submitted its proposal on May 29, 2020 to Evergy { [redacted] } Evergy asked BNSF { [redacted] } A month later, Evergy { [redacted] }[34] Evergy indicated that { [redacted] }

Evergy now insists that the common carrier service it receives from BNSF should impose a contract-like obligation on BNSF to deliver Evergy's historical volumes—but with no concomitant obligation on the part of Evergy to ship those volumes. As Evergy would now have it, because BNSF delivered { [redacted] } than Evergy entered into the CFT in 2022, BNSF is financially responsible for more than $20 million in alleged damages. Evergy asks the Board to treat BNSF's common carrier service as though it was contract service and award damages as

[34] Counsel's Exhibit 05, BNSF_EVERGY_0005044.

though BNSF breached a contractual obligation to transport a specific minimum volume of coal. At the same time, Evergy insists that, as a common carrier shipper, it is free to depart from its historical volume requests as much as it wants without financial consequence of any sort—as it did in 2024 when Evergy shipped { [redacted] } coal than Evergy told BNSF it intended to ship that year due to no fault of BNSF.[35]

Nothing in the language of Section 11101 suggests that Congress ever intended the statute to be used as a mechanism for imposing a specific, volumetric service level obligation on a common carrier. A different statutory provision governs unreasonable delay in transit, 49 U.S.C. § 11706, but Evergy does not claim that BNSF violated the "reasonable dispatch" requirement under that statute.[36] Nor is there any evidence in the record that would support a finding that BNSF did not move traffic tendered by Evergy with reasonable dispatch.

While Section 11101 is silent about the level of service required of a common carrier, the case law establishes that as a corollary to the general reasonableness requirement governing common carrier service, a common carrier must make reasonable efforts to provide "adequate" service.[37] But the case law also makes it clear that adequacy of service is not defined by the shipper's desire or service requests, but rather by the reasonableness of the carrier's actions under the

[35] Prince V.S. ¶ 63.

[36] *See* 49 C.F.R. pt. 1035 App. B.

[37] *Granite State Concrete Co.*, 417 F.3d at 92 n.10.

circumstances, including a rail carrier's capacity to provide the service and the service levels available to other shippers.[38] Even before the Staggers Act, the ICC made it clear that a railroad is not obligated to provide a specific level of service simply because it is desired by a shipper.[39] Rather, a carrier's service is adequate if the carrier acted reasonably under the circumstances in responding to the request for service.[40] The agency has held that when a common carrier faces constrained capacity, it satisfies its regulatory obligations so long as the carrier allocates the constrained capacity in a reasonable manner.[41]

Evergy's strict liability approach ignores altogether the "adequate" service requirement and the "reasonableness" standard by which it is measured—foundational concepts in common carrier law.[42] And so, Evergy's evidence contains no basis whatsoever to determine whether BNSF's service was "adequate" under the circumstances. BNSF's evidence demonstrates that it was.

---

[38] *Granite State Concrete Co.*, 417 F.3d at 94; *Sherwin Alumina Co., LLC*, NOR 42143 (STB served Sept. 29, 2015); *Atchison, Topeka & Santa Fe Ry. Co. v. ICC*, 607 F.2d 1199 (7th Cir. 1979) ("*Atchison*").

[39] *See Winnebago Farmers Elevator Co. v. Chi. & N. W. Transp. Co.*, 354 I.C.C. 859 (1978) (a railroad is not required to provide service in covered hopper cars, notwithstanding the shipper's desire for such service).

[40] *Midland Valley R.R. Co. v. Barkley*, 276 U.S. 482, 485 (1928) ("The law exacts only what is reasonable from such [common] carriers.").

[41] *Pa. R.R. Co.*, 237 U.S. at 133.

[42] Evergy cites to the Board's decision issuing a preliminary injunction in the *NTEC* proceeding for the proposition that a railroad's failure to provide service levels consistent with past levels constitutes a "very strong showing" of a likely violation of Section 11101(a). Evergy Opening Evidence at 24. To the extent that the *NTEC* decision suggests that the Board will examine the common carrier obligation with regard to historical volumes without examining current circumstances, the Board should take this opportunity to clarify that the *NTEC* decision did not overturn over a century of precedent and create a new legal standard.

Evergy cannot establish a violation of BNSF's common carrier obligation without pointing to specific actions that BNSF took that were allegedly unreasonable. But Evergy does not even try to address the reasonableness of BNSF's actions because it wrongly claims that the governing law creates a strict-liability obligation. When evaluated against the proper legal standard of reasonableness, it is clear from the facts discussed in Section I.B below that BNSF satisfied its common carrier obligation.

2. 49 U.S.C. § 11121

Evergy's car service claim under 49 U.S.C. § 11121 is similarly without merit because Evergy itself admits that its complaint is not about the adequacy of BNSF's car fleet—which is the focus of the car service statute—but rather concerns the availability of labor to move the cars, which is not a subject of regulation under the car service statute.[43] Section 11121 deals with the shortage of rail cars, not with the transportation service provided with cars that are available for use. The statute was intended to give the agency authority to ensure that common carriers acquired and maintained an adequate and efficiently sized fleet of cars. The statute was not intended to create authority over how car equipment was used. Those issues are instead governed by the common carrier requirements of Section 11101, as discussed above.

Although the plain language of the statutory definition of "car service" is written broadly enough that it could be interpreted to encompass any "movement"

[43] *See* Evergy Opening Evidence at 28-29.

of rail cars, *see* 49 U.S.C. § 10102(2), courts have construed the term "car service" more narrowly, concluding that the Board's authority to regulate car service under § 11122 does not generally extend to the regulation of the details of the day-to-day movements of rail cars.[44]

In *Peoria*, the Supreme Court held that "car service" means "the use to which the vehicles of transportation are put; not the transportation service rendered by means of them."[45] Applying this distinction, the Court held that the ICC could not use its car service authority to require a terminal company "to switch, by its own engines and over its own tracks, freight cars tendered to it by, or for," another carrier.[46] In *Atchison*, the Seventh Circuit determined that the ICC could not require tariff publication of operating schedules under its car-service authority because tariff operating schedules were "directly related to transportation services [and] do not fall within the definition of 'car service.'"[47]

The agency has observed that the definition of "car service" was amended to include the word "supply," and concluded that the addition of "supply" was for the sole purpose of extending to the agency "powers explicitly to include car supply and, quite obviously, the effect of car supply upon the adequacy of freight rail service."[48]

---

[44] *Peoria & Pekin Union Ry. Co. v. United States*, 263 U.S. 528, 533-35 (1924); *Atchison*, 607 F.2d at 1205.

[45] *Peoria*, 263 U.S. at 533-35.

[46] *Peoria*, 263 U.S. at 531.

[47] *Atchison*, 607 F.2d at 1205.

[48] *Investigation of R.R. Freight Serv.*, 345 I.C.C. 1223, 1236-37 (1976).

The agency's car-service authority thus can apply to the movement of cars only to remedy a problem relating specifically to the fleet of cars.[49]

This interpretation is consistent with the text of Section 11121, which directs the Board to act only when it affirmatively finds, after a hearing on the record, that "providing the facilities or equipment will not materially and adversely affect the ability of the rail carrier to provide safe and adequate transportation; the amount spent for the facilities or equipment, including a return equal to the rail carrier's current cost of capital, will be recovered; and providing the facilities or equipment will not impair the ability of the rail carrier to attract adequate capital."[50] The statute is clearly directed toward the acquisition and maintenance of an adequate fleet of car equipment, not to the way those cars, once available, are used.

There was no shortage of cars available to handle Evergy's service—Evergy informed BNSF that if BNSF had adequate capacity, *Evergy* would provide additional car sets. Rather, Evergy's experts admit that the problem was the availability of employees who could move the cars.[51] In other words, the issue is not about *car* supply, but about *people* supply. Section 11121 simply does not authorize the regulation of people supply, and Evergy cites nothing to suggest that it does.

In addition, even if the car service statute extended to claims about the use of cars that are otherwise available (which it does not), Evergy fails to acknowledge

---

[49] *United States v. Allegheny-Ludlum Steel Corp.*, 406 U.S. 742, 744-46 (1972).

[50] 49 U.S.C. § 11121.

[51] *See* Evergy Opening Evidence, Verified Statement of Robert D. Mulholland and Timothy D. Crowley ("Mulholland/Crowley V.S.") at 2-3.

the case law that makes it clear that a railroad is not obligated to accept private cars onto its network if doing so would result in congestion.[52] This commonsense standard is consistent with the statute's direction to the Board that, in assessing the adequacy of car supply, the Board should consider efficiency factors and the impact on the health of the network.[53] Evergy ignores these issues.

Moreover, the standard applied under the car service statute is a reasonableness standard that is very much the same as the reasonableness standard otherwise applicable to common carriers.[54] A common carrier is only obligated to act reasonably in providing an adequate fleet of cars. If circumstances outside of a railroad's control prevent the supply of cars requested by a shipper, the railroad is not liable. When the ICC acted historically under Section 11121 in circumstances of inadequate car supply, the ICC recognized that railroads are not responsible for unforeseen circumstances and are not liable if they act reasonably in the circumstances.[55]

Like the common carrier service standard provided under Section 11101, the car service statute thus does not create a strict liability standard requiring that a

---

[52] *See, e.g.*, *Shippers Committee, OT-5 v. The Ann Arbor R.R.*, 5 I.C.C.2d 856, 866 (1989), *aff'd sub nom, Shippers Committee, OT-5 v. I.C.C.*, 968 F.2d 75 (D.C. Cir. 1992) (upholding an ICC decision holding that a common carrier had an obligation to accept private railcars into service only if there was adequate capacity to handle those cars).

[53] 49 U.S.C. § 11121.

[54] *See Milmine Grain Co. v. Norfolk & W. Ry. Co.*, 352 I.C.C. 575, 585 (1976) (*citing Elgin Coal Co. v. Louisville & Nashville R.R. Co.*, 277 F. Supp. 247, 250 (E.D. Tenn. 1967)*; see also Midland Valley R.R. Co.*, 276 U.S. at 484-485.

[55] *I.C.C. v. Martin Bros. Box Co.,* 219 F.2d 811 (9th Cir. 1955); *Chi. & N.W. Transp. Co. v. Kalo Brick & Tile Co.*, 450 U.S. 311, 325 (1981).

railroad provide (or accept) cars requested by a shipper regardless of the circumstances. The same failure to show that BNSF acted unreasonably would therefore also be a fatal flaw in Evergy's car service claims even if the statute applied. Evergy fails to state a valid claim under Section 11121 under either analysis, and should in either case be denied.

3. 49 U.S.C. § 10702

Evergy's unreasonable practice claim under 49 U.S.C. § 10702 is likewise fatally flawed because Evergy does not allege anything that is distinct from the claims it makes under the common carrier statute. As the Board has recently made clear, a claim of unreasonable practice is not available if there is a more appropriate statute under which the claim falls.[56]

* * * *

For the foregoing reasons, Evergy has failed to support any of its claims that BNSF violated 49 U.S.C. §§ 11101, 11121, and 10702 because it premises these claims on incorrect characterizations of the applicable legal standard under each statute. As demonstrated in the next section, viewed through the appropriate legal lens, the facts in this case establish without a doubt that BNSF satisfied its statutory obligations.

---

[56] *N. Am. Freight Car Ass'n et al. v. Union Pac.*, NOR 42144, slip op. at 12-13 (STB served Jan. 15, 2025) (citing *Entergy Ark., Inc. v. Union Pac. R.R.*, NOR 42104 et al., slip op. at 10 (STB served June 26, 2009) (rejecting a challenge under § 10702 where another statutory provision specifically governed the lawfulness of the conduct in question)); *Schlicher v. Dir. Gen.*, 62 I.C.C. 181, 186-87 (1921) (treating a challenge under what is now § 11101 as if it were brought under an applicable, more specific statutory provision); *Maislin Indus. U.S. v. Primary Steel*, 497 U.S. 116, 129 (1990).

B. Under the correct legal standards applicable to BNSF's common carrier service in 2022, BNSF satisfied its statutory obligations.

Based on a correct understanding of the law governing common carrier service as described above, BNSF clearly met its common carrier obligations to deliver reasonable service to Evergy under the prevailing circumstances. As demonstrated below, Evergy's 2022 CFT nominations did not constitute statutory requests for service within the meaning of 49 U.S.C. § 11101(a), ignored the terms of the relevant BNSF tariffs, and were not reasonable under the prevailing circumstances in 2022. As such, they did not impose a volume obligation on BNSF that is enforceable through damages. BNSF's capacity in 2022, like the capacity of the entire national rail system, was constrained due to unforeseen events beyond the control of railroads. Nonetheless, BNSF acted reasonably in acting to enhance capacity and allocating its existing constrained capacity fairly among all of its customers in general and Evergy in particular while those efforts bore fruit. As such, Evergy has failed to meet its burden of proof to show that any act or omission of BNSF was unreasonable in the circumstances of 2022.

1. Evergy's CFT nominations were neither statutory requests for service within the meaning of 49 U.S.C. § 11101(a) nor reasonable under the then-existing circumstances.

As an initial matter, Evergy contends that its monthly nominations in BNSF's CFT tool were "reasonable requests" for service imposing an obligation on

BNSF to provide that specific volume of service.[57] But Evergy's 2022 entries into the CFT were neither "requests" in the statutory sense, nor were they reasonable in the context of the existing circumstances in the rail network at that time.

"What constitutes a reasonable request for service is not statutorily defined but depends on all the relevant facts and circumstances."[58] In determining the reasonableness of a request, the agency has considered factors including whether the request reflected the shipper's actual need.[59]

Evergy's attempts to characterize its CFT nominations as statutory requests rely on citing to Board decisions stating that a request for service must be "specific as to the volume, commodity and time of shipment."[60] Of course, it is true that requests for service must be specific and reasonable.[61]

But the cited language refers to instances where the agency evaluated communications between potential shippers and railroads and determined whether the railroad had an obligation to provide any service at all. Here, there is no question that Evergy requested coal transportation service to Iatan and Lawerence

---

[57] Evergy Opening Evidence at 16.

[58] *Sherwin Alumina Co.*, NOR 42143, slip op. at 5 (STB served Sept. 29, 2015) (*citing Granite State Concrete Co.*, 417 F.3d at 92).

[59] *See Norton Lbr. Co. v. C., M. & St. P. Ry.*, 81 I.C.C. 749, 755-56 (1923) (explaining that "[o]bviously a request for twice as many cars as are required can not be considered a reasonable one"); *see also Sample v. A., T. & S. F. Ry.,* 139 I.C.C. 324, 329 (1928) ("It is undisputed that due to the extent to which car orders are inflated by shippers in periods of car shortage, such orders cannot be used in such a period as a basis for fair and equitable distribution of cars between shippers.").

[60] Evergy Opening Evidence at 16.

[61] *See, e.g.*, *LI Acquisition Corp.—Abandonment Exemption—In Montgomery Cnty., PA,* AB-405 (Sub-No. 1X), 1994 WL 450369, at *5 (ICC served Aug. 23, 1994); *The Atchison, Topeka & Santa Fe Ry. Co.—Abandonment Exemption—In Lyon Cnty., KS*, AB-52 (Sub-No. 71X), 1991 WL 120344, at *4 (ICC served June 17, 1991).

and that BNSF promptly established rate and service terms and provided service. Evergy's complaint is not that BNSF did not provide service; its complaint is with the specific volume and schedule of service BNSF provided. Thus, the real question posed by Evergy's novel common carrier theory is whether Evergy's annual declaration or CFT entries created an enforceable volume obligation on the part of BNSF. They did not.

a. Annual declarations and monthly nominations in the CFT are forecasting tools BNSF uses to plan service for all coal customers, not "schedules" that are "approved by BNSF."

Coal shippers on BNSF, including Evergy, are required to submit annual declarations that include their yearly projections for coal transportation service for the upcoming year. Beginning each December, shippers may adjust their forecasted tonnage for specific months using BNSF's Coal Forecasting Tool ("CFT"), which allows for modifications up to 15 days prior to the start of a given month. As its name implies, BNSF's CFT platform is used for *forecasting* coal shipment volumes. The tool helps facilitate the efficient planning, scheduling, and allocation of coal unit trains by requiring shippers (and the coal mines with which the shippers have contracted) to provide detailed, timely, and coordinated forecasts of coal tonnage to be loaded by month for the year. As reflected in BNSF's tariff, the submission of a CFT is not a formal order for transportation services but instead a tool for shippers to communicate their evolving needs to BNSF and for mines to confirm that coal is available to satisfy those needs. After the window for shippers to change the CFT nomination closes on the 15th of the month, the supplying origin mine(s) confirm(s)

the available tons for shipment. Entries made in the CFT are meant to support the complicated logistics of shipping coal from mines to power plants and to resolve any discrepancies between a shipper's request and the coal available to ship at mines.[62] BNSF's CFT platform and BNSF's Price List 6041-B in no way represent that CFT entries are volume commitments on the part of BNSF.[63]

Evergy attempts to mislead the Board by suggesting that CFT nominations are "schedules" for service and that they are "approved" by BNSF.[64] In so doing, Evergy stretches the CFT process far beyond its design. Evergy also conflates CFT entries with annual declarations and how annual declarations relate to MAV requirements in contract provisions.[65] Evergy itself has noted that { [redacted] } which benefited Evergy by removing {{ [redacted] }}[66]

Examination of Evergy's CFT nominations for Iatan in 2022 clearly shows that they are not scheduled shipments. As demonstrated by Messrs. Baranowski and Zebrowski, if BNSF delivered all of the volume that Evergy nominated for Iatan in the first half of 2022, Iatan's stockpile would have { [redacted] }

---

[62] Counsel's Exhibit 06, EVERGY-0080531, BNSF Price List 6041-B, Item 260); Counsel's Exhibit 07, BNSF_EVERGY_0004848 (Dec. 23, 2021 Letter from BNSF to Evergy); Counsel's Exhibit 08, BNSF_EVERGY_0007960 (Feb. 12, 2020 Letter from BNSF to Evergy).

[63] *Id.*

[64] Evergy Opening Evidence at 12; Tucker V.S. at 5-6.

[65] Under Tariffs BNSF 60024 and 60029, Evergy was required to provide BNSF annual declarations for its plants for the next calendar year. Counsel's Exhibit 09, BNSF_EVERGY_0009611 (BNSF 60024). For 2022, Evergy's annual declaration for Iatan was 4,500,000 tons. *See, e.g.*, Counsel's Exhibit 07, BNSF_EVERGY_0004848; Evergy's 2022 annual declaration for Lawrence was { [redacted] } tons. *Id.*

[66] Counsel's Exhibit 10, EVERGY-0082987.

{{ [redacted] }}[67]

Baranowski/Zebrowski Figure 24: Estimated June 2022 Iatan Stockpile if 100% of Final Nominations Were Delivered vs. Evergy's Maximum and Desired 2022 Iatan Stockpiles {{



}}

Rather, Evergy's activity in managing their monthly CFT nominations show that they often overstated their actual demand for coal. For example, Evergy { [redacted] } nominations for Iatan on multiple occasions in the first half of 2022 even though it had received { [redacted] } than the nominated amount in the prior months. For example, in January and February 2022, BNSF's deliveries to Iatan were { [redacted]

[67] *See* Verified Reply Statement of Michael R. Baranowski and Nathaniel S. Zebrowski ("Baranowski/Zebrowski V.S.") at 28 at tab "Push Pull". {{ [redacted] }}.

[68] Baranowski/Zebrowski V.S. at 30.

[redacted]}[70] When coupled with the evidence discovered in this case that they could not possibly have received as much coal as they nominated in the first half of 2022, it is clear that Evergy's nominations do not truly reflect their actual demand.[71]

In addition, Evergy's communications to BNSF in the first half of 2022 also show that Evergy did not actually want BNSF to deliver the amounts of coal listed in its CFT nominations at that time. On January 24, 2022, Evergy's {{ [redacted] }}[72] {{ [redacted] }}[74]

[69] *Id.*

[70] *Id.*

[71] Despite the evidence that Evergy's CFT nominations did not accurately reflect the coal it wanted BNSF to deliver particularly in the first half of 2022, Evergy nonetheless points to cumulative shortfalls based on undelivered CFT nominations from this period of time.

[72] Counsel's Executive Summary Exhibit 07, EVERGY-0082975.

[73] Counsel's Executive Summary Exhibit 07, EVERGY-0082975.

[74] Counsel's Executive Summary Exhibit 07, EVERGY-0082975.

Although Evergy consented to { [redacted] } in service to Iatan in March, it continued to enter nominations in the CFT for Iatan { [redacted] } than what { [redacted] } could feasibly deliver as shown below.

Baranowski/Zebrowski Figure 26: Estimated Iatan Deliveries Assuming { [redacted] }[75] vs. Iatan's Final CFT Nominations (March & April 2022) {{

[redacted] }}

Internal emails confirm that Evergy {{ [redacted] }}[76]

[75] { [redacted] }

[76] *See* Counsel's Exhibit 11, EVERGY-0082946 {{ [redacted] }}.

Similarly, even in 2024, Evergy's CFT nominations continued to show that Evergy routinely { [redacted] } coal that it has no intention of actually transporting. As BNSF communicated to Evergy in a September 2024 letter, Evergy's 2024 delivery demands were {{ [redacted] }}[77] BNSF separately communicated to Evergy in October 2024 that BNSF was {{ [redacted] }}[78]

In response to BNSF's letters flagging Evergy's inconsistent demands, Evergy noted that {{ "[redacted] }}[79] As Evergy later conceded:

> {{ [redacted] }}[80]

[77] Counsel's Executive Summary Exhibit 02, BNSF_EVERGY_0026107; Evergy's 2024 Annual Declaration reflected no such outage period (*see* Counsel's Exhibit 12, BNSF_EVERGY_0007633).

[78] Counsel's Exhibit 13, BNSF_EVERGY_0026163.

[79] Counsel's Executive Summary Exhibit 05, BNSF_EVERGY_0026099 (emphasis added).

[80] Counsel's Executive Summary Exhibit 06, BNSF_EVERGY_0026104.

By the end of the year and although Evergy had shipped { [redacted] } than the volume Evergy indicated in its Annual Declaration, Evergy nevertheless declined to { [redacted] } its monthly CFT entries to reflect the actual volume it wanted, resulting in { [redacted] } CFT figures versus what it actually tendered for shipment to BNSF.

Evergy's own communications acknowledge that the annual declarations and monthly nominations they input in the CFT are forecasting tools, and their actions show that they routinely { [redacted] } what they actually intend to tender for shipment, contrary to the terms of BNSF's tariff. BNSF uses CFT nominations provided by shippers to plan service but are not "schedules" and are not "approved by BNSF." Moreover, to the extent that Evergy argues their CFT nominations reflect requests for service, it is clear that they were neither accurate nor reasonable.

b. Evergy's CFT nominations in 2022 ignored the terms of BNSF's tariffs that required that traffic be { [redacted] }

As described above, BNSF responded to Evergy's requests for service by establishing tariffs for Lawrence and Iatan. "A railroad's obligation to furnish transportation is defined by what it holds out to the public in its tariffs."[81] BNSF's tariff is the sole determinant of the service BNSF held out to provide at the rate provided to Evergy. BNSF's tariffs for both Iatan and Lawrence were clear that { [redacted]

[81] *Potomac Elec. Power Co. v. United States*, 584 F.2d 1058, 1063 (D.C. Cir. 1978).

[redacted] } Evergy's pattern of { [redacted] } nominations in the CFT thus cannot form the basis of enforceable volume obligation on BNSF.

The tariffs for Iatan and Lawrence stated:

> BNSF Service. Service provided pursuant to this publication will be common carrier service for movement of trainloads of Coal as ordinarily and customarily provided by BNSF for such service, and as such, cycle times and schedules may vary from time to time. Shipper acknowledges that BNSF does not guarantee observance of scheduled dates and times that trains may arrive at Origin or Destination at any time, 365 days a year. In the event of a conflict between this publication and another BNSF publication, this publication shall apply. Service Limitation Notice: The provision of service and acceptance of any tenders for movement under this publication, including the supply of carrier equipment and/or the introduction of shipper train sets on BNSF for the movement of coal pursuant to this Common Carrier Price Authority shall, for the foreseeable future, be subject to BNSF's sole discretion.
>
> Ratability of Shipments. Shipper agrees to cause all Coal transported pursuant to this price authority to be loaded in reasonably even monthly increments. Railroad does not guarantee the observance of scheduled dates and times for shipments.[82]

Evergy was fully aware of the { [redacted] } provisions set forth in BNSF's tariffs yet knowingly chose to disregard them. In an internal Evergy email dated January 6, 2023, {{ [redacted] }}[83] Despite this knowledge, Evergy now claims that BNSF had an obligation to ramp up the number of trainsets in service during the summer of 2022 to correspond with its { [redacted] }

[82] *See, e.g.*, Compl. Exhibit 1 (BNSF 60024); Compl. Exhibit 4 (BNSF 60029).

[83] *See* Counsel's Executive Summary Exhibit 04, EVERGY-0082612.

Evergy's CFT nominations followed a pattern of { [redacted] } During peak summer months, Evergy requested tonnages equivalent to { [redacted] } in shoulder months of spring and fall. Jessica Tucker describes in her verified statement that Evergy's "need for coal deliveries is highest during the Summer and Winter months . . . and that need tends to moderate in the Spring and Fall. Schedules for coal deliveries generally track this variability."[84] In an internal Evergy communication, {{ [redacted] }}[85]

Evergy knew that these fluctuations did not meet the tariff's { [redacted] } In March 2022, Jessica Tucker { [redacted] }[86] Though Evergy stated that it would { [redacted]

[84] Tucker V.S. at 3.

[85] *See* Counsel's Exhibit 14, EVERGY-0082459.

[86] *See* Counsel's Exhibit 15, BNSF_EVERGY_0004845; Tucker V.S. at 22.

[redacted] }, it did not do so.[87] Nonetheless, Evergy continues to erroneously claim without support that it is entitled to ignore the { [redacted] } terms of the tariffs.[88]

The unreasonableness of Evergy's CFT nominations is perhaps best demonstrated by comparing them to BNSF's other coal shippers. Shippers generally stockpile coal due to its non-perishable nature, and BNSF generally provides ratable coal service over the course of a given year. However, Evergy prefers to unload deliveries directly from trains into its generating units.[89] Evergy's insistence on a "just-in-time" delivery model to avoid the costs associated with storing and moving coal from stockpiles to burn creates significant variability—an approach fundamentally different from other shippers with larger stockpiles and more {{ [redacted] }} demonstrated in the following chart:

[87] *Id.*

[88] *See* Tucker V.S. at 8.

[89] *See* Tucker V.S. at 6.

Baranowski/Zebrowski Figure 27: Monthly Nominations Variance from Average - Evergy vs. All Other BNSF-Served Coal Plants (January 2019 – December 2022) {{



}}

While this chart shows a {{ [redacted] }} Evergy's historic nominations reflected both { [redacted] } than {{ [redacted] }} As shown by Messrs. Baranowski and Zebrowski, even while the transportation to Iatan and Lawrence was covered by contract, Evergy's nominations were much {{ [redacted] }} Over this period, Evergy's initial nominations { [redacted] } from its final nominations for a particular month than did the nominations of {{ [redacted] }}[90]

[90] Baranowski/Zebrowski V.S. Figures 27 & 28.

c. Evergy's CFT entries in 2022 were not reasonable in the context of the prevailing circumstances at that time

Evergy relies on historical shipment volumes from 2017-2021 in an attempt to establish that its 2022 CFT entries were reasonable and imposed an obligation on BNSF to deliver { [redacted] } volumes in 2022.[91] But in so doing, Evergy fails to account for the fact that (i) supply chains were facing historic strain in 2022; (ii) the referenced historic deliveries were made under contractual frameworks that governed planning, capacity allocation, and operational logistics; (iii) the contractual framework allowed for more variable service than most coal shippers, and (iv) the contractual framework's inclusion { [redacted] } Evergy also fails to acknowledge that BNSF delivered *more* tonnage to Lawrence in 2022 than both the historical average for that plant and Evergy's { [redacted] }

As explained by Dr. Prince, Dr. Johnson, and Messrs. Baranowski and Zebrowski and more fully set out in Section I.B.2 below, 2022 was not just another year in supply chains or the railroad industry. During 2022, in the aftermath of the COVID pandemic, rail service across the United States faced unprecedented challenges.[92] Supply chains buckled in the face of lockdowns, uneven reopening,

[91] Evergy Opening Evidence at 17. Even including the significantly higher outlier deliveries in 2017 (which are more than 1.3 million tons higher than any other delivery total for Iatan from 2018-present), Evergy's 2022 CFTs were still above historic delivery averages for Iatan.

[92] *See, e.g.*, *Reciprocal Switching for Inadequate Rail Service*, EP 711 (Sub-No. 2) (STB served Apr. 30, 2024) (recounting service issues across the rail industry).

and historic labor market shifts. All aspects of the economy faced tremendous challenges as the workforce adapted to direct stimulus payments unprecedented in their magnitude, remote working, vaccine mandates, and dramatic changes in demand.

"Like many aspects of the American economy, railroads were not immune from the workforce challenges of the COVID-19 pandemic."[93] These challenges resulted in nationwide reductions in velocity, rail deliveries, and service across the rail industry.[94] As illustrated in Counsel's Figure 1, the October 26, 2022 Rail Energy Transportation Advisory Committee ("RETAC") Utility Update, based on input from 45 power plants, reflected the power industry's recognition that rail service problems were industry-wide, and not limited to individual shippers. Other RETAC updates from 2022 tell the same story.

[93] *Grand Trunk Corp. v. STB*, 143 F.4th at 744.

[94] *See* Baranowski/Zebrowski V.S. at 10-16.

Counsel's Figure 1[95]



Evergy itself recognized that the challenges were industry wide. As Evergy stated in an internal email in April 2022: {{ [redacted] }}[96] Evergy's claim that its CFT nominations were reasonable ignores these circumstances.

The fact that Evergy's previous service was pursuant to a rail transportation contract also makes Evergy's comparison to 2022 invalid. BNSF's contracts with Evergy included { [redacted]

[95] RETAC, Utility Update Presentation (Oct. 26, 2022), https://www.stb.gov/wp-content/uploads/STB-RETAC-utility-2022-1022.pptx.

[96] Counsel's Exhibit 43, EVERGY-0088877, at 882.

[redacted] Under the contract service, BNSF could [redacted]

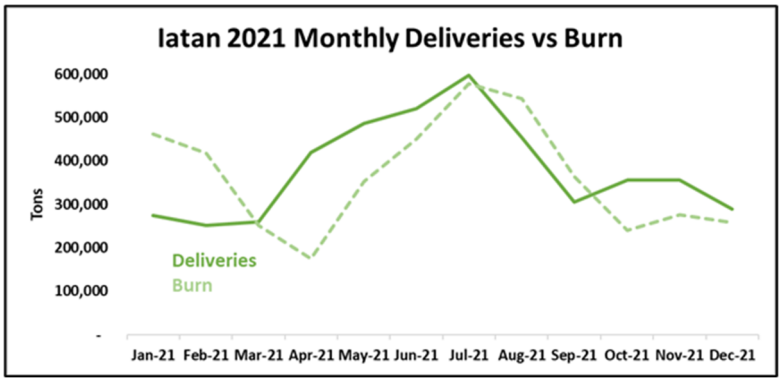
In addition to [redacted] Evergy's prior contract for Iatan allowed for [redacted] As noted by Dr. Prince, [redacted][98] Thus, Dr. Prince concluded that these contracts illustrate that parties negotiate over multiple points, including volume commitments, ratability of shipments, and rail rates.[99] Under the contract which did not require [redacted] Iatan was able to time monthly deliveries with its burn schedule, as shown below.

[97] *See Parrish & Heimbecker, Inc.—Petition for Declaratory Order*, 4 S.T.B. 866, 870-71 (2000).

[98] Prince V.S. ¶ 59.

[99] *Id.* ¶ 60.

Baranowski/Zebrowski Figure 37: Iatan Monthly Deliveries vs. Burn (January 2021 - December 2021)



But this is not the norm for {{ [redacted] }} The chart below illustrates that BNSF-served coal plants also increased summer burn but received relatively flat levels of deliveries throughout the year.

Baranowski/Zebrowski Figure 38: All BNSF-Served Coal Plants Monthly Deliveries vs. Burn (January 2021 - December 2021) {{

[redacted] }}

Comparing Evergy's 2022 CFT entries to historic deliveries is also incongruous with the fact that pre-2022, BNSF's service to Evergy allowed for flexibility in shifting sets between { [redacted] } which improved efficiency and cycle times at all of Evergy's plants: BNSF could keep more sets in circulation and maintain network fluidity because if one plant

was unable to accept an inbound train it could be easily diverted to another Evergy plant; similarly, if one plant needed additional deliveries they could be temporarily redirected without adding sets to the network. As shown by Messrs. Baranowski and Zebrowski, an average of {{ [redacted] }} trains were diverted among Evergy's plants between 2019 and 2021, resulting in Iatan receiving {{ [redacted] }} more tons of coal than it otherwise would have.[100] This was no longer an option in 2022, as Evergy { [redacted] } It would thus be inappropriate to predicate a service obligation in 2022 based on BNSF's pre-2022 volumes and service plan.

Based on the foregoing, Evergy's CFT entries were not reasonable and did not create an enforceable volume obligation on BNSF.

2. BNSF's capacity in 2022 was constrained by unforeseen events outside of its control

The law is clear that when a common carrier faces constrained capacity due to unforeseen events, it satisfies its regulatory obligations so long as the carrier allocates the constrained capacity in a reasonable manner. Common carriers are not responsible for unforeseen circumstances.[101]

---

[100] Baranowski/Zebrowski V.S. at 70.

[101] *Midland Valley R.R. Co.*, 276 U.S. at 484-85 ("The right of a shipper to cars is not an absolute right and the carrier is not liable if its failure to furnish cars was the result of sudden and great demands which it had no reason to apprehend would be made and which it could not reasonably have been expected to meet in full. The law exacts only what is reasonable from such carriers."); *I.C.C. v. Martin Bros. Box Co.*, 219 F.2d at 815 (post-WWII demand was unforeseeable and a "carrier is not liable if its failure to furnish cars was the result of sudden and great demands which it had no reason to apprehend would be made and which it could not reasonably have been expected to meet in full").

Evergy's opening evidence utterly fails to acknowledge the impacts of COVID and the post-COVID recovery on the freight railroad industry in 2022. In fact, Evergy's witness Jessica Tucker, goes so far as to testify that "[t]he principal difference of which I am aware regarding 2022 (as opposed to prior years) pertains to the fact that BNSF provided service to Iatan and LEC on a common-carrier basis rather than on a contract basis."[102] But Ms. Tucker was fully aware of the challenges across the economy, across supply chains, and across the rail network in 2022—challenges that did not exist in prior years.[103]

Rail capacity for a particular customer like Evergy is a dynamic concept involving not just tangible resources, like crew or trainsets, but—in this network industry—other shippers' demand and external factors.[104] To evaluate whether BNSF acted reasonably in 2022, all relevant circumstances, including overall shipper demand and external factors, must be considered. Evergy fails to do so, presenting instead an overly simplistic and factually incorrect theory of whether BNSF had the capacity to transport all the coal it wanted.

---

[102] Tucker V.S. at 48.

[103] *See* Counsel's Exhibit 43, EVERGY-0088877 {{ [redacted] }} *See also* Kara Larson, "Kara Larson Alumni Spotlight | Associate General Counsel, Evergy," posted Mar 21, 2022, by Husch Blackwell, YouTube, 4 min., 16 sec., https://www.youtube.com/watch?v=L4YsDXhCerU ("one of the things that's really a hot topic right now . . . really with every employer . . . is what they're calling the Great Resignation . . . [T]hat there is a kind of cultural reckoning around what people expect out of work…people are leaving jobs that they don't enjoy even if they're well paid . . . and people are expecting employers to offer them benefits around their personal lives, giving them more flexibility."

[104] *Navajo Transitional Energy Co.—Ex Parte Petition for Emergency Service Order*, NOR 42178, slip op. at 26 (STB served June 23, 2023) (Member Fuchs, dissenting).

COVID was an extraordinary event that affected the world economy and supply chains through 2022. COVID caused significant disruptions throughout numerous industries, including freight transportation industries such as trucking, ports, and freight moved by aircrafts. The recovery from the COVID pandemic was fundamentally different from other recessions, leading to an unexpectedly abrupt expansion in economic activity alongside a historically tight labor market. As a result, firms in some sectors of the economy faced an existential threat and firms in other sectors experienced service problems, including freight transportation firms across all modes.

The COVID pandemic and recovery specifically affected rail service in 2022 in three, mutually reinforcing ways. First, Dr. Prince explains that COVID caused failures in multiple points of a complex supply chain, causing frictions that made railroad capacity less effective.[105] Second, Messrs. Baranowski and Zebrowski show that the post-COVID recovery caused an unexpected {{ [redacted] }} in demand for transportation that pressed railroad capacity, including demand {{ [redacted] }} in intermodal transportation and {{ [redacted] }} demand for coal.[106] Third, COVID caused labor market frictions that reduced railroad capacity. Dr. Johnson details the historic nature of the "Great Resignation" and the constrained labor markets that were facing railroads, BNSF, and the Evergy route in 2022.[107]

[105] *See* Prince V.S. at Section V.

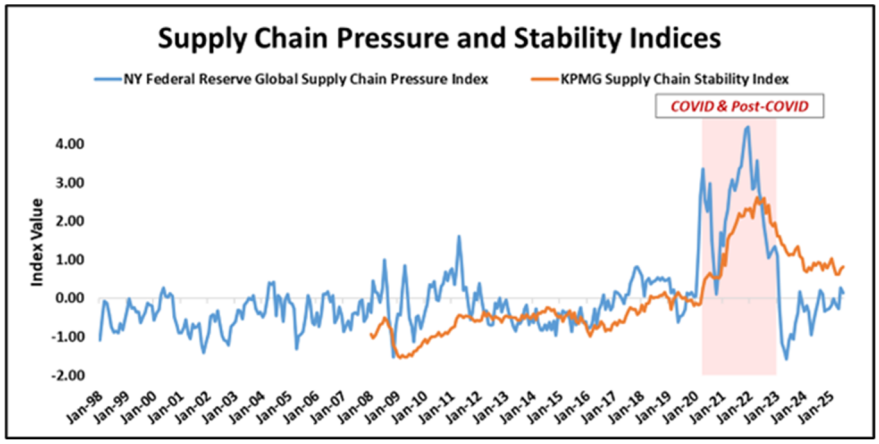
[106] Baranowski/Zebrowski V.S. at 44.

[107] Verified Statement of Erin M. Johnson, Ph.D. ("Johnson V.S.") ¶¶12-16.

a. Recovery from COVID placed unprecedented strains on world supply chains

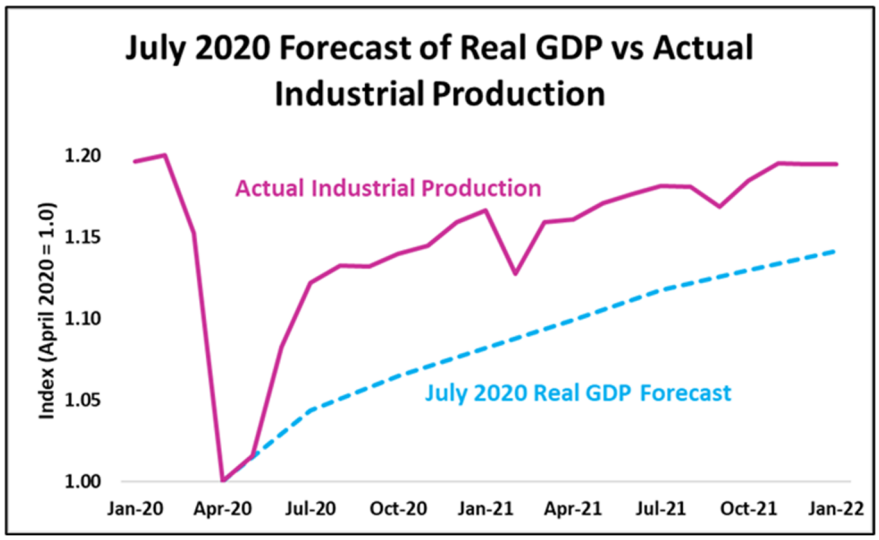
The supply chain was extremely strained during the COVID aftermath as demand returned much faster than expected, as shown below.

Baranowski/Zebrowski Figure 3: Supply Chain Pressure and Stability Indices (1998 - 2025)



While economists projected increased economic activity as lockdowns ended, economic projections at the time forecasted a much slower recovery than actually occurred, as shown in Baranowski/Zebrowski Figure 4 below.

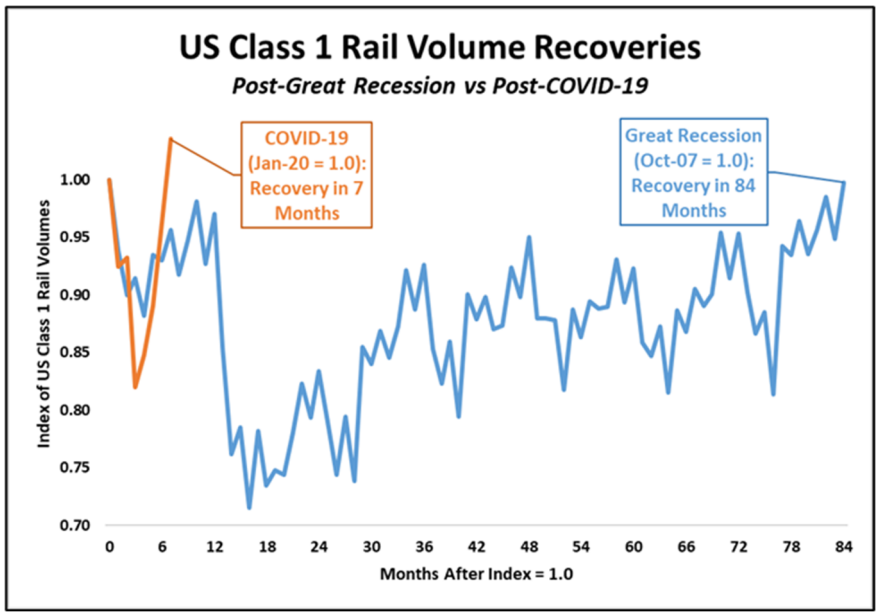
Baranowski/Zebrowski Figure 4: July 2020 GDP Forecast vs. Actual Industrial Production (January 2020 – January 2022)



b. Demand for rail transportation surged in 2021 and the rail network became congested.

During this period, month-to-month traffic levels in the rail industry saw large swings that added to the uncertainty, and railroad traffic volumes recovered much more quickly post-COVID than they had following Great Recession of 2007-09.

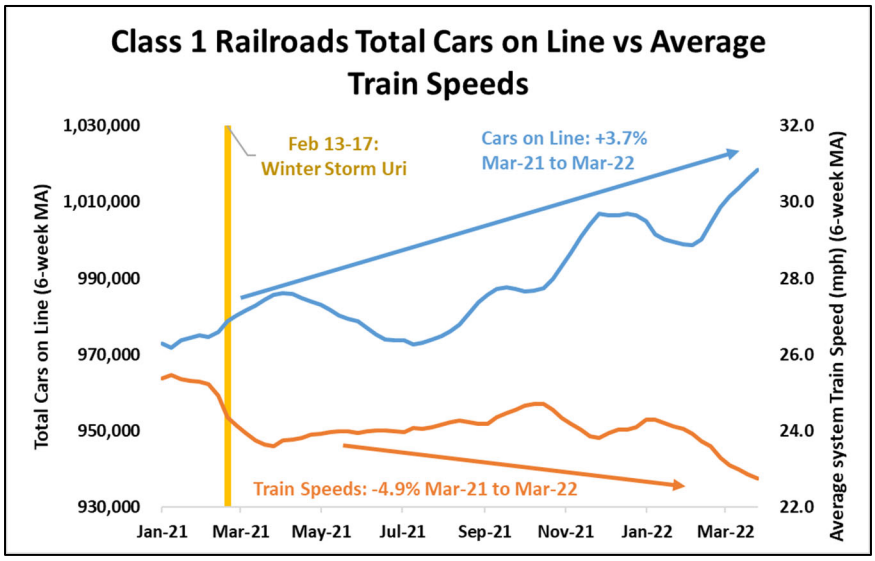
Baranowski/Zebrowski Figure 5: US Class 1 Rail Volumes Post Great Recession vs. Post COVID-19



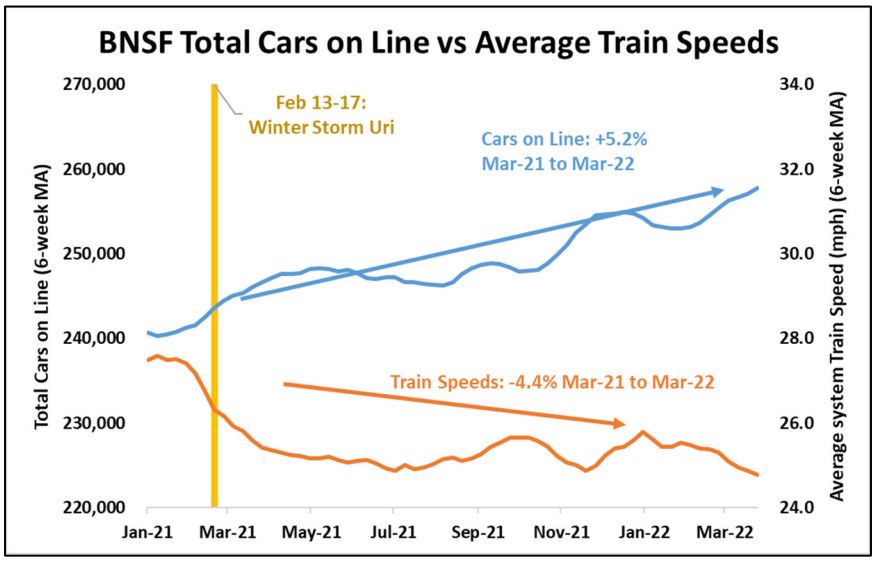
As a result, the national rail network, including BNSF, became congested due to COVID-related demand shocks by late 2021.[108] Baranowski/Zebrowski Figure 7 shows increasing cars on-line and decreasing train speeds for both the entire rail industry and BNSF in 2021.

[108] Morehouse V.S. at 3.

Baranowski/Zebrowski Figure 7: Class 1 Railroads: Total Cars on Line vs. Average Train Speeds (January 2021 - March 2022)



Baranowski/Zebrowski Figure 8: BNSF: Total Cars on Line vs. Train Speeds (January 2021 - March 2022)



c. BNSF, like the rest of the economy, faced labor challenges in the wake of COVID.

At the same time BNSF was facing surging demand and external forces beyond BNSF's control, as evidenced by {{ [redacted] }} which contributed to outcomes below historic expectations. This time period saw historically tight labor markets across all sectors of the economy, resulting from government stimulus and other intervention, the rise in remote work, and the "Great Resignation."

Through a review of economic literature and her own data analysis, Dr. Johnson demonstrates the unprecedented labor market conditions affecting the rail industry and BNSF in 2022. It is obvious that the COVID pandemic caused high unemployment throughout the economy in early 2020. Less obvious was the considerable uncertainty at the time about how long markets would take to come back. Given the large initial impact of COVID on labor markets and the substantial economic uncertainty arising from the pandemic, economists did not generally anticipate that the demand for goods (and subsequently the demand for labor) would bounce back just months after the recession. However, the speed of the recovery in 2020 was unusual, with economists concluding that the labor market rebounded faster after COVID than "after any other major recession since World War II."[109]

[109] Johnson V.S. ¶ 11 (citing Rouse, "Lessons for Economists from the Pandemic," 3).

Dr. Johnson finds that the demand for labor bounced back much more quickly in the aftermath of the COVID than labor supply did. As a result, labor market conditions reached unprecedented levels of tightness in 2021 and 2022. During 2021 unemployment rates continued to decline, reaching pre-pandemic levels by early 2022. By the end of 2022 unemployment was historically low. The U.S. Bureau of Labor Statistics ("BLS") reported that the fraction of persons unemployed during 2022 was at the lowest level since 1958, leading CNN to conclude, "2022 had the lowest total unemployment rate ever."[110] "The state of the labor market around the pandemic is therefore a rarity: it is the "only peacetime episode of an inefficiently tight labor market in the United States."[111] Additionally, "in the second quarter of 2022, labor market tightness reached "a value which it had last reached in 1945."[112]

In addition, a record four million people quit their jobs during April 2021,[113] part of what became known as "The Great Resignation."[114] "The Great Resignation reflected changing views on work and work-life balance in the population, as well as an increase in the opportunities available for individuals to "trade up" to jobs offering better work-life balance, compensation, or the ability to work from

---

[110] *Id.* ¶ 13.

[111] *Id.* ¶ 13.

[112] *Id.* ¶ 13.

[113] *Id.* ¶ 15.

[114] The phrase was coined by management professor Anthony Klotz. *See*, Ann Kellett, "The Texas A&M Professor Who Predicted 'The Great Resignation'," Texas A&M University, Feb. 11, 2022, https://stories.tamu.edu/news/2022/02/11/the-texas-am-professor-who-predicted-the-great-resignation/.

home."[115] Dr. Johnson notes that "[e]vidence has shown that jobs with, for example, inflexible schedules, in-person work requirements, and vaccination requirements were more heavily impacted by changing attitudes to work during this time."[116] "In addition, quits rates were highest amongst workers without a college degree who decreased their desired work hours during this time" and had increased opportunities as companies sought to address labor shortages.[117]

In addition to the national market, Dr. Johnson notes that employers in a wide array of industries faced labor shortages during 2021 and 2022. These

---

[115] Johnson V.S. ¶15. One Forbes article went so far as to say that "[w]orkplace flexibility is the new money in today's post vaccine economy." *See,* Lisa Curtis, "Why The Big Quit Is Happening And Why Every Boss Should Embrace It," *Forbes*, June 30, 2021, https://www.forbes.com/sites/lisacurtis/2021/06/30/why-the-big-quit-is-happening-and-why-every-boss-should-embrace-it/. Moreover, economists have found that "young non-college workers . . . disproportionately moved from lower-paying to higher-paying and potentially more productive jobs" post-pandemic. *See*, *e.g.*, David Autor, Arindrajit Dube, and Annie McGrew, "The Unexpected Compression: Competition at Work in the Low Wage Labor Market," *National Bureau of Economic Research* (Revised March 2024) at 3, https://www.nber.org/papers/w31010.

[116] Johnson V.S. ¶ 15. *See*, *e.g.*, Ryan Michaels, "What Explains the Great Resignation," *Federal Reserve Bank of Philadelphia*, 2024, https://www.philadelphiafed.org/-/media/frbp/assets/economy/articles/economic-insights/2024/q2/eiq224-what-explains-the-great-resignation.pdf ("Using industry-level data from JOLTS, recent research has indeed found that industries with lower rates of telework experienced higher quit rates in 2021-2022."); Stephanie Ferguson Melhorn, Understanding America's Labor Shortage: The Most Impacted Industries," *U.S. Chamber of Commerce,* Nov. 21, 2023, https://www.uschamber.com/workforce/understanding-americas-labor-shortage-the-most-impacted-industries ("Now with many jobs offering flexibility and the opportunity to work remotely, industries that require in-person attendance have an extra challenge in recruiting and retailing workers."). Pushback against vaccine requirements by workers specifically in the rail industry is also well documented. *See*, *e.g.*, Bill Stephens, "Norfolk Southern warns that COVID-19 vaccine mandate poses risks to service (updated)," *Trains*, Oct. 27, 2021, https://www.trains.com/trn/news-reviews/news-wire/norfolk-southern-warns-that-covid-19-vaccine-mandate-poses-risks-to-service/; Josh Funk, "Railroads fight with unions in court over vaccine mandates," *AP News*, Nov. 8, 2021, https://apnews.com/article/coronavirus-pandemic-joe-biden-business-health-lawsuits-f812e239a69591972213d78748cc6add; David Shepardson, "U.S. passenger railroad Amtrak suspends vaccine mandate for employees," *Reuters*, Dec. 14, 2021, https://www.reuters.com/world/us/us-passenger-railroad-amtrak-suspends-vaccine-mandate-employees-2021-12-14/.

[117] Johnson V.S. ¶ 15.

included trucking, air travel, public transit, ports, mining, and public utilities.[118] Dr. Johnson's analysis also shows that that "the labor markets relevant to the BNSF system and the Evergy route tracked the national experience, as did the experience of the broader rail transportation industry, with high unemployment during 2020 followed by extremely tight labor markets in 2021 that became even tighter in 2022."[119]

d. <u>BNSF moved aggressively to hire and retain workers despite unprecedented labor challenges.</u>

Thus, at the same time BNSF faced surging demand, BNSF faced historically tight labor markets beyond BNSF's control evidenced by {{ [redacted] }} than historic experience. Nonetheless, BNSF took aggressive actions to {{ [redacted] }}[120] In the first half of 2021 BNSF stepped up its {{ [redacted] }} In the first quarter, BNSF recalled {{ [redacted] }} total crew systemwide and {{ [redacted] }} crew on the Evergy route, and in the second quarter, BNSF recalled {{ [redacted] }} total crew and {{ [redacted] }} crew on the Evergy route.[121] Notwithstanding these furlough recalls, BNSF's active conductor and engineer headcount did not substantially increase

[118] *Id.* ¶ 5.

[119] *Id.* ¶ 5.

[120] Carter V.S. at 4-7.

[121] Johnson V.S. ¶ 43. Note that due to data availability, here, crew refers to conductors and engineers.

from December 2020 to June 2021.[122] As explained by Dr. Johnson, "[t]wo forces worked against BNSF's furlough recall actions during this period: furlough recall failures and employee attrition."[123] These forces were "consistent with changes in labor market conditions at the time. During 2021 the labor market became increasingly tight, and it was during 2021 that employee attrition increased throughout the economy and the Great Resignation became a topic of conversation."[124] Thus, BNSF's {{ [redacted] }} during this period are consistent with the national experience.

Despite labor market headwinds, as of June 2021 BNSF had enough crew to meet the crew demand it forecasted. In June 2021 BNSF had {{ [redacted] }} active conductors and engineers and projected that it would require on average {{ [redacted] }} active TY&E employees in the following six months, taking into account coal nominations and expected employee attrition.[125] "On the Evergy route, BNSF had an active supply of {{ [redacted] }} and projected only slightly higher crew requirements of {{ [redacted] }} during the following six months."[126] Consistent with these numbers, in a letter to the Board dated June 9, 2021, BNSF wrote: "[W]e have sufficient train

[122] BNSF system conductor and engineer employment was {{ [redacted] }} in December 2020 and {{ [redacted] }} in June 2021. Headcount was {{ [redacted] }} and {{ [redacted] }} for the same dates on the Evergy route. *See id.* ¶ 44 n.106.

[123] *Id.* ¶ 44.

[124] *Id.* ¶ 45.

[125] *Id.* ¶ 46.

[126] *Id.*.

crews and yard employees for current volumes. In addition, currently over 1,500 TYE employees remain on furlough . . .'"[127]

In the second half of 2021 BNSF's employment outlook changed. During this time, BNSF recalled an additional {{ [redacted] }} employees ({{ [redacted] }} on the Evergy route).[128] However, employee attrition and furlough recall failure rates remained high in the second half of 2021 as in the first half (on average {{ [redacted] }} and {{ [redacted] }} percent per month, respectively).[129] Despite furlough recalls, by December 2021, BNSF had fewer active conductors and engineers than it had in June 2021 ({{ [redacted] }} down from {{ [redacted] }}).[130] At the same time, BNSF's forecasted demand increased from {{ [redacted] }} to {{ [redacted] }}.[131] While BNSF still had roughly {{ [redacted] }} conductors and engineers on furlough systemwide in December 2021, the stock of furloughed employees was exhausted even sooner at many stations on the Evergy Route.[132]

"By October 2021 BNSF recognized that it needed to take action to ensure crew supply going into 2022."[133] BNSF pursued a hiring initiative that included advertising campaigns, outreach efforts, and generous financial incentives targeted

---

[127] Katie Farmer, Letter from BNSF to STB, June 9, 2021, https://www.stb.gov/wp-content/uploads/BNSF-Response-Letter-to-Chairman-Oberman-Regarding-Rail-Service-June-09-2021.pdf. The 1,500 figure is approximately equal to the number of {{ [redacted] }} just prior to the date of the letter in May 2021. *See* Johnson V.S. at Exhibit 14.

[128] Johnson V.S. ¶ 47.

[129] *Id.* ¶ 47 n.116.

[130] *Id.* ¶ 47 n.117.

[131] *Id.* ¶ 46, ¶ 46 n.112.

[132] *Id.* ¶ 47.

[133] *Id.* ¶ 48.

to areas with particular needs.[134] BNSF also offered financial incentives to encourage employees to stay in or transfer to areas with particular crew needs[, as well as] vacation buy-backs and delayed retirement incentives to increase crew availability."[135]

In a March 2022 letter to the Board, BNSF stated that it planned "to hire an additional 1,000 Train, Yard and Engine (TY&E) employees in 2022."[136] BNSF acknowledged that labor market conditions throughout the economy were not favorable for hiring, but projected confidence, stating: "[d]espite facing the same attrition and hiring obstacles that nearly all U.S. corporations are experiencing at the moment, we are on pace to meet that hiring plan this year."[137] Dr. Johnson shows in the chart below that "BNSF hired a substantial number of conductors in the first half of 2022 ({{ [redacted] }} conductors on the Evergy route and {{ [redacted] }} in the rest of the system)."[138] "BNSF's hiring was {{ [redacted] }} during the second half of 2022, when it hired {{ [redacted] }} conductors on the Evergy route and {{ [redacted] }} in the rest of the system."[139]

---

[134] Carter V.S. at 5-7.

[135] Johnson V.S. ¶ 48.

[136] *Id.* ¶ 54.

[137] *Id.*

[138] *Id.*

[139] *Id.*

Johnson Figure 7: Count of Hires
BNSF System and Evergy Route (October 2021 – December 2022) {{



}}

BNSF also took several other steps to increase the number of available crews in 2022 including:

- Increasing the frequency of conductor training classes;
- Offering "financial incentives for employees to transfer into the Evergy Route;"[140] and
- Offering incentives beyond hiring bonuses to increase availability and retention of incumbent crew members in the form of vacation buy-backs and deferred retirement incentives.

[140] *Id.* ¶ 56.

While BNSF was working to hire and train new employees, it faced several headwinds that reduced its ability to get additional crews in the field. These headwinds were acute in Lincoln and Alliance on the Evergy route, where labor market conditions were particularly challenging.

In line with the increased quits rate in the broader economy,[141] BNSF faced substantial attrition from incumbent conductors and engineers. This high attrition hindered BNSF's ability to increase crew.[142] Also, "BNSF also faced difficulties in attracting and retaining qualified candidates as it sought to hire conductors during late 2021 through 2022, and this limited BNSF's ability to get new hires onto trains."[143]

BNSF was also limited in the short term in the ways it could seek to attract and retain employees and was precluded from {{ [redacted] }} by the terms of its collective bargaining agreements with unions.[144] "BNSF could offer {{ [redacted] }}[145] "However, BNSF competed to attract and retain employees with employers who were {{ [redacted] }} in 2021 and 2022 in response to tightening labor market conditions."[146] BNSF's collective

[141] *Id.* ¶ 60.

[142] *Id.*

[143] *Id.* ¶ 61.

[144] *Id.* ¶ 63.

[145] *Id.*.

[146] *Id.*.

bargaining agreements with unions also {{ [redacted] }}, making geographically-focused hiring difficult.[147] This means that BNSF's efforts to recruit and hire at a particular station like Alliance or Lincoln might do little to alleviate shortages at those stations, as personnel in these locations could transfer to other locations.[148]

In sum, BNSF service in 2022 was challenged by unforeseen external forces beyond its control. BNSF took considerable action to prevent and remediate crew shortages during 2022 to address surging demand.

> BNSF recruited and hired aggressively, offered hiring and transfer incentives, and incentivized employee availability through vacation buy-backs and deferred retirement incentives. However, BNSF faced headwinds due to labor market conditions and union agreements. High employee attrition, consistent with the experience of employers throughout the economy, outmigration of crew from critical areas, and union agreements meant that BNSF faced crew shortages in critical personnel areas during 2022 despite its considerable efforts.[149]

e. Evergy's complaints about BNSF's pre-COVID hiring practices are unavailing

Evergy ignores the strains in the world supply chain, unforeseen surging demand for transportation, and the historic nature of labor markets in 2022, and instead claims that BNSF did not maintain an adequate labor force *prior* to the

[147] *Id.* ¶ 62.

[148] *Id.*

[149] *Id.* ¶ 65.

COVID pandemic, that its failure to do so was unreasonable, and that is what caused Evergy's service issues in 2022.[150] These claims regarding staffing decisions prior to 2022 fall well outside the 2-year statute of limitations and cannot form the basis of this complaint.[151] But even if such claims were not barred by the statute of limitations, the dramatic effects of the COVID pandemic on traffic levels cuts off any causal linkage between the supposedly unreasonable labor practices pre-COVID and BNSF's service in 2022.[152] As explained by BNSF's labor expert Dr. Johnson, BNSF has historically maintained employee levels that correlate with traffic levels, fluctuating employee headcount up and down through the furlough process, consistent with BNSF's collective bargaining agreements.[153] The dramatic shutdown of the world economy in March of 2020 necessitated work force reductions at BNSF commensurate with reduced traffic levels. Regardless of staffing levels prior to those events, BNSF would have ended up in largely the same place in terms of headcount in 2020. As a result, BNSF's position in 2022 would not have been materially different if it had higher head count going into the pandemic.

Regardless, even if Evergy could show facts supporting its claim, Evergy again ignores the appropriate legal standard. Evergy cannot ask the Board to find a violation of the common carrier obligation by looking back at staffing levels with

---

[150] *See* Evergy Opening Evidence at 31 (claiming that "any employee or locomotive power shortages that BNSF experienced in 2022 were a consequence of its own deliberate decisions and operations plans put in place well before the Covid pandemic occurred.").

[151] 49 U.S.C. § 11705(c).

[152] This lack of causal linkage is also fatal to Evergy's damages claim, as discussed below.

[153] Johnson V.S. ¶ 70; *see also* Witness Statement of Judy K. Carter at 4 n.1.

the benefit of hindsight rather than by demonstrating unreasonable conduct at the time decisions were made. The Board should not micromanage railroad operations or second-guess staffing levels after the fact. Moreover, the Supreme Court has made clear that the agency does not have authority to regulate railroad workforce levels.[154]

Finally, Evergy's claim is just not true. Prior to the pandemic, BNSF maintained crew levels that reasonably varied according to traffic demands and did not adopt a strategy of extreme "cost-cutting operations" as Evergy alleges.[155] Unlike other Class I rail carriers, BNSF's crew levels remained consistent in the years leading up to the pandemic—a point highlighted in charts submitted by organized labor in EP 770.[156] Further, Dr. Johnson's analysis of BNSF's headcount confirms that staffing per service level remained consistent during the same period and even increased after the pandemic, contrary to Evergy's claims that pre-pandemic cuts lead to 2022 shortages.[157]

---

[154] *Mo. Pac. R.R. v. Norwood*, 283 U.S. 249, 258 (1931).

[155] Evergy Opening Evidence at 31.

[156] *See* Johnson V.S. ¶ 69, Figure 10 (data on carloads per employee for Class I carriers shows BNSF's metrics remained stable from 2015 to 2019).

[157] *Id.* ¶¶ 70-71, Figure 11.

Johnson Figure 11: Headcount and Loaded Units
BNSF System 2017 - 2022 {{



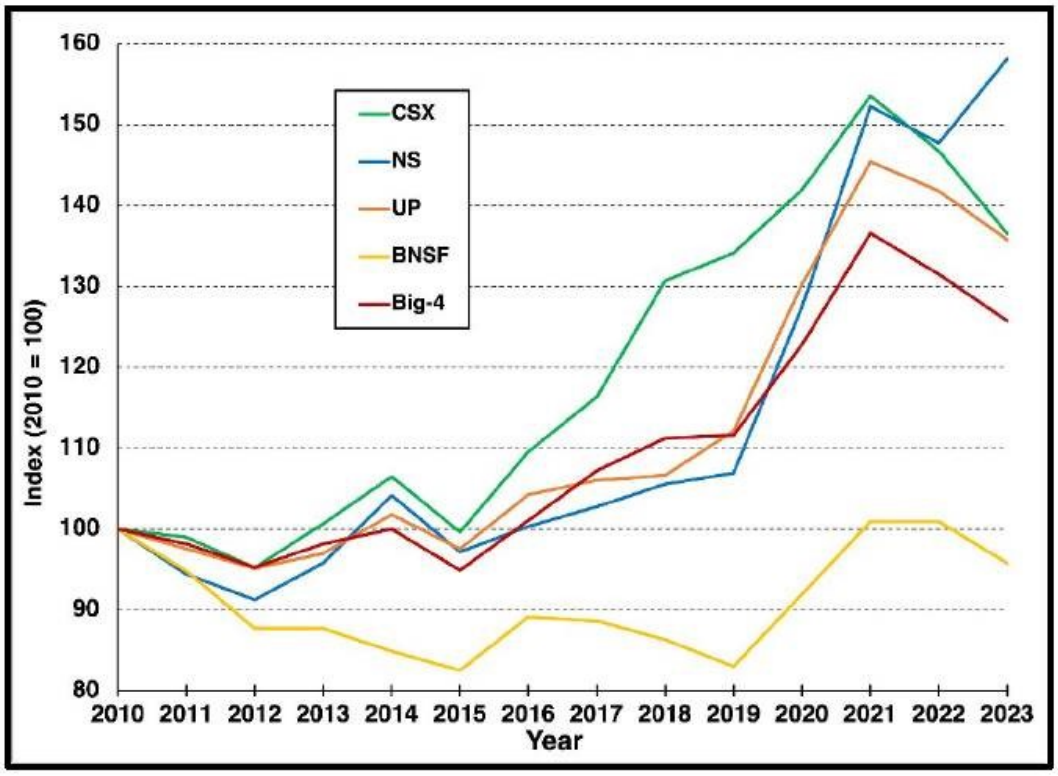
}}

Even the testimony by representatives of organized labor cited by Evergy demonstrate these facts.[158] The data submitted by those organizations in the EP 770 proceeding demonstrated that BNSF did not dramatically cut headcount relative to traffic in the years prior to 2020 and that BNSF maintained significantly higher employee levels than other large railroads in this timeframe. As the yellow line in the chart submitted by the unions in EP 770 below shows, unlike other railroads, BNSF saw decreased carloads per employee in the years 2010—-2020 and in 2022 had roughly the same number of carloads per employee as it did in 2012.[159]

[158] *See* Evergy Opening Evidence at 32 (citing to submissions by organized labor groups in EP 770).

[159] Third Supplemental Comments of the Brotherhood of Maintenance of Way Employees Division/IBT; Brotherhood of Railroad Signalmen; International Association of Sheet Metal, Air, Rail, and Transportation Workers/Mechanical Division; International Association of Boilermakers; International Association of Machinists and Aerospace Workers District #19; National Conference of Firemen and Oilers 32BJ/SEIU; Brotherhood of Locomotive Engineers and Trainmen/IBT and Transport Workers Union of America, *Urgent Issues in Freight Rail Service* EP 770 (Sub. No. 1) (filed Apr. 12, 2024) at 66.

Johnson Figure 10: Carloads per Employee in the Class I Railroads 2010 – 2021



	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
CSX	293	290	279	295	312	292	321	341	383	393	416	450	430	400
NS	287	271	262	275	299	279	288	295	303	307	366	437	424	454
UP	165	161	157	160	168	161	172	175	176	185	215	240	234	224
BNSF	212	201	186	186	180	175	189	188	183	176	195	214	214	203
Big-4	276	271	263	271	276	262	279	296	307	308	339	377	363	347

3. BNSF acted reasonably in allocating transportation services during a time when demand exceeded available capacity.

Faced with a network with slowing velocity and constrained capacity, BNSF took actions to protect all shippers and did not put the parochial interest of any one

shipper—even a large shipper with {{ [redacted] }} traffic like Evergy—above the interest of the broader network. Such an approach is consistent with—indeed required by—the common carrier obligation.[160] Under some circumstances, a railroad may not merely have a "right" but a "plain duty to refuse to receive more [goods] for shipment until its line [is] clear," to avoid mass congestion on its network.[161] Rail carriers also do not have an unqualified obligation to furnish cars or accept private cars into common carrier service.[162] Similarly, railroads do not have an obligation to accept shipper-owned cars in times of congestion.[163] The congestion and resource limitations clearly encountered in 2022 invoke such considerations under the circumstances.

As shown below, BNSF fairly allocated capacity throughout the network and provided reasonable service to Evergy during the periods of congestion in 2022.

a. <u>BNSF executed the plan to address falling velocities in the coal network that it presented to the Board in 2014 and 2022.</u>

During service challenges due to extreme winter weather in 2014, BNSF wrote to the Board about how the number of trainsets impacts network velocity in times of congestion. BNSF explained that much like cars on a highway, an

---

[160] *Savannah Port Terminal R.R.—Pet. for Declaratory Order—Certain Rates & Practices as Applied to Cap. Cargo, Inc.*, FD 34920, slip op. at 8-9 (STB served May 30, 2008).

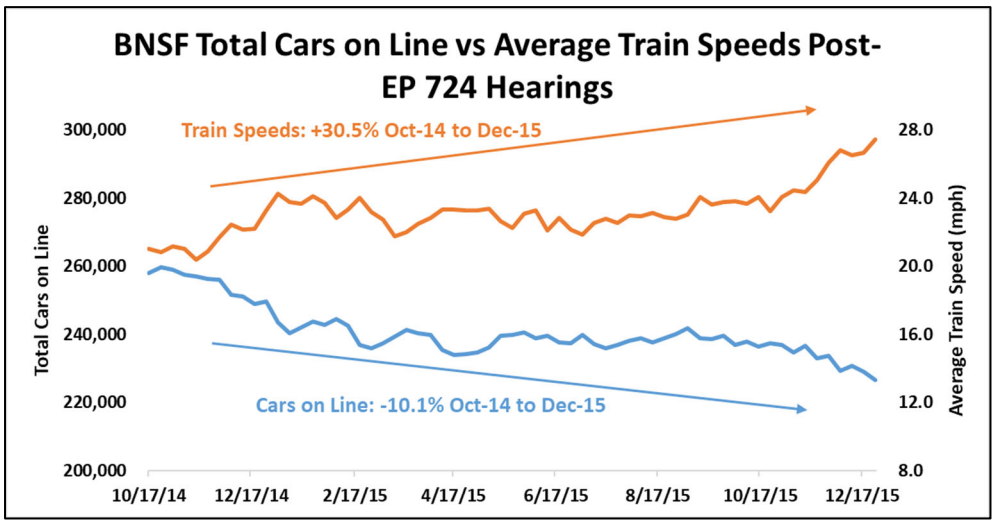
[161] *Ill. Cent. R.R. v. Cobb, Christy & Co.*, 64 Ill. 128, 137 (1872).

[162] *Atchison, Topeka & Santa Fe Ry. Co. v. United States*, 232 U.S. 199, 214 (1914).

[163] *See, e.g.*, *Shippers Comm., OT-5 v. The Ann Arbor R.R.*, 5 I.C.C.2d at 864, *aff'd sub nom, Shippers Comm., OT-5 v. I.C.C.*, 968 F.2d at 79, 81 (upholding an ICC decision holding that a common carrier had an obligation to accept private railcars into service only if there was adequate capacity to handle those cars).

increased number of trainsets running on key coal corridors led to reduced velocity and, consequently, less coal being delivered overall. To operate the network more efficiently and increase coal deliveries at that time, BNSF identified the need to decongest the network by strategically reducing the number of trainsets. Specifically, BNSF removed fewer than 30 sets from the more congested lanes in 2014. BNSF's performance reports to the Board showed that these reductions led to measurable improvements in velocity and overall deliveries at that time.[164] That improvement is illustrated below.

Baranowski/Zebrowski Figure 10:
BNSF Total Cars on Line vs. System Average Train Speeds
(October 2014 - December 2015)



[164] Letter from Roger Nober, BNSF, to Chairman Daniel R. Elliott, III, Vice Chairman, Deb Miller & Member Ann D. Begeman, STB (Oct. 28, 2014) at 3-4, https://dcms-external.s3.amazonaws.com/MPD/17248/9E451F72DBAFCA0985257D7F006B0333/236915.pdf.

BNSF took similar operational steps in 2022 to restore network fluidity.[165] Part of that plan was {{ [redacted] }} trainsets from service across the coal network in March 2022, since reducing cars online improves velocity—a dynamic familiar to anyone that has been stuck in a traffic jam. The coal set reductions were spread among BNSF's customers, and { [redacted] } sets was an Evergy set. Evergy's sets for its Lawrence plant were not impacted by the { [redacted] } at all; rather, BNSF left { [redacted] } sets in service to Lawrence from mid-January through the end of 2022. Removing trainsets in service had the desired effect, and velocity increased in the coal network. As a result, BNSF was able to deliver more coal to Iatan in March through June of 2022 with { [redacted] } than it had in February with { [redacted] }[166]

b. Evergy dramatically { [redacted] } CFT nominations as markets changed in May 2022

Slightly over a month before summer began, Evergy reversed its course of { [redacted] } nominations and began sharply { [redacted] } its nominations for the second half of 2022. During the first part of the year with {{ [redacted] }}, Evergy had been { [redacted] } its nominations for the second half of 2022 through its April CFT submissions. By contrast, during this same period, other {{ [redacted] }} for the remainder of the year. However, as natural gas prices rose following the Russian invasion of Ukraine, Evergy reversed course and began dramatically { [redacted] } its nominations for the second half of 2022 (and for June, which was less than a month away), as is depicted below.

Baranowski/Zebrowski Figure 31: Changes in Amount of Coal Nominated for Second Half of 2022 (December 2021 - July 2022 CFTs) {{



}}

Along with its { } its burn in summer of 2022 very quickly, and stockpiles accordingly began to decline. Iatan's increase in its burn rate was greater than {{ }}

Baranowski/Zebrowski Figure 32: 2022 Monthly Burn - Percentage Over or Under Annual Average Monthly Burn (January 2022 - December 2022) {{



}}

The exceptionally dramatic increase in burn at Iatan caused its stockpile, {{ [redacted] }}, to begin to drop. {{ [redacted] }}[167] On July 8, 2022, Evergy notified[168] BNSF that Iatan's stockpile was {{ [redacted] }} Mere days later, BNSF promptly { [redacted] } in service to Iatan.[169] Baranowski/Zebrowski Figure 33 below depicts this series of events.

Baranowski/Zebrowski Figure 33: Iatan Stockpile vs. Rolling 10-Day Average Monthly Burn (May 1, 2022 - August 1, 2022) {{



}}

[167] {{ [redacted] }}

[168] *See* Counsel's Exhibit 16, BNSF_EVERGY_0006193. { [redacted] } (July 8, 2022).

[169] *See* Counsel's Exhibit 17, BNSF_EVERGY_0006186. { [redacted] } (July 19, 2022).

As shown in Baranowski/Zebrowski Figure 34 below, BNSF's quick response to { [redacted] } once it was informed Iatan's inventory was { [redacted] } resulted in increased deliveries for the rest of the summer and fall, although { [redacted] }

Baranowski/Zebrowski Figure 34: Deliveries to Iatan vs. Cycle Days (June 2022 - November 2022) {



}

Evergy benefited from BNSF increasing deliveries to Evergy far more than to {{ [redacted] }} As shown in Baranowski/Zebrowski Figure 35 and Baranowski/Zebrowski Figure 36 below, BNSF's average monthly deliveries to Iatan were {{ [redacted] }} in July through November 2022 compared to its deliveries to the plant in March through June 2022, whereas BNSF's monthly deliveries to other coal shippers in this timeframe {{ [redacted] }}.

Baranowski/Zebrowski Figure 35: Average Monthly Coal Deliveries to Iatan (March - June 2022 vs. July - November 2022) {{



}}

Baranowski/Zebrowski Figure 36: Average Monthly Deliveries to Non-Evergy BNSF-Served Coal Plants (March - June 2022 vs. July - November 2022)[170] {{



}}

Despite { } in July 2022, Evergy wanted even more coal and asked to { } seeking to double the volume of deliveries it had sought during the first half of the year. However, BNSF could not accommodate Evergy's desire to { } due to the impacts of the crew shortage along the Evergy route, which had reached its height by midyear. Indeed, as shown below, { } for Evergy would have further {{ }} cycle times and would not have yielded an increase in coal volume to Evergy's plants.

[170] *See* workpaper "Analysis of EIA Burn, Deliveries, and Stockpiles.xlsx at tab "Iatan vs. Others Av. Deliveries."

c. {{ [redacted] }} contributed to the temporary crew shortage in 2022 that did not allow a { [redacted] } in service to Iatan.

The temporary crew shortage during this period occurred due to a confluence of unprecedented changes in labor markets during the pandemic period, as well as major unforeseen {{ [redacted] }} along the Evergy route. There were no changes in BNSF's resource planning processes or target resource levels that contributed to this crew shortage, and other than crew, BNSF had sufficient resources, including locomotive and track resources.[171] The effects of this {{ [redacted] }} demand were especially pronounced on the Evergy route, as {{ [redacted] }} grain demand specifically involved grain that travels through the St. Joseph subdivision, along the Evergy route where Iatan is located.

{{ [redacted] }} in demand for coal transportation on BNSF's network were far {{ [redacted] }} in 2022 than in prior years. For any given transportation year, BNSF initially generates internal forecasts of coal demand during the year prior and then receives actual nominations and CFT updates from its coal customers as the period of transportation approaches. Shown below, between initial internal forecasts and final CFT nominations the demand for coal transportation on BNSF's network for the second half of 2022 {{ [redacted] }}—well above the prior two years.

[171] *See* Baranowski/Zebrowski V.S. at 45-46.

Baranowski/Zebrowski Figure 45: Change in BNSF Network's Coal Demand for Second Half of Year (2020 vs. 2021 vs. 2022) {{



}}

In the above chart, the first portion of the green line depicts an initial {{

}}[173]

Grain traffic funneling through the St. Joseph's subdivision—a segment of BNSF's network spanning from Lincoln, Nebraska to Kansas City, Missouri—also {{ }} in 2022. The chart below shows there was {{ }} grain traffic

[172] Energy Ventures Analysis, U.S. Coal Markets and the Current Coal Supply Shortage, PJM Stakeholder Process Presentation Prepared for America's Power (July 2022), https://www.pjm.com/-/media/DotCom/committees-groups/committees/oc/2022/20220714/item-08---us-coal-markets-and-the-current-coal-supply-shortage.ashx.

[173] Following the invasion, the price of natural gas increased significantly in the U.S., which made coal relatively more attractive as a source of power generation.

traversing the St. Joseph's subdivision in 2022 than in the prior three years, and that this {{ [redacted] }} from May to September.

Baranowski/Zebrowski Figure 46: BNSF Monthly Grain Carloads Traversing the St. Joseph's Subdivision (2022 vs. 2019-2021 Average) {{



}}

"The {{ [redacted] }} section of the {{ [redacted] }} is a crucial link on BNSF's system between {{ [redacted] }} where grain originates and {{ [redacted] }} where grain terminates."[174] "[T]o move these {{ [redacted] }} levels of grain in a period of crew shortages and simultaneously {{ [redacted] }} levels of coal demand, it was imperative that BNSF maintain fluid operations and avoid the risk that train holds reduce the thruput of this segment, which was already near capacity."[175] Any unloading issues at Iatan stood to amplify congestion, as unloading delays for any

[174] Baranowski/Zebrowski V.S. at 54.

[175] *Id.*

given train would force BNSF to stage the subsequently arriving train at sidings along this segment.[176]

Although Messrs. Mulholland and Crowley describe the Evergy route as largely double- and triple-tracked,[177] the portion of the route on the St. Joseph's subdivision is {{ [redacted] }}[178] Evergy's Iatan plant directly connects to the {{ [redacted] }} St. Joseph's subdivision. This subdivision was also the one segment on the Evergy route that lacked ample excess trackage capacity during the summer and fall of 2022.

BNSF, while responsive in accommodating Evergy's request for a { [redacted] } in service to Iatan in July 2022, was correct to not also { [redacted] } Several metrics indicated strained operations along the Evergy route during the summer and fall of 2022.

First, consistent with the temporary crew shortage described above, crew-related delay minutes along the Evergy route {{ [redacted] }} across most of 2022 before peaking in October 2022.

[176] *See* Counsel's Exhibit 18, BNSF_EVERGY_0006243. {{ [redacted] }} (March 15, 2022).

[177] *See* Mulholland/Crowley V.S. at 11 ("Although the Evergy route accounts for just 3.5% of BNSF's system-total 32,837 route miles, the Evergy route includes high-volume segments with extensive double- and triple-track.").

[178] *See* Baranowski/Zebrowski V.S. at 54.

Baranowski/Zebrowski Figure 48: Crew Related Delay Minutes along the Evergy Route (March 2022 - December 2022) {{



}}

Second, as {{ [redacted] }} trains tried to traverse the Ravenna[179] and St. Joseph's subdivisions on the Evergy route, disproportionately {{ [redacted] }} trains ended up holding as is depicted in the next two charts below.

[179] The Ravenna subdivision tracks between Ravenna, Nebraska, and Lincoln, Nebraska.

Baranowski/Zebrowski Figure 49: Trains per Day Traversing the St. Joseph's and Ravenna Subdivisions (June 2022 - September 2022) {{



}}

Baranowski/Zebrowski Figure 50: Train Holdings per Day on St. Joseph's and Ravenna Subdivisions (June 2022 - September 2022) {{



}}

Third, train speeds {{ }} on the Ravenna subdivision.[180] Shown in Baranowski/Zebrowski Figure 52 below, starting in May trains traveled {{ }} miles per day on average when tracking over the Ravenna subdivision.

[180] Train speeds would not necessarily {{ }} on all subdivisions on the Evergy route, as BNSF could strategically hold trains on certain subdivisions until a path cleared to move trains through the subdivision ahead.

Baranowski/Zebrowski Figure 51: Train Miles per Day on Ravenna Subdivision (June 2022 - September 2022) {{



}}

Fourth, consistent with the above trends, cycle days for Iatan trains {{ }} from June to September 2022 as shown on Baranowski/Zebrowski Figure 52 below.

Baranowski/Zebrowski Figure 52: Iatan Average Monthly Cycle Days (June 2022 - September 2022) {{



}}

Fifth, as is shown on Baranowski/Zebrowski Figure 53 below, {{ }}

[redacted] }} following the { [redacted] } in July 2022.

Baranowski/Zebrowski Figure 53: Average Iatan Unloading Time Pre- and Post-July 2022 { [redacted] } (April - June 2022 vs. July - September 2022) {{

[redacted]

}}

Consistent with the deteriorating operating conditions indicated by the above metrics, BNSF was {{ [redacted] }} coal trainsets operating on the Alliance Corridor (which contains the Evergy route) as shown on Baranowski/Zebrowski Figure 54 below.

Baranowski/Zebrowski Figure 54: Trainsets in Service for Alliance Corridor Plants (August 2022 - November 2022) {{



}}

Accordingly, it was entirely appropriate for BNSF to { }. BNSF communicated as much to Evergy.[181]

d. BNSF balanced the service needs of all of its customers.

Even if operating conditions along the Evergy route had supported an {{ }} of coal trainsets during the summer and fall of 2022, there were numerous other BNSF-served coal plants with {{ }} than Iatan that had not, unlike Iatan, received any {{ }} all through this period. The chart below shows that from July to November 2022, there were at any given time {{ }}

[181] *See* Counsel's Executive Summary Exhibit 03, BNSF_EVERGY_0005734.

Baranowski/Zebrowski Figure 55: {{ [redacted] }} {{



}}

e. <u>BNSF's service during the period of temporary crew shortage was sufficient to sustain Evergy's normal operations.</u>

Starting in August 2022 when BNSF was unable to { [redacted] } in service to Iatan, it was realistic to project that keeping { [redacted] } in service until December, and then { [redacted] } would provide enough coal to cover Iatan's historic burn requirements without nearing Iatan's 20-day inventory threshold of {{ [redacted] }} stockpile tons. This assessment is based on modelling the number of tons that would be delivered to Iatan under this set plan at current cycle days as of August, the level of historic burn at Iatan, and projecting out monthly Iatan stockpile levels from actual August 2022 stockpile levels. This projection is shown below.

Baranowski/Zebrowski Figure 56: Hypothetical Iatan Stockpile given BNSF's Trainset Plan Through Winter 2023 (July 2022 - February 2023) {{



}}

Despite the service challenges stemming from BNSF's temporary crew shortage in the summer and fall of 2022, Evergy still received enough coal to sustain normal rates of coal burn and maintained inventory levels {{ [redacted] }} Under no case would Evergy's inventories have been fully depleted even if it hadn't decided to impose coal conservation measures. The service it received was {{ [redacted] }} to other BNSF-served coal plants during this period and could have been { [redacted] }

f. BNSF's service to Evergy during the second half of 2022 was {{ [redacted] }} to service other BNSF-served coal plants received.

Evergy received service {{ [redacted] }} to the service other BNSF-served coal plants received in the second half of 2022.[182] As shown on Baranowski/Zebrowski Figure 60 below, relative to nominations for the year entered into the CFT at the beginning of 2022, Evergy received {{ [redacted] }}

Baranowski/Zebrowski Figure 60: Fulfillment of Initial CFT Nominations for Second Half of 2022 - Evergy vs. Other BNSF-Served Coal Plants {{

[redacted]

}}

The number of deliveries Evergy received in the second half of 2022 relative to its final nominations would also have been {{ [redacted] }}

[182] For reasons discussed above, in the first half of the year Iatan's stockpile was {{ [redacted] }} for BNSF to deliver additional volumes included in Evergy's { [redacted] } nominations.

[redacted] }} This is depicted below.

Baranowski/Zebrowski Figure 61: Fulfillment of Final CFT Nominations – Evergy {{ [redacted] }} {{

[redacted]

}}

In her Verified Statement, Ms. Tucker presents a view that BNSF only delivered 63.4% of Evergy's CFT requests for Iatan in 2022.[183] Messrs. Mulholland and Crowley provide the same statistics for both Iatan and Lawrence as well as all other BNSF coal customers.[184] However, these measures are skewed because they include the first half of 2022, a period in which Iatan's stockpile {{ [redacted] }} and

[183] *See* Tucker V.S. at Table 5, row "% of CFT Schedules Delivered", column "Iatan".

[184] *See* Mulholland/Crowley V.S. at Ex. 10.

nominations were { [redacted] } and do not control for Evergy's nominations {{ [redacted] }}

g. {{ [redacted] }}

Baranowski/Zebrowski Figure 64: Percent of Declarations Delivered at {{ [redacted] }} vs. BNSF-Served Evergy Coal Plants (August 2022 - November 2022)[185] {{



}}

[185] *See* Workpaper "Section 3.6.xlsx" at tab "F66."

{{ [redacted] }}

[186] Counsel's Exhibit 19, EVERGY-0089006; Counsel's Exhibit 20, EVERGY-0089297.

[187] Counsel's Exhibit 19, EVERGY-0089006.

[188] Counsel's Exhibit 20, EVERGY-0089304.

[redacted] }} Accordingly, BNSF should not be held responsible for the widespread disruptions caused by a global pandemic and the Great Resignation—these challenges unexpectedly impacted rail carriers and industries worldwide.

* * * *

Despite the challenging environment for all railroads in 2022, BNSF managed to provide reasonable and consistent transportation service to Evergy in line with BNSF's tariffs. Notably, Lawrence received better coal service than {{ [redacted] }} having received more coal than Evergy { [redacted] } a fact {{ [redacted] }}[190] The only alleged shortages to Lawrence were a function of Evergy's { [redacted] } Iatan was also able to maintain coal consumption during peak summer months at levels consistent with its historical operations and burned at historically high levels in October.[191] Although stockpiles at Iatan fell lower than Evergy would have preferred in the fall of 2022, {{ [redacted]

[189] Counsel's Exhibit 21, EVERGY-0089871.

[190] *See* Counsel's Exhibit 22, EVERGY-0082500. {{ [redacted] }}

[191] Verified Statement of Paul J. Hibbard ("Hibbard V.S.") ¶ 39.

[redacted] }} Furthermore, as discussed by Mr. Hibbard, according to Evergy's own damages modeling, Evergy {{ [redacted] }}[193]

4. Evergy's other claims are unavailing.

a. Evergy has not shown that the language of the tariffs was unreasonable.

Evergy attempts to make much of the inclusion of the phrase "sole discretion" in Evergy's Iatan and Lawrence tariffs, but that language was of no consequence to Evergy. Evergy does not provide any evidence regarding how the inclusion of the sole discretion language impacted its service in 2022. As BNSF stated in the *NTEC* proceeding in 2023, it became apparent that the term "sole discretion" created confusion, and BNSF removed it from its tariffs.[194] Indeed, Evergy itself stresses that there was no difference in the service BNSF provided before and after the phrase "sole discretion" was removed from the tariff in 2023.[195] But this shows that the inclusion of the term had no impact on Evergy and cannot be the basis for

[192] *Id.* ¶ 114.

[193] *Id.* ¶ 71. Moreover, as discussed below, Evergy could have conserved far less coal {{ [redacted] }} *Id.* Section IV.C.1 and Section VI.A.1.

[194] *See* BNSF Ry. Co.'s Supplemental Reply to NTEC's *Ex Parte* Application for Section 11123 Emergency Service Order at 12-13, May 5, 2023, *Navajo Transitional Energy Co., LLC—Ex Parte Petition for Emergency Service Order*, NOR 42178.

[195] Evergy Opening Evidence at 26.

liability or any damages. Since the term had no impact on service while it was in effect, and the term is no longer used by BNSF, Evergy's claim that the language was unreasonable, is moot, and should be dismissed.

Moreover, the reference to "sole discretion" was never intended to, nor could it, over-ride the obligation that exists under the common carrier statute to take reasonable actions to satisfy reasonable requests for service. BNSF has always acknowledged and adhered to its common carrier obligation.

The sole discretion language in the tariff reflected the uncontroversial truth that a railroad must make decisions in the first instance regarding the operation of its network within the bounds of the law. It is black letter law that railroads have discretion regarding how to fulfill the common carrier obligation.[196] Shippers do not have the authority to direct a railroad common carrier to perform any specific service.[197] Indeed, as discussed above, there are instances where a railroad has the right to refuse service altogether.[198]

---

[196] *Tex. Mun. Power Agency*, 7 S.T.B. at 807.

[197] *Savannah Port Terminal R.R.*, slip op. at 8.

[198] *Ill. Cent. R.R.*, 64 Ill. at 137. To the extent Evergy contends that BNSF has ever taken the position that the "sole discretion" language in its tariff relieved BNSF of the obligation to comply with its regulatory obligations, including its common carrier obligations, Evergy is incorrect. The sole discretion language plainly cannot grant BNSF discretion to act in an unlawful manner, and BNSF has never contended otherwise. Rather, the language was only ever intended reserve to BNSF the maximum discretion to organize and operate its affairs in a manner consistent with its legal obligations. As demonstrated herein, BNSF has consistently exercised that discretion in a manner fully compliant with its obligation to act reasonably under the circumstances in responding to requests for service.

Evergy has not met its burden to show that BNSF's tariff language was unreasonable.[199] The Board has considered a variety of factors to evaluate the reasonableness of railroad practices including (1) the impact on car supply, and (2) operating efficiency.[200] The sole discretion language did not affect car supply; the inability to add additional trainsets were not a result of insufficient cars, but rather a direct result of unforeseen congestion on the network and labor shortages caused by the unique circumstances following the COVID pandemic, as described above. Likewise, the sole discretion language did not hinder operating efficiency. To the contrary, as demonstrated above, BNSF's ability to exercise its discretion regarding the number of trains in service to Evergy's and other coal shippers facilities improved cycle times and enhanced service and was necessary to improve fluidity while hiring efforts took place.

b. <u>There was not a stand-alone locomotive shortage in 2022.</u>

Evergy also curiously claims that there was a locomotive shortage in 2022. But there was no stand-alone locomotive shortage that impacted BNSF's ability to provide service to Evergy. As shown in the chart below, for every month in 2022, BNSF had over {{ [redacted] }} road locomotives in good order (a metric describing

[199] *See, e.g.*, *N. Am. Freight Car Ass'n v. STB*, 529 F.3d 1166, 1173 n.6 (2008) ("Placing the burden on the complaining shipper is consistent with the Commission's general rule that the complainant has the burden to show that a practice is 'unreasonable' under section 10702." (citing *Aluminum Co. of Am. v. St. Louis—S.F. Ry. Co.*, 364 I.C.C. 137, 143 (1980)).

[200] In the past, the Board has considered various factors including the impact of the practice on car supply, operating efficiency, competition, and rail revenue, as well as the relative benefits and burdens of the practice. *CF Industries, Inc. v. Ind. & Ohio Ry., Point Comfort & N. Ry., & The Mich. Shore R.R.—Petition for Declaratory Order*, FD 35517, slip op. at 5 (STB served Nov. 28, 2012); *Shippers Comm., OT-5 v. The Ann Arbor R.R.*, 5 I.C.C.2d at 864.

functional locomotives in storage). Messrs. Mulholland and Crowley allege BNSF was constrained in 2022 by a decrease in locomotive power input across the prior several years.[201] BNSF's monthly performance data shows otherwise. Across 2022, BNSF maintained {{ [redacted] }} in good order and available for use.

Baranowski/Zebrowski Figure 47: BNSF System Road Locomotive Units in Good Order (January 2022 - December 2022) {{



}}

Messrs. Mulholland and Crowley observed a decrease in locomotive power and increase in locomotive-related delays in certain data and wrongly concluded this was due to BNSF lacking sufficient locomotive resources.[202] The correct interpretation of the observed decrease is that BNSF did not have enough crew resources in place to productively use the additional locomotive resources that were in {{ [redacted] }}

[201] *See* Mulholland/Crowley V.S. at 7.

[202] *See* Mulholland/Crowley V.S. at 7 ("We observed a decrease in the locomotive power input. BNSF reduced the number of locomotives operating on its network by more than six (6) percent during the Study Period.").

c. Evergy's traffic was "worth it."

Evergy asserts that "[a] railroad cannot refuse or restrict service because of operational inconvenience or based on its opinion whether the transportation is 'worth it.'"[203] In so doing, Evergy cites to cases involving shippers on failing branch lines facing potential abandonment, a situation not at all present here. In those cases, the agency and the courts have observed the non-controversial rule that a carrier cannot cease operations without first getting authority to abandon or discontinue service. That is, rail common carriers cannot refuse service to low-volume small shippers to favor high-volume large shippers like Evergy. Contrary to Evergy's implication that its traffic was not "worth it" to BNSF, BNSF was incentivized to move as much coal as it could to Iatan because Evergy's traffic generated {{ [redacted] }}[204]

C. Evergy is not entitled to damages under 49 U.S.C. § 11704(b).

1. Any harm that Evergy suffered in 2022 was not due to an act or omission by BNSF.

As described above, Evergy's complaint and opening evidence posits a novel strict liability common carrier regime under which BNSF would be liable for failing to deliver Evergy's { [redacted] } But that's not the law. Under the

[203] Evergy Opening Evidence at 23 (citing *GS Roofing Products Co. v. STB*, 143 F.3d 387, 391 (8th Cir. 1998)); *Pejepscot Indus. Park, Inc.—Pet. for Decl. Order*, FD 33989, slip op. at 13 (STB served May 15, 2003).

[204] Baranowski/Zebrowski V.S. at 65-66.

correct standard, Evergy's theory cannot prevail because BNSF acted reasonably in the circumstances, which is precisely what the law requires. But even if Evergy could show liability, Evergy has independently failed to satisfy the statutory provision governing damages which requires that Evergy show that it has been damaged "as a result of an act or omission of" BNSF.[205] Evergy can point to nothing that BNSF did wrong and fails to establish in its opening evidence any causal connection between BNSF's conduct and Evergy's alleged damages. Evergy does not articulate what specific act or omission it believes entitles it to damages. Indeed, the evidence shows that any damages that Evergy may have incurred in 2022 were more likely the result of its own business decisions within the context of the complicated regulated energy market. As such, Evergy cannot establish that it is entitled to *any* damages.

Indeed, the record does not contain any specific act or omission by BNSF that would entitle Evergy to damages. This is a fatal flaw in Evergy's damages claim. Under the statute itself, a rail carrier should be responsible only for damages flowing from particular acts, decisions, or omissions. But Evergy wants to make BNSF an insurer of service regardless of events and circumstances outside of BNSF's control. Evergy's flawed approach allows it to ignore the myriad circumstances that affected BNSF's service to Evergy in 2022 that BNSF had no control over, like the impact of the Ukraine invasion and high natural gas prices. It allows Evergy to ignore circumstances involving Evergy's own decisions and actions,

[205] 49 U.S.C. § 11704(b).

like its { [redacted] } and the need for three-person crews to serve Lawrence. Evergy's flawed approach tries to make BNSF responsible for everything that affected service in 2022, which is not lawful under the statute.

Any damages Evergy suffered in 2022 as a result of not receiving as much coal as it wanted were due to the effects of the pandemic on supply chains and the railroad industry and not any act or omission of BNSF, as required under common carrier service. If not for the unusual labor market circumstances arising after the COVID recession, BNSF's pre-2020 crew levels would have been more than adequate to handle Evergy's 2022 traffic.[206] The staffing and congestion issues that BNSF—and all Class I railroads—encountered in 2022 were not the natural and probable result of BNSF's pre-COVID hiring practices or any specific act that BNSF took in 2022. Rather, they were the result of COVID. BNSF's pre-COVID hiring decisions—the only purported wrongdoing on BNSF's part to which Evergy points in support of its claims—are too remote to be considered the proximate cause of Evergy's damages. COVID was an intervening cause breaking the chain of causation.[207] Regardless of how many crew BNSF had on staff pre-COVID, the

---

[206] Johnson V.S. ¶¶ 71-74.

[207] *See Nat G. Harrison Overseas Corp. v. Am. Tug Titan*, 516 F.2d 89, 97 (5th Cir. 1975), modified, 520 F.2d 1104 (5th Cir. 1975) ("In these circumstances the question of whether the intervention of a new and independent cause or force will relieve the original actor from liability, disrupt the causal connection between the original wrong and the injury, or constitute a superseding cause, is to be determined by ascertaining whether the intervening cause, force, or occurrence was reasonably 'foreseeable' or could or should have been anticipated. We fully agree with the district court that Harrison's improper stowage of the cargo was not a proximate cause of the post-capsizing loss because it was not foreseeable."); *see also Exxon Co., U.S.A. v. Sofec, Inc.*, 517 U.S. 830, 837 (1996) ("The doctrine of superseding cause is . . . applied where the defendant's negligence in fact substantially contributed to the plaintiff's injury, but the injury was actually brought about by a later cause of independent origin that was not foreseeable."); *Douglas v. Washington Terminal Co.*, 298 F. 199, 202 (D.C. Cir. 1924) ("With respect to the first of these charges we may say that the

massive drop in demand precipitated by pandemic lockdowns would have necessitated BNSF reducing crew levels to the very same levels that BNSF had in 2021-2022, following the pandemic. As such, the difficulties BNSF faced in reactivating or hiring crew in the wake of the pandemic are in no logical sense "the result" of any of BNSF's pre-COVID hiring practices.[208]

The impacts on labor and supply chains from COVID were not unique to BNSF. *All* Class I railroads were similarly impacted.[209] The suggestion that 2022 service challenges were BNSF's fault is baseless. If Evergy is entitled to damages for 2022 service, then *all* shippers on *all* Class I railroads would be entitled to damages for 2022 because of the industry-wide, pervasive nature of the service

---

drifting movement of the rear section was not in fact or law the proximate cause of Douglas' injury, since a new and independent cause, to wit, Douglas' movement across the track, intervened between the two events, and became the efficient and proximate cause of the injury. Therefore the plaintiff was not entitled to recover upon that ground.").

[208] 49 U.S.C. § 11704(b). *See Groome & Assocs., Inc. v. Greenville Cnty. Econ. Dev. Corp.*, NOR 42087, slip op. at 17-18 (STB served July 27, 2005) ("We agree that Complainants' business environment would have been more hospitable if they had had rail service. But Complainants must show that the absence of rail service, and not these other circumstances, is what caused their demise. Complainants have not shown that the various non-rail-related adversities that befell them, along with their thin capitalization that made it difficult for them to weather this combination of events, were not the proximate cause of their business failure. Indeed, as GCEDC points out, Mr. Groome did not even mention the lack of rail service to his bankers until October 2002, long after he alleges he was damaged by it. In short, the absence of rail service may have made business more difficult for G&A, but the record does not support the conclusion that it caused G&A to go out of business."); *GS Roofing Prods. Co. v. Arkansas Midland R.R. Co. & Pinsly R.R. Co.*, NOR 41230, slip op. at 19-21(STB served May 5, 2000) ("[T]he ICC consistently rejected awarding damages based on estimates of lost profits. . . . Under these circumstances, we conclude that the Shippers (in particular GS Roofing and Gifford-Hill) have not carried their burden of proof concerning the amount of lost profits. Nor have the Shippers demonstrated that the lack of rail service alone was the sole cause for any lost sales. Therefore, consistent with the agency's normal practice, we will not accept the lost profit claims.")

[209] *Supra* Section I.B.2.

problems. But the statute does not entitle customers to damages for industry-wide issues not caused by the act or omission of an individual rail carrier.

2. Evergy is not entitled to any damages for service to Lawrence.

Even accepting Evergy's own theory of the case—that BNSF had a regulatory obligation to deliver its CFT nominations regardless of the prevailing circumstances—there is no basis for the Board to award any damages for service to Lawrence—a generating facility that Evergy had previously told BNSF it was planning to shut down in the near future. In any event, even considering Evergy's misinterpretation of the common carrier obligations, { [redacted] } Compared to historic levels (as Evergy also wrongly argues), even despite conservation, Lawrence burned more coal in 2022 than it did in 2020-21. And even more telling on how Evergy's own decisions created any need to conserve, Lawrence could have held more coal in its inventory prior to the implementation of its coal conservation measures, but Evergy made a voluntary choice to enter 2022 with a lower inventory level at Lawrence than it maintained in prior and subsequent years.[210]

[210] *See* Hibbard V.S. ¶ 80; discussed *infra* at Section I.C.3.e.

a. BNSF delivered more coal to Lawrence in 2022 { [redacted] }

In October 2021, Evergy declared { [redacted] } tons for Lawrence for 2022.[211] In 2022, BNSF delivered 1,184,780 tons of coal to Lawrence—{ [redacted] }[212] In Evergy's internal documents from 2023 evaluating BNSF's service in 2022, its senior personnel repeatedly acknowledged that BNSF {{ [redacted] }}[213] Evergy's documents from 2022 also indicate that BNSF was {{ [redacted] }} Evergy's nominations throughout 2022.[214]

Evergy's opening evidence completely ignores its 2022 annual declaration and initial CFT nomination—Evergy's *own estimate* of its coal needs for Lawrence in 2022. In fact, Evergy does not mention the { [redacted] } nomination figure a single time in its voluminous opening brief. That's because Evergy manufactured an argument for litigation that BNSF caused a shortfall at Lawrence because BNSF did not deliver the total volume of tons that Evergy { [redacted]

---

[211] *See* Counsel's Exhibit 23, EVERGY-0066868 (Oct. 1, 2021 Evergy nomination letter).

[212] Tucker V.S. at 10.

[213] Counsel's Exhibit 24, EVERGY-0088859, at 862 ({{ [redacted] }}); Counsel's Executive Summary Exhibit 04, EVERGY-0082612, at 614 (January 6, 2023 email from John Bridson: {{ [redacted] }}).

[214] *See* Counsel's Exhibit 25, EVERGY-0088820 (August 21, 2022 internal Evergy email: {{ [redacted] }}); Counsel's Exhibit 26, EVERGY-0014397 (July 25, 2022 email: {{ [redacted] }}); *see also* Evergy Ex. JT-16 (Aug. 29, 2022 BNSF letter to Evergy: {{ [redacted] }}).

[redacted] } throughout the year—even though that figure reflects the dramatic { [redacted] } in nominations in the second half of the year as described by Messrs. Baranowski and Zebrowski and shown below.

Baranowski/Zebrowski Figure 65: Cumulative Declarations, Initial Nominations, Final Nominations, and Deliveries - Lawrence (January 2022 – December 2022) {

[redacted] }

{{ [redacted] }}[215] Evergy cannot now move the goal posts and manufacture a shortfall. Evergy recognized in 2023 that {{ [redacted] }}.[216] The answer is no, Evergy does not {{ [redacted] }} regarding Lawrence—at least, not a valid one.

[215] Counsel's Exhibit 24, EVERGY-0088859, at 862; Counsel's Executive Summary Exhibit 04, EVERGY-0082612, at 613.

[216] Counsel's Exhibit 24, EVERGY-0088859, at 862; Counsel's Executive Summary Exhibit 04, EVERGY-0082612, at 614.

b. Lawrence burned more coal and generated more electricity in 2022 than it did historically.

Evergy incorrectly argues that BNSF should be held to a historical standard, but the evidence shows that Lawrence operated in excess of historical levels in 2022.[217] In 2022, Lawrence generated 1,992,285 MWh.[218] In 2020-2021, Lawrence generated 1,911,357 MWh on average.[219] Thus, Lawrence generated *more electricity in 2022* (by 4%) than it did historically. The same is true with respect to coal burn: Lawrence *burned more coal* in 2022 (by 5%) than it did in 2020-2021. The increased generation/burn is even more pronounced during the April-November 2022 period (when Lawrence was engaged in coal conservation) as compared to that period historically. When restricted to April through November, 2022, coal burn is 14% higher and electric generation is 16% higher than the 2020-2021 period.[220]

Yet Evergy now wants BNSF to pay damages that Evergy purportedly incurred at Lawrence during 2022. Evergy's damages claim for Lawrence is premised on the notion that BNSF was obligated to ensure that Lawrence exceeded historical electricity generation and burn *by even more than it already did*—and by even more than Evergy's { [redacted] } indicates that *Evergy intended* to burn in 2022. There is no support for such a position.

[217] Comparisons to Evergy's historical volumes are inapposite because BNSF moved Evergy's historical volumes under contract, including a contract for Iatan that did not include a ratability term.

[218] Hibbard V.S. ¶ 79 n.100.

[219] *Id.*

[220] *Id.* ¶ 79.

Moreover, despite engaging in coal conservation, Lawrence increased its burn rate far beyond the levels of other utilities. Messrs. Baranowski and Zebrowski explain in their verified statement that Evergy's burn rate at Lawrence far {{ [redacted] }}[221] Evergy's suggestion that BNSF should be financially responsible for Lawrence's purported inability to burn at an even more aberrantly high level in the context of 2022 is nonsense.

c. <u>BNSF never { [redacted] } the number of trainsets at Lawrence.</u>

BNSF began 2022 with { [redacted] } trainset in service at Lawrence.[222] Within the first two weeks of January 2022, BNSF { [redacted] } trainset.[223] BNSF { [redacted] } trainset for the duration of 2022. **At no point in 2022 did BNSF { [redacted] } a trainset from service to Lawrence**.[224]

Evergy's complaints that BNSF should have added more trainsets at Lawrence to meet Evergy's { [redacted] } CFT nominations in the second half of 2022 are groundless. Evergy's CFT declarations were neither reasonable nor ratable as discussed below.

Between BNSF delivering more coal than { [redacted] } for Lawrence, *infra*, and never { [redacted] } from service at Lawrence, it is

[221] Baranowski/Zebrowski V.S. Figure 39.

[222] Tucker V.S. Table 6.

[223] *Id*.

[224] *See id*.

difficult to understand how Evergy can claim with a straight face that it is entitled to *any* damages at Lawrence.

d. Awarding damages based on Evergy's { [redacted] } CFT nominations at Lawrence would hold BNSF responsible for factors outside BNSF's control.

As explained above, Evergy cannot sweep its annual declaration under the rug. And because BNSF { [redacted] } that declaration, Evergy cannot credibly claim any entitlement to damages. But even considering Evergy's monthly CFT declarations, a revealing story emerges.

Despite Evergy's annual declaration for Lawrence of { [redacted] } tons to BNSF, Evergy's total CFT nominations for the entire year as of April 2022 (submitted on March 14, 2022) totaled only { [redacted] } tons for the year.[225] BNSF exceeded this figure by { [redacted] } tons. But then, shortly after Russia's invasion of Ukraine and a steep increase in natural gas prices, Evergy { [redacted] } its annual declarations through the CFT.[226] In Evergy's May 2022 CFT declaration (submitted on April 15, 2022), Evergy suddenly { [redacted] } its annual declaration from { [redacted] } tons to { [redacted] } tons—an { [redacted] } *in a single month*. Evergy's annual declaration remained above { [redacted] } for the remainder of the year.[227]

[225] *See* Baranowski/Zebrowski V.S. Figure 31 & n.58; *see also id.* Figures 27 & 28.

[226] *See* Counsel's Exhibit 28, EVERGY-0086001, at 004 (Evergy's June 30, 2022 Coal Inventory Forecasts and Coal Conservation Levers: {{ [redacted] }}).

[227] *See* Baranowski/Zebrowski V.S. Figure 31 & n.58; *see also id.* Figures 27 & 28.

Now, Evergy wants BNSF to be liable because BNSF didn't deliver { [redacted] } tons to Lawrence. But this argument fails for multiple independent reasons:

- BNSF isn't legally or causally responsible for this unforeseen { [redacted] } in total nominations—which in turn is due to other factors outside BNSF's control, such as increased natural gas prices, which {{ [redacted] }}[228]
- Because Evergy's CFT { [redacted] } was not ratable, it violated the tariff's terms, which require that "all Coal transported pursuant to this price authority [] be loaded in reasonably even monthly increments."[229] The huge monthly { [redacted] } in Evergy's CFT declaration starting with May 2022 are not ratable. Evergy's June 2022 CFT declaration requested { [redacted] } A requested { [redacted] } between two months is not ratable. {{ [redacted] }}[230]
- Moreover, in April 2022, Evergy requested { [redacted] } for July and August. Yet, by June 2022, two months later, Evergy's requests for all three of those months { [redacted] } This is not a reasonable request, as BNSF explains above. And, for damages purposes, BNSF is not liable for being unable to meet Evergy's { [redacted] } in demand. Such { [redacted] } were neither ratable nor caused by BNSF. BNSF is not a just-in-time supplier.
- Finally, Evergy acknowledges in its internal documents that {{ [redacted] }}[231]

---

[228] *See Nat G. Harrison Overseas Corp.*, 516 F.2d at 97; *Exxon Co., U.S.A.*, 517 U.S. at 837; *see also* Counsel's Exhibit 28, EVERGY-0086001, at 004 (explaining that {{ [redacted] }}).

[229] Counsel's Exhibit 29, BNSF_EVERGY_0007896, at 897.

[230] Counsel's Executive Summary Exhibit 04, EVERGY-0082612, at 614 (January 6, 2023 email from Eric Peterson (Evergy) to John Bridson (Evergy): {{ [redacted] }}).

[231] Counsel's Exhibit 24, EVERGY-0088859, at 862 (January 31, 2023 slide deck about Evergy's "2022 Coal Conservation").

[redacted] }} under the tariff *and* under BNSF's common carrier obligation, {{ [redacted] }}

Evergy's reliance on its { [redacted] } CFT nominations at the end of the year also assumes that Evergy should have received all the coal it declared in the CFT. But BNSF was only obligated to take reasonable actions to provide adequate service under the circumstances. Rather than try to establish what a reasonable level of service was given the circumstances, Evergy claims damages based on { [redacted] } CFT nominations—which at times even exceeded the level of coal that {{ [redacted] }}[232]

e. Lawrence's actual inventory at Lawrence in the second half of 2022 was significantly higher than the inventory level that {{ [redacted] }}

By the end of 2022, Evergy had already established a stockpile at Lawrence that {{ [redacted] }} Evergy's stated goal was to have {{ [redacted] }} of coal inventory at Lawrence in mid-December 2022.[233]

[232] Baranowski/Zebrowski V.S. Figure 24.

[233] Counsel's Exhibit 25, EVERGY-0088820 (August 21, 2022 email from Evergy's Vice President for Generation, John Bridson: {{ [redacted] }}); Counsel's Exhibit 25, EVERGY-0088820, at 827 (August 22, 2022 "Opportunity Cost Calculator" slide deck: {{ [redacted] }}); Counsel's Exhibit 27, EVERGY-0082489 (September 22, 2022 email from Bridson: {{ [redacted] }}).

Evergy hit this {{ [redacted] }} inventory goal at Lawrence in September 2022[234]—but nevertheless continued to engage in coal conservation measures *for another two months*, through November 22, 2022.[235] (As noted below, BNSF should not be responsible for any damages after Evergy achieved its {{ [redacted] }} inventory goal at each plant.) And on December 15, 2022, Lawrence had {{ [redacted] }} which *wa*s {{ [redacted] }} *Evergy's stated goal*.[236]

Evergy is now asking the Board to require BNSF to foot the bill for building Lawrence's inventory. But BNSF should not be responsible for building Evergy's stockpile at all, let alone in a year in which Evergy exceeded its historical summer burn rate, *and* BNSF delivered { [redacted] } coal than Evergy's own annual declaration requested. To the extent Evergy suffered damages at Lawrence, such harm was the result of Evergy's own coal conservation decisions and factors outside BNSF's control that impacted demand, such as the {{ [redacted] }}.[237]

* * * *

As discussed *infra*, removing Lawrence's contributions to damages is fatal to Evergy's *entire* damages claim because Evergy's damages modeling does not allow

[234] Hibbard V.S. ¶ 114.

[235] Evergy Opening Evidence at 15; Crosby V.S. at 9.

[236] *See* Baranowski/Zebrowski V.S. at 27; Hibbard V.S. ¶ 114.

[237] Counsel's Exhibit 28, EVERGY-0086001, at 004.

for separating the damages attributable to service at Lawrence from the damages attributable to service at Iatan.

3. Evergy's claimed damages were the result of voluntary business decisions, not BNSF's service.

Nearly all of Evergy's alleged damages flow from its decision to conserve coal. Evergy does not allege that it was directly damaged because it ever lacked coal. Instead, Evergy claims that it was compelled to conserve coal and that coal conservation caused it to lose revenues and imposed costs in the market in which it participates. In fact, Evergy was not required to conserve coal and made *voluntary* business decisions about fuel supply and pricing that were in Evergy's economic interest.

Evergy both generates electricity and sells electricity to retail customers. Evergy's generating plants, including Iatan and Lawrence, sell their electricity into the wholesale electricity market in the SPP. Evergy then buys electricity from SPP to sell to retail customers. The market's peculiar structure is important to understand because its workings form the basis for nearly all of Evergy's claimed damages. As Mr. Hibbard explains, utilities like Evergy conserve coal not by holding the coal off the market or shutting down a facility (as may happen in other industries), but by including "adders" in their bid prices for any plant at which the utility wishes to conserve coal.[238] These adders increase the bid price—meaning the utility charges more for the electricity it produces—with the knowledge that the

[238] Hibbard V.S. ¶ 32.

higher price may make that plant uneconomic to dispatch.[239] When that occurs, the plant will burn less coal.[240]

Importantly, a plant's bid adders shifts the entire market—increasing the Locational Marginal Price ("LMP") at which plants are dispatched—such that the remaining generators all earn more revenue from their generation as a result of the adders.[241] Thus, higher prices for electricity—caused by "conservation"—can lead to higher prices paid to Evergy for the electricity it produces and higher overall revenues to Evergy.[242] Despite being a sophisticated entity in the business of buying and selling electricity, Evergy failed to account for this increased revenue in its complaint to the Board when it claimed damages in excess of $55 million.[243] When Evergy factored this fact into its damages calculations in its opening evidence, Evergy reduced its damages by *sixty percent, to $22 million*.[244]

As shown below, Evergy was not compelled to conserve coal. Instead, Evergy made voluntary business decisions to conserve coal because it believed such action was in its economic interest. Because Evergy's claimed damages are based on speculation about what market outcomes would have been had it not conserved coal, Evergy engaged in modeling to estimate the market outcomes. Evergy's modeling is

---

[239] *Id.*

[240] *Id.*

[241] *Id.* ¶ 55.

[242] The SPP has an entire unit dedicated to preventing market manipulation because of the possibility that utilities might game the bidding and coal conservation processes.

[243] Compl. at 3.

[244] Evergy Opening Evidence at 2.

wholly unreliable and riddled with obvious errors such that it cannot be the basis of a damages award as shown in Section I.C.5, below.

But even if Evergy's modeling was reliable, the interconnected nature of bid prices, LMPs, and Evergy's revenues and costs in SPP mean that coal conservation resulted in Evergy at times making more money, not less. Indeed, based on Evergy's own modeling, coal conservation resulted in higher net revenues to Evergy {{ [redacted] }} of the time in the relevant time period.[245] As demonstrated by Mr. Hibbard, whether or not Evergy made or lost money in any given hour is dependent on many factors independent of coal conservation. In short, Evergy submitted a model to the Board that shows a scenario where it suffered damages as a result of coal conservation. But other scenarios, including ones in which Evergy actually made money from coal conservation, are possible. Simply modeling one scenario that shows damages is an insufficient showing to be awarded millions of dollars from the Board.

a. No authority ordered Evergy to conserve coal.

Evergy suggests that it was required to conserve coal. In its Complaint, Evergy alleged:

> As Load Responsible Entities in SPP, Complainants are subject to resource adequacy requirements that **obligate them** to supply SPP with enough available generating capacity to serve the demand within their operating service territories, along with a reserve margin. If Iatan or Lawrence experience coal delivery shortfalls compared to shipment schedules, of if coal inventories fall substantially

[245] Hibbard V.S. ¶ 57.

> below target levels, **Evergy can be required to implement "coal conservation measures."**[246]

Similarly, in Evergy's opening evidence, Evergy implies that SPP required it to conserve coal so that it could maintain inventory levels for reliability purposes.[247]

But Evergy was never required to conserve coal. No regulator ordered Evergy to conserve coal and neither did SPP. In response to BNSF's written discovery request, {{ [redacted] }}[248]

Evergy has not suggested, and no produced documents suggest, that the Federal Energy Regulatory Commission ("FERC"), which oversees SPP, ordered or requested that Evergy conserve coal. The same is true for Evergy's state regulators, the Kansas Corporation Commission ("KCC"), and the Missouri Public Service Commission ("Mo.

---

[246] Compl. at 12-13 (emphasis added).

[247] *See* Tucker V.S. at 32 { [redacted] }; *id*. at 38 ("As an electric utility and a member of SPP, Evergy and its operating companies do not have an option to burn through our entire coal inventory. Reliability concerns mandate that we take actions to preserve a reasonable margin to continue coal-fired generation operations when needed in the event of unexpected fuel supply interruptions, particularly during peak months of a year.").

[248] Counsel's Exhibit 30, SPP Responses to BNSF Subpoena.

PSC").[249] Nor do any of these authorities mandate that a utility maintain any particular level of coal reserves. SPP and Mo. PSC have reporting requirements if coal inventories drop below a certain threshold.[250] Evergy reported to these authorities several times during 2022 when inventory levels at Iatan or Lawrence fell below reporting thresholds.[251] Yet *none of them ever ordered Evergy to conserve coal.* Evergy was also not subject to any penalties or other regulatory consequences for Evergy's inventory levels in 2022. Instead, Evergy chose to conserve coal, knowing that burning the coal later in the year might be more profitable.[252]

b. Evergy's damages were not foreseeable because utilities can profit when they engage in coal conservation through bid adders.

As described by Mr. Hibbard, electricity market outcomes depend on a variety of factors. Whether or not Evergy ended up making money or losing money as a result of its decision to place adders on its bids was the result of these factors, and completely beyond BNSF's control. For example, weather conditions, including factors like how cool or warm the year is and how much wind is blowing, would affect whether Evergy made or lost money by implementing coal conservation measures. In fact, Mr. Crosby's workpapers and analysis reflect a scenario where Iatan experienced negative damages—*i.e.*, made a profit— for {{ [redacted]

[249] *Id.* ¶ 70.

[250] *Id.* ¶¶ 64, 69.

[251] *Id.*

[252] Counsel's Executive Summary Exhibit 09, EVERGY-0086316 (October 30, 2022 email in which John Bridson (Evergy Vice President for Generation) states, regarding implementing the coal adder, {{ [redacted] }}) (emphasis added).

[redacted] }}[253] Similarly, in Mr. Crosby's models, Lawrence experienced negative damages for {{ [redacted] }}[254] In total, of the {{ [redacted] }} that Evergy implemented coal conservation measures at either plant, at least one of the plants experienced negative damages in {{ [redacted] }}[255]

[253] Hibbard V.S. Figure 2.

[254] *Id.*

[255] *Id.*

Hibbard Figure 2: Evergy's Lost Opportunity and Net Cost to Load Damages, 2022 {{



}}

It is only because of the assumptions underlying Evergy's modeling that Evergy ends up with a result that it lost money. Evergy could have experienced negative damages.[256] BNSF should not be held liable based on factors beyond both parties' control.

[256] *See id*. Section IV.A.

Foreseeability is an important element of damages, as discussed above.[257] But at no point were these market outcomes foreseeable to BNSF. The Board has recognized that something that is not foreseeable is not reasonable. The Board's decision in *Ark. Elec. Coop. Corp.—Petition for Declaratory Order*, FD 35305 (STB served Mar. 3, 2011), is instructive. There, the Board determined that it was improper to hold shippers responsible for harms they did not know—and could not know—were going to occur.[258] The issue is similar here. When Evergy implemented coal conservation measures, {{ [redacted] }} The only thing BNSF knew was that Evergy might decide to conserve coal. That decision could have produced profits for Evergy, and BNSF would never have known in advance that coal conservation would cause harm. But BNSF should not be responsible for harms that it could not have known about in advance.

c. Evergy {{ [redacted] }}

Evergy {{ [redacted] }} Based on Evergy's projections and based on unexpectedly {{ [redacted] }}—a factor beyond BNSF's control—Evergy was concerned

[257] *Nat G. Harrison Overseas Corp.*, 516 F.2d at 97.

[258] The Board held that BNSF's coal dust tariff could not be upheld because "the challenged tariff in this case simply creates too much uncertainty to be deemed a reasonable practice," since "[u]nder the challenged tariff, the railroad would accept rail cars loaded with coal and then inform coal shippers at a later date whether and to what extent coal dust was released during transport,." among other reasons. *Id.*, slip op. at 14.

that it *might* run out of coal *at some future date*.[259] But Evergy {{ [redacted] }}

And BNSF's expert, Mr. Hibbard, demonstrates that if Evergy had not implemented coal conservation measures at Iatan and Lawrence, *Evergy* {{ [redacted] }}[260] The inventories were sufficient to carry Evergy through the summer and fall—even though the inventories could have been larger but for other business decisions and oversights by Evergy that have nothing to do with BNSF, as discussed below.

Evergy's harm is based on Evergy's voluntary decision *not to burn the coal already present at Iatan and Lawrence*. Evergy's harm, to the extent it experienced any, was self-inflicted. That is not BNSF's fault or BNSF's responsibility.

d. <u>BNSF should not be compelled to be the insurer of Evergy's conservative business decisions.</u>

Evergy made the decision to conserve coal when Iatan's inventory was at {{ [redacted] }} and Lawrence's inventory was at {{ [redacted] }}[261] The metaphorical gas tanks {{ [redacted] }}

---

[259] Counsel's Exhibit 28, EVERGY-0086001, at 004 (Evergy's June 30, 2022 Coal Inventory Forecasts and Coal Conservation Levers).

[260] Hibbard V.S. ¶ 71. Indeed, Evergy could have engaged in far less extensive coal conservation efforts {{ [redacted] }} Reliability Status means that generation can be suspended or delayed unless there is a capacity shortage on the system that would require the affected plants to generate in order to meet load requirements. *Id*. ¶¶ 65-66, 104-105.

[261] Counsel's Exhibit 31, EVERGY-0086109, at 122 ({{ [redacted] }}); Counsel's Exhibit 32, EVERGY-0082598 (inventory levels as of {{ [redacted] }}).

And Evergy continued conserving coal well into the fall of 2022, even after it hit the inventory levels that it wanted to achieve for {{ [redacted] }}[262] It is particularly notable that Mr. Bridson wrote on November 21, 2022 that he {{ [redacted] }}[263] yet Evergy continued conserving coal at Iatan *for another month*, through December 20, 2022.

These decisions were, to say the least, conservative, and were anything but compelled by BNSF service.[264] Evergy's conservatism likely derives both from the fact that it might make money from conserving and from the fact that, if it loses money, its state regulators will allow it to recover those costs.[265] And, in fact, that is precisely what occurred here: Mo. PSC and KCC fully compensated Evergy for all of its costs in 2022, including purported damages, through its fuel adjustment clauses.[266] There is no reason for Evergy *not* to be conservative with implementing coal conservation measures when it knows that it may make money by implementing the measures, and almost certainly will not lose money.[267] But BNSF should not be responsible for the consequences of Evergy's conservative business

---

[262] *See infra* Section I.C.3.e; Evergy Opening Evidence at 14-15 (coal conservation was in effect at Iatan through December 20, 2022); Counsel's Exhibit 27, EVERGY-0082489 (September 22, 2022 email from John Bridson noting that Evergy has an inventory target at all plants of {{ [redacted] }}).

[263] Counsel's Exhibit 33, EVERGY-0082279.

[264] Hibbard V.S. Section IV.C.

[265] *Id.* ¶ 54.

[266] *Id.* ¶¶ 50, 51.

[267] *Id.* ¶ 54.

decisions.[268] The reasonableness of those decisions should be evaluated by Evergy's state regulators, not the Board.

Evergy's coal conservation measures were designed, at least in part, to maximize Evergy's profits.[269] And *Evergy's own customers* paid the increased costs that resulted from Evergy's decisions.[270]

Evergy apparently contends that it was justified in conserving coal beginning in April 2022 because a BNSF employee suggested to Evergy that if Evergy was concerned about coal inventory, Evergy { [redacted] }[271] Evergy explains that it "took two actions in response { [redacted] }," one of which was "implement[ing] coal-conservation measures as part of [its] SPP market offer process within four days of receiving BNSF's message."[272]

Evergy closely guards its inventory levels, *see infra* Section I.C.5.i, meaning BNSF could not have had any insight into how high Iatan and Lawrence's inventory levels were during this alleged conversation in April 2022. Regardless, it is absurd for Evergy to suggest that it relies on BNSF personnel (with no experience in

---

[268] To the extent Evergy's conservative decisions were based on the possibility of a future rail strike, BNSF should not be responsible for that decision.

[269] Counsel's Executive Summary Exhibit 09, EVERGY-0086316, at 317 ({{ [redacted] }}) (emphasis added).

[270] *Id.* ({{ [redacted] }}).

[271] Tucker V.S. at 8, 23. Evergy quotes from an internal Evergy email that states, in relevant part: {{ [redacted] }}. *See also* Evergy Ex. JT-6.

[272] Tucker V.S. at 23.

electricity markets or insight into Evergy's internal stockpile goals) when making business decisions about how to prepare bids for the SPP market and how to operate its plants.

Fuel management is part of an electric generating utility's business, and BNSF should not be responsible for Evergy's coal conservation decisions. Evergy is an investor-owned utility and a sophisticated entity, in the business of making decisions on when to procure fuel, at what price, and how to deploy its mix of generation resources. The Board should not transform BNSF into Evergy's guarantor against any adverse financial consequences that might flow from Evergy's voluntary and conservative business decisions.

Mr. Hibbard calculates that including Evergy's early, voluntary decision to conserve coal using market bid adders starting in April 2022, when Lawrence and Iatan's inventory levels {{ [redacted] }}, results in an overstatement of Evergy's purported damages of up to {{ [redacted] }}.[273] Similarly, Mr. Hibbard calculates that including purported damages associated with excessive coal conservation measures—*i.e.*, whenever Evergy's inventory at each plant exceeded {{ [redacted] }} at minimum burn—results in an overstatement of Evergy's purported damages by {{ [redacted] }}.[274]

[273] Hibbard V.S. ¶ 108.

[274] As Mr. Hibbard explains, the range here and with other figures reflects uncertainty in the magnitude of the impact of Evergy's calculated net cost to load damages. Correcting this flaw may significantly or fully eliminate net cost to load damages, but it is impossible to estimate by how much due to the combined modeling of Lawrence and Iatan impacts in PROMOD. *See id.* ¶ 105 and n.112.

e. Evergy decided to maintain {{ }} inventories at Iatan and Lawrence, which contributed to its damages calculations.

Evergy decided to lower the inventory targets at Iatan and Lawrence, which inflates its damages calculations. In 2018, Evergy's target inventory at Lawrence was {{ }} excluding basemat.[275] Evergy steadily {{ }}, excluding basemat, by 2022. This is a {{ }} nearly {{ }} of Lawrence's inventory. Lawrence's maximum daily burn was {{ }} and minimum daily burn was {{ }}[276], meaning that Lawrence's target inventory decreased by {{ }} and {{ }} between 2018 and 2022. As a result of these {{ }} and instead of shipping more coal in 2021 when capacity was available, Evergy entered 2022 with a {{ }} **Evergy voluntarily chose to decrease Lawrence's stockpile capacity by nearly** {{ }}. And even with its {{ }}.[277] And if Evergy hadn't decreased Lawrence's stockpile capacity in the first place, and maintained a target inventory level comparable to its

[275] *See id.* n.101.

[276] *See id.* n.130.

[277] *Id.* Figure 3.

target in 2018, Lawrence's stockpile likely would never have dropped below {{ [redacted] }}[278]

In a similar vein, Evergy increased Lawrence's stockpile in 2023, to more than {{ [redacted] }}[279] According to Mr. Hibbard's calculations, if Evergy had built up similar levels of coal inventories before 2022, Lawrence almost certainly never would have dropped below the {{ [redacted] }} threshold or Evergy's internal target of {{ [redacted] }} of inventory.[280] Mr. Hibbard calculates that including Evergy's voluntary decision to {{ [redacted] }} in 2022 results in an overstatement of Evergy's purported damages by {{ [redacted] }}[281]

Moreover, Evergy was aware that {{ [redacted] }}[282] The fact that Evergy knew that its burns would {{ [redacted] }}

[278] *Id.* ¶ 80, n.101.

[279] *Id.* ¶ 80 and Figure 9.

[280] As depicted in *id.* Figure 3, Lawrence {{ [redacted] }}

[281] *Id.* ¶ 112.

[282] Counsel's Executive Summary Exhibit 04, EVERGY-0082612, at 614 (emphasis added).

The facts paint a similar picture for Iatan. Iatan entered 2022 with a coal inventory target, excluding basemat, of {{ [redacted] }} and a maximum coal inventory capacity of {{ [redacted] }}.[283] As such, Iatan's initial target inventory level was {{ [redacted] }}[284] A few months later, on February 21, 2022, Evergy {{ [redacted] }} Iatan's target coal inventory, excluding basemat, by {{ [redacted] }}[285] Iatan exceeded that target at various points in 2022, reaching inventory levels in excess of {{ [redacted] }} tons of coal, excluding basemat, in {{ [redacted] }}[286] The facts establish that Evergy *chose* to maintain a {{ [redacted] }} level at Iatan in 2022. If Iatan had entered 2022 with an inventory level of {{ [redacted] }} consistent with their maximum inventory capacity rather than an inventory level {{ [redacted] }} Iatan likely never would have dropped below {{ [redacted] }} of inventory.[287] Mr. Hibbard calculates that including Evergy's

[283] *See* Hibbard V.S. ¶ 115 and n.132.

[284] Iatan's daily maximum burn was {{ [redacted] }} and daily minimum burn was {{ [redacted] }} *See id.* n.111.

[285] *See id.* at n.132. The "k-Targets" tab also includes {{ [redacted] }} as referenced above in the section on Lawrence's inventory. In that chart, {{ [redacted] }}

[286] *Id.* Figures 3, 19 Workpapers.

[287] *Id.* at n.133.

voluntary decision to maintain a smaller inventory level at Iatan in 2022 results in an overstatement of Evergy's purported damages by {{ [redacted] }}.[288]

Evergy claims now that "Evergy Metro and EKC cannot feasibly expand inventory capacity at Iatan or LEC beyond current capabilities without extensive new capital investment and environmental permitting changes."[289] But Evergy's inventory levels at Lawrence prior to 2022 *and* after 2022, and at Iatan after 2022, show that this claim is false. And even if Evergy's statements were accurate, the premise of its argument reveals a telling double standard: Evergy should not be faulted for its spending decisions related to its inventory capacity at Lawrence or Iatan, but BNSF *should* be faulted for decisions regarding crew levels as far back as 2017 even though there is no causal connection between them and Evergy's purported harm in 2022, as discussed above.

4. Evergy's damage calculations are unreliable, and Evergy has failed to prove damages.

a. Evergy's made-for-litigation modeling diverges from real world data.

Evergy's PROMOD modeling rests on a comparison of two models generated by the PROMOD software: (i) an "actual" model of the supposed actual system conditions and market outcomes for 2022 compared to (ii) a "but for" model of the system conditions and market outcomes that supposedly would have prevailed, but

[288] *Id.* ¶ 115

[289] Tucker V.S. at 36; *see id.* at 37 ("Simply storing more coal is not a reasonable option for anticipating rail transportation service limitations.").

for coal conservation at Iatan and Lawrence. The inputs for Evergy's "actual" modeling do not match actual 2022 data. They don't even come close.

To the contrary, Evergy's PROMOD modeling results for the "actual" scenario vary dramatically from both actual 2022 system conditions and actual 2022 market outcomes in the following respects:

- Evergy's modeled electricity generation deviates by a large amount from actual 2022 electricity generation for all power plants across SPP, including for plants owned by Evergy—and, in particular, for Iatan and Lawrence.[290]
- Evergy's modeled coal burn deviates by a large amount from actual 2022 coal burn for coal-fired power plants across SPP, including for plants owned by Evergy—and, in particular, for Iatan and Lawerence.[291]
- Evergy's modeled LMPs, which are the fundamental input for *every* major category of losses and revenues alleged by Evergy, deviate unpredictably and by large amounts from the *actual* LMPs that cleared in the SPP electricity marketplace in 2022. This is particularly true for the LMPs in Evergy's service territory (which govern cost to load and revenues to Evergy's other generators), and for Iatan and Lawrence (which govern estimates of lost opportunities).[292]

This deviation from reality completely undermines Evergy's claim for damages. Based on its modeling, {{ [redacted] }} of Evergy's damages are supposedly incurred in {{ [redacted] }}.[293] In the real world, Iatan burned 189,143 tons of coal in {{ [redacted] }}.[294] But Evergy's "actual" PROMOD scenario generates a

[290] Hibbard V.S. ¶ 89.

[291] *Id.* ¶ 90.

[292] *Id.* ¶ 92.

[293] *Id.* ¶ 91.

[294] As discussed by Mr. Hibbard, Evergy's modeling errors are similarly {{ [redacted] }} for Lawrence. Lawrence burned 44,139 tons of coal in October 2022, but Evergy models coal burn of {{ [redacted] }} tons, a difference of {{ [redacted] }}. *Id.* ¶ 91.

burn of just {{ [redacted] }} tons for Iatan in {{ [redacted] }}, a difference of {{ [redacted] }}.[295] As Mr. Hibbard explains and illustrates in the chart below, {{ [redacted] }} This obvious mistake in Evergy's modeling inflates damages in precisely the period when Evergy estimates the largest portion of damages are incurred.

Hibbard Table 4: Comparison of Actual and PROMOD Monthly Coal Burn (Tons), Iatan {{

[redacted]

}}

[295] *Id.*

Hibbard Table 5: Comparison of Actual and PROMOD Monthly Coal Burn (Tons), Lawrence {{



}}

These major deviations between Evergy's modeling and the real world in 2022, for the most important factors governing Evergy's allegations of losses, render Evergy's modeling and its damages presentation completely unreliable.[296] The consistently high degree of inaccuracy is evidence that Evergy's choice of modeling software and analytic method are not based in verifiable fact, and therefore wholly and speculative and unreliable for the purposes of estimating alleged damages in this case.[297]

b. The Board should not rely on Evergy's damages modeling, which is speculative and uses modeling software that is not designed for determining damages.

Most of Evergy's claimed damages are based on its speculation that, as a result of not receiving all the coal it supposedly wanted, Evergy lost opportunities to

[296] *Id.* Tables 4, 5.

[297] *See id.* Section V.B.

profit in the electricity markets in which it generates, buys, and sells power. But Evergy's claims of lost opportunity are too speculative to support a damages award. Any assessment of Evergy's claimed economic loss must rely on complicated production cost modeling, the outputs of which can vary dramatically based on small fluctuations in innumerable inputs—meaning that any resulting damages calculation is necessarily speculative. Evergy's modeling itself presents many examples of inconsistencies that make its damages calculations particularly unreliable, as discussed in Sections I.C.4 and I.C.5 below and in Mr. Hibbard's verified statement. And Evergy already conceded that the damages claim in its complaint was overstated by more than *$32 million*, showing that a failure to account for a single variable can wildly swing the damages figures.

The Board should refrain from awarding damages because the modeling involved is complicated and within the expertise of other regulatory agencies that act to protect utilities and the public interest.[298] Any action by the Board here regarding damages would necessarily require it to opine on Evergy's models, the relevant electricity markets, and Evergy's business decisions with respect to coal conservation. The Board should not be required to wade into these unfamiliar waters.

The Board has recognized that electricity markets are complex and beyond the expertise of the agency.[299] And, in a prior opinion in this case, the Board

---

[298] *See id.* ¶¶ 11-16.

[299] *See Petition of the Association of American Railroads to Institute a Rulemaking Proceeding to Reintroduce Indirect Competition as a Factor Considered in Market Dominance Determinations for*

concluded that Evergy's resource planning-related obligations under Missouri law was "beyond the scope of this proceeding."[300] The same is true with damages based on col conservation, which would require interpreting Evergy's obligations under Missouri and Kansas law.

Evergy cites two cases for the proposition that "PROMOD's industry ubiquity also has been acknowledged by federal courts."[301] Neither case is helpful for Evergy, and PROMOD's "industry ubiquity" is irrelevant to whether Evergy correctly used PROMOD to model damages. The Court in *In re Mirant Corp.*, 334 B.R. 800, 813 (Bankr. N.D. Tex. 2005), notes in a footnote that PROMOD is "a computer model in use in the energy industry for predicting revenues of power generators." This is an accurate description of PROMOD's purpose as far as it goes, but this sentence has nothing to do with the use of PROMOD for a retrospective look at potential damages and is not instructive here. On the other hand, Evergy's second case, *N. Indiana Pub. Serv. Co. v. Colorado Westmoreland, Inc.*, 667 F. Supp. 613, 625 (N.D. Ind. 1987), is instructive. This case likewise is unrelated to

---

Coal Transported to Utility Generation Facilities, EP 717, slip op. at 2 (STB served Mar. 19, 2013) (citing *Mkt. Dominance Determinations—Prod. & Geographic Competition*, 3 S.T.B. 937, 947 (1998)) (declining to reintroduce indirect competition in market dominance determinations because doing so would require the Board to engage in complex analyses of wholesale power markets, second-guess utility business decisions, and devote substantial resources to issues far removed from its transportation expertise).

[300] *See* Board May 14, 2025 Decision on BNSF's Motion to Compel at 6 n.9 ("BNSF's contention that Complainants, as a regulated energy utility, have an obligation under Missouri state law to preserve data associated with resource planning, is beyond the scope of this proceeding.").

[301] Evergy Opening Evidence at 42.

damages, but the court's discussion of how PROMOD works, addressed in the next section, identifies one of the key problems with Evergy's modeling.

c. The Board should not rely on Evergy's damages modeling because it is highly dependent on input assumptions.

In *Northern Indiana Public Service Company*, 667 F. Supp. at 625, upon which Evergy relies, the court observed that PROMOD is "the victim of Garbage In, Garbage Out."[302] This is an accurate and important criticism. And it reflects a critical problem with PROMOD: the modeling results are only as good as the inputs.

Evergy conceded that the $55+ million damages figure in its complaint was overstated by more than *$32 million*. After BNSF probed Evergy's damages claims in discovery, Evergy now acknowledges that it more than doubled the calculated damages by failing to consider *a single factor*: the higher revenues that Evergy's other plants earned because Iatan and Lawrence were engaged in coal conservation and thereby boosting the LMP payable to all generators.[303] At a minimum, this demonstrates how changes in assumptions underlying the modeling exercise will dramatically change the outputs from those models.

Evergy's internal emails also reflect that modifying inputs can produce {{ [redacted] }} *See* Counsel's Exhibit 31, EVERGY-0086107, at 108 (May 27, 2022 email from James

[302] *Id.*

[303] *See* Evergy Opening Evidence at 43 ("Drawing on the outputs from these PROMOD IV runs, Ms. Foo determined that other Evergy generators realized a total of $32,881,872 in benefits from the higher LMPs in effect during Iatan and LEC coal conservation hours.").

Meitner (Evergy) to John Bridson (Evergy) about {{ [redacted] }}) (emphasis added); Counsel's Exhibit 34, EVERGY-0082911, at 913 (September 29-30, 2022 email chain; email from Eric Peterson: {{ [redacted] }}) (emphasis added); Counsel's Exhibit 35, EVERGY-0082907, at 908 (October 5, 2022 email chain; email from Eric Peterson: {{ [redacted] }}).

And because of the problems with Evergy's input assumptions, discussed below, its modeling should be disregarded.

d. Modifying just a few assumptions results in a negative damages number.

Aside from the problems with Evergy's inputs, modifying a few inputs would result in a negative damages number. As noted in Section I.C.3, it is only by happenstance that Evergy's coal conservation measures resulted in a loss to Evergy. Evergy easily could have *made money* based on its implementation of coal conservation measures. This makes it impossible for Evergy to establish causation. But it emerges again in the context of the modeling because changing a few

assumptions, such as wind levels or temperatures, could result in Evergy's damages modeling producing a *negative damages number*.[304] The Board should not rely on modeling that is so sensitive that modest changes in assumptions can produce negative damages.

e. <u>The Board should not rely on Evergy's damages modeling in this proceeding because it is inconsistent with Evergy's past modeling.</u>

The huge discrepancies in Evergy's damages calculations underscores the lack of reliability in Evergy's PROMOD and GenTrader analyses. Evergy's modeling generated widely differing damages figures in January 2023, when it ran internal modeling; in January 2024, when it ran modeling to support the damages claim in its complaint; and now.

In January 2023, Evergy employee Eric Peterson prepared a {{ [redacted] }}[305] He calculated {{ [redacted] }} as follows:[306]

[304] Hibbard V.S. Section IV.A., Appendix B ¶ 133.

[305] Counsel's Executive Summary Exhibit 04, EVERGY-0082612, at 615.

[306] *Id.* at 613.

{{



}}

His modeling found that Iatan was responsible for {{ }} and Lawrence was responsible for {{ }}[307] Responding to Peterson, Vice President John Bridson acknowledged {{ }}[308]

But now, Mr. Crosby calculates Iatan's lost opportunity costs as {{ }} The facts and data did not change between January 2023 and Evergy's opening evidence. Yet, Evergy's lost opportunity damages estimate at Iatan is significantly higher and internally inconsistent relative to its own January 2023 estimate. This inconsistency calls into question the reliability of Evergy's modeling and damages claims.

[307] *Id.*

[308] *Id.* at 614.

Similarly, the fact that Evergy decreased its damages figure by more than $32 million between its complaint and its opening evidence due to failing to consider Evergy's profits from the increase in LMPs shows the significant variability in, and unreliability of, Evergy's modeling and PROMOD more generally as a tool for determining damages.

f. Evergy's modeling includes damages at Lawrence that renders the models fatally flawed.

Because Evergy chose to implement coal conservation measures at Iatan and Lawrence to determine damages, Evergy has calculated its damages by modeling a but-for world in which there were no coal conservation measures at either plant. But the damages at Lawrence are *zero* for the many reasons identified above. Because Lawrence's damages are zero, all of Evergy's damages modeling is unreliable.

Since Evergy is not entitled to damages at Lawrence, Evergy's damages model is founded on an inaccurate assumption: a but-for world in which there was no coal conservation at *either* Lawrence *or* Iatan. However, a model in which Lawrence is assumed to have operated with coal conservation, as it did in the real world, would be necessary to isolate Iatan's impact on the LMP absent coal conservation and the associated impact on Iatan's generation. (This is how Evergy's witness Foo treated Evergy's other plants in Evergy's modeling.[309]) Evergy's current modeling cannot do that {{ [redacted]

[309] Hibbard V.S. Section IV.E.

[redacted]}}[310] For these hours—more than 50% of Iatan's hours—it is impossible to separate each plant's impact on the but-for LMPs. Because of this, Evergy cannot determine—and remove—Lawrence's effects on Evergy's damages calculation.

Assuming arguendo that Evergy suffered compensable damages at Iatan, Evergy's modeling cannot be relied upon to determine the amount of those damages because of the confounding impact of the inaccurate assumption of no coal conservation at Lawrence. For these same reasons, Evergy's calculation for "net compensatory damages" that Evergy claims it is owed due to additional cost Evergy incurred in the market fails.[311] Lacking a reliable damages model, Evergy can establish no entitlement to damages.

[310] This is true for {{ [redacted] }} *Id.* *See also* Evergy Opening Evidence at 43 ("Ms. Foo ran PROMOD IV with an input data set that replicated the actual Evergy conditions in 2022, including specifically the coal conservation measures implemented for Iatan and LEC.").

[311] Evergy claims that it is entitled to recover the "net additional costs that Complainants experienced in purchasing their load requirements from SPP." Evergy Opening Evidence at 41. Evergy explains that under Ms. Foo's PROMOD modeling, "The outputs showed a total additional cost incurred by Evergy to meet its load requirements attributable to conservation at Iatan and LEC of $37,509,755." *Id.* at 43. The total "benefits from the higher LMPs in effect during Iatan and LEC coal conservation hours" were $32,881,872, *id.*, resulting in "a net compensatory damages figure for additional SPP load requirement costs of $4,627,883." *Id.* at 44. Yet Ms. Foo's PROMOD modeling assumes damages at Lawrence. Her modeling finds a $37.5 million additional cost that is "attributable to conservation at Iatan *and LEC*." *Id.* at 43 (emphasis added). But using Evergy's current modeling, it is impossible to determine Evergy's "additional cost" without including Lawrence's impact. Hibbard V.S. Section IV.E. Thus, Evergy's $4,627,883 figure for "additional costs" cannot be relied upon and must be thrown out.

g. By using two production cost modeling programs (PROMOD and GenTrader), Evergy compounded the unreliability of its damages modeling.

Evergy's decision to use two models when one would have sufficed exponentially increases the unreliability of its damages calculations.[312] Unlike the Board's cost of capital process, where the averaging of two different models estimating the same thing with different assumptions can result in a more reliable result, Evergy uses two different models that build one on top of the other, with the outputs from one model (PROMOD) becoming the inputs for the other model (GenTrader).[313] Rather than providing separate and independent results that may be compared with each other or averaged, this means that any errors with one model are compounded by running the second model using the first model's outputs.[314]

PROMOD and GenTrader are fundamentally different in the scope and scale of modeled power system operations and dispatch, and the mismatch between the models introduces obvious and unresolvable inconsistencies in Evergy's analytic method. Mr. Hibbard's verified statement provides a comprehensive catalog of key inconsistencies between the PROMOD IV and GenTrader models.[315]

---

[312] Hibbard V.S. Section V.C.

[313] *Id.*

[314] *Id. Compare Use of Multi-Stage Discounted Cash Flow Model in Determining R.R. Indus.'s Cost of Capital*, EP 664 (Sub-No. 1), slip op. at 14-15 (STB served Jan. 28, 2009).

[315] Hibbard V.S. Figure 20, App. A.

5. In addition to their overall unreliability, Evergy's damages are overstated in various respects due to specific errors.

a. The vast majority of Evergy's damages stem from overly aggressive coal conservation measures.

The substantial majority of Evergy's claimed damages stem from coal conservation efforts that were {{ [redacted] }} As Mr. Hibbard explains, the SPP may place a generating resource in "Reliability Status" if it believes that reduced or delayed generation from the resource may be necessary to ensure adequate generation to satisfy the needs of the system.[316] However, the SPP considers moving a resource to reliability status only when its inventory falls below the level necessary for 20 days of generation at minimum burn rates.[317] Even then, the SPP makes a determination of whether to place the resource in reliability status only after a case-by-case review.[318]

Mr. Hibbard's analysis further confirms that, with far less aggressive coal conservation, the inventory levels at Iatan and Lawrence {{ [redacted] }} Even setting aside the myriad other methodological flaws in Evergy's damages calculation, this single factor—inclusion of damages associated

[316] *Id.* ¶¶ 66, 104.

[317] *Id.*

[318] *Id.*

with overly aggressive coal conservation—results in an overstatement of Evergy's purported damages by approximately {{ [redacted] }}.

b. Much of Evergy's claimed damages are associated with coal conservation beyond what was necessary {{ [redacted] }}

Evergy's coal conservation was overly aggressive {{ [redacted] }} Evergy had an internal goal of achieving inventories of at least {{ [redacted] }}.[319] By the end of {{ [redacted] }} yet it continued to engage in coal conservation measures for {{ [redacted] }}. By December 15, 2022, Lawrence inventory exceeded {{ [redacted] }} and Iatan inventory exceeded {{ [redacted] }}, which *wa*s {{ [redacted] *}} Evergy's stated goal*.[320] This single factor—inclusion of damages after coal inventories at Lawrence and Iatan recovered above Evergy's {{ [redacted] }}—results in an overstatement of Evergy's purported damages by approximately {{ [redacted] }}.[321]

c. No basis exists for Evergy to recover damages based on its voluntary business decision to apply market bid adders.

As Mr. Hibbard explains, SPP market participants may apply market bid adders at any time, at any power plant, for any reason.[322] A participant's decision

[319] Counsel's Exhibit 25, EVERGY-0088820.

[320] Hibbard V.S. Figure 3 Workpapers, n.130.

[321] *Id.* ¶ 114.

[322] *Id.* ¶ 107.

to include them is wholly discretionary and is not reviewed by the SPP or any state or federal regulatory authority.[323] Concern over the adequacy of fuel supply is merely one of any number of considerations that may have motivated Evergy's utilization of market bid adders during 2022. Another potential reason for employing market bid adders is to boost revenues by reducing electricity supply and increasing the LMP paid to all SPP generators—and as noted above, Evergy's application of the adders resulted in higher net profits in many months at both Iatan and Lawrence.[324] The timing of Evergy's application of market bid adders—which commenced when its coal piles were at {{ [redacted] }} of target inventories at Iatan and {{ [redacted] }} of target inventory at Lawrence—eliminates any basis for claiming Evergy's voluntary decision to apply the adders was motivated completely, or even primarily, by concern over the adequacy of its fuel supply.[325] This single factor—Evergy's inclusion of damages during periods when only the market bid adder was in place—results in an overstatement of Evergy's purported damages of up to {{ [redacted] }}.[326]

[323] *Id.* ¶ 108.

[324] *Id.* Figure 2.

[325] *Id.* Figure 3 Workpapers; n.130.

[326] *Id.*¶ 108.

d. Evergy is not entitled to damages at Iatan Unit 1 for {{ [redacted] }} because Evergy planned for Iatan Unit 1 to be shut down for an outage during that {{ [redacted] }} period, but Evergy then chose to push back the planned outage, inflating its purported damages.

Evergy is not entitled to damages at Iatan because Evergy originally planned—and informed BNSF—that Iatan Unit 1 would be { [redacted] } during much of the period for which it now claims damages. Evergy should not be permitted to inflate its damages through its own unilateral decision to change the date of its planned outage.

In March 2022, Evergy informed BNSF that { [redacted] }[327] This was consistent with historical practice: Evergy typically conducted planned maintenance at Iatan in the shoulder season, and often in October.[328] This remained Evergy's plan until at least June 2022.[329] But, by September 2022, Evergy had {{ [redacted] }}[330]

[327] Counsel's Exhibit 36, EVERGY-0028043 (March 7, 2022 email from Abby Herl (Evergy) to Patrick Moynihan (BNSF)).

[328] *See also* U.S. Energy Information Administration, "What is the shoulder season in electricity markets?" (Dec. 16, 2024), https://www.eia.gov/todayinenergy/detail.php?id=64044 ("Electric utilities and owners of power-generating assets perform maintenance on power plants during shoulder seasons because of less electricity demand that means that the system generally doesn't need to be operating at full capacity. The spring shoulder season is usually March, April, and May, and the fall shoulder season is typically September, October, and November. However, many factors can influence the exact timing of planned maintenance such at local weather patterns, utility strategy, and market conditions.").

[329] Counsel's Exhibit 37, EVERGY-0089109, at 127 (reflecting {{ [redacted] }}).

[330] Counsel's Exhibit 38, EVERGY-0082687, at 694.

According to Mr. Hibbard's calculations, Evergy's inclusion of damages for Iatan Unit 1 for the period from {{ [redacted] }}—despite the fact that Iatan Unit 1 originally planned to have an outage during this period, { [redacted] } and consistent with historical practice—results in an overstatement of Evergy's damages figures for Iatan of between {{ [redacted] }}[331] This is because Evergy claims that it suffered {{ [redacted] }} in damages based on reduced generation at Iatan Unit 1 during a month in which Evergy had planned to have *no generation at all* due to a scheduled shutdown that was wholly unrelated to BNSF's rail service.

e. Evergy's business decisions at Lawrence contributed to its purported damages.

Evergy is not entitled to any damages at Lawrence for the many reasons noted above. But even if Evergy were entitled to damages at Lawrence, Evergy's business decisions contributed to its own purported harm and independently precludes Evergy's claimed recovery.

{ [redacted] } are required to unload a coal train at Lawrence, compared to the {{ [redacted] }}[332] As a result, coal trains {{ [redacted] }} to unload at Lawrence than {{ [redacted] }} Evergy's { [redacted]

[331] Hibbard V.S. ¶ 109.

[332] *See* Counsel's Exhibit 39, EVERGY-0082962 (Aug. 5, 2022 email from Abby Herl (Evergy): {{ [redacted] }}).

[redacted] }[333]

If Evergy had invested in its infrastructure such that { [redacted] } then BNSF's coal trains would have { [redacted] } with the result that Lawrence would have received more coal. According to Messrs. Baranowski and Zebrowski's calculations, if Evergy had been able to unload BNSF coal trains in { [redacted] } Lawrence would have received {{ [redacted] }} more tons of coal—a {{ [redacted] }} increase in total volume for 2022.[334]

Evergy's business decision not to upgrade its facilities and equipment, which resulted in Lawrence receiving less coal than it otherwise could have received, contributed to its damages. The same is true of Evergy's decision to set Lawrence's inventory level { [redacted] } as noted above. Evergy is not entitled to damages at Lawrence for the many reasons outlined above, but even if it were, the impact of its own contribution to any supposed harm through business decisions and facility limits should be offset against any such damages.

[333] *See* Baranowski/Zebrowski V.S. at 71-72.

[334] *See id.*

f. If Iatan had not experienced unloading delays caused by Evergy, Iatan would have received {{ [redacted] }}.

The delays at Iatan were also significant, though not as extreme as at Lawrence. Evergy's { [redacted] }[335] If Evergy had unloaded BNSF coal trains in the industry standard { [redacted] } Iatan would have received an additional {{ [redacted] }} tons of coal in 2022, representing an {{ [redacted] }} increase.[336]

According to Mr. Hibbard's calculations, failing to account for Evergy's unloading times that are in excess of { [redacted] } at both Lawrence and Iatan results in an overstatement of Evergy's purported damages by {{ [redacted] }}.[337] BNSF should not be on the hook for Evergy's failure to unload as efficiently as BNSF's other shippers.

g. Evergy chose to { [redacted] } which could have allowed Iatan and Lawrence to receive more coal (Iatan and Lawrence).

Before 2022, BNSF served Hawthorn and La Cygne in addition to Iatan and Lawrence. Because BNSF served multiple plants along the same route, BNSF could divert coal between plants, for example if a destination plant was unable to

[335] *See id.*

[336] *See id.*

[337] Hibbard V.S. ¶ 113.

take a train or if another plant had a pressing need for additional coal.[338] From 2019 through 2021, Evergy and BNSF diverted an average of { [redacted] } trains each year, carrying a total of approximately {{ [redacted] }} tons of coal, from La Cygne or Hawthorn to Iatan.[339] For 2022, BNSF competed hard but Evergy chose to switch service for Hawthorn and La Cygne { [redacted] } as was its prerogative. But one of the consequences of this switch was that BNSF could no longer divert trains between multiple plants as needed. If Evergy had maintained BNSF service at its other plants, BNSF could have provided approximately {{ [redacted] }} additional tons to Iatan, consistent with past years.[340] According to Mr. Hibbard's calculations, failing to account for this results in an overstatement of Evergy's purported damages by {{ [redacted] }}.[341]

h. Similarly, if Evergy had allowed BNSF to shift a trainset from Lawrence to Iatan, for the second half of the year { [redacted] } this would have resulted in a net { [redacted] } additional tons to Evergy. Evergy's {{ [redacted] }} in the summer of 2022 resulted in a precipitous drop in inventory at both Iatan and Lawrence; absent those drops, both plants would have had significantly higher inventory (Iatan and Lawrence).

Evergy performed {{ [redacted] }} of its coal inventories in the summer of 2022. These {{ [redacted] }} determined that Evergy had {{ [redacted] }} the inventory levels

[338] *See* Morehouse V.S. at 10; Counsel's Exhibit 41, EVERGY-0014749, at 752 (August 29, 2022 letter from Patrick Moynihan (BNSF) to Jessica Tucker (Evergy): { [redacted] }).

[339] Baranowski/Zebrowski V.S. at 71; Hibbard V.S. ¶ 110.

[340] *Id.*

[341] *Id.*

at both Iatan and Lawrence by a substantial margin. As a result of the recount, Evergy's inventory level at Iatan dropped by *more than* {{ [redacted] }} and at Lawrence it dropped by *more than* {{ [redacted] }}.[342] This represented {{ [redacted] }} days of burn at Iatan and {{ [redacted] }} of burn at Lawrence.

According to Ms. Tucker, Evergy's inventory {{ [redacted] }} at each plant were annual, meaning that Evergy's {{ [redacted] }} likely emerged in 2021. If Evergy had kept better track of its inventory, Evergy could have requested and received additional inventory from BNSF in 2021, and maintained a higher inventory level heading into 2022.[343] Had those tons been available for Evergy to burn, neither plant's inventory would have dropped as low as it dropped. (Though as noted above, even absent coal conservation measures, {{ [redacted] }})

According to Mr. Hibbard's calculations, failing to account for these inventory {{ [redacted] }} results in an overstatement of Evergy's purported damages by {{ [redacted] }}.[344]

Additionally, if Evergy's sudden realization in the summer of 2022 that its { [redacted] } led it to be more aggressive with its subsequent conservation of coal, then BNSF should not

[342] {{ [redacted] }}.

[343] Baranowski/Zebrowski V.S. at 72.

[344] Hibbard V.S. ¶ 111.

be responsible for any damages purportedly flowing from that conservation. Rather, Evergy's own negligence in {{ [redacted] }} its coal pile is to blame.

i. Evergy refused to inform BNSF of its inventory levels at Iatan and Lawrence in real time, preventing BNSF from taking measures to proactively address inventory levels.

Evergy refused to share its plants' inventory levels with BNSF, treating this as a closely guarded secret.[345] Evergy's secrecy persists even now, in 2025, with respect to Evergy's *2022* inventory levels—despite the fact that this data now is publicly available through the U.S. Energy Information Administration ("EIA"). Evergy apparently is concerned that BNSF could somehow use data about inventory levels to prejudice Evergy.[346] This is exactly backwards, since BNSF uses inventory level data to proactively *prioritize deliveries* to plants with low inventory.[347]

In 2022, when Evergy informed BNSF that plants were { [redacted] } BNSF responded quickly. For example, when Evergy { [redacted] }[348]

If Evergy had engaged in open communication with BNSF about its inventory levels, BNSF could have taken steps to proactively address the inventory levels,

[345] *See* Witness Statement of Craig Morehouse at 7-8.

[346] *See* Counsel's Executive Summary Exhibit 06, BNSF_EVERGY_0026104, at 105.

[347] *See* Counsel's Exhibit 42, BNSF_EVERGY_0026101, at 102-103.

[348] *See* Counsel's Exhibit 17, BNSF_EVERGY_0006186; Counsel's Exhibit 16, BNSF_EVERGY_0006193; Counsel's Exhibit 40, EVERGY_0049541.

such as by { [redacted] } a trainset into service earlier. Evergy's refusal to openly communicate prevented this.

j. Evergy seeks damages for time periods when it was not even engaged in coal conservation.

Apart from seeking damages based on its own voluntary decisions to conserve coal—decisions that were overly aggressive {{ [redacted] }}—Evergy also seeks damages for time periods in which it was engaged in *no coal conservation at all*. Specifically, Evergy ceased all coal conservation efforts by December 20, 2022, but its damages calculations include purported damages for hours during the remainder of the year.[349] This single factor—inclusion of damages beyond the period of coal conservation—results in an overstatement of Evergy's purported damages by approximately {{ [redacted] }}.[350]

6. Evergy is not entitled to compensatory damages for bulldozer fuel costs or trainset storage costs.

Evergy claims that it is entitled to $395,113.65 in damages for the cost of fuel for Evergy's use of bulldozers to reclaim inventory from the coal piles at Iatan and Lawrence.[351] Evergy also claims that it is entitled to $225,750.00 in railcar storage expenses "because BNSF refused to accept a sufficient number of railcars into service to transport the coal volumes that had been scheduled for delivery to Iatan and LEC using BNSF's CFT platform."[352] Because Evergy is not entitled to recover

[349] Evergy Opening Evidence at 14-15 (citing Crosby V.S. at 9).

[350] Hibbard V.S. ¶ 116.

[351] *See* Evergy Opening Evidence at 45.

[352] *Id*. at 45-46.

damages for either plant, as set out above, Evergy similarly cannot recoup bulldozer damages or railcar storage expenses for either plant. But there are additional problems with these claimed damages.

a. Evergy failed to establish that BNSF should bear responsibility for Evergy's bulldozer fuel costs.

Evergy's claim is based on the idea that BNSF should be responsible for how Evergy moves coal around different parts of its plants. But this is not BNSF's financial responsibility. Evergy offers no support for the notion that moving coal between a plant's stockpile and burn areas is related to a rail carrier's alleged service failure. Instead, this is an ordinary part of operating a coal plant. Once again, this reflects how Evergy assumes that BNSF should serve as a just-in-time-supplier under common carrier service: it should unload coal "directly for use in the generating units at Iatan and [Lawrence]," which is Evergy's "preferred approach."[353] But the law does not obligate railroad common carriers to provide just-in-time service, and such service is not consistent with the ratability requirements of the tariff provisions.

Additionally, Evergy's estimates of bulldozer costs depend on unsupported assumptions. Evergy's witness supporting the bulldozer damages claim, Ms. Tucker, includes "high," "medium," and "low" fuel consumption bulldozers in her workpapers, but chooses to use "high" fuel consumption bulldozers without explaining why or explaining the { [redacted]

[353] Tucker V.S. at 40.

[redacted]}[354] Similarly, Ms. Tucker provides estimates of how many tons of coal each model of bulldozer can move per hour, but she does not provide any support or documentation for these estimates.[355] In sum, Ms. Tucker offers no reliable basis for quantifying Evergy's alleged bulldozer cost damages.

b. Evergy failed to establish that BNSF is responsible for railcar storage costs.

As with bulldozer costs, Evergy incurs railcar storage expenses in the ordinary course of its operations. Evergy has not offered any reason for why these railcar storage costs should be considered any differently and should become BNSF's responsibility.

Messrs. Baranowski and Zebrowski explain that Evergy's railcars always fluctuate with demand.[356] Historically, during weeks of lower trainset utilization, Evergy would have incurred periodic railcar storage expenses. And Evergy recognized that it could only handle two trainsets in service at Iatan for the majority of the first half of 2022.[357] Given these considerations, there is no reason for BNSF to bear the cost of Evergy storing sets in 2022.

II. Conclusion

Evergy's complaint and request for damages must be rejected in their entirety. Evergy misstates the law and attempts to induce the Board to overturn

---

[354] Baranowski/Zebrowski V.S. at 96. *See* Tucker V.S. Workpapers at "Iatan Average Diesel Fuel Price.xls"; Tucker V.S. Workpapers at "LEC Average Diesel Fuel Price for 2022.xlsx".

[355] *Id.*

[356] Baranowski/Zebrowski V.S. Figures 20 & 66.

[357] *See id.* at 98.

over a century of precedent to create a new strict-liability common carrier obligation. The record evidence presented by both Evergy and BNSF shows that (i) BNSF, and all other railroads, faced constrained capacity in 2022 due to factors beyond their control; (ii) BNSF acted reasonably in allocating the available capacity to its customers and provided reasonable service to Evergy in the prevailing circumstances; and (iii) Evergy is not entitled to any damages. As such, Evergy's claims must fail.

Respectfully submitted,

/s/ Timothy J. Strafford

Adam Weiskittel
Tyler White
Kevin W. Baldwin
BNSF Railway Company
2500 Lou Menk Drive
Fort Worth, Texas
(817) 352-2383 76131

Timothy J. Strafford
Anthony J. LaRocca
Steptoe LLP
1330 Connecticut Ave., NW
Washington, D.C. 20036
(202) 429-3000

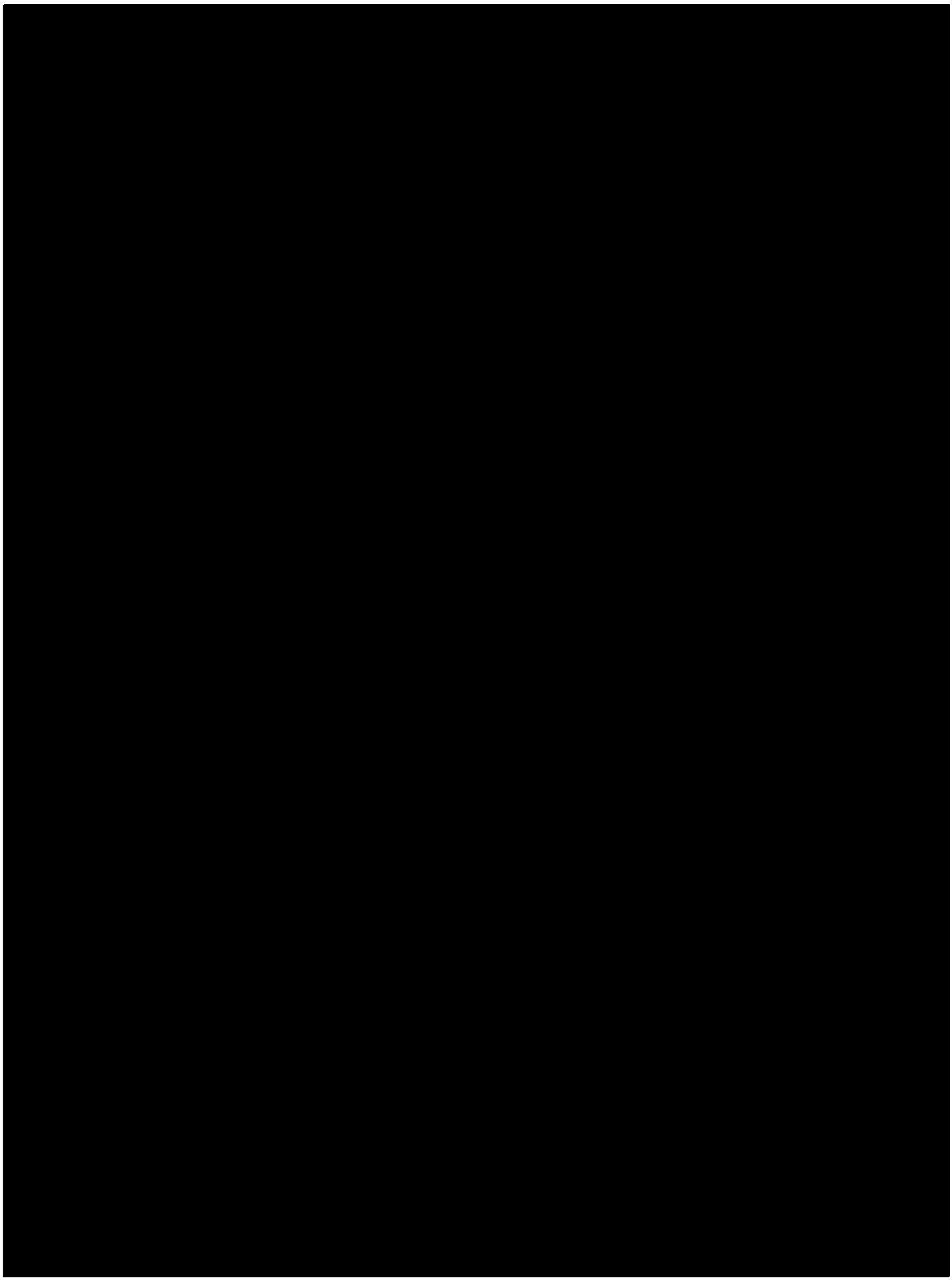
Justin Waggoner
Alexander M. Wolf
Steptoe LLP
717 Texas Ave., Suite 2800
Houston, Texas 77002
(713) 221-2309

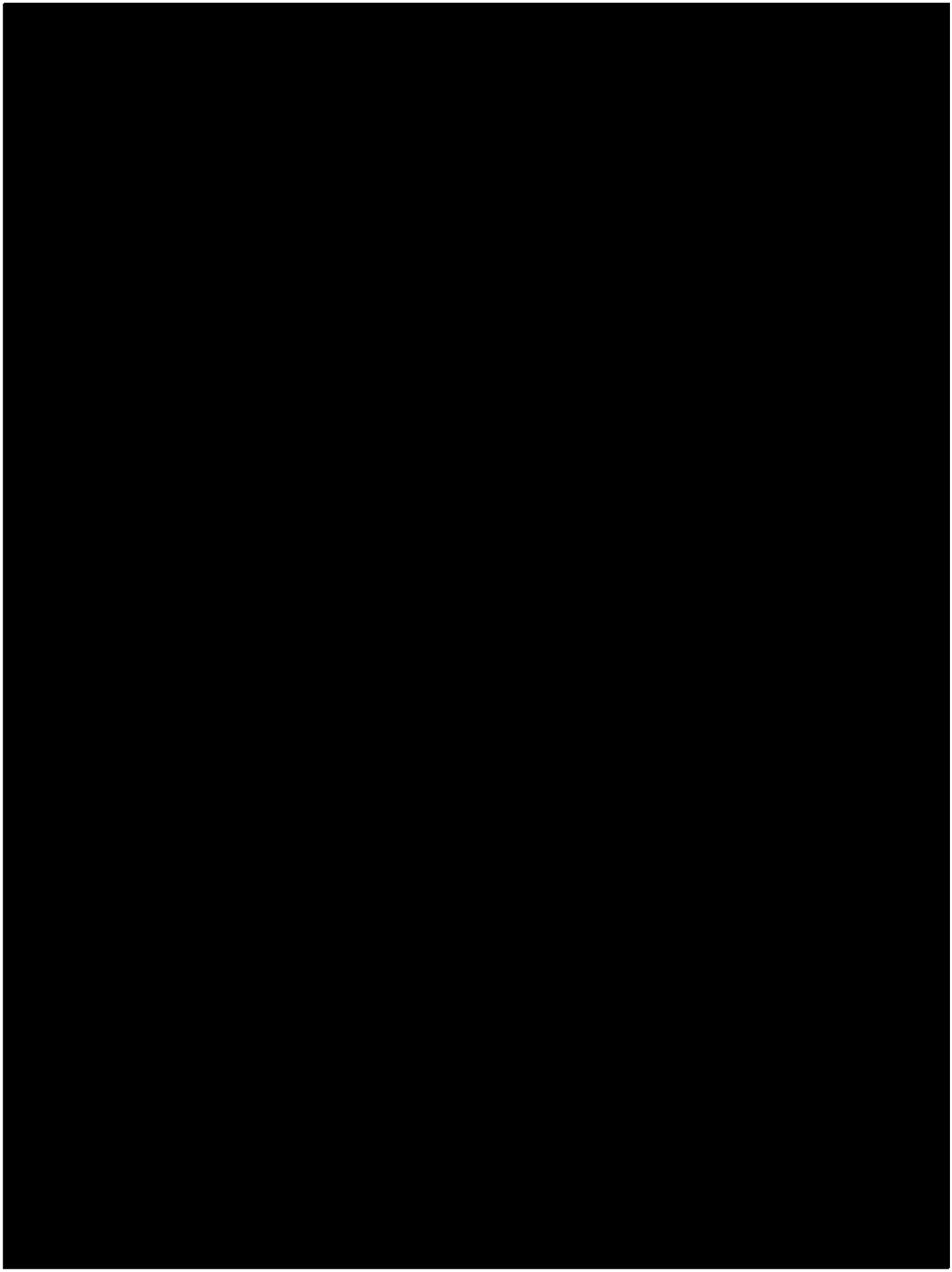
Counsel for BNSF Railway Company

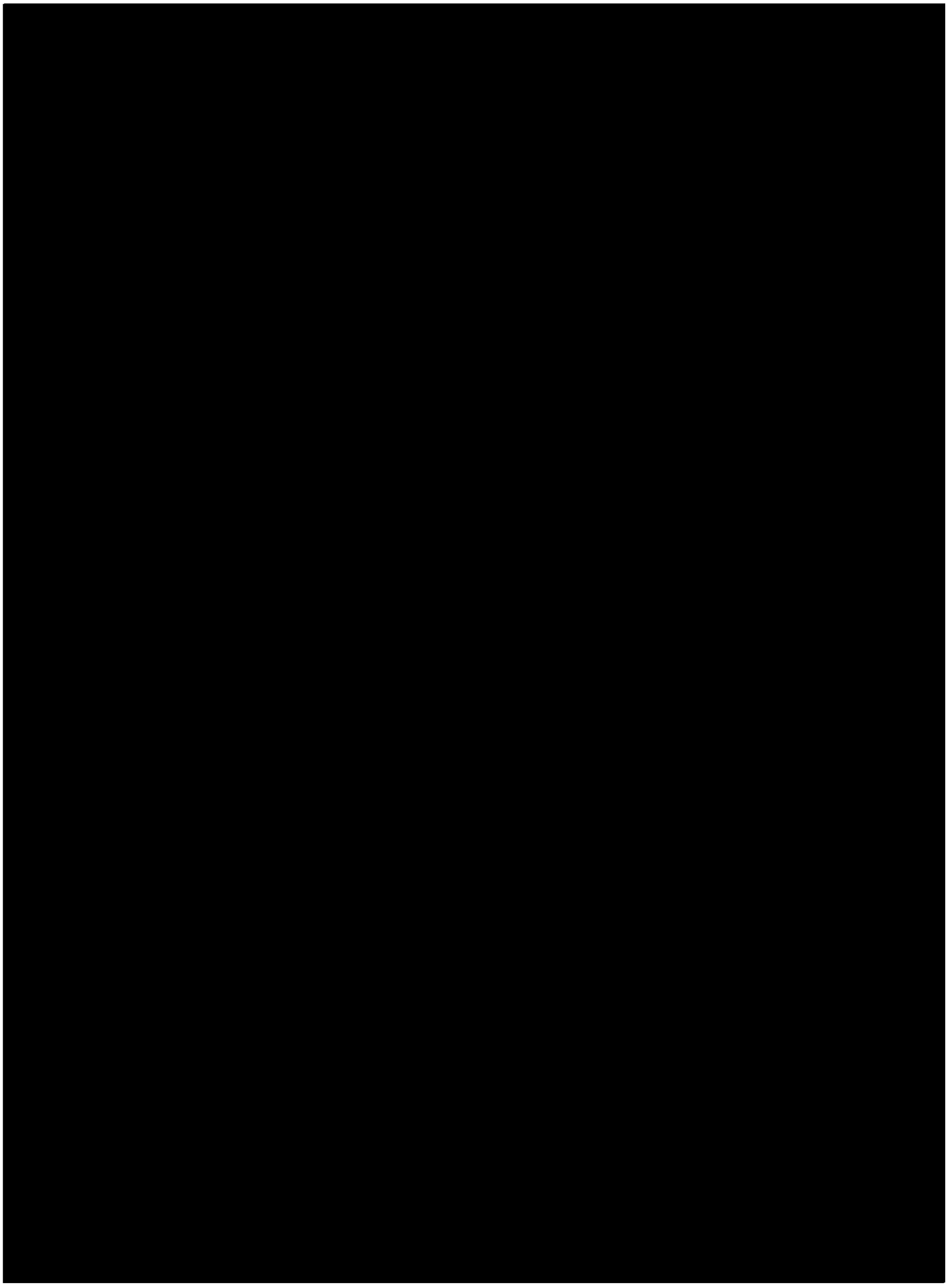
Dated: November 20, 2025

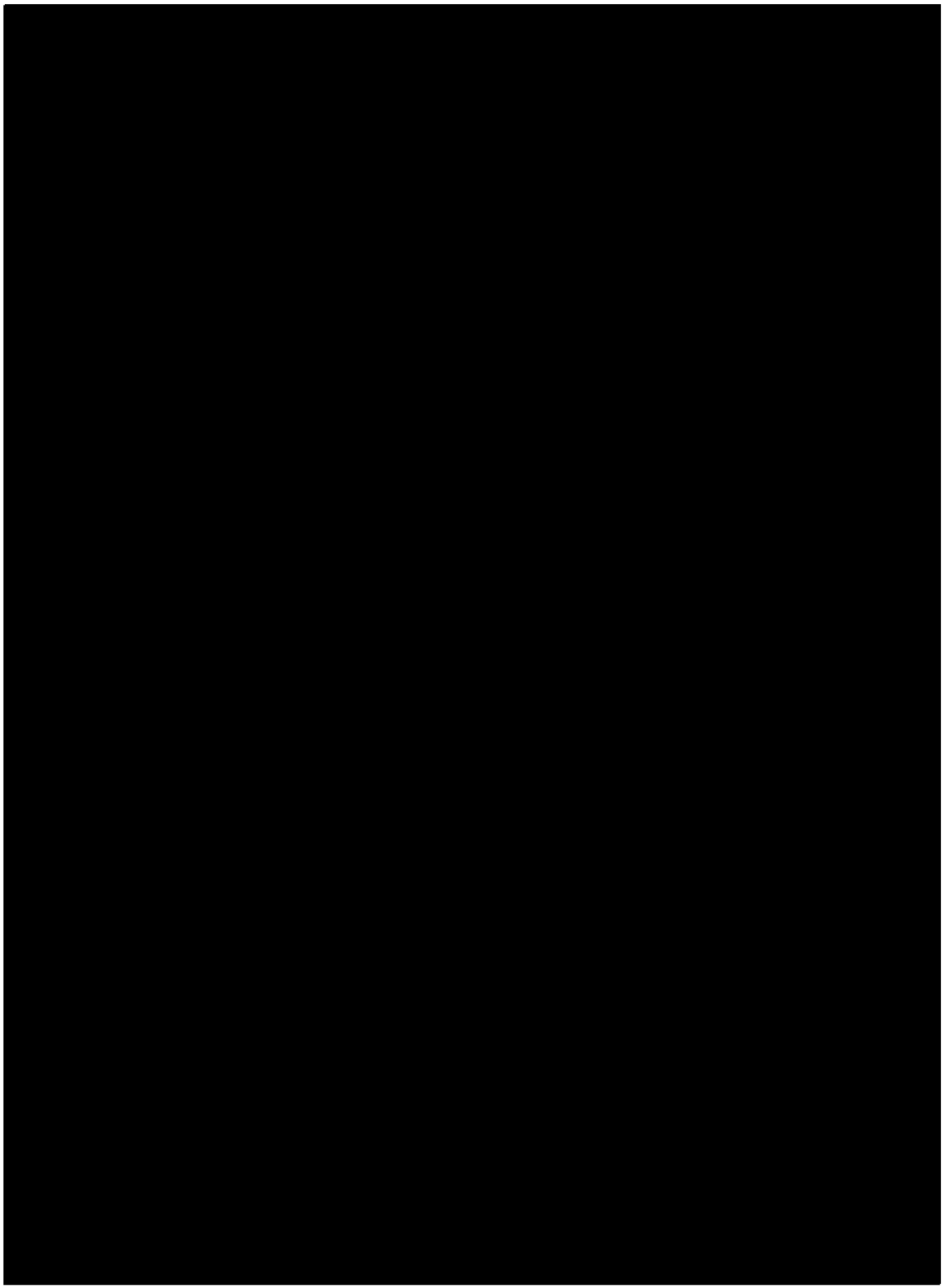
Counsel's Exhibit 01

{{







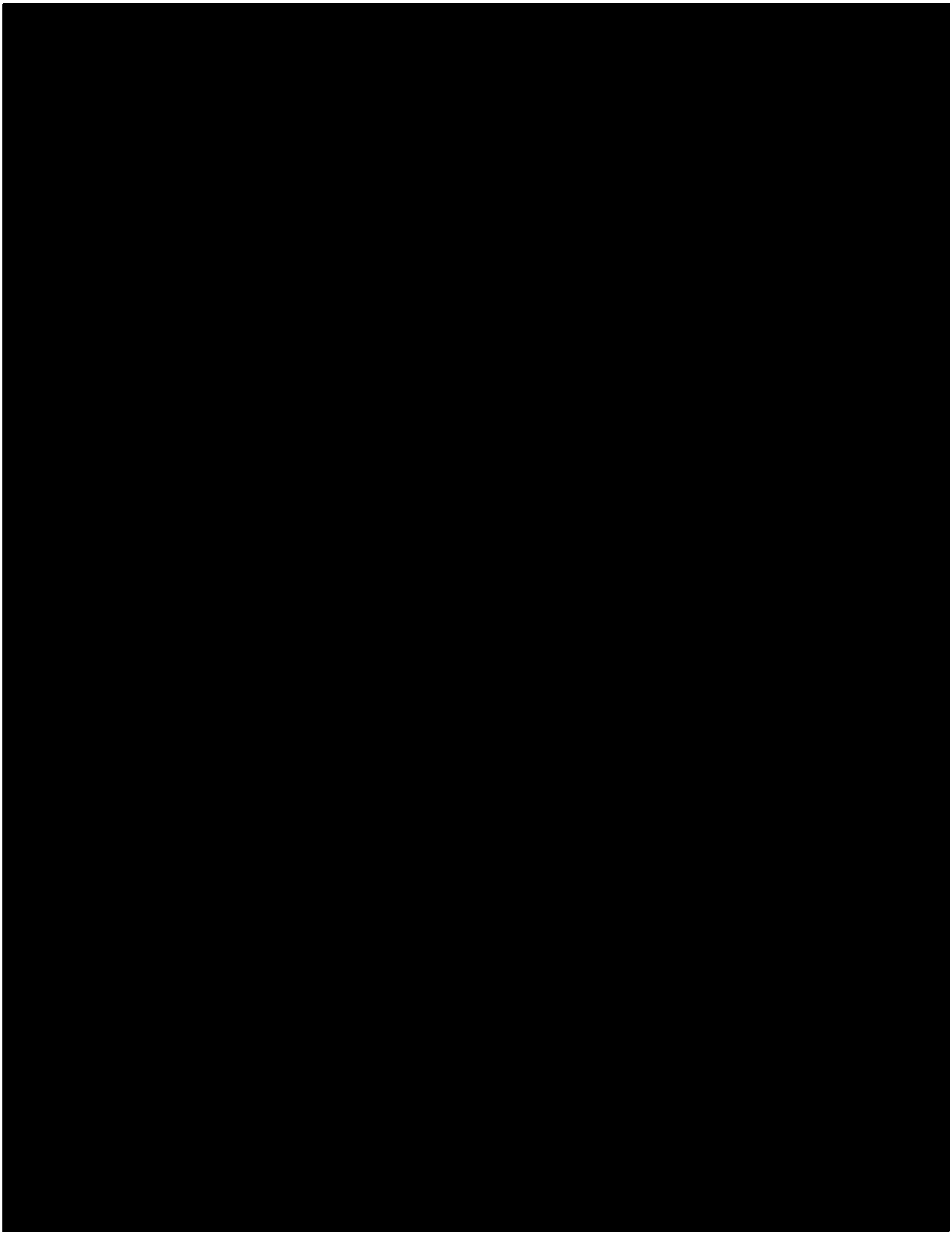


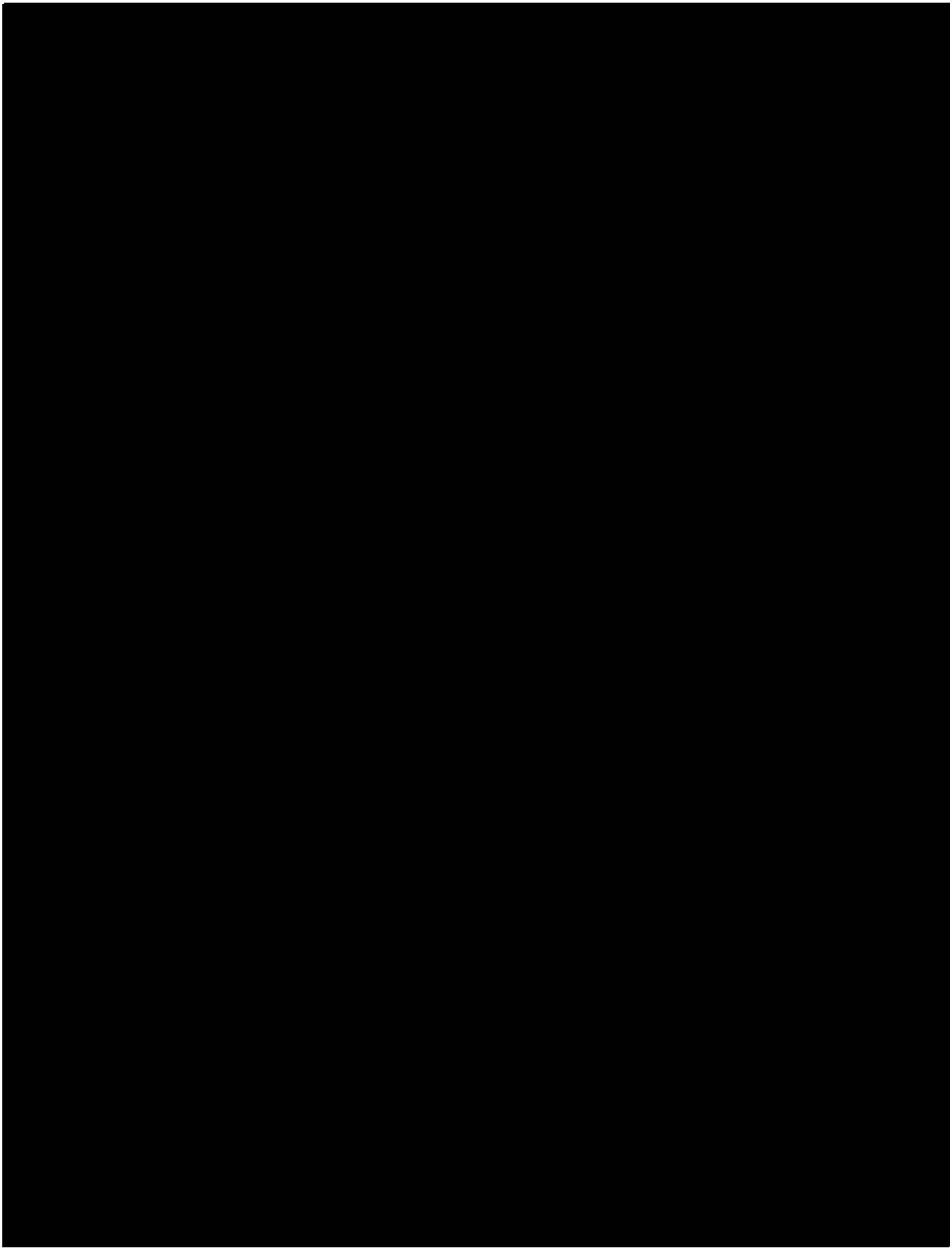
[redacted]

}}

Counsel's Exhibit 02

{



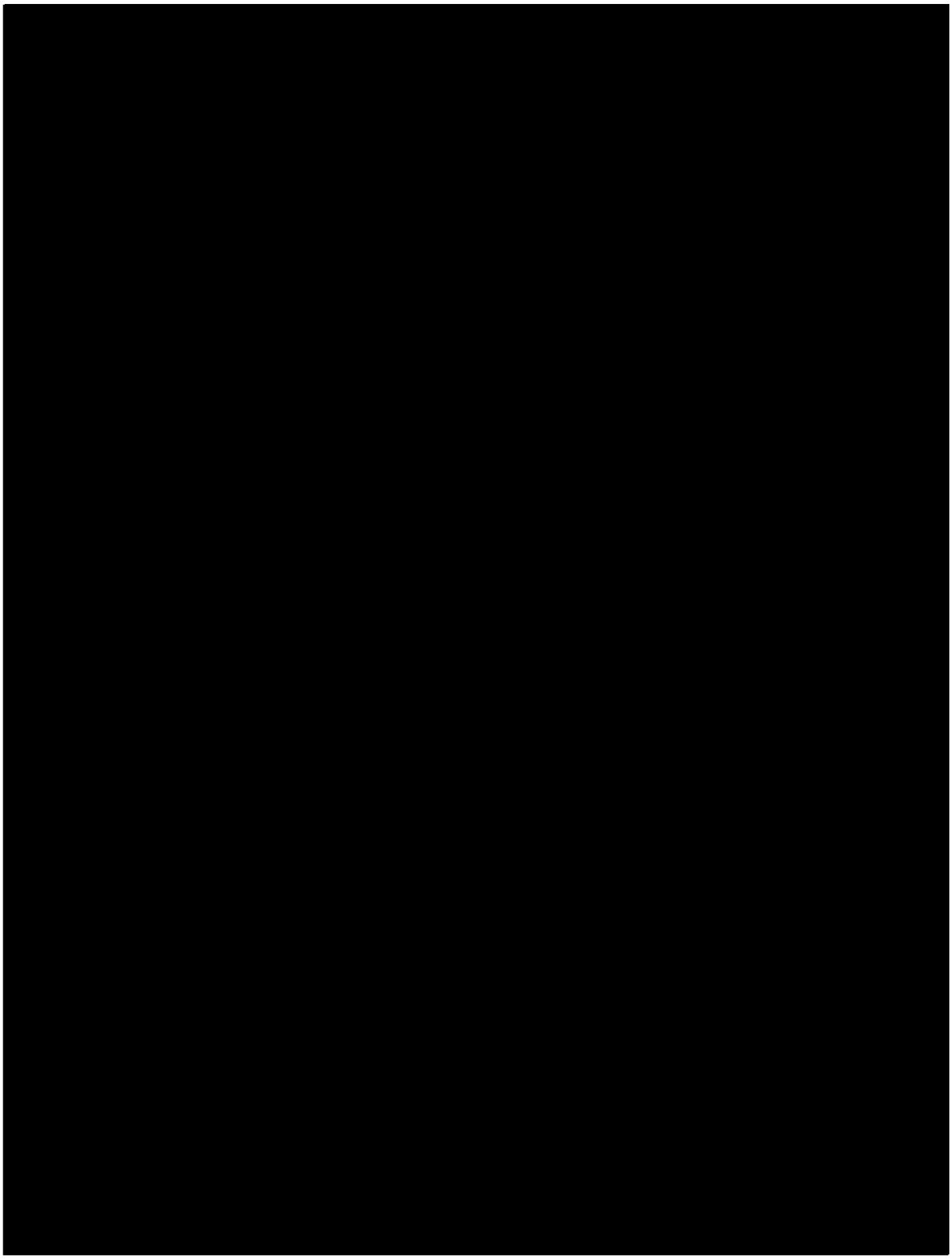


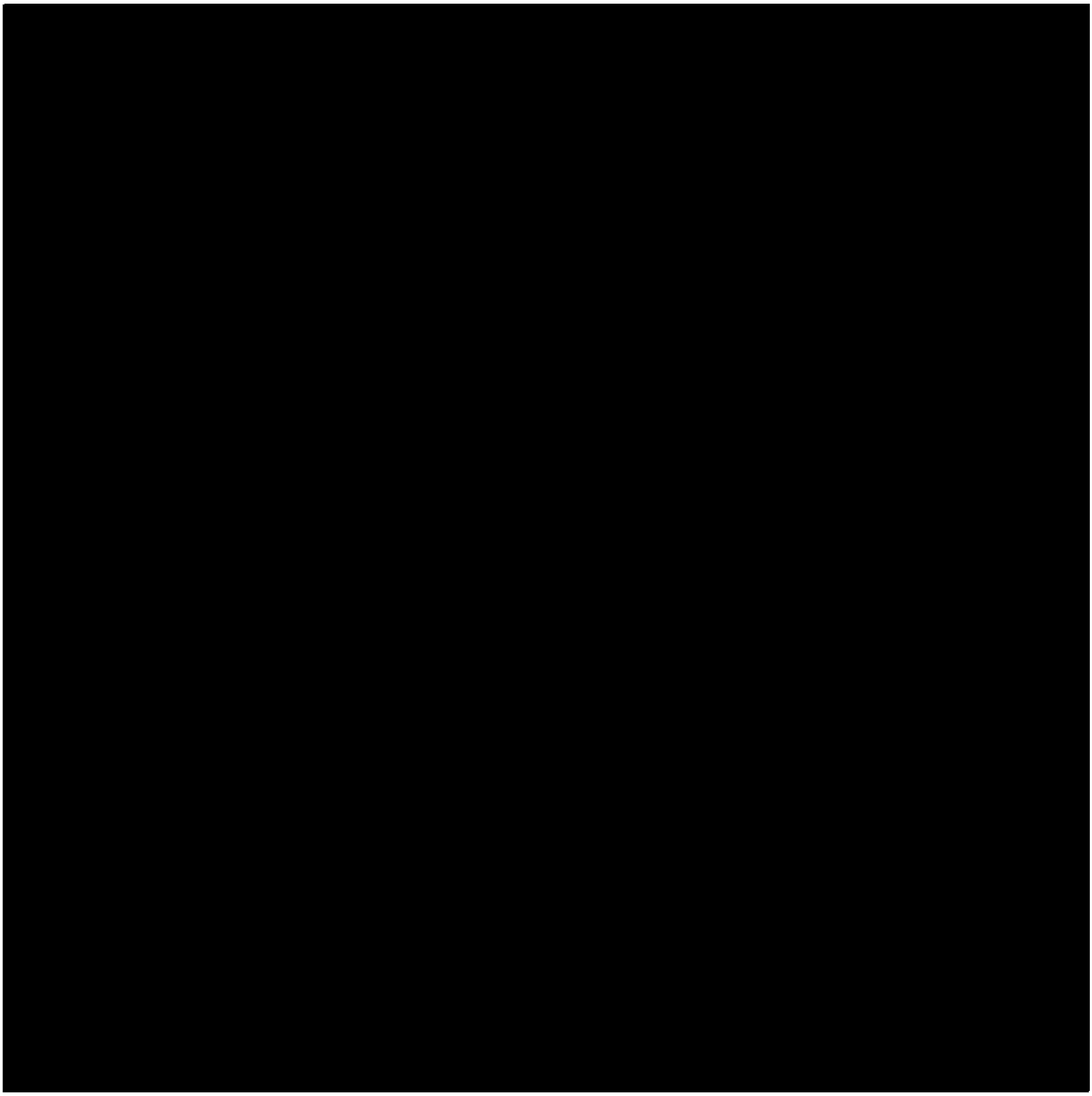


}

Counsel's Exhibit 03

{

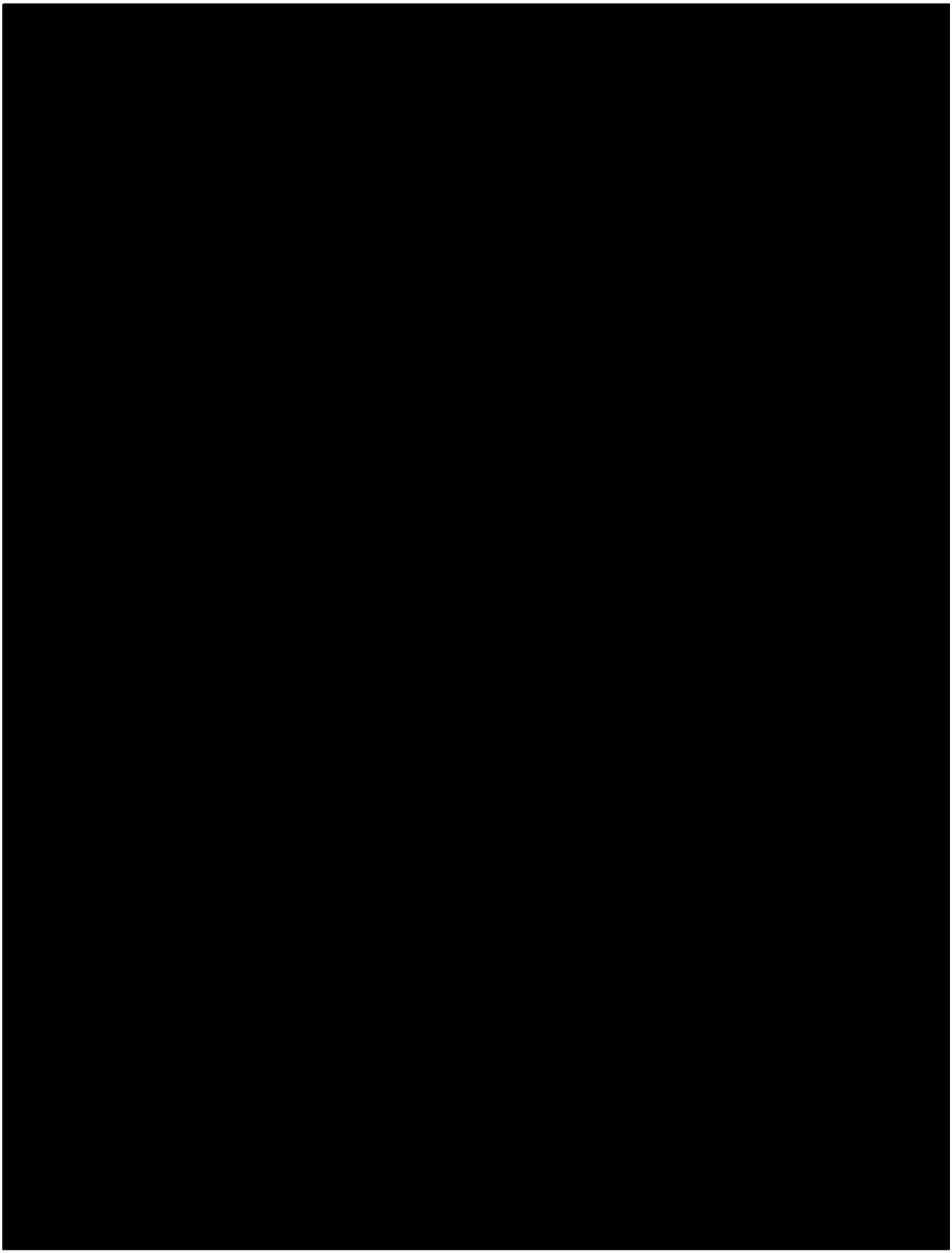


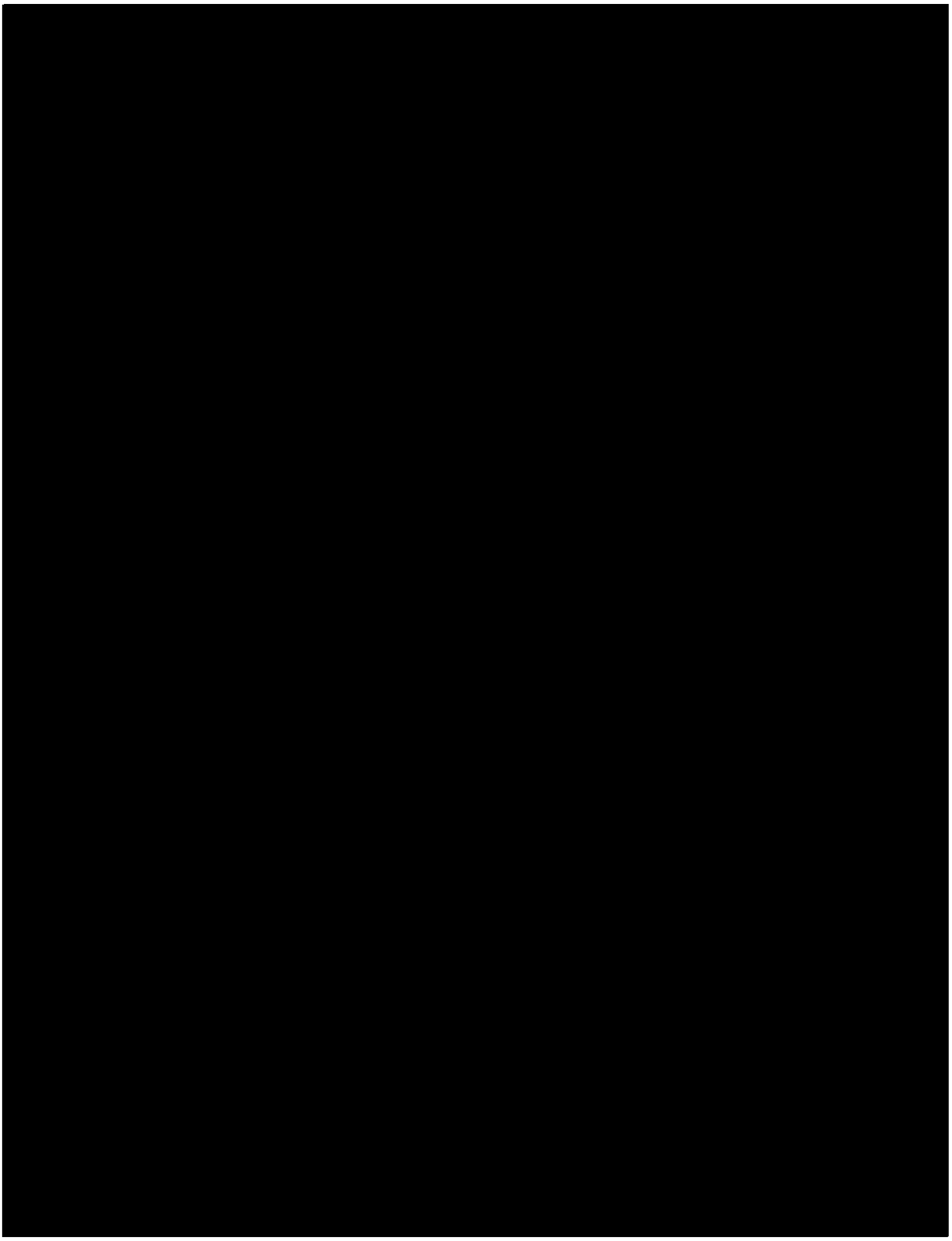


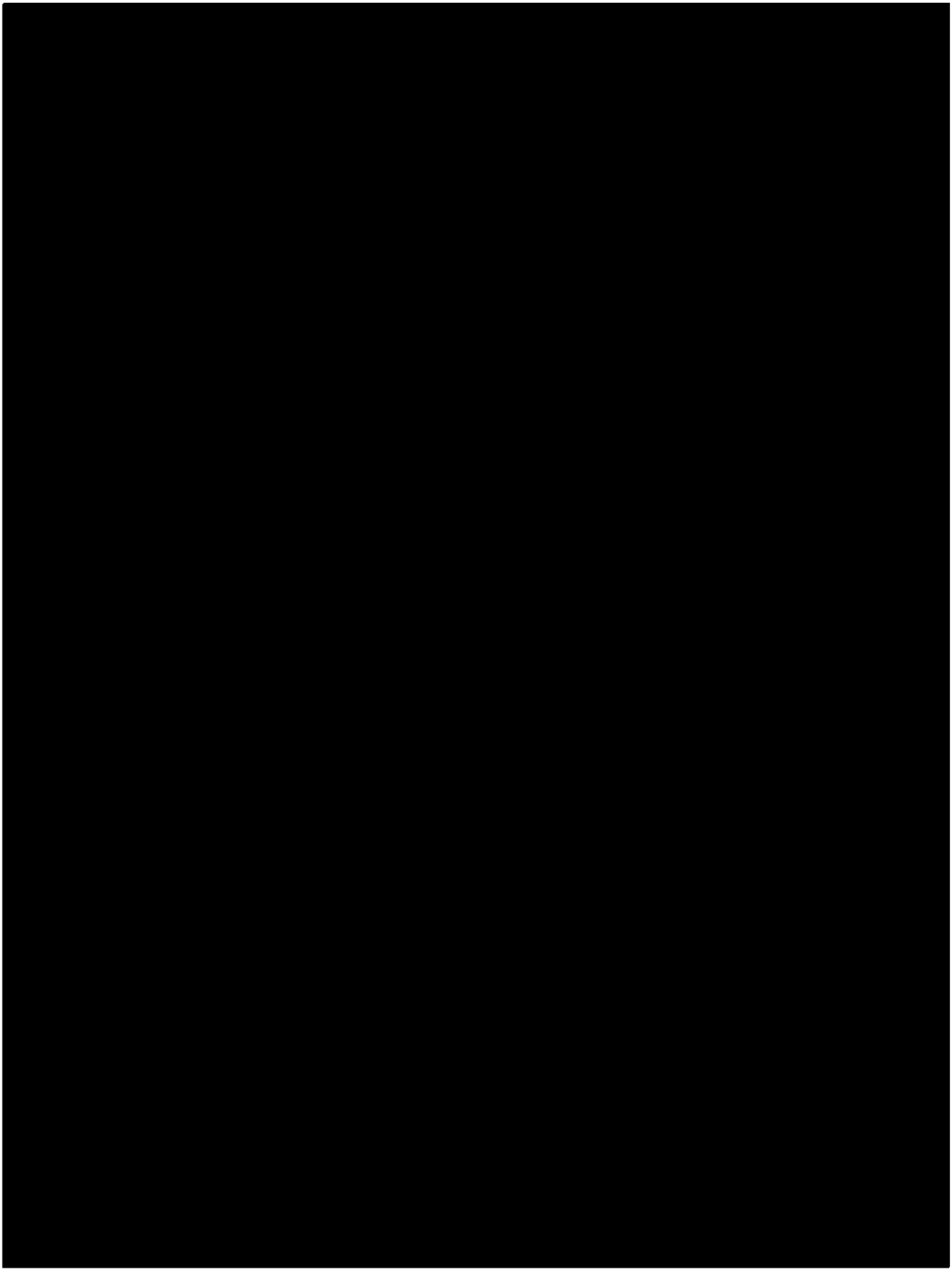
}

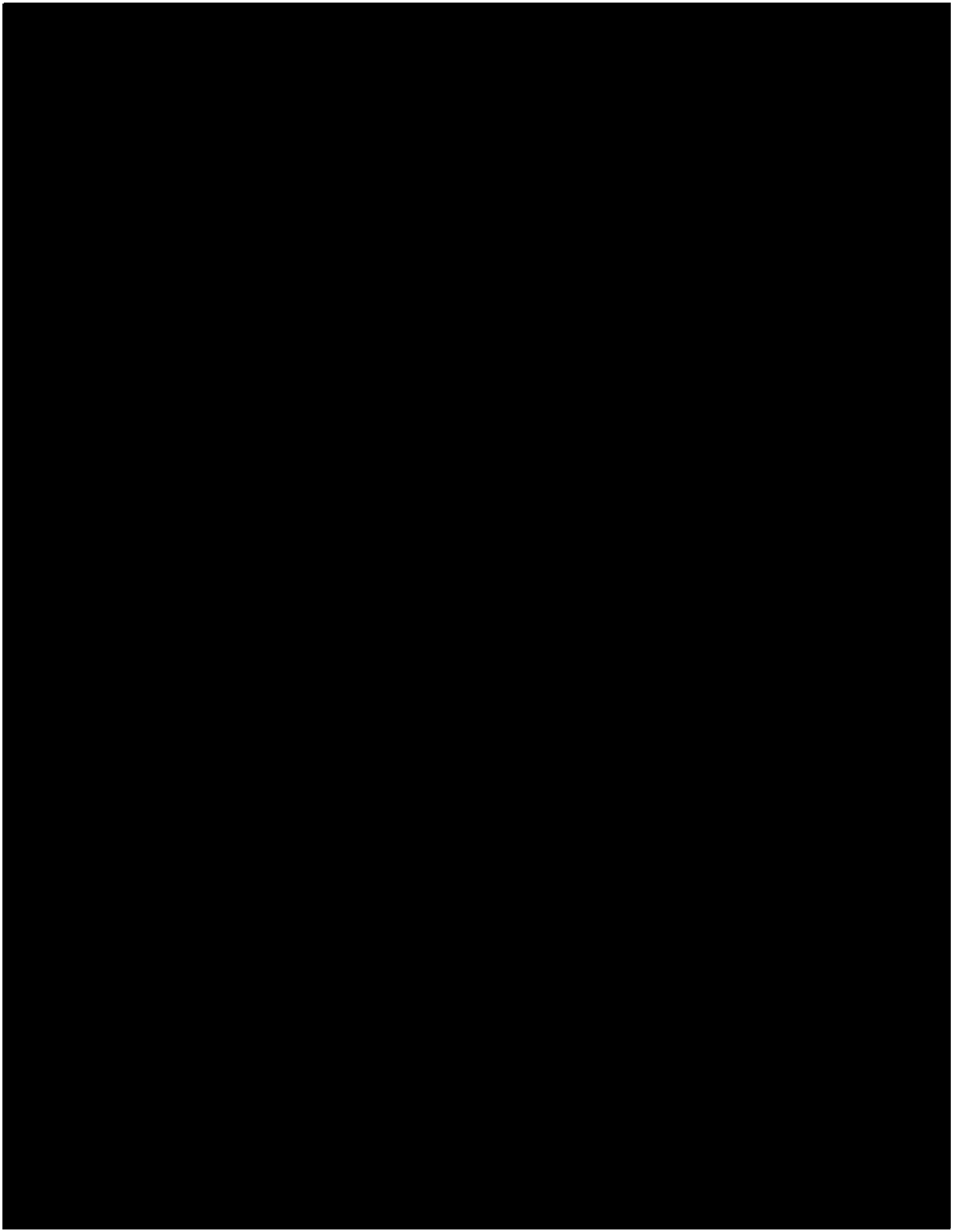
Counsel's Exhibit 04

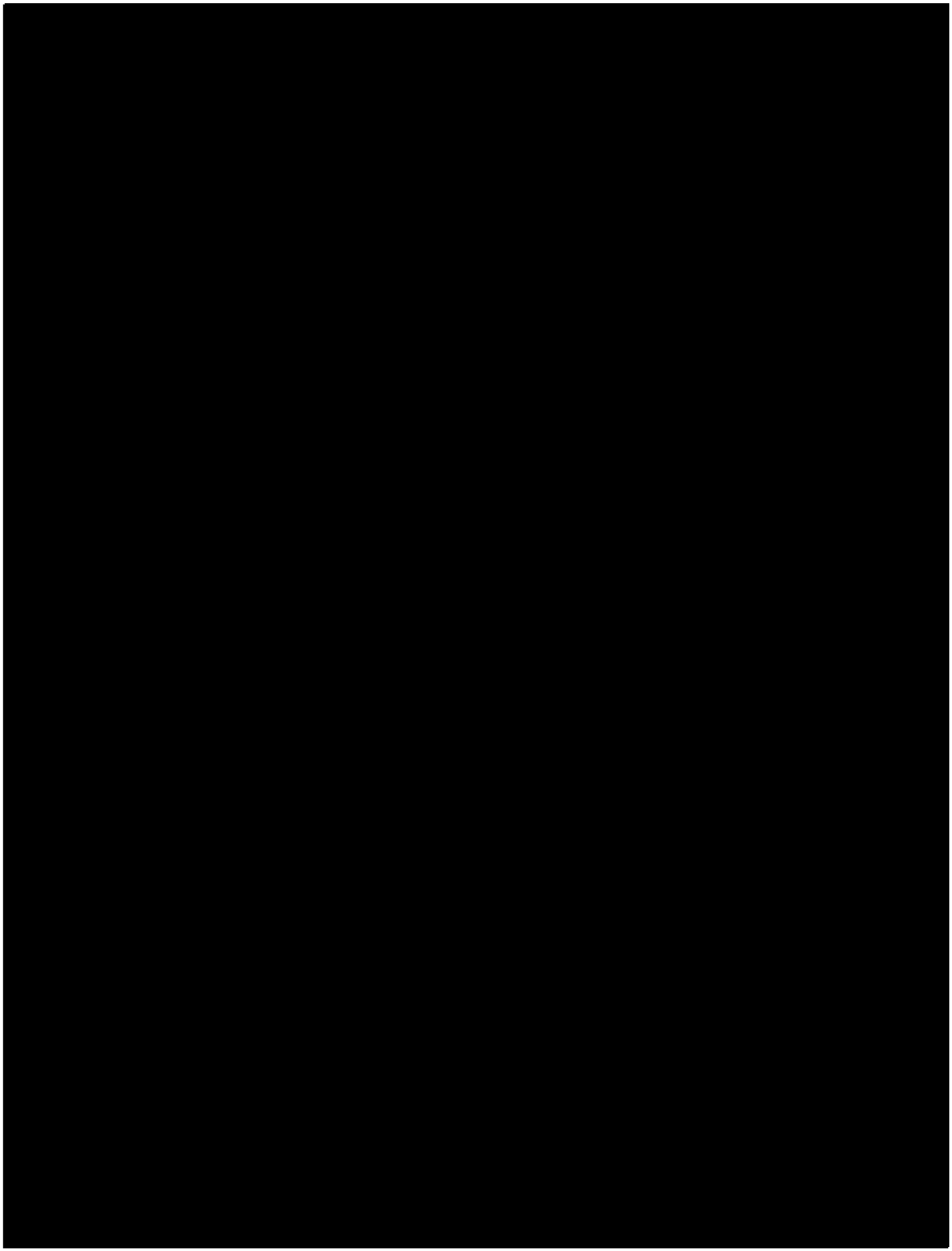
{









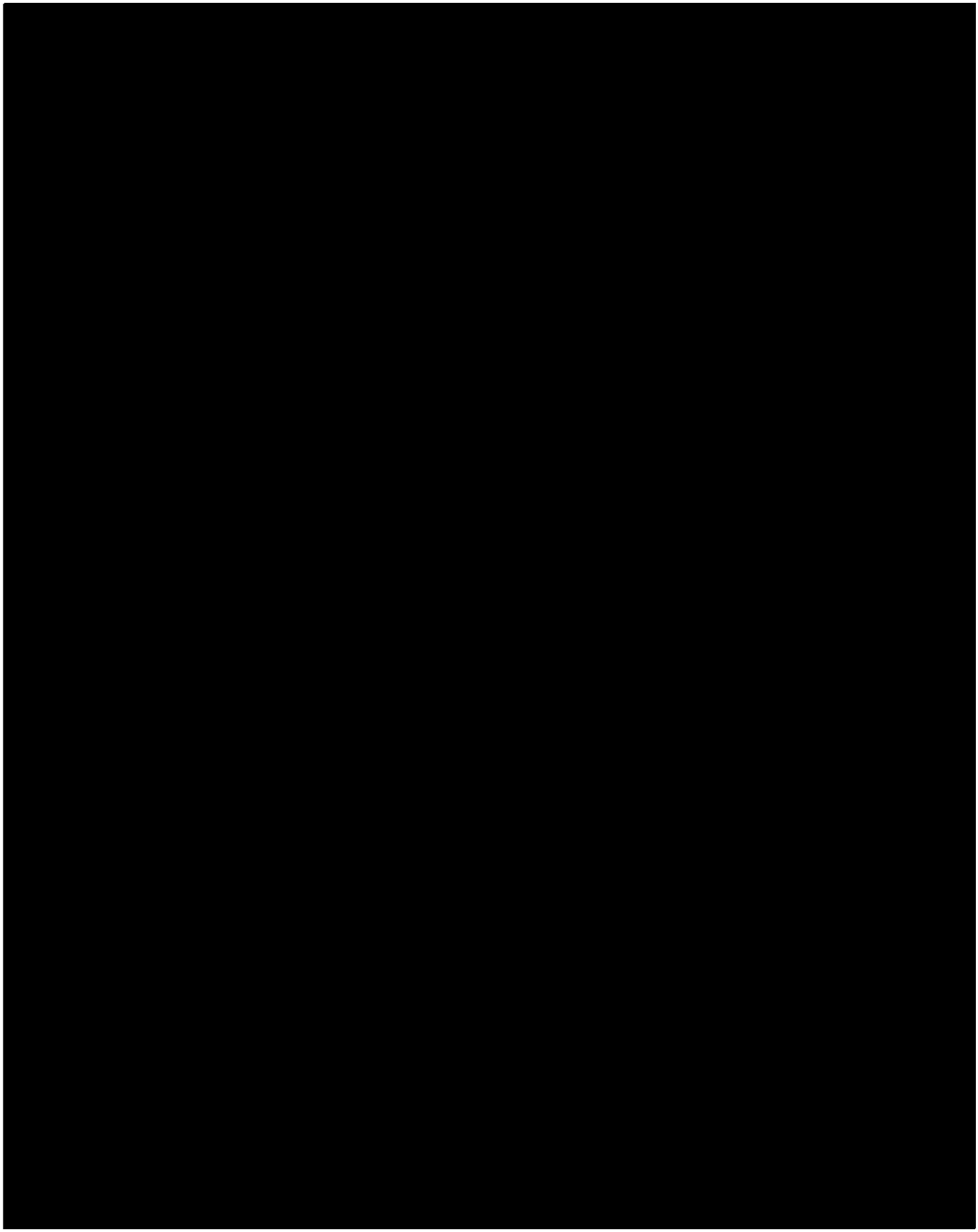


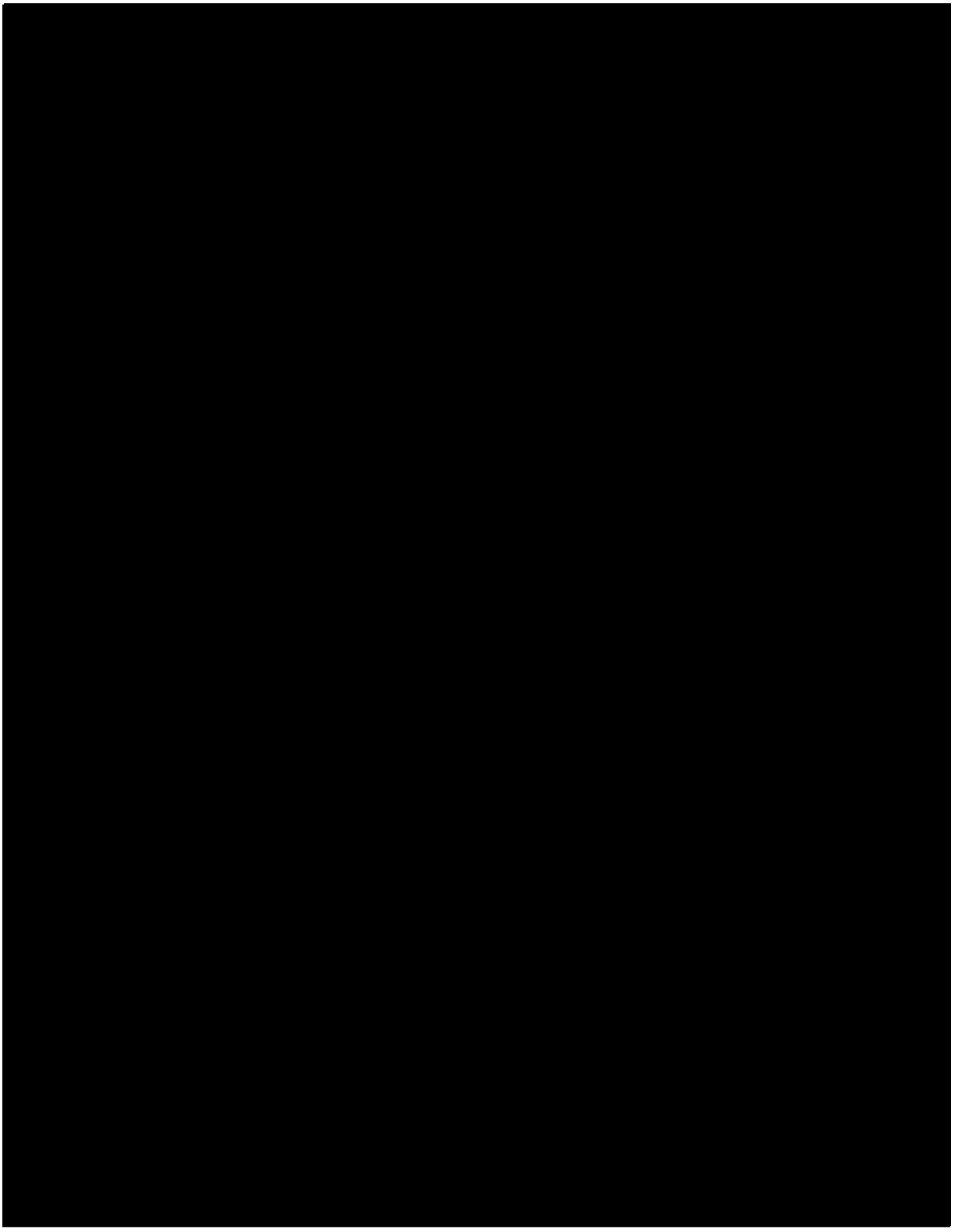
[redacted]

}

Counsel's Exhibit 05

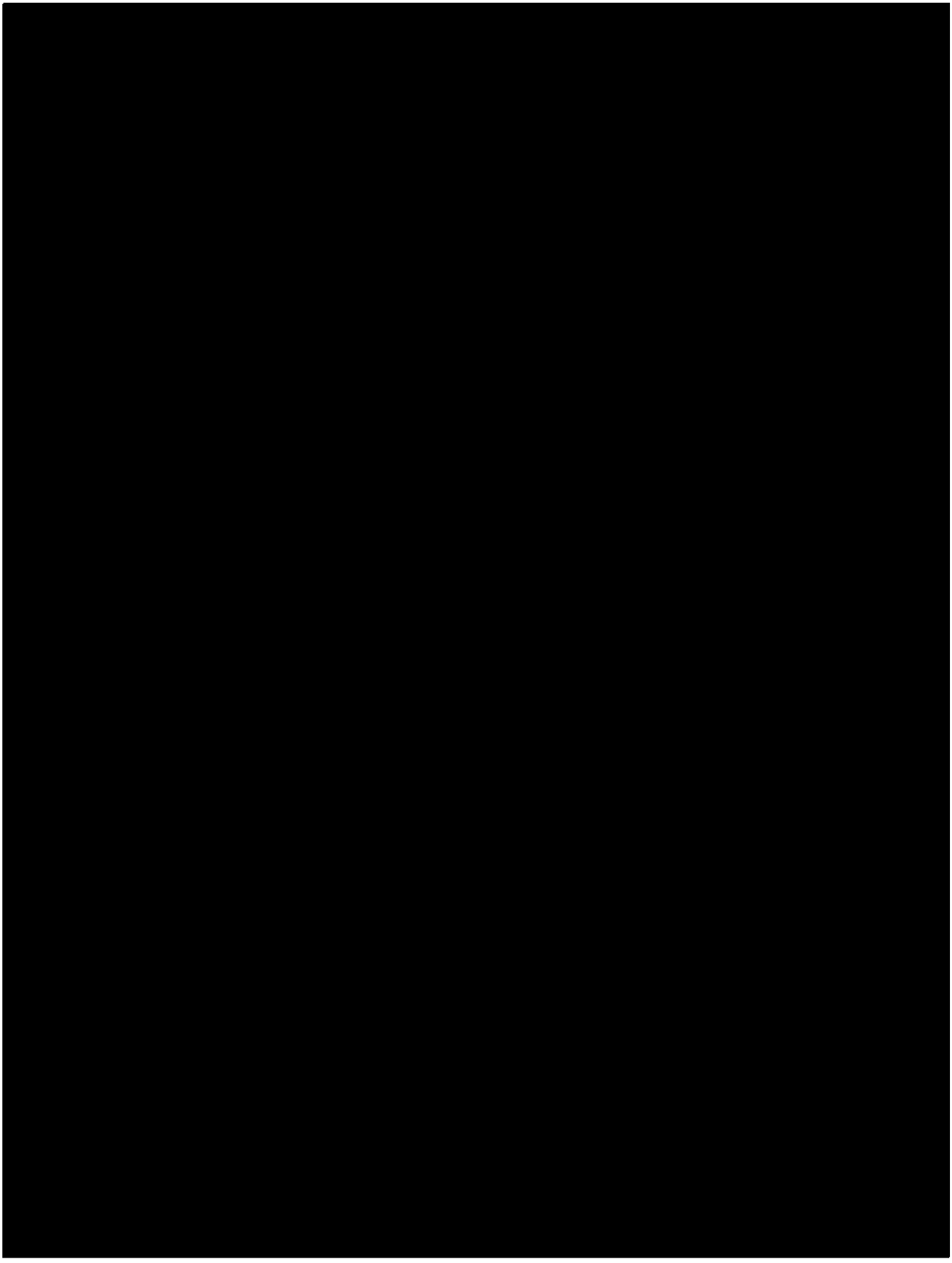
{

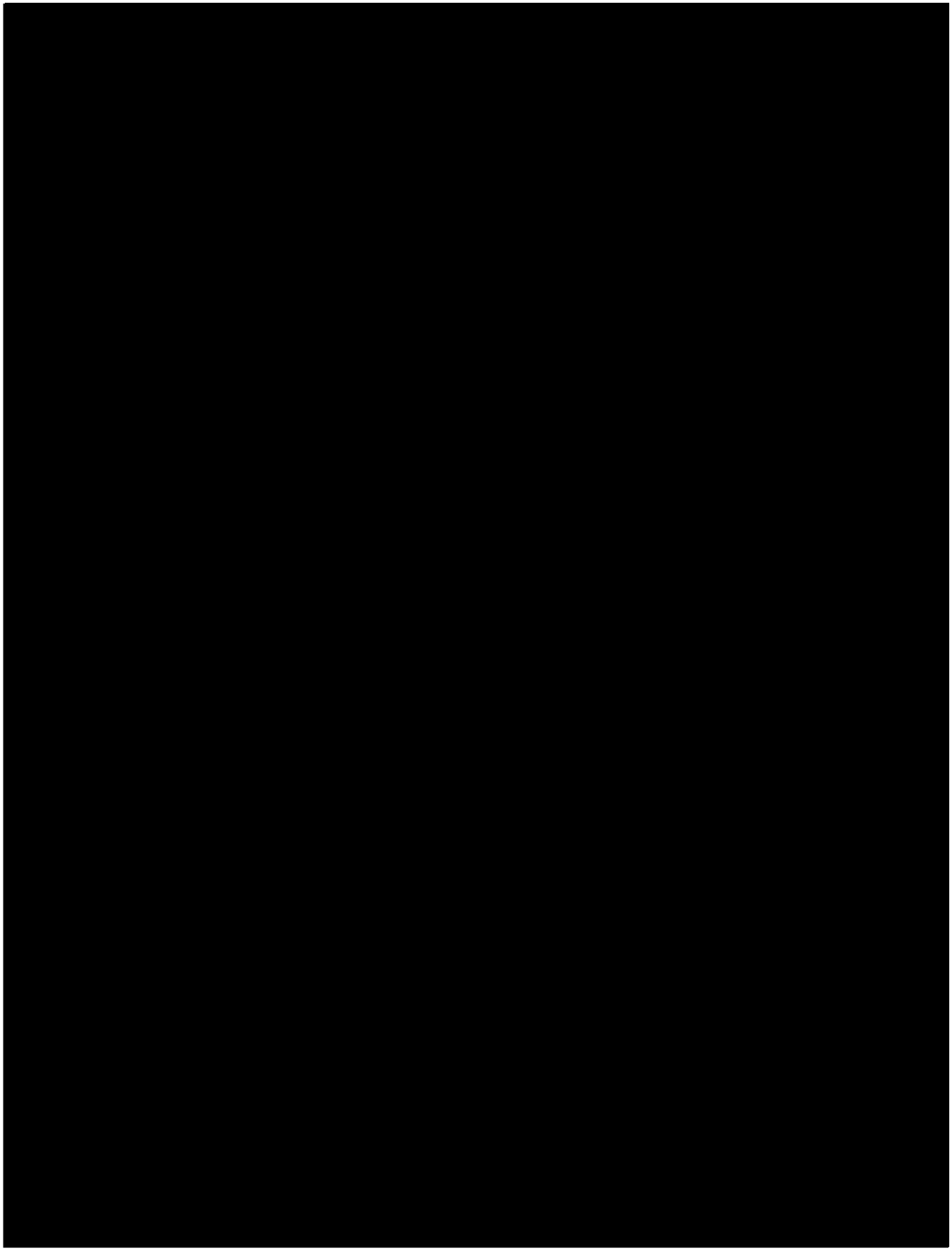


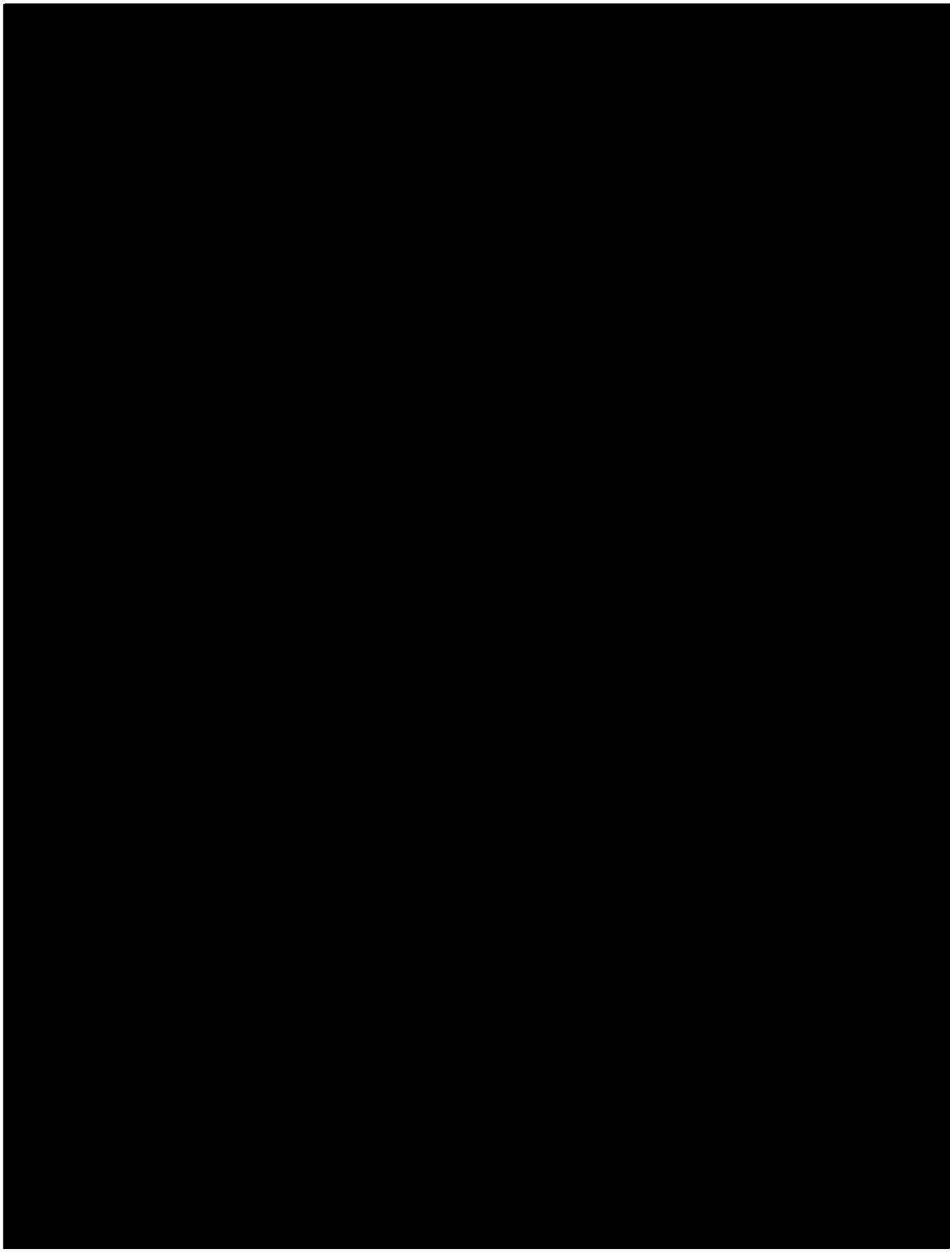


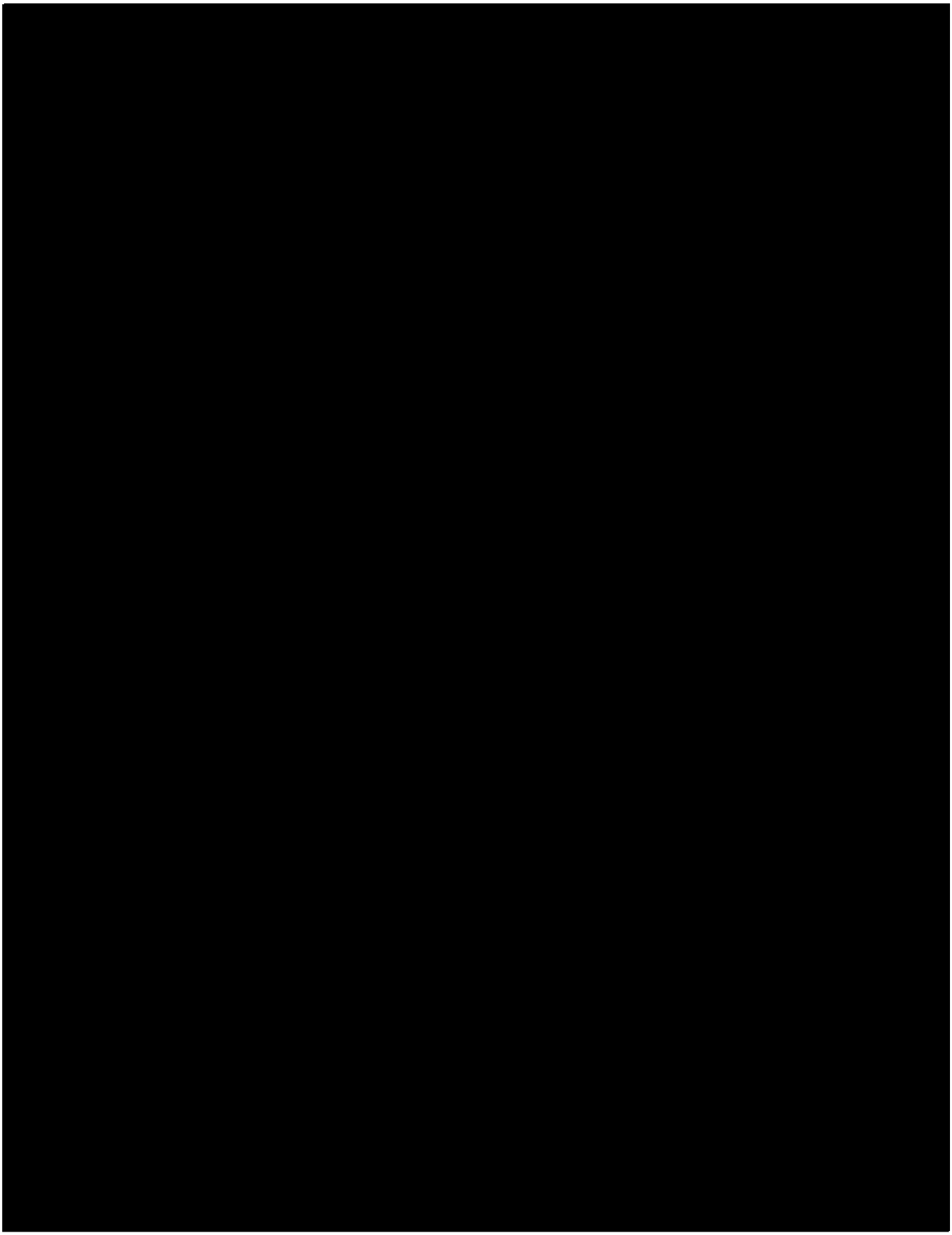
Counsel's Exhibit 06

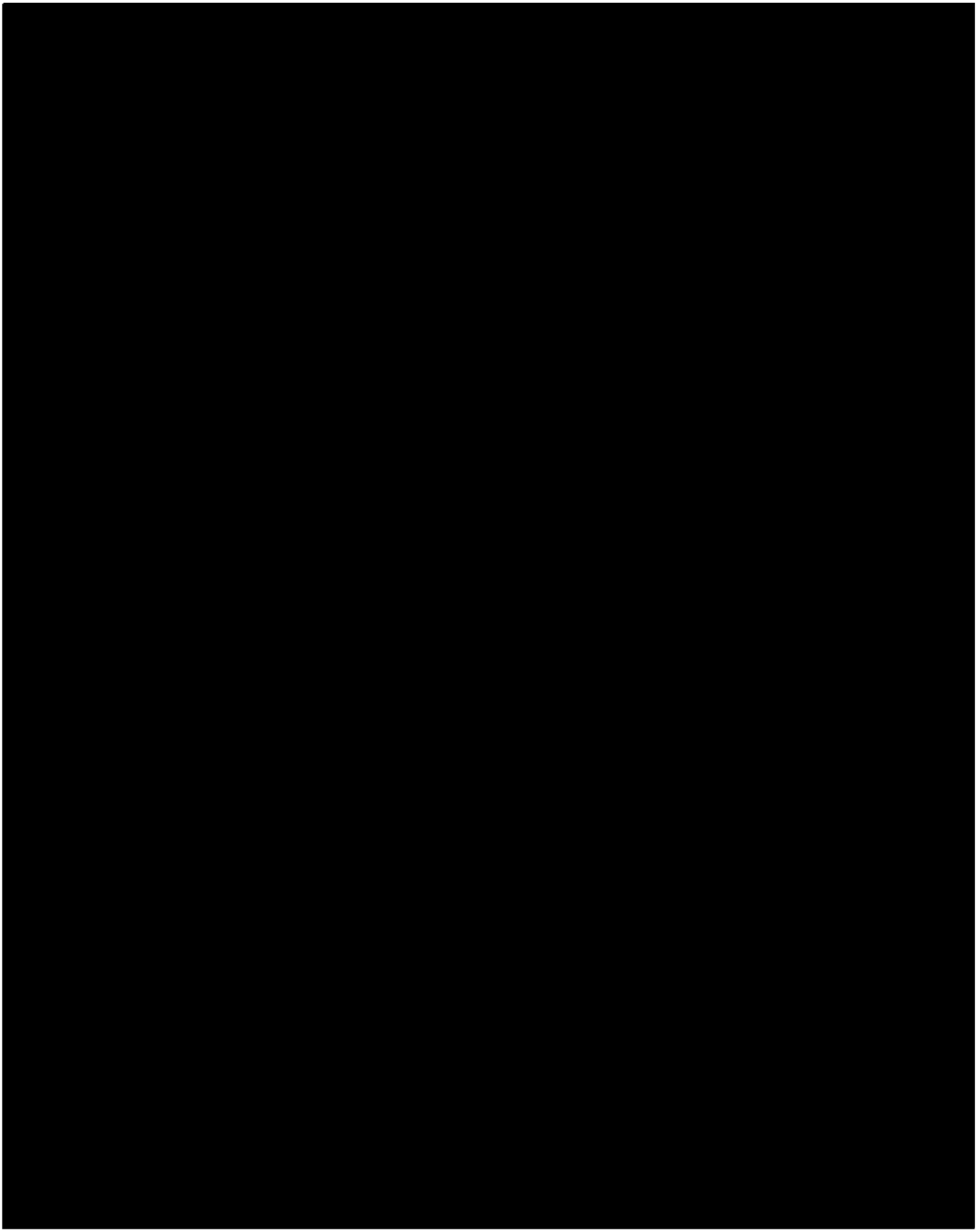
{

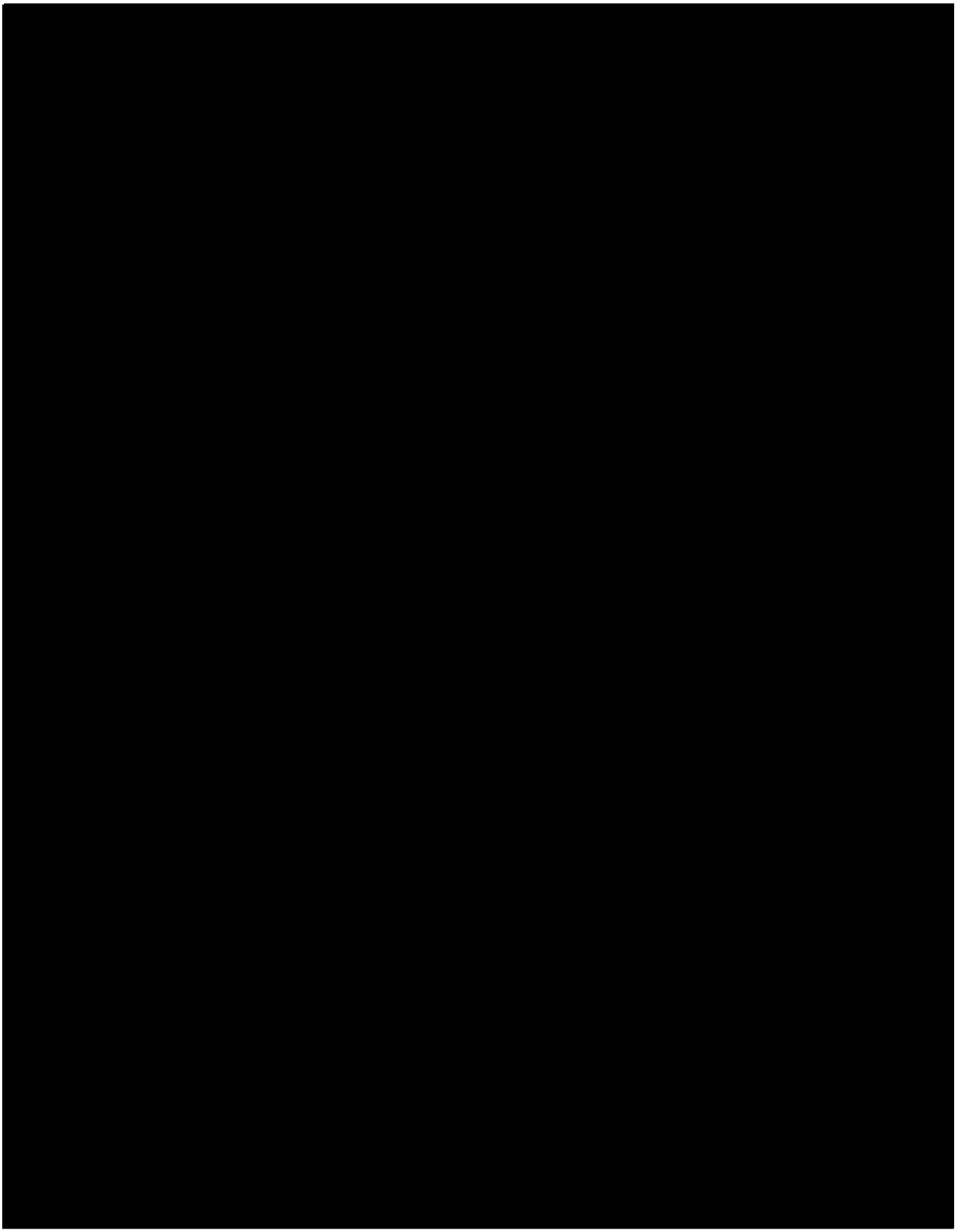


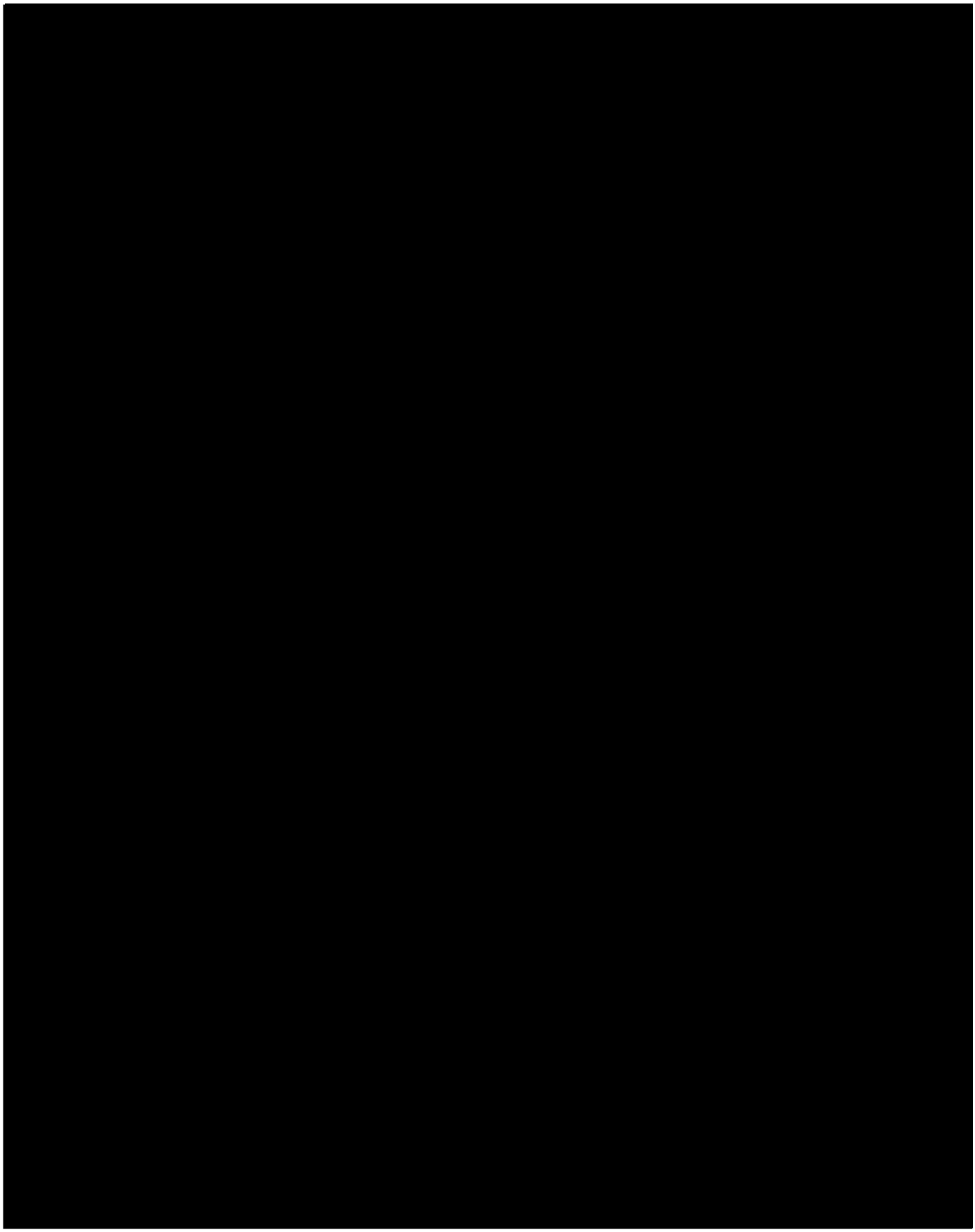


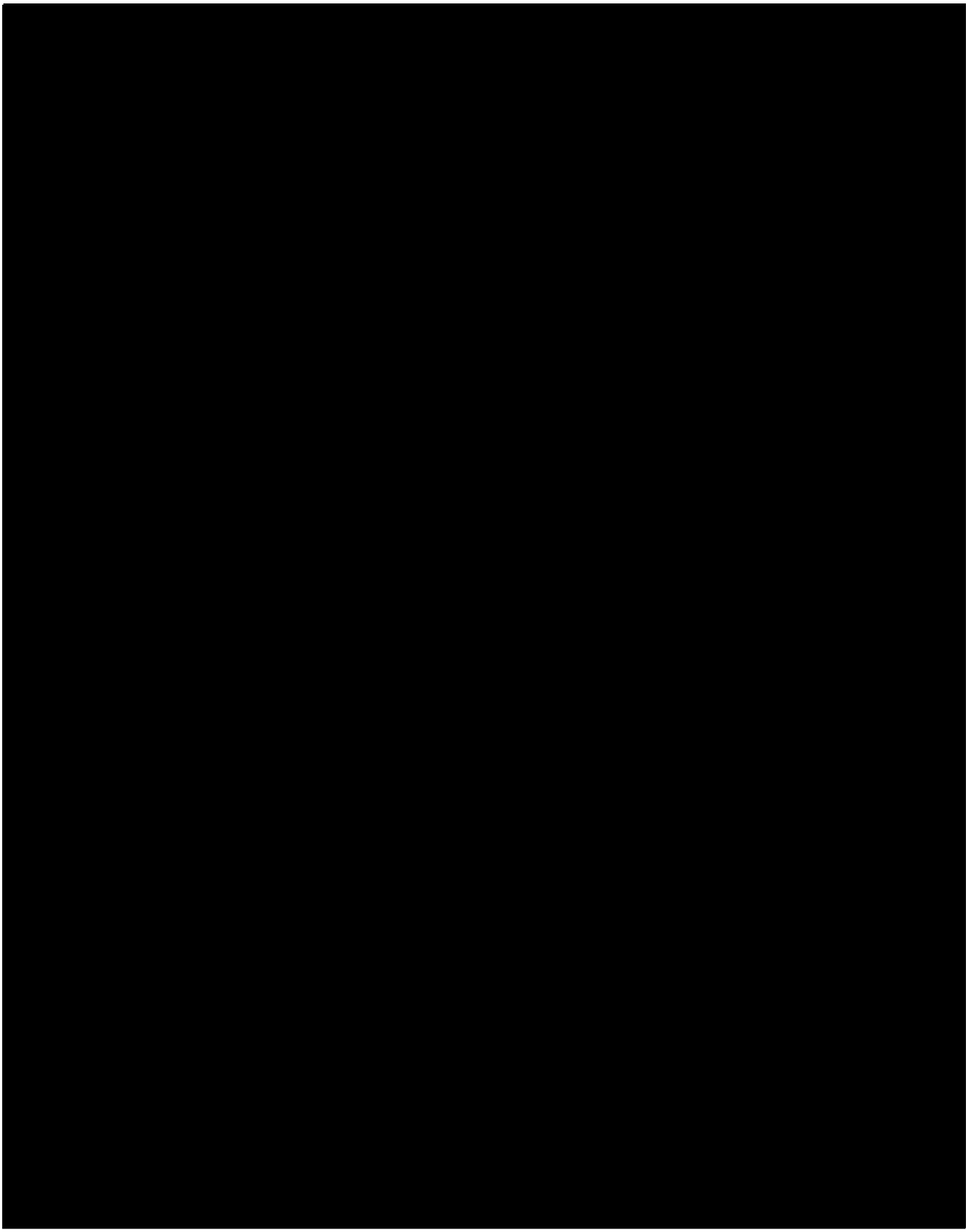


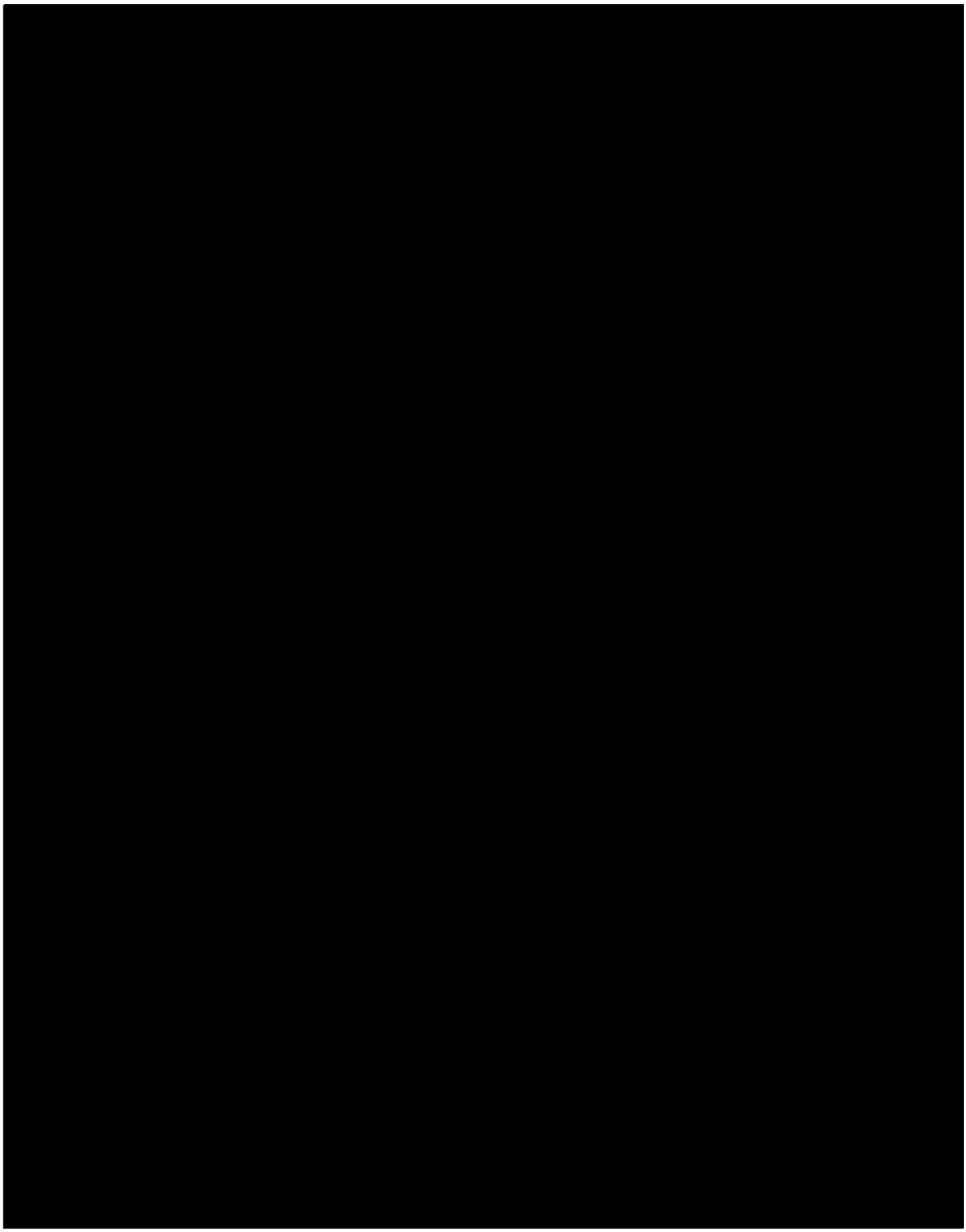


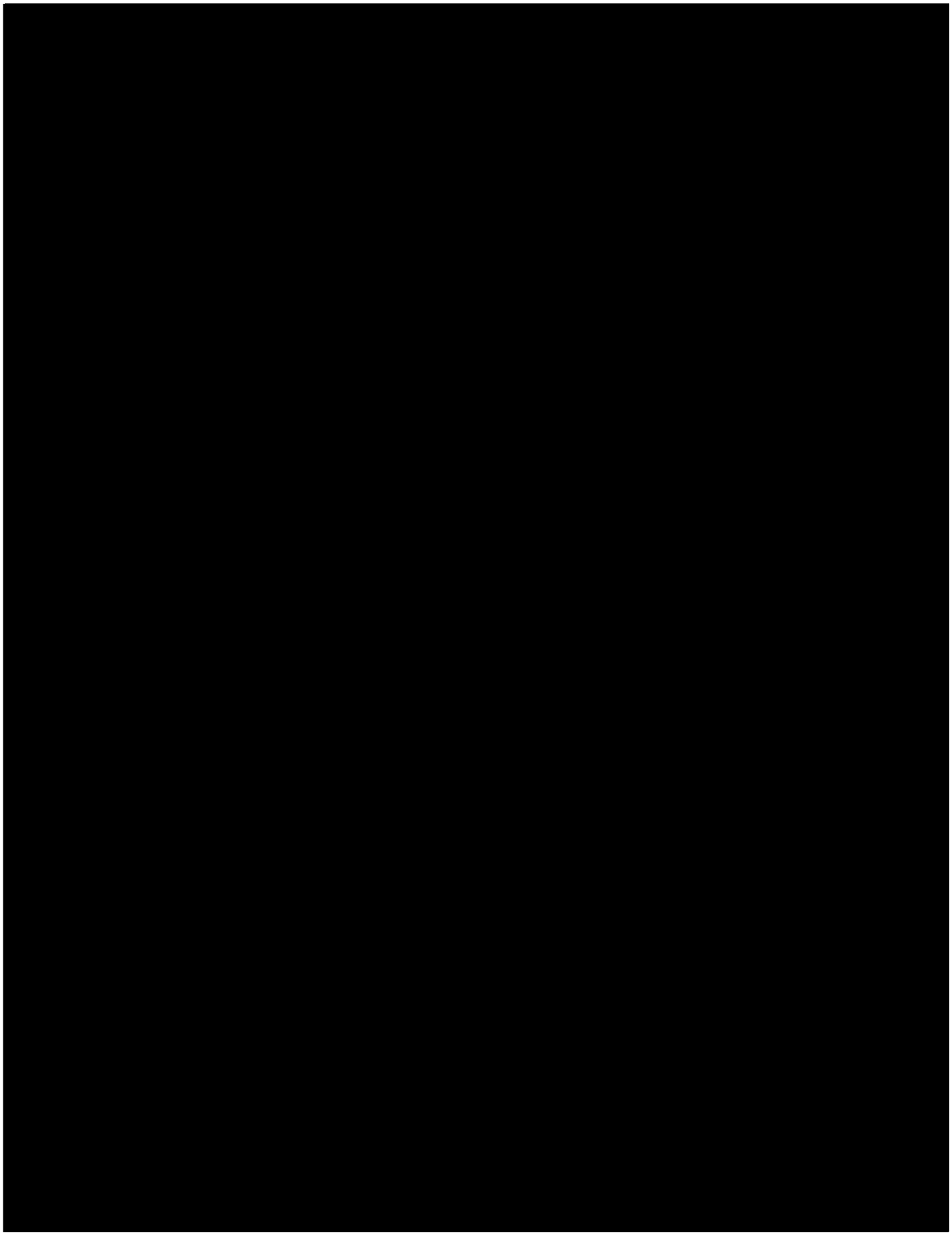


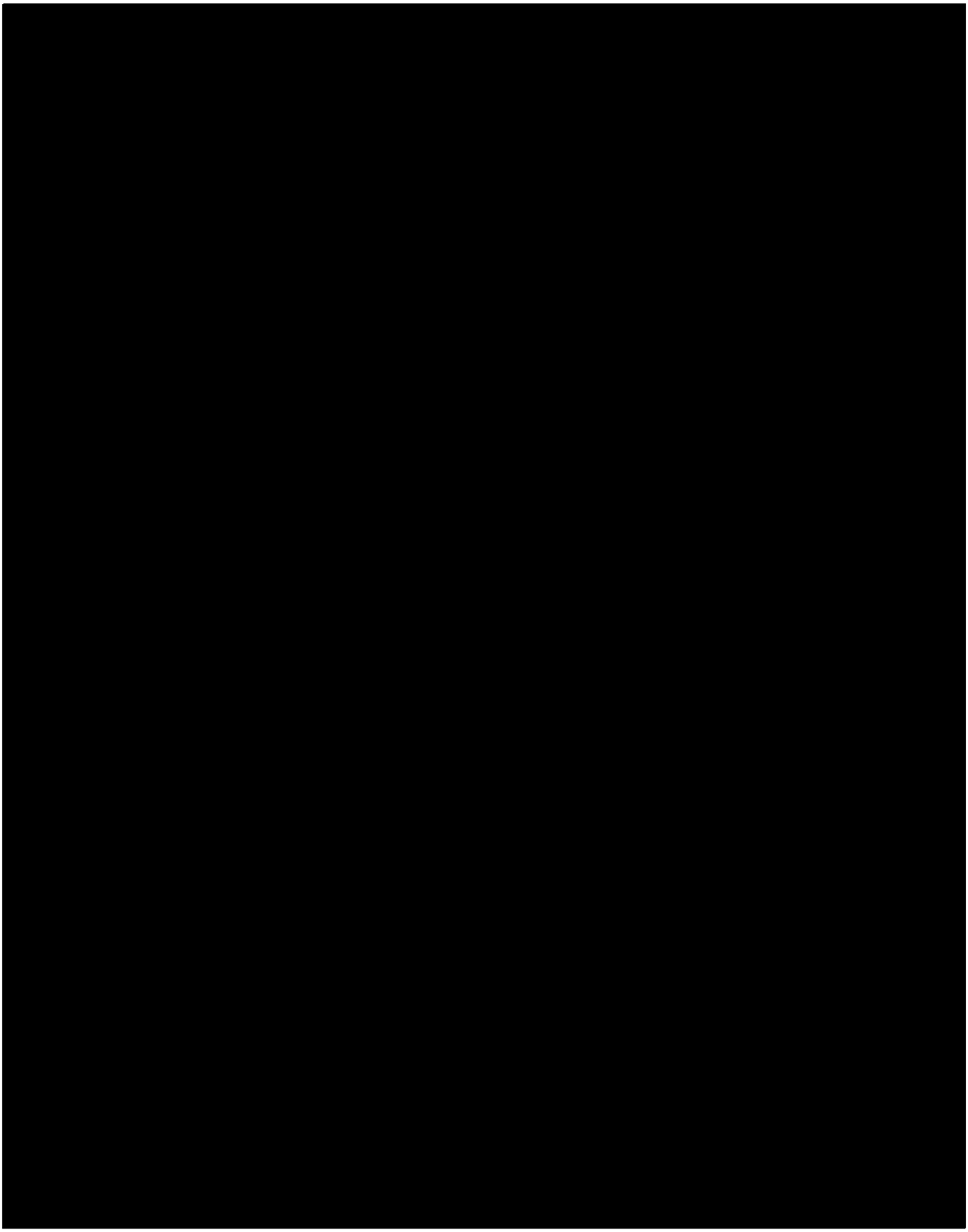


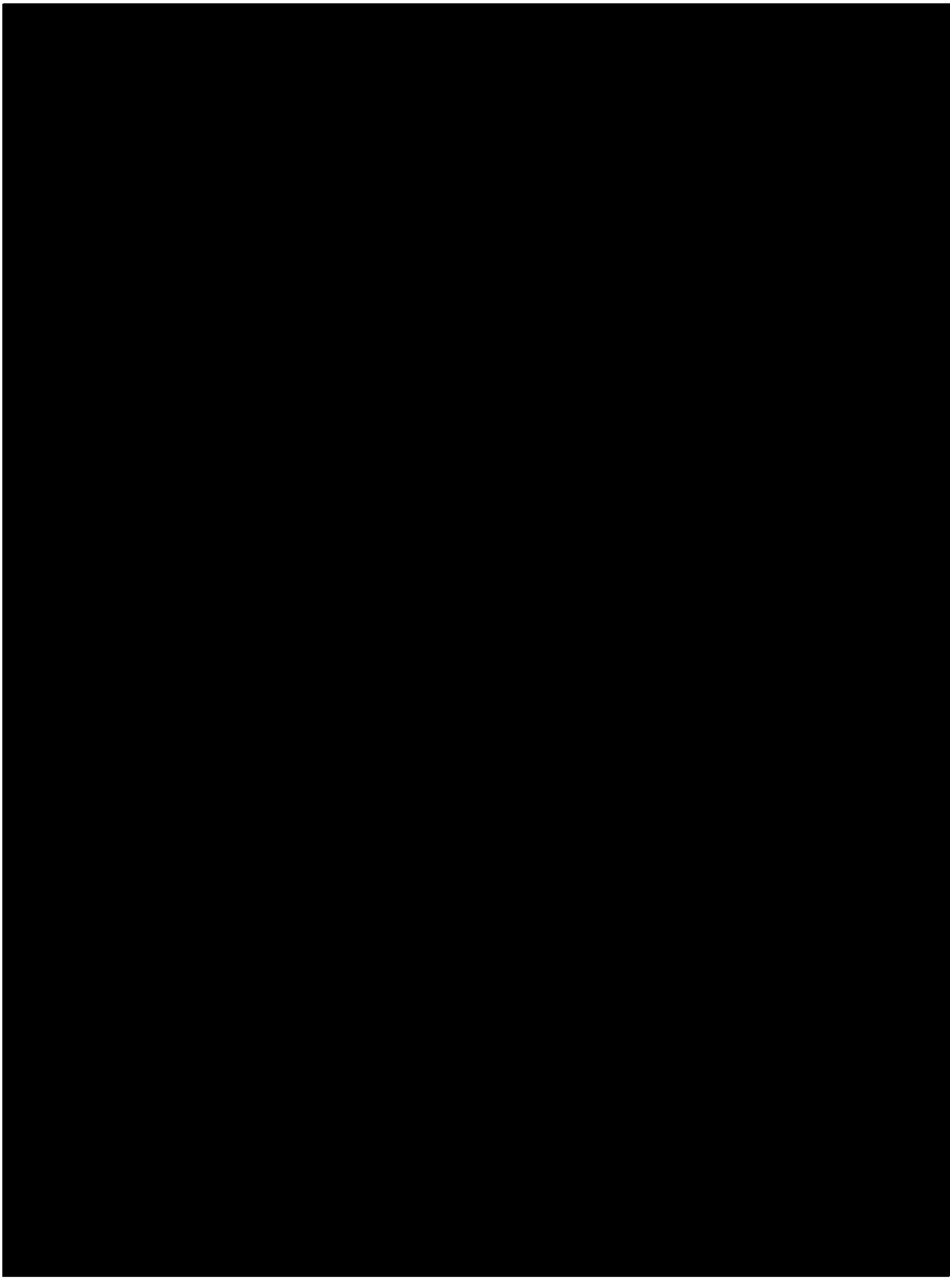


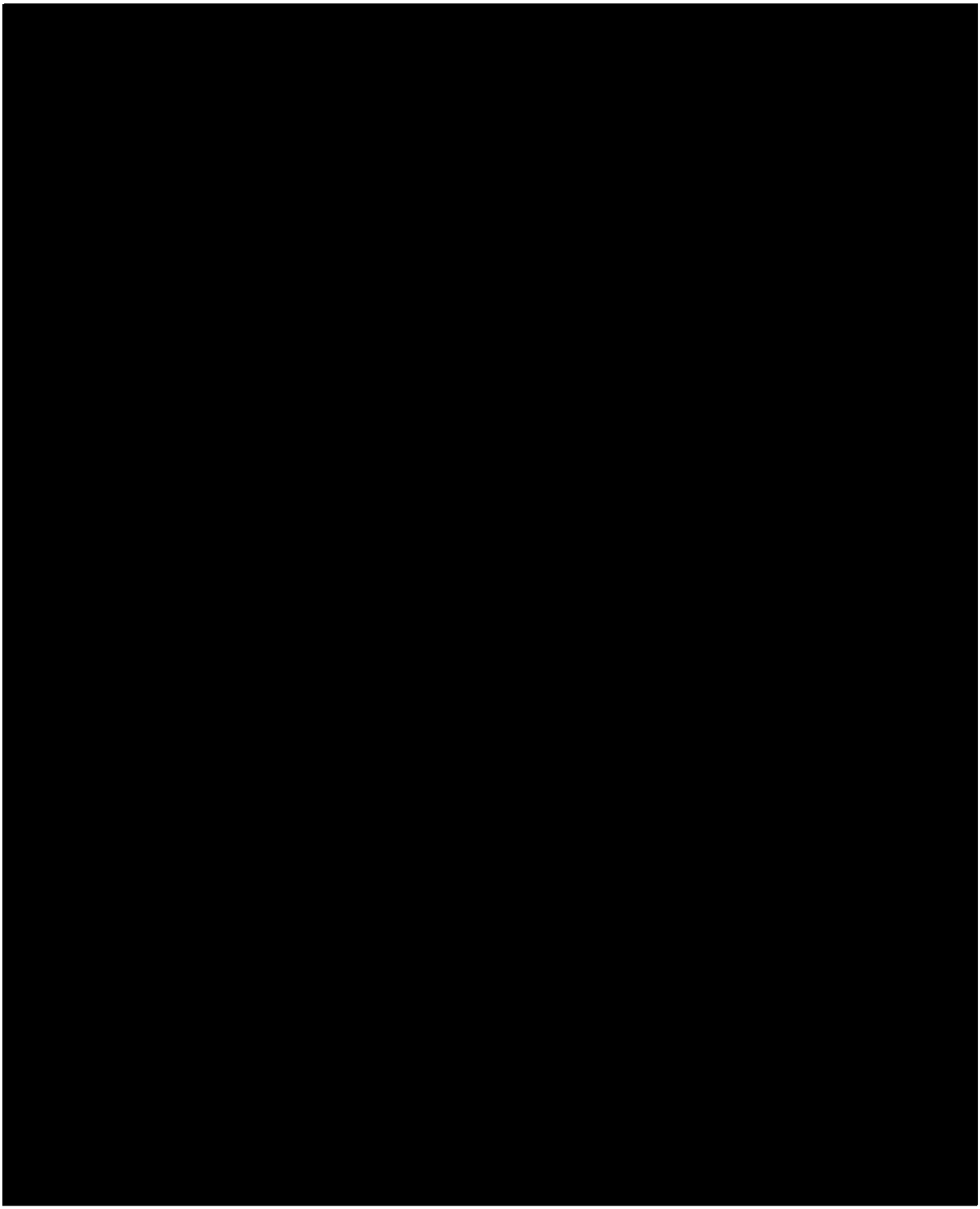


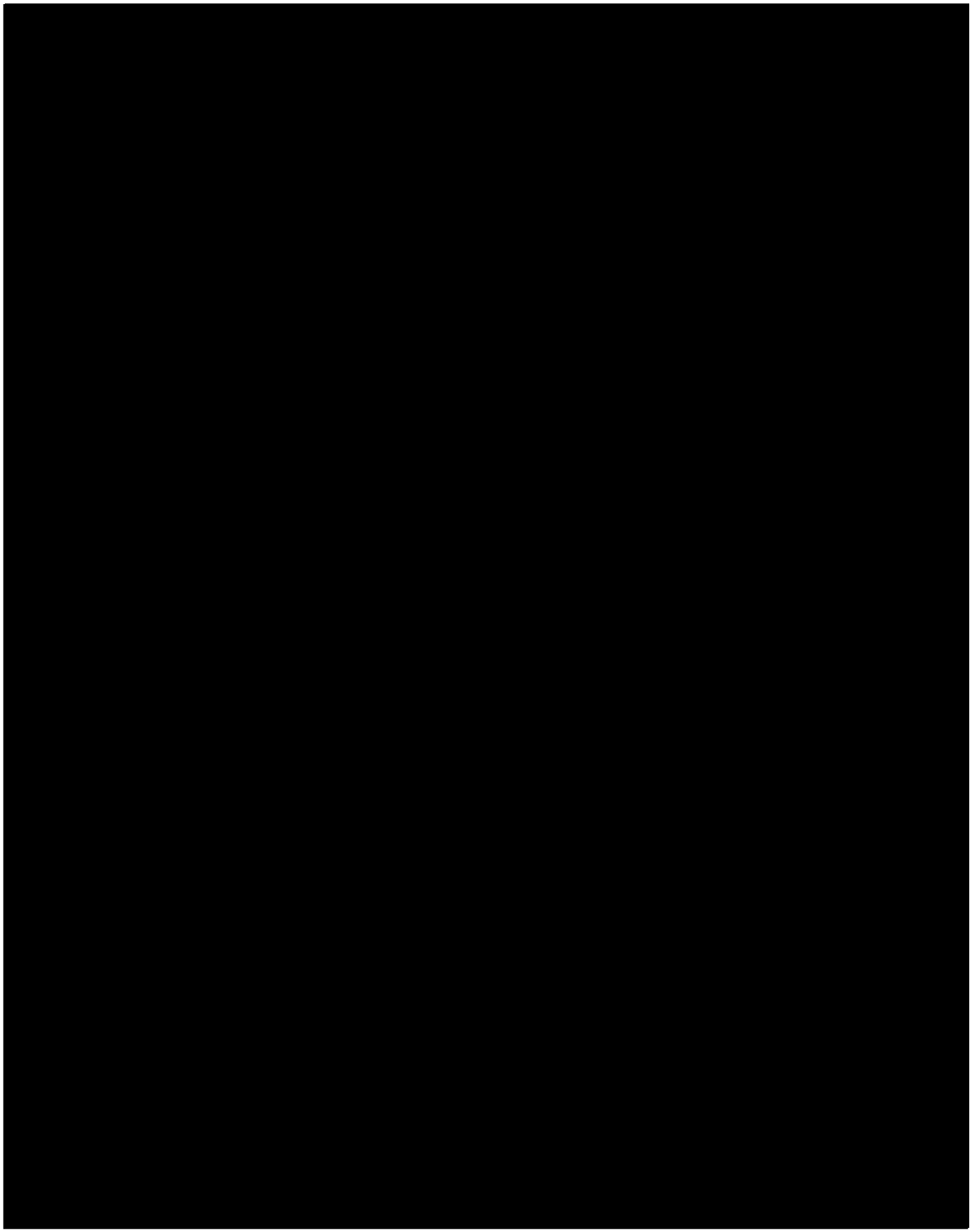


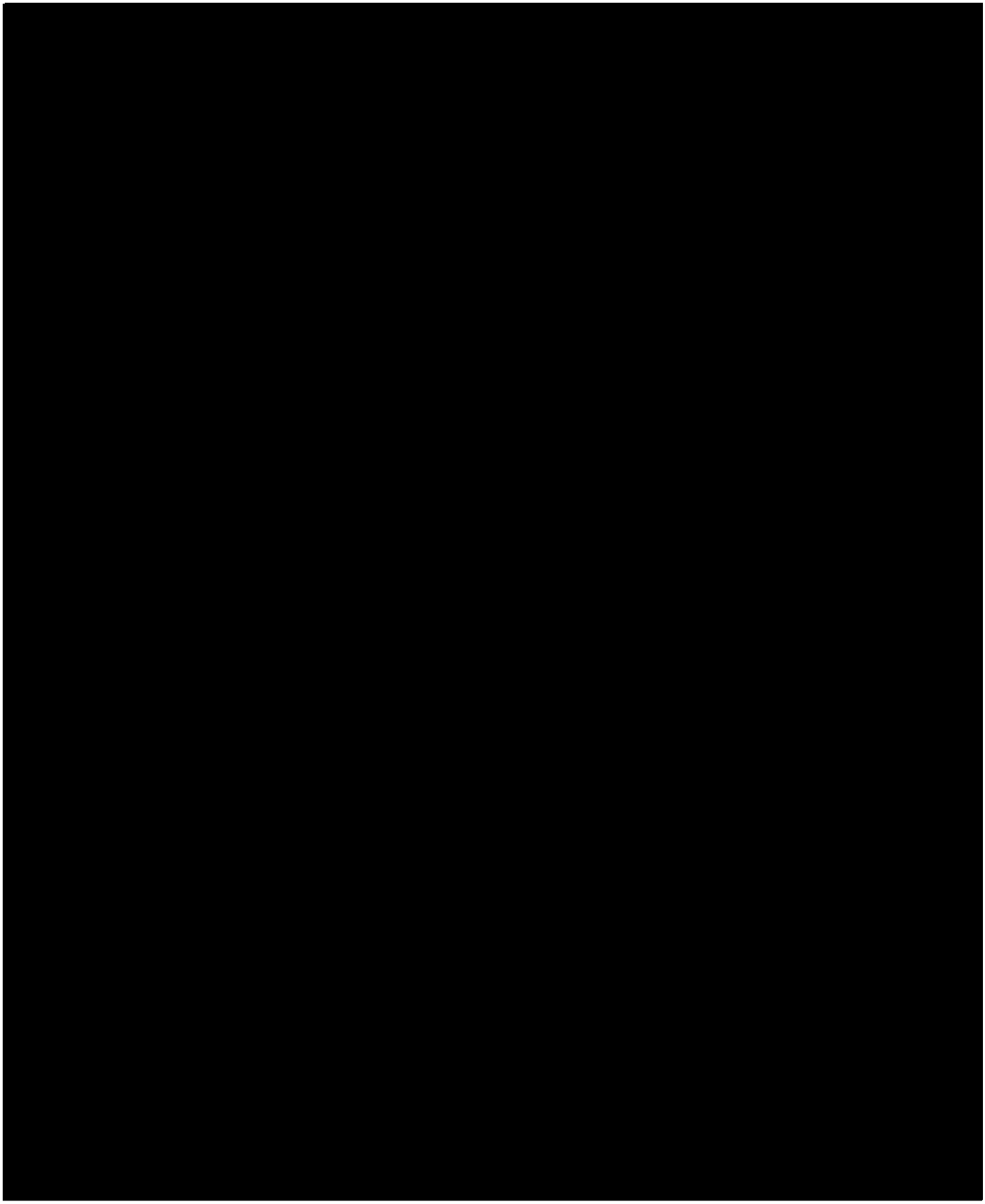


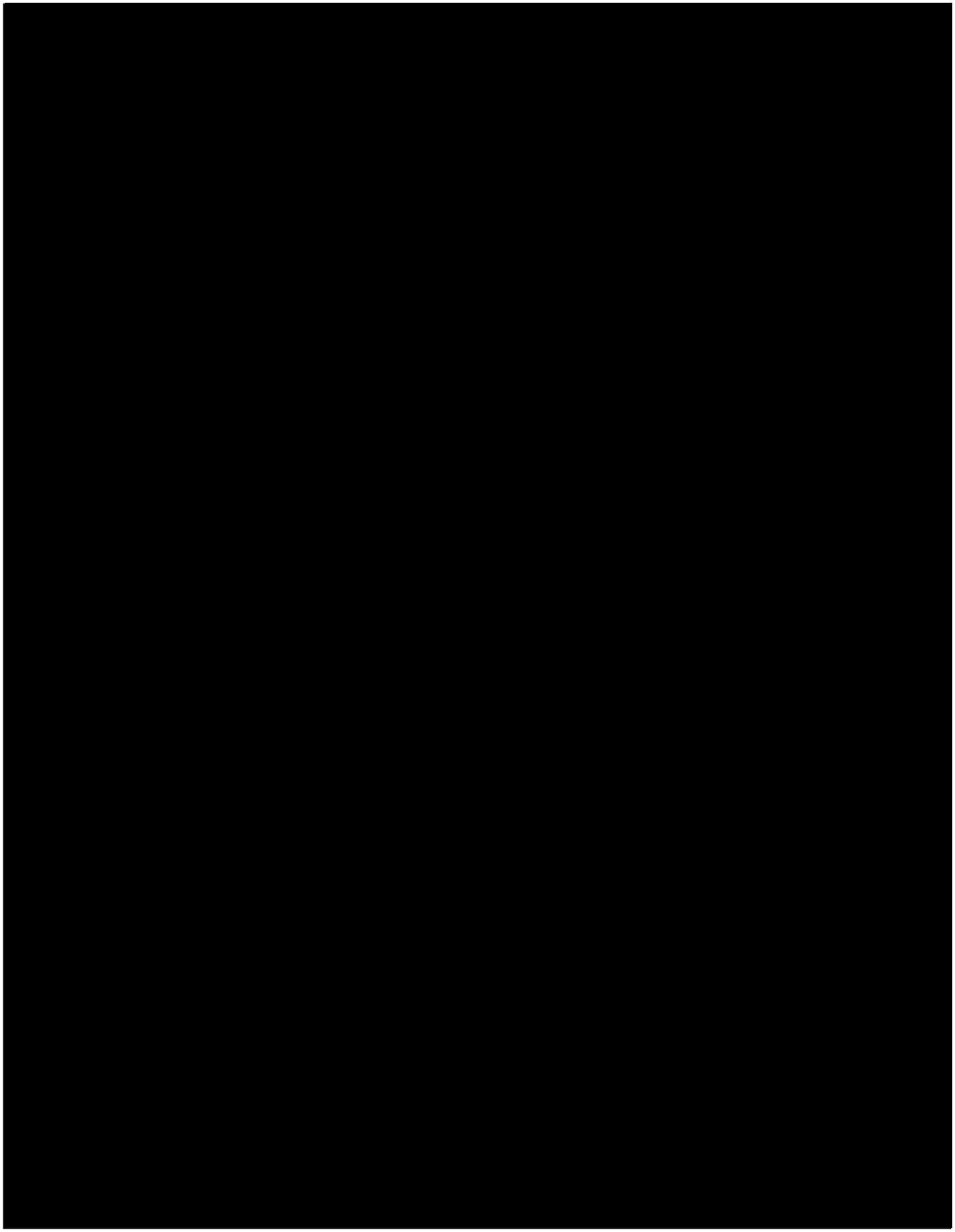


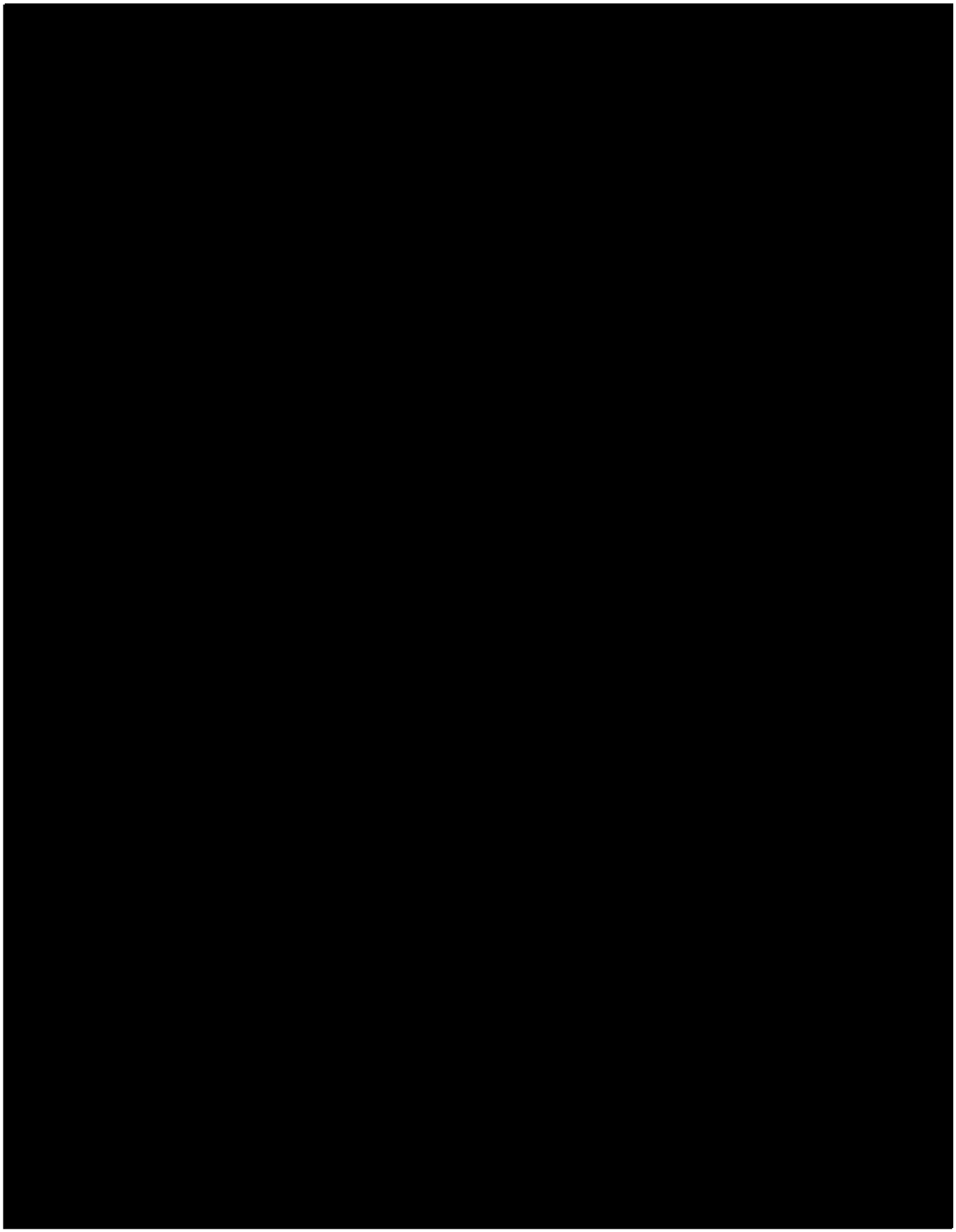


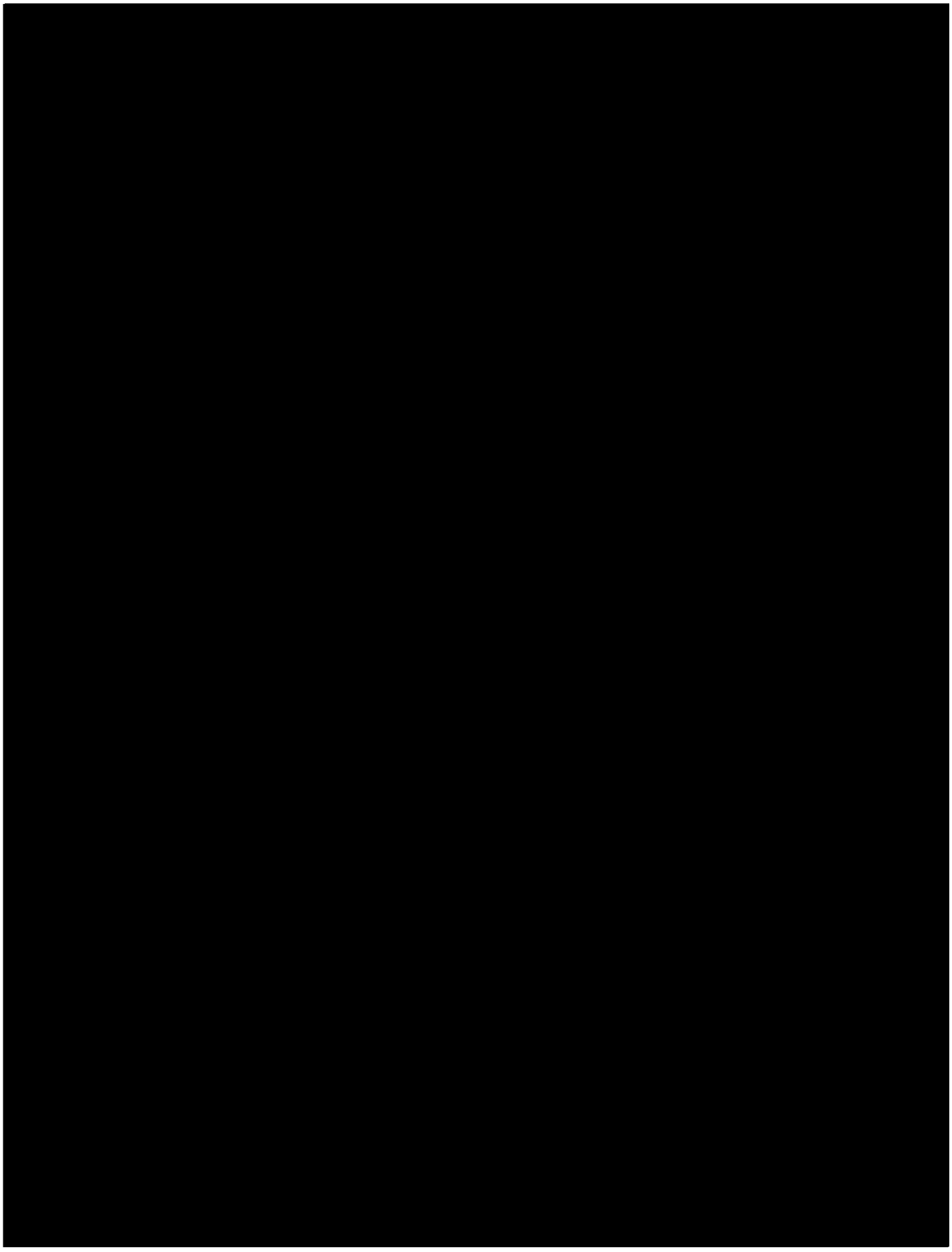


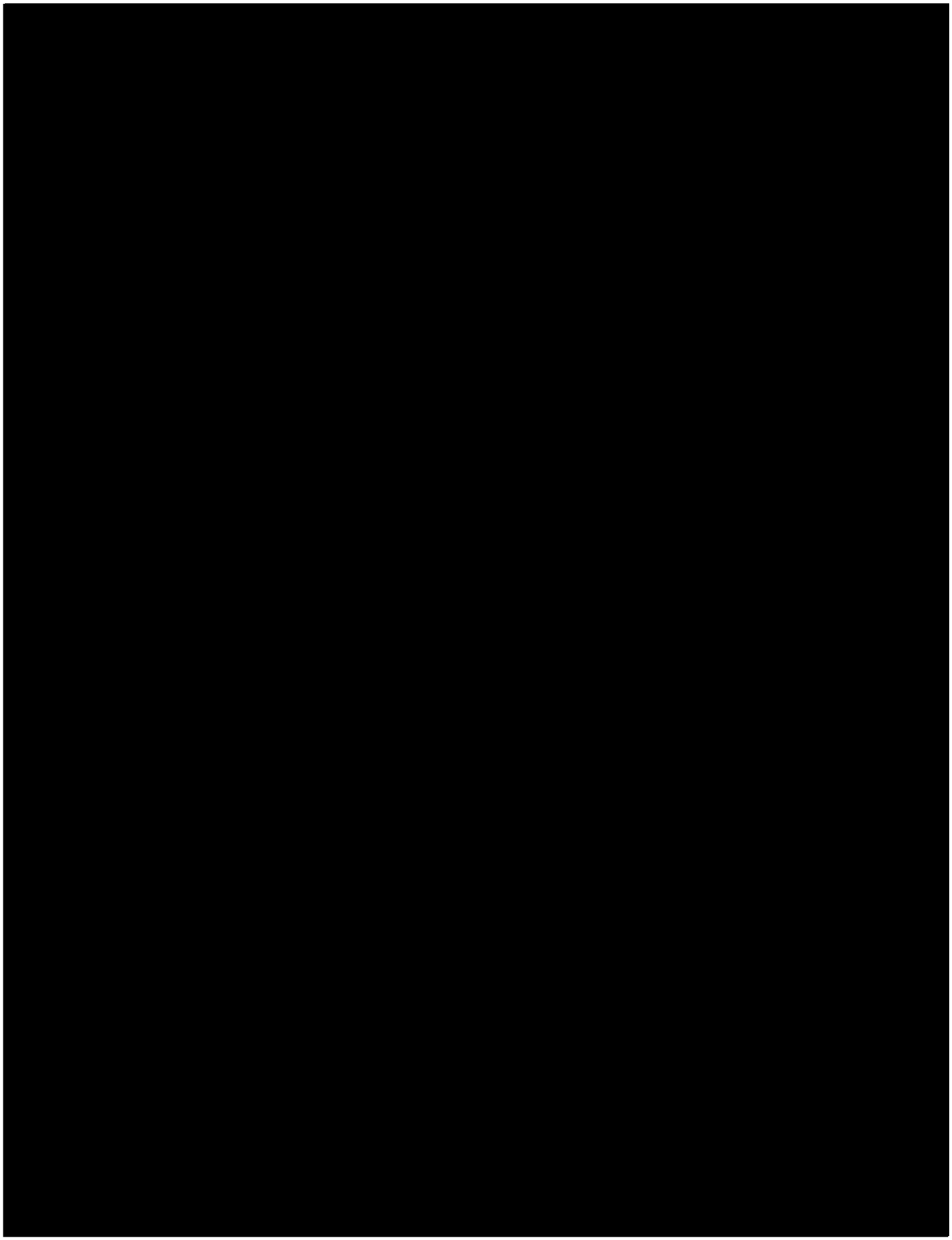


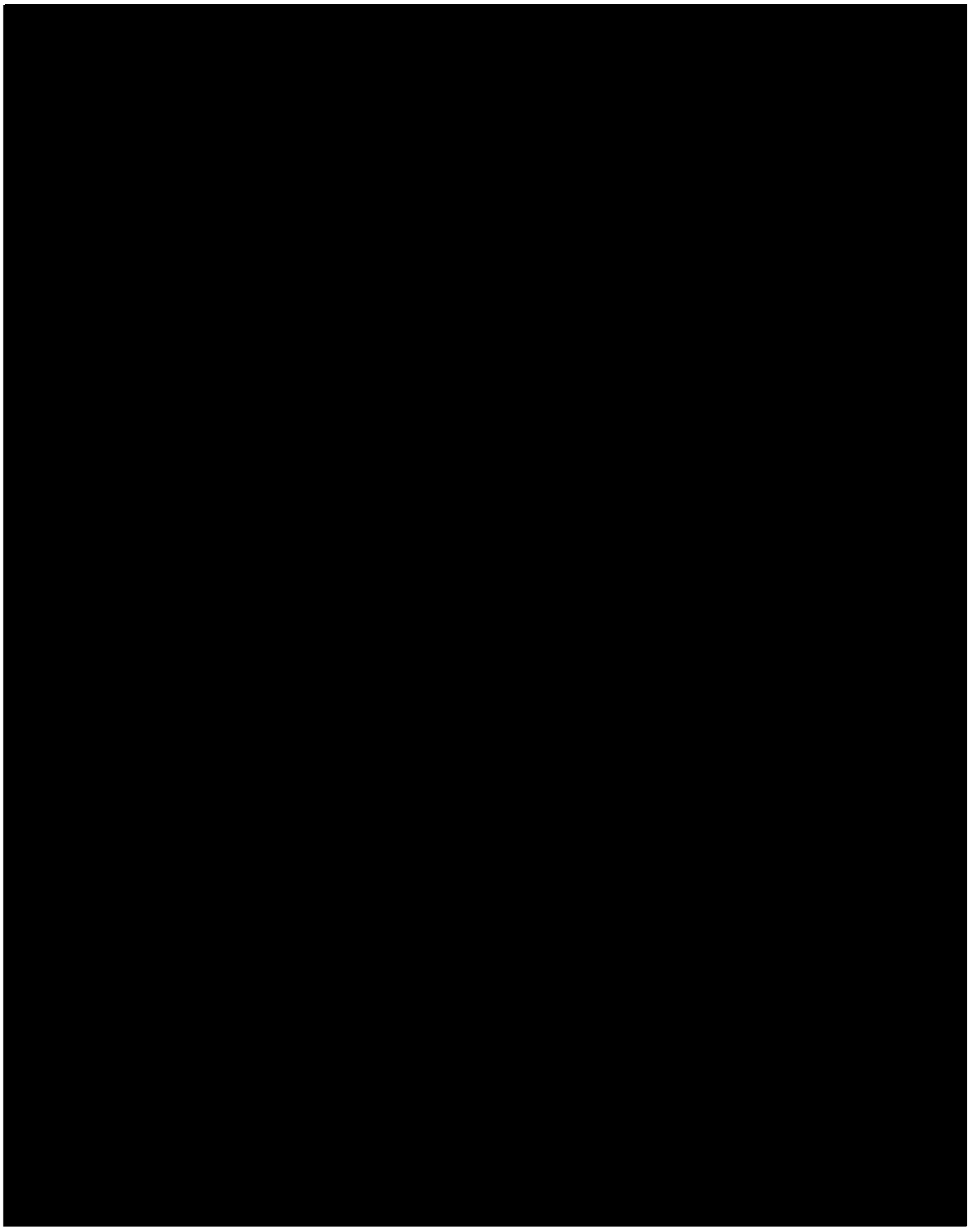


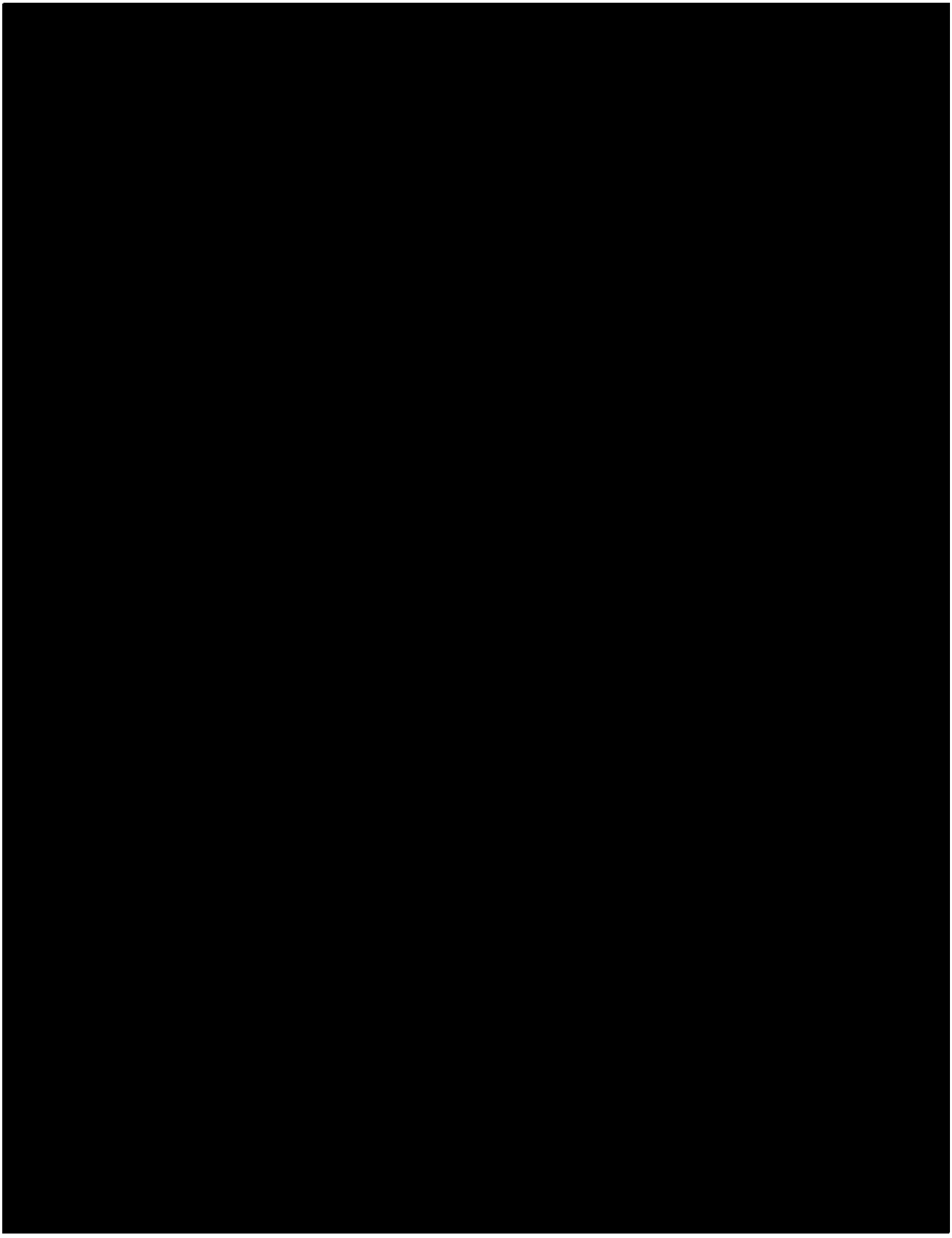








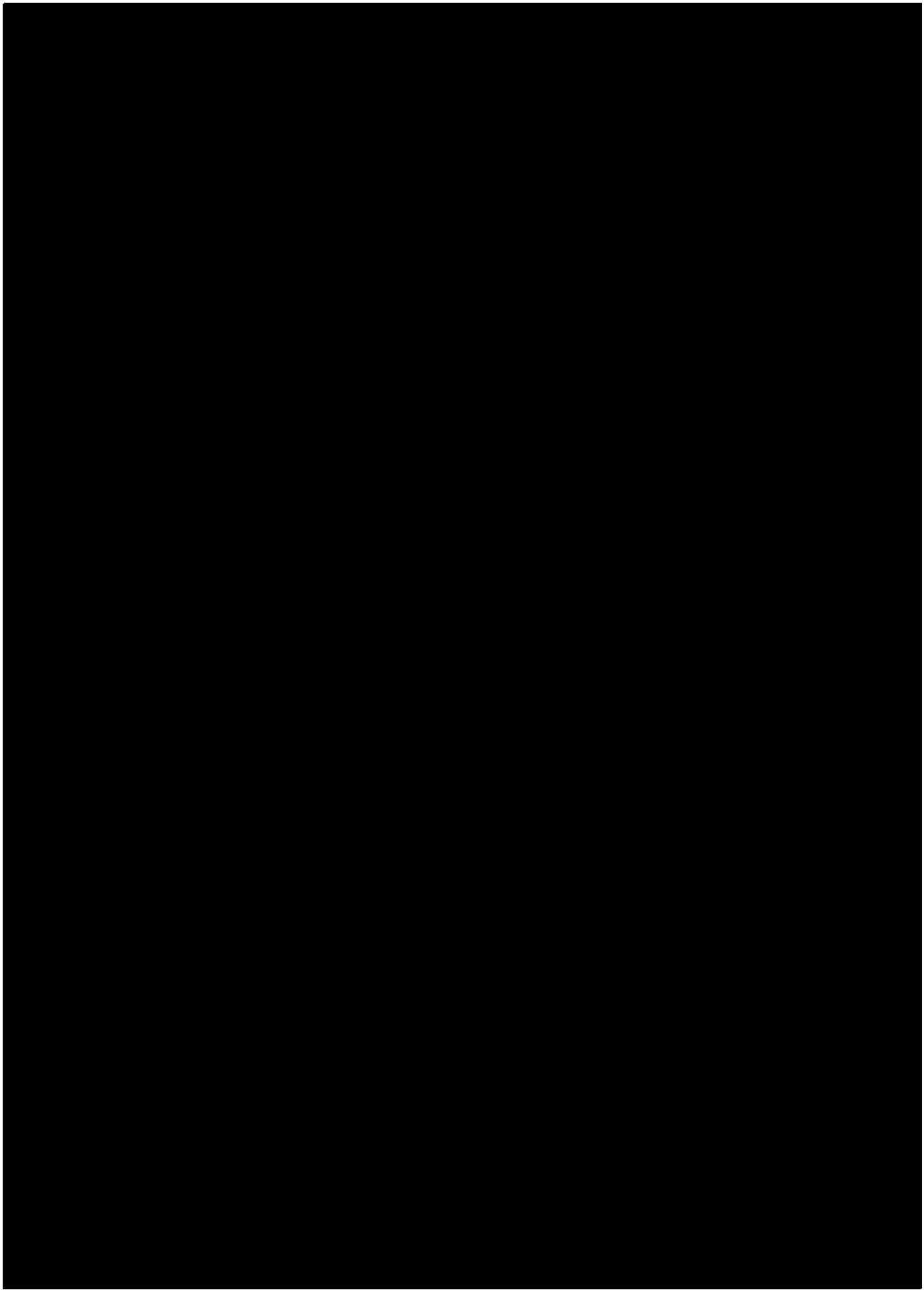




}

Counsel's Exhibit 07

{

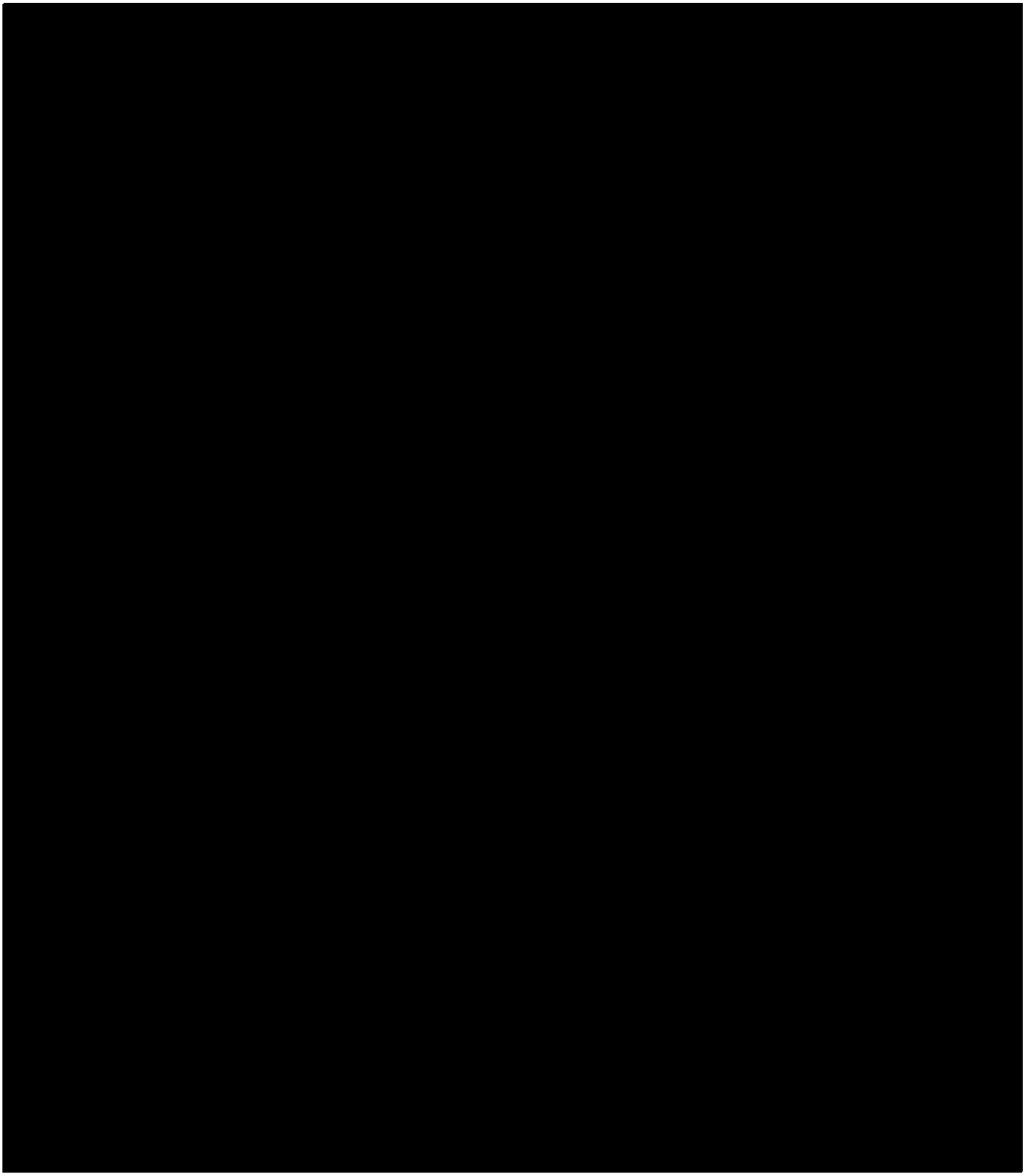


[redacted]

}

Counsel's Exhibit 08

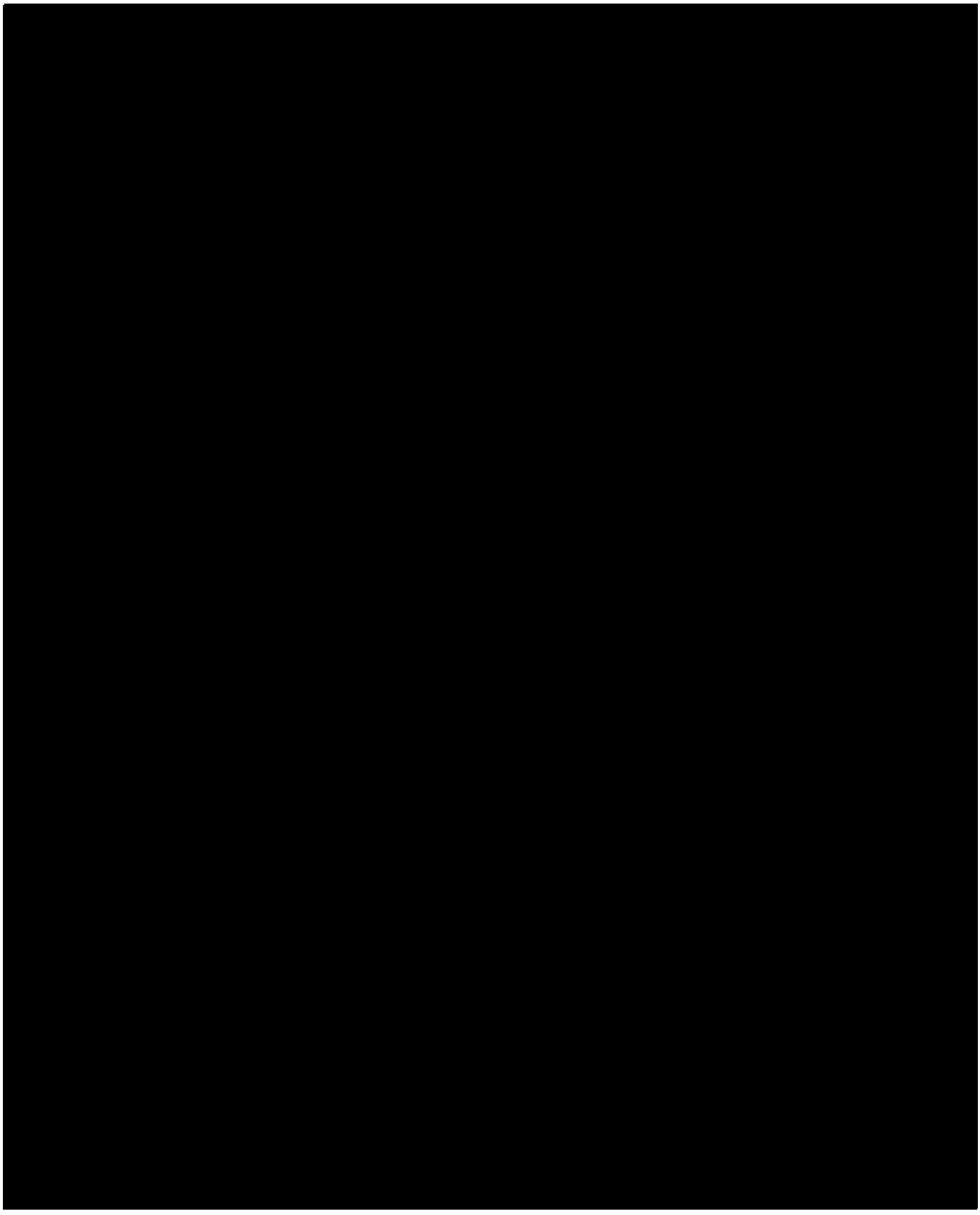
{

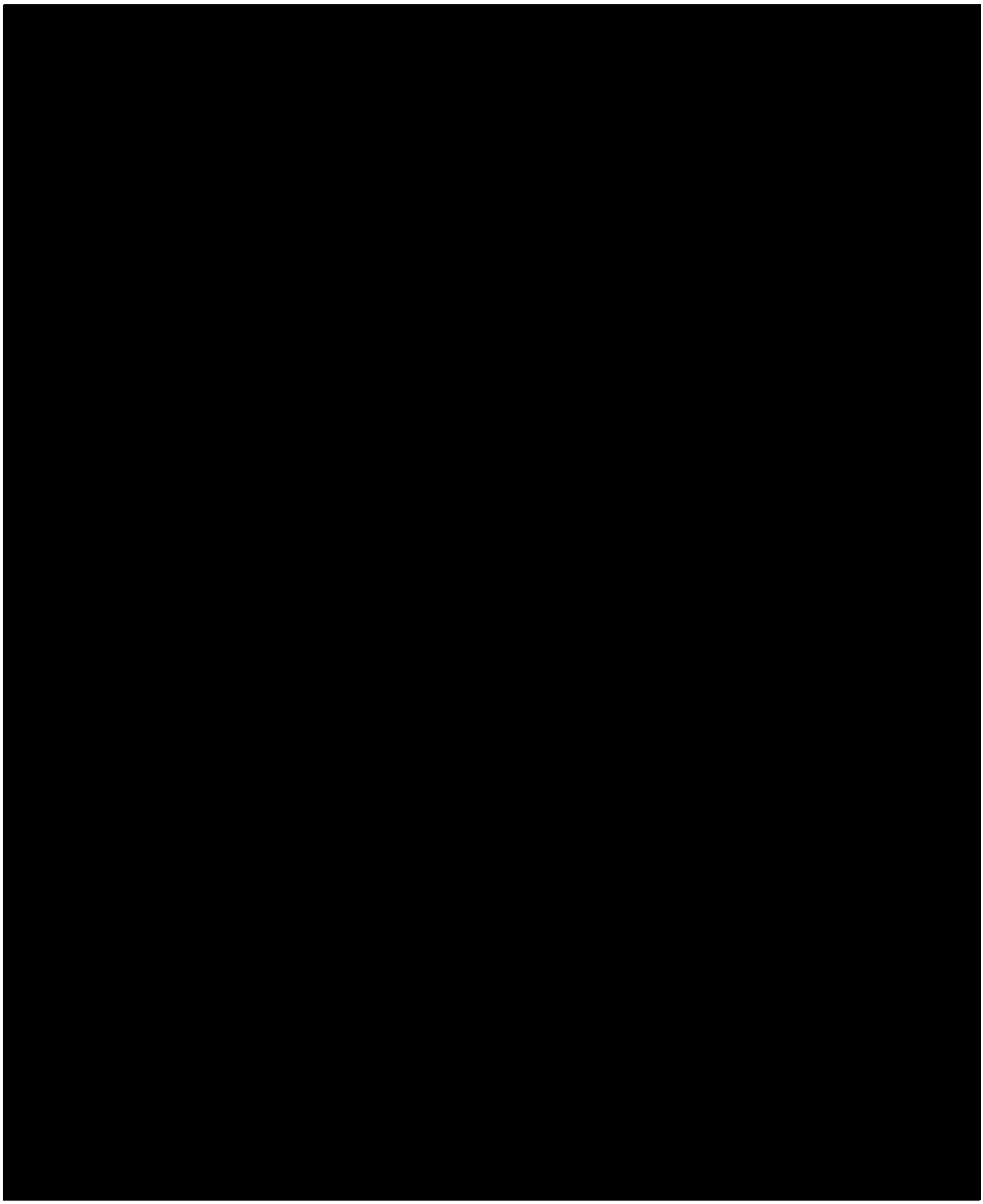


}

Counsel's Exhibit 09

{







}

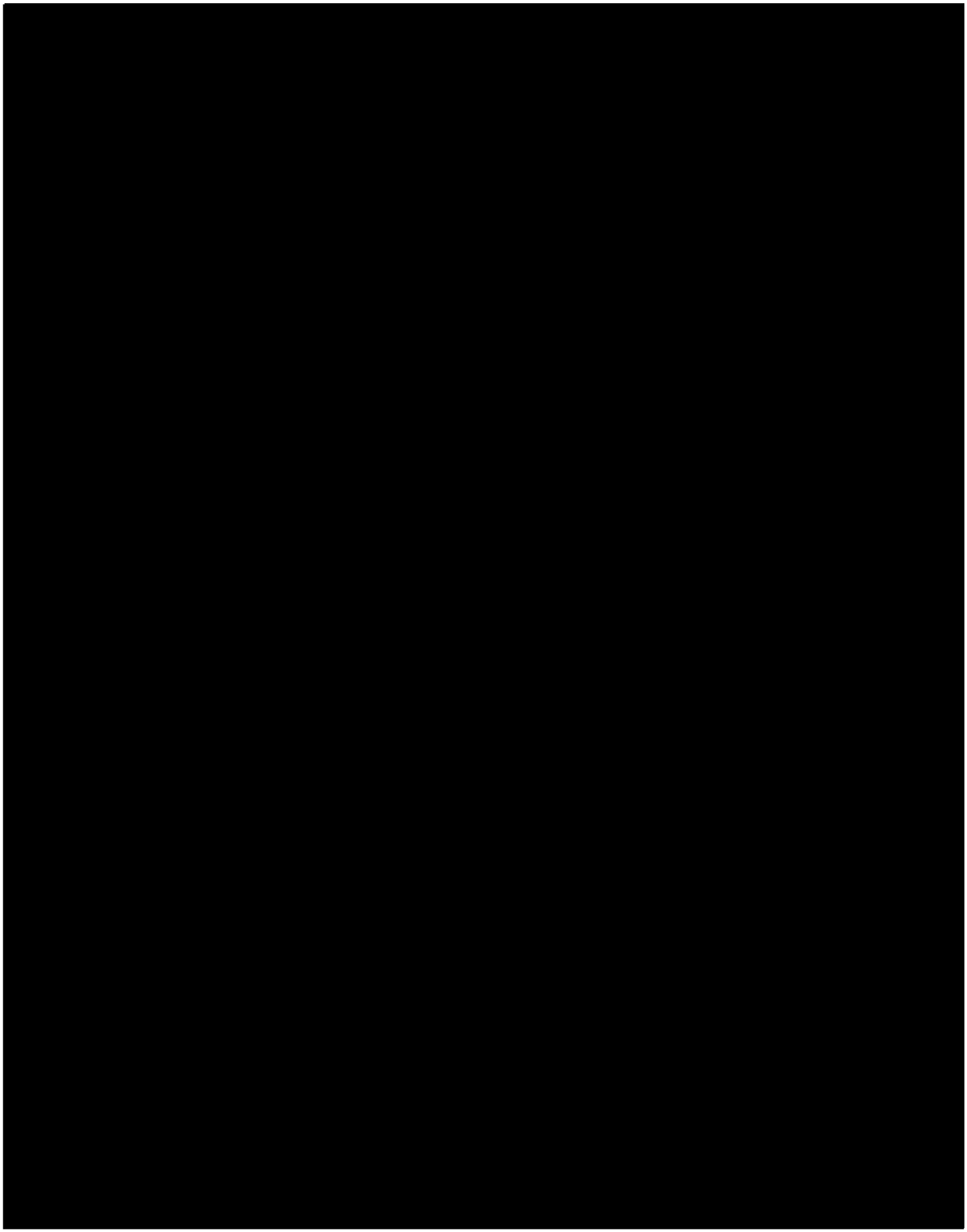
Counsel's Exhibit 10

{{ [redacted]

[redacted]

Counsel's Exhibit 11

{{

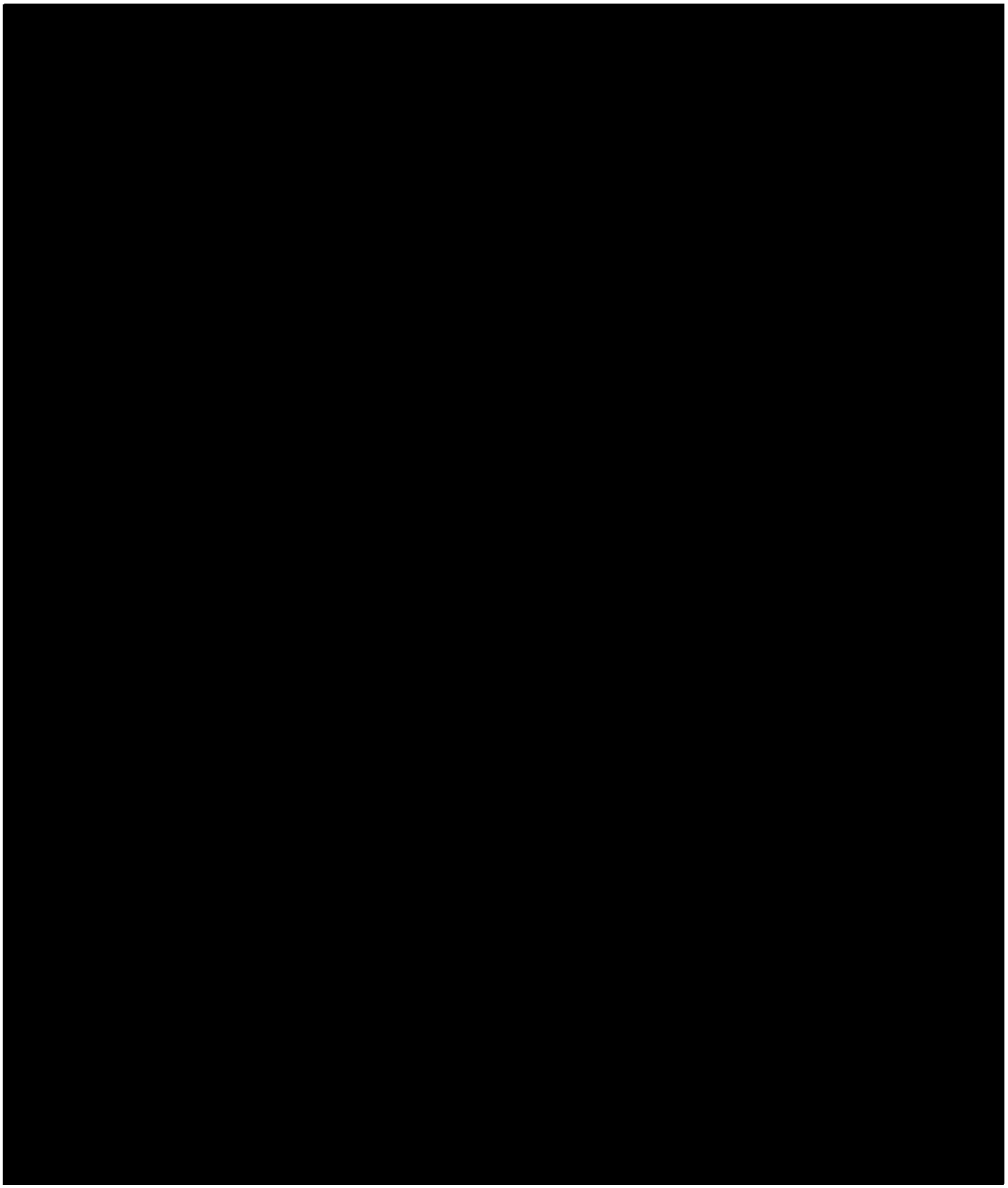


[redacted]

}}

Counsel's Exhibit 12

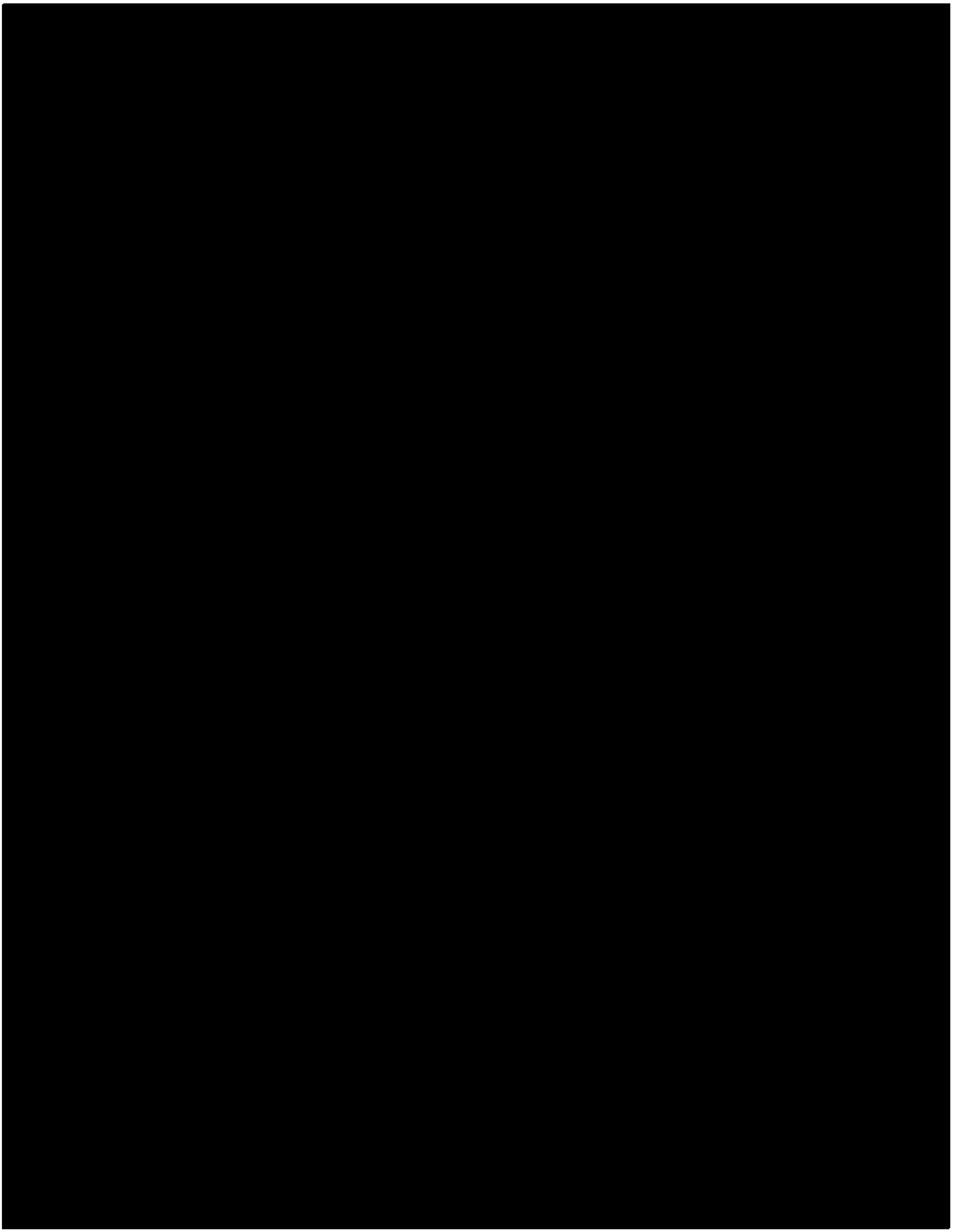
{



}

Counsel's Exhibit 13

{{

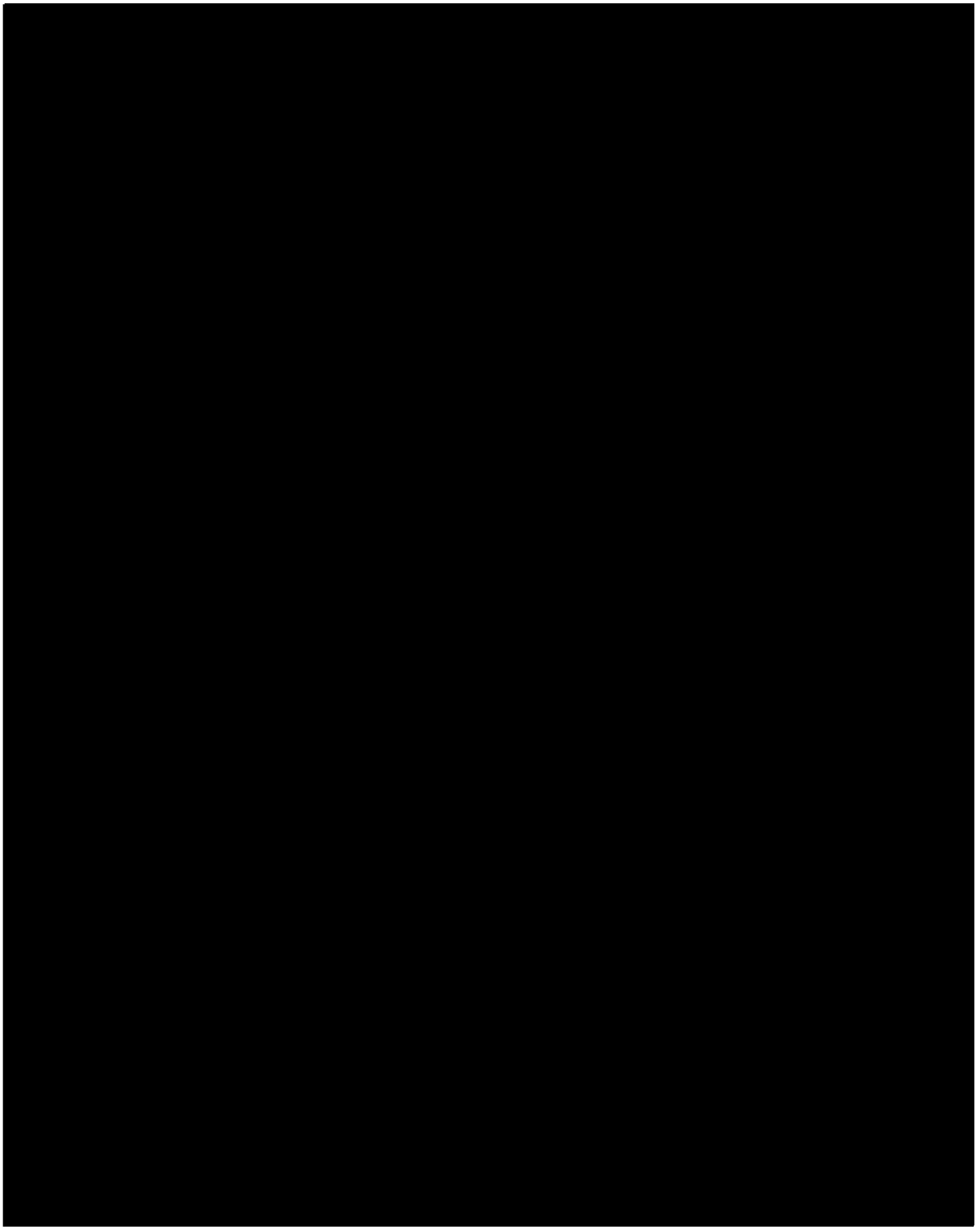




}}

Counsel's Exhibit 14

{{

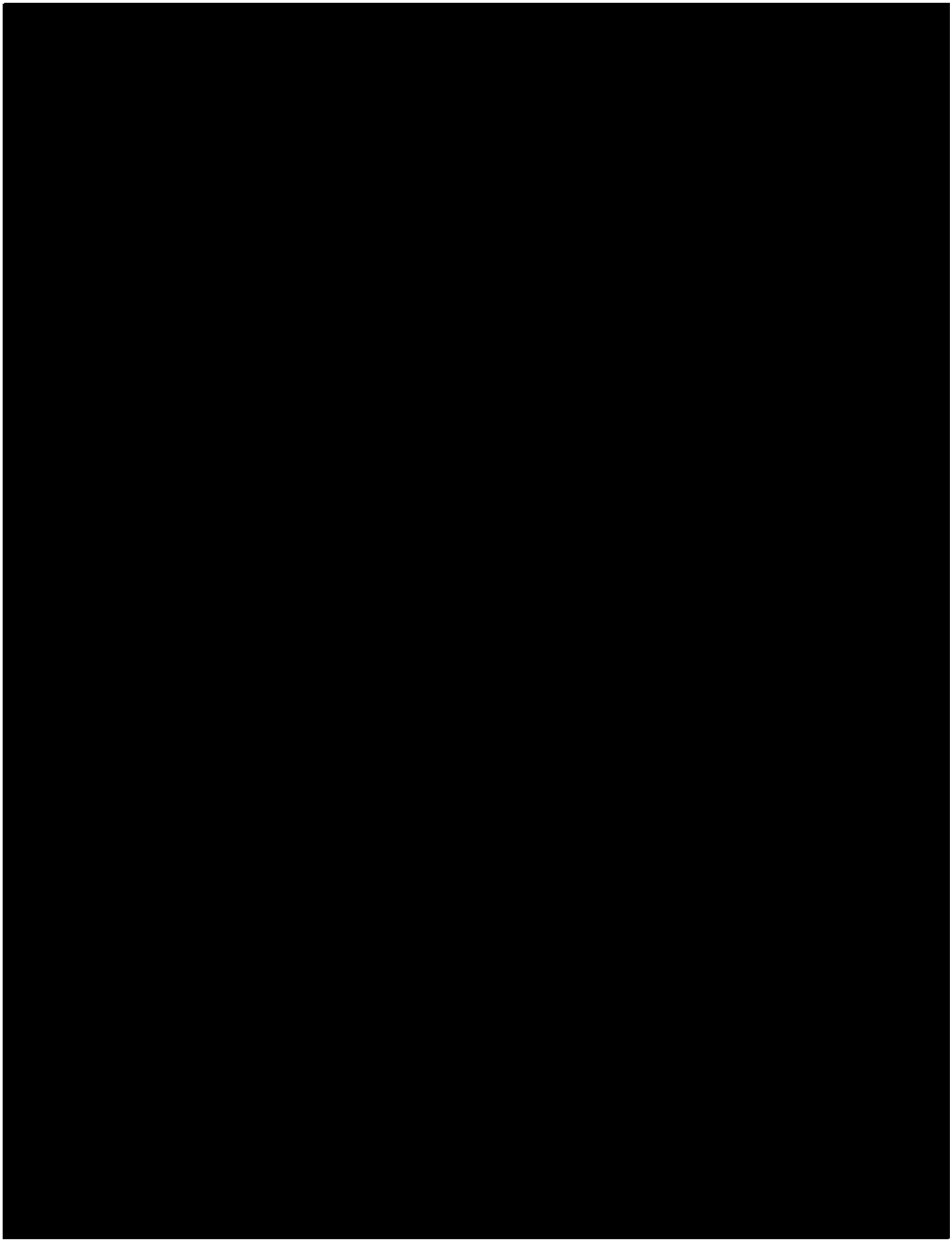


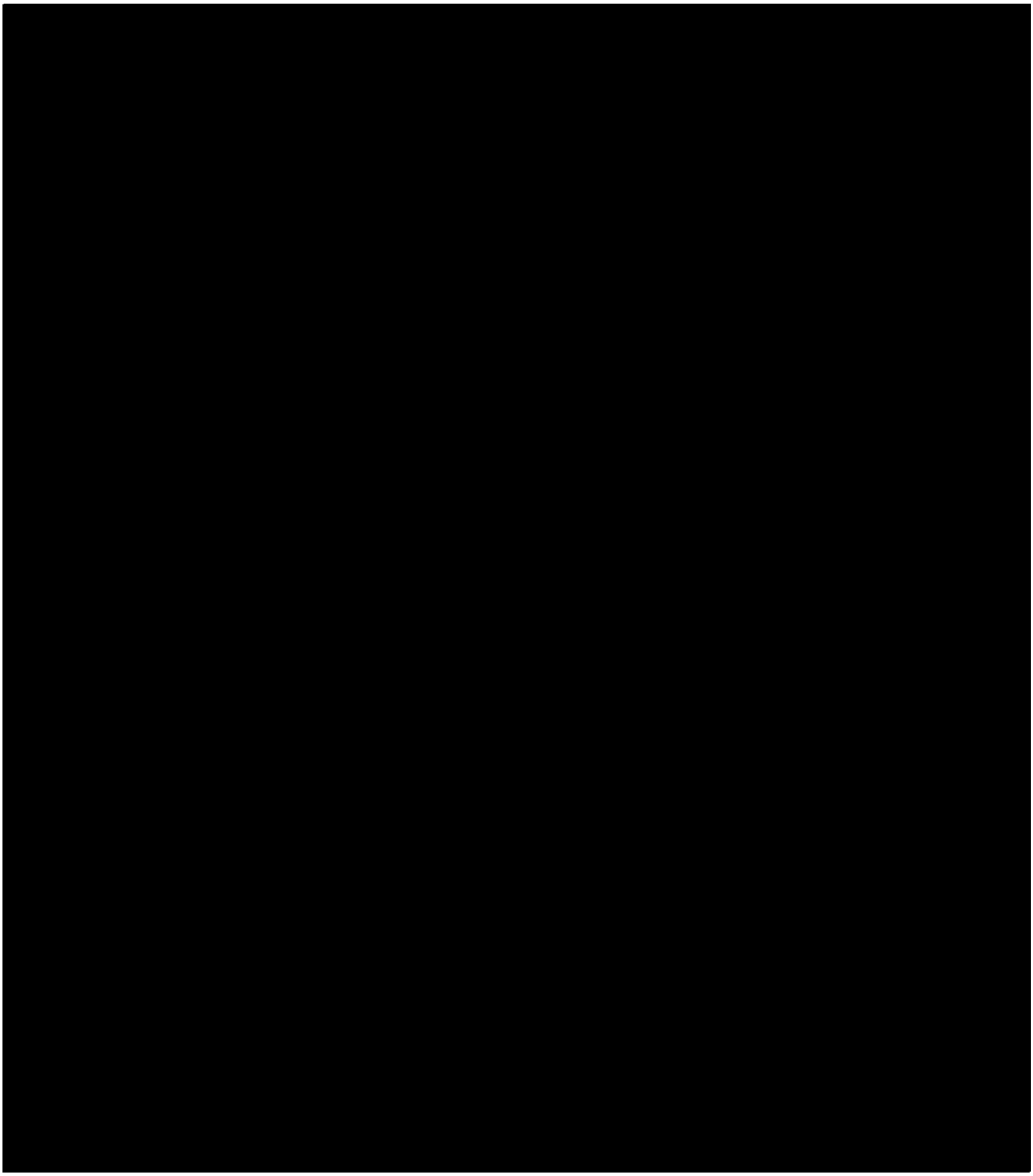
[redacted]

}}

Counsel's Exhibit 15

{





}

Counsel's Exhibit 16

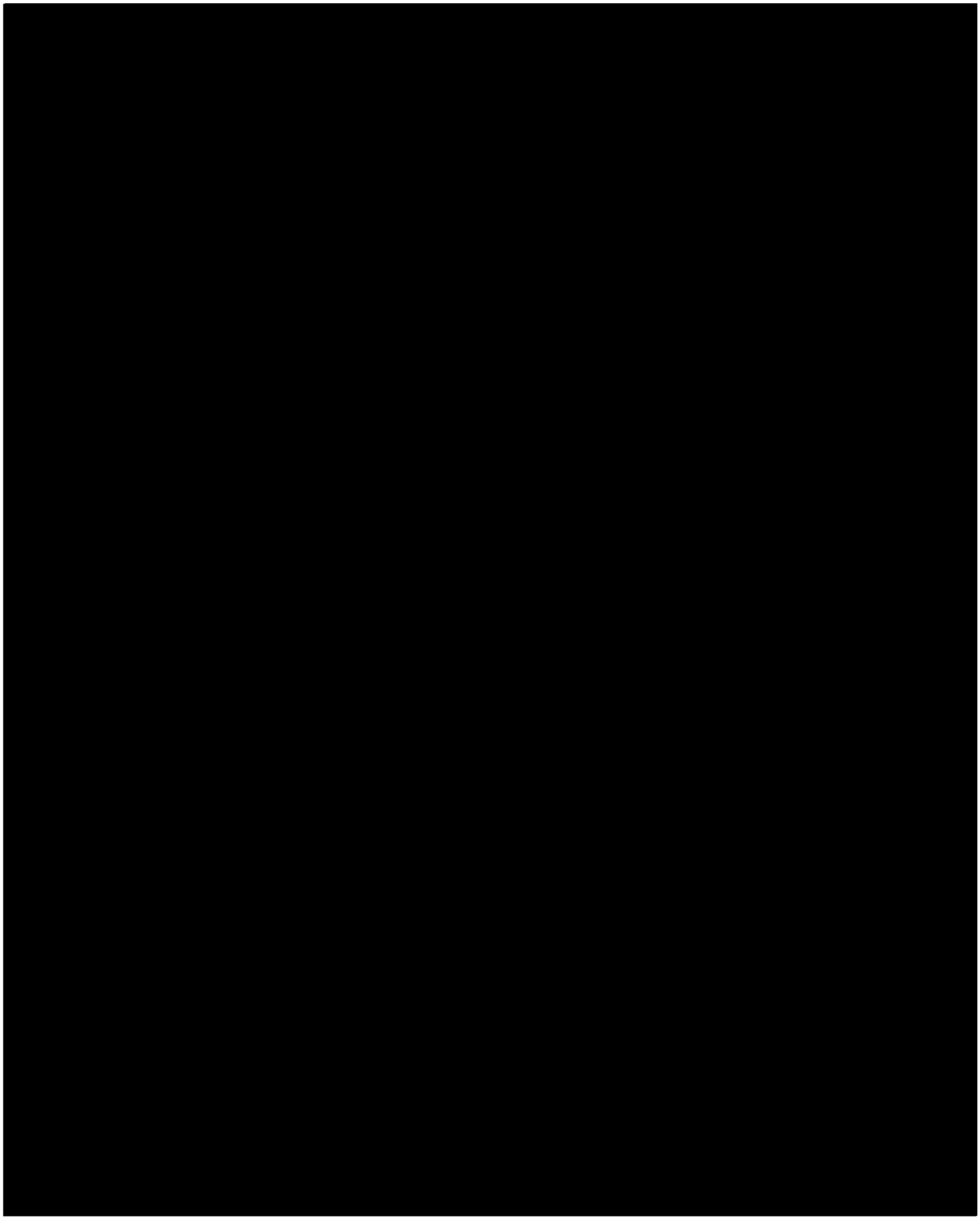
{



}

Counsel's Exhibit 17

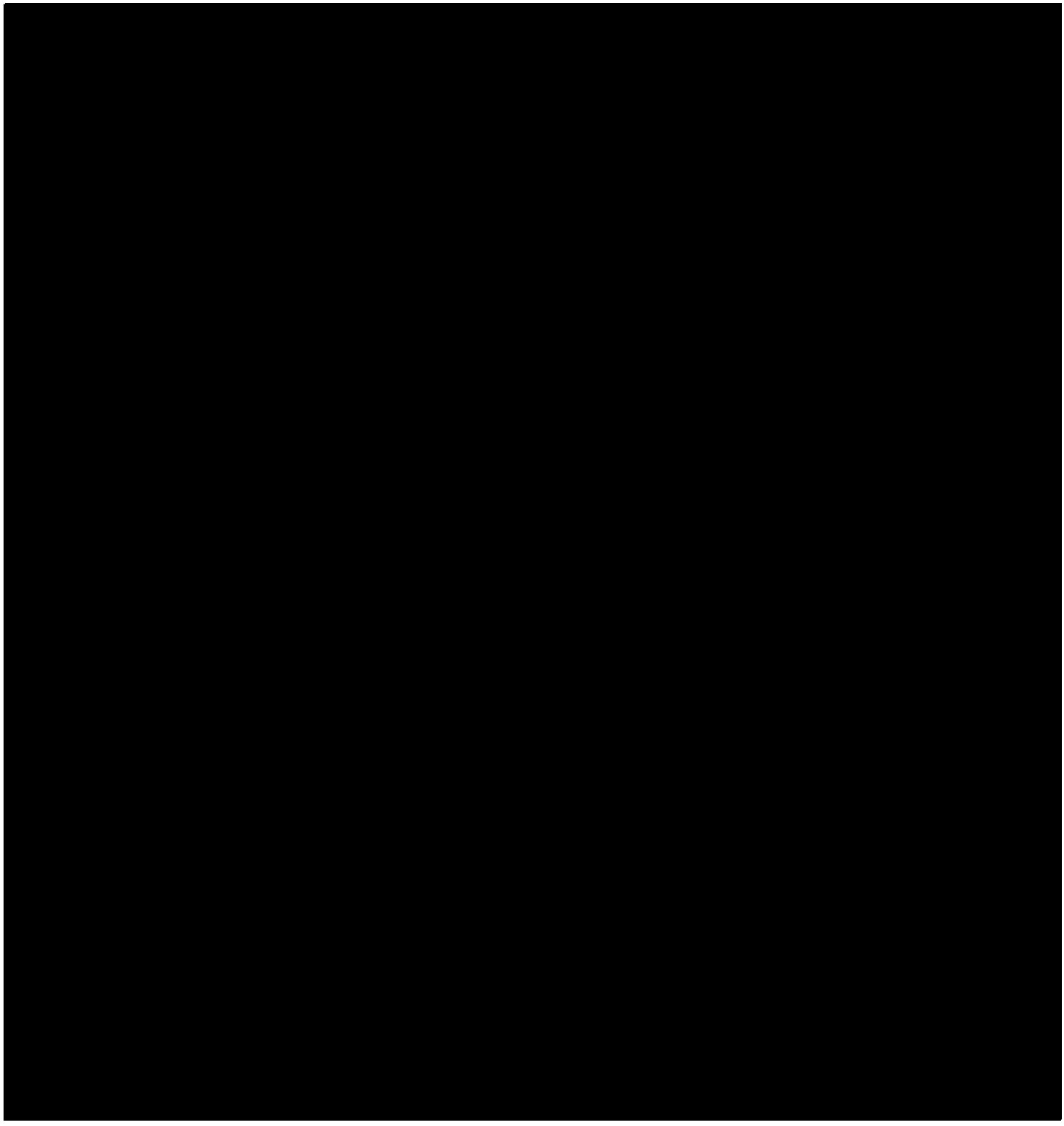
{



[redacted]

}

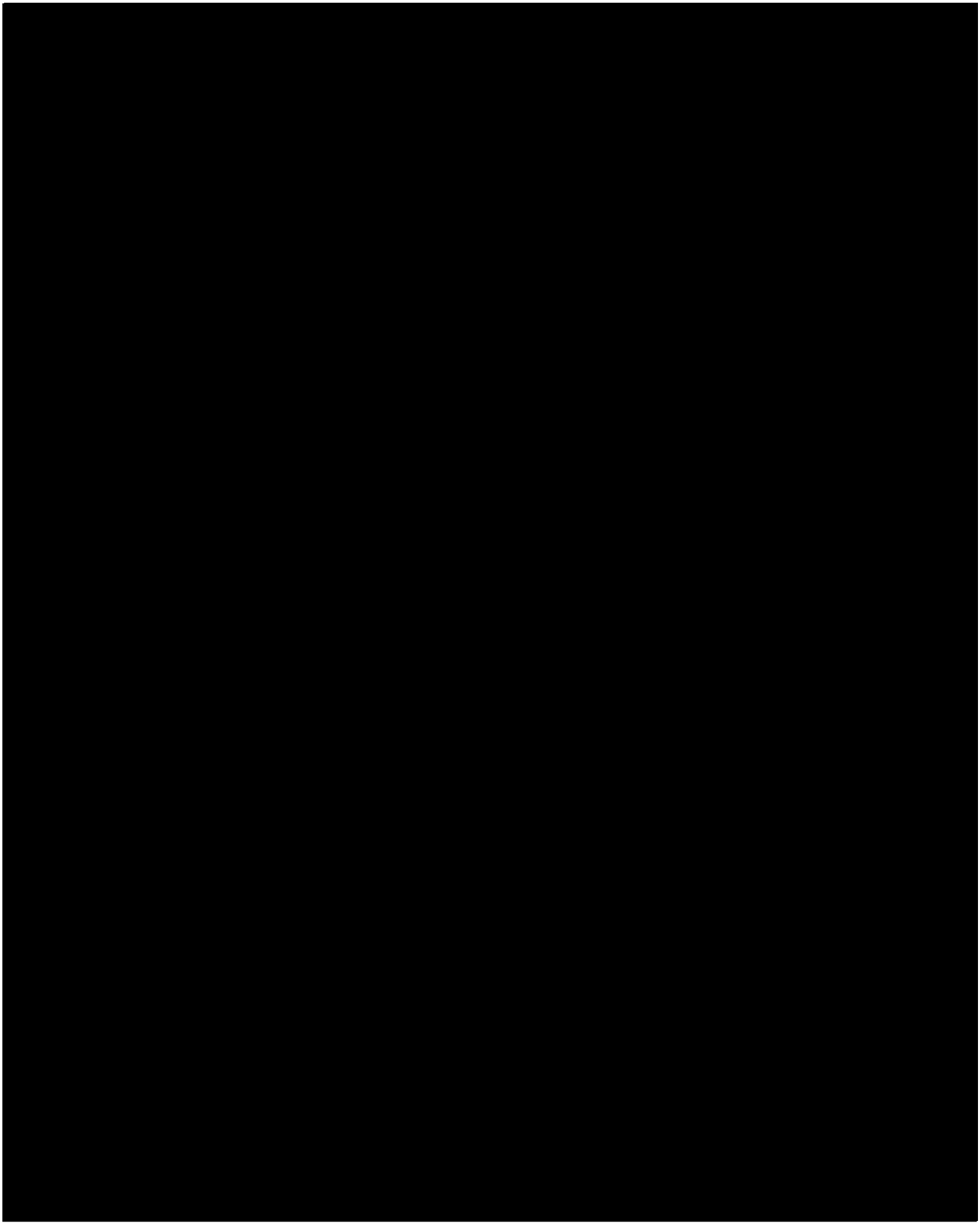
Counsel's Exhibit 18



}}

Counsel's Exhibit 19

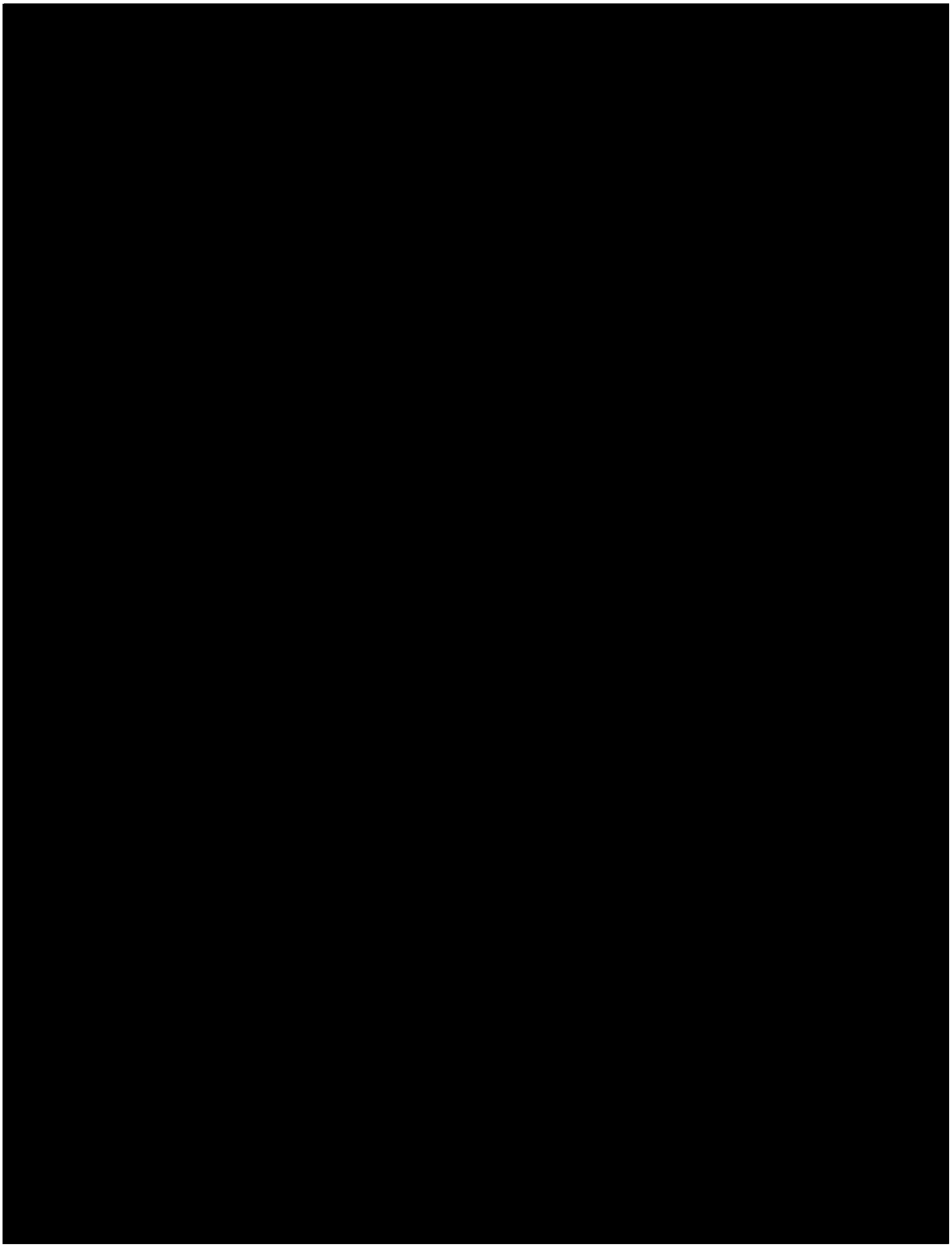
{{



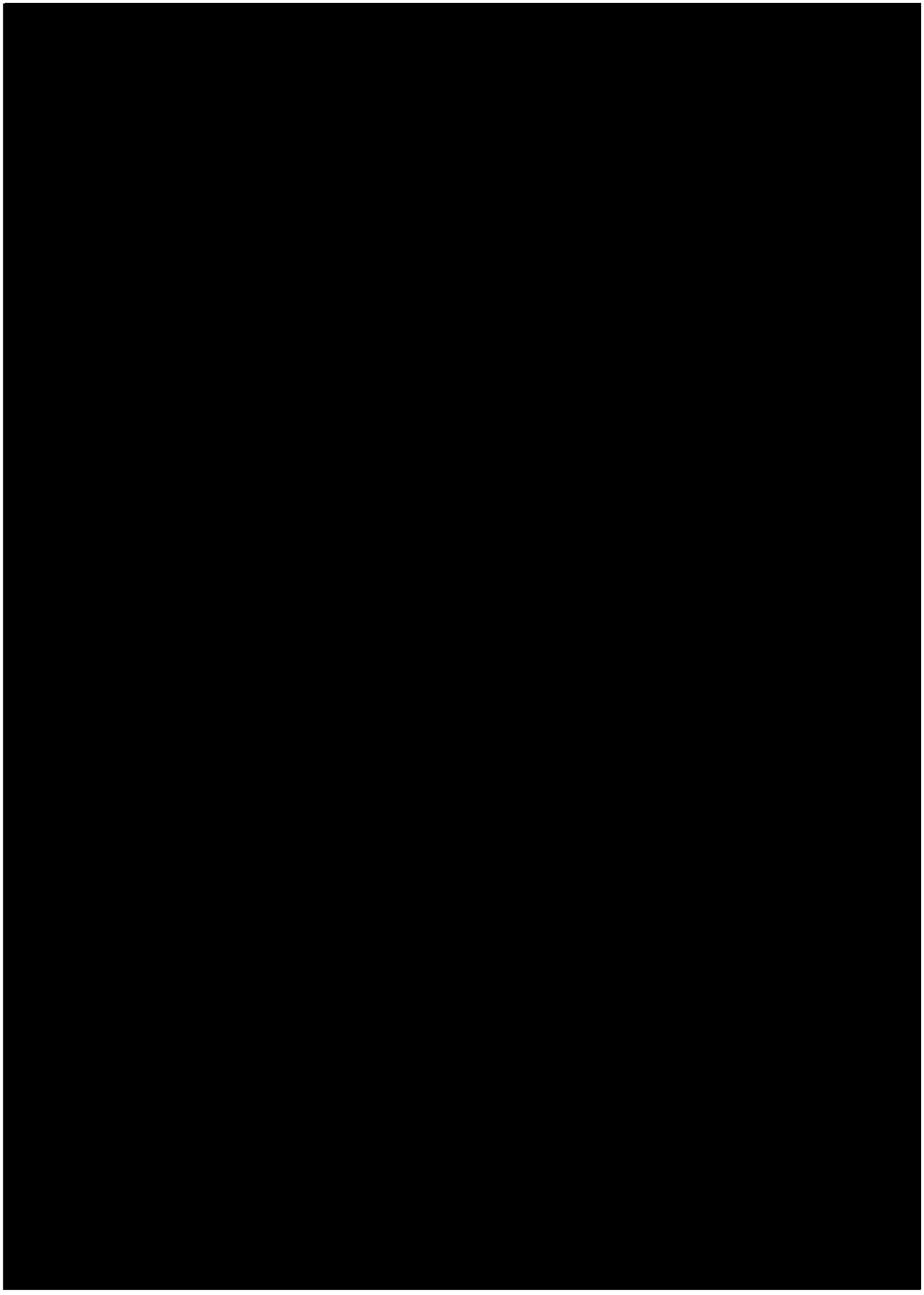
}}

Counsel's Exhibit 20

{{



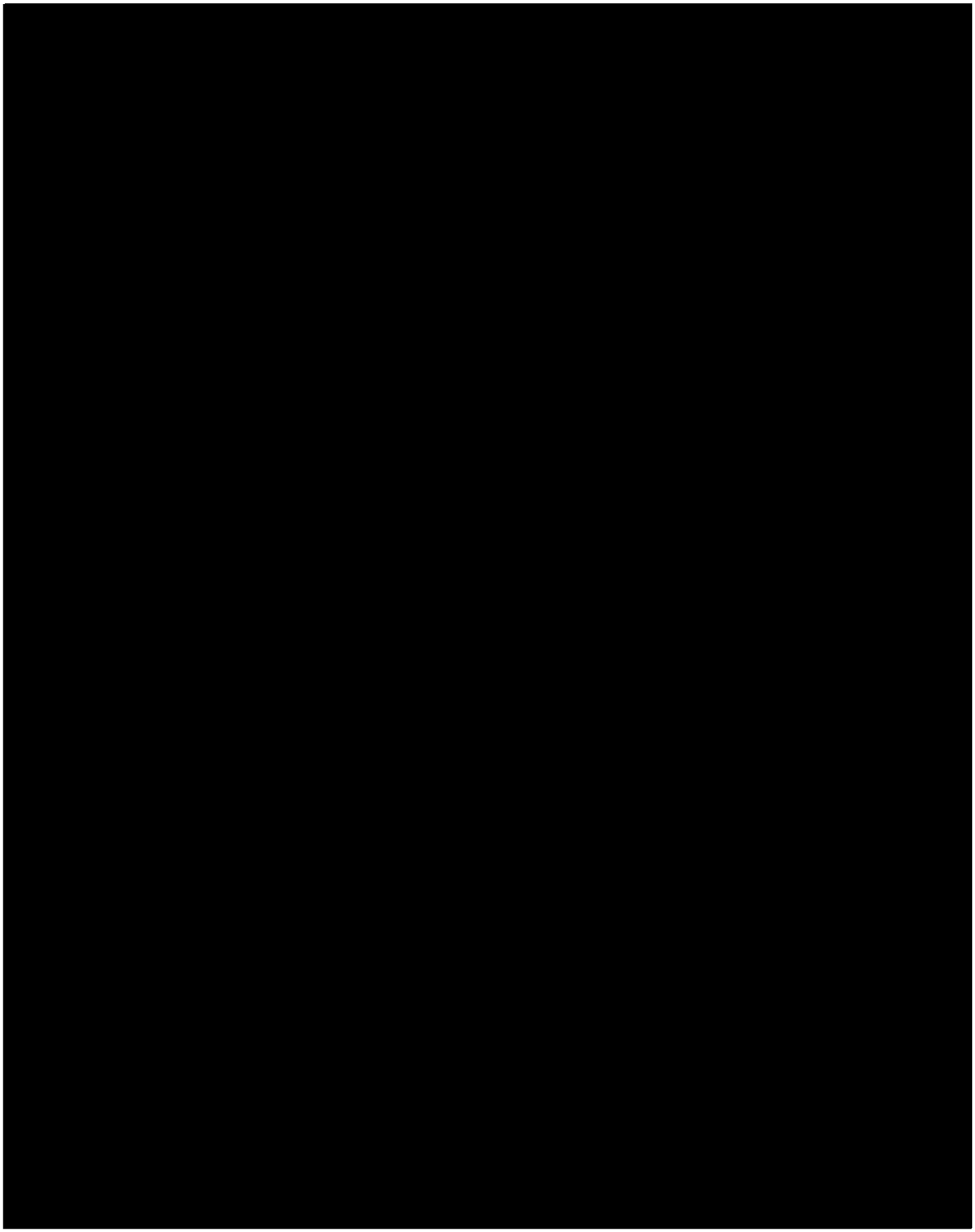
[redacted]



[redacted]

Counsel's Exhibit 21

{{

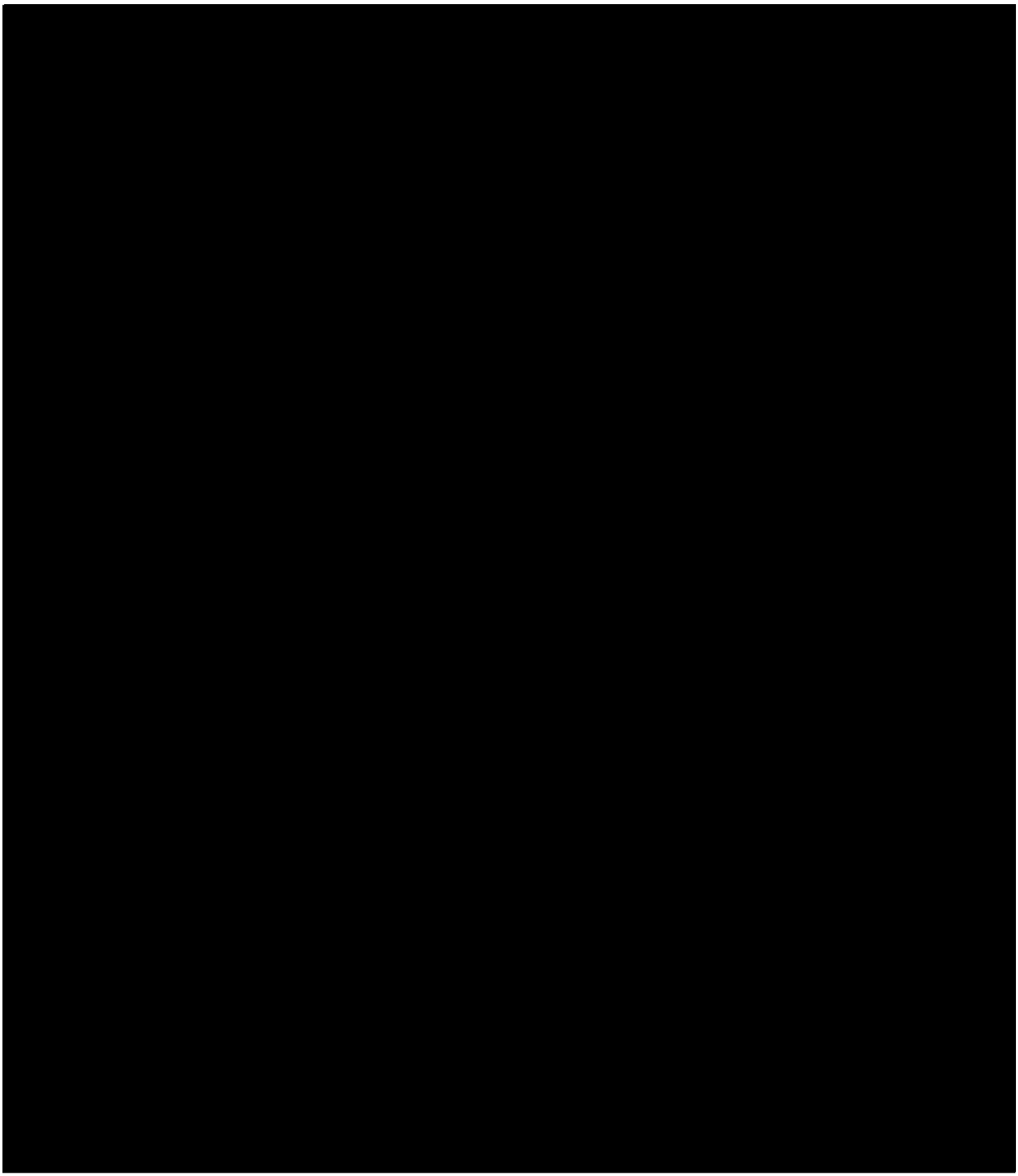




}}

Counsel's Exhibit 22

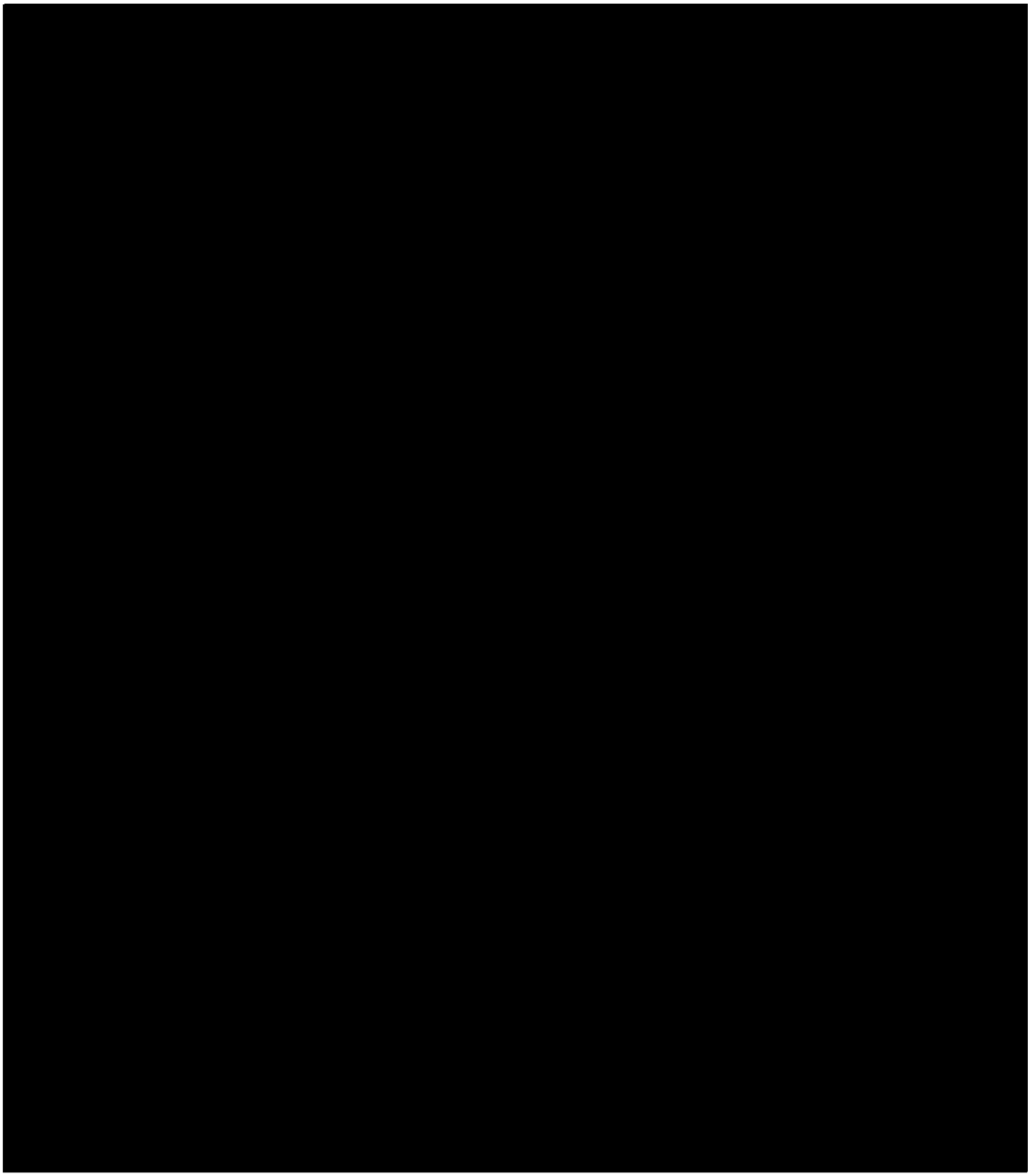
{{



}}

Counsel's Exhibit 23

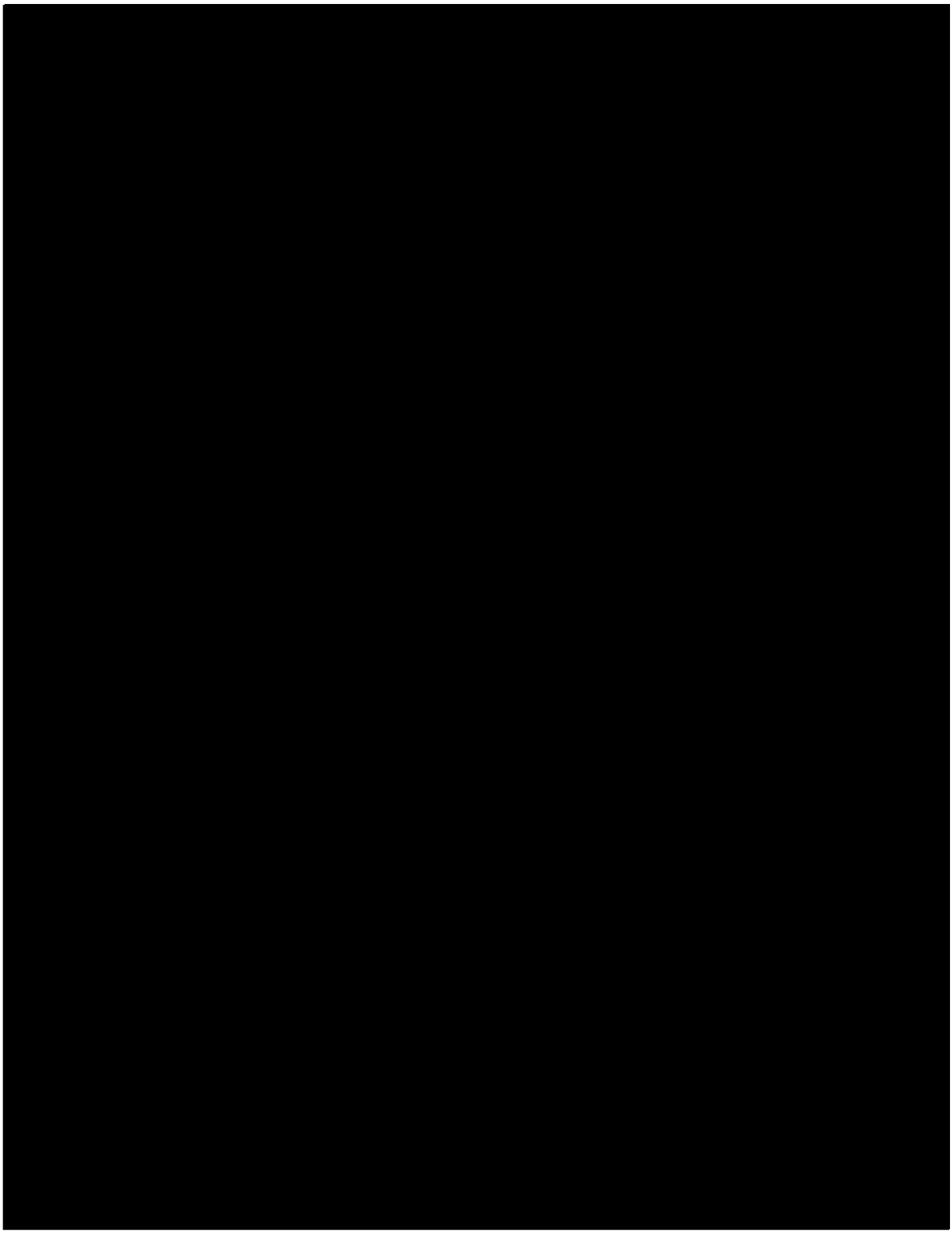
{

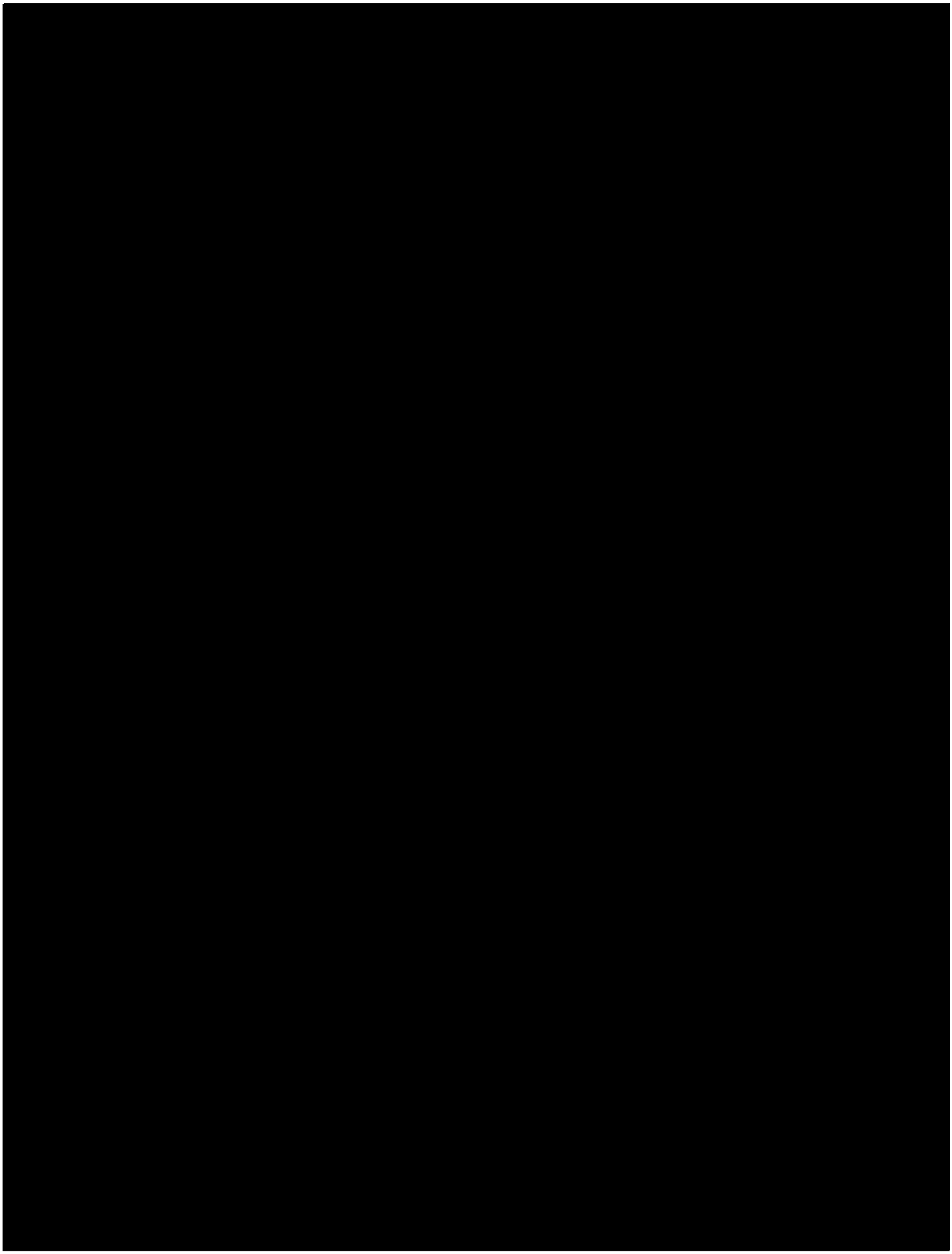


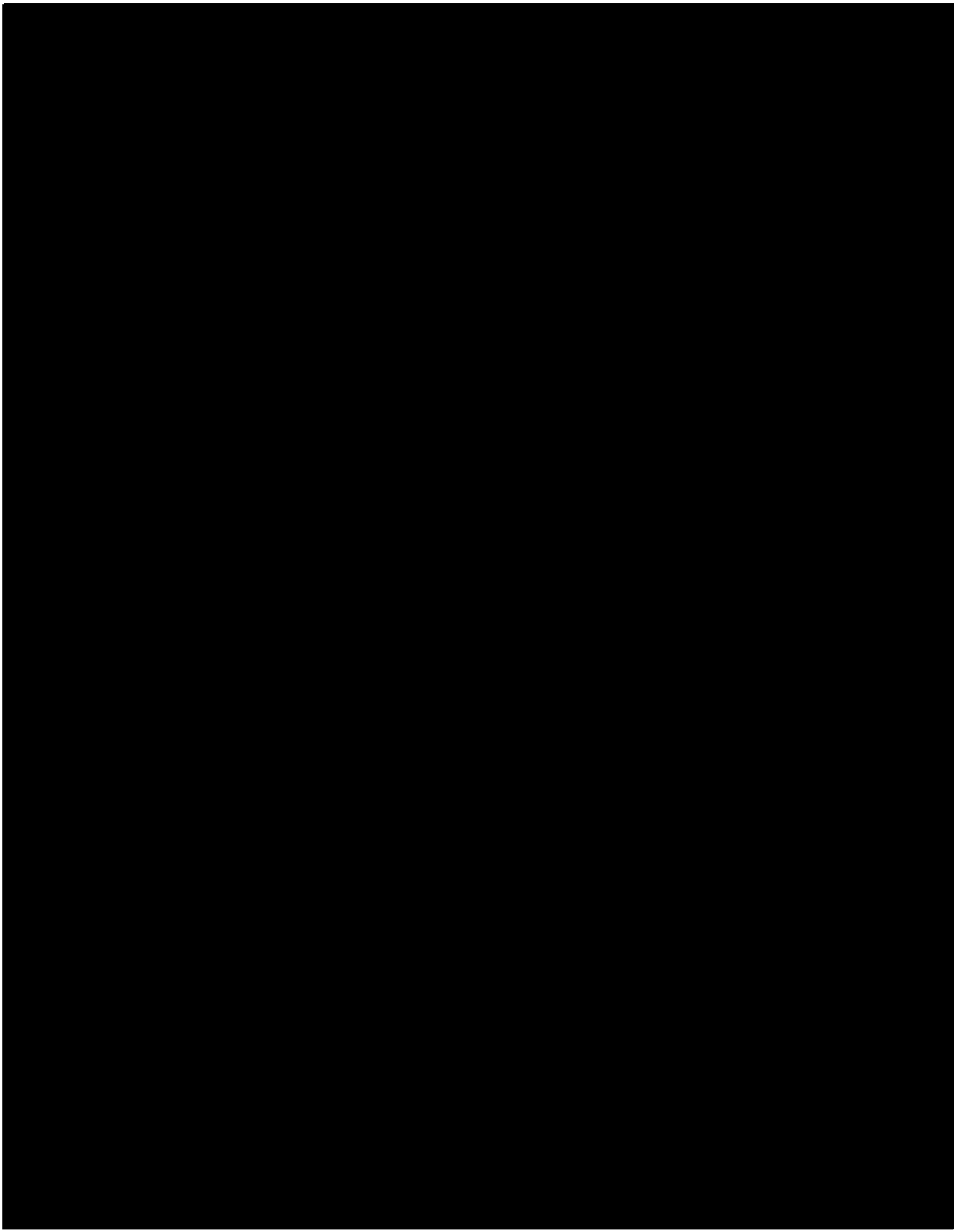
}

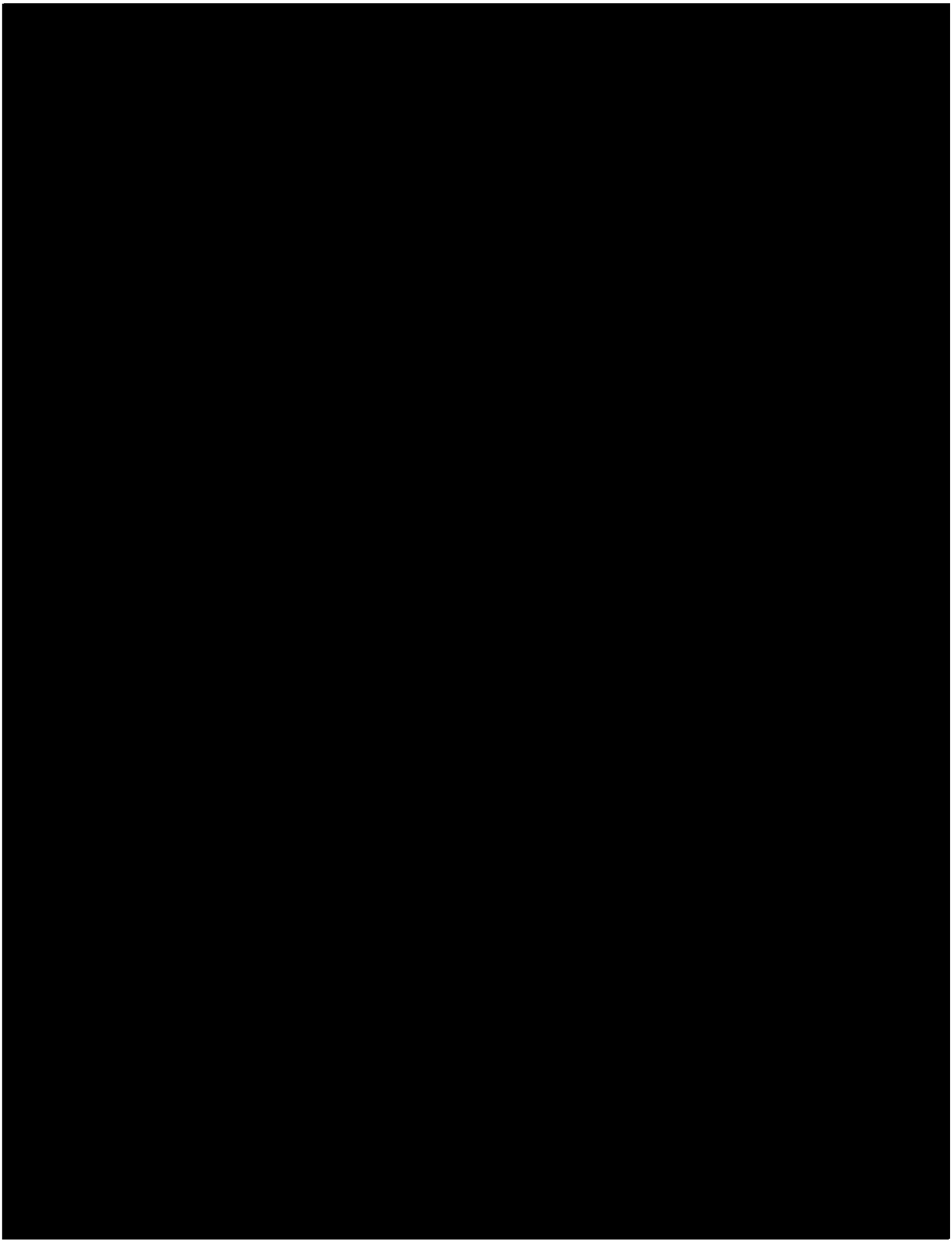
Counsel's Exhibit 24

{{







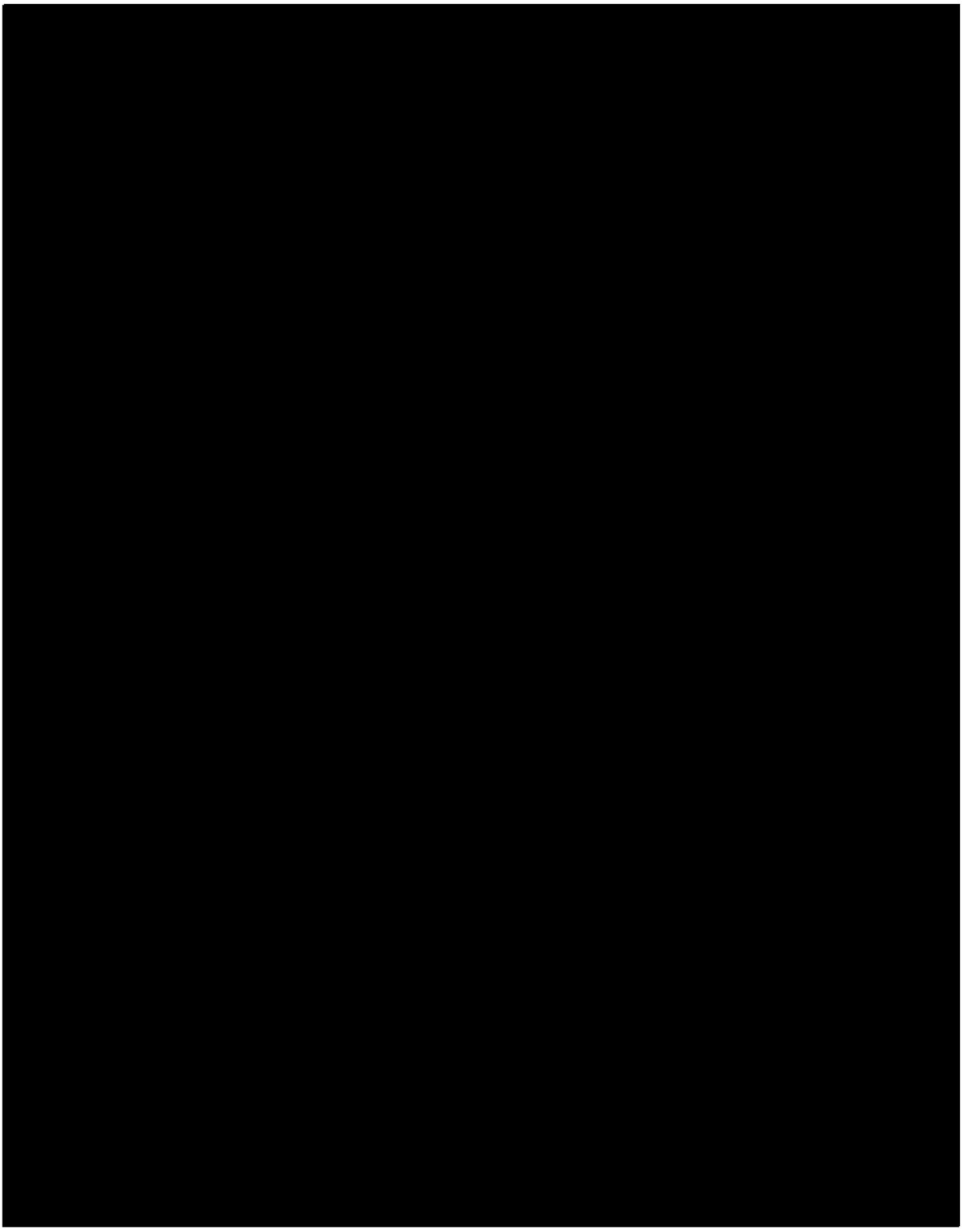


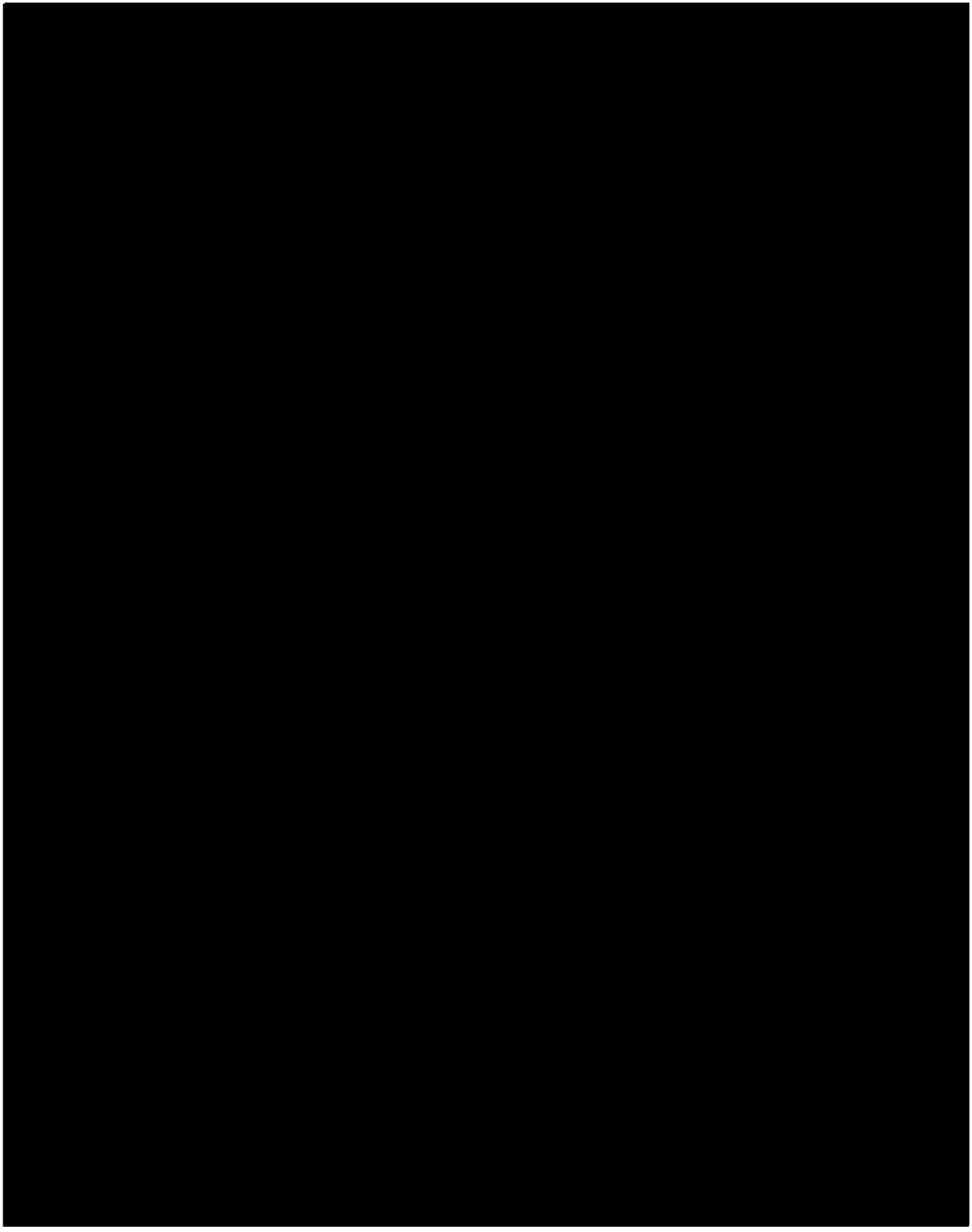
[redacted]

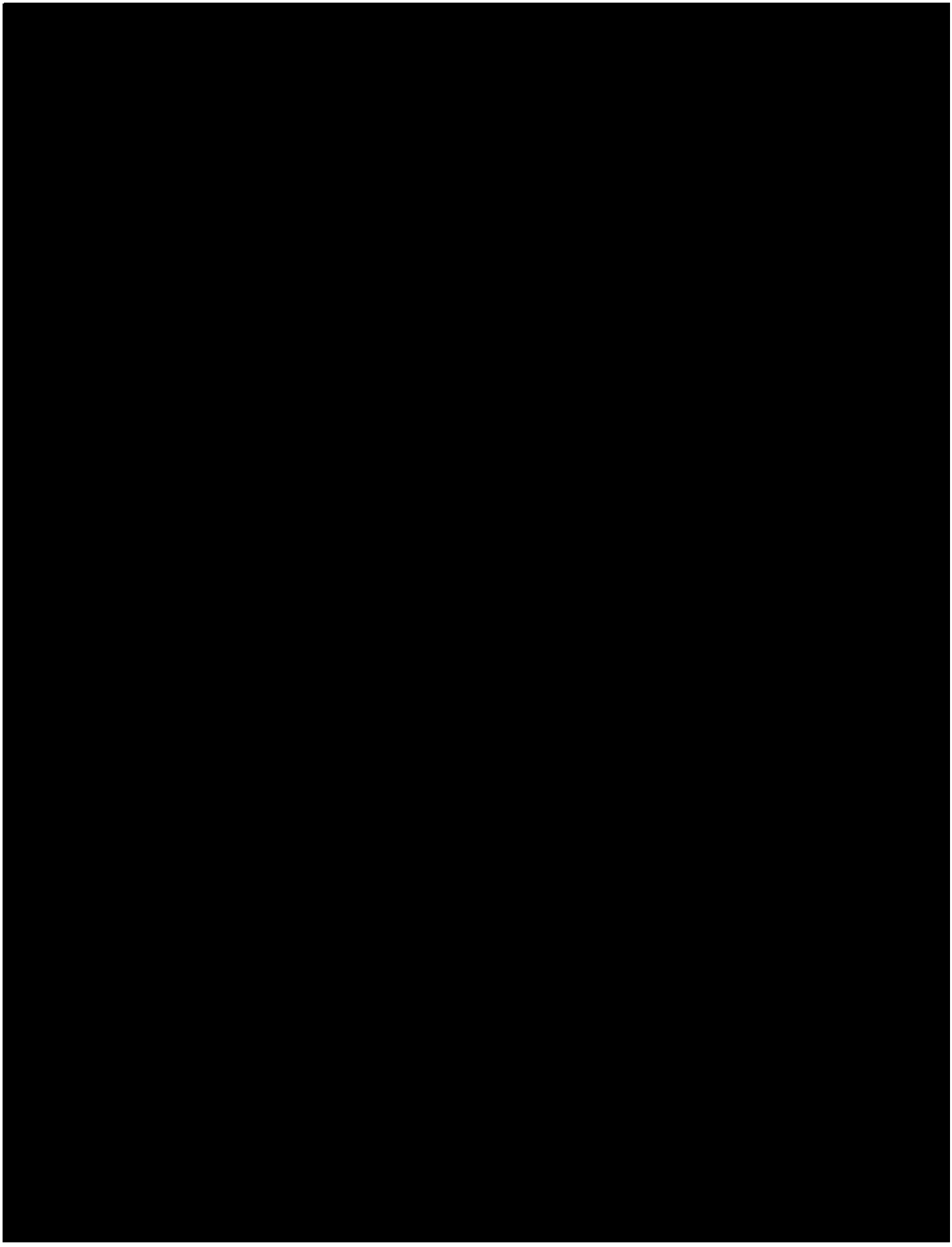
}}

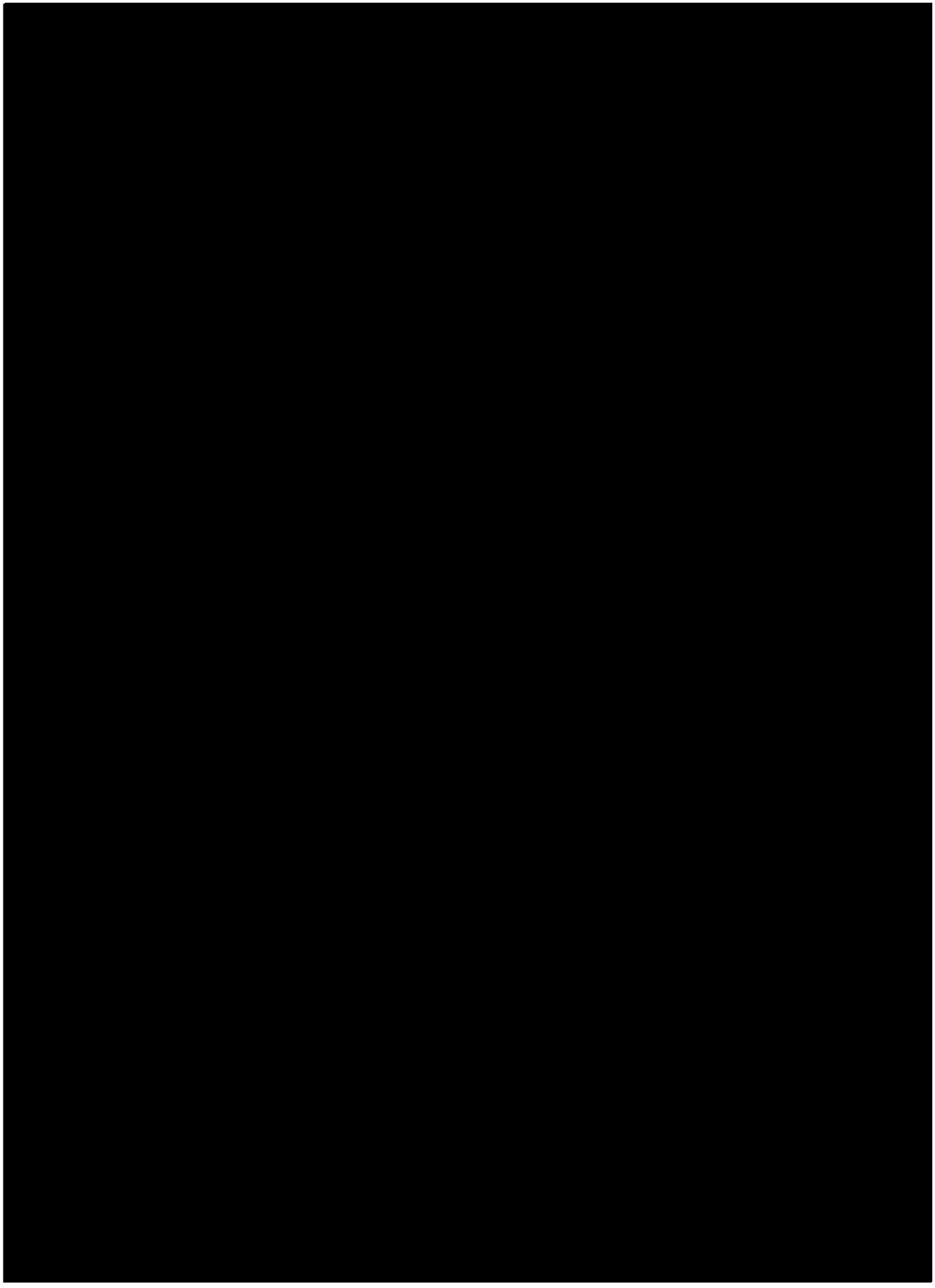
Counsel's Exhibit 25

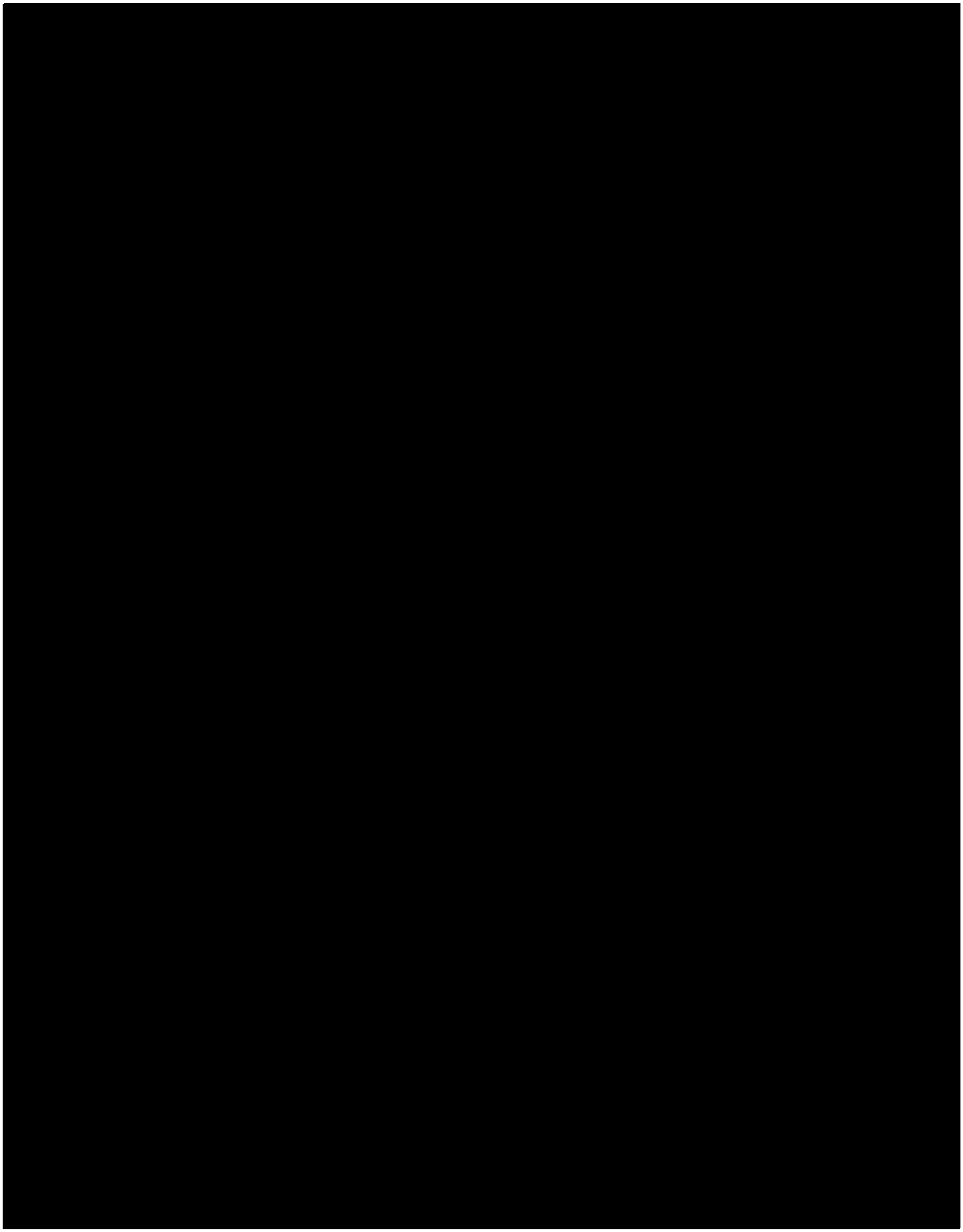
{{

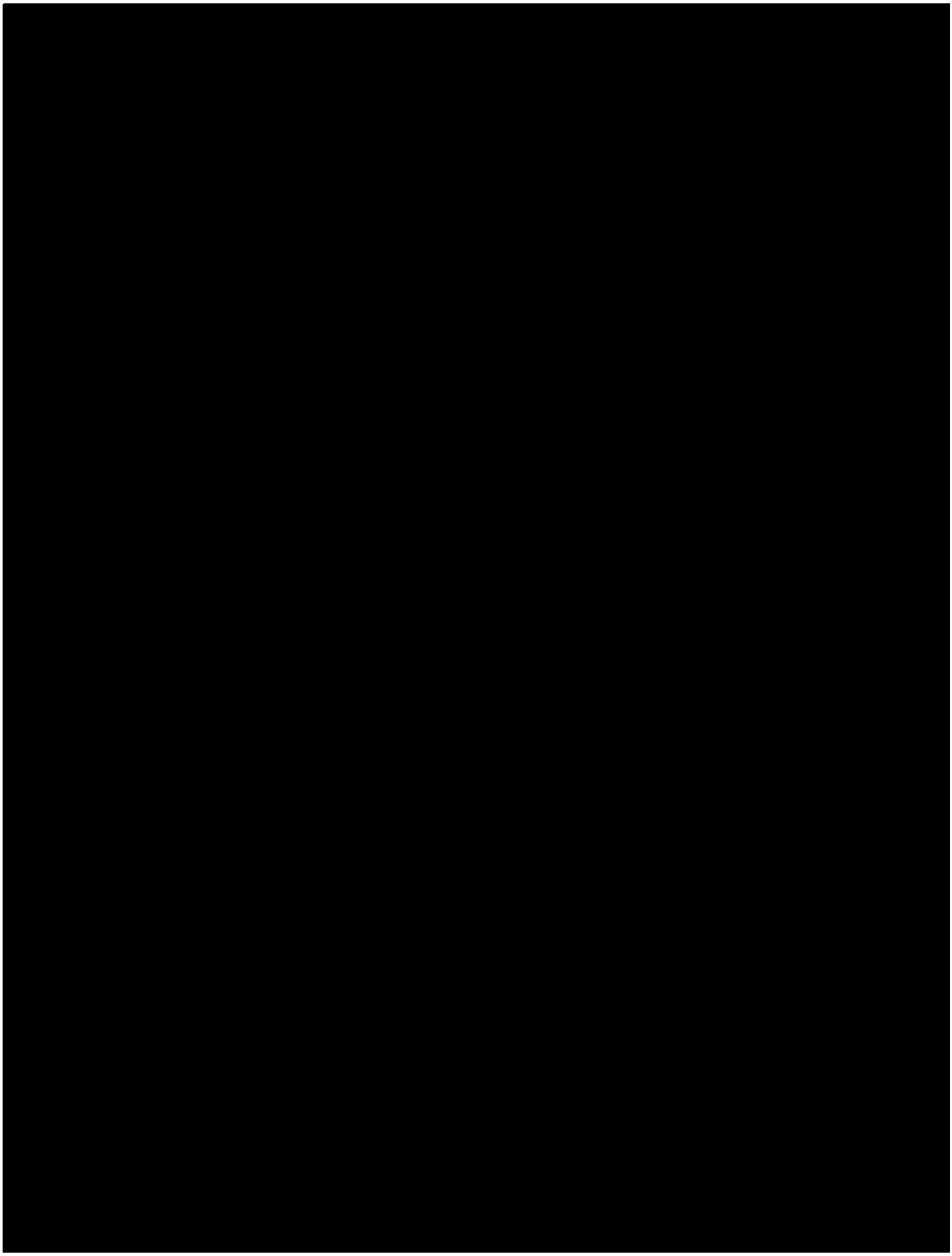


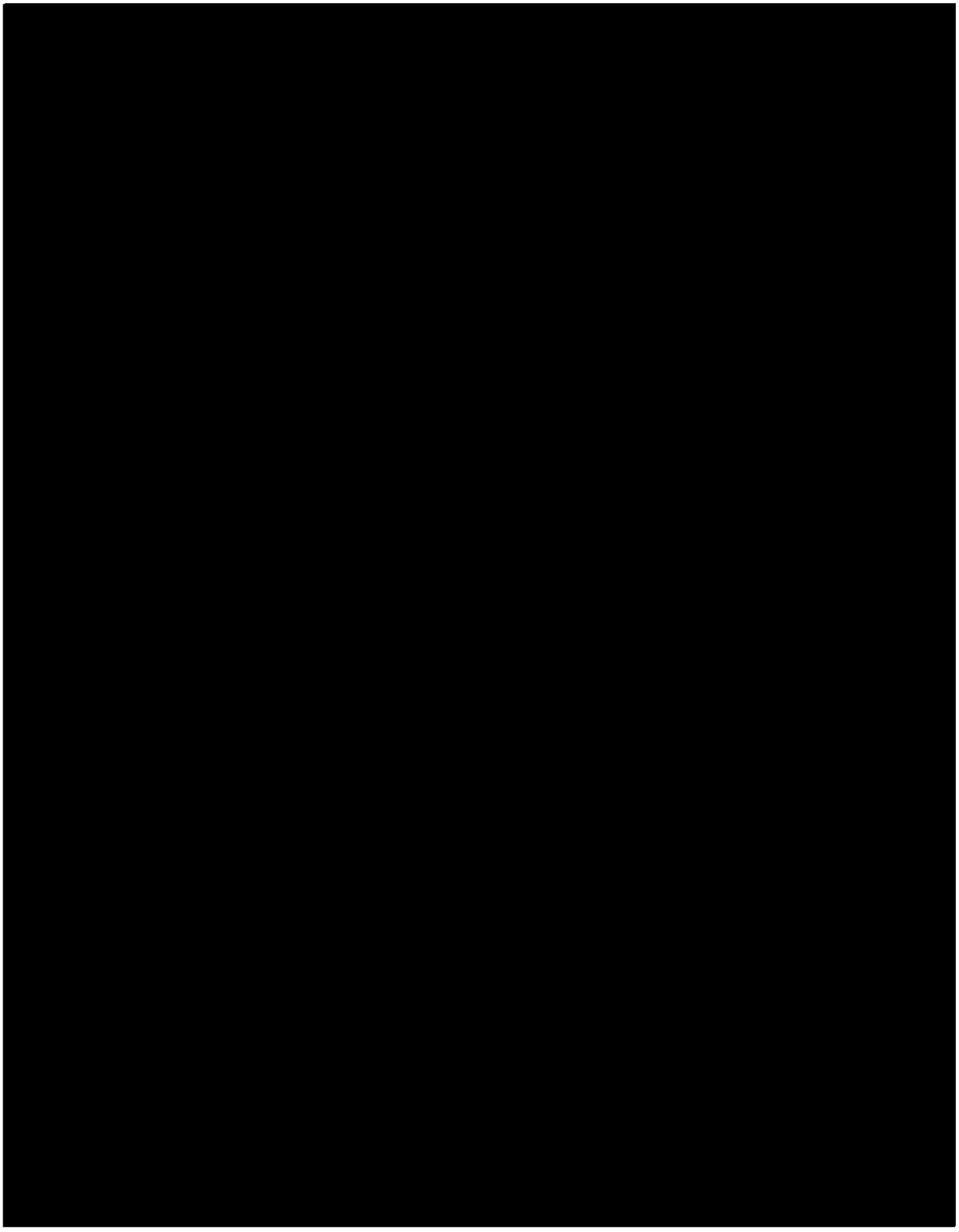


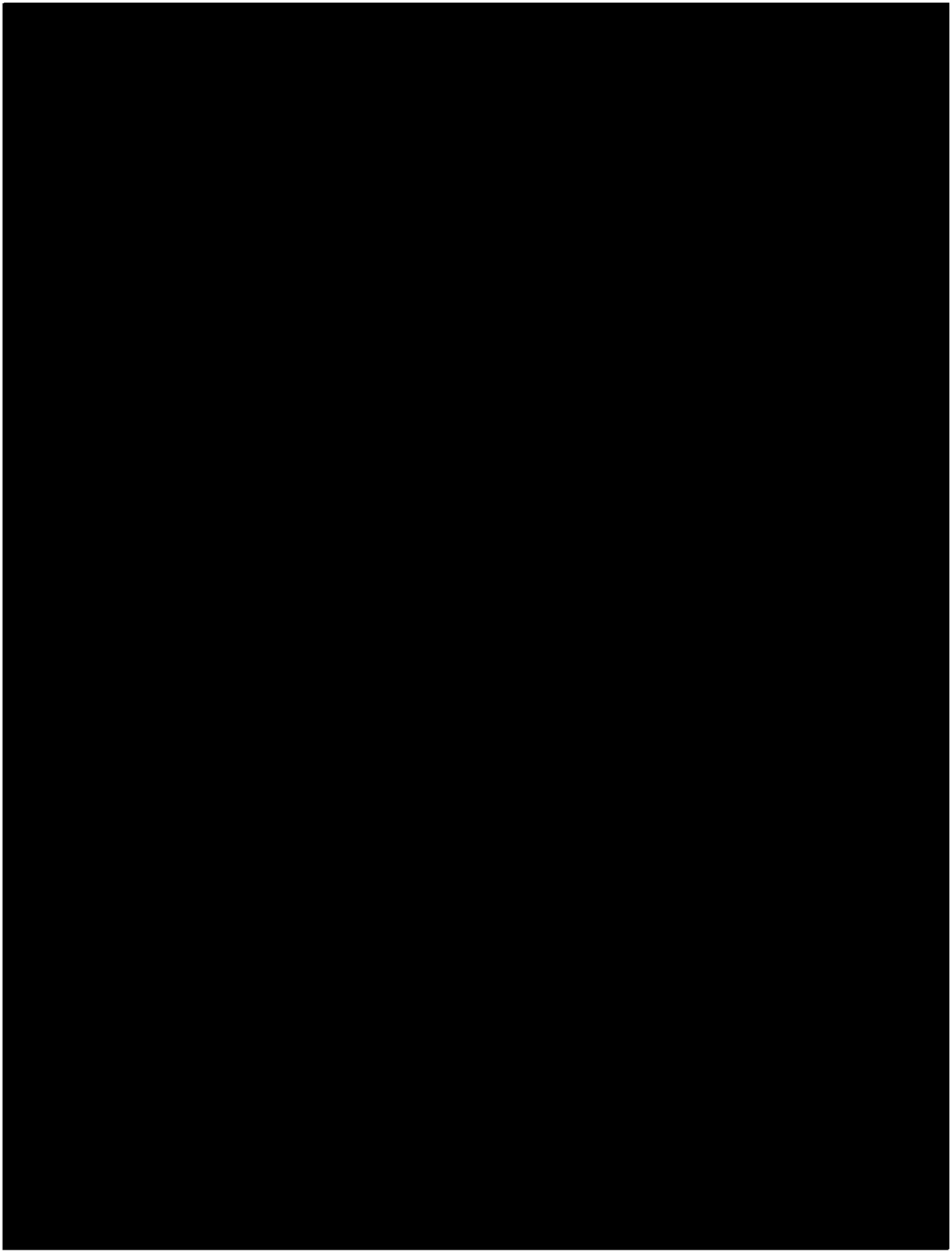


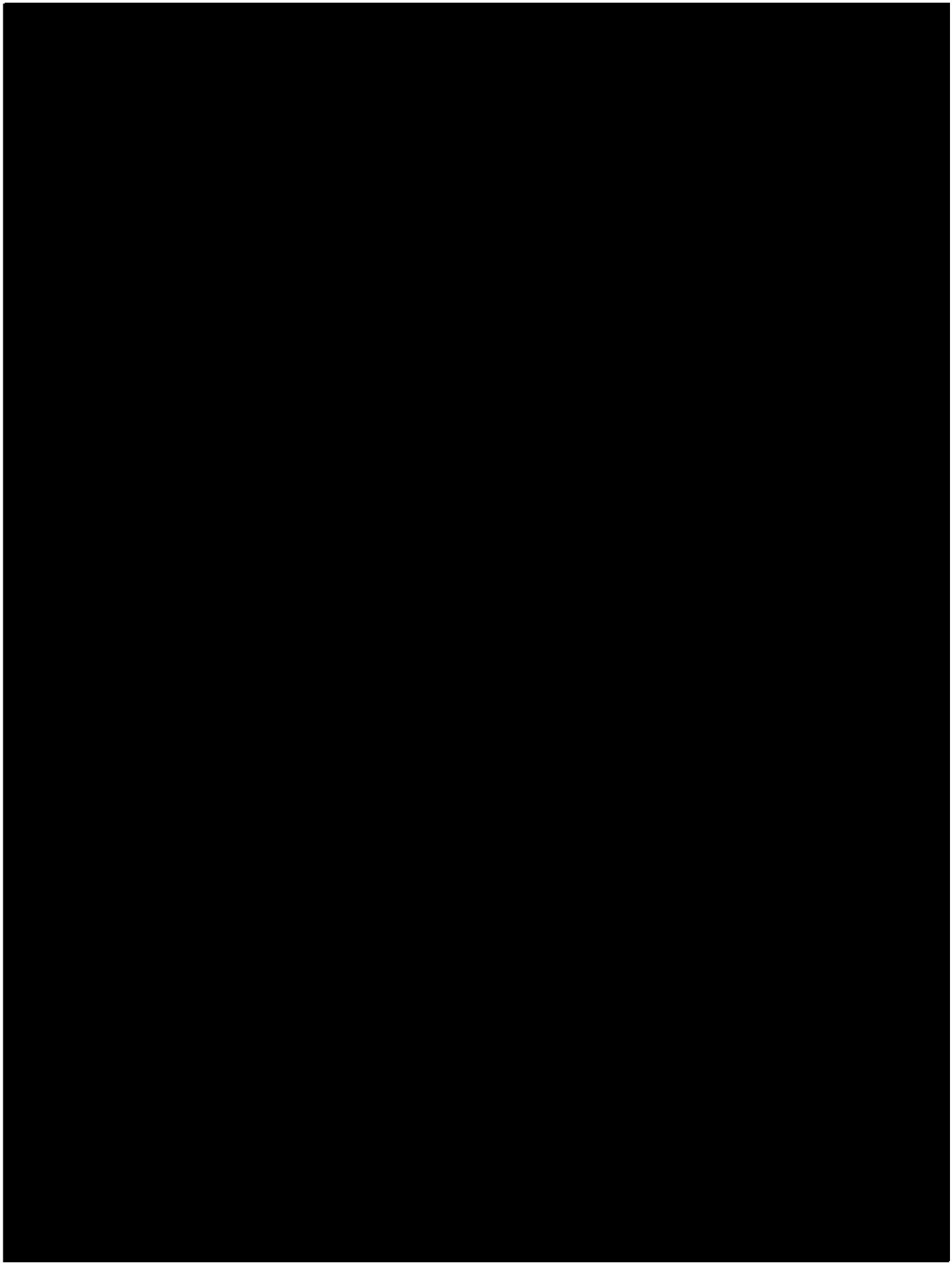


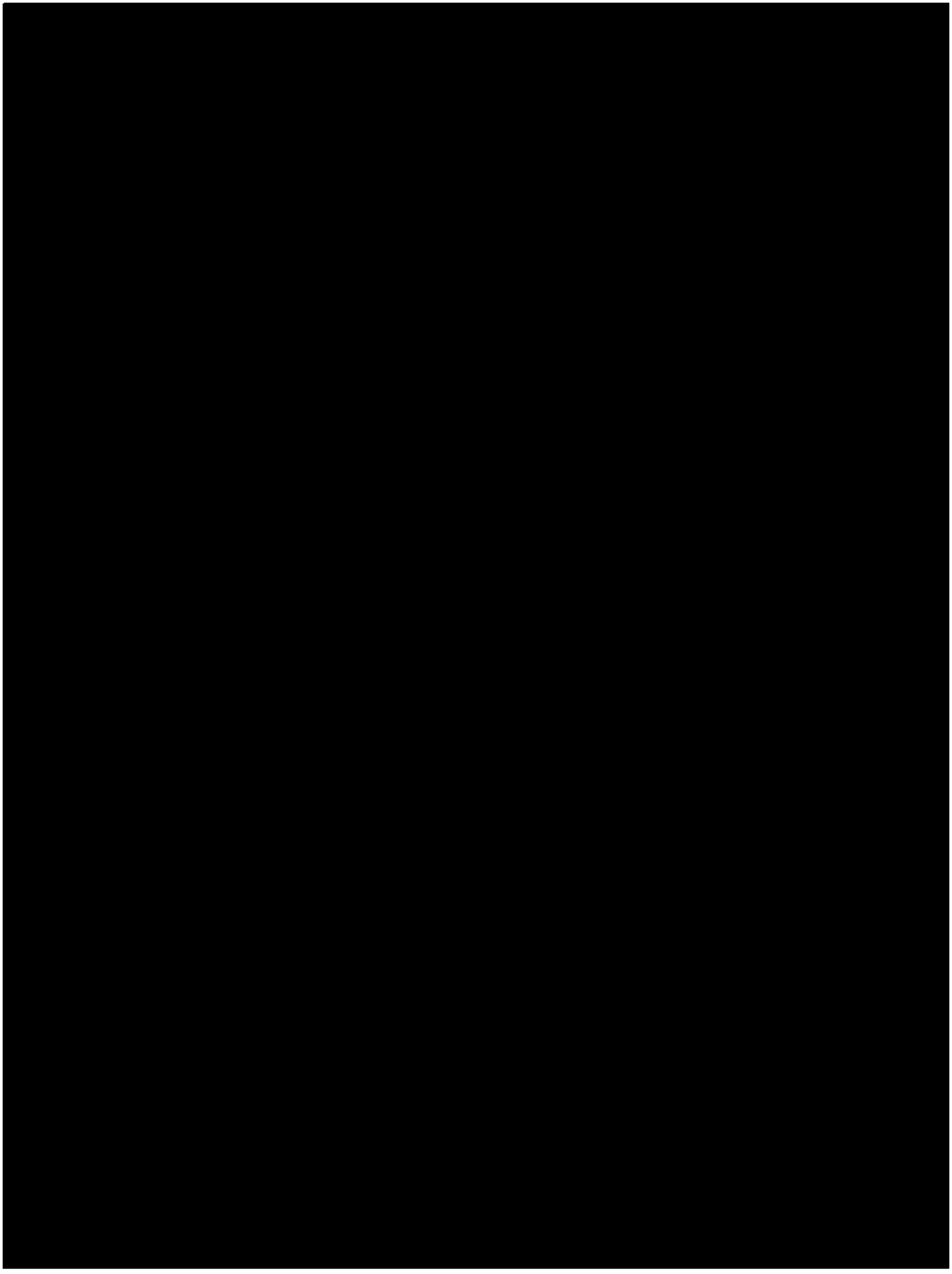






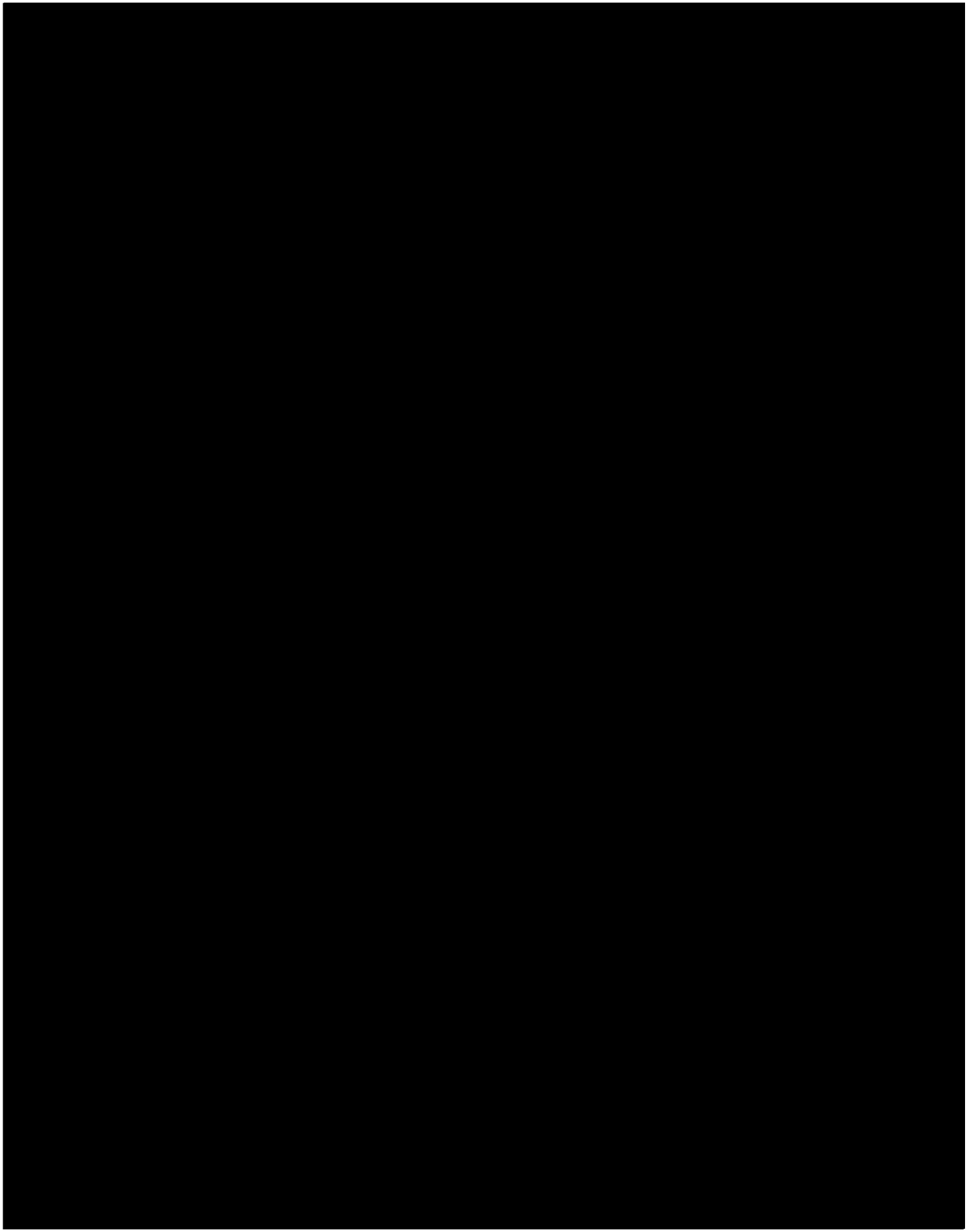






Counsel's Exhibit 26

{{

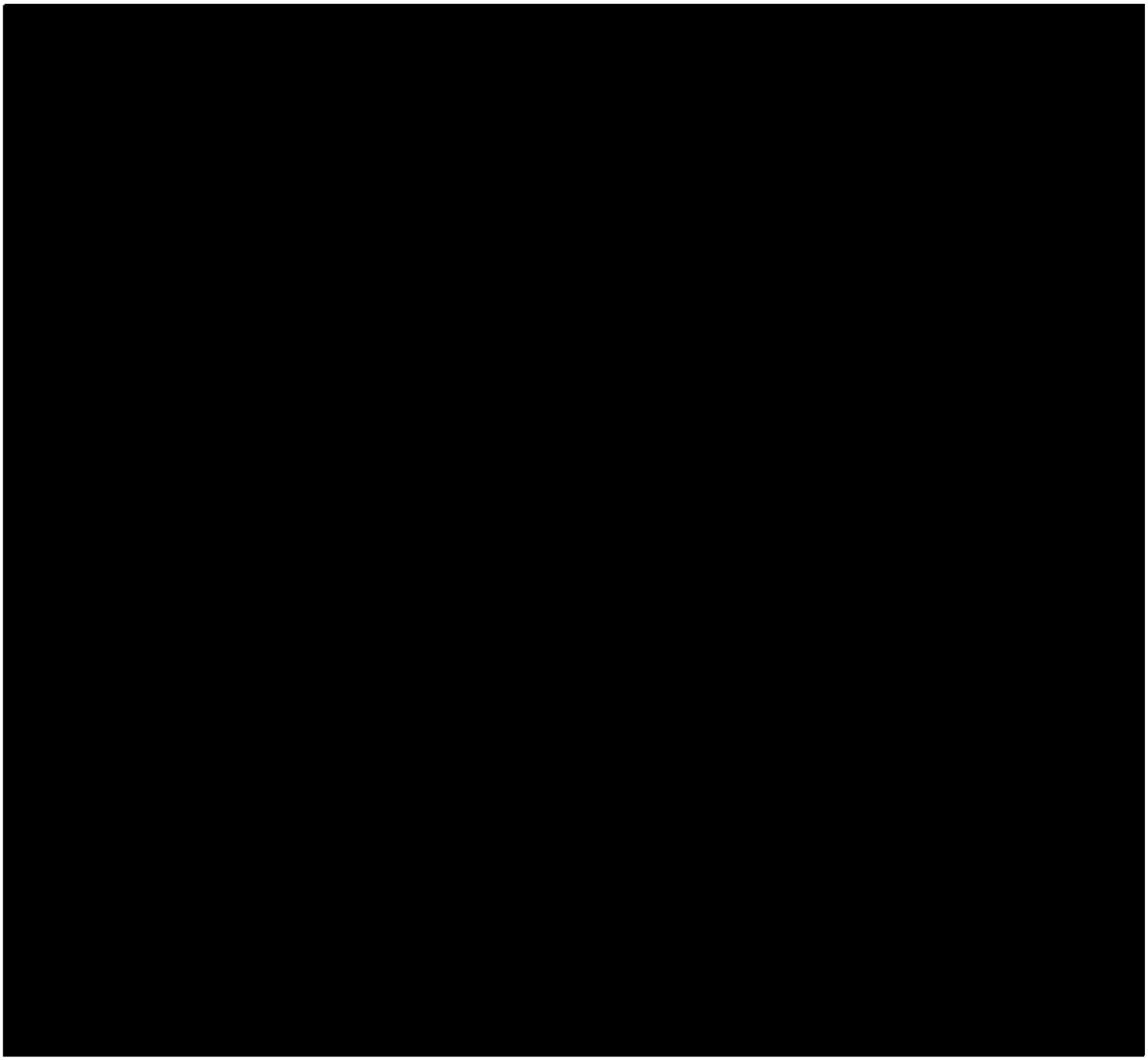


[redacted]

}}

Counsel's Exhibit 27

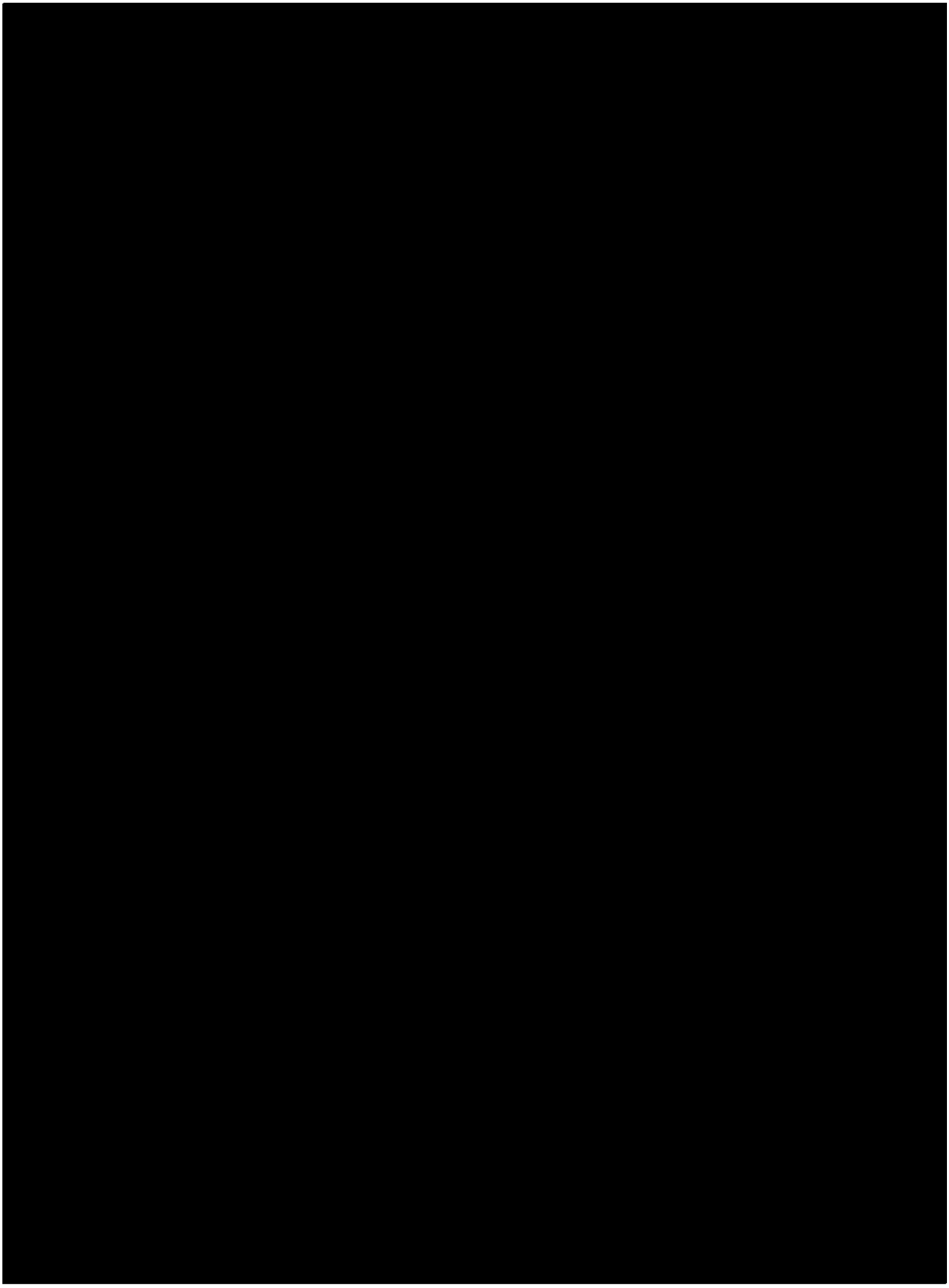
{{

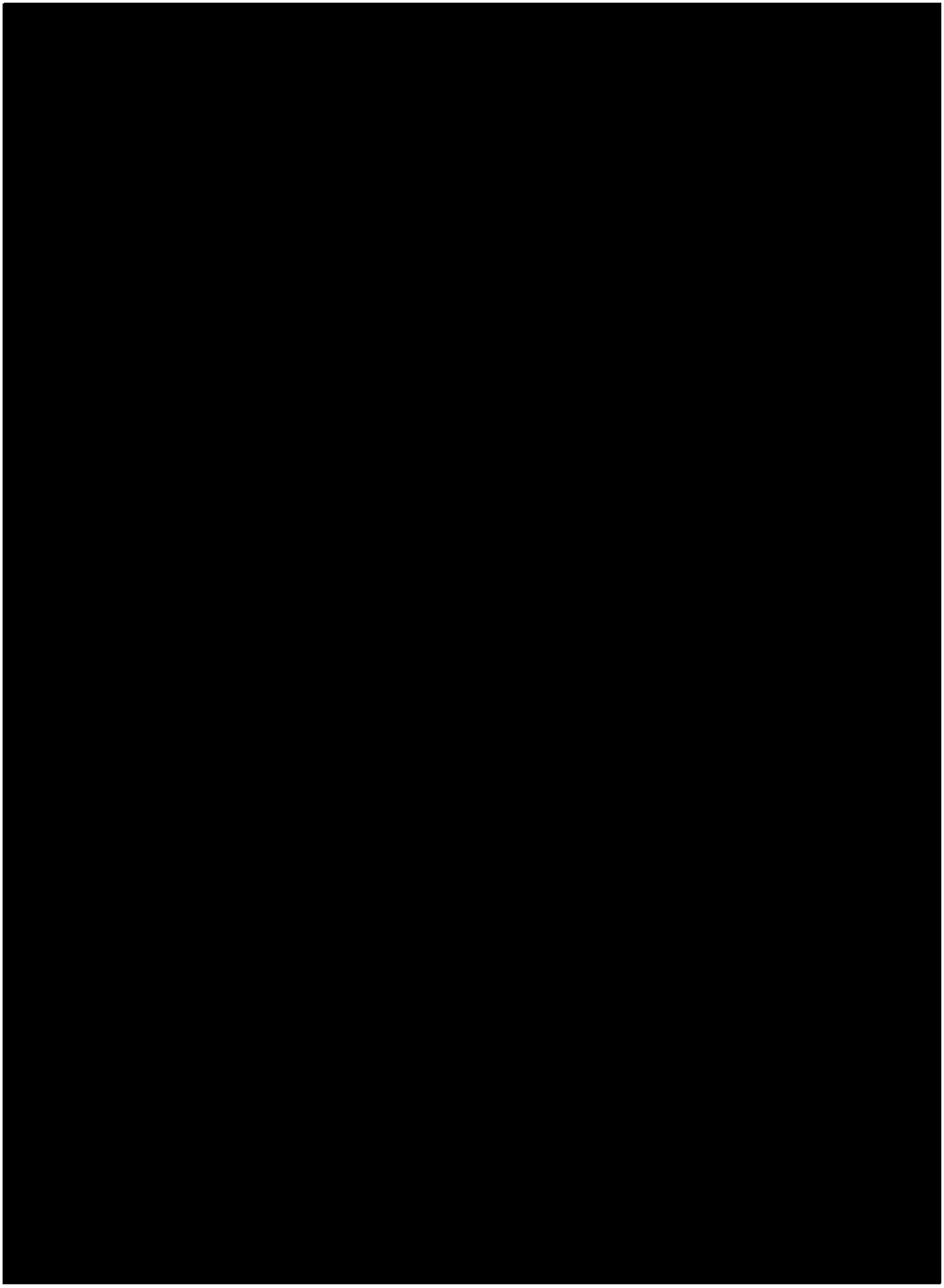


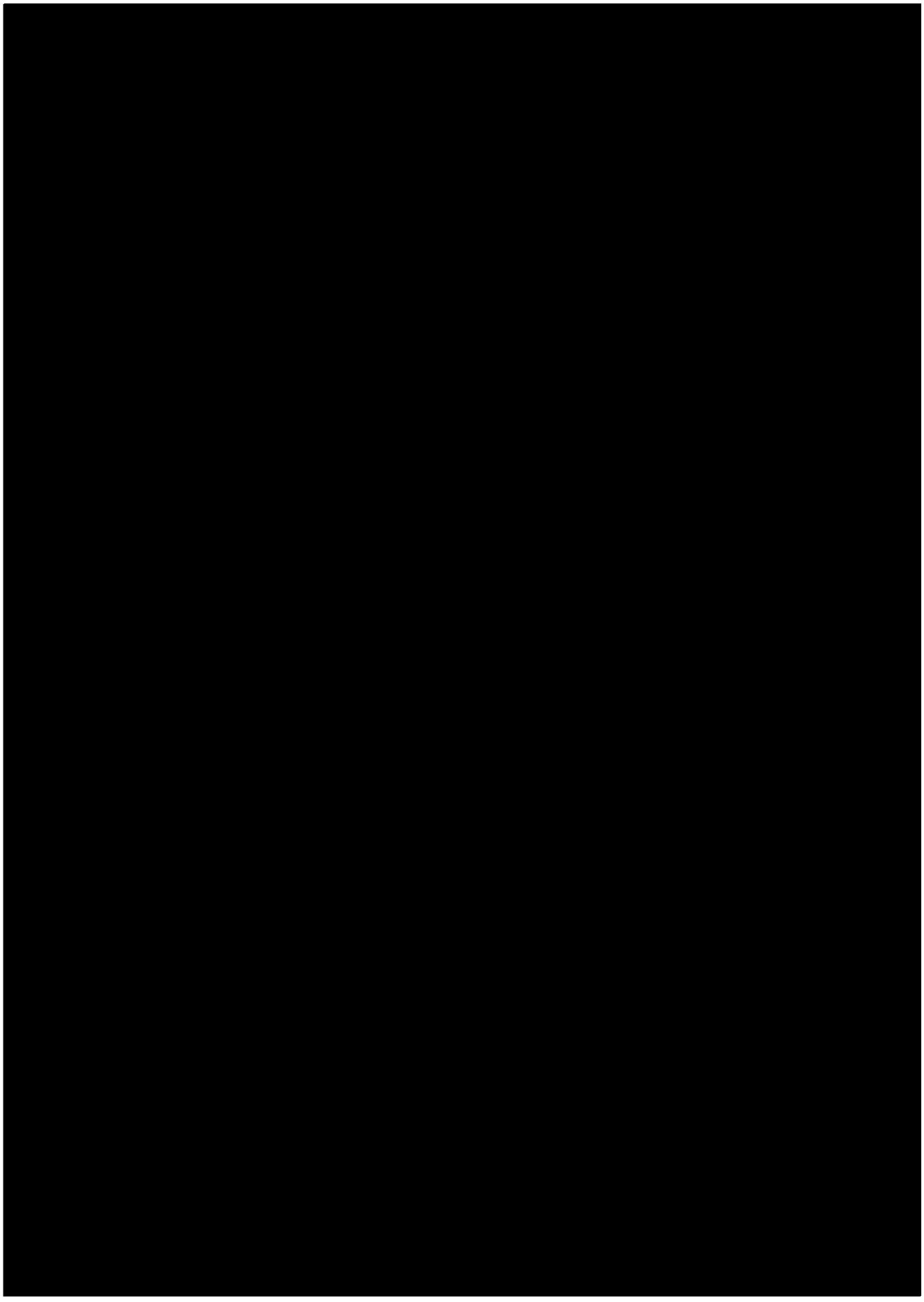
}}

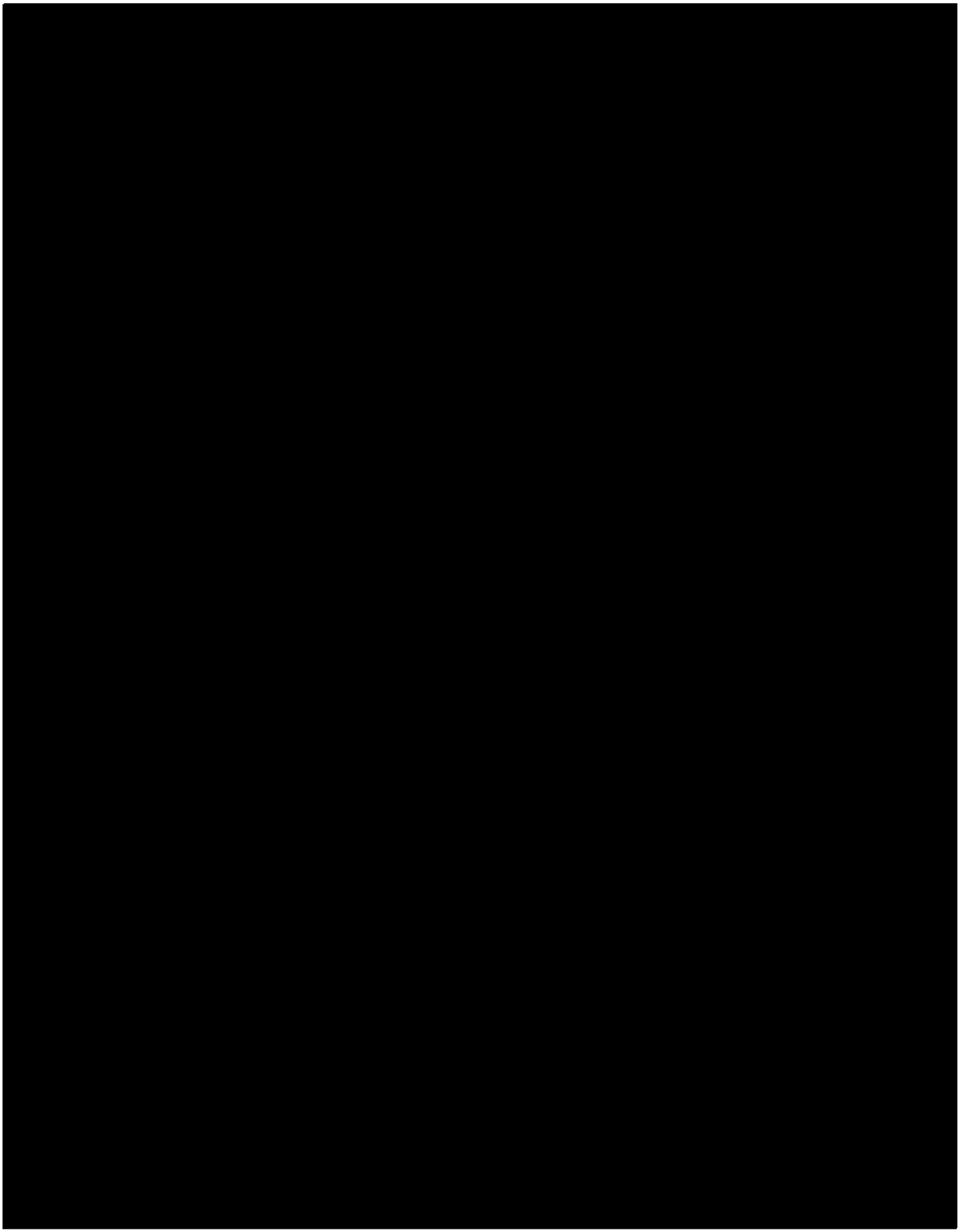
Counsel's Exhibit 28

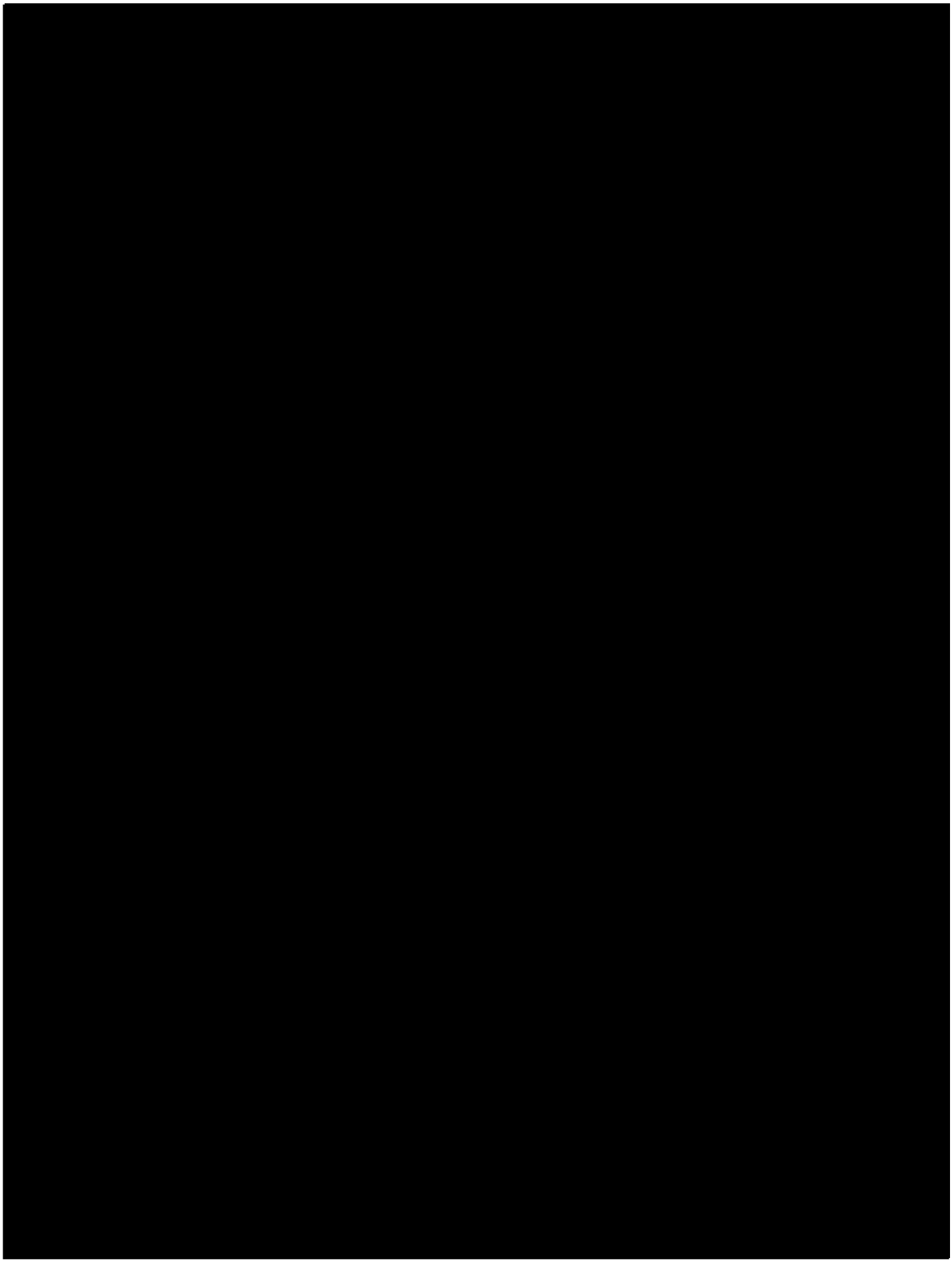
{{







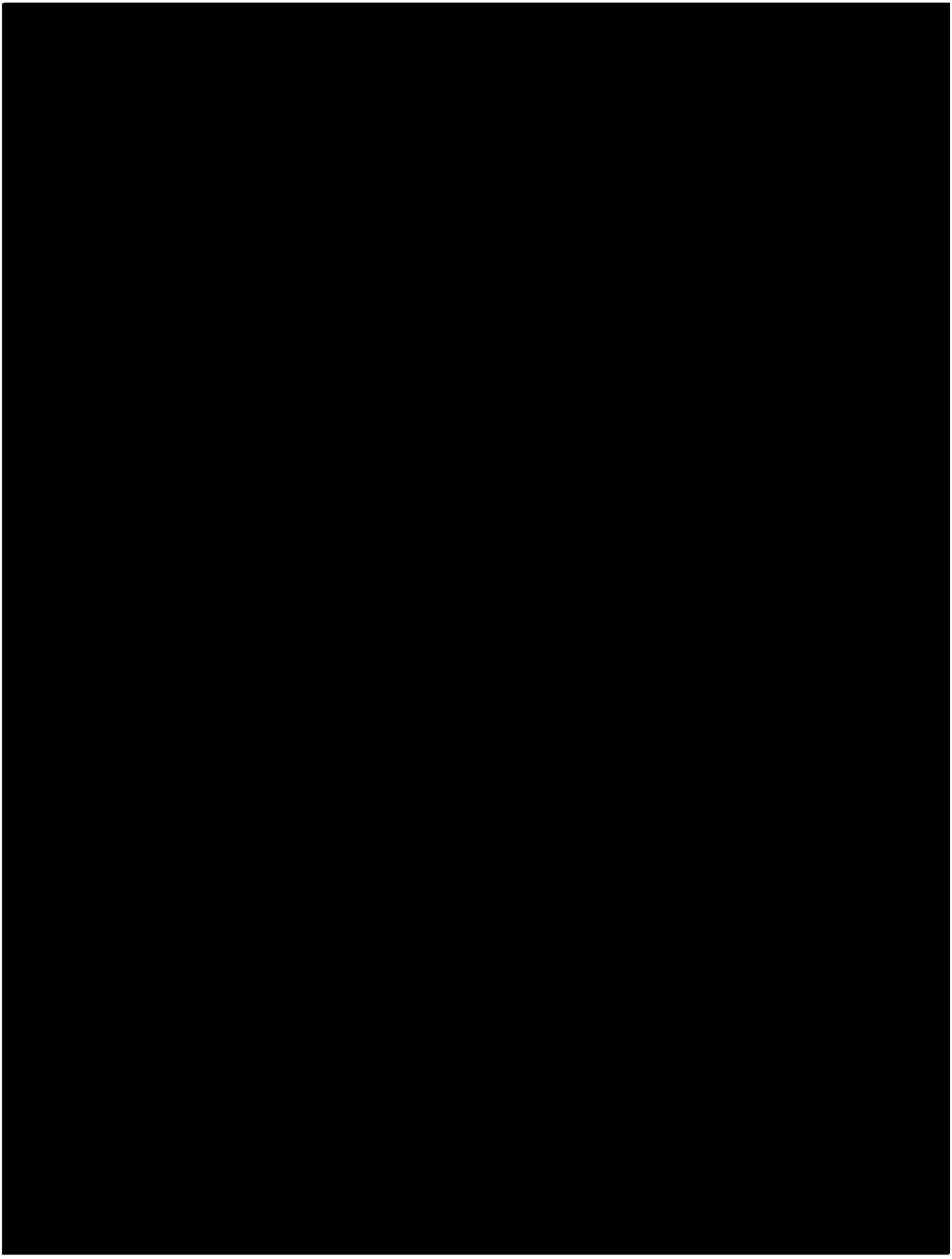


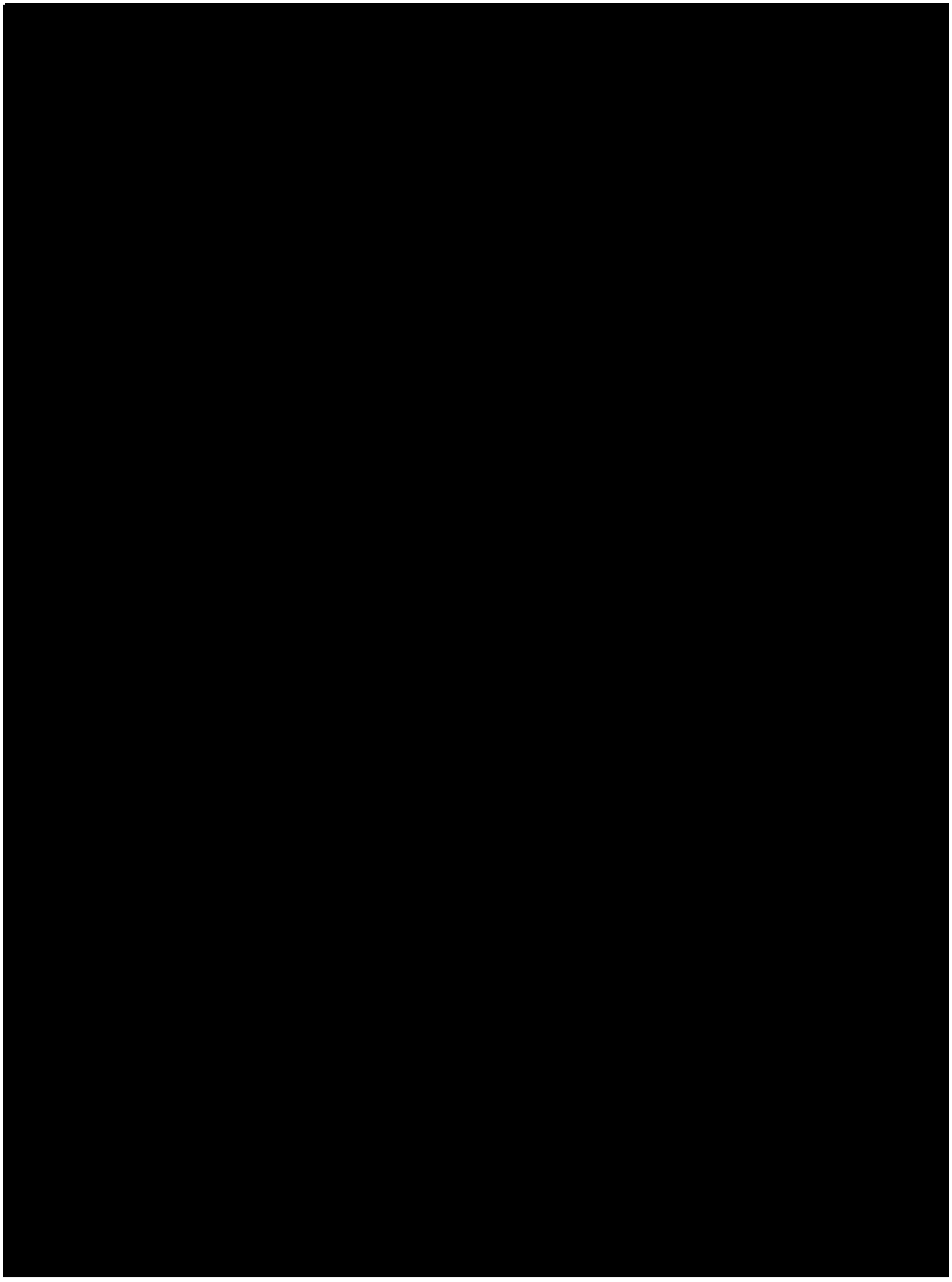


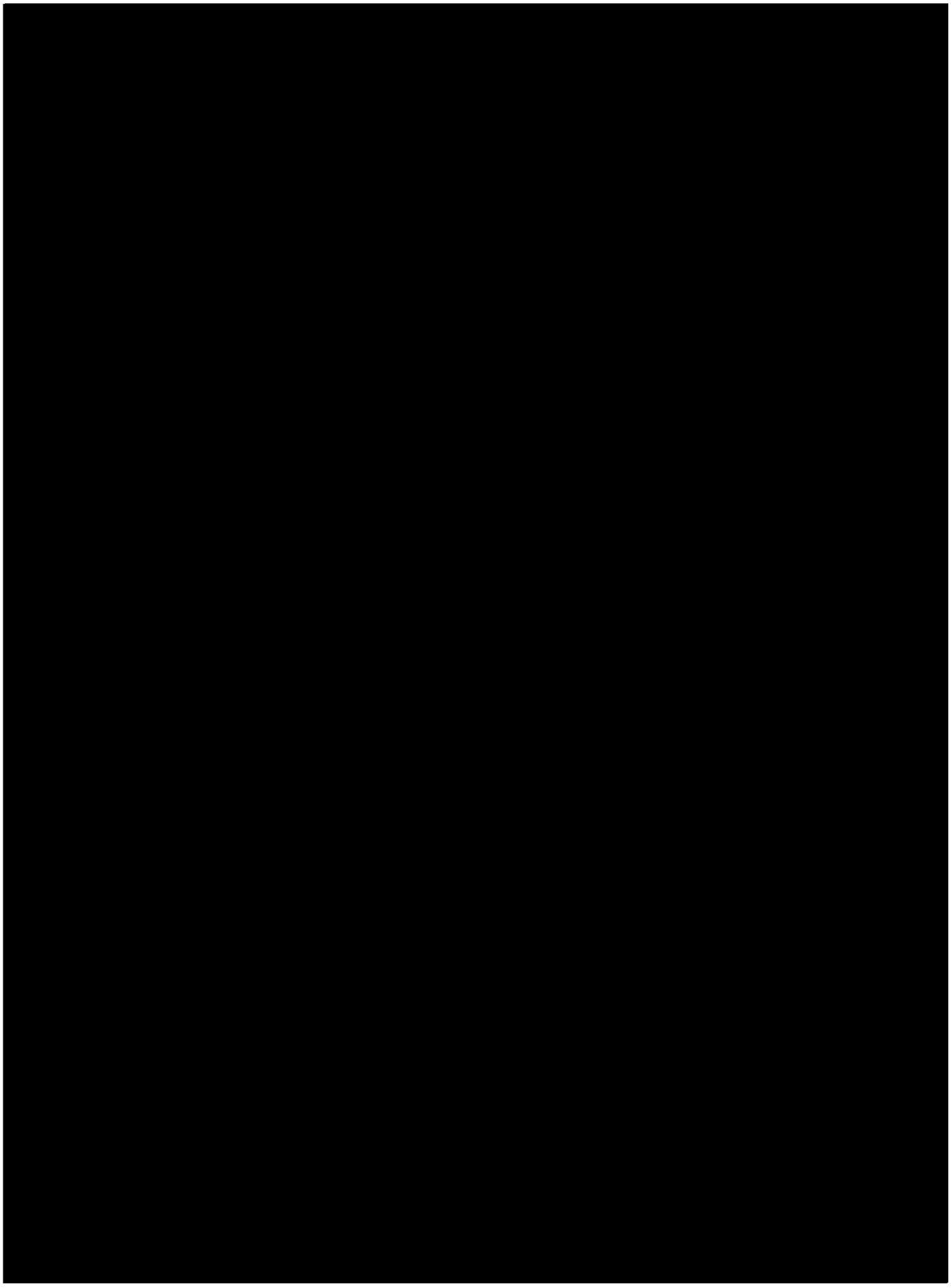


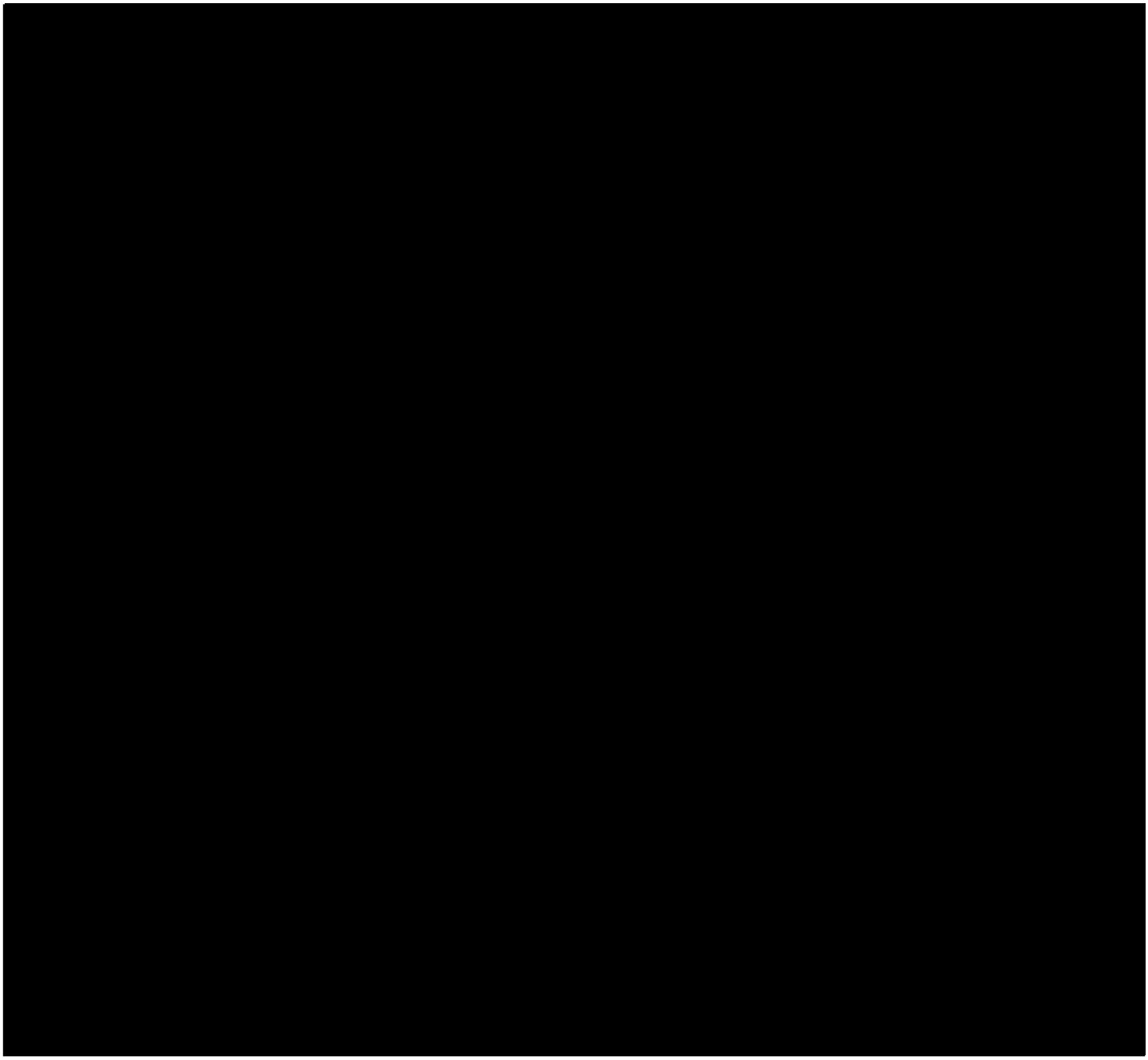








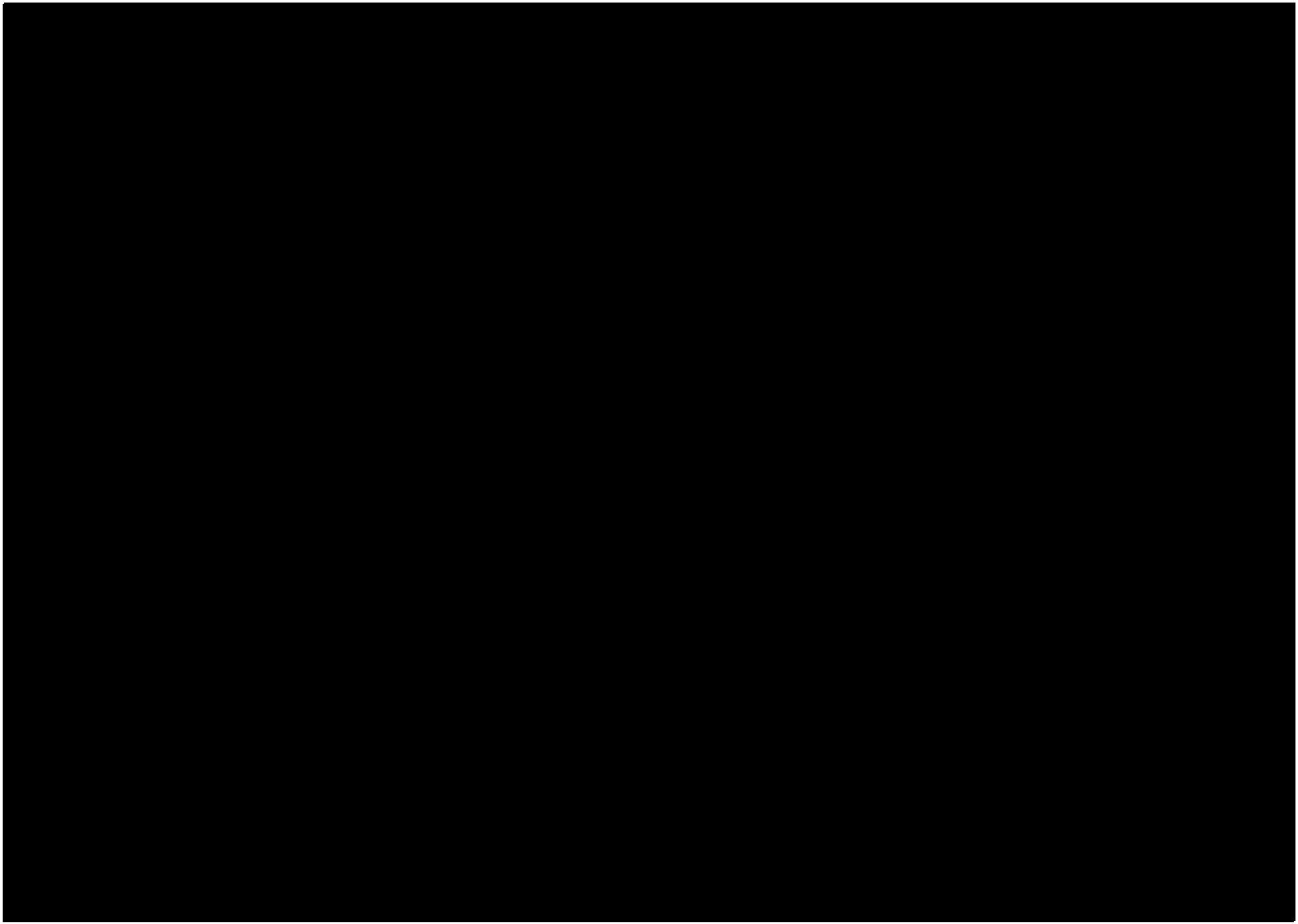


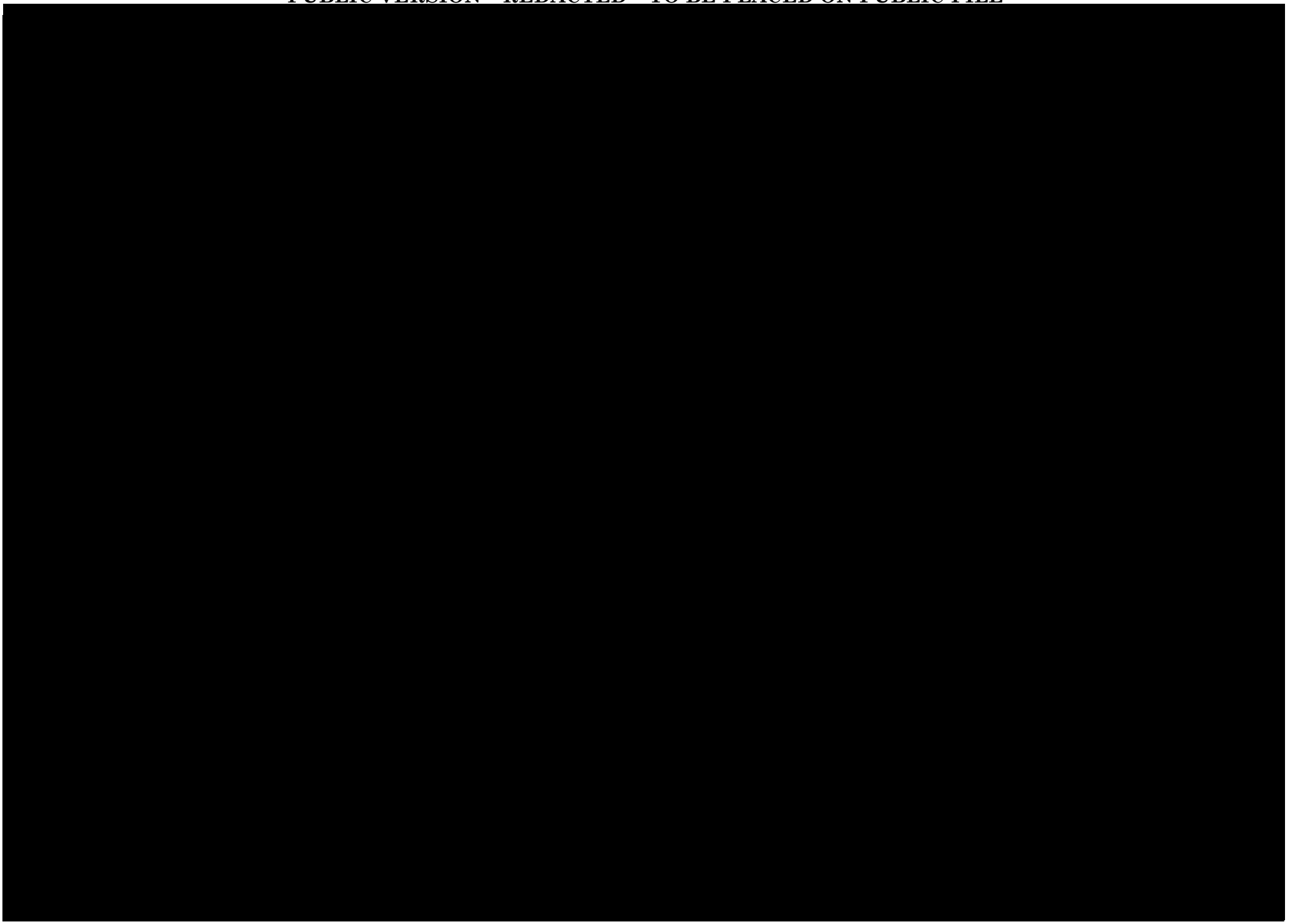


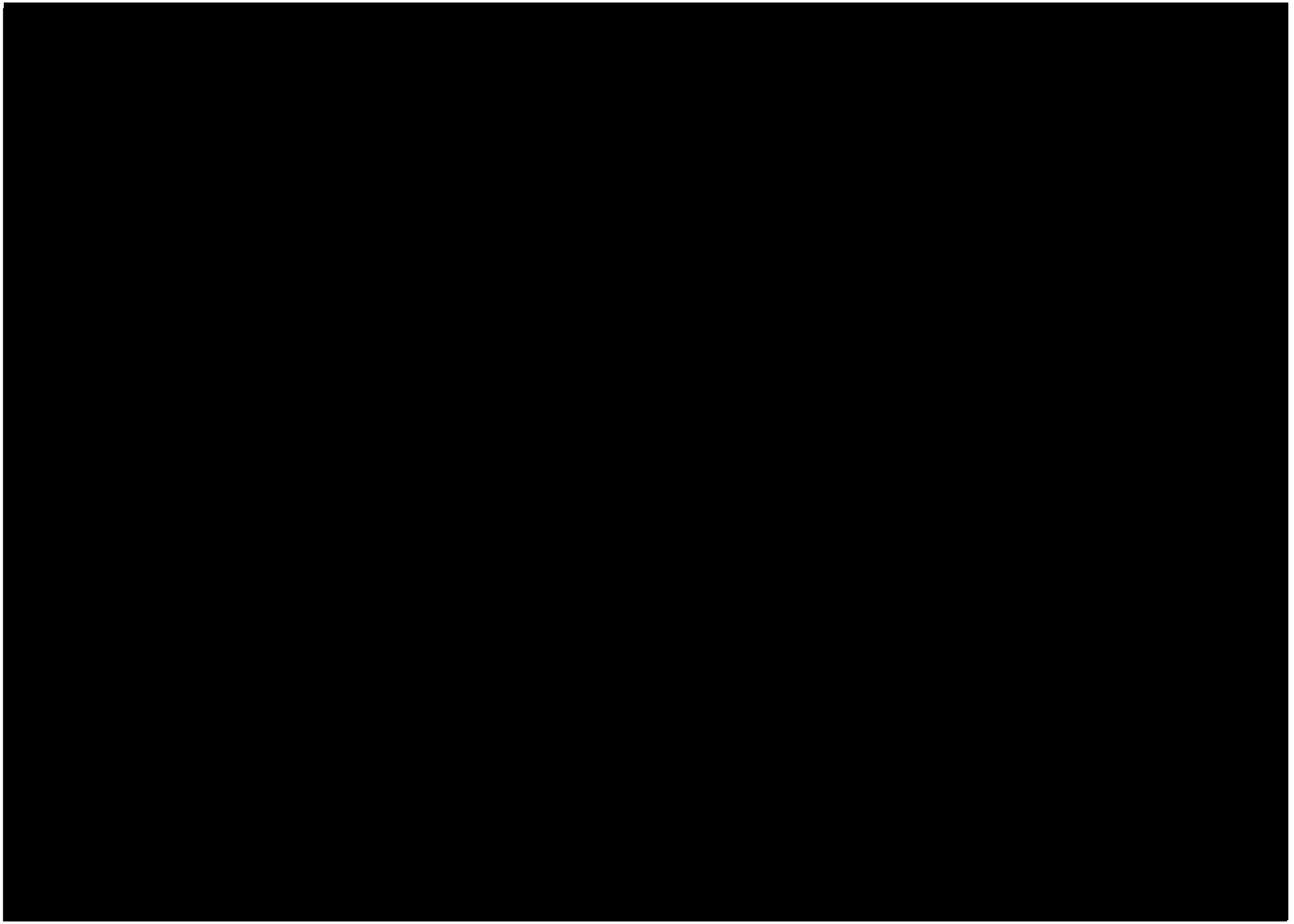
}}

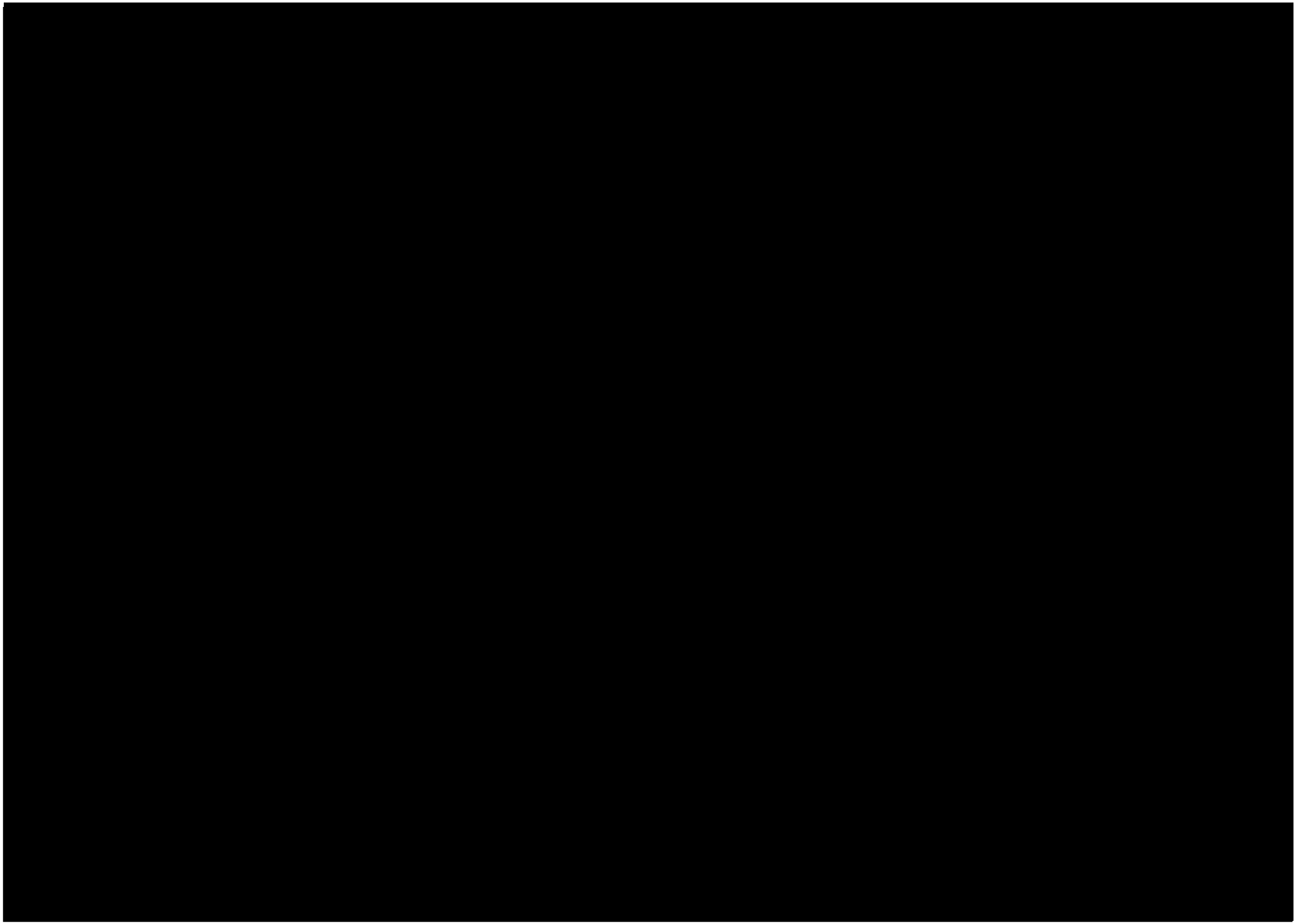
Counsel's Exhibit 29

{





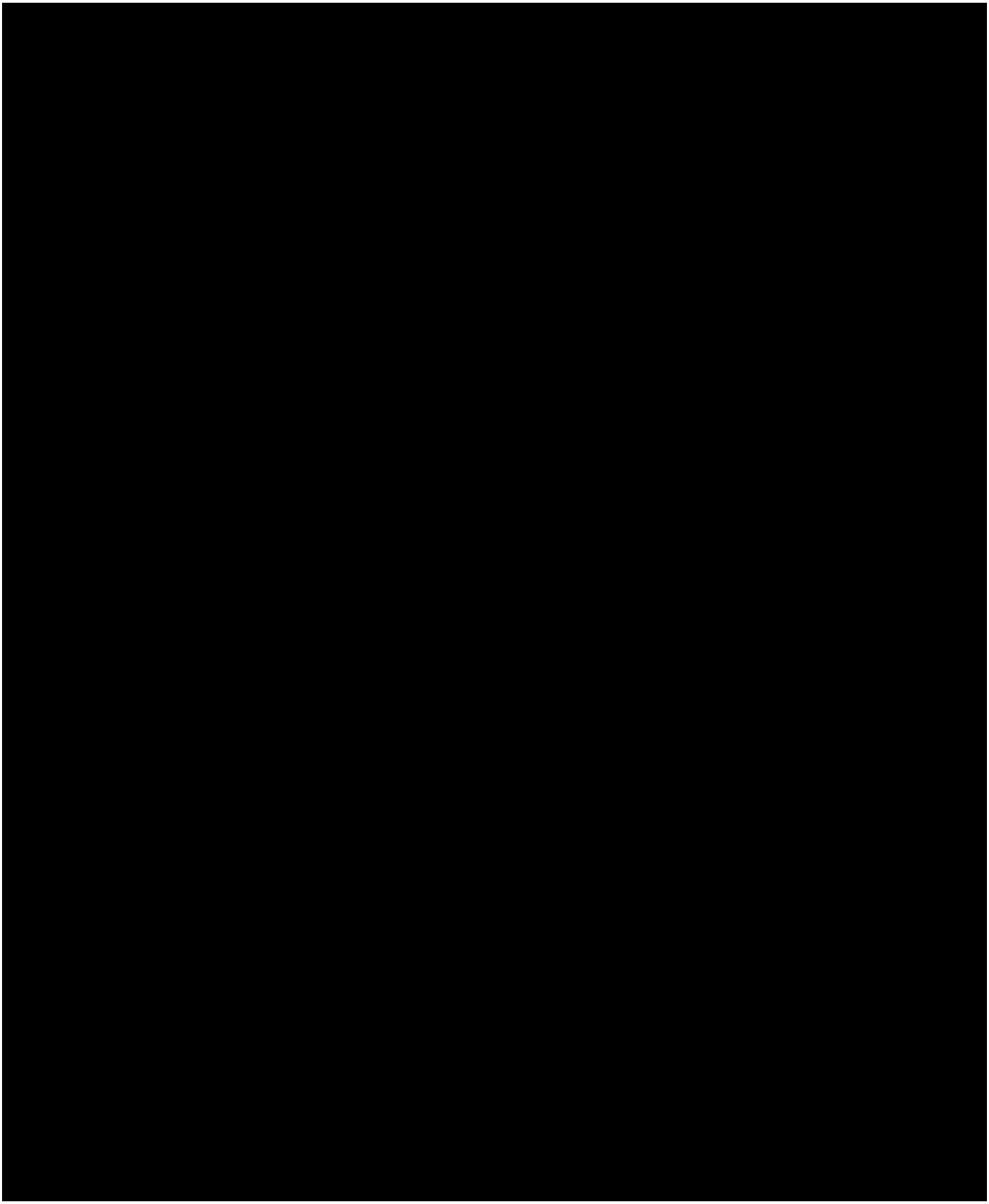


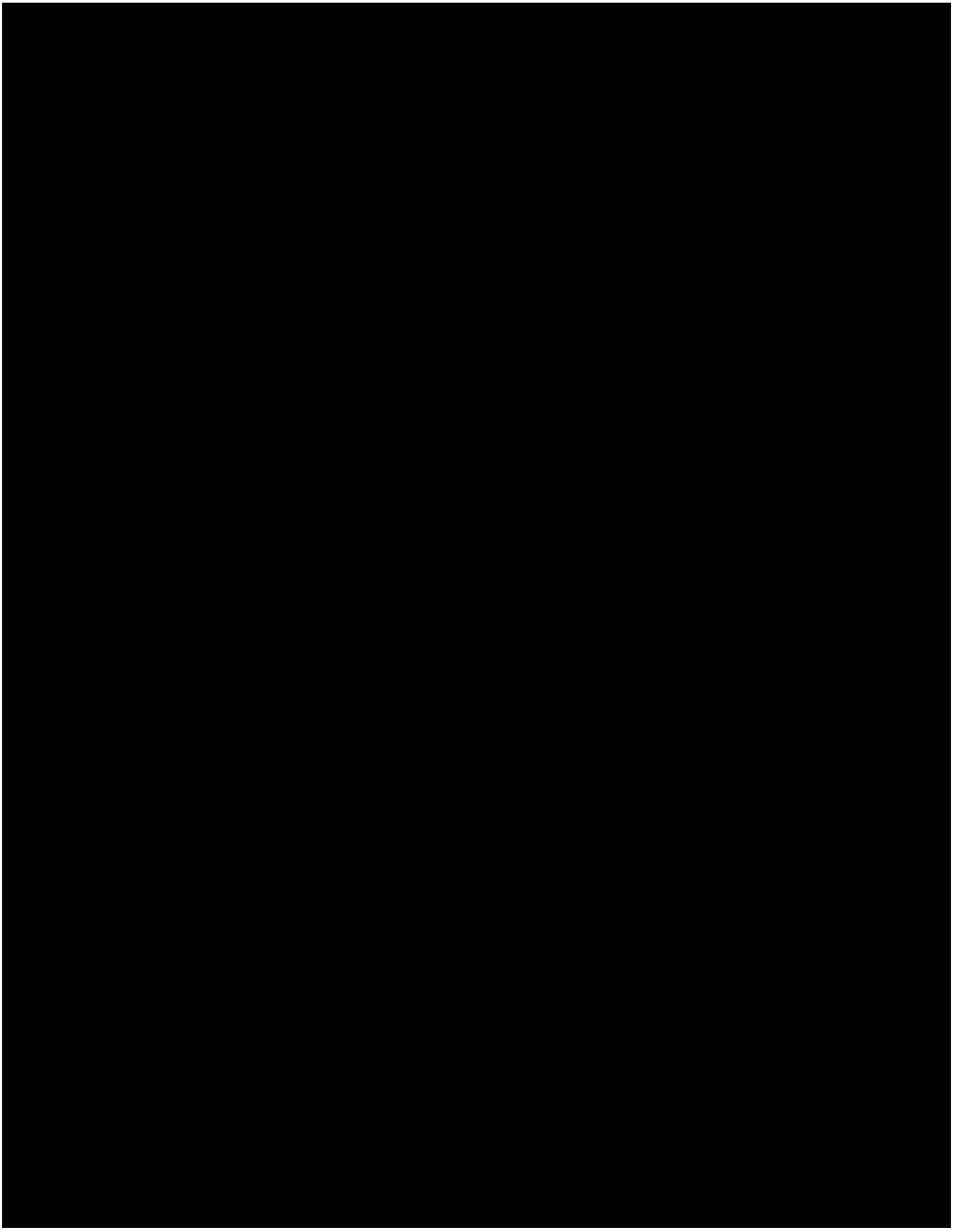


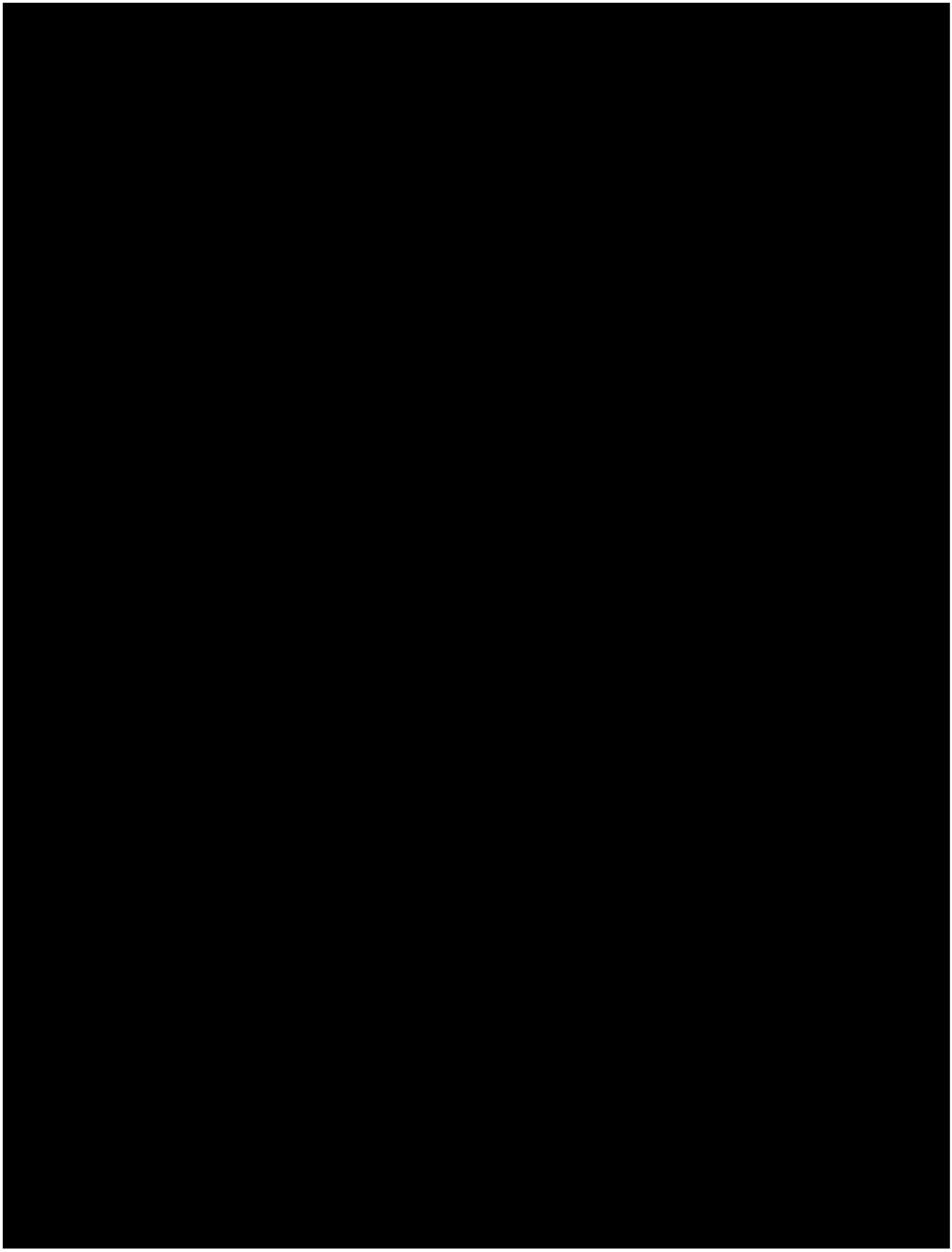


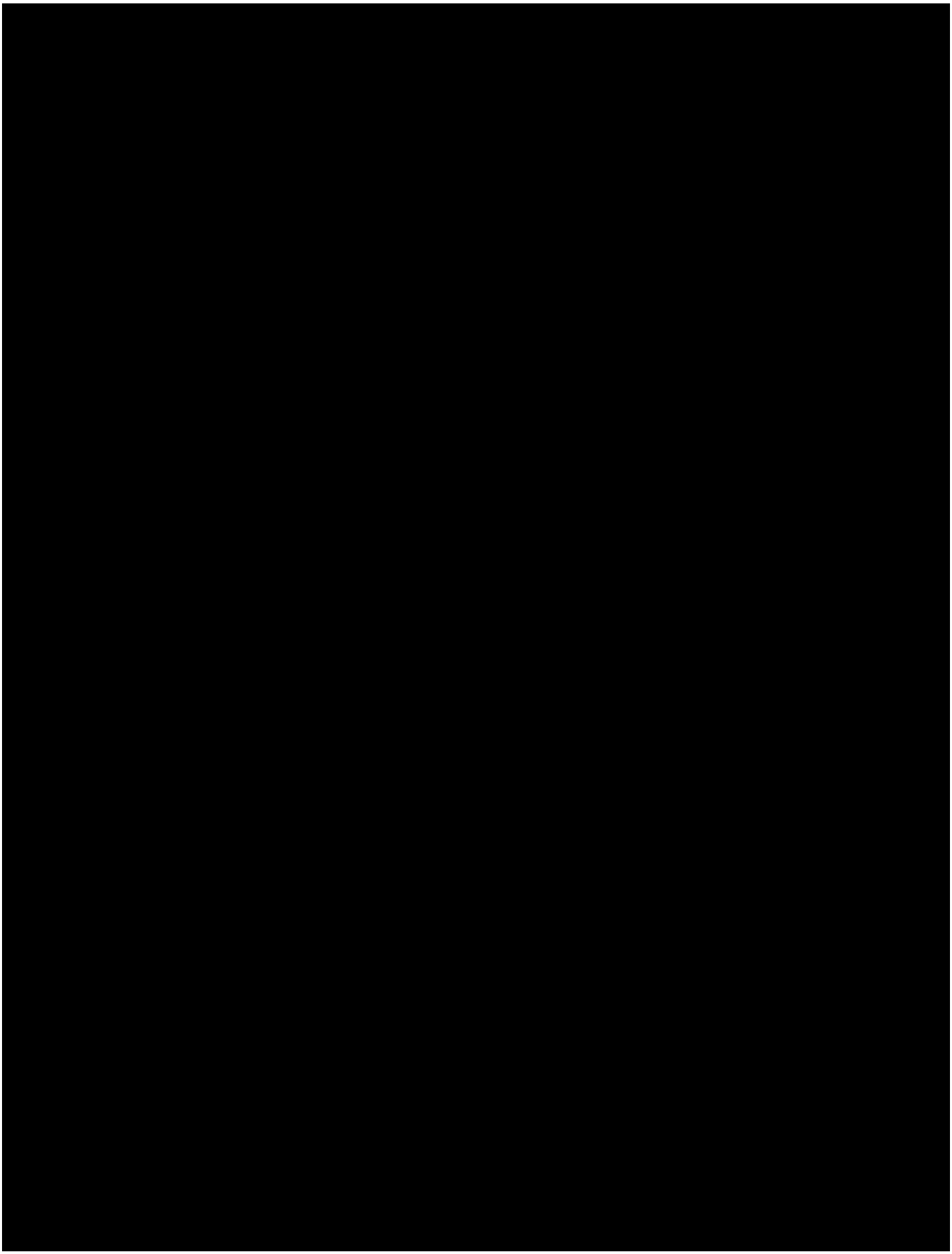
Counsel's Exhibit 30

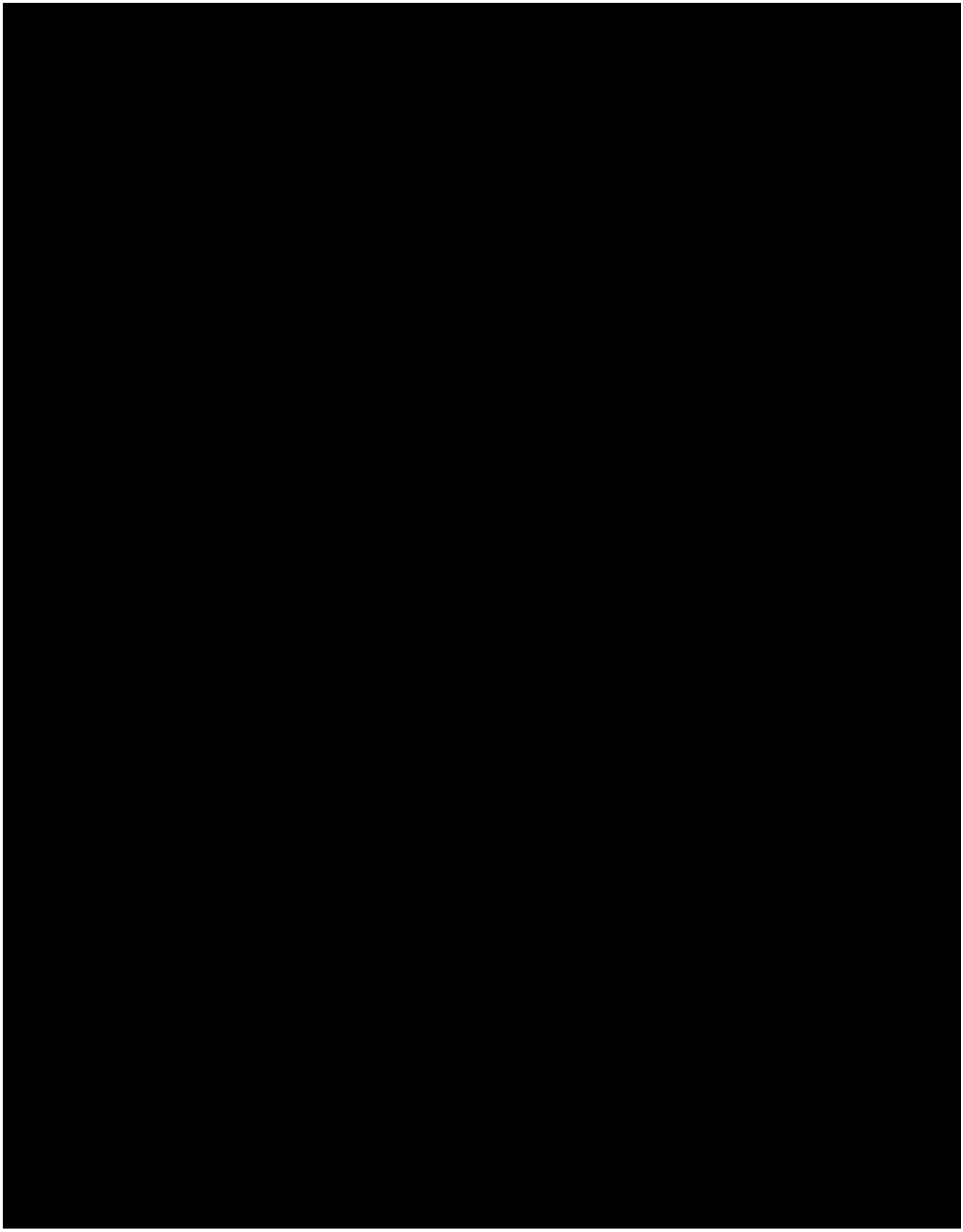
{{

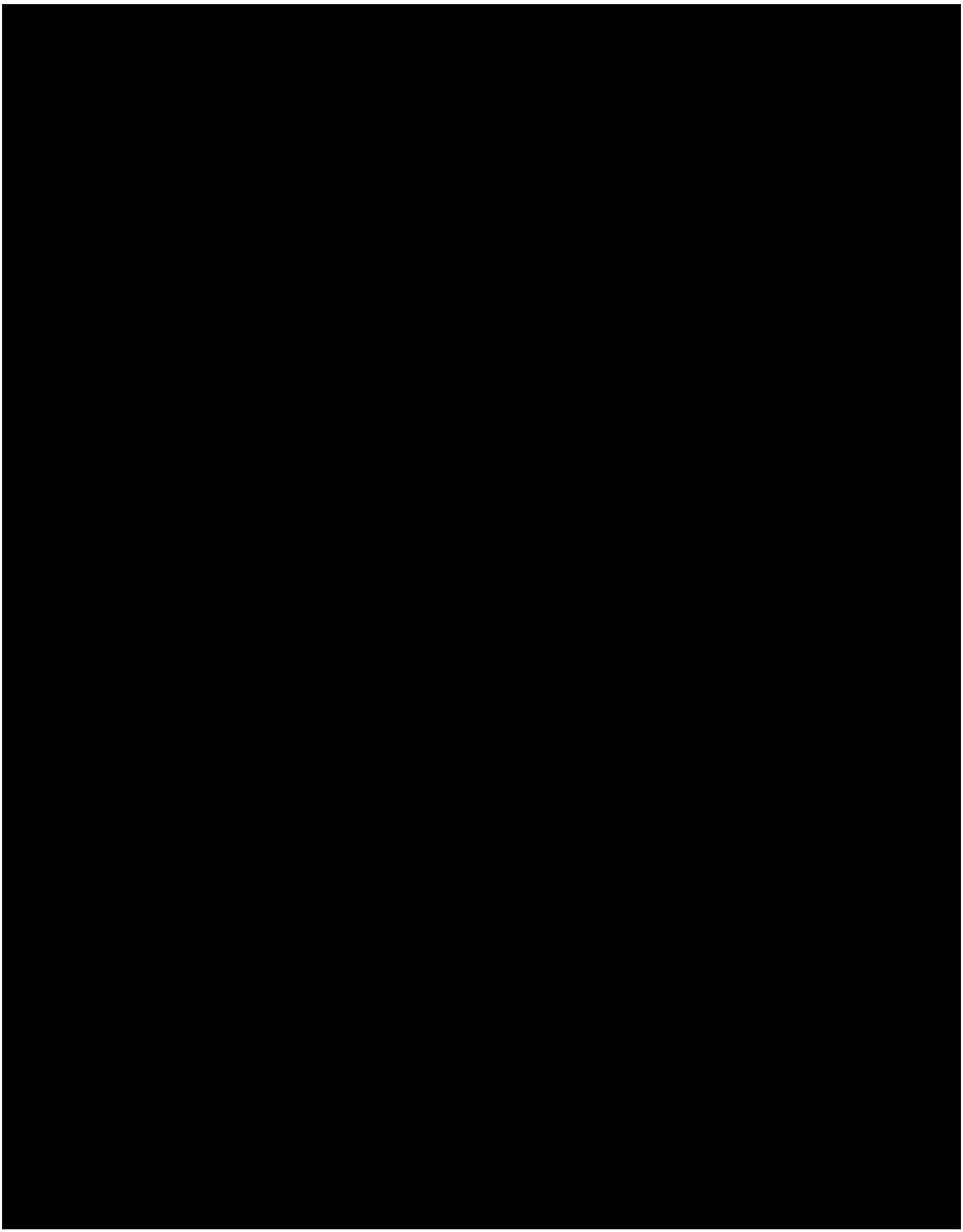










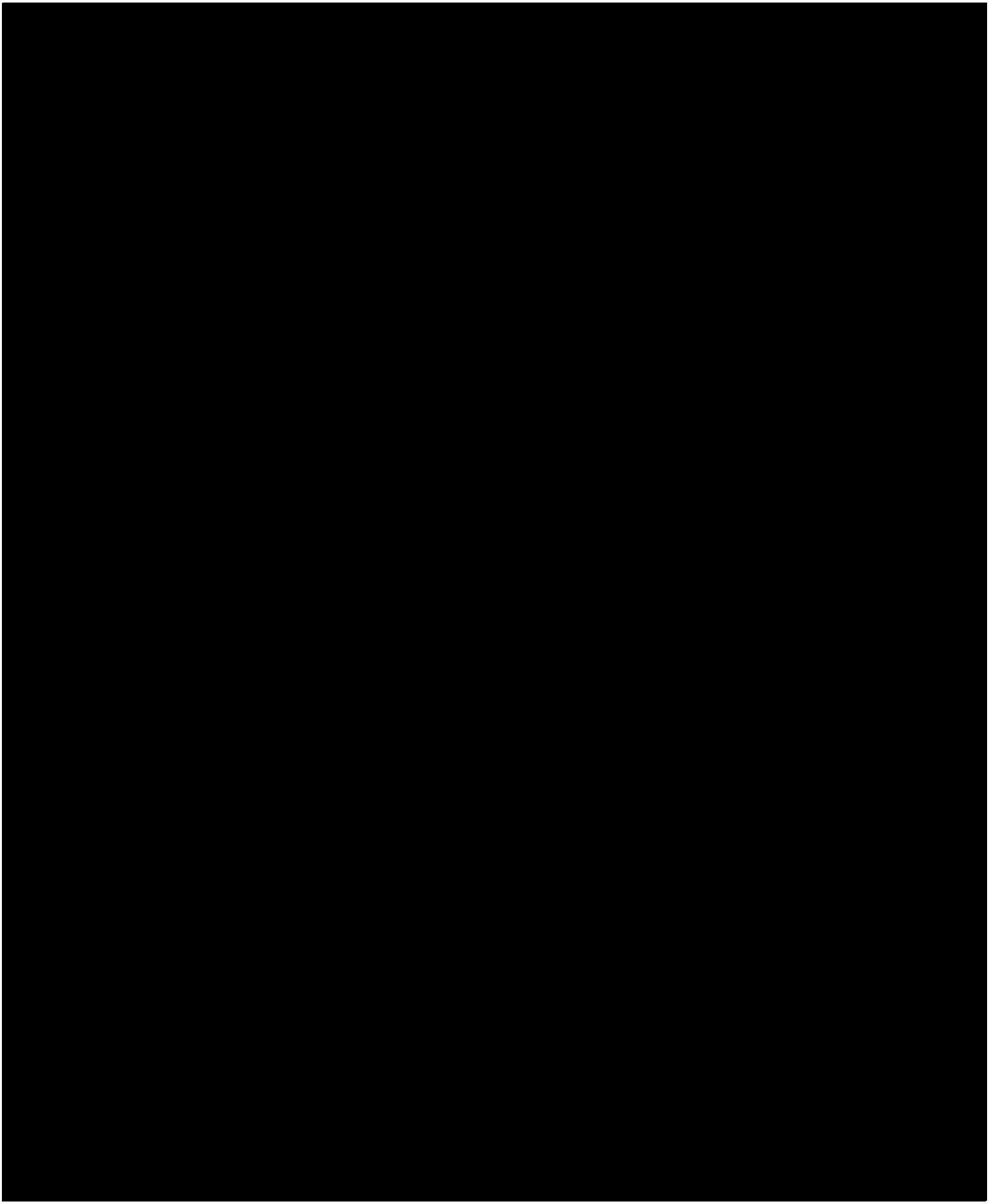


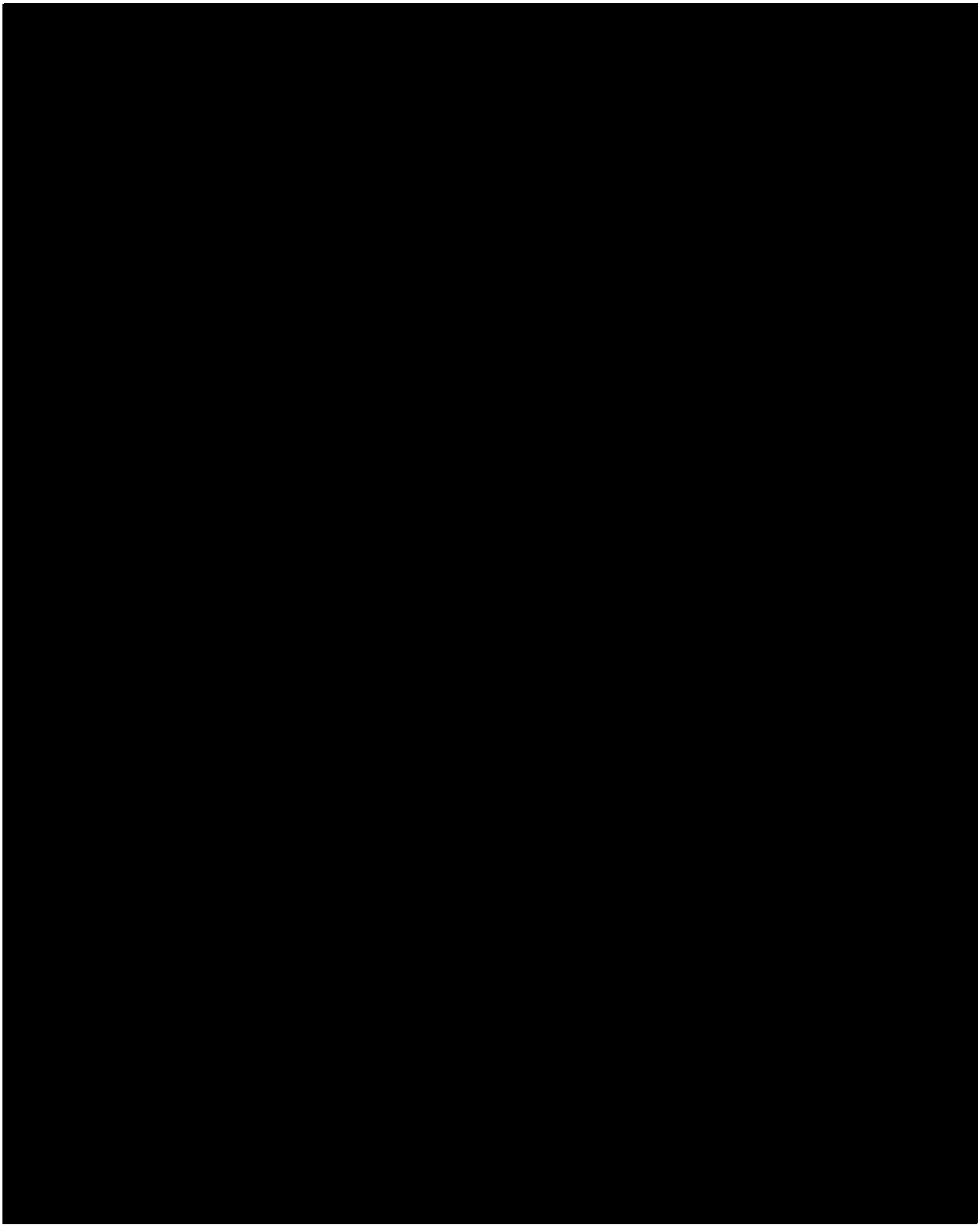


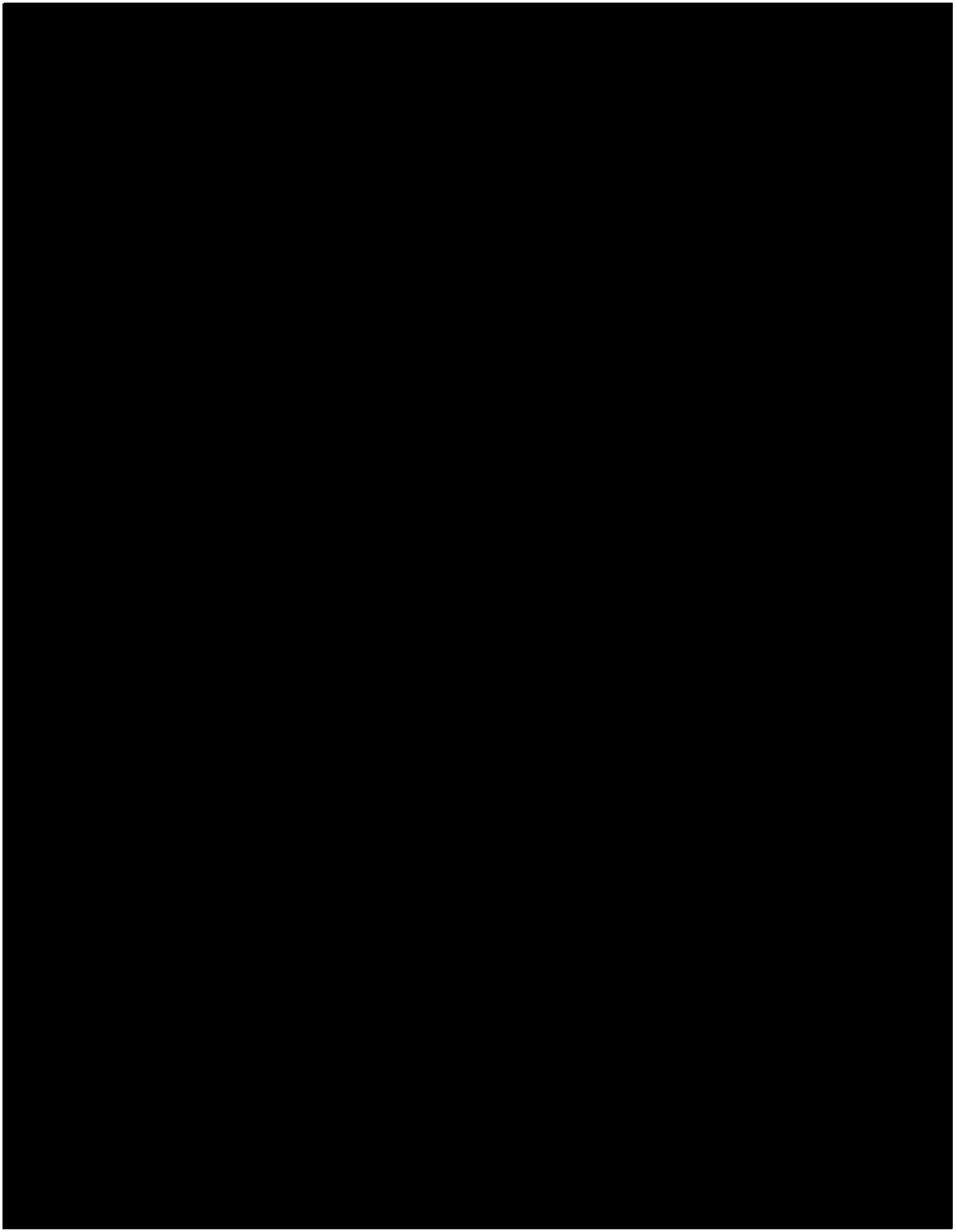
}}

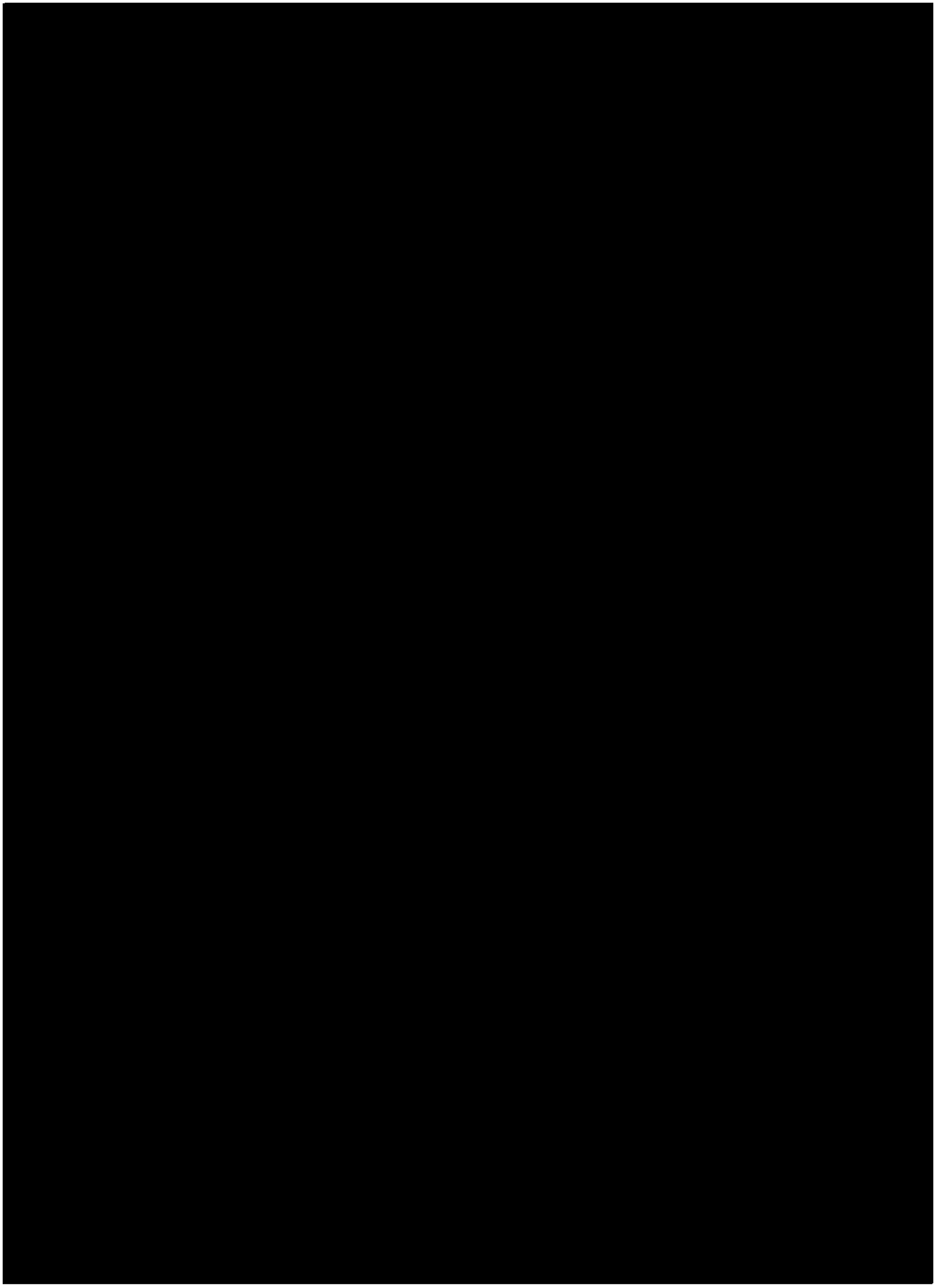
Counsel's Exhibit 31

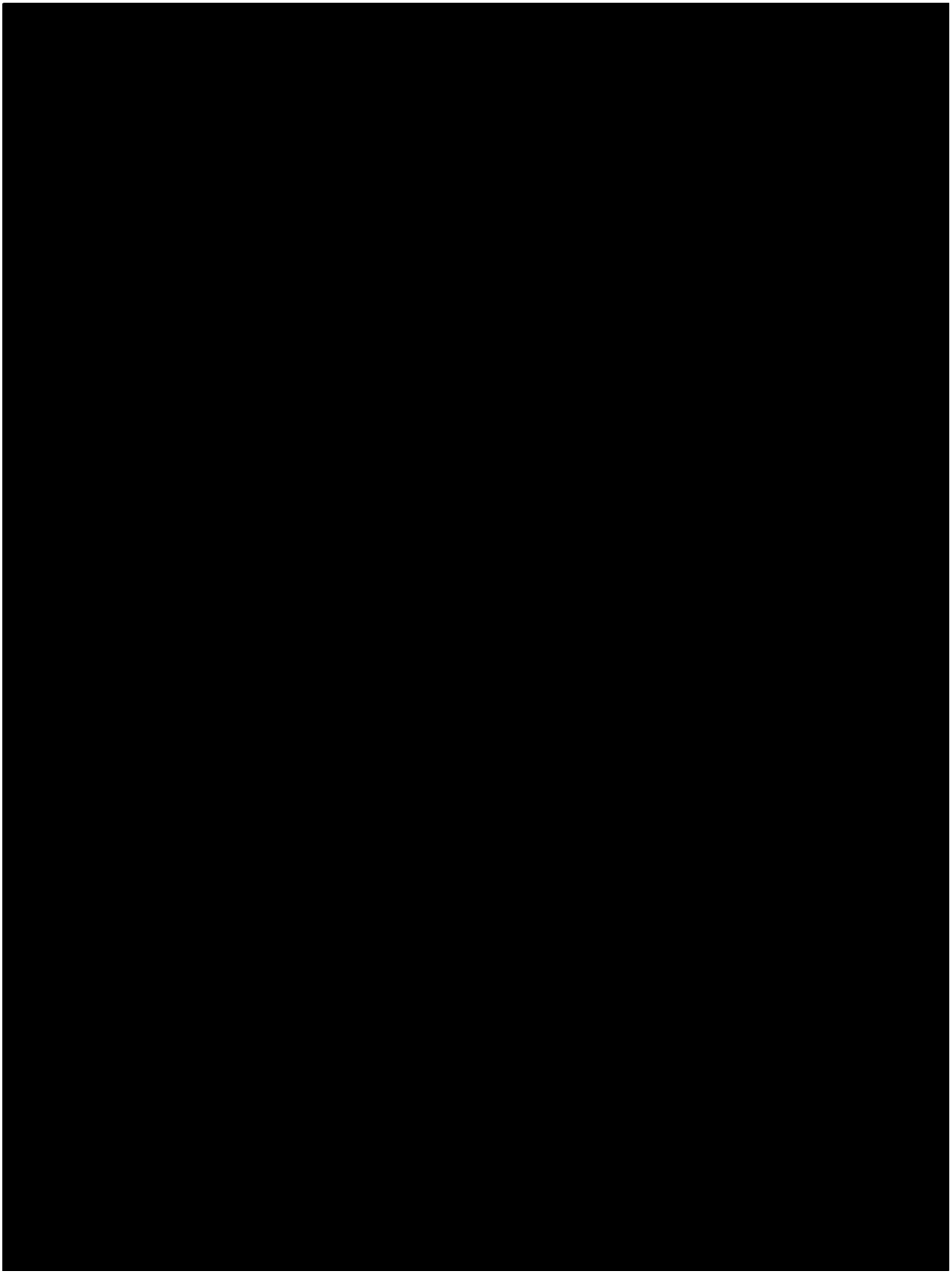
{{

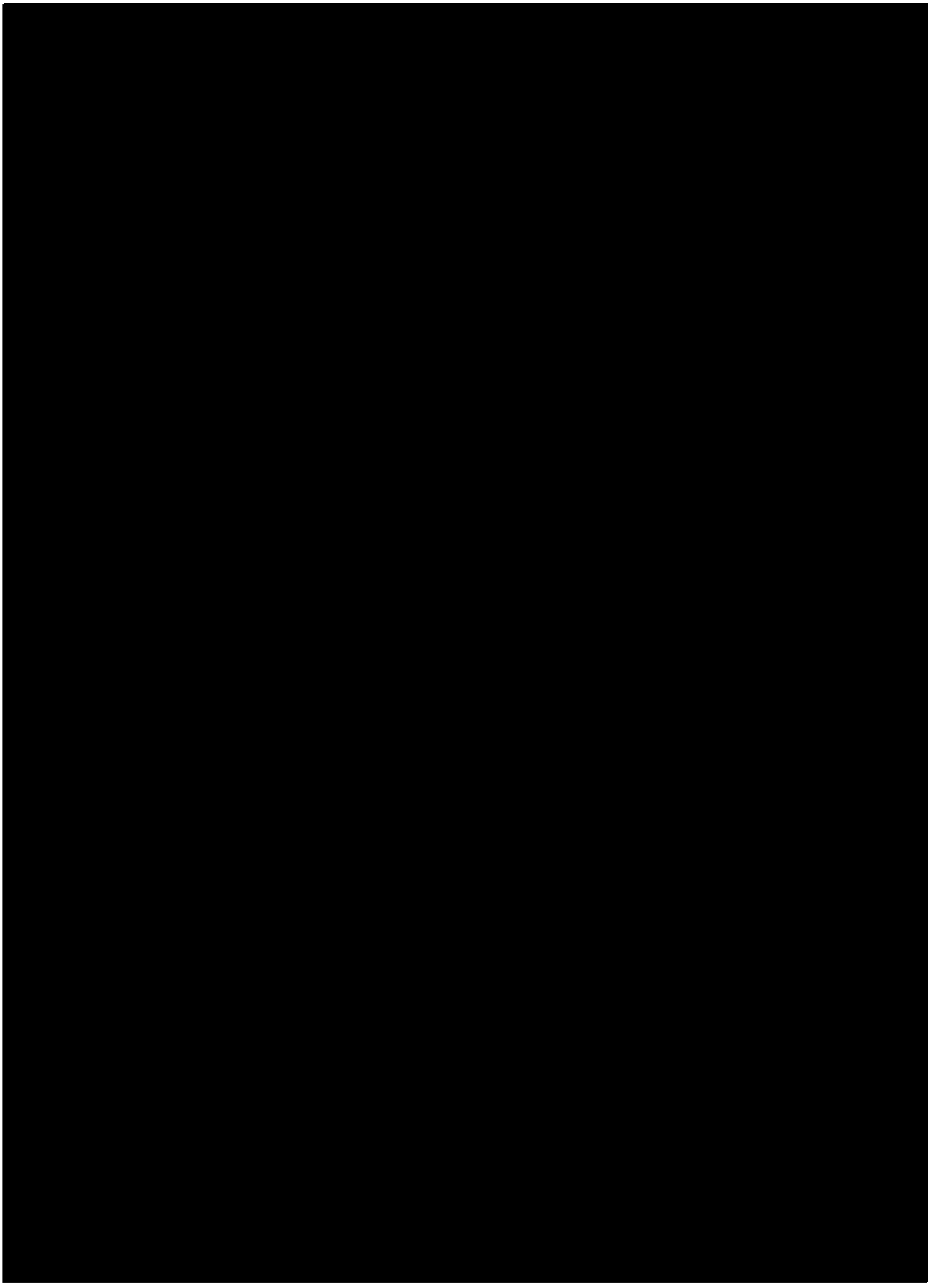


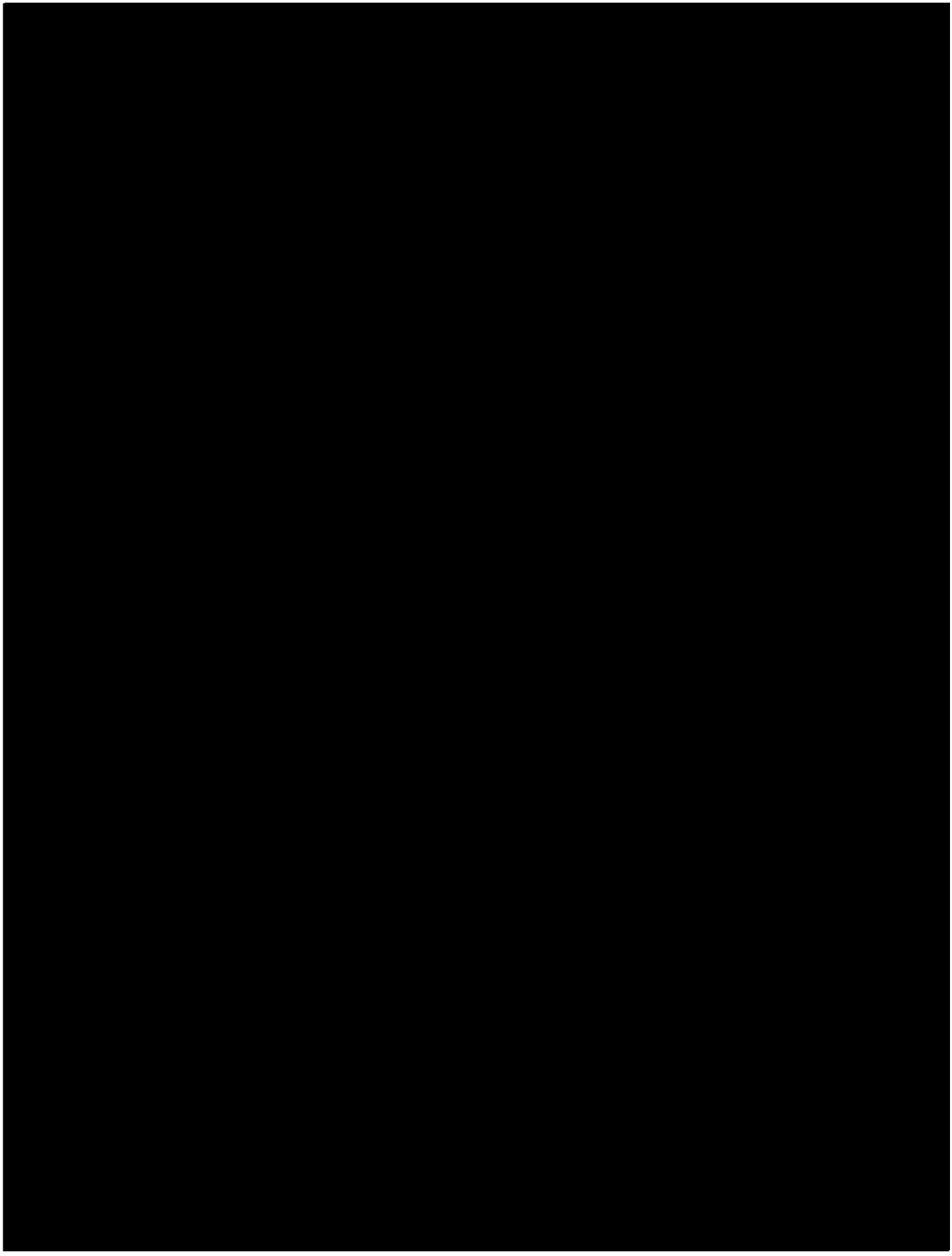


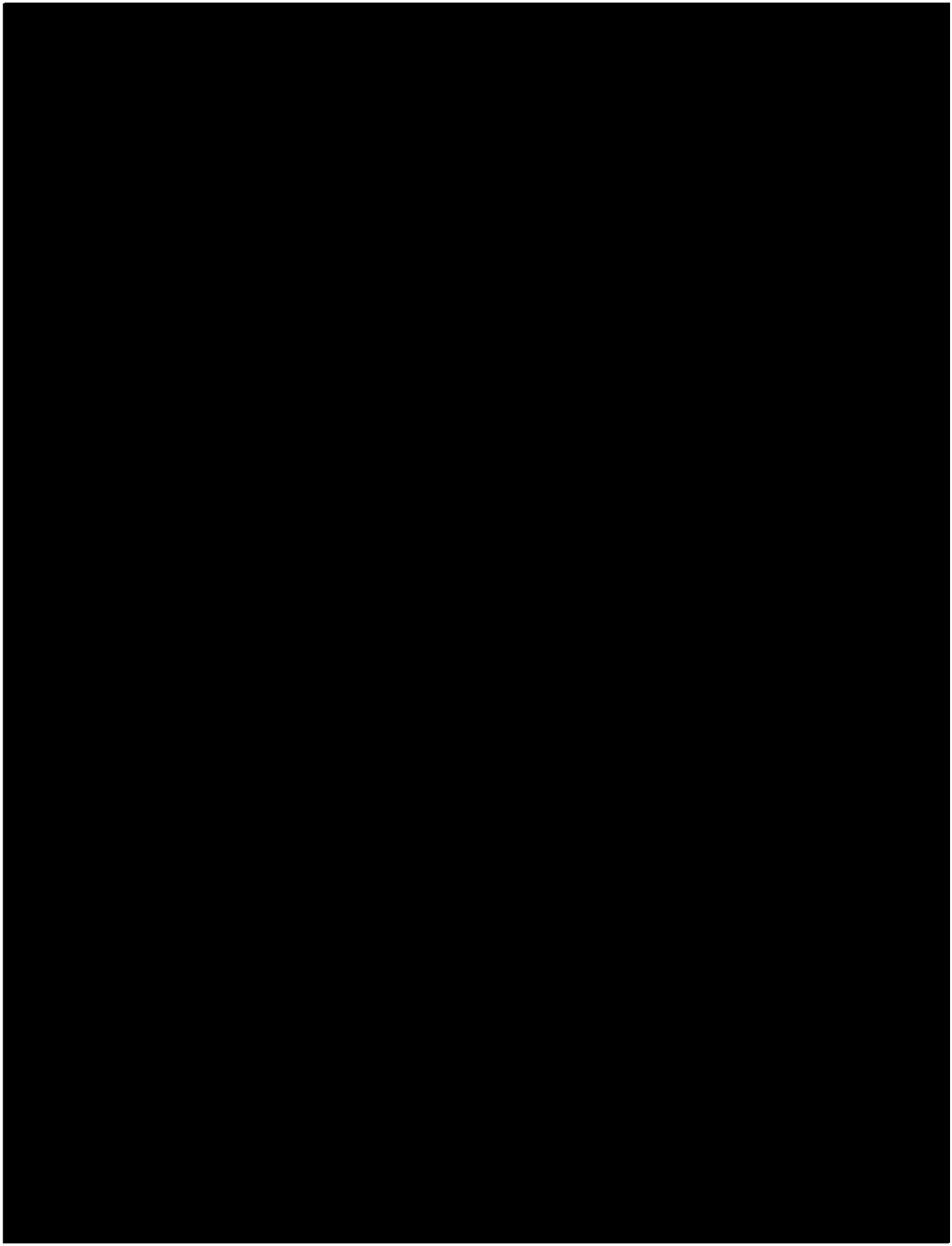


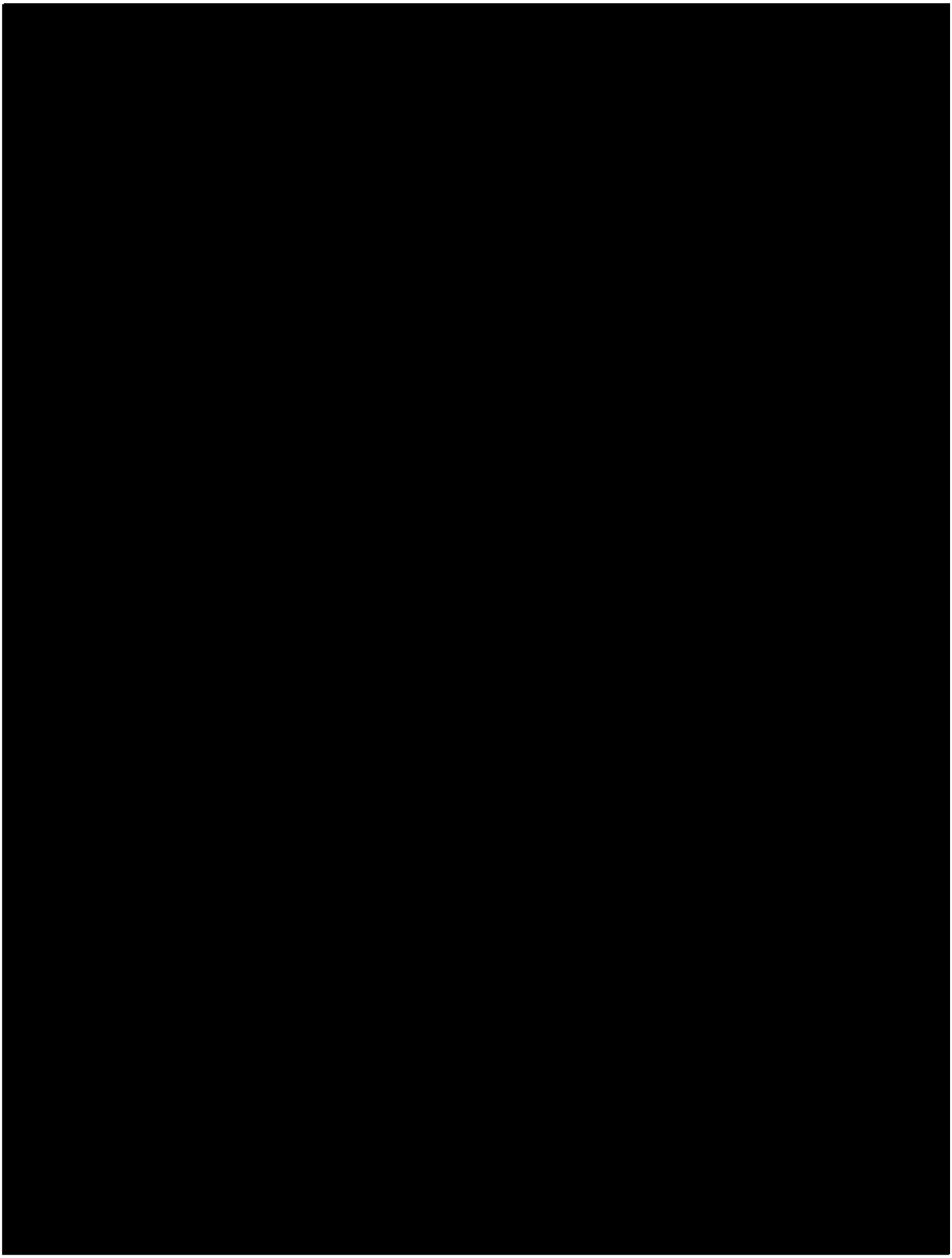


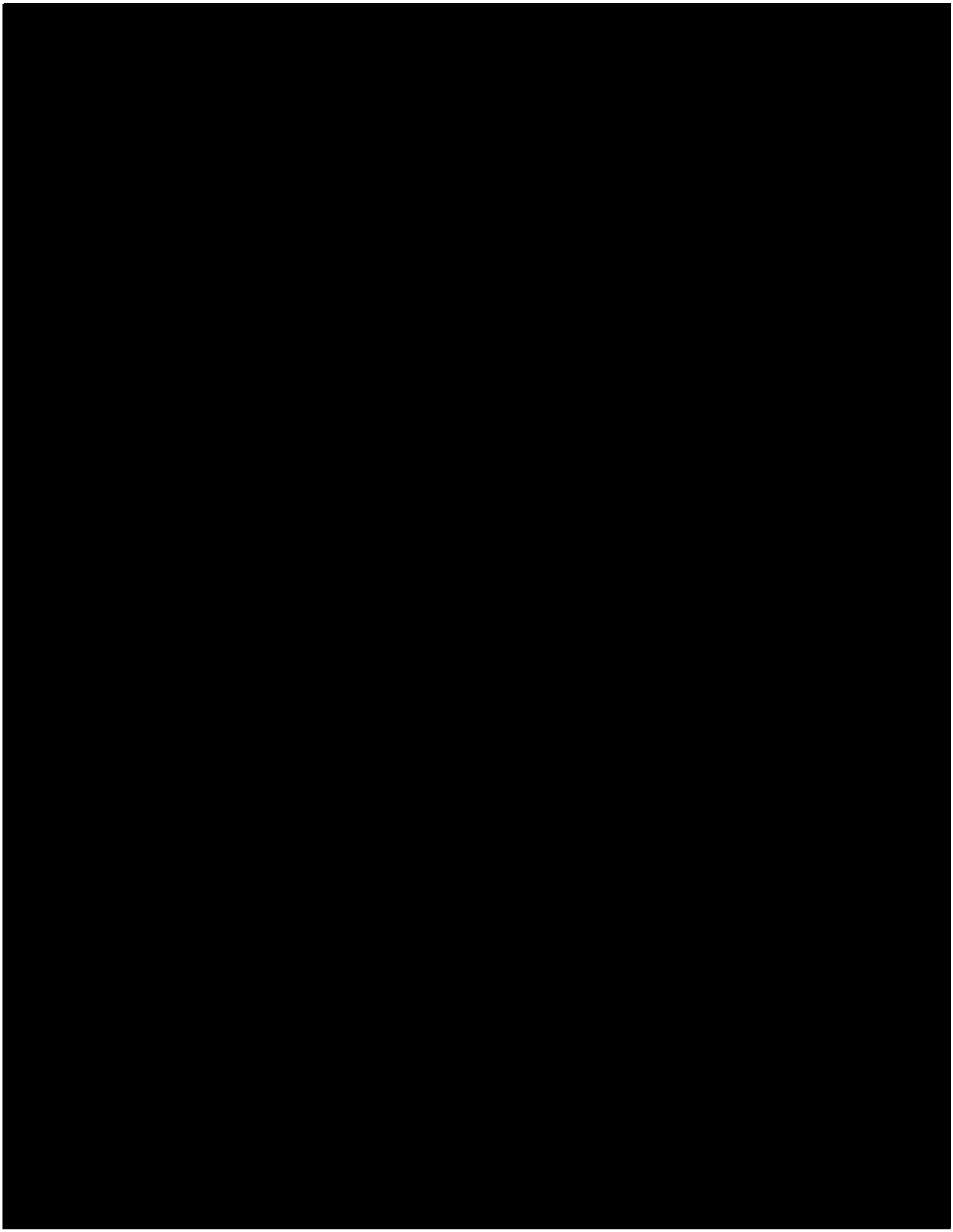


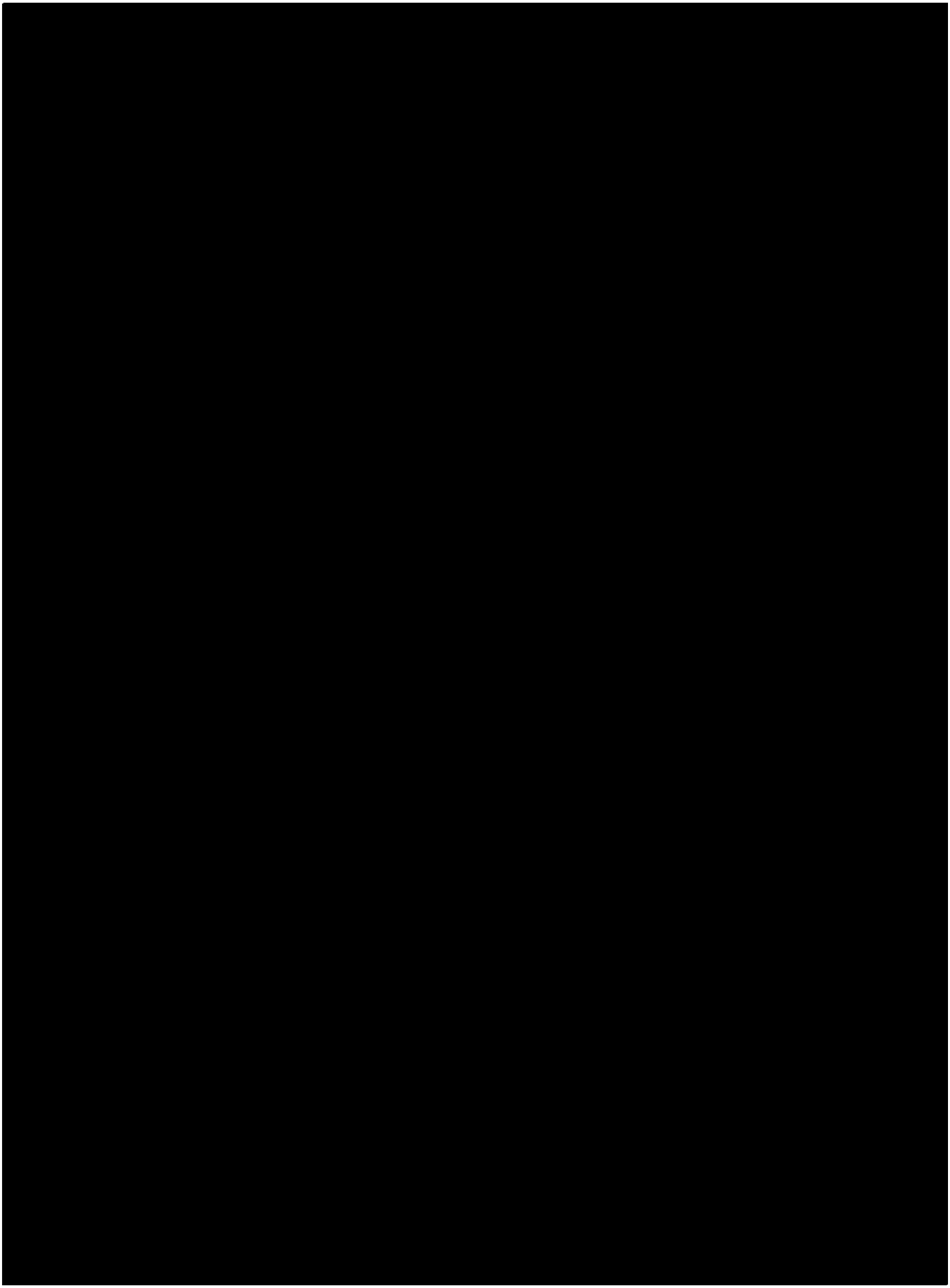


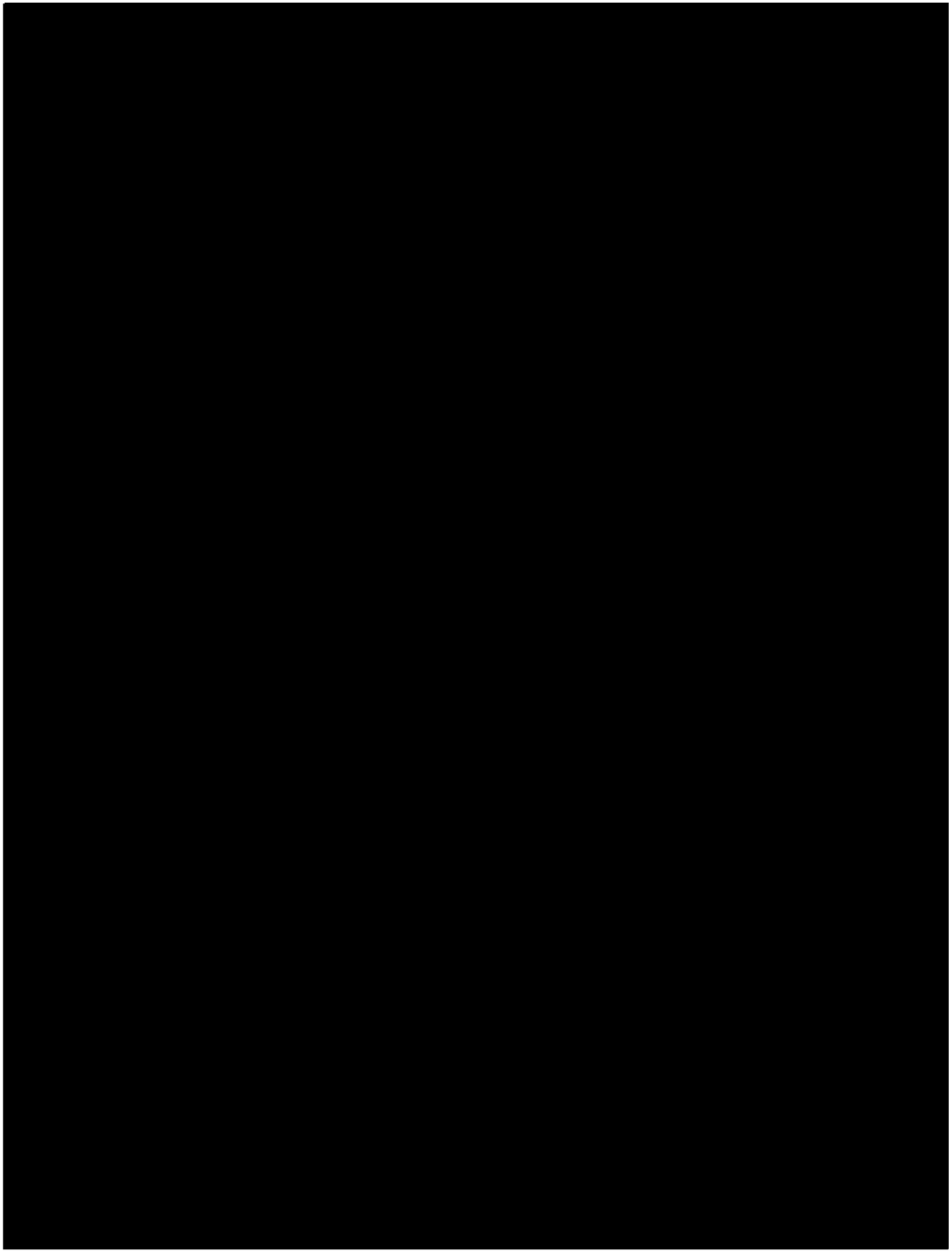


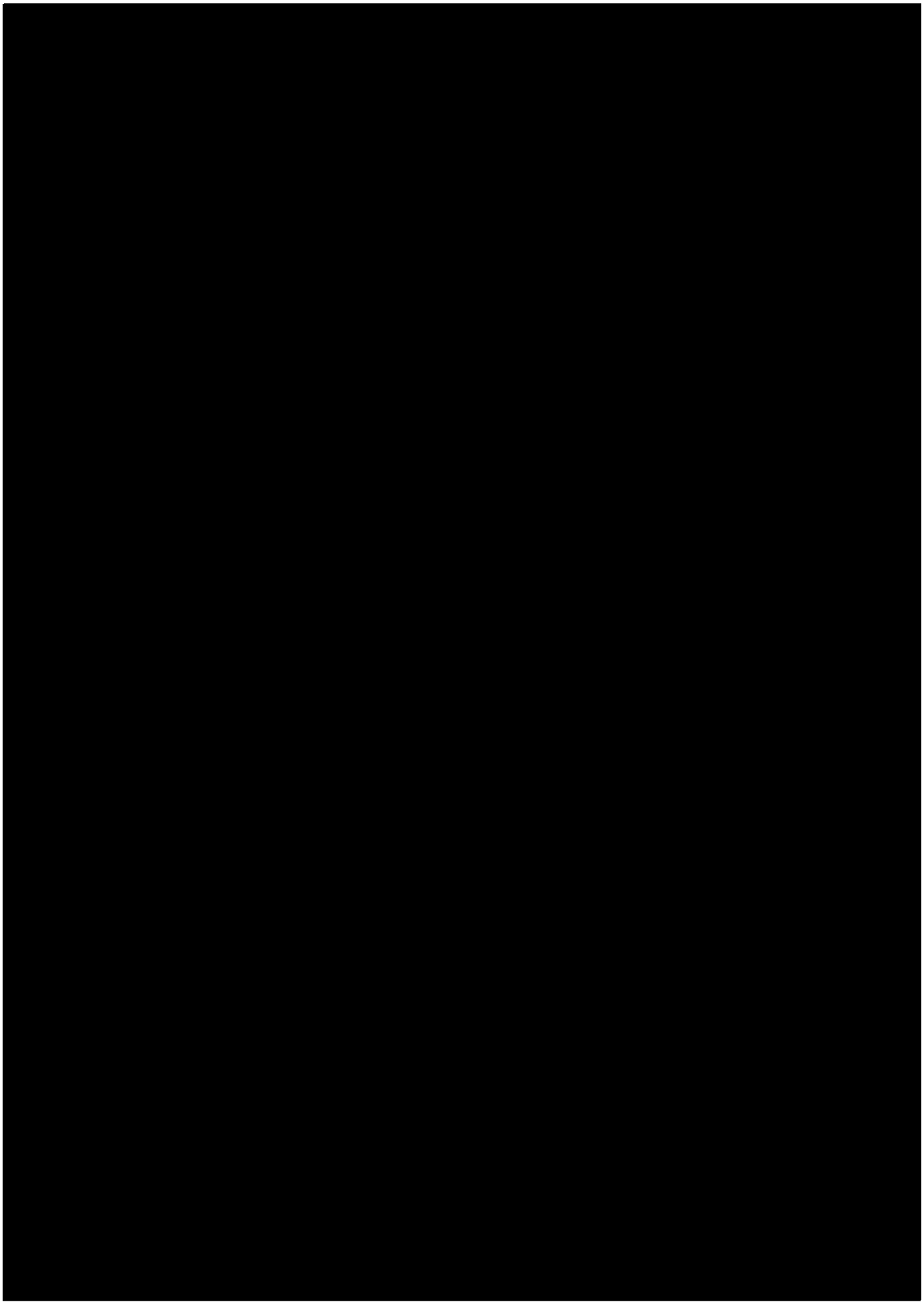


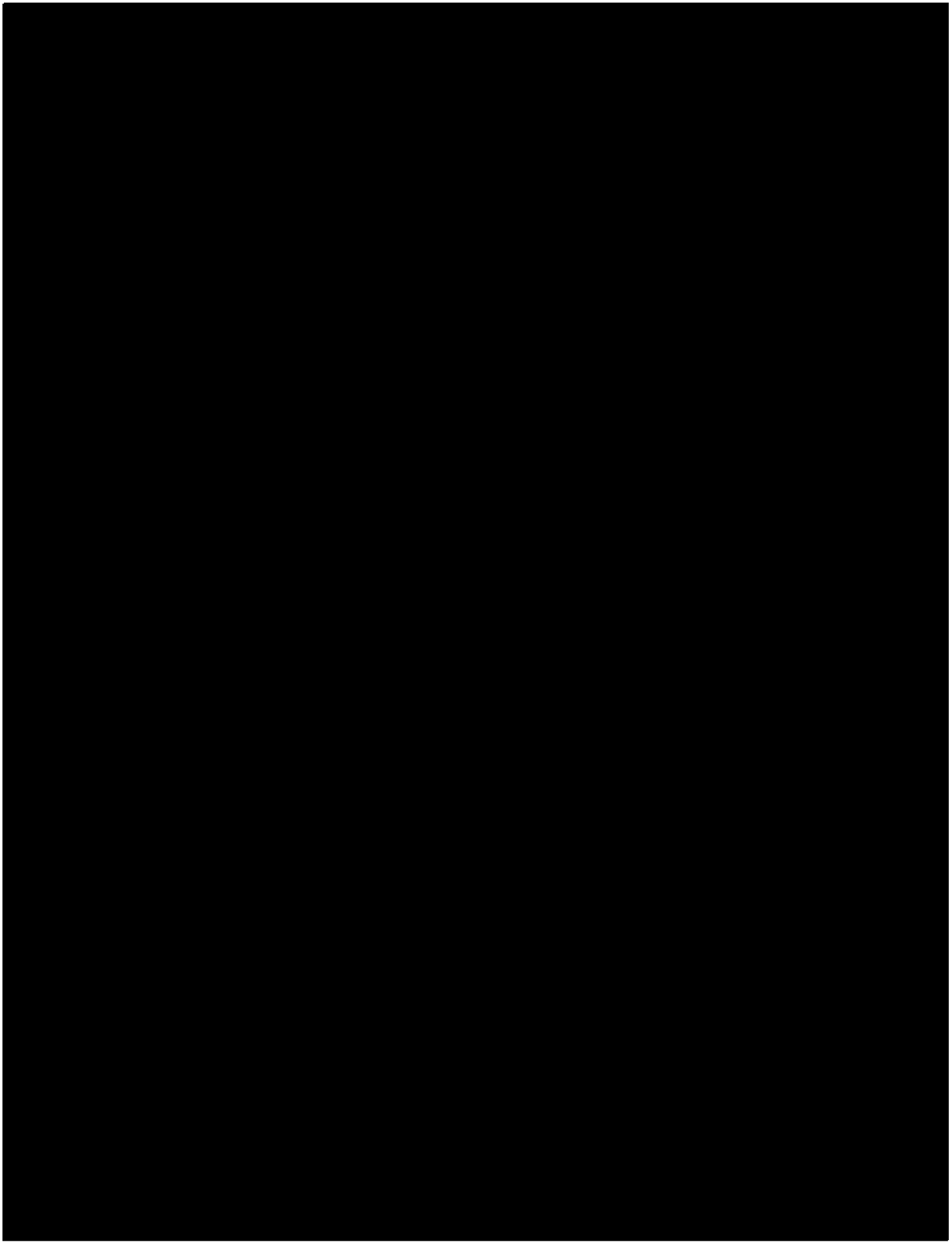


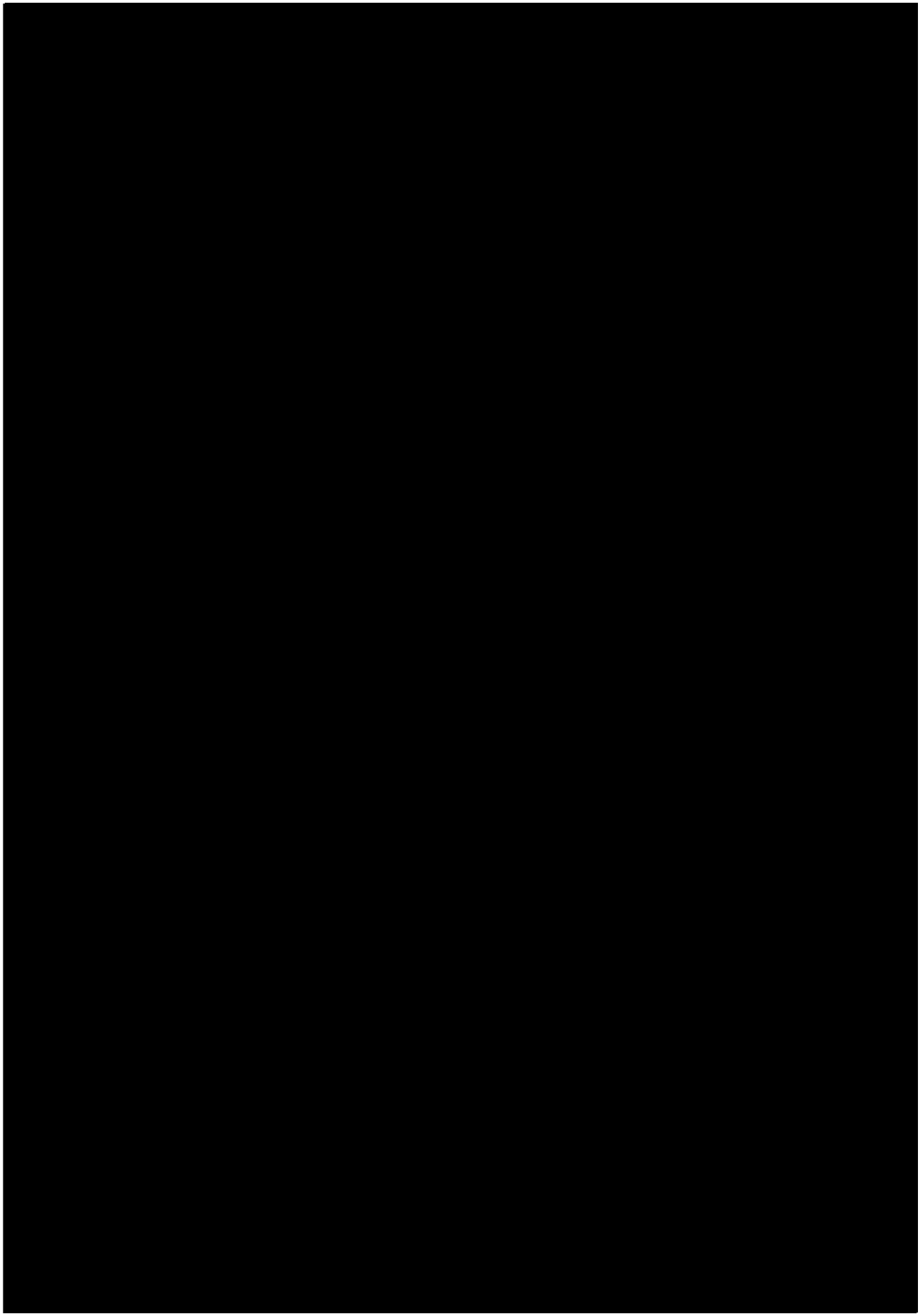


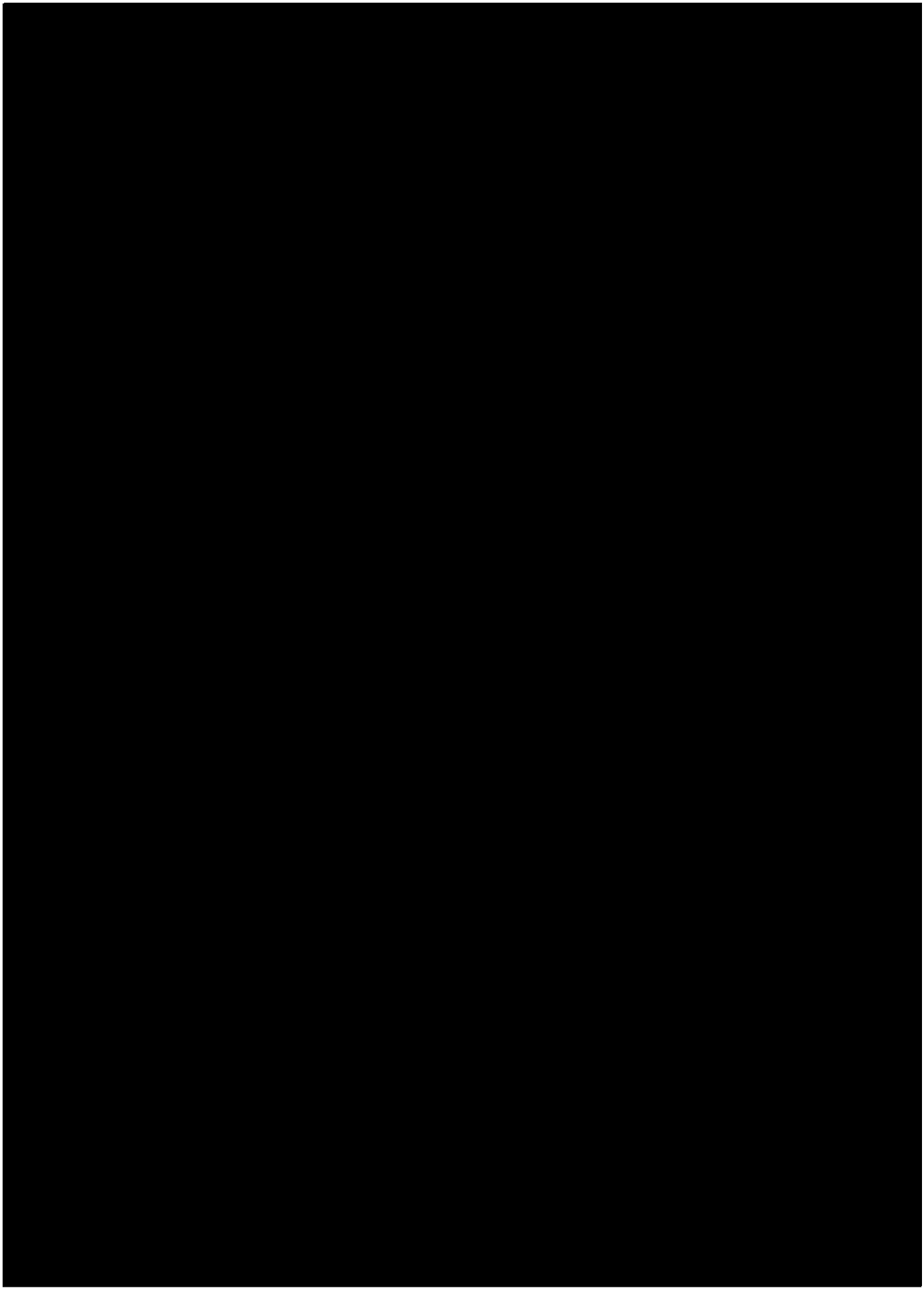


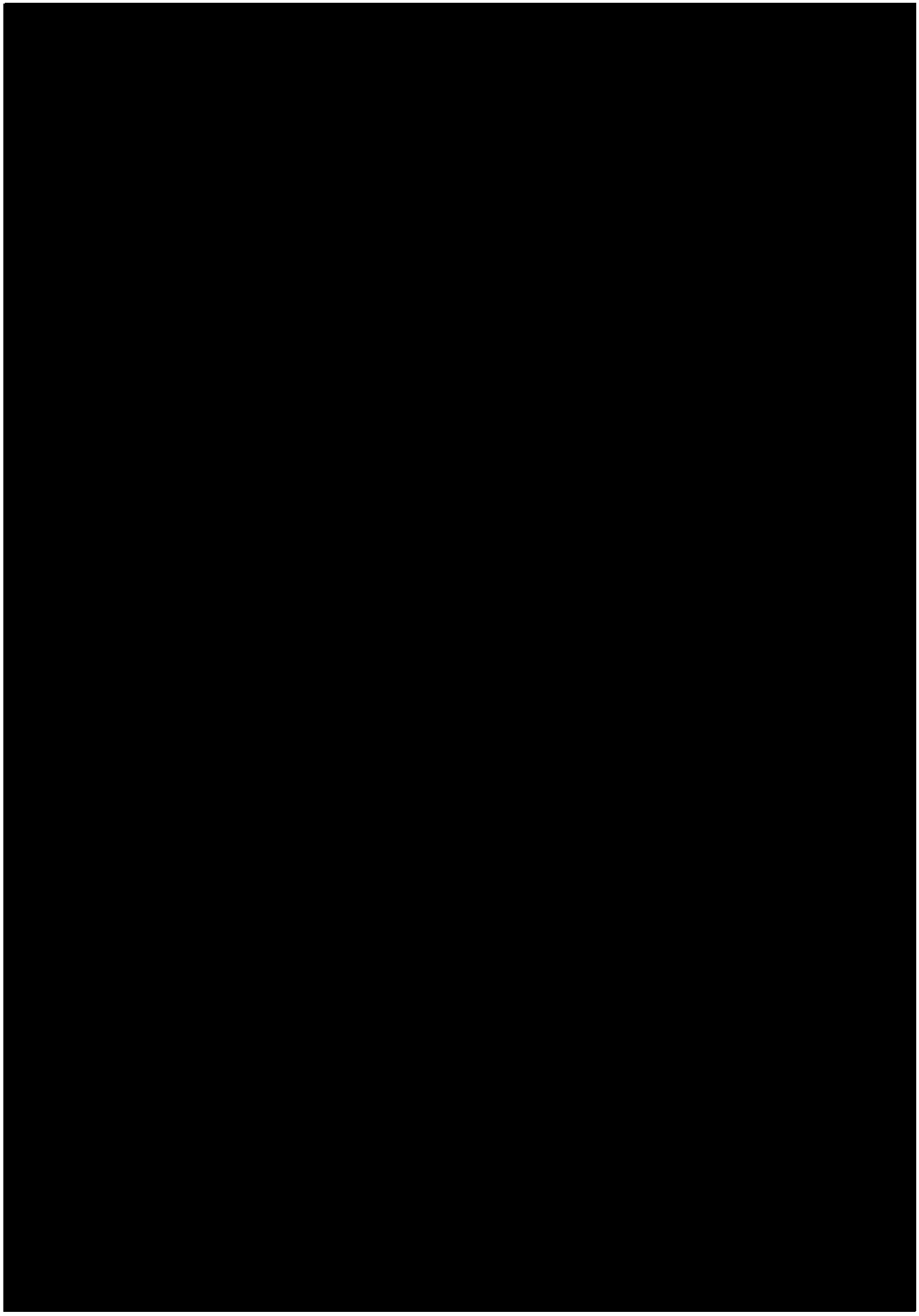


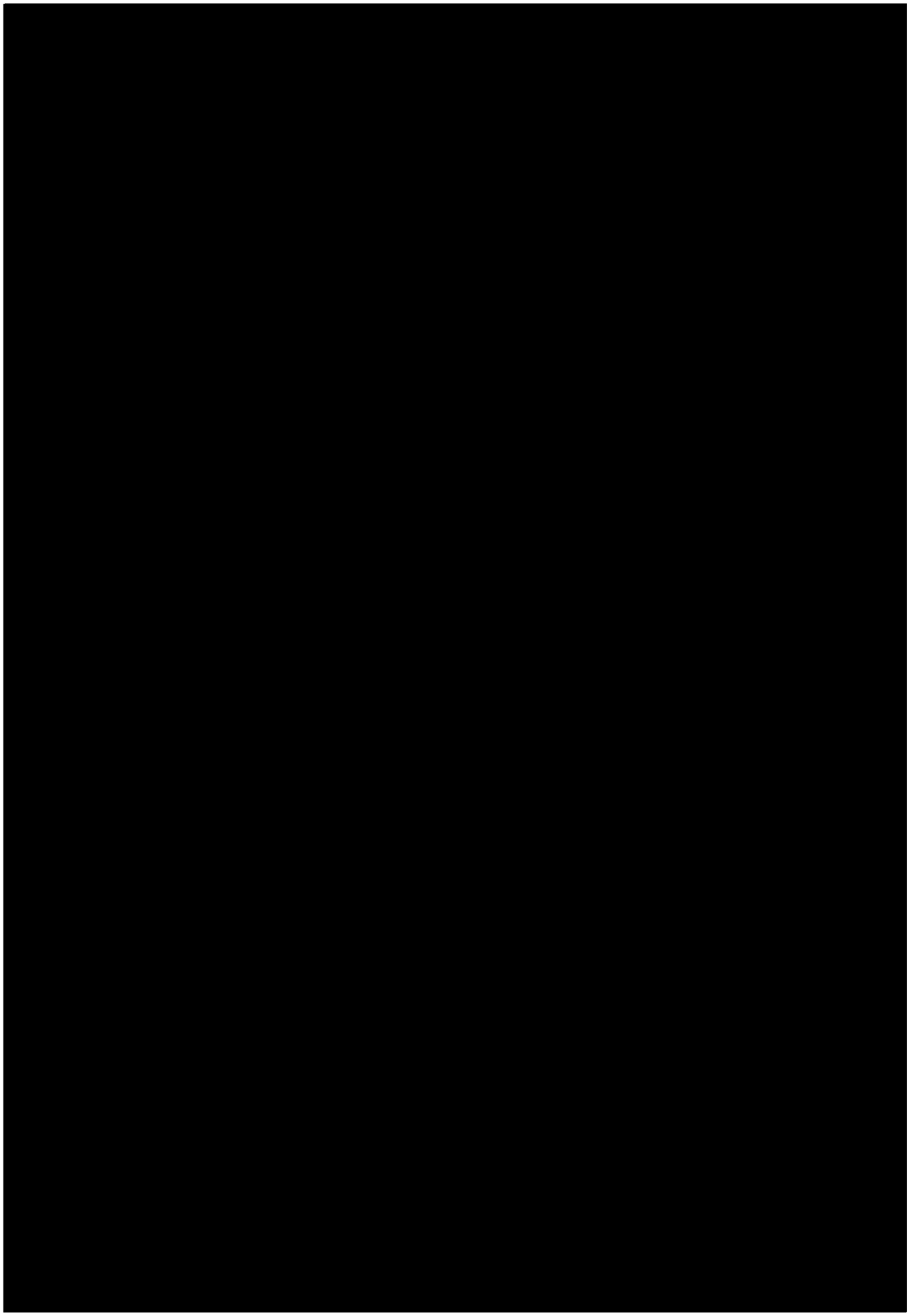












[redacted]

}}

Counsel's Exhibit 32

{{



}}

Counsel's Exhibit 33

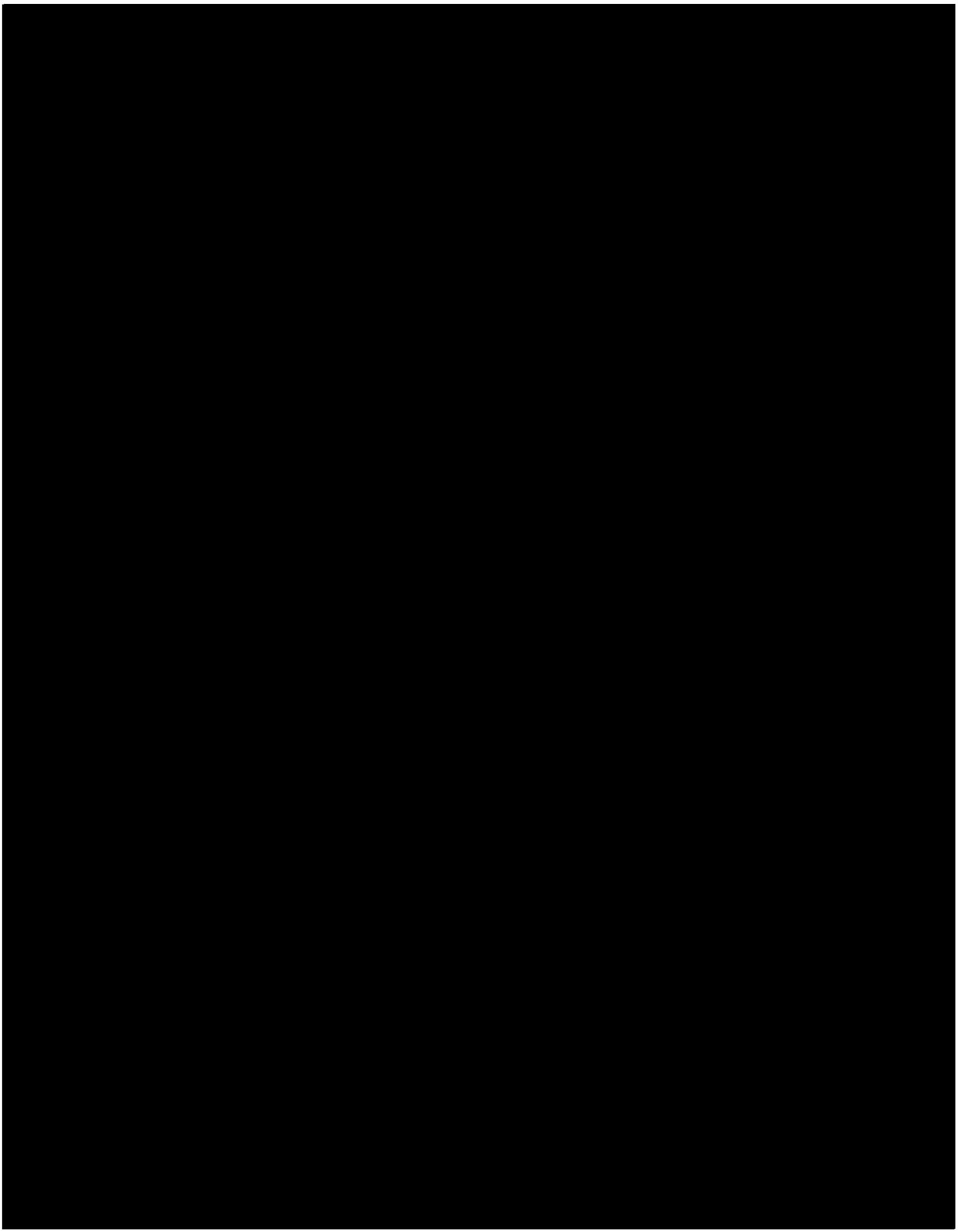
{{

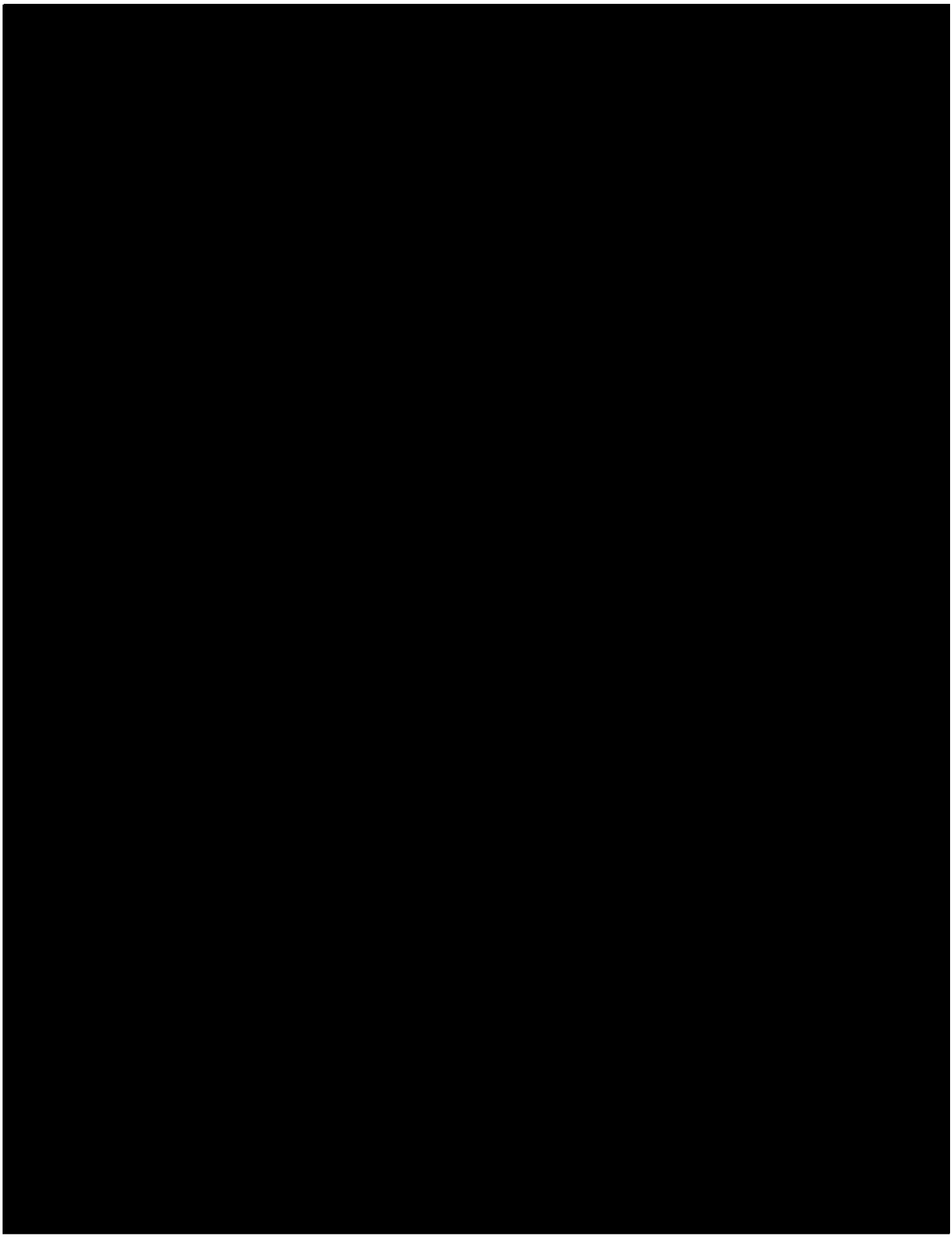


}}

Counsel's Exhibit 34

{{



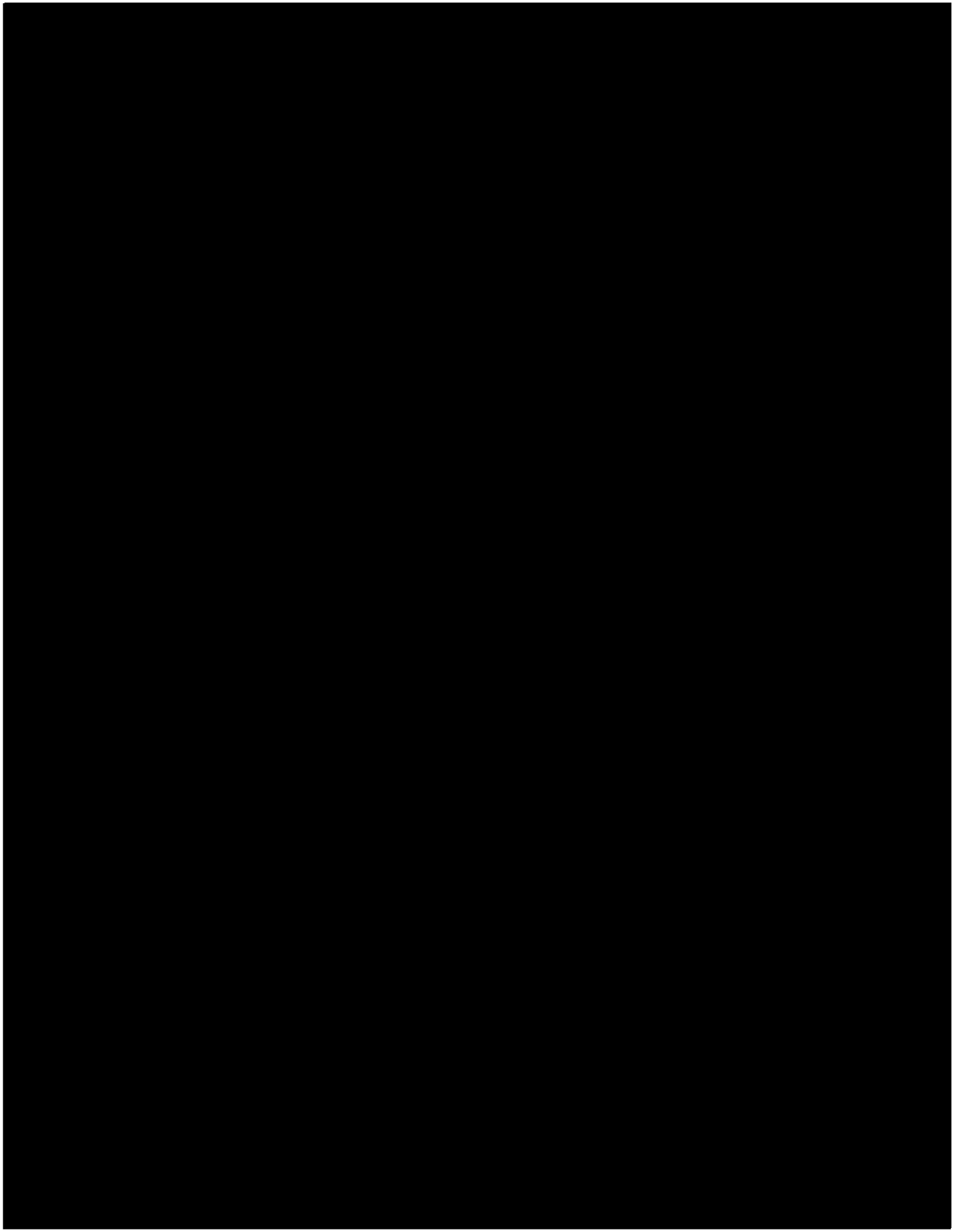


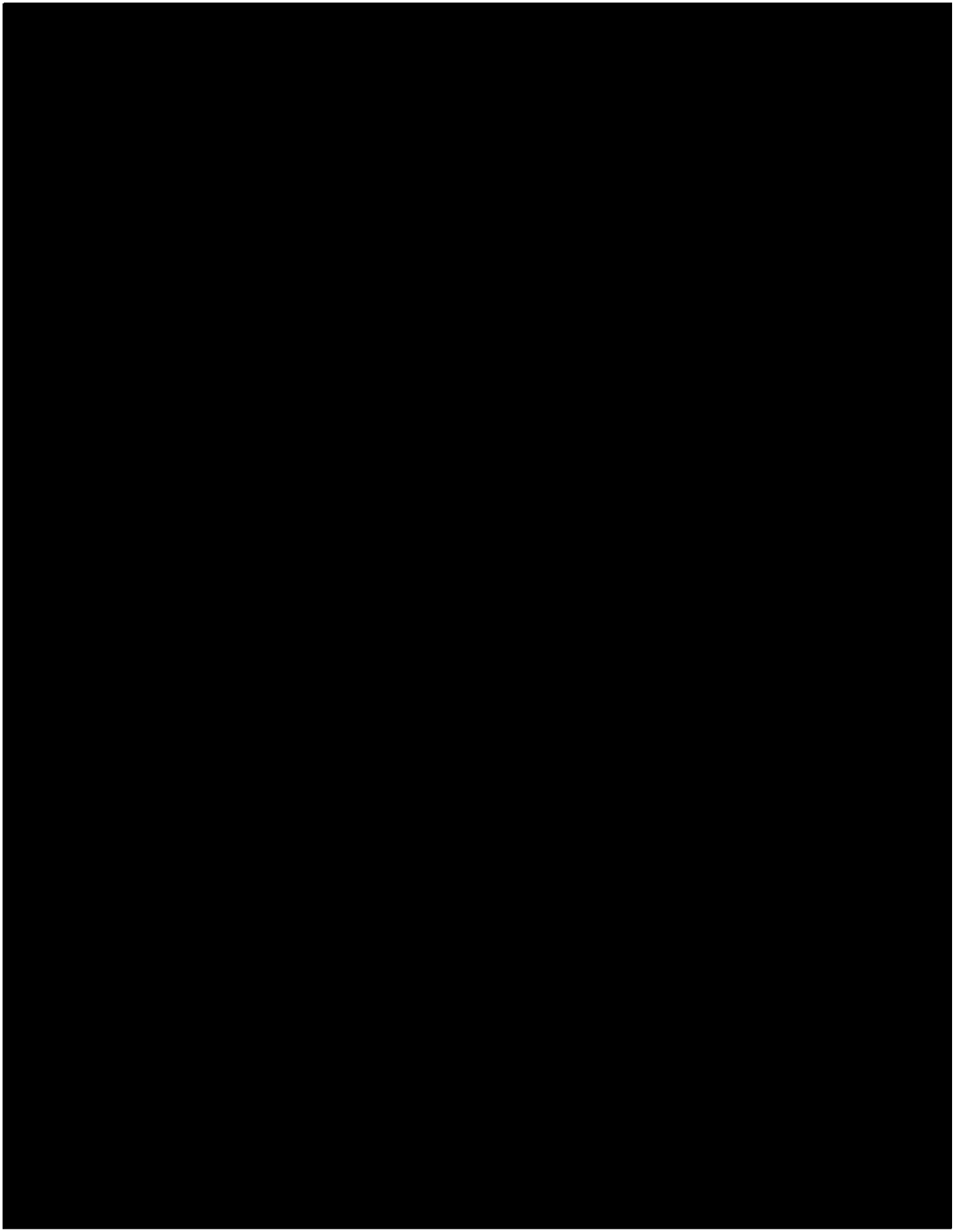
[redacted]

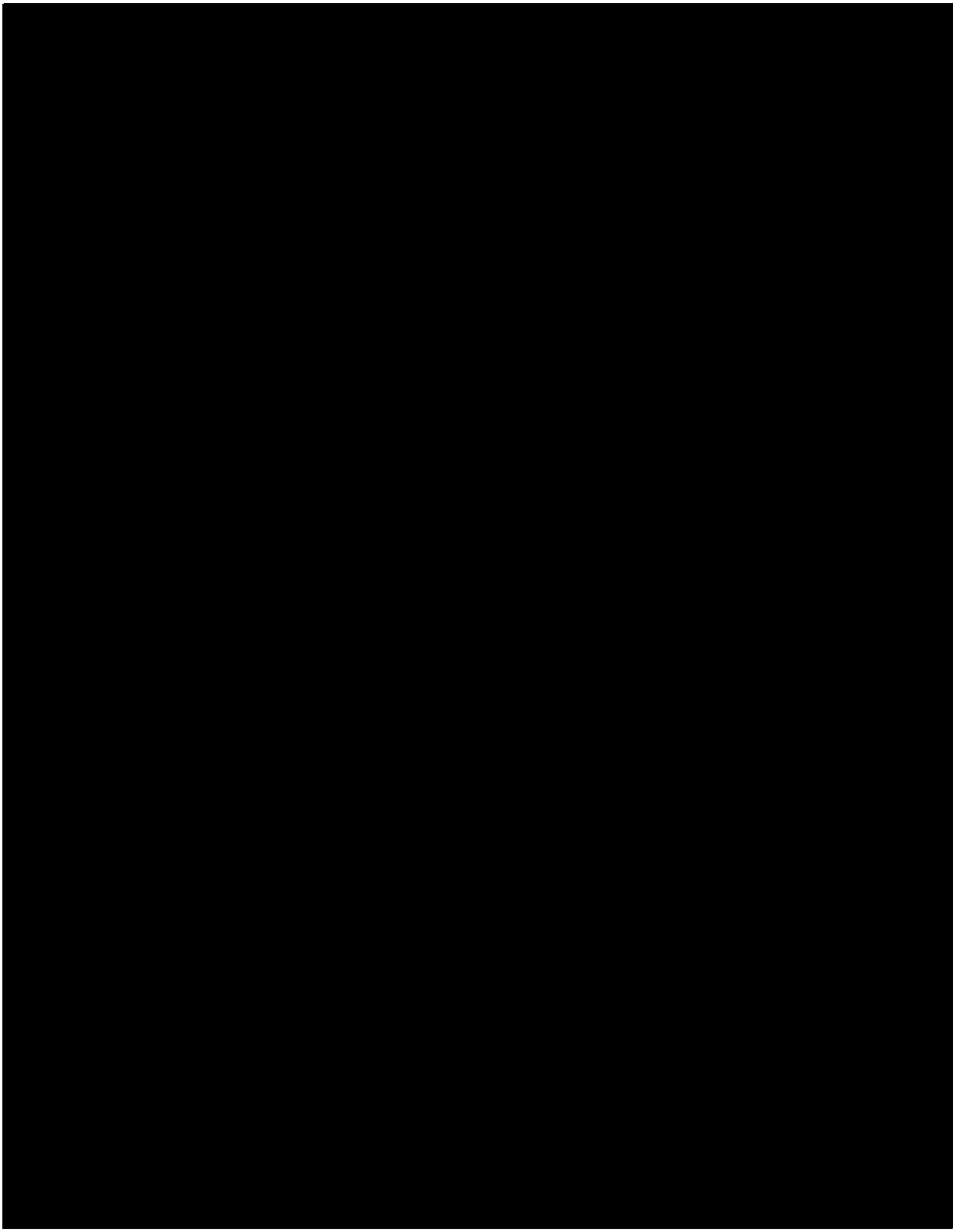
}}

Counsel's Exhibit 35

{{









}}

Counsel's Exhibit 36

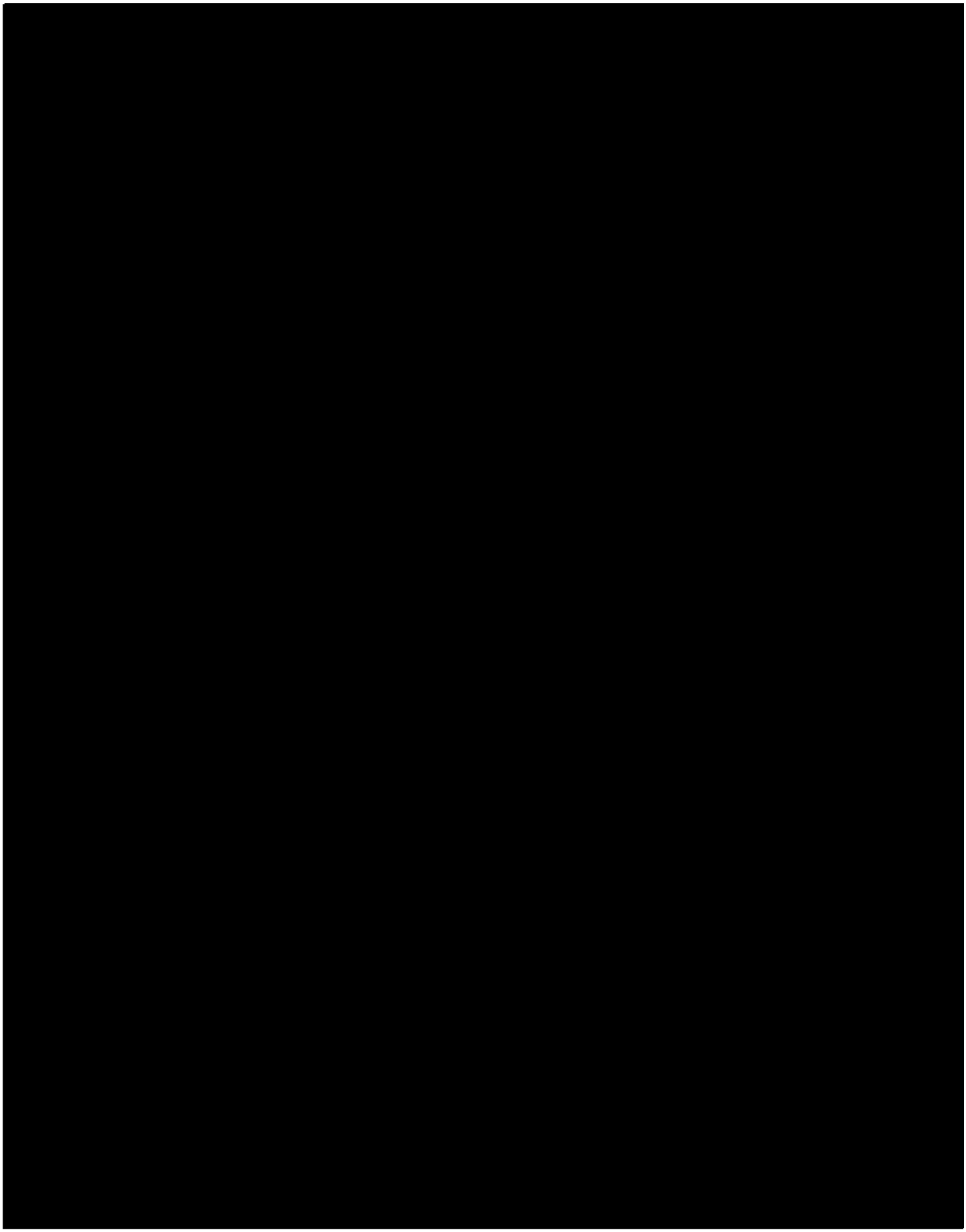
{

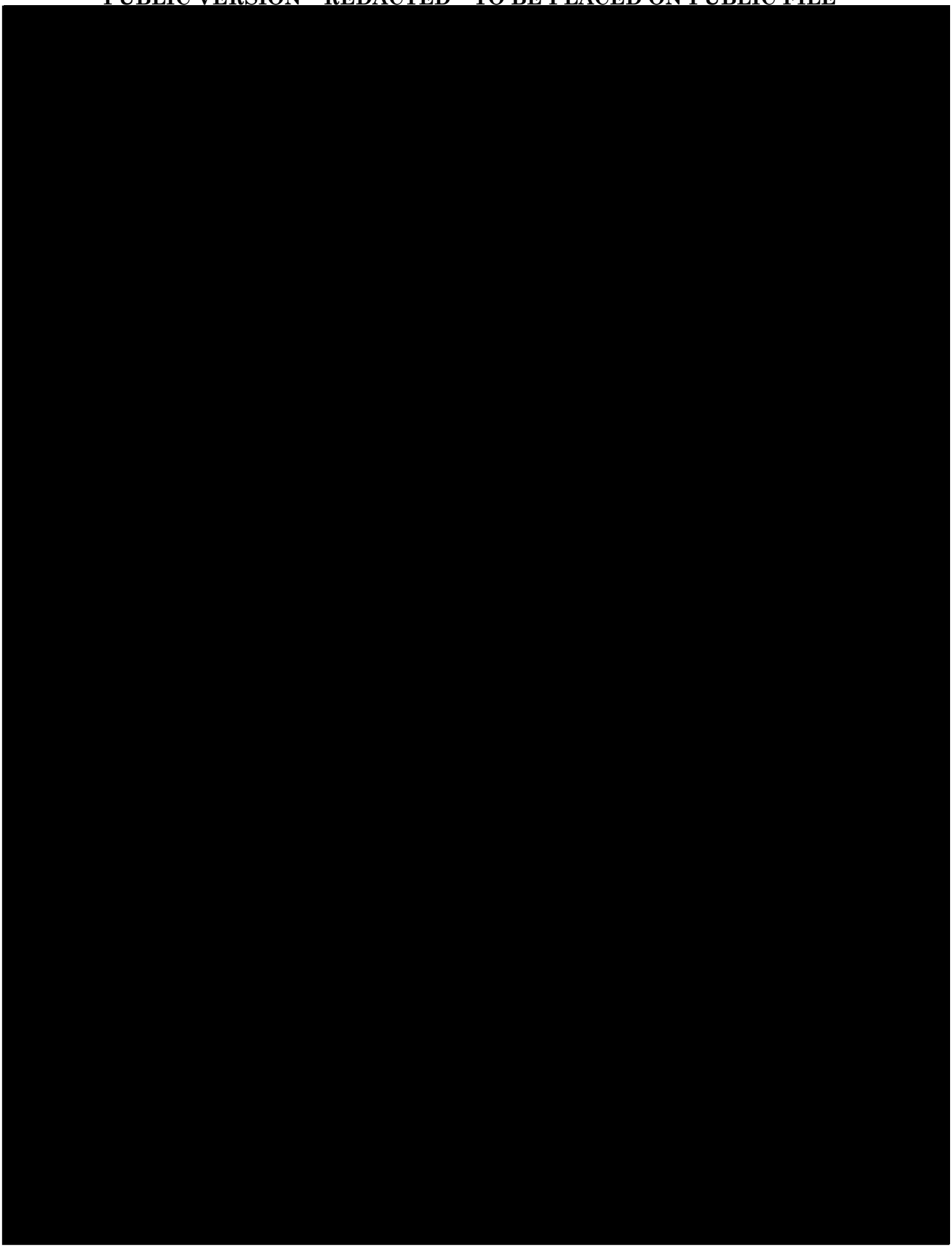


}

Counsel's Exhibit 37

{{



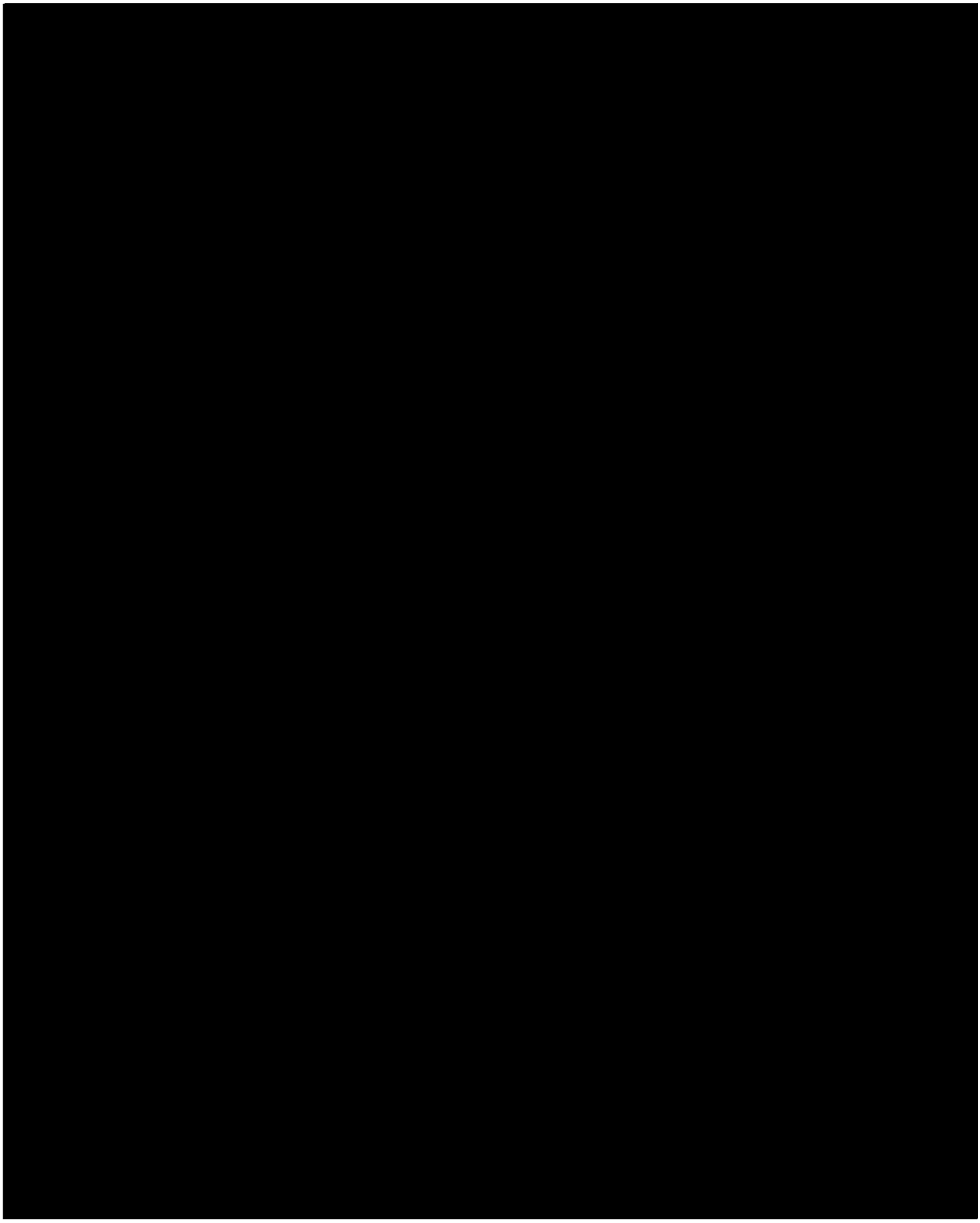


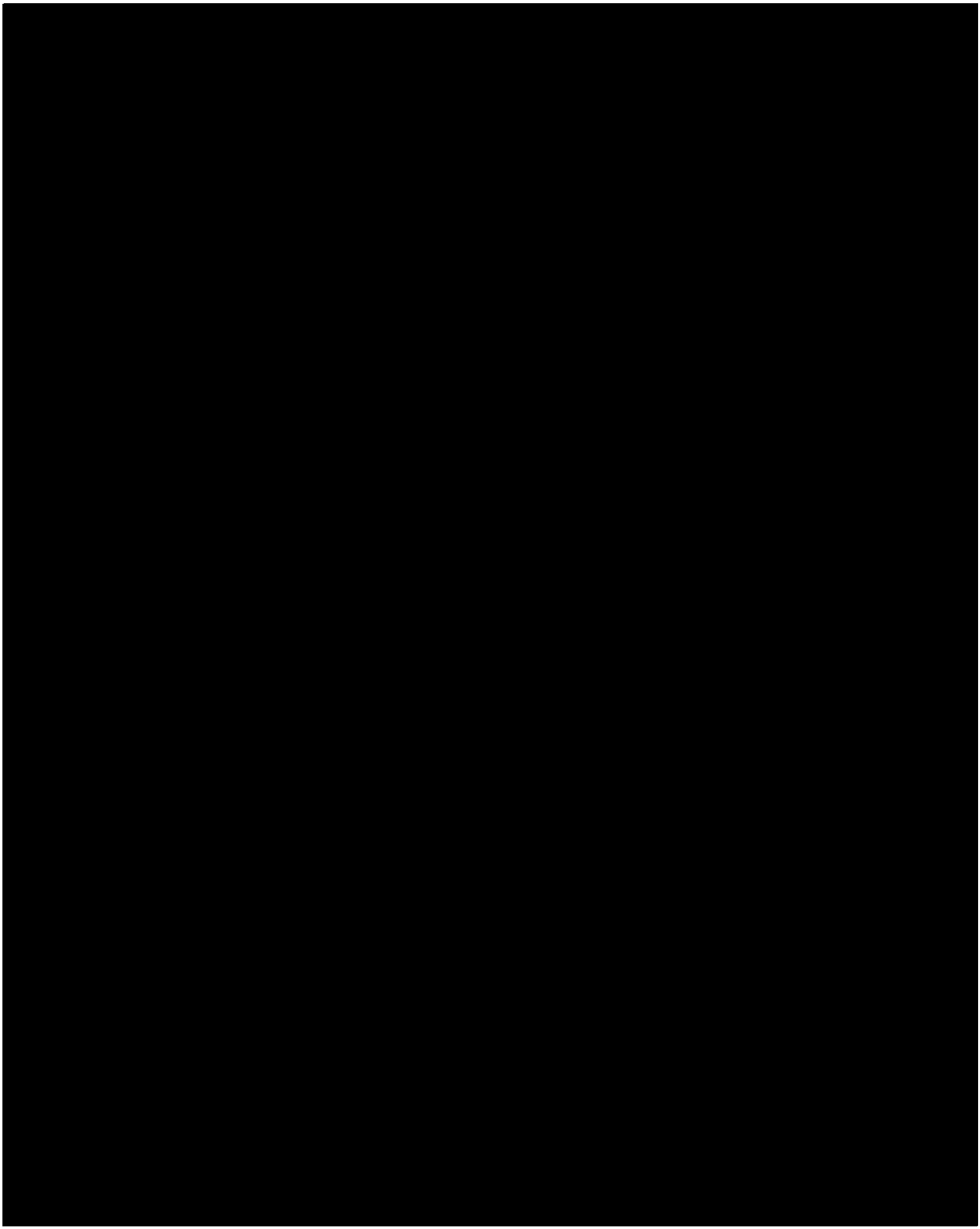


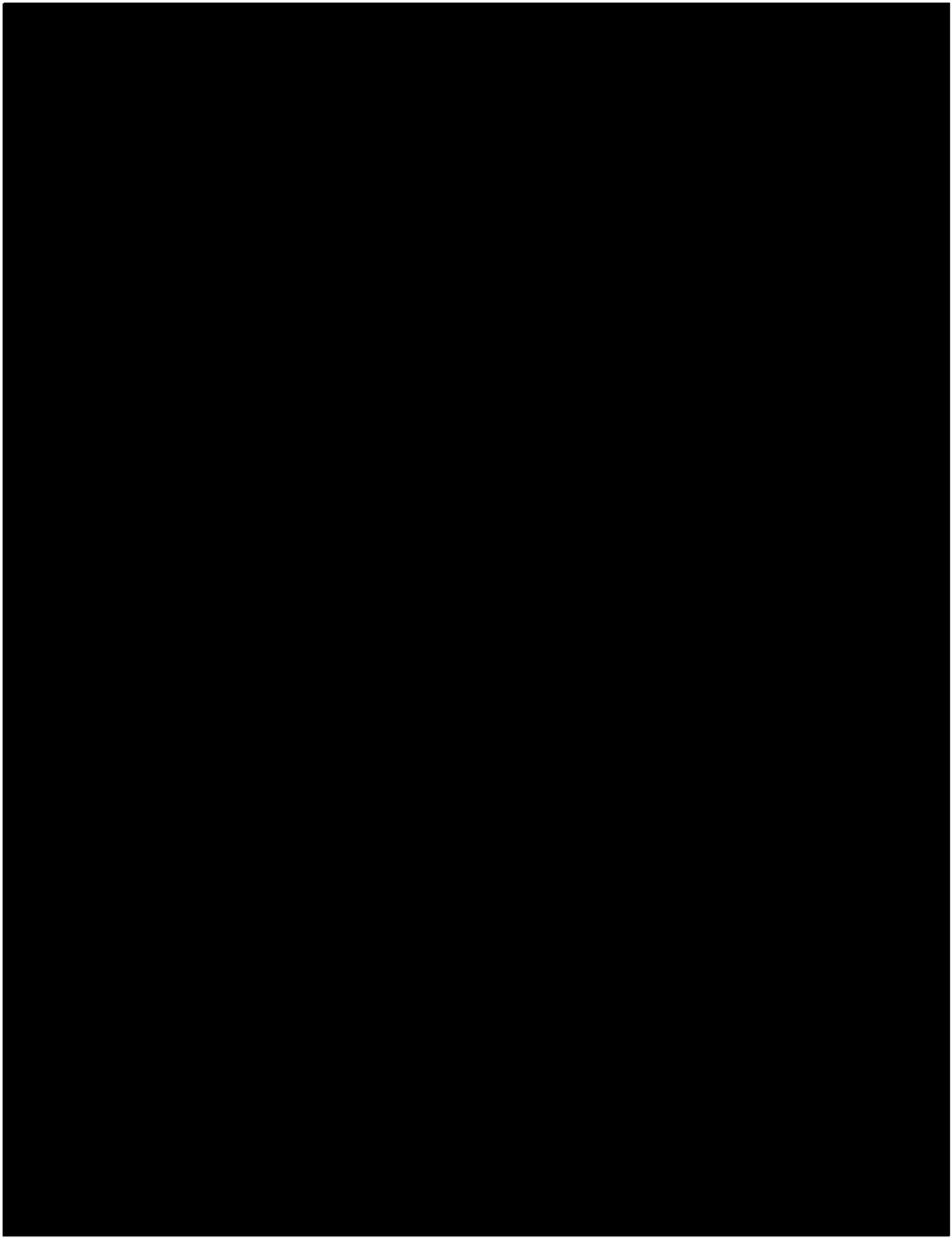
}}

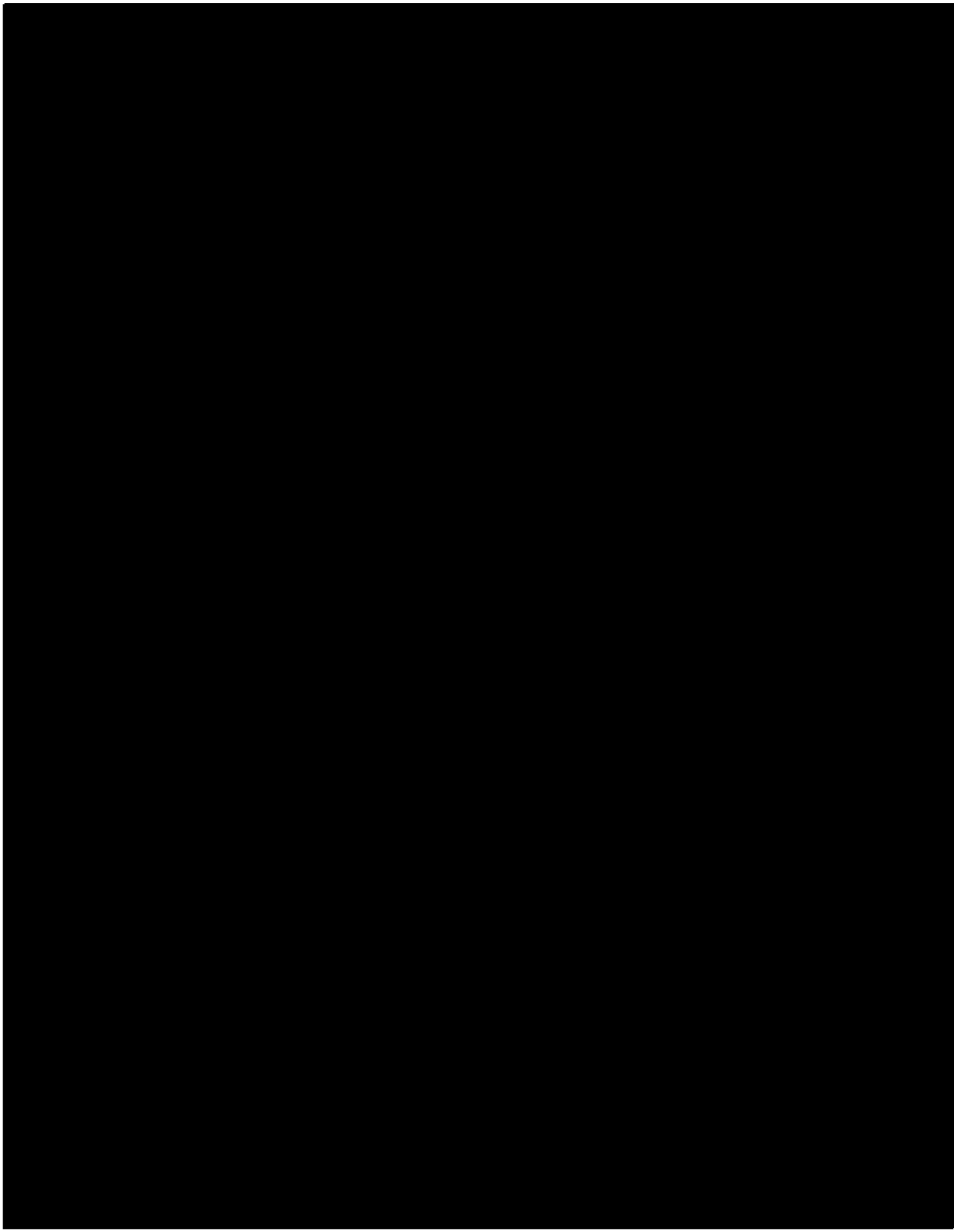
Counsel's Exhibit 38

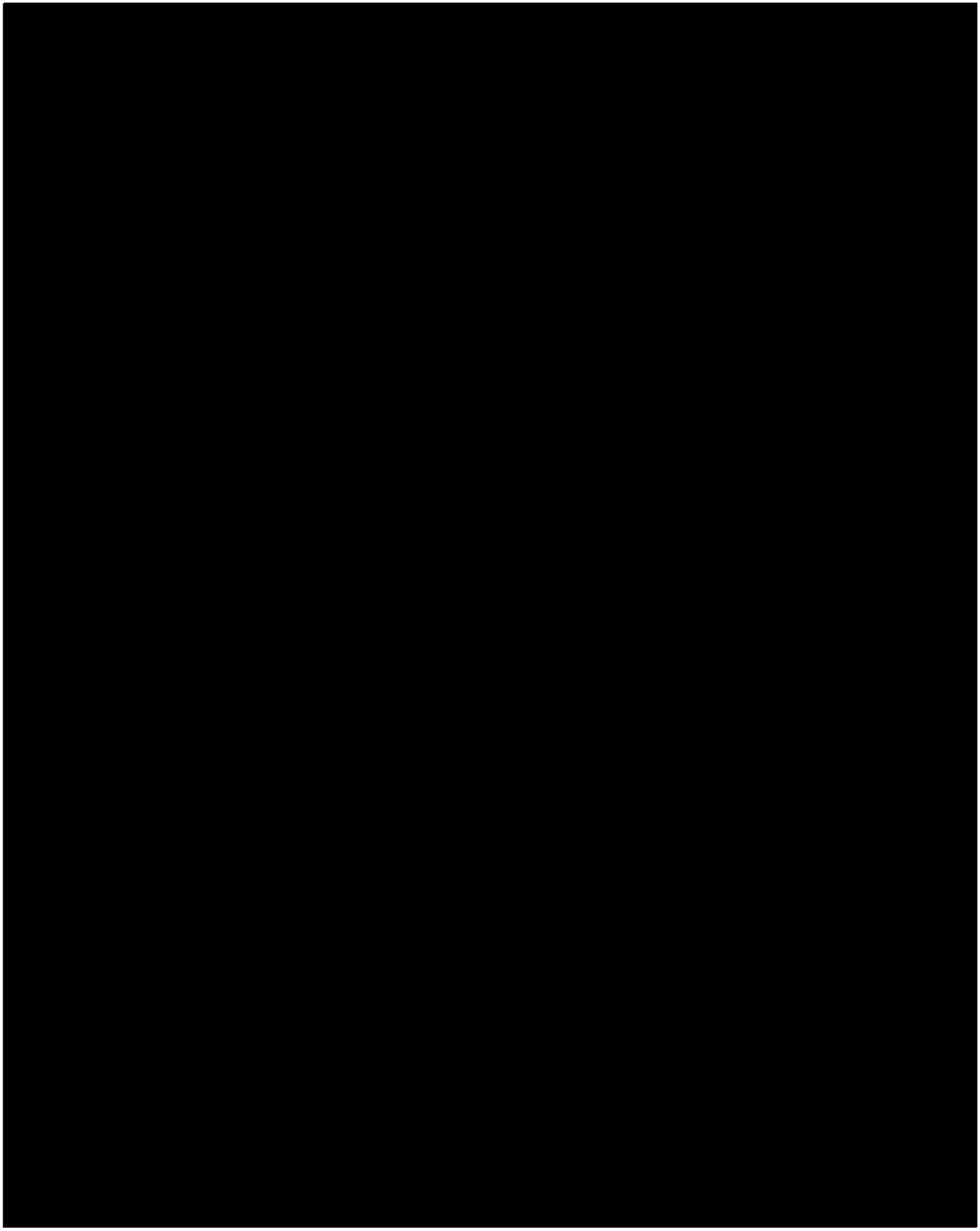
{{

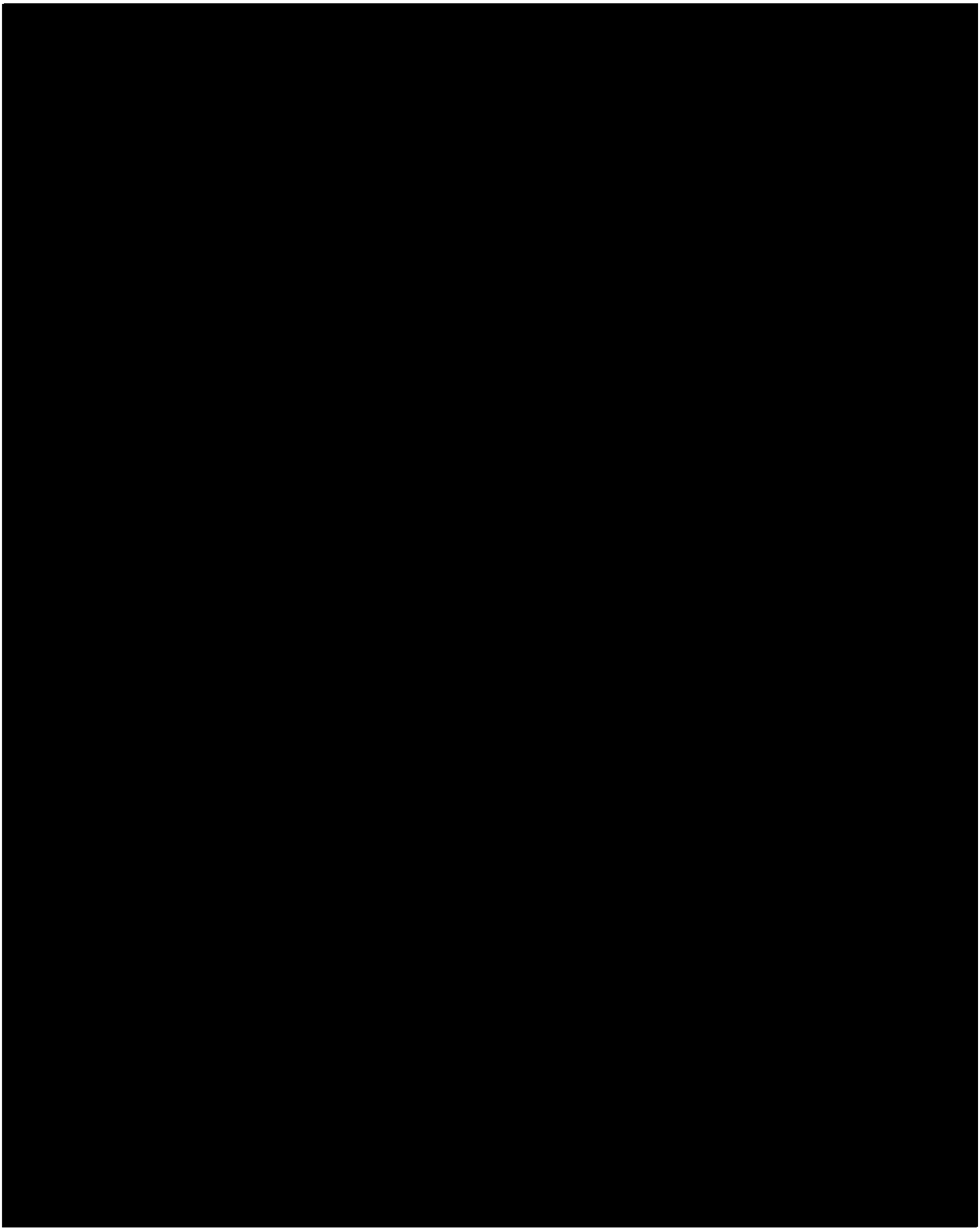


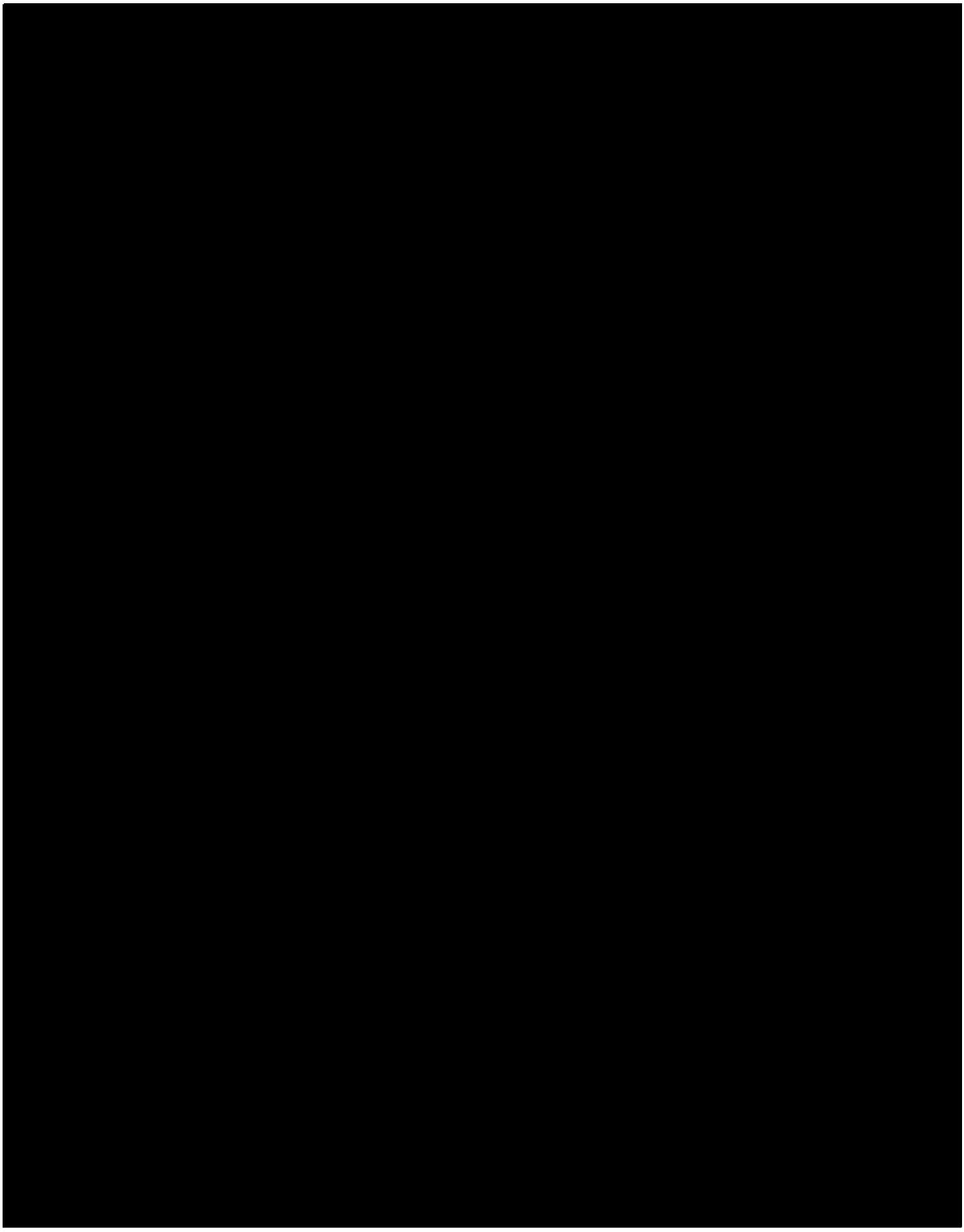


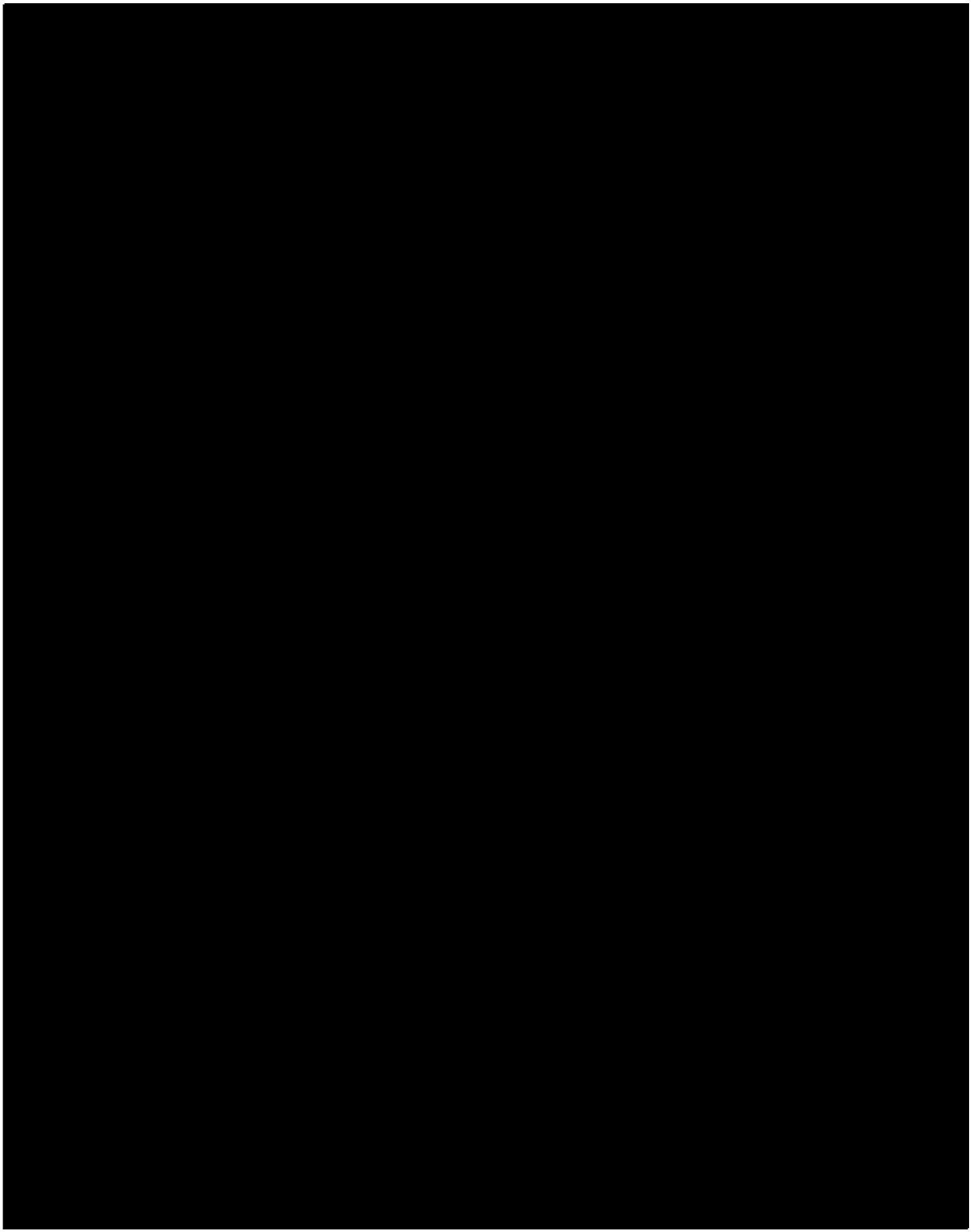


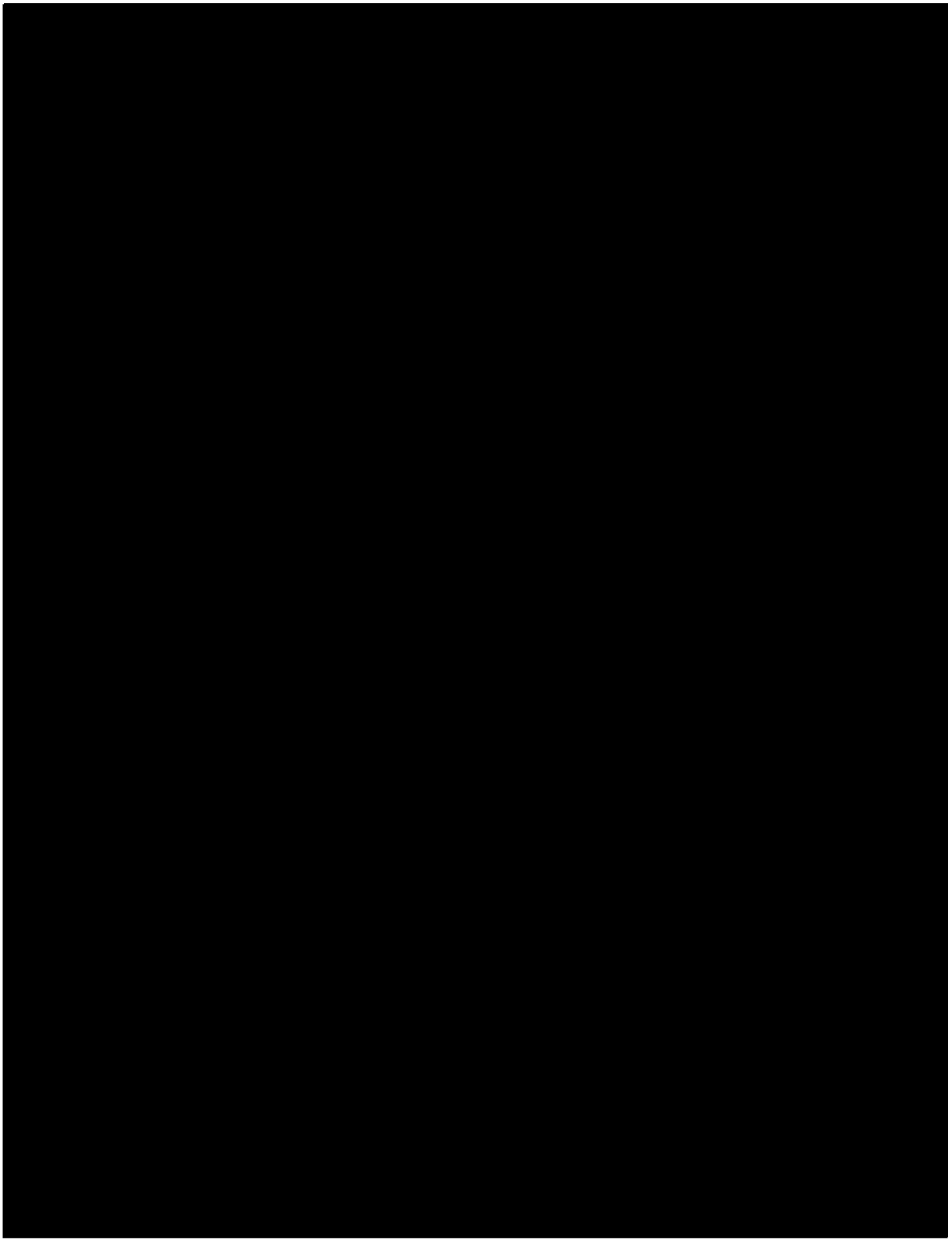


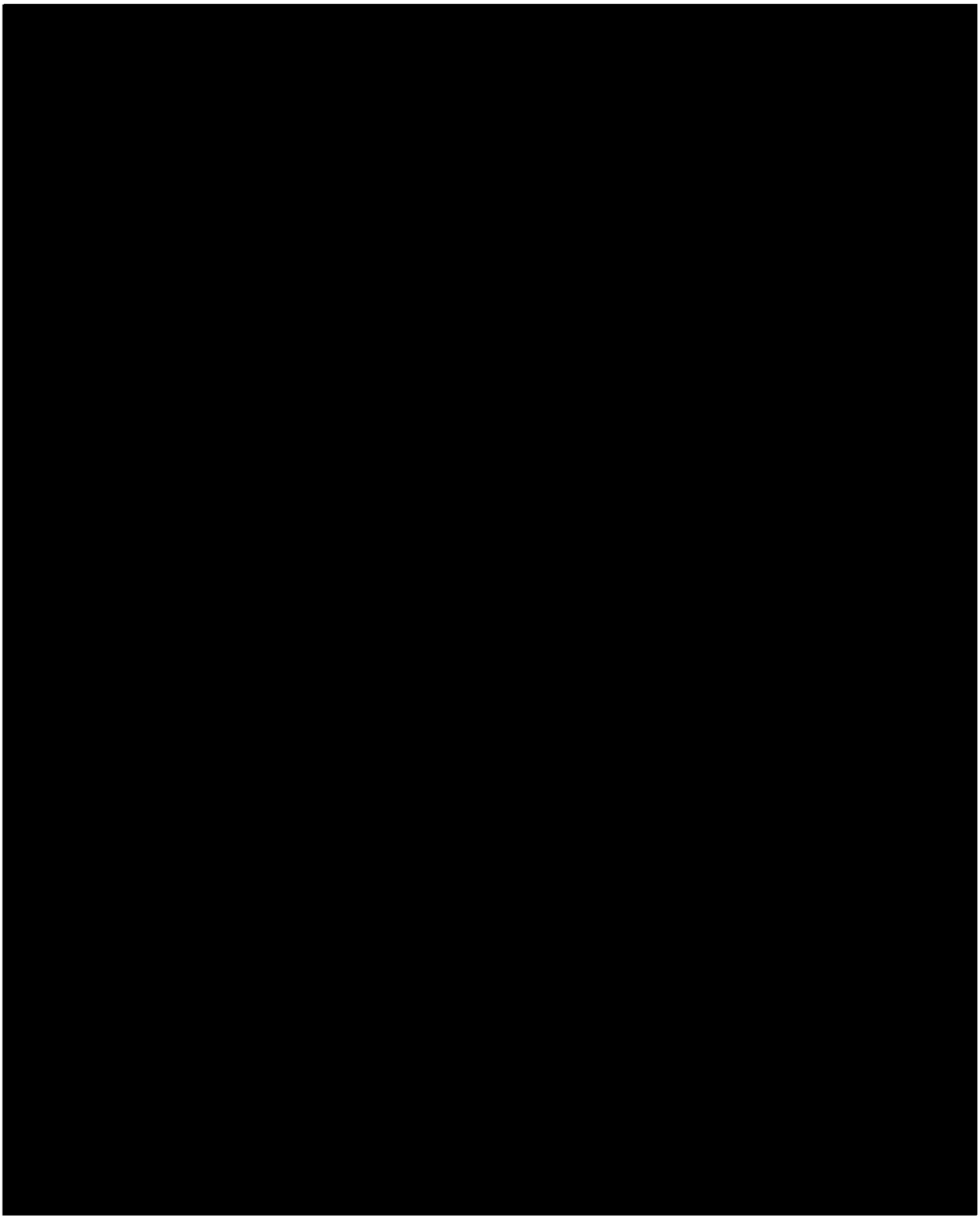


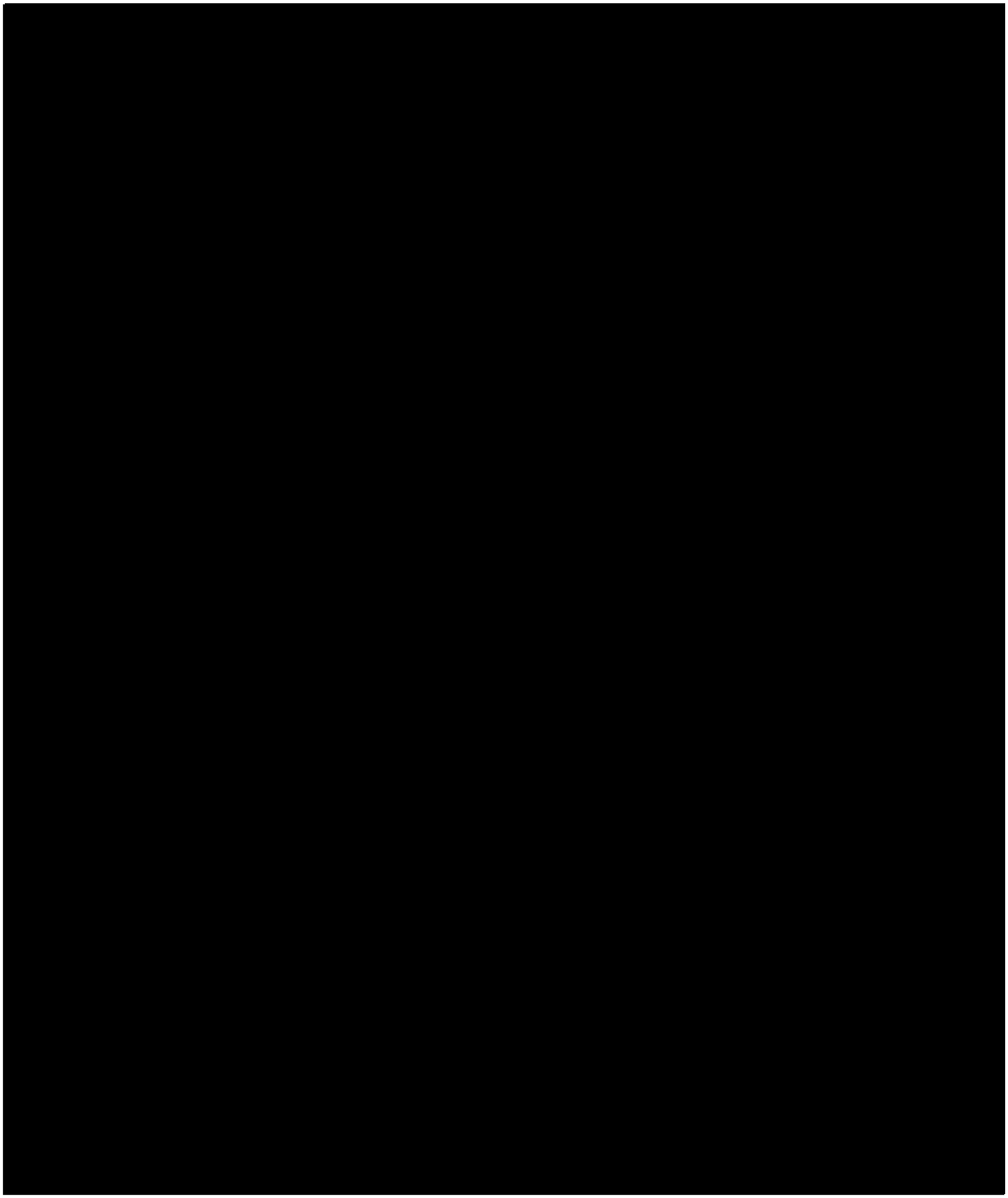


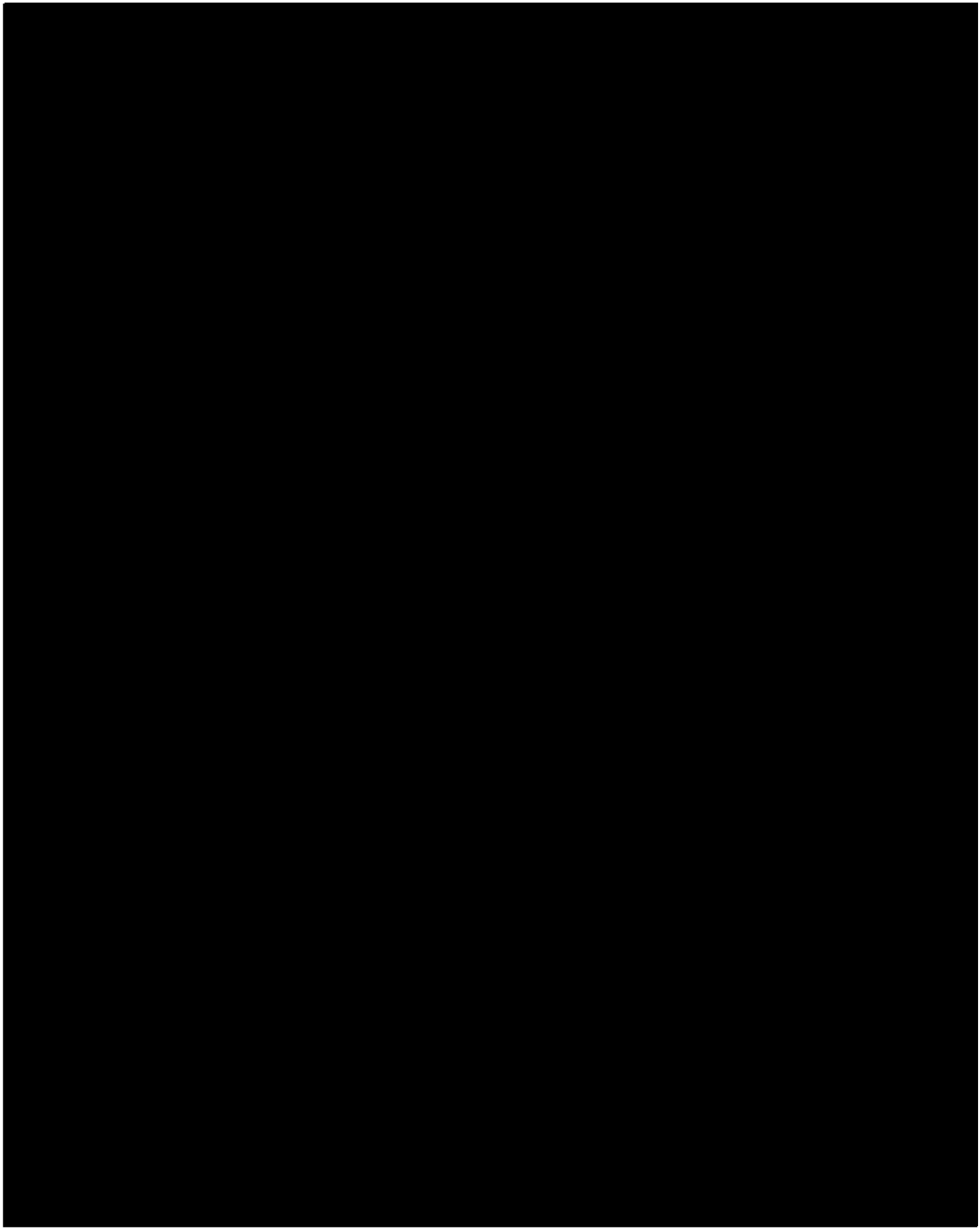


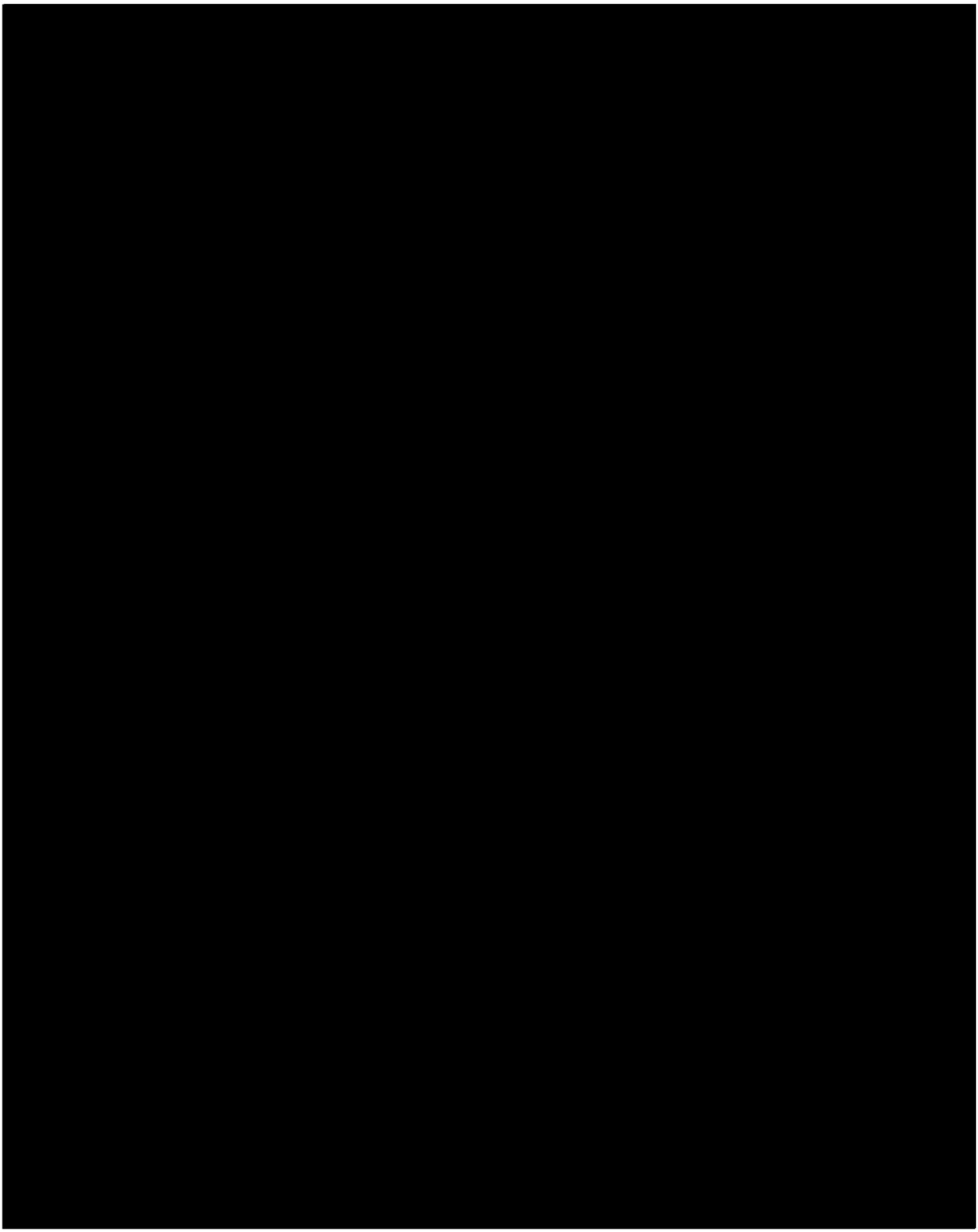


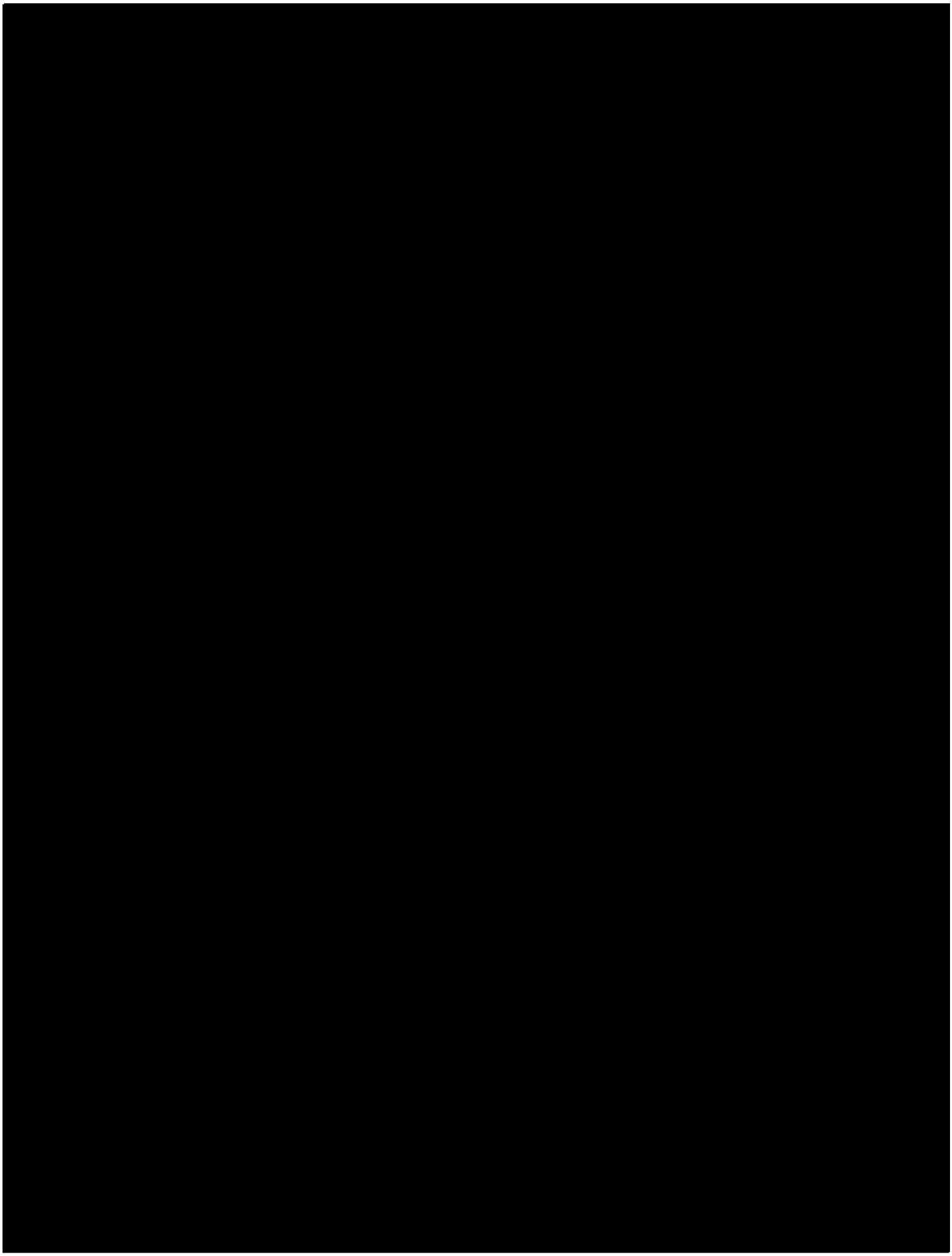


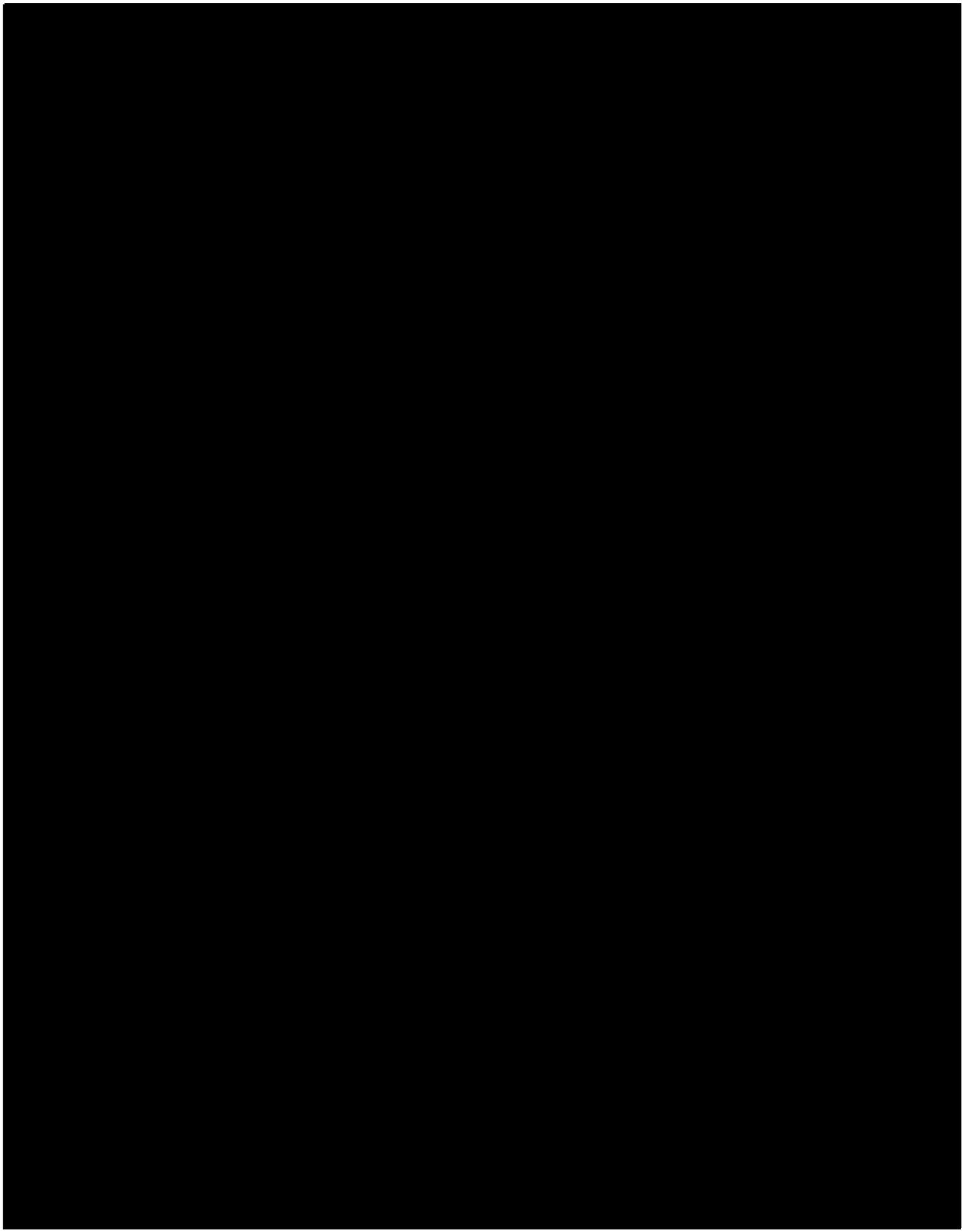


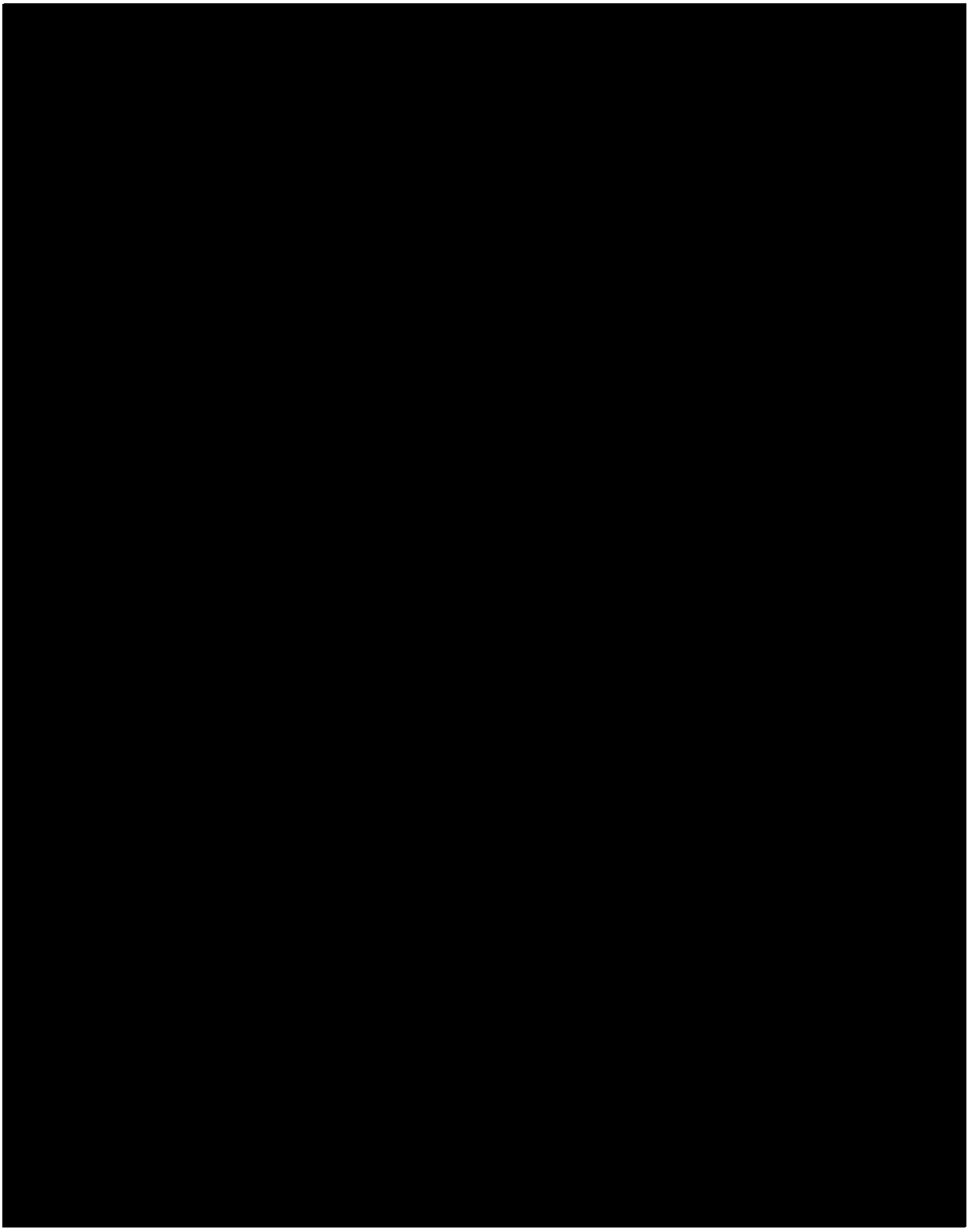


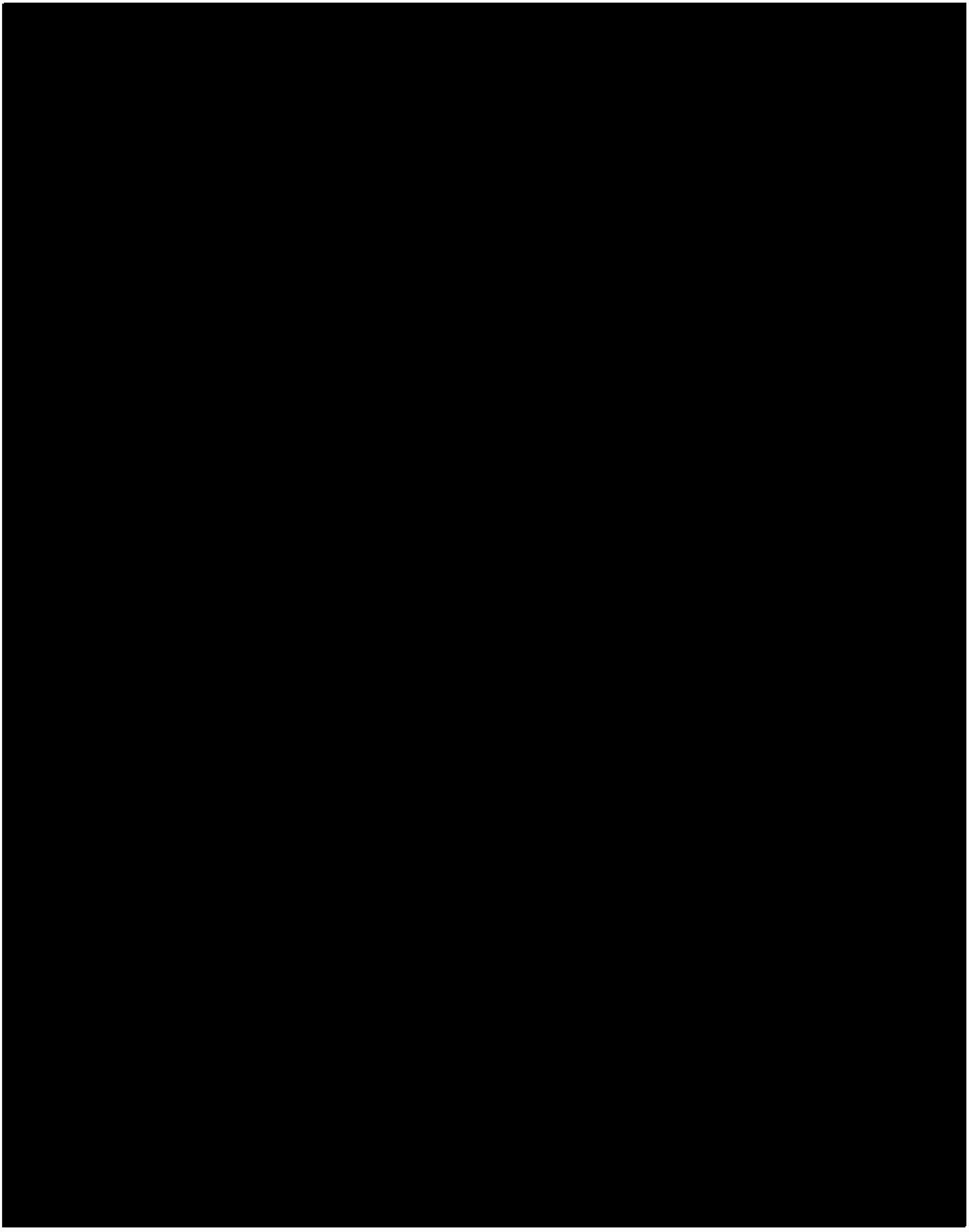


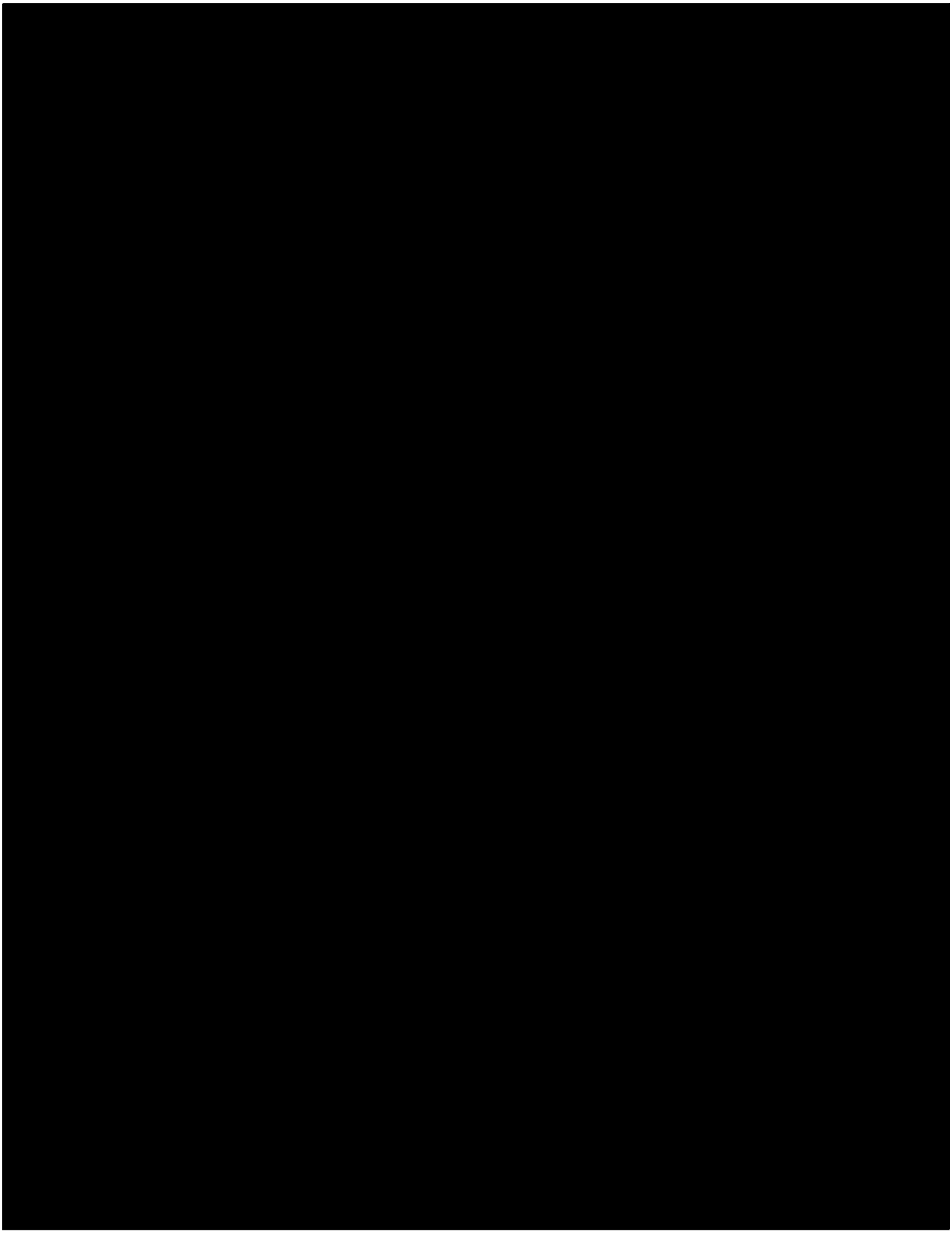


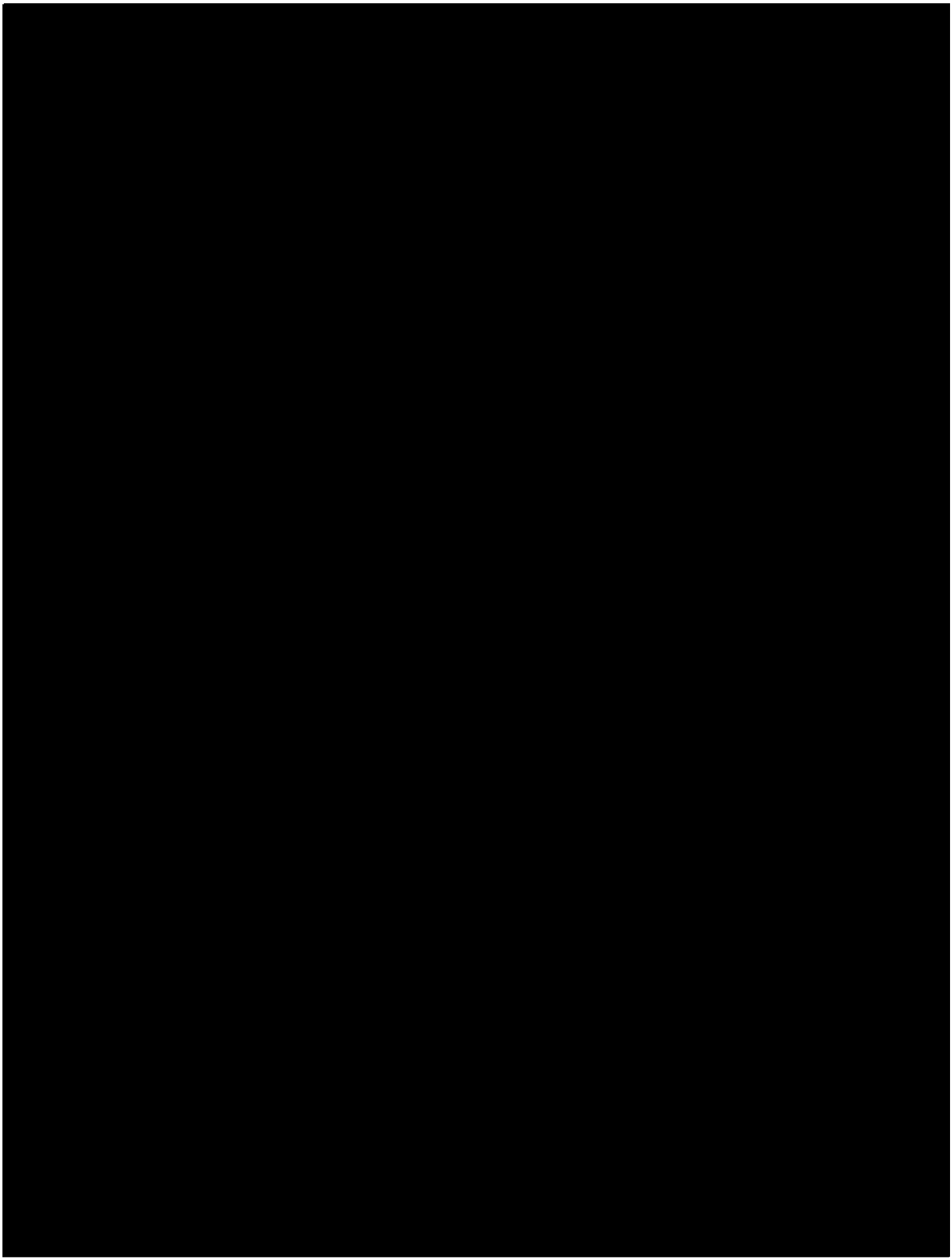


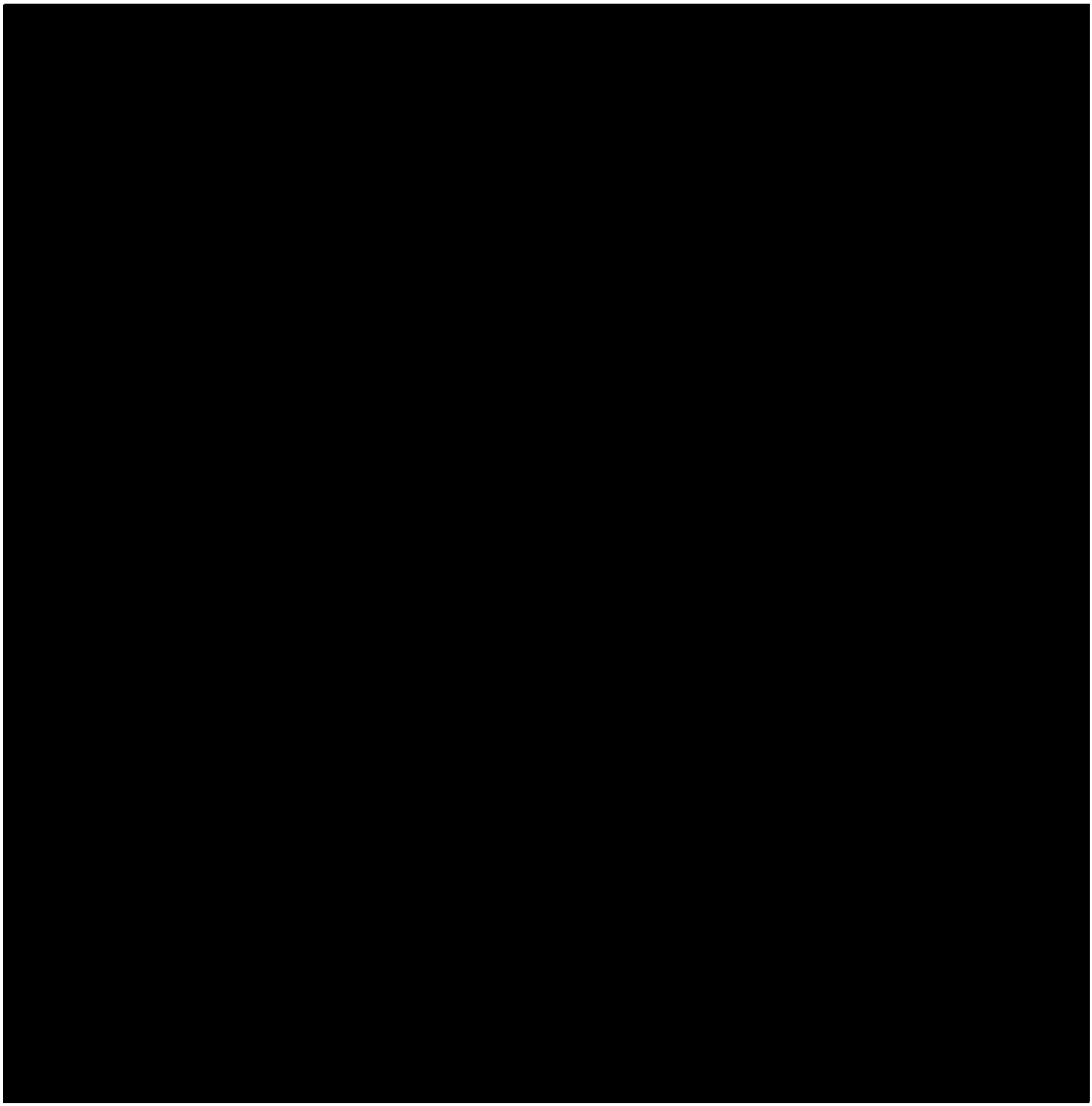








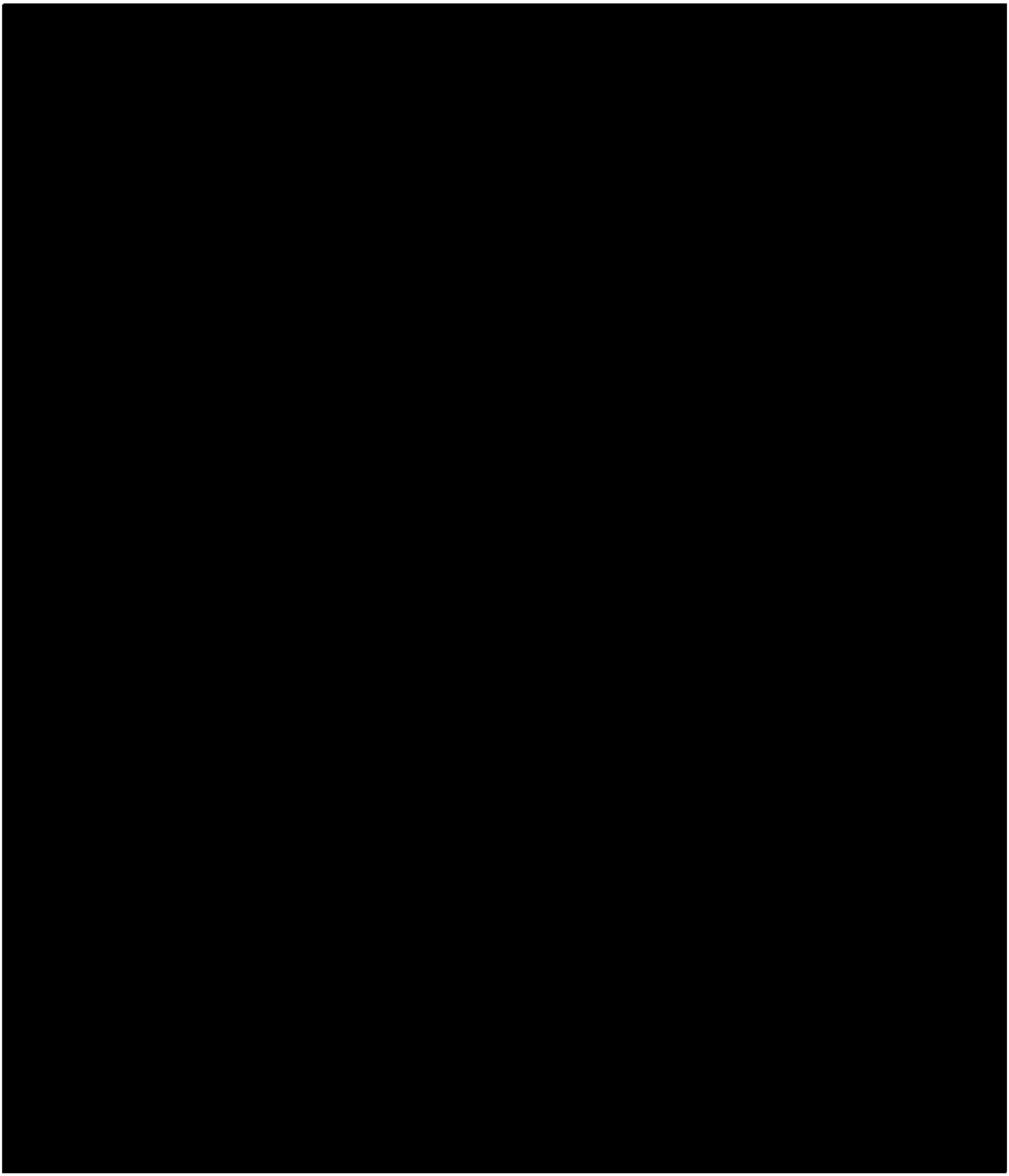




}}

Counsel's Exhibit 39

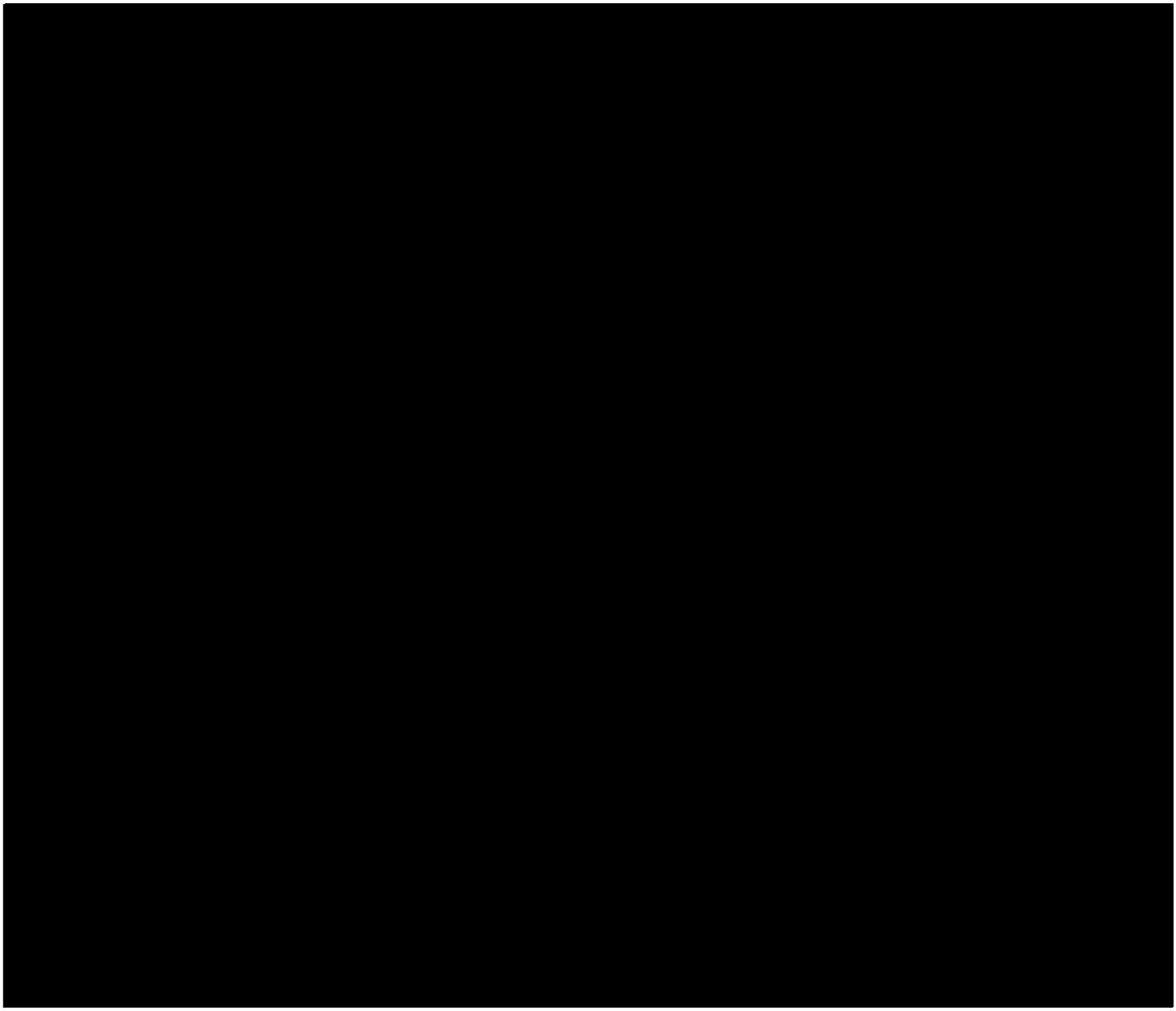
{{



}}

Counsel's Exhibit 40

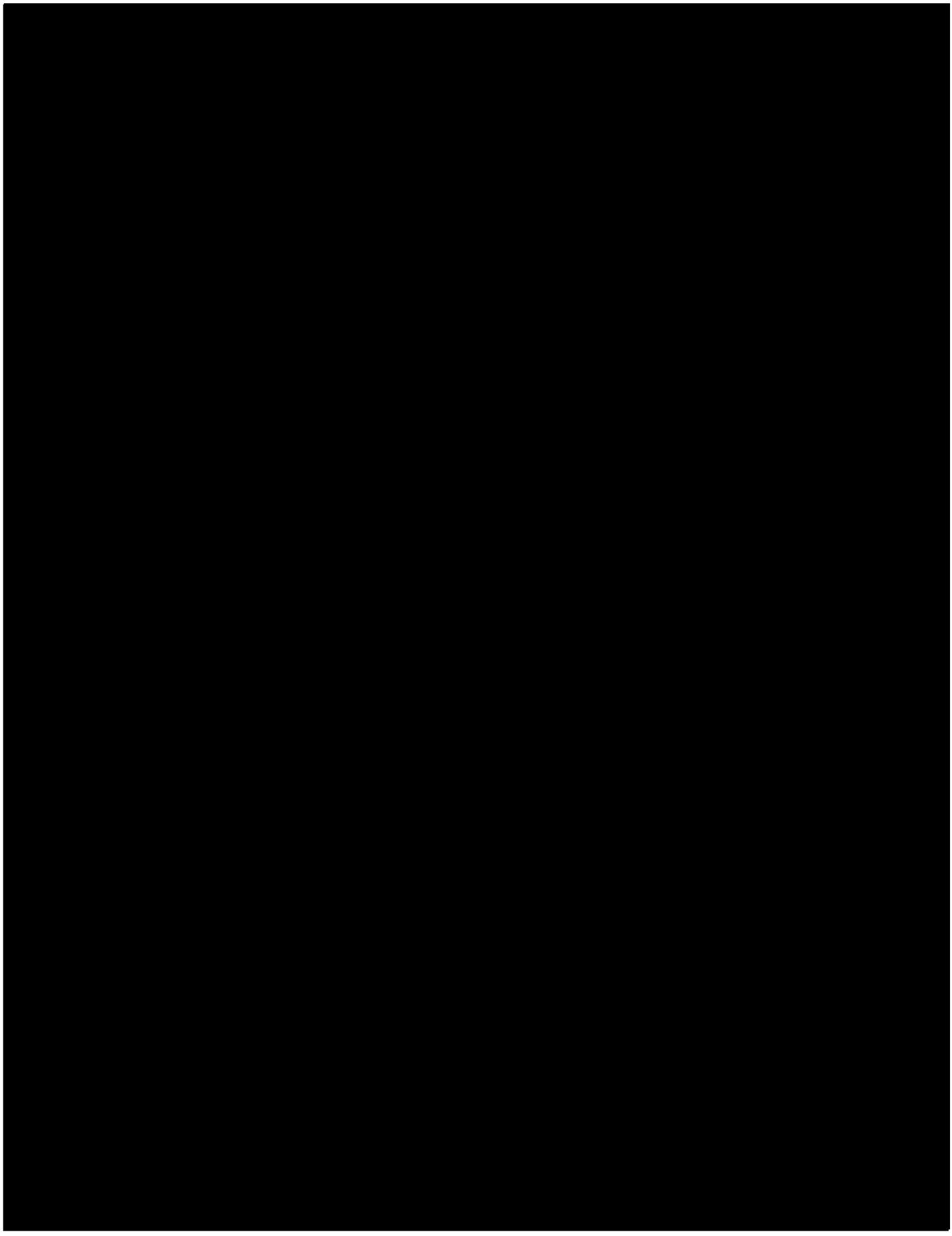
{

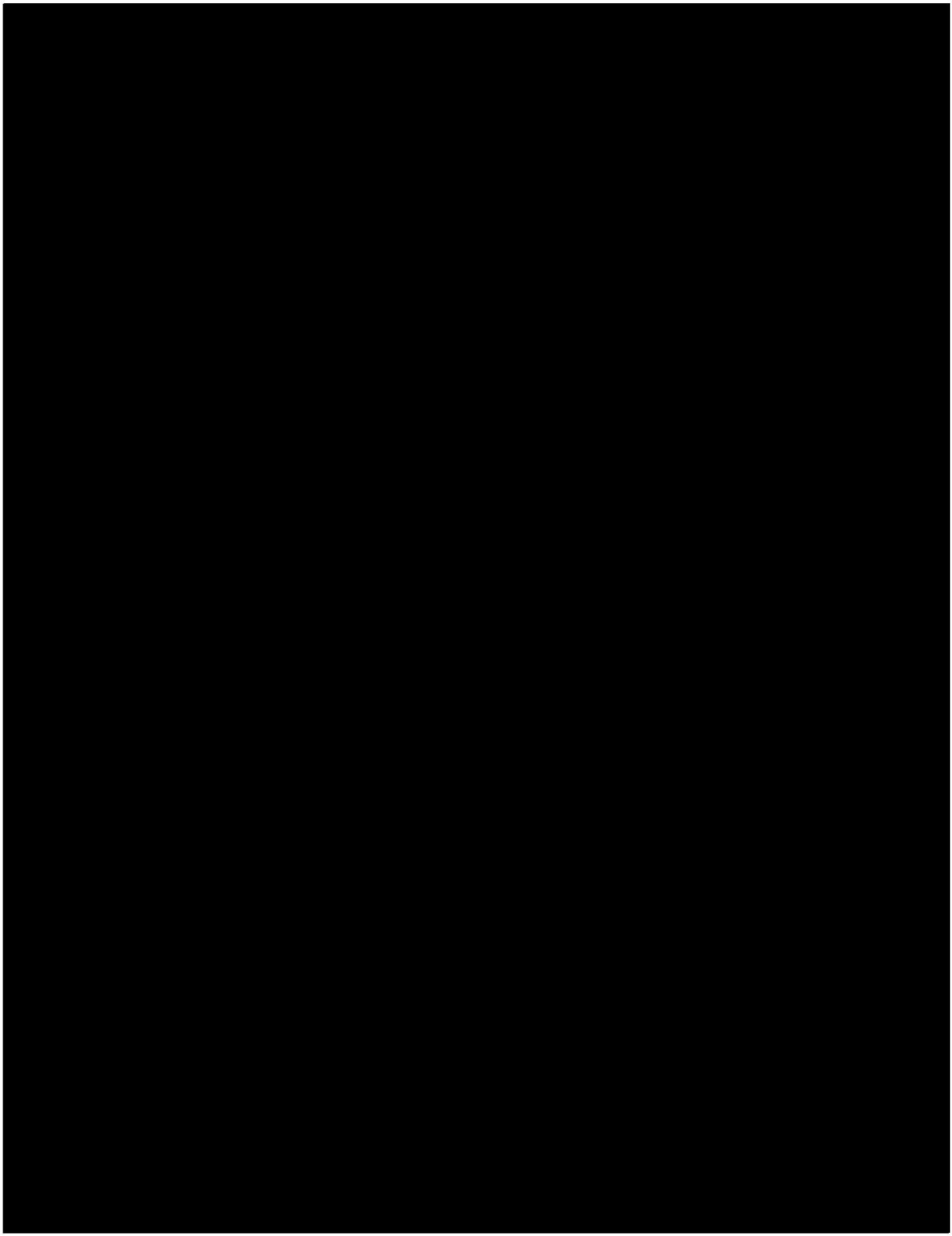


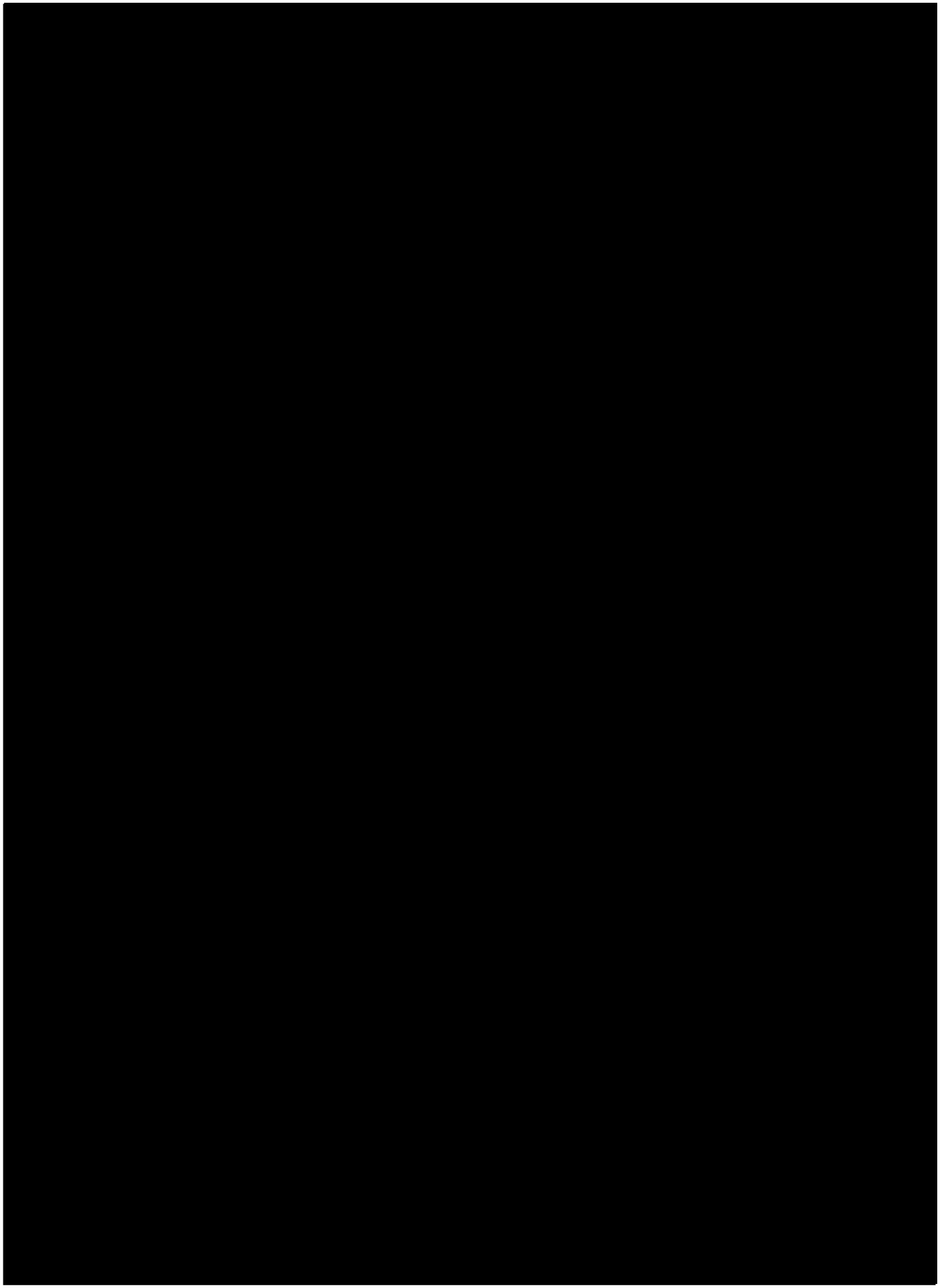
}

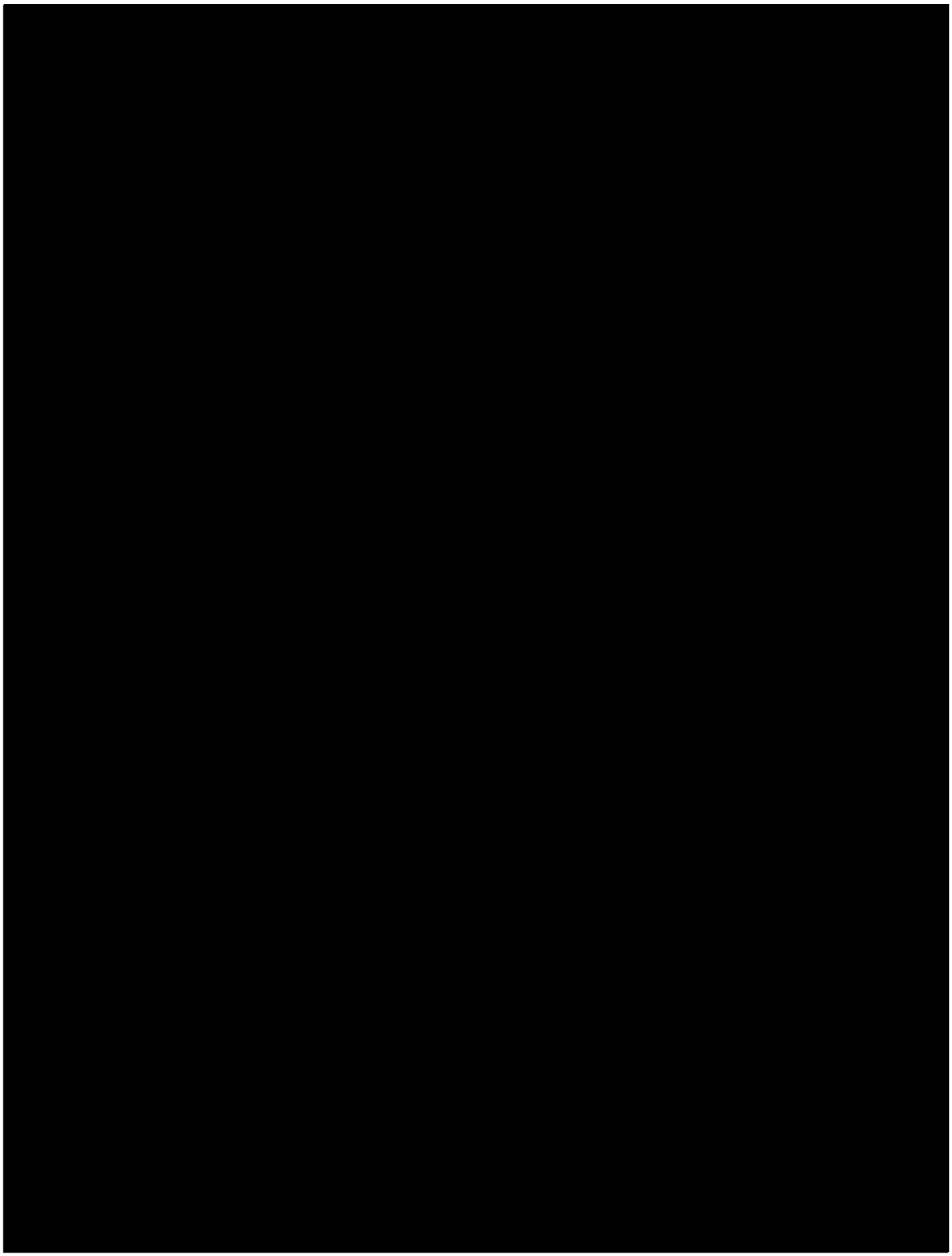
Counsel's Exhibit 41

{



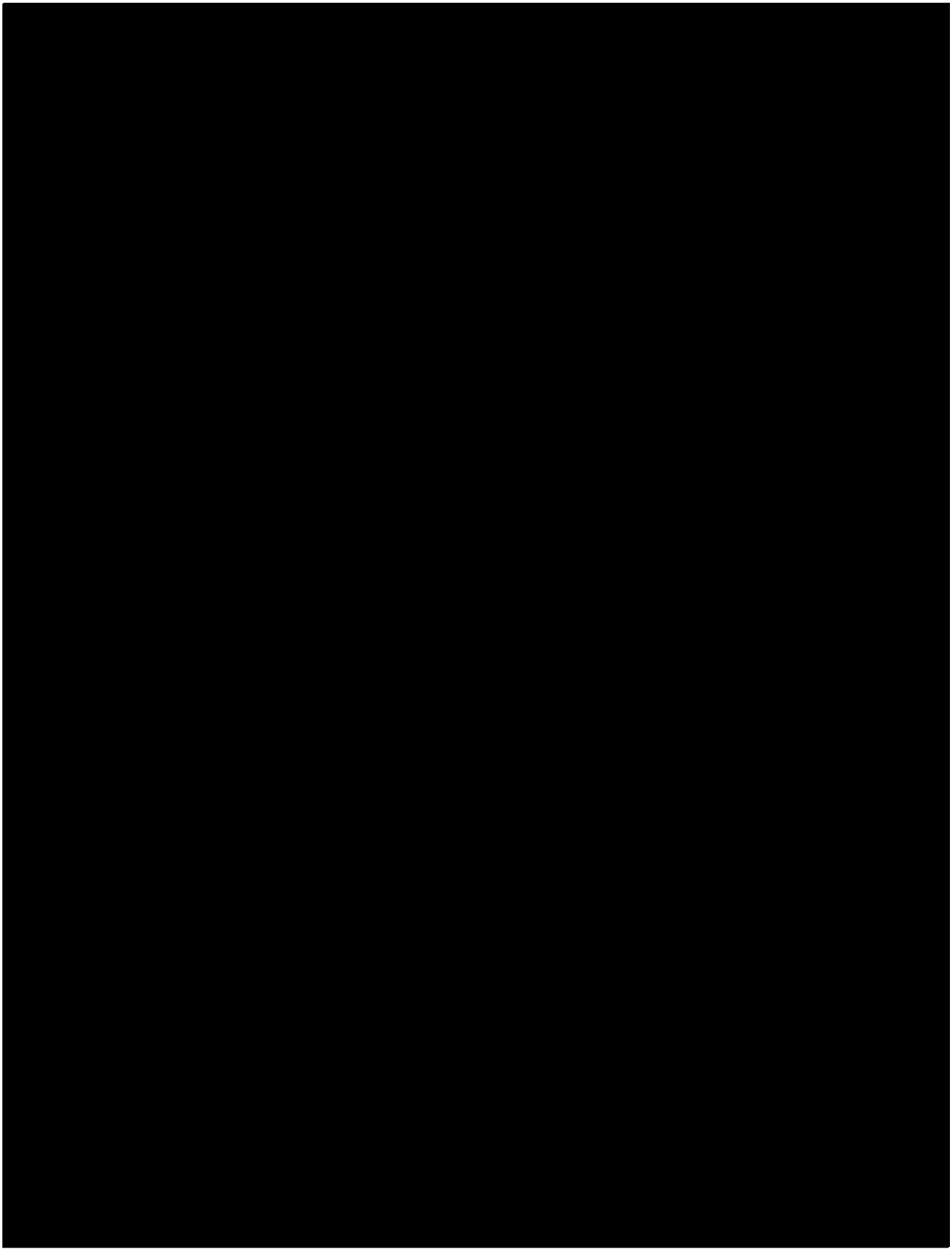


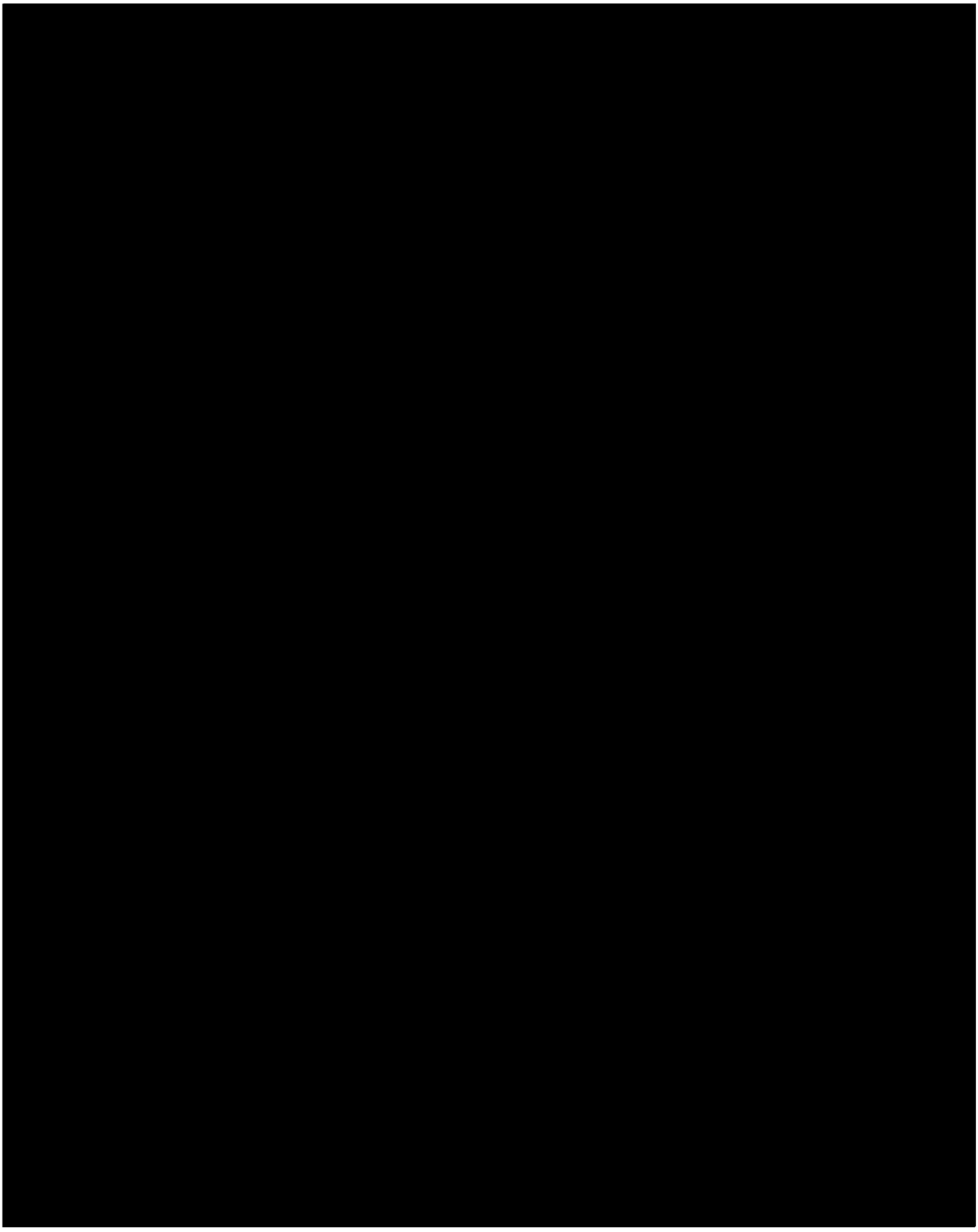




}

Counsel's Exhibit 42



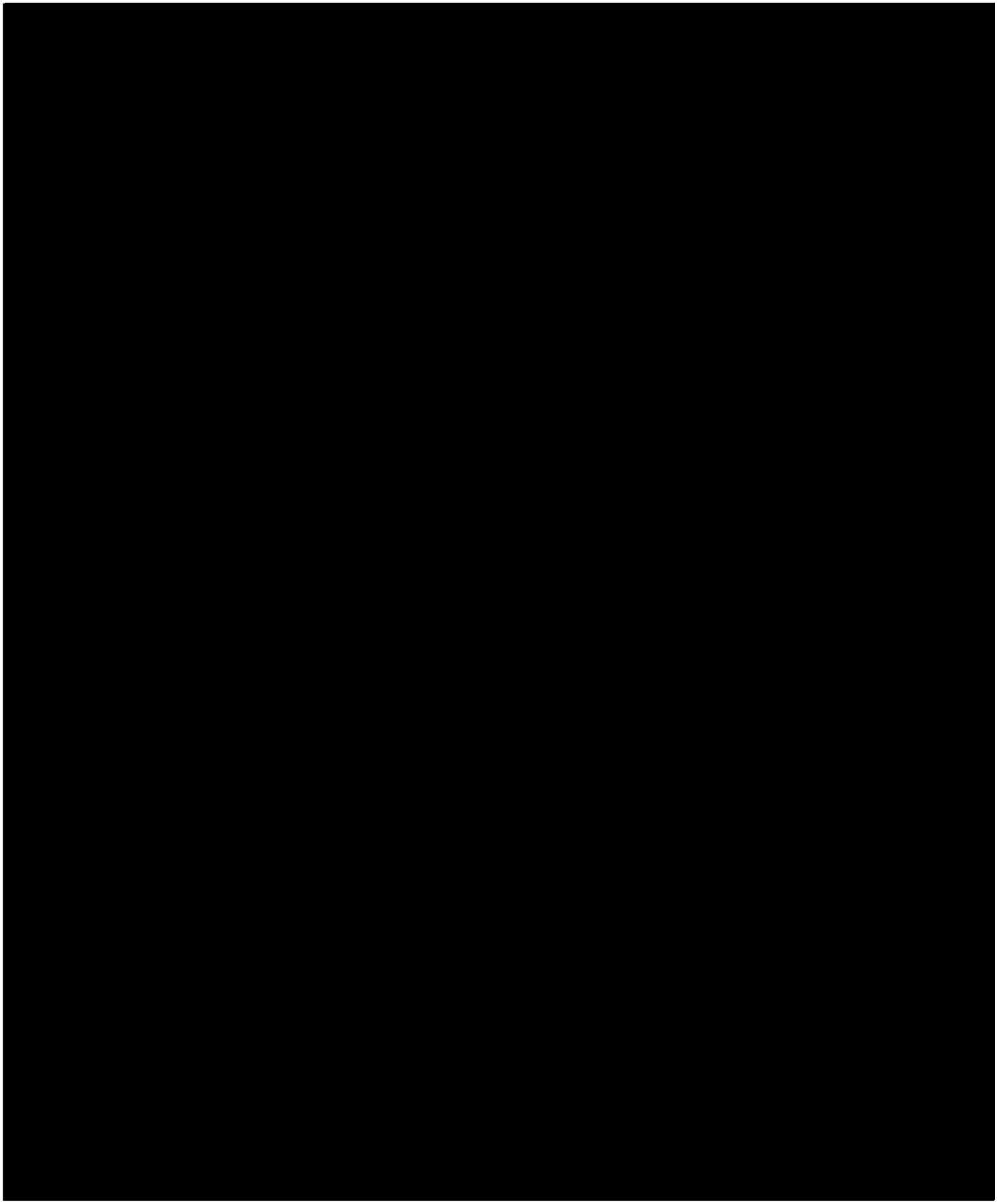


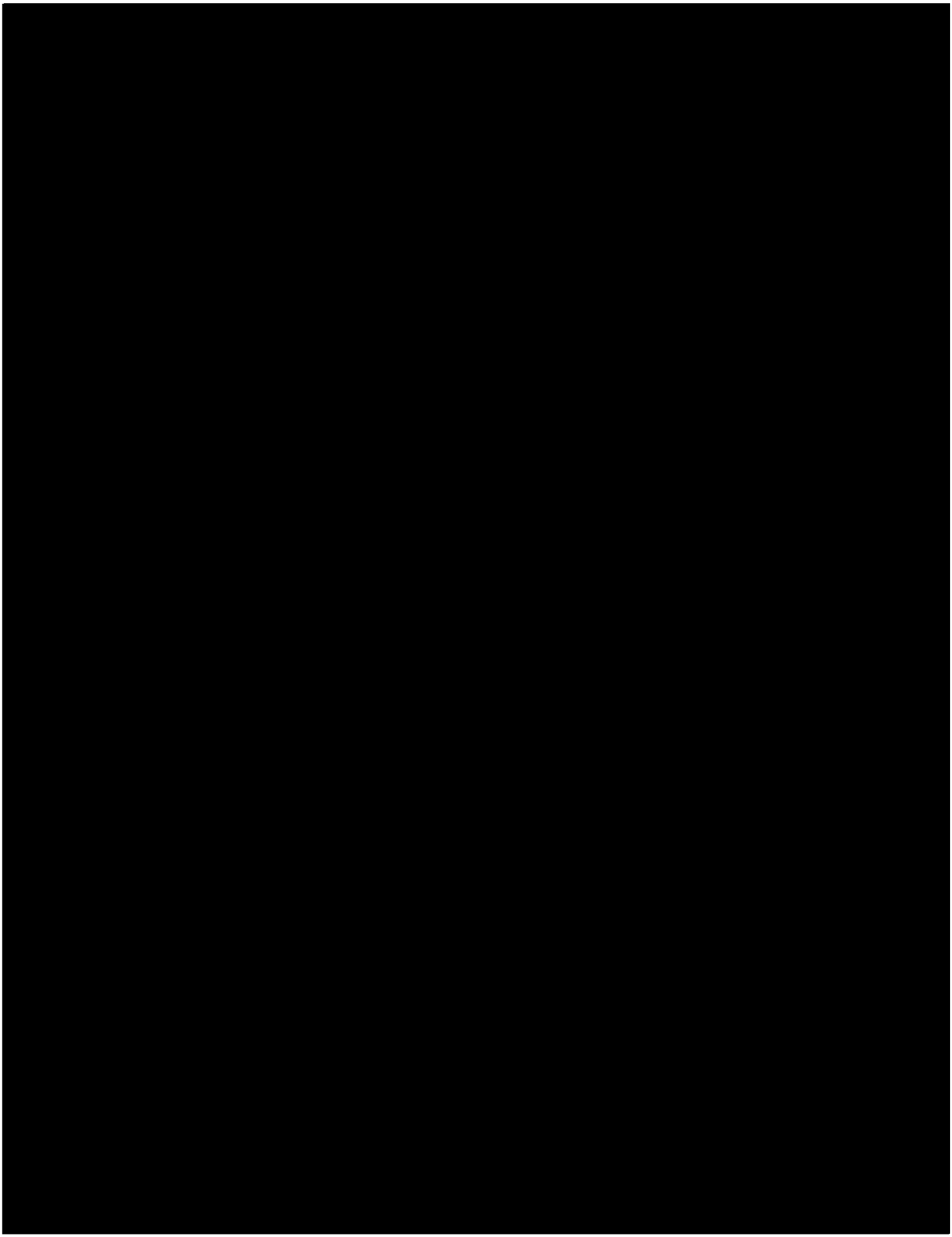


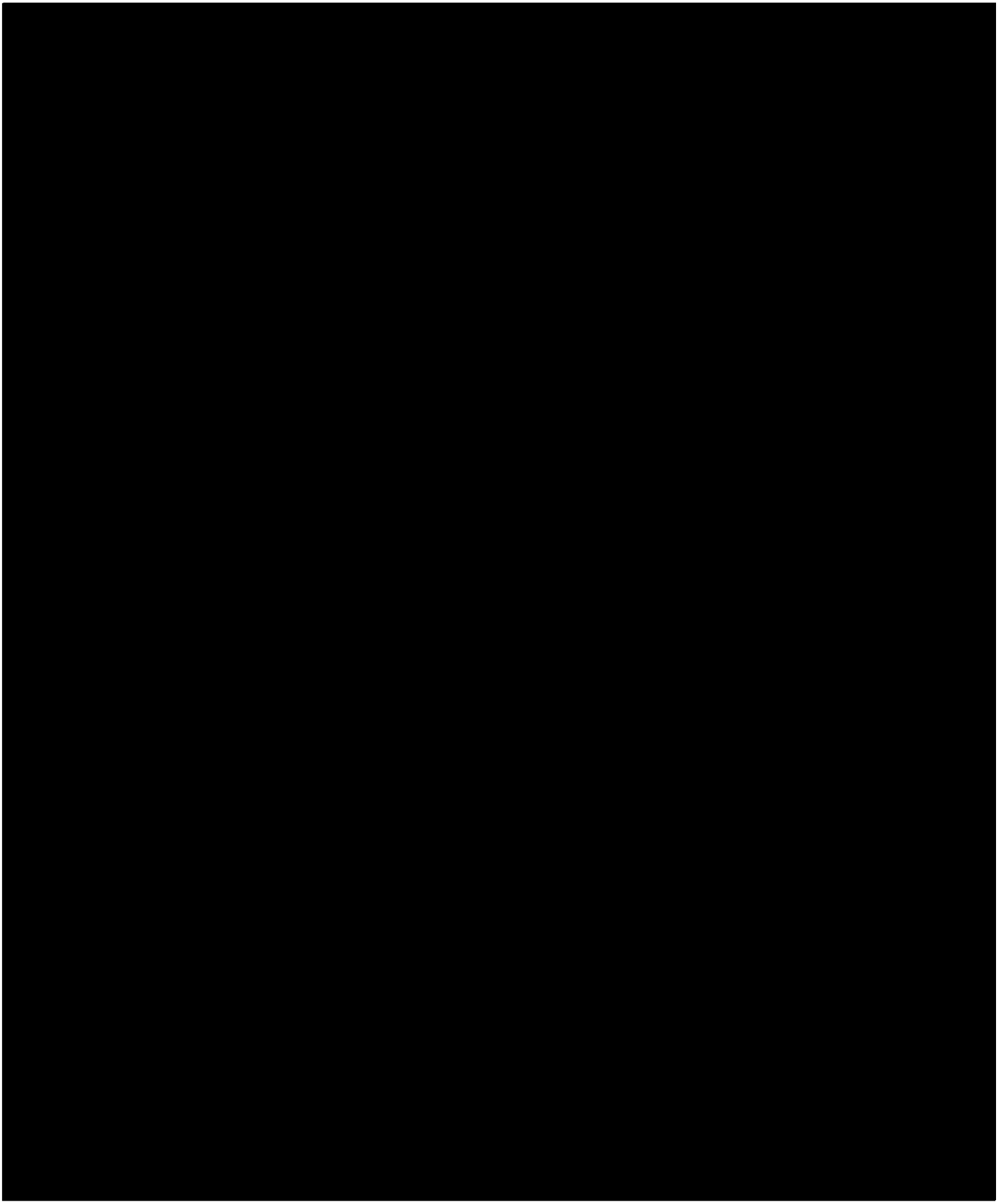
}}

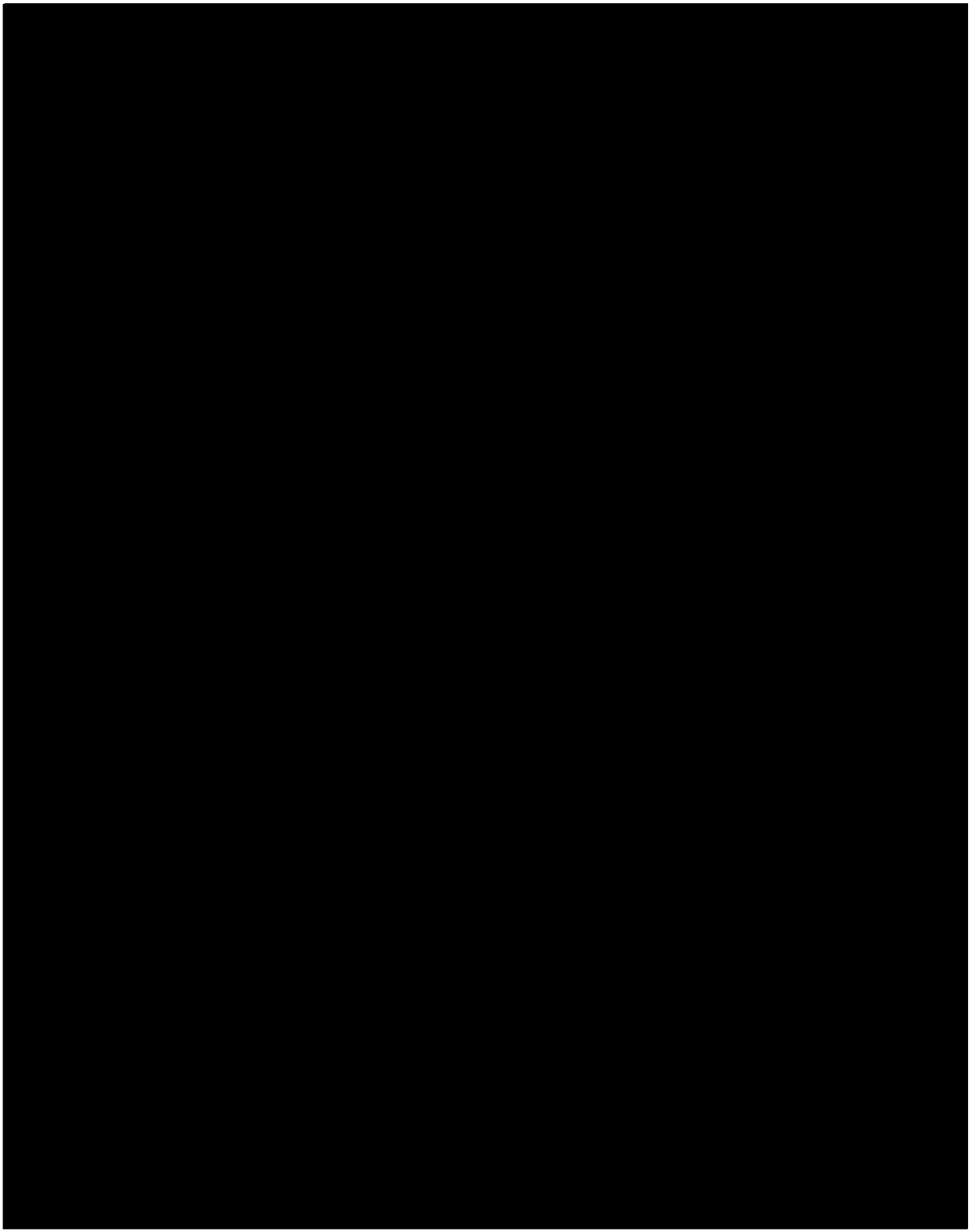
Counsel's Exhibit 43

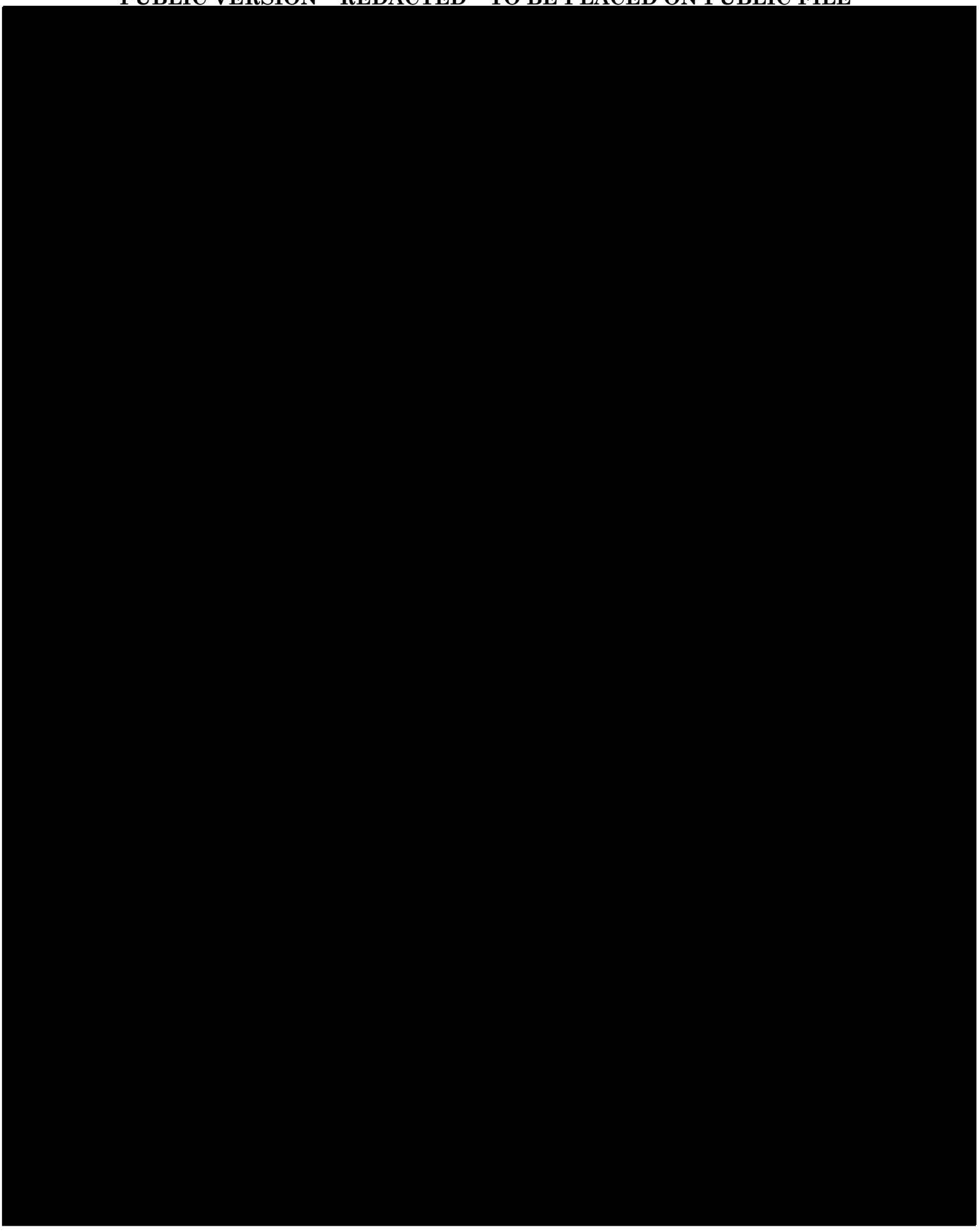
{{

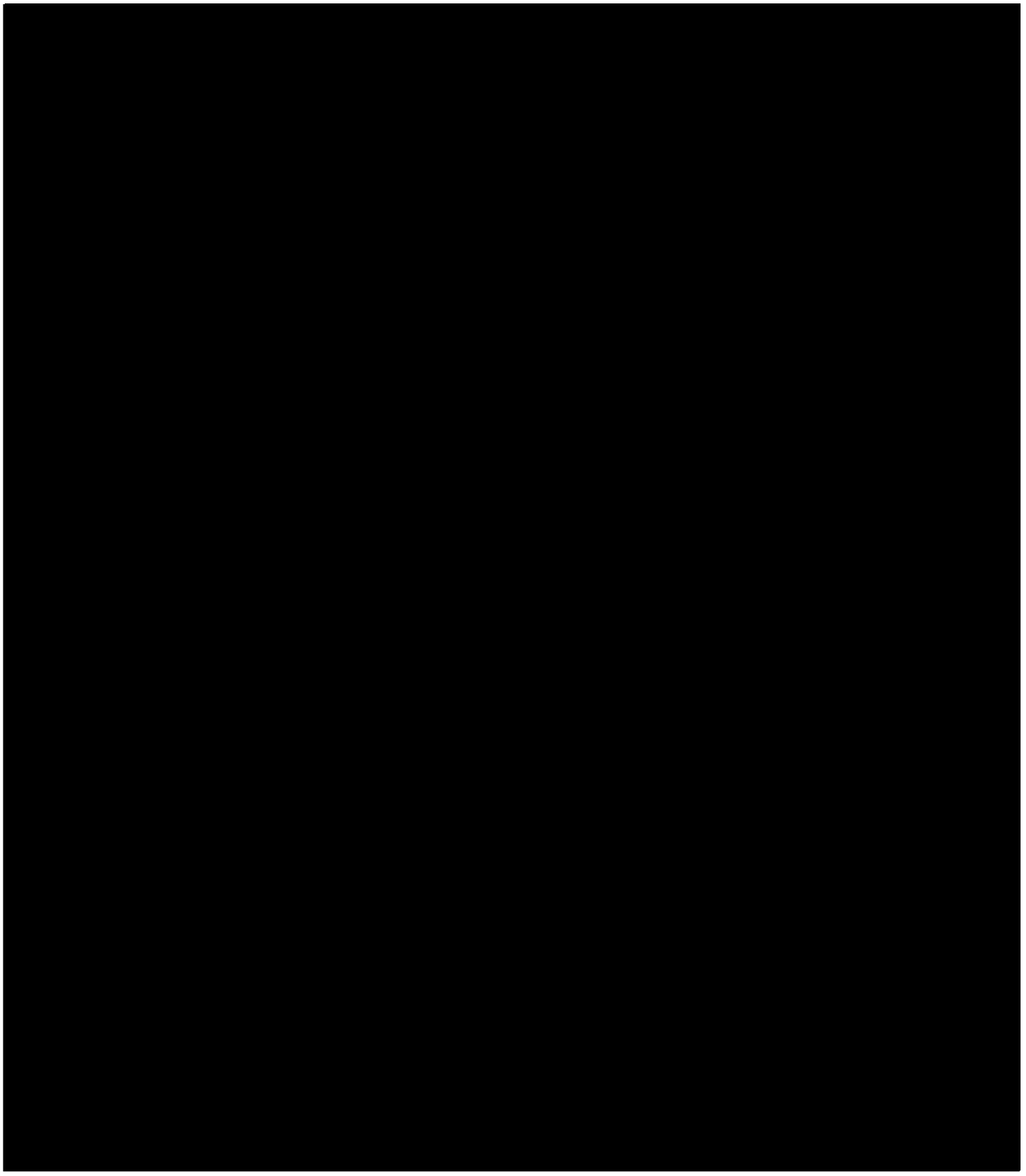












}}

Verified Statement of Dr. Jeffrey Prince

BEFORE THE
SURFACE TRANSPORTATION BOARD

DOCKET NO. NOR 42180

EVERGY INC., EVERGY METRO, INC. AND EVERGY KANSAS CENTRAL, INC
v.
BNSF RAILWAY COMPANY

VERIFIED REPLY STATEMENT OF PROFESSOR JEFFREY T. PRINCE

NOVEMBER 20, 2025

TABLE OF CONTENTS

I. Introduction 1

A. Qualifications 1

B. Allegations 1

C. Assignment 2

II. Summary of Opinions 2

III. Appropriate Application of The Common Carrier Obligation Requires Adhering to Economic Guardrails that Recognize Some Fundamental Economics of The Railroad Industry 5

A. Inefficiencies in the Rail Network Undermine the Ability of Railroads to Be Viable Competitors in a Competitive Industry and Ultimately Impose Costs on All Railroad Participants 7

B. To Avoid Harm to the Broader Network, the STB Should Be Guided by Certain Economic Guardrails when Adjudicating the Common Carrier Obligation 11

1. Ignoring the Circumstances When Assessing Reasonableness Harms the Broader Network 11
2. It Is Inefficient and Ultimately Harmful to the Network and Its Participants if Railroads' Capacity Levels Are Set to Fully Service All Shippers in Times of Extreme Demand and Supply Shocks 16
3. Obligations Under Common Carrier Service are Distinct from Contract Service, and Confusing the Two Risks Eliminating Contracting Incentives and Ultimately Harm to the Network 20
4. Individual Shippers' Incentives are Not Aligned with the Overall Network, and as a Consequence, Shipper Requests Can Lead to a Tragedy of the Commons 24

IV. The Regulatory Service Obligation Asserted by Evergy Runs Afoul of Economic Guardrails and Risks Significant Harm to the Broader Network 26

A. The Regulatory Service Obligation Asserted by Evergy Ignores Crucial Circumstances 27

B. The Regulatory Service Obligation Asserted by Evergy Would Encourage Inefficient Capacity Levels Based on Extreme Demand and Supply Shocks 28

C. The Regulatory Service Obligation Asserted by Evergy Would Confuse Contract Obligations with Common Carrier Obligations, Risking Destruction of Contracting Incentives 31

D. The Regulatory Service Obligation Asserted by Evergy Would Increase the Likelihood and/or Severity of a Tragedy of the Commons 36

V. Any Assessment of BNSF's CCO in 2022 Must Account For the Extraordinary Effects Of COVID And Related Events 38

A. The Recovery from COVID Was Fundamentally Different from Prior Recessions, Leading to an Unexpected Expansion in Economic Activity, a Historically Tight Labor Market, and an Extraordinary Supply Chain Crisis 39
1. The Recovery from Covid Caused an Unexpected Expansion in Economic Activity 39
2. COVID and the Recovery from COVID Caused a Historically Tight Labor Market 44
3. COVID and the Recovery from COVID Caused an Extraordinary Supply Chain Crisis, Including Widespread Service Problems in the Manufacturing and Transportation and Other Industries 45

B. COVID and the Post-Covid Recovery Disrupted Many Industries, Many of Which Experienced Labor Shortages and/or Service Problems 51
1. COVID Posed a Substantial Threat to Some Businesses 51
a. Hospitality and Tourism 51
b. Passenger Airlines 52
2. COVID and the Post-COVID Recovery Caused Service Problems in the Freight Transportation Industry and in Other Industries 54
a. Trucking 54
b. Ports 57
c. Air Freight 62
d. Public Passenger Transportation 65

C. BNSF Experienced Labor Shortages and Supply Issues in 2022 Due to COVID, Similar to Other Industries 66

VI. Conclusion 70

I. INTRODUCTION

A. Qualifications

1. My name is Jeffrey T. Prince. I am a PhD. economist and a tenured full professor of Business Economics and Public Policy at the Kelley School of Business, Indiana University. I am also the Harold A. Poling Chair in Strategic Management at the Kelley School, an Advisory Committee Member for the Indiana University Center for Survey Research, a Faculty Affiliate of the Indiana University Data Science Program, a Faculty Affiliate of the Indiana University Institute for Corporate Governance and Ethics, and a University Fellow at the Technology Policy Institute. From 2016 to 2025, with the exception of the 2019 – 2020 academic year, I served as the Chairperson of Business Economics and Public Policy, and from 2016 to 2022, I served as Co-Director of the Institute for Business Analytics at the Kelley School. Prior to joining the Kelley School, I worked as an Assistant and tenured Associate Professor at Cornell. From Fall 2019 to Fall 2020, I served as Chief Economist at the Federal Communications Commission where I advised the Chairman on a wide range of telecommunications policy issues and initiatives that involved auction design, data analytics, and antitrust matters. I also led the internal research program at the Commission. I have provided economic consulting services in cases across a broad set of industries. A copy of my CV is attached as **Appendix A**.

B. Allegations

2. On January 31, 2024, Evergy Inc., Evergy Metro, Inc. and Evergy Kansas Central, Inc (collectively, "Evergy" or "Complainants") filed a Complaint and Petition for Declaratory Order ("Complaint") with the Surface Transportation Board ("Board" or "STB"). In the Complaint, Evergy alleges that BNSF "fail[ed] to provide reasonable and adequate rail transportation service […] upon reasonable request to Evergy Metro's Iatan Generating Station near Iatan, Missouri ("Iatan") and EKC's Lawrence Energy Center near Lawrence, Kansas ("Lawrence") in 2022 […]."[1] On June 25, 2025, Evergy submitted its Opening Evidence.[2]

[1] Complaint and Petition for Declaratory Order, January 31, 2024 ("Complaint"), pp. 1-2.

[2] Evergy Opening Evidence, June 25, 2025.

3. I understand that Evergy has asked the Board to determine that BNSF "has breached its statutory obligation to provide adequate common carrier service on reasonable request," "engaged in unreasonable practices in establishing and implementing the terms of such service," and "failed to provide safe and adequate car service."[3] Evergy also seeks "a declaration of the scope of BNSF's service obligations to Complainants," and "an award of monetary damages as compensation to Complainants for the consequences of BNSF's unlawful actions and inactions."[4]

C. Assignment

4. I have been engaged by counsel for BNSF to consider the economic implications of the Complaint and Evergy's Opening Evidence filed on June 25, 2025, including the Statement by Messrs. Robert D. Mulholland and Timothy D. Crowley. In particular, I have been asked to:

- Assess which economic principles should guide the STB when adjudicating whether a railroad has complied with the Common Carrier Obligation ("CCO");
- Assess the potential effect of the regulatory service obligation asserted by Evergy on the future health of the rail network; and
- Determine whether COVID and/or the recovery from COVID, created economic circumstances that would need to be taken into account when assessing BNSF's CCO in 2022.

II. SUMMARY OF OPINIONS

5. On the basis of my review of the information identified herein, I have reached the following opinions:

6. The CCO is a regulatory principle that requires railroads to make reasonable efforts to meet a shipper's reasonable request to transport traffic. In assessing the reasonableness

[3] Complaint, pp. 1-2.

[4] Complaint, p. 2.

of both service requests and the railroad's response to service requests, the STB has acknowledged the importance of protecting the broader rail network. This acknowledgement follows naturally from the fact that railroads must maintain an efficient rail network to remain competitive—both with other railroads and with other modes of transportation—and to ensure economic viability. To avoid negative economic impacts to the rail network, including the risk of entering a "downward spiral" in which declining efficiency and performance undermine railroads' competitiveness and ultimately hurt shippers and consumers, the STB should be mindful of certain economic principles, or "guardrails" when considering the CCO:

- *Circumstances matter*: Because demand and supply conditions inherently influence network economics, and these conditions can and do change with circumstances, evaluating service levels based on their reasonableness under the relevant circumstances helps ensure that the broader network remains optimized and efficient.

- *Don't build the church for Easter Sunday*: It is inefficient and ultimately harmful to the broader network and its participants if railroads' capacity levels are based on the ability to service all requests even under rare and extreme supply and demand shocks. Thus, the CCO must not compel railroads to maintain inefficiently large capacities for extreme demand and supply shocks. In fact, occasional capacity "shortages" are expected in efficient networks when there are unexpected shocks to the system.

- *Contract service is different*: Obligations under common carrier service differ from those under contract service. Contract service involves negotiated, reciprocal obligations with agreed-upon service and volume levels, whereas common carrier service imposes no such commitments and instead relies on what is reasonable under the circumstances. Because contracts frequently enhance network efficiency, regulations that confuse obligations under common carrier services with those under contract service risk severely degrading or eliminating contracting incentives can be harmful to the broader network.

- *Individual shipper interests may conflict with network health*: Because individual shippers' incentives are not aligned with using railroad resources in the interest of

the overall network, regulation focused solely on individual shipper interests risks facilitating a tragedy of the commons. Effective regulation must therefore account for protecting the broader network.

7. The regulatory service obligation asserted by Evergy risks serious harm to the rail network by disregarding these economic guardrails.

- First, the regulatory service obligation asserted by Evergy ignores crucial circumstances affecting the economics of the network, including COVID and the subsequent recovery. It is striking that Evergy's economists Messrs. Robert D. Mulholland and Timothy D. Crowley do not even refer *once* to the impact of COVID on the economy in 2022.

- Second, the regulatory service obligation asserted by Evergy would force railroads to operate with inefficient capacity. If shippers could compel allocation of resources during times of constrained capacity due to an extreme industry shock, as Evergy suggests here, railroads would face strong pressure to build excess slack capacity to be able to meet extreme demand and supply shocks. This excess capacity would have costs, and those costs ultimately would have to be borne by customers via higher prices, and incentivizing marginal traffic to move by truck rather than rail.

- Third, the regulatory service obligation asserted by Evergy confuses the obligations under contract service with the obligations under the common carrier standard. The proposed standard would impose an obligation on the railroad to reserve capacity for the shipper's use without any reciprocal commitment on the part of the shipper to use that capacity. Such a standard would severely degrade and possibly eliminate incentives to contract and lead to inefficient outcomes.

- Fourth, the regulatory service obligation asserted by Evergy would increase the risk of a tragedy-of-the-commons outcome, as individual shippers, such as Evergy, have little incentive to consider the broader impacts on the rail network or on the quality of service to other customers.

8. Thus, by violating the "guardrails," the result of adopting Evergy's asserted regulatory service obligation would be a less efficient and less competitive railroad network which would drive up costs for shippers, and ultimately, given the competitive pressures exerted on railroads by other modes of shipping, lead to a greater risk of a decline of railroads, harming both railroads and shippers.

9. A point that warrants further elaboration is that the regulatory service obligation asserted by Evergy lacks an analysis of reasonableness under the circumstances. Indeed, Evergy failed to consider the profound effects of the COVID pandemic on the economy, labor markets, supply chains, and transportation networks. However, the disruption of COVID and the post COVID recovery at the time was so great that a network operator that was making sound capacity decisions and behaving reasonably with service requests would almost certainly have to reduce service to customers relative to their shipping requests. COVID and the post-COVID recovery had unexpected impacts throughout the economy and caused disruptions, such as labor shortages and service problems in 2021 and 2022, in numerous other industries, including freight transportation industries such as trucking, ports, and freight moved by aircraft, and public passenger transportation.

10. BNSF experienced labor shortage and service issues in 2022 due to COVID and the recovery from COVID, similar to other industries. Thus, any assessment of BNSF's CCO in 2022 would need to take COVID and the post-COVID recovery (in concert with other unexpected events such as the war in Ukraine) into account. Messrs. Robert D. Mulholland and Timothy D. Crowley failed to do so.

III. APPROPRIATE APPLICATION OF THE COMMON CARRIER OBLIGATION REQUIRES ADHERING TO ECONOMIC GUARDRAILS THAT RECOGNIZE SOME FUNDAMENTAL ECONOMICS OF THE RAILROAD INDUSTRY

11. As providers of vital transportation infrastructure, railroads are among a select group of firms that have been deemed common carriers and are subject to a CCO. I understand that as common carriers, railroads have a responsibility to provide service to individual shippers, but they are also responsible for the health of the rail network on which numerous other shippers rely. When assessing a railroad's compliance with the CCO, the STB has acknowledged the

importance of avoiding harm to the broader network.[5] Generally, protecting and improving the health of the rail network requires recognition of the fundamental economics of the railroad industry.

12. The economics of freight rail are shaped by powerful network effects and high fixed costs, characteristics shared in common with many of the other network industries I have analyzed and on which I advised the Chairman while serving as the Chief Economist at the Federal Communications Commission. In a network industry, such as railroads, where problems in one part of the network can impact the network as a whole, there are strong benefits for integrated, system-wide planning rather than planning for one line or one shipper. Ideally, railroads would have access to the best information possible on future shipper demand, enabling them to plan capacity so that most shipments can be accommodated as efficiently as possible. However, given the high costs of maintaining capacity and the inevitability of demand and supply shocks, efficient capacity planning also means that shipment requests will sometimes exceed available capacity. Building a completely shock-proof network would otherwise drive up costs and prices for shippers. Moreover, as discussed in more detail in **Section III.A** below, because freight railroads compete not only with each other but also with other industries, inefficiencies in railways can undermine their competitiveness and, over time, their economic viability.

13. Based on these economic fundamentals, avoiding harm to the broader network and avoiding inefficiencies in the network requires *avoiding* several sources of economic harm, including:

- (1) establishing specific rules regarding railroad volume or service obligations without accounting for circumstances,

[5] *See e.g.*, *Capital Cargo, Inc. v. Rail Link, Inc., Savannah Port Terminal Railroad, Inc. and Georgia Ports Authority*, Civil Action No. CV05-0755-AB, STB Finance Docket No. 34920, p. 9 (STB served May 30, 2008) ("But common carriers serve the public generally, and the common carrier obligation does not require a carrier to maintain service levels for one shipper that will degrade service overall."); *Navajo Transitional Energy Company, LLC – Ex Parte Petition for Emergency Service Order,* Docket No. NOR 42178, p. 6 (STB served June 23, 2023) ("in common carrier cases, the needs of the carrier's other shippers, including its contract shippers, should be considered."); *Navajo Transitional Energy Company, LLC v. BNSF Railway Company,* Docket No. NOR 42179, p. 2 (STB served Dec. 13, 2023) (dissenting board member Fuchs noted that the common carrier obligation should "avoid[] harming broad groups of shippers, […] and imposing unnecessary costs on the network).

- (2) establishing conditions that effectively mandate wasteful capacity cushions to absorb extreme shocks, such as COVID,
- (3) confusing obligations under common carrier service with those under contracts, thereby risking elimination of incentives for shippers to enter contracts, and
- (4) increasing the risk of a "tragedy of the commons" situation.

I refer to avoiding these four sources of economic harm to the broader railroad network as economic "guardrails" that the STB should be mindful of when adjudicating the CCO, and discuss them in more detail in **Section III.B** below.

A. Inefficiencies in the Rail Network Undermine the Ability of Railroads to Be Viable Competitors in a Competitive Industry and Ultimately Impose Costs on All Railroad Participants

14. Greater inefficiencies in a rail network impose costs on all railroad participants, including shippers, who may experience these inefficiencies in terms of higher prices, or lower quality of service, or both. For example, higher operating costs due to inefficient overinvestment in capacity may be passed on to shippers, resulting in higher rail rates. Inefficiencies may also result in a decrease of service performance, by, e.g. lowering the quality of service provided at the same price. In addition, railroads face competition and must maintain an efficient rail network to compete effectively and survive. However, when the efficiency of the network is degraded, railroads risk entering a "downward spiral" in which declining efficiency undermines their competitiveness and ultimately further hurts shippers and consumers.

15. Railroads must be efficient to compete. Freight railroads face direct competition for their services from other railroads (intramodal competition) and other modes of competition (intermodal competition), such as trucking and barging. Indeed, a majority of shippers utilizing freight railroads are not captive — instead they have access to intermodal and/or intramodal competitors of the freight railroad. According to the U.S. Department of Justice, a former STB

chairman estimated that only "15-20 percent of all rail movements involve captive shippers."[6] Similarly, Mayo and Willig (2018) state that "many, if not most, rail activities" are exposed to "effective competitive constraints."[7]

16. Even for shippers that the STB considers to be captive, market forces can still constrain a railroad's market power.[8] For example, competitive pressures in the downstream markets for commodities moved by rail may effectively prevent a railroad from exercising market power.[9] As evidence of persistent competitive pressure, **Exhibit 1** shows real rail rates, as measured by the STB's rail rate index, approximately stayed flat between 2016 and 2021, and in 2022 were below the 2012 level.

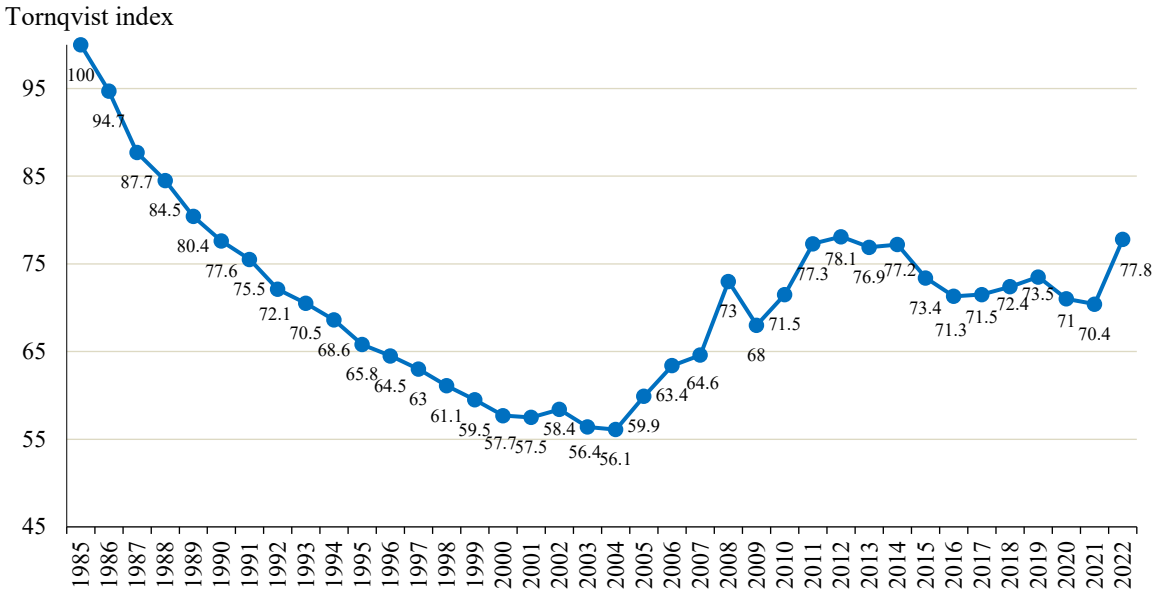
[6] Pittman, Russell, "The Economics of Railroad 'Captive Shipper' Legislation," *Economic Analysis Group, Antitrust Division, U.S. Department of Justice*, January 2010, available at https://www.justice.gov/sites/default/files/atr/legacy/2010/02/05/255003.pdf, p. 2. In another estimate, a former STB chairman testified before Congress that "[l]ess than 10% of the nation's freight rail traffic is recognized as captive and eligible for STB rate regulation." "STB Chairman Charles D. Nottingham Oral Statement," *House Committee on Transportation and Infrastructure Hearing on Rail Competition and Service*, September 25, 2007, available at https://www.stb.gov/wp-content/uploads/Testimony-Nottingham-2007-09-25b.pdf, p. 2.

[7] Mayo, J. W. and R.D. Willig, "Economic Foundations for 21st Century Freight Rail Rate Regulation," *Georgetown McDonough School of Business Research Paper No. 3286211*, (2018), p. 4.

[8] In 2024, Norfolk Southern and The Anderson-DuBose Company, Inc., a shipper serving McDonald's and Chipotle locations in the Eastern U.S., entered an agreement for Anderson-Dubose to develop a distribution facility on a Norfolk Southern-owned industrial park in Jacksonville that was exclusively served by a Norfolk Southern mainline. Anderson-DuBose characterized the development as "a joint growth opportunity for both [] companies." https://norfolksouthern.mediaroom.com/Norfolk-Southern-to-sell-property-to-Anderson-DuBose-for-development-of-60M-rail-served-food-storage-and-distribution-facility-in-Jacksonville (viewed August 15, 2025).

[9] For example, in 2012 the Association of American Railroads ("AAR") submitted a petition to the STB to "institute a rulemaking proceeding to reintroduce indirect competition as a factor considered in market dominance determinations for coal transported to utility generation facilities." *Petition of the Association of American Railroads to Institute a Rulemaking Proceeding to Reintroduce Indirect Competition as a Factor Considered in Market Dominance Determinations for Coal Transported to Utility Generation Facilities*, STB Ex Parte No. 717, p. 1 (STB served Nov. 19, 2012). Specifically, in their petition, the AAR submitted expert testimony discussing how competition between generation resources (*e.g.*, natural gas) in the wholesale power markets constrained rail rates for coal, and further, how changes in wholesale power markets increased the impact of indirect competition on rail rates, in some instances "provid[ing] an effective competitive constraint on rail rates." *Verified Statement of David A. Reishus, Petition of the Association of American Railroads to Institute a Rulemaking Proceeding to Reintroduce Indirect Competition as a Factor Considered in Market Dominance Determinations for Coal Transported to Utility Generation Facilities*, STB Ex Parte No. 717, pp. 8-9 (STB served Nov. 19, 2012).

Exhibit 1: Rail Rate Index Based on Real Revenue Per Ton-Mile, 1985=100[10]



17. Furthermore, freight railroads are in a position of navigating both a regulatory common carrier obligation and facing competitive pressures, including from competitors that are not subject to similar obligations. Other industries that provide cargo transport services, such as airlines and trucking, may also face intramodal and intermodal competition,[11] but are generally

[10] Surface Transportation Board, "Annual Rail Rate Index Study: 1985-2022," June 5, 2024, available at https://www.stb.gov/wp-content/uploads/Annual_Rail_Rate_Index_Study_2022.pdf, pp. 1, 6 and Figure 1. ("The Rail Rate Index Study uses the STB's Confidential Carload Waybill Sample (Waybill Sample) data for all traffic to calculate a Tornqvist index to show how rates are changing over time across the entire rail industry, while controlling for shifts among different traffic characteristics from year to year. Figure 1 shows the real, inflation-adjusted Rail Rate Index over time. […] In developing our Tornqvist index, we first assigned each railroad movement to one of 70 separate categories based on its commodity and service characteristics. The Tornqvist index measures the change in prices within each category and assigns a percentage weight to each category based on its share of total revenues, essentially creating a weighted average of price changes within the various categories.").

[11] According to the Federal Trade Commission ("FTC"), competition in the trucking industry has intensified, especially after deregulation in the 1980s. FTC, "Trucking Deregulation in the United States Submission by the Unites States to the Ibero-American Competition Forum," September 2007, available at https://www.ftc.gov/system/files/attachments/us-submissions-oecd-2010-present-other-international-competition-fora/ibero-trucking.pdf, pp. 2, 4-5. Similarly, following deregulation in 1978, the airline industry became "highly competitive." Peterson, Robert, "Impacts of Airline Deregulation," *TR News*, May-June 2018, available at https://onlinepubs.trb.org/onlinepubs/trnews/trnews315airlinedereg.pdf, pp. 13-15 According to the Federal Aviation Administration ("FAA"), "[c]argo carriers face price competition from alternative shipping modes such as trucks, container ships, and rail cars, as well as from other air carriers." FAA, "FAA Aerospace Forecast, Fiscal Years 2020-2040," available at https://www.faa.gov/sites/faa.gov/files/data_research/aviation/aerospace_forecasts/FY2020-40_FAA_Aerospace_Forecast.pdf, p. 22.

not subject to the same level of service obligations as railroads.[12] Other industries that are generally subject to relatively greater service obligations than airlines and trucking, such as public utilities (including water, natural gas, and electricity) and pipelines, in turn face less competition.[13] Indeed, public utilities have essentially guaranteed monopoly power and can set rates to cover new investments without having to worry about competition siphoning off demand that can be serviced at a lower cost.[14]

18. As a consequence, railroads need to be efficient to compete effectively. Efficiency, in turn, depends on avoiding excessive capacity investments, as these costs would need to be passed along to customers, and risk driving business to competitors. Non-captive shippers with alternative transportation options would switch away from a costly and inefficient railroad network, shrinking the base over which railroads could spread fixed costs. This, in turn, would drive prices even higher, prompting further switching of non-captive shippers, and risking a self-reinforcing cycle of decline. Indeed, the railroad struggles prior to the 1980 Staggers Act represent a serious warning about what could happen with increased railroad inefficiency.

19. Consequently, the CCO must recognize and account for railroads' need to be efficient to compete effectively. This means regulation of railroads should reflect market economics as much as possible; if regulation imposes significant inefficiencies, then railroads will not be able to compete effectively, harming rail customers and the public interest. This

[12] Since the ICC Termination Act, federal law generally preempts state efforts to impose service obligations on motor carriers, including the trucking industry. 49 U.S.C. § 14501(c)(1) ("a State […] may not enact or enforce a law […] related to a price, route, or service of any motor carrier […] with respect to the transportation of property."). Similarly, the Airline Deregulation Act broadly preempts state mandates regarding service obligations. 49 U.S.C. § 41713(b)(1) (states "may not enact or enforce a law … related to a price, route, or service of an air carrier.").

[13] *See, e.g.*, Public Utilities Commission of Nevada, "Presentation to the Governor's Committee on Energy Choice," September 26, 2017, available at https://www.energy.nv.gov/siteassets/content/Agenda_Item_5_-_Energy_101.pdf, p. 6 ("A utility is given a monopoly over electric service in a specific area. The utility's obligation to serve demand in a defined service territory at regulated rates comes with the monopoly.").

[14] *See, e.g.*, https://thebeaconnews.org/stories/2024/01/24/kansas-city-energy-bills-regulation-utility-commissions/ (viewed September 10, 2025) ("Unlike most grocery chains or cellphone companies, Evergy faces no competition."); https://www.kcur.org/news/2025-08-13/missouri-utility-companies-evergy-ameren-electricity-energy (viewed September 10, 2025) ("Energy companies in Missouri have been raising their prices to recoup costs of investments and the price of fuel. […] When customers dislike the price of groceries or a streaming service, they can shop around for a better option. But for electricity, there's usually just one provider available.").

would, at a minimum, be counterproductive to the STB's stated interest to expand rail service[15] and legislative mandate to promote railroad revenue adequacy.[16]

B. To Avoid Harm to the Broader Network, the STB Should Be Guided by Certain Economic Guardrails when Adjudicating the Common Carrier Obligation

1. Ignoring the Circumstances When Assessing Reasonableness Harms the Broader Network

20. Because demand and supply conditions inherently influence the economics of railways, and these conditions can and do change with circumstances, evaluating service levels based on their reasonableness under the relevant circumstances helps maintain an optimized and efficient network. In contrast, mandating specific rules without accounting for circumstances, such as requiring a railroad to always match historical service levels — as Evergy appears to claim[17] — can harm the broader network in various ways, including creating substantial inefficiencies and/or performance problems due to overregulation, overinvestment, and less informed decision making.

21. First, lower output does not automatically mean there is market failure or justify regulatory intervention, such as mandated service levels or service rulings that do not take circumstances, such as prevailing economic conditions, into account. For example, a major shock, like COVID, may take time for even healthy markets to adjust to. An attempt to intervene and "fix" such disruptions via specific service rules risks slowing necessary adjustments and leaving the industry burdened with unnecessary overregulation. Second, ignoring circumstances like COVID when adjudicating the CCO would essentially compel railroads to heavily

[15] For example, in a press release titled "STB to Hold Hearing Regarding Growth in the Freight Rail Industry," the STB announced it would hold a public hearing in September 2024 "to gather information about recent trends and strategies for growth in the freight rail industry," noting "the Board has an interest in the health and growth of the industry," and understanding "what rail carriers are doing and can do to increase shippers' use of rail." https://www.stb.gov/news-communications/latest-news/pr-24-29/ (viewed September 8, 2025).

[16] 49 U.S.C. § 10704(a)(2).

[17] Evergy asserts its 2022 service request was reasonable "considering historic precedent". For example, Evergy Opening Evidence, p. 17 ("There was nothing extreme, unexpected or out of the ordinary about Complainants' 2022 service requests. Both in form – which was prescribed by BNSF – and in substance considering historic precedent, Evergy Metro's and EKC's 2022 service requests were reasonable.").

overinvest in capacity to avoid performance declines from extreme shocks.[18] Third, railroads possess more immediate and detailed knowledge of local market conditions than the STB. Consequently, when regulators attempt to substitute their judgment for railroad management's by imposing specific service rules, they risk doing more harm than good to network efficiency and overall service performance.

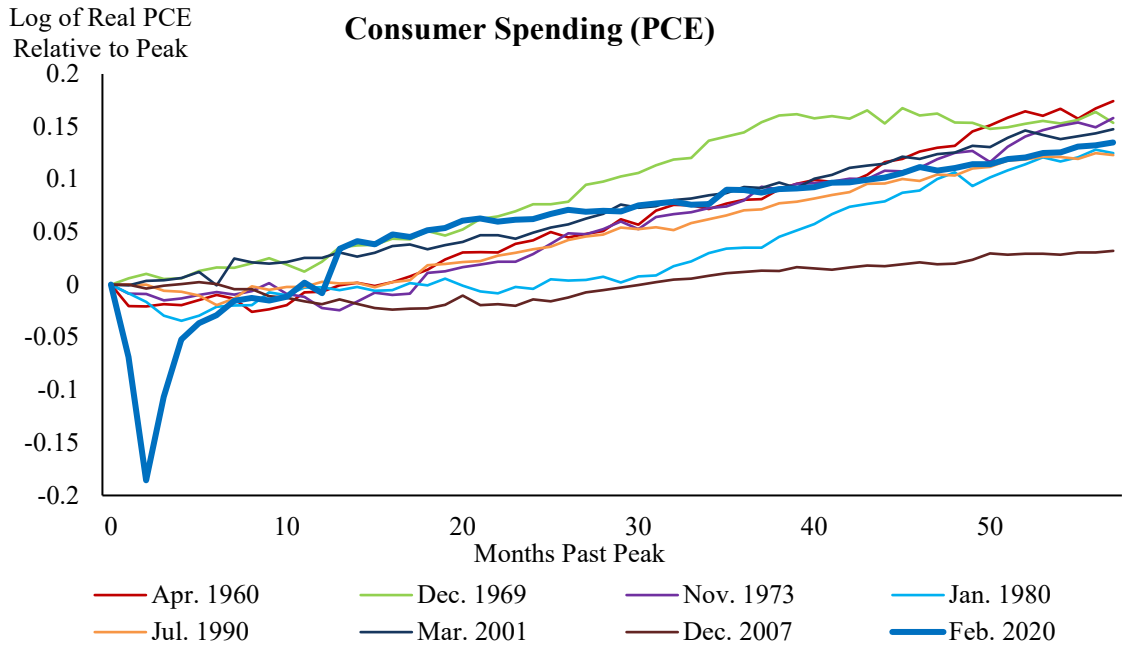
22. Assessing what is reasonable *under the circumstances* provides key practical guidance for applying the CCO in a manner that safeguards the broader network by avoiding the above distortions. In this case, the impact of COVID and the recovery from COVID are circumstances that must be considered in assessing BNSF's transportation service. I address in detail below in **Section V** the extraordinary and unprecedented effects of COVID on the U.S. economy and in particular on transportation sectors. The failure of Evergy's economists Messrs. Robert D. Mulholland and Timothy D. Crowley to even discuss COVID in their evaluation of BNSF's transportation service, by itself, undermines the credibility and reliability of their testimony.[19]

23. As shown in **Exhibit 2**, which is discussed further below, the initial decline in economic activity caused by COVID was far deeper than previous recessions and the recovery far more accelerated.

[18] *See also* **Section III.B.2**.

[19] Ms. Tucker only mentions Covid once, acknowledging "…volume aberrations attributable to the Covid pandemic." Verified Statement of Jessica L. Tucker, p. 4.

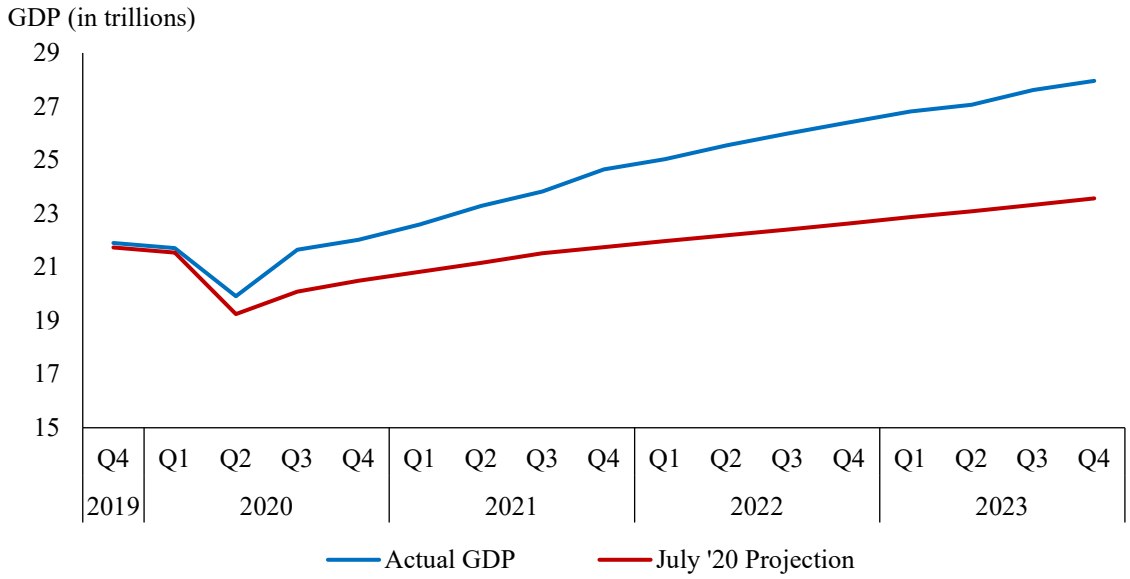
Exhibit 2: Recovery from COVID vs. Selected Other Recessions[20]



24. Following the depth of economic activity with the onset of COVID, economic recovery vastly exceeded even the Government's forecasts, as shown in **Exhibit 3**, which is discussed further below.

[20] Stock, James H. and Mark Watson, "Recovering from COVID," NBER Working Paper 33857, May 2025, available at https://www.nber.org/system/files/working_papers/w33857/w33857.pdf, Figure 2. Personal consumption expenditures ("PCE") represent the "value of goods and services purchased by, or on behalf of, U.S. residents", see https://www.bea.gov/data/consumer-spending/main (viewed October 8, 2025). The labels for each series correspond to the month and year of the business-cycle peak as dated by the NBER. For example, February 2020 denotes the peak of the cycle that began that month. This figure was replicated using the authors' replication files available on Mark W. Watson's website, https://www.princeton.edu/~mwatson/wp.html (viewed October 10, 2025). The replication files include monthly nominal PCE by Major Type of Product, covering total PCE and monthly Price Indexes for all PCE series. The plotted PCE series are real, adjusted for inflation using the corresponding price indexes, expressed in natural logarithms, and normalized to zero at the business-cycle peak month as dated by the NBER. A value of zero therefore represents the level at the cycle peak, and the horizontal axis measures the number of months following that peak, up to approximately sixty. The business-cycle peaks are those reported by the NBER, available at https://www.nber.org/research/data/us-business-cycle-expansions-and-contractions (viewed October 10, 2025). The authors combined the business cycles beginning in January 1980 and July 1981. *See* footnotes 92 and 95 for additional details.

Exhibit 3: Economic Recovery[21]
CBO Forecast July 2020 vs. Actuals



25. The result was a supply chain crisis in the United States that included widespread service problems in manufacturing and transportation, as well as other industries. U.S. suppliers' delivery times were extraordinarily challenged, as shown in **Exhibit 4**, discussed below.

[21] Congressional Budget Office, "Economic Projections: July 2020," available at https://www.cbo.gov/data/budget-economic-data#4; Congressional Budget Office, "Historical Data and Economic Projections: June 2024," available at https://www.cbo.gov/data/budget-economic-data#4.

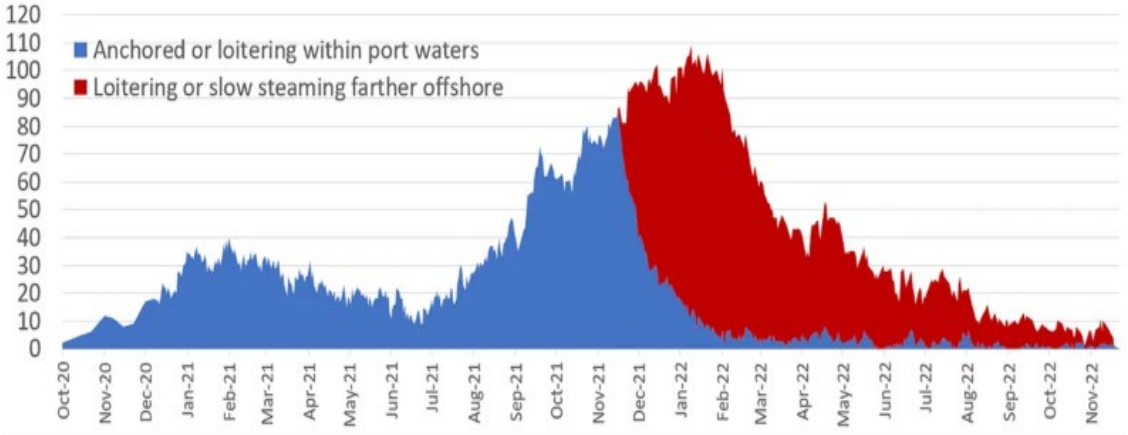
Exhibit 4: S&P Global PMI, U.S. Manufacturing Supplier Delivery Times 2008 – 2024[22]



26. Congestion and delay were at extraordinary levels, for example on West Coast ports, as shown in **Exhibit 5**, also discussed further below.

[22] https://www.spglobal.com/marketintelligence/en/mi/research-analysis/us-pmi-slips-back-into-contraction-territory-for-first-time-this-year-in-july.html (viewed October 14, 2025). Purchasing Managers' Index ("PMI") data are compiled by S&P Global from surveys of senior executives at private sector companies across more than 40 economies worldwide. The PMI dataset features a headline number, which indicates the overall health of an economy, and sub-indices, which provide insights into other key economic drivers such as GDP, inflation, exports, capacity utilization, employment and inventories. The Manufacturing Supplier Delivery Times subindex captures the extent of supply chain delays in an economy.

Exhibit 5: Container Ships Waiting in Los Angeles/Long Beach Queue
October 2020 to November 2022[23]



27. In many industries that I discuss below, demand was slow to recover, and there was a serious threat to the continued viability of those industries. But even in industries such as transportation, where demand returned at an accelerated pace, industry participants faced unprecedented shortages of labor, impeding the recovery to pre-COVID levels of activity. Any assessment of BNSF's transportation service during these extraordinary times must consider the circumstances caused by COVID.

2. It Is Inefficient and Ultimately Harmful to the Network and Its Participants if Railroads' Capacity Levels Are Set to Fully Service All Shippers in Times of Extreme Demand and Supply Shocks

28. Industries routinely experience positive and negative shocks to both demand and supply, and railroads are no exception. Yet, as a general principle, it is inefficient to "build a church for Easter Sunday," — that is, to maintain capacity on hand to meet the most extreme circumstances. As a consequence, even with an efficient level of capacity, railroads and other industries should be expected to, at times, experience shortages due to capacity constraints, particularly when there are unexpected shocks to the economy.

29. Capacity constraints can arise due to shocks to demand (e.g., unexpected surges in demand) or supply/cost (e.g., an input to production unexpectedly becoming unavailable/costly,

[23] https://www.freightwaves.com/news/zero-ships-waiting-off-southern-california-59-off-other-ports (viewed August 13, 2025).

such as labor shortages, maintenance issues, and weather) or both. While demand surges may be more frequently associated with capacity constraints, supply-side shocks can equally constrain effective capacity. As a recent example, in 2023 airlines reduced flights in the New York area because of a lack of air traffic controllers.[24] In the railroad industry, labor market frictions — such as retirements, regional shortages, or regulatory constraints — can reduce available capacity even when physical infrastructure exists. The COVID pandemic provided a vivid example: railroads, like many industries, experienced unexpected labor shortages due to a historically tight labor market.[25]

30. Firms across various industries have incentives to keep buffer capacity on hand to accommodate some shocks to demand and/or supply. However, having capacity on hand to meet extreme and infrequent demand or supply shocks implies there will be substantial amounts of resources lying dormant for long stretches of time, imposing excessive costs that are offset only when a rare, extreme shock occurs (if ever), resulting in lower efficiency. Thus, the Easter Sunday analogy reflects a general economic principle: having some situations in which capacity constraints are felt (e.g., in extreme situations) can be entirely appropriate/efficient. Or, conversely, designing systems to accommodate the most extreme peak events is usually inefficient and unsustainable.

31. Not building and/or maintaining capacity for Easter Sunday is commonplace across industries. For example, shipping delays and backlog effects are routinely observed in sectors like trucking, parcel delivery, and ports during holiday seasons, labor strikes, or storm events.[26] Hotels do not build enough rooms to accommodate a city's demand during the Super Bowl, nor do sports arenas construct permanent seating to host the occasional Taylor Swift

[24] https://apnews.com/article/faa-limits-new-york-flights-6992dfe968891b414901f5bd2fef9de7 (viewed September 8, 2025).

[25] Verified Statement of Erin M. Johnson, Ph.D., Section III. *See also*, **Section V**.

[26] *See, e.g.*, https://www.seavantage.com/blog/unpacking-port-congestion-how-delays-disrupt-global-supply-chains-2025 (viewed September 8, 2025) (Ports get the most congested during "Holiday Shopping Season" and "Labor Strikes & Disruptions", "causing shipment delays, higher costs, and supply shortages."); https://www.shipwithshaker.com/insights/weather-and-logistics-how-shippers-can-weather-the-storm/ (viewed September 8, 2025) ("Unpredictable weather patterns and surprise storms can snarl traffic and create delays for freight that ripple across a supply chain.").

concert.[27] Likewise, supermarkets typically do not maintain the staff, shelf space, or inventory levels needed to fully absorb the demand surges caused by pre-storm panic buying.[28] Even Apple and Nvidia, two of the most profitable companies in the world, have at times struggled to keep up with demand surges associated with newly launched iPhones and AI chips, respectively.[29] In each case, decision-makers recognize that maintaining such extreme levels of surplus capacity would impose excessive costs during normal periods and result in a substantial amount of idle resources. These examples illustrate that some level of capacity constraint during rare, extreme events is not only expected, but economically rational and efficient.

32. A relevant question is how much slack capacity should be built into the system ex ante to account for unpredictable shocks. Typically, the answer would be to build in *some* excess capacity relative to a baseline situation with no shocks but not to build in excess capacity to cover all potential contingencies.[30] And the extent to which excess capacity is built in should depend on the costs and benefits of building such capacity. In other words, it is rational for firms

---

[27] *See, e.g.*, https://www.sportsbusinessjournal.com/Daily/Issues/2012/01/30/Events-and-Attractions/Super-Bowl/ (viewed September 8, 2025) (For Super Bowl XLVI in Indianapolis, the city has "far fewer hotel rooms than a typical host city," and attendees chose to stay "in distant cities, including Chicago, which is about 180 miles from Indianapolis."); https://www.yahoo.com/entertainment/thousands-swifties-amass-outside-stadium-035807985.html (viewed October 14, 2025) (During Taylor Swift's Eras Tour in Philadelphia, despite the stadium "ha[ving] an estimated concert capacity of just under 70,000, and Swift [] playing three concerts at the venue over the weekend […] thousands of [fans] who were shut out of tickets still turned out and took in her shows from outside the stadium").

[28] *See, e.g.*, https://www.wuft.org/business-news/2024-10-09/gainesville-residents-panic-buying-ahead-of-hurricane-milton (viewed October 14, 2025) ("Grocery store supply chains can be fragile. […] [S]tores operate using just-in-time inventory management strategies where stores order just what they need to provide for their customers and little more. This strategy ensures high-quality, fresh food, but it can cause short-term shortages when excessive amounts of certain items are rapidly purchased.").

[29] *See, e.g.*, https://www.nytimes.com/2024/01/29/technology/ai-chips-nvidia-amazon-google-microsoft-meta.html (viewed September 8, 2025) (Discussing how Nvidia "has not kept up with the demand."); https://www.thesupplychainer.com/post/nvidia-s-supply-chain-woes-highlight-risks-of-ai-boom (viewed September 8, 2025) ("As demand for AI hardware continues to surge, NVIDIA is struggling to meet orders for its Blackwell series AI chips."); https://www.forbes.com/sites/connieguglielmo/2012/09/17/apple-says-iphone-5-demand-outstrips-supply-as-pre-orders-shatter-previous-record/ (viewed September 8, 2025) ("Apple said demand for the iPhone 5 set a record and has already surpassed its initial supply, with some customers who pre-ordered the device now having to wait until October to get their hands on the slimmer, lighter new smartphone.").

[30] *See, e.g.*, Sheffi, Yossi and James B. Rice Jr., "A Supply Chain View of the Resilient Enterprise," *MIT Sloan Management Review*, Vol. 47, No. 1 (2005): 41-48, pp. 41, 44 ("While some redundancy is part of every resiliency strategy, it represents sheer cost with limited benefit unless it is needed due to a disruption"; "companies have to be careful not to digress from 'just-in-time' to 'just-in-case' inventory management [...] extra inventory has proven to be detrimental to product quality and lean operations in general."); "Chapter 3: The Problem of Capacity and Delay," available at https://www.princeton.edu/~ota/disk3/1984/8403/840305.PDF, pp. 46, 48 ("Practical capacity, which is always less than throughput capacity, is that level of airfield utilization which can be attained with no more than some acceptable amount of delay"; "some delay, though avoidable, might be too expensive to eliminate").

to balance the cost of underperformance and adjustment costs during rare shocks with the opportunity cost of idle capital and labor in normal conditions.

33. The same principles apply in the railroad industry: striving for full capacity coverage at all times would often mean overbuilding and overspending, at the cost of long-term efficiency and viability. Instead, railroads plan for demand and supply shocks by incorporating some level of buffer capacity into their capital and operational strategies. However, determining how much slack is "reasonable" is a complex decision shaped by economic constraints and trade-offs and optimized given the available information at the time (rather than in hindsight). For example, railroads utilize several resources, including tracks, locomotives, and labor. In response to changing demand conditions, some of these resources, such as labor, can in some circumstances be fluidly scalable. For instance, labor can be furloughed when demand is low and typically be recalled when demand is high. Thus, maintaining significant slack labor when demand is low could lead to inefficiencies. At the same time, an unexpected supply shock in any one input — such as labor — cannot be fully offset by increasing availability of other inputs. For example, having surplus locomotives does not solve a labor shortage problem, since there are not enough qualified personnel to operate them. In such a scenario, the ability to provide full service is constrained not by track or equipment, but by the absence of train crews; however, as just noted, it may have been efficient to *not* have maintained significant slack labor. Thus, a sufficiently large and rare supply shock, such as to labor, may result in some degradation in service, but efficient capacity means that these costs are more than offset by savings from avoiding idle workers during non-extreme market conditions.

34. Consequently, the CCO should avoid compelling Railroads to overinvest in capacity to accommodate extreme demand and supply shocks, as this would impose inefficient costs on railroads. Those costs would have to be borne by all rail customers, exacerbated by the fact that customers with competitive options may opt to leave the rail system and move goods by other modes (**Section III.A**).

3. Obligations Under Common Carrier Service are Distinct from Contract Service, and Confusing the Two Risks Eliminating Contracting Incentives and Ultimately Harm to the Network

35. Obligations under common carrier service are different from obligations under contract service. For certain types of shipments, the common carrier obligation forms a floor of obligations for the railroad without any reciprocal obligations for the shipper — a platform on which contracts can and do build. In economic parlance, common carrier service is an outside option for shippers, an assurance that railroads will expend reasonable efforts to serve reasonable requests even if no contract is negotiated. Importantly, the converse is not the case: obligations that were specified in contracts do not form a floor for the obligations to be expected under common carrier service. Obligations in contracts reflect negotiated terms, including risk sharing between the parties, and are reciprocal in nature. Thus, common carrier service obligations cannot be lifted from obligations arising in contract service, since in common carrier service they would be unilaterally applied to railroads rather than being part of reciprocal obligations.

36. Contract service allows railroads and shippers to come to an agreement regarding mutual obligations and service and volume levels. Through contract, a shipper can commit to provide a minimum volume of coal and the railroad to carry it, with both parties bound to consequences if they fail to meet their respective obligations. For example, an important commitment feature of private contracts is the Minimum Annual Volume Requirements ("MAVs") for shippers to tender a certain amount of traffic because they allow network operators to plan ahead and ultimately improve network efficiency.[31] MAVs typically set a floor on the volume the shipper is obligated to load for the duration of the contract, which is typically long-term. Shippers may also annually nominate their expected tonnage for the next calendar year ("Annual Tonnage Nomination"), including specifics about number of trains/cars, broken

[31] *See e.g.*, U.S. Government Accountability Office, "Freight Rail Pricing Contracts Provide Shippers and Railroads Flexibility, but High Rates Concern Some Shippers," December 2016, available at https://www.gao.gov/assets/gao-17-166.pdf ("According to railroad representatives, the volume commitments negotiated in a contract allow the railroad to more efficiently allocate its resources and ensure consistent revenues.") and ("[A]ccording to representatives from three Class I railroads, a contract's overall volume commitment and certainty helps the railroads better plan future investments. Specifically, one railroad representative said a contract allows the railroad to allocate locomotives and rail crews more efficiently and ensure a consistent source of revenue. As a result, contracts generally include agreements on the amount of volume a shipper is willing to commit.").

down by month and origin, etc.[32] This Annual Tonnage Nomination lets shippers set target quantities (within reason) that they would like served and provide that information to the railroads. Importantly, the Annual Tonnage Nomination also places obligations on the shippers since the MAV for the next calendar year will be the greater of the initial floor and the annual nominations.

37. In contrast, I understand that common carrier service lacks reciprocity of obligations, and service and volume levels are governed by an analysis of reasonableness under the circumstances. Evergy's own demand shortfalls illustrate the lack of reciprocal shipper obligations under common carrier service: for example, in 2023 and 2024, Evergy shipped {[redacted]} percent and {[redacted]} percent, respectively, less coal than it initially requested for which there were no economic consequences.[33]

38. Indeed, to preserve incentives for entering contracts, the CCO should limit its service requirements to efforts that are reasonable under the circumstances. Imposing obligations beyond that threshold would create an outside option that reduces shippers' willingness to enter into contracts, risking lost improvements to network efficiency that contracts can achieve via reciprocal obligations. For example, were the CCO to increase from requiring reasonable efforts under circumstances to requiring railroads be a guarantor of service regardless of external circumstances, then the shipper would have reduced, and possibly even no, incentive to enter a contract in which the shipper obtains less than the full guarantee of service, even if risk sharing with mutual obligations can be efficiency-enhancing. Thus, such an extreme CCO standard would impose a loss to network efficiency. In contrast, because contracts generally require both parties to make at least reasonable efforts,[34] a CCO governed by the standard of reasonableness under the circumstances, does not undermine the incentives to enter into contracts.

---

[32] *See e.g.*, BNSF_EVG_0003960, at p. 3; EVERGY-0080063-069, at EVERGY-0080064.

[33] {[redacted]}. Verified Reply Statement of Michael R. Baranowski and Nathaniel S. Zebrowski, p. 100 ("In December 2022, {[redacted]}").

[34] *See e.g.*, BNSF_EVG_0003960, at p. 1; EVERGY-0080063at 64.

39. While it is not the case that all traffic is necessarily more efficiently moved via contract, a regulatory regime that effectively destroys contracting incentives almost certainly will lead to reduced network efficiency. Contracts facilitate information gathering and risk sharing, thus providing a means for increased efficiency. Contracts enable shippers to signal downstream information by articulating their expected demand for railroad services and sharing risk with respect to future traffic by committing to service volumes. Commitments by shippers in contracts also give shippers "skin in the game," incentivizing communication of accurate forecasts due to contractually imposed costs when forecasts are inaccurate. By contrast, when shippers rely on common carrier services — which is similar to purchasing in a "spot market"[35] — railroads operate with less (and less reliable) information and less commitment, which limits their ability to make efficient allocation and investment decisions.

40. Information and risk sharing are particularly important in the railroad industry. Railroads face decisions regarding how to expand, maintain, or shrink network resources — such as crews, locomotives, cars, and tracks[36] ("investment decisions") — and how to use the network resources currently available ("allocation decisions").[37] Two prominent features of railroad networks create challenges for railroads when making these decisions: 1) network resources are largely shared across network users, while relevant information is dispersed across network

[35] Macher, J.T., J.W. Mayo, D.E.M. Sappington, "The evolution of contracting: evidence from the US freight rail industry," *The Journal of Law, Economics, and Organization*, Vol. 41 (2025): 316–347, pp. 322-323 ("The Staggers Act thus permitted a choice between two distinct exchange governance mechanisms: tariffs (akin to spot market prices) and contracts. Railroads continued to offer a menu of set prices that are still referred to as "tariffs" in the industry for shipments between specific origins and destinations. As with pre-Staggers Act tariffs, post-Staggers Act tariffs are not customer-specific, and service quality generally is determined by standard service provisions (so called "best-efforts") of the rail carrier involved. Moreover, for certain commodities, regulations still require that railroads offer a tariffed rate of service: a common carrier obligation […] Prices do not adjust instantaneously to equilibrate the supply of and the demand for transportation services, as would be the case in a perfect spot market. However, the prices are influenced by the same forces that shape spot market prices.").

[36] https://www.aar.org/operations-101 (viewed August 18, 2025); https://www.trains.com/trn/train-basics/abcs-of-railroading/the-people-who-work-on-trains (viewed August 18, 2025).

[37] Lai, Y.C. and C.P. L. Barkan, "Comprehensive Decision Support Framework for Strategic Railway Capacity Planning," *Journal of Transportation Engineering*, Vol. 137, No. 10 (Oct. 2011): 738–749.

users,[38] and 2) investment in network resources is capital intensive,[39] often/largely irreversible,[40] and potentially requires substantial lead time. Unaddressed, the former feature can lead to inadequately informed decisions, and the latter feature can lead to decisions overly influenced by risk concerns; both potentially leading to inefficient investment and allocation decisions. Hence, when railroads are able to gather more information from network users (e.g., shippers' bona fide estimates of anticipated demand of railroad services) and share some of the investment risks, there is the potential for efficiency gains.

41. Indeed, railroads can aggregate information from contracts — which shippers are incentivized to provide accurately due to corresponding obligations — to plan both in terms of allocating resources and investing into the network. Additionally, contracts can provide information to manage the allocation of network resources during periods of constrained capacity. For example, contracts may contain railroad obligations to the shipper that would require the railroad to provide specified volumes of service, or may contain make-up periods which allow the railroad to de-prioritize certain traffic if needed. Such terms can reflect the importance of serving particular traffic, which may signal the surplus that would be lost if that traffic was not served on time or not at all. Contracts also provide a means through which shippers share the risk of the investments the railroads make, which allows railroads in turn to more efficiently invest based on the bona fide information and commitments they collected

[38] Association of American Railroads, "*National Rail Freight Infrastructure Capacity and Investment Study*," Sep. 17, 2008, available at https://www.stb.gov/wp-content/uploads/files/docs/railEnergyTransportationAdvisoryCommittee/Cambridge%20Systematics%20briefing.pdf.

[39] Association of American Railroads, "Economic Impact of America's Freight Railroads," Feb. 28, 2025, available at https://www.aar.org/wp-content/uploads/2025/02/AAR-PE-Economic-Impact-Report-2025-FINAL.pdf, p. 12.

[40] Burton, M. and C. Sims, "Understanding Railroad Investment Behaviors, Regulatory Processes, and Related Implications for Efficient Industry Oversight," *Review of Industrial Organization*, Vol. 49, No. 2 (2016): 263–288, pp. 263, 269.

across the network. The long-term nature of coal transportation relationships,[41] in particular, makes contracts well-suited to define expectations in the coal transportation business.[42]

42. Given the ability of contracts to materially increase network efficiency, the CCO should take care not to seriously degrade or destroy contracting incentives, which would result in a less efficient network and diminish the ability of railroads to be competitive (**Section III.A**). This means, among other things, being careful not to remove incentives to reciprocally share information via a contracted arrangement.

4. Individual Shippers' Incentives are Not Aligned with the Overall Network, and as a Consequence, Shipper Requests Can Lead to a Tragedy of the Commons

43. The railroad industry is a network industry with shared assets among numerous shippers, and the operator must determine how best to share them. Individual shippers who use the common network are focused on their own interests and maximizing what they get out of the network. Shippers do not account for externalities (i.e., the effects of their actions on other users of the network), and as a consequence, their self-interested requests for service may be contrary to the interests across all users of the network. This mismatch in interests can lead to a tragedy of the commons, where a common resource is depleted and/or degraded by individual overexploitation. Perhaps the most well-known example of a tragedy of the commons involves a commonly-owned fishing property (e.g., a lake), where left to their own devices, fishers catch as many fish as they want without accounting for long-term damage to the fishing stock. Ultimately, the fishing stock becomes depleted, resulting in less fish for everyone.

---

[41] Coal transportation contracts were usually around 10 years before 2010 and around 3 to 5 years as of 2014. *See* U.S. Department of Agriculture, Study of Rural Transportation Issues, Chapter 5: Coal Transportation (2010), available at https://www.ams.usda.gov/services/transportation-analysis/rti, p. 173; U.S. Government Accountability Office, "Freight Rail Pricing: Contracts Provide Shippers and Railroads Flexibility, but High Rates Concern Some Shippers," GAO-17-166 (2016), available at https://www.gao.gov/assets/gao-17-166.pdf, p. 16. The contracts between BNSF and Evergy and {{[redacted]}} have been between {{[redacted]}}. *See* EVERGY-0080063-069; BNSF_EVG_0003960; BNSF_EVG_0019487; EVERGY-0089007. In 2018, energy providers KCP&L and Westar Energy merged under the name Evergy. *See* https://investors.evergy.com/news-releases/news-release-details/kcpl-and-westar-energy-are-now-evergy (viewed October 15, 2025).

[42] Verified Reply Statement of Michael R. Baranowski and Nathaniel S. Zebrowski, p. 100 ("The majority of coal transported by rail in the U.S. moves under contracts agreed to between the coal customer and the rail carrier. Many of these contracts have volume commitments, some of which extend out many years in the future.")

44. In the railroad setting, a tragedy of the commons emerges when shippers (1) request shipments, without considering both the impact on other shippers by tying up too many network resources and preventing de-congestion, and/or (2) make nominations in their own interest (e.g., erring on the high side to ensure full service even for their very highest demand scenario). Similar to the fishing example, when shippers consider only their own self interests in these ways, it results in the railroad network becoming depleted and/or degraded, leading to less service or lower quality of service for everyone. Regarding (1), the railroad would need to *allocate* network resources sub-optimally if it were compelled to do so by individual shippers. Such a situation may worsen service levels and/or quality, by, for example, increasing congestion on the network. Regarding (2), if the railroad were compelled to avoid worsening service even in the highest demand scenario across all shippers, the railroad would need to *overinvest* in capacity, incurring additional costs, at least some of which would need to be passed on to shippers for the railroad to remain viable. In other words, the tragedy of the commons for railroads can entail both a distortion of allocation decisions (due to inefficiently tying up too many network resources by certain shippers) and a distortion of investment decisions (due to over-nominations by shippers), increasing inefficiencies in the railroad network both in the short-term and long-term.

45. The COVID-related service interruptions (including in 2022) provide a poignant illustration of a potential tragedy of the commons in practice for railroads. During that time, as discussed in **Section IV.D** below, shippers had the incentive to add cars. However, adding cars may ultimately be counterproductive due to an increase in network congestion. Thus, the shippers' incentives to add more cars — to improve the chances of getting their shipment despite slowing the entire network — are indicative of negative externalities not taken into account. In contrast, BNSF subsequently decided to take some cars off the network in order to decongest the network and improve service overall.[43] A tragedy of the commons situation may have ensued or

[43] Verified Reply Statement of Michael R. Baranowski and Nathaniel S. Zebrowski, p. 8 ("As part of its overall service recovery plan, BNSF removed {{ }} coal trainsets from service on its network in March 2022, including { }"), p. 22 ("Similar to the improvements in BNSF's service to Iatan after { }, BNSF's system-wide initiative to reduce cars on line had a positive impact on network fluidity and service performance as well."), and p. 56 ("During this period of worsening congestion, BNSF rightly recognized the need to reduce traffic along the Evergy route and {{ }}").

worsened due to inefficiently tying up too many network resources had the railroad not been able to decongest the network.

46. Hence, it is important for the CCO to avoid establishing a regulatory environment that enhances the likelihood of a tragedy of the commons emerging, which will result in a less efficient network and diminish the ability of railroads to be competitive (**Section III.A**). Instead, regulation must be guided by an analysis that considers the consequences to the network as a whole.

IV. THE REGULATORY SERVICE OBLIGATION ASSERTED BY EVERGY RUNS AFOUL OF ECONOMIC GUARDRAILS AND RISKS SIGNIFICANT HARM TO THE BROADER NETWORK

47. I understand that the regulatory service obligation asserted by Evergy can be characterized as follows: BNSF is obligated to provide requested service levels under tariff, as long as they match historical service levels, regardless of forecasted levels or changes in circumstances and whether historical service was provided under contract or tariff, and where Evergy can have shortfalls without consequences but BNSF would owe damages for shortfalls.[44] This asserted service obligation for BNSF risks significant harm to the network because it runs afoul of each of the CCO economic guardrails, risking declines in network efficiency and overall performance, by:

- Ignoring the circumstances, including COVID and the recovery from COVID (**Section IV.A**);
- Compelling railroads to overinvest in slack capacity (**Section IV.B**);
- Confusing contract obligations with common carrier obligations and risking destruction of contracting incentives (**Section IV.C**); and
- Increasing the likelihood of a tragedy of the commons (**Section IV.D**).

48. As a consequence, the asserted service obligation can lessen railroad competitiveness, leading to higher prices for shippers and consumers, and ultimately, given the

[44] *See e.g.*, Complaint, p. 2; Evergy Opening Evidence at p. 17; Evergy Opening Evidence, Tucker Verified Statement at pp. 9, 18, 48.

competitive pressures facing railroads, risk a decline of railroads (see discussion in **Section III.A** above).

A. The Regulatory Service Obligation Asserted by Evergy Ignores Crucial Circumstances

49. The regulatory service obligation asserted by Evergy disregards the circumstances that affected BNSF's ability to provide service in 2022. The COVID pandemic was an unexpected, major shock to the economy and as discussed in **Section V** below:

- COVID (and the subsequent recovery) represented an extraordinary disruption of U.S. economic activity and to numerous sectors across the economy.
- Many industries (including trucking, ports, freight-moving airlines, and public passenger transportation) experienced difficulties maintaining service levels in 2021 and 2022, in part due to labor shortages and labor frictions stemming from COVID (and the subsequent recovery).
- In 2022 BNSF experienced labor shortages and supply issues due to COVID (and the subsequent recovery) — paralleling the difficulties faced by many industries.

50. Thus, any assessment of BNSF's CCO in 2022 must account for the extraordinary effects and circumstances of COVID and the recovery from COVID. However, even though Messrs. Robert D. Mulholland and Timothy D. Crowley's assignment was "to identify factors, if any, contributing to the volume shortfalls experienced by Evergy in that year,"[45] they fail to address the effect of COVID, and instead apparently attribute alleged shortfalls in Evergy coal deliveries to Iatan and Lawrence simply to "operational changes and resource allocation decisions implemented by BNSF."[46]

[45] Verified Statement of Robert D. Mulholland And Timothy D. Crowley, p. 1.

[46] Verified Statement of Robert D. Mulholland And Timothy D. Crowley, p. 40.

B. The Regulatory Service Obligation Asserted by Evergy Would Encourage Inefficient Capacity Levels Based on Extreme Demand and Supply Shocks

51. The regulatory service obligation asserted by Evergy would compel allocation of railroad resources regardless of circumstances, including during times of constrained capacity. As discussed in **Section V** below, the regulatory service obligation asserted by Evergy ignores that COVID (and the recovery from COVID) represented an extreme shock to the economy generally, and specifically to the transportation sector, including railroads. If shippers could compel allocation of resources during times of constrained capacity, railroads would be forced to over-invest in capacity simply to guard against such extreme demand and supply shocks.

52. Thus, granting the regulatory service obligation asserted by Evergy increases the chance of establishing a regulatory environment that encourages inefficient capacity levels based on extreme demand and supply shocks. When firms maintain such capacity levels or are compelled by regulators to do so, the resulting inefficiencies can have substantial negative consequences. There are multiple well-documented instances in which businesses over-expanded their capacity — through capital investments and/or hiring — resulting in too much idle capacity, and ultimately financial distress and/or bankruptcy. For example, Hanjin Shipping and other container shipping companies invested heavily into new container vessels during the 2000s and 2010s, which ultimately lead to an oversupply of capacity and financial difficulties — indeed, Hanjin filed for bankruptcy in 2016, resulting in the "largest bankruptcy for container shipping in 30 years."[47] As another example, during the COVID pandemic, several technology

[47] Hanjin Shipping, once one of the largest container shipping companies globally, invested heavily in new container vessels alongside other major industry players, contributing to a significant oversupply of shipping capacity. As the industry became saturated, intense competition led to widespread rate-cutting. https://porteconomicsmanagement.org/pemp/contents/part10/port-resilience/hanjin-shipping-bankruptcy/ (viewed August 12, 2025); https://supplychaincommunity.org/the-fall-of-a-giant-how-hanjin-shippings-bankruptcy-shook-global-trade (viewed August 13, 2025). By 2016, 11 of the 12 container shipping companies that publicly reported financial results had posted substantial losses. https://www.weforum.org/stories/2016/09/hanjin-shipping-crisis-global-trade/ (viewed August 13, 2025). When global trade volumes declined and freight rates were falling, Hanjin was left with excess vessel capacity and a crippling debt burden. https://www.sdcexec.com/warehousing/news/12255649/hanjin-shipping-bankruptcy-and-supply-chain-impacts (viewed August 18, 2025); https://supplychaincommunity.org/the-fall-of-a-giant-how-hanjin-shippings-bankruptcy-shook-global-trade (viewed August 13, 2025). The company ultimately filed for bankruptcy in 2016, which was the "largest for container shipping in 30 years." https://www.freightwaves.com/news/hanjins-bankruptcy-was-the-largest-for-container-shipping-in-30-years (viewed October 7, 2025).

As another example, several communications companies that invested heavily in building out fiber optic networks in the 1990s in anticipation of explosive growth in the demand for high-speed internet traffic, such as Global Crossing

companies, including Stripe, Shopify, and Peloton, rapidly expanded their workforces in anticipation of sustained digital growth.[48] When demand softened in 2022, these labor investments became a financial liability, prompting widespread layoffs.[49] In addition, mandatory capacity levels set by regulators have in some cases imposed financial burdens. In some cases, regulators, after having witnessed the negative consequences, have lessened or removed the mandatory capacity levels. For example, historically, municipalities in the U.S. have imposed mandatory minimum parking requirements on developers.[50] Policymakers ultimately recognized that the financial burdens of minimum parking requirements outweighed the intended benefits.[51] As another example, starting in April 2020 some air carriers were required to maintain minimum

---

and Level 3, ran into trouble into the early 2000s as demand did not meet expectations. *See, e.g.*, https://knowledge.wharton.upenn.edu/article/factors-behind-global-crossings-failure/ (viewed September 8, 2025); https://www.wired.com/2002/11/fiber-optic/ (viewed September 8, 2025).

[48] https://www.hr-brew.com/stories/2022/12/06/how-over-hiring-during-the-pandemic-led-to-the-rash-of-layoffs-in-2022 (viewed August 20, 2025).

[49] *Id.* In 2022, 917 tech companies laid off approximately 145,000 employees. *Id.*. By 2024, total layoffs in the sector exceeded 400,000, as firms moved to reduce expenses and restore profitability. *See* https://www.forbes.com/councils/forbestechcouncil/2024/07/03/from-overhiring-to-overhauling-the-tech-industrys-talent-paradox/ (viewed August 20, 2025). As another example, labor overcapacity also arose in the 1980s, when U.S. automakers such as General Motors and Chrysler faced mounting financial strain under union-mandated "jobs bank" provisions, which required nearly full wages for idled workers. These obligations inflated fixed costs, limited operational flexibility, and contributed to overproduction and declining profitability. https://www.newyorker.com/magazine/2009/04/27/the-road-ahead (viewed August 20, 2025).

[50] https://www.cnn.com/2023/05/20/business/parking-minimums-cars-transportation-urban-planning (viewed August 28, 2025); https://www.npr.org/2024/01/02/1221366173/u-s-cities-drop-parking-space-minimums-development (viewed August 28, 2025). These zoning regulations mandated how much off-street parking (i.e., number of spaces) developers were required to provide when constructing new buildings to ensure that sufficient parking was available. *Id.*

[51] Mandatory parking minimums were not responsive to actual demand but instead were applied as rigid formulas across projects and municipalities (i.e., a mandated number of spaces per square feet of building area), resulting in dramatic increases to the costs of constructing new buildings. Shoup, Donald, "The High Cost of Parking Requirements," in *Parking and the City*, Routledge (2018), p. 83. In one 2018 analysis, the average construction cost per parking space was estimated to be between $24,000 to $33,000. *Id.* at 82. The same study found that on average, parking requirements increased the cost of constructing office buildings by 30 to 47 percent. *Id.* at 87. By increasing the cost of development, minimum parking requirements "can reduce the supply and increase the price of real estate," impacting prices paid by renters and homeowners regardless of if occupants needed or used parking and reducing housing affordability. *Id.* at 92-93; https://www.cnn.com/2023/05/20/business/parking-minimums-cars-transportation-urban-planning (viewed August 28, 2025).

In 2022, the California Legislature enacted Assembly Bill 2097, prohibiting local governments from imposing minimum parking requirements for residential, commercial, or other development projects located within one-half mile of public transit and citing that "the imposition of mandatory parking minimums can increase the cost of housing, limit the number of available units, lead to an oversupply of parking spaces, and increased greenhouse gas emissions." California Department of Housing and Community Development, "Technical Advisory on the Implementation of AB 2097, Prohibition on Minimum Parking Requirements (Statutes of 2022)," January 2025, available at https://www.hcd.ca.gov/sites/default/files/docs/policy-and-research/ab-2097-ta.pdf, pp. 2-3, 11.

air services, resulting in "nearly empty flights" and exacerbating the financial malaise of the industry.[52] Accordingly, the Department of Transportation ultimately eased this requirement, and allowed the obligation to expire at the end of its initial term in September 2020.[53]

53. An instructive contrast to examples where inefficient capacity levels resulted in negative consequences can be drawn from the regulatory treatment of public utilities. These industries also face capacity investment decisions (as does the railroad industry) but operate under public utility commission oversight. Regulators explicitly seek to prevent overinvestment in capacity through prudency reviews, which determine whether capital additions were reasonable and necessary in light of projected demand.[54] A utility that sets inefficiently high capacity levels — constructing infrastructure that proves excessive or underutilized — risks not recovering those costs via the rate they charge. This creates a clear disincentive against building for improbable demand peaks. In other words, "just in case" infrastructure investments are not in the public interest unless supported by sound planning assumptions.

54. The STB should take care not to establish or imply a contrary expectation — that railroads must maintain excessive idle capacity simply to avoid liability for service degradation

---

[52] In April 2020 the U.S. Department of Transportation issued an order requiring that air carriers receiving financial assistance under the CARES Act maintain a defined minimum level of flights to communities they served prior to March 1st on a nationwide basis. U.S. Department of Transportation, Press Release, Apr. 7, 2020, https://www.transportation.gov/briefing-room/us-department-transportation-issues-final-order-service-obligations-air-carriers (viewed October 7, 2025). With collapsed demand for air travel as a result of COVID, this requirement compelled some carriers to "send out nearly empty flights," exacerbating financial losses incurred by airlines during the pandemic. https://rollcall.com/2020/05/12/dot-eases-airport-service-mandates-for-struggling-airlines/ (viewed August 28, 2025); U.S. Department of Transportation, "Final Order on Adjustments to Service Obligations," June 3, 2020, available at https://www.transportation.gov/sites/dot.gov/files/2020-06/CARES%20Act%20Final%20Order%20Point%20Exemptions%20FINAL.pdf.

[53] *See* https://rollcall.com/2020/05/12/dot-eases-airport-service-mandates-for-struggling-airlines/ (viewed August 28, 2025); U.S. Department of Transportation, "Final Order on Adjustments to Service Obligations," June 3, 2020, available at https://www.transportation.gov/sites/dot.gov/files/2020-06/CARES%20Act%20Final%20Order%20Point%20Exemptions%20FINAL.pdf; U.S. Department of Transportation, Press Release, Apr. 7, 2020, https://www.transportation.gov/briefing-room/us-department-transportation-issues-final-order-service-obligations-air-carriers (viewed October 7, 2025).

[54] Janice A. Beecher, "Economic Regulation of Utility Infrastructure," May 2013, available at https://www.lincolninst.edu/app/uploads/2024/04/economic-regulation-of-utility-infrastructure_0.pdf, p. 1 ("The commissions continue to rely primarily on the method known as rate base/rate-of-return regulation, by which regulators review the prudence of infrastructure investment, along with prices, profits, and performance."); Samuel Gotora and Motshegetsi Sebalo, "Principles of Conducting Prudency Reviews in Regulatory Decisions: A South African Case," *National Energy Regulator of South Africa*, July 2018, p. 1 ("The National Energy Regulator of South Africa […] has recently been applying the prudency tests on regulated entities applications and has declined some costs that were deemed unnecessary for the provision of the regulated service.").

during rare events like COVID. Doing so would effectively reverse the prudency logic applied in other infrastructure-heavy sectors and risk encouraging inefficient capacity levels. Instead, regulators should recognize that capacity shortfalls in extreme, rare conditions are not a sign of railroad incentives being misaligned with the public interest, but rather they are economically optimal in a system designed for long-run efficiency.

C. The Regulatory Service Obligation Asserted by Evergy Would Confuse Contract Obligations with Common Carrier Obligations, Risking Destruction of Contracting Incentives

55. The regulatory service obligation asserted by Evergy would impose contract-like obligations on the railroad without reciprocal obligations on the shipper. Indeed, compared to the prior contractual relationship between the parties that reflected risk sharing and obligations on both sides — with some flexibility for BNSF that would help in its planning — the asserted service obligation would remove obligations on the shipper while increasing uncertainty and risk for the railroad. This is in stark contrast to the CCO serving as a "platform" on which contracts can be built, and which should reflect only that a railroad handling coal must make efforts that are reasonable under the circumstances. If Evergy's asserted service obligation were imposed, it would seriously degrade and possibly destroy incentives of both shippers and railroads to contract. Shippers' contracting incentives would decline since tariff service would guarantee commitments beyond what is reasonable under the circumstances, reducing the added value of contracts. Railroads, in turn, would be discouraged from contracting because they would recognize that contracted service levels can have implications on what shippers can expect in future service under tariff, where shortfalls come with large fines.

56. Board members in other proceedings have recognized that confusing obligations under contract service with the obligations under the common carrier standard can lead to negative economic consequences such as diminishing incentives to contract. For example, in the decision on *Navajo Transitional Energy Company, LLC – Ex Parte Petition for Emergency Service Order*, Mr. Fuchs (dissenting) stated that

> "…the Decision accomplishes little while both degrading well-established protections against premature, unfair decision-making

> and **undermining long-term commercial relationships between rail carriers and shippers.**"[55]
>
> "…the Decision essentially guarantees annual tonnage levels that a shipper—like NTEC in the past—would have ordinarily negotiated in a contract, subject to liquidated damages. […] by potentially **reducing the relative value of contract** minimums, it appears at this point that the Decision's early intervention may well **have broader effects on the public by undermining incentives for carriers and shippers to use contracts** as means to enhance business planning and communication."[56]
>
> "If the Board's reliance on views intimately related to a draft contract term is permissible…it is easy to see how **both rail carriers and shippers** across the industry **might ask how the Board might use draft contracts and contract-related communications in the future**. […] its approach—at a minimum—injects some measure of uncertainty and may well cause parties to paper candid exchanges with caveats or disclaimers or even limit dialogue, again with broader implications for the network."[57]
>
> "The Decision's failed short cut—its attempt to **use purported admissions related to draft contracts**—instead **affects fundamental rail carrier and shipper commercial relationships**."[58]

57. In years prior to this dispute, BNSF and Evergy contracted for servicing both Iatan and Lawrence in addition to other Evergy plants. Evergy's obligations included {[redacted]},[59] and relatedly, to provide an {[redacted]}.[60] The MAV was determined as the maximum of {[redacted]}

[55] *See e.g.*, *Navajo Transitional Energy Company, LLC – Ex Parte Petition for Emergency Service Order,* Docket No. NOR 42178, June 22, 2023, p. 16.

[56] *See e.g.*, *Navajo Transitional Energy Company, LLC – Ex Parte Petition for Emergency Service Order,* Docket No. NOR 42178, June 22, 2023, p. 33.

[57] *See e.g.*, *Navajo Transitional Energy Company, LLC – Ex Parte Petition for Emergency Service Order,* Docket No. NOR 42178, June 22, 2023, p. 33-34.

[58] *See e.g.*, *Navajo Transitional Energy Company, LLC – Ex Parte Petition for Emergency Service Order,* Docket No. NOR 42178, June 22, 2023, p. 34.

[59] BNSF_EVG_0003960, at p. 1; EVERGY-0080063-069, at EVERGY-0080064.

[60] BNSF_EVG_0003960, at p. 1; EVERGY-0080063-069, at EVERGY-0080064.

[redacted].[61] {[redacted][62]

58. Under the contract, both Evergy and BNSF were {[redacted]} Evergy has, in practice, {[redacted][67]

59. Thus, these contracts reflect risk shifting from the railroad to the shipper, since {[redacted]

[61] BNSF_EVG_0003960, at p. 3; EVERGY-0080063-069, at EVERGY-0080064.

[62] BNSF_EVG_0003960, at p. 1; EVERGY-0080063-069, at EVERGY-0080064.

[63] BNSF_EVG_0003960, at p. 1; EVERGY-0080063-069, at EVERGY-0080064.

[64] EVERGY-0080063-069, at EVERGY-0080064-065.

[65] EVERGY-0080063-069, at EVERGY-0080064.

[66] EVERGY-0080063-069, at EVERGY-0080064.

[67] EVERGY-0079915, at EVERGY-0079918 {[redacted]}

[68] BNSF_EVG_0003960, at p. 3.

[redacted]} This arrangement facilitated the realization of efficiencies by aiding the railroad in its resource investment and allocation planning across network users. In turn, Evergy was likely {[redacted]} than it would have otherwise obtained without the obligations in the contract.

60. Moreover, these contracts illustrate that parties negotiate over multiple points, including volume commitments, ratability of shipments, and rail rates. For example, a railroad may make concessions in a contract, such as {[redacted]} perhaps in exchange for being paid higher rates, whereas in other cases, {[redacted]} ratability, as discussed above, is a shipper obligation. Thus, terms that avoid ratability cannot simply be selectively lifted from contracts and applied to the asserted service obligation, as that would isolate them without the context of negotiated reciprocal obligations.

61. The relatively flexible arrangement on the part of the railroad when contracting with Evergy is also discussed in other documents. For example, a letter from Evergy to BNSF in January 2021 regarding {[redacted]}[69] Moreover, contracts with other railroads, such as the agreement between {{[redacted]}}[70] also reflect reciprocal obligations on the part of the shipper and flexibility for the railroad.[71] These documents illustrate that the parties understood the railroad's obligation to allow for operational discretion, rather than imposing strictly enforceable requirements.

62. In contrast, the regulatory service obligation asserted by Evergy would replace flexibility with rigid obligations for railroads while removing obligations for shippers. By

[69] EVERGY-0079902, at EVERGY-0079903 {[redacted]}

[70] EVERGY-0089007-033, at EVERGY-0089008.

[71] {{[redacted]}} *See* EVERGY-0089007-033, at EVERGY-0089008-012.

removing shipper obligations — such as meeting the annual nominations — the efficiency gains from risk sharing would be lost, leaving railroads with greater uncertainty in forward planning. Further, obligating railroads to honor shipper nominations would force the railroad to incur the costs of maintaining excessive slack capacity, as they would have to be prepared for a wide range of outcomes depending on whether shippers follow through on their nominations.

63. Uncertainty as to the shipper's actual shipments is illustrated by the fact that across the years 2023 and 2024 Evergy shipped roughly {[redacted]} percent of the amounts it suggested that it would ship;[72] indeed, Evergy's shortfall ({[redacted]} percent) was almost the "mirror image" of what Evergy asserted BNSF's shortfall was in 2022 (32.3 percent),[73] with the difference being that under the regulatory service obligation asserted by Evergy, BNSF was obligated to avoid shortfalls while Evergy was not. In other words, Evergy is asserting a regulatory service obligation where it can nominate its tonnage (but does not have to follow through with it and/or can ship tonnages that vary substantially from month to month) for which the railroad would have to provide service (but does not know whether some/all/none will actually happen, and may face large month to month variations).

64. In sum, the regulatory service obligation asserted by Evergy imposes a regulatory environment that confuses contract obligations with common carrier obligations, removing obligations on the shipper while increasing uncertainty (e.g., mirror image shortfall) and risk (including risks for damages[74]) for the railroad. This risks serious degradation or even destruction of contracting incentives, and ultimately harm to the network due to lost contracting efficiencies.

---

[72] {[redacted]} Verified Reply Statement of Michael R. Baranowski and Nathaniel S. Zebrowski, p. 100 ("In December 2022, {[redacted]}").

[73] {[redacted]} Ms. Tucker calculated a total BNSF shortfall of 32.3 percent when comparing "2022 CFT Schedules vs. Deliveries". Verified Statement of Jessica L. Tucker, Table 5.

[74] I understand that Evergy has claimed over $22 million in damages. Evergy Opening Evidence, June 25, 2025, p. 46 ("the principal amount of damages to which Complainants are entitled totals $22,211,624.65").

D. The Regulatory Service Obligation Asserted by Evergy Would Increase the Likelihood and/or Severity of a Tragedy of the Commons

65. The regulatory service obligation asserted by Evergy would increase the risk and/or severity of a tragedy of the commons situation. During the COVID-related service interruptions, shippers had the incentive to add more cars to BNSF's network, anticipating a surge in demand and hoping to secure higher volumes.[75] However, BNSF stated in its Service Recovery Plan that "adding cars to a strained network had the opposite result, decreasing velocity and increasing dwell, leading ultimately to the delivery of less product for all of [its] customers."[76] Similarly, Mr. Garland's testimony stated that

> "While we move quickly to bring additional locomotives and crew resources to support all the business areas, those are resources that take time to deploy. At the same time, a series of difficult events occurred on top of existing supply chain issues, and a series of extreme weather events that started in late '21, and has continued through the first four months of 2022.
>
> As a result, we experienced an increased amount of car inventory on our network, and as our velocity slowed with increased demand, there was an understandable reaction from our **customers, to add more cars, on the network**, in hopes that they would quickly increase their chances of getting their shipment.
>
> **Unfortunately, adding cars to the network has the opposite result.** Compared to the same time last year, we have 5 percent more cars online, but we're moving 3 percent less volume. And while those don't sound like big percentages, that's on a base of about a quarter million cars."[77]

66. As I understand from the reply statement of Mr. Michael Baranowski and Mr. Nathan Zebrowski, BNSF decongested the network by removing suitable trainsets, including for

[75] Before the Surface Transportation Board, Docket No. EP 770, "Urgent issues in freight rail service – Railroad Reporting, Supplemental service recovery plan of BNSF Railway Company," June 23, 2022, p. 5.

[76] Before the Surface Transportation Board, Docket No. EP 770, "Urgent issues in freight rail service – Railroad Reporting, Supplemental service recovery plan of BNSF Railway Company," June 23, 2022, p. 5.

[77] *See* Transcript of Public Hearing, Surface Transportation Board, Docket No. EP 770, "Urgent issues in freight rail service – Railroad Reporting, Transcript," June 15, 2022, pp. 786-787. (Emphasis added). In the testimony, Mr. Garland identified himself as the "the [V]ice President who leads BNSF's transportation team". Mr. Garland is currently employed by BNSF as Executive Vice President and Chief Transportation Officer. *See* https://www.bnsf.com/about-bnsf/our-executive-team.page (viewed September 10, 2025).

Evergy (served at Iatan).[78] However, the regulatory service obligation asserted by Evergy would increase the ability of shippers to dictate allocation decisions, increasing the risk and/or severity of a tragedy of the commons situation by, for example, limiting the network operator's ability to manage congestion. Increasing shippers' ability to compel railroads to comply with shippers' preferred resource allocation shifts resource allocation decisions from railroads (who can at least partially observe, and have an incentive to account for, externalities) to shippers (who do not have an incentive to account for externalities). Consequently, such a change would increase the likelihood of observing a tragedy of the commons, depleting the existing network to where railroads underperform in the short term and incentivizing railroads to overinvest in capacity (with shippers needing to bear at least some of the cost) in the long term.

67. The negative consequences stemming from the tragedy of the commons would be especially pronounced if shippers could compel allocation of resources during times of constrained capacity, as asserted by Evergy. If a railroad would be compelled to allocate resources to shippers irrespective of whether the network experiences constrained capacity, then this would exacerbate commensurate service underperformance in the short term (experienced, e.g., as congestion) and further increase the pressure on the railroad to overinvest in capacity even more in the long term to avoid any periods of constrained capacity.

68. In addition, the regulatory service obligation asserted by Evergy would increase the risk of a tragedy of the commons scenario where shippers would over-nominate and railroads, lacking alternatives, would be forced to overinvest in capacity in anticipation that these over-nominations may translate into shipment requests. Evergy's own nominations are a prime example of shippers prioritizing their own individual concerns, rather than the network. For example, across 2023 and 2024, Evergy shipped roughly {[redacted]} percent of coal that it said it would.[79] Similarly, as discussed by Mr. Baranowski and Mr. Zebrowski, Evergy made

[78] Verified Reply Statement of Michael R. Baranowski and Nathaniel S. Zebrowski, p. 8 ("As part of its overall service recovery plan, BNSF removed {{[redacted]}} coal trainsets from service on its network in March 2022, including {[redacted]}"), p. 22 ("Similar to the improvements in BNSF's service to Iatan after {[redacted]}, BNSF's system-wide initiative to reduce cars on line had a positive impact on network fluidity and service performance as well."), and p. 56 ("During this period of worsening congestion, BNSF rightly recognized the need to reduce traffic along the Evergy route and {{[redacted]}}").

[79] {[redacted]} Verified Reply Statement of Michael R. Baranowski and Nathaniel S. Zebrowski, p. 100 ("In December 2022, {[redacted]

"{[redacted]} nominations" in 2022.[80] However, if the CCO requires railroads to fully honor shippers' nominations — even inflated ones unlikely to materialize — the railroad would have to build in slack capacity, just in case, to avoid CCO penalties. Under Evergy's proposed service obligation, shippers could compel railroads to commit railroad resources to respond to their requests, even during periods of strained capacity, leading to inefficient diversions of resources.

69. Thus, granting the regulatory service obligation asserted by Evergy increases the chance of establishing a regulatory environment such that the tragedy of the commons emerges and the broader network suffers.

V. ANY ASSESSMENT OF BNSF'S CCO IN 2022 MUST ACCOUNT FOR THE EXTRAORDINARY EFFECTS OF COVID AND RELATED EVENTS

70. The regulatory service obligation asserted by Evergy disregards the circumstances that affected BNSF's ability to provide service in 2022. Specifically, it ignores the disruptions stemming from COVID as well as the post-COVID recovery, which triggered an unexpected expansion in economic activity that affected firms across the economy — including related events such as the historically tight labor market and the supply chain crisis. From an economic perspective, COVID was a truly extraordinary event. The resulting economic consequences were so great that a network operator making sound capacity decisions and acting reasonably in response to service requests would, almost certainly, have been required to reduce service to customers. On top of this, the war in Ukraine caused further upheaval beginning in early 2022, which put additional strain on freight railroads. The remainder of this section develops these points in detail.

[redacted]}").

[80] Verified Reply Statement of Michael R. Baranowski and Nathaniel S. Zebrowski, Section 3.2.

A. The Recovery from COVID Was Fundamentally Different from Prior Recessions, Leading to an Unexpected Expansion in Economic Activity, a Historically Tight Labor Market, and an Extraordinary Supply Chain Crisis

1. The Recovery from Covid Caused an Unexpected Expansion in Economic Activity

71. At the onset of COVID, there was substantial uncertainty about demand, including a widespread perception that COVID could suppress demand for an extended period — similar to prior recessions, and particularly the 2007 – 2009 Great Recession.

72. For instance, in July 2020, the Congressional Budget Office (CBO) released its first economy-wide forecast after the onset of COVID. According to that forecast, "real GDP [was] down 11.3 percent in the second quarter of 2020 and still down 5.2 percent in the fourth quarter of 2021, relative to CBO's pre-pandemic January 2020 projections."[81] The CBO also noted that in the first quarter of 2020, the pandemic "triggered the deepest downturn in output and employment since World War II."[82] In hindsight, commentators noted that "[t]he initial pessimistic projections [from July 2020] for the recovery from the recession [due to COVID] may have been colored by what happened in the Great Recession of 2007-2009, which at the time was by far the worst recession since the Great Depression and the recovery from which was disappointingly slow."[83] As another example, the IMF's World Economic Outlook, published in April 2020, noted "substantial" risks for "severe outcomes" and that "the global economy is projected to contract sharply by 3 percent in 2020, much worse than during the 2008–09 financial crisis."[84] Two months later, the IMF's World Economic Outlook in June 2020 was even more pessimistic, noting that "[t]he COVID-19 pandemic has had a more negative impact on activity in the first half of 2020 than anticipated, and the recovery is projected to be more gradual

[81] https://www.cbpp.org/research/economy/tracking-the-recovery-from-the-pandemic-recession#stronger_GDP_growth (viewed September 8, 2025).

[82] https://www.cbo.gov/publication/56759 (viewed September 8, 2025).

[83] https://www.cbpp.org/research/economy/tracking-the-recovery-from-the-pandemic-recession#stronger_GDP_growth (viewed September 8, 2025).

[84] https://www.imf.org/en/Publications/WEO/Issues/2020/04/14/weo-april-2020 (viewed October 14, 2025).

than previously forecast."[85] Moreover, it also noted that "[a]s with the April 2020 WEO projections, there is a higher-than-usual degree of uncertainty around this forecast."[86]

73. Similarly, early in the pandemic, market observers noted that hope for a "V-shaped" (or speedy) recovery was fading.[87] For example, Federal Reserve Chairman Powell warned on May 13, 2020, that "the recovery may take some time to gather momentum."[88] It was widely believed that the basis for an economic recovery would be the availability of vaccines to mitigate the effects of COVID, allowing a reduction of social distancing and lockdown measures. While research and development efforts for a COVID vaccine were underway as of mid-2020, it was by no means clear when such a vaccine would be developed, approved, manufactured, and widely distributed. It was a distinct possibility that by the time the vaccine arrived, the economy would have suffered sufficient damage such that a rapid recovery was out of reach.

74. However, contrary to the experience in the Great Recession, or any other recession on record, economic recovery picked up just a few months into the COVID pandemic, and the recovery proved more forceful and more rapid than had been anticipated at the onset. According to a recent working paper by Stock and Watson,

> Compared to other business cycles, the COVID recession was highly unusual. The NBER dated recession lasted only two months, by far the shortest on record. The initial recovery was nearly as rapid as the collapse: in two months following the April trough, real PCE grew by 14% and the unemployment rate fell nearly four percentage points.[89]

---

[85] https://www.imf.org/en/Publications/WEO/Issues/2020/06/24/WEOUpdateJune2020 (viewed October 14, 2025).

[86] https://www.imf.org/en/Publications/WEO/Issues/2020/06/24/WEOUpdateJune2020 (viewed October 14, 2025).

[87] https://www.cnbc.com/2020/04/06/coronavirus-update-a-v-shaped-economic-recovery-getting-less-likely.html (viewed September 8, 2025); https://www.bloomberg.com/news/articles/2020-04-02/economists-debate-shape-of-a-global-recovery-after-coronavirus (viewed September 8, 2025); https://www.cazenovecapital.com/en/channel-islands/wealth-management/insights/economies-in-free-fall-as-hopes-fade-for-a-v-shaped-recovery/ (viewed September 8, 2025); https://realeconomy.rsmus.com/pandemic-economics-prospects-for-permanent-job-losses-rising/ (viewed September 8, 2025); https://www.marketscreener.com/quote/currency/AUSTRALIAN-DOLLAR-EURO-AU-2361412/news/Global-economic-contraction-to-be-steepest-on-record-recovery-U-shaped-30469155/ (viewed September 8, 2025).

[88] https://www.federalreserve.gov/newsevents/speech/powell20200513a.htm (viewed October 7, 2025).

[89] Stock, James H. and Mark Watson, "Recovering from COVID," NBER Working Paper 33857, May 2025, available at https://www.nber.org/system/files/working_papers/w33857/w33857.pdf, p. 2.

In fact, Stock and Watson find that "[t]he COVID business cycle was the first trend-stationary business cycle since 1960, that is, it was the first in which the level of GDP reattained its pre-recession trend."[90] The stark difference between the COVID recovery and the recoveries associated with the last seven recessions is clear when comparing the logarithm of key macroeconomic indicators such as unemployment and consumer spending, which reflect overall economic activity across cycles. As shown in **Exhibit 6** below, replicated from the Stock and Watson paper,[91] the COVID recession was much deeper, with the macroeconomic series exhibiting a "precipitous but very short collapse" [92] followed by an "extraordinarily rapid"[93] recovery compared to previous recessions when measured relative to the peak month of each cycle.

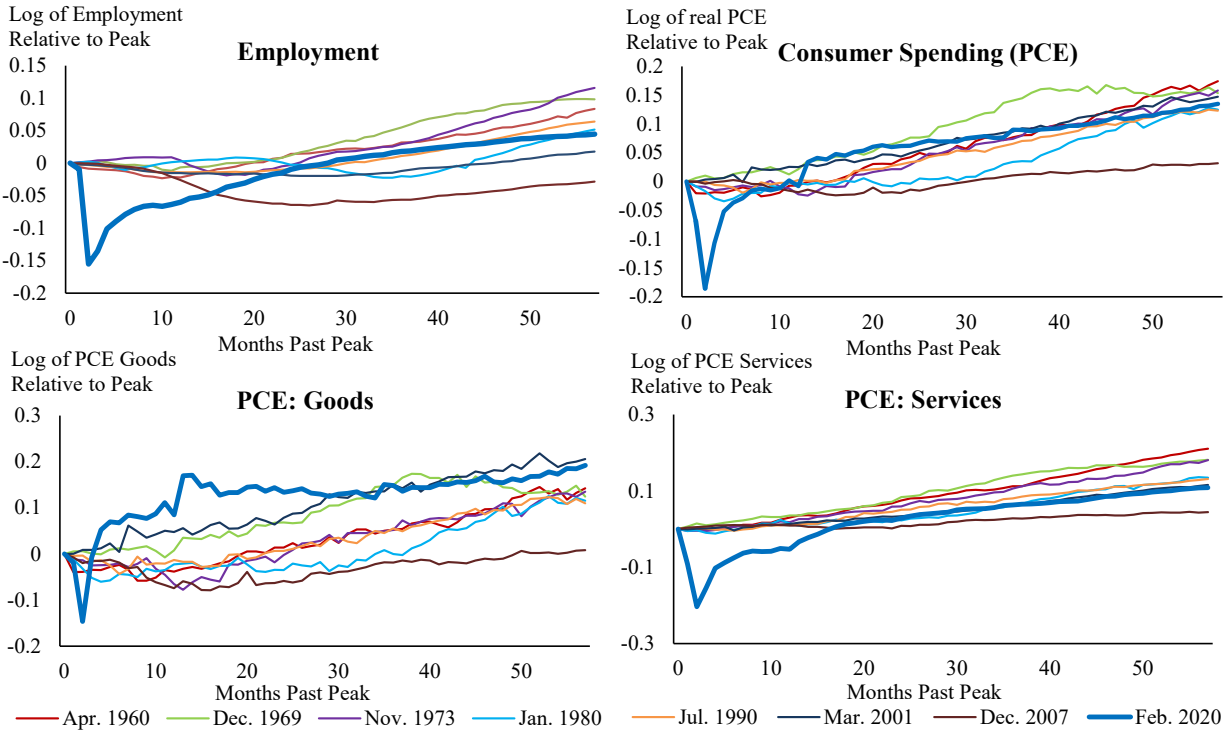
[90] Stock, James H. and Mark Watson, "Recovering from COVID," NBER Working Paper 33857, May 2025, available at https://www.nber.org/system/files/working_papers/w33857/w33857.pdf, p. 7.

[91] Stock, James H. and Mark Watson, "Recovering from COVID," NBER Working Paper 33857, May 2025, available at https://www.nber.org/system/files/working_papers/w33857/w33857.pdf, Figure 2. The replication uses the authors' replication files available on Mark W. Watson's website, https://www.princeton.edu/~mwatson/wp.html (viewed October 10, 2025). The replication files include data for (1) Current Employment Statistics series for Total Nonfarm produced by the Federal Reserve Bank of St. Louis, (2) monthly nominal Personal Consumption Expenditures ("PCE") by Major Type of Product, covering all PCE as well as expenditures on goods and services, and (3) monthly Price Indexes for all PCE series. The PCE series plotted by the authors are real, adjusted for inflation using the corresponding price indexes. The files also include the code used to reproduce all figures in the article. The business cycle peaks referenced by the authors are those reported by the NBER. *See* https://www.nber.org/research/data/us-business-cycle-expansions-and-contractions (viewed October 10, 2025). The authors combined the business cycles starting in January 1980 and July 1981. *See* footnote 95 for additional details about the plotted series.

[92] Stock, James H. and Mark Watson, "Recovering from COVID," NBER Working Paper 33857, May 2025, available at https://www.nber.org/system/files/working_papers/w33857/w33857.pdf, p. 7.

[93] Stock, James H. and Mark Watson, "Recovering from COVID," NBER Working Paper 33857, May 2025, available at https://www.nber.org/system/files/working_papers/w33857/w33857.pdf, p. 6.

Exhibit 6: Recovery from COVID (Blue Line) vs. Selected Other Recessions[94]

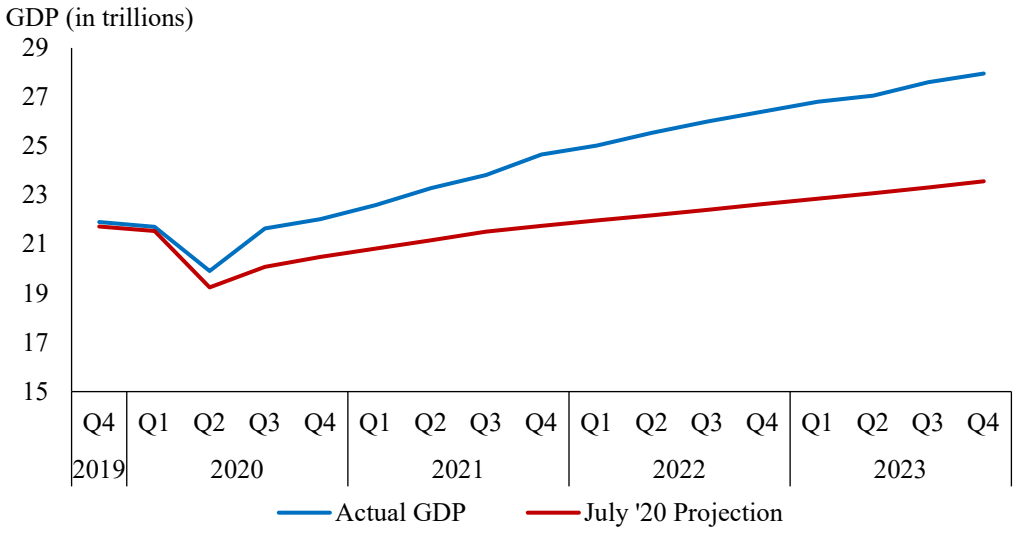


75. The unexpectedly sharp economic recovery was in part due to substantial relief and recovery measures. These measures were put in place to bridge the time needed to successfully develop a vaccine against COVID. Yet the impact of these measures still exceeded expectations. For example, as shown in **Exhibit 7**, the economic recovery far exceeded the forecast by the CBO from July 2020, even though these forecasts already "incorporated the

[94] Stock, James H. and Mark Watson, "Recovering from COVID," NBER Working Paper 33857, May 2025, available at https://www.nber.org/system/files/working_papers/w33857/w33857.pdf, Figure 2. The figures plot the paths of employment and consumer spending across all U.S. business cycles since 1960. The labels for each series correspond to the month and year of the business-cycle peak as dated by the NBER. For example, February 2020 denotes the peak of the cycle that began that month. Each series is shown in natural logarithms and normalized to equal zero at the cycle's peak month, as dated by the NBER. A value of zero therefore represents the level at the business cycle peak, and the horizontal axis measures the number of months following that peak, up to roughly sixty months. Employment (current employment, total nonfarm) from the Bureau of Labor Statistics' establishment survey is defined as the number of U.S. workers excluding proprietors, private household employees, unpaid volunteers, farm employees, and the unincorporated self-employed, which together account for approximately 80 percent of the workers who contribute to GDP (https://www.bls.gov/bls/empsitquickguide.htm (viewed October 8, 2025); https://fred.stlouisfed.org/series/PAYEMS (viewed October 8, 2025)). Personal consumption expenditures (PCE) represent the value of goods and services purchased by, or on behalf of, U.S. residents (https://www.bea.gov/data/consumer-spending/main (viewed October 8, 2025)). PCE goods include durable and nondurable items such as motor vehicles, furniture, food, and clothing, while PCE services include health care, housing, transportation, recreation, and financial services ("Chapter 5: Personal Consumption Expenditure," December 2024, available at https://www.bea.gov/resources/methodologies/nipa-handbook/pdf/chapter-05.pdf, pp. 11–37).

effects of the CARES Act and other measures enacted in March and April 2020."[95] The same report notes that without those measures, the CBO's projections would have been far worse than that.[96]

Exhibit 7: Economic Recovery[97]
CBO Forecast July 2020 vs. Actuals



76. Commentators noted that "[t]he expansion in economic activity in the recovery proved to be stronger and faster than initial projections."[98] The Federal Reserve noted in several statements in the second half of 2020 that the "recovery has progressed more quickly than generally expected."[99] Similarly, a Congressional Research Service report to Congress from May 2022 referred to the recovery as "a historically rapid economic recovery."[100]

[95] https://www.cbpp.org/research/economy/tracking-the-recovery-from-the-pandemic-recession#stronger_GDP_growth (viewed September 8, 2025).

[96] https://www.cbpp.org/research/economy/tracking-the-recovery-from-the-pandemic-recession#stronger_GDP_growth (viewed September 8, 2025) ("Information in the CBO report indicated that without those measures, the agency's GDP projections would have been 12 percent below its pre-pandemic projection in 2020 and 9 percent below in 2021.").

[97] Congressional Budget Office, "Economic Projections: July 2020," available at https://www.cbo.gov/data/budget-economic-data#4; Congressional Budget Office, "Historical Data and Economic Projections: June 2024," available at https://www.cbo.gov/data/budget-economic-data#4.

[98] https://www.cbpp.org/research/economy/tracking-the-recovery-from-the-pandemic-recession#stronger_GDP_growth (viewed September 8, 2025).

[99] https://www.federalreserve.gov/newsevents/speech/powell20201006a.htm (viewed September 8, 2025); https://www.nbcnews.com/business/economy/economy-recovering-faster-expected-closely-trusted-vaccine-key-fed-chair-n1240251 (viewed September 8, 2025).

[100] https://crsreports.congress.gov/product/pdf/R/R47115 (viewed September 8, 2025).

2. COVID and the Recovery from COVID Caused a Historically Tight Labor Market

77. Due to the widespread demand uncertainty and a general perception that COVID may lower demand for an extended period, firms across many industries undertook concerted efforts to rationalize spending across inputs and conserve resources. Employment in the U.S. quickly plummeted by 15 percent after the onset of COVID, with firms across many sectors such as airlines, hospitality, entertainment and energy generation announcing tens of thousands of layoffs in the weeks following the onset of COVID in the U.S.[101] As discussed by Dr. Johnson, COVID "caused high unemployment driven by furloughs in [early] 2020."[102]

78. However, as described above, the COVID recession was unusually short. According to Stock and Watson, the recession's brevity was also reflected in a very fast recovery in employment relative to other recessions:

> The dynamics of the recovery were highly unusual. During the first six months after the April 2020 trough, the recovery was extraordinarily rapid. Establishment employment grew by 18% at an annual rate, compared to a 1% mean for this window in prior post-1960 recoveries.[103]

79. As discussed by Dr. Johnson, in 2021 and 2022 the "abnormally low" supply of labor — reflecting a depressed labor force participation rate relative to historical trends — could not keep up with the unexpectedly high demand for labor.[104] As a result, the labor market reached "tight labor market conditions that were unprecedented in 2021" and were "even tighter in 2022."[105]

---

[101] *See, e.g.*, https://finance.yahoo.com/news/25-companies-laying-off-most-110018805.html (viewed September 8, 2025); https://www.forbes.com/sites/lisettevoytko/2020/05/27/coronavirus-layoffs-boeing-lays-off-6770-workers-amid-pandemic/ (viewed September 8, 2025); https://www.bls.gov/opub/mlr/2021/article/covid-19-ends-longest-employment-expansion-in-ces-history.htm (viewed October 15, 2025).

[102] Verified Statement of Erin Johnson, Ph.D., p. 6.

[103] Stock, James H. and Mark Watson, "Recovering from COVID," NBER Working Paper 33857, May 2025, available at https://www.nber.org/system/files/working_papers/w33857/w33857.pdf, pp. 6-7.

[104] Verified Statement of Erin M. Johnson, Ph.D., p. 10.

[105] Verified Statement of Erin M. Johnson, Ph.D., pp. 4, 9.

3. COVID and the Recovery from COVID Caused an Extraordinary Supply Chain Crisis, Including Widespread Service Problems in the Manufacturing and Transportation and Other Industries

80. The US supply chain crisis was extraordinary in modern times due to a combination of factors,[106] including a faster than expected recovery in economic activity, a shift in demand toward durable goods consumption, historically tight labor markets, and scarcity of raw materials.[107] According to a comprehensive assessment from the US National Economic Council and the US National Security Council, the "pandemic-era supply chain disruptions" were "unique in breadth and scale."[108] Multiple U.S. indicators reached record or near-record extremes. In early 2022, the number of ships waiting to unload at the busiest U.S. ports reached record highs.[109] Between 2022 and 2023, manufacturers' unfilled orders climbed to a series high, according to Federal Reserve Economic Data.[110] In 2021, manufacturers' supplier delivery times reached their highest level since 1974,[111] while the backlog of orders also set an all-time

[106] *See, e.g.,* White House Council on Supply Chain Resilience, "2021-2024 Quadrennial Supply Chain Review," U.S. Department of Commerce, December 19, 2024, available at https://www.trade.gov/sites/default/files/2025-01/20212024-Quadrennial-Supply-Chain-Review.pdf, pp. 7-9.

[107] Stock, James H. and Mark Watson, "Recovering from COVID," NBER Working Paper 33857, May 2025, available at https://www.nber.org/system/files/working_papers/w33857/w33857.pdf, pp. 6-7; Santacreu, Ana Maria and Jesse LaBelle, "Global Supply Chain Disruptions and Inflation During the COVID-19 Pandemic," Federal Reserve Bank of St. Louis Review, 2022, available at https://www.stlouisfed.org/publications/review/2022/02/07/global-supply-chain-disruptions-and-inflation-during-the-covid-19-pandemic, p. 81; Gudmundsson, Tryggvi, Chris Jackson, and Rafael Portillo, "The Shifting and Steepening of Phillips Curves During the Pandemic Recovery: International Evidence and Some Theory," IMF Working Paper No. 007, January 2024, available at https://www.imf.org/en/Publications/WP/Issues/2024/01/12/The-Shifting-and-Steepening-of-Phillips-Curves-During-the-Pandemic-Recovery-International-543712, p. 14.

[108] White House Council on Supply Chain Resilience, "2021-2024 Quadrennial Supply Chain Review," U.S. Department of Commerce, December 19, 2024, available at https://www.trade.gov/sites/default/files/2025-01/20212024-Quadrennial-Supply-Chain-Review.pdf, p. 9.

[109] https://www.wsj.com/articles/imports-drop-at-southern-california-ports-as-ship-backup-grows-11643143742 (viewed September 11, 2025); Port of Los Angeles Harbor Department, Board Report on Agreement with Marine Exchange of Southern California, August 2024, available at https://kentico.portoflosangeles.org/getmedia/49de169f-6330-4fb2-9004-de4028d154d2/06_port-pilots_mx-socal-agreement_board-report, p. 2.

[110] https://fred.stlouisfed.org/series/UDXTUO (viewed October 14, 2025).

[111] The ISM's manufacturing Supplier Deliveries subindex hit 78.8 in May 2021, the highest since April 1974 at 82.1. *See* https://www.haver.com/articles/archive-economy-ism-manufacturing-index-continues-to-indicate-growth-in-may (viewed September 11, 2025); https://www.ismworld.org/supply-management-news-and-reports/news-publications/inside-supply-management-magazine/blog/2020-05/rob-roundup-april-pmi/ (viewed October 15, 2025).

record.[112] Deep sea freight and trucking prices both reached record highs in 2022,[113] and warehousing prices surged to record levels in late 2021 and early 2022.[114]

81. The U.S. supply chain crisis included widespread service problems in manufacturing and transportation, and other industries.[115] These service issues were in part caused by shortages of materials and labor which, combined with delivery delays, made it difficult to get products to customers.[116] For example, the Federal Reserve noted in December 2021 that "labor and logistical challenges held back production gains for many" manufacturers and that "materials and labor supply challenges held back growth in nonresidential construction."[117] Similarly, a survey conducted by the National Association of Manufacturers in 2022 found that companies faced "difficulties in finding sufficient workers to meet their capacity needs."[118] According to the Census Bureau's Small Business Pulse Survey, 22.7 percent of respondents reported delivery and shipping delays, with manufacturing among the most affected

[112] The all-time high reached was of 70.6. *See* https://www.ismworld.org/supply-management-news-and-reports/news-publications/inside-supply-management-magazine/blog/2024/2024-04/the-monthly-metric-backlog-of-orders-index/ (viewed September 11, 2025).

[113] https://tradingeconomics.com/united-states/producer-price-index-by-industry-deep-sea-freight-transportation-deep-sea-freight-transportation-services-fed-data.html (viewed September 11, 2025); https://tradingeconomics.com/united-states/producer-price-index-by-industry-general-freight-trucking-long-distance-truckload-fed-data.html (viewed September 11, 2025).

[114] https://www.mhwmag.com/nuts-bolts/october-2021-logistics-managers-index-report/ (viewed September 11, 2025); https://staging.mhwmag.com/nuts-bolts/march-2022-logistics-managers-index-report/ (viewed October 15, 2025); /https://fred.stlouisfed.org/series/PCU483111483111 (viewed October 15, 2025); https://fred.stlouisfed.org/series/PCU484121484121 (viewed October 15, 2025).

[115] For example, U.S. semiconductor manufacturers faced persistent supply constraints that could not keep pace with demand, with companies such as Texas Instruments reporting that demand continued to outstrip capacity in fiscal years 2022 and 2023 (Texas Instruments Incorporated, Annual Report (Form 10-K) for the fiscal year ended December 31, 2022, p. 11). In the automotive industry, U.S. manufacturers such as General Motors and Ford faced production stoppages and accumulated large stocks of unfinished vehicles, pushing vehicle sales down 8 percent from 2021 to 2022. (General Motors Company, Q2 2022 Earnings Deck, July 26, 2022, available at https://media.gm.com/content/dam/Media/gmcom/investor/2022/jul/Q2-22-Earnings-Deck.pdf, pp. 3, 24; https://apnews.com/article/business-auto-industry-953b0c38b86b82dce205161ae05dcd44 (viewed September 11, 2025); https://www.businesswire.com/news/home/20220919005768/en (viewed September 11, 2025)). *See also* **Section V.B**.

[116] https://www.federalreserve.gov/monetarypolicy/beigebook202106-summary.htm (viewed September 11, 2025).

[117] https://www.federalreserve.gov/monetarypolicy/beigebook202112.htm (viewed October 7, 2025).

[118] https://nam.org/2022-1st-quarter-manufacturers-outlook-survey (viewed October 7, 2025).

sectors.[119] Further, as explained in detail below in **Section V.B.2**, service issues and labor shortages were severe across multiple modes of the U.S. transport system.

82. The service problems in the manufacturing and transportation industries can be illustrated by the behavior of several indexes that measure supply chain pressures. **Exhibit 8**, **Exhibit 9** and **Exhibit 10** show several indices measuring supply chain performance. Each of these indices reported extreme values during 2021 and continuing into 2022 and/or 2023 compared to pre-pandemic levels, indicating strained supply chains and reflecting service issues in the manufacturing and transportation sectors. **Exhibit 8**, showing the inverted S&P Global PMI, U.S. Manufacturing Supplier Delivery Times, indicates that delivery times in 2021 and 2022 were extraordinarily challenged compared to historic levels (lower values indicate slower delivery times). Similarly, **Exhibit 9**, featuring the U.S. Suppliers' Delivery Times components of the Institute for Supply Management's Manufacturing PMI ("ISM PMI"), the U.S. Logistics Managers' Index ("LMI"), the KPMG's Supply Chain Stability Index ("Stability Index"), and the New York Fed's Global Supply Chain Pressure Index ("GSCPI"), shows elevated values during the COVID recovery (higher values in all of these indices reflect greater supply strains).[120]

---

[119] https://www.census.gov/library/stories/2021/08/united-states-small-businesses-suffer-supply-chain-disruptions.html (viewed September 11, 2025).

[120] The ISM and S&P PMI delivery times measures are based on surveys of purchasing and supply executives across manufacturing industries and track whether delivery times are speeding up or slowing down. (https://corporatefinanceinstitute.com/resources/economics/ism-manufacturing-index/ (viewed September 11, 2025); https://www.spglobal.com/marketintelligence/en/mi/research-analysis/sp-global-pmi-and-ism-survey-comparisons.html (viewed September 11, 2025)). Because slower deliveries signal congestion and bottlenecks, these measures are used as proxies for supply chain strain and supplier service levels. (*See, e.g.,* Gudmundsson, Tryggvi, Chris Jackson, and Rafael Portillo, "The Shifting and Steepening of Phillips Curves During the Pandemic Recovery: International Evidence and Some Theory," IMF Working Paper No. 007, January 2024, available at https://www.imf.org/en/Publications/WP/Issues/2024/01/12/The-Shifting-and-Steepening-of-Phillips-Curves-During-the-Pandemic-Recovery-International-543712, p. 14; https://www.brookings.edu/articles/us-disinflation-and-the-covid-19-supply-shock/ (viewed September 11, 2025)). The LMI tracks logistics activity in the United States, based on a survey of logistics professionals—including supply chain, transportation, and warehouse managers—covering inventory, warehousing, and transportation capacity, utilization, and prices, with values above 50 indicating tight, costly, and heavily utilized markets. (https://sunlandlogisticssolutions.com/what-is-the-logistics-managers-index/ (viewed September 12, 2025)). The Stability Index tracks performance in areas such as service levels, costs, working capital, and labor in the transportation, manufacturing, and logistics sectors—specifically trucking, ocean freight, inland water freight, airfreight, and rail, as well as manufacturing, warehousing, and utilities. (*See* KPMG LLP, Supply Chain Stability Index: Seeking Supply Chain Stability in an Era of Volatility, in association with the Association for Supply Chain Management, September 2022, available at https://kpmg.com/kpmg-us/content/dam/kpmg/pdf/2023/supply-chain-stability-index-report.pdf, pp. 3-5; https://kpmg.com/us/en/articles/2023/supply-chain-stability-index.html (viewed October 7, 2025)). The GSCPI

Exhibit 8: S&P Global PMI, U.S. Manufacturing Supplier Delivery Times

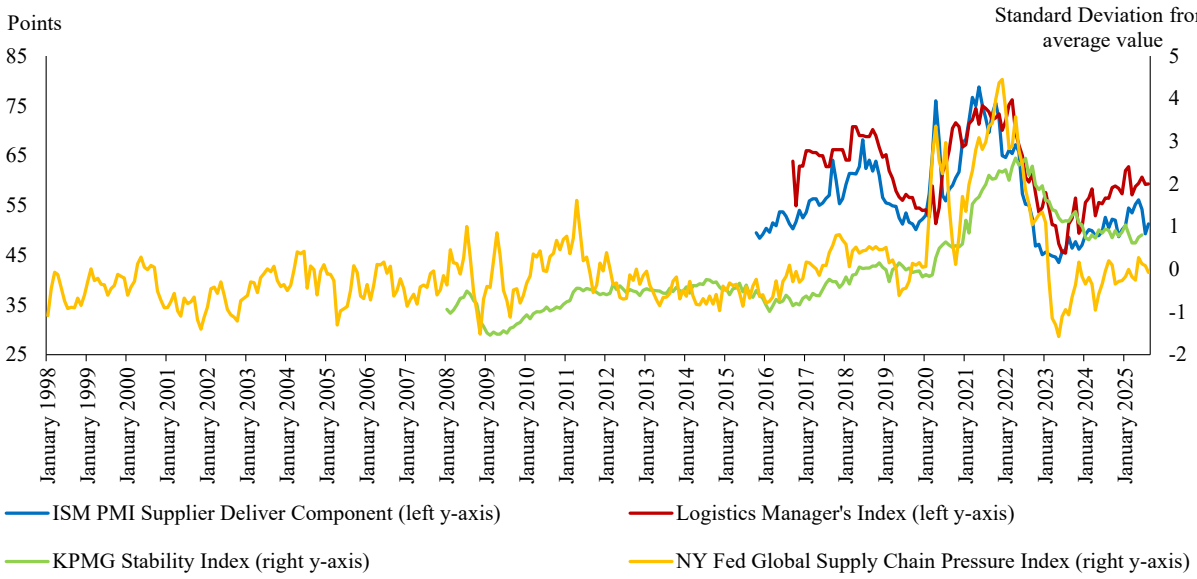
2008 – 2024[121]



captures similar supply chain pressures on a global scale by combining PMI data on delivery times, backlogs, and purchased stocks with transportation cost measures, including global transportation costs (Baltic Dry Index and Harpex Index) and airfreight cost indices from the U.S. Bureau of Labor Statistics, along with data for China, the Euro area, Japan, Korea, Taiwan, the United Kingdom, and the U.S. (Benigno, Gianluca, Julian di Giovanni, Jan J. J. Groen, and Adam I. Noble, "The GSCPI: A New Barometer of Global Supply Chain Pressures," Staff Report No. 1017 (Federal Reserve Bank of New York), May 2022, available at https://www.newyorkfed.org/medialibrary/media/research/staff_reports/sr1017.pdf, pp. 2-3).

[121] https://www.spglobal.com/marketintelligence/en/mi/research-analysis/us-pmi-slips-back-into-contraction-territory-for-first-time-this-year-in-july.html (viewed October 2, 2025). Purchasing Managers' Index (PMI) data are compiled by S&P Global from surveys of senior executives at private sector companies across more than 40 economies worldwide. The PMI dataset features a headline number, which indicates the overall health of an economy, and sub-indices, which provide insights into other key economic drivers such as GDP, inflation, exports, capacity utilization, employment and inventories. The Manufacturing Supplier Delivery Times subindex captures the extent of supply chain delays in an economy.

Exhibit 9: Selected Additional Measures of Supply Chain Performance[122]



83. The Stability Index allows for a filtering of variables related specifically to the railroad industry, thereby illustrating service issues in the transportation and manufacturing sectors net of railroad-specific service problems. **Exhibit 10** shows the Stability Index excluding variables specific to rail transportation (red line), and excluding variables that are both specific to rail transportation and broader transportation sector variables, some components of which may reflect rail transportation (green line).[123] In both alternative indices, stress levels remain elevated

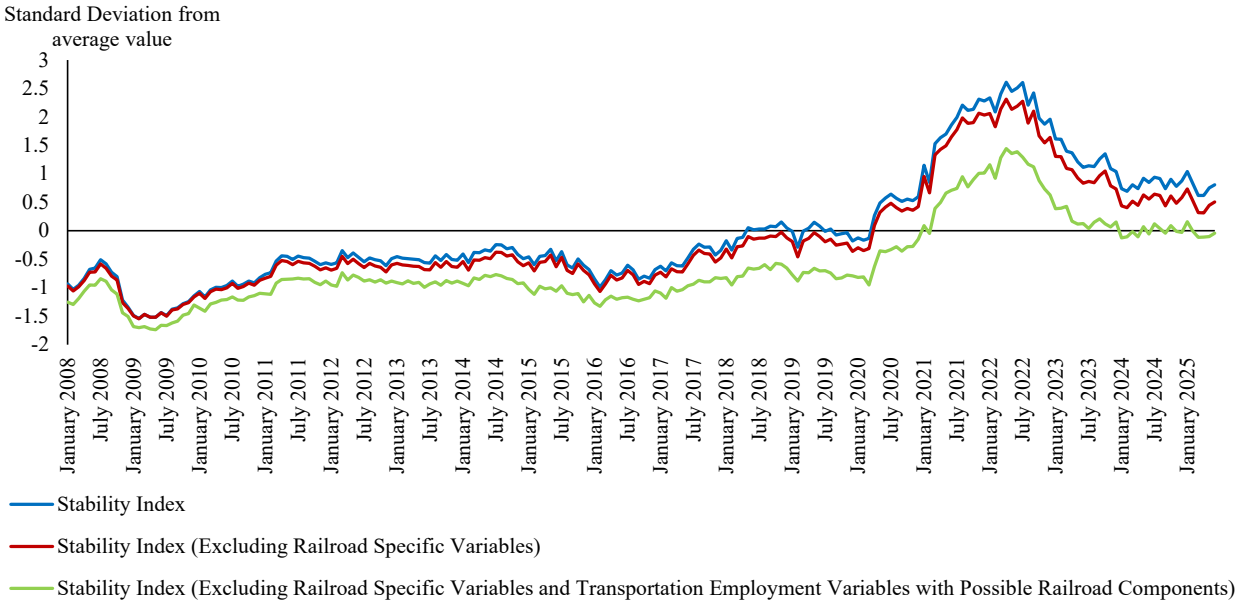
[122] ISM PMI Supplier Deliver component data from https://tradingeconomics.com/united-states/ism-manufacturing-supplier-deliveries (viewed October 2, 2025) and available data spans from October 2015 to August 2025; Logistics Manager's Index from https://tradingeconomics.com/united-states/lmi-logistics-managers-index-current (viewed October 2, 2025) and available data spans from September 2016 to August 2025; KPMG's Supply Chain Stability Index from https://kpmg.com/us/en/articles/2023/supply-chain-stability-index.html (viewed October 7, 2025) and available data spans from January 2008 to June 2025; NY Fed Global Supply Chain Pressure Index from https://www.newyorkfed.org/research/policy/gscpi#/interactive (viewed October 2, 2025) and available data spans from January 1998 to August 2025.

[123] I employed regression methods to replicate the weighting structure used to construct the three factors that form the Stability Index, as well as the weights for the 27 underlying variables. Specifically, I extract the data for the Stability Index, the three contributing factors, and the 27 supporting variables from KPMG's Supply Chain Stability Index page https://kpmg.com/us/en/articles/2023/supply-chain-stability-index.html (viewed October 7, 2025). Using the monthly data, I first estimate a regression with the Stability Index as the dependent variable and the three contributing factors as explanatory variables. The resulting coefficients, along with a constant term, predict the Stability Index values almost perfectly (R-Squared of 0.9999987). I then conduct regressions for each contributing factor—logistics, capacity, and supply—using the 27 supporting variables as explanatory variables. Using the coefficients from these regressions, I reconstruct the three contributing factors and, in turn, the Stability Index. The blue line in **Exhibit 10** plots the evolution of the Stability Index. The red solid line in **Exhibit 10** represents the reconstructed Stability Index, which sets to zero the variables specific to rail transportation, including Freight Rail

in 2022, indicating that issues specific to the railroad industry do not account for most of the observed movements relative to pre-pandemic levels.

Exhibit 10: KPMG's Supply Chain Stability Index

Total vs. Excluding Railroad Supporting Variables[124]



84. Overall, the evolution of the supply chain indexes and the evidence of the extraordinary nature of the crisis show that the U.S. experienced historic levels of supply chain stress, primarily driven by the COVID pandemic, which disrupted every stage of supply chains from production to distribution. As shown in the analysis of the Stability Index, a key driver of these delays was severe capacity constraints in transportation services, even after excluding the potential influence of the railroad industry. As discussed further **in Section V.B.2** below, labor shortages and surging demand strained the trucking industry, U.S. ports became congested in

Carloads, Freight Rail Intermodal Units, PPI – Line-Haul Railroads–Carload Freight Rail, and PPI – Line-Haul Railroads–Intermodal Freight Rail. In addition, some variables do not measure railroad factors specifically but instead capture broader transportation metrics that may include railroads. Specifically, the employment-related variables Job Openings Rate, Job Openings for Transportation, Warehousing, and Utilities, and Unemployment Rate for Transportation and Warehousing may, among other industries, also reflect employment levels in the railroad industry. The solid green line shows the reconstructed Stability Index when setting to zero the value of these employment variables in addition to the railroad-specific variables.

[124] The three indexes are reconstructed using the regression methods described in footnote 124, with data from KPMG. *See* https://kpmg.com/us/en/articles/2023/supply-chain-stability-index.html (viewed October 7, 2025).

part due to labor frictions, and the air cargo industry faced reduced capacity as passenger flights were curtailed.

B. COVID and the Post-Covid Recovery Disrupted Many Industries, Many of Which Experienced Labor Shortages and/or Service Problems

85. The impact of COVID was widespread and impacted businesses across an assortment of industries. While the overall economy experienced an unexpected demand surge, certain sectors — including hospitality, tourism, and passenger airlines — continued to struggle through 2020 and early 2021 due to persistently low demand. Then, when demand eventually returned, several of these industries experienced labor shortages that slowed their recovery. Other industries, such as freight transportation (including trucking, ports, and air freight), as well as public passenger transportation, did not suffer from persistently low demand, but nonetheless experienced service problems. These difficulties were due in part to demand surges, supply chain issues, and/or labor shortages.

86. As a result, industries across a range of regulatory frameworks and competitive environments struggled to forecast and adapt to economic conditions created by COVID and the recovery from COVID — including demand uncertainty, supply chain issues, and labor shortages.

1. COVID Posed a Substantial Threat to Some Businesses

a. Hospitality and Tourism

87. The pandemic jeopardized the continued operation of many businesses within the hospitality and tourism industries. In August 2020, the American Hotel & Lodging Association (AHLA) concluded that "the hotel industry remains on the brink of collapse," six months into the pandemic, with occupancy having cratered to "the historic low of 24.5% in April" and a majority of properties at or below break-even.[125] AHLA further reported that at the peak, "nearly nine in

[125] AHLA, "State of the Hotel Industry Analysis: Covid-19 Six Months Later," August 31, 2020, available at https://www.ahla.com/sites/default/files/State%20of%20the%20Industry.pdf, pp. 2, 4 (This document states that 65 percent of hotels were at or below 50 percent occupancy—"near the threshold at which most hotels can break-even with expenses and pay for their debt.").

ten hotels … had to lay off or furlough workers," and that "4 [o]ut of 10 [h]otel [e]mployees [a]re [s]till [n]ot [w]orking" as of that report.[126]

88. Similarly, COVID affected restaurants, leading to widespread layoffs and closures. The U.S. Bureau of Labor Statistics recorded that in April 2020 "employment in leisure and hospitality plummeted by 7.7 million," with "almost three-quarters of the decrease … in food services and drinking places (-5.5 million)."[127] By December 2020, the National Restaurant Association reported that "17% of restaurants—more than 110,000 establishments—are closed permanently or long-term."[128]

89. When demand returned, labor shortages impeded re-opening and the return to pre-COVID service levels. A November 2021 National Restaurant Association survey found that for restaurants, "77% of operators said their restaurant did not have enough employees to support existing customer demand."[129] Other restaurants periodically operated with reduced hours or limited to drive through service in 2021 due to staff shortages.[130] Hotels reported the same constraints: in June 2022, AHLA stated that 97 percent of surveyed hotels faced staffing shortages, "49% severely so," with housekeeping the most critical need.[131]

b. Passenger Airlines

90. COVID had a dramatic impact on the passenger airline industry. With the onset of stay-at-home orders and travel restrictions, consumer demand for air travel substantially decreased. According to the U.S. Bureau of Transportation Statistics, passenger traffic on U.S.

---

[126] AHLA, "State of the Hotel Industry Analysis: Covid-19 Six Months Later," August 31, 2020, available at https://www.ahla.com/sites/default/files/State%20of%20the%20Industry.pdf, pp. 2-3.

[127] U.S. Bureau of Labor Statistics, "The Employment Situation – April 2020," September 23, 2020, available at https://www.bls.gov/news.release/archives/empsit_05082020.pdf, p. 3.

[128] https://restaurant.org/research-and-media/media/press-releases/restaurant-industry-in-free-fall%3B-10%2C000-close-in-three-months (viewed October 9, 2025).

[129] https://restaurant.org/research-and-media/research/restaurant-economic-insights/analysis-commentary/most-restaurants-remained-understaffed-in-december/ (viewed October 9, 2025).

[130] https://www.businessinsider.com/mcdonalds-chick-fil-a-starbucks-closing-dining-rooms-worker-shortage-2021-9 (viewed September 8, 2025).

[131] https://www.ahla.com/news/97-surveyed-hotels-report-staffing-shortages-ahla-foundation-expands-recruitment-campaign (viewed September 8, 2025).

airlines in 2020 was the lowest since the mid-1980s.[132] According to the Government Accountability Office ("GAO"), while passenger demand for domestic travel recovered steadily, in the second half of 2021, the number of passengers on scheduled passenger domestic flights in the U.S. was still 13.6 percent below the number during the same period in 2019.[133]

91. As a result of decreased consumer demand for passenger air travel, in 2020 and 2021 major U.S. passenger airlines suffered significant financial losses.[134] According to GAO, over $100 billion in payroll support, loans, and federal assistance was important to maintaining airline operations.[135] The passenger airline industry's finances recovered slowly, reporting a small positive industry-wide income margin of 2.7 percent in 2022 for the first time since the start of the pandemic, but still a far cry from the margin of 10.4 percent reported in 2019.[136]

92. Operational challenges from the pandemic had a lasting impact on the passenger airline industry. GAO found that despite fewer scheduled flights in the last 6 months of 2021, flight cancellation rates during this period outpaced 2018 and 2019 rates.[137] Airline-caused delays also increased for nearly all U.S. airlines during the same period.[138] According to GAO, factors within the airlines' control, including airline maintenance and lack of crew, were the

---

[132] https://www.bts.gov/newsroom/full-year-2020-and-december-2020-us-airline-traffic-data (viewed August 13, 2025). In April 2020 U.S. aviation passenger traffic was 96 percent lower than April 2019, and in 2020 U.S. airlines carried 557 million fewer passengers than in 2019, a 60 percent decrease. GAO, "COVID-19 Pandemic: Observations on the Ongoing Recovery of the Aviation Industry," October 2021, available at https://www.gao.gov/assets/gao-22-104429.pdf, pp. 1, 12; https://www.bts.gov/newsroom/full-year-2020-and-december-2020-us-airline-traffic-data (viewed August 13, 2025). Globally, airline passenger volumes dropped by 66 percent, the largest annual decline in aviation history. International Air Transport Association, "Air Passenger Market Analysis," December 2020, available at https://www.iata.org/en/iata-repository/publications/economic-reports/air-passenger-monthly-analysis---december-2020/, p. 1.

[133] GAO, "Airline Passenger Protections: Observations on Flight Delays and Cancellations, and DOT's Efforts to Address Them," April 2023, available at https://www.gao.gov/assets/gao-23-105524.pdf, p. 7.

[134] The U.S. passenger airline industry-wide adjusted pretax income margin fell to a loss of 61.5 percent in 2020 from a 10.4 percent profit in 2019. *See* https://www.alpa.org/news-and-events/air-line-pilot-magazine/state-of-the-industry-2023 (viewed August 13, 2025).

[135] GAO, "COVID-19 Pandemic: Observations on the Ongoing Recovery of the Aviation Industry," October 2021, available at https://www.gao.gov/assets/gao-22-104429.pdf, p. 1.

[136] https://web.archive.org/web/20240107211254/https://www.alpa.org/news-and-events/air-line-pilot-magazine/state-of-the-industry-2023 (viewed October 20, 2025).

[137] GAO, "Airline Passenger Protections: Observations on Flight Delays and Cancellations, and DOT's Efforts to Address Them," April 2023, available at https://www.gao.gov/assets/gao-23-105524.pdf, pp. 1, 10.

[138] GAO, "Airline Passenger Protections: Observations on Flight Delays and Cancellations, and DOT's Efforts to Address Them," April 2023, available at https://www.gao.gov/assets/gao-23-105524.pdf, pp. 1, 14.

leading cause of cancellations during the second half of 2021.[139] Airline and union representatives cited "operational challenges," including a need for additional pilots and crew, reduced training capacity, and outdated pre-pandemic scheduling models, as reasons why the passenger airline industry was struggling to manage disruptive events, impacting airline cancellations and delays.[140]

2. COVID and the Post-COVID Recovery Caused Service Problems in the Freight Transportation Industry and in Other Industries

93. Impacts from COVID were felt within the freight transportation sector, including trucking, ports, and freight moved by aircraft, and other industries, including public passenger transportation. These industries experienced difficulties maintaining their service levels in 2021 and/or 2022. This further indicates that any service problems that the railroad industry experienced in 2022 should be assessed within the context of the disruptions caused by COVID.

a. Trucking

94. The trucking industry experienced a sharp contraction early in the COVID pandemic followed by a sharp increase with an overall muted recovery. For example, the Truck Tonnage Index, which measures the gross tonnage of freight hauled by motor carriers,[141] declined by 12.2 percent in April 2020.[142] Trucking volumes showed a sharp increase in June

[139] GAO, "Airline Passenger Protections: Observations on Flight Delays and Cancellations, and DOT's Efforts to Address Them," April 2023, available at https://www.gao.gov/assets/gao-23-105524.pdf, pp. 1, 4, 15.

[140] GAO, "Airline Passenger Protections: Observations on Flight Delays and Cancellations, and DOT's Efforts to Address Them," April 2023, available at https://www.gao.gov/assets/gao-23-105524.pdf, pp. 18-19.

[141] https://www.bts.gov/learn-about-bts-and-our-work/statistical-methods-and-policies/truck-tonnage (viewed August 13, 2025).

[142] https://www.trucking.org/news-insights/ata-truck-tonnage-index-plunged-122-april (viewed August 13, 2025). This decline included both short- and long-distance goods transport. (Ng, Max TM, Joseph Schofer, and Hani S. Mahmassani, "How Well Did US Rail and Intermodal Freight Respond to the COVID-19 Pandemic versus the Great Recession?," *Transportation Research Record,* Vol. 2677, No. 4 (2023): 597-610, p. 604.) Long-haul freight shipments covering distances greater than 800 miles declined by approximately 30 percent during April 2020 (Ng, Max TM, Joseph Schofer, and Hani S. Mahmassani, "How Well Did US Rail and Intermodal Freight Respond to the COVID-19 Pandemic versus the Great Recession?," *Transportation Research Record,* Vol. 2677, No. 4 (2023): 597-610, p. 604.).

2020, with an 8.9 percent rise in the Truck Tonnage Index.[143] Volumes then declined in July 2020 and remained below pre-pandemic levels throughout 2021, before beginning to recover in early 2022.[144]

95. The spike in volume during mid-2020 and the subsequent period of reduced activity coincided with persistent service disruptions, as measured by the Outbound Tender Rejection Index (OTRI). The OTRI is a key industry metric that measures the percentage of electronically offered contract loads (known as "tenders") rejected by carriers.[145] A high OTRI indicates tight capacity, often reflecting that carriers are either fully booked or shifting to the spot market in pursuit of higher rates.[146] In contrast, a low OTRI reflects looser capacity, with more carriers accepting contracted shipments.[147] As shown in **Exhibit 11**, the OTRI began increasing in July 2020, remained elevated through 2021, and did not return to pre-pandemic single-digit levels until approximately May 2022. Indeed, FreightWaves commented that "[b]etween July 2020 and January 2022, the OTRI averaged above 23%, meaning carriers rejected nearly one out of every four loads due to insufficient availability," and described this period as "among the most challenging periods for securing transportation capacity."[148]

[143] https://www.thetrucker.com/trucking-news/business/truck-tonnage-plummeted-5-1-in-july-after-seeing-encouraging-8-9-surge-in-june (viewed August 13, 2025).

[144] https://www.thetrucker.com/trucking-news/business/truck-tonnage-plummeted-5-1-in-july-after-seeing-encouraging-8-9-surge-in-june (viewed August 13, 2025); https://www.trucking.org/news-insights/ata-truck-tonnage-index-increased-24-may (viewed August 13, 2025).

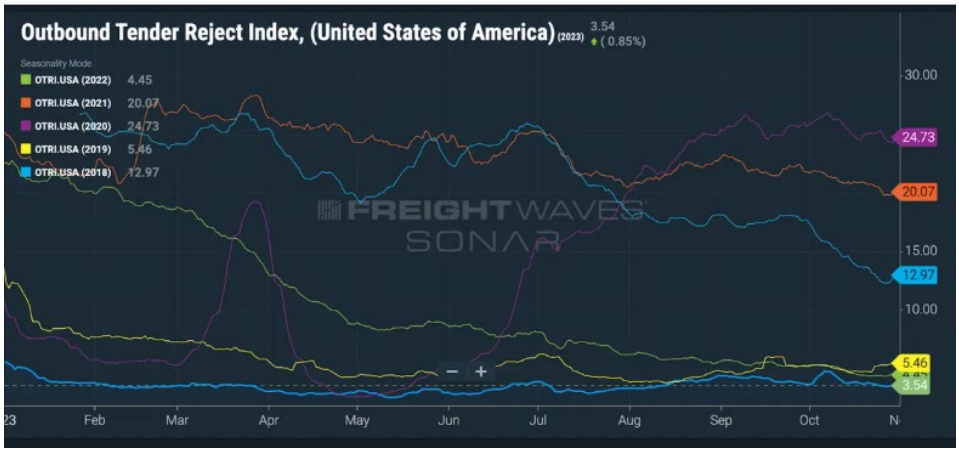
[145] The OTRI is a daily metric delivered by FreightWaves through its SONAR platform, based on data from approximately 40,000 daily truckloads and $20 billion in annual freight spending. *See* FreightWaves, "FreightWaves SONAR Outbound Tender Rejection Index (OTRI)," March 2022, available at https://gosonar.com/wp-content/uploads/2022/03/SONAR-Bloomberg-OTRI-One-Sheet.pdf.

[146] https://www.freightwaves.com/news/why-tracking-tender-rejections-is-important (viewed August 13, 2025).

[147] https://www.freightwaves.com/news/why-tracking-tender-rejections-is-important (viewed August 13, 2025).

[148] https://www.freightwaves.com/news/resilient-rejection-rates-illustrate-truckload-capacitys-decline (viewed August 13, 2025).

Exhibit 11: Outbound Tender Rejection Index ("OTRI"), 2018 (blue) vs. 2019 (yellow) vs. 2020 (purple) vs. 2021 (red) vs. 2022 (green)[149]



96. The service problems in the trucking industry were in part caused by labor shortages relative to what was needed to service what, at times, was surging trucking demand. As discussed by Dr. Johnson, trucking faced an "extremely tight labor market" during the 2021 – 2022 timespan.[150] Research published between of December 2021 and January 2022, likewise observed that labor shortages continued to limit the trucking industry's ability to meet demand, as the job market across the U.S. tightened.[151] Driver shortage was ranked as the second most important concern in 2022 by the American Transportation Research Institute's report on top 10 issues in the trucking industry.[152]

97. Schofer et al. (2021) similarly find that trucking experienced a demand surge that exceeded its capacity to supply trucking services,[153] stating that the trucking market experienced

[149] https://www.freightwaves.com/news/americans-are-getting-spendy-again-but-its-not-ending-jaw-dropping-trucking-bloodbath (viewed August 13, 2025).

[150] Verified Statement of Erin M. Johnson. Ph.D., Section III.D. According to the American Trucking Associations ("ATA"), the industry faced a shortage of approximately 81,258 drivers during 2021 – the highest such number on record. In 2022, the number of unfilled driver jobs declined to nearly 78,000 – the second-highest number of vacancies on record, according to the ATA. https://www.truckingdive.com/news/truck-driver-shortage-eases-slightly-in-2022-chief-economist-Bob-Costello-ATA-MCE-2022/634854/ (viewed August 13, 2025).

[151] Schofer, Joseph L., Hani S. Mahmassani, and Max T.M. Ng, "Resilience of US Rail Intermodal Freight during the COVID-19 Pandemic," *Research in Transportation Business & Management*, Vol. 43 (2022): 1-11, p. 9.

[152] https://simplexgroup.net/top-5-trucking-industry-concerns-of-2022/ (viewed October 9, 2025).

[153] Schofer, J.L., et al., "The U.S. Railroads and COVID-19: Keeping Supply Chains Moving," Northwestern University Transportation Center, May 2021, p. 12.

"capacity constraints" that were "attributable to persistent driver shortages amplified by the spread of COVID-19."[154]

98. Service disruptions in the trucking industry began to ease in 2022, due in part to weaker demand relative to the prior year and an increase in new trucking authorities.[155] These included individuals entering the industry for the first time, as well as drivers who previously worked for larger carriers acquiring their own trucks and becoming independent owner-operators.[156]

b. Ports

99. Ports initially faced a sharp decline in demand at the onset of the pandemic, followed by a sharp demand surge that strained port capacity.[157] Port congestion remained a significant challenge for U.S. ports in 2022, as reflected in metrics such as port delays, number of ships waiting in queue outside ports before docking, and time to load/unload vessels (vessel dwell time). As discussed by Dr. Johnson, ports faced labor shortages during the 2021 – 2022 timespan.[158] The congestion at the ports was in part due to the shortages in labor.[159]

---

[154] Schofer, J.L., et al., "The U.S. Railroads and COVID-19: Keeping Supply Chains Moving," Northwestern University Transportation Center, May 2021, p. 21.

[155] https://www.truckingdive.com/news/act-ftr-ttmi-2023-outlook/695258/ (viewed August 13, 2025); https://www.freightwaves.com/news/americans-are-getting-spendy-again-but-its-not-ending-jaw-dropping-trucking-bloodbath (viewed August 13, 2025).

[156] https://time.com/6313178/trucking-bubble-has-burst/ (viewed August 13, 2025).

[157] For example, according to Schofer et al. (2021), "[w]hen COVID-19 hit, inbound, loaded container volumes dropped precipitously, first reflecting manufacturing shutdowns in China, and later the dip in U.S. economic activity […] By July, 2020, adjustments in the U.S. economy began to pull more products through the Asian supply chain; October showed an almost 30% increase in containers coming through the Port of Los Angeles compared with 2019." The authors also noted that "[s]imilar increases were reported in EC ports, as well, and demands for drayage were pressing capacity limits in mid-2020." Capacity was especially tested since "[o]n top of this peak in inbound container flows, COVID-19 hit port workers." Schofer, J.L., et al., "The U.S. Railroads and COVID-19: Keeping Supply Chains Moving," Northwestern University Transportation Center, May 2021, pp. 22-23.

[158] Verified Statement of Erin M. Johnson Ph.D., Section III.D.

[159] Verified Statement of Erin M. Johnson Ph.D., Section III.D. For example, reported causes of this congestion included "COVID Outbreaks and Shutdowns" and "worker shortage[s]" including from "mass resignation drives, worker protests & strikes." (https://www.allthingssupplychain.com/port-congestion-in-the-us-and-its-effects-on-supply-chains/ (viewed August 13, 2025).). On the U.S. West Coast, labor-related tensions at major cargo ports, along with continued equipment shortages, contributed to ongoing instability in maritime logistics. (https://www.mholland.com/market-insights/2022-logistics-update-capacity-increases-uncertainty-remains (viewed August 13, 2025). A Fitch Ratings July 2022 report noted that labor issues at major cargo ports had the potential to

100. **Exhibit 12** shows that many of the 10 largest ports experienced elevated port delays from January 2022 through at least September 2022, with 80 percent of the months across all these ports reporting average delays of 10 or more days during that period.[160] Although delays eased toward year-end, several major ports (NY/NJ, GA, and TX) still reported waits of around 10 days in November 2022.

Exhibit 12: Port Delays in Days - Monthly Average at Top 10 U.S. Ports in 2022[161]

Port	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
Los Angeles, CA	18.1	14.9	12.2	10.7	10.9	8.0	7.2	7.4	6.9	6.4	6.3	6.7
Long Beach, CA	11.4	12.3	10.1	10.2	9.1	8.4	7.3	6.9	5.0	6.0	4.9	6.5
Oakland, CA	13.6	15.5	23.8	13.6	11.7	8.6	10.9	11.7	11.2	9.0	8.2	8.3
Tacoma, WA	13.7	11.9	11.7	14.1	10.0	8.6	9.8	9.9	9.2	9.5	7.6	7.2
Seattle, WA	12.0	17.2	8.7	12.7	12.4	9.8	12.1	9.2	10.1	9.8	7.7	6.4
New York/ New Jersey	15.7	15.1	14.6	14.8	14.0	13.7	13.8	14.6	13.6	11.7	10.2	8.3
Savannah, GA	11.1	10.3	10.3	10.9	11.3	12.8	14.4	13.6	14.2	12.5	11.7	9.3
Charleston, SC	14.7	15.6	17.4	13.3	12.3	11.1	11.2	11.4	9.9	9.0	8.3	8.4
Norfolk, VA	13.5	14.6	14.4	14.4	13.9	10.6	10.8	10.2	10.2	9.4	9.2	7.9
Houston, TX	11.2	12.8	12.5	11.5	11.9	11.7	11.7	12.4	11.8	10.3	10.4	9.3

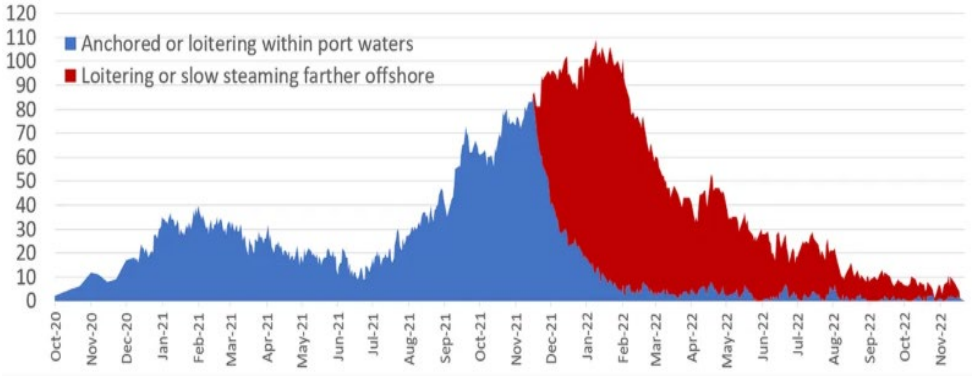
prolong shipping bottlenecks and temporarily reduce volumes, as ports remained vulnerable to labor-related disruptions while still clearing residual backlogs from the COVID pandemic. https://www.fitchratings.com/research/infrastructure-project-finance/global-port-labor-issues-add-to-bottlenecks-limited-credit-effect-21-07-2022 (viewed August 13, 2025).). Delays at U.S. ports were exacerbated by customs processing requirements and staffing shortages within the U.S. Customs and Border Protection agency. Before cargo can leave port storage sites or warehouses, it must be inspected and cleared by the U.S. Customs and Border Protection. While necessary for security and regulatory compliance, this requirement can increase dwell time for containers and contributes to port congestion. Staffing shortages within CBP could have compounded these delays. The agency has not consistently met its staffing targets, citing high attrition rates, a lengthy hiring process, and competition from other law enforcement agencies. (https://www.asisonline.org/security-management-magazine/articles/2022/05/solving-the-maritime-talent-shortage-introduces-new-challenges (viewed August 13, 2025).).

[160] Specifically, of the 90 port-month observations between January and September 2022, 72 reported average delays of ten or more days. *See* **Exhibit 12**.

[161] The numbers are calculated by Descartes Systems Group and represent the average number of port delay days, defined as the difference between the estimated arrival date declared on the bill of lading and the date Descartes receives the bill of lading processed by U.S. Customs and Border Protection. *See* https://www.globaltrademag.com/top-u-s-port-analysis-a-tale-of-two-coasts-in-2022-2/ (viewed October 3, 2025); https://www.descartes.com/resources/knowledge-center/global-shipping-crisis-december-2022-us-container-volumes-continue-to-close-in-on-2019-levels (viewed October 3, 2025).

101. Moreover, as shown in **Exhibit 13** below, the number of container ships queued at the Los Angeles and Long Beach ports rose sharply in 2021 and remained elevated into 2022. The Marine Exchange of Southern California, which oversees vessel movement in and out of Los Angeles and Long Beach, declared that the containership backlog officially ended on November 22, 2022.[162]

Exhibit 13: Number of Container Ships Waiting in Los Angeles/Long Beach Queue October 2020 to November 2022[163]



102. The congestion that these ports experienced during the COVID pandemic and the subsequent recovery was especially severe, even when compared to prior congestion episodes. As shown in **Exhibit 14** (which does not even capture the full duration of the COVID congestion), COVID-era congestion at the Los Angeles and Long Beach ports far surpassed in both severity and duration the 2015 episode, which had previously been considered an unprecedented "worst-case scenario."[164] The 2015 congestion lasted from at least October 2014 through February 2015, and cost billions in lost output.[165] The COVID-related congestion was

[162] https://maritime-executive.com/article/containership-backup-is-declared-over-in-southern-california (viewed October 3, 2025).

[163] https://www.freightwaves.com/news/zero-ships-waiting-off-southern-california-59-off-other-ports (viewed August 13, 2025).

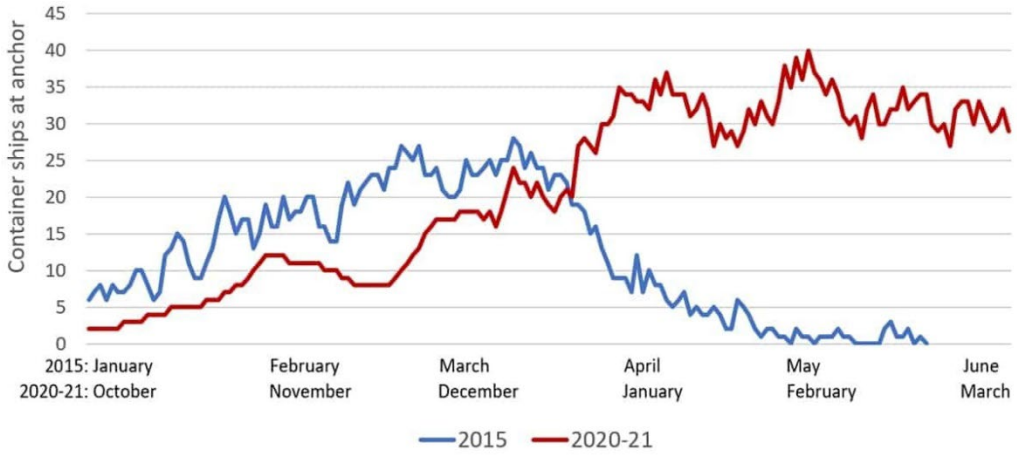
[164] https://t4america.org/2015/02/25/west-coast-port-closures-example-of-the-worst-case-scenario/ (viewed September 4, 2025). https://www.craneww.com/knowledge-center/latest-news-and-info/us-port-update/ (viewed August 29, 2025). The 2015 episode was itself more severe than the 2002 labor dispute that cost the U.S. economy an estimated $1 billion per day. https://www.mdlogistics.com/2015/06/white-paper-the-perfect-storm-lessons-from-the-west-coast-port-closures-of-2014 (viewed September 4, 2025); https://maritime-executive.com/article/US-Port-Congestion-Hides-Deeper-Issues-2014-11-24 (viewed September 4, 2025).

[165] https://www.federalreserve.gov/econresdata/notes/ifdp-notes/2015/did-the-west-coast-port-dispute-contribute-to-the-first-quarter-gdp-slowdown-20150702.html (viewed September 4, 2025). https://maritime-executive.com/article/US-Port-Congestion-Hides-Deeper-Issues-2014-11-24 (viewed September 4, 2025). *See, e.g.,* Washington Council on International Trade (WCIT), "The Economic Costs of the 2014–2015 West Coast Port Slowdown on Washington State," p. 2.

estimated to have delayed approximately $238 billion in cargo at these ports and to have lasted approximately two years.[166] As a consequence, it caused U.S. retailers to incur around $321 million in additional interest expense in 2021 alone.[167] As of July 2022, over $40 billion of cargo was estimated to be waiting offshore at U.S. ports.[168]

Exhibit 14: West Coast Port Congestion

COVID-related Congestion vs. 2015[169]



103. Container ship backlogs occurred not only at Los Angeles and Long Beach but also at other U.S. container ports. As shown in **Exhibit 15**, the number of container ships awaiting berths at *all* U.S. ports remained consistently high during 2022. While conditions improved in the second half of the year, congestion persisted into early 2023 at certain ports.[170] In particular, ship queues at some East Coast and Gulf Coast ports also remained relatively high

[166] https://maritime-executive.com/article/port-congestion-cost-shippers-millions-in-added-interest-expenses (viewed October 7, 2025); https://www.rvia.org/news-insights/southern-californias-notorious-container-ship-backup-ends (viewed October 7, 2025).

[167] https://maritime-executive.com/article/port-congestion-cost-shippers-millions-in-added-interest-expenses (viewed October 7, 2025); https://container-news.com/californias-congestion-leads-billions-of-dollars-worth-of-cargo-waiting-outside-uswc-ports-racking-up-millions-in-interest (viewed October 13, 2025).

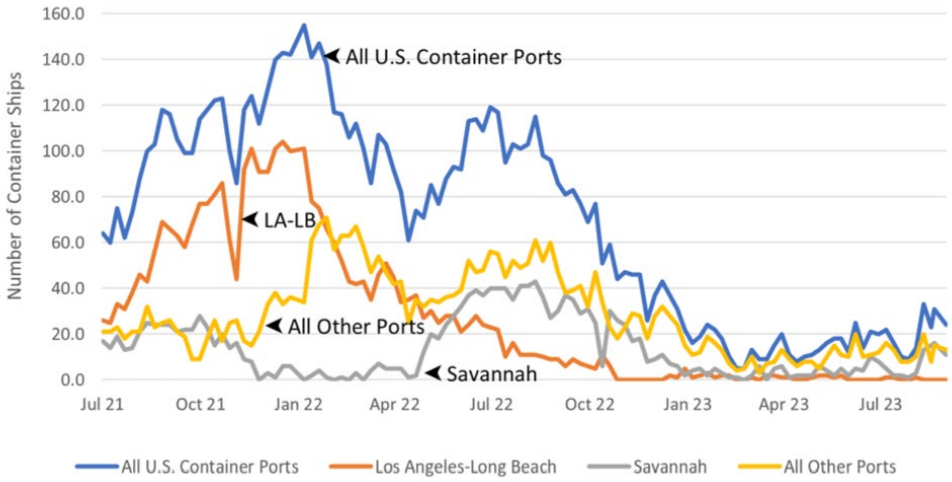
[168] https://www.freightwaves.com/news/theres-still-over-40b-in-cargo-on-container-ships-waiting-offshore (viewed October 10, 2025).

[169] https://www.freightwaves.com/news/california-port-pileup-leaves-old-records-in-the-dust (viewed September 5, 2025).

[170] *See, e.g.,* https://www.freightwaves.com/news/coast-is-almost-clear-as-port-congestion-fades-even-further (viewed August 13, 2025).

during much of 2022.[171] The time those ships spent waiting outside ports was also elevated, with press in August 2022 noting that "8 of the 10 largest ports in the US face average congestion of 7 days," meaning that "ships have to wait nearly 7 days outside the largest ports in the US before they are allowed to dock and unload their cargo."[172]

Exhibit 15: Weekly Number of Container Ships Awaiting to Dock at All U.S. Ports July 2021 to September 2023[173]



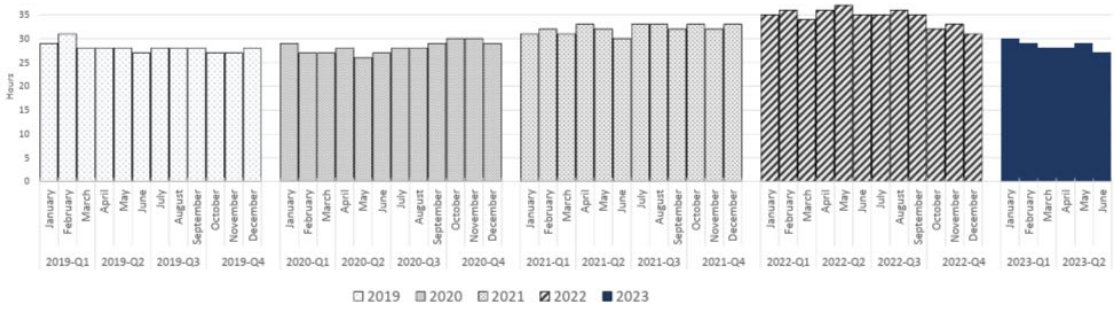
104. Regarding container vessel dwell times, defined as the time a vessel spends in port while loading or unloading, **Exhibit 16** shows that average times at the top 25 U.S. ports remained above pre-pandemic 2019 levels throughout 2022 and only began to approach pre-pandemic ranges in 2023. In 2022, dwell times exceeded 30 hours, compared to 25 to 30 hours in 2019, with the exception of February, and in the first half of 2023.

[171] The Port of Savannah in Georgia had nearly 50 ships waiting in mid-2022, with about 30 still waiting in late November. At the Port of Houston, the queue had remained in the mid-20s during the summer of 2022. https://www.freightwaves.com/news/coast-is-almost-clear-as-port-congestion-fades-even-further (viewed August 13, 2025).

[172] https://www.allthingssupplychain.com/port-congestion-in-the-us-and-its-effects-on-supply-chains/ (viewed August 13, 2025).

[173] U.S. Department of Transportation, Bureau of Transportation Statistics, "2024 Port Performance Freight Statistics Program: Annual Report to Congress," January 2024, available at https://www.bts.gov/sites/bts.dot.gov/files/2024-01/2024_Port_Performance_Report_0.pdf, p. 19.

Exhibit 16: Monthly Average Container Vessel Dwell Times at the Top 25 U.S. Container Ports January 2019 to June 2023[174]



c. Air Freight

105. A substantial share of global air cargo is typically transported in the underfloor holds of passenger aircraft, commonly referred to as belly cargo.[175] As described above, the COVID pandemic led to the widespread grounding of passenger flights. As a result, this critical source of cargo capacity effectively disappeared, leading to a sharp reduction in available space that could not be fully offset by dedicated freighters or by temporarily converting passenger aircraft for cargo use.[176] In 2021, air freight capacity in the U.S. continued to be limited by lower passenger air travel, as system-wide passenger enplanements for U.S. passenger airlines remained 27.3 percent below 2019 levels.[177] To account for this constrained capacity, in July 2021, the Federal Aviation Administration extended an exemption allowing U.S. airlines to carry

[174] U.S. Department of Transportation, Bureau of Transportation Statistics, "2024 Port Performance Freight Statistics Program: Annual Report to Congress," January 2024, available at https://www.bts.gov/sites/bts.dot.gov/files/2024-01/2024_Port_Performance_Report_0.pdf, p. 37.

[175] Prior to the pandemic, approximately 54 percent of air cargo was carried as belly cargo. (https://www.reedsmith.com/en/perspectives/global-air-freight/2022/01/surge-in-demand-for-air-freight-raises-aviations-outlook-but-for-how-long (viewed August 13, 2025); Boeing, "World Air Cargo Forecast 2022–2041," 2022, p. 11.). According to the U.S. Bureau of Labor Statistics, typically 45 to 50 percent of air freight is transported in the bellies of passenger planes. https://www.bls.gov/opub/btn/volume-10/air-freight-prices.htm (viewed September 12, 2025).

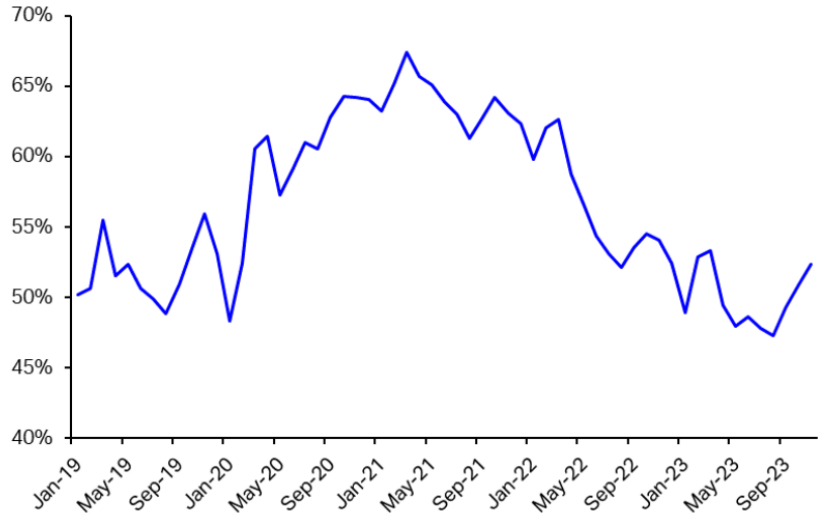
[176] U.S. International Trade Commission, "Preighters: How Airlines Pivoted Operations in the Face of a Global Pandemic," October 2021, available at https://www.usitc.gov/publications/332/executive_briefings/ebot_preighters-how_airlines_pivoted_operations_in_the_face_of_a_global_pandemic.pdf, p. 1.

[177] https://www.bts.gov/newsroom/full-year-2021-and-december-2021-us-airline-traffic-data (viewed September 12, 2025).

cargo in the main cabin when passengers were not present, "citing an ongoing need to provide extra cargo lift capability while passenger traffic remain[ed] below pre-pandemic levels."[178]

106. **Exhibit 17** shows the global cargo load factor (CLF), which "indicates the balance between demand and supply," [179] from January 2019 to September 2023, as reported by the International Air Transport Association (IATA). CLF remains high from the start of COVID through the first half of 2022, indicating freight airline capacity remained more constrained in 2021 — potentially continuing into 2022 — compared to the period prior to COVID. Similarly, contemporaneous commentary highlighted the constrained capacity in freight airlines. For example, according to IBA, "[a]ir cargo demand continue[d] to outpace capacity in the market as of March 2022, with freight capacity remaining restricted and dedicated freighters proving unable to meet demand."[180]

Exhibit 17: Global Cargo Load Factor[181]



107. U.S.-specific information also highlights constrained capacity related to freight moved by airlines and at airports. As discussed by Dr. Johnson, airlines such as JetBlue faced

[178] https://www.freightwaves.com/news/faa-gives-passenger-airlines-6-month-extension-for-cabin-cargo (viewed September 12, 2025).

[179] IATA, "Air Cargo Market Analysis," December 2024, available at https://www.iata.org/en/iata-repository/publications/economic-reports/air-cargo-market-analysis-december-2024/, p. 2.

[180] *See* https://www.iba.aero/resources/articles/4-key-air-cargo-trends-to-watch-for-in-2022 (viewed August 13, 2025).

[181] IATA, "Air Cargo Market Analysis," November 2023, available at https://www.iata.org/en/iata-repository/publications/economic-reports/air-cargo-market-analysis---november-2023/, p. 2.

labor shortages during the 2021 to 2022 timespan.[182] Moreover, staffing shortages at airports and cargo terminals contributed to delays in freight handling, extended dwell times, and growing warehouse congestion.[183] According to the International Air Cargo Association, 2021 "saw significant difficulties in moving cargo at several key US gateway airports."[184] These delays were caused by "labor shortages — partly related to workers placed in quarantine — insufficient storage space at airports, and a large backlog of shipments to process."[185] Similarly, according to a 2022 white paper by the Air Forwarders Association and the National Customs Brokers and Forwarders Association of America, disruptions were magnified by factors such as hiring difficulties, and delays in obtaining federal security certifications for new workers.[186] Further, a 2021 industry survey conducted by the same organizations, which gathered responses from more than 3,000 airport and air cargo stakeholders, identified staffing as a critical operational challenge.[187] Respondents reported that "[s]taffing for almost all elements of the cargo operations is insufficient," and cited low wages, high turnover, and long freight breakdown times as key contributors to delays.[188]

108. Similar constraints also affected major carriers. For example, in early 2022, FedEx temporarily paused its economy freight service due to staffing shortages,[189] while DHL

[182] Verified Statement of Erin M. Johnson, Ph.D., Section III.D.

[183] Air Forwarders Association and National Customs Brokers and Forwarders Association of America, "Safeguarding the Future of Air Cargo: Its Economic Importance and Critical Need for Investment," 2022, pp. 11-12.

[184] https://tiaca.org/a-retrospective-look-at-air-cargo-in-2021/ (viewed September 12, 2025).

[185] https://tiaca.org/a-retrospective-look-at-air-cargo-in-2021/ (viewed September 12, 2025).

[186] Air Forwarders Association and National Customs Brokers and Forwarders Association of America, "Safeguarding the Future of Air Cargo: Its Economic Importance and Critical Need for Investment," 2022, pp. 11-12.

[187] Air Forwarders Association and National Customs Brokers and Forwarders Association of America, "Safeguarding the Future of Air Cargo: Its Economic Importance and Critical Need for Investment," 2022, pp. 14, 21.

[188] Air Forwarders Association and National Customs Brokers and Forwarders Association of America, "Safeguarding the Future of Air Cargo: Its Economic Importance and Critical Need for Investment," 2022, p. 21.

[189] https://www.axios.com/2022/02/01/fedex-pauses-freight-services-omicron (viewed August 13, 2025); https://www.reuters.com/business/autos-transportation/fedex-suspends-domestic-express-freight-services-omicron-hit-2022-02-01/ (viewed August 13, 2025).

cited persistent labor shortfalls and airport backlogs as factors contributing to service disruptions expected to last through the end of the year.[190]

d. Public Passenger Transportation

109. Demand for public transportation fell immediately at the onset of the COVID pandemic. Driven by lockdown orders and the shift to remote work, during the first two months of the pandemic, public transit ridership in the U.S. fell by 83 percent, with certain transit systems seeing an even bigger drop.[191] Public transit agencies often had to reduce service and lay off staff.[192]

110. During the COVID pandemic recovery, the public transportation industry faced labor shortages, impacting the quality of the service offered at least through mid-2022. As discussed by Dr. Johnson, public transit agencies faced labor shortages during the 2021-2022 timespan.[193] According to the American Public Transit Association (APTA), in December 2021 many public transportation agencies "reported difficulty with service reliability because of the number of operators, mechanics, and other transit workers required to stay at home due to COVID cases."[194] Similarly, based on a survey conducted by APTA, as of March 2022, 92 percent of public transit agencies stated having difficulty hiring new employees, and 66 percent

[190] DHL Global Forwarding, "Air Freight Market Update Webinar: October 2022," October 19, 2022, available at https://www.dhl.com/content/dam/dhl/global/dhl-global-forwarding/documents/pdf/dhl-dgf-air-freight-market-update-webinar-oct2022.pdf, p. 10.

[191] https://www.richmondfed.org/publications/research/econ_focus/2023/q1_feature1# (viewed August 12, 2025).

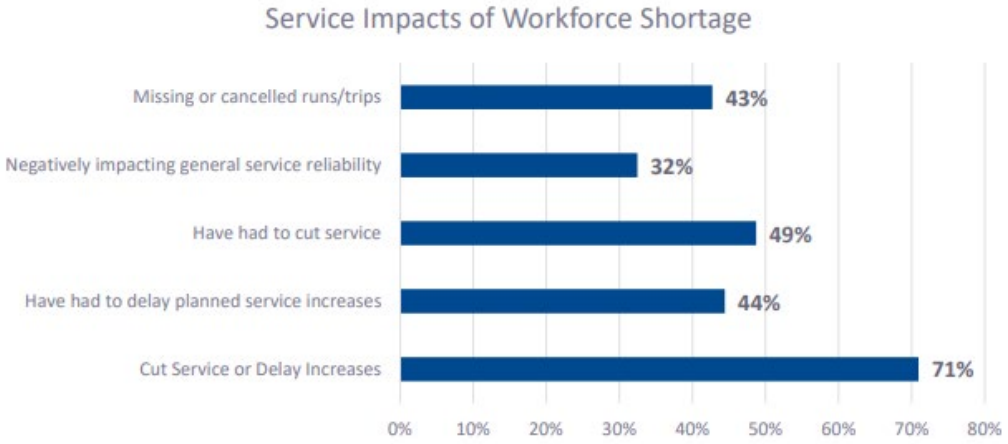
[192] In 2020, facing critical funding shortfalls even after receiving emergency relief from the federal government, 65 percent of public transit agencies were forced to cut service, with 38 percent of agencies reporting that they were considering additional cuts to service to close budget gaps. In the same poll, 22 percent of public transit agencies reported that they had been forced to lay off staff, and 28 percent reported delayed, deferred, or cancelled capital projects, impacting manufacturing and construction jobs elsewhere. *See* APTA, "COVID-19 Pandemic Threatens Public Transit Jobs and Service," January 2021, available at https://www.apta.com/wp-content/uploads/APTA-Survey-Brief-Agency-Jan-2021.pdf.

[193] Verified Statement of Erin M. Johnson, Ph. D., Section III.D. During recovery, public transit systems faced a shortage of transit workers, in particular for bus operators, mechanics, and maintenance, hindering their ability to ramp service up to meet demand. (APTA, "Workforce Shortages Impacting Public Transportation Recovery," March 2022, available at https://www.apta.com/wp-content/uploads/APTA-SURVEY-BRIEF-Workforce-Shortages-March-2022.pdf.)

[194] APTA, "APTA Public Transportation Ridership Update," April 2022, available at https://www.apta.com/wp-content/uploads/APTA-Transit-Ridership-Brief-April-2022.pdf, p. 2.

reported difficulty retaining employees.[195] As shown in **Exhibit 18** below, in the same survey, 71 percent of public transit agencies reported "[c]ut [s]ervice or [d]elay [i]ncreases" due to the impact of a workforce shortage. Indeed, labor shortages continued to affect transit agencies' ability to provide service until at least July 2022.[196] For example, in a July 2022 survey, "[96]percent of public transportation agencies reported experiencing a workforce shortage, and 84 percent of those with shortages said the shortage affected their ability to provide service."[197]

Exhibit 18: Service Impacts of Workforce Shortage in Public Transit in March 2022[198]



C. BNSF Experienced Labor Shortages and Supply Issues in 2022 Due to COVID, Similar to Other Industries

111. As discussed by Dr. Johnson, BNSF and the railroad industry faced labor shortages in 2021 and 2022 similar to the overall US economy and similar to other industries, including trucking, ports, airlines, and public transportation.[199] In addition, as mentioned in **Section V.B.1**, other industries, such as hospitality and tourism, also faced labor shortages.

---

[195] APTA, "Workforce Shortages Impacting Public Transportation Recovery," March 2022, available at https://www.apta.com/wp-content/uploads/APTA-SURVEY-BRIEF-Workforce-Shortages-March-2022.pdf.

[196] APTA, "Transit Workforce Shortage Synthesis Report," March 2023, available at https://www.apta.com/wp-content/uploads/APTA-Workforce-Shortage-Synthesis-Report-03.2023.pdf, p. 1.

[197] APTA, "Transit Workforce Shortage Synthesis Report," March 2023, available at https://www.apta.com/wp-content/uploads/APTA-Workforce-Shortage-Synthesis-Report-03.2023.pdf, p. 1.

[198] APTA, "Workforce Shortages Impacting Public Transportation Recovery," March 2022, available at https://www.apta.com/wp-content/uploads/APTA-SURVEY-BRIEF-Workforce-Shortages-March-2022.pdf.

[199] Verified Statement of Erin M. Johnson, Ph.D., Section III.

112. Moreover, as discussed in **Section V.B** above, several industries, including trucking, ports, airlines, and public transportation, experienced service problems during the 2021 to 2022 timespan, as summarized in **Exhibit 19** below—similar to BNSF, which, as discussed by Mr. Baranowski and Mr. Zebrowski, experienced improvements in labor-related service issues by 2023.[200]

Exhibit 19: COVID-Related Service Issues in Selected Industries, 2021 – 2022

Industry	Service Issues in 2021 and/or 2022	Notes on Service Issues
Trucking[201]	✓	OTRI remains elevated through at least April 2022.
Ports[202]	✓	8 of the 10 largest ports in the US faced

[200] Verified Reply Statement of Michael R. Baranowski and Nathaniel S. Zebrowski, pp. 22-23 ("Similar to the improvements in BNSF's service to Iatan after {[redacted]}, BNSF's system-wide initiative to reduce cars on line had a positive impact on network fluidity and service performance as well. As BNSF gradually reduced cars on line over the course of 2022, system-wide train speeds steadily increased[...]. BNSF's service also became {{[redacted]}} for customers[…] [S]ystem-wide measurements of {{[redacted]}} across the back half of 2022, {{[redacted]}} by the end of the year."), p. 45 ("After {[redacted]} in July 2022, BNSF could not accommodate Evergy's request to {[redacted]} in service to Iatan until December due to a temporary crew shortage along the Evergy route in 2022 that was at its height during this time."), p. 50 ("The ratio between train miles and train and engine employees that existed in 2019 […] has since returned in 2023 and 2024. Correspondingly, service metrics such as {{[redacted]}}. Messrs. Mulholland and Crowley failed to identify that the shortage in crew resources was temporary. When looked at correctly, their analysis corroborates this finding. While they focused on crew-related delays being {{[redacted]}} in 2022 than in 2019, they neglected to recognize that soon after the temporary crew shortage the extent of these delays {{[redacted]}} […]."), and p. 88 ("Messrs. Mulholland and Crowley's analysis of crew-related delays, when looked at over the entire 2019 to 2023 period covered by available data, corroborates the finding that there was a temporary, pandemic-era crew shortage that has since abated.").

[201] The OTRI, which measures the percentage of electronically offered contract loads rejected by carriers, began increasing in July 2020, remained elevated through 2021, and did not return to pre-pandemic single-digit levels until approximately May 2022. https://www.freightwaves.com/news/americans-are-getting-spendy-again-but-its-not-ending-jaw-dropping-trucking-bloodbath (viewed August 13, 2025); **Exhibit 11**.

[202] As of August 2022, 8 of the 10 largest ports in the U.S. faced average congestion of 7 days. https://www.allthingssupplychain.com/port-congestion-in-the-us-and-its-effects-on-supply-chains/ (viewed August 13, 2025). Relatedly, the number of container ships queued at the Los Angeles and Long Beach ports rose sharply in 2021 and remained elevated throughout much of 2022. https://www.freightwaves.com/news/zero-ships-waiting-off-southern-california-59-off-other-ports (viewed August 13, 2025). Ship queues at certain East Coast and Gulf Coast ports also remained elevated during through much of 2022. The Port of Savannah in Georgia had nearly 50 ships

		average congestion of at least 7 days throughout at least August 2022.
Freight Moved by Aircraft[203]	✓	Passenger enplanements 27% lower in 2021 than in 2019, impacting belly cargo.
Public Transportation[204]	✓	APTA surveys in March 2022 and July 2022 report that a vast majority of public utilities experienced service issues due to labor shortages.

waiting in mid-2022, with about 30 still waiting in late November. At the Port of Houston, the queue had remained in the mid-20s during the summer of 2022. https://www.freightwaves.com/news/coast-is-almost-clear-as-port-congestion-fades-even-further (viewed August 13, 2025).

[203] In 2021, air freight capacity in the U.S. continued to be limited by lower passenger air travel, as system-wide passenger enplanements for U.S. passenger airlines remained 27.3 percent below 2019 levels. https://www.bts.gov/newsroom/full-year-2021-and-december-2021-us-airline-traffic-data (viewed September 12, 2025). To account for this constrained capacity, in July 2021 the Federal Aviation Administration extended an exemption allowing U.S. airlines to carry cargo in the main cabin when passengers were not present, "citing an ongoing need to provide extra cargo lift capability while passenger traffic remain[ed] below pre-pandemic levels." https://www.freightwaves.com/news/faa-gives-passenger-airlines-6-month-extension-for-cabin-cargo (viewed September 12, 2025). According to the International Air Cargo Association, 2021 "saw significant difficulties in moving cargo at several key US gateway airports" which were caused by "labor shortages – partly related to workers placed in quarantine – insufficient storage space at airports, and a large backlog of shipments to process." https://tiaca.org/a-retrospective-look-at-air-cargo-in-2021/ (viewed September 12, 2025).

[204] According to APTA, in December 2021 many public transportation agencies "reported difficulty with service reliability because of the number of operators, mechanics, and other transit workers required to stay at home due to COVID cases." APTA, "APTA Public Transportation Ridership Update," April 2022, available at https://www.apta.com/wp-content/uploads/APTA-Transit-Ridership-Brief-April-2022.pdf, p. 2. In a March 2022 survey conducted by APTA, 71 percent of public transit agencies reported "[c]ut [s]ervice or [d]elay [i]ncreases" due to the impact of a workforce shortage. APTA, "Workforce Shortages Impacting Public Transportation Recovery," March 2022, available at https://www.apta.com/wp-content/uploads/APTA-SURVEY-BRIEF-Workforce-Shortages-March-2022.pdf. In a July 2022 survey, 96 percent of public transportation agencies reported experiencing a workforce shortage, and 84 percent of those with shortages said the shortage affected their ability to provide service. APTA, "Transit Workforce Shortage Synthesis Report," March 2023, available at https://www.apta.com/wp-content/uploads/APTA-Workforce-Shortage-Synthesis-Report-03.2023.pdf, p. 1.

113. Further, as discussed by Dr. Johnson, BNSF did not appear to excessively decrease labor prior to COVID,[205] and BNSF's reduction in labor during the initial part of the COVID recession was in line with the drop in demand experienced by BNSF.[206]

114. In contrast, maintaining staffing levels to be able to absorb the unexpected shocks to labor in 2022 despite the pre-COVID trends and the drop in demand at the onset of COVID would have required, at least given the information at the time, maintaining a large and generally inefficient amount of slack capacity. Such an overinvestment in labor capacity would essentially entail "building for Easter Sunday" (see **Section III.B.2**), leading to an inefficient network at the long-run expense of all participants. The fact that many other industries experienced similar labor shortages and service problems provides robust corroboration that building slack capacities to manage such extreme circumstances without service problems would not be a rational or efficient undertaking.

115. Thus, any assessment of BNSF's CCO in 2022 must account for the extraordinary effects and circumstances of COVID and the recovery from COVID. On top of that, other events such as extreme weather conditions and the war in Ukraine magnified the effects and circumstances experienced by COVID.[207] Messrs. Robert D. Mulholland and Timothy D. Crowley fail to mention COVID and the recovery from COVID, much less take these circumstances into account, even though their assignment was "to identify factors, if any, contributing to the volume shortfalls experienced by Evergy in that year."[208]

---

[205] Verified Statement of Erin Johnson, Ph.D., p. 47 ("BNSF was not operating with reduced headcount relative to service levels going into Covid and that BNSF's headcount reductions during the Covid pandemic tracked service levels.").

[206] Verified Statement of Erin M. Johnson, Ph.D., p. 25 ("BNSF's reductions in active headcount during the Covid recession were in line with reductions in the demand for BNSF's coal transportation services at the time.").

[207] Verified Reply Statement of Michael R. Baranowski and Nathaniel S. Zebrowski, p. 13 ("In the midst of an unpredictable COVID recovery, following winter storm Uri in February 2021, the United States rail network experienced a persistent increase in congestion.") and p. 52 ("{{ }} during the spring of 2022 following Russia's invasion of Ukraine in February 2022.").

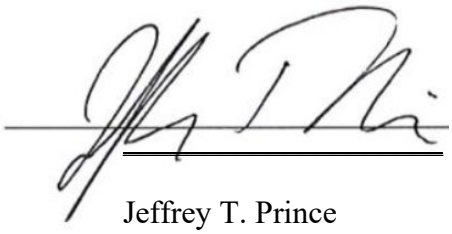
[208] Verified Statement of Robert D. Mulholland and Timothy D. Crowley, p. 1.

VI. CONCLUSION

116. The Asserted Service Obligation by Evergy risks significant harm to the broader railroad network. Moreover, any assessment of BNSF's CCO in 2022 must account for the extraordinary effects of COVID — which Evergy failed to do.

VERIFICATION

I, Jeffrey T. Prince, verify under penalty of perjury that I have read this Verified Statement on behalf of BNSF, that I know the contents thereof, and that the same are true and correct to the best of my knowledge. Further, I certify that I am qualified and authorized to file this statement.



Jeffrey T. Prince

Executed on November 20, 2025.

APPENDIX A

VITA

JEFFREY T. PRINCE

2029 S. Hawksmoore Dr.
Bloomington, IN 47401

Office: 812-856-2692
ostonFax:812-855-3354

E-mail: jeffrey.t.prince@gmail.com
Web page: https://sites.google.com/view/jeffrey-t-prince/home

PERSONAL INFORMATION

Born: April 29, 1976 at Cincinnati, OH
Citizenship: USA
Married to Ann Prince
Children: Katherine Prince, Elizabeth Prince, Henry Prince

EDUCATION

Ph.D.: Economics, Department of Economics, Northwestern University, 2004.
Dissertation Title: The Diffusion of Durable Information Technology Products.
M.A.: Economics, Department of Economics, Northwestern University, 2000.
B.A.: Economics, Miami University, 1998, *Summa Cum Laude*.
B.S.: Mathematics/Statistics, Miami University, 1998, *Summa Cum Laude*.

FIELDS OF SPECIALIZATION

Primary: Industrial Organization
Secondary: Applied Econometrics, Strategy, Regulation

ACADEMIC POSITIONS HELD

Professor of Business Economics and Public Policy (with tenure), Kelley School of Business, Indiana University, 2017-present.

Harold A. Poling Chair in Strategic Management, Kelley School of Business, Indiana University, 2015-present.

Faculty Affiliate, Indiana University Data Science Program, 2018-present.

Advisory Committee Member, Indiana University Center for Survey Research, 2018-present.

Faculty Affiliate, Indiana University Institute for Corporate Governance and Ethics, 2025-present.

University Fellow at the Technology Policy Institute, 2021-present.

Chairperson, Department of Business Economics and Public Policy, Kelley School of

APPENDIX A

Business, Indiana University, 2016-2019 & 2020-2025.
Co-Director, Kelley Institute for Business Analytics, 2016-2022.

Associate Professor (with tenure) of Business Economics and Public Policy, Kelley School of Business, Indiana University, 2010-2017.

Visiting Scholar, Strategy Department, Kellogg Graduate School of Management, Northwestern University, Summer and Fall, 2015.

Visiting Scholar, Center of Business and Public Policy, McDonough School of Business, Georgetown University, Fall, 2015.

Cathie and Jerry Anderson Faculty Fellow, Kelley School of Business, Indiana University, 2013-2015.

Assistant Professor, Applied Economics and Management, Cornell University, 2004-2010 (promoted to Associate with tenure, July, 2010).

NONACADEMIC EXPERIENCE

Chief Economist, Federal Communications Commission, 2019-2020.

National Security Agency, Cryptologic Mathematician in Director's Summer Program, Fort George G. Meade, Maryland, Summer 1998.

UNEXT, Consultant and Co-author for Online Masters Business Course in Vertical Integration, Chicago, Illinois, Summer 2001.

Nationwide Insurance, Actuarial Intern, Columbus, Ohio, Summer 1997.

EDITORIAL POSITIONS

Co-editor, *Journal of Economics and Management Strategy*, 2015-present.

Editorial Board member, *Information Economics and Policy*, 2008-present.

Co-editor, *Journal of Economics and Management Strategy Special Edition on Digital Transformation and the Business Revolution*, 2024.

BOOKS

Conglomerates and Ecosystems in the Digital Era, co-editor with Justin (Gus) Hurwitz and Geoffrey A. Manne, Cambridge University Press, 2026 (expected).

Managerial Economics and Business Strategy, *2025 Release*, with Michael R. Baye, McGraw-Hill Education, 2025.

APPENDIX A

The Metaverse: What Everyone Needs to Know, with Scott J. Shackelford, Michael Mattioli, and Joao Marinotti, Oxford University Press, 2025.

Managerial Economics and Business Strategy, *10th Edition*, with Michael R. Baye, McGraw-Hill Education, 2022.

Predictive Analytics for Business Strategy: Reasoning from Data to Actionable Knowledge, McGraw-Hill Education, 2019.

Managerial Economics and Business Strategy, *9th Edition*, with Michael R. Baye, McGraw-Hill Education, 2017.

Managerial Economics and Business Strategy, *8th Edition*, with Michael R. Baye, McGraw-Hill Education, 2014.

WORKING PAPERS

"Does Market Power Impact Price Partitioning? Evidence from Cleaning Fees and Rental Rates on AirBnB" with Daniel Simon, 2025, 2nd revision invited at the *Journal of Industrial Economics*. (Working version at SSRN)

"Have Smartphones Changed the Structure of Online Consumption?", with Hong Lee and Shane Greenstein, 2025, under review. (Working version at SSRN)

"Competitive Effects of Joint Ventures in the U.S. International Airline Market", with Hong Lee, Jaehak Lee, and Daniel Simon, 2025, under review. (Working version at SSRN)

"Economic Assessment of Vertical Integration, with Antitrust Implications for Vertical Mergers", with Robert Kulick and Elena Ramirez Pierce, 2025. (Working version at SSRN)

"Do Shared Marketing and Operations within Joint Ventures Have Differential Impacts on Airline Pricing?" with Daniel Simon, Hong Lee, and Jaehak Lee, 2025. (Working version at SSRN)

REFEREED PUBLICATIONS

"Do People Around the World Care Where Their Data Are Stored?" with Scott Wallsten, *Information Economics and Policy*, 71, 101132, 2025. (Working version at SSRN)

APPENDIX A

"The Business Revolution: Economy-Wide Impacts of Artificial Intelligence and Digital Platforms", with Hanna Halaburda, D. Daniel Sokol, and Feng Zhu, forthcoming in the *Journal of Economics and Management Strategy,* Special Issue on Digital Transformation and the Business Revolution, 33, 2, pp. 269-275, 2024. (Working version at SSRN)

"Optimal Promises: Application of a General Framework to Airline Schedule Times", with Daniel Simon, *Journal of Air Transport Management*, 118, 102618, 2024. (Working version at SSRN)

"The Effect of Domestic Travel on the Spread of Covid-19 in the U.S.", with Daniel Simon, *Applied Economics Letters*, 31, 11, pp. 992-995, 2024. (Working version on SSRN)

"The Effect of International Travel on the Spread of Covid-19 in the U.S.", with Daniel Simon, *Southern Economic Journal*, 90, 2, pp. 224-241, 2023. (Working version at SSRN)

"How Much is Privacy Worth Around the World and Across Platforms?", with Scott Wallsten, *Journal of Economics and Management Strategy*, 31, pp. 841-861, 2022. (Working version at SSRN)

"Mobile Internet Usage and Usage Based Pricing", with Shane Greenstein, *Journal of Economics and Management Strategy*, 30, 4, pp. 760-783, 2021. (Working version at SSRN)

"Economics at the FCC: 2019-2020", with Allison Baker, Patrick Brogan, Octavian Carare, Nicholas Copeland, Patrick DeGraba, Steven Kauffman, Paul LaFontaine, Catherine Matraves, Sean Sullivan, Patrick Sun, and Emily Talaga, *Review of Industrial Organization*, 57, pp. 827-858, 2020.

"The Persistence of Broadband User Behavior: Implications for Universal Service and Competition Policy", with Andre Boik and Shane Greenstein, *Telecommunications Policy*, 43, 8, 2019. (Available at SSRN). (NBER working paper No. w22427). Extended working version titled: Empirical Economics of Online Attention.

"A Paradigm for Assessing the Scope and Performance of Predictive Analytics", *Information Economics and Policy*, 47, pp. 7-13, 2019. (Available at SSRN).

"Distinguishing Bandwidth and Latency in Households' Willingness-to-Pay for Broadband Internet Speed," with Yu-Hsin Liu and Scott Wallsten (lead article), *Information Economics and Policy*, 45, pp. 1-15, 2018. (Available at SSRN).

APPENDIX A

"Does Competition Lead to Agglomeration or Dispersion in EMR Vendor Decisions?", with Seth Freedman and Haizhen Lin, *Review of Industrial Organization*, 53, 1, 57-79, 2018. (Working version at SSRN).

"Information Technology and Patient Health: Analyzing Outcomes, Populations, and Mechanisms", with Seth Freedman and Haizhen Lin, *American Journal of Health Economics*, 4, 1, 51-79, 2018. (Working version at SSRN). (NBER working paper No. w21839)

"Measuring Consumer Preferences for Video Content Provision via Cord-Cutting Behavior", with Shane Greenstein, (lead article) *Journal of Economics and Management Strategy*, 26, 2, 293-317, 2017. (Working version at SSRN).

"The Impact of Mergers on Quality Provision: Evidence from the Airline Industry", with Daniel Simon, *Journal of Industrial Economics*, 65, 2, 336-362, 2017. (Working version at SSRN).

"The Effect of Competition on Toxic Pollution Releases", with Daniel Simon, *Journal of Environmental Economics and Management*, 79, 40-54, 2016. (Working version at SSRN).

"Determinants of Private Long-Term Care Insurance Purchase in Response to the Partnership Program", with Haizhen Lin, *Health Services Research*, 51, 2, 687-703, 2016. (Working version at SSRN).

"Do Incumbents Improve Service Quality in Response to Entry: Evidence from Airlines' On-Time Performance", with Daniel Simon, *Management Science*, 61, 2, 372-390, 2015. (Working version at SSRN).

"Does Service Bundling Reduce Churn?", with Shane Greenstein, *Journal of Economics and Management Strategy*, 23, 4, 839-875, 2014. (Working version at SSRN).

"Indirect Network Effects and the Quality Dimension: A Look at the Gaming Industry", with Jin-Hyuk Kim and Calvin Qui, *International Journal of Industrial Organization*, 37, 6, 99-108, 2014. (Working version at SSRN).

"Is Dual Agency in Real Estate a Cause for Concern?", with Vrinda Kadiyali and Daniel Simon, *Journal of Real Estate Finance and Economics*, 48, 1, pp. 164-195, 2014. (Working version at SSRN).

"The Impact of the Partnership Long-term Care Insurance Program on Private Coverage", with Haizhen Lin, *Journal of Health Economics*, 32, 6, pp. 1205-1213, 2013. (Working version at SSRN).

APPENDIX A

"Racial Bias in Expert Quality Assessment: A Study of Newspaper Movie Reviews", with Lona Fowdur and Vrinda Kadiyali, *Journal of Economic Behavior and Organization*, 84, 1, pp. 292-307, 2012. (Working version at SSRN)

"The Welfare Impact of Reducing Choice in Medicare Part D: A Comparison of Two Regulation Strategies", with Claudio Lucarelli and Kosali Simon, *International Economic Review*, 53, 4, pp. 1155-1177, 2012. (Working version at SSRN)

"Relating Inertia and Experience in Technology Markets: An Analysis of Households' Personal Computer Choices", *Applied Economics*, 43, 29, pp. 4501-4514, 2011. (Working version at SSRN)

"Are Risk Preferences Stable across Contexts? Evidence from Insurance Data", with Levon Barseghyan and Joshua Teitelbaum, *American Economic Review*, 101, 2, pp. 591-631, 2011. (Working version at SSRN)

"Is Time Inconsistency Primarily a Male Problem?", with Dan Shawhan, (lead article) *Applied Economics Letters*, 18, 6, pp. 501-504, 2011. (Working version at SSRN)

"Has the Internet Accelerated the Diffusion of New Products?", with Daniel Simon, *Research Policy*, 38, 8, pp. 1269-1277, 2009. (Working version at SSRN)

"How Do Households Choose Quality *and* Time to Replacement for a Rapidly Improving Durable Good?", *International Journal of Industrial Organization*, 27, 2, pp. 302-311, 2009. (Working version at SSRN)

"Multi-market Contact and On-Time Performance in the US Airline Industry", with Daniel Simon, *Academy of Management Journal*, 52, 2, pp. 336-354, 2009. (Working version at SSRN)

"Repeat Purchase amid Rapid Quality Improvement: Structural Estimation of the Demand for Personal Computers", (lead article) *Journal of Economics and Management Strategy*, 17, 1, pp. 1-33, 2008. (Working version at SSRN)

"Internet Adoption and Usage Patterns are Different: Implications for the Digital Divide", with Avi Goldfarb, (lead article) *Information Economics and Policy*, 20, 1, pp. 2-15, 2008. (Listed as the #1 most cited article for this journal since 2008: http://www.journals.elsevier.com/information-economics-and-policy/most-cited-articles/). (Working version at SSRN)

"The Beginning of Online/Retail Competition and Its Origins: An Application to Personal Computers", *International Journal of Industrial Organization*, 25, 1, pp. 139-156, 2007. (Working version at SSRN)

APPENDIX A

"The Diffusion of the Internet and the Geography of the Digital Divide in the United States", with Shane Greenstein, in (eds) Robin Mansell, Chrisanthi Avgerou, Danny Quah, and Roger Silverstone, The Oxford Handbook of Information and Communication Technologies, Oxford University Press, pp. 168-195, 2007. (NBER working paper No. W12182)

EDITED CHAPTERS AND NON-REFEREED PUBLICATIONS

"Ensuring Antitrust Actually Promotes Competition in the Digital Economy: Evaluating Proposed Remedies in the Google Case", with D. Daniel Sokol and Feng Zhu, Computer & Communications Industry Association, 2025. (Available at SSRN)

"Antitrust Economics of Digital Platforms," with D. Daniel Sokol, Cambridge University Press Handbook on Digital Platforms, eds. Dukes, A., Sokol, D., Sun, T., Zhu, F., 2025. (Available at SSRN)

"Information," with Michael R. Baye, Elgar Encyclopedia on the Economics of Competition, Regulation and Antitrust, ed. Noel, M., 2024. (Available at SSRN)

"Coordinated Effects (Merger)," Global Dictionary of Competition Law, eds. Kovacic, W., Whish, R., Healey, D., 2023. (Available here).

"Empirical Evidence of the Value of Privacy," with Scott Wallsten, *Journal of European Competition Law and Practice*, 12, 8, pp. 648-654, 2021. (Available here).

"The Economics of Digital Platforms: A Guide for Regulators", with Michael R. Baye, Global Antitrust Institute Report on the Digital Economy, 2020. (Available at SSRN)

"Does Original Content Help Streaming Services Attract More Subscribers?", *Harvard Business Review*, April, 2018. (Available at HBR.org)

"Position Statement on Challenges Facing Online Video Distributors", FCC's Video Landscape Workshop, March, 2016.

"The Dynamic Effects of Triple Play Bundling in Telecommunications", Time Warner Research Program on Digital Communications, Winter, 2012. (Available here).

"The Geographical Diffusion of the Internet in the United States", with Shane Greenstein, in (eds) Munindar Singh, The Practical Handbook of Internet Computing, CRC Press, pp. 56-1 – 56-17, 2004. (Available here).

APPENDIX A

TEACHING EXPERIENCE

Lecturer, 2026 (scheduled).
Digital Economics for Business (Executive MBA)

Lecturer, 2025-present.
Digital Economics for Business (Undergraduate)

Lecturer, 2011-2017, 2024.
Predictive Analytics for Business Strategy (Undergraduate)

Lecturer, 2019-2021.
Predictive Analytics for Business Strategy II. (MBA)

Lecturer, 2018-2021.
Predictive Analytics for Business Strategy I. (MBA)

Lecturer, 2016.
Econometric Methods in Business II (PhD)

Lecturer, Summer 2012-2014.
Introduction to Economics (Global Business Institute)

Lecturer, 2011.
Managerial Economics (Undergraduate)

Lecturer, 2010.
Business Econometrics (Undergraduate)

At Cornell:

Lecturer, 2006-2010.
Empirical Analysis of Industrial Organization (PhD)

Lecturer, 2005-2010.
Introduction to Business Regulation (Undergraduate)

Lecturer, 2007-2010.
Game Theory for Applied Economists (PhD)

Lecturer, Summer 2007.
Gaming: In the Casino and Beyond (Cornell Adult University)

Guest Lecturer, 2005-2006.
Graduate Industrial Organization, Empirical methods (PhD)

APPENDIX A

At Northwestern:

Teaching Assistant, 2000-2004.

Introductory Econometrics, Transportation, Intermediate Microeconomics, Honors Thesis Seminar, Advanced Econometrics.

Lecturer, 2002-2003.

Introductory Econometrics, Accelerated Probability and Statistics.

FELLOWSHIPS AND AWARDS

Best Research Poster, Research Conference on Communications, Information and Internet Policy, 2015.

Trustees Teaching Award, Indiana University, 2015.

Trustees Teaching Award Finalist, Indiana University, 2012, ’13, ’14, ‘15.

Certificate of Excellence in Reviewing, Information Economics and Policy, 2014.

Sauvain Teaching Award Nominee, 2014.

Innovative Teaching Award, Kelley School of Business, 2012.

Young Faculty Teaching Excellence Award, Cornell University, 2008.

Outstanding Graduate Student Teacher Award, Northwestern University, 2004.

Distinguished Teaching Assistant Award, Northwestern University, 2001,’02,’03,’04.

University Summer Fellowship, Northwestern University, 2003.

University Fellowship, Northwestern University, 1999-2000.

Teaching Assistant Fellow, Northwestern University.

George W. Thatcher Prize for top student in economics, Miami University, 1998.

Alumni Senior Prize for outstanding student in mathematics and statistics, Miami University, 1998.

Actuarial Exam P (equivalent based on passing pre-2000 Part 1 and Part 2 exams), 1998.

GRANTS AND OTHER FUNDING

Advanced Analytics for IU’s Addictions Grand Challenge

APPENDIX A

NET Institute Summer Research Grant

Research Data Grant, Kelley School of Business

Time Warner Research Stipend

Cornell's Institute for the Social Sciences Theme Project Faculty Fellow

Cornell Institute for the Social Sciences Small Grant Award

INVITED PAPER PRESENTATIONS

"Do People Around the World Care Where Their Data Are Stored?"

- Plamadiso Talk, Weizenbaum Insitut, November, 2024. (Publicly available here)
- Ostrom Workshop, Indiana University, October, 2024.
- Cornell University, October, 2023.
- University of Nebraska, November, 2022.

"Optimal Promises: Application of a General Framework to Airline Schedule Times"

- International Industrial Organization Conference, May, 2022.

"How Much is Privacy Worth Around the World and Across Platforms?"

- University of Kent, October, 2021.
- Kelley Faculty Research Series, IU Mexico Gateway, May, 2021.
- Game Theoretic and Behavioral Economic Insights on Social Media, February, 2021.
- Research Conference on Communications, Information and Internet Policy, February, 2021.
- NBER Economics of IT and Digitization Workshop, July, 2020.
- FTC PrivacyCon, July, 2020.

"The Effect of International Travel on the Spread of Covid-19 in the U.S."

- Purdue, November, 2020.

"Mobile Internet Usage and Usage Based Pricing"

- Research Conference on Communications, Information and Internet Policy, February, 2021.
- Federal Communications Commission, October, 2020.
- International Industrial Organization Conference, May, 2020.

"A Paradigm for Assessing the Scope and Performance of Predictive Analytics"

- Technology Policy Institute, February, 2018.

APPENDIX A

"Distinguishing Bandwidth and Latency in Households' Willingness-to-Pay for Broadband Internet Speed"
- Bureau of Economic Analysis, October, 2017.
- Technology Policy Institute, October, 2017.
- Research Conference on Communications, Information and Internet Policy, September, 2017.

"The Empirical Economics of Online Attention"
- Pomona College, March, 2019.
- Research Conference on Communications, Information and Internet Policy, September, 2017.
- Searle 8th Annual Conference on Internet Commerce, June, 2017.
- Federal Communications Commission, March, 2017.
- Media Economics Workshop, October, 2016.
- University of Oklahoma, September, 2016.
- International Industrial Organization Conference, April, 2016.
- American Economic Association Annual Meetings, January, 2016.
- Kellogg School of Management, November, 2015.
- Georgetown University, October, 2015.
- Research Conference on Communications, Information and Internet Policy, September, 2015.

"Does Competition Lead to Agglomeration or Dispersion in EMR Vendor Decisions?"
- International Industrial Organization Conference, April, 2017.

"The Effect of Competition on Toxic Pollution Releases"
- International Industrial Organization Conference, April, 2015.
- University of California, Davis, March, 2015.

"The Impact of Mergers on Quality Provision: Evidence from the Airline Industry"
- Strategic Management Society Conference "Strategies in a World of Networks," September, 2014.
- International Industrial Organization Conference, April, 2014.

"Measuring Consumer Preferences for Video Content Provision via Cord-Cutting Behavior"
- Cable Show Academic Workshop, April, 2014.
- Research Conference on Communications, Information and Internet Policy, September, 2013.

APPENDIX A

"Information Technology and Patient Health: Analyzing Outcomes, Populations, and Mechanisms"
- IUPUI, January, 2018
- Purdue University, November, 2014.
- ASHEcon Conference, June, 2014.
- University of Massachusetts, April, 2014.
- International Industrial Organization Conference, April, 2014.
- NBER Economics of IT and Digitization Workshop, July, 2013.

"Indirect Network Effects and the Quality Dimension: A Look at the Gaming Industry"
- Indiana University Economics Department, November, 2013.
- International Industrial Organization Conference, May, 2013.

"Does Service Bundling Reduce Churn?"
- NBER Economics of IT and Digitization Workshop, July, 2012.
- International Industrial Organization Conference, March, 2012.
- Federal Trade Commission, March, 2012.
- Michigan University, November, 2011.
- Research Conference on Communications, Information and Internet Policy, September, 2011.

"The Impact of the Partnership Long-term Care Insurance Program on Private Coverage"
- University of Cincinnati, October, 2012.

"Do Incumbents Improve Service Quality in Response to Entry: Evidence from Airlines' On-Time Performance"
- Ohio State University, November, 2012.
- Econometric Society North American Summer Meeting, June, 2011.
- Temple University, November, 2010.
- Miami University, October, 2010.
- International Industrial Organization Conference, May, 2010.

"Has the Internet Accelerated the Diffusion of New Products?"
- Bureau of Economic Analysis, November, 2009.

"Are Risk Preferences Stable across Contexts? Evidence from Insurance Data"
- Econometric Society North American Summer Meeting, June, 2008.

"Multi-market Contact and On-Time Performance in the US Airline Industry"
- International Industrial Organization Conference, May, 2008.

APPENDIX A

"The Welfare Impact of Reducing Choice in Medicare Part D: A Comparison of Two Regulation Strategies"
- ASHEcon Conference, June, 2010.
- International Industrial Organization Conference, April, 2009.
- Federal Trade Commission, March, 2008.

"Is Dual Agency in Real Estate a Cause for Concern?"
- International Industrial Organization Conference, May, 2008.
- Midwest Economic Association Annual Meeting, March, 2008.

"Internet Adoption Patterns and Usage are Different: Implications for the Digital Divide"
- University of Maryland, April, 2007.

"How Do Households Choose Quality and Time to Replacement for a Rapidly Improving Durable Good?"
- Kelley School of Business, February, 2010.
- Duke University, September, 2007.
- Cornell University, September, 2007.
- Econometric Society North American Summer Meeting, June, 2007.
- International Industrial Organization Conference, April, 2007.

"Relating Inertia and Experience in Technology Markets: An Analysis of Households' Personal Computer Choices"
- Dartmouth Winter IO Conference, January, 2006.

"The Beginning of Online/Retail Competition and Its Origins: An Application to Personal Computers"
- International Industrial Organization Conference, April, 2006.
- Cornell University, March, 2006.
- ASSA SGE, January, 2006.

"Repeat Purchase amid Rapid Quality Improvement: Structural Estimation of the Demand for Personal Computers"
- Penn State University, April, 2007.
- Econometric Society World Conference, August, 2005.
- International Industrial Organization Conference, April, 2005.
- Miami University, March, 2005.
- ASSA SGE, January, 2005.
- Duke University, November, 2004.
- Cornell University, November, 2004.
- NBER Summer Institute, July, 2004.

APPENDIX A

EXPERT PANELS AND ENGAGEMENTS

AI and Antitrust: The New Competitive Battleground, Concurrences' Global Antitrust Economics Conference, November, 2025.

Future of Regulation and Quasi-regulation, USC/Analysis Group Antitrust Conference, June, 2025.

The Economic Impact of Artificial Intelligence, Technology Policy Institute, Aspen Forum, August, 2024.

Panel on Unilateral Conduct, NERA Antitrust and Regulation Seminar, July, 2024.

AI Policy and Regulation: Balancing Consumer Protection and Innovation, NABE Tech Economics Conference, November, 2023.

Panel on the Economics of Privacy, Research Conference on Communications, Information and Internet Policy, September, 2023.

Panel on Privacy Law, Policy and Consumer Preferences, Technology Policy Institute Aspen Forum, August, 2023.

Panel on Breaking Developments in Damages Calculations, Litigating Patents and Trade Secret Remedies Summit, January, 2023.

Antitrust: Overview and Recent Developments, University of Nebraska Tech Policy Forum, January, 2023.

Econometrics for Policy Makers, University of Nebraska Tech Policy Forum, January, 2023.

Research Roundtable on Regulating Privacy, George Mason University, December, 2022.

Do People Care Where Their Data Are Stored? Tech Refactored Podcast, Nebraska Governance and Technology Center, November 2022. (Podcast link)

Advertising Markets: Is the Current Ecosystem Stimulating Competition? Concurrences' Global Antitrust Economics Conference, November, 2021.

Damages from Data Breach and Misuse of Personal Information, Brattle Group, October, 2021.

Broadband Mapping Roundtable, Technology Policy Institute, October, 2021.

APPENDIX A

Panel on Competition and Innovation, 14th Annual Innovation Economics Conference, August, 2021.

Privacy, Please? American Bar Association Panel on Valuing Privacy, April, 2021.

Two Think Minimum Podcast with Scott Wallsten and Sarah Oh, Technology Policy Institute, February, 2021. (Podcast link)

Panel on the Economy and Business Development of Spectrum Sharing, NSF Virtual Workshop on New Paradigms in Intelligent Spectrum Management and Regulations, December, 2020. (Online presentation)

Scientific Sense Podcast Interview with Gill Eapen, October, 2020. (Podcast link)

Panel on the Attention Economy, Technology Policy Institute Aspen Forum, October, 2020. (Online video)

Panel on Antitrust Policy and Intellectual Property (moderator), Northwestern/USPTO Conference on Innovation Economics, August, 2020.

Panel on STELAR/Retransmission Consent, Phoenix Center Telecom Symposium, December, 2019.

BU Technology Policy Research Initiative Conference on the Law and Economics of IP, July, 2019.

FTC Merger Retrospective Hearing, Federal Trade Commission, April, 2019 (Online video).

Panel on Consumer Protection and Regulation, Maurer School of Law, March, 2018.

Terminator or the Jetsons? The Economics and Policy Implications of Artificial Intelligence, Technology Policy Institute, February, 2018.

All Data is Health Data; The Impact of Data and Data Laws on Clinical Care, Innovation, and Research, Symposium at Hall Center for Law and Health, October, 2017.

Tools of Damages Estimation, IPO's Damages and Injunctions Committee Conference, June, 2017.

The Unlikely Pairing of Payers, Providers and Pharma for Patient Centered Analytics, Kelley Forum on Healthcare Analytics, September, 2016.

APPENDIX A

Challenges Faced by Online Video Distributors, Federal Communications Commission Video Landscape Workshop, March, 2016 (Online video).

The Future of Video Policy and Business Models, hosted by the Technology Policy Institute, January, 2014 (Online audio).

PUBLIC SPEECHES

"State of the Economy"

- Mechanical Contractor Association of Indiana Annual Meeting, June, 2022.

"IoT and Telecom Policy"

- Nelms Distinguished E-Seminar Series, University of Florida, October, 2020.

"Delivering Econometrics Skills within a Business Analytics Curriculum"

- Robert Morris Teaching Economics Conference, February, 2018

"Critical Assessment of Correlation vs. Causality for Business Decisions"

- 180 Degrees Consulting, Indiana University, February, 2017

"Bringing Repeated Games to Life via Empirical Examples"

- McGraw-Hill Education Fall INXPO Event, October, 2016
- University of Phoenix School of Business Symposium, March, 2016
- McGraw-Hill Education Teaching Workshop for Professional Development, March, 2013

"Critical Assessment of Correlation vs. Causality for Public Policy"

- Vietnam Initiative with Indiana University, October, 2015

"As Graduates of Elder, You are Ready…"

- Cincinnati Elder High School Graduation Commencement, May, 2005

PUBLIC COMMENTARY

"Citizens Around the World Have Similar Data Privacy Preferences, At Least Relatively", with Scott Wallsten, Technology Policy Institute blog, October, 2024 (Available at TPI)

"Privacy Preferences Differ by Gender and Age, But Not by Income", with Scott Wallsten, Technology Policy Institute Blog, November, 2023. (Available at TPI)

"Conflict of Interest and Platforms," Comment on DOJ and FTC Draft Merger Guidelines, with Avigail Kifer, public submission to antitrust agencies, September, 2023. (Available at SSRN)

APPENDIX A

"Comment on the January 2022 DOJ and FTC RFI on Merger Enforcement: Issues Related to Digital Markets," with Lesley Chiou, Nathanial Hipsman, and Sachin Sancheti, public submission to antitrust agencies, March, 2022. (Available at SSRN)

"People Lie When Answering Polls. Here's How to Fix It", with Scott Wallsten, *Technology Policy Institute Blog*, January, 2021. (Available at TPI)

"Travelers Coming from Italy May Have Driven First US Covid-19 Wave More Than Those From China, Study Suggests", with Daniel Simon, *The Conversation*, January, 2021. (Available at the Conversation)

"Improved Economic Analysis Should Be Lasting Part of Pai's FCC Legacy", with Babette Boliek and Jerry Ellig, *The Hill*, December, 2020. (Available at The Hill)

"FCC Comments on Vertical Merger Guidelines," with Giulia McHenry, Patrick DeGraba, Eric Ralph, Catherine Matraves, Eugene Kiselev, and Aleksandr Yankelevich, February, 2020.

MEDIA COVERAGE

Specific Papers/Books/Public Commentary:

"Travelers Coming from Italy May Have Driven First US Covid-19 Wave More Than Those From China, Study Suggests," the *Conversation*, January, 2021.

- Reprint in Associated Press, Yahoo News

"How Much is Privacy Worth Around the World and Across Platforms?"

- "Facebook Would have to pay $3.50 Per Month to U.S. Users for Sharing Contact Info: Study" by Nandita Bose, *Reuters*, February 25, 2020. Reprint in *NY Times*. (Online version)

"A Paradigm for Assessing the Scope and Performance of Predictive Analytics"

- "A Paradigm for Assessing the Scope and Performance of Predictive Analytics – Economic and Policy Implications of AI," by Wallis G. Romzek, Technology Policy Institute, April 17, 2018. (Online version).

"Does Original Content Help Streaming Services Attract More Subscribers?"

- "Will Netflix Win the Streaming Wars?", Louis Foglia, BEME News, August, 2019. (Video).
- "Streaming Video: Original Content is the Hook," by David Marino-Nachison, Barron's Next, April 25, 2018. (Online version).

APPENDIX A

Predictive Analytics for Business Strategy

- "Kelley Professor's New Book 'Actively' Advocates the Role of Economics within Today's Analytics Boom," by George Vlahakis, Kelley School official blog, March 27, 2018. (Online version).

"The Impact of Mergers on Quality Provision: Evidence from the Airline Industry"

- "Flight Delay? Lost Luggage? Don't Blame Airline Mergers, Research Shows," by George Vlahakis, reprinted in *Science Daily*, May 23, 2017. (Online version).

"The Empirical Economics of Online Attention"

- "We Spend a Fixed Amount of Time Online Each Week (But People with Higher Incomes Spend Less)," by Julia Hann, Forbes, September 14, 2016. (Online version).
- "Let Them Eat Internet," by Tyler Cohen, *Marginal Revolution*, July 19, 2016. (Online version).
- "Consumers Have a Troubling Internet Habit That's Threatening Digital Media," by Myles Udland, *Business Insider*, July 19, 2016. (Online version).
- "Richer People Spend Less Time on the Internet," by Allee Manning, *Vocativ*, July 19, 2016. (Online version).

"The Impact of the Partnership Long-term Care Insurance Program on Private Coverage"

- "The Boomer Challenge: It's a Numbers Game," by Paul Barr, *Hospitals and Health Networks*, April 8, 2014. (Online version).

"Do Incumbents Improve Service Quality in Response to Entry: Evidence from Airlines' On-Time Performance"

- "Study Finds That Competition May Lead to More Airline Delays," by Hugo Martin, *LA Times*, December 22, 2013. (Online version).

"Racial Bias in Expert Quality Assessment: A Study of Newspaper Movie Reviews"

- "Psychology Uncovers Racism at the Movies," by Dr. Raj Persaud and Adrian Furnham, *Psychology Today*, September 5, 2015. (Online version)
- "Men in Black the movie – but men in white would be a better film?," by Dr. Raj Persaud and Adrian Furnham, *Huffington Post*, May 22, 2012. (Online version).

APPENDIX A

"The Welfare Impact of Reducing Choice in Medicare Part D: A Comparison of Two Regulation Strategies"

- "Medicare As We've Known It Isn't an Option," by Betsy McCaughey, *Wall Street Journal*, April 27, 2011. (Online content).

"Internet Adoption Patterns and Usage are Different: Implications for the Digital Divide"

- "People below 'digital divide' would use the Internet more, if they had it," by Bill Steele, *Cornell Chronicle*, April 18, 2008. (Online version).
- Invited guest for "Digital Divide," *Nevada Public Radio*. (Online content).

Expert Opinion:

"ISP/Website 'Mutuality of Interests' – or Retrans Blackouts – Among Net Neutrality Reversal Possibilities," *Communications Daily*, Vol. 34, No. 17, January, 2014.

PROFESSIONAL SERVICE

Miami University Economics Advisory Board, 2023-present.

BEPP Faculty Research Awards Committee, 2022-2025.

NBER Small Digitization Grants Review Committee, 2022.

Research Conference on Communications, Information and Internet Policy (TPRC) Program Committee, 2017-2021.

International Industrial Organization Conference (IIOC) Local Organizer, 2018.

Midwest Health Economics Conference Local Organizing Committee, 2016.

European Conference on Information Systems (ECIS) Associate Editor of the track "Decision Analytics, Big Data, and Visualization," 2016.

International Conference on Information Systems (ICIS) Associate Editor of the track "Decision Analytics, Big Data, and Visualization," 2014.

International Industrial Organization Conference (IIOC) Program Committee, 2012-2014.

Ad hoc referee for:
Agricultural and Resource Economics Review, American Economic Journal: Applied Economics, American Economic Journal: Economic Policy, American Economic Review,

APPENDIX A

Applied Economics, Applied Economics Letters, Applied Financial Economics, B.E. Journal of Economic Analysis & Policy, Business Horizons, Communications of the Association for Information Systems, Economic Inquiry, Economics of Education Review, Economics of Innovation and New Technology, Economics Letters, European Journal of Law and Economics, Geneva Papers on Risk and Insurance, Growth and Change: A Journal of Urban and Regional Policy, Health Economics, Health Services Research, Information Economics and Policy, Inter-America Development Bank, International Economic Review, International Journal of Industrial Organization, Israel Science Foundation, Journal of Air Transport Management, Journal of Banking and Finance, Journal of Competition Law and Economics, Journal of Economics and Business, Journal of Economics and Management Strategy, Journal of the European Economic Association, Journal of Gerontology, Journal of Health Economics, Journal of Industrial Economics, Journal of Policy Analysis and Management, Journal of Political Economy, Journal of Political Economy Microeconomics, Journal of Public Economics, Journal of Risk and Insurance, Journal of Rural Studies, Journal of Urban Technology, Leverhulme Trust, Management Science, Managerial and Decision Economics, Marketing Science, National Science Foundation, North American Journal of Economics and Finance, Organizational Science, Oxford Bulletin of Economics and Statistics, Quantitative Marketing and Economics, Quarterly Journal of Economics, Quarterly Review of Economics and Finance, RAND Corporation, RAND Journal of Economics, Research Policy, Review of Economics and Statistics, Review of Industrial Organization, Review of Network Economics, Risk Management and Insurance Review, Social Behavior and Personality, Southern Economic Journal, Strategic Management Journal, Telecommunications Policy, Telematics and Informatics, Transportation Research Part E, U.S.-Israel Binational Science Foundation, World Development

External tenure/promotion/reappointment reviewer for:

Boston University, City University of Hong Kong, Cornell University, Drexel University, Emory University, Fairfield University, Georgetown University, Imperial College London, Loyola University Maryland, Pomona College, Purdue University, Stanford University, University of Central Florida, University of Colorado, University of Georgia, University of Massachusetts, University of Oklahoma, University of Oregon

External program reviewer for:

Ball State University Economics

DISCUSSANT ACTIVITIES

Platform Dynamics Roundtable, November, 2023

- "Self-Preferencing at Amazon: Evidence from Search Rankings," by Chiara Farronato, Andrey Fradkin, and Alexander MacKay

APPENDIX A

International Industrial Organization Conference, April, 2023
- "Platform Information Design and Competitive Price Targeting," by Ruiqi Wu, Yufeng Huang, and Nan Li

International Industrial Organization Conference, May, 2022
- "Conflicts of Interest, Ethical Standards, and Competition in Legal Services," by Jan Bouckaert and Johan Stennek

NBER Economics of Digitization Summer Institute Meeting, July, 2021
- "Browsers Don't Lie? Gender Differences in the Effects of Covid-19 Lockdowns on Digital Activity and Time Use," by Amalia R. Miller, Kamalini Ramdas, and Alp Sungu
- "Does Telemedicine Transcend Disparities or Create a Digital Divide? Evidence from the Covid-19 Pandemic," by Jeffrey McCullough, Kartik K. Ganju, and Chandy Ellimoottil

NBER Economics of Digitization Summer Institute Meeting, July, 2018
- "Steering Incentives and Bundling Practices in the Telecommunications Industry," by Brian McManus, Aviv Nevo, Zachary Nolan, and Jonathan W. Williams

International Industrial Organization Conference, April, 2017
- "Price-Linked Subsidies and Health Insurance Markups," by Sonia Jaffe and Mark Shepard

NBER Economics of Digitization Meeting, March, 2017
- "Using Massive Online Choice Experiments to Measure Changes in Well-being," by Erik Brynjolfsson, Felix Eggers, and Avinash Gannamaneni

International Industrial Organization Conference, April, 2016
- "Using Matching to Study Merger: An Application to the U.S. Airline Industry," by Zexuan Liu, Pallab Ghosh, and Qihong Liu
- "Market Structure with the Entry of Peer-to-Peer Platforms: The Case of Hotels and Airbnb," by Chiara Farronato and Andrey Fradkin

Searle Center Conference on Innovation Economics, June, 2015
- "How Do Open Standards Influence Inventive Activity? Evidence from the IETF," by Wen Wen, Chris Forman, and Sirkka Jarvenpaa

Searle Center Conference on Internet Search and Innovation, June, 2015
- "Match Quality, Search, and the Internet Market for Used Books," by Sara Fisher Ellison
- "E-Book Pricing and Vertical Restraints," by Babur De los Santos and Matthijs Wildenbeest

APPENDIX A

International Industrial Organization Conference, April, 2015
- "Do Private Medicare Firms Face Lower Costs?," by Keaton Miller
- "The Market for Electric Vehicles: Indirect Network Effects and Policy Impacts," by Yiyi Zhou

Searle Center Research Roundtable on Patents and Technology Standards: The Data Sets, April, 2015

American Economic Association Annual Meetings, Pricing and Resource Allocation in Telecommunications, January, 2015
- "Employing Auctions to Allocate Scarce Resources," by John Mayo and David Sappington

American Economic Association Annual Meetings, Digital Media Economics, January, 2015
- "Super Returns? The Effects of Ads on Product Demand," by Seth Stephens-Davidowitz, Hal Varian, and Michael D. Smith

Searle Center Conference on Internet Search and Innovation, June, 2014
- "Auction vs. Posted-Price: Market Mechanism, Lender Behaviors, and Transaction Outcomes in Online Crowdfunding," by Zaiyan Wei and Mingfeng Lin

Research Roundtable on the Law and Economics of Digital Markets, July, 2013
- "Digital Music Consumption on the Internet," by Bertin Martens and Luis Aguiar

Searle Center Conference on Internet Search and Innovation, June, 2013
- "When Does Retargeting Work? Information Specificity in Online Advertising," by Anja Lambrecht and Catherine Tucker
- "Local News Online: Aggregators, Geo-Targeting and the Market for Local News," by Lisa George

International Industrial Organization Conference, May, 2013
- "The Impact of Privacy Policy on the Auction Market for Online Display Advertising," by Garrett Johnson
- "Transactions in Two-Sided Markets," by Alexei Alexandrov and Daniel Spulber

American Economic Association Annual Meetings, Economics of the Internet, January, 2013
- "Supply-Side Responses to Privacy Protection," by Avi Goldfarb and Catherine Tucker

APPENDIX A

Searle Center Book Preview Roundtable, December, 2012

- *Innovation from the Edges: The Economics of Creating the Commercial Internet,* by Shane Greenstein

Searle Center Conference on Internet Search and Innovation, June, 2012

- "News Aggregators and Competition among Newspapers," by Doh-Shin Jeon and Nikrooz Nasr Esfahani
- "Technology Shocks in Multi-Sided Markets: The Impact of Craigslist on Local Newspapers," by Robert Seamans and Feng Zhu

Midwest Health Economics Conference, May, 2012

- "The Anticipatory Effects of Medicare Part D on Drug Utilization," by Abby Alpert

International Industrial Organization Conference, March, 2012

- "Intra-Household Effects on Demand for Telephone Service: Empirical Evidence," by Ching-I Huang
- "Unobserved Risk Type and Sorting: Signaling Game in Online Credit Markets," by Kei Kawai, Ken Onishi, and Kosuke Uetake

NBER Economics of Digitization Meeting, February, 2012

- "The Effect of Localization in News Aggregators on Local News Consumption," by Susan Athey and Markus Mobius

Federal Trade Commission Microeconomics Conference, November, 2011

- "Do Firms Game Quality Ratings? Evidence from Mandatory Disclosure of Airline On-Time Performance," by Silke Forbes, Mara Lederman, and Trevor Tombe

International Industrial Organization Conference, May, 2010

- "Competition in Public School Districts: Student Sorting, School Quality Determination, and School Entry," by Nirav Mehta
- "A Model of Entry and Network Access Competition in Local Telephony," by Gustavo Marcos and Eduardo Saavedra

International Industrial Organization Conference, April, 2009

- "Consumer Search and Online Demand for Durable Goods," by Jun Kim, Bart Bronnenberg, and Paulo Albuquerque
- "Price Controls and Competition in Gasoline Retail Markets," by Juan Esteban Carranza and J.F. Houde

APPENDIX A

International Industrial Organization Conference, May, 2008
- "A Simple Model of Pricing for Non-storable Goods in Oligopoly: Some Considerations on Airline Pricing Behaviour," by Marco Alderighi

International Industrial Organization Conference, April, 2007
- "Markov Perfect Industry Dynamics with Many Firms," by Gabriel Weintraub

International Industrial Organization Conference, April, 2006
- "Price, Price Dispersion and Number of Sellers at a Low Entry Cost Shopbot," by Michelle Haynes and Steve Thompson

International Industrial Organization Conference, April, 2005
- "Asymmetric Advertising Costs as a Barrier to Entry: Evidence from Theatrical Motion Pictures," by Charles Moul

BOOK REVIEWS

Tucker, C. and Marthews, A., *You'll Pay for That: Payment Systems, Privacy, and Political Dissent*, MIT Press, 2023.

Bekes, G. and Kezdi, G., *Patterns, Causality and Prediction: Data Analysis for Business, Economics and Policy*, Cambridge University Press, 2017.

Lesser, W., *American Business Regulation: Understand, Survive, and Thrive*, M.E. Sharpe, 2015.

CONSULTING AND EXPERT WITNESS WORK

Expert reports, deposition, testimony and consulting for various matters including:

Competition policy and antitrust
Consumer protection
Damages calculations
Intellectual property
Privacy valuation
Survey design and analysis
Telecommunications policy

MEMBERSHIPS

American Economic Association.

Industrial Organization Society.

Academy of Management.

Association for Information Systems.

APPENDIX A

Team member for Cornell's Institute for the Social Sciences Theme Project, Getting Connected: Social Science in the Age of Networks, 2005-2008.

UNIVERSITY SERVICE

Member of Subcommittee for Department Research Award, 2023-present.

Member of Indiana Business Research Center Executive Director Search Committee, 2021-2022.

Member of Diversity, Equity & Inclusion Task Force, 2020-2021.

Member of Hiring Committee for Business Economics and Public Policy, 2017-2018, 2015-2016 & 2010-2011.

Chair of Hiring Committee for Business Economics and Public Policy, 2014-2015 & 2013-2014.

Kelley Direct Policy Committee, 2014-2016.

Judge for Kelley Honors Case Competition, 2016.

Judge for Deloitte Undergraduate Case Competition, 2017, 2015, 2011.

Co-founder and Judge for Economic Consulting Case Competition (EC3), sponsored by the Keystone Group, 2011-2015.

Co-founder and Co-organizer for BEPP "Eat, Meet, & Compete," 2012-2015.

Undergraduate Policy Committee, 2012-2014 & 2010-2011.

Doctoral Advisor for Business Economics and Public Policy, 2011-2012.

Doctoral Policy Committee, 2011-2012.

Judge for Net Impact Sustainable Business Club 2010 Case Competition, 2010.

At Cornell:
Applied Economics and Management Petitions Committee, 2007-2010.

Policy Analysis and Management External Hiring Committee, 2006-2007 & 2009-2010.

Mann Café Advisory Board, 2007-2010.

APPENDIX A

Institute for the Social Sciences Small Grant Program Committee, 2008.

Biz Quiz Faculty Advisor, 2008.

Applied Economics and Management Seminar Committee, 2005-2007.

Judge for Globalize '07, Cornell Hotel School, 2007.

Mann Library Vendor Evaluation Sub-committee, 2006.

PHD STUDENTS

Committee Chair:

Hong Lee
Aparna Soni
Yu-Hsin Liu
Yejing Ren
Junlin Du (Co-chair)
Fernanda Lopez de Leon

Committee Member:

Ningning Guo
Abhishek Ganguly
Catalin Stefanescu
Susan Kayser
Eric Schmidbauer
Shyam Venkatesan
Carlos Castelan
Joo Yeon Sun
Annemie Maertens (Substitute member)
Thanasin Tanompongphandh
Jiahong Zhang
Lona Fowdur
Anirban Mukherjee
Marc Bellemare (Substitute member)
Hyunkyung Choe
Daniel Shawhan

External Proposal Reviewer:

Andres Jola Sanchez (chair)
Mohammad Ghuloum
Kyle Bradley

APPENDIX A

MASTERS STUDENTS

Committee Member:

Malcolm Wade (Johns Hopkins, Systems Engineering)

Verified Statement of Dr. Erin Johnson

VERIFIED STATEMENT OF
ERIN M. JOHNSON, Ph.D.
November 20, 2025

Table of Contents

I. Introduction....2

II. Summary of Findings....3

III. Labor Market Analysis....6

A. Studies Have Shown That Covid Caused High Unemployment During 2020 and Historically Tight Labor Markets in 2021 That Tightened Further in 2022....6

1. *Covid Caused High Unemployment Driven by Furloughs in 2020....6*

2. *Labor Demand Bounced Back Faster than Anticipated in 2020....7*

3. *Covid Caused Tight Labor Market Conditions That Were Unprecedented in 2021, and Labor Markets Were Even Tighter in 2022....9*

B. My Own Analysis Shows That Covid Caused High Unemployment During 2020 and Historically Tight Labor Markets in 2021 That Tightened Further in 2022....11

C. The Experience of BNSF System and Evergy Route Labor Markets Tracked the National Experience....16

D. Employers in the Transportation Sector and Related Industries Faced Labor Shortages During 2021 and 2022....20

E. The Experience of the Rail Transportation Industry Tracked the National Experience....21

IV. Analysis of BNSF's Actions Affecting T&E Crew Levels....23

A. Faced with Lower Demand, BNSF Furloughed Crew During April and May 2020....23

B. During the Second Half of 2020 BNSF Successfully Recalled Furloughed Workers to Bring Crew Supply in Line with Increasing Demand....26

C. During the First Half of 2021 BNSF Continued to Recall Furloughed Workers but Faced Increasing Headwinds as Labor Markets Tightened....27

D. During Late 2021 and Throughout 2022 BNSF Took Considerable Actions to Increase Crew Supply but Faced Headwinds from Historically Tight Labor Markets....29

1. BNSF Took Considerable Action to Recruit and Hire Qualified Conductors....30

2. BNSF Increased Conductor Trainings to Get Conductors onto Trains More Quickly, Without Reducing the Quality or Length of Training....36

3. BNSF Offered Substantial Transfer Incentives to Increase Crew Supply in Shortage Areas 37
4. BNSF Offered Vacation Buy-Backs and Retirement Incentives 39
5. Labor Market Conditions and Other Constraints Limited BNSF's Ability to Address Crew Shortages During 2022 40
6. BNSF Took Action to Address Shortages in Lincoln and Alliance during 2021 and 2022 43

V. Evaluation of Evergy's Opening Evidence Related to Labor Market Issues 44

A. Evergy Has Not Established That Crew Shortages Were the Consequence of BNSF Decisions Before the Pandemic, During the Covid Recession, or Thereafter 44
B. Decreases in T&E Crew Between 2019 and 2022 Are Consistent with BNSF Taking Action to Increase Crew Supply While Facing Unprecedented Labor Market Conditions 50
C. BNSF Implemented Hi-Viz to Increase Crew Availability and Improve Transparency for Employees 51

VI. Conclusion 54

Verification 56

List of Exhibits 57

I. Introduction

1. I am Erin M. Johnson. I am an economist and Director at NERA, which is a global firm of experts dedicated to applying economic, finance, and quantitative principles to complex business and legal issues. I have a Ph.D. in economics, I have published peer reviewed research in labor economics, and I have provided economic consulting services in cases involving labor market issues across a broad set of industries. My credentials are summarized in my Curriculum Vitae, which is attached as **Exhibit 1** to this statement.

2. I have been asked by BNSF Railway Company ("BNSF") to describe the impact of the COVID-19 ("Covid") pandemic on labor markets in 2020 and to describe the state of labor markets after the Covid recession in 2021 and 2022. In my labor market analysis, I have been asked to consider (i) national labor markets, (ii) labor markets relevant to Train and Engine ("T&E") employees in the BNSF system, and (iii) labor markets relevant to T&E employees on the routes that served the Iatan Generating Station ("Iatan") and Lawrence Energy Center ("Lawrence") of Complainants Evergy, Inc., Evergy

Metro, Inc., and Evergy Kansas Central, Inc. (collectively, "Evergy").[1] I have also been asked by BNSF to assess the actions BNSF took leading up to and in the face of T&E crew shortages in 2022 in the context of the information BNSF had and the labor market conditions BNSF faced at the time. Finally, I have been asked by BNSF to evaluate arguments related to labor issues included in Evergy's opening evidence dated June 25, 2025 ("Evergy Opening Evidence").[2]

3. I understand that Evergy alleges in its complaint that BNSF failed to "adequately provide for the transportation of coal upon reasonable request" to Evergy's Iatan and Lawrence power generation facilities.[3] I further understand that the Evergy Complaint alleges that "any crew or power shortages that BNSF may have experienced in 2022 were the consequences of deliberate operational decisions made and policies adopted by BNSF," because "these issues did not arise with any frequency during the decades that BNSF transported coal to Iatan and Lawrence under contracts."[4]

II. Summary of Findings

4. Economists use the terms "tight" and "loose" to refer to the labor market situation. "Tight" labor markets are characterized by few people looking for work (low unemployment) and high levels of job openings.[5] "Loose" labor markets are characterized by many people looking for work (high unemployment) and low levels of job openings.[6] Hiring and retaining employees is more difficult in tight compared with loose labor markets, and tight labor markets are often characterized by labor shortages.[7]

[1] For the purposes of this report, I use the term "T&E employees" to refer to conductors, engineers, and brakemen.

[2] Evergy, Inc., Evergy Metro, Inc. and Evergy Kansas Central, Inc. v. BNSF Railway Company, Complainants' Opening Evidence, Docket No. NOR 42180, June 25, 2025 ("Evergy Opening Evidence").

[3] Evergy, Inc., Evergy Metro, Inc. and Evergy Kansas Central, Inc. v. BNSF Railway Company, Complaint and Petition for Declaratory Order, Docket No. NOR 42180, January 31, 2024 ("Evergy Complaint"), p. 2.

[4] Evergy Complaint, ¶ 22.

[5] "The labor market is inefficiently tight when there are more vacancies than jobseekers." *See*, Pascal Michaillat and Emmanuel Saez, "u* = √uv: The Full-Employment Rate of Unemployment in the United States," *Brookings Papers on Economic Activity*, (Fall 2024): 341, https://www.brookings.edu/wp-content/uploads/2024/09/17160-BPEA-BPEA-FA24_WEB_MichaillatSaez.pdf.

[6] "The labor market is inefficiently slack when there are more job seekers than vacancies." *See,* Michaillat and Saez, "u* = √uv," 341.

[7] "The unusually tight labor market has generated a wide range of challenges for employers attempting to hire workers." *See*, Claudia Macaluso and Sonya Ravindranath Waddell, "Changing Recruiting Practices and Methods in the Tight Labor Market," *Federal Reserve Bank of Richmond*, September 2022, https://www.richmondfed.org/publications/research/economic_brief/2022/eb_22-36.

5. First, I have concluded that national labor markets and the labor markets relevant to the BNSF system and the Evergy route were historically tight during 2021 and 2022. These conclusions are based on the following findings:

- The Covid pandemic caused high unemployment throughout the economy in early 2020, driven in large part by furloughs.
- In the aftermath of the Covid pandemic, labor demand bounced back quickly, but labor supply was slower to recover, leading to tight labor market conditions that were unprecedented in 2021. Then labor markets became even tighter in 2022.
- Employers in a wide array of industries, including in the transportation sector, faced labor shortages during 2021 and 2022. These included trucking, air travel, public transit, ports, mining, and public utilities.
- The labor markets relevant to the BNSF system and the Evergy route tracked the national experience, as did the experience of the broader rail transportation industry, with high unemployment during 2020 followed by extremely tight labor markets in 2021 that became even tighter in 2022.

6. Second, I have concluded that BNSF took actions to match crew supply to demand during the Covid pandemic and its aftermath, and that BNSF's actions and the labor market response were consistent with the national labor market experience and the experience of other Class I railroads.

- During the Covid recession from March through April 2020, BNSF furloughed employees. BNSF's furloughs were in line with demand for freight transportation and with the actions of employers in the broader economy, as well as the other Class I railroads.
- From June through December 2020, BNSF recalled furloughed workers in response to increasing demand. BNSF successfully increased crew levels to within {{ [redacted] }} of pre-Covid levels during this period, consistent with employers in the broader economy and the other Class I railroads.
- During 2021 BNSF continued to recall furloughed workers, but BNSF crew levels did not increase meaningfully during this period due to high employee attrition rates and low furlough recall success rates. This experience was consistent with stagnating labor force

participation rates in the broader economy and flat employment levels among the other Class Is at the time.

- By the fourth quarter of 2021, BNSF projected crew shortages and began actively recruiting, hiring, and training conductors. BNSF continued hiring throughout 2022 and offered valuable hiring and transfer incentives to increase crew levels. During this period BNSF continued to face high attrition rates, as did employers throughout the economy.

7. Third, I have concluded that Evergy's opening evidence does not demonstrate that the crew shortages BNSF experienced on the Evergy route in 2022 were due to actions on the part of BNSF. The limited evidence Evergy provides is entirely consistent with BNSF having taken reasonable actions in the face of labor market conditions that BNSF could not have reasonably anticipated.

- Evergy claims that BNSF could have reasonably anticipated its coal transportation needs in 2022, but BNSF could not have reasonably anticipated that it would have to meet those needs while competing for crew in the tightest labor market since World War II.

- The decreases in T&E employment levels from 2019 to 2022 that Messrs. Mulholland and Crowley document in their Verified Statement are entirely consistent with BNSF taking actions to match crew supply to demand in the face of extremely tight labor markets.

- Evergy claims that BNSF reduced crew headcount in the years before the pandemic and these changes were the cause of BNSF's crew shortages during 2022. Counterfactual analysis shows that BNSF's crew levels going into 2021 would have been adequate to meet demand during 2022 had labor market conditions been less extreme.

- Evergy claims that BNSF implemented policies that made its T&E jobs undesirable, but Evergy does not consider why BNSF implemented the policies it alludes to, nor does Evergy undertake any study of the desirability of BNSF jobs. BNSF T&E jobs provided lucrative compensation and benefits packages and opportunities for training, advancement, and seniority.

III. Labor Market Analysis

8. This section summarizes my analysis of (i) the impact of the Covid pandemic on labor markets in 2020 and (ii) labor market conditions in the aftermath of the pandemic in 2021 and 2022. To analyze labor market conditions, I reviewed academic literature and government reports on labor market conditions during the period. I also conducted my own analysis of labor market data nationally and in the geographic areas surrounding the BNSF system and the Evergy route.[8] In my own analysis, I use publicly available data from the U.S. Census Bureau ("Census") and the Bureau of Labor Statistics (BLS) to construct and analyze key indicators of the labor market situation, including rates of unemployment, unfilled job openings, labor force participation, and employee quits.

A. Studies Have Shown That Covid Caused High Unemployment During 2020 and Historically Tight Labor Markets in 2021 That Tightened Further in 2022

1. *Covid Caused High Unemployment Driven by Furloughs in 2020*

9. Covid began with an outbreak of coronavirus in China in December 2019 and was declared a pandemic in March of 2020.[9] Covid began to impact labor markets in late February 2020, and by April 2020 the substantial impact of Covid was evident in government statistics. According to economists, in the period from February to April, the U.S. employment rate fell by a stark 9 percentage points and the unemployment rate increased by over 10 percentage points.[10] Economists have found that nearly 80 percent of this large increase in unemployment was due to workers being furloughed during a time of unprecedented conditions, including social distancing policies, shutdown orders, school and childcare closures, health concerns, and economic uncertainty.[11] While Covid's pandemic status

[8] I use the term "Evergy route," to refer to the route(s) on the BNSF system taken by trains transporting (or returning from transporting) coal to Evergy's facilities in Iatan and Lawrence.

[9] "Archived: WHO Timeline - COVID-19," *World Health Organization*, April 27, 2020, https://www.who.int/news/item/27-04-2020-who-timeline---covid-19.

[10] "Between February and April 2020, the unemployment rate (not seasonally adjusted) spiked by 10.6 percentage points, reaching 14.4 percent, while the employment rate fell by over 9 percentage points." *See*, Alexander W. Bartik et al., "Measuring the Labor Market at the Onset of the COVID-19 Crisis," *Brookings Papers on Economic Activity* (Summer 2020): 243, https://www.brookings.edu/wp-content/uploads/2020/06/SU20_S4_Bartik-et-al_-final-paper-1.pdf.

[11] According to economists, in April 2020, nearly 80 percent of unemployed individuals were on furlough and expected to be recalled by their former employer. *See*, Jessica Gallant et al., "Temporary Unemployment and Labor Market Dynamics during the COVID-19 Recession," *Brookings Papers on Economic Activity* (Fall 2020): 184, https://www.brookings.edu/wp-content/uploads/2020/09/Gallant-paper.pdf. References to the "unprecedented conditions" are numerous, including health concerns and increased childcare responsibilities. *See*, e.g., Eliza Forsythe et al., "Searching, Recalls, and Tightness: An Interim Report on the COVID Labor Market," *National Bureau of Economic Research Working Paper Series* (December 2020): 4,

continued into 2023, economic activity began to recover in May of 2020.[12] The National Bureau of Economic Research determined that the COVID-19 recession began in March 2020 and ended in April 2020.[13]

2. Labor Demand Bounced Back Faster than Anticipated in 2020

10. Given the large initial impact of Covid on labor markets and the substantial economic uncertainty arising from the pandemic, economists did not generally anticipate that the demand for goods (and subsequently the demand for labor) would bounce back just months after the recession.[14] However, economists have found that by June 2020 nearly half of lost jobs and 80 percent of job openings were recovered.[15] During the second half of 2020, labor markets continued to improve, with unemployment rates dropping to 6.7 percent and job openings reaching pre-pandemic levels by the end of the year.[16]

11. The speed of the recovery in 2020 was unusual, with economists concluding that the labor market rebounded faster after Covid than "after any other major recession since World War II."[17] A 2024 paper by Michaillat and Saez puts the labor market recovery in historical context by examining

---

http://www.nber.org/papers/w28083. Other "unprecedented conditions" referenced in the literature include the social distancing policies and shutdown orders. *See*, e.g., Marianna Kudlyak and Erin Wolcott, "Pandemic layoffs and the role of stay-at-home orders," *Economics Letters* 242 (September 2024): 1, https://doi.org/10.1016/j.econlet.2024.111894.

[12] "End of the Federal COVID-19 Public Health Emergency (PHE) Declaration," *Centers for Disease Control and Prevention*, September 12, 2023, https://archive.cdc.gov/www_cdc_gov/coronavirus/2019-ncov/your-health/end-of-phe.html.

[13] The National Bureau of Economic Research (NBER) measures the duration of a recession as beginning in the month after a "peak" in the business cycle and ending in the month of a "trough" in the business cycle. February 2020 represents the peak and April 2020 represents the trough of the COVID-19 business cycle. *See*, "Business Cycle Dating Committee Announcement July 19, 2021," *National Bureau of Economic Research*, July 19, 2021, https://www.nber.org/news/business-cycle-dating-committee-announcement-july-19-2021.

[14] On the recovery of the demand for goods, Dr. Rouse, president of the Brookings Institution and former Chair of the Council of Economic Advisors, stated, "given that the pandemic restrictions were basically about face-to-face interactions, people swapped their services consumption for durables. A switch of this magnitude from services to goods had never happened before over such a short period of time." On the recovery of the demand for labor, Dr. Rouse further states that "the labor market recovery from the COVID pandemic was faster than after any other major recession since World War II." *See*, Cecilia E. Rouse, "Lessons for Economists from the Pandemic," *National Bureau of Economic Research: The Reporter*, no. 3 (2024): 1, 3, https://www.nber.org/sites/default/files/2024-10/2024number3.pdf.

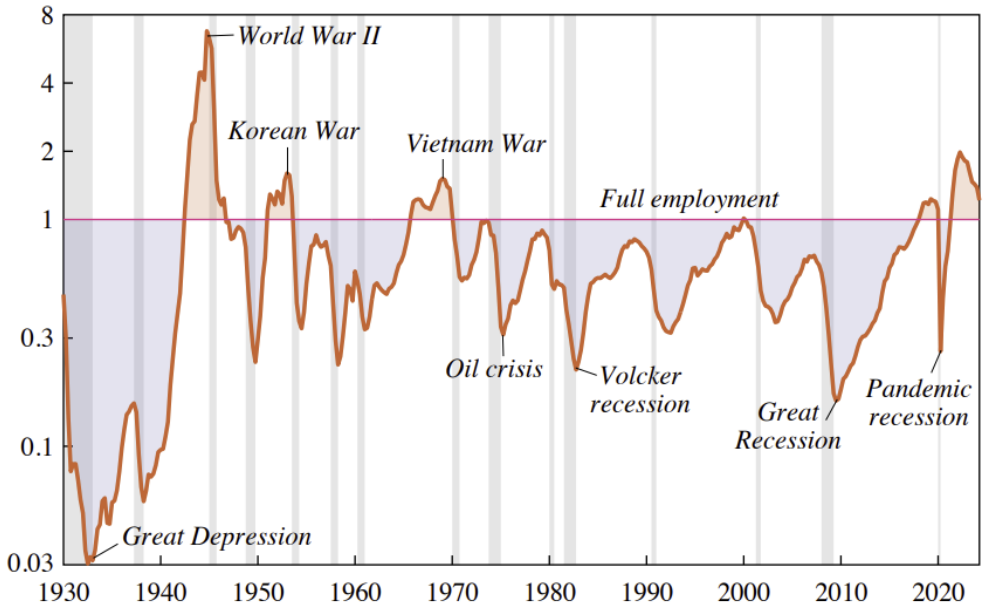
[15] "Surprisingly, by June, nearly half of the lost jobs had returned and job vacancies had recovered to 80% of their pre-pandemic levels." *See*, Forsythe et al., "Searching, Recalls, and Tightness," 2.

[16] "The unemployment rate increased in 2020, surging to 13.0 percent in the second quarter of the year before easing to 6.7 percent in the fourth quarter." *See*, "Unemployment rises in 2020, as the country battles the COVID-19 pandemic," *U.S. Bureau of Labor Statistics*, June 2021, https://www.bls.gov/opub/mlr/2021/article/unemployment-rises-in-2020-as-the-country-battles-the-covid-19-pandemic.htm. Total nonfarm job openings were at 6.773 million in December 2020 compared to 6.699 million in December 2019. *See*, U.S. Bureau of Labor Statistics, 2019–2020, "Job Openings: Total Nonfarm," Federal Reserve Bank of St. Louis, https://fred.stlouisfed.org/series/JTSJOL/.

[17] Rouse, "Lessons for Economists from the Pandemic," 3.

labor market tightness over time.[18] **Figure 1** is an exact reproduction of Figure 12 from Michaillat and Saez and displays the ratio of job vacancies to job seekers from 1930 to 2024.[19] When job vacancies outnumber job seekers, the ratio is greater than one, indicating a tight labor market (orange shaded areas), and ratios less than one indicate a loose labor market (purple shaded areas).[20] The figure shows that the ratio of job vacancies to job seekers exceeded one within mere months of the onset of the Covid recession, already indicating a tight labor market. By comparison, it took more than six years for labor markets to recover to a similar degree after the Great Recession, the last major recession prior to Covid.

Figure 1
National Labor Market Tightness



Notes: "Labor-market tightness is the ratio of job vacancies to jobseekers. The vertical gray areas are NBER-dated recessions. The labor market is at full employment when the unemployment rate equals the vacancy rate, inefficiently slack when the unemployment rate exceeds the vacancy rate, and inefficiently tight when the unemployment rate is below the vacancy rate. Equivalently, the labor market is at full employment when tightness equals 1, inefficiently slack when tightness is below 1, and inefficiently tight when tightness exceeds 1."[21]

Source: Michaillat and Saez, "$u^* = \sqrt{uv}$."

[18] Michaillat and Saez, "$u^* = \sqrt{uv}$," 323.

[19] Michaillat and Saez, "$u^* = \sqrt{uv}$," 361.

[20] Michaillat and Saez, "$u^* = \sqrt{uv}$," 342.

[21] Michaillat and Saez, "$u^* = \sqrt{uv}$," 347.

3. Covid Caused Tight Labor Market Conditions That Were Unprecedented in 2021, and Labor Markets Were Even Tighter in 2022

12. In the aftermath of Covid, labor market conditions reached unprecedented levels of tightness.[22] In 2021, the BLS reported that the unfilled job openings rate was at the highest level since the inception of the data series twenty years prior, showing that employers were facing difficulties hiring.[23] During the first quarter of 2022 job openings continued to climb, hitting a new record of 12.2 million job openings in March 2022.[24]

13. The tight labor market is evident in unemployment statistics as well. During 2021 unemployment rates continued to decline, reaching pre-pandemic levels by early 2022.[25] By the end of 2022 unemployment was historically low. The BLS reported that the fraction of persons unemployed during 2022 was at the lowest level since 1958, leading CNN to conclude, "2022 had the lowest total unemployment rate ever."[26] Michaillat and Saez similarly concluded, "[t]he state of the labor market around the pandemic is therefore a rarity: it is the only peacetime episode of an inefficiently tight labor

[22] "In the aftermath of the pandemic, the US labor market has become historically tight. In 2022:Q2, tightness reached 1.98, a value which it had last reached in 1945." *See*, Michaillat and Saez, "$u^* = \sqrt{uv}$," 360.

[23] In September 2021, the BLS reported that "[f]rom June to July 2021, the number of job openings was up 749,000 to 10.9 million, the highest level since we started tracking job openings in December 2000." *See*, "Job openings reach high of 10.9 million in July 2021," *U.S. Bureau of Labor Statistics*, September 14, 2021, https://www.bls.gov/opub/ted/2021/job-openings-reach-high-of-10-9-million-in-july-2021.htm.

[24] As of January 2024, the BLS reports "a [job openings] series high of 12.2 million in March 2022." *See*, U.S. Bureau of Labor Statistics, *Job Openings and Labor Turnover – January 2024*, (Washington, D.C.: U.S. Department of Labor, 2024), https://www.bls.gov/news.release/archives/jolts_03062024.pdf, p. 1.

[25] The BLS reports that "[t]he U.S. labor market continued to recover in 2021 from the recession caused by the coronavirus disease 2019 pandemic. Both the number of people who were unemployed and the unemployment rate decreased over the year … [however,] both measures are still above their prepandemic levels." *See*, Roxanna Edwards, Lawrence S. Essien, and Michael Daniel Levinstein, "U.S. labor market shows improvement in 2021, but the COVID-19 pandemic continues to weigh on the economy," *U.S. Bureau of Labor Statistics*, June 2022, https://doi.org/10.21916/mlr.2022.16. In 2022, "unemployment continued to decline early in the year," returning to its prepandemic level, "and then leveled off." *See*, Lawrence S. Essien, Michael Daniel Levinstein, and Greg Owens, "Unemployment rate returned to its prepandemic level in 2022," *U.S. Bureau of Labor Statistics*, June 2023, https://doi.org/10.21916/mlr.2023.15.

[26] "The 'work-experience unemployment rate'—defined as the number of persons unemployed at some time during the year as a proportion of the number of persons who worked or looked for work during the year—decreased by 1.9 percentage points to 7.6 percent in 2022. This is the lowest rate in this series, which began in 1958." *See*, U.S. Bureau of Labor Statistics, *Work Experience of the Population — 2022*, (Washington, D.C.: U.S. Department of Labor, 2023), https://www.bls.gov/news.release/archives/work_12192023.pdf, p. 1. *See also*, Samantha Delouya, "2022 had the lowest total unemployment rate ever," CNN, December 20, 2023, https://www.cnn.com/2023/12/20/economy/lowest-unemployment-rate-year-2022.

market in the United States."[27] They go on to state that in the second quarter of 2022, labor market tightness reached "a value which it had last reached in 1945."[28]

14. Economists have found that labor shortages arose in the aftermath of Covid as a result of abnormally low labor supply and unexpectedly high labor demand.[29] In other words, while labor demand bounced back and continued to grow, labor supply did not follow suit. Labor demand was unexpectedly high during this time due to the quick economic recovery and government programs like the CARES Act, which increased consumer demand for goods and services.[30] Labor supply was abnormally low during 2021 and 2022 due to a decrease in labor force participation rates relative to the historical trend, driven by health concerns, caregiving responsibilities, generous unemployment benefits, and other factors.[31]

15. In addition, during April 2021 a record four million people quit their jobs, part of what became known as "The Great Resignation."[32] The Great Resignation reflected changing views on work and work-life balance in the population, as well as an increase in the opportunities available for individuals to "trade up" to jobs offering better work-life balance, compensation, or the ability to work

---

[27] Michaillat and Saez, "u* = √uv," 359.

[28] Michaillat and Saez, "u* = √uv," 360.

[29] "Labor supply emerged as the main constraint to the recovery in spring 2021, when job vacancies soared well beyond their pre-pandemic level." *See*, Eliza Forsythe et al., "Where have all the workers gone? Recalls, retirements, and reallocation in the COVID recovery," *Labour Economics* 78 (2022): 2, https://doi.org/10.1016/j.labeco.2022.102251.

[30] "The U.S. pandemic experience is different because robust U.S. financial aid improved the financial situation of almost all Americans. The last several years of growth are largely explained by consumers with lower debts and more savings being willing to spend. That robust spending created demand for goods and services, encouraging employers to hire and produce." *See*, Scott Fulford, "The post-pandemic economy," *Princeton University Press*, May 22, 2024, https://press.princeton.edu/ideas/the-post-pandemic-economy.

[31] "The labor force participation rate, however, did not recover as fast [as the unemployment rate]. This low participation rate during COVID-19 has been attributed to several factors, such as dependent care demands, increased unemployment benefits, or people afraid of getting sick from the COVID virus." *See*, Richard Hernandez, "What is driving the labor force participation rate lower?" *U.S. Bureau of Labor Statistics*, September 2022, https://www.bls.gov/opub/mlr/2022/beyond-bls/what-is-driving-the-labor-force-participation-rate-lower.htm. By the end of 2022, the labor force participation rate was 62.2 percent, staying under prepandemic levels over the year. *See*, Essien, Levinstein, and Owens, "Unemployment rate returned to its prepandemic level in 2022." *See also*, U.S. Bureau of Labor Statistics, "Labor Force Participation Rate," Federal Reserve Bank of St. Louis, https://fred.stlouisfed.org/series/CIVPART. In addition to labor force participation, the desired number of working hours decreased during this period, as well. *See*, R. Jason Faberman, Andreas I. Mueller, and Ayşegül Şahin, "Has the Willingness to Work Fallen during the Covid Pandemic?" *Labour Economics* 79 (2022): 7–9, https://doi.org/10.1016/j.labeco.2022.102275.

[32] *See*, U.S. Bureau of Labor Statistics, *Job Openings and Labor Turnover – April 2021*, (Washington, D.C.: U.S. Department of Labor, 2021), https://www.bls.gov/news.release/archives/jolts_06082021.pdf, p. 2. The phrase "The Great Resignation" was coined by management professor Anthony Klotz. *See also*, Ann Kellett, "The Texas A&M Professor Who Predicted 'The Great Resignation'," *Texas A&M University*, February 11, 2022, https://stories.tamu.edu/news/2022/02/11/the-texas-am-professor-who-predicted-the-great-resignation/.

from home.[33] Evidence has shown that jobs with, for example, inflexible schedules, in-person work requirements, and vaccination requirements were more heavily impacted by changing attitudes to work during this time.[34] In addition, quits rates were highest amongst workers without a college degree who decreased their desired work hours during this time and disproportionately moved to higher-paying jobs.[35]

16. To summarize, the literature concludes that Covid sharply reduced employment during the pandemic recession. This was followed by a period during which labor demand bounced back with unusual speed. As demand bounced back and exceeded pre-pandemic levels, Covid continued to impact labor supply decisions, resulting in a labor market situation that economists describe as unprecedented.

B. My Own Analysis Shows That Covid Caused High Unemployment During 2020 and Historically Tight Labor Markets in 2021 That Tightened Further in 2022

17. My own analysis of labor market conditions, based on data from the BLS, leads to the same conclusions as the literature summarized above. I have looked at three key indicators of labor

[33] One Forbes article went so far as to say that "workplace flexibility is the new money in today's post vaccine economy." *See*, Lisa Curtis, "Why The Big Quit Is Happening And Why Every Boss Should Embrace It," *Forbes*, July 1, 2021, https://www.forbes.com/sites/lisacurtis/2021/06/30/why-the-big-quit-is-happening-and-why-every-boss-should-embrace-it/. Moreover, economists have found that "young non-college workers … disproportionately moved from lower-paying to higher-paying and potentially more-productive jobs" post-pandemic. *See*, e.g., David Autor, Arindrajit Dube, and Annie McGrew, "The Unexpected Compression: Competition at Work in the Low Wage Labor Market," *National Bureau of Economic Research Working Paper Series* (May 2024): 3, https://www.nber.org/papers/w31010.

[34] *See*, e.g., Ryan Michaels, *What Explains the Great Resignation*, (Philadelphia: Federal Reserve Bank of Philadelphia, 2024), https://www.philadelphiafed.org/-/media/frbp/assets/economy/articles/economic-insights/2024/q2/eiq224-what-explains-the-great-resignation.pdf, p. 15 ("Using industry-level data from JOLTS, recent research has indeed found that industries with lower rates of telework experienced higher quit rates in 2021-2022."); Stephanie Ferguson Melhorn and Makinizi Hoover, "Understanding America's Labor Shortage: The Most Impacted Industries," *U.S. Chamber of Commerce,* November 21, 2023, https://www.uschamber.com/workforce/understanding-americas-labor-shortage-the-most-impacted-industries ("Now with many jobs offering flexibility and the opportunity to work remotely, industries that require in-person attendance have an extra challenge in recruiting and retailing workers."). Pushback against vaccine requirements by workers specifically in the rail industry is also well documented. *See*, e.g., Bill Stephens, "Norfolk Southern warns that COVID-19 vaccine mandate poses risks to service (updated)," *Trains*, October 27, 2021, https://www.trains.com/trn/news-reviews/news-wire/norfolk-southern-warns-that-covid-19-vaccine-mandate-poses-risks-to-service/; Josh Funk, "Railroads fight with unions in court over vaccine mandates," *AP News*, November 8, 2021, https://apnews.com/article/coronavirus-pandemic-joe-biden-business-health-lawsuits-f812e239a69591972213d78748cc6add; David Shepardson, "U.S. passenger railroad Amtrak suspends vaccine mandate for employees," *Reuters*, December 14, 2021, https://www.reuters.com/world/us/us-passenger-railroad-amtrak-suspends-vaccine-mandate-employees-2021-12-14/.

[35] Current Population Survey data reveal that in 2021 "the increase in the quits rate is largely due to younger and less-educated workers." Bart Hobijn, "'Great Resignations' Are Common During Fast Recoveries," *Federal Reserve Bank of San Francisco*, April 4, 2022, https://www.frbsf.org/research-and-insights/publications/economic-letter/2022/04/great-resignations-are-common-during-fast-recoveries/. *See also*, Faberman, Mueller, and Şahin, "Has the Willingness to Work Fallen during the Covid Pandemic," 2 ("Instead, we find the drop in desired hours is pervasive across most demographic groups, with those with less than a college degree having a notably larger contribution."); Autor, Dube, and McGrew, "The Unexpected Compression," p. 3 ("…[R]apid labor market tightening accompanying the pandemic attenuated employer market power, thus spurring rapid wage growth among young non-college workers, who disproportionately moved from lower-paying to higher-paying…jobs.").

market conditions: the unemployment rate, the unfilled job openings rate, and the labor force participation rate. The unemployment rate is the fraction of the labor force that is unemployed and actively searching for work, and it is an indicator of the difficulty of finding a job.[36] The unfilled job openings rate is the fraction of jobs employers report they have yet to fill, and it is an indicator of employers' difficulty in hiring.[37] The labor force participation rate is the fraction of the working-age population that is employed or looking for work, and it reflects the availability of labor.[38]

18. I constructed unemployment rates and labor force participation rates using data from the Current Population Survey (CPS), which is the dataset the BLS uses for its monthly employment statistics.[39] I constructed job openings rates based on data from the Job Openings and Labor Force Turnover Survey (JOLTS), which form the basis of the BLS's monthly job openings estimates.[40]

19. **Exhibit 2** displays the unemployment rate from January 2012 through December 2022. **Exhibit 3** displays the unfilled job openings rate from January 2001 through December 2022. **Exhibit 4** displays the labor force participation rate from January 2012 through December 2022. Because T&E employees are not required to have a college degree and because train crew tend to be more male than female, I display the unemployment and labor force participation rates for individuals with less than a

[36] For the Current Population Survey's official definition of the unemployment rate, *see*, "Concepts and Definitions (CPS)," *U.S. Bureau of Labor Statistics*, September 15, 2025, https://www.bls.gov/cps/definitions.htm#unemployed. If fewer job seekers find jobs, then, all else equal, the unemployment rate will increase. *See*, Simon Mongey and Jeff Horwich, "Fewer openings, harder to get hired: U.S. labor market likely softer than it appears," *Federal Reserve Bank of Minneapolis*, September 5, 2024, https://www.minneapolisfed.org/article/2024/fewer-openings-harder-to-get-hired-us-labor-market-likely-softer-than-it-appears.

[37] Indeed, "[h]igh levels of job openings can indicate unmet demand for workers." *See*, "Measuring Job Openings in the U.S. Labor Market," *Congress.gov*, February 28, 2024, https://www.congress.gov/crs-product/IF11054.

[38] "The Labor Force Participation Rate," *Congress.gov*, March 19, 2024, https://www.congress.gov/crs_external_products/IF/HTML/IF12615.web.html.

[39] The unemployment rate is the ratio of the number of unemployed persons who are actively looking for work divided by the number of persons in the labor force, which consists of employed persons and persons actively looking for work. *See*, BLS, "Concepts and Definitions (CPS)." The labor force participation rate is the ratio of employed persons and persons actively looking for work divided by the number of working-age persons. *See*, BLS, "Concepts and Definitions (CPS)." The CPS is a monthly survey of U.S. households conducted by the U.S. Census Bureau, and it forms the basis for the BLS's monthly unemployment rate series. *See*, "How the Government Measures Unemployment," *U.S. Bureau of Labor Statistics*, October 8, 2015, https://www.bls.gov/cps/cps_htgm.htm#why.

[40] The JOLTS is a survey of "approximately 21,000 U.S. business establishments" that is "collected by the Bureau of Labor Statistics through JOLTS Data Collection Centers in Atlanta and Kansas City." The BLS notes that the "JOLTS survey covers all nonagricultural industries in the public and private sectors for the 50 States and the District of Columbia." The BLS notes that "[t]hese data serve as demand-side indicators of labor shortages." *See*, "Job Openings and Labor Turnover Survey Overview Page," *U.S. Bureau of Labor Statistics*, May 6, 2024, https://www.bls.gov/jlt/jltover.htm.

college degree and for men with less than a college degree, as well as for all individuals.[41] For unfilled job openings, demographic information is not available, so I display results for all individuals and for individuals in the transportation, warehousing, and utilities sector, which is the sector of the economy that includes the rail transportation industry.[42] The results of my analysis are summarized below.

20. As with my review of the literature, my own analysis leads me to conclude that Covid caused large reductions in employment that were largely driven by furloughs in the early days of the pandemic.

- **Exhibit 2** shows that, for all groups, the unemployment rate spiked in April 2020, with the unemployment rate for males with less than a college degree increasing to nearly 17 percent in April 2020. In addition, my own calculations confirm that a large fraction of the newly unemployed during April 2020 were furloughed employees who expected to be recalled to their former positions.[43]

- **Exhibit 3** shows that the rate of unfilled job openings declined during the early pandemic, reflecting a decrease in hiring during this period.[44]

- **Exhibit 4** shows that labor force participation decreased during the early pandemic. For males with less than a college degree, labor force participation dropped by nearly 4 percentage points between January and April 2020.[45]

[41] In 2022-2023, 13.2 percent of railroad conductors and yardmasters had a college degree. For the rail transportation industry in 2021, 7.6 percent were women. *See*, U.S. Bureau of Labor Statistics, 2024, "Table 5.3 Educational attainment for workers 25 years and older by detailed occupation, 2022–23 (Percent)," U.S. Department of Labor, https://www.bls.gov/emp/ind-occ-matrix/education.xlsx; "Women in the Labor Force: A Databook," *U.S. Bureau of Labor Statistics*, April 2023, https://www.bls.gov/opub/reports/womens-databook/2022/, Table 14.

[42] The utilities, transportation, and warehousing sectors are defined according to North American Industry Classification System (NAICS) sectors 22, 48, and 49. *See*, "North American Industry Classification System," *U.S. Bureau of Labor Statistics*, October 2, 2025, https://www.census.gov/naics/. Note that JOLTS data are not available for these sectors individually or for finer industries within the 2-digit NAICS sectors.

[43] Based on my own analysis of the April 2020 CPS, 88.6 percent of newly unemployed individuals reported that they expected to be recalled to their previous position. *See*, "Current Population Survey (CPS)," *U.S. Bureau of Labor Statistics*, accessed June 4, 2025, https://www.census.gov/programs-surveys/cps.html.

[44] There was a sharp decrease in unfilled job openings for "All Industries" in April 2020. Unfilled job openings in the transportation, warehousing, and utilities sector were noisier and declined during the pandemic recession but do not show the same sharp decrease in April.

[45] Labor force participation was 67.8 percent in January 2020 and 63.9 percent in April 2020. A decrease from 67.8 percent to 63.9 percent represents a 3.9 percentage point decrease. *See*, **Exhibit 4**.

21. Also consistent with the literature, my analysis of labor market conditions during the remainder of 2020 shows that labor markets recovered quickly.

- **Exhibit 2** shows that the unemployment rate for males with less than a college degree decreased from nearly 17 percent in April 2020 to 10 percent by August 2020 and was only 3.5 percentage points above pre-pandemic levels by December 2020.[46]

- **Exhibit 3** shows that the overall unfilled job openings rate recovered to pre-pandemic levels by July of 2020.[47]

- **Exhibit 4** shows that labor force participation improved but remained below pre-pandemic levels during 2020. Labor force participation rates for males with less than a college degree increased from their low of 63.9 percent in April 2020 to 65.4 percent by the end of the year but remained 2.4 percentage points below pre-pandemic levels in December 2020.[48]

22. Finally, my analysis of labor market conditions confirms that labor markets were historically tight during 2021 and even tighter during 2022.

- **Exhibit 2** shows that the unemployment rate recovered to pre-pandemic levels by the first quarter of 2022 and then proceeded to drop further. During 2022, the average monthly unemployment rate was a low 3.65 percent for all individuals and 4.45 percent for males with less than a college degree. These rates are below the "healthy" level, indicating a very tight labor market in which few people were looking for work.[49]

- **Exhibit 3** shows that, during 2021 and 2022, the rate of unfilled job openings attained historic highs, with an average rate of 6.6 percent for all individuals and 7.0 percent for individuals in the transportation, warehousing, and utilities sector, as compared with a rate of

[46] The unemployment rate for males with less than a college degree was 4.9 percent in February 2020 and 8.4 percent in December 2020. An increase from 4.9 percent to 8.4 percent represents a 3.5 percentage point increase. *See*, **Exhibit 2**.

[47] The unfilled job openings rate was 4.4 percent in February 2020 and 4.5 percent in July 2020.

[48] The labor force participation rate for males with less than a college degree was 67.8 percent in February 2020 and 65.4 percent in December 2020. A decrease from 67.8 percent to 65.4 percent represents a 2.4 percentage point decrease. *See*, **Exhibit 4**.

[49] Labor economists currently consider an unemployment rate around 5 percent to be "healthy" or "natural." *See*, e.g., Scott A. Wolla, "Making Sense of Unemployment Data," *Federal Reserve Bank of St. Louis*, February 1, 2016, https://www.stlouisfed.org/publications/page-one-economics/2016/02/01/making-sense-of-unemployment-data. For a time-varying series of the natural unemployment rate, *see*, U.S. Congressional Budget Office, "Noncyclical Rate of Unemployment," *Federal Reserve Bank of St. Louis*, https://fred.stlouisfed.org/series/NROU.

3.2 percent in the sector in the ten years leading up to 2020.[50] These historical highs indicate a tight labor market in which employers were struggling to hire.

- **Exhibit 4** shows that labor force participation rates did not recover to pre-pandemic levels during 2021 or 2022. For males with less than a college degree, the rate was 2.2 percentage points below pre-pandemic levels at the end of 2022.[51] This is consistent with a faster recovery of labor demand compared with labor supply during this period.[52]

23. I have also constructed and examined the quits rate (that is, the ratio of voluntary job separations to the number of jobs) using JOLTS data. **Exhibit 5** displays the quits rate for all industries and for the transportation, warehousing, and utilities sector. It shows that the quits rate reached series highs during 2021 and 2022 overall and for the sector. Thus, my analysis also confirms that employee quits were high during the period known as the Great Resignation.[53]

24. It is not only economists who recognized the unusual nature of the labor market during 2022. In an interview posted to YouTube in March of 2022, Evergy's Assistant General Counsel, Kara Larson, noted that "one of the things that's really a hot topic right now … really with every employer … is what they're calling the Great Resignation. … [T]here is a kind of cultural reckoning around what people expect out of work … so, people are leaving jobs that they don't enjoy even if they're well paid … and people are really expecting employers to offer them benefits around their personal lives, giving them more flexibility."[54]

[50] I calculate the average unfilled job openings rate during the prior ten years from January 2010 to December 2019.

[51] The labor force participation rate for males with less than a college degree was 67.8 percent in February 2020 and 65.6 percent in December 2022. A decrease from 67.8 percent to 65.6 percent represents a 2.2 percentage point decrease. *See*, **Exhibit 4**.

[52] "To date, in the aggregate, the recovery has been fairly robust, but there are nonetheless frictions in the economy that indicate it has not fully returned to normal yet. … [T]he key economic policy challenges going forward relate to … a low labor force participation rate." *See*, Marc Labonte and Lida R. Weinstock, "U.S. Economic Recovery in the Wake of COVID19: Successes and Challenges," *Congress.gov*, May 31, 2022, https://www.congress.gov/crs-product/R47115.

[53] "More than 40% of all employees were thinking about leaving their jobs at the beginning of 2021, and as the year went on, workers quit in unprecedented numbers." *See*, Donald Sull, Charles Sull, and Ben Zweig, "Toxic Culture Is Driving the Great Resignation," *MIT Sloan Management Review*, January 11, 2022, https://sloanreview.mit.edu/article/toxic-culture-is-driving-the-great-resignation/.

[54] Kara Larson, "Kara Larson Alumni Spotlight | Associate General Counsel, Evergy," *Husch Blackwell*, March 21, 2022, video, 1:08, https://www.youtube.com/watch?v=L4YsDXhCerU.

C. The Experience of BNSF System and Evergy Route Labor Markets Tracked the National Experience

25. BNSF stations are in approximately half of the states in the U.S., and Evergy trains were operated by T&E crew out of six main personnel areas. In this section I evaluate labor market conditions in BNSF system states and in the labor markets surrounding Evergy route personnel areas. I show that the experience of BNSF system and Evergy route labor markets tracked the national experience. Covid caused BNSF system states and Evergy route labor markets to experience increased unemployment and decreased job openings in March and April 2020, but tight labor markets ensued during 2021, and labor markets tightened further in 2022.

26. During 2022 BNSF operated in 28 states in the U.S.[55] Evergy trains were primarily operated by T&E employees from six stations in five states.[56] The six stations are named for their cities: (1) Alliance, Nebraska; (2) Edgemont, South Dakota; (3) Gillette, Wyoming; (4) Kansas City, Kansas; (5) Kansas City, Missouri; and (6) Lincoln, Nebraska.[57]

27. To evaluate labor market conditions on the Evergy route, I focus on the five Evergy route states and, when data permit, I also evaluate conditions in narrower geographic areas that reflect the labor markets surrounding the six main Evergy route stations.[58] I define these narrower geographic areas using the home zip codes of T&E employees who worked on Evergy trains out of one of the six Evergy route

[55] *See*, "BNSF Railway Fact Sheet," *BNSF* (via Wayback Machine), August 2022, https://web.archive.org/web/20221116093640/https:/www.bnsf.com/bnsf-resources/pdf/about-bnsf/fact_sheet.pdf. To evaluate labor market conditions on the BNSF system, I focus on the 23 states in which BNSF had train crew in 2022: {{ [redacted] }} *See*, BNSF_EVERGY_0023105; BNSF_EVERGY_0025775.

[56] I define Evergy trains based on their symbol. I include all train symbols that start with "C" (indicating "coal") and end with "SAI" or "LRT" (indicating that "Iatan" or "Lawrence", respectively, is the destination). I additionally include all train symbols that start with "E" (indicating "empty"), followed by "SAI" or "LRT" (indicating that "Iatan" or "Lawrence", respectively, is the origin). *See*, BNSF-X-EVERGY-0000035. I define T&E employees as conductors, engineers, and brakemen. In BNSF's payroll data, this corresponds to the following job titles: Conductor (SMART-TD), Conductor (UTU), Engineer (BLET), LAJ Engineer (SMART-TD), LAJ Engineer (UTU), Brakeman (SMART-TD), and Brakeman (UTU). The five states are as follows: Kansas, Missouri, Nebraska, South Dakota, and Wyoming. *See*, BNSF-X-EVERGY-0000035.

[57] The Evergy Opening Evidence includes additional personnel areas on the Evergy route: Overland Park, KS; St Joseph, MO; Broken Bow, NE; Crawford, NE; Grand Island, NE; Mullen, NE; Ravenna, NE; York, NE; Guernsey, WY; and Newcastle, WY. *See*, Evergy Opening Evidence, Exhibit No. 15. These additional personnel areas, however, have a trivial number of T&E employees on Evergy trains (less than {{ [redacted] }} percent of total T&E employees on Evergy trains in each year from 2017 to 2022) and so I omit them from my analysis. *See*, BNSF-X-EVERGY-0000035.

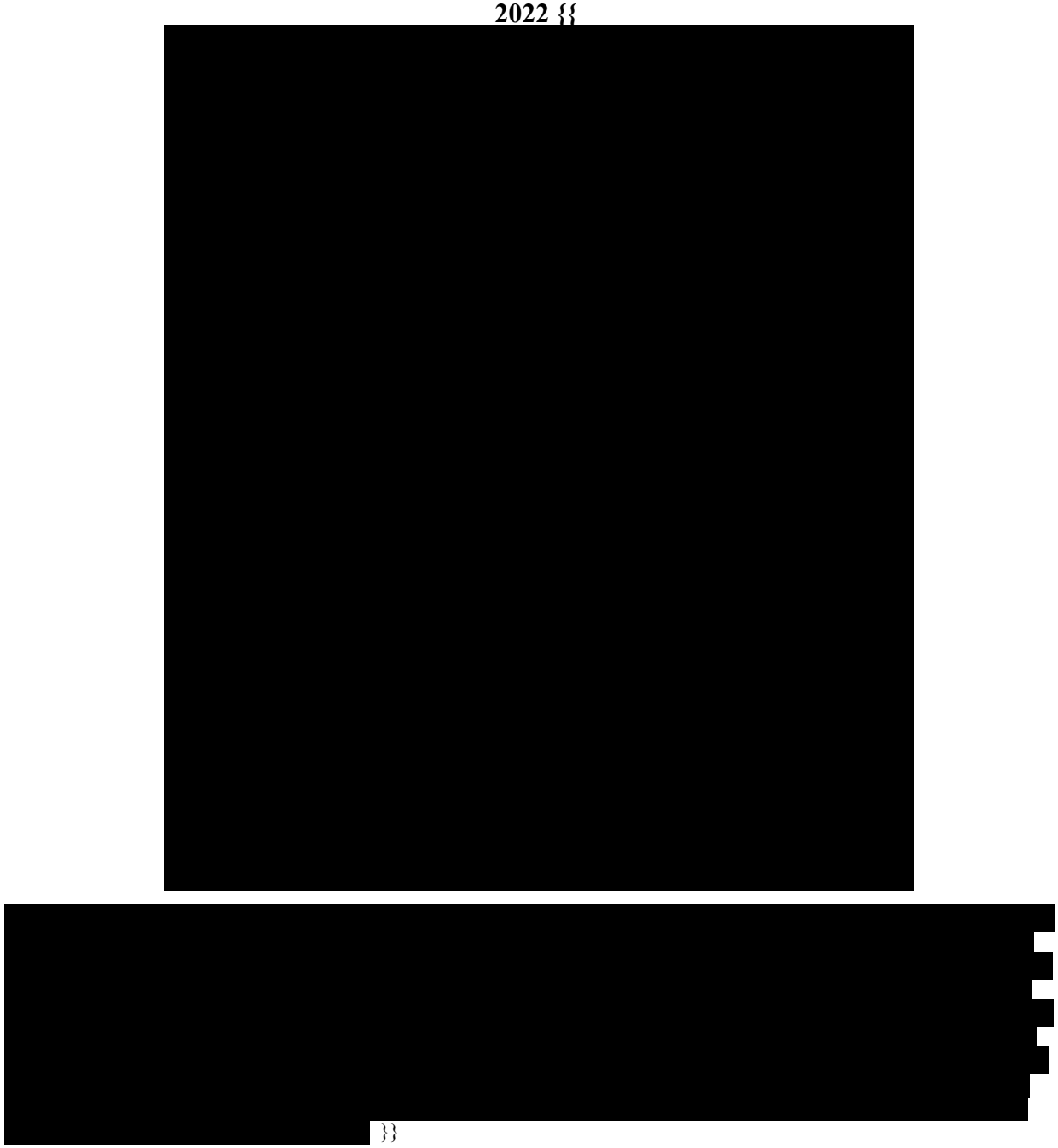
[58] While some of the data I employ are available only at the state level, some is available for narrower geographic areas.

stations.[59] Specifically, I include in each local labor market the U.S. Census Bureau geographic areas that contain the most common T&E employee zip codes for that station, capturing as near to 75 percent of regular pay T&E employees operating Evergy trains from that station in a given year as possible (the "75 percent labor market draw areas").[60] **Figure 2** displays the 75 percent labor market draw areas for 2022 on the Evergy route. I construct five, rather than six, distinct draw areas given the proximity of the Kansas City, Kansas and Kansas City, Missouri stations.

[59] I limit my analysis of employee zip codes to Evergy route states and neighboring states in order to focus on the relevant local labor market for each station. For 2022, this restriction excludes the following percentages of employees from each Evergy route station: {{ [redacted] }} *See*, BNSF-X-EVERGY-0000035; BNSF_EVERGY_0025771; "HUD USPS Zip Code Crosswalk Files," *Office of Policy Development and Research*, accessed August 29, 2025, https://www.huduser.gov/portal/datasets/usps_crosswalk.html.

[60] An employee's home zip code and station are determined based on their most frequently stated home zip code and station in a given year. *See*, BNSF-X-EVERGY-0000035; BNSF_EVERGY_0025771. When I capture "as near to 75 percent of regular pay T&E employees operating Evergy trains from that station in a given year as possible," I include the most common zip codes that minimize the difference between 75 percent and the actual share of T&E employees operating Evergy trains from the given station in the given year. In practice, each station's 75 percent draw area in 2022 is as follows: {{ [redacted] }} *See*, BNSF-X-EVERGY-0000035; BNSF_EVERGY_0025771; *Office of Policy Development and Research*, "HUD USPS Zip Code Crosswalk Files," accessed August 29, 2025, https://www.huduser.gov/portal/datasets/usps_crosswalk.html. In the case of a tie, I am overinclusive. Once I identify the 75 percent draw area zip codes, I map them to their corresponding U.S. Census Bureau geographic area. The U.S. Census Bureau geographic area that I use is the Public Use Microdata Area (PUMA). PUMAs are "non-overlapping, statistical geographic areas that partition each state or equivalent entity into geographic areas containing no fewer than 100,000 people each." *See*, "Public Use Microdata Areas (PUMAs)," *United States Census Bureau*, last modified September 7, 2023, https://www.census.gov/programs-surveys/geography/guidance/geo-areas/pumas.html. Two zip codes (82717 and 64190) are present in the data, but not in the zip code-to-PUMA crosswalk that I employ. *See*, "Relationship Files," *United States Census Bureau*, last modified November 21, 2024, https://www.census.gov/geographies/reference-files/time-series/geo/relationship-files.2020.html#puma. In those two cases, I manually find the corresponding PUMA. As zip code regions do not map one-to-one with PUMAs, I assign employment to PUMAs based on the share of the corresponding zip codes' land contained within the PUMA.

Figure 2
Evergy Route Employee Draw Areas
2022 {{



}}

Sources: BNSF-X-EVERGY-0000035; BNSF_EVERGY_0025771.

28. I have constructed unemployment rates for BNSF system states, Evergy route states, and Evergy route labor market draw areas. While state-level analyses are based on the CPS, analyses of Evergy route draw areas are based on data from the American Community Survey (ACS), the largest

annual household survey conducted by the U.S. Census Bureau. Because the ACS is a large survey, it can be used to evaluate labor markets for smaller geographic areas.[61] **Exhibit 6** displays national, BNSF system, and Evergy route state unemployment rates from 2017 to 2022. **Exhibit 7** displays national, BNSF system, and Evergy route state labor force participation rates for the same period. **Exhibit 8** displays unemployment rates based on ACS data for Evergy route 75 percent draw areas. **Exhibit 9** and **Exhibit 10** display job openings rates and quits rates nationally, for BNSF system states, and for Evergy route states.[62] The results of my analysis are summarized below:

- **Exhibit 6** shows that unemployment rates in BNSF system and Evergy route states followed a similar trend to national rates from 2020 through 2022. The figure also shows that unemployment rates in Evergy route states were lower than in BNSF system states and in the United States, suggesting Evergy route labor markets may have been tighter than national markets.

- **Exhibit 7** shows that labor force participation decreased during the early pandemic for all series and did not recover to pre-pandemic levels during 2021 or 2022. As in national markets, labor supply increased during 2020 but did not fully recover in BNSF and Evergy route labor markets during 2021 or 2022.

- **Exhibit 8** shows that unemployment rates were low in the Evergy route labor market draw areas in 2022, as in the Evergy route states.

- **Exhibit 9** shows that the unfilled job openings rate for the BNSF system and Evergy route closely track the national experience and were historically high during 2021 and 2022.

- **Exhibit 10** shows that the quits rate for BNSF system and Evergy route states closely track the national experience and were elevated during 2021 and 2022.

[61] "Fact Sheet: Differences Between the American Community Survey (ACS) and the Annual Social and Economic Supplement to the Current Population Survey (CPS ASEC)," *United States Census Bureau,* last modified June 23, 2023, https://www.census.gov/topics/income-poverty/guidance/data-sources/acs-vs-cps.html.

[62] I do not display job openings rates and quits rates for Evergy route draw areas as these data come from the JOLTS, which is not available at a geographical level finer than the state. *See,* "Job Openings and Labor Turnover Survey Overview Page," *United States Bureau of Labor Statistics*, last modified May 6, 2024, https://www.bls.gov/jlt/jltover.htm.

D. Employers in the Transportation Sector and Related Industries Faced Labor Shortages During 2021 and 2022

29. Industry and government studies have noted that there were labor shortages in a wide array of industries during 2021 and 2022, including transportation sector industries, ports, the mining industry, and public utilities. For example:

- A March 2022 article from the American Trucking Association notes that "trucking is an extremely tight labor market" and that "[d]rivers are in high demand…a fact exacerbated by COVID."[63] The Biden Administration acknowledged these "supply chain bottlenecks as the economy rapidly reopened" and instituted the Biden-Harris Trucking Action Plan in December of 2021.[64] This initiative was aimed at increasing the supply of truckers through such actions as veteran outreach, a pilot program that allowed 18 to 21-year-olds to drive trucks, and reduced barriers to receiving trucking licenses.[65]

- A March 2022 survey from the American Public Transportation Association found that 92 percent of public transit agencies reported difficulty hiring, 66 percent reported difficulty retaining employees, and 71 percent had reduced service due to worker shortages.[66]

- Oliver Wyman published a study in March 2021 forecasting pilot staffing shortages well beyond the summer."[67] In April 2022 NBC News reported on summer air travel, with JetBlue citing staffing shortages in regards to the trimming of its summer flight schedule and analysts expecting staffing issues to contribute to higher airfare throughout the summer.[68]

---

[63] "The Truth About Trucking Turnover," *American Trucking Associations*, March 25, 2022, https://www.trucking.org/news-insights/truth-about-trucking-turnover.

[64] "FACT SHEET: The Biden-Harris Administration Trucking Action Plan to Strengthen America's Trucking Workforce," *The White House*, December 16, 2021, https://bidenwhitehouse.archives.gov/briefing-room/statements-releases/2021/12/16/fact-sheet-the-biden-%E2%81%A0harris-administration-trucking-action-plan-to-strengthen-americas-trucking-workforce/.

[65] *The White House,* "FACT SHEET: The Biden-Harris Administration Trucking Action Plan to Strengthen America's Trucking Workforce."

[66] Matthew Dickens, "Workforce Shortages Impacting Public Transportation Recovery," *The American Public Transportation Administration*, March 2022, https://www.apta.com/wp-content/uploads/APTA-SURVEY-BRIEF-Workforce-Shortages-March-2022.pdf.

[67] Geoff Murray and Jeffrey Green, "After COVID-19, Aviation Faces a Pilot Shortage," *Oliver Wyman*, March 2021, https://www.oliverwyman.com/our-expertise/insights/2021/mar/after-covid-19-aviation-faces-a-pilot-shortage.html.

[68] Nigel Chiwaya, "Airline Industry Jobs Are Still Below Pre-Covid Levels," *NBC News*, April 22, 2022, https://www.nbcnews.com/data-graphics/airline-industry-jobs-are-still-pre-covid-levels-rcna25350.

- In 2021, The United States International Trade Commission reported that "[h]igh COVID-19 infection rates among port workers negatively impacted port operations, … [u]pdated health policies and working conditions also may have decreased port productivity," and that "labor shortages impacted global supply chains."[69]

- A McKinsey study from February 2023 stated that "71 percent of mining leaders are finding the talent shortage is holding them back from delivering on production targets" and "86 percent of mining executives tell us it is harder to recruit and retain the talent they need versus two years ago."[70]

- The Center for Energy Workforce Development reported retention issues in the public utilities sector in a 2023 publication, noting that "both non-retirement attrition and total attrition have increased significantly the last two years and in 2022 hit their highest levels."[71]

E. The Experience of the Rail Transportation Industry Tracked the National Experience

30. In government statistics, the rail transportation industry includes employees of any occupation working for any freight or passenger railroad.[72] I am not aware of any academic or industry studies pertaining to the labor market situation in the rail transportation industry, but I have conducted my own analysis of labor market indicators for this industry. While job openings are not available for the rail transportation industry, data are available for calculating employment levels and unemployment rates.[73]

[69] "The Impact of the COVID-19 Pandemic on Freight Transportation Services and U.S. Merchandise Imports," *United States International Trade Commission*, 2021, https://www.usitc.gov/research_and_analysis/tradeshifts/2020/special_topic.html.

[70] Timur Abenov et al., "Has Mining Lost Its Luster? Why Talent Is Moving Elsewhere and How to Bring Them Back," *McKinsey & Company*, February 14, 2023, https://www.mckinsey.com/industries/metals-and-mining/our-insights/has-mining-lost-its-luster-why-talent-is-moving-elsewhere-and-how-to-bring-them-back.

[71] "2023 Energy Workforce Survey Results: Executive Summary," *Center for Energy Workforce Development*, December 2023, https://cewd.org/wp-content/uploads/2023/01/CEWD-2023-Workforce-Report-Executive-Summary_2023-FINAL-1.pdf, p. 7.

[72] "Industries at a Glance: Rail Transportation: NAICS 482," *U.S. Bureau of Labor Statistics,* accessed August 16, 2025, https://www.bls.gov/iag/tgs/iag482.htm.

[73] *See*, fns. 74–75.

Employment levels are from the Current Employment Statistics based on the Quarterly Census of Employment and Wages (QCEW).[74] Unemployment rates are from the CPS.[75]

31. The results of my analysis are summarized below:

- **Exhibit 11** displays the employment level (that is, the number of individuals employed) in the rail transportation industry from 2001 through 2022. It shows that employment dropped nearly 8 percent during 2020, and that by the end of 2022 employment was still approximately 8 percent lower than the December 2019 level.[76]

- **Exhibit 12** displays the unemployment rate in the rail transportation industry from 2017 to 2022. The unemployment rate for men with less than a college degree increased from 2.9 percent in 2020 to 3.5 percent in 2021, but fell to a very low 2.3 percent in 2022. This shows that very few individuals who were previously employed in the rail transportation industry were looking for work during 2022.

32. Evergy itself acknowledges that crew shortages were a widespread issue across railroads and customers. In a 2022 correspondence between BNSF and Evergy, Evergy states that {{ [redacted] }}[77] They go on to say that {{ [redacted] }}[78] Thus, the broader rail transportation industry appears to have experienced the same reduction in labor force and low unemployment rates experienced in the rest of the economy.

[74] "The Quarterly Census of Employment and Wages (QCEW) program publishes a quarterly count of employment and wages reported by employers covering more than 95 percent of U.S. jobs, available at the county, MSA, state and national levels by industry." *See*, "Quarterly Census of Employment and Wages," *U.S. Bureau of Labor Statistics,* accessed August 16, 2025, https://www.bls.gov/cew/.

[75] The CPS is a monthly survey of U.S. households conducted by the U.S. Census Bureau, and it forms the basis for the BLS's monthly unemployment rate series. *See*, "About the Current Population Survey," *U.S. Bureau of Labor Statistics*, accessed June 4, 2025, https://www.census.gov/programs-surveys/cps/about.html. Industry information is available in the CPS for individuals who are employed and for unemployed individuals who (at the time of the survey), based on the industry of the individual's last job. *See*, "Concepts and Definitions (CPS)," *U.S. Bureau of Labor Statistics*, last modified September 15, 2025, https://www.bls.gov/cps/definitions.htm.

[76] The employment level in the rail transportation industry was approximately 163,600 in December 2019 and 150,200 in December 2022. 150,200 is approximately 8 percent lower than 163,600. *See*, **Exhibit 11**.

[77] EVERGY-0088877–882, at 882.

[78] EVERGY-0088877–882, at 882.

IV. Analysis of BNSF's Actions Affecting T&E Crew Levels

33. In this section I describe the considerable actions that BNSF took during the period from 2020 to 2022 to match crew supply to demand. Using my understanding of labor market conditions during this period, as described above, I place each of BNSF's actions in the context of the labor market situation and the experience of other employers at the time. I show that BNSF took actions to match crew supply to changing demand conditions during the Covid recession and its aftermath.

34. I begin with BNSF's response to Covid during early 2020. I then turn to the actions BNSF took during the second half of 2020 through the third quarter of 2021, a time of tightening labor market conditions when BNSF was able to successfully increase its active crew supply to meet demand. Finally, I discuss the actions BNSF took during late 2021 and 2022 as labor markets tightened further and BNSF's crew requirements increased across the system. I show that BNSF faced headwinds from historically tight labor markets as it worked to retain its workforce and recruit, hire, and train new crew during this period. I do not address BNSF's actions leading up to the pandemic recession in this section, but in Section V below, I respond to claims in Evergy's Opening Evidence that crew reductions before 2020 contributed to shortages during 2022.[79]

A. Faced with Lower Demand, BNSF Furloughed Crew During April and May 2020

35. Going into the Covid pandemic in January and February 2020, BNSF averaged {{ [redacted] }} active T&E employees and {{ [redacted] }} employees on furlough systemwide.[80] On the Evergy route, BNSF averaged {{ [redacted] }} active T&E employees and {{ [redacted] }} employees on furlough.[81] In March 2020, the demand for freight transportation decreased sharply as entire sectors of the global economy shut down.[82] BNSF furloughed employees at this time to bring its crew supply in line

[79] Evergy Opening Evidence, pp. 30–37.

[80] BNSF_EVERGY_0023105; BNSF_EVERGY_0025775. I discuss BNSF's headcount and actions impacting headcount leading up to this period in Section V below.

[81] BNSF_EVERGY_0023105; BNSF_EVERGY_0025775.

[82] "The first quarter of 2020 saw rail volumes drop quickly for most commodities as a result of COVID-19…mirroring the change in industrial production." *See*, Joseph L. Schofer, Hani S. Mahmassani, and Max T.M. Ng, "Resilience of U.S. Rail Intermodal Freight during the Covid-19 Pandemic," *Research in Transportation Business & Management* 43 (2022): 2, https://www.sciencedirect.com/science/article/pii/S2210539522000128#s0015.

with demand.[83] In this subsection, I explain that BNSF's furloughs were enacted to protect the incomes of active T&E employees, they were consistent with actions taken by the other Class I railroads, and they were consistent with actions taken by employers throughout the economy.

36. I understand that BNSF's furloughs are, to a large extent, a mechanical result of rules governing the size of labor pools in longstanding agreements with unions.[84] When demand for rail transportation decreases, there is a reduction in the number of carloads and therefore trips necessary to meet demand. A reduction in the number of trips for a particular route causes a reduction in the total number of shifts assigned to the labor pool for that route. If the number of crew in the labor pool were to stay the same when the number of shifts decreases, the number of shifts per employee would decrease, leading to lower earnings for crew who are paid on a per-mile basis. {{ [redacted] }}[85] I understand that {{ [redacted] }}[86]

37. During April and May 2020, BNSF furloughed {{ [redacted] }} By May 2020 there were {{ [redacted] }} employees on furlough in the BNSF system, up from {{ [redacted] }} in February 2020.[87] During this period BNSF's furloughed workers {{ [redacted] }}

[83] Matt Garland, the Vice President who leads BNSF's Transportation Team, confirms that BNSF takes action to bring crew supply in line with demand. *See*, Urgent Issues in Freight Rail Service Public Hearing, EP 770, Volume II, April 27, 2022, 789:13–22 ("We work so hard to align our labor force levels to the customer's expected demand.")

[84] *See, e.g.,* BNSF_EVERGY_0025805–811, at 805 {{ [redacted] }}

[85] *See, e.g.,* BNSF_EVERGY_0025789–797, at 794 {{ [redacted] }}; BNSF_EVERGY_0025798–804, at 802 {{ [redacted] }} *See, e.g.,* BNSF_EVERGY_0025780–788, at 785 {{ [redacted] }}

[86] On the Evergy route, a total of {{ [redacted] }} conductors and engineers were on furlough in April 2020 and {{ [redacted] }} were on furlough in May 2020. This is in comparison to January through March 2020, when there were an average of {{ [redacted] }} conductors and engineers on furlough each month on the Evergy route. ({{ [redacted] }} is the average of {{ [redacted] }}). *See*, **Exhibit 14**; BNSF_EVERGY_0023105; BNSF_EVERGY_0025775.

[87] *See*, **Exhibit 14**.

as a percent of total headcount from {{ [redacted] }}[88] On the Evergy route, furloughed employees increased from {{ [redacted] }} in February 2020 to {{ [redacted] }} in May 2020, an increase of {{ [redacted] }} percentage points.[89] During this period, BNSF incurred substantial expense to maintain extraboard employees to ensure immediate availability of crew if needed.[90]

38. BNSF's reductions in active headcount during the Covid recession were in line with reductions in the demand for BNSF's coal transportation services at the time. The average monthly number of active conductors and engineers per loaded unit was {{ [redacted] }} on the BNSF system in the fourth quarter of 2019.[91] As total loaded units declined across the system and on the Evergy route during the first half of 2020, reductions in headcount followed, but the number of active conductors and engineers per loaded unit remained steady around {{ [redacted] }} through July 2020.[92]

39. BNSF's actions were also in line with the actions of other Class I railroads and employers throughout the economy. Average T&E employment levels at the Class I railroads excluding BNSF decreased by 17 percent from December 2019 to July 2020.[93] For BNSF the decrease was 18 percent.[94] BNSF's actions during the Covid pandemic took place at a time when employers throughout the economy

[88] In February 2020, {{ [redacted] }} conductors and engineers (that is, {{ [redacted] }} percent of furloughed and active conductors and engineers) were on furlough in the BNSF system. By May 2020, {{ [redacted] }} conductors and engineers (that is, {{ [redacted] }} percent of furloughed and active conductors and engineers) were on furlough in the BNSF system. An increase from {{ [redacted] }} percent to {{ [redacted] }} percent represents a {{ [redacted] }} percentage point increase. *See*, BNSF_EVERGY_0023105; BNSF_EVERGY_0025775; BNSF_EVERGY_0023097.

[89] In February 2020, {{ [redacted] }} conductors and engineers (that is, {{ [redacted] }} percent of furloughed and active conductors and engineers) were on furlough on the Evergy route. By May 2020, {{ [redacted] }} (that is, {{ [redacted] }} percent of furloughed and active conductors and engineers) were on furlough on the Evergy route. An increase from {{ [redacted] }} percent to {{ [redacted] }} percent represents an {{ [redacted] }} percentage point increase. *See*, BNSF_EVERGY_0023105; BNSF_EVERGY_0025775; BNSF_EVERGY_0023097.

[90] *See*, Urgent Issues in Freight Rail Service Public Hearing, EP 770, Volume II, April 27, 2022, 790:1–8 ("[I]n 2021, we paid over 27 million, in guarantees, to employees, to hold them in reserve, and that was really to make sure that we had an immediate availability to deploy them.")

[91] *See*, **Figure 11**; BNSF_EVERGY_0025775; BNSF_EVERGY_0023105; STB Loaded Units Data.

[92] *See*, **Figure 11**; BNSF_EVERGY_0025775; BNSF_EVERGY_0023105; STB Loaded Units Data.

[93] In July 2020, the average T&E headcount across all Class I railroads, except for BNSF, was 5,170. In December 2019, it was 6,232. *See*, Surface Transportation Board, 2015–2024, "Surface Transportation Board Report of Railroad Employment - Class I Line-Haul Railroads," https://www.stb.gov/reports-data/economic-data/employment-data/.

[94] In July 2020, BNSF's T&E headcount was 13,750. In December 2019, it was 16,739. *See*, Surface Transportation Board, 2015–2024, "Surface Transportation Board Report of Railroad Employment - Class I Line-Haul Railroads," https://www.stb.gov/reports-data/economic-data/employment-data/.

were facing reduced demand and there were increases in unemployment and decreases in labor force participation throughout the economy.[95]

B. During the Second Half of 2020 BNSF Successfully Recalled Furloughed Workers to Bring Crew Supply in Line with Increasing Demand

40. Coming out of the Covid recession, in June 2020 BNSF had {{ }} active crew and {{ }} furloughed employees on the BNSF system.[96] On the Evergy route, BNSF had {{ }} active and {{ }} furloughed employees.[97] When demand began increasing, BNSF started recalling furloughed employees. **Exhibit 13** displays the number of furloughed conductors and engineers recalled, by quarter, for the BNSF system and the Evergy route. The figure shows that the first major recall took place in the second quarter of 2020, with most recalls in June when {{ }} conductors and engineers were recalled systemwide and {{ }} were recalled on the Evergy route. BNSF recalled another {{ }} employees in the third quarter and another {{ }} in the fourth quarter of 2020, and{{ }} of these recalls were on the Evergy route. {{ }} percent of the employees recalled during 2020 returned to work and were termed "successful recalls."[98] This contributed to active conductor and engineer employment increasing to {{ }} on the BNSF system and to {{ }} on the Evergy route by December 2020.[99]

41. By the end of 2020, BNSF had recalled {{ }} the conductors and engineers it furloughed between February and May 2020.[100] And while BNSF's active conductor and

[95] The BLS reported in December 2020 that the "magnitude of job loss in March and April 2020 had no precedent since the end of World War II" and "more than twice as many jobs were lost between March and April 2020 as were lost during the entire 2007–09 period." *See*, Elizabeth Weber Handwerker, et al., "Employment recovery in the wake of the COVID-19 pandemic," *Bureau of Labor Statistics: Monthly Labor Review*, December 2020, https://www.bls.gov/opub/mlr/2020/article/employment-recovery.htm. *See also,* **Exhibit 2** for national unemployment and **Exhibit 4** for national labor force participation rates.

[96] Here, crew refers to conductors and engineers due to data availability. *See*, BNSF_EVERGY_0023105; BNSF_EVERGY_0025775.

[97] Here, employees refer to conductors and engineers due to data availability. *See*, BNSF_EVERGY_0023105; BNSF_EVERGY_0025775.

[98] In 2020, {{ }} conductors and engineers were recalled from furlough. Of those {{ }} returned to work. *See*, BNSF_EVERGY_0023097.

[99] Active employment cannot be calculated as the prior period's active employment plus successful furlough recalls because there is a delay between recalling furloughed employees and crew returning to active duty. Additionally, there was employee attrition, which averaged {{ }} percent per year during 2020. *See*, **Exhibit 16**; BNSF_EVERGY_0025770; BNSF_EVERGY_0025768; BNSF_EVERGY_0025773.

[100] A total of {{ }} conductors and engineers were recalled from furlough between June and December 2020. Data on newly furloughed employees is unavailable, so I use the net change in the stock of furloughs as an approximation. The net change in furloughed conductors and engineers between February and May of 2020 was {{ }}. That is, the stock of furloughs in

engineer headcount {{ [redacted] }} during the Covid recession, by December 2020 it was {{ [redacted] }} February 2020 levels.[101] BNSF's experience is on par with U.S. labor markets. At the end of 2020, U.S. employment was 5.5 percent below February 2020 levels.[102]

42. Compared with demand for BNSF's freight services, BNSF's {{ [redacted] }} in active conductor and engineer headcount through the end of 2020 lagged slightly. Crew per loaded unit {{ [redacted] }} in December 2020 (as compared with {{ [redacted] }} in February 2020).[103]

C. During the First Half of 2021 BNSF Continued to Recall Furloughed Workers but Faced Increasing Headwinds as Labor Markets Tightened

43. In the first half of 2021 BNSF stepped up its recalls of furloughed employees. In the first quarter BNSF recalled {{ [redacted] }} crew systemwide and {{ [redacted] }} crew on the Evergy route, and in the second quarter BNSF recalled {{ [redacted] }} crew systemwide and {{ [redacted] }} crew on the Evergy route.[104] By the end of June, {{ [redacted] }} of the employees BNSF furloughed during the Covid recession had been recalled, and approximately {{ [redacted] }} employees remained on furlough systemwide.[105]

44. Despite the many furlough recalls BNSF enacted during the first half of 2021, BNSF's active conductor and engineer headcount increased only slightly from December 2020 to June 2021.[106]

May 2020 was {{ [redacted] }} more than the stock of furloughs in February 2020. *See,* BNSF_EVERGY_0023097; BNSF_EVERGY_0023105; BNSF_EVERGY_0025775.

[101] Conductor and engineer employment in the BNSF system was {{ [redacted] }} in February 2020, {{ [redacted] }} in June 2020, and {{ [redacted] }} in December 2020. *See,* **Figure 11;** BNSF_EVERGY_0023105; BNSF_EVERGY_0025775.

[102] Employment (in thousands) was 158,714 in February 2020 compared to 149,975 in December 2020. *See*, U.S. Bureau of Labor Statistics, 2020, "Employment Level," retrieved from FRED, Federal Reserve Bank of St. Louis, https://fred.stlouisfed.org/series/CE16OV.

[103] *See*, **Figure 11.**

[104] Here, crew refers to conductors and engineers due to data availability. *See*, **Exhibit 13**.

[105] {{ [redacted] }} conductors and engineers were recalled in the second half of 2020 and {{ [redacted] }} were recalled in the first half of 2021, amounting to {{ [redacted] }} recalled conductors and engineers between July 2020 and June 2021. Data on newly furloughed employees is unavailable, so I estimate the number of conductors and engineers furloughed during the Covid recession using the net change in the stock of furloughs. The net change in furloughed conductors and engineers between February and May of 2020 was {{ [redacted] }}. *See*, **Exhibit 13**; **Exhibit 14;** BNSF_EVERGY_0025770; BNSF_EVERGY_0025768; BNSF_EVERGY_0025773.

[106] BNSF system conductor and engineer employment was {{ [redacted] }} in December 2020 and {{ [redacted] }} in June 2021. Headcount was {{ [redacted] }} and {{ [redacted] }} for the same dates on the Evergy route. *See*, BNSF_EVERGY_0023105; BNSF_EVERGY_0025775.

Two forces worked against BNSF's furlough recall actions during this period: furlough recall failures and employee attrition. During the first half of 2021, BNSF's furlough recall success rate decreased from {{ [redacted] }} percent to {{ [redacted] }} percent.[107] This means that many of the employees BNSF recalled declined returning to active service during this time. During the first half of 2021, BNSF also saw a substantial increase in employee attrition rates. During 2020, {{ [redacted] }} percent of active crew departed BNSF each month on average, but during the first half of 2021, attrition {{ [redacted] }} percent per month.[108] On an annual basis, attrition increased from {{ [redacted] }} percent in 2020 to {{ [redacted] }} percent in 2021.[109]

45. These changes are consistent with changes in labor market conditions at the time. During 2021 the labor market became increasingly tight, and it was during 2021 that employee attrition increased throughout the economy and the Great Resignation became a topic of conversation. In fact, it was during April 2021 that the U.S. quits rate reached its record high, with four million workers voluntarily leaving their jobs.[110] As shown in **Exhibit 5,** the U.S. quits rate increased from an average of 1.94 percent per month in the ten years leading up to 2021 to 2.53 percent per month during the first half of 2021. Thus, BNSF's recall failures and employee attrition during this period are consistent with the national experience.[111] As I explain above, during this period the tightening labor market increased job opportunities, especially for workers without a college degree, and preferences regarding work changed, with certain work characteristics, like inflexible schedules and vaccine requirements, becoming increasingly disfavored.

46. Despite labor market headwinds, as of June 2021 BNSF had adequate crew to meet the crew demand it forecasted. In June 2021 BNSF had {{ [redacted] }} active conductors and engineers and projected that it would require on average {{ [redacted] }} active conductors and engineers in the following

[107] In 2020, there were {{ [redacted] }} BNSF employees who were recalled from furlough, and {{ [redacted] }} returned to work in response. Between January and June 2021, {{ [redacted] }} employees were recalled from furlough, and {{ [redacted] }} returned to work in response. *See*, BNSF_EVERGY_0023097.

[108] This calculation excludes attrition due to refused recall or because an individual had not worked for nine months. It additionally excludes attrition of individuals with a blank value for "Craft." *See*, BNSF_EVERGY_0025773.

[109] *See*, **Exhibit 16**.

[110] *See*, Bureau of Labor Statistics, "Job Openings and Labor Turnover – April 2021," *Bureau of Labor Statistics*, June 8, 2021, https://www.bls.gov/news.release/archives/jolts_06082021.pdf, p. 2.

[111] Note that BNSF's average monthly attrition rate is below the national average, even after the increase in attrition in 2021 and 2022. I exclude attrition due to refused recall or because an individual had not worked for nine months.

six months.[112] On the Evergy route, BNSF had an active supply of {{ [redacted] }} and projected only slightly higher crew requirements of {{ [redacted] }} during the following six months.[113] Consistent with these numbers, in a letter to the Surface Transportation Board dated June 9, 2021, BNSF wrote: "We have sufficient train crews and yard employees for current volumes. In addition, currently over 1,500 TYE employees remain on furlough."[114]

D. During Late 2021 and Throughout 2022 BNSF Took Considerable Actions to Increase Crew Supply but Faced Headwinds from Historically Tight Labor Markets

47. In the second half of 2021 BNSF's employment outlook changed. During this time, BNSF recalled an additional {{ [redacted] }} employees, including {{ [redacted] }} on the Evergy route.[115] However, employee attrition remained high and furlough recall success rates remained low in this period.[116] Despite the furlough recalls, by December 2021 BNSF had fewer active conductors and engineers than it had in June.[117] While BNSF still had roughly {{ [redacted] }} conductors and engineers on furlough systemwide in December 2021, the stock of furloughed employees was already exhausted at many stations on the Evergy Route.[118] **Exhibit 15** displays the stock of furloughed conductors and engineers, by month, at each of the Evergy Route stations. Aside from the Kansas City stations, there were {{ [redacted] }} conductors or engineers on furlough on the Evergy Route as of September 2021.[119]

---

[112] BNSF's crew requirements are based on BNSF's monthly crew resource planning process, which takes into account factors like traffic volumes, crew requirements to move traffic, expected shifts per employee, and employee attrition (BNSF_EVERGY_0025770; BNSF_EVERGY_0025768). Customer nominations factor into this process (*See* BNSF_EVERGY_0026101–103, at 101 (In a letter to Evergy, BNSF's Kristin Hansen writes, { [redacted] } *See*, BNSF_EVERGY_0022190 (Alliance NE July 21 forecast.csv); BNSF_EVERGY_0022242 (Lincoln July 21 forecast.csv).

[113] BNSF_EVERGY_0025770; BNSF_EVERGY_0025768.

[114] Letter from Katie Farmer (President and CEO of BNSF) to Martin Oberman (Chairman of the Surface Transportation Board), June 9, 2021, https://www.stb.gov/wp-content/uploads/BNSF-Response-Letter-to-Chairman-Oberman-Regarding-Rail-Service-June-09-2021.pdf. Note that the 1,500 figure is approximately equal to the number of T&E employees on furlough systemwide in May 2021, just prior to the date of the letter. *See*, **Exhibit 14.**

[115] *See*, **Exhibit 13.**

[116] During this time, attrition averaged {{ [redacted] }} percent per month and the percent of recalled employees who returned to work averaged {{ [redacted] }} percent per month. BNSF_EVERGY_0023097; BNSF_EVERGY_0025773.

[117] In December 2021 BNSF had {{ [redacted] }} conductors and engineers, down from {{ [redacted] }} in June. *See*, **Exhibit 11.**

[118] *See*, **Exhibit 14.**

[119] *See*, BNSF_EVERGY_0025775; BNSF_EVERGY_0023105.

48. By October 2021 BNSF recognized that it needed to take action to ensure crew supply going into 2022.[120] In the remainder of this subsection, I describe the considerable actions BNSF took during late 2021 and through 2022 to increase crew supply. BNSF implemented a hiring initiative that included advertising campaigns, outreach efforts, and generous financial incentives targeted to areas with particular needs. BNSF also offered financial incentives to encourage employees to stay in or transfer to areas with particular crew needs and vacation buy-backs and delayed retirement incentives to increase crew availability.

1. BNSF Took Considerable Action to Recruit and Hire Qualified Conductors

49. In the fourth quarter of 2021, BNSF launched a hiring initiative to establish a pipeline of new conductors for trains. BNSF posted positions starting in September 2021, with many of the first open positions focusing on the Lincoln and Alliance stations on the Evergy route in Nebraska.[121] BNSF documents from the time show that BNSF saw a need to hire urgently and devoted considerable resources to the task. In an October 2021 internal email, the Assistant Vice President of Human Resources at BNSF asked her team to {{ [redacted] }}[122] The email chain goes on to outline levers currently being pulled, including {{ [redacted] }}[123] BNSF successfully hired {{ [redacted] }} conductors on the Evergy route and {{ [redacted] }} conductors on the rest of the system during the fourth quarter of 2021.[124]

50. BNSF also launched advertising campaigns to increase the flow of qualified applicants at this time. An email chain between Human Resources employees and a marketing agency discusses the {{ [redacted] }} in early December 2021. In the chain, Lisa Culos from BNSF writes, {{ [redacted]

[120] BNSF_EVERGY_0021731–734, at 733 {{[redacted]}}.

[121] A job is considered open for the entire period applications were being received. *See*, BNSF_EVERGY_0025772. *See also*, BNSF_EVERGY_0021731–734 (fall 2021 BNSF email thread with subject line "Alliance / Lincoln Hiring - URGENT"); BNSF_EVERGY_0023005–006 (fall 2021 BNSF email thread with subject line "Lincoln/Alliance Media Plan with JMG").

[122] BNSF_EVERGY_0021731–734, at 734.

[123] BNSF_EVERGY_0021731–734, at 733.

[124] *See* BNSF_EVERGY_0025776.

[redacted] }} reflecting a sense of urgency around hiring at BNSF at the time.[125] Documents also show that BNSF ran {{ [redacted] }} digital recruiting campaigns in Nebraska during December 2021, and these resulted in over {{ [redacted] }} impressions and {{ [redacted] }} clicks.[126] Examples of digital ads that were served to individuals in Nebraska in November 2021 and April 2022 are included below as **Figure 3** and **Figure 4**.

Figure 3
Digital Ad Dated November 2021 {



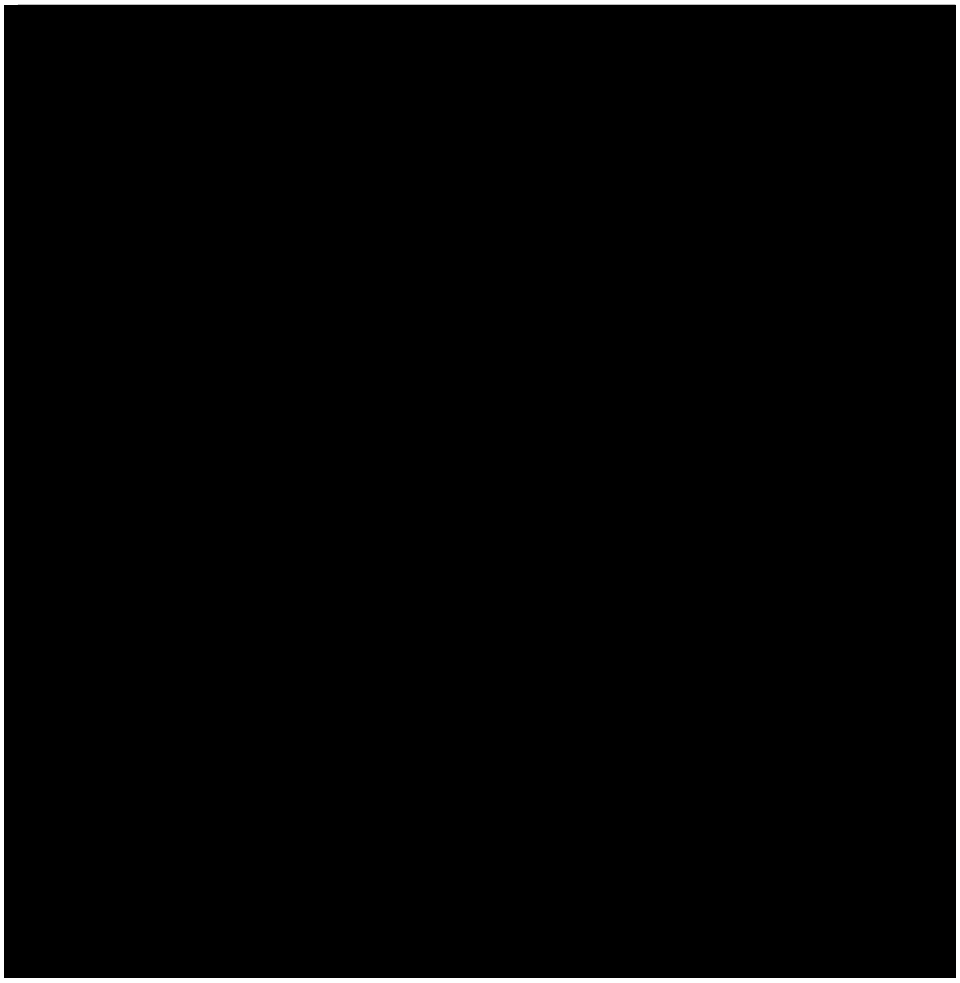
[redacted] }

Source: BNSF_EVERGY_0023084–088, at 084.

[125] BNSF_EVERGY_0021735–741, at 738.

[126] BNSF_EVERGY_0022995.

Figure 4
Digital Ad Dated April 2022 {



}

Source: BNSF_EVERGY_0023084–088, at 087.

51. The record also shows that BNSF advertised on billboards in Nebraska during 2022. **Figure 5** displays an image of a billboard advertising job openings that was displayed in Lincoln through December 2022.

Figure 5
Billboard Displayed in Lincoln, NE in 2022 {



}

Source: BNSF_EVERGY_0026081 (attachment to BNSF_EVERGY_0026079–080).

52. In addition to posting and advertising job openings, BNSF offered substantial hiring bonuses to qualified applicants to aid in recruiting and retention { }.[127] **Figure 6** summarizes the frequency and amounts of BNSF's new hire bonuses paid to T&E employees from 2017 to 2022.[128] The figure shows that BNSF's bonuses were widespread and generous in 2022. During this time, BNSF paid out {{ }} bonuses systemwide with an average payout of over {{ }}. On

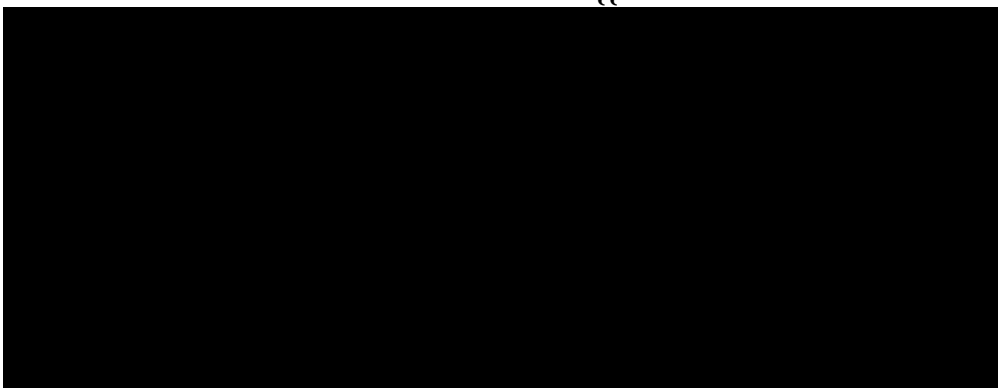
[127] *See*, *e.g.*, BNSF_EVERGY_0021635–638; BNSF_EVERGY_0021639–640; BNSF_EVERGY_0021641–644; BNSF_EVERGY_0021649–653; BNSF_EVERGY_0021654–657; BNSF_EVERGY_0021658–659; BNSF_EVERGY_0021660–663; BNSF_EVERGY_0021664–665; BNSF_EVERGY_0021666–667; BNSF_EVERGY_0021668–669; BNSF_EVERGY_0021673–676; BNSF_EVERGY_0021677–680; BNSF_EVERGY_0021681–684; BNSF_EVERGY_0021685–686; BNSF_EVERGY_0021687–691; BNSF_EVERGY_0021748–749; BNSF_EVERGY_0021750–753; BNSF_EVERGY_0021754–755; BNSF_EVERGY_0021756–758; BNSF_EVERGY_0021759–762; BNSF_EVERGY_0021763; BNSF_EVERGY_0021764–767; BNSF_EVERGY_0021768–769; BNSF_EVERGY_0021770–773; BNSF_EVERGY_0021774–775; BNSF_EVERGY_0021780–781; BNSF_EVERGY_0021782–784; BNSF_EVERGY_0021785–788; BNSF_EVERGY_0021789–790; BNSF_EVERGY_0021820–822; BNSF_EVERGY_0021823–826; BNSF_EVERGY_0021827–830; BNSF_EVERGY_0021831–832; BNSF_EVERGY_0021837–838; BNSF_EVERGY_0021839–841; BNSF_EVERGY_0021842–843; BNSF_EVERGY_0021844–845; BNSF_EVERGY_0021846–849; BNSF_EVERGY_0021850–851; BNSF_EVERGY_0021852–855; BNSF_EVERGY_0021856–857; BNSF_EVERGY_0021858–860; BNSF_EVERGY_0021861–864; BNSF_EVERGY_0021865–868; BNSF_EVERGY_0021869–872; BNSF_EVERGY_0021873–874; BNSF_EVERGY_0021875–876; BNSF_EVERGY_0021877–879; BNSF_EVERGY_0021880; BNSF_EVERGY_0021881–883; BNSF_EVERGY_0021884–885; BNSF_EVERGY_0022990.

[128] More specifically, the exhibit shows the percentage of new hires who received at least one payment of any kind from BNSF who also received a new hire bonus.

the Evergy route,{{ }} percent of hires received bonuses with an average payout of nearly {{ }} in 2022. The figure also shows that BNSF's use of hiring bonuses in 2022 was unusual, as BNSF did not provide {{ }} in the five years from 2017 to 2021.

53. Hiring bonuses were intended not only to increase hiring, but also to increase retention of employees in hiring stations where crew was needed. Bonus payouts were often contingent on either staying or being under recall to the hiring station. As an example, one hiring bonus described as the "2022 TYE Hiring Incentive Program" provided a {{ }} to new hires starting and staying at certain stations, including the following along the Evergy Route: Kansas City, KS; Alliance, NE; Lincoln, NE; and Gillette, WY.[129] In addition to hiring bonuses, in 2022 BNSF offered referral bonuses {{ }}[130]

Figure 6
Hiring Bonuses
BNSF System and Evergy Route
2017 – 2022 {{



}}

Source: BNSF-X-EVERGY-0000035.

[129] BNSF_EVERGY_0021666–667, at 666.

[130] BNSF_EVERGY_0026086–092, at 086.

54. Regarding its hiring, in a March 2022 letter to the National Grain and Feed Association (NGFA), BNSF stated that they planned "to hire an additional 1,000 Train, Yard and Engine (TY&E) employees in 2022."[131] In the letter BNSF acknowledged that labor market conditions throughout the economy were not favorable for hiring, but projected confidence, stating "[d]espite facing the same attrition and hiring obstacles that nearly all U.S. corporations are experiencing at the moment, we are on pace to meet that hiring plan this year."[132] **Figure 7** shows that BNSF hired a substantial number of conductors in the first half of 2022 ({{ [redacted] }} conductors on the Evergy route and {{ [redacted] }} in the rest of the system). BNSF's hiring was {{ [redacted] }} during the second half of 2022, when it hired {{ [redacted] }} conductors on the Evergy route and {{ [redacted] }} in the rest of the system.

[131] Letter from Katie Farmer (President and CEO of BNSF) to Michael J. Seyfert (President and CEO of NGFA), March 30, 2022, https://www.stb.gov/wp-content/uploads/BNSF-response-to-NGFA-03302022.pdf, p. 1.

[132] Letter from Katie Farmer (President and CEO of BNSF) to Michael J. Seyfert (President and CEO of NGFA), March 30, 2022, https://www.stb.gov/wp-content/uploads/BNSF-response-to-NGFA-03302022.pdf, pp. 1–2.

Figure 7
Count of Hires
BNSF System and Evergy Route
October 2021 – December 2022 {{



}}

Source: BNSF_EVERGY_0025776.

2. BNSF Increased Conductor Trainings to Get Conductors onto Trains More Quickly, Without Reducing the Quality or Length of Training

55. BNSF also increased the frequency of conductor training classes during 2022. Increasing the frequency of training classes allowed BNSF to get conductors onto trains more quickly and alleviate shortages while maintaining the length of training programs to ensure safety. BNSF data show that the number of training classes was higher and there were fewer students in each training class in 2022 compared to earlier years. In 2018, BNSF held {{ }} training classes with an average of {{ }}

hires per class.[133] By contrast, in 2022 BNSF held {{ }} training classes with an average of only {{ }} hires per class.[134] An October 2021 email chain confirms the urgency with which BNSF held training classes. In that email chain, BNSF Human Resources stated {{ }}[135]

3. BNSF Offered Substantial Transfer Incentives to Increase Crew Supply in Shortage Areas

56. In addition to new hire bonuses, BNSF also offered financial incentives for employees to transfer into the Evergy Route.[136] **Figure 8** displays the net crew on transfer to Evergy route stations during 2022. A total of {{ }} net crew were on transfer at Evergy route stations at some point during 2022, with Lincoln and Alliance each having {{ }} unique net transfers.

[133] I count the number of training classes in each "Plan Year" and calculate the mean number of new hires in those training classes. In 2019 BNSF held {{ }} training classes with an average of {{ }} hires per class. BNSF did not hold training classes in 2020. In 2021 BNSF held {{ }} training classes with an average of {{ }} hires per class. *See*, BNSF_EVERGY_0025776.

[134] BNSF_EVERGY_0025776. I count the number of training classes in Plan Year 2022 and calculate the mean number of new hires in each of those classes.

[135] BNSF_EVERGY_0021808–809, at 809.

[136] *See*, BNSF_EVERGY_0022939 {{ }} *See also*, BNSF_EVERGY_0022950–951; BNSF_EVERGY_0022980; BNSF_EVERGY_0022981; BNSF_EVERGY_0022982–983.

Figure 8
Net Crew Transfers
Conductors and Engineers
Evergy Route
2022 {{



}}

Sources: BNSF_EVERGY_0026109–159.

57. BNSF documents describe transfer incentives in more detail. For example:

- An internal email chain from January 2022 acknowledges that BNSF had been {{ }}[137]
- There is documentation of a {{ }} to locations including Lincoln and Alliance in Nebraska beginning in November 2022.[138]

[137] BNSF_EVERGY_0025845–849, at 848.

[138] BNSF_EVERGY_0022950–951.

- Lincoln was added to a temporary transfer agreement from April of 2022 that provided for {{ [redacted] }} for {{ [redacted] }} months in addition to regular transfer agreement incentives.[139]

- During 2021 BNSF informed furloughed workers in Kansas City that they could self-recall to Lincoln and there were {{ [redacted] }} self-recalls to Lincoln in response to this action.[140]

4. BNSF Offered Vacation Buy-Backs and Retirement Incentives

58. During 2022 BNSF also offered incentives to increase the availability and retention of incumbent crew members. First, it offered vacation buy-backs, which are payments BNSF offered in exchange for crew agreeing not to take paid time off. The aim of this program was to increase crew availability during high vacation times. Internal communication from May 2022 references BNSF's decision {{ [redacted] }}[141] **Figure 9** reports the number of vacation buy-backs BNSF paid out from June through December 2022. It shows that there was considerable take-up of the incentive, with take-up peaking in July. BNSF also offered deferred retirement incentives, or financial payments in exchange for crew agreeing to delay their retirement for a particular duration. BNSF documents show that anyone who {{ [redacted] }} was eligible for deferred retirement incentives.[142]

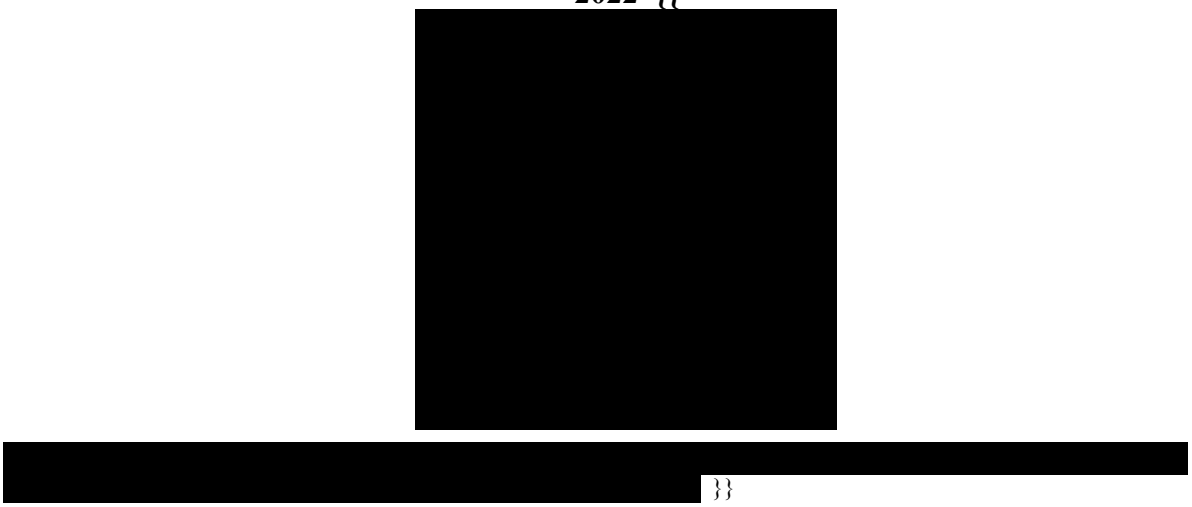
[139] BNSF_EVERGY_0022935.

[140] There were {{ [redacted] }} self-recalls to Lincoln in response to this action, but only {{ [redacted] }} actually reported. *See*, BNSF_EVERGY_0022979.

[141] BNSF_EVERGY_0025831–832, at 831. This {{ [redacted] }} vacation buy-back option was paid on top of an employee's vacation rate of pay.

[142] BNSF_EVERGY_0025853–854, at 853.

Figure 9
Vacation Buy-Backs
T&E Employees
BNSF System
2022 {{



}}

Source: BNSF-X-EVERGY-0000035.

5. Labor Market Conditions and Other Constraints Limited BNSF's Ability to Address Crew Shortages During 2022

59. I have shown that BNSF took action to ensure adequate crew supply to meet the demand for its freight services, including recalling furloughed workers, executing a hiring plan and hiring over {{ }} employees from October 2021 through December 2022, increasing the frequency of conductor training, and offering substantial incentives to incumbents and new hires. However, BNSF faced headwinds in addressing crew shortages in 2022. These included continued high attrition rates, low graduation rates of new conductors, high crew outmigration rates, union negotiations, and limitations placed on BNSF by union contracts.

60. While BNSF was working to hire and train new employees, it faced substantial attrition from incumbent conductors and engineers. While annual attrition levels did not exceed {{ }} percent in the period from 2017 to 2020, in 2021 annual attrition rates were nearly {{ }} percent overall and nearly {{ }} percent on the Evergy route.[143] In 2022 rates increased slightly to {{ }} percent for

[143] *See*, **Exhibit 16**. Note that the attrition rate excludes attrition due to failure to recall from furlough and not working in the preceding nine months. I also exclude attrition from employees who have a blank value for the "CRAFT" field.

the BNSF system and {{ [redacted] }} percent for the Evergy route.[144] This high attrition hindered BNSF's ability to increase crew supply. However, BNSF's increased attrition reflected labor market conditions in the broader economy. The national monthly quits rate reached record levels during 2021 and remained elevated during 2022.[145]

61. BNSF also faced difficulties in attracting and retaining qualified candidates as it sought to hire conductors during late 2021 through 2022, and this limited BNSF's ability to get new hires onto trains. This is evident in the graduation rates of new conductors from BNSF's training programs. While {{ [redacted] }} percent of new hires successfully graduated from training programs from 2018 through 2019, only {{ [redacted] }} percent of new hires successfully graduated from BNSF's conductor training programs in 2021 and only {{ [redacted] }} percent graduated in 2022.[146] BNSF's difficulty in hiring is consistent with the broader labor market experience. The unprecedented national rate of unfilled job openings in 2021 and 2022 suggests employers throughout the economy struggled to hire during this period.[147]

62. A third headwind BNSF faced was outmigration of crew. BNSF's agreements with unions {{ [redacted] }}, known as outmigration.[148] This means that BNSF's efforts to recruit and hire crew to stations like Alliance or Lincoln might do little to alleviate shortages in those stations. During 2022, outmigration rates, or the rates at which crew hired into one station moved to another, were {{ [redacted] }} percent on the BNSF system and {{ [redacted] }} percent on the Evergy route.[149] These rates are well above the {{ [redacted] }} percent rate on the BNSF system and the {{ [redacted] }} percent rate on the

[144] *See*, **Exhibit 16**. Note that the attrition rate excludes attrition due to failure to recall from furlough and not working in the preceding nine months. I also exclude attrition from employees who have a blank value for the "CRAFT" field.

[145] *See*, **Exhibit 10**. The monthly quits rate increased from {{[redacted]}} percent in 2017 through 2019 to {{[redacted]}} percent in 2021.

[146] BNSF_EVERGY_0025776. I calculate the graduation rate as the percentage of new hires in a given year that graduate. Note that year assignment is based on the class start date rather than the graduation date. In both 2018 and 2019, the graduate rate was approximately {{[redacted]}} percent for new hires in the BNSF system.

[147] *See*, "Job openings reach high of 10.9 million in July 2021," *Bureau of Labor Statistics*, September 14, 2021, https://www.bls.gov/opub/ted/2021/job-openings-reach-high-of-10-9-million-in-july-2021.htm; Bureau of Labor Statistics, "Job Openings and Labor Turnover – January 2024," March 6, 2024, https://www.bls.gov/news.release/archives/jolts_03062024.pdf.

[148] See, e.g., BNSF_EVERGY_0022868–882; BNSF_EVERGY_0022883–896; BNSF_EVERGY_0022897–910; BNSF_EVERGY_0022911–924.

[149] BNSF_EVERGY_0025776. The outmigration rate is a weighted average of migration rates by hire location and hiring plan, where I use the number of new hires as weights.

Evergy route in 2019.[150] The increased outmigration rate limited BNSF's ability to keep crew at the stations at which they were most severely needed.

63. BNSF also faced other limitations due to its union agreements. Because of its agreements with unions, BNSF was precluded from {{ [redacted] }}.[151] BNSF could offer {{ [redacted] }}.[152] However, BNSF competed to attract and retain employees with employers who were {{ [redacted] }} in 2021 and 2022 in response to tightening labor market conditions. This likely hindered BNSF's ability to attract qualified applicants and retain crew, especially since national union contracts were not renegotiated during the period from late 2019 to 2022, with the result that wage schedules did not increase during this period.[153] In addition, union negotiations during 2022 may have hindered BNSF's hiring and retention efforts due to union tactics that involved publicly disparaging T&E jobs and the railroads.[154] Moreover, BNSF was hindered by the fact that it could not decrease training requirements or lessen the required qualifications for crew jobs due to safety concerns.[155]

---

[150] BNSF_EVERGY_0025776.

[151] *See*, *e.g.*, BNSF_EVERGY_0025789–797, at 794; BNSF_EVERGY_0025780–788, at 785. Both agreements list {{ [redacted] }} The literature also supports the idea of unions acting as a barrier to firms seeking to change wages in response to shocks in the labor market. *See*, Michael L. Wachter, "Union Wage Rigidity: The Default Settings of Labor Law," *The American Economic Review* 76, no. 2 (May 1986): 240–244 ("Nonunion as well as union firms develop internal labor markets and implicitly contract over the long term with their specifically trained workers. There is, however, no agent for the workers with whom the nonunion firm must bargain. Hence, nonunion firms exercise more freedom in adjusting their wage bill in response to shocks").

[152] *See*, *e.g.*, BNSF_EVERGY_0021756–758 { [redacted] } BNSF_EVERGY_0021782–784 { [redacted] } BNSF_EVERGY_0021858–860 { [redacted] } BNSF_EVERGY_0021759–762 { [redacted] }

[153] "Fact Sheet: Timeline of Railroad Labor Negotiations," *U.S. Chamber of Commerce*, November 22, 2022, https://www.uschamber.com/security/supply-chain/fact-sheet-timeline-of-railroad-labor-negotiations.

[154] *See*, *e.g.,* Justin Franz, "Unions Vote Down Contracts, Renewing Threat of Rail Shutdown," *Montana Free Press*, November 1, 2022, https://montanafreepress.org/2022/11/01/unions-vote-down-contracts-renewing-threat-of-rail-shutdown/ ("'Workers are fed up right now,' said Greg Regan, president of the Transportation Trades Department of the AFL-CIO. 'They believe they are being used and abused by the railroads"'). For an overview of the status of union negotiations in 2022, *see*, "Bargaining Timeline: Rail Labor Has Negotiated in Good Faith," *Transportation Trades Department, AFL-CIO*, accessed August 27, 2025, https://ttd.org/rail-negotiations/bargaining-timeline/.

[155] *See*, Federal Railroad Administration, *Railroad Safety*, 49.C.F.R., Subtitle B, Chapter II (December 31, 2021), https://www.ecfr.gov/on/2021-12-31/title-49/subtitle-B/chapter-II. *See also*, Federal Railroad Administration, *Training,*

6. BNSF Took Action to Address Shortages in Lincoln and Alliance during 2021 and 2022

64. In this subsection, I explain BNSF's actions and the headwinds it faced in two specific personnel areas: Lincoln and Alliance, Nebraska. In Lincoln and Alliance, crew decreased by a relatively larger extent between 2019 and 2022 than other areas ({{ [redacted] }} percent and {{ [redacted] }} percent, respectively), compared to {{ [redacted] }} percent systemwide. Outmigration rates in 2022 were also higher in Lincoln and Alliance than in other areas ({{ [redacted] }} percent and {{ [redacted] }} percent, respectively), compared to {{ [redacted] }} percent systemwide.[156] BNSF responded to these disadvantageous conditions with targeted actions. In addition to the advertising campaigns described above, BNSF established {{ [redacted] }} starting in June 2021.[157] BNSF also offered generous incentives to incumbent employees and new hires to increase crew supply in these areas. For example, BNSF offered incentive payments of up to {{ [redacted] }} for transfers to Nebraska stations during August and Septem ber of 2021.[158] As another example, BNSF launched an incentive in August 2022 that offered {{ [redacted] }} for new employees hired to Nebraska locations who agreed to stay at the location for three years. BNSF also offered new hire bonuses of up to {{ [redacted] }} in Lincoln and {{ [redacted] }} in Alliance (for conductors with an anticipated start date of December 2022).[159]

65. To summarize, BNSF took considerable action to prevent and remediate crew shortages during 2022. BNSF recruited and hired aggressively, offered hiring and transfer incentives, and incentivized employee availability through vacation buy-backs and deferred retirement incentives. However, BNSF faced headwinds due to labor market conditions and union agreements. High employee attrition, consistent with the experience of employers throughout the economy, outmigration of crew from critical areas, and union agreements meant that BNSF faced crew shortages in critical personnel areas during 2022 despite its considerable efforts.

Qualification, and Oversight for Safety-Related Railroad Employees, 49.C.F.R., §243 (December 31, 2021), https://www.ecfr.gov/on/2021-12-31/title-49/subtitle-B/chapter-II/part-243.

[156] BNSF_EVERGY_0025776.

[157] BNSF_EVERGY_0025780–788, at 780, 788.

[158] BNSF_EVERGY_0025894–895.

[159] BNSF_EVERGY_0021754–755, at 754; BNSF_EVERGY_0021782–784, at 782.

V. Evaluation of Evergy's Opening Evidence Related to Labor Market Issues

66. In this section, I address the Evergy allegations and the claims in Evergy's Opening Evidence that relate to labor market issues.[160] First, I address Evergy's claims that BNSF's crew shortages were the consequence of BNSF's own operational decisions and policies. I show that BNSF did not cut crew relative to service during the period leading up to Covid, and I consider whether the headcount BNSF had at the beginning of 2021 would have been adequate had BNSF faced more typical labor market conditions during 2021 and 2022. Second, I explain that the changes in T&E employment levels that Mr. Mulholland and Mr. Crowley ("Mulholland and Crowley") document in their Verified Statement are consistent with BNSF taking actions to match crew supply to demand in the face of extremely tight labor markets. Third, I address Evergy's unsupported assertions regarding the desirability of T&E jobs at BNSF. I conclude that Evergy's Opening Evidence is entirely consistent with BNSF having taken reasonable actions in the face of labor market conditions that BNSF could not have anticipated.

A. Evergy Has Not Established That Crew Shortages Were the Consequence of BNSF Decisions Before the Pandemic, During the Covid Recession, or Thereafter

67. In its Complaint, Evergy writes that "any crew or power shortages that BNSF may have experienced in 2022 were the consequences of deliberate operational decisions made and policies adopted by BNSF," because "these issues did not arise with any frequency during the decades that BNSF transported coal to Iatan and Lawrence under contracts."[161] Evergy's claim that BNSF should have been able to provide service without issues in 2022 because it was able to do so previously falls flat in light of the fact that labor market conditions in 2022 were drastically different than conditions during and prior to the Covid recession and in light of the fact that employers in industries throughout the economy experienced labor shortages during 2022. Evergy has not made any attempt to rule out that changes to service in 2022 resulted from changes in labor market conditions, nor has Evergy demonstrated that changes in service resulted from any operational decision or policy. Moreover, as I discuss above, BNSF documents and data I have reviewed show that BNSF took operational decisions and implemented policies in 2021 and 2022 aimed at increasing (rather than decreasing) crew supply and availability,

[160] The scope of my assignment, and thus the scope of my evaluation of Evergy's Opening Evidence, is limited to T&E employees.

[161] Evergy Complaint, ¶ 22.

including recalling furloughed workers, recruiting, hiring, and training new workers, and offering generous incentives to workers to increase crew availability.

68. Evergy repeats its claim that BNSF's crew shortages were the result of its own actions in its Opening Evidence when it states, "It is a matter of public record that any employee or locomotive power shortages that BNSF experienced in 2022 were a consequence of its own deliberate decisions and operations plans put in place well before the Covid pandemic occurred, not the result of Covid or any other circumstance beyond its control."[162] The public record Evergy points to is the record in the Surface Transportation Board's (STB's) Ex Parte No. 770 proceedings. Evergy claims the record in these proceedings "clearly established that BNSF's adoption of cost-cutting operations in the years prior to the arrival of Covid resulted in force reductions and retrenched power and equipment deployments that left BNSF ill-positioned to meet Evergy's reasonable and predictable transportation needs in 2022."[163]

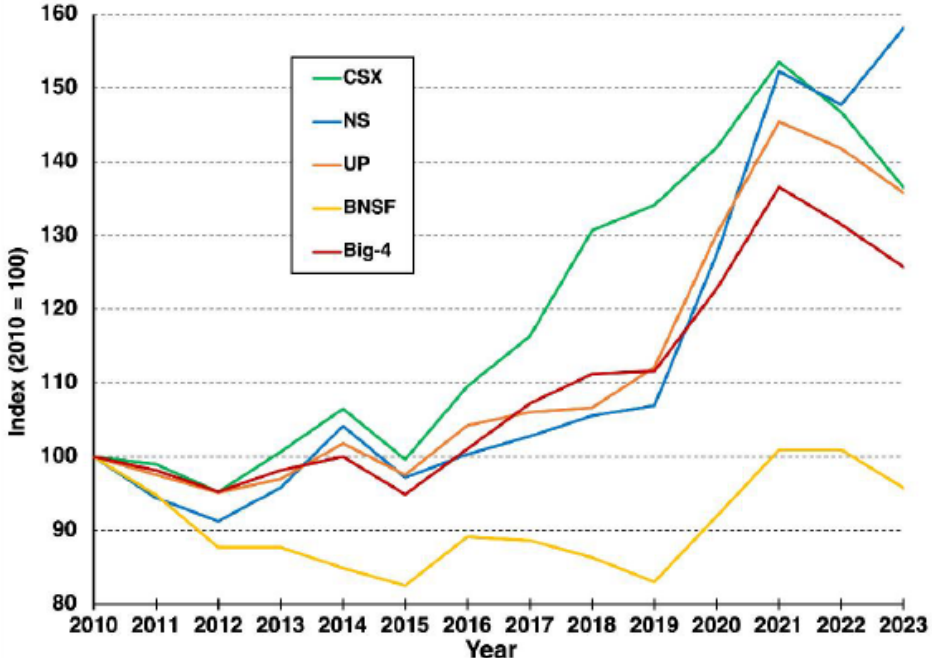
69. However, Evergy does not refer to evidence the unions provided in the Ex Parte 770 proceedings that contradict their claims. **Figure 10** is an exact replication of a figure included on page 66 of the unions' own Third Supplemental Comments Ex Parte EP 770. The figure shows that, in contrast with the other Class I railroads, BNSF's carloads per employee did not increase from 2015 to 2019. Instead, the figure shows that BNSF's carloads per employee were flat during that time.[164] The figure also shows that BNSF's carloads per employee did not substantially increase (taking into account normal year-to-year variability) until 2021 and 2022. As I have explained, in 2021 and 2022 BNSF was faced with unprecedented labor market conditions, and BNSF documents and data show that BNSF was actively trying to increase headcount (and thereby reduce carloads per employee) during this time.

[162] Evergy Opening Evidence, p. 31.

[163] Evergy Opening Evidence, pp. 31–32.

[164] According to the unions' table, BNSF's carloads per employee were 175 in 2015 and 176 in 2019.

Figure 10
Carloads per Employee in the Class I Railroads
2010 – 2021



Source: Third Supplemental Comments of the Brotherhood of Maintenance of Way Employees Division/IBT; Brotherhood of Railroad Signalmen; International Association of Sheet Metal, Air, Rail, and Transportation Workers/Mechanical Division; International Association of Boilermakers; International Association of Machinists and Aerospace Workers District #19; National Conference of Firemen and Oilers 32BJ/SEIU; Brotherhood of Locomotive Engineers and Trainmen/IBT and Transport Workers Union of America, Ex Parte No. 770 (Sub. No. 1) Urgent Issues in Freight Rail Service, April 12, 2024, p. 66.

70. Results are similar based on my own analysis of BNSF headcount. **Figure 11** displays BNSF's headcount per loaded unit from 2017 to 2023. It shows that BNSF's headcount tracked loaded units closely from 2015 to 2019 and diverged from loaded units only during the period from the end of the Covid recession through the end of 2022, a period during which BNSF was continuously recalling furloughed workers and/or hiring conductors. Headcount again tracked loaded units closely in 2023. This figure is inconsistent with Evergy's claim that "cost-cutting operations in the years prior to the arrival of Covid … left BNSF ill-positioned to meet Evergy's reasonable and predictable transportation needs in 2022."[165] Instead, it is consistent with BNSF experiencing disruptions due to Covid and crew shortages in line with economywide labor shortages during 2021 and 2022.

[165] Evergy Opening Evidence, pp. 31–32.

Figure 11
Headcount and Loaded Units
BNSF System
2017 – 2022 {{



}}

Source: BNSF_EVERGY_0025775; BNSF_EVERGY_0023105; STB Loaded Units Data.

71. The figures above show that BNSF was not operating with reduced headcount relative to service levels going into Covid and that BNSF's headcount reductions during the Covid pandemic tracked service levels. To further address Evergy's claim that BNSF's 2022 labor shortages were the result of deliberate crew reductions, I have conducted a counterfactual analysis. The counterfactual analysis is designed to assess whether BNSF's crew levels on the Evergy route going into 2021 (which were the result of all of BNSF's prior policies and decisions) would have been adequate in 2022 had BNSF faced labor market conditions in 2021 and 2022 that were more typical.

72. To conduct the counterfactual, I begin with BNSF's actual conductor and engineer headcount at Evergy route stations as of December 2020. As a matter of arithmetic, each month's headcount is equal to the prior month's headcount *plus* successful furlough recalls and new hires during the month *less* attrition during the month.[166] To calculate counterfactual monthly headcount, I assume that

[166] In practice, there is a delay between recalling furloughed employees and crew returning to active duty, so this arithmetic is an approximation.

the Evergy route's furlough recall success rate in each month would not have decreased in 2021 and 2022 relative to the average level from 2017 to 2019 and that non-furlough attrition in each month would not have increased in 2021 and 2022 relative to the average level in 2017 to 2019.[167] To be conservative, I do not assume that BNSF would have been able to hire more conductors during 2021 and 2022 than it actually hired. I additionally conservatively assume that the Evergy route had zero net transfers from other stations within the BNSF system during 2021 and 2022.[168]

73. **Figure 12** displays the results of this analysis. The solid purple line is the Evergy route's actual conductor and engineer headcount. The dashed purple line, Scenario 1, is the Evergy route's counterfactual headcount assuming attrition and furlough recall success rates were at 2017 to 2019 levels. The figure shows that the Evergy route would have had nearly {{ [redacted] }} more conductors and engineers going into 2022 (and over {{ [redacted] }} more conductors and engineers by the end of 2022) had the labor market situation been more in line with BNSF's prior experience. This increase in headcount would have been adequate to meet the crew needs BNSF projected for 2022 in December 2021.[169] By the end of 2022, the counterfactual headcount is over 2,200, and BNSF's December 2021 crew planning process projected that just over {{ [redacted] }} crew would be needed to meet demand over the next twelve months.[170]

74. The other dashed lines in the figure display the results of additional counterfactual scenarios and show that the Evergy route's headcount levels in 2022 would have been adequate even if the Evergy route faced increased attrition rates and/or reduced furlough recall success rates relative to 2017 to 2019 levels. In Scenarios 2 through 4, I assume that attrition rates were higher than the 2017 to 2019 level but not as high as the actual attrition rates the Evergy route experienced in 2022. Scenario 2 has the lowest attrition rates and Scenario 4 has the highest, with the rates increasing by fixed percentages to span the difference between benchmark and actual attrition rates.[171] Similarly, in Scenarios 2 through 4, I assume that furlough recall success rates were lower than the 2017 to 2019 level, but not as low as the

[167] To calculate the average 2017–2019 levels, I take an average of the monthly furlough recall success and non-furlough attrition rates, weighted by the number of furlough recalls and attritions, respectively, in each month for the 2017–2019 period.

[168] This is a conservative assumption as the Evergy route had positive net transfers in each month of 2022. *See*, **Figure 8**.

[169] It also would have returned T&E crew levels to February 2020 levels.

[170] In {{ [redacted] }} If I do not take this {{ [redacted] }} into account, I still find that BNSF would have had adequate crew in the counterfactual scenario. *See*, BNSF_EVERGY_0025770; BNSF_EVERGY_0025768; BNSF_EVERGY_0025775; BNSF_EVERGY_0023105.

[171] In particular, the monthly attrition rates for Scenarios 1, 2, 3, and 4 are {{ [redacted] }} percent, respectively, compared to an actual weighted average monthly attrition rate of {{ [redacted] }} percent in 2022. If the values of counterfactual attrition fall above actual rates in a particular month, the actual rate is used.

actual recall success rates the Evergy route experienced in 2022.[172] Scenario 2 shows that, if the Evergy route had experienced only slightly elevated attrition rates and slightly lower furlough recall success rates relative to 2017 to 2019 levels, but still not as extreme as the actual conditions experienced in 2022, it could have had over {{ [redacted] }} additional conductors and engineers by July 2022. Scenarios 3 and 4 show that, had the Evergy route experienced attrition rates and furlough recall success rates that were even further from its 2017 to 2019 experience, it still could have had over {{ [redacted] }} and {{ [redacted] }} additional conductors and engineers, respectively, by July 2022. To summarize, the counterfactual analyses show that the Evergy route could have achieved its target crew levels had labor market conditions been in line with its historical experience. The analyses also show that the Evergy route's crew levels going into 2021 would have been adequate under alternative scenarios involving labor market conditions that were tighter than the Evergy route's historical experience but less extreme than the conditions the Evergy route actually experienced in 2021 and 2022. [173]

[172] In particular, the furlough recall success rates for Scenarios 1, 2, 3, and 4 are {{ [redacted] }} percent, respectively, compared to an actual weighted average success rate of {{ [redacted] }} percent in 2022. If the values of counterfactual recall success fall below actual rates in a particular month, the actual rate is used.

[173] I have also conducted a counterfactual where I consider the entire BNSF system instead of limiting to the Evergy route. *See*, **Exhibit 17**. The conclusions I outline in this section apply to the BNSF system as well.

Figure 12
Counterfactual Headcount
Evergy Route
2017 – 2022 {{



}}

Sources: BNSF_EVERGY_0023105; BNSF_EVERGY_0025775; BNSF_EVERGY_0025776; BNSF_EVERGY_0023097; BNSF_EVERGY_0025773.

B. Decreases in T&E Crew Between 2019 and 2022 Are Consistent with BNSF Taking Action to Increase Crew Supply While Facing Unprecedented Labor Market Conditions

75. In their Verified Statement, Mulholland and Crowley conduct an analysis of BNSF headcount during 2019 through 2022. They conclude from their analysis that "BNSF reduced its daily train crew staffing levels by { } system-wide, and by { } at crew change locations on the Evergy Route from 2019 to 2022."[174] They further claim that these reductions "outpaced

[174] *Evergy Inc., Evergy Metro, Inc., and Evergy Kansas Central, Inc. v. BNSF Railway Company*, Docket No. NOR 42180, Verified Statement of Robert D. Mulholland and Timonthy D. Crowley, June 25, 2025 ("Mulholland and Crowley Verified Statement"), p. 2.

BNSF's decline in train volumes," which they claim declined by { [redacted] } percent for all trains and { [redacted] } percent for coal trains.[175] Based primarily on this analysis, they conclude that "BNSF's failure to provide the requested coal transportation services to Evergy was attributable primarily to BNSF's decision to reduce its pool of train crews available to provide the requested service."[176]

76. The analysis of Mr. Mulholland and Mr. Crowley is misleading and uninformative for at least two reasons. First, their simple comparisons of headcount between 2019 and 2022 ignore the many substantive changes in context and conditions that occurred between 2019 and 2022. Focusing on changes in labor market conditions, as I explain above, the Covid pandemic had a stark impact on labor markets during the Covid recession, and labor markets were historically tight in 2021 and 2022. For this reason alone, comparisons of headcount between 2019 and 2022 cannot be attributed to BNSF's decisions without further analysis. I also understand that there were changes in demand for freight services during this period. Second, Mr. Mulholland and Mr. Crowley's analysis ignores the fact that BNSF was actively trying to increase headcount during 2022. During this period, BNSF took substantial action to increase crew levels, but faced headwinds due to labor market conditions, as I explain in Section IV.D above.

C. BNSF Implemented Hi-Viz to Increase Crew Availability and Improve Transparency for Employees

77. In its Opening Evidence, Evergy claims that witnesses in the STB's Ex Parte No. 770 proceedings testified that "BNSF policies restricting time off and disincentivizing employees from taking medical or family leave exacerbated tension within the workforce, and that BNSF made 'working as an engineer and a conductor extremely undesirable' by consolidating work in ways that 'stretch[ed] the limits of the true territorial qualifications' and made both recruiting new employees and inducing furloughed employees to return more difficult."[177] Evergy did not, however, provide any analysis of the BNSF policies or their impacts, nor did Evergy provide any analysis of the desirability of T&E jobs at BNSF.

[175] Mulholland and Crowley Verified Statement, pp. 2, 38.

[176] Mulholland and Crowley Verified Statement, p. 3.

[177] Evergy Opening Evidence, p. 32.

78. The policy Evergy alludes to in its opening evidence is presumably the Hi-Viz Attendance Program, which BNSF implemented on February 1, 2022, and modified on June 1, 2022.[178] Hi-Viz introduced a tally system for monitoring employee attendance and availability relative to the company standard. Under Hi-Viz, T&E employees start out with a set number of points, and points can be deducted due to non-attendance and accrued due to attendance. If points are exhausted, the program calls for disciplinary actions.[179] The goal of Hi-Viz was to provide a guideline that set {{ [redacted] }} allowed {{ [redacted] }} and provided {{ [redacted] }}[180]

79. The program was successful in meeting this stated goal of increasing the transparency of attendance expectations and of each employee's real-time status relative to those expectations. This is evidenced by the decrease in attendance incidents after its introduction. **Figure 13** summarizes attendance incidents among T&E employees from 2020 through 2022. The figure shows that there was a {{ [redacted] }}

[178] Marybeth Luczak, "BNSF Modifying 'Hi-Viz' Attendance Policy (UPDATED)," *Railway Age*, May 17, 2022, https://www.railwayage.com/freight/class-i/bnsf-modifying-hi-viz-attendance-policy/.

[179] BNSF_EVERGY_0026044–054, at 044-047.

[180] BNSF_EVERGY_0026044–054, at 044.

Figure 13
Attendance Incidents
T&E Employees
BNSF System
2020 – 2022 {{

[redacted] }}

Source: BNSF_EVERGY_0025918.

80. While Evergy claims that "BNSF made 'working as an engineer and a conductor extremely undesirable,'" Evergy did not provide any analysis of T&E crew shifts, compensation, or benefits, or undertake any other evaluation of the quality of BNSF's T&E jobs.[181] Had Evergy undertaken an analysis of BNSF's T&E jobs, it would have found that the Hi-Viz Attendance Program did not cause a large increase in the number of shifts worked by employees (as would be expected if Hi-Viz caused the jobs to become more onerous).[182] Evergy also would have found that T&E jobs at BNSF are highly compensated and provide generous benefits as well as paid training and advancement opportunities.

[181] Evergy Opening Evidence, p. 32.

[182] In particular, the average number of monthly shifts for T&E employees was {{ [redacted] }} from February 2022 to December 2022 (i.e., after the adoption of the Hi-Viz Attendance Program) compared to {{ [redacted] }} from February 2021 to December 2021

81. A review of conductor trainee job postings along the Evergy route with expected start dates in early 2023 shows that BNSF offered an average daily compensation rate during training of approximately { [redacted] } per day and an annual salary range following training of { [redacted] }[183] This compares favorably with the median pay for full-time U.S. workers whose highest level of education was a high school diploma of $170 per day in 2022, translating approximately to $43,000 per year.[184] In addition, BNSF provides new conductors with up to 17 weeks of paid classroom and on-the-job training after hire. BNSF conductors also have opportunities to train for engineer positions as they gain seniority.[185] Also, BNSF's benefits include health, vision, and dental insurance, a 401(k) plan, an employee stock purchase plan, paid sick leave and vacation days, as well as the Railroad Retirement Board annuity, which is more generous than social security and available to individuals after 30 years of service rather than at retirement age.[186]

VI. Conclusion

82. Based on my review of academic literature and government studies as well as my own analysis of labor market data, I have reached the conclusion that the labor market situation in the U.S. from February 2020 through 2022 was without precedent. During the Covid recession from March through April 2020, unemployment skyrocketed as employees were furloughed and laid off, but labor demand bounced back in the second half of 2020 and continued to increase thereafter. Labor supply was

(i.e., the comparable months in the year before the adoption of the Hi-Viz Attendance Program). I define a shift to be a unique regular pay observation for a given employee on a given day. *See*, BNSF-X-EVERGY-0000035.

[183] BNSF_EVERGY_0021759-762, at 759; BNSF_EVERGY_0021641-644, at 641; BNSF_EVERGY_0021673-676, at 673; BNSF_EVERGY_0021677-680, at 677; BNSF_EVERGY_0021687-691, at 687. These estimated earning numbers are conservative as a review of payroll data shows that BNSF T&E employees made an average of {{ [redacted] }} in 2022. *See*, BNSF-X-EVERGY-0000035; BNSF_EVERGY_0025773. This is limited to total earnings for conductors, engineers, and brakemen who (i) had at least one regular pay record in a given year, (ii) were not new hires in that year, and (iii) did not attrit in that year.

[184] The BLS reports weekly median earnings for this demographic group as $853. Therefore, assuming the employee works five days a week and no more than 50 weeks a year, I calculate the daily rate as $853 / 5 = $170 and the annual rate as $853 x 50 = $42,650. "Education Pays, 2022," *U.S. Bureau of Labor Statistics*, May 2023, https://www.bls.gov/careeroutlook/2023/data-on-display/education-pays.htm.

[185] BNSF_EVERGY_0021759-762, at 759-761; BNSF_EVERGY_0021641-644, at 641-643; BNSF_EVERGY_0021673-676, at 673-675; BNSF_EVERGY_0021677-680, at 677-679; BNSF_EVERGY_0021687-691, at 687-689.

[186] *See*, "5 BNSF Benefits You Need to Know About!" *BNSF* (via Wayback Machine), 2022, https://web.archive.org/web/20221129160536/https://cdn.phenompeople.com/CareerConnectResources/BRSBRWUS/documents/ScheduledHighlights-1662762891479.pdf. The benefit for a stylized worker designed to reflect the "medium earnings" over the lifecycle would receive $26,736 per year under railroad retirement, compared with $17,208 under social security. *See also*, Kevin Whitman, "An Overview of the Railroad Retirement Program," *Social Security Administration*, October 2008, https://www.ssa.gov/policy/docs/ssb/v68n2/v68n2p41.html.

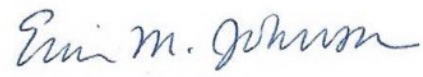
slower to recover after the pandemic, leading to widespread labor shortages, including in transportation-related industries. I have also concluded that BNSF system and Evergy route labor markets were extremely tight during 2022, and the rail transportation industry experienced declining employment and low unemployment rates during 2022.

83. Based on my analysis of BNSF documents and data, I have concluded that BNSF took considerable actions to match crew supply to demand during the Covid pandemic and its aftermath. I have also concluded that BNSF's actions, and the labor market response to its actions were consistent with the experience of employers in the national economy, as reflected in national statistics, during the Covid recession and its aftermath.

84. Based on my review of Evergy's Opening Evidence related to labor market issues, I have concluded that Evergy did not establish that crew shortages were the consequence of BNSF's deliberate actions. Rather, I have found that Evergy's Opening Evidence is entirely consistent with BNSF having taken reasonable actions in the face of once-in-a-century labor market conditions that BNSF could not have reasonably anticipated.

Verification

I, Erin M. Johnson, verify under penalty of perjury that I have read this Verified Statement on behalf of BNSF, that I know the contents thereof, and that the same are true and correct to the best of my knowledge. Further, I certify that I am qualified and authorized to file this statement.



Erin M. Johnson

Executed on 11/20/2025.

List of Exhibits

Exhibit 1: Curriculum Vitae of Erin M. Johnson, Ph.D.

Exhibit 2: Unemployment Rate, United States, 2012 – 2022

Exhibit 3: Unfilled Job Openings Rate for All Industries vs. the Transportation, Warehousing, and Utilities Industry, United States, 2001 – 2022

Exhibit 4: Labor Force Participation Rate, United States, 2012 – 2022

Exhibit 5: Quits Rate for All Industries vs. the Transportation, Warehousing, and Utilities Industry, United States, 2001 – 2022

Exhibit 6: Unemployment Rate, United States vs. BNSF System States vs. Evergy Route States, 2017 – 2022

Exhibit 7: Labor Force Participation Rate, United States vs. BNSF System States vs. Evergy Route States, 2017 – 2022

Exhibit 8: Unemployment Rate, BNSF System States vs. Evergy Route PUMAs, 2017 – 2022

Exhibit 9: Unfilled Job Openings Rate, United States vs. BNSF System States vs. Evergy Route States, 2017 – 2022

Exhibit 10: Quits Rate, United States vs. BNSF System States vs. Evergy Route States, 2017 – 2022

Exhibit 11: Employment Level for Rail Transportation Industry, United States, 2001 – 2022

Exhibit 12: Unemployment Rate for Rail Transportation Industry, United States, 2017 – 2022

Exhibit 13: Furlough Recalls for Conductors and Engineers, BNSF System vs. Evergy Route, 2019 – 2022

Exhibit 14: Stock of Furloughs for Conductors and Engineers, BNSF System vs. Evergy Route, 2019 – 2022

Exhibit 15: Stock of Furloughs for Conductors and Engineers, Evergy Route Stations, 2019 – 2022

Exhibit 16: Attrition Rate for Conductors and Engineers, BNSF System vs. Evergy Route, 2017 – 2022

Exhibit 17: Counterfactual Headcount, BNSF System, 2017 – 2022

Erin Johnson
Director, NERA
99 High Street, Boston, MA 02110
Tel: +1 617 417 2155
erin.johnson@nera.com
www.nera.com

Exhibit 1

ERIN JOHNSON
Director

Erin Johnson is an expert in labor and antitrust economics. Dr. Johnson's experience includes matters involving alleged employment discrimination, wage fixing, no-poach agreements, anticompetitive information exchange, price fixing, monopolization, refusal to deal, non-solicit and noncompete agreements, and union disputes. Dr. Johnson's experience spans industries, including agriculture, healthcare, pharmaceuticals, consumer goods, industrial products, and technology. Dr. Johnson has served as an expert in class action and single plaintiff litigations.

Prior to joining NERA, Dr. Johnson was a faculty member at the Massachusetts Institute of Technology in the Sloan School of Management and in the economics department at Wellesley College. She was also a Faculty Research Fellow at the National Bureau of Economic Research. Dr. Johnson has taught courses in microeconomics and industrial organization and published peer reviewed research.

Dr. Johnson is affiliated with the American Economic Association and the American Bar Association. She earned her Ph.D. in Economics from the University of California, Berkeley, and her A.B. in Economics from Princeton University. She is from Oklahoma and lives in Boston.

Education

University of California, Berkeley
Ph.D., Economics, 2010

Princeton University
A.B., Economics, 2001

Professional Experience

	NERA
2023-present	Director
	Data for Decisions, LLC
2018-2023	Senior Economist/Practice Leader
	Wellesley College
2016-2020	Visiting Lecturer, Department of Economics
	Wellesley College
2016-2017	Research Scientist, Wellesley Centers for Women
	Massachusetts Institute of Technology
2010-2016	Assistant Professor, Sloan School of Management
	National Bureau of Economic Research
2013-2018	Faculty Research Fellow
	The Boston Consulting Group
2001-2003	Associate

Professional Activities

American Bar Association

American Economic Association

Referee for various economic journals:

Quarterly Journal of Economics, American Economic Review, Journal of Public Economics, Journal of Human Resources, Management Science, American Economic Journal: Public Policy, American Economic Journal: Applied Economics, Journal of Health Economics, Health Affairs, NSF Doctoral Grant Review, Review of Economics and Statistics, Economics and Human Biology

Honors, Grants, and Distinctions

National Institutes of Health (Co-PI with M. Rehavi) RO3HD081369, 2014.

Graduate Student Award in Public Policy Research, UC Berkeley, 2010.

Dean's Normative Time Fellowship, UC Berkeley, 2007.

UC Labor Employment Research Fund Dissertation Fellowship, 2007.

Walter C. Sauer Thesis Award, Princeton University, 2001.

Expert Reports / Testimony

Declaration on behalf of Bright Horizons in connection with *Chelsea Rutter and Magdalena Chavez v. Bright Horizons Family Solutions, Inc. d/b/a Bright Horizons Children's Centers, Inc*., State of Washington Superior Court, Western Kings County, Case No. 22-2-19810-0 SEA. Report: June 13, 2025.

Expert report on behalf of Gilead in connection with *Blase Tucci v. Gilead Sciences, Inc.*, Civil Action No. 2:21-cv-01859. Report: June 5, 2025.

Testimony on behalf of UNFI in connection with arbitration between Teamsters Locals 117 and 313 and United Natural Foods, Inc., FMCS Case No. 190430-06670. Report: February 21, 2025. Testimony: March 13, 2025.

Testimony on behalf of Sutter Health in connection with NLRB Cases 20-CA-295261, 20-CA-295278, 20-CA-295287, 20-CA-295288, 20-CA-295292, 20-CA-295295, 20-CA-295296, 20-CA-295297, 20-CA-295298, 20-CA-295331, 20-CA-295496, 20-CA-295507, 20-CA-295514, 32-CA-295420, 32-CA-295430. Testimony: September 17, 2024.

Expert report on behalf of Dell Technologies in connection with *Cicilia Gilbert v. Dell Technologies,* Case No. 1:19-cv-01930. Report: May 26, 2021.

Expert report on behalf of Husky Energy, Inc. in connection with *Jasen Bruzek et al. v. Husky Energy Inc. et al.,* United States District Court, Western District of Wisconsin, Case No. 3:18-cv-00697. Report: August 18, 2020.

Selected Experience

- Retained as an expert witness on behalf of Defendant in a single-plaintiff termination case in the software industry.

- Retained to calculate damages on behalf of Defendant in a mediation relating to breach of contract for union employees.
- Retained as an expert witness on behalf of Defendant in a class action gender discrimination case involving pay and promotion.
- Worked on a class action litigation involving allegations of price fixing in agricultural markets.
- Worked on class action litigations involving allegations of monopolization and exclusionary conduct in the healthcare industry, in agriculture, and in technology.
- Worked on divestiture and merger retrospectives in wholesale goods and consumer goods industries.
- Retained to testify regarding damages in a litigation involving the breach of noncompete and non-solicit agreements.
- Worked on a class action litigation involving allegations of wage fixing (class certification stage).
- Worked on a class action litigation involving allegations of a no-poach agreement (merits and damages stage).

Invited Seminars and Presentations

Harvard/BU/MIT Health Seminar, MIT Industrial Liason Program Healthcare Meeting, Yale, Ohio State, ASHE Meetings (presenter and discussant), NBER Summer Institute (Healthcare), HEC Montreal; Northwestern, Kellogg School of Management; MIT Sloan; NBER (Organizations and Healthcare Delivery Meeting), NBER Summer Institute (Healthcare Meeting); MIT Economics Department; Stanford; University of Pennsylvania, Wharton School; Carnegie Mellon, Heinz School; Northeastern University, Boston University School of Management; University of Chicago, Harris School; MIT Sloan School

Publications

"Economic Evidence in Criminal Labor Cases," *Competition Journal of the Antitrust and Unfair Competition Law Section of the California Lawyers Association* (October 2024). See https://competition.scholasticahq.com/article/124373-economic-evidence-in-criminal-labor-cases

"Physicians Treating Physicians: Information and Incentives in Childbirth," (with M. Rehavi), *American Economic Journal: Economic Policy* (February 2016). See https://www.aeaweb.org/articles?id=10.1257/pol.20140160

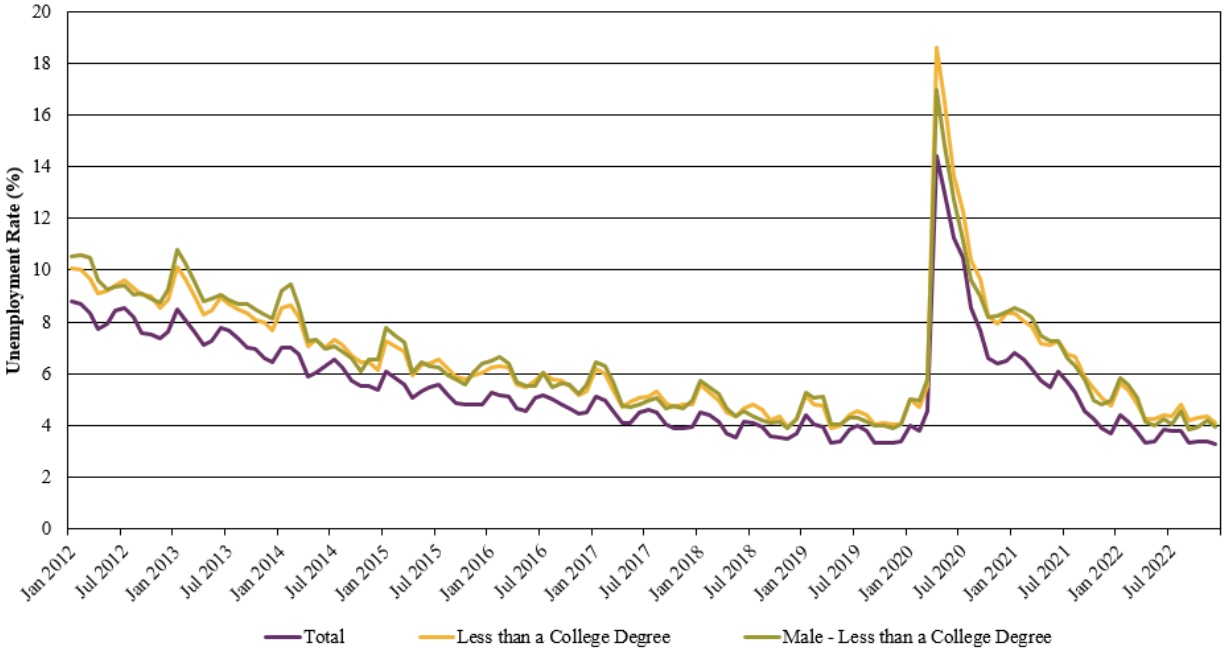
"Physician Induced Demand," *Encyclopedia of Health Economics* (2014). See https://www.sciencedirect.com/science/article/pii/B9780123756787008051

White Papers and Research Under Review

"Ability, Learning and the Career Path of Cardiac Specialists," See http://www.mit.edu/~erinmj/files/Draft_042011.pdf

"Provider Continuity and Patient Outcomes," (with M. Marit Rehavi, Daniela Carusi, M.D. and David Chan, M.D.). See https://www.nber.org/papers/w22666

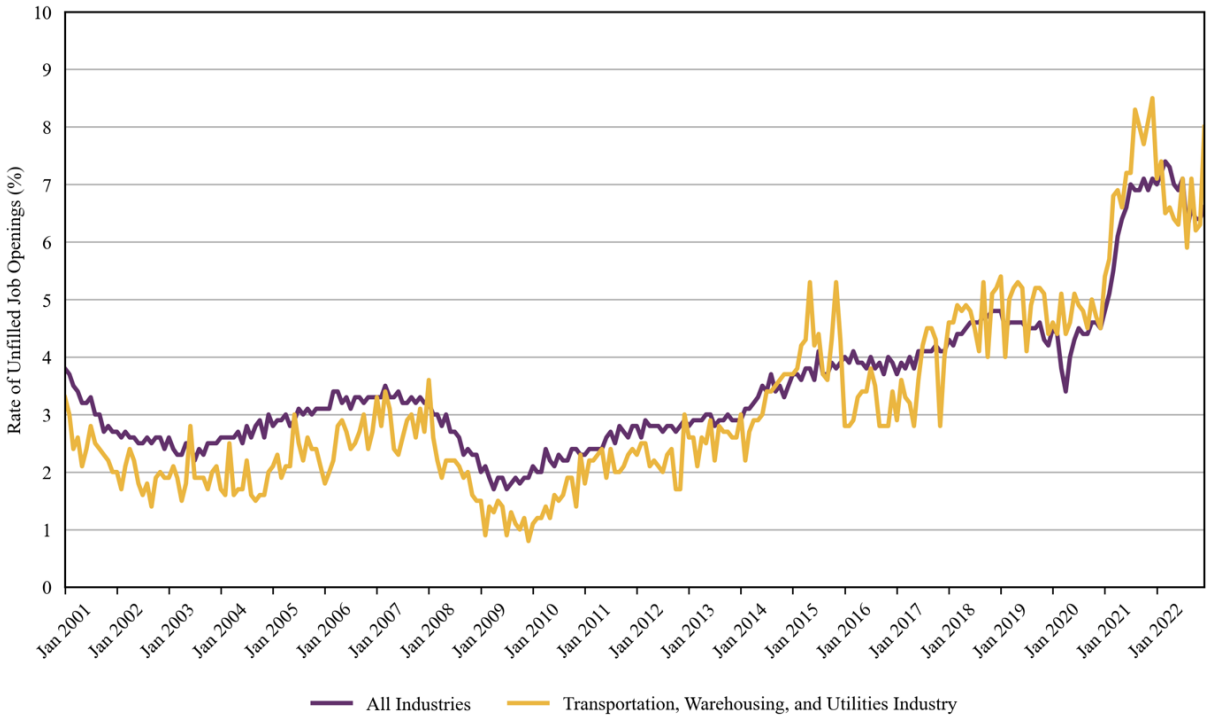
Exhibit 2
Unemployment Rate
United States
2012 – 2022



Notes: Data are reported monthly. Unemployment rate is defined as the percentage of the civilian noninstitutional labor force (age sixteen and older) that is unemployed and looking for work at the time of the survey. Less than a College Degree includes individuals who have completed high school and may have completed some college, but did not receive a degree.

Source: Current Population Survey (CPS), Bureau of Labor Statistics.

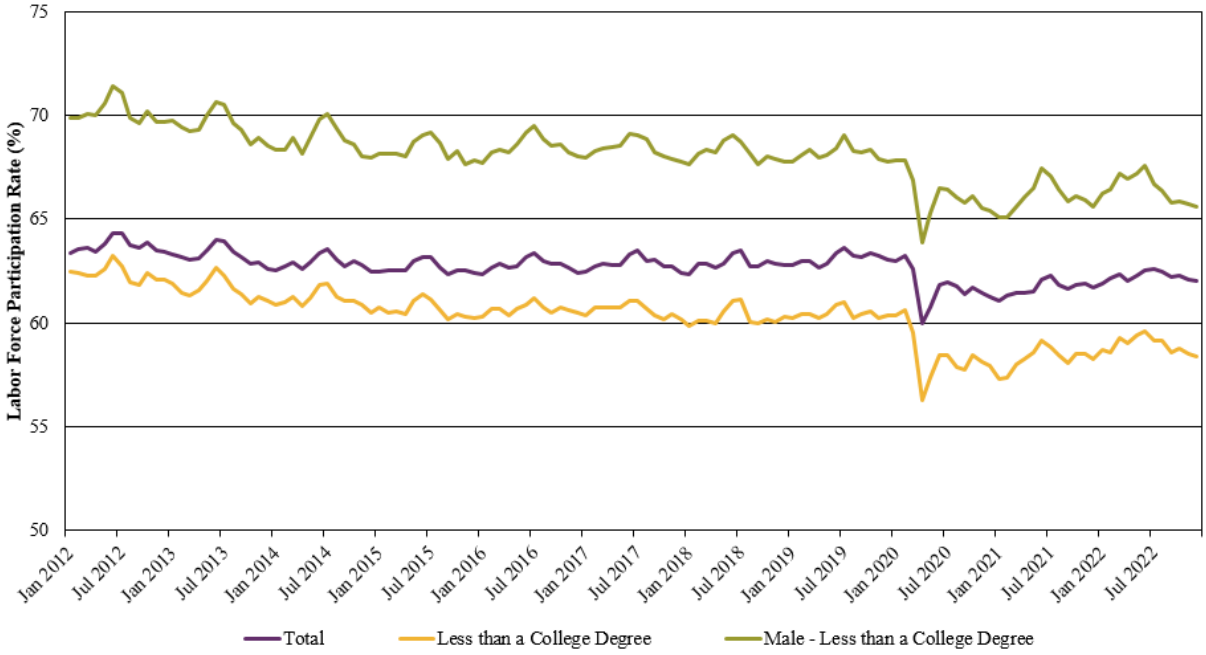
Exhibit 3
Unfilled Job Openings Rate for All Industries vs. the Transportation, Warehousing, and Utilities Industry
United States
2001 – 2022



Notes: Data are reported monthly and are seasonally adjusted. The unfilled job openings rate is calculated as the number of total job openings divided by the sum of total employment and job openings, multiplied by one hundred, for all nonfarm employees. The Transportation, Warehousing, and Utilities Industry is identified by North American Industry Classification System (NAICS) sectors 22, 48, and 49.

Source: Job Openings and Labor Turnover Survey (JOLTS), Bureau of Labor Statistics.

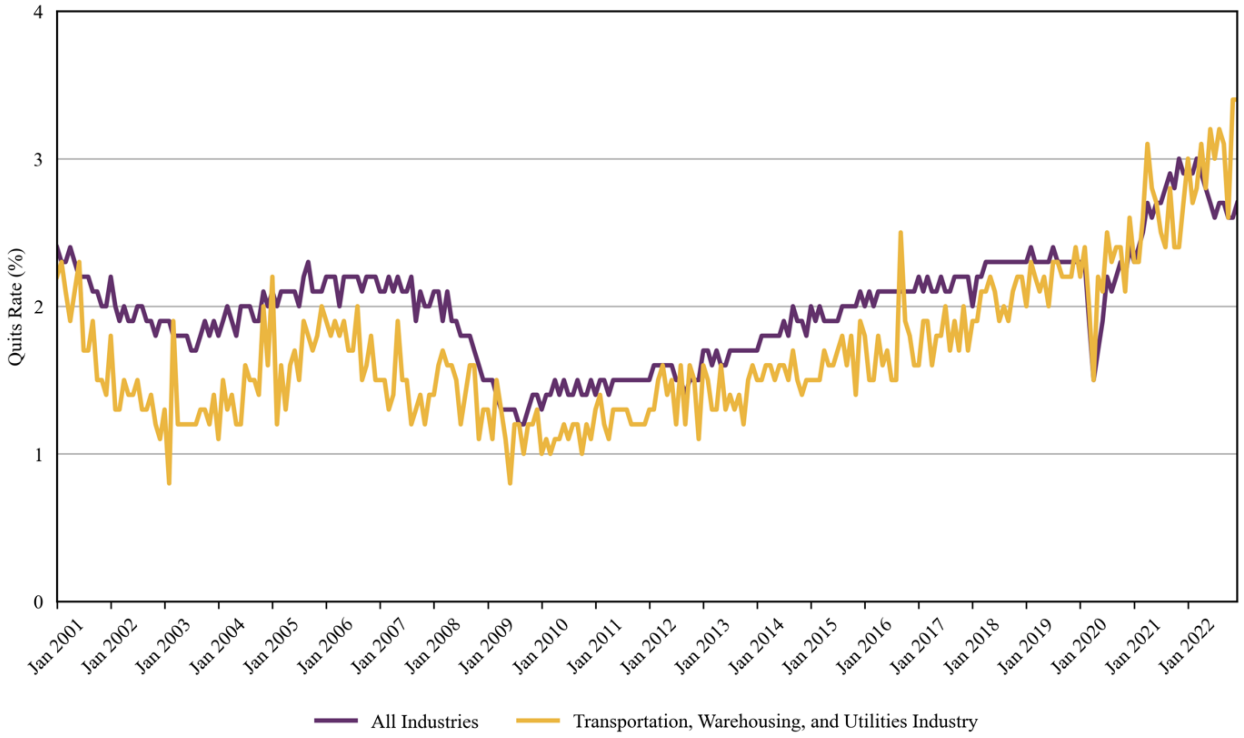
Exhibit 4
Labor Force Participation Rate
United States
2012 – 2022



Notes: Data are reported monthly. Labor force participation rate is defined as the percentage of the civilian noninstitutional population (age sixteen and older) that is either employed or unemployed and looking for work at the time of the survey. "Less than a College Degree" includes individuals who have completed high school and may have completed some college, but did not receive a degree.

Source: Current Population Survey (CPS), Bureau of Labor Statistics.

Exhibit 5
Quits Rate for All Industries vs. Transportation, Warehousing, and Utilities Industry
United States
2001 – 2022



Notes: Data are reported monthly and are seasonally adjusted. For all nonfarm employees, the quits rate is calculated as the number of quits during the month as a percent of employment. The Transportation, Warehousing, and Utilities Industry is identified by North American Industry Classification System (NAICS) sectors 22, 48, and 49.

Source: Job Openings and Labor Turnover Survey (JOLTS), Bureau of Labor Statistics.

Exhibit 6
Unemployment Rate
United States, BNSF System, and Evergy Route States
2017 – 2022 {{

[redacted]

}}

Source: BNSF_EVERGY_0025775; BNSF_EVERGY_0023105; Local Area Unemployment Statistics (LAUS), Bureau of Labor Statistics.

Exhibit 7
Labor Force Participation Rate
United States, BNSF System, and Evergy Route States
2017 – 2022 {{

[redacted]

}}

Source: BNSF_EVERGY_0025775; BNSF_EVERGY_0023105; Local Area Unemployment Statistics (LAUS), Bureau of Labor Statistics.

Exhibit 8
Unemployment Rate
BNSF System and Evergy Route PUMAs
2017 – 2022 {{

[redacted]

}}

Source: BNSF_EVERGY_0023105; BNSF_EVERGY_0025771; BNSF_EVERGY_0025775; BNSF-X-EVERGY-0000035; American Community Survey (ACS), Bureau of Labor Statistics.

Exhibit 9
Unfilled Job Openings Rate
United States, BNSF System States, Evergy Route States
2017 – 2022 {{



}}

Source: BNSF_EVERGY_0025775; BNSF_EVERGY_0023105; Job Openings and Labor Turnover Survey (JOLTS), Bureau of Labor Statistics.

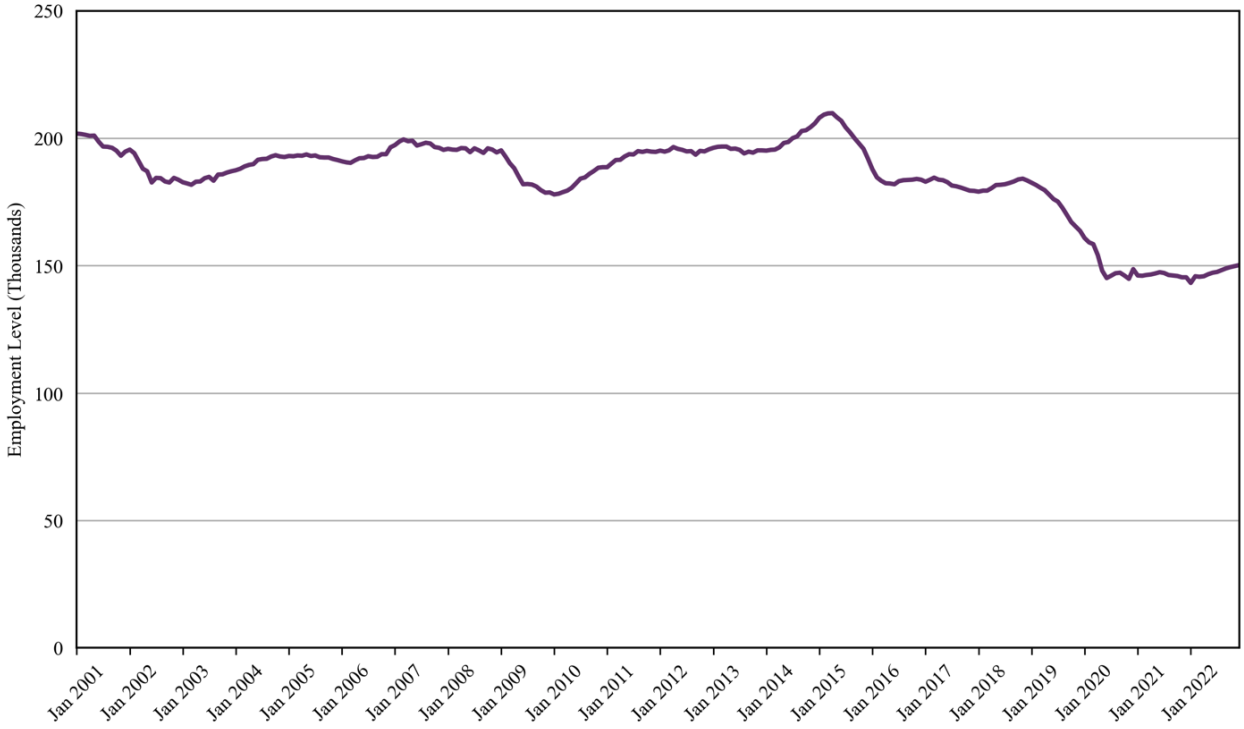
Exhibit 10
Quits Rate
United States, BNSF System, and Evergy Route
2017 – 2022 {{

[redacted]

}}

Source: BNSF_EVERGY_0025775; BNSF_EVERGY_0023105; Job Openings and Labor Turnover Survey (JOLTS), Bureau of Labor Statistics.

Exhibit 11
Employment Level for Rail Transportation Industry
United States
2001 – 2022



Notes: Data are reported monthly and are seasonally adjusted. Employment level is defined as the total number of workers employed in the Rail Transportation Industry in the United States. The Rail Transportation Industry is identified by North American Industry Classification System (NAICS) code 482.

Source: U.S. Department of Labor, Bureau of Labor Statistics, Current Employment Statistics (Washington, DC: Monthly Issues), series ID CES4348200001.

Exhibit 12
Unemployment Rate in Rail Transportation Industry
United States
2017 – 2022

Year	United States	Less than a College Degree	Male Less than a College Degree
(a)	(b)	(c)	(d)
2017	1.6 %	1.7 %	1.7 %
2018	1.4	1.4	1.3
2019	1.5	1.3	1.2
2020	3.7	2.9	2.9
2021	3.5	3.6	3.5
2022	2.1	2.4	2.3

Notes: Data are reported annually. Unemployment rate is defined as the percentage of the civilian noninstitutional (age sixteen and older) labor force that is unemployed and looking for work at the time of the survey. Less than a College Degree includes individuals who have completed high school and may have completed some college, but did not receive a degree.

Source: American Community Survey (ACS), Bureau of Labor Statistics.

Exhibit 13
Furlough Recalls
Conductors and Engineers
BNSF System and Evergy Route
2019 – 2022 {{



}}

Source: BNSF_EVERGY_0023097.

Exhibit 14
Stock of Furloughs
Conductors and Engineers
BNSF System and Evergy Route
2019 – 2022{{

[redacted]

[redacted] }}

Source: BNSF_EVERGY_0025775; BNSF_EVERGY_0023105.

Exhibit 15
Stock of Furloughs
Conductors and Engineers
Evergy Route Stations
2019 – 2022 {{

[redacted] }}

Source: BNSF_EVERGY_0025775; BNSF_EVERGY_0023105.

Exhibit 16
Attrition
Conductors and Engineers
BNSF System and Evergy Route
2017 – 2022 {{

[redacted]

}}

Source: BNSF_EVERGY_0025773; BNSF_EVERGY_0025775; BNSF_EVERGY_0023105.

Exhibit 17
Counterfactual Headcount
BNSF System
2017 – 2022 {{

[redacted]

}}

Sources: BNSF_EVERGY_0023105; BNSF_EVERGY_0025775; BNSF_EVERGY_0025776; BNSF_EVERGY_0023097; BNSF_EVERGY_0025773.

Verified Statement of
Mr. Michael Baranowski and Mr. Zebrowski

BEFORE THE
SURFACE TRANSPORTATION BOARD

DOCKET NO. NOR 42180

EVERGY, INC.,
EVERGY METRO, INC. and
EVERGY KANSAS CENTRAL, INC.

Complainants,

v.

BNSF RAILWAY COMPANY

Defendant.

BNSF RAILWAY COMPANY'S REPLY STATEMENT AND EVIDENCE

Verified Reply Statement of Michael R. Baranowski and Nathaniel S. Zebrowski

Table of Contents

1. Introduction 1
2. Executive Summary 2
3. BNSF's Service to Evergy in 2022 7
3.1. Network congestion was increasing going into 2022 and, as part of its successful service recovery efforts, BNSF appropriately removed {{ }} trainsets from unit coal train service in March 2022, { } 8
3.1.1. There was unprecedented unpredictability and volatility affecting the freight rail network in the post-pandemic period 9
3.1.2. To address mounting network congestion, freight railroads reduced cars on line 13
3.1.3. BNSF's service recovery plan included removal of {{ }} coal trainsets from service, and { }. 17
3.1.4. The {{ }} in deliveries to Iatan after BNSF { } set confirms BNSF acted appropriately. 21
3.1.5. BNSF's service recovery worked, but local signs of a still-fragile network warranted a cautious approach to { } 22
3.2. Evergy received {{ }} at Iatan in the first half of 2022, and alleged shortfalls in this period were a function of { } nominations. 24
3.2.1. BNSF's deliveries {{ }} Iatan's burn from August 2021 through the first half of 2022 25
3.2.2. Evergy nominated {{ }} than Iatan could have received in the first half of 2022. 27
3.2.3. Evergy's nominations for Iatan in spring 2022 conflicted with the number of sets Evergy approved in service 31
3.2.4. Evergy's nominations had long been { }. 32
3.2.5. Iatan entered summer with a {{ }} stockpile and inventory levels {{ }}. 34
3.3. When Evergy belatedly { } and dramatically increased its burn in the summer of 2022, BNSF was still able to partially accommodate Evergy. 36
3.3.1. Evergy reversed course just before summer and { } 36

3.3.2. Evergy ramped up its burn in summer of 2022 quicker than practically {{ [redacted] }}, and stockpiles accordingly began to decline. 37

3.3.3. BNSF quickly responded when Iatan's stockpile first dropped below {{ [redacted] }} in July 2022. 39

3.3.4. The benefit to Evergy from BNSF {{ [redacted] }} deliveries was far more than that to {{ [redacted] }}. 40

3.4. BNSF couldn't fully accommodate Evergy's expressed desire for { [redacted] } due to a temporary crew shortage in 2022. 45

3.4.1. A temporary crew shortage occurred in 2022 due to factors outside of BNSF's control. 45

3.4.2. {{ [redacted] }} coal and grain demand contributed to the temporary crew shortage in 2022. 51

3.4.3. There was not a stand-alone locomotive shortage in 2022. 55

3.5. The temporary crew shortage and associated operational effects drove BNSF's inability to { [redacted] } trainset to Iatan until December 2022. 56

3.5.1. Operations along the Evergy route and specifically for the Iatan lane were strained during this period. 57

3.5.2. Many {{ [redacted] }} had more urgent need for increased service than Evergy. 61

3.5.3. Based on delivery projections and historical burn rates, Iatan's stockpile was projected to and did remain at {{ [redacted] }} levels with { [redacted] } trainsets in service. 62

3.5.4. During the temporary crew shortage, {{ [redacted] }} 63

3.6. BNSF's service during the period of temporary crew shortage was sufficient to sustain Evergy's normal operations. 66

3.6.1. BNSF's service to Evergy during the second half of 2022 was {{ [redacted] }} received. 66

3.6.2. Iatan's burn patterns in the summer and fall of 2022 were comparable to historical levels, even in the fall when Evergy claimed it could have burned much more coal but for BNSF's alleged service failures. 68

3.6.3. Evergy did not exercise several available options for increased service to Iatan. 70

3.6.4. BNSF's service to Iatan and Lawrence was {{ [redacted] }} during the height of the temporary crew shortage. 72

3.6.5. Lawrence received better coal service than {{ [redacted] }} 73

4. Mischaracterizations and Omissions in Ms. Tucker's Verified Statement 74

4.1. Ms. Tucker's assertion that BNSF began { [redacted] } in August 2021 ignores Evergy's decreasing burn and increasing stockpiles 75

4.2. Ms. Tucker's comparison of 2022 deliveries to 2017-21 deliveries ignores how circumstances differed in 2022. 76

4.3. Ms. Tucker's assessment of service levels based only on final CFT nominations ignores the many problems with Evergy's final CFT nominations in 2022 78

4.4. Ms. Tucker downplays the extent of { [redacted] } in Evergy's nominations 80

4.5. Ms. Tucker neglects to mention Evergy's { [redacted] }. 83

4.6. Ms. Tucker wrongly tries to fault BNSF for { [redacted] } at Iatan 85

5. Issues and Oversights in Messrs. Mulholland & Crowley's Joint Verified Statement 87

5.1. Messrs. Mulholland & Crowley mistake a temporary shortage in crew resources in 2022 for a structural changes in BNSF's operating plan 87

5.2. Messrs. Mulholland & Crowley's assessment of service levels is flawed 94

6. Flawed Assumptions in Evergy's Requested Damages 94

6.1. Evergy's inventory management damages calculation is based on flawed premises and unsupported cost assumptions. 95

6.2. Evergy has not demonstrated why BNSF should be responsible for the train set storage costs it incurred in 2022. 96

7. The Role of Stockpiles, Nominations Commitments, and Set Management in Coal Network Operations 97

7.1. Coal-burning plants are accustomed to ratable coal deliveries and manage peak seasonal burn by drawing from stockpiles. 97

7.2. For high volume customers, it is well-established and most efficient for railroads to secure reliable volume commitments. 99

7.3. It is most efficient for railroads to manage their own network operations and not permit customers to dictate terms. 100

Verified Statement of Michael R. Baranowski & Nathaniel S. Zebrowski

1. Introduction

We are Michael R. Baranowski and Nathaniel S. Zebrowski of FTI Consulting. Mr. Baranowski is a Senior Managing Director of FTI Consulting, Inc. and leader of the firm's Network Industries Strategies ("NIS") practice. Since 1980, Mr. Baranowski has been involved in projects analyzing the engineering, operational, competitive, and financial aspects of the railroad industry. Mr. Baranowski has testified before the Surface Transportation Board ("STB"), the Competition Bureau Canada, state and federal courts, and in arbitrations. Mr. Zebrowski is a Senior Managing Director in FTI's NIS practice. Mr. Zebrowski joined the practice in 2011 and has fifteen years of experience analyzing freight railroad traffic patterns, operations, and costs including developing numerous evidentiary submissions to the STB, federal courts, and arbitration panels. Details of our backgrounds and qualifications are set forth in Exhibits 1 and 2 to this Verified Statement.

In their Opening Evidence filed on June 25, 2025,[1] the Complainants – Evergy, Inc; Evergy Metro, Inc.; and Evergy Kansas Central, Inc. (collectively "Evergy") – allege that BNSF Railway Company ("BNSF") violated its common carrier obligation by failing to provide adequate rail service upon reasonable request. Specifically, Evergy claims that in 2022 BNSF did not transport its requested amounts of coal from mines in the Powder River Basin to two of its generation stations in the vicinity of Kansas City. These two stations are the Iatan Generating Station ("Iatan") and the Lawrence Energy Center ("Lawrence"). Evergy asserts that in 2022

[1] *See* Complainants' Opening Evidence, Surface Transportation Board, Docket No. NOR 42180 (Evergy, Inc., Evergy Metro, Inc., and Evergy Kansas Central, Inc. v. BNSF Railway Co.), Doc. No. 309705 (June 25, 2025)

BNSF's coal deliveries fell roughly two million tons below what it asked for and as a result it experienced damages of over $22 million.

Following these submissions, and as part of BNSF's Reply Evidence, we have been asked by counsel for BNSF to:

a) Identify and evaluate the operational facts and relevant data pertaining to Evergy's requests and BNSF's provision of service to Evergy in 2022, including the unique circumstances that BNSF faced during the COVID-19 pandemic and aftermath, and

b) Review the Verified Statement of Jessica L. Tucker ("Ms. Tucker" and "Tucker V.S."), the Verified Statement of Michael Crosby ("Mr. Crosby" and "Crosby V.S."), and the Joint Verified Statement of Robert D. Mulholland and Timothy D. Crowley ("Messrs. Mulholland and Crowley" and "Mulholland and Crowley V.S.") provided in Evergy's Opening Evidence and identify errors, omissions, and/or oversights contained in their claims and analysis.

2. Executive Summary

Based on our review, we conclude that a proper evaluation of the service BNSF provided Evergy in 2022 should account for the following operational facts:

1. Going into 2022, congestion on the U.S. rail network, including on BNSF, had risen to unsustainable levels and needed to be addressed. This was brought on by a rapid resurgence in demand following COVID lockdowns unforeseen by observers across the economy, unprecedented instability in the global supply chain, and novel effects of the "Great Resignation" on labor markets discussed by BNSF witness Dr. Erin Johnson.

2. BNSF successfully implemented the playbook actions required to decongest its network, which included temporarily removing {{ [redacted] }} coal trainsets in March 2022, but the network remained fragile throughout 2022 due to a temporary crew shortage.

3. { [redacted] }, and for good reason – Iatan had one of the largest stockpiles and lowest burn rates among {{ [redacted] }} in early 2022, was struggling to productively use its { [redacted] } sets in service and beset by serious { [redacted] } issues. Additionally, Evergy was

{ } Iatan's coal nominations[2] at this time while most of {{ }} theirs.

4. Lawrence, the much smaller of the two plants, { } and received { } service throughout 2022, which resulted in BNSF delivering { } coal than Evergy had nominated for Lawrence at the beginning of the year. Any alleged delivery shortfalls for Lawerence were due to Evergy { } its nominations for Lawrence by nearly { } than its initial annual declaration. Consistent with its policy of { }, BNSF {{ }} deliveries by {{ }} in the following months.[4] This was an {{ }} compared to other coal shippers that fell below { } in 2022.

5. Iatan, the much larger of the two plants, was flush with coal throughout the first half of 2022 with stockpiles both well above historical levels and {{ }}. BNSF delivered more coal to Iatan in this period with { } sets than it had with { } due to { }. There was {{ }} for BNSF to deliver any more coal than it did in the first half of 2022 without {{ }} This, among other things, shows that Evergy's nominations throughout the first half of the year were { } and that there were no legitimate shortfalls accumulating during this time period.

6. In May 2022, flush with coal at Iatan and having consistently { } nominations over the past several months, Evergy sharply reversed course and { } for the second half of 2022. This belated { } preceded only slightly Iatan's distinction of having the {{ }} highest ramp up in summer coal burn among all BNSF-served coal plants on the Alliance Corridor.[5] Burn rates began to skyrocket in June, and, as a result, Iatan's stockpile went from being {{ }}[6] tons at the end of May, to {{ }}[7] on June 30 (which still represented an inventory of almost {{ }} days of maximum burn[8]).

7. BNSF { } to Iatan in mid-July, just days after BNSF had learned that Iatan's stockpile had {{ }}. Deliveries

---

[2] Nominations are also referred to as "CFT Nominations" (representing the requests BNSF customers make via BNSF's Coal Forecast Tool).
[3] *See* workpaper "Executive Summary.xlsx" at tab "Lawrence Nominations Increase"
[4] *See* Figure 58
[5] *See* workpaper "Executive Summary.xlsx" at tab "Iatan Summer Burn Ramp-Up Rank"
[6] *See* workpaper "Section 3.2.xlsx" at tab "F22" at cell F95
[7] *See* workpaper "Section 3.2.xlsx" at tab "F22" at cells E125 and F125
[8] *See* workpaper "Section 3.2.xlsx", at tab "Iatan Days at Max Burn-June 30".

{{ [redacted] }} in the August to November period with { [redacted] } in service compared to the March to June period with { [redacted] } in service. This {{ [redacted] }} for Iatan was {{ [redacted] }} than the {{ [redacted] }} BNSF's other coal shippers received during this time period.[9]

8. The period when skyrocketing burn turned Iatan from a plant {{ [redacted] }} with coal in spring to desiring {{ [redacted] }} in the summer and fall of 2022 coincided with the height of the temporary crew shortage on the Evergy route. { [redacted] } show BNSF followed its traditional and logical process for projecting crew need that was responsive to changing conditions, but BNSF nonetheless had over {{ [redacted] }} fewer engineers and conductors along the Evergy route than its projected need.[10] This shortage was driven by novel challenges in hiring crew discussed by Dr. Johnson and exacerbated by high levels of grain traffic and uniquely sharp increases in coal demand.

9. Due to the temporary crew shortage, operations were precarious on the Evergy route during the summer and fall of 2022 and BNSF was unable to { [redacted] } Many other coal customers had {{ [redacted] }} During this period BNSF was {{ [redacted] }} in the face of increasing {{ [redacted] }} and {{ [redacted] }}. Cycle times were trending { [redacted] } at Iatan after adding the { [redacted] } and unloading times had { [redacted] } These trends cautioned against { [redacted] } set prematurely, which could at best have no effect if there was no crew available to move the set and at worst backfire by introducing { [redacted] } on the network and thus slowing operations.

10. Despite the height of the temporary crew shortage coinciding with Iatan's period of rapidly ramped up coal demand, the coal BNSF was able to deliver enabled Iatan to operate at normal historical levels, achieve {{ [redacted] }} and maintain inventory levels above { [redacted] } days throughout the entire period. Iatan received {{ [redacted] }} when controlling for its { [redacted] } Burn levels at Iatan were very similar to what they had been in the prior three years throughout summer and fall, and Evergy's claim that it wanted to burn more coal is based on positing burn rates well above historical levels.

[9] *See* Figure 35 and Figure 36

[10] *See* workpaper "Executive Summary.xlsx" at tab "Evergy Route Crew Shortage"

To summarize BNSF's 2022 service to Iatan, the following timeline outlines key facts in perspective of burn and inventory levels. This timeline highlights the distinct difference between the first and second halves of 2022. In the first half, Iatan's stockpile was effectively {{ [redacted] }}, and in the second half, Evergy rapidly increased burn at Iatan and belatedly { [redacted] } at the height of BNSF's temporary crew shortage, with BNSF responding quickly to { [redacted] } set and { [redacted] } deliveries as much as able.

Figure 1: Timeline of BNSF's 2022 Service to Iatan[11] {{

[redacted]

}}

To summarize BNSF's service to Lawrence in 2022, the following chart shows that BNSF delivered { [redacted] } to Lawrence than Evergy { [redacted] } in 2022 and that any alleged shortfalls were a result of Evergy's { [redacted] } beginning in May.

[11] *See* workpaper "Section 2.xlsx" at tab "F1"

Figure 2: Lawrence 2022 - Cumulative Initial Declarations, Final Nominations, and Deliveries[12] {



}

Evergy's opening evidence either ignores or misinterprets the impact of the key facts pertaining to its requests and BNSF's service to Iatan and Lawrence. Evergy's witness Ms. Tucker fails to recognize how Evergy's { } patterns makes her assessment of service levels based exclusively on deliveries compared to final Coal Forecasting Tool ("CFT") nominations inappropriate. She also incorrectly fails to consider the impact of low burn levels and high stockpile levels on Iatan's ability to accept the nominated volumes. Instead, she goes out of her way to dismiss how BNSF correctly identified the significance of Iatan's low burn levels and { } in its communication with her.

Messrs. Crowley and Mulholland's work also includes major oversights, misinterpretations and flawed conclusions of the data they analyze. When considered correctly, their analyses corroborate our observation that BNSF experienced a temporary crew shortage during the pandemic and undermines rather than supports Evergy's allegation that BNSF irresponsibly cut resources over the years.

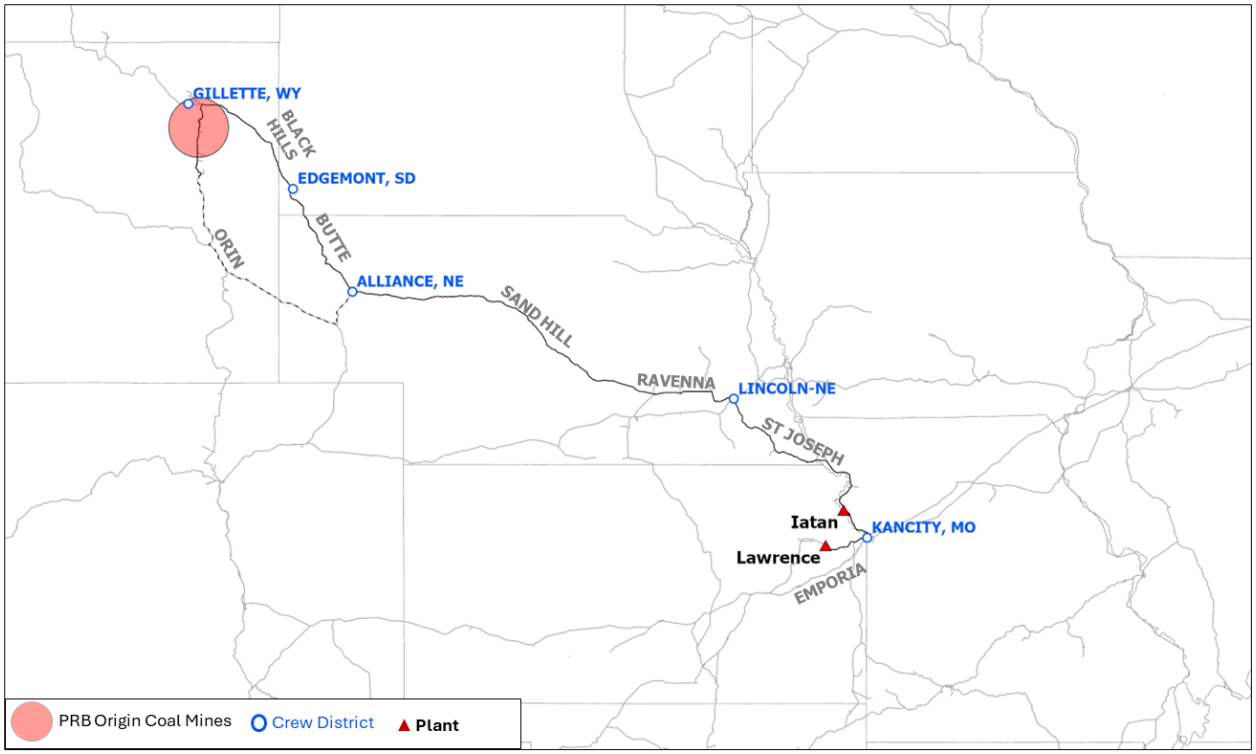
[12] *See* workpaper "Section 2.xlsx" at tab "F2"

Evergy witnesses adopt other problematic positions that conflict with well-established practices for the rail transportation of coal. We show how Evergy's claimed damages for inventory management costs wrongly presuppose that a coal plant should not have to use stockpiles to accommodate peak burn and that rail carriers should instead be responsible for providing just-in-time deliveries. This presupposition is at odds with the well-established practice among U.S. coal plants of using stockpiles to accommodate peak burn seasons and benefitting from the railroad cost efficiencies of providing ratable deliveries of coal throughout the year. Evergy also disregards the well-established practice of adhering to volume commitments and, as its behavior in 2023 and 2024 confirms, sees no problem with initially { [redacted] } tons of coal than it later decides it needs. In the reverse situation when seeking increases in deliveries, Evergy would have the Board mandate the addition of sets, regardless of the operational consequence, even if it does not need the coal. Such an outcome would also conflict with well-established practice recognizing that the responsibility for managing sets lies with carriers, which have incentives to protect network fluidity, unlike shippers, which are only interested in their own service.

3. BNSF's Service to Evergy in 2022

To provide context for the following review of BNSF's service to Evergy, the below map depicts the route used by BNSF to transport coal from origin mines in the Powder River Basin to Iatan and Lawrence, including identifying subdivisions and crew locations along the route.

Map 1: Map of Evergy Route



3.1. Network congestion was increasing going into 2022 and, as part of its successful service recovery efforts, BNSF appropriately removed {{ }} trainsets from unit coal train service in March 2022, { } .

A confluence of unique and unprecedented events during the pandemic period caused service challenges across industries, including for the freight rail industry. Going into 2022, there was mounting congestion across the United States freight rail network, and rail carriers implemented service recovery plans that correctly identified the necessity of reducing cars on line. As part of its overall service recovery plan, BNSF removed {{ }} coal trainsets from service on its network in March 2022, including { }. { } at that time due to its low coal burn, large coal stockpile, { }, and { }. Due to { } in February, Iatan received { } coal after the { }. BNSF's overall service recovery plan also succeeded,

although the network remained fragile in the second half of 2022 due to the effects of a temporary crew shortage that was {{ [redacted] }}.

3.1.1. There was unprecedented unpredictability and volatility affecting the freight rail network in the post-pandemic period

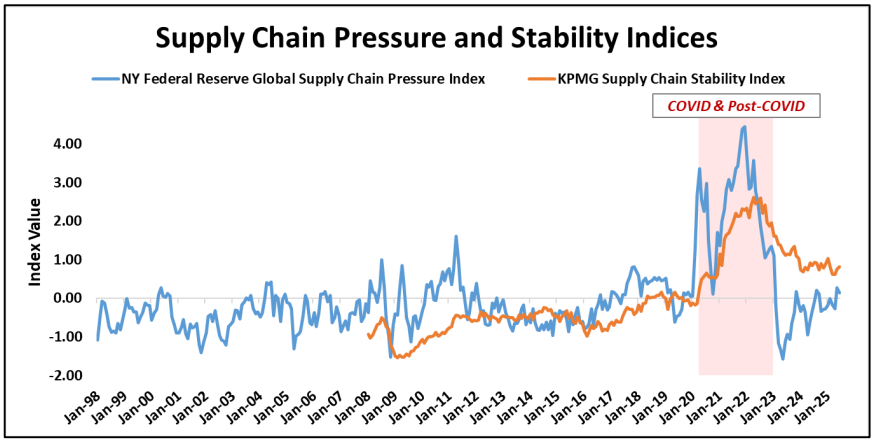
The COVID-19 pandemic, beginning in early 2020 in the United States, severely impacted all sectors of the global economy including industrial supply chains. Empirical measures of supply chain performance illustrate the unprecedented instability immediately introduced to global supply chains as a result of the pandemic. One such measure comes from the Federal Reserve Bank of New York, which maintains a Global Supply Chain Pressure Index that combines sector or geography specific metrics such as delivery times, order backlogs, shipping material costs, and freight transportation costs into a single index describing how pressured the global supply chain is at a given point in time.[13] Similarly, KPMG and the Association for Supply Chain Management use market indicators such as industry-specific job openings and unemployment rates, unfulfilled orders, and freight price indices to measure the current and future stability of supply chains in their Supply Chain Stability Index.[14] As shown below, during the pandemic both indices peaked far above levels ever reached before, reflecting the pandemic's uniquely destabilizing effect on the global supply chain.

---

[13] *See* Gianluca Benigno, Julian di Giovanni, Jan J.J. Groen, & Adam I. Noble, Federal Reserve Bank of New York Staff Report No. 1017, *The GSCPI: A New Barometer of Global Supply Chain Pressures* (May 2022), https://www.newyorkfed.org/medialibrary/media/research/staff_reports/sr1017.pdf?sc_lang=en

[14] *See* KPMG LLP, *Supply Chain Stability Index.* https://kpmg.com/us/en/articles/2023/supply-chain-stability-index.html

Figure 3: Supply Chain Pressure and Stability Indices (1998 - 2025)[15]

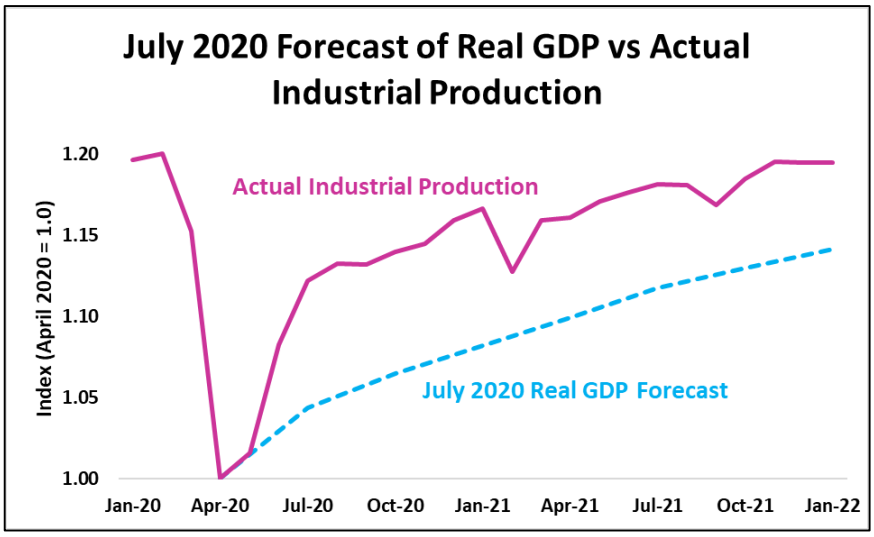


In this period of instability, economic forecasters had a difficult time predicting how the economy, including the industrial supply chain, would react to the pandemic. Figure 4 below shows how industrial production recovered far more quickly than economic activity was forecasted to return based on the Congressional Budget Office's forecast of GDP as of July 2020.[16]

[15] *See* workpaper "Section 3.1.xlsx" at tab "F3"

[16] Industrial production tends to track freight transportation demand and generally follows overall economic activity. Accordingly, we examined levels of industrial production in context of overall expected economic recovery as measured by an authoritative contemporary GDP forecast.

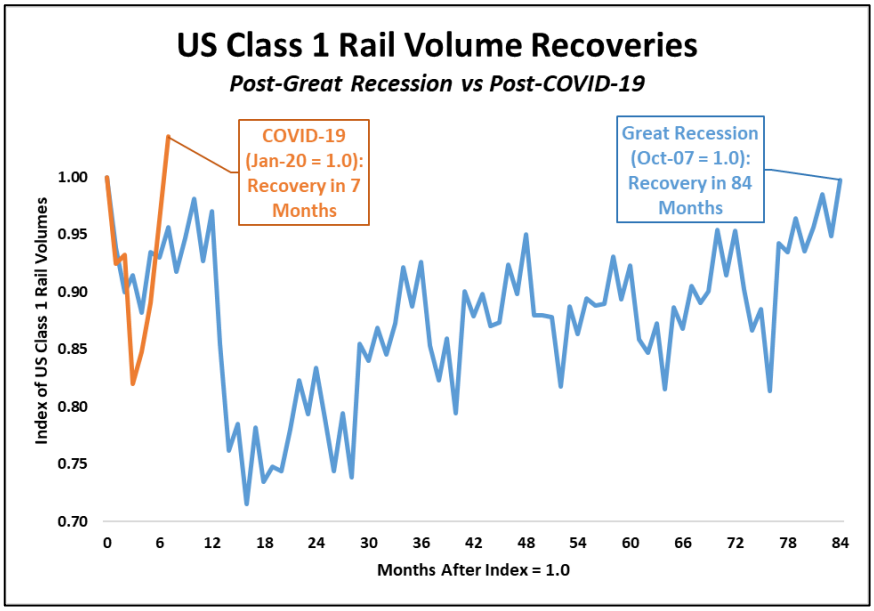
Figure 4: July 2020 GDP Forecast vs. Actual Industrial Production (January 2020 – January 2022)[17]



This unexpectedly rapid uptick in economic activity contrasted sharply with the pace of recovery following the prior recession in 2008. Figure 5 below shows that while it took seven years for freight rail volumes to recover to pre-recession levels following the 2008 Great Recession, it only took seven months to recover to pre-pandemic levels in 2020.

[17] *See* workpaper "Section 3.1.xlsx" at tab "F4"

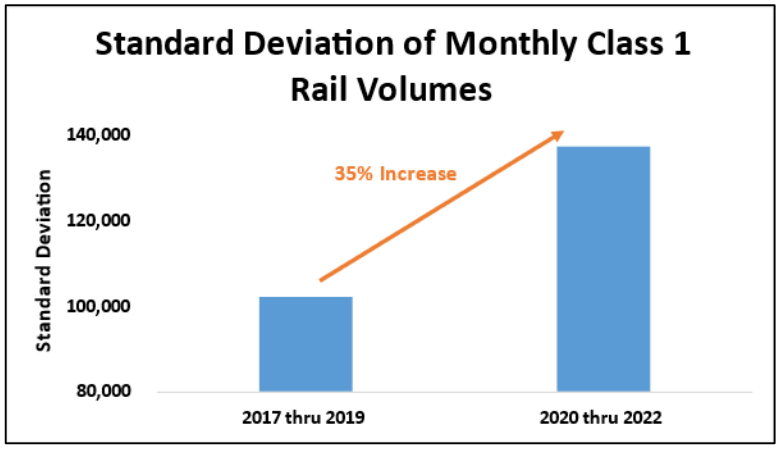
Figure 5: US Class 1 Rail Volumes Post Great Recession vs. Post COVID-19[18]



The rapid rebound in freight rail volumes brought with it volatile changes in month-to-month volumes during the pandemic. Not only did these unpredictable changes in monthly volumes complicate resource planning, they also created uncertainty about prospects for a sustained recovery. As Figure 6 demonstrates below, the standard deviation of monthly rail traffic units in the three years following the outbreak of the pandemic was approximately 35% higher than in the three years prior.

[18] *See* workpaper "Section 3.1.xlsx" at tab "F5"

Figure 6: Standard Deviation of Monthly Class I US Rail Volumes (2017 - 2022)[19]

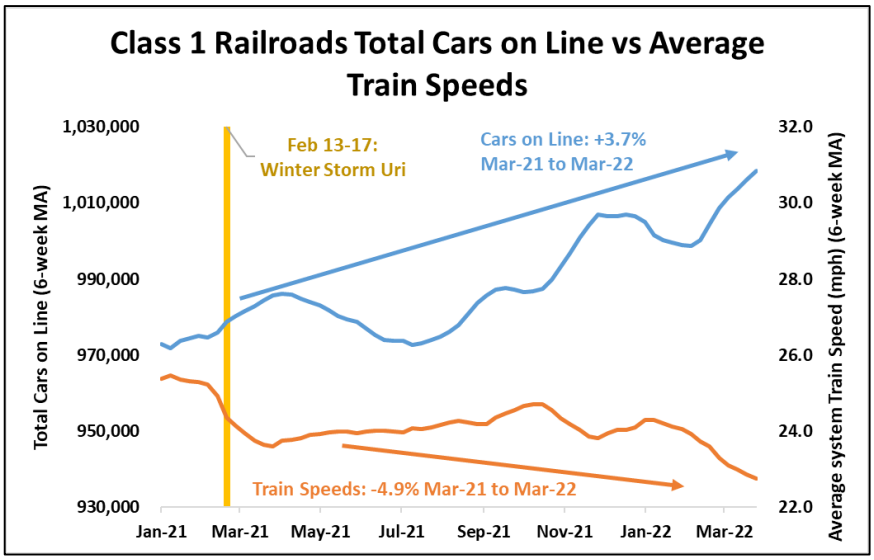


3.1.2. To address mounting network congestion, freight railroads reduced cars on line.

In the midst of an unpredictable COVID recovery, following winter storm Uri in February 2021, the United States rail network experienced a persistent increase in congestion. Rail network congestion can be measured by the number of cars on line, and rail network fluidity can be measured by train speed. As Figure 7 below shows, cars on line increased and train speeds decreased across the Class I railroad network in the U.S. throughout the remainder of 2021 and into 2022.

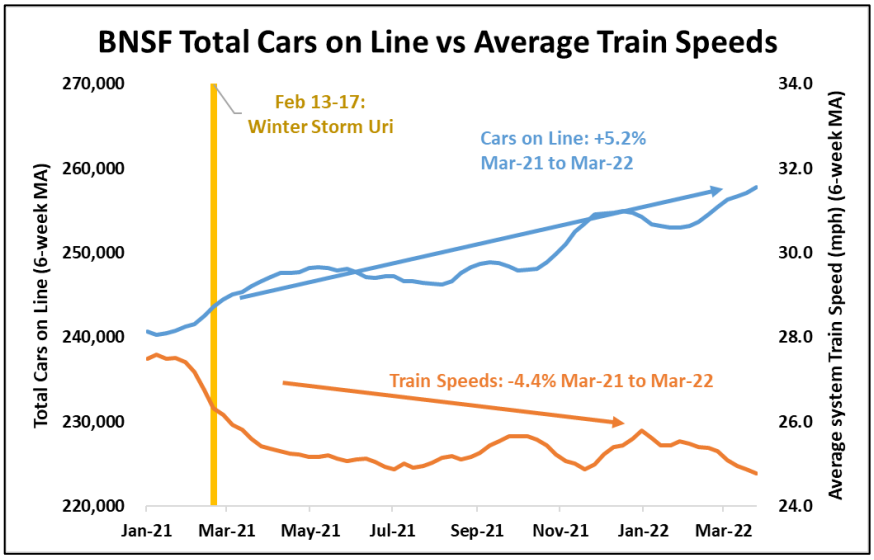
[19] *See* workpaper "Section 3.1.xlsx" at tab "F6"

Figure 7: Class 1 Railroads: Total Cars on Line vs. Average Train Speeds (January 2021 - March 2022)[20]



This industry-wide trend also held true for BNSF, as shown on Figure 8 below.

Figure 8: BNSF: Total Cars on Line vs. Train Speeds (January 2021 - March 2022)[21]



[20] *See* workpaper "Section 3.1.xlsx" at tab "F7"
[21] *See* workpaper "Section 3.1.xlsx" at tab "F8"

Railroads including BNSF have long recognized that when a network becomes congested and service deteriorates, customers may react by trying to add more cars to the network, but the opposite is required to restore service. Matthew Garland, a long-time executive on BNSF's Transportation team, testified to this relationship during the STB service hearings in April 2022:

> "…we experienced an increased amount of car inventory on our network, and as our velocity slowed with increased demand, there was an understandable reaction from our customers to add more cars…in hopes that they would quickly increase their chances of getting their shipment. Unfortunately, adding cars to the network has the opposite result."[22]

Data from BNSF's internally circulated daily performance reports corroborates Mr. Garland's point. As Figure 9 below shows, despite BNSF having nearly {{ [redacted] }} on line in April 2022 versus April 2021, its thruput to customers as measured by gross-ton-miles {{ [redacted] }} in April 2022 versus April 2021.

Figure 9: Change in BNSF Performance Metrics (April 2021 - April 2022)[23]{{

[redacted]

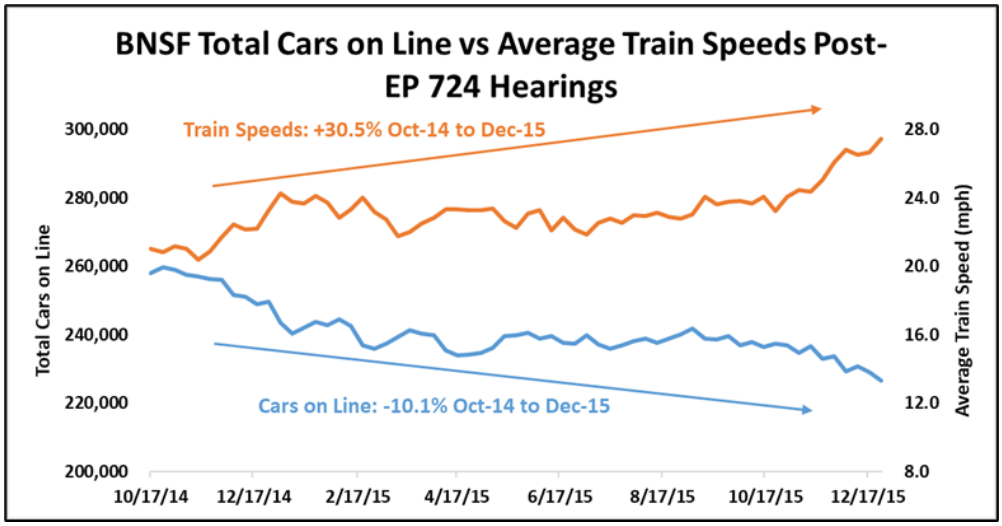
}}

[22] *See* Transcript of Public Hearing, Surface Transportation Board, Docket No. EP 770 (*Urgent Issues in Freight Rail Service*), Doc. No 304765, at 787:1-11 (April 27, 2022)
[23] *See* workpaper "Section 3.1.xlsx" at tab "F9"

Later in the same hearing, Mr. Garland described that one of the key aspects of BNSF's service recovery plan was to "temporarily reduce the number of cars on [the BNSF] network."[24] Other railroads such as Union Pacific ("UP") participating in this hearing described similar plans to address network congestion by reducing cars on line.[25]

This strategy is consistent with past practice. Figure 10 below shows how, when coming out of a period of similar congestion in 2013, BNSF achieved increases in train speeds correlated with decreases in cars on line.

Figure 10: BNSF Total Cars on Line vs. System Average Train Speeds (October 2014 - December 2015)[26]



[24] *See* Transcript of Public Hearing, Surface Transportation Board, Docket No. EP 770 (*Urgent Issues in Freight Rail Service*), Doc. No 304765, at 788:4-5 (April 27, 2022)
[25] *See* Transcript of Public Hearing, Surface Transportation Board, Docket No. EP 770 (*Urgent Issues in Freight Rail Service*), Doc. No 304765, at 826:19-827:4 (April 27, 2022)
[26] *See* workpaper "Section 3.1.xlsx" at tab "F10"

3.1.3. BNSF's service recovery plan included removal of {{ }} coal trainsets from service, and { }.

With coal cars representing 16% of BNSF's cars on line in the first quarter of 2022,[27] the inventory reduction component of BNSF's service recovery plan appropriately included plans to reduce trainsets in service to its coal customers. BNSF specifically planned to {{ }}. This level of coal trainset reductions is supported by the fact that, after having consistently trended {{ }} in the prior year, nearly {{ }} coal trains were holding at any given time as of February 2022.

Figure 11: BNSF System - Average Daily Loaded Unit Coal Train Holds of 6+ Hrs (January 2021 - February 2022)[28] {{



}}

{ }.

There were several reasons why { }. First, and as depicted on Figure 12, Iatan's winter 2022 stockpile was nearly 28% higher than it had been on

[27] *See* workpaper "Section 3.1.xlsx" at tab "BNSF 10-Q 2022 Analysis"
[28] *See* workpaper "Section 3.1.xlsx" at tab "F11"

average in the prior three winters, placing it well above {{ [redacted] }} (Lawrence was similarly 25% higher than usual).

Figure 12: Percent Difference - Average Winter 2022 Stockpile vs. Average Winter 2019-2021 Stockpile[29] {{

[redacted] }}

Second, Iatan was one of a handful of utilities burning at least 35% less coal during the winter of 2022 than it had been during the prior three winters, placing it {{ [redacted] }} (Lawrence was similarly 24% lower than usual).

[29] *See* workpaper "Section 3.1.xlsx" at tab "F12"

Figure 13: Percent Difference - Average Winter 2022 Burn vs. Average Winter 2019-2021 Burn[30] {{



}}

Third, consistent with the low burn and high stockpile at Iatan, { [redacted] {{ [redacted] }} [redacted] }. Figure 14 below depicts how the total amounts of coal Evergy nominated for Iatan between January and April 2022 as entered into BNSF's Coal Forecasting Tool ("CFT") at various times in early 2022 was { [redacted] } what Evergy initially declared in its Annual Tonnage Nomination in December 2021 and { [redacted] }.

[30] *See* workpaper "Section 3.1.xlsx" at tab "F13

Figure 14: Changes in Amount of Coal Nominated for Full Year 2022 (December 2021 Declarations thru April 2022 CFTs)[31] {{



}}

Fourth, Iatan was experiencing { } in early 2022 that resulted in the { } not operating productively. Figure 15 below shows that average unloading times at Iatan had {{ }} in February 2022.[32]

[31] *See* workpaper "Section 3.1.xlsx" at tab "F14"

[32] As addressed further in section 4.6, this issue was explicitly identified by BNSF in its communications with Evergy. *See* BNSF_EVERGY_0007748. { }

Figure 15: Issues with { } at Iatan in Early 2022[33] {{



}}

As discussed further in section 3.4.2, { } also increased the likelihood that inbound Iatan trains { }, which poses the serious risk of blocking mainline sidings to the detriment of many shippers. {{ }}

3.1.4. The {{ }} in deliveries to Iatan after BNSF { } set confirms BNSF acted appropriately.

The {{ }} in coal deliveries following the { } affirms BNSF's decision. As Figure 16 below shows, due to a {{ }} improvement in cycle days, Iatan received on average 16% more coal per month in March through June of 2022 with { } than it had in February with { }

[33] *See* workpaper "Section 3.1.xlsx" at tab "F15"
[34] *See* workpaper "Section 3.1.xlsx" at tab "Early 2022 Train Holdings"

Figure 16: Improvement in Cycle Days and Average Monthly Deliveries (February vs. March-June 2022)[35] {{



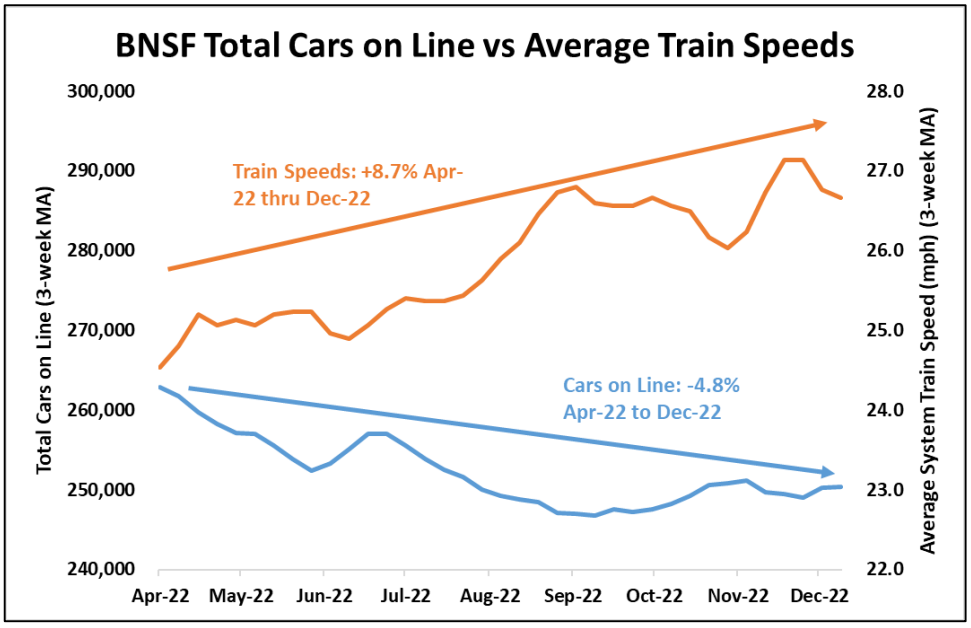
}}

3.1.5. BNSF's service recovery worked, but local signs of a still-fragile network warranted a cautious approach to { }

Similar to the improvements in BNSF's service to Iatan after { }, BNSF's system-wide initiative to reduce cars on line had a positive impact on network fluidity and service performance as well. As BNSF gradually reduced cars on line over the course of 2022, system-wide train speeds steadily increased, as is shown on Figure 17 below.

[35] *See* workpaper "Section 3.1.xlsx" at tab "F16"

Figure 17: BNSF Train Speed vs. Total Cars on Line (April 2022 - December 2022)[36]



BNSF's service also became {{ [redacted] }} for customers. Figure 18 below shows how system-wide measurements of {{ [redacted] }} across the back half of 2022, {{ [redacted] }} by the end of the year.

Figure 18: BNSF System On-Time Performance (January 2022 - January 2023)[37]{{


[redacted]

}}

[36] *See* workpaper "Section 3.1.xlsx" at tab "F17"
[37] *See* workpaper "Section 3.1.xlsx" at tab "F18"

Despite these system-wide improvements, operations remained or became {{ [redacted] }} at various places and times across BNSF's system. In particular, even as crew shortages across BNSF's system were abating, {{ [redacted] }} in the summer and fall of 2022 as depicted on Figure 19 below.

Figure 19: Evergy Route vs. BNSF System: Monthly Crew Shortage - Forecasted People Need (as of December 2021) vs. Actual Crew Supply (January 2022 - December 2022)[39] {{



}}

As is further addressed in section 3.5, as long as there were not sufficient crew resources in place to move even the existing trains, adding more trainsets would have been counterproductive and risked re-congesting the network.

3.2. Evergy received {{ [redacted] }} at Iatan in the first half of 2022, and alleged shortfalls in this period were a function of { [redacted] } nominations.

The coal BNSF delivered to Iatan kept its stockpile effectively {{ [redacted] }} in the first half of 2022. Evergy cannot have experienced coal shortfalls at Iatan in the first half of 2022

[38] Our analysis considers the {{ [redacted] }} predominant crew locations along the Evergy route used to supply crew both for BNSF trains to Iatan and Lawrence, which are {{ [redacted] }}

[39] *See* workpaper "Section 3.1.xlsx" at tab "F19"

as it claimed while simultaneously having stockpiles {{ [redacted] }}[40] Rather, any alleged shortfalls in the first half of 2022 were a function of { [redacted] }, which are {{ [redacted] }}.

3.2.1. BNSF's deliveries {{ [redacted] }} Iatan's burn from August 2021 through the first half of 2022.

Evergy's opening evidence traces its coal delivery issues back to August 2021 when it asserts BNSF began { [redacted] } its trainsets in service. In fact, these trainset { [redacted] } were both aligned with { [redacted] } and required because {{ [redacted] }} Figure 20 below shows that between August 2021 and February 2022, BNSF {{ [redacted] }}

Figure 20: Iatan trainsets vs. Rolling 30-Day Average Monthly Burn (August 2021 - February 2022)[41] {{

[redacted]

[40] This would have been the case even if Evergy had not imposed bid adders at Iatan near the end of the first half of 2022. Evergy's modelling shows only a {{ [redacted] }} were conserved during this period.

[41] *See* workpaper "Section 3.2.xlsx" at tab "F20"

}}

As a result of {{ [redacted] }} in this period, Iatan's already high stockpile in August 2021 grew well above {{ [redacted] }} and neared historic highs by February 2022 as depicted by Figure 21 below.

Figure 21: Iatan Stockpile and rolling 30-Day Average Monthly Burn vs. Historical Averages (August 2021 - February 2022)[42] {{



}}

As discussed above in section 3.1.4, after { [redacted] } in March, BNSF's deliveries to Iatan {{ [redacted] }}. This {{ [redacted] }} in deliveries combined with burn levels that remained low resulted in Iatan's stockpile remaining high. Figure 22 below shows that Iatan's stockpile was growing increasingly close to its historic maximum size from when the { [redacted] } until the end of May and remained well above {{ [redacted] }} until the end of June.

[42] *See* workpaper "Section 3.2.xlsx" at tab "F21"

Figure 22: Iatan Stockpile and Rolling 30-Day Average Monthly Burn vs. Historical Averages (March 2022 - June 2022)[43] {{



}}

3.2.2. Evergy nominated {{ }} than Iatan could have received in the first half of 2022.

Evergy alleges that BNSF's deliveries of { }[44] As discussed above, the amount of coal BNSF delivered in the first half of 2022 kept Iatan's stockpile {{ }} to accommodate any additional coal. This indicates that the source of the alleged shortfall was Evergy's { }. Figure 23 below illustrates that, if BNSF delivered { } for Iatan in the first half of 2022, Iatan's stockpile would have exceeded { } tons.

[43] *See* workpaper "Section 3.2.xlsx" at tab "F22"
[44] *See* workpaper "Section 3.2.xlsx" at tab "Tucker 1H2022"

Figure 23: Estimated June 2022 Iatan Stockpile if 100% of Final Nominations Were Delivered[45] {



}

In other words, Iatan's stockpile would have {{ }} had BNSF delivered all the coal Evergy nominated in the first half of 2022. Figure 24 below shows that the { } tons in Iatan's stockpile had BNSF delivered { } in the first half of 2022 {{ }}.[46]

[45] *See* workpaper "Section 3.2.xlsx" at tab "F23"
[46] *See* EVERGY-0014539 at tab "Push Pull". {{ }}

Figure 24: Estimated June 2022 Iatan Stockpile if 100% of Final Nominations Were Delivered vs. Evergy's Maximum and Desired 2022 Iatan Stockpiles[47] {{



}}

As shown on Figure 25 below, of the { [redacted] {{ [redacted] }} [redacted] }.

[47] *See* workpaper "Section 3.2.xlsx" at tab "F24"

Figure 25: First Half 2022 Final CFT Nominations – {{ [redacted] }}[48] {{



}}

The pattern in which Evergy { [redacted] } during the first half of 2022 indicates that Evergy did not actually want BNSF to deliver the amounts of coal listed in its { [redacted] } at that time. On multiple occasions, Evergy { [redacted] } nominations for Iatan after BNSF delivered { [redacted] } the nominated amount in the prior months. For example, in January and February 2022, BNSF's deliveries to Iatan were { [redacted] } These patterns confirm Evergy { [redacted] }.[49]

[48] *See* workpaper "Section 3.2.xlsx" at tab "F25"
[49] *See* workpaper "Section 3.2.xlsx" at tab "Spring 2022 CFTs vs Deliveries"

3.2.3. Evergy's nominations for Iatan in spring 2022 conflicted with the number of sets Evergy approved in service

Although Evergy consented to { [redacted] } to Iatan, it entered nominations in the CFT for Iatan for { [redacted] }. Internal emails {{ [redacted] }} confirm that Evergy {{ [redacted] }}

Based on the number of trainsets in service on and cycle times for a given lane in a period, the amount of coal that will be delivered is readily known. However, despite approving of and recognizing the necessity of {{ [redacted] }}, Evergy nonetheless nominated amounts of coal { [redacted] }. As Figure 26 below demonstrates, the CFT nominations Evergy had entered for spring 2022 were {{ [redacted] }}

[50] *See* EVERGY-0082946. {{ [redacted] }}

[51] See "EVERGY-0014393.xlsx", at tab "i-DailyFuels".

Figure 26: Estimated Iatan Deliveries Assuming { } vs. Iatan's Final CFT Coal Nominations (March & April 2022) {{



}}

3.2.4. Evergy's nominations had long been { }.

The { } CFT nominations Evergy provided to BNSF in the first half of 2022 were consistent with Evergy's standard practice of submitting nominations that were {{ }}.

First, Evergy's nominations were {{ }} Figure 27 below shows the percentage difference between final CFT nominations for a given month and annual average final CFT nominations.

[52] { }

Figure 27: Monthly Nominations Variance from Average - Evergy vs. All Other BNSF-Served Coal Plants (January 2019 – December 2022)[53] {{



}}

As discussed later in section 7.1, ratable shipments are a reasonable objective for coal transportation, notwithstanding Evergy's desire to receive service { [redacted] }.

Second, Evergy changed its nominations {{ [redacted] }} than other BNSF-served coal plants between when it first submitted a nomination for a given amount of coal several months prior and its final nomination immediately before the month of transportation. Figure 28 below shows the percentage change between initial CFT nominations submitted months prior to and final CFT nominations submitted immediately before the month of transportation.

[53] *See* workpaper "Section 3.2.xlsx" at tab "F27"

Figure 28: Percent Change Between Initial and Final Nominations - Evergy vs. All Other BNSF-Served Coal Shippers (January 2019 - December 2022)[54] {{



}}

3.2.5. Iatan entered summer with a {{ }} stockpile and inventory levels {{ }}.

Despite Evergy's { } nominations in the first half of 2022, Iatan received { } coal from BNSF in the spring to enter the summer of 2022 with healthy stockpiles higher than those {{ }}. Figure 29 below shows that Iatan's stockpile remained significantly higher than historic levels throughout the first half of 2022, whereas {{ }}

[54] *See* workpaper "Section 3.2.xlsx" at tab "F28"

Figure 29: 2022 Stockpile vs. Average 2019-2021 Stockpile - Iatan vs. Alliance Corridor (January - June)[55] {{



}}

As Figure 30 below shows, the Lawrence stockpile remained above historic levels and better off than the {{ }} through June as well.

Figure 30: 2022 Stockpile vs. Average 2019-2021 Stockpile - Lawrence vs. Alliance Corridor (January - June)[56] {{



}}

[55] *See* workpaper "Section 3.2.xlsx" at tab "F29"
[56] *See* workpaper "Section 3.2.xlsx" at tab "F30"

In summary, as evidenced by the high stockpile levels at Iatan and above average stockpile levels at Lawrence in the first half of 2022, BNSF's service was in proportion to Evergy's underlying transportation needs, and any appearance of shortfalls was due to Evergy's { [redacted] }.

3.3. When Evergy belatedly { [redacted] } and dramatically increased its burn in the summer of 2022, BNSF was still able to partially accommodate Evergy.

Slightly over a month before summer began, Evergy reversed course and began sharply { [redacted] } for the second half of 2022. Evergy then increased its burn at Iatan and Lawrence at rates {{ [redacted] }}, resulting in stockpile decline. When BNSF was alerted in July 2022 that Iatan's inventory levels had {{ [redacted] }}, BNSF reinstated a { [redacted] } to Iatan within a week. Deliveries {{ [redacted] }} to Iatan by {{ [redacted] }} on average in the following four months after the { [redacted] }, compared to {{ [redacted] }} on average for all other BNSF-served coal plants in the same timeframe.[57]

3.3.1. Evergy reversed course just before summer and { [redacted] }

Presumably due to having {{ [redacted] }} Evergy had been { [redacted] } During this period, other {{ [redacted] }} However, between mid-April and the beginning of May, Evergy reversed course and began { [redacted] } its nominations for the second half of 2022 (and for June, which was less than a month away), as is depicted on Figure 31 below.

[57] *See* workpaper "Section 3.3.xlsx" at tab "Pre- v Post-Iatan 3rd Set"

Figure 31: Changes in Amount of Coal Nominated for Second Half of 2022 (December 2021 Declarations - July 2022 CFTs)[58] {{



}}

3.3.2. Evergy ramped up its burn in summer of 2022 quicker than practically {{ }}, and stockpiles accordingly began to decline.

Evergy's belated { } was shortly thereafter followed by a dramatic increase in burn at Iatan starting in June 2022. This increase was greater than practically {{ }} as Figure 32 below shows.

[58] *See* workpaper "Section 3.3.xlsx" at tab "F31"

Figure 32: 2022 Monthly Burn - Percentage Over or Under Annual Average Monthly Burn (January 2022 - December 2022)[59] {{



}}

The exceptionally high increase in burn at Iatan caused its stockpile, {{ }}, to begin to drop. Even given this drop, the stockpile remained {{ }} until the end of June.[60] BNSF learned from Evergy by July 7 that Iatan's stockpile was {{ }}.[61] In response, BNSF promptly reinstated a { } to Iatan slightly over a week later.[62] Figure 33 below depicts this series of events.

[59] *See* workpaper "Section 3.3.xlsx" at tab "F32"

[60] {{ }}

[61] *See* BNSF_EVERGY_0006193. { }

[62] *See* BNSF_EVERGY_0006186. { }

Figure 33: Iatan Stockpile vs. Rolling 10-Day Average Monthly Burn (May 1, 2022 - August 1, 2022)[63] {{



}}

3.3.3. BNSF quickly responded when Iatan's stockpile first dropped below {{ [redacted] }} in July 2022.

As discussed above, after Evergy first provided BNSF with notice that Iatan was {{ [redacted] }}, BNSF quickly { [redacted] }. Shown in Figure 34 below, this resulted in increased deliveries for the rest of the summer and fall, although { [redacted] } after { [redacted] } dampened the full effect of the { [redacted] } in sets (which, mathematically, would have led to an increase in deliveries of 50% if { [redacted] }).

[63] *See* workpaper "Section 3.3.xlsx" at tab "F33"

Figure 34: Deliveries to Iatan vs. Cycle Days (June 2022 - November 2022)[64] {



}

3.3.4. The benefit to Evergy from BNSF {{ }} deliveries was far more than that to {{ }}.

As shown in Figure 35, BNSF's average monthly deliveries to Iatan were {{ }} higher in July through November 2022 compared to its deliveries to the plant in March through June 2022.

[64] *See* workpaper "Section 3.3.xlsx" at tab "F34"

Figure 35: Average Monthly Coal Deliveries to Iatan (March - June 2022 vs. July - November 2022)[65] {{



}}

In contrast, as shown in Figure 36 below, BNSF's average monthly deliveries to other coal shippers were only {{ [redacted] }} in July through November 2022 compared to March through June 2022 deliveries.

[65] *See* workpaper "Section 3.3.xlsx" at tab "F35"

Figure 36: Average Monthly Deliveries to Non-Evergy BNSF-Served Coal Plants (March - June 2022 vs. July - November 2022)[66] {{

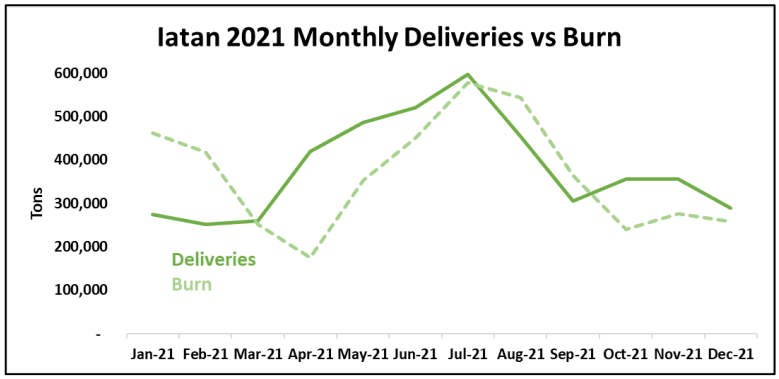


}}

This {{ }} of delivery {{ }} Iatan received in 2022 was similar to, but not as pronounced as, { }. Shown in Figure 37 below, in 2021 Iatan received increases in deliveries timed directly before its increases in burn.[67]

[66] *See* workpaper "Section 3.3.xlsx" at tab "F36"
[67] Lawrence received similar seasonal increases. *See* workpaper "Section 3.3.xlsx" at tab "F37"

Figure 37: Iatan Monthly Deliveries vs. Burn (January 2021 - December 2021)[68]



In contrast, Figure 38 shows that other BNSF-served coal plants also {{ [redacted] }} throughout the year.

Figure 38: All BNSF-Served Coal Plants Monthly Deliveries vs. Burn (January 2021 - December 2021)[69] {{



}}

Part of the impetus for BNSF's {{ [redacted] }} seasonal {{ [redacted] }} to Iatan and Lawrence is the fact that both Iatan and Lawrence's demonstrated historical stockpile capacity relative to maximum burn is lower than typical. While such infirmities can be mutually addressed and overcome in the back and forth of contract negotiations, the ratable nature of BNSF service under tariff does not invite comparable flexibility. This results in {{ [redacted]

[68] *See* workpaper "Section 3.3.xlsx" at tab "F37"
[69] *See* workpaper "Section 3.3.xlsx" at tab "F38"

[redacted] }}. Figure 39 below shows that Iatan's maximum stockpile covers 2.4 months of maximum burn and Lawrence's maximum stockpile covers 2.2 months of maximum burn, while stockpiles of other BNSF-served coal plants ramping up summer burn {{ [redacted] }} Iatan and Lawrence on average cover {{ [redacted] }} months of maximum burn—a {{ [redacted] }} inventory capacity compared to Iatan and Lawrence respectively.

Figure 39: Number of Months of Maximum Burn Covered by Maximum Stockpile - Iatan vs. Other Alliance Corridor Coal Plants in Top Quartile of June to September Burn Ramp-Up (2019 - 2022)[70] {{



}}

This lower capacity relative to higher ramp-up likely contributed to Evergy's inability to maintain desired inventory levels in light of substantially increased coal burn at Iatan and Lawrence despite entering the summer of 2022 with {{ [redacted] }} and receiving a {{ [redacted] }} in deliveries than other BNSF-served coal plants.

[70] *See* workpaper "Section 3.3.xlsx" at tab "F39"

3.4. BNSF couldn't fully accommodate Evergy's expressed desire for { [redacted] } due to a temporary crew shortage in 2022.

After { [redacted] } in July 2022, BNSF could not accommodate Evergy's request to { [redacted] } in service to Iatan until December due to a temporary crew shortage along the Evergy route in 2022 that was at its height during this time. This temporary crew shortage occurred due to a confluence of unprecedented changes in labor markets during the pandemic period, as well as major unforeseen increases in {{ [redacted] }}. This temporary crew shortage was not the result of changes to BNSF's resource planning processes or target resource levels, and other than crew BNSF had sufficient resources, including locomotive and track capacity.

3.4.1. A temporary crew shortage occurred in 2022 due to factors outside of BNSF's control.

BNSF experienced a temporary crew shortage in 2022 along the Evergy route that reached its peak during the summer and fall of 2022. The genesis of the temporary crew shortage can be explained using materials produced in discovery describing BNSF's crew resource planning process. These materials demonstrate the process consists of the following basic steps:

{{

[redacted]

[71] *See* BNSF_EVERGY_0025756, BNSF_EVERGY_0026160, BNSF_EVERGY_0026161, BNSF_EVERGY_0026162, BNSF_EVERGY_0026165, BNSF_EVERGY_26166, BNSF_EVERGY_26167
[72] *See* BNSF_EVERGY_0025755, BNSF_EVERGY_0025757, BNSF_EVERGY_0025759, BNSF_EVERGY_0025763
[73] *See* BNSF_EVERGY_0025765

[redacted] }}

As of July 2021, this process identified the need for {{ [redacted] }} crew members in 2022 across the {{ [redacted] }} primary crew locations providing crew for moving trains along the Evergy route to handle projected volumes, compared to {{ [redacted] }} crew members currently on staff.[75] Forecasts of 2022 volume {{ [redacted] }} significantly during the next several months, and in December 2021 this process, in response, correctly identified an {{ [redacted] }} 2022 crew need of {{ [redacted] }} employees. Over this same period, however, current crew supply had {{ [redacted] }} to {{ [redacted] }} crew members. Shown in Figure 40 below, a projected 2022 crew {{ [redacted] }} employees as of July 2021 flipped to a crew {{ [redacted] }} employees forecasted as of December 2021.

[74] *See* BNSF_EVERGY_0025775, BNSF_EVERGY_0023105, BNSF_EVERGY_0025768, BNSF_EVERGY_0025770

[75] Our analysis considers the {{ [redacted] }} predominant crew locations along the Evergy route used to supply crew both for BNSF trains to Iatan and Lawrence, which are {{ [redacted] }}.

Figure 40: Evergy Route Projected 2022 Average Monthly People Need vs. Current Crew Supply (July 2021 vs. December 2021)[76] {{



}}

As signs of a 2022 crew {{ }} emerged between July and December 2021, BNSF made efforts to {{ }}. This is depicted on Figure 41 below.

[76] *See* workpaper "Section 3.4.xlsx" at tab "F40"

Figure 41: Evergy Route Projected 2022 Crew Shortage vs. Hiring & Recall Attempts (as of December 2021)[77] {{



}}

For reasons discussed in Dr. Johnson's Verified Statement, BNSF was unable to {{ }} the number of crew employees along the Evergy route despite its significant efforts to do so. BNSF instead experienced a continued {{ }} in crew supply along the Evergy route that did not {{ }} until the fall of 2022. This {{ }} may be quantified by comparing the forecasted number of crew employees needed to handle BNSF's projected 2022 traffic volumes to the number of crew employees actually in supply at crew locations on the Evergy route in 2022. This is depicted in Figure 42 below.

[77] *See* workpaper "Section 3.4.xlsx" at tab "F41"

Figure 42: Forecasted People Need (December 2021 Vintage) vs. Actual People Supply on Evergy Route (January 2022 - December 2022)[78] {{



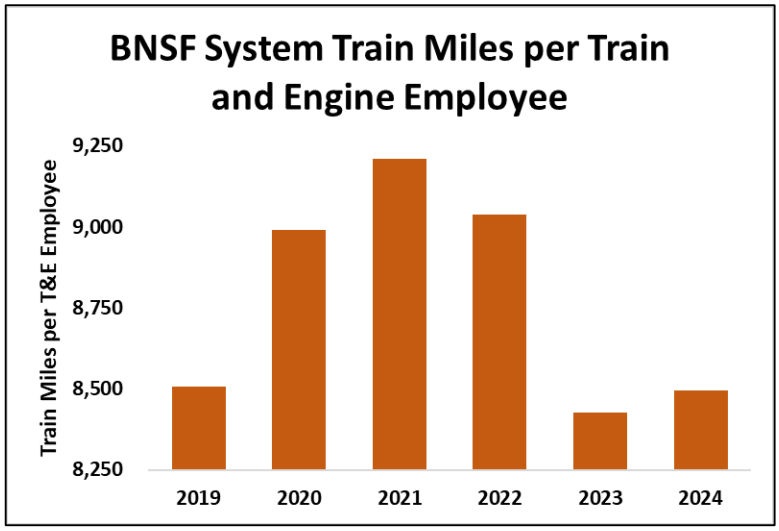
}}

As shown above, at crew locations serving traffic on the Evergy route, BNSF typically had at least {{ }} than its resource planning process had identified as necessary throughout 2022. As the following section discusses, this is a lower-end estimate since traffic demand, and thus the corresponding need for additional crew, continued to increase with unanticipated rapidity in 2022—above the already increased levels projected for 2022 as of December 2021.

As addressed more in section 5, the crew shortage that occurred was temporary and was not the result of BNSF cutting resource levels over time as Evergy's Opening Statement alleges.[79] As is shown in Figure 43 below, the relationship between the levels of crew resources and total train miles has not changed since 2019, except during the unique and temporary pandemic and post-pandemic periods.

[78] *See* workpaper "Section 3.4.xlsx" at tab "F42"
[79] *See* Evergy Opening Argument at page 31. "It is a matter of public record that any employee or locomotive power shortages that BNSF experienced in 2022 were a consequence of its own deliberate decisions and operations plans…"

Figure 43: BNSF System - Train Miles per T&E Employee (2019-2024)[80]



The ratio between train miles and train and engine employees that existed in 2019 and has since returned in 2023 and 2024. Correspondingly, service metrics such as {{ [redacted] }}.[81]

Messrs. Mulholland and Crowley failed to identify that the shortage in crew resources was temporary. When looked at correctly, their analysis corroborates this finding. While they focused on crew-related delays being {{ [redacted] }} in 2022 than in 2019, they neglected to recognize that soon after the temporary crew shortage the extent of these delays {{ [redacted] }}, as is shown in Figure 44 below.

[80] *See* workpaper "Section 3.4.xlsx" at tab "F43"
[81] *See* workpaper "Section 3.4.xlsx" at tab "OTP 2019, 2022, 2023"

Figure 44: Total Crew-Related Delay Minutes on the BNSF System (2019 - 2023)[82] {{



}}

3.4.2. {{ }} coal and grain demand contributed to the temporary crew shortage in 2022.

In addition to the unprecedented challenges in adding and retaining crew during the pandemic period, {{ }} coal and grain demand in 2022 further contributed to BNSF's temporary crew shortage. The effects of this {{ }} demand were especially pronounced on the Evergy route, both because {{ }}, and because the {{ }} grain demand specifically involved grain flows also traveling southbound {{ }} -- the only segment on the route that is not {{ }} and where Iatan is located.

Focusing first on coal, {{ }} in demand for coal transportation on BNSF's network were far {{ }} than in prior years. For any given transportation year, BNSF initially generates internal forecasts of coal demand during the year prior, and then receives actual nominations and CFT updates from its coal customers as the period of transportation approaches. Shown in Figure 45 below, between initial internal forecasts and final CFT

[82] *See* workpaper "Section 3.4.xlsx" at tab "F44"

nominations, the demand for coal transportation on BNSF's network for the second half of 2022 {{ [redacted] }} – well above the prior two years.

Figure 45: Change in BNSF Network's Coal Demand for Second Half of Year (2020 vs. 2021 vs. 2022)[83] {{

[redacted]

}}

In the above chart, {{ [redacted] }} during the spring of 2022 following Russia's invasion of Ukraine in February 2022.[85]

On top of that, grain traffic {{ [redacted] }} in 2022. This flow of grain is depicted on the following map.

[83] *See* workpaper "Section 3.4.xlsx" at tab "F45"
[84] *See* workpaper "Energy Ventures Coal Report.pdf".
[85] Following the invasion, the price of natural gas increased significantly in the U.S., which made coal relatively more attractive as a source of power generation.

Map 2: BNSF Grain Traffic {{



}}

Figure 46 below shows there was {{ }} grain traffic traversing {{ }} than in the prior three years, and that this {{ }} from May to September.

Figure 46: BNSF Monthly Grain Carloads Traversing the St. Joseph's Subdivision (2022 vs. 2019-2021 Average)[86] {{



}}

The {{ }} section of the {{ }}, is a crucial link on BNSF's system between {{ }} where grain originates and the {{ }} where grain terminates. Although Messrs. Mulholland and Crowley describe the Evergy route as largely double- and triple-tracked, [87] the portion of the route on {{ }}.[88] Evergy's Iatan plant directly connects to this subdivision. In order to move these {{ }} levels of grain in a period of crew shortages and simultaneously move {{ }} levels of coal demand, it was imperative that BNSF maintain fluid operations and avoid the risk that train holds reduce the thruput of this segment, which was already near capacity. As BNSF personnel

[86] *See* workpaper "Section 3.4.xlsx" at tab "F46"
[87] *See* Mulholland and Crowley V.S. at page 11. "Although the Evergy route accounts for just 3.5% of BNSF's system-total 32,837 route miles, the Evergy route includes high-volume segments with extensive double- and triple-track."
[88] *See* BNSF_EVERGY_0022043 at page 24.

recognized, any { [redacted] } at Iatan stood to amplify congestion, as { [redacted] } for a given train could force BNSF to stage the subsequently { [redacted] } at sidings along this segment.[89]

3.4.3. There was not a stand-alone locomotive shortage in 2022.

There was not a stand-alone locomotive shortage in 2022 that impacted BNSF's ability to provide service to Evergy. Messrs. Mulholland and Crowley allege BNSF was constrained in 2022 by a {{ [redacted] }} in locomotive power input across the prior several years.[90] BNSF's monthly performance data shows otherwise. Figure 47 below shows that for every month in 2022, BNSF had over {{ [redacted] }} road locomotives in good order (a metric describing functional locomotives in storage).

Figure 47: BNSF System Road Locomotive Units in Good Order (January 2022 - December 2022)[91] {{

[redacted]

}}

[89] *See* BNSF_EVERGY_0006243. { [redacted] }

[90] *See* Mulholland and Crowley V.S. at page 7. {{ [redacted] }}

[91] *See* workpaper "Section 3.4.xlsx" at tab "F47"

Messrs. Mulholland and Crowley observed {{ [redacted] }} and wrongly concluded this was due to BNSF lacking sufficient locomotive resources. Had Messrs. Mulholland and Crowley conducted a more robust analysis, they would have found that the correct interpretation of the observed {{ [redacted] }} is that BNSF did not have enough crew resources in place to productively use the additional locomotive resources that were in ample supply.

3.5. The temporary crew shortage and associated operational effects drove BNSF's inability to { [redacted] } trainset to Iatan until December 2022.

Both broader Evergy route trends and the effects of Iatan's reinstated { [redacted] } explain BNSF's decision to not { [redacted] } to Iatan until December 2022 despite Evergy's desire for earlier action. The temporary crew shortages peaking in the summer and fall of 2022 resulted in increasingly frequent {{ [redacted] }} along the Evergy route. Additionally, as traffic along key subdivisions of the Evergy route {{ [redacted] }} over the summer of 2022, train holdings became {{ [redacted] }}. Specific to Iatan, { [redacted] } in July 2022 resulted in { [redacted] } and { [redacted] }. During this period of worsening congestion, BNSF rightly recognized the need to reduce traffic along the Evergy route and {{ [redacted] }}. Even if BNSF were in a position to add trainsets back in service during this period, {{ [redacted] }}. BNSF's decision to delay { [redacted] } to Iatan still resulted in a plan that would reasonably have been expected to, and in fact did, cover Iatan's historical burn levels and maintain {{ [redacted] }} at these burn levels.

3.5.1. Operations along the Evergy route and specifically for the Iatan lane were strained during this period.

BNSF, while responsive in accommodating Evergy's request for { [redacted] } trainset in service to Iatan in July 2022, was correct to not also { [redacted] } Iatan trainset. Several metrics indicated strained operations along the Evergy route during the summer and fall of 2022.

First, consistent with the temporary crew shortage described above, {{ [redacted] }}.

Figure 48: Crew Related Delay Minutes along the Evergy Route (March 2022 - December 2022)[92] {{

[redacted]

}}

Second, as {{ [redacted] }} trains tried to traverse the {{ [redacted] }} on the Evergy route, disproportionately {{ [redacted] }} ended up holding as is depicted on Figure 49 and Figure 50 below.

[92] *See* workpaper "Section 3.5.xlsx" at tab "F48"
[93] The Ravenna subdivision tracks between Ravenna, Nebraska, and Lincoln, Nebraska.

Figure 49: Trains per Day Traversing the St. Joseph's and Ravenna Subdivisions (June 2022 - September 2022)[94] {{



}}

Figure 50: Train Holdings per Day on St. Joseph's and Ravenna Subdivisions (June 2022 - September 2022)[95] {{



}}

Third, train speeds {{ }} on the {{ }}.[96] Shown in Figure 51 below, starting in June trains traveled {{ }} miles per day on average when tracking over the {{ }}.

[94] *See* workpaper "Section 3.5.xlsx" at tab "F49"
[95] *See* workpaper "Section 3.5.xlsx" at tab "F50"
[96] Train speeds would not necessarily decrease on all subdivisions on the Evergy route, as BNSF could strategically hold trains on certain subdivisions until a path cleared to move trains through the subdivision ahead.

Figure 51: Train Miles per Day on Ravenna Subdivision (June 2022 - September 2022)[97] {{



}}

Fourth, consistent with the above trends, cycle days for Iatan trains continually { } from June to September 2022 as shown on Figure 52 below.

Figure 52: Iatan Average Monthly Cycle Days (June 2022 - September 2022)[98] {



}

[97] *See* workpaper "Section 3.5.xlsx" at tab "F51"
[98] *See* workpaper "Section 3.5.xlsx" at tab "F52"

Fifth, as is shown on Figure 53 below the { [redacted] } at Iatan observed prior to the { [redacted] } trainset in March 2022 re-emerged following the { [redacted] } in July 2022.

Figure 53: Average Iatan Unloading Time Pre- and Post-July 2022 { [redacted] } (April - June 2022 vs. July - September 2022)[99] {{



}}

Consistent with the deteriorating operating conditions indicated by the above metrics, BNSF was {{ [redacted] }} (which contains the Evergy route) as shown on Figure 54 below.

[99] *See* workpaper "Section 3.5.xlsx" at tab "F53"

Figure 54: Trainsets in Service for Alliance Corridor Plants (August 2022 - November 2022)[100] {{



}}

3.5.2. Many {{ }} had more urgent need for increased service than Evergy.

Even if operating conditions along the Evergy route had supported an increase of coal trainsets during the summer and fall of 2022, at all times during this period there were {{ }}. Figure 55 below shows that from July to November 2022, there were at any given time at least {{ }}

[100] *See* workpaper "Section 3.5.xlsx" at tab "F54"

Figure 55: {{ [redacted] }}[101] {{



}}

3.5.3. Based on delivery projections and historical burn rates, Iatan's stockpile was projected to and did remain at {{ [redacted] }} levels with { [redacted] } trainsets in service.

Starting in August 2022 realistic projections would have shown that keeping { [redacted] } trainsets in service until December, and then { [redacted] }, would provide enough coal to cover Iatan's historic burn requirements without falling below Iatan's 20-day inventory threshold of {{ [redacted] }} stockpile tons[102]. This assessment is based on modelling the amount of tons that would be delivered to Iatan under this set plan at current cycle days as of August, the level of historic burn at Iatan, and projecting out monthly Iatan stockpile levels from actual August 2022 stockpile levels. This projection is shown on Figure 56 below.

[101] *See* workpaper "Section 3.5.xlsx" at tab "F55"
[102] *See* workpaper "EVERGY-0014393", at tab "Days of Cover"

Figure 56: Hypothetical Iatan Stockpile given BNSF's Trainset Plan Through Winter 2023 (July 2022 - February 2023)[103] {{



}}

3.5.4. During the temporary crew shortage, {{

}}

{{

}}

[103] *See* workpaper "Section 3.5.xlsx" at tab "F56"

[104] {{

}}

Figure 57: Coal Shippers Appearing on BNSF's Internal Process for Identifying Customers With Most Urgent Need[105] {{



}}

Customers reporting 20 inventory days or less in 2022 received on average an {{ }} in the three months following when they first appeared on the list in comparison to the three months prior.[106] { }, receiving {{ }} in average monthly deliveries in the three following months compared to the three prior months. Documents show that by { }.[107] Following these efforts, { }

[105] *See* workpaper "Section 3.5.xlsx" at tab "F57"
[106] *See* workpaper "Section 3.5.xlsx" at tab "Coal Hot List – Deliveries"
[107] *See* BNSF_EVERGY_0005787

[redacted] } increased {{ [redacted] }} in the next three months from August to October compared to the prior three months. This is shown on the following chart.

Figure 58: {{ [redacted] }}

[redacted]

{{ [redacted] }}

[108] *See* workpaper "Section 3.5.xlsx" at tab "F58"

Figure 59: 2022 BNSF Revenues over Variable Costs by Traffic Group[109]{{



}}

3.6. BNSF's service during the period of temporary crew shortage was sufficient to sustain Evergy's normal operations.

Despite the service challenges stemming from BNSF's temporary crew shortage in the summer and fall of 2022, Evergy still received enough coal to sustain normal rates of coal burn and maintained inventory levels well above many of its peers. The service it received was {{ }} during this period and could have been higher had Evergy pursued options available to it to increase deliveries.

3.6.1. BNSF's service to Evergy during the second half of 2022 was {{ }} received.

Evergy received service {{ }} received in the second half of 2022.[110] As shown on Figure 60 below, relative to initial

[109] *See* workpaper "Section 3.5.xlsx" at tab "F59"

[110] For reasons discussed above, in the first half of the year Iatan's stockpile was consistently {{ }} for BNSF to deliver additional volumes included in Evergy's inflated nominations.

nominations entered into the CFT, Evergy received {{ [redacted] }} on average in the second half of 2022.

Figure 60: Fulfillment of Initial CFT Nominations for Second Half of 2022 - Evergy vs. Other BNSF-Served Coal Plants[111] {{



}}

The amount of deliveries Evergy received in the second half of 2022 relative to its final nominations would also have been {{ [redacted] }}, but for the fact that Evergy { [redacted] } its nominations in the second half of 2022 by {{ [redacted] }}. Specifically, if Evergy had { [redacted] } its nominations for the second half of 2022 by {{ [redacted] }}—the average {{ [redacted] }} in this timeframe—rather than { [redacted] }, Evergy would have received {{ [redacted] }}. This is depicted on Figure 61 below.

[111] *See* workpaper "Section 3.6.xlsx" at tab "F60"

Figure 61: Fulfillment of Final CFT Nominations - Evergy {{



}}

In her Verified Statement, Ms. Tucker presents a view that BNSF only delivered { } of Evergy's CFT nominations for Iatan in 2022.[113] Messrs. Mulholland and Crowley provide similar statistics for both Iatan and Lawrence as well as all other BNSF coal customers.[114] However, these measures are skewed because they include the first half of 2022, a period in which Iatan's {{ }} and nominations { }, and do not control for Evergy's nominations {{ }}

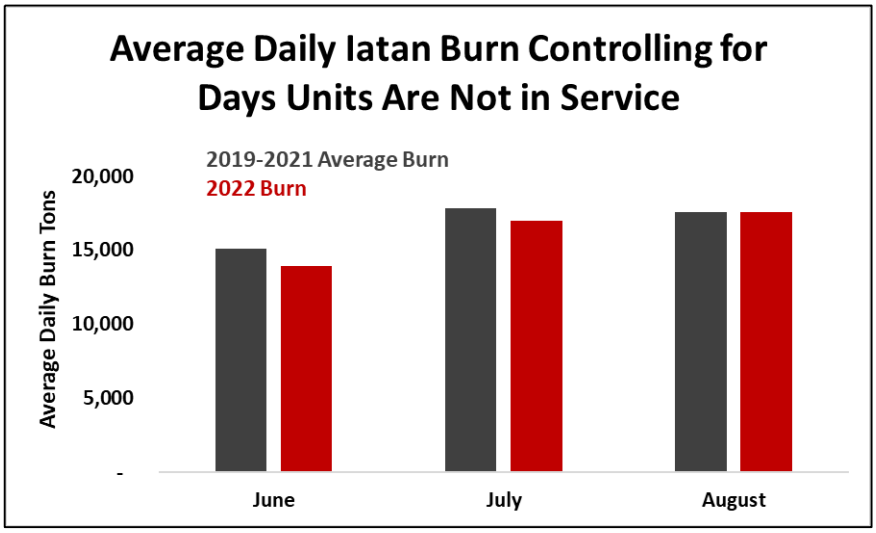
3.6.2. Iatan's burn patterns in the summer and fall of 2022 were comparable to historical levels, even in the fall when Evergy claimed it could have burned much more coal but for BNSF's alleged service failures.

Whether looking at the peak burn season in the summer of 2022 or the period from August to November 2022 in which BNSF was unable to fulfill Evergy's request for a {

[112] *See* workpaper "Section 3.6.xlsx" at tab "F61"
[113] *See* Tucker V.S. at Table 5, row "% of CFT Schedules Delivered", column "Iatan"
[114] *See* Mulholland and Crowley V.S. at Exhibit 10.

[redacted] }, Iatan sustained normal levels of coal burn. Figure 62 below shows that Iatan's daily levels of burn on non-outage days in the summer of 2022 were very similar to average levels in the prior three years.

Figure 62: Average Daily Iatan Burn Controlling for Days Units Are Not In Service (June - August, 2022 vs. 2019-2021 Average)[115]



Iatan also burned a similar amount of total coal in the August to November 2022 period as it had in the prior three years. In contrast, {{ [redacted] }} with historic levels, as shown on Figure 63 below.

[115] *See* workpaper "Section 3.6.xlsx" at tab "F62"

Figure 63: Crosby "but-for" burn vs. Historical Average and 2022 Actual Burn - Iatan (August - November)[116] {{



}}

3.6.3. Evergy did not exercise several available options for increased service to Iatan.

{ [redacted] }.[117] BNSF originally suggested this in March, and had Evergy accepted this offer starting in July when Iatan's inventory dropped below {{ [redacted] }}, deliveries to Iatan for the second half of 2022, { [redacted] }, would have increased by approximately { [redacted] } tons.[118] These increased deliveries would have resulted in { [redacted] } of Evergy's

[116] *See* workpaper "Section 3.6.xlsx" at tab "F63"
[117] *See* BNSF_EVERGY_0006245. {{ [redacted] }}
[118] *See* workpaper "Section 3.6.xlsx" at tab "LRT to SAI Set Shift"

initial CFT nominations for the second half of 2022 being delivered to Iatan—{{ [redacted] }} the average amount of coal deliveries relative to initial CFT nominations received by other BNSF-served coal plants of {{ [redacted] }}.

{ [redacted] }.[119] In 2019 through 2021, Evergy diverted an average of {{ [redacted] }} that delivered on average an additional {{ [redacted] }} tons of coal a year to Iatan, when netting out the effects of trains diverted away from Iatan.[120] Had this option been available in 2022, Evergy would have similarly had opportunities to coordinate with BNSF and increase deliveries to Iatan.

Evergy could have also increased deliveries by adhering to BNSF's standard { [redacted] } allotment for unloading time rather than its { [redacted] } unloading times. We calculate that in 2022 Evergy would have received an additional { [redacted]

[119] *See* BNSF_EVERGY_0006243. {{ [redacted] }}

[120] *See* workpaper "Section 3.6.xlsx" at "UP Plants Diversions"

[redacted] }.[121]

Finally, Evergy could have taken actions to receive more coal towards the end of 2021 which could have had positive impacts in 2022. Instead, in the last four months of 2021, Evergy's final nominations for Iatan and Lawrence combined were approximately { [redacted] } per month on average than in the first eight months of 2021, and BNSF correspondingly { [redacted] } the average pace of its deliveries by about { [redacted] } tons per month in the last four months of 2021.[122]

3.6.4. BNSF's service to Iatan and Lawrence was {{ [redacted] }} during the height of the temporary crew shortage.

{{ [redacted] }}

Figure 64: Percent of Declarations Delivered at {{ [redacted] }} vs. BNSF-Served Evergy Coal Plants (August 2022 - November 2022)[123]

{{

[121] *See* workpaper "Section 3.6.xlsx" at tab "Unloading Time Model"
[122] *See* workpaper "Section 3.6.xlsx" at tab "Sep – Dec 2021"
[123] *See* workpaper "Section 3.6.xlsx" at tab "F64"



}}

3.6.5. Lawrence received better coal service than {{ }}

While much of the above discussion has centered on BNSF's deliveries to the much larger Iatan plant, the alleged delivery shortages to Lawrence should also be put in context. Of particular importance is the fact that Lawrence was {{ }} BNSF coal plants to receive {{ }} than reported in both its Annual Tonnage Nomination (i.e., annual declaration) and initial CFT nominations for 2022, {{ }} The only alleged shortages to Lawrence were a function of Evergy's { } beginning in May 2022, as is depicted on Figure 65 below.

[124] *See* EVERGY-0082500. {{ }}

Figure 65: Cumulative Declarations, Initial Nominations, Final Nominations, and Deliveries - Lawrence (January 2022 - December 2022)[125] {



}

4. Mischaracterizations and Omissions in Ms. Tucker's Verified Statement

In this section we address specific mischaracterizations and omissions in Ms. Tucker's Verified Statement. Her mischaracterizations and omissions include failing to consider how { } at Lawrence and Iatan were influenced by reducing burn and high stockpiles, trying to establish historical baselines without recognizing how current circumstances differed from those baselines, rejecting attempts made by BNSF at the time to point out these current circumstances { }, and disclaiming any responsibility for Evergy's { }. Due to these flaws, her assessment of BNSF's service to Evergy in 2022 is myopic and inaccurate.

[125] *See* workpaper "Section 3.6.xlsx" at tab "F65"

4.1. Ms. Tucker's assertion that BNSF began { [redacted] } in August 2021 ignores Evergy's decreasing burn and increasing stockpiles.

Ms. Tucker asserts that beginning in August 2021 BNSF began { [redacted] }[126] In fact, Evergy's stockpiles at Iatan and Lawrence continued to grow throughout the remainder of 2021 even after BNSF began { [redacted] } in burn in the fall of 2021. These trends are shown for Iatan in Figure 20 and Figure 21 above. Lawrence followed this same trend – Figure 66 below shows that trainsets were { [redacted] } in burn.

Figure 66: Lawrence trainsets vs. Rolling 30-Day Average Monthly Burn (August 2021 - February 2022)[127] {{

[redacted]

}}

As a result, Lawrence's stockpile was growing in the months following when Ms. Tucker asserted BNSF began { [redacted] } and remained well above prior three-year historical averages throughout winter 2022.

[126] *See* Tucker V.S. at page 14.
[127] *See* workpaper "Section 4.xlsx" at tab "F66"

Figure 67: Lawrence Rolling 30-Day Average Monthly Burn and Inventory Compared to 3-Year Historical Average (August 2021 – February 2022)[128] {{



}}

Ms. Tucker's analysis of prior set levels also ignores {{ [redacted] }}. In light of this acknowledged constraint, her observations of between { [redacted] } sets in service at Iatan between March and June in 2019 and 2021 are irrelevant.

4.2. Ms. Tucker's comparison of 2022 deliveries to 2017-21 deliveries ignores how circumstances differed in 2022.

Ms. Tucker's comparisons to past levels of historical deliveries overlook the actual circumstances in 2022 which drove lower levels of deliveries. She attempts to portray Evergy's operations in 2022 as no different than in past years, and on that basis questions why BNSF did not deliver the same amount of coal as in past years. In addition to disregarding BNSF's acknowledged service challenges in 2022 stemming from the pandemic, she ignores how there was {{ [redacted] }} in the first half of 2022, as we

[128] *See* workpaper "Section 4.xlsx" at tab "F67"

demonstrate in section 3.2.1. She further ignores how this was related to Evergy's own decreasing burn rates, explicitly dismissing { [redacted] }, [129] both of which turned out to be true as we discuss in sections 3.1.3 and 3.2.1.

Table 1 below modifies Ms. Tucker's table presenting annual 2017 to 2021 historic deliveries[130] to Iatan to cover the first half of the year in light of coal burn and ending stockpile levels.

Table 1: First Half 2022 vs. Average First Half 2017-2021 Iatan Deliveries, Burn, and Stockpile[131]

	Deliveries	Burn	Stockpile as of June 30th
Average 2017-21 First Half	2,277,907	2,279,755	1,101,124
2022 First Half	1,419,458	1,516,443	1,139,097

This shows that BNSF's deliveries to Iatan in the first half of 2022 differed from historical levels because burn at Iatan also differed from historical levels. Any claim that burn rates were low in this period due to BNSF's delivery shortfalls is clearly not true because at the end of the first half of 2022 {{ [redacted] }}.[132] By neglecting to recognize the important circumstances in 2022 that dictated

---

[129] *See* BNSF_EVERGY_0007748. {{ [redacted] }}

[130] *See* Tucker V.S. at Table 1

[131] *See* workpaper "Section 4.xlsx" at tab "T1"

[132] { [redacted] }

changes in delivery levels, Ms. Tucker's analysis of 2017 to 2021 historic baselines provides no relevant information for assessing BNSF's 2022 service.

4.3. Ms. Tucker's assessment of service levels based only on final CFT nominations ignores the many problems with Evergy's final CFT nominations in 2022

Ms. Tucker's assessment of 2022 service levels is based exclusively on Evergy's final monthly CFT nominations in relation to deliveries. She claims that BNSF delivered { [redacted] }[133] of Evergy's requested tonnage in 2022 based on a flawed comparison of final CFT nominations to BNSF's deliveries.

First, Ms. Tucker's assessment of service based on comparing BNSF's deliveries to Evergy's final CFT schedules is flawed because it does not consider how Evergy's final CFT nominations were unrelated to either its {{ [redacted] }}, as we discuss in sections 3.2.2 and 3.2.3. Table 2 below summarizes final CFT nominations that Ms. Tucker considered compared to actual deliveries and deliveries required to maintain Iatan's {{ [redacted] }} level in the first half of 2022.

Table 2: Deliveries to Iatan Required in First Half of 2022 vs. Actual Deliveries and Evergy's Final CFT Nominations used by Ms. Tucker[134]

	First Half 2022
Deliveries required to maintain Iatan's target stockpile at Iatan	{{ [redacted]
Deliveries required to maintain Iatan's target stockpile at Iatan, assuming additional burn occurred had Evergy not implemented coal adders	[redacted] }}
BNSF's deliveries	{ [redacted]
Evergy's final CFT nominations used in Ms. Tucker's service analysis	[redacted] }

[133] *See* Tucker V.S. at Table 5.
[134] *See* workpaper "Section 4.xlsx" at tab "T2"

This analysis shows that it is not realistic to claim that there were any shortfalls in deliveries in the first half of 2022 to Iatan, contrary to Ms. Tucker's flawed claim that BNSF's under-delivered { [redacted] }[135] tons in this period.

Second, Ms. Tucker's assessment of service based on comparing BNSF's deliveries to Evergy's final CFT schedules for Iatan and Lawrence is flawed because it does not account for the { [redacted] } to CFT nominations for the second half of 2022. As we discuss in section 3.3.1, { [redacted] }. Table 3 below compares the final CFT nominations included in Ms. Tucker's service assessment to the CFT nominations Evergy had provided to BNSF in April.

Table 3: { [redacted] }[136]

2022	CFT Amounts Provided by Evergy in April	Final CFT Amounts Provided by Evergy Included in Ms. Tucker's Analysis	Difference
July	{ [redacted]	[redacted]	[redacted]
Aug	[redacted]	[redacted]	[redacted]
Sept	[redacted]	[redacted]	[redacted]
Oct	[redacted]	[redacted]	[redacted]
Nov	[redacted]	[redacted]	[redacted]
Dec	[redacted]	[redacted]	[redacted]
Total	[redacted]	[redacted]	[redacted] }

[135] *See* workpaper "Section 4.xlsx" at tab "T2"
[136] *See* workpaper "Section 4.xlsx" at tab "T3"

While Ms. Tucker claims BNSF { [redacted] } in the second half of 2022 to Lawrence and Iatan, the above table shows that { [redacted] } this amount is related to { [redacted] } in Every's CFT nominations.

4.4. Ms. Tucker downplays the extent of { [redacted] } in Evergy's nominations

Ms. Tucker's Verified Statement provides a number of metrics showing { [redacted] }. Ms. Tucker recounts a letter she sent to BNSF stating that Evergy will { [redacted] } This is belied by other facts in Ms. Tucker's Verified Statement. For instance, Ms. Tucker shows that Evergy's 2022 final CFT nominations { [redacted] }. She also provides a chart identifying how in 2019 and 2021 Evergy had as { [redacted] } sets in service at any given time. Further, as discussed in section 3.2.4 and shown in Figure 68 below, Evergy's nominations are {{ [redacted] }} than other BNSF shippers on average.

Figure 68: Monthly Nominations Variance from Average - Evergy vs. All Other BNSF-Served Coal Plants (January 2019 – December 2022)[137] {{



}}

Ms. Tucker's assessment of BNSF's service to Evergy does not recognize how the transportation service Evergy sought for Iatan in 2022 epitomized this { [redacted] }. As established in section 4.2, it was not realistic for BNSF to deliver any more than the approximately { [redacted] } tons actually delivered in the first half of 2022. However, as discussed in section 4.3, in the second half of 2022, Evergy nominated a total of { [redacted] } tons of coal. The seasonal discrepancy between the tonnage Iatan was able to, and did, receive in the first half of 2022 and the tonnage Evergy nominated for Iatan in the second half of 2022 is shown in Figure 69 below.

[137] *See* workpaper "Section 3.2.xlsx" at tab "F27"

Figure 69: Iatan - Actual First Half 2022 Deliveries vs. Second Half 2022 Final CFT Nominations[138] {



}

Similarly, as is shown in Figure 70 below, Evergy {{ }} sets at Iatan in spring 2022 as discussed in section 3.2.3, yet even at the time was asking for { } sets at Iatan for the summer.[139]

Figure 70: Iatan - Actual Trainsets in Service vs. Requested Trainsets in Service[140] {{



}}

[138] *See* workpaper "Section 4.xlsx" at tab "F69"
[139] *See* BNSF_EVERGY_0006219. { }
[140] *See* workpaper "Section 4.xlsx" at tab "F70"

Both of these facts reflect Evergy's wish for BNSF to roughly { [redacted] } its coal deliveries from one month to the next. For reasons discussed in section 3.4, BNSF was only able to partially accommodate this desire for highly { [redacted] } service initially, although by December 2022 BNSF had added a { [redacted] } compared to what Iatan could realistically have handled through mid-June.

4.5. Ms. Tucker neglects to mention Evergy's { [redacted] }.

Ms. Tucker's assessment of BNSF's service to Evergy does not consider the effects of Evergy's { [redacted] } to its nominations. As discussed in section 3.2.4 and shown in Figure 71 below, Evergy { [redacted] } its nominations {{ [redacted] }} other BNSF shippers on average.

Figure 71: Percent Change Between Initial and Final Nominations – Evergy vs. All Other BNSF-Served Coal Shippers (January 2019 – December 2022)[141] {{



}}

As discussed above, Ms. Tucker's quantification of service levels based on final CFT nominations holds BNSF responsible for not delivering the { [redacted] } of coal Evergy

[141] *See* workpaper "Section 3.2.xlsx" at tab "F28"

{ [redacted] } for the second half of 2022. However, Ms. Tucker does not consider the mirror image issue of whether Evergy should have any responsibility when it { [redacted] } its coal nominations, as occurred in both 2023 and 2024. In 2023, Evergy initially { [redacted] } by the end of the year. It presumably wanted { [redacted] } with no hint of a complaint from Evergy. In fact, Evergy's response was to { [redacted] }. The following chart shows how Evergy { [redacted] } its nominations for both Iatan and Lawrence in 2023.

Figure 72: Changes in Evergy's 2023 Nominations for Iatan and Lawrence[142] {

[redacted]

}

A similar and even more significant { [redacted] } by year's end for Iatan and Lawrence. It presumably wanted { [redacted] }. The following chart shows how Evergy { [redacted] } its nominations for Iatan and Lawrence in 2024.

[142] *See* workpaper "Section 4.xlsx" at tab "F72"

Figure 73: Changes in Evergy's 2024 Nominations for Iatan[143] {



}

Ms. Tucker does not address these { } . We discuss the costs this type of behavior imposes on BNSF in section 7.2.

4.6. Ms. Tucker wrongly tries to fault BNSF for { } at Iatan

Ms. Tucker dismisses BNSF's legitimate concerns with { } at Iatan and wrongly alleges they are the fault of BNSF. Specifically, Ms. Tucker cites communications between { } As is shown above in section 3.1.2, { } .

[143] *See* workpaper "Section 4.xlsx" at tab "F73"

[144] *See* BNSF_EVERGY_0007748. { }

Ms. Tucker tries to substantiate her claim that { [redacted] } are BNSF's fault by offering an example of { [redacted] }.[145] However, her claim is inconsistent with the actual events of these trains. {{ [redacted] }} These events are depicted in Figure 74 below.

Figure 74: String-Line Representation of Trains Arriving at Iatan on September 3, 2022[146]

{{

[redacted]

}}

[145] *See* BNSF_EVERGY_0005726.
[146] *See* workpaper "Section 4.xlsx" at tab "F74"

Moreover, Ms. Tucker neglects to mention {{ [redacted] }} In other words, irregular operational features outside of BNSF's control affected cycling efficiency, causing {{ [redacted] }}

5. Issues and Oversights in Messrs. Mulholland & Crowley's Joint Verified Statement

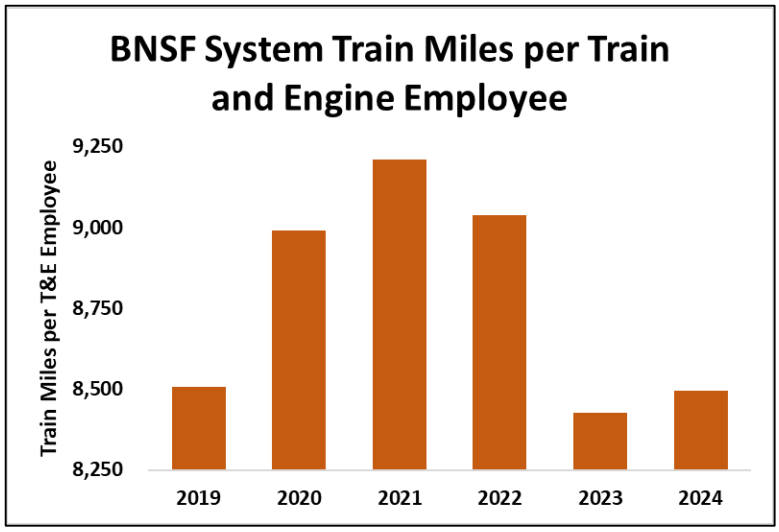
Messrs. Mulholland and Crowley's Joint Verified Statement submitted as part of Evergy's Opening Evidence reviewed BNSF operating data between 2019 and 2022. In this section we identify and address oversights in their statement and flawed conclusions Evergy draws from their analysis.

5.1. Messrs. Mulholland & Crowley mistake a temporary shortage in crew resources in 2022 for a structural changes in BNSF's operating plan

Although 2023 data is available, Messrs. Mulholland and Crowley only selectively include it in their analysis and often only make comparisons between 2019 and 2022. It is not remarkable nor surprising that their analysis finds crew resource inadequacies in 2022 at the height of BNSF's temporary crew shortage. However, this finding does not support their flawed conclusion that BNSF had inappropriately changed its operating plan in prior years. Instead, when corrected to consistently include 2023 data and survey patterns in the intervening years starting in 2019, their analysis shows that BNSF's service challenges in 2022 were the result of a temporary crew shortage that has since abated. This finding contradicts Evergy's claims that BNSF began deliberately cutting resources before the pandemic started and is consistent with our analysis presented in section 3.4.1 above.

As we showed in section 3.4.1, the ratio of train miles to T&E employees diverged from prior norms during the pandemic period, including during 2022 when the acknowledged crew shortage was at its height, but has since returned to pre-pandemic levels.

Figure 75: BNSF System Train Miles per T&E Employee (2019 - 2024)[147]



Messrs. Mulholland and Crowley's analysis of crew-related delays, when looked at over the entire 2019 to 2023 period covered by available data, corroborates the finding that there was a temporary, pandemic-era crew shortage that has since abated. Figure 76 below shows this by extending their analysis of total crew-related delay minutes on BNSF's system in 2019 and 2022 to instead show the entire 2019 to 2023 period, which the data produced in this proceeding covers.[148]

[147] *See* workpaper "Section 3.4.xlsx" at tab "F43"
[148] *See* Mulholland and Crowley V.S. at Table No. 13, Line 2, Column 5.

Figure 76: Total Crew Delay Minutes per Train - BNSF System (2019 - 2023)[149] {{



}}

Similarly, Figure 77 below extends Messrs. Mulholland and Crowley's analysis of crew-related delay minutes per train on the Evergy route to cover the same 2019 to 2023 period and again confirms the temporary nature of the crew shortage.[150]

[149] *See* workpaper "Section 5.xlsx" at tab "F76"
[150] *See* Mulholland and Crowley V.S. at Table No. 14, Line 2, Column 5.

Figure 77: Total Crew Delay Minutes per Train - Evergy route (2019 - 2023)[151] {{

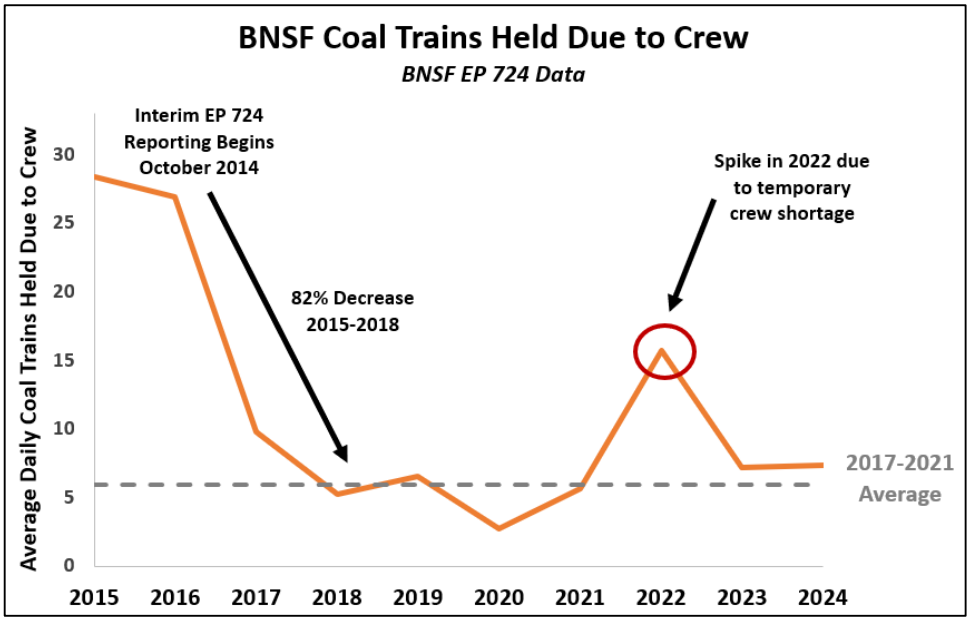


}}

A similar analysis covering the period from when BNSF first began reporting train hold data to the STB at the end of 2014 through present confirms the finding that operational issues due to crew shortages spiked during the pandemic period and have since returned to normal levels (after the industry recovered from the 2015 and 2016 service challenges which led to the reporting of this data). Figure 78 below shows total BNSF trains holding due to crew from 2015 through 2024.

[151] *See* workpaper "Section 5.xlsx" at tab "F77"

Figure 78: BNSF Coal Trains Held Due to Crew[152]



Other metrics included in Messrs. Mulholland and Crowley's analysis also belie claims that BNSF has structurally reduced resource levels.

For one, while Messrs. Mulholland and Crowley focus on increases in crew, mechanical, and locomotive power related delays in 2022 compared to 2019, these three categories together comprise {{ [redacted] }} of all delay minutes recorded along the Evergy route in 2022. Stated differently, while there are approximately {{ [redacted] }} delay minutes related to crew, mechanical, and power along the Evergy route in 2022 compared to 2019, overall 2022 delay minutes were {{ [redacted] }} compared to 2019, representing a {{ [redacted] }} in total delays.[153] This is not consistent with Evergy's allegation that BNSF has changed its operating plan to rely on irresponsibly low resource levels.

[152] *See* workpaper "Section 5.xlsx" at tab "F78"
[153] *See* workpaper "Section 5.xlsx" at tab "Delay Minute Calculations"

Neither does Messrs. Mulholland & Crowley's analysis of the number of trains and the number of train crew support Evergy's allegations that BNSF cut too many crew resources. While they observe that between 2019 and 2022 along the Evergy route the number of train crew employees {{ }},[154] in other parts of their analysis they identify that the number of trains {{ }}[155] and train speeds {{ }}.[156] They fail to recognize how the observed {{ }} in train employees is consistent with the combined effects of the observed {{ }} in the number of trains and {{ }} in train productivity. The below hypothetical calculation demonstrates this using crew counts, train counts, and average speeds taken from the Mulholland and Crowley V.S. and distance assumptions representative of operations along the Evergy route.

Table 4: Hypothetical Illustration of Crew Resource Balance[157]

	2019	Change	2022
Crew	{{		
Trains			
Speed (mph)			
Assumed segment distance			
Hours Per Crew Required			
Train Miles Travelled			
Required Operating Hours			
Hours Per Crew Member			**}}**

The changes Messrs. Mulholland & Crowley observed do not indicate a strategic change in underlying resource levels relative to resource needs. Rather, they indicate that BNSF

[154] *See* Mulholland and Crowley workpaper "Train and Crew Figures_Opening" at tab "Charts" at cell R13
[155] *See* Mulholland and Crowley V.S. at Exhibit No. 11 at Page 1 of 6 at Row 15 and Column 7
[156] *See* Mulholland and Crowley V.S. at Exhibit No. 12 at Page 1 of 2 at Row 13 and Column 7
[157] *See* workpaper "Section 5.xlsx" at tab "T4"

experienced a shortage of crew, and as a result was not able to provide the amount of service it desired until obtaining additional crew.

Messrs. Mulholland and Crowley also opine on "BNSF's decision to reduce its pools of train crews available" based strictly on their review of BNSF's operational data, which does not shed any light on BNSF's decision-making processes.[158] As discussed in section 3.4.1, BNSF produced documents showing its crew resource planning process, following customary and logical standards for determining resource requirements, {{ [redacted] }} in 2022. BNSF sought to obtain these crew resources but, for reasons beyond its control discussed in Dr. Johnson's Verified Statement, was not able to do so in a time period consistent with past experience.

In addition, Messrs. Mulholland and Crowley mistakenly assert there was a locomotive shortage in 2022. As we show in section 3.4.3, {{ [redacted] }} locomotives were available to BNSF throughout this period. BNSF's {{ [redacted] }} of locomotives in good order throughout the pertinent timeframe strongly indicate that the {{ [redacted] }} Messrs. Mulholland and Crowley observe in locomotive related delays in 2022,[159] which comprise a {{ [redacted] }} of all delays, stem from the shortage of crew resources required to position the locomotives in the required locations.

Finally, the lack of evidence for alleged resource reductions is also clear in their assessment of revenues and operating expenses. Messrs. Mulholland and Crowley analyze increases in revenues and expenses independently, but do not put two metrics together, which

[158] *See* Mulholland and Crowley V.S. at Page 3
[159] *See* Mulholland and Crowley V.S. at Table No. 13 at Row 10 and Column 5

shows that BNSF's operating ratio increased from 65%[160] to 67%[161] from 2019 to 2022. This fact does not support allegations that BNSF irresponsibility cut resources over this period, which they fail to recognize.

5.2. Messrs. Mulholland & Crowley's assessment of service levels is flawed

Messrs. Mulholland & Crowley's claim BNSF's service to Evergy in 2022 {{ [redacted] }} than to other BNSF coal shippers. However, they offer no legitimate support for this claim. First, they compare 2019 to 2022 annual coal deliveries for all of BNSF's coal customers, and observe that Evergy received {{ [redacted] }} in 2022 than in 2019 compared to many other coal customers. This analysis ignores practically all relevant factors affecting delivery levels, including how much coal a shipper nominates in a given year, how high its stockpile is going into a given year, how much coal it burns in that year, and how much coal it has space to store in its stockpile. Messrs. Mulholland & Crowley also compare annual 2022 deliveries to aggregated final monthly CFT nominations for all BNSF coal shippers. This comparison is the same as Ms. Tucker performed, and is invalid for all the same reasons we discuss in sections 3.6.1, 4.3 and 4.4.

6. Flawed Assumptions in Evergy's Requested Damages

Evergy's requested damages for normal course of business expenditures for inventory management costs and railcar storage costs developed by Ms. Tucker are unsupported and arbitrary.

---

[160] ($15,145,542,000 Operating Expenses/$23,132,863,000 Operating Revenues) x 100% = 65%; *see* Mulholland and Crowley V.S. at Table No. 1 at Row 1

[161] ($17,102,565,000 Operating Expenses/$25,609,516,000 Operating Revenues) x 100% = 67%; *see* Mulholland and Crowley V.S. at Table No. 1 at Row 4

6.1. Evergy's inventory management damages calculation is based on flawed premises and unsupported cost assumptions.

Evergy requests nearly {{ [redacted] }} for so-called inventory management costs, which boil down to costs Ms. Tucker estimates Evergy incurred to move coal between its stockpile and burn queue.[162] This damages claim is based on the unsupported and problematic notion that BNSF should be responsible for how Evergy moves coal around different parts of its plant. Additionally, Ms. Tucker does not provide documentation for the actual hours spent and fuel consumed by bulldozers allegedly moving coal nor does she identify where exactly the coal was moved from or to.

Based on differences between low and high stockpile points in 2022, Ms. Tucker infers that bulldozers must have moved over {{ [redacted] }} combined tons of coal at Iatan and Lawrence between each plant's stockpile and burn queue. She does not explain why the movement of coal between stockpile and burn areas is related to a rail carrier's alleged service failure rather than being a normal part of operating a coal plant that includes use of a stockpile. In essence, her calculations assume that the coal in Evergy's stockpile should remain there indefinitely and that whatever coal is burned should be delivered directly from BNSF's trains into the burn queues at Iatan and Lawrence. This implied entitlement that BNSF should unload coal "directly for use in the generating units at Iatan and [Lawrence]" as this is Evergy's "preferred approach"[163] is inconsistent with tariff provisions, which { [redacted] }

[162] *See* Tucker V.S. at Table 28.
[163] *See* Tucker V.S. at page 40.
[164] For Iatan, *see* BNSF_EVERGY_0007820– BNSF 60029: Evergy Iatan (Sadler) Tariff Rate. For Lawrence, *see* BNSF_EVERGY_0007968– BNSF 60024: Evergy Lawrence Tariff. For both

Furthermore, the additional bulldozer costs Ms. Tucker estimates depend on unsupported assumptions. First, {{ [redacted] }}[165,166] Second, Ms. Tucker provides estimates of how many tons of coal per hour each model of bulldozer used at Iatan or Lawrence is capable of moving. However, she does not provide any support or documentation for these bulldozer productivity estimates other than to say that considerations of each facility's layout were arrived at "by way of background."[167] In sum, Ms. Tucker offers no reliable basis for quantifying Evergy's alleged increased bulldozer cost damages.

6.2. Evergy has not demonstrated why BNSF should be responsible for the train set storage costs it incurred in 2022.

Evergy also requests damages of over {{ [redacted] }} related to railcar storage expenses. However, Evergy has not demonstrated why these railcar storage expenses should be considered any differently than railcar storage expenses incurred in the course of typical operations. The number of trainsets utilized by Evergy, and not idle or in storage, has always fluctuated with demand – for example, Table 10 in Ms. Tucker's Verified Statement shows Evergy utilizing anywhere from 6 to 11 trainsets during any given week in 2019.[168] Similarly, Table 9 shows Evergy utilizing anywhere from 2 to 10 trainsets during any given week in 2021.[169] Presumably,

---

plants, provisions for unloading are described by the general terms of BNSF Tariff 6041-series or successors thereto (*see* BNSF_EVERGY_0019850).

[165] *See* Tucker V.S. Workpapers at "Iatan Average Diesel Fuel Price.xls"

[166] *See* Tucker V.S. Workpapers at "LEC Average Diesel Fuel Price for 2022.xlsx"

[167] *See* Tucker V.S. at page 44, Footnote 9.

[168] *See* Tucker V.S. at Table 10.

[169] *See* Tucker V.S. at Table 9.

during weeks of lower trainset utilization in 2019 and 2021, Evergy was comfortable with incurring periodic storage expenses assuming unutilized trainsets might be needed at a later date. As discussed above in section 3.2.2, Evergy itself recognized it could only handle {{ [redacted] }} trainsets in service at Iatan for the majority of the first half of 2022, and it is illogical to conclude then that BNSF should bear the expense of Evergy storing further sets during this time. More generally, as documented in sections 3.1.3, 3.2.2, 3.2.4, and 3.3.1 above, Evergy's forecasts of coal demand, nominations, and set requests were often { [redacted] }. Since Evergy's resource planning judgments, including the number of trainsets to acquire, were presumably tied at least in part to forecasts of coal demand, then BNSF should not be held liable for Evergy's inaccurate assessments of its own resource needs.

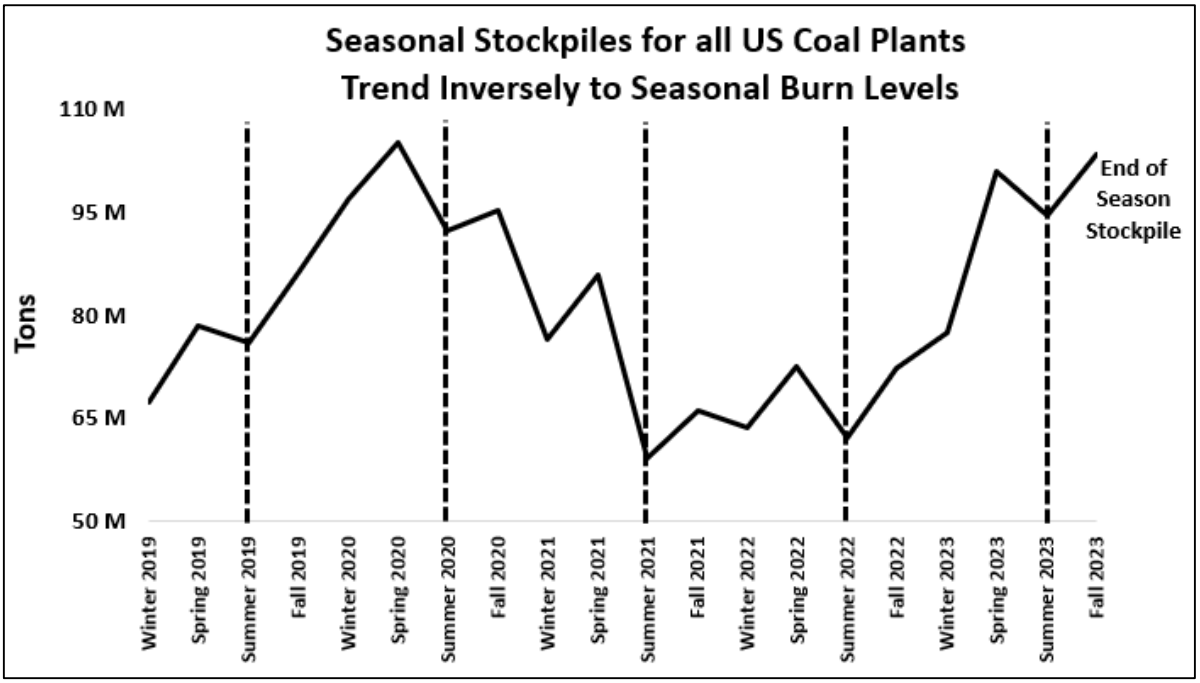
7. The Role of Stockpiles, Nominations Commitments, and Set Management in Coal Network Operations

In this section we describe three well-established and important features of coal transportation by rail in relation to positions expressed by Evergy. Specifically, we discuss how stockpiles are used to accommodate peak burn seasons, how mutually agreed-upon volume commitments help carriers efficiently plan resources, and how rail operators are most qualified to manage sets in times of resource constraints.

7.1. Coal-burning plants are accustomed to ratable coal deliveries and manage peak seasonal burn by drawing from stockpiles.

Evergy seeks damages in this proceeding for, among other things, pushing coal from its stockpile to its burn queue. Paired with Evergy's highly seasonal nominations (*see* Figure 27 in section 3.2.4), this reflects an expectation for deliveries being timed to seasonal burn. Figure 79 below shows how aggregate coal inventory levels across all coal plants in the U.S. routinely decline in the peak summer burn season.

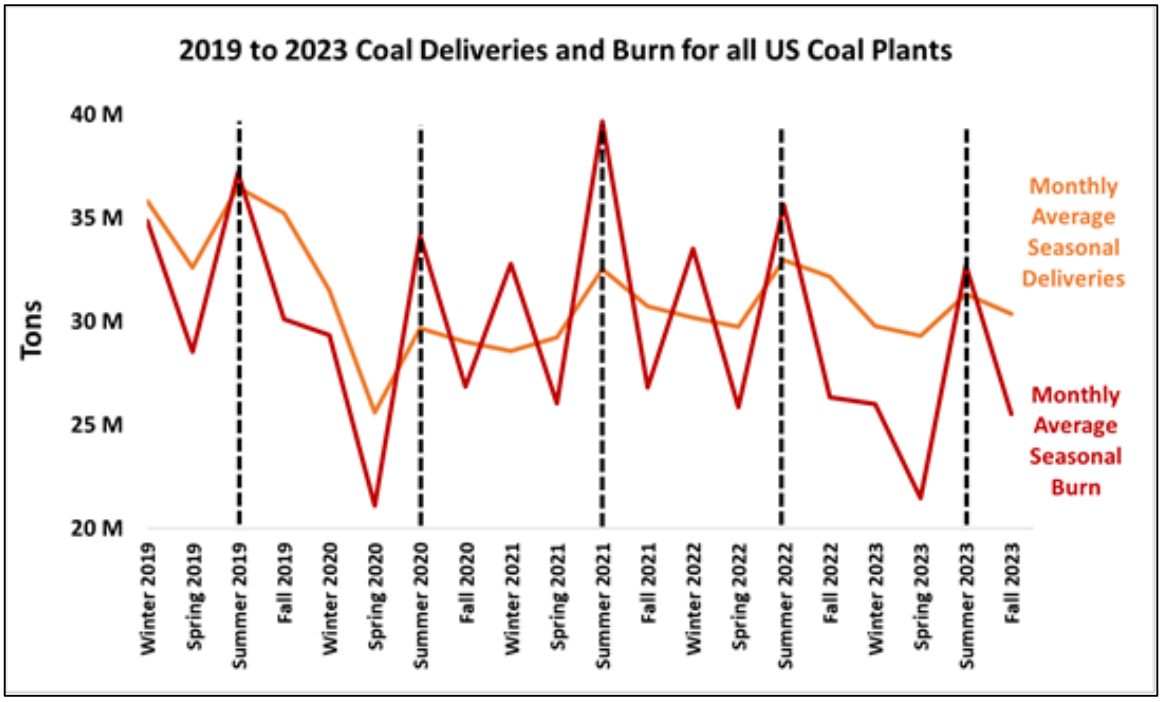
Figure 79: Seasonal Coal Stockpiles for U.S. Plants[170]



These routine declines in summer inventory are due to overall rail deliveries holding relatively constant while burns peak, as is shown in Figure 80 below.

[170] *See* workpaper "Section 7.xlsx" at tab "F79"

Figure 80: Seasonal Burn vs. Seasonal Deliveries for U.S. Coal Plants[171]



If all coal plants were entitled to deliveries timed with burn fluctuations, thus reducing or eliminating the need to move coal from stockpiles to burn queues, rail resources would need to be significantly expanded to accommodate peak burn seasons and then remain idle during other parts of the year, resulting in significant costs that would be ultimately borne by coal customers. In contrast, ratable deliveries allow for consistent utilization of rail resources, which improves efficiency of rail transportation networks for coal. As discussed in section 3.2.4, Evergy has historically sought to { [redacted] }.

7.2. For high volume customers, it is well-established and most efficient for railroads to secure reliable volume commitments.

The ability to secure commitments for transporting certain volume levels in the future allows rail carriers to plan resources well in advance and is an effective mechanism that rail

[171] *See* workpaper "Section 7.xlsx" at tab "F80"

carriers and coal customers frequently use to support stable transportation operations. The majority of coal transported by rail in the U.S. moves under contracts agreed to between the coal customer and the rail carrier.[172] Many of these contracts have volume commitments, some of which extend out many years in the future. { [redacted] } {{ [redacted] }}

The potential harm from not having volume commitments is apparent in Evergy's recent interactions with BNSF. In December 2022, { [redacted] }

7.3. It is most efficient for railroads to manage their own network operations and not permit customers to dictate terms.

Rail carriers in the U.S. have proper incentives to manage their own networks optimally in periods of resource constraints. During these periods, and specifically during a period of crew resource constraints, adding more trainsets to the network at customers' behest would not increase thruput and would instead only risk further decreasing already limited capacity.

[172] *See* U.S. Government Accountability Office, GAO-17-166, *Freight Rail Pricing: Contracts Provide Shippers and Railroads Flexibility, but High Rates Concern Some Shippers*, figure 3, at page 15 (December 2016), https://www.gao.gov/assets/gao-17-166.pdf

Operationally, this occurs because, if there is no better staging area available once a trainset begins actively operating over a rail network, that train must hold at a siding when there is no available crew to move it at that moment, which prevents the siding from being used to facilitate the passing of other trains. In turn, these trains will take longer to find sidings where they can pass, which consumes more crew time and further depletes strained resources without providing any additional transportation.

BNSF's actions in regards to Iatan are illustrative. In early 2022 { [redacted] }. During the same period, BNSF struggled with overall system problems, including increasing congestion, increasing coal train holds, and decreasing train speeds. Once BNSF { [redacted] } trainset from Iatan in February 2022, cycle times { [redacted] } to the extent that deliveries actually increased. This occurred concurrently with other actions BNSF was taking to decrease network congestion, including the temporary {{ [redacted] }} coal trainsets. When BNSF put the { [redacted] } to Iatan, unloading problems { [redacted] }, but BNSF was able to { [redacted] } cycle times to achieve an incremental increase in deliveries. However, { [redacted] } and the height of the temporary crew shortage, and { [redacted] } trainset in service to Iatan at any time during this event sequence would have likely backfired. Instead, BNSF correctly held off from { [redacted] } and for {{ [redacted] }} until it obtained enough crew resources and achieved { [redacted] } velocities to ensure that the introduction of more trainsets would result in incremental increases, and not decreases, in deliveries.

VERIFICATION

I, Michael R. Baranowski, declare under penalty of perjury that the foregoing is true and correct. Further, I certify that I am qualified and authorized to file this verified statement.

/s/ Michael R. Baranowski

Michael R. Baranowski

Executed on November 20, 2025.

VERIFICATION

I, Nathaniel S. Zebrowski, declare under penalty of perjury that the foregoing is true and correct. Further, I certify that I am qualified and authorized to file this verified statement.

/s/ Nathaniel S. Zebrowski

Nathaniel S. Zebrowski

Executed on November 20, 2025.

BEFORE THE
SURFACE TRANSPORTATION BOARD

DOCKET NO. NOR 42180

EVERGY, INC.,
EVERGY METRO, INC. and
EVERGY KANSAS CENTRAL, INC.

Complainants,

v.

BNSF RAILWAY COMPANY

Defendant.

BNSF RAILWAY COMPANY'S
REPLY STATEMENT AND EVIDENCE

Exhibit 1 to
Verified Reply Statement of Michael R. Baranowski and Nathaniel S. Zebrowski

Curriculum Vitae of Michael R. Baranowski

Michael Baranowski

Senior Managing Director
Economic Consulting

8251 Greensboro Drive, Suite 1111 – McLean, VA 22102
+1 571 830 1050
mike.baranowski@fticonsulting.com

Education

B.S. in Accounting, Fairfield University

Supplemental Finance Studies, Kean College

Mike Baranowski heads FTI's Network Industries Strategies practice and provides strategic, financial, and economic consulting services to the telecommunications and railroad and pipeline transportation industries. He has special expertise in analyzing and developing complex costing and cash flow models, conducting detailed operations analysis, and transportation engineering. Much of his work involves providing oral and written expert testimony before courts, arbitration panels and regulatory bodies.

He is a recognized expert in railroad regulatory economics and has assisted FTI's railroad clients in a broad range of litigation and regulatory engagements involving pricing of services, contract disputes, damage calculations and analyses of the specific effects of pending or proposed changes in policy or regulation.

Some of Mr. Baranowski's representative experience includes:

- Development of strategic litigation analyses for large network industry regulatory rate proceedings based on the theory of Constrained Market Pricing and the Stand-Alone cost test. Theory assumes the existence of a hypothetical, efficient competitor and involves detailed analysis of short and long run operations, expenses, capital expenditures and revenues.
- Analysis of market dynamics effecting pricing and development of a suite of modeling tools to assess the regulatory risk of tariff and contract transportation rates for a mix of commodities and services based on key cost drivers and forecasts.
- Expert testimony related to the determination of damages in a variety of commercial contract disputes in the railroad, telecommunications, pipeline and trucking industries.
- Evaluation of market effects of proposed railroad mergers and identification of merger related efficiencies and quantification of the associated savings.

- Going concern and liquidation value estimates for railroad related assets as the basis for trackage rights and competitive access compensation.
- Develop detailed cost and revenue allocation metrics to assess relative profitability of individual asset groups or segments of complex network industries.

Mr. Baranowski holds a B.S. in Accounting from Fairfield University in Fairfield, Connecticut and has pursued supplemental finance studies at Kean College in Union, New Jersey.

Select Railroad Testimony

Surface Transportation Board

September 5, 2014	Ex Parte No. 722 Railroad Revenue Adequacy, Opening Comments of Norfolk Southern Railway Company, Verified Statement of Michael R. Baranowski
November 4, 2014	Ex Parte No. 722 Railroad Revenue Adequacy, Reply Comments of Norfolk Southern Railway Company, Verified Statement of Michael R. Baranowski
September 4, 2015	Docket No. FD 35743 Application of the National Railroad Passenger Corporation Under 49 U.S.C. § 24308(a) - Canadian National Railway Company, Opening Evidence of Illinois Central Railroad Company and Grand Trunk Western Railroad, Joint Verified Statement of Michael Baranowski and Benton Fisher
October 7, 2015	Docket No. 42121 Total Petrochemicals & Refining USA, Inc. v. CSX Transportation, Inc., Supplemental and Compliance Evidence of CSX Transportation, Inc.
October 23, 2015	Docket No. FD 33760 (Sub-No. 46) BNSF Railway Company - Terminal Trackage Rights -- Kansas City Southern Railway Company and Union Pacific Railroad Company, BNSF Rebuttal Statement, Verified Statement of Michael R. Baranowski
November 20, 2015	Docket No. 42121 Total Petrochemicals & Refining USA, Inc. v. CSX Transportation, Inc., Reply to Supplemental and Compliance Evidence
March 7, 2016	Docket No. 42142 Consumers Energy Company v. CSX Transportation, Inc., Reply Evidence of CSX Transportation, Inc.
July 18, 2016	Docket No. FD 35842 New England Central Railroad, Inc. -- Trackage Rights Order – Pan Am Southern LLC, Pan Am Southern Reply Evidence, Verified Statement of Michael R. Baranowski
July 26, 2016	Ex Parte No. 704 (Sub-No. 1) Review of Commodity, Boxcar, and TOFC/COFC Exemptions, Comments of the Association of American Railroads, Verified Statement of Michael R. Baranowski and Benton V. Fisher
August 26, 2016	Ex Parte No. 704 (Sub-No. 1) Review of Commodity, Boxcar, and TOFC/COFC Exemptions, Comments of the Association of American Railroads, Verified Statement of Michael R. Baranowski and Benton V. Fisher

October 11, 2016	Ex Parte No. 431 (Sub-No. 4) Review of the General Purpose Costing System, Comment of the Association of American Railroads, Verified Statement of Michael R. Baranowski and Benton V. Fisher
October 26, 2016	Ex Parte No. 711 (Sub-No. 1) Reciprocal Switching, Opening Comments of the Association of American Railroads, Verified Statement of Michael R. Baranowski
November 7, 2016	Ex Parte No. 431 (Sub-No. 4) Review of the General Purpose Costing System, Reply Comments of the Association of American Railroads, Verified Statement of Michael R. Baranowski and Benton V. Fisher
March 6, 2017	Docket No. 42142 Consumers Energy Company v. CSX Transportation, Inc., Supplemental Reply Evidence of CSX Transportation, Inc.
January 12, 2018	Docket No. FD 32760 (Sub-No. 46) BNSF Railway Company - Terminal Trackage Rights -- Kansas City Southern Railway Company and Union Pacific Railroad Company, BNSF Petition to Establish Conditions of Use and Compensation, Verified Statement of Michael R. Baranowski
July 16, 2018	Docket No. FD 32760 (Sub-No. 46) BNSF Railway Company - Terminal Trackage Rights -- Kansas City Southern Railway Company and Union Pacific Railroad Company, BNSF Rebuttal, Verified Statement of Michael R. Baranowski
April 26, 2019	Docket No. 42144 North American Freight Car Association, et al v. Union Pacific Railroad Company, Verified Statement of Michael R. Baranowski
January 26, 2021	Docket No. FD 32760 (Sub-No. 46) BNSF Railway Company - Terminal Trackage Rights -- Kansas City Southern Railway Company and Union Pacific Railroad Company, BNSF Opening Statement on Compensation, Verified Statement of Michael R. Baranowski
January 29, 2021	Ex Parte No. 704 (Sub-No. 1) Review of Commodity, Boxcar, and TOFC/COFC Exemptions, Comments of the Association of American Railroads, Verified Statement of Michael R. Baranowski and Benton V. Fisher
April 12, 2021	Docket No. FD 32760 (Sub-No. 46) BNSF Railway Company - Terminal Trackage Rights -- Kansas City Southern Railway Company and Union Pacific Railroad Company, BNSF Reply Statement on Compensation, Verified Statement of Michael R. Baranowski
May 12, 2021	Docket No. FD 32760 (Sub-No. 46) BNSF Railway Company - Terminal Trackage Rights -- Kansas City Southern Railway Company and Union Pacific Railroad Company, BNSF Rebuttal Statement on Compensation, Verified Statement of Michael R. Baranowski
June 21, 2021	Docket No. FD 36500, Canadian Pacific Ry. – Control – Kansas City Southern, Canadian Pacific Applicants' Response to KCS Reply, Verified Statement of Michael R. Baranowski
October 29, 2021	Docket No. FD 36500, Canadian Pacific Ry. – Control – Kansas City Southern, Railroad Control Application, Verified Statement of Michael R. Baranowski
February 14, 2022	Ex Parte No. 711 (Sub-No. 1), Reciprocal Switching, supplemental Comments of the Association of American Railroads, Verified Statement of Michael R. Baranowski and Nathaniel S. Zebrowski

May 27, 2022	Docket No. FD 35743, Application of the National Railroad Passenger Corporation Under 49 U.S.C. 24308(a) – Canadian National Railway Company, Post-Interim Decision Opening Submission of CN, Verified Statement of Michael R. Baranowski
July 12, 2022	Docket No. FD 36500, Canadian Pacific Ry. – Control – Kansas City Southern, Railroad Control Application, Reply Verified Statement of Michael R. Baranowski on behalf of Applicants
August 22, 2022	Docket No. FD 35743, Application of the National Railroad Passenger Corporation Under 49 U.S.C. 24308(a) – Canadian National Railway Company, Post-Interim Decision Rebuttal Submission of CN, Verified Statement of Michael R. Baranowski
February 23, 2023	Ex Parte No. 771, Alternative to URCS, Opening Comments of AAR, Verified Statement of Michael R. Baranowski
September 22, 2023	Ex Parte No. 711 (Sub-No. 2), Reciprocal Switching for Inadequate Service, Motion of The Association of American Railroads to Extend the Comment Period, Verified Statement and Written Testimony of Michael R. Baranowski and Nathaniel S. Zebrowski
December 20, 2023	Ex Parte No. 711 (Sub-No. 2), Reciprocal Switching for Inadequate Service, Reply Comments of The Association of American Railroads, Reply Verified Statement of Michael R. Baranowski and Nathaniel S. Zebrowski
May 3, 2024	Docket No. FD 22218, Atchison, Topeka & Santa Fe Railway Company -- Operating Rights -- Southern Pacific Transportation Co., BNSF Railway Company's Opening Statement and Evidence, Verified Statement of Michael R. Baranowski and Nathan Zebrowski

U.S. District Court for the Northern District of Texas, Fort Worth Division

November 7, 2017	Civil Action No. 4:16-cv-1061-O, BNSF Railway Company v. Panhandle Northern Railroad LLC, Expert Report of Michael R. Baranowski
November 22, 2017	Civil Action No. 4:16-cv-1061-O, BNSF Railway Company v. Panhandle Northern Railroad LLC, Reply Expert Report of Michael R. Baranowski
December 21, 2017	Civil Action No. 4:16-cv-1061-O, BNSF Railway Company v. Panhandle Northern Railroad LLC, Rebuttal Expert Report of Michael R. Baranowski

U.S. District Court for the Western District of Washington

December 15, 2023	U.S. District Court for the Western District of Washington, Case No. 2:15-CV-00543-RSL, Swinomish Indian Tribal Community v. BNSF Railway Company, Expert Report of Michael R. Baranowski
February 16, 2024	U.S. District Court for the Western District of Washington, Case No. 2:15-CV-00543-RSL, Swinomish Indian Tribal Community v. BNSF Railway Company, Rebuttal Expert Report of Michael R. Baranowski

Arbitrations and Mediations

April 14, 2017	American Arbitration Association Case No. 01-15-0004-4830 and 01-15-0004-4931, Arbitration Between FirstEnergy Generation LLC and CSX Transportation, Inc. & BNSF Railway Company, Expert Report of Michael R. Baranowski
November 22, 2017	American Arbitration Association Case No. No. 01-16-0003-6208, CSXT Transportation, Inc. v. JEA and Florida Power & Light Co., Expert Report of Michael R. Baranowski
January 26, 2018	American Arbitration Association Case No. No. 01-16-0005-5615, BNSF Railway Company & Norfolk Southern Railway Company v. FirstEnergy Generation, LLC, Expert Report of Michael R. Baranowski
February 16, 2018	American Arbitration Association Case No. 01-16-0005-5615, BNSF Railway Company & Norfolk Southern Railway Company v. FirstEnergy Generation, LLC, Rebuttal Expert Report of Michael R. Baranowski
February 23, 2018	American Arbitration Association Case No. 01-17-0000-0130, J.B. Hunt Transport, Inc. and BNSF Railway Company, Expert Report of Michael R. Baranowski
April 17, 2018	American Arbitration Association Case No. 01-17-0000-0130, J.B. Hunt Transport, Inc. and BNSF Railway Company, Reply Expert Report of Michael R. Baranowski
June 22, 2018	JAMS REF #1100088262, BNSF Railway Company v. Union Pacific Railroad Company, Expert Report of Michael R. Baranowski
March 25, 2019	American Arbitration Association Case No. 01-17-0000-0130, J.B. Hunt Transport, Inc. and BNSF Railway Company, Expert Report of Michael R. Baranowski
April 26, 2019	American Arbitration Association Case No. 01-17-0000-0130, J.B. Hunt Transport, Inc. and BNSF Railway Company, Reply Expert Report of Michael R. Baranowski
January 18, 2021	American Arbitration Association Case No. 01-18-0001-3283, BNSF Railway Company & Norfolk Southern Railway Company, and Dynegy Midwest Generation, LLC, Expert Report of Michael R. Baranowski on Behalf of BNSF & NS
February 5, 2021	American Arbitration Association Case No. 01-18-0001-3283, BNSF Railway Company & Norfolk Southern Railway Company, and Dynegy Midwest Generation, LLC, Expert Reply Report of Michael R. Baranowski on Behalf of BNSF & NS
January 14, 2022	Arbitration between The Port of Vancouver, USA and BNSF Railway Company, Reply Expert Report of Michael R. Baranowski

Select Pipeline Testimony

Federal Energy Regulatory Commission

November 20, 2019	Docket Nos. OR18-7-002, et al. (Consolidated), Epsilon Trading, et al v. Colonial Pipeline Company, Prepared Answering Testimony of Michael R. Baranowski on behalf of Colonial Pipeline
March 20, 2020	Docket Nos. OR18-7-002, et al. (Consolidated), Epsilon Trading, et al v. Colonial Pipeline Company, Prepared Answering Testimony to Trial Staff of Michael R. Baranowski on behalf of Colonial Pipeline

BEFORE THE
SURFACE TRANSPORTATION BOARD

DOCKET NO. NOR 42180

EVERGY, INC.,
EVERGY METRO, INC. and
EVERGY KANSAS CENTRAL, INC.

Complainants,

v.

BNSF RAILWAY COMPANY

Defendant.

BNSF RAILWAY COMPANY'S
REPLY STATEMENT AND EVIDENCE

Exhibit 2 to
Verified Reply Statement of Michael R. Baranowski and Nathaniel S. Zebrowski

Curriculum Vitae of Nathaniel S. Zebrowski

Nathaniel S. Zebrowski

Senior Managing Director
Economic Consulting

8251 Greensboro Drive, Suite 1111 – McLean, VA 22102
+1 571 830 1050
Nathaniel.zebrowski@fticonsulting.com

Education

B.A. in Economics, Northwestern University

Graduate Certificate in Transportation Policy and Economics, George Mason University

Nathan Zebrowski is a Senior Managing Director in the Network Industries Strategies group of the Economic Consulting segment, located in McLean, VA. He provides financial and economic consulting services to the transportation and energy industries.

Mr. Zebrowski's work combines economic and statistical training with deep industry expertise and project experience. His work includes freight transportation market analysis; competitive assessments and valuations for transportation assets, services, and systems; contract evaluation, negotiation support, regulatory risk assessment, and damages determinations; litigation and expert witness testimony; rate reasonableness inquiries including application of regulatory tests; M&A related analysis and support; and operational, capital investment, and cost studies.

In Mr. Zebrowski's work evaluating network enterprises, he is informed by an intimate knowledge of the fundamental economics related to long-lived network assets, the unique realities affecting network operations and the highly individualized nature of the regional and commodity markets in which transportation businesses participate. He has special expertise in developing complex computer models assessing traffic flows over railroad networks and conducting detailed studies on costs, operations, and pricing of freight transportation services.

Testimony:

March 7, 2016	United States Surface Transportation Board, Docket No. 42142 Consumers Energy Company v. CSX Transportation, Inc., Reply Evidence of CSX Transportation, Inc.
October 29, 2021	United States Surface Transportation Board, Docket No. 36500, Canadian Pacific Ry. – Control – Kansas City Southern, Railroad Control Application, Verified Statement of Nathaniel S. Zebrowski and Richard W. Brown
February 14, 2022	United States Surface Transportation Board, Ex Parte No. 711 (Sub-No. 1), Reciprocal Switching, Verified Statement of Nathaniel S. Zebrowski and Michael R. Baranowski
July 12, 2022	United States Surface Transportation Board, Docket No. 36500, Canadian Pacific Ry. – Control – Kansas City Southern, Railroad Control Application, Reply Verified Statement of Nathaniel S. Zebrowski and Richard W. Brown
January 19, 2023	Private Party Arbitration, Kansas City Southern Railway Company vs. Vicksburg Bridge Commission, Expert Report of Nathaniel S. Zebrowski
February 14, 2023	Private Party Arbitration, Kansas City Southern Railway Company vs. Vicksburg Bridge Commission, Supplemental Expert Report of Nathaniel S. Zebrowski
April 15, 2023	Private Party Arbitration, Kansas City Southern Railway Company vs. Vicksburg Bridge Commission, Hearing Testimony of Nathaniel S. Zebrowski
September 25, 2023	United States Surface Transportation Board, Ex Parte No. 711 (Sub-No. 2), Reciprocal Switching for Inadequate Service, Verified Statement of Nathaniel S. Zebrowski and Michael R. Baranowski
December 20, 2023	United States Surface Transportation Board, Ex Parte No. 711 (Sub-No. 2), Reciprocal Switching for Inadequate Service, Reply Verified Statement of Nathaniel S. Zebrowski and Michael R. Baranowski
February 26, 2024	United States Surface Transportation Board, Finance Docket 36744, Canadian National Railway Company—Control—Iowa Northern Railway Company Verified Statement of Nathaniel S. Zebrowski
April 29, 2024	United States Surface Transportation Board, Finance Docket 36744, Canadian National Railway Company—Control—Iowa Northern Railway Company Verified Statement of Nathaniel S. Zebrowski
May 3, 2024	United States Surface Transportation Board, Finance Docket 22218, Atchison, Topeka & Santa Fe Railway Company—Operating Rights—Southern Pacific Transportation Co. Verified Statement of Nathaniel S. Zebrowski and Michael R. Baranowski.
March 14, 2025	United States Surface Transportation Board, Finance Docket 22218, Atchison, Topeka & Santa Fe Railway Company—Operating Rights—Southern Pacific Transportation Co. Reply Verified Statement of Nathaniel S. Zebrowski and Michael R. Baranowski.
August 15, 2025	Cause No. 017-361391-25, BNSF Railway Company v. Amsted Rail Company Inc., Expert Report of Nathaniel S. Zebrowski

Verified Statement of Mr. Paul Hibbard

BEFORE THE

SURFACE TRANSPORTATION BOARD

EVERGY, INC., EVERGY METRO, INC. and EVERGY KANSAS CENTRAL, INC. 1200 Main Street Kansas City, Missouri 64105 Complainants, v. BNSF RAILWAY COMPANY 2650 Lou Menk Drive Fort Worth, Texas 76131 Defendant.	Docket No. NOR 42180 **VERIFIED STATEMENT OF PAUL J. HIBBARD**

November 20, 2025

TABLE OF CONTENTS

I. QUALIFICATIONS AND ASSIGNMENT 1

A. Qualifications 1

B. Assignment 2

C. Summary of Opinions 3

II. BACKGROUND ON ELECTRICITY MARKETS, ELECTRIC UTILITY REGULATION, AND EVERGY'S DAMAGES CLAIMS 5

A. Evergy is subject to full oversight and regulation by state public utility commissions (KCC and MPSC) and FERC. 6

1. Electric Utility Regulation and Evergy 6

2. State Regulation 8

3. Federal Regulation 12

B. Evergy is a member of the Southwest Power Pool, which is subject to oversight and regulation by FERC. 13

1. SPP 13

2. Reliability Obligations of SPP Market Participants 14

3. SPP Integrated Marketplace and Market Monitoring 16

C. Evergy's claim of damages and analytic method. 21

1. Evergy's Theory of Damages 21

2. Analytic Method and Modeling Tools Used 28

III. EVERGY'S DAMAGES CLAIMS MUST BE CONSIDERED WITHIN THE CONTEXT OF THE BROADER REGULATORY AND ECONOMIC LANDSCAPE IN WHICH IT OPERATES. 31

A. Evergy's claims of damages are based on SPP market outcomes, which are determined by many factors unrelated to BNSF coal deliveries to Iatan and Lawrence. 31

B. Evergy ignores the broader context for coal delivery – namely, the decline of coal-fired generation, including at Iatan and Lawrence, and the changing nature of coal-fired plant operations. 32

C. Evergy is effectively guaranteed full cost recovery of all fuel, transportation, and wholesale market costs through state regulatory proceedings in Kansas and Missouri 34

D. Evergy is insulated from the financial consequences of coal conservation measures due to rate regulation. 39

IV. EVERGY'S ANALYSIS PROVIDES NO BASIS FOR A CLAIM OF DAMAGES. 39

A. Evergy's alleged damages flow from voluntary decisions to conserve coal that could have produced positive or negative financial effects due

to random, exogenous factors unrelated to BNSF deliveries of coal to Iatan and Lawrence. 39

B. Contrary to Evergy's claims, Evergy's decision to conserve coal was always voluntary, and was never directed or requested by state regulators, SPP, or FERC....41

1. Evergy would have satisfied its resource adequacy obligations as a Load Responsible Entity in SPP without coal conservation at Iatan or Lawrence.…. 42

2. Evergy was never directed by SPP to conserve coal. 44

3. Evergy was never directed by state regulatory authorities in Missouri or Kansas to conserve coal. 46

C. Evergy's coal conservation measures were conservative, were not needed to maintain power system reliability, and were not needed to preserve fuel supplies at either Iatan or Lawrence....47

1. Evergy's own damages modeling demonstrates that {{ }} 47

2. Evergy's coal conservation measures were unnecessary for the purpose of providing reliable electric service to its customers, and were not needed to maintain reliability in the SPP region. 49

3. Evergy's coal conservation measures were conservative relative to the inventory thresholds in SPP's market rules. 54

D. Evergy fails to provide a basis for including Lawrence in its damages calculations……54

E. It is impossible to identify Iatan-only damages using Evergy's Opening Evidence. 60

V. EVERGY'S DAMAGES MODELING IS NOT RELIABLE 61

A. Production cost modeling software is a simplified representation of actual SPP system conditions and market operations. 62

B. Evergy's PROMOD modeling of "actual" outcomes is highly inaccurate and, as a result, invalidates all of Evergy's damages estimates....63

1. Evergy's PROMOD modeling of actual generation is grossly inaccurate.…. 64

2. Evergy's PROMOD modeling of actual coal burn is grossly inaccurate.…. 68

3. Evergy's modeling of actual generation and associated coal burn is exceedingly inaccurate precisely in the period in which Evergy estimates the majority of damages. 70

4. Evergy's PROMOD modeling of actual electricity prices is grossly inaccurate. 70

C. Because Evergy's PROMOD modeling output is used as an input to its GenTrader modeling, the problems with Evergy's PROMOD modeling impact all of its damages estimates. 73

D. Evergy itself estimates widely divergent damages estimates, emphasizing the unreliable nature of its analytical approach. 76

E. Evergy's modeling is not reliable enough to even conclude that Evergy suffered *any* damages, let alone what the magnitude of damages (if any) were. 80

VI. EVERGY'S MODELING CONTAINS FLAWS THAT OVERSTATE ITS DAMAGES 81

A. Evergy's modeling and damages methodology contain specific flaws that inflate its estimate of damages. 81

1. The inclusion of damages during periods of excessive coal conservation 81

2. The inclusion of damages due to coal conservation measures implemented at Lawrence. 84

3. The inclusion of damages during a period with "market bid" adders alone 85

4. The inclusion of damages during Iatan Unit 1's planned outage during the {[redacted]} period 86

5. The inclusion of damages for coal which could have been provided to Iatan if Evergy took reasonable mitigation steps 87

6. The failure to exclude damages associated with Evergy's coal inventory "write-downs" of {{[redacted]}} tons at Iatan and {{[redacted]}} tons at Lawrence 87

7. The inclusion of damages that could have been avoided if Lawrence had maintained its historic coal inventory targets 88

8. The inclusion of damages that could have been avoided if Evergy maintained unloading times in line with BNSF's other plants 88

9. The inclusion of damages after coal inventories recovered to Evergy's internal target of {{[redacted]}} 89

10. The inclusion of damages that could have been avoided if Iatan stockpiled coal to its maximum inventory levels in early 2022. 90

11. The inclusion of net cost to load damages after the coal conservation period ended 90

B. Correcting for these errors would eliminate the damages sought by Evergy related to lost opportunity revenues and net cost to load. 91

VII. CONCLUSION 91

APPENDIX A: SUMMARY OF ISSUES WITH EVERGY'S DAMAGES MODELING 93

A. Lost Opportunity Damages 93

B. Net Cost to Load Damages 95

C. Comparison of Key Variables in Evergy's Damages Modeling.....96

APPENDIX B: OVERVIEW OF EVERGY'S THEORY OF DAMAGES.....110

APPENDIX C: ILLUSTRATING THE PROBLEMS WITH EVERGY'S LMP DIFFERENTIAL APPROACH.....113

I. QUALIFICATIONS AND ASSIGNMENT

A. Qualifications

1. I am a Principal at Analysis Group, an economic, financial and strategy consulting firm, headquartered in Boston, Massachusetts. I have been in the energy business for over 35 years in both public service and private practice, with a particular focus on electricity and natural gas markets, regulation, and policy. I have been with Analysis Group for approximately sixteen years—first, from 2003 to April 2007, and most recently, from August 2010 to the present. In between, from April 2007 to June 2010, I served as Chairman of the Massachusetts Department of Public Utilities ("Department"), responsible for administration of the state's laws, regulations and policies governing oversight and regulation of the electric, natural gas, and water utilities in Massachusetts, and for overseeing the state's involvement in regional wholesale electricity markets. While Chairman, I also served as a member of the Massachusetts Energy Facilities Siting Board, the New England Governors' Conference Power Planning Committee, and the NARUC Electricity Committee and Procurement Work Group. I also served as State Manager for the New England States Committee on Electricity and as Treasurer to the Executive Committee of the 41-state Eastern Interconnect States' Planning Council.

2. I previously worked in energy and environmental consulting with Lexecon, Inc. from 2000 to 2003. Prior to working with Lexecon, I worked in state energy and environmental agencies for almost ten years. From 1998 to 2000, I worked for the Massachusetts Department of Environmental Protection on the development and administration of air quality regulations, Clean Air Act State Implementation Plans, and emission control programs for the electric industry with a focus on criteria pollutants and carbon dioxide, as well as various policy issues related to controlling pollutants from coal, oil, natural gas, and biomass-fueled electric power

plants within the Commonwealth of Massachusetts. From 1991 to 1998, I worked in the Electric Power Division of the Department on cases related to the setting of utility rates, restructuring of the electric industry in Massachusetts and New England, the design and administration of the New England region's wholesale electricity markets, quantification of environmental externalities, integrated resource planning, energy efficiency, utility compliance with state and federal emission control requirements, and coordination with other states on electricity and gas policy issues through the staff subcommittee of the New England Conference of Public Utility Commissioners.

3. A copy of my CV, together with a list of the trial and deposition testimony I have given in the last four years, is attached as **Exhibit PH-1**.

B. Assignment

4. Evergy, Inc., Evergy Metro, Inc., and Evergy Kansas Central, Inc. (hereafter, collectively referred to as "Evergy") have submitted a Complaint and Opening Evidence regarding alleged failures on the part of BNSF Railway Company (hereafter, "BNSF") to supply coal to Evergy's Iatan Generating Station ("Iatan") and Lawrence Energy Center ("Lawrence" or "LEC").[1] Additionally, Evergy has claimed that it has suffered damages as a result of BNSF's actions and, as such, is entitled to an award of $22.21 million (before interest).[2]

[1] Evergy, Inc., Evergy Metro, Inc. and Evergy Kansas Central, Inc., v. BNSF Railway Company, Complaint and Petition for Declaratory Order, *Evergy Inc. v. BNSF Railway Company*, Docket No. NOR 42180, January 31, 2024 ("Compl."), https://www.stb.gov/proceedings-actions/search-stb-records/, Before the Surface Transportation Board, Docket No. NOR 42180, January 31, 2024 (hereafter, "Compl."); Evergy, Inc., Evergy Metro, Inc. and Evergy Kansas Central, Inc., v. BNSF Railway Company, Complainants' Opening Evidence, *Evergy Inc. v. BNSF Railway Company*, Docket No. NOR 42180, June 25, 2025 ("Evergy Opening Evidence"), https://www.stb.gov/proceedings-actions/search-stb-records/, Before the Surface Transportation Board, Docket No. NOR 42180, June 25, 2025 (hereafter, "Evergy Opening Evidence").

[2] Evergy Opening Evidence, Complainants' Opening Evidence, p. 50.

5. I have been asked by counsel for BNSF to review Evergy's Complaint, Opening Evidence, Verified Statements, and associated workpapers regarding Evergy's claims concerning its alleged market and reliability obligations, and its alleged damages due to lost opportunity revenues at Iatan and Lawrence ("lost opportunity revenues") and net additional costs incurred to meet load requirements in Southwest Power Pool ("net cost to serve load"). Counsel for BNSF have asked me to provide background on utility regulation and wholesale electricity markets, and offer opinions regarding Evergy's characterization of its market and reliability obligations, the theory and basis of Evergy's damages related to lost opportunity revenues and net cost to serve load, and the reliability of Evergy's analytic method used to quantify these categories of damages.

C. Summary of Opinions

6. I have formulated the following opinions regarding Evergy's damages claims related to lost opportunity revenues and net cost to load:

a. Evergy's purported damages are the result of Evergy's voluntary decisions to conserve coal at Iatan and Lawrence. Evergy was never directed or requested by its regulators or the Southwest Power Pool ("SPP") to conserve coal. Evergy did not need to conserve coal to fulfill resource adequacy requirements in SPP, or maintain power system reliability (*i.e.*, coal conservation at Iatan or Lawrence was unnecessary to "keep the lights on"). Evergy's conservative decisions are not surprising because the regulatory structure in which Evergy operates provides incentives to stockpile coal even if it is not needed to maintain reliability.

b. Impacts on Evergy from coal conservation actions can be positive (Evergy earns profits) or negative (Evergy incurs costs) due to a vast array of random, exogenous

factors unrelated to BNSF's coal deliveries. In fact, Evergy's own damages modeling results in higher profits from coal conservation actions in nearly {{ }} of all hours in the claimed damages period. Evergy appears to be asking the STB to hold BNSF responsible for voluntary business decisions that could have produced either profits or losses for Evergy, and then uses a deeply flawed "black box" analytic method (described below) to manufacture alleged damages stemming from its own decisions.

c. Lawrence should be excluded from Evergy's damage calculations. In 2022, BNSF delivered more coal to Lawrence than Evergy requested in its annual declaration. As a result, Lawrence generated more electricity and consumed more coal in 2022 than it had over the 2020-2021 historic period. With Lawrence removed, it is impossible to identify Iatan-only damages from Evergy's Opening Evidence, because {{ }} of damages hours include coal conservation measures at both Iatan and Lawrence.

d. The electricity markets that are the basis for Evergy's alleged damages are extremely complicated, uncertain, and volatile. And the models that Evergy applies to simulate this complicated reality are both a simplistic representation of the market, and highly complicated, requiring specialized knowledge and experience using the models to conduct the analysis and properly interpret modeled outcomes. Based upon my experience with production cost modeling and my careful review of Evergy's damages method and results, I find that Evergy's modeling of damages is wholly unreliable, and does not provide a reasonable basis to conclude that Evergy was negatively impacted by its coal conservation measures. First, Evergy's modeling is unable to reasonably match its actual operations or market outcomes in 2022, and

these large and ubiquitous deviations from reality in Evergy's modeling outcomes invalidate Evergy's modeling approach for the purpose of estimating damages. Second, without needing to do so, Evergy combines two very different modeling platforms (PROMOD and GenTrader) to estimate damages, and this puzzling combination introduces unresolvable discrepancies and errors. For example, Evergy uses electricity price "differentials" that are outputs from Ms. Foo's PROMOD modeling as inputs to Mr. Crosby's GenTrader modeling, even though Ms. Foo and Mr. Crosby's baseline electricity prices are wildly different. These methodological errors and faulty assumptions in Evergy's analytic method undermine the reliability of Evergy's modeling results (*i.e.*, "garbage in, garbage out").

e. Finally, even ignoring these fundamental flaws, Evergy's calculations include many additional errors and conceptual mistakes which, if corrected, would eliminate Evergy's estimated damages.

II. BACKGROUND ON ELECTRICITY MARKETS, ELECTRIC UTILITY REGULATION, AND EVERGY'S DAMAGES CLAIMS

7. Evergy is a vertically-integrated investor-owned utility ("IOU"), subject to the oversight of both the Federal Energy Regulatory Commission ("FERC") and state utility regulators, the Kansas Corporation Commission ("KCC") and the Missouri Public Service Commission ("MPSC").[3] Evergy also participates as a transmission owner/operator and a market participant in the SPP, a regional transmission organization subject to the oversight of

[3] Evergy, Annual Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934, filed December 31, 2024, https://investors.evergy.com/static-files/1745ffa2-a24c-40b9-8f22-d15c4f32edcb, pp. 8-9.

FERC.[4] Evergy's regulation at the state level with respect to the setting of rates and Evergy's participation in wholesale electricity markets administered by SPP are both relevant to understanding Evergy's claims of damages in this case.

A. Evergy is subject to full oversight and regulation by state public utility commissions (KCC and MPSC) and FERC.

1. Electric Utility Regulation and Evergy

8. Electric utilities like Evergy are natural monopolies that invest in and operate power plants, transmission lines, and local distribution systems to provide electricity to end-use customers (people and businesses in their service territories).[5] In exchange for providing electric service, electric utilities are allowed to collect from customers their cost of doing business, including (1) annual expenses (such as the cost of fuel and transportation), (2) purchases of power from other suppliers (*e.g.*, through the regional SPP electricity market), (3) investments made in electric infrastructure (power plants, transmission lines, distribution lines), and (4) a return on their investment sufficient to repay loans and provide a return on investment to shareholders. In effect, provided the utility demonstrates the need for investments and expenses,

[4] "Members & Markets Participants," *Southwest Power Pool*, available at https://www.spp.org/about-us/members-market-participants.

[5] Electric companies are granted exclusive "service territories," which mark the geographical boundaries within which (1) they are the only provider of electricity, and (2) are responsible to meet all the electricity requirements of the residents and businesses. *See, e.g.*, McDermott, Dr. Karl, *Cost of Service Regulation In the Investor-Owned Electric Utility Industry: A History of Adaptation*, United States of America, Edison Electric Institute, June 2012, p. vii.

regulators set electricity rates for customers that allow the utility to recover the costs it reasonably incurs to discharge its public service obligation.[6]

9. Evergy is an investor-owned utility with multiple subsidiaries operating under a single holding company.[7] Evergy is a vertically integrated utility that – without competition – serves end-use customer demand for electricity within state-designated service territories in Missouri and Kansas. Evergy invests in power plants, transmission and distribution lines, and other infrastructure, and incurs expenses for items such as fuel, fuel transportation, purchased power, taxes, and operations and maintenance, in order to meet the electricity needs of customers in its service territories.

10. The at-issue Lawrence Energy Center plant is a 518 MW generating plant operated and entirely owned by Evergy Kansas Central.[8] The at-issue Iatan plant includes two generating units, Iatan Unit 1 and Iatan Unit 2, collectively 1,640 MW of capacity.[9] Iatan Unit 1 is operated by Evergy Metro, with ownership split between Evergy Metro (70 percent), Evergy

[6] McDermott, Dr. Karl, *Cost of Service Regulation In the Investor-Owned Electric Utility Industry: A History of Adaptation*, United States of America, Edison Electric Institute, June 2012, pp. vii-viii. This is often described as an exchange – that is, the utility is granted exclusivity within a designated service territory (without competition), and must meet all customer needs within the service territory in exchange for the opportunity to recover reasonable costs and a reasonable return on capital. *See, e.g.*, McDermott, Dr. Karl, *Cost of Service Regulation In the Investor-Owned Electric Utility Industry: A History of Adaptation*, United States of America, Edison Electric Institute, June 2012, pp., 5-8.

[7] Evergy's subsidiaries are Evergy Metro, Inc., Evergy Missouri West, Inc., Evergy Kansas Central, Inc., Evergy Kansas South, Inc., and Evergy Transmission Company, LLC. Evergy, Annual Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934, filed December 31, 2024, https://investors.evergy.com/static-files/1745ffa2-a24c-40b9-8f22-d15c4f32edcb, p. 8.

[8] Evergy Opening Evidence, Complainants' Opening Evidence, p. 3.

[9] Evergy Opening Evidence, Complainants' Opening Evidence, p. 3; Howell, Mark, Dan Wilkus, and Jared Morrison, "Iatan Generating Station," *Evergy*, June 20, 2023, available at https://efis.psc.mo.gov/Document/Display/42658, p. 7.

Missouri West (18 percent), and non-Evergy entities (Liberty Utilities owns 12 percent).[10] Iatan Unit 2 is operated by Evergy Metro, with ownership split between Evergy Metro (55 percent), Evergy Missouri West (18 percent), and non-Evergy entities (Liberty Utilities owns 12 percent, Missouri Joint Municipal Electric Utility Commission owns 11.76 percent, and Kansas Electric Power Cooperative owns 3.53 percent).[11] Lawrence Unit 5 is capable of fuel-switching between coal and natural gas as fuel input, while Iatan only operates on coal as its fuel.[12] Overall, the Lawrence and Iatan facilities represent approximately 14 percent of Evergy's electricity generating capacity.[13]

2. State Regulation

11. As natural monopolies, Evergy's subsidiaries are subject to the state regulatory jurisdiction of the Kansas Corporation Commission ("KCC") and the Missouri Public Service

[10] According to Evergy's 2024 Form 10-K, ownership of the Iatan plant is divided between two Evergy subsidiaries—Evergy Metro and Evergy Missouri West. The filing reports Evergy's overall ownership interests as 88% in Iatan 1 and 73% in Iatan 2. Specifically, Evergy Metro holds 70% of Iatan 1 and 55% of Iatan 2, while Evergy Missouri West owns 18% of both units. Evergy, Annual Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934, filed December 31, 2024, https://investors.evergy.com/static-files/1745ffa2-a24c-40b9-8f22-d15c4f32edcb, pp. 113-114, 148; Evergy Opening Evidence, Complainants' Opening Evidence, p. 3; Howell, Mark, Dan Wilkus, and Jared Morrison, "Iatan Generating Station," *Evergy*, June 20, 2023, available at https://efis.psc.mo.gov/Document/Display/42658, p. 9.

[11] According to Evergy's 2024 Form 10-K, ownership of the Iatan plant is divided between two Evergy subsidiaries—Evergy Metro and Evergy Missouri West. The filing reports Evergy's overall ownership interests as 88% in Iatan 1 and 73% in Iatan 2. Specifically, Evergy Metro holds 70% of Iatan 1 and 55% of Iatan 2, while Evergy Missouri West owns 18% of both units. Evergy, Annual Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934, filed December 31, 2024, https://investors.evergy.com/static-files/1745ffa2-a24c-40b9-8f22-d15c4f32edcb, pp. 113-114, 148; Evergy Opening Evidence, Complainants' Opening Evidence, p. 3; Howell, Mark, Dan Wilkus, and Jared Morrison, "Iatan Generating Station," *Evergy*, June 20, 2023, available at https://efis.psc.mo.gov/Document/Display/42658, p. 9.

[12] *Preferred Portfolio Selection and Resource Acquisition Strategy Integrated Resource Plan (Volume 6)*, Evergy Kansas Central and Evergy Metro, May 17, 2024, https://estar.kcc.ks.gov/estar/ViewFile.aspx/S202405171645034245.pdf?Id=4d0e9668-f7f7-42ce-9fd8-2c35b910595a, pp. 18-19.

[13] Evergy Opening Evidence, Complainants' Opening Evidence, p. 3; Evergy, Annual Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934, filed December 31, 2024, https://investors.evergy.com/static-files/1745ffa2-a24c-40b9-8f22-d15c4f32edcb, p. 10.

Commission ("MPSC").[14] State utility regulatory commissions regulate natural monopolies to ensure reasonable prices and adequate quality of service.[15] Specifically, the MPSC and KCC have statutory obligations to ensure that electric rates are just and reasonable.[16] Subject to regulatory approval, each of Evergy's subsidiary utilities are allowed to recover their costs to supply electricity to customers, and do so through electric rates set by the commissions. That is, in Missouri, the MPSC approves rates to recover Evergy Metro's costs plus a return on

[14] "Jurisdictional Utilities," *Kansas Corporation Commission*, available at https://www.kcc.ks.gov/about-us/jurisdiction ; "Regulated Electric Companies," *Missouri Public Service Commission*, available at https://psc.mo.gov/Electric.

[15] State regulatory commission regulate natural gas and water utilities in addition to electric utilities. *See e.g.,* Bonbright, James C., *Principles of Public Utiliity Rates*, Columbia University Press, 1961, Chapter 1, pp. 3-25.

[16] Federal Power Act, Section 205, "16 U.S. Code § 824d - Rates and charges; schedules; suspension of new rates; automatic adjustment clauses," *Legal Information Institute, Cornell Law School*, available at https://www.law.cornell.edu/uscode/text/16/824d (16 U.S. Code § 824d(a) states: "All rates and charges made, demanded, or received by any public utility for or in connection with the transmission or sale of electric energy subject to the jurisdiction of the Commission, and all rules and regulations affecting or pertaining to such rates or charges shall be just and reasonable, and any such rate or charge that is not just and reasonable is hereby declared to be unlawful."); "Title XXV Incorporation and Regulation of Certain Utilities and Carriers. Chapter 386.040. Commission established," *Revisor of Missouri*, August 28, 1939, available at https://revisor.mo.gov/main/OneSection.aspx?section=386.040&bid=21691&hl=Missouri Revised Statutes (Commission established in 1939); "Title XXV Incorporation and Regulation of Certain Utilities and Carriers. Chapter 393.130. Safe and adequate service — charges — certain home rule cities, interest accrual, when — service tariff schedules, when," *Revisor of Missouri*, August 28, 2025, available at https://revisor.mo.gov/main/OneSection.aspx?section=393.130&bid=57324&hl=Missouri Revised Statutes ("Every gas corporation, every electrical corporation, every water corporation, and every sewer corporation shall furnish and provide such service instrumentalities and facilities as shall be safe and adequate and in all respects just and reasonable. All charges made or demanded by any such gas corporation, electrical corporation, water corporation or sewer corporation for gas, electricity, water, sewer or any service rendered or to be rendered shall be just and reasonable and not more than allowed by law or by order or decision of the commission. Every unjust or unreasonable charge made or demanded for gas, electricity, water, sewer or any such service, or in connection therewith, or in excess of that allowed by law or by order or decision of the commission is prohibited."); "Kansas Statutes, Chapter 74-601. State corporation commission; creation; members, appointment, terms, vacancies; chairperson; salaries; application of K-GOAL," *Kansas Office of Revisor of Statutes*, available at https://ksrevisor.gov/statutes/chapters/ch74/074_006_0001.html (Creation of the KCC in 1933); "Kansas Statutes, Chapter 66-101b. Electric public utilities; efficient and sufficient service; just and Contact Us Open Records Statutes reasonable rates," *Kansas Office of Revisor of Statutes*, available at https://ksrevisor.gov/statutes/chapters/ch66/066_001_0001b.html ("Every electric public utility governed by this act shall be required to furnish reasonably efficient and sufficient service and facilities for the use of any and all products or services rendered, furnished, supplied or produced by such electric public utility, to establish just and reasonable rates, charges and exactions and to make just and reasonable rules, classifications and regulations. Every unjust or unreasonably discriminatory or unduly preferential rule, regulation, classification, rate, charge or exaction is prohibited and is unlawful and void. The commission shall have the power, after notice and hearing in accordance with the provisions of the Kansas administrative procedure act, to require all electric public utilities governed by this act to establish and maintain just and reasonable rates when the same are reasonably necessary in order to maintain reasonably sufficient and efficient service from such electric public utilities.").

investment; in Kansas, the KCC approves rates to recover Evergy Kansas Central's costs plus a return on investment.

12. Rates are generally approved by the MPSC and KCC through periodic "rate cases" administered by the commissions upon a filing of all relevant cost information by the utility. In a rate case, the utility submits, among other things, its historical or expected annual expenses, annual depreciation of investments, and requested annual return on investments to establish its revenue requirement. All elements of the rate case – *i.e.*, all expenses, investments, and proposed return on investment – are investigated by the commission and intervenors through a rate case proceeding, culminating with a final decision by the commission that sets rates in place on a going-forward basis.

13. One element of a rate case relevant to the current dispute between Evergy and BNSF involves the full review of the company's expected expenses to purchase fuel and associated transportation, and expected costs or net revenues associated with its purchase and sale of electricity in wholesale electricity markets. These expected costs and net revenues are typically set on a reconcilable basis. In other words, since fuel and transportation expenses and wholesale market purchases and sales are highly variable and uncertain, commissions typically allow *the projected* costs associated with these expenses to be included in rates, but require that they be periodically reconciled to *actual costs incurred* on a regular basis. In Missouri and Kansas these reconciliations occur through regular "fuel adjustment clause" proceedings

adjudicated before the Commissions.[17] As discussed in **Section III**, through these fuel adjustment clause proceedings, Evergy has already fully recovered/reconciled all of the costs it incurred for the supply and transportation of coal (and all other fuels), and all of the costs it incurred for the purchase (and net revenues it received for the sale) of electricity in SPP's wholesale electricity markets in 2022.[18]

14. In sum, fuel adjustment clause proceedings permit Evergy to pass through any higher costs to serve load to its customers in the form of higher rates, while also requiring Evergy to pass along any net revenues received from the sale of electricity in excess of what was required to meet the demand of Evergy's own customers in the form of lower rates. Thus, fuel adjustment clause proceedings ensure Evergy is not financially harmed by higher-than-expected net costs to serve load or lower-than-expected net market revenues from its power plants, which are the focus of Evergy's damages claims in this matter.

15. The structure of utility regulation described above is comprehensive and time-tested, and has been administered (and vetted through many judicial reviews) for over a century of public utility regulation in states across the country, and at the federal level through FERC. The MPSC, KCC, and FERC have specialized, detailed knowledge regarding Evergy's retail delivery operations, transmission system operations, the setting of Evergy's electricity rates

[17] "20 CSR 4240-20.090 - Fuel and Purchased Power Rate Adjustment Mechanisms," *Legal Information Institute, Cornell Law School*, available at https://www.law.cornell.edu/regulations/missouri/20-CSR-4240-20-090 ("PURPOSE: This rule sets forth the definitions, structure, operation, and procedures relevant to the filing and processing of applications to reflect prudently incurred fuel and purchased power costs through an interim energy charge or a fuel adjustment clause which allows periodic rate adjustments outside general rate proceedings."); *Evergy Kansas Central Electric Tariff*, December 31, 2024, https://bcg.evergy.com/-/media/documents/billing/kansas-central/other/ks-central-rates.pdf, Schedule: RECA, Retail Energy Cost Adjustment, Sheets 5-6.

[18] *See* **Section III.C**.

charged to customers, Evergy's reliability and other service obligations, and Evergy's participation in the SPP wholesale electricity markets.

3. Federal Regulation

16. Evergy is also subject to federal regulation by FERC. State regulatory commissions have jurisdiction over the provision of electric service to the utility's end use customers within the state, and the rates charged to customers for this service. In contrast, FERC has jurisdiction over Evergy's activities that involve interstate commerce. This includes any sales of electricity for resale (*i.e.,* sales of electricity to any other entity (*e.g.,* another electric utility) that then sells the electricity to other entities or end use customers), and investment in and operation of interstate transmission lines that have the capability to transport electricity across state lines.[19] Similar to state regulators, FERC has the statutory obligation to ensure that electric rates related to jurisdictional investments and transactions are just and reasonable.[20] This includes Evergy's investments and costs associated with its interstate transmission facilities and any sales to non-end use customers. As described below, this includes all transactions in SPP's wholesale electricity markets in which Evergy participates.

[19] "What FERC Does," *FERC*, June 18, 2025, available at https://www.ferc.gov/what-ferc-does#; Ervin, Sam J., "The State of Energy Regulation in the United States," *National Association of Regulatory Utility Commissioners*, available at https://pubs.naruc.org/pub.cfm?id=538F9979-2354-D714-51EE-34D36131BC2C.

[20] Lazar, Jim, *Electricity Regulation In the US: A Guide (Second Edition)*, Regulatory Assistance Project, June 2016, https://www.raponline.org/knowledge-center/electricity-regulation-in-the-us-a-guide-2/, p. 97; Shea, Daniel, "Electricity Markets: A Primer for State Legislators," *NCSL*, December 14, 2021, available at https://www.ncsl.org/energy/electricity-markets-a-primer-for-state-legislators.aspx ("FERC has jurisdiction over wholesale electricity markets and transmission in interstate commerce […] As an essential service that is vital to health, safety and economic activity, government oversight of the power sector has always been designed to ensure reliable service at just and reasonable rates.") .

B. Evergy is a member of the Southwest Power Pool, which is subject to oversight and regulation by FERC.

1. SPP

17. Evergy is a member of the Southwest Power Pool. SPP is not a regulator, but rather an independent regional transmission operator whose roles and responsibilities are established by participating members and regulated by FERC. It is a member organization with governing tariffs, bylaws, and market protocols reviewed and approved by FERC, and adhered to by members and participants in SPP's wholesale electricity markets.[21] Members of and market participants in SPP include investor-owned electric utilities (like Evergy), electric cooperatives, municipal electric light companies, utility and non-utility power plant owners and operators, independent transmission companies, electricity purchasers, marketers and brokers, and the like.

18. Regional transmission organizations like SPP have three basic functions: (1) coordinated scheduling and operation of the bulk power system to meet specified reliability standards; (2) coordinating planning for *future* bulk power system infrastructure needs (*e.g.*, new transmission lines) to ensure the system can interconnect new generation facilities and reliably deliver electricity to load over time; and (3) independent administration of wholesale electricity markets approved by FERC to facilitate the purchase and sale of electricity among all market participants in the SPP region, including Evergy.[22]

[21] "Governance," *Southwest Power Pool*, available at https://www.spp.org/governance/, p. 1.

[22] The "bulk power system" includes all interconnected elements of the electric system used to generate electricity and move that electricity to where it is consumed, including power plants and transmission lines owned by SPP members (like Evergy). *Energy Primer: A Handbook For Energy Market Basics*, Federal Energy Regulatory Commision (FERC), December 2023, https://www.ferc.gov/sites/default/files/2024-01/24_Energy-Markets-Primer_0117_DIGITAL_0.pdf, pp. 67-69.

19. SPP is a (roughly) 550,000 square mile region covering all or part of 14 states in the middle of the country, and serving approximately 18 million people with a peak electricity demand of over 56,000 megawatts ("MW") in 2023.[23] Demand is met through coordinated operation and dispatch of over 1,000 power plants totaling over 100,000 MW of nameplate capacity, across over 70,000 miles of high voltage transmission lines.[24] The markets administered by SPP (the SPP "day-ahead integrated marketplace") settled over $30 billion dollars in energy market transactions in 2023, and roughly $6 billion more in its transmission market transactions.[25] SPP has nearly 400 separate entities as market participants.[26]

2. Reliability Obligations of SPP Market Participants

20. As noted, SPP is responsible for planning for and ensuring reliable power system operations across the SPP footprint. On a second-by-second basis, SPP ensures reliability through the coordinated operation and dispatch of all elements of the bulk power system (power plants and transmission facilities) to ensure that electricity supply and electricity demand are

[23] "2024 Annual Report," *Southwest Power Pool*, May 6, 2025, available at https://storymaps.arcgis.com/stories/270f9ba619da4a2d9c239d6cc6115d4c/print, pp. 15, 38. The 14 states that are (in whole or part) included in the SPP region are MO, KS, ND, SD, TX, MN, OK, NE, LA, IA, NM, AR, MT, and WY. "SPP," *Federal Energy Regulatory Commission (FERC)*, available at https://www.ferc.gov/industries-data/electric/electric-power-markets/spp.

[24] For comparison, Iatan and LEC constitute two of these power plants, with a nameplate generating capacity total of approximately 2.2 thousand MW, or roughly 5.4 percent of SPP 2022 average available capacity. Evergy Opening Evidence, Complainants' Opening Evidence, p. 3. *See* **Figure 4** Sources [B]-[D].

[25] "2024 Annual Report," *Southwest Power Pool*, May 6, 2025, available at https://storymaps.arcgis.com/stories/270f9ba619da4a2d9c239d6cc6115d4c/print, p. 20.

[26] "2024 Annual Report," *Southwest Power Pool*, May 6, 2025, available at https://storymaps.arcgis.com/stories/270f9ba619da4a2d9c239d6cc6115d4c/print, p. 20.

always in balance. On an annual basis, SPP ensures that sufficient resources will be available to maintain reliable power supply through its resource adequacy requirements.[27]

21. SPP requires that member entities within SPP (like Evergy) who are responsible to meet the electricity needs of their customers – called Load Responsible Entities ("LREs")[28] – demonstrate their ability to meet their customers' aggregate demand for electricity at the time of the SPP system peak demand, with designated resources (*i.e.,* power plants that they own or whose electrical output they have under contract).

22. Resource adequacy demonstrations are made through annual filing requirements. Pursuant to SPP rules, load responsible entities must submit summer resource adequacy filings to SPP in February of each year, four months prior to the start of the summer season (which covers June through September).[29] In order to satisfy resource adequacy requirements, load responsible entities must demonstrate that they have firm power plant capacity available to meet summer

[27] The Resource Adequacy construct is governed by the SPP Open Access Transmission Tariff ("OATT"), Sixth Revised, Volume No. 1, Attachment AA. SPP market rules have evolved over time, and continue to evolve; the description in this section focuses on the resource adequacy construct in place during the at-issue 2022 period. *Open Access Transmission Tariff, Sixth Revised Volume No. 1 - Attachment AA Resource Adequacy*, Southwest Power Pool (SPP), Effective July 1, 2018, https://sppviewer.etariff.biz/filing, Docket No. ER18-1268-000 (Navigate to folder 2018, March, "Accepted – Tariff Revisions to Implement a Set of Resource Adequacy Policies").

[28] *Open Access Transmission Tariff, Sixth Revised Volume No. 1 - Attachment AA Resource Adequacy,* Southwest Power Pool (SPP), Effective July 1, 2018, https://sppviewer.etariff.biz/filing, Docket No. ER18-1268-000, Section 2 Definitions (Navigate to folder 2018, March, "Accepted – Tariff Revisions to Implement a Set of Resource Adequacy Policies").

[29] *Open Access Transmission Tariff, Sixth Revised Volume No. 1 - Attachment AA Resource Adequacy,* Southwest Power Pool (SPP), Effective July 1, 2018 and October 1, 2020, https://sppviewer.etariff.biz/filing, Docket Nos. ER18-1268-000 and ER20-2578-000 (For Docket No. ER18-1268-000, navigate to folder 2018, March, "Accepted – Tariff Revisions to Implement a Set of Resource Adequacy Policies;" For Docket No. ER20-2578-000, navigate to folder 2020, July, "Accepted - Demand Response Programs and BTM Generation for Resource Adequacy").

peak customer demand plus a planning reserve margin.[30] Each power plant is assigned a certain amount of accredited capacity (determined by SPP) that a load responsible entity can use to count toward its resource adequacy requirements.

23. As discussed in **Section IV**, in 2022, all load responsible entities in SPP – including Evergy – fully satisfied their resource adequacy requirements and, moreover, SPP did not experience any capacity shortfalls during Evergy's coal conservation period.[31]

3. SPP Integrated Marketplace and Market Monitoring

a. Administration of the SPP Integrated Marketplace

24. In addition to ensuring reliability through the balancing of system supply and demand and administration of the SPP RA construct, SPP acts as administrator for the region's wholesale electricity markets – the SPP Integrated Marketplace ("IM"). A purpose of the SPP IM is to reliably meet system demand on a second-by-second basis in a manner that minimizes the total system cost to meet the demand. This is accomplished through administration of (1) a day-ahead market to commit generating resources to meet the next day's expected demand for electricity at the lowest possible total system cost, and (2) a real time balancing market to

[30] Specifically, the SPP resource adequacy requirement is equal to the summer peak demand plus the summer peak demand multiplied but the planning reserve margin. *Open Access Transmission Tariff, Sixth Revised Volume No. 1 - Attachment AA Resource Adequacy*, Southwest Power Pool (SPP), Effective July 1, 2018, https://sppviewer.etariff.biz/filing, Docket No. ER18-1268-000, Section 5 Summer Season Resource Adequacy Requirement, p. 11 (Navigate to folder 2018, March, "Accepted – Tariff Revisions to Implement a Set of Resource Adequacy Policies"); The PRM was 12 percent in 2022. *2022 SPP Resource Adequacy Report*, Southwest Power Pool (SPP), June 15, 2022, https://www.spp.org/documents/67297/2022%20spp%20june%20resource%20adequacy%20report.pdf, p. 3.

[31] Evergy fully satisfied its reliability RA requirements to SPP between February and May of 2022. *Open Access Transmission Tariff, Sixth Revised Volume No. 1 - Attachment AA Resource Adequacy*, Southwest Power Pool (SPP), Effective July 1, 2018, https://sppviewer.etariff.biz/filing, Docket No. ER18-1268-000, Section 9 Summer Season Resource Adequacy Timeline (Navigate to folder 2018, March, "Accepted – Tariff Revisions to Implement a Set of Resource Adequacy Policies"); *2022 SPP Resource Adequacy Report*, Southwest Power Pool (SPP), June 15, 2022, https://www.spp.org/documents/67297/2022%20spp%20june%20resource%20adequacy%20report.pdf, pp. 1, 26, 39.

"dispatch" resources *in real time* to meet actual load (variations from the day ahead expectations) at least cost, subject to system constraints to ensure reliable system operations.[32] In both cases, the market "clears" when enough supply has been committed or dispatched to meet demand in each hour, and the price of the last unit dispatched sets the "market clearing price" for that hour. In other words, neither electric utilities like Evergy nor other owners of individual power plants are responsible for ensuring the system is dispatched to reliably meet electricity demand in each hour across SPP; this is SPP's responsibility.

25. Power plants in SPP submit price "offers" to the day-ahead energy market to operate their units in each hour of the following day based primarily upon their variable costs (*i.e.*, cost of fuel and variable operations and maintenance expenses) to operate the unit. In order to achieve the most economical dispatch of resources as electricity demand on the system increases, SPP requests generators to come online and increase output in order of cost – that is, going from the lowest variable cost resource to higher variable cost resources until demand is met. This is referred to as dispatching resources based upon "economic merit order." The lower the variable cost of a resource (*e.g.*, wind and solar have essentially no fuel or variable costs), the more often it will be selected to operate when available. Higher cost (less efficient) resources will tend to operate less often and for fewer hours over the course of the year. Evergy submitted price offers to SPP for the commitment and dispatch of Iatan and Lawrence generating stations

[32] *SPP 101: An Introduction to Southwest Power Pool*, Southwest Power Pool (SPP), August 19, 2025, https://www.spp.org/documents/31587/spp%20101%208.1.2025%20(web).pdf, p.19. "Dispatching" resources means turning power plants on or off, and ramping their output up and down, as needed to meet the changing demand for electricity on the system. "Dispatching," *U.S. Energy Information Administration*, available at https://www.eia.gov/tools/glossary/index.php?id=Dispatching.

{{[redacted]}} of 2022, including the period in which coal conservation measures were in place.[33]

26. Evergy's participation in the SPP IM dictates the costs it incurs and the revenues it receives from the market. Loosely speaking, Evergy "pays" SPP the market clearing price in each hour for its total customer demand for electricity in that hour, and "is paid" the market clearing price in each hour for the total generation output of power plants it owns, operates, or has under contract for that hour. Thus, in the wholesale market in each hour, Evergy is either net positive (the revenues it earns for the operation of the power plants it owns or has under contract exceeds the amount it must pay to meet demand in that hour), net negative (the reverse), or zero (the revenues Evergy earns exactly equal the amount it must pay).

b. SPP Market Monitoring

27. SPP's Market Monitoring Unit ("MMU") is responsible for monitoring SPP's markets to ensure that markets are competitive, and that participants are not taking actions that would inappropriately raise electricity prices higher than they otherwise would be (*e.g.*, through the exercise of market power and/or the withholding of generation output).[34] The MMU is focused on the structure, administration, and outcomes of wholesale markets. The MMU must

[33] Note that instead of bidding into the SPP market for economic dispatch, generation resource in SPP can also "self-schedule" generate a set amount, regardless of market price. There were a {{[redacted]}}, representing {{[redacted]}}, where Evergy "self scheduled" its resources. EVERGY-0014677, tab "Document_TB34"; EVERGY-0014678, tab "Document_TB34"; EVERGY-0014637, tab "Document_TB34"; EVERGY-0014638, tab "Document_TB34".

[34] The SPP MMU monitors the market to mitigate instances of both economic and physical withholding. Economic withholding is the use of high offer prices above resource cost to reduce resource dispatch probability in the market (described further below). Physical withholding is the use of reduced generation capacity in resource offers to reduce the quantity of energy offered into the market. Both of these practices can have the effect of increasing overall market prices if the resource employing them has sufficient market power (*i.e.*, a resource with a significant role and impact on SPP's ability to balance electricity supply and demand in each hour). Whenever these dynamics lead to increased market prices, Evergy and all other SPP generators earn higher profits. *Energy Primer: A Handbook For Energy Market Basics*, Federal Energy Regulatory Commision (FERC), December 2023, https://www.ferc.gov/sites/default/files/2024-01/24_Energy-Markets-Primer_0117_DIGITAL_0.pdf, pp. 93, 137.

operate independently from SPP, and reports directly to the SPP Board of Directors in order to ensure the integrity of its decision-making process and to avoid actual or apparent conflicts in its oversight role.[35] FERC reviews the roles and structures of the market monitoring unit to ensure that it is independent.

28. The market monitor accomplishes its oversight role through, among other things, (1) the receipt and review of power plant market offers, fuel costs, variable costs, and other data that may be considered when forming a market offer; (2) review of the behavior of market participants; (3) evaluating the overall structure of the market with respect to entities' potential ability to exercise market power; (4) evaluating market rules, standards, and procedures to determine whether there are any structural flaws in the markets that may lead to inefficient or uncompetitive outcomes; (5) responding to complaints or inquiries with respect to market activity; and (6) issuing reports that evaluate market designs and market outcomes, recommend changes to market rules, procedures or practices, or make findings with respect to the behavior of individual market participants.[36]

29. SPP market rules govern how generating unit owners may form the offers that they make to sell energy in the day-ahead and real-time energy markets. Offers are expressed in dollars per megawatt-hour ("MWh") of generation in each hour. The market rules require that these offers be based on the short-run variable costs to operate the unit including, *e.g.*, the cost of

[35] "SPP Oversight Committee Position Statement on the Independence of the Market Monitoring Unit," SPP, December 23, 2015, available at "SPP Oversight Committee Position Statement on the Independence of the Market Monitoring Unit," *Southwest Power Pool*, December 23, 2015, available at https://www.spp.org/documents/17118/spp-06-151223-mmu_independence_oc_statement%2012_23_15.pdf, p. 1.

[36] *Markets+ Tariff Version 2*, Southwest Power Pool, March 15, 2024, https://spp.org/documents/71310/markets%20plus%20tariff%20v2%20pdf.pdf.

fuel to generate a MWh of energy, variable operations and maintenance costs, etc.[37] In addition, asset owners may include an "adder" of up to 25 percent of variable costs without explaining the purpose of the adder and without triggering specific review of the adder by the MMU.[38] The MMU is generally responsible to review asset owner offers to ensure they comply with market rules, to determine whether additional review of the offers is warranted, and to "mitigate"—*i.e.*, reduce—offers if they fail to comply with market rules.[39]

[37] "Mitigated Energy Offer ($/MWh) = HeatRate (mmBtu/MWh) * Performance Factor * Total Fuel Related Costs ($/mmBtu) + Energy Offer Curve VOM ($/MWh) + Opportunity Costs ($/MWh)." *Open Access Transmission Tariff, Sixth Revised Volume No. 1 - Attachment AF Market Power Mitigation Plan*, Southwest Power Pool (SPP), Effective May 18, 2022, https://sppviewer.etariff.biz/filing, Docket No. ER22-1557-000, Section 3.2, Mitigation Measures for Energy Offer Curves (Navigate to folder 2022, April, "Accepted - Tariff Clean-Up Filing Effective 20220518").

[38] Resource offer mitigation occurs when the SPP MMU requires a resource to change market offers that violate SPP's market power mitigation rules. The SPP MMU defines an allowed 25% "adder" or "conduct threshold" on top of the cost-based, "mitigated energy offers." Cost-based offers that are augmented below the 25% conduct threshold are not evaluated for market power violations. Offers above the 25% conduct threshold are evaluated for potential mitigation action *i.e.*, a requirement for the resource to modify any offers that violate SPP's market power mitigation rules. *Open Access Transmission Tariff, Sixth Revised Volume No. 1 - Attachment AF Market Power Mitigation Plan*, Southwest Power Pool (SPP), Effective May 18, 2022, https://sppviewer.etariff.biz/filing, Docket No. ER22-1557-000, Section 3.2, Mitigation Measures for Energy Offer Curves (Navigate to folder 2022, April, "Accepted - Tariff Clean-Up Filing Effective 20220518") (For most resources in SPP not located in areas with binding transmission constraints (like Iatan and Lawrence), "the conduct threshold is a 25% increase above the mitigated Energy Offer Curve.").

[39] *Open Access Transmission Tariff, Sixth Revised Volume No. 1 - Attachment AG Market Monitoring Plan*, Southwest Power Pool (SPP), Effective March 1, 2014, https://sppviewer.etariff.biz/filing, Docket No. ER12-1179, Section 1.3.1 Mission Statement (Navigate to Tariffs, "Open Access Transmission Tariff, Sixth Revised Volume No. 1," Attachment AG, Section 1) ("The mission of the Market Monitor is to (a) monitor and report on possible abuses of horizontal and vertical market power and gaming in Markets and Services by any Market Participant (b) identify market design flaws and recommend any changes in design to improve the operation of Markets and Services for the benefit of consumers and Market Participants and (c) monitoring Market Participants' compliance with market rules.").

C. Evergy's claim of damages and analytic method.

1. Evergy's Theory of Damages

30. Evergy is seeking damages of $22,211,624.65 (before interest) due to purported damages incurred by Evergy due to coal conservation measures taken at Iatan and Lawrence.[40] Evergy is seeking damages in several distinct categories:

(1) "Lost Opportunity Damages" of $16,962,878;[41]

(2) "Net Additional Costs to Meet Load" of $4,627,883;[42]

(3) "Additional Fuel Costs" of $395,113.65;[43]

(4) "Principal Railcar Storage Expenses" of $225,750;[44]

(5) "Interest Before Damages," which is not specifically quantified in Evergy's Opening Evidence.[45]

31. I address the first two categories of damages in this verified statement. I understand that Mr. Baranowski and Mr. Zebrowski address the third and fourth categories of damages in their verified statement.

32. Evergy's coal conservation measures involved increasing the price at which Iatan and Lawrence would offer generation into the SPP day-ahead market to reduce the likelihood that SPP would commit the generation and, as a result, reduce associated coal burn in some hours

[40] Evergy Opening Evidence, Complainants' Opening Evidence, p. 50.

[41] Evergy Opening Evidence, Complainants' Opening Evidence, pp. 40-41.

[42] Evergy Opening Evidence, Complainants' Opening Evidence, pp. 42-44.

[43] Evergy Opening Evidence, Complainants' Opening Evidence, p. 45.

[44] Evergy Opening Evidence, Complainants' Opening Evidence, p. 46.

[45] Evergy Opening Evidence, Complainants' Opening Evidence, pp. 46-48.

to preserve coal inventories.[46] Evergy increased bid prices at Iatan and Lawrence using a combination of bid "adders" during different periods in 2022, including (i) self-determined market bid adders up to approximately 25 percent of the cost-based offer ("market adder"), and (ii) incrementally higher bid adders using SPP's Opportunity Cost Calculator ("OCC adder").[47] As discussed in more detail below, the market adder can be applied to generating unit offers at any time for any reason (*i.e.,* not necessarily for coal conservation), without market monitor review.[48] The OCC adder was used by Evergy to reduce generation and coal burn at a specific time to preserve the coal for use at a future time, subject to an SPP analysis of opportunity costs.[49] Evergy applied the market adder during the full coal conservation period from April 29 – November 22, 2022 at both Lawrence units, and from April 29 – December 20, 2022 at both

[46] Evergy Opening Evidence, Complainants' Opening Evidence, p. 14.

[47] Evergy Opening Evidence, Complainants' Opening Evidence, p. 14. *See also*, Evergy Opening Evidence, Verified Statement of Jessica L Tucker, p. 38.

[48] *Open Access Transmission Tariff, Sixth Revised Volume No. 1 - Attachment AF Market Power Mitigation Plan*, Southwest Power Pool (SPP), Effective May 18, 2022, https://sppviewer.etariff.biz/filing, Docket No. ER22-1557-000, Section 3.2, Mitigation Measures for Energy Offer Curves (Navigate to folder 2022, April, "Accepted - Tariff Clean-Up Filing Effective 20220518") (For most resources in SPP not located in areas with binding transmission constraints (like Iatan and Lawrence), the conduct threshold above which offer mitigation is considered by the MMU is, "a 25% increase above," cost based offers.")

[49] Application of an OCC adder due to fuel limitations must be verified by the SPP MMU. *Open Access Transmission Tariff, Sixth Revised Volume No. 1 - Attachment AF Market Power Mitigation Plan*, Southwest Power Pool (SPP), Effective May 18, 2022, https://sppviewer.etariff.biz/filing, Docket No. ER22-1557-000, Section 3.2 Mitigation Measures for Energy Offer Curves, Subsection E (Navigate to folder 2022, April, "Accepted - Tariff Clean-Up Filing Effective 20220518"). On August 5, 2022, SPP updated its Market Protocols so that non-force majeure fuel limitations was a condition under which market participants could request approval of an OCC adder: "Fuel Limitations are eligible for Non-Regulatory Opportunity Costs for a fuel supply limitation or transportation limitation, for up to one year, resulting from (a) an event of force majeure, or (b) other circumstances verified by the SPP MMU. […] Fuel Limitations resulting from other circumstances may include, but are not limited to, abnormal fuel supply or transportation limitations. These other circumstances need not be unforeseeable. They may include unusual market conditions and provisions considered in but not rising to the level of force majeure. Market Participants must provide evidence to the SPP MMU supporting a request for application of this alternative. The SPP MMU will determine whether this provision applies case-by-case and such determination will be made in a non-unduly discriminatory manner. The SPP MMU may periodically review the continuing applicability of its determination, in light of the purpose for this provision, which is to aid in the conservation of scarce fuel resources, and may revoke its application if that goal is not being achieved." *Market Protocols SPP Integrated Marketplace Revision 90*, Southwest Power Pool (SPP), August 5, 2022, https://www.spp.org/spp-documents-filings/?id=21024, Section G.12.1.3 Non-Regulatory Opportunity Cost: Fuel Limitations.

Iatan units. Evergy applied the OCC adder from August 19 – October 19, 2022 at both Lawrence units, September 28 – October 19, 2022 at Iatan 1, and September 22 – October 19, 2022 at Iatan 2.[50]

33. The first two components of Evergy's damages claims reflect the fact that Evergy is both a supplier to and purchaser from the SPP wholesale electricity market. Evergy is a supplier of electricity to the SPP wholesale electricity market because it owns or has under contract just under 15,800 megawatts ("MW") of generating capacity and renewable power purchase agreements across its four subsidiaries, including Iatan and Lawrence.[51] Additionally, Evergy is a purchaser of electricity because it is a load responsible entity that distributes electricity to its end use customers ("ratepayers") in the SPP region.[52]

34. For its "Lost Opportunity" damages, Evergy claims its coal conservation measures meant that, in certain hours, Iatan and/or Lawrence may not have been dispatched when they otherwise would have been and thus generated less electricity than they otherwise would have.[53] Evergy claims this reduction in electricity supply from Iatan and Lawrence is a loss in net profits equal to the difference in generation in each hour from the two power plants,

[50] Evergy Opening Evidence, Verified Statement of Jessica L Tucker, p. 39. Based on my review of Evergy's produced modeling data, the start dates for coal conservation in Ms. Tucker's Table 21 appear to be inclusive, while the end dates for coal conservation are exclusive.

[51] Evergy, Annual Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934, filed December 31, 2024, https://investors.evergy.com/static-files/1745ffa2-a24c-40b9-8f22-d15c4f32edcb, p. 10.

[52] *See* Section II.B.

[53] Evergy Opening Evidence, Complainants' Opening Evidence, p. 38. Evergy claims that in order to conserve coal, it increased its price offers into the SPP market for Iatan and Lawerence and, because their offer prices were higher, they were dispatched less by SPP. *See* Evergy Opening Evidence, Complainants' Opening Evidence, p. 14.

multiplied by its incremental net revenues (profits) in that hour – that is, the price it would have earned in each hour less the costs it incurred to operate the units.[54]

35. For its "Net Additional Costs to Meet Load" damages, Evergy claims that the impact of reduced operations at Iatan and Lawrence meant prices in the SPP market were higher in those hours than they otherwise would have been. As a result, Evergy claims it had to pay more in those hours than it otherwise would have in order to purchase electricity in the market to meet its customers' needs.[55]

36. Conversely, since Evergy operates many power plants in SPP, those power plants would have benefited from higher market prices. Generally speaking, if Evergy's portfolio generation in a specific hour happened to equal its load obligation, a change in SPP prices would have no effect on Evergy (net positive or negative) – the increase in net revenues to Evergy's generators would cancel out the increase in cost to load. In hours where Evergy's portfolio generation exceeds its customers' demand for electricity, the higher prices would mean that, on net, Evergy is earning additional revenues (*i.e.,* "negative damages"). In hours where Evergy's portfolio generation is less than its customers' demand for electricity, the higher prices would mean that, on net, Evergy is paying additional costs (*i.e.,* "positive damages"). **Appendix B** provides a more detailed overview of Evergy's theory of damages.

37. This dynamic is directly observable in Evergy's modeling. **Figure 1** depicts Ms. Foo's estimates of net revenues for all Evergy generators other than Iatan and Lawrence, together with Mr. Crosby's estimates of net revenues for Iatan and Lawrence (*i.e.,* generation

[54] Evergy Opening Evidence, Complainants' Opening Evidence, pp. 39-41. *See also* Evergy Opening Evidence, Verified Statement of Michael Crosby.

[55] Evergy Opening Evidence, Complainants' Opening Evidence, p. 41. *See also,* Evergy Opening Evidence, Verified Statement of Hsin Foo.

revenue minus generation costs) for an example hour. **Figure 1** also presents Ms. Foo's estimate of the gross increase in cost to load (*i.e.,* change in LMPs at Evergy's KCPL, MPS, and WR load nodes multiplied by Evergy's corresponding load obligations in each region) in the same example hour. Damages (or profits) due to coal conservation are calculated by summing the difference in net revenues and difference in cost to load between the "With Coal Conservation" bars and the "Without Coal Conservation" bars.[56] In this single hour, according to Evergy's own modeling, Evergy's net profits *increased* by {{[redacted]}} due to its coal conservation measures. Increased net profits in a damages hour means Evergy incurred negative damages in that hour.

[56] Evergy Opening Evidence, Crosby Workpapers (Actual Opportunity and Lost Opportunity and Startup Calcs.xlsx); Evergy Opening Evidence, Foo Workpapers (Foo's Hourly PROMOD Net Cost to Load Dataset). "Foo's Hourly PROMOD Net Cost to Load Dataset" refers to a combination of the following produced PROMOD output data files from Ms. Foo: 91_2022 EVRG Load Cost Impact - 20250320.xlsx; 93_FI_Report_KCPL_COM240126_With_Conserv_20240919.xlsx; 94_FI_Report_MPS_COM240126_With_Conserv_20240919.xlsx; 95_FI_Report_WR_COM240126_With_Conserv_20240920.xlsx; 96_FI_Report_KCPL_COM240126_But_For_20241114.xlsx; 97_FI_Report_MPS_COM240126_But_For_20241114.xlsx; 98_FI_Report_WR_COM240126_But_For_20241114.xlsx; COM240126_Actual-S1.BUS; COM240126_Actual-S2.BUS; COM240126_Actual-S3.BUS; COM240126_Actual-S4.BUS; COM240126_Normal2-S1.BUS; COM240126_Normal2-S2.BUS; COM240126_Normal2-S3.BUS; COM240126_Normal2-S4.BUS; COM240126_Actual-S1.DIA; COM240126_Actual-S2.DIA; COM240126_Actual-S3.DIA; COM240126_Actual-S4.DIA; COM240126_Normal2-S1.DIA; COM240126_Normal2-S2.DIA; COM240126_Normal2-S3.DIA; COM240126_Normal2-S4.DIA; COM240126_Actual-S1.TRN; COM240126_Actual-S2.TRN; COM240126_Actual-S3.TRN; COM240126_Actual-S4.TRN; COM240126_Normal2-S1.TRN; COM240126_Normal2-S2.TRN; COM240126_Normal2-S3.TRN; COM240126_Normal2-S4.TRN; COM240126_Actual-S1.FUL; COM240126_Actual-S2.FUL; COM240126_Actual-S3.FUL; COM240126_Actual-S4.FUL; COM240126_Normal2-S1.FUL; COM240126_Normal2-S2.FUL; COM240126_Normal2-S3.FUL; COM240126_Normal2-S4.FUL; COM240126_Actual.pff.

Figure 1. Example Hour with Negative Evergy "Damages"

{{



}}

38. **Figure 2** depicts Evergy's lost opportunity and net cost to load monthly damages over the course of 2022. Mr. Crosby separately estimates lost opportunity damages for Iatan and Lawrence. Ms. Foo's estimate of net cost to load damages reflects Evergy's increased cost to load minus Evergy's increased profits at all Evergy generators other than Iatan and Lawrence. Ms. Foo's estimate of net cost to load cannot be separated into "Iatan-only" or "Lawrence-only" components. As such, I depict monthly totals for net cost to load damages.

39. **Figure 2** illustrates some obvious peculiarities in Evergy's damages estimates. First, {{[redacted]}} of damages are estimated in May, which is prior to the summer peak period and when coal inventories were still high. Moreover, as discussed above, Evergy only employed market bid adders in May (*i.e.*, it did not apply OCC coal conservation adders in this month). Second, Evergy's own estimates of lost opportunity damages at Iatan and Lawrence are frequently *negative*, not positive, with total damages falling below zero (meaning Evergy earned *greater* profits from coal conservation, not losses) in {{[redacted]}} and {{[redacted]}}. Moreover, because Evergy earns net profits in so many hours, total damages are negligible in {{[redacted]}}, {{[redacted]}}, {{[redacted]}}, and {{[redacted]}}. Third, the majority of Evergy's damages are incurred in {{[redacted]}}, which is part of the "shoulder season" in which electricity demand is considerably below the summer peak and, as such, generators typically schedule outages.[57] As I discuss below, these obvious issues are symptomatic of the unreliable basis and method for Evergy's damages modeling.

[57] Peterson, Kimberly, Chris Peterson, and Mark Morey, "What is the shoulder season in electricity markets?," *U.S. Energy Information Administration*, December 16, 2024, available at https://www.eia.gov/todayinenergy/detail.php?id=64044 ("Electricity consumption in the U.S. Lower 48 states is highly seasonal; the demand for electricity peaks in the summer and the winter in response to more extreme temperatures and decreases in the spring and fall, in the so-called shoulder seasons, when weather is generally milder. Electric utilities and owners of power-generating assets perform maintenance on power plants during shoulder seasons because of less electricity demand that means that the system generally doesn't need to be operating at full capacity.")

Figure 2. Evergy's Lost Opportunity and Net Cost to Load Damages, 2022
{{



}}

2. Analytic Method and Modeling Tools Used

40. In its Complaint and Opening Evidence, Evergy attempts to estimate lost revenues in hours when Iatan or Lawrence would have run more than they actually did in 2022, "but for" Evergy's coal conservation actions, and determine how differences in generation may have affected broader SPP market dynamics and either increased net revenues at other Evergy-owned

plants, or increased net costs associated with purchasing power to serve Evergy customers.[58] For both purported damages calculations, Evergy compares "actual" market outcomes in 2022 with coal conservation to "but for" market outcomes without coal conservation. Importantly, both actual and but for market outcomes are representations of market conditions based on modeling outputs and not historical data. Evergy employs two different modeling platforms in their analysis, which are simplified representations of certain electricity market dynamics. These models are referred to as "production cost models," and are used in the industry for various resource planning and forecasting purposes. One model is referred to as "PROMOD," and the other "GenTrader."

41. Production cost models like PROMOD and GenTrader are based on stylized representations of market operations under simplified and theoretically "pure" representations of power plant owner bidding behavior and operational decisions. Yet the electricity market and the actual circumstances that dictate power plant operations, output, and pricing involve an exceedingly complicated mix of many factors that are not within the control of individual actors, including, at least, the evolving structure, design, and implementation of wholesale electricity markets in SPP and all neighboring regions; local and regional meteorological conditions and cloud cover; consumer behavior and economic trends; the drivers of prices in global fuel markets; power plant operating conditions, age, and history; the power plant portfolios, market share, and investment strategies of market participants; consumer price responsive behavior; bidding strategies of individual power plant owners; and other factors.

[58] A more detailed description of the modeling platforms and methods is included in **Appendix A**:.

42. The models used by Evergy for its damages claims are effectively "stick figure" representations of the electricity market. System and market representations in the models are simplified representations of market and system operational factors, and are streamlined to manage model run times (since models can take many hours or days to run). They reflect idealized conditions and behavior that do not capture the complexity of actual power system operations, configuration and operation of the interconnected transmission system infrastructure, or complicated bidding and operating rules and procedures that change over time.

43. Moreover, it is well understood that power plant owner bidding behavior deviates meaningfully from the theoretically "pure" representations in the models – *i.e.,* power plant owners don't simply bid their exact short-run variable costs (as typically assumed in the models). Bids incorporate complicated considerations related to fuel and energy portfolio management; individual beliefs on future weather, system, and fuel price conditions; unique and changing plans for asset investment, operations, and maintenance; and other strategies used to maximize the profits and net value of the owner's full power plant portfolio. In addition, the models require for each case in which they are run a wide range of simplifying assumptions and judgments relative to the highly complex reality of actual SPP system conditions and market operations.

44. Finally, Evergy chose to use two very different models for different parts of its representation of the SPP wholesale electricity market, and also used the outputs from one model as inputs to another. Yet, as discussed below, PROMOD and GenTrader are fundamentally different in the scope and scale of modeled power system operations and dispatch, and the use of different models introduces obvious and unresolvable problems in Evergy's modeling. The mismatch between the models complicates the ability to understand and interpret model

outcomes, and requires the translation of one model's data outputs into a different form for input into the other. The challenges that flow from Evergy's application of this analytic method and its use of production cost models are discussed in **Section V** and **Appendix A**.

III. EVERGY'S DAMAGES CLAIMS MUST BE CONSIDERED WITHIN THE CONTEXT OF THE BROADER REGULATORY AND ECONOMIC LANDSCAPE IN WHICH IT OPERATES.

A. Evergy's claims of damages are based on SPP market outcomes, which are determined by many factors unrelated to BNSF coal deliveries to Iatan and Lawrence.

45. As discussed in **Section II** above, Evergy's claims of damages related to lost opportunities and net cost to load are based on its participation in SPP's electricity markets. SPP market outcomes, including the amount of generation from Evergy's power plants and associated market revenues, are the result of many well-known exogenous factors. Exogenous factors affecting SPP market outcomes and Evergy's market revenues on any given day include: variable fuel prices (*i.e.,* oil, uranium, natural gas, and coal), variations in the regional demand for electricity, changes in weather patterns, the amount of wind and solar generation, power plant outage schedules, power plant operational parameters (*e.g.,* minimum run times), forced and unforced outages and derates at generating facilities, and the occurrence of outages, derates, and congestion on the transmission system that moves energy from power plants to consumers.[59]

[59] *Energy Primer: A Handbook For Energy Market Basics*, Federal Energy Regulatory Commision (FERC), December 2023, https://www.ferc.gov/sites/default/files/2024-01/24_Energy-Markets-Primer_0117_DIGITAL_0.pdf, p. 33 ("[…] market-based […] prices are affected by physical factors or conditions that drive electric supply and demand – these factors are known as physical fundamentals. For example, weather affects both supply and demand. Fuel costs, capital costs, transmission capacity and constraints, and the operating characteristics of power plants affect the cost at which supply can be provided. The actual price for power is determined by the interaction of supply and demand. For example, extreme heat can drive up demand and require grid operators to activate less-efficient, more-expensive power plants, and consequently drive prices up."); "Electricity Explained: Factors affecting electricity prices," *U.S. Energy Information Administration*, June 29, 2023, available at https://www.eia.gov/energyexplained/electricity/prices-and-factors-affecting-prices.php.

Most of these exogenous factors affecting power plant generation levels and revenues are wholly unrelated to BNSF's delivery of coal to Iatan and Lawrence.

B. Evergy ignores the broader context for coal delivery – namely, the decline of coal-fired generation, including at Iatan and Lawrence, and the changing nature of coal-fired plant operations.

46. Coal use and coal-fired generation have been declining for decades in the U.S.[60] This trend holds in SPP as a region, for Evergy as a company, and for Iatan and Lawrence in particular. Between 2014 and 2024, the share of SPP generation capacity from coal-fired generators declined from 35 percent to 22 percent.[61] In that same period, Evergy's generation from coal has declined by 48 percent overall, including declines of 68 percent at Lawrence and 56 percent at Iatan.[62]

47. Historically, coal-fired power plants operated as baseload generators, which means the plants essentially ran continuously, "to serve loads on an around-the-clock basis."[63] However, the economics of coal plant operations have been in decline, affecting the way in

[60] "The United States uses a mix of energy sources," *U.S. Energy Information Administration*, July 15, 2024, available at https://www.eia.gov/energyexplained/us-energy-facts/ ("The contribution of coal to total U.S. energy consumption has declined from about 37% in 1950 to 9% in 2023, largely because the U.S. electric power sector has increased use of other energy sources and reduced coal consumption."); "U.S. production of all types of coal has declined over the past two decades," *U.S. Energy Information Administration*, April 8, 2025, available at https://www.eia.gov/todayinenergy/detail.php?id=64924.

[61] "2014 State of the Market," *Southwest Power Pool*, August 24, 2015, available at https://www.spp.org/spp-documents-filings/?id=18512, p. 23; "State Of The Market 2024," *Southwest Power Pool Market Monitoring Unit*, June 12, 2025, available at https://www.spp.org/spp-documents-filings/?id=18512, p. 4.

[62] Evergy operates five coal generators: Jeffrey Energy Center, Lawrence Energy Center, La Cygne, Iatan, and Hawthorn. Evergy, Annual Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934, filed December 31, 2024, https://investors.evergy.com/static-files/1745ffa2-a24c-40b9-8f22-d15c4f32edcb, p. 33;"Form EIA-923 Detailed Data with Previous Form Data (EIA-906/920)," *U.S. Energy Information Administration*, available at https://www.eia.gov/electricity/data/eia923/, Schedules 3A & 5A Generator Data, Page 1 Generation and Fuel Data.

[63] "Glossary," *U.S. Energy Information Administration*, available at https://www.eia.gov/tools/glossary/index.php?id=base+load.

which coal plants operate.[64] Due to an increase in generation from intermittent renewable energy resources and natural gas-fired resources, many coal resources have shifted from baseload operations to load-following, or cycling operations.[65] Evergy noted this dynamic in its own 2021 Integrated Resource Plan Overview, stating:



[66]

48. Increased cycling implies a higher number of starts from coal-fired generators, and more pronounced variation in generation (and associated coal burn). As a result, demand for coal from coal-fired generators is also more volatile.[67]

[64] "As U.S. coal-fired capacity and utilization decline, operators consider seasonal operation," *U.S. Energy Information Administration*, September 1, 2020, available at https://www.eia.gov/todayinenergy/detail.php?id=44976, ("The coal power plant fleet is used much less during electricity's shoulder months of spring (March, April, and May) and fall (September, October, and November). During the winter and summer months, the coal fleet operates at an average capacity factor, or utilization rate, of more than 60%. However, in the spring and fall, the average capacity factor has been less than 50%. **Seasonal differences in capacity factor have become more pronounced during the past two years, largely because coal has been displaced by cheaper generation from natural gas and renewable energy during the shoulder months. In April and May 2020, the coal fleet operated less than 30% of the time. As a result, coal plants sometimes assert that they are unable to operate for enough hours to produce enough annual revenue to cover costs**.") (emphasis added).

[65] Graeter, Phillip and Seth Schwartz, *Recent Changes to U.S. Coal Plant Operations and Current Compensation Practices*, National Association of Regulatory Utility Commissioners, January 2020, https://pubs.naruc.org/pub/7B762FE1-A71B-E947-04FB-D2154DE77D45, p. 1 and Figure 7.

[66] EVERGY-0006465, at 467.

[67] *See, e.g.*, "Flexible Operations and Heat Rate," EPRI, *Flexible Operations and Heat Rate*, Electric Power Research Institute, May 2018, https://restservice.epri.com/publicdownload/000000003002013992/0/Product.

49. Evergy's coal procurement and delivery practices and their claim of damages in this case should be considered in the context of industry-wide changes in coal plant operations in the U.S. {{ [redacted] }}[68]

C. Evergy is effectively guaranteed full cost recovery of all fuel, transportation, and wholesale market costs through state regulatory proceedings in Kansas and Missouri.

50. As noted earlier, Evergy's state regulatory authorities – the MPSC and the KCC – allow Evergy to recover its costs associated with fuel, fuel transportation, and SPP electricity market purchased power on a reconciling basis through fuel adjustment clause proceedings ("FAC"). In a FAC, if Evergy's fuel costs or purchased power expenses are higher than expected, Evergy fully recovers these incremental costs through state public utility commission approval of a rate increase in the FAC. If Evergy's fuel costs or purchased power expenses are lower than expected, Evergy returns the excess to customers through state PUC approval of a rate decrease in the FAC. FAC proceedings occur on a regular basis in both Missouri and Kansas, include long-established and well-understood processes for reconciling all fuel and purchased power costs to actual amounts incurred, and result in essentially full recovery by Evergy of all costs related to operations of its power plants and its net cost to serve load. As a result, essentially all of the costs associated with any actions Evergy takes with respect to fuel

[68] *See* BNSF Verified Statement of Witness Michael R. Baranowski and Nathan S. Zebrowski ("Baranowski and Zebrowski V.S." at Figure 27.

inventories (including coal) or market purchases of electricity are fully collected from ratepayers, and are not borne by Evergy's shareholders.

51. Specifically, Evergy has already recovered all costs incurred in 2022 associated with operating its power plants and meeting load, including incremental costs (if any) associated with its coal conservation measures. In Kansas, Evergy Kansas Central, the owner and operator of Lawrence Energy Center, received approval from the KCC to recover approximately $36.8 million in net costs associated with fuel, purchased power, and off-system sales accumulated in 2022.[69,70] In Missouri, Evergy Missouri Metro received approval from the MO PSC to recover approximately $10.8 million (before interest) in net costs associated with fuel, purchased power,

[69] Evergy Kansas Central was approved to recover approximately $97.9 million in total for the January-December 2022 period. However, approximately $61.1 million of that total was deferred cost recovery from February 2021 Winter Storm Uri. $97.9 million - $61.1 million = $36.8 million in costs incurred in 2022 approved for recovery. *23-EKCE-668-ACA Kansas Corporation Commission Docket*, Kansas Corporation Commission, https://estar.kcc.ks.gov/estar/portal/kscc/page/docket-docs/PSC/DocketDetails.aspx?DocketId=cc93247d-496d-40b7-8d0b-0d135abfa442, accessed October 3, 2025, Order Approving Annual Cost Adjustment, p.4; *23-EKCE-668-ACA Kansas Corporation Commission Docket*, Kansas Corporation Commission, https://estar.kcc.ks.gov/estar/portal/kscc/page/docket-docs/PSC/DocketDetails.aspx?DocketId=cc93247d-496d-40b7-8d0b-0d135abfa442, accessed October 3, 2025, Direct Testimony of Elizabeth A. Herrington, March 21, 2023, p. 2.

[70] Note that fuel and purchased power are costs that *increase* Evergy's permitted revenue requirement and associated rates, but net profits from off-system sales are a credit that *decrease* Evergy's permitted revenue requirement and associated rates. As such, essentially all net profits or losses from Evergy's operation of Lawrence or Iatan are passed through as a change in rates to Evergy's customers.

and off-system sales accumulated in January to December 2022 in two separate proceedings.[71,72] Additionally, Evergy Missouri West received approval to recover approximately $149.1 million (before interest) in three separate proceedings covering fuel, purchased power, and off-system

[71] MPSC approved recovery of approximately $1.6 million (before interest) accumulated in January to June 2022, and approximately $9.3 million (before interest) accumulated in July to December 2022. *Direct Testimony of Lisa A. Starkebaum*, Evergy Metro, Inc. d/b/a Evergy Missouri Metro, July 29, 2022, https://efis.psc.mo.gov/Case/FilingDisplay/116416, Docket No. ER-2023-0030, pp. 3, 4; *Order Approving Fuel Adjustment True-up and Approving Tariff to Change Fuel Adjustment Clause Rates*, Missouri Public Service Commission, September 14, 2022, https://efis.psc.mo.gov/Case/FilingDisplay/129648, Docket No. ER-2023-0030, p. 3; *Order of Correction Nunc Pro Tunc*, Missouri Public Service Commission, September 15, 2022, https://efis.psc.mo.gov/Case/FilingDisplay/146076, Docket Nos. EO-2023-0029 and ER-2023-0030; *Direct Testimony of Lisa A. Starkebaum*, Evergy Metro, Inc. d/b/a Evergy Missouri Metro, January 31, 2023, https://efis.psc.mo.gov/Case/FilingDisplay/222396, Docket No. ER-2023-0245, p. 4; *Order Approving Tariff and Approving Annual Fuel Adjustment Clause True-Up*, Missouri Public Service Commission, March 16, 2023, https://efis.psc.mo.gov/Case/FilingDisplay/123074, Docket No. ER-2023-0245, p. 2.

[72] Under MPSC administrative regulations, utilities may recover up to a maximum of 95 percent of permitted costs through FCA proceedings. The formula for Evergy Metro, for example, is: 95% * Annual Net Energy Costs (includes fuel, purchased power, off-system sales, emissions, and transmission costs) adjusted for net base energy costs + any true-up, disallowances, and interest. *Evergy Metro Electric Tariff, P.S.C. MO. No. 7*, February 6, 2022, https://efis.psc.mo.gov/Case/FilingDisplay/221834, Docket No. ER-2022-0129, 3rd, Revised Sheet Nos. 50.32 to 50.43. This is different from Kansas, where utilities may recover up to 100 percent of permitted costs through FCA proceedings. *See, e.g., Evergy Kansas Central Electric Tariff*, December 31, 2024, https://bcg.evergy.com/-/media/documents/billing/kansas-central/other/ks-central-rates.pdf, Schedule: RECA, Retail Energy Cost Adjustment.

sales accumulated in December 2021 to May 2023.[73,74] I am not aware of Evergy in its 2022 FAC filings explicitly attributing increased fuel or purchased power costs to coal conservation efforts; nor am I aware of any instance where the Missouri or Kansas Commissions explicitly call out, evaluate, or make findings on the impact of coal conservation on fuel and purchased power expenses in FAC proceedings covering 2022 expenses and revenues. As such, essentially all of Evergy's fuel and purchased power expenses/revenues for 2022 were reconciled through these FAC processes without any meaningful discussion of coal conservation efforts.

[73] MPSC approved recovery of approximately $44.6 million (before interest) in Accumulation Period 30 from December 2021 to May 2022. *See Direct Testimony of Lisa A. Starkebaum*, Evergy Missouri West, Inc. d/b/a Evergy Missouri West, July 1, 2022, https://efis.psc.mo.gov/Case/FilingDisplay/222375, Docket No. ER-2023-0011, p. 6; *Order Approving Tariff to Change Fuel Adjustment Rates*, Missouri Public Service Commission, November 28, 2022, https://efis.psc.mo.gov/Case/FilingDisplay/218940, Docket No. ER-2023-0011, p. 4.

Evergy accumulated a total of approximately $101.5 million (before interest) in Accumulation Period 31 from June to November 2022. Approximately $16 million was approved for recovery in Accumulation Period 31, and approximately $85.4 was deferred to future periods (all values before interest). *See Direct Testimony of Lisa A. Starkebaum*, Evergy Missouri West, Inc. d/b/a Evergy Missouri West, December 30, 2022, https://efis.psc.mo.gov/Case/FilingDisplay/123066, Docket No. ER-2023-0210, p. 5; *Order Approving Stipulation and Agreement*, Missouri Public Service Commission, August 23, 2023, https://efis.psc.mo.gov/Case/FilingDisplay/116430, Docket No. ER-2023-0210, pp. 1-2. Approximately $45.3 million (before interest) of the deferred amount was approved for recovery in Accumulation Period 32. *See Order Approving Fuel Adjustment Clause True-up*, Missouri Public Service Commission, August 17, 2023, https://efis.psc.mo.gov/Case/FilingDisplay/249598, Docket No. EO-2023-0445, pp. 1-2. The remaining approximately $40.2 million (before interest) of the deferred amount was approved for recovery in Accumulation Period 33. *See Direct Testimony of Lisa A. Starkebaum*, Evergy Missouri West, Inc. d/b/a Evergy Missouri West, December 29, 2023, https://efis.psc.mo.gov/Case/FilingDisplay/580613, Docket No. ER-2024-0205, p. 6; *Order Approving True-Up and Tariff to Change Fuel Adjustment Rates*, Missouri Public Service Commission, February 22, 2024, https://efis.psc.mo.gov/Case/FilingDisplay/583777, Docket No. ER-2024-0205, p. 2. In summary, recovery of the entire $101.5 million in costs accrued from June to November 2022 was approved by the MPSC.

Finally, the MPSC approved recovery of approximately $3 million (before interest) accumulated in December 2022 to May 2023. *See Direct Testimony of Lisa A. Starkebaum*, Evergy Missouri West, Inc. d/b/a Evergy Missouri West, June 30, 2023, https://efis.psc.mo.gov/Case/FilingDisplay/252716, Docket No. ER-2023-0444, p. 4; *Order Approving Interim Tariff to Change Fuel Adjustment Rates*, Missouri Public Service Commission, August 17, 2023, https://efis.psc.mo.gov/Case/FilingDisplay/252717, Docket No. ER-2023-0444, p. 2; *Evergy Missouri West Electric Tariff, P.S.C. M.O. No. 1*, September 1, 2023, https://efis.psc.mo.gov/Case/FilingDisplay/218958, Docket No. ER-2023-0444, Revised Sheet No. 127.34; *Order Approving Stipulation and Agreement*, Missouri Public Service Commission, January 18, 2024, https://efis.psc.mo.gov/Case/FilingDisplay/581676, Docket No. ER-2023-0444.

[74] Given the FAC filing period definitions of December 2021-May 2022, June 2022-November 2022, and December 2022-May 2023, it is not possible to isolate the costs accumulated in 2022 for recovery. However, in total, between both Kansas and Missouri, Evergy was approved to recover costs in the hundreds of millions related to fuel, purchased power, and off-system sales in 2022.

52. This regulatory treatment of Evergy's costs is an important consideration. Under Evergy's theory of damages, Evergy asserts it incurred losses due to a decrease in net revenues at Iatan and Lawrence (*i.e.*, a decline in off-system sales) and an increase in the net cost to serve load (*i.e.*, an increase in fuel costs, if the incremental generator was owned by Evergy, or an increase in purchased power costs, if the incremental generator was not). However, due to long-running state regulatory proceedings in Kansas and Missouri related to fuel and purchased power expenses and revenues, Evergy has already been reimbursed for any such costs incurred in 2022.

53. Evergy is also fully reimbursed for costs associated with stockpiling coal. Specifically, Evergy is permitted to include costs associated with meeting its target level of coal inventories in its rate base.[75] As such, Evergy is guaranteed both a "return of" and "return on" all costs associated with its coal inventory included in the rate base.[76]

[75] *See*, *e.g.*, for Evergy Missouri West, *Direct Testimony of Ronald A. Klote*, Evergy Missouri West, January 7, 2022, https://efis.psc.mo.gov/Case/FilingDisplay/115649, Schedule RAK-2 and *Direct Testimony of Jessica L. Tucker*, Evergy Missouri Metro, January 7, 2022, https://efis.psc.mo.gov/Case/FilingDisplay/221835, Docket No. ER-2022-0129, pp. 9-20; for Evergy Missouri Metro, *Direct Testimony of Ronald A. Klote*, Evergy Missouri Metro, January 7, 2022, https://efis.psc.mo.gov/Case/FilingDisplay/128047, Docket No. ER-2022-0129, Schedule RAK-2 and *Direct Testimony of Jessica L. Tucker*, Evergy Missouri Metro, January 7, 2022, https://efis.psc.mo.gov/Case/FilingDisplay/221835, Docket No. ER-2022-0129, pp. 9-19; for Evergy Kansas Central, *Direct Testimony of Ronald A. Klote*, Evergy Metro, Inc., Evergy Kansas Central, Inc. and Evergy Kansas South, Inc., April 25, 2023, https://estar.kcc.ks.gov/estar/portal/kscc/PSC/PSCDocumentDetailsPage.aspx?DocumentId=e0420eaa-d24a-4559-9fca-e63c0b3c8cf0&Class=Filing, Docket No. 23-EKCE-775-RTS, Exhibit RAK-8 and *Direct Testimony of Jessica Tucker*, Evergy Metro, Inc., Evergy Kansas Central, Inc. and Evergy Kansas South, Inc., April 25, 2023, https://estar.kcc.ks.gov/estar/portal/kscc/PSC/PSCDocumentDetailsPage.aspx?DocumentId=67c9334e-a016-4b1f-a091-b58197681b29&Class=Filing, Docket No. 23-EKCE-775-RTS, pp. 6-18.

[76] *See*, *e.g.*, Cappers, Peter, *Basics of Cost of Service Ratemaking*, U.S. Department of Energy's Clean Energy Innovator Fellows Training, September 12, 2024, https://eta-publications.lbl.gov/sites/default/files/2024-09/basics_of_ratemaking.pdf, p. 6.

D. Evergy is insulated from the financial consequences of coal conservation measures due to rate regulation.

54. As described above, Evergy is largely insulated from the financial consequences of coal conservation measures because it is allowed to pass through any incremental costs to its ratepayers. In effect, Evergy is not significantly exposed to financial risk associated with uncertain SPP market outcomes, including the potential impacts on fuel and purchased power expenses of coal conservation measures. As a result, Evergy has an incentive to be conservative when making coal conservation decisions, because (a) Evergy is effectively insulated from any financial losses due to excessive coal conservation since recovery of associated costs is very likely through fuel adjustment clause proceedings, and (b) in many cases (as described above) actions that increase market prices can increase profits for all other Evergy power plants. These regulatory and electricity market incentives are features of the vertically integrated electric utility landscape in which Evergy operates.

IV. EVERGY'S ANALYSIS PROVIDES NO BASIS FOR A CLAIM OF DAMAGES.

A. Evergy's alleged damages flow from voluntary decisions to conserve coal that could have produced positive or negative financial effects due to random, exogenous factors unrelated to BNSF deliveries of coal to Iatan and Lawrence.

55. Even if one were to ignore the flaws in Evergy's theory of damages, it is important to recognize that actual results calculated based on its theory could be positive (net damages) or negative (net profits) depending on random, exogenous factors unrelated to BNSF's delivery of coal to Iatan and Lawrence. As discussed in **Section II**, Evergy's coal conservation measures took the form of "bid adders," which raised the bids submitted into the SPP day-ahead and real time markets by Iatan and Lawrence. According to Evergy, these higher bids led to higher prices in the SPP wholesale market in many hours. As a result, all SPP generators

operating in these hours (including all generators owned by Evergy) earned higher revenues. Conversely, all entities purchasing power from SPP incurred higher costs in these hours (including Evergy, which purchases power from SPP to meet its customers' demand). In short, any action by a power plant owner (*e.g.*, raising offer prices or otherwise withholding generation from the market) increases revenues and profits *for all other operating power plants* in the market (including Evergy's plants and those owned by others in SPP).

56. Thus, the overall impact of bid adders on Evergy's net revenues is ambiguous – it could be positive or negative, depending on whether Evergy happens to be generating more or less than its customers are consuming in a given hour. For example, lower Evergy demand and/or higher Evergy generation could result in negative damages (*i.e.*, net profits) under Evergy's damages theory. This means that, even ignoring all of the other shortcomings of Evergy's analytic method for postulating damages discussed herein, factors that are outside of Evergy's (and BNSF's) control ultimately determine whether Evergy's damages in a given time period will be positive or negative.

57. The random and variable nature of Evergy's damages theory is evident in Evergy's own analysis. For example, a review of Evergy's modeling results reveals that for nearly {{ }} of hours during the damages period ({{ }}), Evergy actually earned *higher* net revenues due to coal conservation measures after accounting for both lost opportunity revenues and net cost to load.[77] Similarly, as depicted in **Figure 2**, total damages fall below zero (meaning Evergy earned *greater* profits from coal conservation, not losses) in {{ }} and {{ }}. In fact, according to Evergy's own modeling, Iatan earned {{ }}

[77] Evergy Opening Evidence, Crosby Workpapers (Actual Opportunity and Lost Opportunity and Startup Calcs.xlsx); Evergy Opening Evidence, Foo Workpapers (Foo's Hourly PROMOD Net Cost to Load Dataset).

[redacted]}} due to the use of the market bid adder. As discussed in Section II.C and Section VI.A.3, market bid adders may be applied by any SPP market participant at any time to any power plant for any reason. The end result of increasing offer prices through the application of market bid adders could be an increase in the market participant's net revenues. As depicted in Table 1, Mr. Crosby estimates that, as a whole, Iatan {{[redacted]}} when the market bid adder alone was in place. As such, Evergy's own modeling confirms that the use of coal conservation measures can result in overall {{[redacted]}} in profits at its generators.

Table 1. Lost Opportunity "Damages" at Iatan During the Market Bid Adder Period

{{

[redacted]

}}

B. Contrary to Evergy's claims, Evergy's decision to conserve coal was always voluntary, and was never directed or requested by state regulators, SPP, or FERC.

58. Contrary to Evergy's insinuations in its Complaint and Opening Evidence, *even in the absence of coal conservation* in 2022, Evergy would have satisfied all of its regulatory and reliability obligations pursuant to Kansas and Missouri state public utility commission regulations and directives, and would have satisfied its reliability and operational obligations as a load-serving entity in SPP regulated by FERC. Evergy's decisions related to the availability and operation of its power plants, the administration of power purchase agreements with other power

plants, and the hedging of fuel and purchased power costs through market instruments – including any Evergy decisions to conserve coal at Iatan and Lawrence – are voluntary decisions by the company.

1. Evergy would have satisfied its resource adequacy obligations as a Load Responsible Entity in SPP without coal conservation at Iatan or Lawrence.

59. Evergy's Complaint states:

> "[a]s Load Responsible Entities in SPP, Complainants are subject to resource adequacy requirements that obligate them to supply SPP with enough available generating capacity to serve the demand within their operating service territories, along with a reserve margin. If Iatan or Lawrence experience coal delivery shortfalls compared to shipment schedules, or if coal inventories fall substantially below target levels, Evergy can be required to implement 'coal conservation measures.'"[78]

60. This statement is, at best, misleading. It is true that as a member of SPP, Evergy is a Load Responsible Entity and is required to submit annual filings under SPP's resource adequacy construct.[79] However, Evergy fully satisfied its resource adequacy requirements in 2022, and *would have done so with or without coal conservation measures*.[80]

61. As noted in **Section II**, load responsible entities must submit summer resource adequacy filings to SPP in February of each year, 4 months prior to the start of the summer

[78] Compl., ¶ 21.

[79] *Open Access Transmission Tariff, Sixth Revised Volume No. 1 - Attachment AA Resource Adequacy,* Southwest Power Pool (SPP), Effective October 1, 2020, https://sppviewer.etariff.biz/filing, Docket No. ER20-2578-000, Section 2 Definitions, (Navigate to folder 2020, July, "Accepted - Demand Response Programs and BTM Generation for Resource Adequacy"). The Resource Adequacy construct is governed by the SPP Open Access Transmission Tariff ("OATT"), Sixth Revised, Volume No. 1, Attachment AA.

[80] *2022 SPP Resource Adequacy Report*, Southwest Power Pool (SPP), June 15, 2022, https://www.spp.org/documents/67297/2022%20spp%20june%20resource%20adequacy%20report.pdf, pp. 26, 39.

season (June – September).[81] In order to satisfy resource adequacy requirements, load responsible entities must demonstrate that they have firm capacity supply available to meet summer peak customer demand plus a planning reserve margin.[82] By May of each year, load responsible entities must resolve any summer resource adequacy deficiencies.[83] Deficient load responsible entities are subject to a deficiency payment.[84] As of June 2022, all Evergy subsidiaries, along with all other load responsible entities in SPP, fully satisfied their resource adequacy requirements, and no deficiency payments were levied.[85]

62. As such, by the May 15, 2022 deadline for load responsible entities to cure deficiencies in their resource adequacy submission, Evergy had already met its 2022 SPP resource adequacy requirements pursuant to SPP rules through compliance filings, and there was never a risk that this outcome would be reversed due to potential issues with coal inventories.[86]

---

[81] *Open Access Transmission Tariff, Sixth Revised Volume No. 1 - Attachment AA Resource Adequacy*, Southwest Power Pool (SPP), Effective October 1, 2020, https://sppviewer.etariff.biz/filing, Docket No. ER20-2578-000, Section 2 Definitions, (Navigate to folder 2020, July, "Accepted - Demand Response Programs and BTM Generation for Resource Adequacy").

[82] Specifically, the SPP resource adequacy requirement is equal to the summer peak demand plus the summer peak demand multiplied but the planning reserve margin. *Open Access Transmission Tariff, Sixth Revised Volume No. 1 - Attachment AA Resource Adequacy*, Southwest Power Pool (SPP), Effective July 1, 2018, https://sppviewer.etariff.biz/filing, Docket No. ER18-1268-000, Section 5 Summer Season Resource Adequacy Requirement (Navigate to folder 2018, March, "Accepted – Tariff Revisions to Implement a Set of Resource Adequacy Policies"); The PRM was 12% in 2022. *2022 SPP Resource Adequacy Report*, Southwest Power Pool (SPP), June 15, 2022, https://www.spp.org/documents/67297/2022%20spp%20june%20resource%20adequacy%20report.pdf.

[83] *Open Access Transmission Tariff, Sixth Revised Volume No. 1 - Attachment AA Resource Adequacy*, Southwest Power Pool (SPP), Effective July 1, 2018, https://sppviewer.etariff.biz/filing, Docket No. ER18-1268-000, Section 9 Summer Season Resource Adequacy Timeline (Navigate to folder 2018, March, "Accepted – Tariff Revisions to Implement a Set of Resource Adequacy Policies").

[84] *Open Access Transmission Tariff, Sixth Revised Volume No. 1 - Attachment AA Resource Adequacy*, Southwest Power Pool (SPP), Effective July 1, 2018, https://sppviewer.etariff.biz/filing, Docket No. ER18-1268-000, Section 5, Summer Season Resource Adequacy Requirement and Section 14.2, Deficiency Payment, (Navigate to folder 2018, March, "Accepted – Tariff Revisions to Implement a Set of Resource Adequacy Policies").

[85] *2022 SPP Resource Adequacy Report*, Southwest Power Pool (SPP), June 15, 2022, https://www.spp.org/documents/67297/2022%20spp%20june%20resource%20adequacy%20report.pdf.

[86] "Notification of the Commencement of the Annual Resource Adequacy Process," *SPP Resource Adequacy Team*, available at https://www.spp.org/spp-documents-filings/?id=280895.

2. Evergy was never directed by SPP to conserve coal.

63. As stated by SPP itself, Evergy was never directed by SPP to conserve coal: {{ }}[87] This fact is consistent with my understanding of SPP's market rules and requirements related to fuel supply.

64. In 2022, SPP had a coal inventory reporting requirement in the SPP BA Emergency Operating Plan, which required Generator Operators (like Evergy) to notify SPP when coal reserves were projected to drop below certain levels (*e.g.*, { }).[88] Evergy complied with this coal inventory reporting requirement by providing regular updates to the SPP about its coal inventory levels from {{ }}.[89]

65. However, a reporting requirement is just that – a *reporting requirement*, not a request to conserve coal. SPP's reporting requirement did not imply that SPP would necessarily take any action if coal inventory levels fell below the reporting requirement:

{ }[90]

[87] *SPP's Discovery Responses to BNSF*, Southwest Power Pool (SPP), November 8, 2024, responses 4, 6, and 7.

[88] For example, { } SPP-000078, p. 16.

[89] {{ }}

[90] SPP-000078. GOP is short for Generation Operator; MP is short for Market Participant.

66. In SPP, placing a generation resource into "Reliability Status" means that the generation from the resource may be suspended or delayed, but this would only occur if there is sufficient available capacity to otherwise meet load.[91] Critically, SPP decisions to place resources into Reliability Status for the purpose of maintaining adequate fuel supplies required several factors – specifically, it required inventories to dip below {[redacted]} burn, required a "case-by-case basis" review, and depended on system conditions at the time – *i.e.*, did system conditions warrant SPP to make such a recommendation? Most importantly, the {[redacted]} burn *reporting* requirement was just that – notification of when inventories dipped below that threshold – and did not represent a decision to place a unit into reliability status, curtail generation from the unit, or require that the unit maintain any specific level of fuel supplies on site.

67. As I discuss below, SPP did not experience any reliability events during Evergy's coal conservation period and, as such, system conditions would not have necessitated the conservation of fuel at Iatan or Lawrence, even if coal inventories fell below {[redacted]}.

[91] In the event of a capacity shortage, generators in Reliability Status would be dispatched economically until the capacity shortage is eliminated. ("If this capacity is not sufficient to meet the fixed Demand Bids, fixed Export Interchange Transaction Bids, the upper bound of the Instantaneous Load Capacity requirements and Operating Reserve requirements on a system- wide basis, the DA Market SCUC algorithm will, in priority order: (1) curtail non-firm fixed Export Interchange Transaction Bids until the capacity shortage is eliminated; (2) incorporate capacity up to Resources' Maximum Emergency Capacity Operating Limit, Maximum Emergency Discharge Limit, and down to Minimum Emergency Charge Limit as applicable, commit Resources' with a Commit Status of Reliability on an economic basis until the capacity shortage is eliminated while attempting to maintain the Regulation-Up requirement to the extent possible, and/or de-commit charging Resources with a Commit Status of Self.") "Market Protocols SPP Integrated Marketplace Revision 91a," *Southwest Power Pool*, October 10, 2022, available at https://www.spp.org/spp-documents-filings/?id=21024, pp. 185-186.

3. Evergy was never directed by state regulatory authorities in Missouri or Kansas to conserve coal.

68. Based upon my review of Evergy's produced documents, Kansas state laws, administrative regulations, KCC orders, and Evergy rate cases, Evergy was not subject to any regulatory requirements in Kansas related to either maintaining minimum coal inventory levels or reporting to a regulator when coal inventories fell below a specific level. Evergy did not provide anything in its Opening Evidence suggesting otherwise.

69. Among other types of incident reporting, Missouri requires electric utilities to report "[r]eductions of coal inventory below a thirty-day supply" to the MPSC.[92] Evergy complied with this directive by providing regular updates to the MPSC from {{ }}.[93] However, based on the materials I have reviewed, the MPSC did not direct (and, to my knowledge, has never directed) Evergy to either conserve coal or maintain specific levels of coal inventories.[94]

70. In sum, Evergy's decisions about whether or not to conserve coal at Iatan and Lawrence in a given month, on a given day, or in a given hour in 2022 were not (and to my knowledge have never been) directed by any state regulatory authority (*i.e.*, the MPSC and KCC), or SPP and its regulatory authority, FERC.

[92] "Code of State Regulations, Department of Commerce and Insurance, Division 4240 3.190. Reporting Requirements for Electric Utilities and Rural Electric Cooperatives," *Secretary of State*, available at https://www.sos.mo.gov/CMSImages/AdRules/csr/current/20csr/20c4240-3.pdf, p. 21.

[93] EVERGY-0014610 at 610-620.

[94] I have reviewed emails and documents produced by Evergy related to the Missouri PSC, along with Missouri state laws, Missouri administrative regulations, Missouri PSC orders, and Evergy's recent rate cases.

C. Evergy's coal conservation measures were conservative, were not needed to maintain power system reliability, and were not needed to preserve fuel supplies at either Iatan or Lawrence.

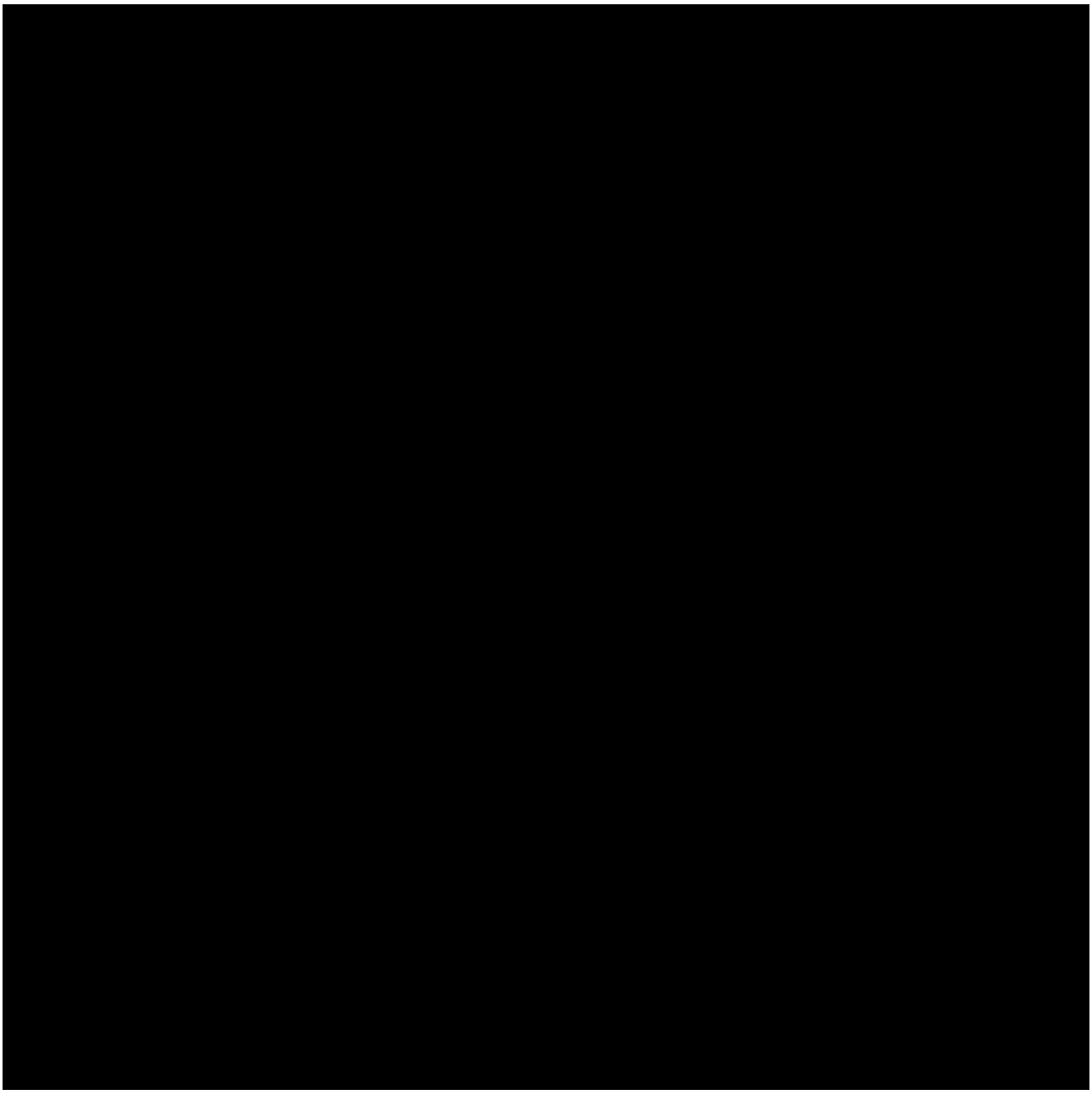
1. Evergy's own damages modeling demonstrates that {{ }}

71. By Mr. Crosby's own estimation, {{ }} **Figure 3** shows actual and "but-for" coal inventories (*i.e.,* the coal inventory levels that Evergy's modeling indicates it would have had in the absence of coal conservation) over the course of 2022. This calculation, using Mr. Crosby's own assumptions and modeling output, demonstrates that {{ }} given the coal delivered to them by BNSF.

Figure 3. Daily Actual and But-For Coal Inventories

{{





}}

2. Evergy's coal conservation measures were unnecessary for the purpose of providing reliable electric service to its customers, and were not needed to maintain reliability in the SPP region.

72. Not only were Evergy's coal conservation measures unnecessary to avoid running out of coal at either Iatan or Lawrence, coal conservation measures were unnecessary for the purpose of providing reliable electric service to Evergy's customers or any other customer in

the SPP region during any hour in which Evergy had coal conservation measures in place in 2022.

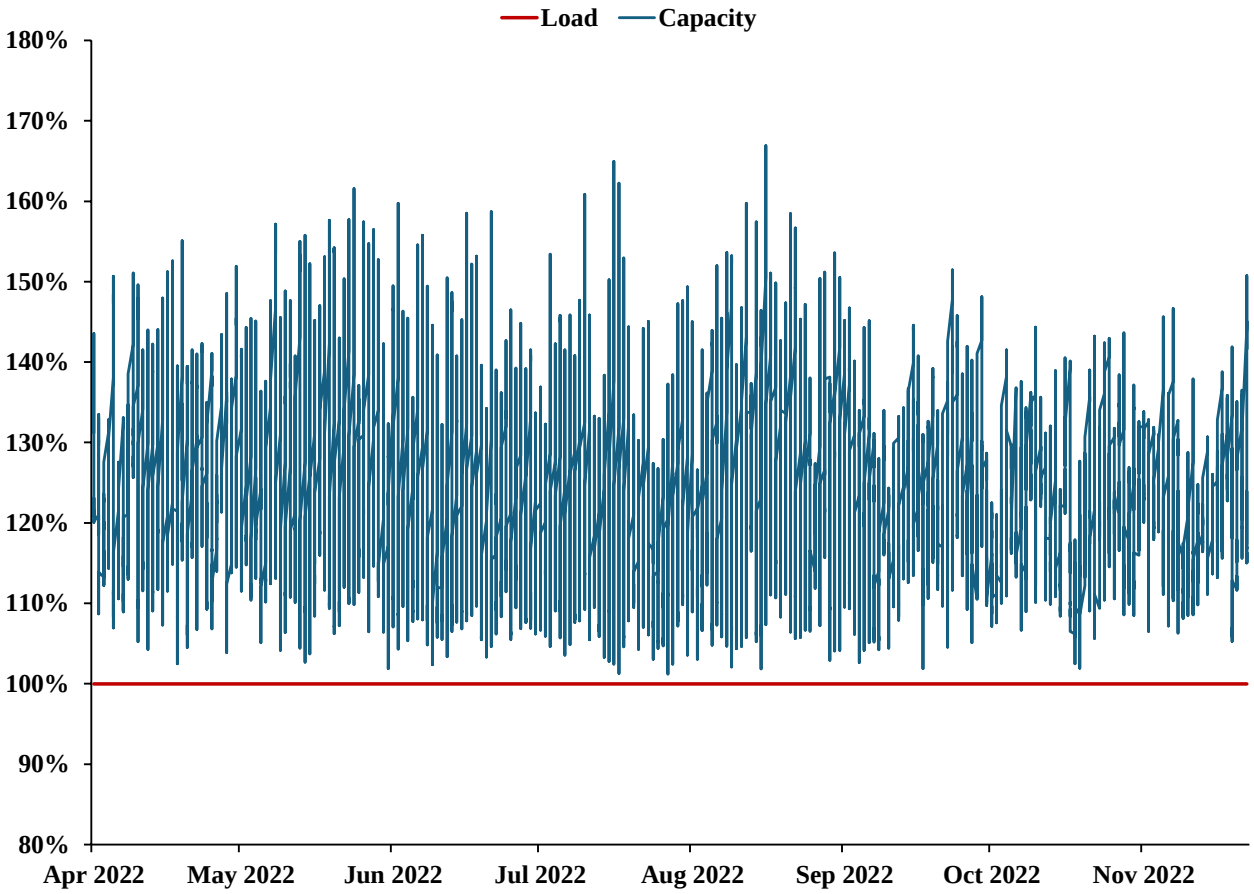
73. **Figure 4a** depicts hourly capacity available in SPP as a percentage of load for the period April 29, 2022 (the beginning of coal conservation measures by Evergy) to December 20, 2022 (the end of Evergy's coal conservation measures). A value above "100 percent" means that available capacity is greater than load, meaning that no actions by SPP are required to avoid a loss of load. **Figure 4b** sorts every hour during this period from highest to lowest capacity available as a percentage of load to illustrate that available capacity exceeded load *in every hour in which Evergy had coal conservation measures in place in 2022*, and by a very large amount in the overwhelming majority of hours.

74. As depicted in **Figure 4** and **Figure 5**, over the course of Evergy's damages period, SPP had surplus capacity in every hour, and more than a 10 percent capacity surplus in 86.62 percent of hours, and more than a 20 percent capacity surplus in 53.83 percent of hours.

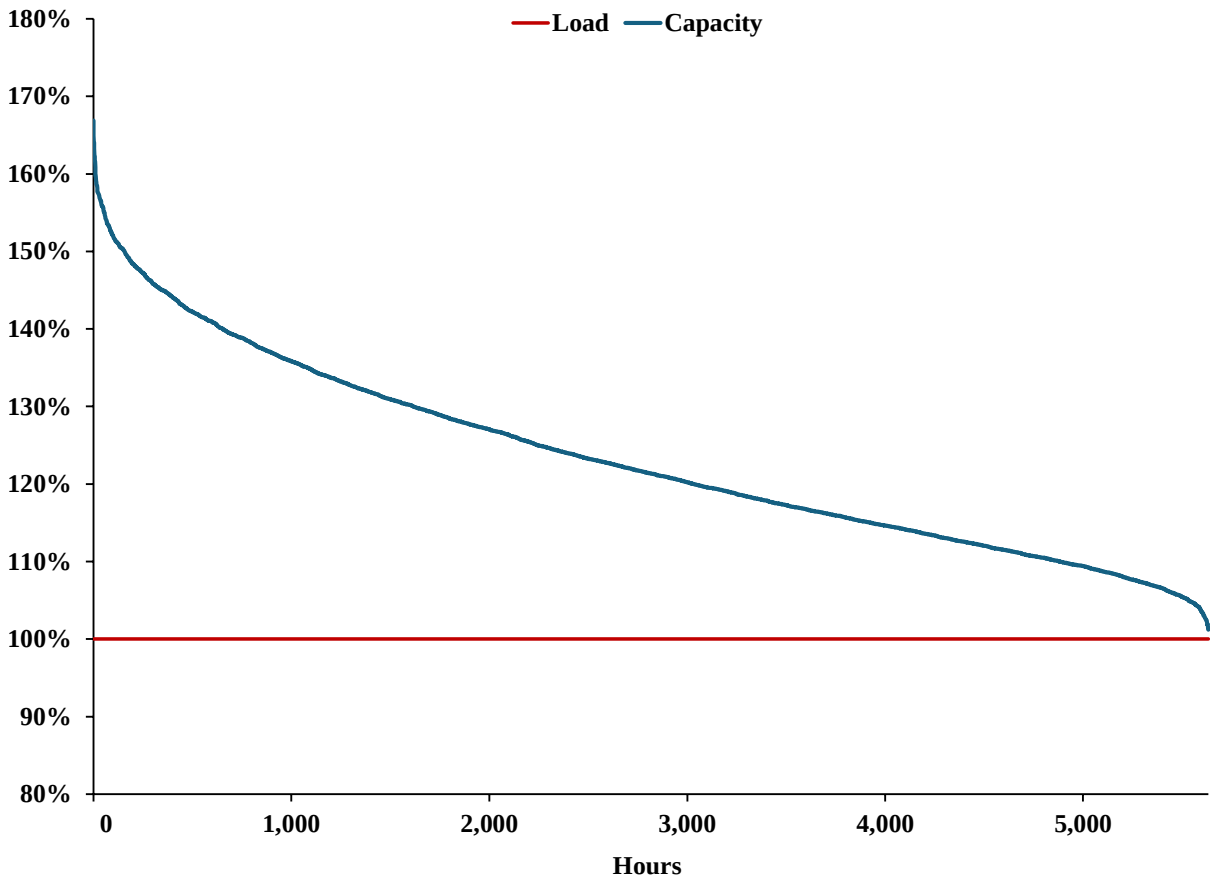
75. *In sum, Evergy's coal conservation measures were not necessary to "keep the lights on" for Evergy's customers or any other customers in SPP.*

Figure 4. SPP Hourly Capacity Available as a Percentage of Load

(a) Chronological

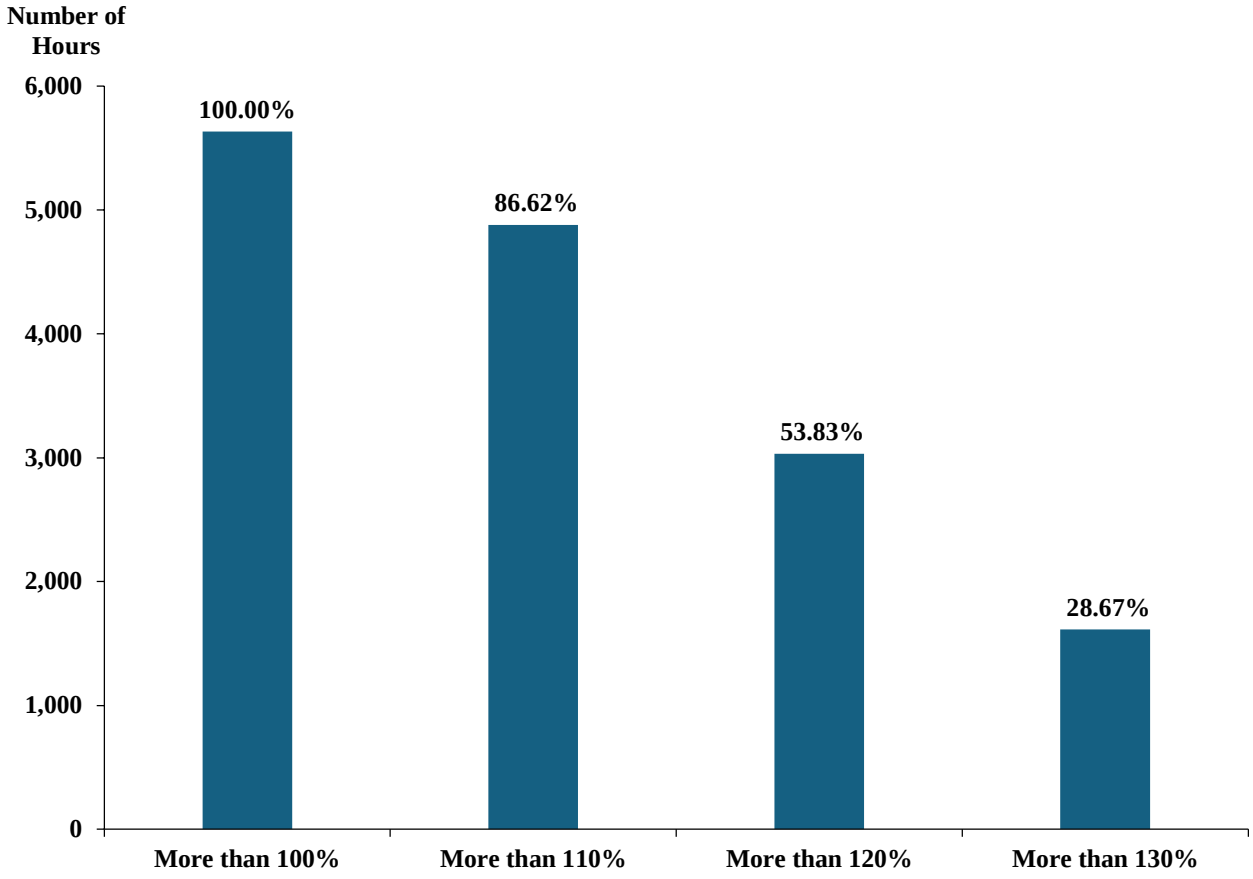


(b) Sorted



Notes: [1] Values above 100 percent indicate available capacity exceeded load in that hour. [2] Capacity includes day ahead economic maximum capacity available for thermal resources, actual generation for wind and solar resources, and firm net imports into SPP. The results hold as well during hours where SPP was a net exporter to other regions. **Sources:** [A] "SPP Hourly Load Data," https://portal.spp.org/pages/hourly-load. [B] "SPP Hourly Generation Capacity By Fuel Type Data," https://portal.spp.org/pages/hourly-generation-capacity-by-fuel-type. [C] "SPP Generation Mix Historical Data," https://portal.spp.org/pages/generation-mix-historical. [D] "SPP Historical Tie Flow Data," https://portal.spp.org/pages/historical-tie-flow.

Figure 5. SPP Hourly Capacity Available as a Percentage of Load, April 29, 2022 – December 20, 2022



Notes: [1] Values above 100 percent indicate available capacity exceeded load in that hour. [2] Capacity includes day ahead economic maximum capacity available for thermal resources, actual generation for wind and solar resources, and firm net imports into SPP. The results hold as well during hours where SPP was a net exporter to other regions. **Sources:** [A] "SPP Hourly Load Data," https://portal.spp.org/pages/hourly-load. [B] "SPP Hourly Generation Capacity By Fuel Type Data," https://portal.spp.org/pages/hourly-generation-capacity-by-fuel-type. [C] "SPP Generation Mix Historical Data," https://portal.spp.org/pages/generation-mix-historical. [D] "SPP Historical Tie Flow Data," https://portal.spp.org/pages/historical-tie-flow.

3. Evergy's coal conservation measures were conservative relative to the inventory thresholds in SPP's market rules.

76. By the time Evergy removed its coal conservation measures at each plant, coal inventories exceeded {{ }} days of minimum burn (or {{ }} days of maximum burn) at Lawrence, and {{ }} days of minimum burn (or {{ }} days of maximum burn) at Iatan.[95] As discussed above, this level of coal inventories greatly exceeded the notification guidelines published by SPP in its SPP Balancing Authority Emergency Operating Plan – { }.[96] It also exceeded SPP's threshold for whether to consider if a coal generating unit should be placed on Reliability Status – { }.[97]

77. As such, Evergy is seeking damages associated with levels of coal conservation that, in addition to being unnecessary to address electricity needs in the SPP market, exceeded guidance provided by the independent system operator tasked with ensuring the reliable operations of the SPP system.

D. Evergy fails to provide a basis for including Lawrence in its damages calculations.

78. As depicted in **Figure 6**, BNSF provided Lawrence 1,184,780 tons of coal in 2022, which exceeded Evergy's 2022 annual declaration of { } tons of coal by more than { } percent.[98]

[95] Reflects inventory levels as of November 22, 2022 at Lawrence, and December 20, 2022 at Iatan. *See* **Figure 3** workpapers; EVERGY-0014395, tab "Days of Cover."

Figure 6. Evergy Annual Declaration versus BNSF Deliveries to Lawrence in 2022

{



}

79. Moreover, Lawrence generated more electricity (as depicted in **Figure 7**) and burned more coal (as depicted in **Figure 8**) during the April-November 2022 coal conservation

[96] SPP-000078; SPP-000079; SPP-000006A.

[97] SPP-000080; SPP-000078; SPP-000079; SPP-000006A. {[redacted]}.

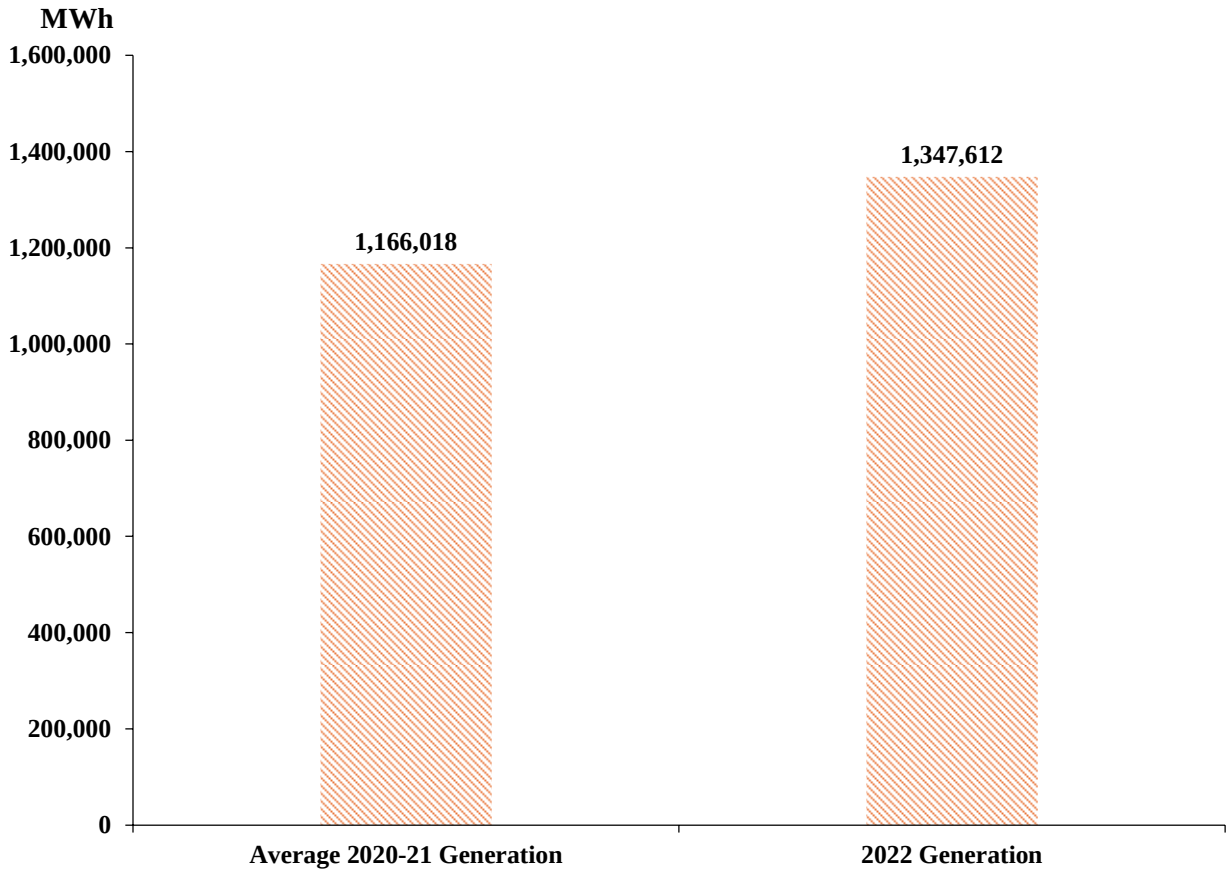
[98] EVERGY-0014515 at 515 (I report the final 2022 annual tonnage declaration of {[redacted]} tons); Evergy Opening Evidence, Verified Statement of Jessica L. Tucker, Table 5, p. 10.

period than the April-November months in 2020 and 2021. Specifically, Lawrence generated 16 percent more electricity and consumed 14 percent more coal in April-November 2022 (the coal conservation period) relative to April-November 2020-2021.[99] Calculated over the entire year, Lawrence generated 4 percent more electricity and consumed 5 percent more coal in 2022 than on average from 2020 to 2021.[100]

[99] "Form EIA-923 Detailed Data with Previous Form Data (EIA-906/920)," *U.S. Energy Information Administration*, available at https://www.eia.gov/electricity/data/eia923/.

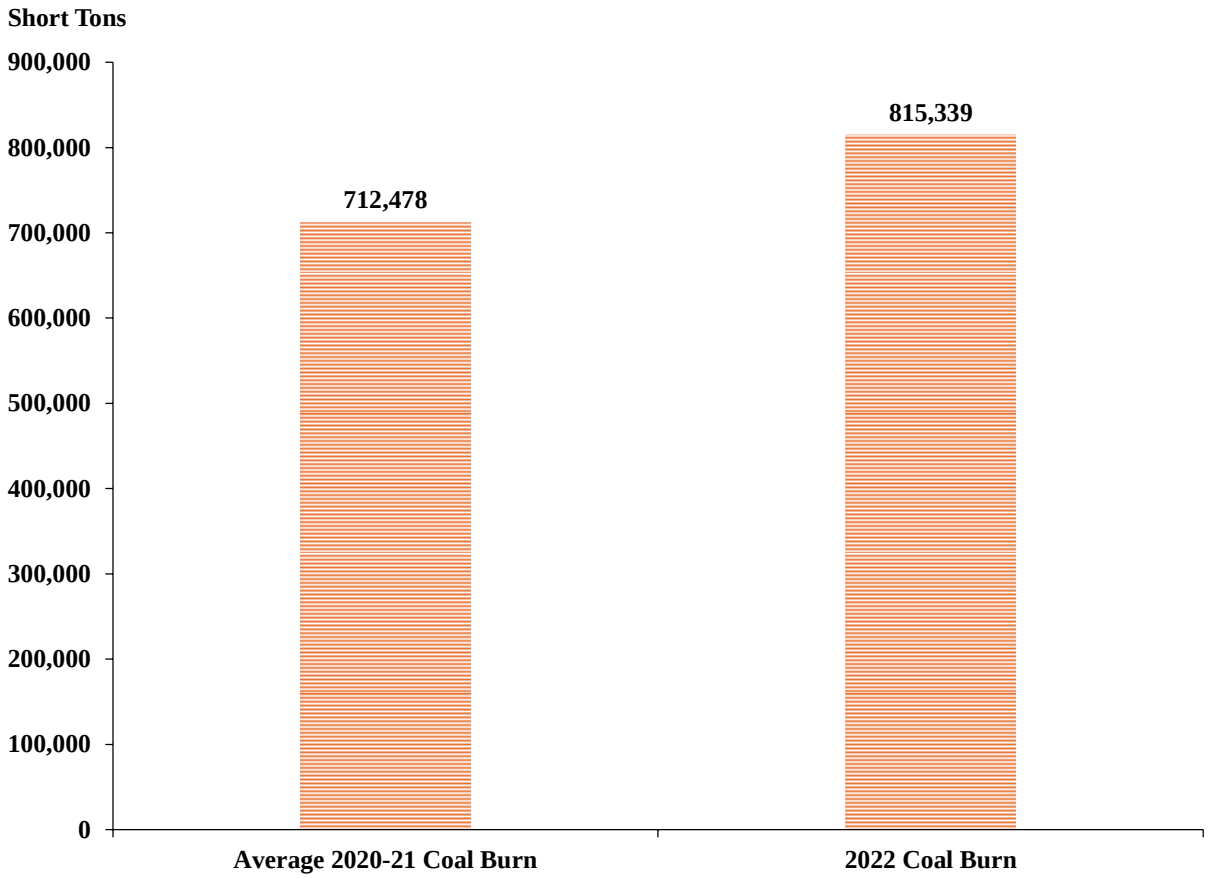
[100] Over the entire year in 2022, Lawrence generated 1,992,285 MWh, 4 percent more than 1,911,357 MWh in 2020-2021 on average. Over the entire year in 2022, Lawrence burned 1,224,750 tons of coal, 5 percent more than 1,169,138 tons in 2020-2021 on average. "Form EIA-923 Detailed Data with Previous Form Data (EIA-906/920)," *U.S. Energy Information Administration*, available at https://www.eia.gov/electricity/data/eia923/. I exclude 2019 from the historic comparison period to avoid the exogenous impacts of COVID-19 on electricity demand and supply between 2019 and 2020.

Figure 7. Comparison of Lawrence Net Generation During the Coal Conservation Period to the Same Months in 2020 and 2021



Note: [1] The average and annual values are only calculated for months within the damages period for Lawrence *i.e.*, April - November. **Source**: [A] Form EIA-923 (2020-2022), https://www.eia.gov/electricity/data/eia923/.

Figure 8. Comparison of Lawrence Coal Burn During the Coal Conservation Period to the Same Months in 2020 and 2021



Note: [1] The average and annual values are only calculated for months within the damages period for Lawrence *i.e.,* April - November. **Sources**: [A] Form EIA-923 (2020-2022), https://www.eia.gov/electricity/data/eia923/.

80. Finally, Lawrence could have held more coal in its inventory prior to the implementation of its coal conservation measures. Lawrence decreased its target inventory levels in 2022 relative to prior years by nearly {{ }} percent, to {{ }}.[101] Additionally, as depicted in **Figure 9**, Lawrence can stockpile much more coal

[101] EVERGY-0014395, tab "k-Targets" where Evergy decreased its target inventory for Lawrence between {{ }} and 2022. Evergy's target inventory in {{ }}. In 2022, Evergy decreased this target by {{ }} to {{ }}. This is equivalent to a decrease of {{ }} and {{ }} between {{ }} to 2022. If Evergy had started the year at its {{ }} target level in 2022, Lawrence coal inventories would not have dropped below {{ }}.

inventory than the plant did in 2022, as demonstrated by inventories carried in prior and subsequent years. The magnitude of unutilized available storage at Lawrence in 2022 is significant – by way of comparison, Lawrence held {{[redacted]}} (or {{[redacted]}}) of coal at the end of the month in April 2023, which is {{[redacted]}} higher than the maximum amount of coal held at the end of April 2022, corresponding to {{[redacted]}} additional days of supply when generating at maximum burn (or {{[redacted]}}).[102]

[102] "Form EIA-923 detailed data with previous form data (EIA-906/920)," https://www.eia.gov/electricity/data/eia923/; *See* **Figure 3** workpapers coal inventory data; EVERGY-0014395, tab "Days of Cover."

Figure 9. Lawrence Energy Center Monthly Coal Inventory,
2002 – 2024
{{



}}

E. It is impossible to identify Iatan-only damages using Evergy's Opening Evidence.

81. As described above, Evergy fails to provide a basis for including Lawrence in its damages calculations. However, it is impossible to calculate Iatan-only damages from Evergy's Opening Evidence.

82. First, as discussed above, Lawrence had bid adders in place for the majority of hours that Iatan had bid adders in place.[103] Second, both Lawrence and Iatan had bid adders in place for the majority of *damages* hours (specifically, {{ }} percent of Iatan's damages hours and {{ }} percent of Lawrence's damages hours).[104] Therefore, it is not possible to remove the effects of Lawrence on Evergy's calculation of net cost to load or lost opportunities damages. As a result, Evergy's Opening Evidence does not provide any basis for calculating the impact of alleged coal conservation measures at Iatan alone.

V. EVERGY'S DAMAGES MODELING IS NOT RELIABLE

83. The previous section highlights how Evergy has failed to support logically or analytically its claim of damages in this matter. Yet, even if one were to ignore these fundamental flaws in Evergy's claim of damages, the modeling method Evergy applies to generate estimates of damages is wholly unreliable, and cannot serve as a basis for estimating damages.

[103] Evergy applied the market or OCC adder from {{ }} As such, Lawrence had a bid adder in place for {{ }} of all hours in which Iatan had bid adders in place.

[104] Evergy Opening Evidence, Foo Workpapers (Foo's PROMOD Evergy Generators Dataset). "Foo's PROMOD Evergy Generators Dataset" refers to a combination of the following produced PROMOD output data files from Ms. Foo: COM240126_Actual-S1.DIA; COM240126_Actual-S2.DIA; COM240126_Actual-S3.DIA; COM240126_Actual-S4.DIA; COM240126_Normal2-S1.DIA; COM240126_Normal2-S2.DIA; COM240126_Normal2-S3.DIA; COM240126_Normal2-S4.DIA; COM240126_Actual-S1.TRN; COM240126_Actual-S2.TRN; COM240126_Actual-S3.TRN; COM240126_Actual-S4.TRN; COM240126_Normal2-S1.TRN; COM240126_Normal2-S2.TRN; COM240126_Normal2-S3.TRN; COM240126_Normal2-S4.TRN; COM240126_Actual-S1.FUL; COM240126_Actual-S2.FUL; COM240126_Actual-S3.FUL; COM240126_Actual-S4.FUL; COM240126_Normal2-S1.FUL; COM240126_Normal2-S2.FUL; COM240126_Normal2-S3.FUL; COM240126_Normal2-S4.FUL; COM240126_Actual-S1.UNT; COM240126_Actual-S2.UNT; COM240126_Actual-S3.UNT; COM240126_Actual-S4.UNT; COM240126_Normal2-S1.UNT; COM240126_Normal2-S2.UNT; COM240126_Normal2-S3.UNT; COM240126_Normal2-S4.UNT; COM240126_Actual.pff. I identify "damages hours" as those hours in which Iatan or Lawrence generation is greater in the "but for" scenario than the "with conservation" scenario.

A. Production cost modeling software is a simplified representation of actual SPP system conditions and market operations.

84. In its Complaint and Opening Evidence, Evergy uses two types of production cost modeling software, PROMOD and GenTrader, to conduct an *ex post* analysis of damages over the 2022 period. In my experience, PROMOD is used in the industry for generating forecasts and to aid in utility resource planning, while GenTrader is less frequently used for these purposes.

85. As described in **Section II**, production cost modeling software like PROMOD IV and GenTrader is based on stylized representations of market operations under simplified and theoretically "pure" representations of power plant owner bidding behavior and operational decisions. It is well understood how the models fail to accurately capture operational and market conditions, and that power plant owner bidding behavior deviates significantly from the theoretically ideal representations in the models. Moreover, the models require a wide range of simplifying assumptions relative to the highly complex reality of actual SPP system conditions and market operations. Although these simplifying assumptions may be acceptable for forecasting or planning purposes, the application of bad assumptions and reliance on over-simplified market representations can render these models poorly suited for other purposes (as evidenced by Evergy's use of the models in this case).

86. These fundamental limitations mean that Evergy's modeling approach is not reliable for the purpose of quantifying damages associated with lost opportunity revenues or net cost to load in this matter. In addition, there are numerous clear, obvious, and unresolvable errors in Evergy's modeling approach that compound the structural limitations.

B. Evergy's PROMOD modeling of "actual" outcomes is highly inaccurate and, as a result, invalidates all of Evergy's damages estimates.

87. Evergy's PROMOD modeling fails to accurately capture *actual* conditions in 2022. To isolate the impact of Evergy's coal conservation measures, Ms. Foo conducts PROMOD runs for an "actual" (*i.e.,* "With Coal Conservation") scenario and a "but-for" (*i.e.,* "No Coal Conservation") scenario, in which the only difference between the scenarios is the presence of Evergy's bid adders for Iatan and Lawrence. In order to have any validity, it is important that the modeled outcomes from the With Coal Conservation case are reasonably close to *actual outcomes* in 2022, as observed in historic data. Yet, Ms. Foo's model results completely fail to replicate 2022 prices or unit operations. Ms. Foo's modeling should be able to reasonably match Evergy's actual actions and associated outcomes in 2022 yet, as I explain in more detail below, this is simply not the case.

88. Ms. Foo uses PROMOD IV, an out-of-date version of the PROMOD software that is not commercially available today, to model actual and but-for SPP system conditions in 2022.[105] I have reviewed Evergy's PROMOD modeling outputs, and I found that outcomes for the "actual" scenario are grossly inaccurate relative to actual 2022 system conditions and actual 2022 market outcomes for, at a minimum, the following variables that are central to the damages estimates: electricity generation, coal burn, and LMPs (market prices). Given this fundamental disconnect between modeling outcomes and the reality of power system and market operations in

[105] As of the fall of 2024, Hitachi Energy only licenses PROMOD V, not PROMOD IV (correspondence with Hitachi Energy, October 14, 2024). Ms. Foo uses PROMOD IV with engine version 11.1.140, which is significantly out-of-date (*see:* "COM240126_Normal2-S1.REP," Foo Testimony Input Data). For example, as part of its long-run planning processes conducted in 2022, MISO employed PROMOD IV with engine version 11.5 (*see:* "LRTP Tranche 2 - Modeling," *MISO Energy*, February 4, 2025, available at https://help.misoenergy.org/knowledgebase/article/KA-01479/en-us). The use of an out-of-date PROMOD version and out-of-date optimization engine could contribute to inaccuracies in modeling results.

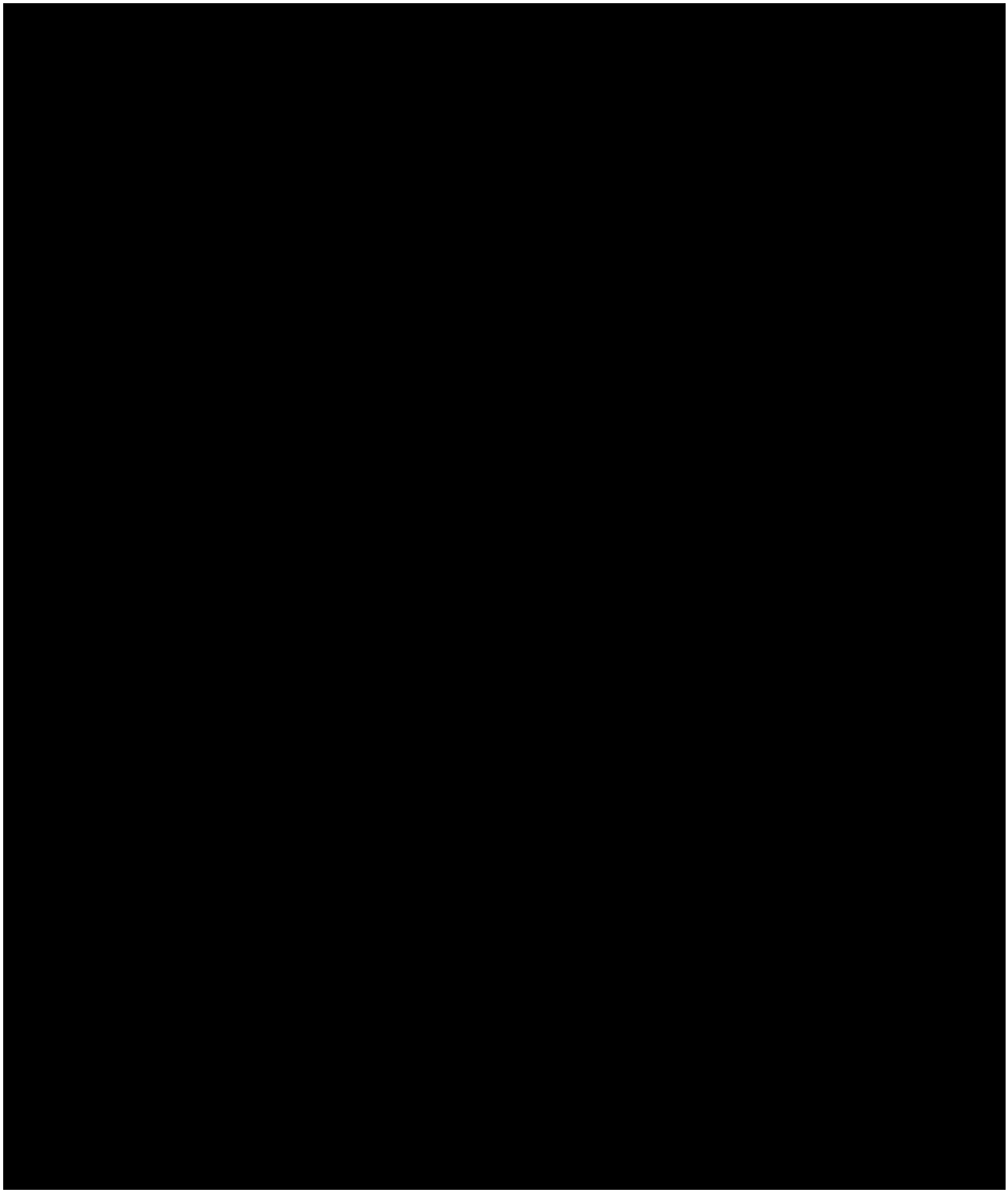
the year in question – 2022 – I conclude that Ms. Foo's calculation of net cost of load, and Mr. Crosby's subsequent use of Ms. Foo's but-for market prices for his calculation of lost opportunity revenues, cannot provide a reliable basis for determining whether Evergy may have incurred any damages in 2022, nor what the magnitude of those damages (if any) would be.

1. Evergy's PROMOD modeling of actual generation is grossly inaccurate.

89. As depicted in **Figure 10**, Evergy's modeled electricity generation deviates by a large amount from actual 2022 electricity generation for *all* power plants and resource types across SPP, including those owned by Evergy and, in particular, for Iatan (**Table 2**) and Lawrence (**Table 3**). Across SPP, modeled coal generation is more than {{[redacted]}} than actual coal generation in 2022. The month with the largest discrepancy in net generation at both plants {{[redacted]}} is also the month in which Evergy is claiming the most damages, as shown in **Figure 2**. Thus, while Evergy's modeling is highly inaccurate across the entire year, this inaccuracy is particularly acute in the month with the highest claimed damages.

Table 2. Comparison of Actual and PROMOD Monthly Generation (MWh), Iatan

{{



}}

Figure 10. Comparison of Evergy Generation between Actual and PROMOD (TWh)

{{



}}

Figure 11. Comparison of Evergy Coal Plant Generation between Actual and PROMOD (TWh)

{{



}}

Figure 12. Comparison of SPP and PROMOD Annual Generation from Marginal Resources (TWh)

{{



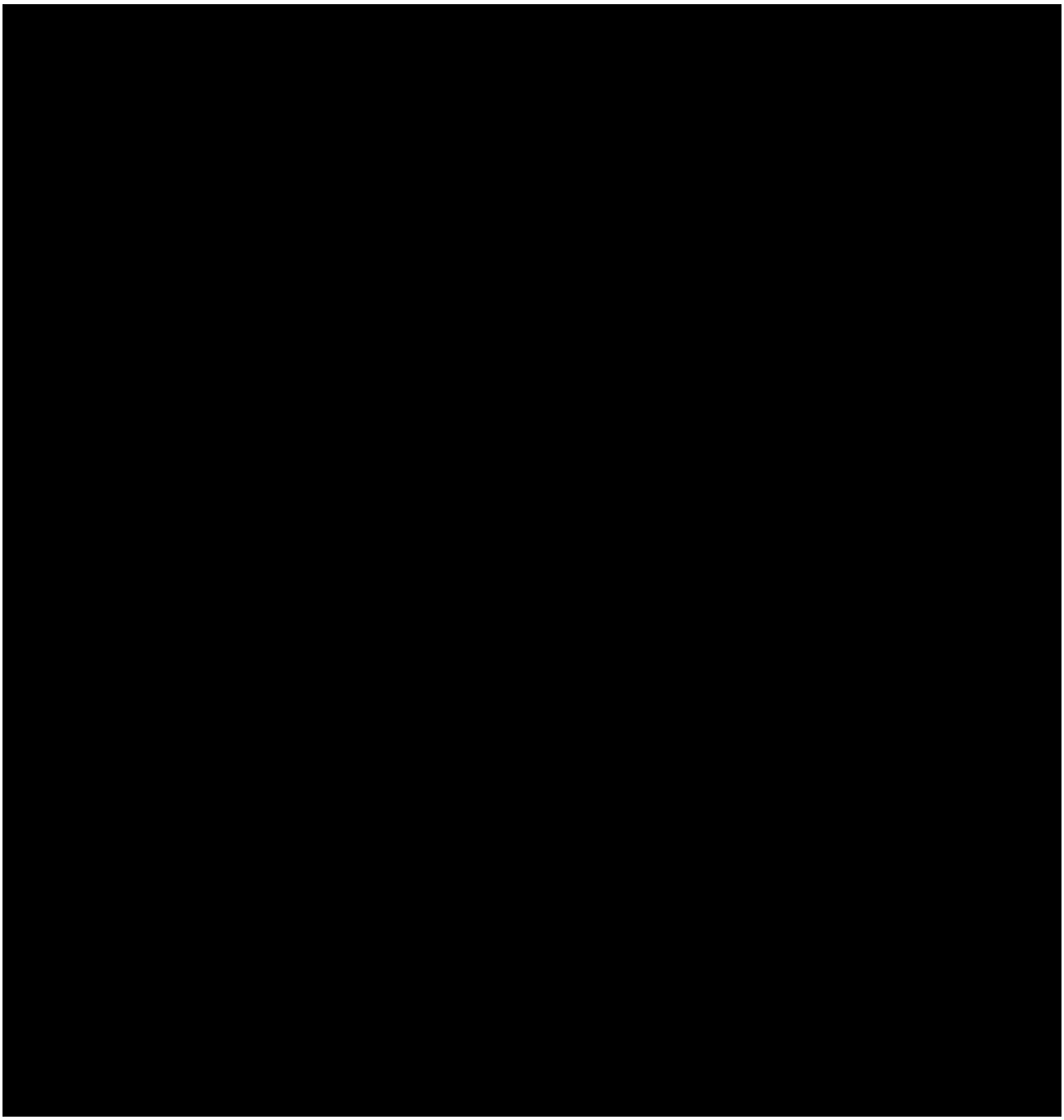
}}

2. Evergy's PROMOD modeling of actual coal burn is grossly inaccurate.

90. Similar to modeled electricity generation, Evergy's modeled coal burn deviates by a large amount from actual 2022 coal burn for coal-fired power plants across SPP, including those owned by Evergy and, in particular, for Iatan (**Table 4**) and Lawrence (**Table 5**).

Table 4. Comparison of Actual and PROMOD Monthly Coal Burn (Tons), Iatan

{{



}}

3. Evergy's modeling of actual generation and associated coal burn is exceedingly inaccurate precisely in the period in which Evergy estimates the majority of damages.

91. It is bad enough that Ms. Foo's modeled generation and coal burn are wildly inaccurate in all months relative to actual 2022 outcomes across the plants in question, Evergy's portfolio, and all power plants in SPP. But critically, Ms. Foo's modeled generation and coal burn for Iatan and Lawrence consistently underestimate actual generation and coal burn during the month in which Evergy estimates the highest proportion of damages: {{ }}. As depicted in **Figure 2**, approximately {{ }} of Evergy's purported damages due to lost opportunity revenues and net cost to load are estimated in {{ }}.[106] In the real world as shown in **Table 4** and **Table 5**, Iatan burned {{ }}. But, as also depicted in **Table 4** and **Table 5**, Evergy's "actual" PROMOD scenario generates a burn of just {{ }} tons for Iatan, a difference of {{ }}, and {{ }} tons for Lawrence, a difference of {{ }}. As such, {{ }} of damages claimed by Evergy are premised on the false notion that Iatan and Lawrence burned {{ }} coal than they actually did in {{ }}. This obvious mistake in Evergy's modeling inflates damages in precisely the period when Evergy estimates the largest portion of damages are incurred.

4. Evergy's PROMOD modeling of actual electricity prices is grossly inaccurate.

92. Day-ahead ("DA") modeled locational marginal prices ("LMPs" or "market prices") – the fundamental input to every major category of losses and revenues alleged by

[106] {{ }} *See* **Figure 2**.

Evergy – deviate unpredictably and by large amounts from the actual market prices that cleared in the SPP electricity marketplace in 2022 as depicted in **Figure 13** and **Figure 14**. This is particularly true for the market prices in Evergy's service territory (which govern the cost to load and revenues to Evergy's other generators) and for Iatan and Lawrence (which govern estimates of lost opportunity damages).

Figure 13. Ranked Average Day Ahead LMP Absolute Percent Differences between PROMOD and SPP, Iatan (2022)

{{



}}

Figure 14. Ranked Average Day Ahead LMP Absolute Percent Differences between PROMOD and SPP, Lawrence (2022)

{{



}}

Table 6. Percentage of Hours by Absolute Percent Difference in Hourly Day-Ahead LMP

{{

[redacted]

}}

93. The average day-ahead market prices modeled by PROMOD differ from the actual SPP market prices in {{[redacted]}} at both Iatan and Lawrence. As illustrated in **Figure 13** and **Figure 14**, the absolute percentage difference in average day-ahead market prices between SPP and PROMOD is greater than {{[redacted]}} across 2022 at both Iatan and Lawrence. As illustrated in **Table 6**, there are also significant differences between SPP and PROMOD market prices at KCPL, MPS, and WR nodes with differences greater than {{[redacted]}} across 2022. These are the pricing nodes that dictate the impact on Evergy's consumers in Ms. Foo's net cost to serve load calculations. Finally, LMP differences exceed {{[redacted]}} for every pricing node employed by Evergy in its damages calculations.

C. Because Evergy's PROMOD modeling output is used as an input to its GenTrader modeling, the problems with Evergy's PROMOD modeling impact all of its damages estimates.

94. These major, unpredictable, and unresolvable deviations between the modeling world and reality in 2022 for the most important factors governing Evergy's alleged losses – actual power plant generation, coal burn, and market prices – are a fatal flaw in Evergy's analytic

method, choice of models, and administration of the modeling exercise. This consistently high degree of inaccuracy is evidence that Evergy's choice of modeling software and analytic method are wholly unreliable for the purpose of estimating alleged damages (or even for determining whether Evergy suffered *any* damages or instead made profits) in this case. Yet these are only a subset of the flaws that are readily apparent in Evergy's analytic approach and modeling exercise – **Appendix A** and **Figure 20** provide a comprehensive catalog of the key inconsistences between Evergy's modeling and actual outcomes in 2022.

95. Moreover, the fatal flaws in Evergy's analytic method and use of PROMOD directly affect all components of its alleged damages – (1) PROMOD is used directly to estimate the net cost to serve load damages (additional cost to serve load minus revenues to other Evergy generators); and (2) PROMOD market prices for the "but-for" scenario are the single most important input to GenTrader, which is used for the lost opportunity revenue damages calculation.

96. **Table 7** provides an example of the problems with Evergy's modeling. First, consistent with the discussion above, Ms. Foo's "actual" market prices are {{[redacted]}} lower than Mr. Crosby's historic market prices. Second, the market price differential (*i.e.,* the difference in market prices between the "With Coal Conservation" and "Without Coal Conservation" scenarios) is assumed to be constant despite Mr. Crosby and Ms. Foo's very different LMPs. These assumptions and results are baked into all of Evergy's modeling results, yet they are obviously wrong.

97. Specifically, Ms. Foo uses PROMOD to estimate two sets of market prices – modeled "actual" prices (*i.e.,* prices in 2022 *with* coal conservation assumed as it occurred) and modeled "but-for" market prices (*i.e.,* prices that *may have* happened if there had been no coal

conservation). Mr. Crosby uses a different set of market prices – actual (rather than modeled) market prices as recorded in the SPP market for his "With Coal Conservation" scenario; and for his second set of market prices – the "Without Coal Conservation" scenario – he adjusts his actual SPP market prices by Ms. Foo's estimated market price differential to approximate "but-for market prices," which serve as an input to his modeling.

98. **Appendix C** depicts the problem with Evergy's approach – due to the basic economics of wholesale electricity markets, LMP differentials should be *greater* when actual LMPs are higher.[107] This issue impacts the but-for LMPs that serve as inputs to Mr. Crosby's modeling and, as such, undermines the reliability of his calculation of lost opportunity damages.

Table 7. Example Mismatch of LMPs in Evergy's Damages Modeling

{{



}}

99. Evergy's choice to use both PROMOD IV and GenTrader for its alleged damages estimates is also puzzling, as the two models are fundamentally different in the scope and scale of modeled power system operations and dispatch, and the mismatch between the models introduces obvious and unresolvable inconsistencies in Evergy's analytic method. **Appendix A** and **Figure 20** provide a comprehensive catalog of key inconsistences between the PROMOD IV and GenTrader models.

[107] Mathematically, price differentials should generally increase with actual LMPs whenever supply curves are convex (*i.e.*, supply curves get steeper as demand for electricity grows). As discussed in **Appendix C**, it is a well-known fact that electricity supply curves are highly convex.

D. Evergy itself estimates widely divergent damages estimates, emphasizing the unreliable nature of its analytical approach.

100. As depicted in **Figure 15**, **Figure 16**, and **Figure 17**, the lack of reliability of Evergy's modeling is evident in the widely divergent range of damages estimates presented in Evergy's Complaint, Opening Evidence, workpapers, and internal emails and documents. The charts depict Evergy lost opportunity estimates {{ }}, in the Complaint, and in the Opening Evidence using PROMOD and GenTrader.[108] As demonstrated by Evergy itself, simple differences in inputs and changes in assumed system conditions will result in markedly different damages estimates, with no guarantee that the final result will be positive or negative.

[108] {{ }}.

Figure 15. Evergy's Alternative Estimates of Lost Opportunity Damages, Iatan

{{



}}

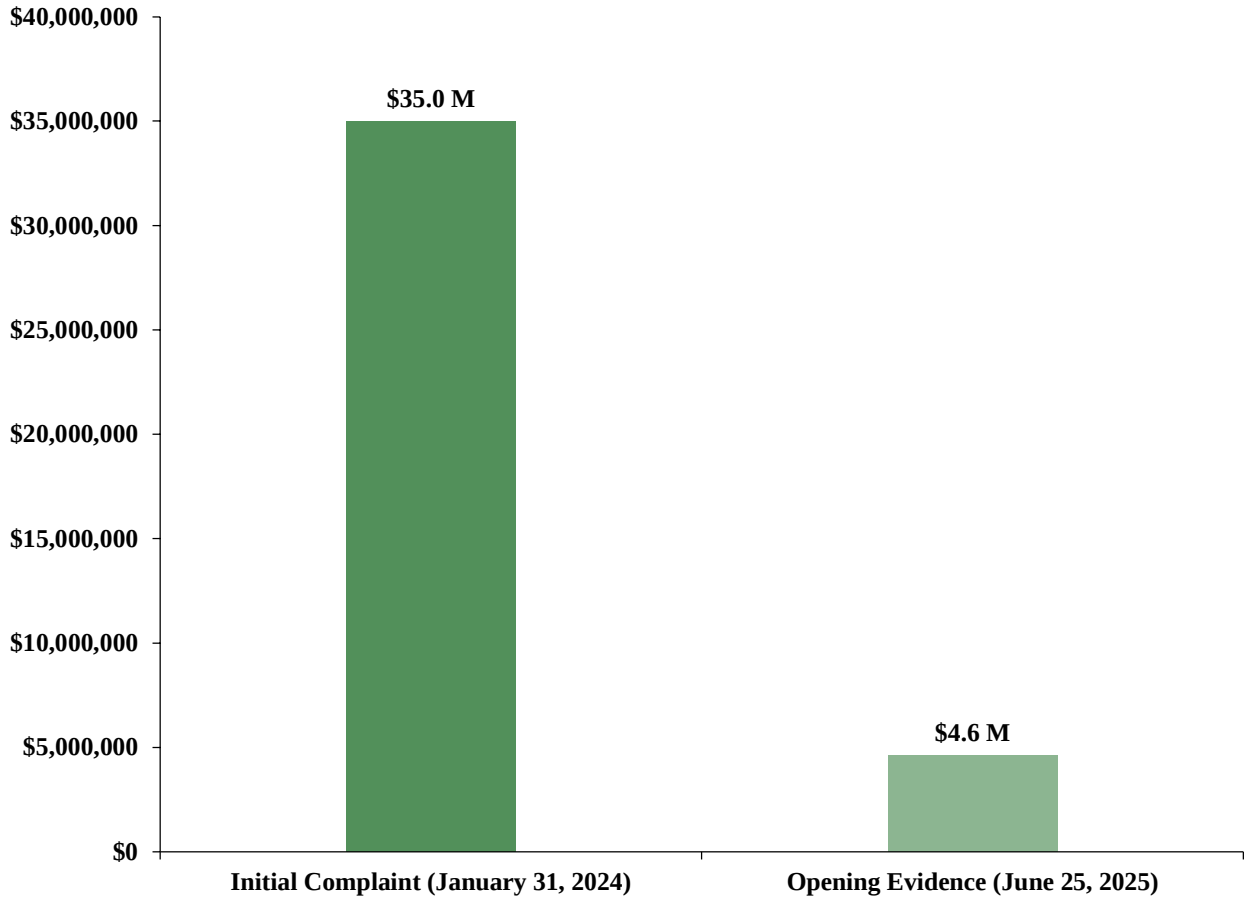
Figure 16. Evergy's Alternative Estimates of Lost Opportunity Damages, Lawrence

{{



}}

Figure 17. Evergy's Alternative Estimates of Net Cost to Load



Sources: [A] Evergy Opening Evidence, Complainants' Opening Evidence, pp. 43-44. [B] Compl., p. 3.

101. For example, as depicted in **Figure 18**, GenTrader produces unreasonably high estimates of lost opportunity damages for Iatan Unit 2 in {{ }}. These estimates are implausible given the coal conservation measures in place at the time (market bid adders equal to {{ }} percent of variable costs), and greatly exceed lost opportunity damages estimated using PROMOD. These discrepancies highlight the unreliable nature of the modeling approach underlying Evergy's damages estimates.

**Figure 18. Lost Opportunities Damages Calculation Comparison,
Iatan Unit 2 in May 2022**
{{



}}

E. Evergy's modeling is not reliable enough to even conclude that Evergy suffered *any* damages, let alone what the magnitude of damages (if any) were.

102. As noted, **Appendix A** and **Figure 20** provide a comprehensive overview of the key deficiencies identified in Evergy's damages modeling, including the subset of flaws discussed in this section. Given these flaws, biases, and inconsistencies, it is clear that Evergy has not applied an analytic method that can reasonably be relied on to understand whether there were damages at all and, if so, what the magnitude (or sign, positive or negative) of the

"damages" might be. In short, I do not believe that Evergy's analytic approach and modeling application provide any basis to conclude that Evergy incurred damages related to lost opportunity revenues or net cost to load.

VI. EVERGY'S MODELING CONTAINS FLAWS THAT OVERSTATE ITS DAMAGES

A. Evergy's modeling and damages methodology contain specific flaws that inflate its estimate of damages.

103. In addition to the methodological and analytic flaws described above, I have reviewed the specific calculations provided by witnesses Mr. Crosby and Ms. Foo. Based on this review, I find that even ignoring Evergy's methodological flaws, Evergy has grossly overstated the basis for its damages estimate. Specifically, I identify a number of errors and conceptual mistakes in Evergy's damages claims which, if corrected, would effectively eliminate Evergy's estimated damages.[109] These errors and conceptual mistakes include, at a minimum, the following:

1. The inclusion of damages during periods of excessive coal conservation

104. As discussed in **Section IV.B.2** above, SPP market rules for considering whether to request that a generating unit be placed into "Reliability" status require a case-by-case evaluation based upon system conditions only once inventories fall below {[redacted]}. Yet, as depicted in **Figure 19,** Evergy's alleged coal conservation measures were exceedingly conservative relative to this threshold. In **Figure 19**, I compare Evergy's

[109] It is impossible to precisely quantify the impacts of correcting these errors and conceptual mistakes without addressing the methodological issues identified with Evergy's modeling. As such, the values I present in this section are approximations. See Section 6 workpapers for the calculations associated with each damages adjustment.

actual coal inventories to what they would be if Evergy simply tried to maintain inventories at least equal to the {[redacted]}.[110] **Figure 19** demonstrates that Evergy's actual coal conservation measures resulted in coal inventories that were excessively high relative to the {[redacted]} threshold throughout the entire 2022 period.

105. As a result of Evergy's excessive coal conservation measures, coal inventories exceeded {{[redacted]}} days of minimum burn (or {{[redacted]}} days of maximum burn) at Lawrence by the end of its coal conservation period, and {{[redacted]}} days of minimum burn (or {{[redacted]}} days of maximum burn) at Iatan by the end of its coal conservation period.[111] Even ignoring the methodological flaws and errors in Evergy's damages calculations, this single factor - inclusion of damages associated with excessive conservation of coal - results in an overstatement of Evergy's purported damages by approximately {{[redacted]}}.[112]

[110] Specifically, {[redacted]}.

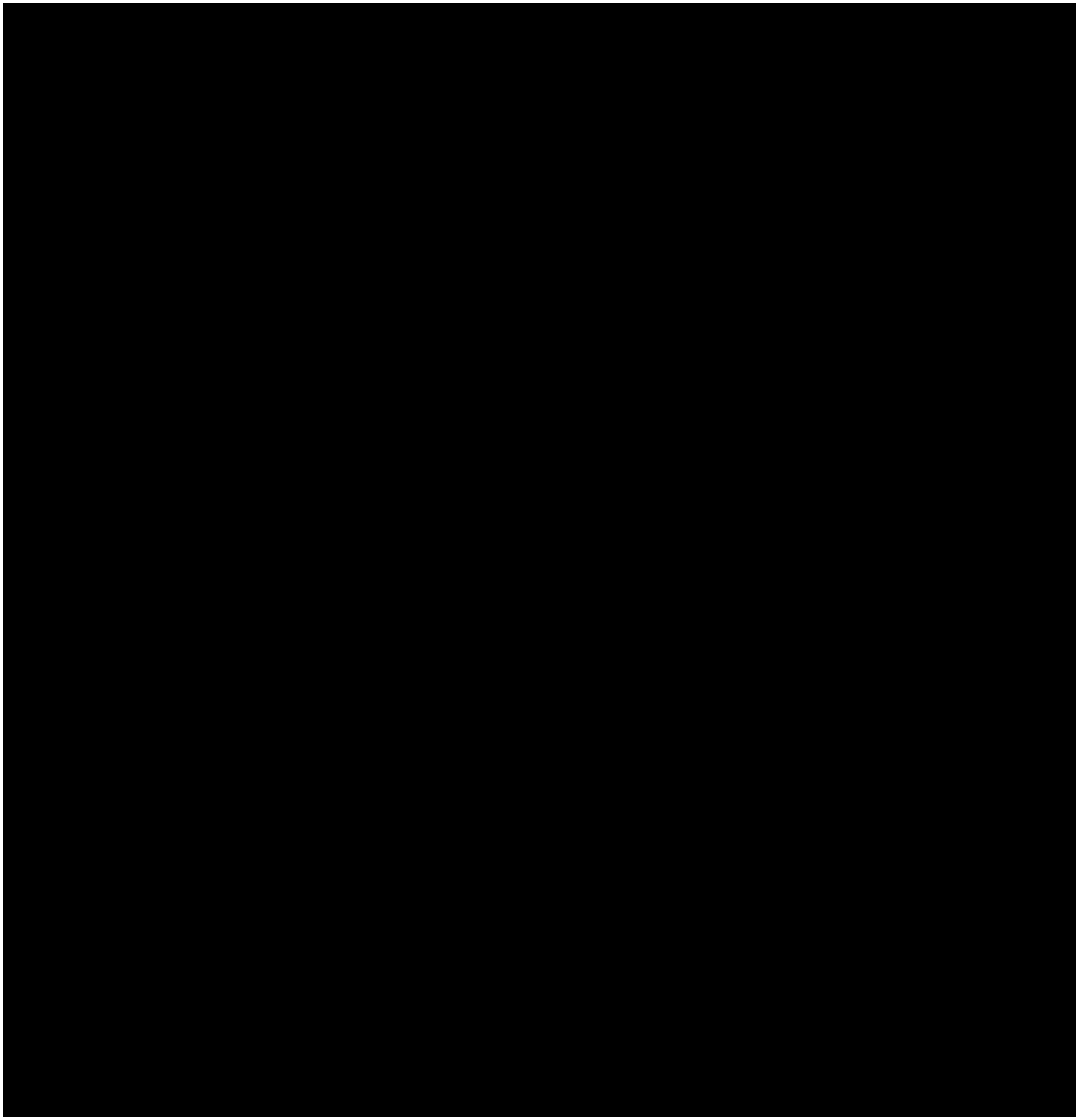
[111] *See* **Figure 3** workpapers; EVERGY-0014395, tab "Days of Cover."

[112] The range reflects uncertainty in the magnitude of the impact of this factor on Evergy's calculated net cost to load damages. Correcting this flaw may significantly or fully eliminate net cost to load damages, but it is impossible to estimate by how much due to the combined modeling of Lawrence and Iatan impacts in PROMOD.

Figure 19. Evergy's Actual Inventories and But-For Coal Inventories Designed to Maintain Inventories Equal to 20 Days of Operation at Minimum Burn

{{





}}

2. The inclusion of damages due to coal conservation measures implemented at Lawrence.

106. As discussed in **Section IV. D**, there is no basis for the inclusion of Lawrence in Evergy's damages claims. BNSF provided Lawrence more coal than Evergy requested in its

annual declaration (**Figure 6**) and, as a result, Lawrence generated more electricity (**Figure 7**) and burned more coal (**Figure 8**) during Evergy's identified damages period in 2022 than recent history. As described in **Section IV.E**, it is not possible to isolate the impact of Lawrence's coal conservation measures on total damages given the modeling presented in Evergy's Opening Evidence. The impact of Lawrence's coal conservation measures modeled in PROMOD directly impacts the net cost to load damages estimated by Ms. Foo, and indirectly impacts the lost opportunity revenue damages estimated by Mr. Crosby through Ms. Foo's estimated but-for LMPs.[113] With this important caveat, this single factor - inclusion of damages for Lawrence despite it generating and burning more coal than in the past - results in an overstatement of Evergy's purported damages by approximately {{ }}.[114]

3. The inclusion of damages during a period with "market bid" adders alone

107. Market bid adders may be applied by any SPP market participant at any time and at any power plant, for any reason. Fuel supply considerations are but one of many potential rationales for a power plant owner to offer into the market at a number between variable costs and variable costs plus this "market bid" adder. A potential outcome of Evergy employing market bid adders could be to increase net revenues at the power plants in question, and potentially at other Evergy-owned power plants. Indeed, as depicted in **Figure 2**, Evergy earned higher revenues at Iatan and Lawrence in multiple months in 2022 due to market bid adders.

[113] As discussed above, {{ }} at Iatan also have damages at Lawrence according to the damages modeling by Ms. Foo.

[114] The range reflects uncertainty in the magnitude of the impact of this factor on Evergy's calculated net cost to load damages. Correcting this flaw may significantly or fully eliminate net cost to load damages, but it is impossible to estimate by how much due to the combined modeling of Lawrence and Iatan impacts in PROMOD.

108. Evergy's rationale for the inclusion of market bid adders is not reviewed or approved by the SPP Market Monitor or any state or federal regulatory body. The specific purpose of Evergy's market bid adders is called into question by the fact that Evergy began applying market bid adders when its coal piles were {{ }} percent of target inventories at Iatan and {{ }} percent of target inventory at Lawrence.[115] This single factor - inclusion of damages during periods when only the market bid adder was in place - results in an overstatement of Evergy's purported damages of up to{{ }}.[116]

4. The inclusion of damages during Iatan Unit 1's planned outage during the { } period[117]

109. Evergy represented to BNSF that Iatan Unit 1 would be on outage, and thus not burning coal, { }.[118] **Figure 2** shows that the majority of Evergy's estimated lost opportunity damages are accrued in {{ }}, due to Iatan Units 1 and 2. This single factor - inclusion of damages during a period when Iatan Unit 1 was planned for an outage - results in an overstatement of Evergy's purported damages by approximately {{ }}.[119]

[115] *See* **Figure 3** workpapers; EVERGY-0014395, tab "k-Targets."

[116] The range reflects uncertainty in the magnitude of the impact of this factor on Evergy's calculated net cost to load damages. Correcting this flaw may significantly or fully eliminate net cost to load damages, but it is impossible to estimate by how much due to the combined modeling of Lawrence and Iatan impacts in PROMOD. Moreover, the impacts of this adjustment are particularly uncertain because Evergy estimates that Iatan incurred {{ }} damages over the market adder period (*i.e.*, {{ }}). *See* Crosby Workpaper: Actual Opportunity and Lost Opportunity and Startup Calcs.xlsx.

[117] BNSF_EVERGY_0008283.

[118] BNSF_EVERGY_0008283.

[119] The range reflects uncertainty in the magnitude of the impact of this factor on Evergy's calculated net cost to load damages. Correcting this flaw may significantly or fully eliminate net cost to load damages, but it is impossible to estimate by how much due to the combined modeling of Lawrence and Iatan impacts in PROMOD.

5. The inclusion of damages for coal which could have been provided to Iatan if Evergy took reasonable mitigation steps

110. BNSF Witnesses Mr. Baranowski and Mr. Zebrowski have identified mitigation opportunities that Evergy could have taken to mitigate coal supply concerns. For example, if the option to divert from La Cygne or Hawthorn to Iatan was available in 2022 and Evergy had diverted the same average number of trains as they did during the 2019-2021 period, an additional {{ }} tons of coal would have been delivered to Iatan in 2022.[120] This single factor – inclusion of damages for coal which could have been provided had Evergy taken reasonable mitigation steps – results in an overstatement of Evergy's purported damages by approximately {{ }}.[121]

6. The failure to exclude damages associated with Evergy's coal inventory "write-downs" of {{ }} tons at Iatan and {{ }} tons at Lawrence[122]

111. Evergy wrote down its estimate of coal inventories at Iatan on June 30, 2022 and its estimate of coal inventories at Lawrence on August 18, 2022.[123] The identified coal inventory write-downs were the result of Evergy's annual coal inventory pile measurement survey, and reflect errors in Evergy's inventory management and planning processes unrelated to BNSF's conduct. If Evergy had correctly accounted for its coal inventories, it could have accepted more coal earlier and had a larger coal stockpile going into 2022. Conversely, if the write-downs did

[120] Baranowski and Zebrowski V.S. at 71.

[121] The range reflects uncertainty in the magnitude of the impact of this factor on Evergy's calculated net cost to load damages. Correcting this flaw may significantly or fully eliminate net cost to load damages, but it is impossible to estimate by how much due to the combined modeling of Lawrence and Iatan impacts in PROMOD.

[122] Evergy Opening Evidence, Verified Statement of Jessica L. Tucker, pp. 37-38. These write-downs are equivalent to {{ }} at maximum burn at Iatan, and {{ }} at maximum burn at Lawrence. EVERGY-0014395, tab "Days of Cover."

[123] Evergy Opening Evidence, Verified Statement of Jessica L. Tucker, pp. 37-38.

not occur, Evergy would not have had to conserve as much coal in 2022. This single factor - inclusion of damages attributable to Evergy's failure to accurately measure its coal inventory - results in an overstatement of Evergy's purported damages by approximately {{ }}.[124]

7. The inclusion of damages that could have been avoided if Lawrence had maintained its historic coal inventory targets

112. As discussed in **Section IV. D**, Lawrence reduced its coal inventory targets from {{ }} in 2018 to {{ }} in 2022.[125] Evergy could have requested more coal from BSNF to ensure inventory amounts for 2022 were consistent with previous target inventory levels. This single factor – inclusion of damages that could have been avoided if Lawrence had maintained its historic coal inventory targets – results in an overstatement of Evergy's purported damages by approximately {{ }}.[126]

8. The inclusion of damages that could have been avoided if Evergy maintained unloading times in line with BNSF's other plants

113. BNSF witnesses Mr. Baranowski and Mr. Zebrowski describe how, due to Evergy's own business decisions, Evergy incurred significant delays when unloading coal trains at Iatan and Lawrence relative to BNSF's other plants. If Evergy had been able to unload BNSF coal trains in six hours, Iatan would have received an additional { } of coal and

[124] The range reflects uncertainty in the magnitude of the impact of this factor on Evergy's calculated net cost to load damages. Correcting this flaw may significantly or fully eliminate net cost to load damages, but it is impossible to estimate by how much due to the combined modeling of Lawrence and Iatan impacts in PROMOD.

[125] EVERGY-0014395, tab "k-Targets."

[126] The range reflects uncertainty in the magnitude of the impact of this factor on Evergy's calculated net cost to load damages. Correcting this flaw may significantly or fully eliminate net cost to load damages, but it is impossible to estimate by how much due to the combined modeling of Lawrence and Iatan impacts in PROMOD.

Lawrence would have received an additional {[redacted]} of coal in 2022.[127] This single factor – inclusion of damages that could have been avoided if Evergy maintained unloading times in line with BNSF's other plants – results in an overstatement of Evergy's purported damages by approximately {{[redacted]}}.[128]

9. The inclusion of damages after coal inventories recovered to Evergy's internal target of {{[redacted]}}

114. Evergy had an internal goal of achieving inventories of at least {{[redacted]}}.[129] Evergy hit this inventory goal by the end of {{[redacted]}} for Iatan and Lawrence, but nevertheless continued to engage in coal conservation measures for {{[redacted]}}. By December 15, 2022, Lawrence inventory exceeded {{[redacted]}} and Iatan inventory exceeded {{[redacted]}}, which *was* {{ [redacted] *}} Evergy's stated goal*.[130] This single factor – inclusion of damages after coal inventories at Lawrence and Iatan recovered above Evergy's {{[redacted]}} – results in an overstatement of Evergy's purported damages by approximately {{[redacted]}}.[131]

[127] Baranowski and Zebrowski V.S. at 71–72.

[128] The range reflects uncertainty in the magnitude of the impact of this factor on Evergy's calculated net cost to load damages. Correcting this flaw may significantly or fully eliminate net cost to load damages, but it is impossible to estimate by how much due to the combined modeling of Lawrence and Iatan impacts in PROMOD.

[129] EVERGY-0082599.

[130] *See* **Figure 3** workpapers; EVERGY-0014395, tab "Days of Cover."

[131] The range reflects uncertainty in the magnitude of the impact of this factor on Evergy's calculated net cost to load damages. Correcting this flaw may significantly or fully eliminate net cost to load damages, but it is impossible to estimate by how much due to the combined modeling of Lawrence and Iatan impacts in PROMOD.

10. The inclusion of damages that could have been avoided if Iatan stockpiled coal to its maximum inventory levels in early 2022.

115. In 2022, Iatan could have stored up to {{ }} tons of coal in its inventory.[132] However, prior to Evergy's coal conservation measures, Evergy had a target inventory level of {{ }} and only stockpiled a maximum of {{ }} tons of coal, which is {{ }} tons below Iatan's maximum capacity.[133] I understand from BNSF witnesses Mr. Baranowski and Mr. Zebrowski that BNSF would have been capable of providing at least this amount of coal to Iatan in 2021 if Evergy had requested it, which would have reduced the need for Evergy's coal conservation measures.[134] This single factor – inclusion of damages that could have been avoided if Iatan stockpiled coal to its maximum inventory levels prior to coal conservation – results in an overstatement of Evergy's purported damages by approximately {{ }}.[135]

11. The inclusion of net cost to load damages after the coal conservation period ended

116. Evergy's witness Ms. Foo includes damages after December 20, 2022, which extends beyond the period in which Evergy employed coal conservation measures at Iatan or Lawrence. This is an obvious mistake. This single factor – inclusion of damages beyond the

[132] Excluding basemat. EVERGY-0014539, tab "Push Pull;" EVERGY-0014395, tab "k-Targets."

[133] Excluding basemat. EVERGY-0014539, tab "Push Pull;" EVERGY-0014395, tab "k-Targets." If Iatan had stockpiled up to its maximum storage capacity in 2022, Iatan coal inventories would likely never have dropped below {{ }}.

[134] *See* Baranowski and Zebrowski V.S. at 72.

[135] The range reflects uncertainty in the magnitude of the impact of this factor on Evergy's calculated net cost to load damages. Correcting this flaw may significantly or fully eliminate net cost to load damages, but it is impossible to estimate by how much due to the combined modeling of Lawrence and Iatan impacts in PROMOD.

period of coal conservation – results in an overstatement of Evergy's purported damages by approximately {{[redacted]}}.

B. Correcting for these errors would eliminate the damages sought by Evergy related to lost opportunity revenues and net cost to load.

117. As noted earlier, Evergy's analytic method, modeling approach, and data inputs/assumptions are wholly unreliable for the purpose to which they are employed in this case, and provide no basis to determine whether Evergy incurred any damages or what the magnitude of the damages (if any) might be. Nevertheless, even if one were to ignore these fundamental flaws in Evergy's damages theory and modeling approach, I have identified specific errors in Evergy's application of its analytic method and modeling approach that should be corrected. It is impossible to precisely quantify the impacts of correcting each of these errors without addressing the methodological problems identified with Evergy's modeling. However, it is clear that correcting for some or all of these flaws would {{[redacted]}} the damages sought by Evergy related to lost opportunity revenues and net cost to load.

VII. CONCLUSION

118. Evergy is seeking a damages award of more than $20 million related to lost opportunity revenues and net cost to load. However, its claim is fatally flawed. All of Evergy's coal conservation decisions were voluntary - Evergy was never directed by its regulators or the SPP to conserve coal, and coal conservation was unnecessary to maintain power system reliability. Moreover, the financial impacts of coal conservation on Evergy are ambiguous – they could be negative or positive, depending on many exogenous factors unrelated to BNSF deliveries of coal to Iatan and Lawrence.

119. Evergy has sponsored modeling for a single scenario in which Evergy appears to be financially harmed due to coal conservation. However, Evergy's analytic method and modeling approach are deeply flawed, and contain obvious, unresolvable mistakes that make it impossible to determine whether Evergy incurred any damages or what the magnitude of the damages (if any) might be. Critically, Evergy's modeling of an "actual" scenario bears little resemblance to real-world outcomes, and Evergy's modeling mistakes are the largest precisely during the period in which Evergy estimates the largest proportion of its damages. These mistakes undermine the basis for Evergy's damages estimates.

120. Even ignoring these obvious mistakes in Evergy's analytic method and modeling approach, Evergy's damages calculations include many errors and conceptual mistakes which, if corrected, would eliminate Evergy's estimated damages.

121. In conclusion, I do not believe Evergy has presented any reliable evidence that it suffered any damages due to its coal conservation measures in 2022.

APPENDIX A: SUMMARY OF ISSUES WITH EVERGY'S DAMAGES MODELING

A. Lost Opportunity Damages

122. Evergy's purported lost opportunity damages of $16,962,878 are calculated by Evergy witness Michael Crosby as the difference between (i) "would have occurred" profits at Iatan and Lawrence generating stations without alleged coal conservation and, (ii) "as occurred" profits at Iatan and Lawrence generating stations with alleged coal conservation ("actual opportunity").[136] The difference is referred to as "lost opportunity" profits. "Would have occurred" profits are represented by Mr. Crosby as would have occurred day-ahead energy revenues less day-ahead costs without alleged coal conservation. "As occurred" profits are represented by Mr. Crosby as the SPP actual day-ahead energy revenues less day-ahead costs. Costs include variable operation and maintenance, fuel, and startup costs. Mr. Crosby estimates would have occurred profits of $218,639,492 and as occurred profits of $201,676,614, leading to a purported "lost opportunities" net damages estimate of $16,962,878.[137]

123. Mr. Crosby calculates these purported lost opportunity damages using the PCI GenTrader Commitment and Dispatch Software ("GenTrader"). GenTrader is an optimization and simulation platform designed to handle both unit commitment and economic dispatch under alternative scenarios and constraints. Economic dispatch involves allocating generation levels across multiple generators to minimize total cost across all generators while ensuring system reliability and operational constraints are satisfied. The portfolio setup and run mode are determined by the user based on the specific scenario considered. Mr. Crosby uses GenTrader's price-based dispatch mode to estimate Evergy's "lost opportunity" net revenues at Iatan and

[136] Evergy Opening Evidence, Verified Statement of Michael Crosby, p. 3.

[137] Evergy Opening Evidence, Verified Statement of Michael Crosby, pp. 13, 18.

Lawrence generating stations that he represents would have occurred but for the alleged coal conservation measures. Mr. Crosby uses the Generation Units Summary output view to summarize revenues, costs, and generation by unit.

124. GenTrader outputs and results are determined in part by the selection of user-specific inputs, as the "internal features and workings of the model itself cannot be changed or manipulated by the user… [and] the model's outputs are driven exclusively by the user's inputs."[138] Using GenTrader's price-based dispatch mode, the most important inputs are the alternative LMP scenarios, as GenTrader does not directly calculate LMPs. Mr. Crosby relies on Evergy witness Ms. Foo's modeling of the SPP system with and without coal conservation using PROMOD IV to estimate LMP differentials and resulting alternative LMPs to apply as an input into GenTrader in the would have occurred scenario. Mr. Crosby assumes that the differential captures the degree to which but-for day-ahead LMPs would have been lower than actual day-ahead LMPs in 2022 without the effects of coal conservation at Iatan and Lawrence.

125. Additional GenTrader inputs for each generation unit include low and high operating limits, maintenance and outage schedules, heat rates by fuel type defined through an incremental heat rate curve, operational fuel prices, variable O&M prices, startup costs, and ramp rates. Mr. Crosby represents most of these inputs to be consistent with actual cost-based inputs that would have been used to calculate offers for Iatan and Lawrence absent coal conservation adders. Because only one startup cost can be entered for a generation unit for an entire period, Mr. Crosby takes an average startup cost based on ratios of hot, warm, and cold starts at each unit.

[138] Evergy Opening Evidence, Verified Statement of Michael Crosby, pp. 14-15.

B. Net Cost to Load Damages

126. Evergy's purported net additional cost to load damages of $4,627,883 are calculated by Evergy witness Ms. Foo as the difference between (i) additional costs ($37,509,755) to meet SPP market load requirements at Evergy-owned or contracted generation stations across SPP (excluding Iatan and Lawrence), and (ii) additional revenues ($32,881,872) from Evergy units selling electricity into the SPP market (excluding Iatan and Lawrence).[139] Ms. Foo represents additional costs and revenues at Evergy generating units by modeling differences in SPP system outcomes between a "with conservation" scenario where Iatan and Lawrence are modeled to conserve coal, and a "but for" scenario where Iatan and Lawrence are modeled to not conserve coal. Ms. Foo alleges coal conservation measures at Iatan and Lawrence, and the corresponding removal of lower-cost generation from the market, resulted in higher LMPs across SPP. This both increases revenues for Evergy units selling electricity into the market, and increases costs for Evergy purchases of electricity to meet its customer load requirements.

127. Ms. Foo leverages PROMOD IV, a production cost modeling platform, to represent hourly commitment and dispatch decisions of all generating units across SPP under the "with conservation" and "but for" scenarios. PROMOD IV includes basic assumptions on hourly demand in a geographic region, supply characteristics of generating units (*e.g.*, capacity, heat rate, fuel types, operating costs), and transmission constraints. Users can change inputs to the modeling, but "internal algorithms are fixed and cannot be manipulated by the operator."[140] Based on input assumptions and operating constraints, PROMOD IV aims to produce hypothetical market outcomes designed to minimize costs while reliably meeting demand.

[139] Evergy Opening Evidence, Verified Statement of Hsin Foo, pp. 9-10.

[140] Evergy Opening Evidence, Verified Statement of Hsin Foo, p. 3.

Outputs include unit commitment and dispatch levels, market clearing LMPs, system generation levels, and other unit and market statistics.

128. As discussed in **Section II**, production cost modeling tools like PROMOD IV and GenTrader are based on stylized representations of market operations that require a wide range of simplifying assumptions about market conditions and unit-specific operating assumptions that do not accurately capture the complexity of actual SPP market conditions and unit-specific bidding and operating behavior.

C. Comparison of Key Variables in Evergy's Damages Modeling

129. As noted earlier, there are numerous flaws and inconsistencies in Evergy's analytic method in general, and in its use of PROMOD and GenTrader in particular. These flaws flow in part from the widely different scope and scale of PROMOD and GenTrader, and from the inability of each model to accurately capture and model the true complexity of power system and market operations. For example, neither Ms. Foo nor Mr. Crosby leverage the modeling platforms to model the fuel switching capability of Lawrence units for their "But-For" scenarios.[141] Ms. Foo notes "PROMOD lacks the functionality to accurately model the natural gas switching operations at LEC," despite the fact that Evergy routinely modeled natural gas switching using PROMOD during the course of 2022.[142] These fundamental limitations and

[141] Mr. Crosby only includes coal fuel prices and heat rate curves as inputs into GenTrader. *See* Crosby Workpaper: GenTrader Cost Data Entry.xlsx, tabs "IHR Constants", "IHR Breakpoint Curve", "IAT1-GT", "IAT2-GT", and "LEC-GT."

[142] Evergy Opening Evidence, Verified Statement of Hsin Foo, p. 8. Evergy produced a series of contemporaneous 2022 PROMOD runs in this matter in which fuel switching between coal and gas was modeled at Lawrence. For example, {{ [redacted] }} Evergy's own modeling contradicts Ms. Foo's assertion regarding the functionality of PROMOD to model fuel switching.

differences lead to results that diverge widely across the two models and that are wildly inconsistent with *actual* market outcomes.

130. Several of the key differences are summarized in **Section V**, above. This Appendix and **Figure 20** provide a comprehensive catalog of comparisons between modeling input and output variables from Mr. Crosby's GenTrader analysis, Ms. Foo's PROMOD analysis, and Evergy produced or SPP actuals. Mr. Crosby and Ms. Foo provide input and output variables with and without alleged coal conservation to estimate purported lost opportunity damages and net cost to load damages, respectively. To illustrate the extent of inconsistencies, the following sets of input and output modeling variables are compared across the models and relative to actual 2022 outcomes for the various scenarios: (i) Mr. Crosby-represented actuals with coal conservation, (ii) Mr. Crosby GenTrader but-for without coal conservation, (iii) Ms. Foo PROMOD actuals with coal conservation, (iv) Ms. Foo PROMOD but-for without coal conservation, and (v) Evergy produced, EIA or SPP actuals under coal conservation in 2022. The following variables are compared at each Iatan and Lawrence generating unit across the five data sources:

Modeling Inputs:

- Fuel Prices: monthly coal and gas prices at each plant ($/MMBtu) provided by Mr. Crosby and Ms. Foo to calculate actual fuel costs and be used as inputs into their respective modeling software to model but-for fuel costs.
- VOM Prices: variable operation & maintenance prices ($/MWh) provided by Mr. Crosby and Ms. Foo to calculate actual VOM costs and be used as inputs into respective modeling software to model but-for VOM costs.

- Locational Marginal Prices: day-ahead market clearing LMPs with and without coal conservation. LMPs are a modeling output from PROMOD IV, but an input into GenTrader. Mr. Crosby relies on Ms. Foo's PROMOD results to estimate but-for LMPs.
- Bids: Mr. Crosby provides two-part unit-level generation offers (no load, breakpoint) with and without the market adder and/or OCC adder. Ms. Foo's PROMOD inputs include unit-level marginal costs (rather than generation offers) with and without the market adder and/or OCC adder to be used to optimize least cost generation to serve load.
- Maintenance, Outage, & Derate Schedules: Mr. Crosby represents operating limits and outage/derate hours as those submitted to SPP. Ms. Foo represents outage schedules based on EPA CEMS and other data sources. Both are used as inputs into modeling to represent operating abilities of each unit in the but-for world.
- Heat Rates: Mr. Crosby leverages input/output curves to estimate fuel consumption at different levels of generation. Ms. Foo also provides an incremental heat rate curve and monthly fuel heat rates.
- Load: Ms. Foo provides hourly SPP-wide and LBA loads based on bill-meter data. Mr. Crosby does not provide load estimates as it is not a modeling input or output for GenTrader.

Modeling Outputs:

- Generation: Mr. Crosby and Ms. Foo modeled day-ahead cleared output based on market clearing LMPs, unit bids, and corresponding simulated SPP market outcomes from PROMOD and GenTrader.
- Fuel Burn & Coal Inventories: day-ahead cleared output multiplied by the assumed heat rates.
- Fuel Costs: calculated fuel burn multiplied by the assumed fuel price.
- VOM Costs: day-ahead cleared output multiplied by the assumed variable operation & maintenance price.
- Startup Costs: Mr. Crosby calculates startup costs based on adjustments to actual submitted SPP offer startup costs for hot, warm, and cold starts. Ms. Foo leverages PROMOD modeling results to estimate startup costs.
- Generator Revenues: day-ahead cleared output multiplied by the modeled day-ahead market clearing LMP.

131. Results summarized in **Figure 20** demonstrate the numerous and significant discrepancies and inconsistencies between Mr. Crosby's GenTrader modeling outcomes, Ms. Foo's PROMOD IV modeling outcomes, and actual outcomes in 2022. Key inconsistencies to highlight include:

- Fuel Prices: As illustrated below in **Table 8**, coal prices used by Mr. Crosby and Ms. Foo as modeling inputs into GenTrader and PROMOD differ from each other and actual reported prices from EIA Form 923 at both Iatan and Lawrence. Actual gas prices at Lawrence are also misrepresented by Mr. Crosby relative to EIA actual prices, and are

not compared to PROMOD as Ms. Foo does not model gas switching. Inaccuracies in fuel prices lead to unreliable estimates of fuel costs and corresponding estimates of net profits and damages.

Table 8. Comparison of Modeled Fuel Prices to 2022 Actuals

{{

[redacted]

}}

- Variable O&M Prices: VOM prices used by Mr. Crosby and Ms. Foo as modeling inputs into GenTrader and PROMOD differ from each other at each plant unit. Mr. Crosby represents average VOM as {{[redacted]}} per MWh at Iatan Unit 1 and {{[redacted]}} per MWh at Iatan Unit 2, while Ms. Foo represents average VOM as {{[redacted]}} per MWh at Iatan Unit 1 and {{[redacted]}} per MWh at Iatan Unit 2.[143] Mr. Crosby represents average VOM

[143] For GenTrader modeling, Mr. Crosby provides two VOM values for each generator during the damages period with the second value replacing the first on June 17, 2022. Unit-level VOM is calculated by dividing the generator's total variable O&M costs by its total generation during the full damages period. Ms. Foo's PROMOD modeling provides a single VOM value for each generator during the full damages period. *See* Crosby Workpaper: Actual Opportunity and Lost Opportunity and Startup Calcs.xlsx; Foo Workpaper: COM240126_Actual.pff.

as {{ }} per MWh at Lawrence Unit 4 and {{ }} per MWh at Lawrence Unit 5, while Ms. Foo represents average VOM as {{ }} per MWh at both Lawrence units. Similar to fuel price discrepancies, inconsistencies in VOM prices lead to unreliable estimates of VOM costs and corresponding estimates of net profits and damages.

- LMP Differences Across Scenarios: As shown in **Figure 13**, **Figure 14**, and **Table 6**, PROMOD modeled LMPs by Ms. Foo differ consistently and by large amounts from the actual LMPs that cleared in SPP in 2022, which leads to unreliable outputs as the market-clearing LMP is the key input to determine whether Iatan and Lawrence are dispatched in the market. In tandem, Mr. Crosby relies on Ms. Foo's LMP differentials to estimate LMPs without coal conservation, which introduces unresolvable inconsistencies as PROMOD IV and GenTrader are fundamentally different in their approach to modeling power system operations and dispatch.[144] In addition, Mr. Crosby makes an obvious mistake by applying Ms. Foo's LMP differential for Iatan Unit 1 to Iatan Unit 2, rather than the Iatan Unit 2 differential, which leads to further inaccuracies in LMPs in {{ }} of hours at Iatan Unit 2.[145] Differences in actual LMPs used by Mr. Crosby and Ms. Foo combined with Mr. Crosby's errors in applying Ms. Foo's differential LMPs leads to differences in but for without coal conservation LMPs used as modeling inputs.

[144] "For the revenue-based input and price-based dispatch, I adjusted the DA Actual LMPs, included in my electronic workpapers in the spreadsheet named "GenTrader Adjusted LMP Data Entry" by applying a differential provided to me by Evergy Witness Hsin Foo, based on her analysis. GenTrader itself does not calculate LMPs; they are inputs to the model. The differential reflects the fact that the DA LMPs without the effects of coal conservation at Iatan and LEC would have been lower than the Actual DA LMPs for 2022 (since more lower-cost coal generation would have been offered into SPP)." *See* Evergy Opening Evidence, Verified Statement of Michael Crosby, p. 16.

[145] Crosby Workpapers: GenTrader Adjusted LMP Data Entry.xlsx, tab "With-Without"; Actual Opportunity and Lost Opportunity and Startup Calcs.xlsx.

- Bid Offers: Modeling of unit offers differs between PROMOD and GenTrader and does not align to granularity of real-world generation offers. PROMOD uses monthly static bid adders and Mr. Crosby provides daily bid curves to represent actual and but-for unit offers. Both misrepresent hourly variation in unit offers, which can lead to improper calibration of commitment decisions, dispatch levels, and resulting modeling outputs.

- Maintenance, Outage, and Derate Schedules: Outage and derate schedules used as modeling inputs by Mr. Crosby and Ms. Foo differ for each plant unit between GenTrader, PROMOD, and relative to Evergy-produced actual schedules from 2022. For example, **Table 9** below compares the proportion of each month during the damages period that each unit was on outage between modeling inputs and Evergy produced actuals. In addition, **Table 10** illustrates the average hourly derate capacity by unit and month between Mr. Crosby and Ms. Foo's modeling inputs. Both figures illustrate discrepancies in assumptions around operating abilities of each unit throughout the damages period. In addition, Evergy documentation states that Iatan Unit 1 was derated to {{[redacted]}} maximum output from {{[redacted]}}.[146] As shown in **Table 10**, both Mr. Crosby and Ms. Foo model a more significant derate during the {{[redacted]}} at Iatan Unit 1 to approximately {{[redacted]}} rather than {{[redacted]}}. There are similar inconsistencies in derate hours at other units.

[146] EVERGY-0082687 at 696, 698.

Table 9. Comparison of Modeled Outage Schedules to Actuals

{{

[redacted]

}}

Table 10. Comparison of Average Hourly MW Derate by Unit

{{

[redacted]

}}

- Heat Rate and Coal Inventory Inconsistencies: As shown below in **Table 13**, implied heat rates used by Mr. Crosby and Ms. Foo at each generator deviate from each other and from actual 2022 heat rates reported through EIA Form 923. Relatively small differences in heat rates can make significant differences in costs, revenues, and coal inventory levels, which impacts commitment and dispatch decisions at Iatan and Lawrence. Heat rate differences illustrate underlying discrepancies in GenTrader and PROMOD

modeling of generation and coal burn methodologies as they incorporate differing assumptions about the magnitude of fuel burn associated with startups and generation system losses. Mr. Crosby and Ms. Foo's modeled but-for coal burn (without coal conservation) differs between GenTrader and PROMOD as shown in **Table 11** for Iatan and **Table 12** for Lawrence.

Table 11. Comparison of GenTrader and PROMOD But For Coal Burn (Short Tons), Iatan

{{



}}

Table 12. Comparison of GenTrader and PROMOD But For Coal Burn (Short Tons), Lawrence

{{



}}

Table 13. Comparison of Implied Heat Rates

{{



}}

- Generation Levels: As shown in **Table 2**, **Table 3**, and **Figure 11**, actual generation with coal conservation for Iatan, LEC, and other Evergy-owned coal plants in SPP modeled by Ms. Foo using PROMOD does not match actual plant generation from 2022 reported to EIA, leading to an inaccurate baseline for comparison. In addition, Mr. Crosby and Ms. Foo's modeled but-for generation (without coal conservation) differs between GenTrader and PROMOD as shown in **Table 14** for Iatan and **Table 15** for Lawrence. Inconsistencies in actual and but for generation levels lead to inaccurate downstream calculations of fuel costs, VOM costs, generator revenues, and resulting damages estimates.

Table 14. Comparison of GenTrader and PROMOD But For Monthly Generation (MWh), Iatan

{{



}}

Table 15. Comparison of GenTrader and PROMOD But For Monthly Generation (MWh), Lawrence

{{



}}

- Startup Costs: As illustrated below in **Table 16**, there are significant differences in the number and total costs between Mr. Crosby's assumed startups and Ms. Foo's modeled startups at each unit in both the actual with coal conservation and but for scenarios.

Differences in startup assumptions correspond to different assumed generation schedules, net profits, and resulting damages estimates.

Table 16. Comparison of Number and Cost of Start Ups

{{



}}

- Mr. Crosby Calculation Errors: Mr. Crosby makes blatant errors in calculating actual and purported lost opportunity damages. He incorrectly links his input monthly fuel price series in his intermediate calculation of actual fuel costs at both Lawrence units in 2022 and corresponding calculation of actual net profits.[147] Mr. Crosby also makes a data manipulation error in translating his input generation series into his intermediate calculations at Iatan Unit 2 as he does not properly account for daylight savings time on November 6th, 2022. This results in his actual (or with coal conservation) generation data

[147] Mr. Crosby's input fuel price series provides fuel prices at specific hours during the damages periods, which are applied forward until an hour when the fuel price changes. He incorrectly applies an Excel formula to translate these fuel prices into his intermediate calculations, which results in erroneous fuel prices being applied in certain hours. For example, {{ }}
See Crosby Workpaper: Actual Opportunity and Lost Opportunity and Startup Calcs.xlsx, tabs "ACTL-FUEL-PRICES", "LEC4 (ACTL PNL)", "LEC5 (ACTL PNL)."

series mischaracterizing generation at Iatan Unit 2 in the final hour of December 20th as missing, which leads to an incorrect estimate of {{ }} of revenue under coal conservation in that hour.[148]

Figure 20. Summary of Evergy's Modeling Errors and Inconsistencies

{{



}}

[148] Crosby Workpaper: Actual Opportunity and Lost Opportunity and Startup Calcs.xlsx, tab "IAT2 (ACTL PNL)."

APPENDIX B: OVERVIEW OF EVERGY'S THEORY OF DAMAGES

132. **Figure 21** provides an illustration of Evergy's theory of damages using a supply and demand graph for a single representative hour where Lawrence alone has coal conservation measures in place. LEC_1 refers to Lawrence's bid in the absence of a bid adder, while LEC_2 refers to Lawrence's bid with an adder (*e.g.*, like the market or OCC bid adders that Evergy employed to conserve coal). As a result of Lawrence's higher bid, the SPP-wide supply curve is reordered and, for a given level of demand, steeper. As such, equilibrium prices rise from P_1 to P_2. Notably, although Lawrence is no longer dispatched, all other generators operating during this period ("inframarginal generators") earn the higher price P_2. Because these units are inframarginal, the increase in LMPs leads to an increase in profits for these units (including generators owned by Evergy).

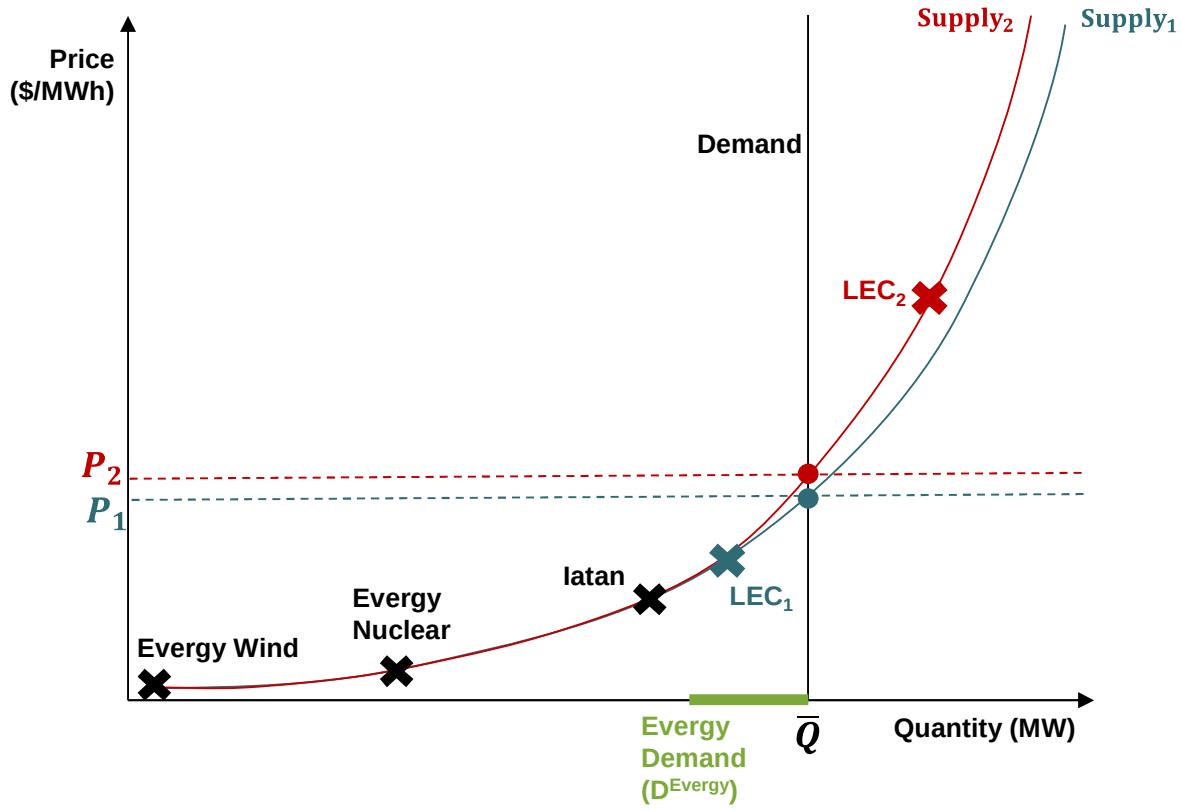
133. This simple representation illustrates two key features of Evergy's theory of damages:

- *Evergy's damages can be positive or negative depending on the relationship between its generation supply and demand within a given hour.*
    - The net financial impact of coal conservation measures on Evergy are determined by (1) the change in profits earned by Evergy-owned generators (including Iatan and Lawrence) (2) the change in the cost of purchasing electricity from the SPP integrated marketplace to serve customer demand. As such, Evergy's damages will depend on many exogenous factors. For example, on the supply side, solar irradiance will determine solar production, wind speeds will determine wind production, planned and forced outages will determine Evergy's fleet availability, temperatures will impact the efficiency of thermal generators like natural gas-

fired and coal-fired generators, and transmission constraints will determine which generators are capable of supplying demand in a given location. On the demand side, Evergy's customer demand will fluctuate due to weather and climate conditions (*e.g.*, due to air conditioning and heating demand), time-of-day and day-of-week (*e.g.*, morning and evening peaks, weekday versus weekend), and macroeconomic conditions (*e.g.*, COVID-19 led to a reduction in aggregate electricity demand). Evergy must accurately account for every single one of these factors to estimate damages in a reliable manner.

- *Evergy's damages theory requires the estimation of but-for prices in every single hour of the coal conservation period in 2022, which depend on the bids of every single other generator, the demand of every single other customer in SPP, and the transmission network.*
    - The impact of coal conservation on market prices (*i.e.*, $P_2 - P_1$) is determined by the slope of the supply curve at $\bar{Q}$, aggregate SPP load. $\bar{Q}$ is determined by the demand of every single other customer in SPP, while the slope of the supply curve is determined by every single other generator bidding into the market. As such, Evergy must accurately model demand, generation, and transmission for the entire SPP region (including all non-Evergy entities).

Figure 21. Illustration of Evergy's Theory of Damages



APPENDIX C: ILLUSTRATING THE PROBLEMS WITH EVERGY'S LMP DIFFERENTIAL APPROACH

134. **Figure 22** provides a graphical depiction of the problems with Evergy's LMP differential approach using the example from **Table 7.** The problem is that differences in actual LMPs imply, mathematically, differences in LMP differentials. {{ }}, this implies that the LMP differentials applied by Mr. Crosby to estimate but-for LMPs are also incorrect. As a result, the flaws in Ms. Foo's modeling are also reflected in Mr. Crosby's damages estimates.

Figure 22. Price Differences Are Not Constant When Supply Curves are Convex

{{



}}

135. The convex nature of electricity supply curves is well-known in the industry.[149] As such, the slope of the supply curve varies considerably with the level of supply. Changes in generator availability due to coal conservation measures will have differing impacts on market prices depending on where aggregate load intersects with the market supply curve. As such, price differentials between actual and but-for LMPs are *not* constant irrespective of the level of actual LMPs.

[149] *See, e.g.,* "Electric Generator Dispatch Depends on System Demand and the Relative Cost of Operation," U.S. Energy Information Administration, August 17, 2012, available at https://www.eia.gov/todayinenergy/detail.php?id=7590, which illustrates a hypothetical dispatch curve for a wholesale electricity market.

VERIFICATION

I, Paul J. Hibbard, declare under penalty of perjury that the foregoing is true and correct. Further, I certify that I am qualified and authorized to file this verified statement.

/s/ Paul J. Hibbard

Paul J. Hibbard

Executed on November 20, 2025.

Exhibit PH-1

PAUL J. HIBBARD
Principal

Direct: 617 425 8171
Fax: 617 425 8001
paul.hibbard@analysisgroup.com

111 Huntington Avenue
14th Floor
Boston, MA 02199

Mr. Hibbard is an expert on economics, strategy, regulation, and policy in the electric and natural gas industries. He has a comprehensive background merging business development, technical analysis, resource planning and development modeling, economics, and public policy in the energy and environmental fields. Mr. Hibbard has provided technical and strategic advice to government, industry, business, public interest groups, and trade organizations on energy market structure, electric and natural gas infrastructure planning and siting, utility resource solicitation and procurement, emission allocation and environmental policy, renewable resource program design and administration, transmission pricing, climate change policy, utility ratemaking practices, and the transfer of US federal and state emission control programs to other countries.

Prior to joining Analysis Group, Mr. Hibbard was chairman of the Massachusetts Department of Public Utilities. During his tenure, he carried out a forward-looking ratemaking and policy agenda to advance energy efficiency and renewable resources, coordinate regional efforts in the development of energy resources and associated infrastructure, and promote the administration of fair and efficient transmission pricing models in regional and national contexts. He also has provided testimony on resource planning, competitive electricity markets, and transmission pricing in hearings before committees of the Massachusetts legislature and the US House of Representatives, the Federal Energy Regulatory Commission (FERC), and state and regional planning councils.

EDUCATION

M.S.	Energy and resources, University of California, Berkeley *Thesis: Safety and Environmental Hazards of Nuclear Reactor Designs* *(Ph.D. coursework in nuclear engineering)*
B.S.	Physics, University of Massachusetts Amherst

PROFESSIONAL EXPERIENCE

2010–Present	**Analysis Group, Inc.** *Principal (2015–Present)* *Vice President (2010–2015)*
2007–2010	**Massachusetts Department of Public Utilities** *Chairman* *Member, Energy Facilities Siting Board* *Manager, New England States Committee on Electricity (NESCOE)* *Treasurer, Executive Committee, Eastern Interconnect States' Planning Council*

2007–2010 **Massachusetts Department of Public Utilities** (continued)
Representative, New England Governors' Conference (NEGC)
Power Planning Committee
Member, National Association of Regulatory Utility Commissioners (NARUC)
Electricity Committee, Procurement Work Group

2003–2007 **Analysis Group, Inc.**
Vice President (2005–2007)
Manager (2003–2005)

2000–2003 **Lexecon Inc.**
Senior Consultant (2002–2003)
Consultant (2000–2002)

1998–2000 **Massachusetts Department of Environmental Protection**
Environmental Analyst

1991–1998 **Massachusetts Department of Public Utilities**
Senior Analyst, Electric Power Division

1988–1991 **University of California, Berkeley**
Research Assistant, Safety/Environmental Factors in Nuclear Designs

SELECTED PUBLIC-SECTOR EXPERIENCE (MASSACHUSETTS)

- ***Chairman, Department of Public Utilities***
  - Chaired the state's public utilities commission during a period of aggressive change in state policies affecting the electricity and natural gas industries, including initial implementation of several new state energy laws and initiatives restructuring the setting of utility rates, promoting the expansion of energy efficiency and demand response, facilitating the retail and wholesale market integration of renewable and low-carbon resources, and revising state policy on the siting of major generation and transmission infrastructure.
  - Oversaw the issuance of initial regulations and policy related to revenue decoupling, net metering, long-term contracting for renewables, and power system emergency planning and outage restoration.
  - Led Massachusetts's work with regulators across the Northeast to pursue large-scale renewable resource development through coordinated procurement strategies to develop coordinated positions related to national transmission development proposals and establish a regional presence on transmission-related provisions in federal legislation.
  - As chairman, served as the administrative and policy head of an agency of nearly 150 employees, and was responsible for agency management and growth, budgeting, legislative matters, press inquiries, and policy agenda-setting.
  - Oversaw the completion of all dockets jurisdictional to the department, including rate cases and associated tariff matters, forecast and supply planning for electric and natural gas industries, and state oversight of natural gas pipeline safety and public transit authorities.
  - Responsible for all interaction with the governor's office, legislature, and Executive Office of Energy and Environmental Affairs, as well as representing the state in regional deliberations related to electric and natural gas utility policy, electricity market design and oversight, and regional power system reliability issues.

- ***Member, Energy Facilities Siting Board***
  Sitting member of the state board responsible for reviewing all proposals for major generation and transmission infrastructure projects within the state, as well as state intervention in federal review of natural gas pipeline infrastructure. Review involved technical, environmental, and economic evaluation of jurisdictional power plants, transmission lines, and other energy infrastructure, as well as ruling on proposals for exemption from state and local zoning ordinances.
- ***Manager, NESCOE***
  State representative of the regional group chartered to develop New England regional policy positions on electricity market and transmission planning issues. Responsibilities included consideration of group development issues, input into regional determinations of the Installed Capacity Requirement, consideration of regional approaches to transmission planning and the consideration of non-transmission alternatives, and coordinated development of a regional RFP/RFI for the solicitation of renewable power under long-term contracts for the New England states.
- ***Treasurer, Executive Committee, Eastern Interconnection States' Planning Council***
  Elected treasurer of the steering committee for the state council formed under a US Department of Energy (DOE) grant to coordinate with power system operators on developing long-range plans for a transmission system spanning 41 states in the eastern US. Coordinated New England states' approach to policy issues stemming from council efforts.
- ***Representative, NEGC Power Planning Committee***
  Represented the governor's office in all discussions related to regional energy/environmental issues, including transmission cost allocation, regional energy policy coordination, and development of mechanisms for and approaches to procurement of renewable power through long-term contracts with sources in New England and eastern Canada. Engaged in collaborative discussions with counterparts representing the Eastern Canadian Premiers.

SELECTED CONSULTING EXPERIENCE

Government, Foundations, Commissions, and Cooperatives

- ***For the Natural Resources Defense Council (NRDC)*** – Coauthored a public report on the Clean Electricity Payment Program's (CEPP) positive impact on the US economy if adopted (2021).
- ***For Advanced Energy Economy (AEE)*** – Coauthored a public report on the potential economic impacts of applying stimulus funds to electrification of the US transportation sector using estimated spending levels from President Biden's American Jobs Plan (2021).
- ***For AEE*** – Coauthored a public report on the potential economic impacts of applying stimulus funds to develop advanced energy technologies, products, and services in the US using estimated spending levels from President Biden's American Jobs Plan (2021).
- ***For the Coalition for Green Capital*** – Coauthored a white paper examining the potential of the federally authorized Clean Energy and Sustainability Accelerator that could address economic and climate crises (2021).
- ***For AEE*** – Coauthored a series of public reports on the economic impacts in select states of potential stimulus spending on clean and advanced energy resources (2020).
- ***For a municipal association*** – Drafted a white paper related to the fuel mix and emission characteristics of the portfolio of generating assets and power contracts used by municipal electric light companies in Massachusetts (2020).
- ***For the Wellesley Municipal Light Plant (WMLP)*** – Coauthored two white papers on the greenhouse gas (GHG) impacts of the WMLP power portfolio, and considerations for the WMLP associated with achieving continued reductions in carbon emissions over the ensuing decades (2020).

- ***For the Georgetown Climate Center*** – Conducted a bill impact analysis related to Virginia's proposed implementation of a carbon cap-and-trade program (2018).
- ***For Energy New England*** – Provided strategic assistance on energy market and public policy issues in New England (2017).
- ***For the Environmental Defense Fund*** – Coauthored a white paper related to historical power system emission trends (2015).
- ***For the Massachusetts Attorney General*** – Coauthored a report evaluating electric and natural gas infrastructure in New England from the perspectives of reliability, cost, and GHG emissions (2015).
- ***For AEE*** – Coauthored a report on the status of the electric industry in the State of Ohio, and developed recommendations on state energy policy in consideration of the state's market and technological circumstances at the time.
- ***For the Energy Foundation and industry groups*** – Coauthored multiple white papers on the reliability, cost, and market efficiency impacts of the US Environmental Protection Agency's (EPA's) proposed regulations to control emissions of carbon dioxide from existing electric generating facilities. Presented results in numerous conference, stakeholder, and regulatory settings.
- ***For a foundation*** – Led a study of the economic impacts of a state clean energy policy (2013–2014).
- ***For the Massachusetts Department of Energy Resources –*** Provided testimony on the ratepayer and social benefits of reducing methane leaks from a local natural gas distribution company's system (2013).
- ***For AEE*** – Facilitated a regional symposium for the New England Conference of Public Utility Commissioners and staff related to advanced energy technology development and commercialization, and the legal and regulatory structures needed to facilitate integration of emerging technologies (2013).
- ***For the Regional Greenhouse Gas Initiative (RGGI)*** – Conducted a bill impact analysis related to changes to retail customer electric bills in New England, New York, and RGGI Pennsylvania, New Jersey, and Maryland Interconnection (PJM) states associated with various changes considered by RGGI to program cap level and use of allowance revenues (2012).
- ***For AEE*** – Participated in a project advising AEE with respect to its national program to support public utility commission consideration of policies and regulations related to the development and integration of advanced energy technologies (2012–2013).
- ***For the Merck Family Fund*** – Developed an interactive tool to compare the impacts of energy, economic, environmental, legislative, and regulatory policies and programs across the US (2012).
- ***For AEE*** – Coauthored a report on the perspectives of CEOs at advanced energy companies doing business in California on California's energy policies. Conducted over 30 interviews with energy business leaders to get perspectives and recommendations for policy changes (2012).
- ***For the Barr Foundation*** – Coauthored a report on the benefits and costs associated with reducing natural gas leaks on natural gas distribution systems through implementation of targeted infrastructure replacement ratemaking mechanisms in Massachusetts, Rhode Island, and Ohio. Developed a cost-benefit model to quantify the impacts of such programs (2012–2013).
- ***For the American Clean Skies Foundation*** – Developed a dispatch price and emissions model to forecast power system outcomes in the PJM Interconnection, Midwest Independent System Operator, and Southwest Power Pool regions (2012).
- ***For a national environmental organization*** – Conducted a comprehensive national review of energy efficiency monitoring and verification programs in order to support development of a protocol that

could be used to allow energy efficiency to be used as a compliance tool in national carbon emission control regimes (2012–2013).

- ***For the Merck Family Fund –*** Co-led a project to carry out an analysis of the economic impacts of the Northeast states' use of revenues collected from the auctioning of carbon allowances associated with RGGI (2011).
- ***For AEE –*** Developed background on electric industry structure, regional planning and market structures and operations, and state energy policy organization and initiatives. Assisted with the development of a web-based information platform (2011).
- ***For the American Clean Skies Foundation –*** Authored a paper on the redesign of wholesale electricity market structures to efficiently integrate a higher level of variable resources (2012). Coauthored a white paper examining electric reliability and air emission issues associated with the potential retirement of the Potomac River Generating Station in Alexandria, Virginia (2011).
- ***For the Public Service Commission of Colorado –*** Coauthored a white paper on the design of incentives for the photovoltaic (PV) solar energy market (2011).
- ***For a national environmental organization*** – Conducted an economic analysis of key US cities that were or had been in nonattainment under the National Ambient Air Quality Standards, to explore relationships between air quality control requirements and the local economy (2011).
- ***For a national environmental organization*** – Completed a comprehensive report on the full scope of energy efficiency and demand response programs administered by New York electric utilities and the New York Independent System Operator (NYISO). Assessed the potential for additional innovative programs to improve energy efficiency and demand response in New York City (2010).
- ***For the North Carolina Attorney General –*** Managed a project in support of expert testimony on the economic and financial feasibility of requiring the installation of controls to reduce emissions of sulfur dioxide, nitrogen oxides, and mercury from coal-fired power plants owned by the Tennessee Valley Authority (TVA). The project was in the context of a public nuisance lawsuit brought by the North Carolina Attorney General against TVA (2006).
- ***For the National Commission on Energy Policy –*** Authored white papers on (1) the implications for US energy infrastructure of the damage to Gulf Coast energy facilities from Hurricanes Katrina and Rita (2006); (2) the practical and economic implications of various mechanisms for the allocation of carbon dioxide emission allowances to the electric sector under potential federal carbon control regimes (2005); and (3) national energy infrastructure needs for the electricity, natural gas, and petroleum industries, and for addressing the long-term impacts of energy production and use associated with spent nuclear fuel and carbon dioxide (2004).
- ***For the Massachusetts Health and Educational Facilities Authority (MHEFA) PowerOptions Program*** – Managed several projects providing regulatory, economic, and strategic advice to PowerOptions to assist in their selection and pricing of retail electricity products from competitive electricity suppliers. Over a three-year period, projects included analyses of forward prices and wholesale markets for capacity and reserves; analysis of contract price options, terms, and conditions; and analysis of congestion pricing implications for retail supply (2002–2004).
- ***For the Energy Foundation*** – Coauthored a report (with Dr. Susan Tierney) documenting best practices in energy facility siting regulations in the US, and analyzing in particular the impact of California's energy facility siting process on that state's electricity crisis (2002). Supported a foundation-based program to provide international assistance to China's efforts to privatize and restructure its electric industry, and to develop regulations to control air emissions from power plants in that country (2000–2003).
- ***For the Massachusetts Technology Collaborative (MTC) –*** Managed projects in support of the MTC's renewable and premium power programs, including the (1) creation of a standard financial

pro-forma for wind and landfill gas technologies in New England under various assumptions related to capital and operating costs, financing, discount rates, and the impact of state and federal policies to support renewable development; (2) development of an economic model to determine the financial impact on potential wind and combined heat and power facilities of proposed changes to utility standby service tariffs; and (3) research, strategic, and regulatory support of MTC's efforts to advance distributed generation in Massachusetts to promote renewable resources and improve power reliability for commercial and industrial customers (2000–2002).

ENERGY INDUSTRY STAKEHOLDERS

- ***For PECO Energy*** – Provided testimony on traditional ratemaking principles as applied to PECO's cost of providing gas delivery service (2021).
- ***For the Hingham Municipal Lighting Plant (HMLP)*** – Conducted an internal evaluation of the impact of decarbonization of residential and commercial energy use in the town, and its effect on HMLP's investments and operations (2020).
- ***For a natural gas interstate pipeline company*** – Coauthored a white paper and presention showing options to decarbonize the company's operations. The study included an analysis of its GHG footprint, identification of options and pathways to reduce net GHG emissions from operations to zero over time, and the development of recommendations for senior management (2020).
- ***For Oracle Corporation*** – Conducted an analysis of and report on the GHG emission reduction impacts of various types of energy efficiency programs and measures, with a focus on the comparison of structural and behavioral energy efficiency programs (2020).
- ***For NYISO*** – Conducted a study of the parameters used as the basis to set the NYISO's installed capacity demand curves for the four capability years beginning with the summer 2021 capability period (2020).
- ***For NYISO*** – Conducted an internal study of the potential reliability impacts on the electric grid due to changes in system mix and operations associated with a changing climate, and with state programs to address climate change (2020).
- ***For NYISO*** – Conducted a study of the potential risks to New York power system operations associated with an increased reliance on natural gas for power generation (2020).
- ***For Commonwealth Edison*** – Provided testimony on issues associated with a request for a certificate of public convenience and necessity by NextEra related to the proposed acquisition of the transmission assets of Rochelle Municipal Utilities (2020).
- ***For Repsol Energy North America*** – Provided strategic assistance related to the potential impacts of electric system market rules and public policy on the potential marketability of liquefied natural gas (LNG) in New England (2020).
- ***For Liberty Utilities*** – Provided testimony on the need for and economic and environmental impacts of the proposed Granite Bridge pipeline and LNG project in the State of New Hampshire (2020).
- ***For NYISO*** – Coauthored a white paper for NYISO on the potential impacts of a proposed carbon pricing mechanism in New York on power prices; energy policy; and economic, environmental, and public health impacts in New York (2020).
- ***For NTE Energy*** – Provided testimony before the Connecticut Siting Council on the need for and potential benefits associated with a proposed new natural gas-fired power plant in the State of Connecticut (2020).
- ***AltaGas*** – Provided testimony before the Maryland and District of Columbia public utility commissions on the potential environmental impacts of a proposed merger between AltaGas and Washington Gas (2017–2018).

- ***For Calpine Corporation*** – Coauthored a white paper on the design of a proposed carbon trading mechanism in Massachusetts (2017).
- ***For Vermont Gas*** – Provided testimony on the prudence of Vermont Gas' decisions and investments with respect to the Addison natural gas project (2017).
- ***For the Vermont Electric Power Company (VELCO)*** – Coauthored a white paper on VELCO's capital structure associated with its transmission assets and operations (2016).
- ***For the Merck Family Fund*** – Coauthored a white paper on economic principles associated with the trading of emission allowances associated with RGGI (2016).
- ***For a consortium of solar companies*** – Developed a white paper on the appropriate evaluation and treatment of behind-the-meter solar PV generation from the perspective of net metering policies in Massachusetts (2015).
- ***For a group of owners of electric generating facilities*** – Developed a comprehensive quantitative and qualitative critique of a utility proposal to invest in electricity storage capability in the State of Texas. Drafted a report for circulation to legislative, regulatory, and market interests stating the results of the critique and analysis (2015).
- ***For an energy resource developer*** – Conducted a financial and ratepayer analysis of the benefits of a project to develop a power plant and natural gas pipeline in the State of Maine. Submitted testimony to the Maine Public Utilities Commission describing the results (2014–2015).
- ***For an energy storage company*** – Developed an optimization analysis to evaluate the security, reliability, economic, and environmental benefits and costs of multiple battery storage installations across the Hawaiian Islands in different industry settings (renewable generator, island utility, military base, hotel/resort). Drafted a report presenting the results, considering the state's unique energy price and fuel security context (2014–2015).
- ***For NYISO*** – Developed a model to compare cost, resource, and emission outcomes of alternative designs for a capacity market in the State of New York. Coauthored a report presenting the results of the analysis and a comprehensive review of the benefits and drawbacks of moving from a spot to a forward capacity market (FCM) structure. Presented results to NYISO senior management and several meetings of New York electricity market participants and stakeholders (2014–2015).
- ***For multiple regional transmission organizations (RTOs)*** – Provided strategic support at the board-of-director and senior-management levels for considering the changing structures of retail regulation and wholesale market incentives within their regions (2014–2015).
- ***For Calpine Corporation –*** Provided testimony on the costs and benefits of different proposals for generation capacity in Florida (2014).
- ***For an RTO*** – Conducted an internal analysis of the financial risk associated with the RTO's position in administering the trading of power system transmission rights (2014).
- ***For a regional transmission operator*** – Conducted a top-to-bottom review of the content and design of the RTO's Rate Schedule 1 tariff for the collection of operational costs from market participants. Presented results of the analysis to the RTO's board of directors and senior management (2014).
- ***For a retail electricity supplier*** – Provided analytic and strategic support with respect to the supplier's participation in a state regulatory proceeding related to changing the nature of and rate structure for electric distribution service (2014).
- ***For Ambri Inc. –*** Led a study of the economic feasibility of using battery storage in conjunction with wind and solar for a micro-grid application (2013–2014).
- ***For Calpine Corporation –*** Provided testimony on the costs and benefits of different proposals for generation capacity in Minnesota (2013).

- ***For the New England Independent System Operator (ISO-NE) –*** Assisted on several projects related to addressing the codependence of electric and natural gas systems in New England through a mix of short- and long-term market rule changes and administrative actions. Assistance included review of market structures to improve unit performance, particularly under stressed natural gas system conditions; quantification of the costs of potential natural gas and electric system infrastructure, and contractual responses to market rules and administrative actions (e.g., dual-fuel capability, new pipeline investment, LNG purchasing, and firm natural gas transportation agreements); and assistance with a series of discussions between ISO-NE and regional electricity and natural gas market participants. Also quantified the potential benefits of improved performance associated with reduced system interruptions (2012–2013).
- ***For the ISO-NE*** – Developed an economic supply/demand model of the FCM to estimate the cost impact of integrating a new long-term performance incentive design element into the FCM auctions and pricing structure (2012–2013).
- ***For Calpine Corporation*** – Filed a report with the EPA on the impact of emergency generation demand response programs on the costs and emissions associated with power system dispatch in the PJM electricity market (2012).
- ***For the ISO-NE*** – Organized and helped lead a strategic planning initiative to address unit retirement, fuel mix, operational performance, and wind resource integration issues. Oversaw comprehensive generating unit performance analysis and electric-gas system risk review. Conducted a thorough internal risk assessment and key-challenge solution development. Facilitated meetings and developed organizational and concept documents to explore outcomes and assist in deliberations with states and regional industry stakeholders, and participated in external meetings to gain input and feedback (2010–2012).
- ***For an RTO*** – Conducted a top-to-bottom review of its external market monitoring function and a comprehensive best-practices survey of all internal and external market monitoring functions at US RTOs and independent system operators (ISOs) (2012).
- ***For a wind power development company*** – Conducted a regional review of wind power development projects and an assessment of potentially valuable projects for acquisition based on power system location and siting viability (2012).
- ***For an energy services company –*** Oversaw and conducted an analysis of business, legal, and regulatory conditions related to a legal dispute over the legitimacy of a contract for energy and water management services. Coauthored a report to be used in the development of legal strategy and legal proceedings (2012).
- ***For an international power company*** – Conducted a review of a regional utility's compliance with the FERC requirements for transmission open access, and developed strategies for the filing of complaints of anticompetitive conduct before the FERC (2011–2012).
- ***For an RTO*** – Comprehensively reviewed and suggested changes to the design of regional market structures; oversaw data review and analysis related to key market design features and asset performance (2011).
- ***For Direct Energy*** – Assisted with the development of strategies to increase retail choice in Pennsylvania, including the design of an opt-in descending-clock auction to increase migration from default service to competitive supply. Prepared comments and analysis on utility contract structures. Provided testimony before the Pennsylvania Public Utilities Commission (2011).
- ***For Algonquin Gas*** – Submitted affidavits and testified in bankruptcy court on the impact on power plant value of changes in market rules related to the FCM in New England. Also provided testimony on the impact on power system reliability of the availability of firm transportation contracts for natural gas supplied to power plants in New England (2010).

- ***For an RTO*** – Conducted a best-practices and performance metrics analysis to benchmark the ISO's performance against industry peers with respect to responsiveness to consumers, stakeholders, and policymakers. Drafted a report with comprehensive benchmarking and performance metric recommendations; participated in stakeholder discussions (2010).
- ***For a power generators trade association*** – Developed and facilitated an all-day group discussion concerning key economic, environmental, legal, and policy challenges to the economic viability of existing and new power generation capacity in regional wholesale electricity markets (2010).
- ***For a coalition of electric companies*** – Coauthored the report "Ensuring a Clean, Modern Electric Generating Fleet while Maintaining Electric System Reliability," which reviewed the impact on power plant operations of proposed EPA rules to reduce emissions of sulfur dioxide, nitrogen oxides, mercury, and other hazardous air pollutants. Presented findings to numerous regional and national industry and regulatory groups (2010).
- ***For an industry coalition*** – Conducted a study and coauthored a white paper (with Dr. Susan Tierney) for the New England Energy Alliance on New England energy infrastructure needs and policy issues (e.g., facility siting policies, RGGI/climate change) influencing the future addition of energy infrastructure in the region (2006).
- ***For an interstate pipeline company and offshore LNG developer*** – Authored a report related to recent developments in the supply and demand for natural gas in New England, and surveyed the development, regulatory, and commercial status of proposed LNG projects across the US (2006); coauthored a report (with Susan Tierney) providing an overview of Northeastern natural gas markets and conditions, and an assessment of natural gas supply and demand conditions (2005).
- ***For independent system operators*** – Managed several projects and coauthored reports or analyses for the Northeast region's ISOs/RTOs related to ISO/RTO annual strategic plans; market monitoring and mitigation best practices; and the links between wholesale electricity markets and local distribution company retail prices (2002–2006).
- ***For electric utilities*** – Managed or participated in numerous engagements with wires-only as well as vertically integrated electric utilities within New England and across the country related to rate case strategy and regulatory support; strategic planning; power supply resource planning and procurement (including the role of independent monitor of utility procurements); price and environmental analyses related to the siting of new high-voltage transmission lines; and evaluation of the allocation of SO_2 and NO_x emission allowances under the EPA Clean Air Interstate Rule (CAIR) program (2001–2006).
- ***For a developer of a land-based LNG facility –*** Assisted in the preparation of confidential reports on US natural gas supply/demand conditions, market pricing indices, US LNG facilities' status, Northeast interstate and intrastate pipeline infrastructure conditions and prospects, and LNG supply contract prices, terms, and conditions (2006).
- ***For retail energy providers*** – Managed projects and authored or coauthored confidential reports on the experience with retail competition in the US, a benefit/cost analysis of wholesale electricity competition, and comparative analyses of retail electricity prices for utility and competitive retail suppliers in select states (2004–2006).
- ***For merchant generating companies/coalitions*** – Managed production cost dispatching analyses for strategic planning related to the construction of new generating capacity in New England; assisted in the development of regulatory proposals for new wholesale market organizations and policies in New England (2001–2002).
- ***For a major interstate pipeline owner/operator –*** Modeled the electrical load characteristics of pipeline operations and utility rate structures to quantify the extent to which the company was being overcharged for electricity services. Supported company intervention in public utility commission proceedings and with analytical support in settlement negotiations (2002).

- ***For a renewable power developer association*** – Provided testimony on the potential negative effects – and remedial policy options – related to the impact of locational marginal pricing on the development and operation of renewable generating resources in New England (2001).

OTHER PROFESSIONAL ACTIVITIES

AEE
Advisory Board (2011)

SELECTED REPORTS, TESTIMONY, PUBLICATIONS, AND PRESENTATIONS

Rebuttal Affidavit of Paul Hibbard and Charles Wu before FERC, Docket No. ER25-596-000 on behalf of NYISO (January 3, 2025)

Affidavit of Paul Hibbard and Charles Wu before FERC, Docket No. ER25-596-000 on behalf of NYISO (November 29, 2024)

Independent Consultant Study to Establish New York ICAP Demand Curve Parameters for the 2025-2026 through 2028-2029 Capability Years – Final Report (Updated Version), with Todd Schatzki, Joe Cavicchi, Charles Wu, and Daniel Stuart (October 2, 2024)

Expert Report of Paul J. Hibbard before the District of South Carolina, Case No. 3:19-cv-3304 on behalf of Deloitte & Touche, LLP; Deloitte LLP (September 27, 2024)

Offshore Wind Procurement: The Driver of Economy-Wide Decarbonization, with Megan Accordino (September 20, 2024)

Rebuttal Testimony of Paul J. Hibbard before the Pennsylvania Public Utility Commission, Docket Nos. R-2024-3047822 and R-2024-3047824 on behalf of Aqua Pennsylvania, Inc. and Aqua Pennsylvania Wastewater, Inc. (September 12, 2024)

Supplemental Testimony of Paul J. Hibbard before FERC, Docket Nos. ER21-2818-004 and EL22-4-000 (consolidated) on behalf of Northwest Rural Public Power District (April 24, 2024)

Rebuttal Testimony of Paul J. Hibbard before the Pennsylvania Public Utility Commission, Docket Nos. R2023-3043189 (Water) and R-2023-3043190 (Wastewater) on behalf of Pennsylvania-American Water Company (February 21, 2024)

Direct Testimony of Paul J. Hibbard before FERC, Docket Nos. ER21-2818-000 and EL22-4-000 on behalf of Northwest Rural Public Power District (February 15, 2024)

"Decarbonization and The Power System," presentation during the ARC Industry Leadership Forum (February 8, 2023)

Testimony of Paul J. Hibbard before the Rhode Island Public Utilities Commission, Docket No. 22-20-NG on behalf of The Narragansett Electric Company, d/b/a Rhode Island Energy (September 1, 2022)

Answering Testimony of Paul J. Hibbard before FERC, Docket No. ER20-2441-002 on behalf of McKenzie Electric Cooperative, Inc. (July 15, 2022)

Testimony of Paul J. Hibbard before the US District Court, Southern District of Florida, Ft. Lauderdale Division on behalf of Simon Property Group et al., Case No. 0:20-cv-60981-AMC (June 6, 2022)

Methane Reduction Technology Electricity and Abatement Costs: The Cost to Power Zero-Emission Pneumatic Controllers and Pumps in Grid-Connected and Remote Locations, with Scott Ario and Elisa Gan (May 6, 2022)

Affidavit of Paul Hibbard and Charles Wu before FERC, Docket No. ER22-772-000 on behalf of NYISO (January 5, 2022)

Modifications to the BSM Construct in the NYISO Capacity Market: Analysis of Potential Capacity Market Competitiveness and Reliability Outcomes, with Charles Wu (December 2021)

Economic Impact of a Clean Electricity Payment Program, with Pavel Darling and Luke Daniels (September 2021)

"Why Hydrogen?," presentation during the EBC Energy Resources Webinar: Future of Green Hydrogen – Earthshot Effort to Meet the Needs of Climate Change (September 30, 2021)

"Decarbonization and The Power System," presentation during the Northeast Public Power Association RodE&O Conference and Expo, Engineering Track (September 22, 2021)

"Net Zero Carbon: What Is It and What Should It Be?," presentation during the LDC Gas Forum (September 14, 2021)

"Net Zero Carbon: What Is It and What Should It Be?," presentation during the NEPPA Annual Conference, General Session (August 23–24, 2021)

"Motivating Customers to Decarbonize with an Eye Toward Equity," presentation during the 2021 NARUC Summer Policy Summit (July 18, 2021)

Economic Impact of Stimulus Investment in Advanced Energy for America, with Pavel Darling (June 2021)

Economic Impact of Stimulus Investment in Transportation Electrification, with Pavel Darling (June 2021)

"A Step Through the Looking Glass – Outlook for Natural Gas in the Northeast," Webinar for the Northeast Gas Association (NGA) Regional Market Trends Forum, What are the Market Pathways and Their Various Implications (April 29, 2021)

Accelerating Job Growth and an Equitable Low-Carbon Energy Transition: The Role of the Clean Energy Accelerator, with Susan F. Tierney (January 2021)

"Carbon Pricing: This Is the Way," presentation on a plenary panel to the New England Restructuring Roundtable (December 11, 2020)

"Approaches to Meeting Decarbonization Mandates: Important Decisions with Cost, Equity, and Reliability Implications," presentation during the EUCI Decarbonization Summit on state decarbonization opportunities (December 9, 2020)

"Approaches to Meeting Decarbonization Mandates: Important Decisions with Cost, Equity, and Reliability Implications," presentation during the New England Energy Summit on state decarbonization opportunities (November 23, 2020)

Affidavit of Paul J. Hibbard before FERC, Docket No. ER21-502-000 on behalf of NYISO (November 30, 2020)

Economic Impact of Stimulus Investment in Advanced Energy (series of 10 state-specific reports), with Pavel G. Darling (September–October 2020)

Climate Change Impact and Resilience Study – Phase II: An Assessment of Climate Change Impacts on Power System Reliability in New York State, with Charles Wu, Hannah Krovetz, Tyler Farrell, and Jessica Landry (September 2020)

Presented virtually at the Annual NECA Conference on how New England can transition away from fossil fuels, as well as the costs, reliability, and societal implications of moving toward low-carbon alternatives (September 30, 2020)

Independent Consultant Study to Establish New York ICAP Demand Curve Parameters for the 2021/2022 through 2024/2025 Capability Years – Final Report, with Todd Schatzki, Charles Wu, Christopher Llop, Matthew Lind, Kiernan McInerney, and Stephanie Villarreal (September 9, 2020)

Utility energy efficiency program performance from a climate change perspective: A comparison of structural and behavioral programs, with Jonathan Baker, Mona Birjandi-Feriz, and Hannah Krovetz (August 2020)

"Energy Efficiency for Climate, Not Ratepayers," presentation on a plenary panel to the American Council for an Energy-Efficient Economy (ACEEE) Summer Study Session (August 19, 2020)

For the New England Power Generators Association (NEPGA), coauthored a report assessing the potential use of carbon pricing in New England; the analysis applied tested industry models to identify effective and efficient economy-wide pricing of carbon dioxide (CO_2) emissions consistent with New England states' GHG emission reduction targets (June 23, 2020)

Carbon Pricing for New England: Context, Key Factors, and Impacts, with Joseph Cavicchi (June 2020)

"Decarbonization and Wholesale Markets in New England – Looking Ahead: Achieving 80% GHG Reduction by 2050," presentation on a plenary panel to the Association of Energy Engineers Conference, "ISO-NE in 2050: Getting to an advanced energy future in New England," Boston, MA (March 18, 2020)

"Decarbonization and Natural Gas in the Northeast," panel moderator and presenter at the EUCI conference on Natural Gas Decarbonization, Denver, CO (January 22–23, 2020)

Fuel and Energy Security in New York State: An Assessment of Winter Operational Risks for a Power System in Transition, with Charles Wu (November 2019)

Clean Energy in New York State: The Role and Economic Impacts of a Carbon Price in NYISO's Wholesale Electricity Markets, with Susan F. Tierney (October 2019)

"Natural Gas in Power Generation: Role Going Forward," 7th Annual Maine Natural Gas Conference to discuss power generation in the New England region. Falmouth, ME (October 3, 2019)

Direct Testimony of Paul J. Hibbard before the New Hampshire Public Utilities Commission on the need for and economic and environmental impacts of proposed Liberty Utilities Granite Bridge pipeline and LNG project, Docket No. DG 17-152 (June 28, 2019)

Rebuttal Testimony on Reopening of Paul J. Hibbard before the Illinois Commerce Commission on behalf of Commonwealth Edison, Docket No. 18-0843 (May 31, 2019)

Pre-filed Testimony of Paul J. Hibbard before the Connecticut Siting Council on behalf of NTE Connecticut LLC, Docket No. 470 (January 18, 2019)

Vehicle Fuel-Economy and Air Pollution Standards: A Literature Review of the Rebound Effect, with Susan F. Tierney, Benjamin Dalzell, Grace Howland, Jonathan Baker, Tom Beckford, Sarah Centanni, Asie Makarova, and Scott Ario (June 28, 2018)

"An Expanding Carbon Cap-and-trade Regime? A Decade of Experience with RGGI Charts a Path Forward," with Susan F. Tierney and Pavel G. Darling, *The Electricity Journal* (June 2018)

Testimony of Paul J. Hibbard before the District of Columbia on behalf of AltaGas, Case No. 1142 (May 25, 2018)

The Economic Impacts of the Regional Greenhouse Gas Initiative on Nine Northeast and Mid-Atlantic States, review of RGGI's third three-year compliance period (2015–2017), with Susan F. Tierney, Pavel G. Darling, and Sarah Cullinan (April 2018)

Post-Settlement Testimony of Paul J. Hibbard before the Maryland Public Service Commission on behalf of AltaGas, Case No. 9449 (January 5, 2018)

Rebuttal Testimony of Paul J. Hibbard before the Public Service Commission of the District of Columbia on behalf of AltaGas, Formal Case No. 1142 (October 27, 2017)

Capacity Resource Performance in NYISO Markets: An Assessment of Wholesale Market Options, with Todd Schatski and Sarah Bolthrunis (November 2017)

RGGI and Emissions Allowance Trading: Options for Voluntary Cooperation Among RGGI and Non-RGGI States, with Ellery Berk (July 2017)

"Analytical Issues in Linking," presentation on Virginia and the Regional Greenhouse Gas Initiative, Virginia Commonwealth University, Richmond, VA (July 12, 2017)

Electricity Markets, Reliability and the Evolving U.S. Power System, with Susan Tierney and Katherine Franklin (June 2017)

"Storage and Microgrids – New Applications," panel presentation during the Electricity Advisory Committee's Energy Storage Session (June 8, 2017)

Supplemental Affidavit of Paul J. Hibbard before FERC, Docket No. ER17-386-000 on behalf of NYISO (December 18, 2016)

Affidavit of Paul J. Hibbard before FERC, Docket No. ER17-386-000 on behalf of NYISO (November 18, 2016)

Evaluation of Vermont Transco, LLC Capital Structure, with Craig Aubuchon and Mike Cliff (October 2016)

Rebuttal Testimony of Paul J. Hibbard before the State of Vermont Public Service Board on behalf of Vermont Gas Systems Inc., Docket Nos. 8698 and 8710 (September 26, 2016)

RGGI and CO_2 Emissions Trading Under the Clean Power Plan: Options for Trading Among Generating Units in RGGI and Other States, Susan Tierney and Ellery Berk (July 12, 2016)

Affidavit of Paul J. Hibbard before the FERC, Docket No. ER16-1751-000 on behalf of the NYISO (May 20, 2016)

Declaration of Paul J. Hibbard and Andrea M. Okie in the US Court of Appeals for the District of Columbia Circuit, Case No. 15-1363 (and consolidated cases) on behalf of multiple parties (December 8, 2015)

Power System Reliability in New England: Meeting Electric Resource Needs in an Era of Growing Dependence on Natural Gas, report for the Massachusetts Office of the Attorney General, with Craig Aubuchon (November 2015)

Testimony of Paul J. Hibbard before the Senate Committee on Global Warming and Climate Change, *Power System Reliability in New England: Meeting Electric Resource Needs in an Era of Growing Dependence on Natural Gas* (November 24, 2015)

The Economic Impacts of the Regional Greenhouse Gas Initiative on Nine Northeast and Mid-Altantic States, review of RGGI's Second Three-Year Compliance Period (2012–2014), with Andrea Okie, Susan Tierney, and Pavel Darling (July 14, 2015)

Electric System Reliability and EPA's Clean Power Plan: The Case of MISO, report for the Energy Foundation, with Susan Tierney and Craig Aubuchon (June 8, 2015)

Net Metering in the Commonwealth of Massachusetts: A Framework for Evaluation (May 2015)

NYISO Capacity Market: Evaluation of Options, report for the NYISO, with Todd Schatzki, Craig Aubuchon, and Charles Wu (May 2015)

Ohio's Electricity Future: Assessment of Context and Options, report for Advanced Energy Economy, with Andrea Okie (April 2015)

Electric System Reliability and EPA's Clean Power Plan: The Case of PJM, report for the Energy Foundation, with Susan Tierney and Craig Aubuchon (March 16, 2015)

Electric System Reliability and EPA's Clean Power Plan: Tools and Practices, report for the Energy Foundation, with Susan Tierney and Craig Aubuchon (February 2015)

Tools States Can Utilize for Managing Compliance Costs and the Distribution of Economic Benefits to Consumers Under EPA's Clean Power Plan, Electricity Forum, with Andrea Okie and Susan Tierney (February 2015)

The Economic Potential of Energy Efficiency, report for the Environmental Defense Fund, with Katherine Franklin and Andrea Okie (December 2014)

Assessment of EPA's Clean Power Plan: Evaluation of Energy Efficiency Program Ramp Rates and Savings Levels, report for the Environmental Defense Fund and National Resources Defense Council, with Andrea Okie and Katherine Franklin (December 2014)

"EPA's Proposed Clean Power Plan and States' Planning for Implementation," presentation to the Power-Gen International Annual Conference (December 2014)

"Storage/Renewables Valuation: A Case Study Hitting Multiple Perspectives," presentation to the Caribbean Renewable Energy Forum 2014 (October 2014)

"Electric Industry Transformation: A New World, or a Step Through the Looking Glass?" presentation to the New England Independent System Operator Quarterly Meeting (September 2014)

"Consumers, Markets, and Infrastructure: New England at a Crossroads," presentation to the New England Consumer Liaison Group (September 2014)

"Columbia River Treaty Hydropower: Perspectives on Power Benefits," presentation to the LSI Conference on the Columbia River Treaty (September 2014)

Direct Testimony of Paul J. Hibbard on behalf of Calpine Construction Finance Company, L.P., before the Florida Public Service Commission, Docket No. 140110-E1 (July 2014)

"States in Control: EPA's Clean Power Plan and State Implementation," presentation at the National Association of Regulatory Utility Commissioners Summer Meetings (July 2014)

"EPA's Clean Power Plan: States' Tools for Reducing Costs and Increasing Benefits to Consumers," with Andrea Okie and Susan Tierney, *The Electricity Journal* (July 2014)

Direct Testimony of Paul J. Hibbard on behalf of Calpine Construction Finance Company, L.P., before the Florida Public Service Commission, Docket No. 140110-E1 (July 14, 2014)

"Project Vigilance: Value of Ambri Batteries at Joint Base Cape Cod," presentation to the Raab Restructuring Roundtable, Boston MA (June 2014)

Further Explanation on Rate Calculations, with Todd Schatzki, memo to the New England Independent System Operator Markets Committee on setting the compensation rate for the ISO Winter Program (May 28, 2014)

"Markets, Infrastructure, and Policy: New England at a Crossroads," presentation to the US/Canada Cross-Border Power Summit (April 2014)

"Siting Infrastructure: Economic and Siting Hurdles," presentation to the US/Canada Cross-Border Power Summit (April 2014)

Economic Impact of the Green Communities Act in the Commonwealth of Massachusetts: Review of the Impacts of the First Six Years," with Susan Tierney and Pavel Darling (March 4, 2014)

Crediting Greenhouse Gas Emission Reductions from Energy Efficiency Investments: Recommended Framework for Proposed Guidance on Quantifying Energy Savings and Emission Reductions in Section 111(d) State Plans Implementing the Carbon Pollution Standards for Existing Power Plants, report for the Environmental Defense Fund, with Andrea Okie (March 2014)

"Climate Policy and the Economy," presentation to the 2014 Joint Institute for Strategic Energy Analysis Annual Meeting, NREL, Golden CO (March 2014)

Testimony of Paul Hibbard and Todd Schatzki on behalf of the New England Independent System Operator before the Federal Energy Regulatory Commission, Docket Nos. ER14-1050-000 and ER14-1050-001 (February 12, 2014)

Project Vigilance: Functional Feasibility Study for the Installation of Ambri Energy Storage Batteries at Joint Base Cape Cod, report for demonstration project under the MassInnovate Program of the Massachusetts Clean Energy Center, with Steve Carpenter, Pavel Darling, Margaret Reilly, and Susan Tierney (February 2014)

Testimony of Paul J. Hibbard before the Maine Public Utilities Commission on behalf of Loring Holdings LLC; testimony described the results of a financial and ratepayer analysis of the benefits of a project to develop a power plant and natural gas pipeline in the State of Maine (2014–2015)

Rebuttal Testimony of Paul Hibbard on behalf of Calpine Corporation before the Minnesota Public Utilities Commission, MPUC Docket No. E-002/CN-12-1240 (October 18, 2013)

Direct Testimony of Paul Hibbard on behalf of Calpine Corporation before the Minnesota Public Utilities Commission, MPUC Docket No. E-002/CN-12-1240 (September 27, 2013)

Assessment of the Impact of ISO-NE's Proposed Forward Capacity Market Performance Incentives, with Todd Schatzki (September 2013)

"Market Monitoring at US RTOs," presentation to the 12th Annual Gas and Power Institute, Houston, TX (August 2013)

Testimony of Paul J. Hibbard before the Massachusetts Department of Public Utilities on behalf of the Massachusetts Department of Energy Resources, DPU 13-07 (May 31, 2013)

Testimony of Paul Hibbard before the House Committee on Energy and Commerce, Subcommittee on Energy and Power, *The Role of Regulators and Grid Operators in Meeting Natural Gas and Electric Coordination Challenges* (March 19, 2013)

Testimony of Paul J. Hibbard, on behalf of the Massachusetts Department of Energy Resources, on the ratepayer and social benefits of reducing methane leaks from a local natural gas distribution company's system (2013)

California's Advanced Energy Economy – Advanced Energy Business Leaders' Perspectives and Recommendations on California's Energy Policies, with Andrea Okie and Susan Tierney, Advanced Energy Economy Institute, (February 2013)

Information from the Literature on the Potential Value of Measures that Improve System Reliability, memo to the New England Independent System Operator (January 24, 2013)

Information on the Range of Costs Associated with Potential Market Responses to Address the Risks Associated with New England's Reliance on Natural Gas, New England Independent System Operator (January 24, 2013)

Summary of Quantifiable Benefits and Costs Related to Select Targeted Infrastructure Replacement Programs, with Craig Aubuchon, report for the Barr Foundation, (January 2013)

"Demand Response in Capacity Markets: Reliability, Dispatch and Emission Outcomes," *The Electricity Journal*, with Andrea Okie and Pavel Darling (November 2012)

"The Electric Generation Landscape – A Marathon of Challenges," presentation to SNL Generation Landscape, Chicago IL (October 2012)

"Economics, EPA, and Old Capacity – Bring Out Your Dead," presentation to LSI Energy in the Northeast, Boston MA (September 2012)

Paul Hibbard, *Reliability and Emission Impacts of Stationary Engine-Backed Demand Response in Regional Power Markets*, report to the EPA on behalf of Calpine Corporation (August 2012)

"Uncertainty in Electricity Infrastructure Development – Key Drivers, International Context," presentation to NCEA Annual Conference, Brainerd, MN (June 2012)

"The Interdependence of Electricity and Natural Gas: Current Factors and Future Prospects," with Todd Schatzki, *The Electricity Journal* (May 2012)

"Economic Impacts of RGGI," presentation to the New Hampshire Environmental Business Council (April 2012)

Testimony of Paul Hibbard before the California Legislature, *The Economic Impacts of RGGI's First Three Years*, California Select Committee on the Environment, the Economy, and Climate Change (March 27, 2012)

Testimony of Paul Hibbard before the New Hampshire Legislature, *RGGI and the Economy – Following the Dollars*," New Hampshire House Committee on Science, Technology, and Energy (February 14, 2012)

Testimony of Paul Hibbard before the Massachusetts Legislature, *RGGI and the Economy – Following the Dollars*," Massachusetts Senate Committee on Global Warming and Climate Change (February 13, 2012)

"Economic Impacts of RGGI: Following the Dollars," presentation to the California Business Climate Network, with Susan Tierney (February 2012)

"Carbon Control and the Economy: Economic Impacts of RGGI's First Three Years," with Susan Tierney, *The Electricity Journal* (December 2011)

"Public Policy Transmission: Competition and Cooperation," presentation to the Energy Bar Association Renewables Subcommittee, Washington, DC (November 2011)

"Competitive Markets and Wind Power: Challenge and Opportunity," presentation to the Governors' Wind Energy Coalition, Washington, DC (November 2011)

The Economic Impacts of the Regional Greenhouse Gas Initiative on Ten Northeast and Mid-Atlantic States; Review of the Use of RGGI Auction Proceeds from the First Three-Year Compliance Period, with Susan Tierney, Andrea Okie, and Pavel Darling (November 15, 2011)

Testimony before the Pennsylvania Public Utilities Commission on retail opt-in auctions (November 10, 2011)

"Interdependence and Opportunity: The Growing Link Between Electricity and Natural Gas," presentation to the Colorado Oil & Gas Association Energy Epicenter Conference, Denver, CO (August 2011)

Potomac River Generating Station: Update on Reliability and Environmental Considerations, with Pavel Darling and Susan Tierney (July 19, 2011)

"Retirement is Coming: Preparing for New England's Capacity Transition," *Public Utilities Fortnightly* (June 2011)

Generation Fleet Turnover in New England: Modeling Energy Market Impacts, with Todd Schatzki, Pavel Darling, and Bentley Clinton (June 2011)

Solar Development Incentives: Status of Colorado's Solar PV Program, Practices in Other States, and Suggestions for Next Steps, with Susan Tierney and Andrea Okie (June 30, 2011)

"The Balancing Act: Challenges in Traversing the Modernization of New England's Infrastructure," presentation to the NECA Annual Conference, Mystic, CT (May 2011)

"Renewables v. Gas: The Future of New England Infrastructure," presentation to the EBC Energy Seminar, Waltham, MA (April 2011)

"Upcoming Power Sector Environmental Regulations: Framing the Issues About Potential Reliability/ Cost Impacts," presentation to the Raab Restructuring Roundtable, Boston, MA (October 2010)

"Carbon Regulation: Action and Convergence Spanning the Pond," presentation to the Energy Smart Conference, Boston, MA (October 2010)

"Renewables Development – A Tricky Time to be Placing Bets," presentation to the NECA Renewables Committee, Boston, MA (October 2010)

"Energy Infrastructure Challenges in the Current Policy Environment, A Wide Angle Point of View," presentation to NARUC, Providence, RI, September 2010.

Ensuring a Clean, Modern Electric Generating Fleet while Maintaining Electric System Reliability, with Susan F. Tierney, Michael J. Bradley, Christopher Van Atten, Amlan Saha, and Carrie Jenks (August 2010)

"Renewables Development – National Policies, New England Progress," presentation to the National Association of State Energy Officials Annual Meeting, Boston, MA (September 2010)

"Northeast US and Eastern Canada – Competitive Markets and Renewable Resource Development," presentation to the LSI Conference on US/Canada Energy Transactions, Vancouver, BC (August 2010)

"Renewables in the Northeast – Local Opportunities, National Context," presentation to the Council of State Governments, Portland, ME (August 2010)

"Ensuring a Clean, Modern Electric Generating Fleet while Maintaining Electric System Reliability," with Susan Tierney, Michael Bradley, Christopher Van Atten, Amlan Saha, and Carrie Jenks (August 2010)

"Federal Transmission Legislation," comments to Capitol Hill briefing of the Coalition for Fair Transmission Policy, Washington, DC (April 2010)

"Transmission Planning & Cost Allocation Alternatives under Order 890," comments to the Energy Bar Association's 64th Meeting, Washington, DC (April 2010)

"Deregulation and Sustainable Energy," class lecture, Massachusetts Institute of Technology (Jonathan Raab Energy Course), Cambridge, MA (March 2010)

"Transmission for Renewables," presentation to the Raab Restructuring Roundtable, Boston, MA (March 2010)

"US Electric Power Transmission: The Battle of the Jurisdictions," comments to CERAWeek 2010 (March 2010)

"New England Blueprint and the Federal Context," presentation to the New England Independent System Operator Consumer Liaison Group Meeting, Westborough, MA (February 2010)

"Interconnection-Wide Planning and Renewable Energy," comments to the National Wind Coordinating Collaborative, Transmission Update Briefing (December 2009)

"Infrastructure Planning," comments to the Northeast Energy and Commerce Association Power Markets Conference, Westborough, MA (November 2009)

"Transmission for Renewables - Risks and Opportunities for the Northeast," presentation to the Governor's Clean Energy Innovation Forum, New Brunswick, NJ (October 2009)

"Renewable Energy Development – The Role of Markets and Planning," presentation to the Northeast Power Planning Council General Meeting, Cambridge, MA (September 2009)

"Transmission Planning," comments to the Federal Energy Regulatory Commission Technical Conference on Transmission Planning Processes Under Order No. 890, Docket No. AD09-8-000, Philadelphia, PA (September 2009)

"New England Governors' Blueprint – Purpose and Context," presentation to the Raab Restructuring Roundtable, Boston, MA (September 2009)

"Wind, Transmission, and Federal Legislation," comments to the MIT Wind Group, Cambridge, MA (Fall 2009)

"National Transmission Policy," comments to The Energy Daily's Transmission Siting Policy Summit, Washington, DC (September 2009)

Testimony before the Massachusetts Joint Committee on Telecommunications, Utilities and Energy Hearing to Review Implementation of the Green Communities Act, Boston, MA (July 8, 2009)

"Federal Transmission Legislation," comments to the National Association of State Utility Consumer Advocates, Boston, MA (July 2009)

"Renewable Energy Development – The Role of Markets and Planning," presentation to the Governor's Wind Energy Coalition, Washington, DC (July 2009)

"Transmission and Renewables: ISO and Regulator Perspectives" comments to the Raab Restructuring Roundtable, Boston, MA (June 2009)

"Renewable Development in and for New England: Massachusetts' Perspective," presentation to Law Seminars International, Boston, MA (June 2009)

"Roadmap to New Renewable Resources in New England," comments on the New England Governors' Blueprint to the New England Conference of Public Utilities Commissioners Annual Symposium, Newport, RI (May 2009)

"Comments of Chairman Paul Hibbard," presentation to the EBC Energy Seminar: New Transmission – The Key to Renewable Resource Integration in New England, Boston, MA (April 2009)

"Coordinating Wind and Transmission Development – Who Pays?" comments to the 2009 Platts Wind Power Development Conference, Chicago, IL (March 2009)

"Integrating Energy and Environmental Regulations in Massachusetts," presentation to the Northeast Sustainable Energy Association Building Energy Conference, Boston, MA (March 2009)

"One Reason for the GCA: Energy Pricing in Massachusetts," presentation to the South Shore Coalition, Hingham, MA (January 2009)

"Non-Reliability Transmission: State Choice and Control," presentation to the New England Conference of Public Utility Commissioners Transmission Group, Chelmsford, MA (January 2009)

"Regulation and Renewable Energy Policy," panel moderator, Center for Resource Solutions National Renewable Energy Marketing Conference, Denver, CO (October 2008)

"Energy Pricing in Massachusetts (… and What We Should Do About It)," presentation to the Berkshire Gas Large Commercial and Industrial Customer Annual Meeting, Lenox, MA (October 2008)

"Conversation with Chairman Hibbard," presentation to the New England Energy Alliance, Boston, MA (September 2008)

"Creating the Path: Delivering Clean Energy through Transmission Improvements," presentation to the New England Independent System Operator Lights, Power, Action Conference, Boston, MA (September 2008)

"Distributed Resources, the Decoupling Model, and the Green Communities Act," presentation to the Raab Restructuring Roundtable, Boston, MA (September 2008)

"Resource Planning: The Contribution of Efficiency and Renewables in Massachusetts," presentation to the Law Seminars International Renewable Energy in New England Conference, Boston, MA (September 2008)

"Remarks to Economic Studies Working Group," ESWG Committee Meeting, Westborough, MA (July 2008)

"Power Trade: Market Context and Opportunities," presentation to the New England Governors' Council/Eastern Canadian Premiers' Energy Dialogue, Montreal, Canada (May 2008)

"New England Transmission Investment," presentation to the Municipal Electric Association of Massachusetts Annual Business Meeting, North Falmouth, MA (April 2008)

"Bringing Power from the North," presentation to the Raab Restructuring Roundtable, Boston, MA (February 2008)

"Natural Gas: Drivers of Supply, Demand, and Prices," comments to the Guild of Gas Managers (November 2007)

"Generation and Demand Outlook for New England," presentation to NECA Dinner Meeting, Cambridge, MA (September 2007)

"Comments on ISO's Draft Regional System Plan," presentation to the Independent System Operator Planning Advisory Committee, Boston, MA (September 2007)

"Regulatory Pressures, Policy Opinions," presentation to the Environmental Business Council, Boston, MA (July 2007)

"Is New England Ensuring the Adequacy and Cost Effectiveness of the Region's Transmission Grid?" panel moderator, New England Conference of Public Utility Commissioners Annual Symposium, Mystic, CT (June 2007)

"Energy Regulation in Massachusetts – Concerns and Options," presentation to the Raab Restructuring Roundtable, Boston, MA (June 2007)

"View From the Regulatory Bench," comments to the New England Energy Conference and Exposition, Groton, CT (May 2007)

"Energy for New England – The Demand, Supply and Price Context," presentation to Massachusetts Municipal Wholesale Electric Cooperative Annual Meeting, Boylston, MA (May 2007)

"Demand Resources in New England: New Opportunities and Future Directions," presentation to the New England Independent System Operator Annual Demand Resources Summit, Westborough, MA (May 2007)

"Power Supply for the New England Region," presentation to the Boston Bar Association, Boston, MA (March 2007)

"Fuel Supplies and the Need for Fuel Diversity: Forecast for Global Fuel Markets and the Likely Impact on Electric Generation in the Northeast," presentation to the Law Seminars International Seminar on Resource Adequacy and Reliability in the Northeast (October 16, 2006)

"Consumers and Politicians Claim They Want Cheap, Reliable and Clean Energy – Do They Have the Will to Make That Happen?" presentation to the National Association of Energy Service Companies New England Regional Meeting (September 28, 2006)

"The Need for New LNG Infrastructure in Massachusetts and New England: An Update," report prepared for Northeast Gateway Energy Bridge, LLC, and Algonquin Gas Transmission, LLC (August 2006)

"Natural Gas & LNG for New England: What's Needed & How To Get It," presentation to the Foundation for American Communications Meeting on *New England's Energy Needs – Who Pays and Who Suffers?* (May 17, 2006)

Energy Policy Act Section 1813 Comments: Report of the Ute Indian Tribe of the Uintah and Ouray Reservation for Submission to the US Departments of Energy and Interior, with Susan F. Tierney, in cooperation with the Ute Indian Tribe of the Uintah and Ouray Reservation (May 15, 2006)

"US Energy Infrastructure Vulnerability: Lessons From the Gulf Coast Hurricanes," report to the National Commission on Energy Policy (March 2006)

"New England Energy Infrastructure – Adequacy Assessment and Policy Review" prepared for the New England Energy Alliance, with Susan Tierney (November 2005)

"Federal Legislative Developments in Energy," presentation to the Law Seminars International Seminar on Energy in the Northeast (October 2005)

"The Benefits of New LNG Infrastructure in Massachusetts and New England: The Northeast Gateway Project," prepared for Northeast Gateway Energy Bridge, LLC, and Algonquin Gas Transmission, LLC, with Susan Tierney (June 2005)

"Climate Change Policy – New Business and Regulatory Risks," presentation to EnviroExpo & Conference (May 2005)

"Carbon Cap & Trade Allocation Options – Practical Considerations," "Carbon Trading Program Emission Allowances: Practical Considerations for Allocation," and "Allocation of Carbon Allowances to Mitigate Electric Sector Costs," reports to the National Commission on Energy Policy (May 2005)

"U.S. Energy Infrastructure: Demand, Supply and Facility Siting," report to the National Commission on Energy Policy (November 2004)

Comments of Susan F. Tierney and Paul. J. Hibbard on their own behalf before the Federal Energy Regulatory Commission, in the Matters of Solicitation Processes for Public Utilities (Docket No. PL04-6-000) and Acquisition and Disposition of Merchant Generation Assets by Public Utilities (Docket No. PL04-9-000), on the role of independent monitors and independent evaluators in public utility resource solicitations (July 1, 2004)

"Energy and Environmental Policy in the United States: Synergies and Challenges in the Electric Industry," prepared for Le Centre Français sur les Etats-Unis (The French Center on the United States), with Susan Tierney (July 2003)

"Controlling China's Power Plant Emissions after Utility Restructuring: The Role of Output-Based Emission Controls," with Barbara A. Finamore, Nancy Seidman, and Tara Szymanski, *The Sinosphere Journal* (July 2002)

"Siting Power Plants in the New Electric Industry Structure: Lessons from California and Best Practices for Other States," with Susan Tierney, *The Electricity Journal* (June 2002)

"Siting Power Plants: Recent Experience in California and Best Practices in Other States," with Susan Tierney, prepared for The Hewlett Foundation and The Energy Foundation (February 2002)

"Setting and Administering Output-Based Emission Standards for the Power Sector: A Case Study of the Massachusetts Output-Based Emission Control Programs," prepared for the China Sustainable Energy Program, Paul Hibbard, N. Seidman, and B. Finamore (October 2001)

Joint Affidavit before the Federal Energy Regulatory Commission, New England Power Pool and ISO New England, Inc., Docket No. ER01-2329, on behalf of the New England Renewable Power Producers Association, with Janet Besser, (July 3, 2001)

"Output-Based Emission Control Programs – U.S. Experience," prepared for the China Sustainable Energy Program, with N. Seidman, B. Finamore, and David Moskovitz (May 2000)

"P2 and Power Plants: The Massachusetts Allowance Trading Program," *Proceedings of the National Pollution Prevention Roundtable* (March 2000)

"Safety and Environmental Comparisons of Stainless Steel with Alternative Structural Materials for Fusion Reactors," with Ann P. Kinzig, and John P. Holdren, *Fusion Technology* (August 1994)

"Utility Environmental Impacts: Incentives and Opportunities for Policy Coordination in the New England Region," US EPA CX817494-01-0, RCEE Core Group (June 1994)

"Final Report: Code Development Incorporating Environmental, Safety, and Economic Aspects of Fusion Reactors," UC-BFE-027, Fusion Environmental and Safety Group, University of California, Berkeley (1991)

Witness Statement of Ms. Judy Carter

WITNESS STATEMENT OF JUDY K. CARTER

My name is Judy K. Carter. I joined BNSF Railway Company ("BNSF") in 2006 and am currently its Senior Vice President and Chief Human Resources Officer. Prior to my current role, I served as Vice President and Chief Human Resources Officer from April 2019 to December 2022. In that role, I was responsible for strategic oversight of employee attraction and retention, recruiting, staffing functions, and related workforce planning efforts across the company. From December 2013 to March 2019, I served as Vice President of Compliance & Audit and Chief Compliance Officer. From 2010 to 2013, I worked as an Associate General Counsel, and prior to that I worked as an attorney in the BNSF Law Department. I am a graduate of Louisiana Scholars' College at Northwestern State University and Cleveland-Marshall College of Law.

I am providing this verified statement to describe for the Surface Transportation Board ("STB" or "Board") the unique and unexpected workforce challenges that BNSF faced as a result of the COVID pandemic and Great Resignation in 2022, the time period that is at issue in the complaint filed by Evergy, Inc., Evergy Metro, Inc., and Evergy Kansas Central, Inc. ("Evergy") against BNSF in this proceeding. Those unprecedented and extraordinary workforce challenges, which affected the level of service BNSF was able to provide in 2022, were outside of BNSF's reasonable anticipation and control. Contrary to Evergy's claims, the measured, conservative workforce adjustments BNSF made in response to the market fluctuations resulting from the COVID pandemic were reasonably based on data-driven projections in line with historic operational expectations. I also describe in this statement the proactive, dynamic, and ultimately successful steps that BNSF took to address the challenges it faced in 2022.

I. BNSF's Employee Resource Planning Decisions are Based on Forecasted Demand and Limitations Imposed by Labor Agreements

BNSF's ability to balance employee resources with freight volume has always been critical to its planning efforts and ability to maintain network fluidity. Crew resource planning is a complex, data-driven process that requires analyzing current employee levels and historic employment trends (including attrition rates and expected retirements); operational trends such as crew starts; changes in geographical patterns relating to crew; and customer and commodity forecasts. In particular, Transportation, Yard, and Engine ("TY&E") headcount is historically the most sensitive to market demand and network capacity needs. To manage the complexities related to forecasting demand, BNSF employs a workforce in accordance with its labor agreement requirements to account for reasonable, predictable changes in demand and maintain network fluidity. However, when significant unanticipated deviations from those forecasts occur, they can directly impact BNSF's personnel resources. Reasonable fluctuations in demand are expected and can be accommodated. However, large deviations from expected demand and historical experience can constrain crew availability in certain areas of the network.

Unlike many other industries, BNSF must operate within the confines of its Collective Bargaining Agreements ("CBAs"). These agreements require BNSF to maintain adequate shifts for employees on active rosters and in fact mandate furloughing of employees when freight volumes decline. Further, these CBAs impose transfer and furlough limitations that impact BNSF's ability to redeploy employees to areas experiencing shortages or expand the number of starts or miles covered per employee. BNSF is also mindful of the impact that furloughing has on employees and their families and strives to balance the number of furloughed employees with the flexibility to address reasonably predictable volume upswings.

BNSF's response to deviations from forecast must operate within BNSF's hiring, furloughing, training, and labor agreement realities. For example, BNSF cannot simply add new employees at the flip of a switch, particularly given the extensive training times required for many operational roles. BNSF's hiring process is necessarily thorough in accord with federal hiring requirements and involves multiple steps from posting jobs online; to tracking applications against requisitions; to screening applicants through assessments, interviews, and other evaluations; to extending conditional job offers; to conducting background checks and medical examinations; to issuing final offers. Once hired, employees must complete position-specific training. Safety is BNSF's highest priority and this is reflected in the quality and duration of the training programs, which are regulated by the Federal Railroad Administration. For TY&E employees, training takes approximately {{ [redacted] }} weeks to complete. The entire process from recruitment to deployment for a TY&E employee takes approximately at least {{ [redacted] }}.

II. BNSF Faced Historic Challenges to Hiring and Retaining Employees in 2021-2022.

The COVID pandemic created unprecedented external conditions that significantly disrupted labor markets nationwide, including within the railroad industry. Widespread illness, quarantine requirements, and the need for social distancing affected employee availability and slowed training pipelines. Pandemic-related restrictions and safety protocols impacted class sizes for conductor training and delayed onboarding for new hires. Additionally, COVID prompted many workers to reevaluate career choices, relocate, or exit the workforce entirely, contributing to elevated attrition rates. These factors were compounded by national supply chain disruptions, heightened competition for labor from other sectors, and logistical challenges in moving candidates through the multi-step hiring and qualification process. Such conditions were outside

BNSF's reasonable anticipation and control, and they impacted the company's ability to respond as quickly as it could have under normal circumstances.

Against these conditions, BNSF diligently worked to develop its workforce forecasting. As of June 2021, even with the extreme and unexpected events associated with the COVID pandemic, BNSF's forecasts –based on analysis of historic trends and the data available at the time[1] – showed that BNSF maintained sufficient crew resources and was well-positioned to meet operational demands.[2]

However, as noted, the pandemic resulted in an unprecedented combination of events that unfolded in 2021 and throughout 2022 – including the tightening of labor markets, increased competition for labor from other industries, a rapid surge in transportation demand, the threat of a rail labor strike in 2022, and the widespread workforce shifts associated with what has become popularly known as the "Great Resignation." When BNSF began to see more volume than forecasted materialize in the second half of 2021, BNSF quickly took action to resource up through expedited training start dates, recalling more employees from furlough, and increasing hiring efforts. For example, in the last quarter of 2021, BNSF proactively made the decision to move up some of our planned 2022 hiring and training.[3] In the fourth quarter of 2021, BNSF launched a hiring initiative to establish a pipeline of new conductors for trains. BNSF posted

[1] Evergy incorrectly alleges in its Opening Evidence that BNSF's pre-pandemic cost-cutting efforts resulted in BNSF's 2022 crew shortages – however, this allegation is entirely unsubstantiated and data shows that BNSF's headcount tracked volume demand in the years leading up to the pandemic. Leading up to the pandemic, BNSF's workforce consistently tracked levels needed to support volumes.

[2] For example, in 2021 alone, BNSF paid $27 million in employee guarantees in order to maintain a healthy bench of employees to deploy in case of reasonable demand fluctuations.

[3] *See, e.g.*, Ex. JC-1, BNSF_EVERGY_0021808 {{ [redacted] }}

positions starting in September 2021, with many of the first open positions focusing on Lincoln and Alliance, Nebraska (along the Evergy route).[4]

BNSF saw a need to hire urgently and devoted considerable resources to the task. In October 2021, BNSF's Human Resources team was directed to {{ [redacted] }} including locations on the Evergy route.[5] The response from the team included {{ [redacted] }}[6] As a result of the team's efforts, BNSF hired {{ [redacted] }} conductors on the Evergy route and {{ [redacted] }} conductors in the rest of the system during the fourth quarter of 2021.[7] BNSF also launched advertising campaigns to increase the flow of qualified applicants at this time.

By April 2022 when I testified before the Board in the EP 770 proceeding, BNSF had already put in place an aggressive plan to hire, train, and put into service an additional 3,000 employees across the transportation, engineering, and mechanical segments of its operations. BNSF also recalled all train crews in the Pacific Northwest, California, Montana, and the Twin Cities and called back the vast majority of the 3,000 furloughed employees. As of June 2021, {{ [redacted] }} of the employees BNSF furloughed during the pandemic recession had been recalled. Going into 2022, BNSF had roughly 1,000 conductors and engineers on furlough systemwide, but the number of furloughed employees was already exhausted at many stations on the Evergy Route. By July 2022, BNSF had exhausted the previously-furloughed employees available for

[4] A job position is considered to be open for the entire period that applications were being received. *See* Ex. JC-2, BNSF_EVERGY_0021731 (fall 2021 BNSF email thread with subject line "Alliance / Lincoln Hiring – URGENT"); Ex. JC-3, BNSF_EVERGY_0023005–006 (fall 2021 BNSF email thread with subject line "Lincoln/Alliance Media Plan with JMG").
[5] Ex. JC-2, BNSF_EVERGY_0021731, at 734.
[6] Ex. JC-2, BNSF_EVERGY_0021731, at 733.
[7] Ex. JC-4, BNSF_EVERGY_0025776.

recall, adding over 1,000 TY&E employees. In all, between 2020-2022, BNSF recalled {{ [redacted] }} conductors and engineers. Of those recalled during this period, only {{ [redacted] }} returned to work. During 2021 and 2022, BNSF also held weekly meetings to review crew numbers and make adjustments for increasing volume and attrition. These proactive measures helped address the unexpected surge in demand, but like many other companies, BNSF was unable to fully overcome the unprecedented staffing challenges encountered during 2021-2022.

In addition to its hires in late 2021, BNSF hired a substantial number of conductors[8] in the first half of 2022 ({{ [redacted] }} conductors on the Evergy route and {{ [redacted] }} in the rest of the system). BNSF's hiring was even more successful during the second half of 2022, when it hired {{ [redacted] }} conductors on the Evergy route and {{ [redacted] }} in the rest of the system.

BNSF also increased the frequency of conductor training classes during 2021 and 2022. While maintaining the length of the training programs to ensure safety, BNSF held more classes with fewer students per class in order to get conductors onto trains more quickly and alleviate shortages. In 2018, BNSF held {{ [redacted] }} training classes with an average of {{ [redacted] }} hires per class.[9] In 2021, BNSF held {{ [redacted] }} training classes with an average of {{ [redacted] }} hires per class.[10] By contrast, in 2022 BNSF held {{ [redacted] }} training classes with an average of only {{ [redacted] }} hires per class.[11] An October 2021 email chain confirms the urgency with which BNSF pursued training. In that email chain, Holly Morgan, a member of BNSF's Human Resources team stated, {{ [redacted]

[8] TY&E employees are first hired as conductors and are eligible to become engineers after gaining experience working as conductors, completing comprehensive engineer training, and passing an engineer exam.
[9] Ex. JC-4, BNSF_EVERGY_0025776.
[10] *Id.*
[11] *Id.*

[redacted] }}[12]

BNSF hiring efforts were also undertaken in an extremely competitive hiring market in 2021 and 2022. During this period, BNSF was seeing smaller pools of applicants, lower acceptance rates, and more candidates failing to meet pre-employment screening and training requirements. BNSF also faced increased turnover in 2021 and 2022, driven by factors such as ease of mobility, economic conditions, and competition from other industries offering significant incentives. BNSF responded to these shifts with targeted programs to support recruiting efforts, including making job offers to a larger number of candidates, tailoring incentives to high-need areas,[13] and offering sign-on bonuses, vacation buy-backs, delayed retirement incentives, adjusted compensation, and enhanced relocation benefits.[14] BNSF also successfully implemented a new attendance policy in 2022 to improve operational transparency and efficiency. By July 2022, BNSF saw a 38.6% reduction in attendance-related discipline year over year and between December 2021 and December 2022, BNSF saw an approximate 50% reduction in attendance-related incidents year over year.

[12] Ex. JC-2, BNSF_EVERGY_0021731.

[13] *See, e.g.*, Ex. JC-5, BNSF_EVERGY_0021666 (2022 TY&E Hiring Incentive Program offering a {{ [redacted] }} incentive over a 10-month period, with payments made in installments. This program applied to several locations on Evergy routes, including Gillette, WY, Lincoln, NE, Kansas City, MO, and Alliance, NE.)

[14] *See, e.g.*, Ex. JC-6, BNSF_EVERGY_0025845 (January 19, 2022, email discussed temporary transfers incentives for Denver, Gillette, Alliance, and Lincoln. BNSF identified areas with the highest furlough counts to post the advertisement, seeking {{ [redacted] }} temporary transfers. Under this incentive structure, the crew would receive an {{ [redacted] }}); *see also* Ex. JC-7, BNSF_EVERGY_0025820 (2021 BNSF-posted opportunity for permanent transfers to specified locations. To encourage transfers to locations with shortages, BNSF offered incentive payments up to {{ [redacted] }} along with a {{ [redacted] }}); Ex. JC-8, BNSF_EVERGY_0025826-31 {{ [redacted] }}; Ex. JC-9, BNSF_EVERGY_0025853 {{ [redacted] }}

III. BNSF's Response to the Unprecedented Challenges in 2021-2022 were Successful.

In 2021-2022, BNSF faced unprecedented challenges, including the pandemic, workforce recall difficulties, attrition spikes, tight labor markets, unexpected demand surges, competition from other industries, and a years-long labor dispute that created the potential for a national rail strike. Despite these challenges, BNSF took immediate, aggressive, and sustained actions to successfully navigate unanticipated staffing needs and trends – a process that BNSF also communicated to the Board throughout 2022.[15]

The measures BNSF implemented in 2021-2022 ultimately worked. BNSF's ability to adapt to abnormal and unanticipated challenges during this period was not the result of a single program or one-time effort; rather, it was the product of sustained, coordinated action across multiple departments that built upon measures BNSF already had in place.

As a result, by late 2022, staffing levels, employee readiness, and operational reliability had significantly improved, and BNSF's staffing levels tracked volumes at similar levels to the years leading up to the pandemic and Great Resignation. Going into 2023, BNSF was able to stabilize crew availability, reduce service delays, and better align our workforce with customer demand.

Following the unprecedented workforce disruptions of 2021-2022, BNSF is now operating from a stronger position to meet customer demand and maintain long-term workforce stability. The 2021-2022 period demonstrated BNSF's ability to remain flexible and resilient under pressure, while still upholding safety, service, and employee support as top priorities.

[15] *See, e.g.*, Apr. 27, 2022, *Urgent Issues in Freight Rail Serv.*, Hearing Tr., STB Docket EP 770.

IV. The Labor Difficulties BNSF Faced in 2021-2022 Were the Result of External Factors Beyond BNSF's Control

Finally, I would like to respond to assertions made by Evergy that BNSF made working for the railroad undesirable.[16] BNSF offers strong salaries and competitive benefits to employees, highlighting its commitment to fostering a positive work environment that attracts and retains talent across all job categories. BNSF's total rewards approach is designed to support employees in their professional roles, personal lives, and long-term financial security. BNSF also offers best-in-class medical, dental, vision, and life insurance benefits, ensuring that employees and their families have access to comprehensive health coverage. Additionally, BNSF provides robust educational assistance programs, mental health services, parental leave, and an employee assistance program that offers resources for counseling, financial planning, and other life challenges.

BNSF employees also benefit from robust retirement plans through the Railroad Retirement System, a standout feature in the U.S. labor market and a major reason why railroad careers are so attractive. This retirement incentive, similar to Social Security, provides a lifetime monthly benefit for both the employee and their spouse, generally at higher rates than the Social Security system. Employees can retire after thirty years of service and at age sixty with a monthly annuity of about $4,500. This remains one of the most attractive and valued elements of BNSF's benefits program, providing stability and peace of mind for employees and their families.

BNSF's data on employee tenure reflects long-term satisfaction. A substantial portion of BNSF employees retire with over 40 years of service. In addition, employees with five or more

[16] *See* Evergy Opening Evidence at 32.

years of service tend to stay with BNSF, and BNSF's average tenure is well above comparable industries and peers.

BNSF is a great place to work, and this is reflected not only in BNSF's internal data, but also in external recognition as an award-winning workplace. For example, in 2022, BNSF was recognized on *Forbes* "America's Best Employers for New Grads" list, achieved a score of 90/100 on the Corporate Equality Index, was named a Best Place for Working Parents, and was inducted into the Top 100 Training Hall of Fame. In addition, in 2021 BNSF was named to *Forbes* "Best Employers for Women," ranked among the Top 10 Military Friendly Employers, recognized as one of the Military Spouse Friendly Employers in 2022, and listed among the Top 50 STEM (Science, Technology, Engineering and Math) Workplaces in 2021. (BNSF has also received numerous such honors since 2022, but I focus here on the time period relevant for this case.) These honors demonstrate that even in a period of labor market disruption, BNSF maintained its standing as an employer of choice across multiple dimensions – from diversity and inclusion to training excellence and support for working families.

V. Conclusion

2021-2022 was an extraordinary period marked by unpredictable external factors that made workforce management extremely challenging. BNSF acted quickly, responsibly, and effectively to navigate these unprecedented challenges and hire enough employees to respond as quickly as was possible to sharply increasing customer needs.

Verification

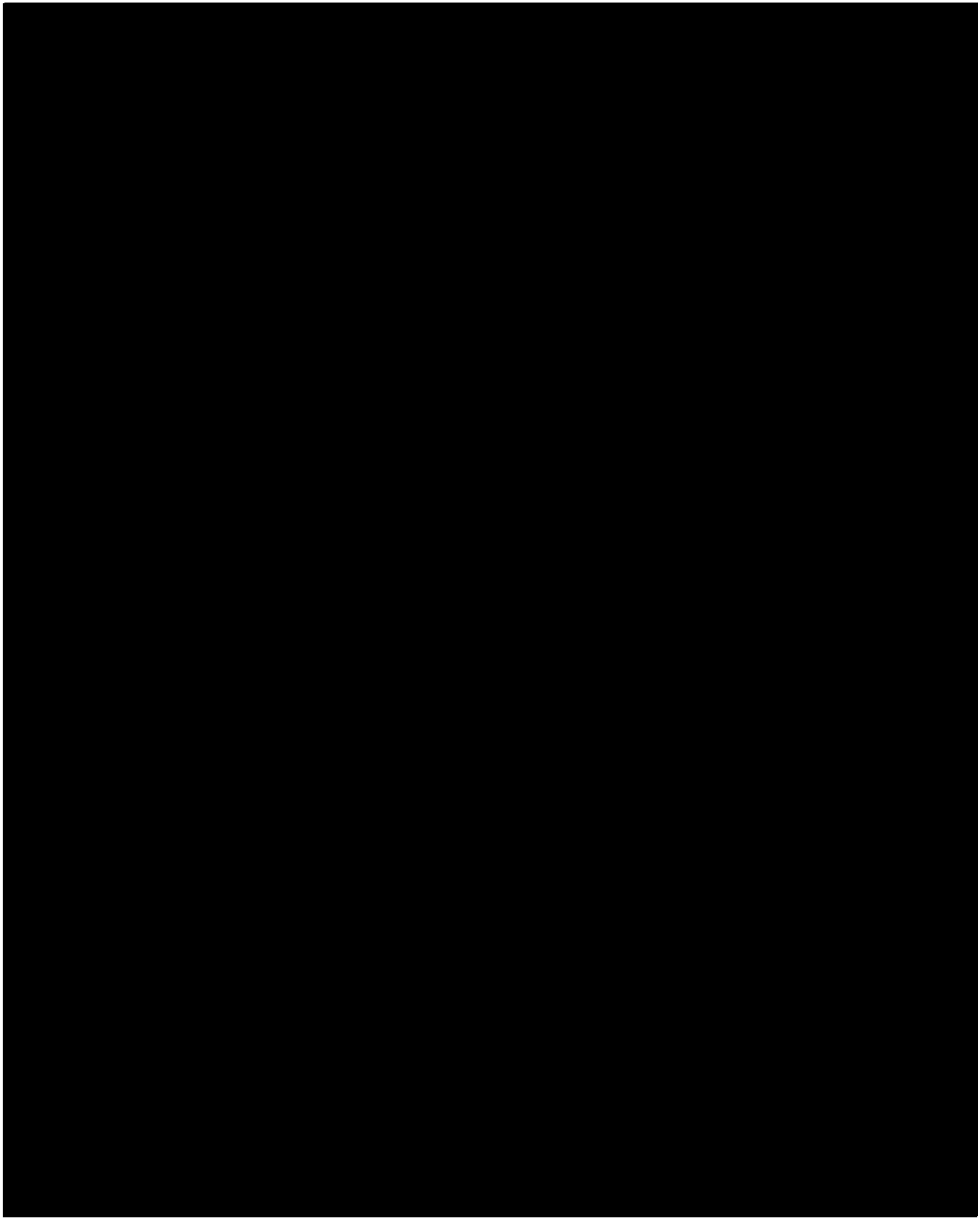
I, Judy K. Carter, verify under penalty of perjury that the foregoing is true and correct. Further, I certify that I am qualified and authorized to file this statement.

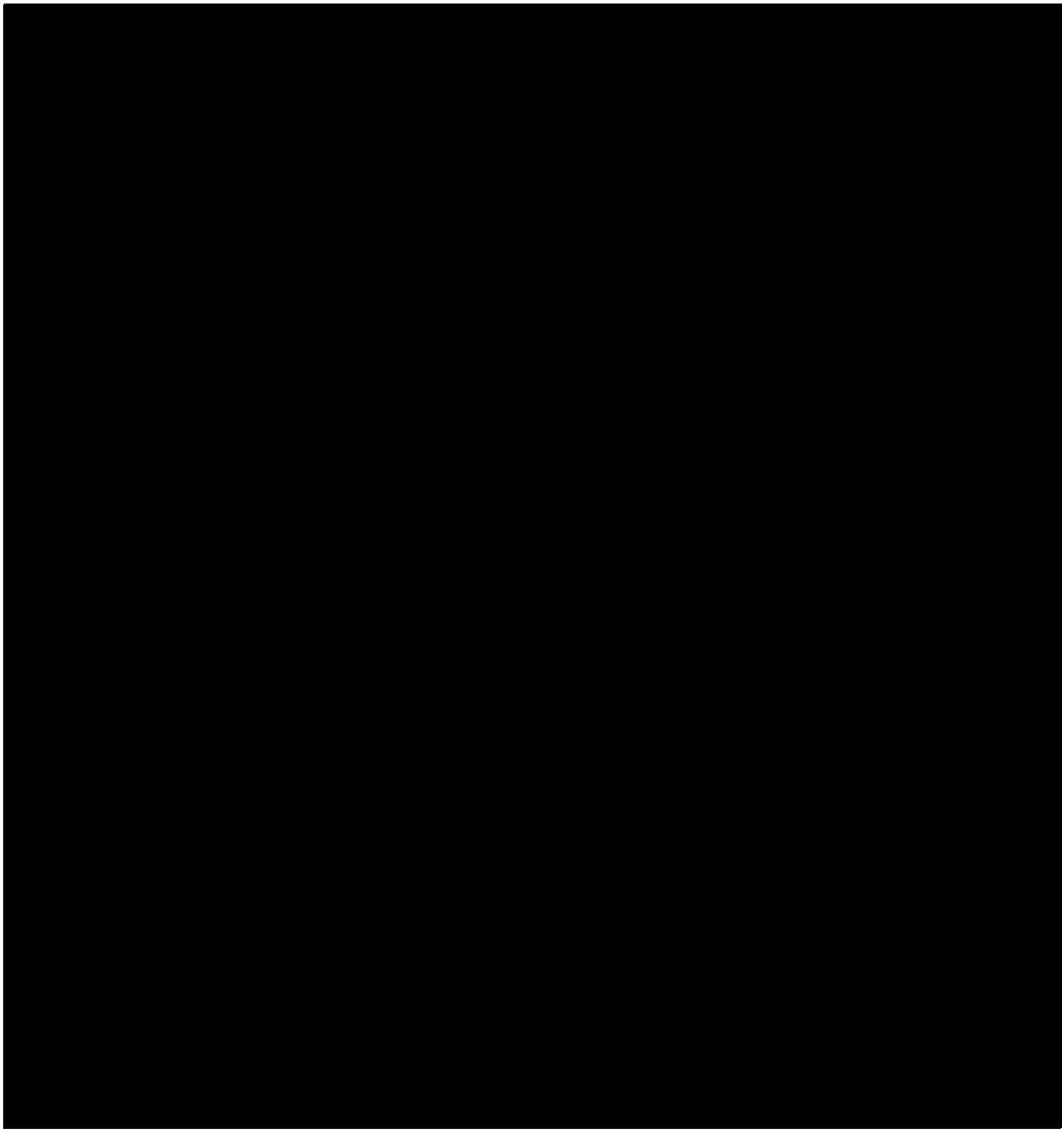
Judy K. Carter

Executed on October 22, 2025

Carter Exhibit 01

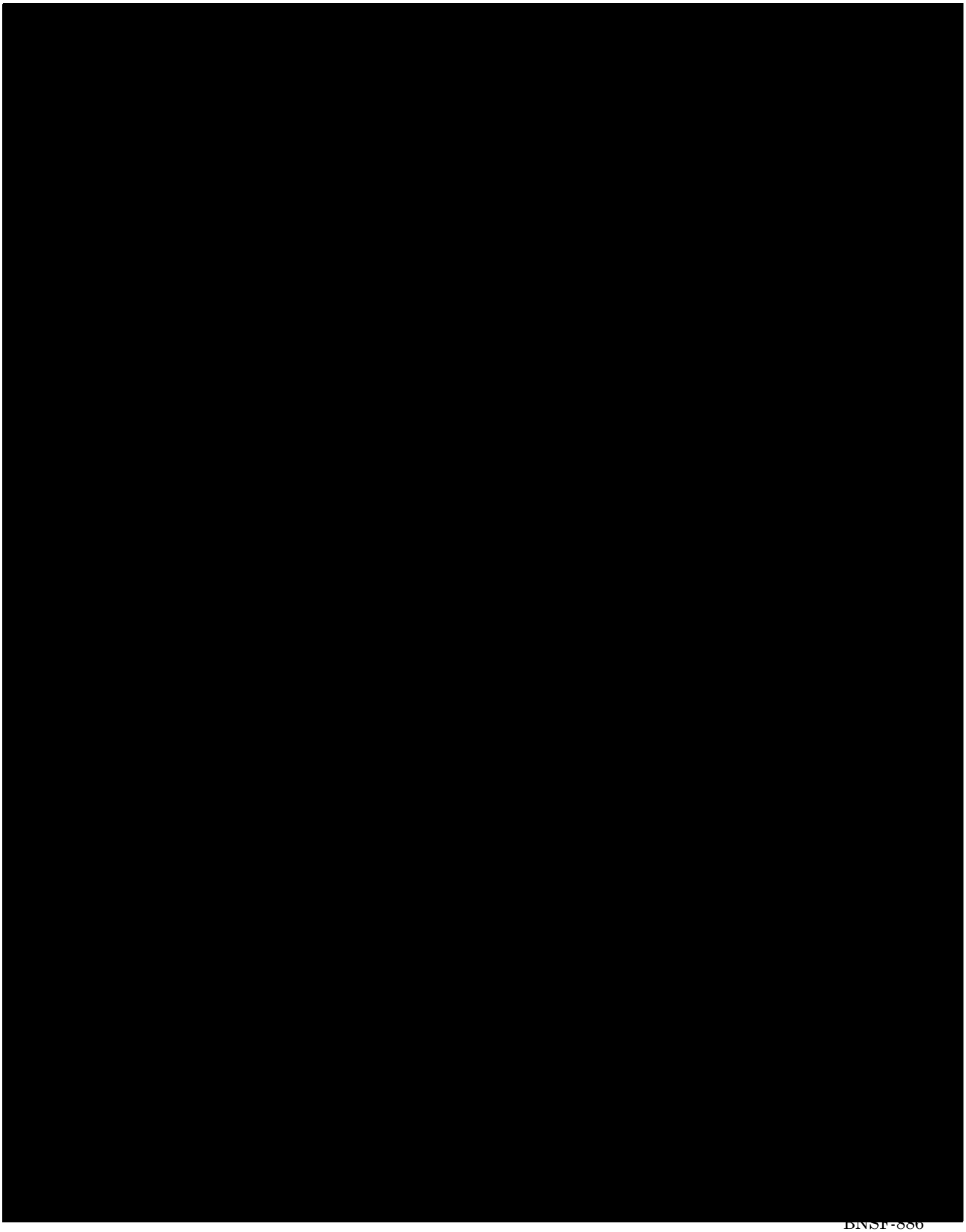
{{

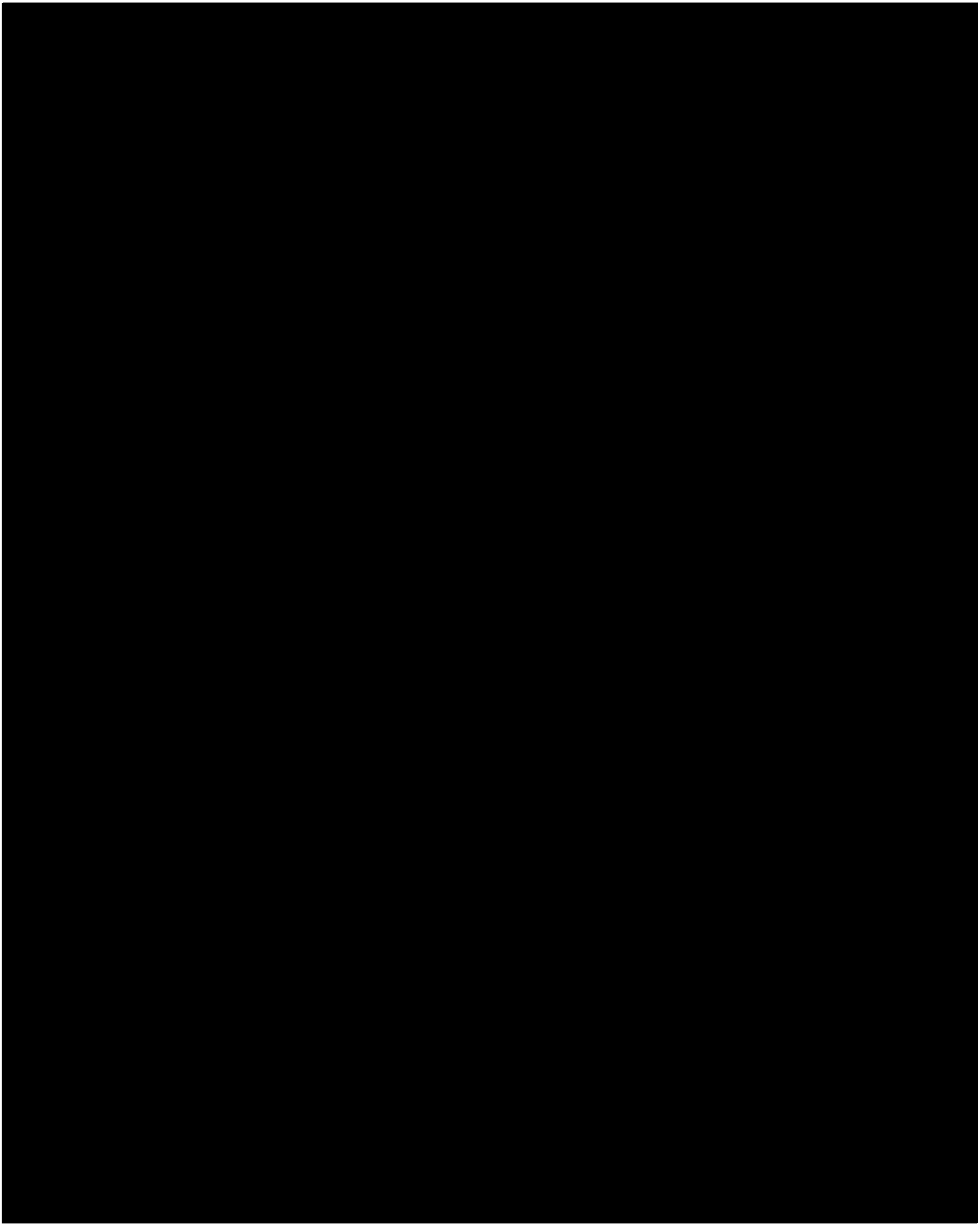


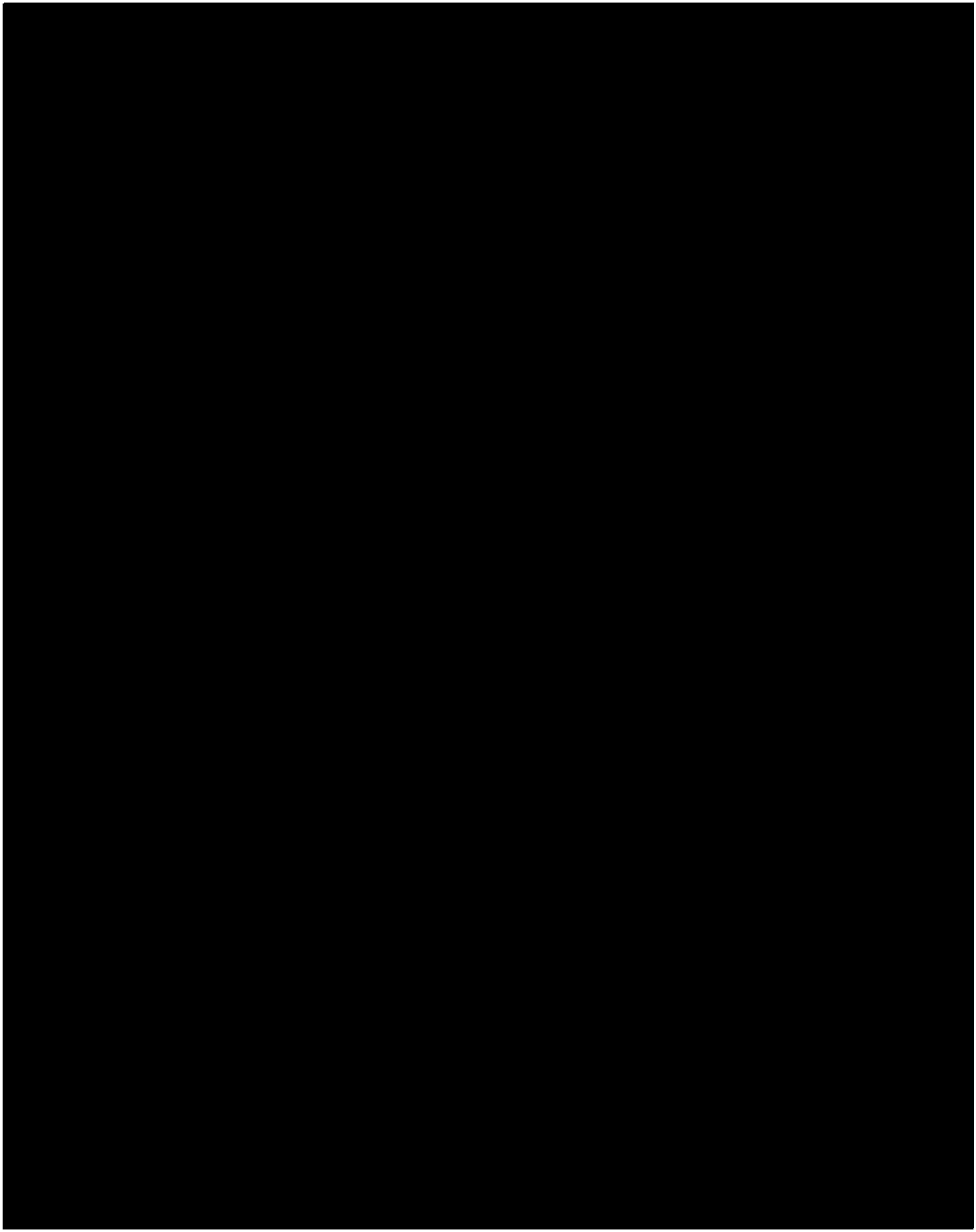


}}

Carter Exhibit 02









}}

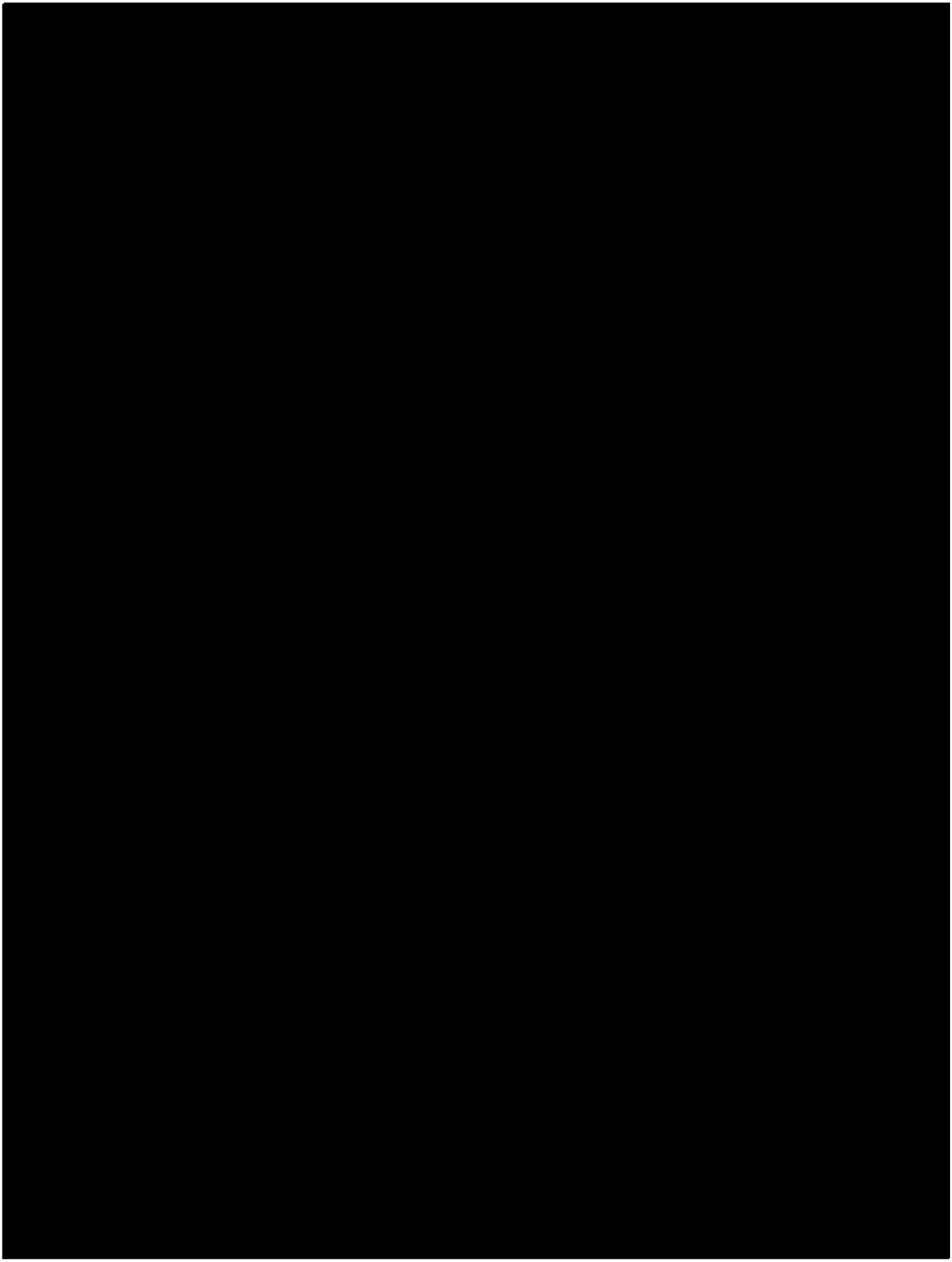
Carter Exhibit 03

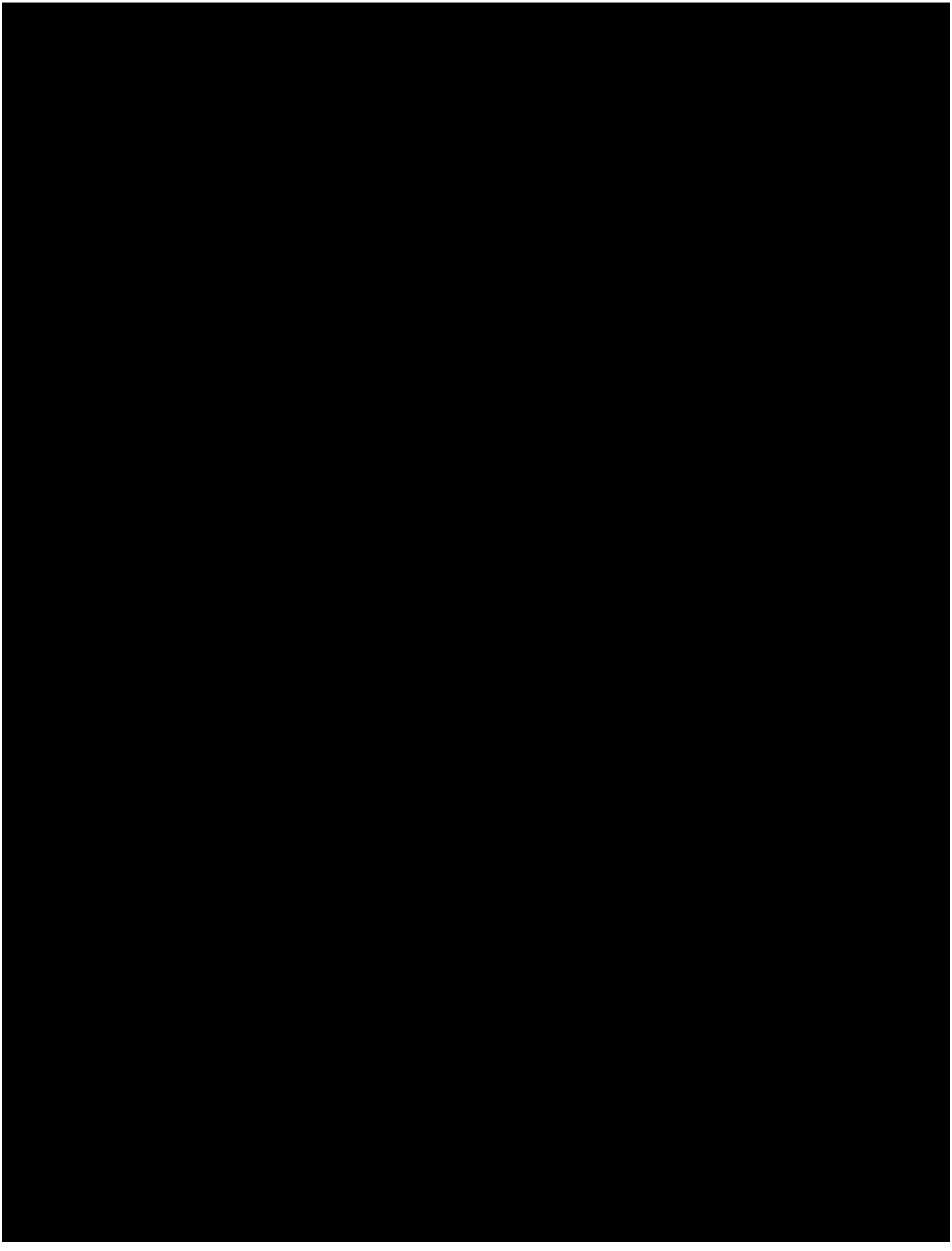
[redacted]

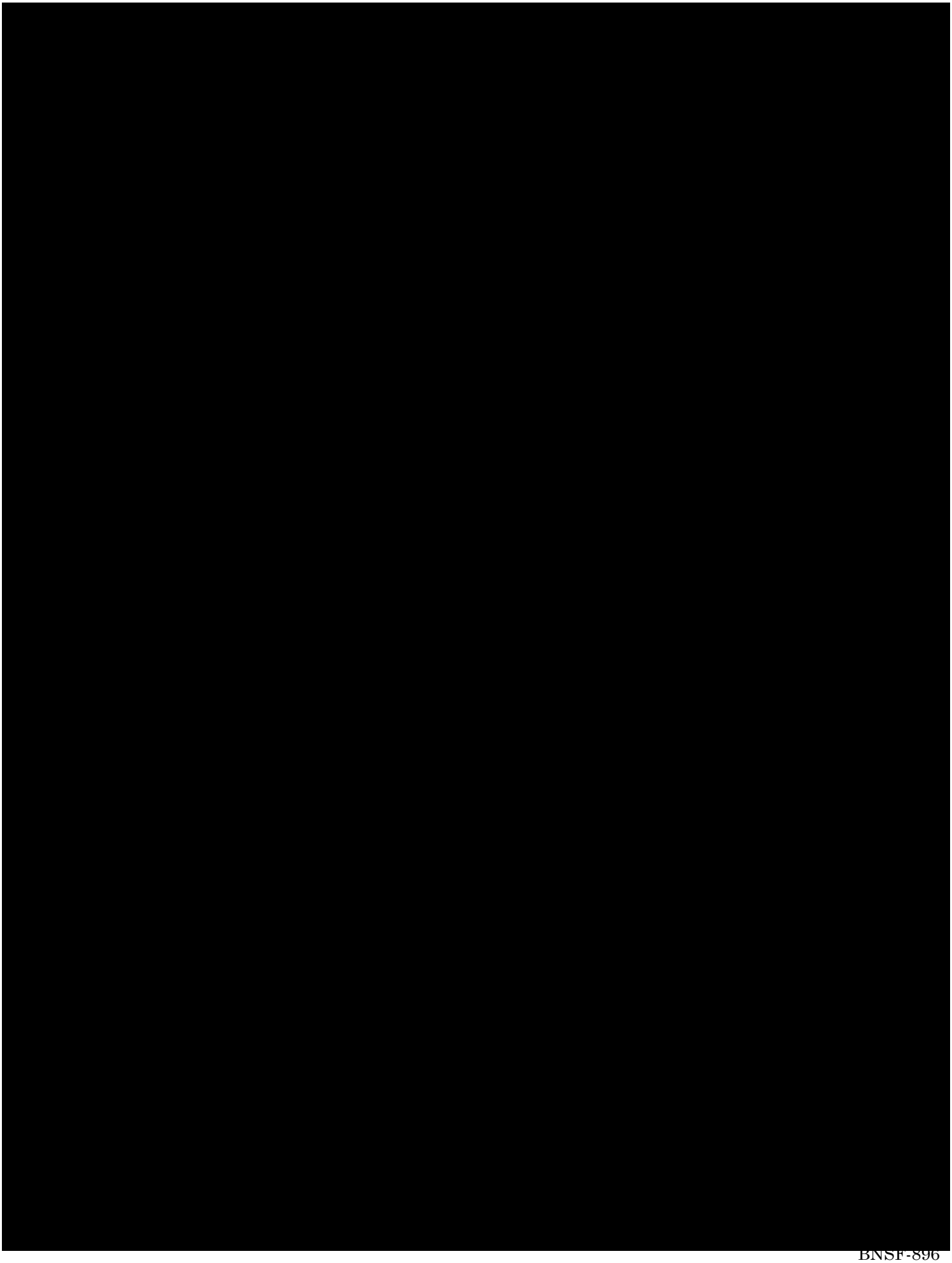
[redacted]

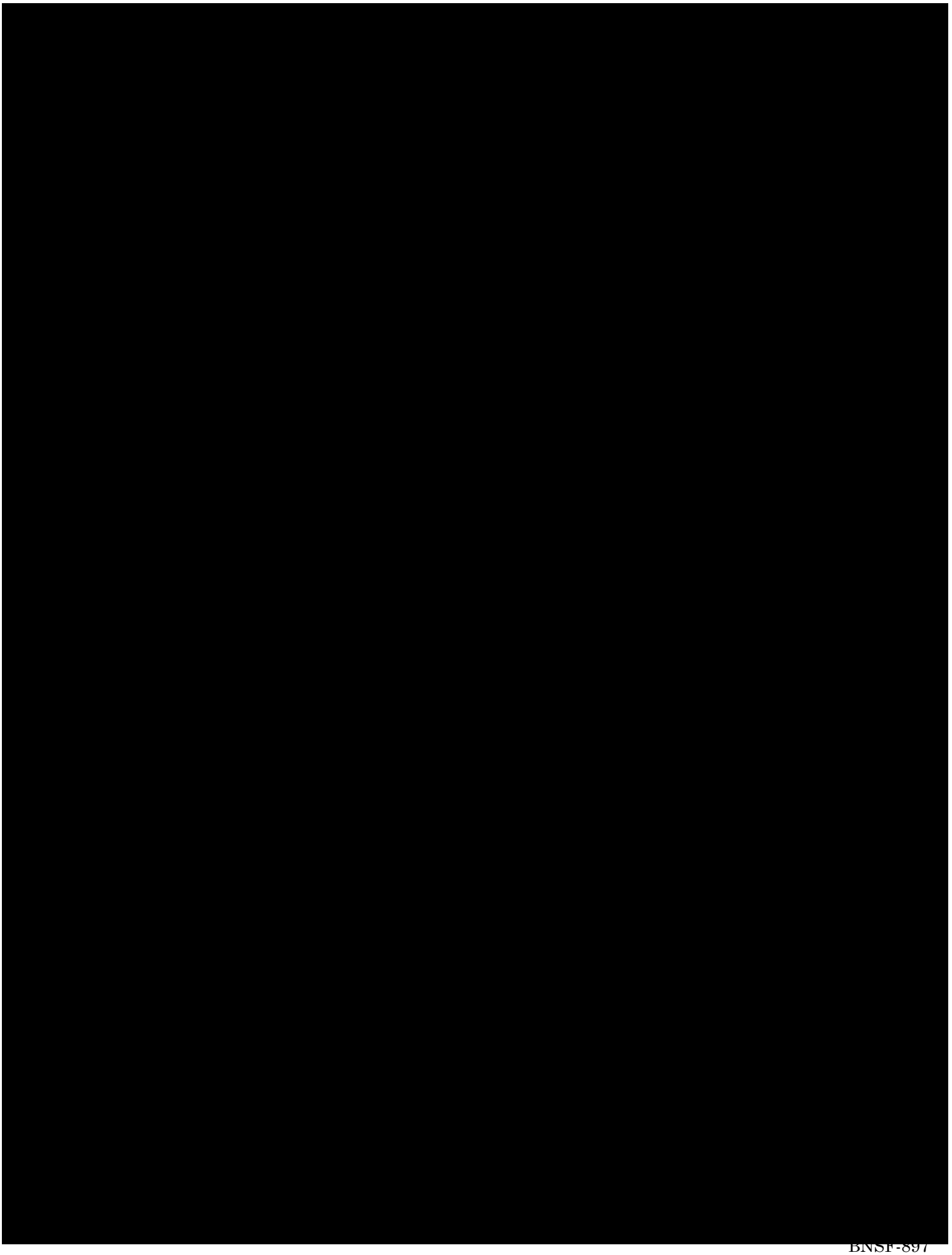
}}

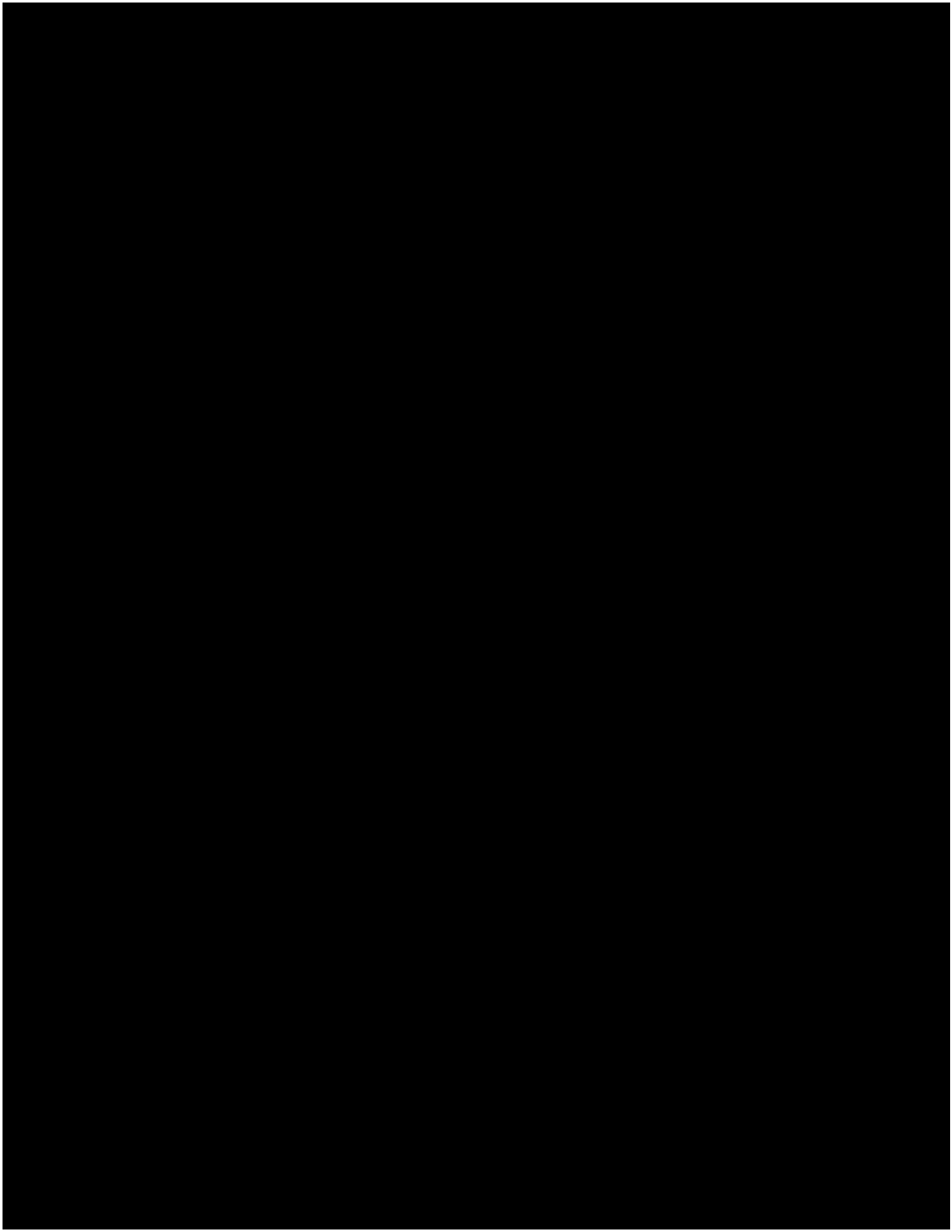
Carter Exhibit 04

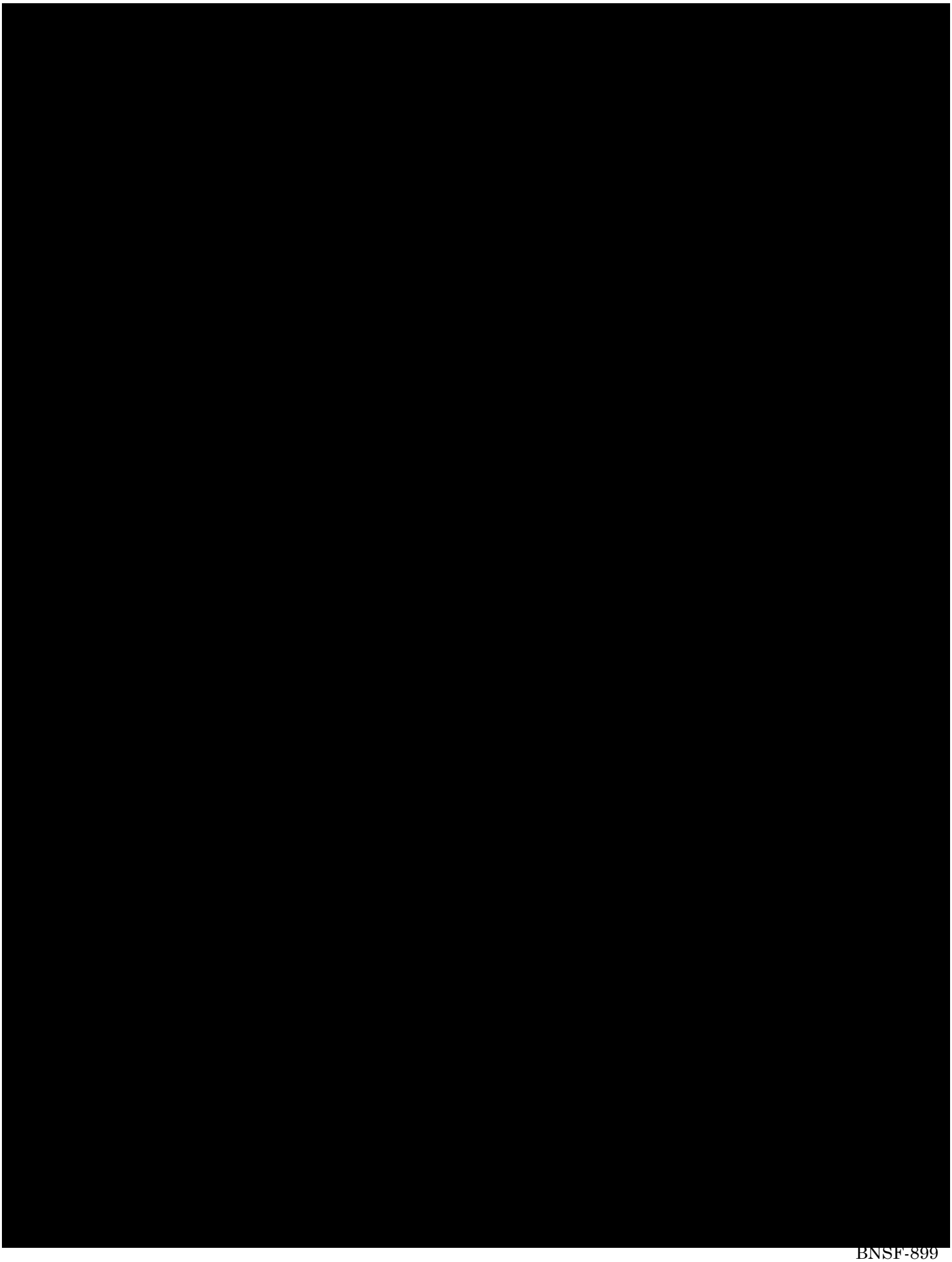






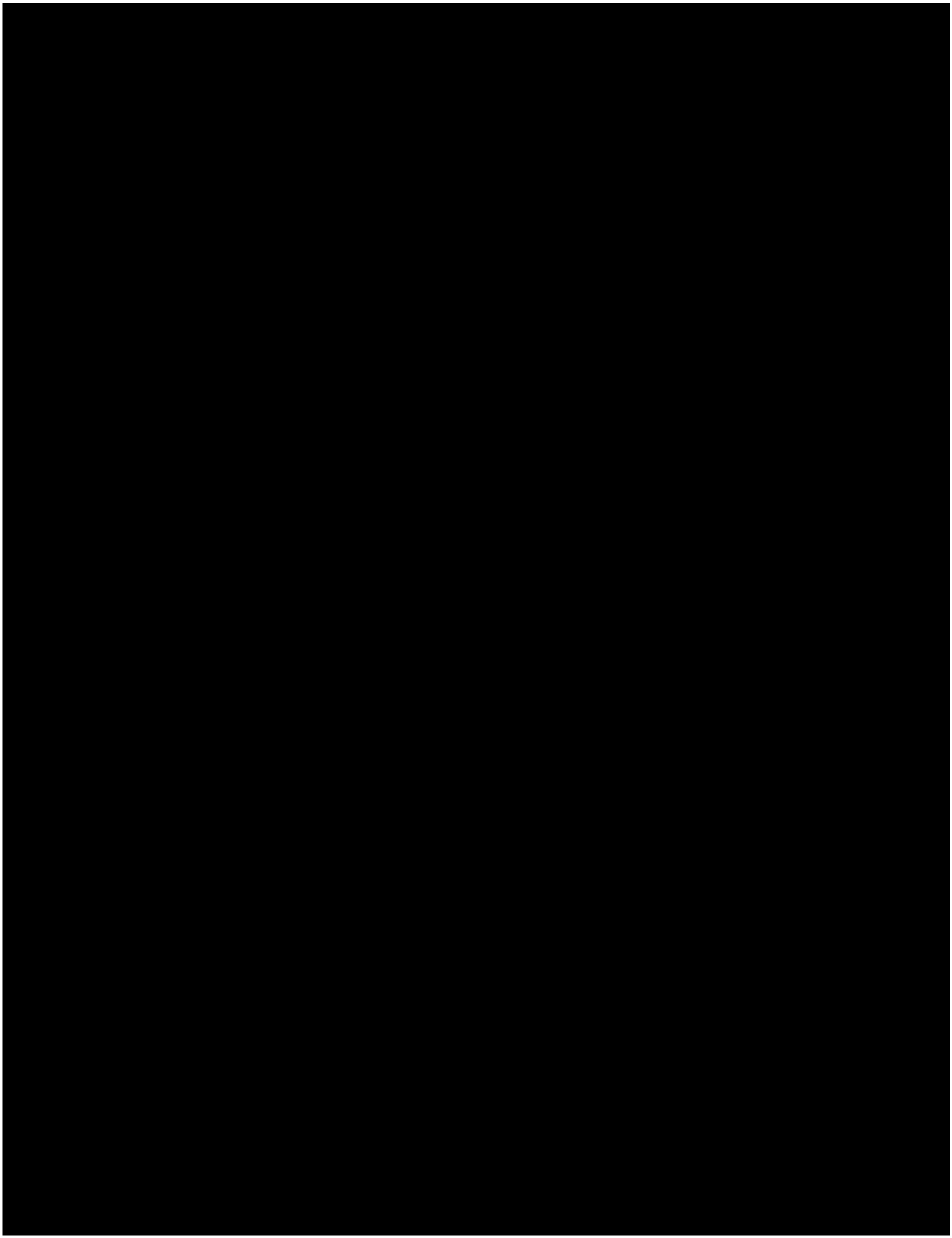


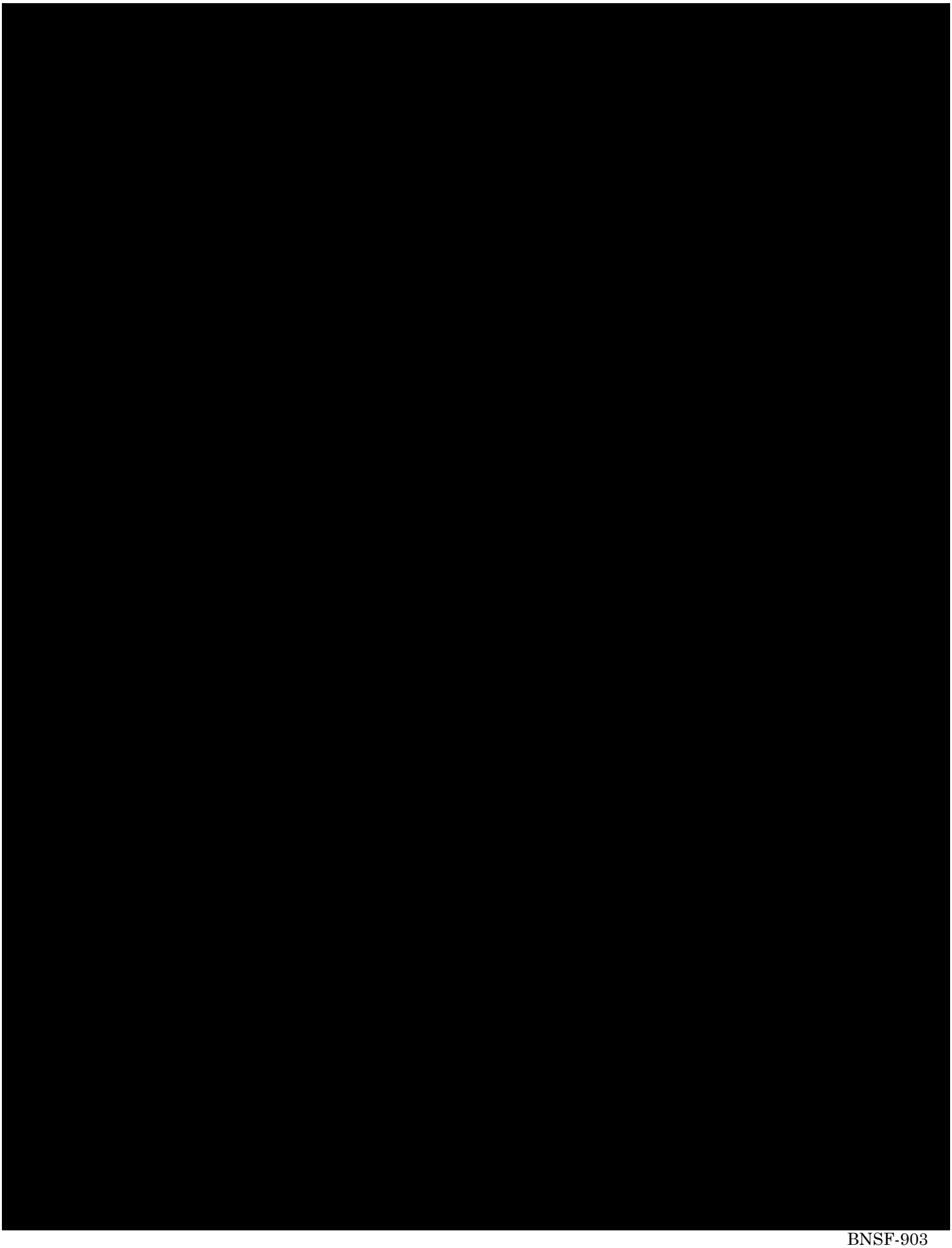


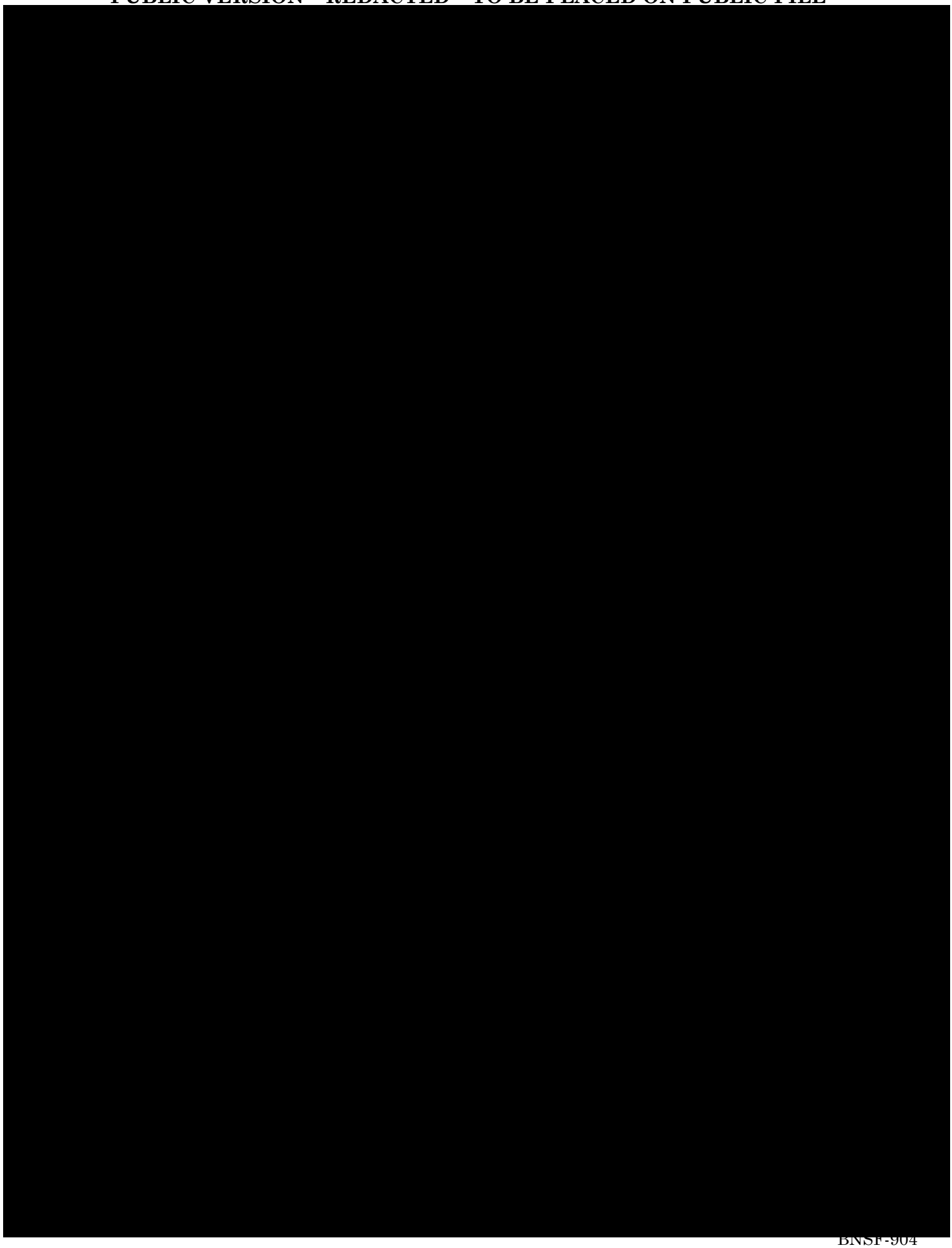


[redacted]

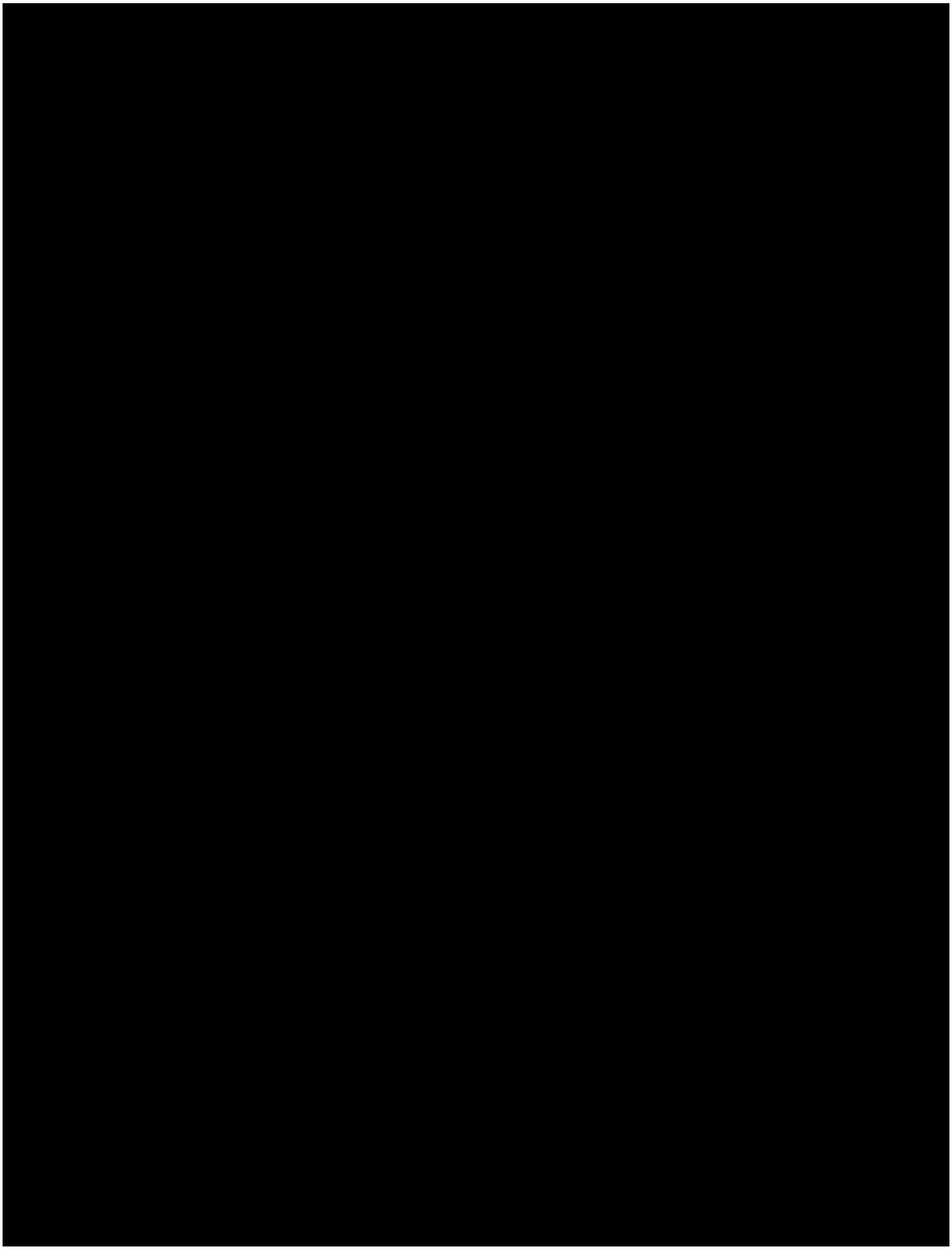
[redacted]

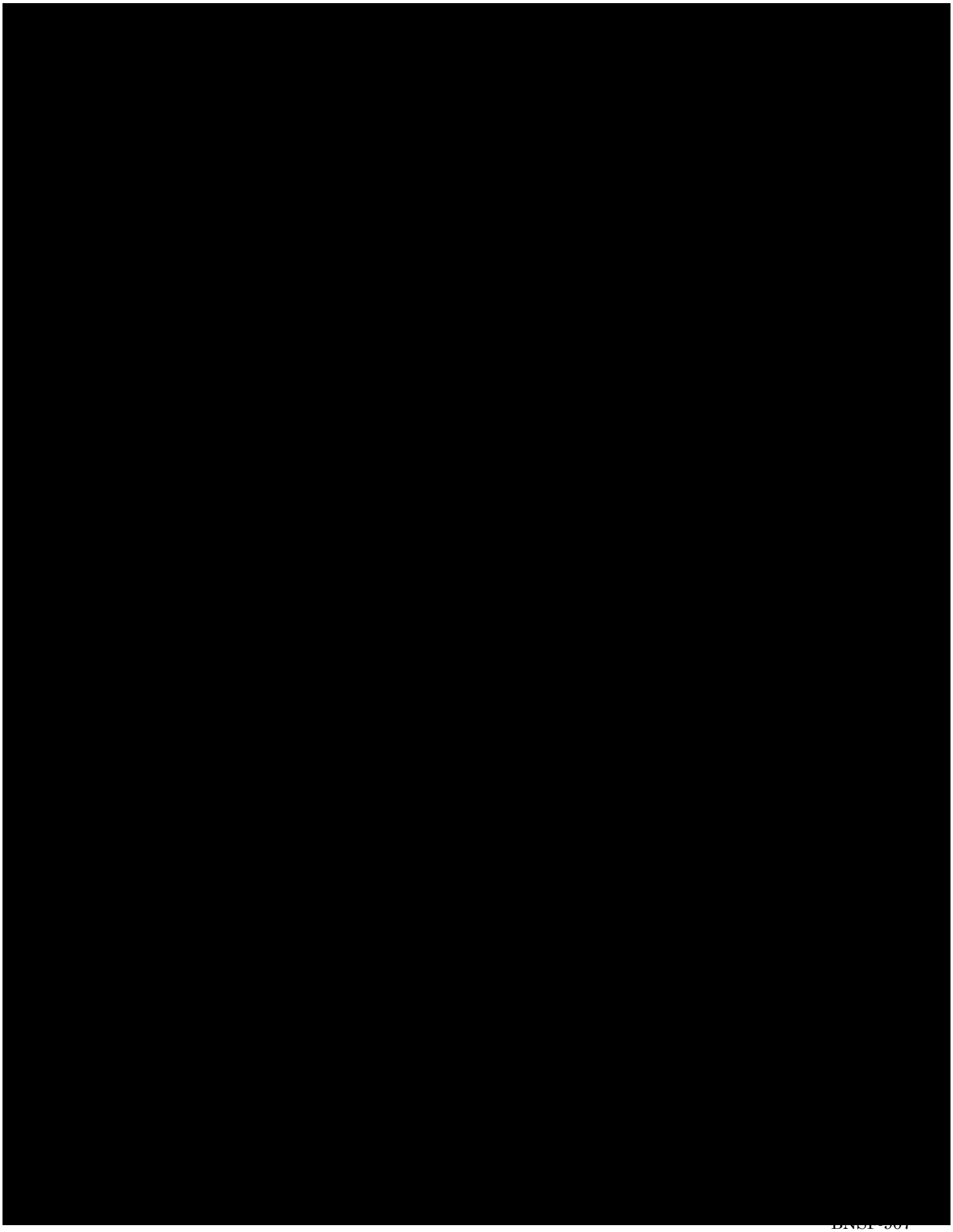


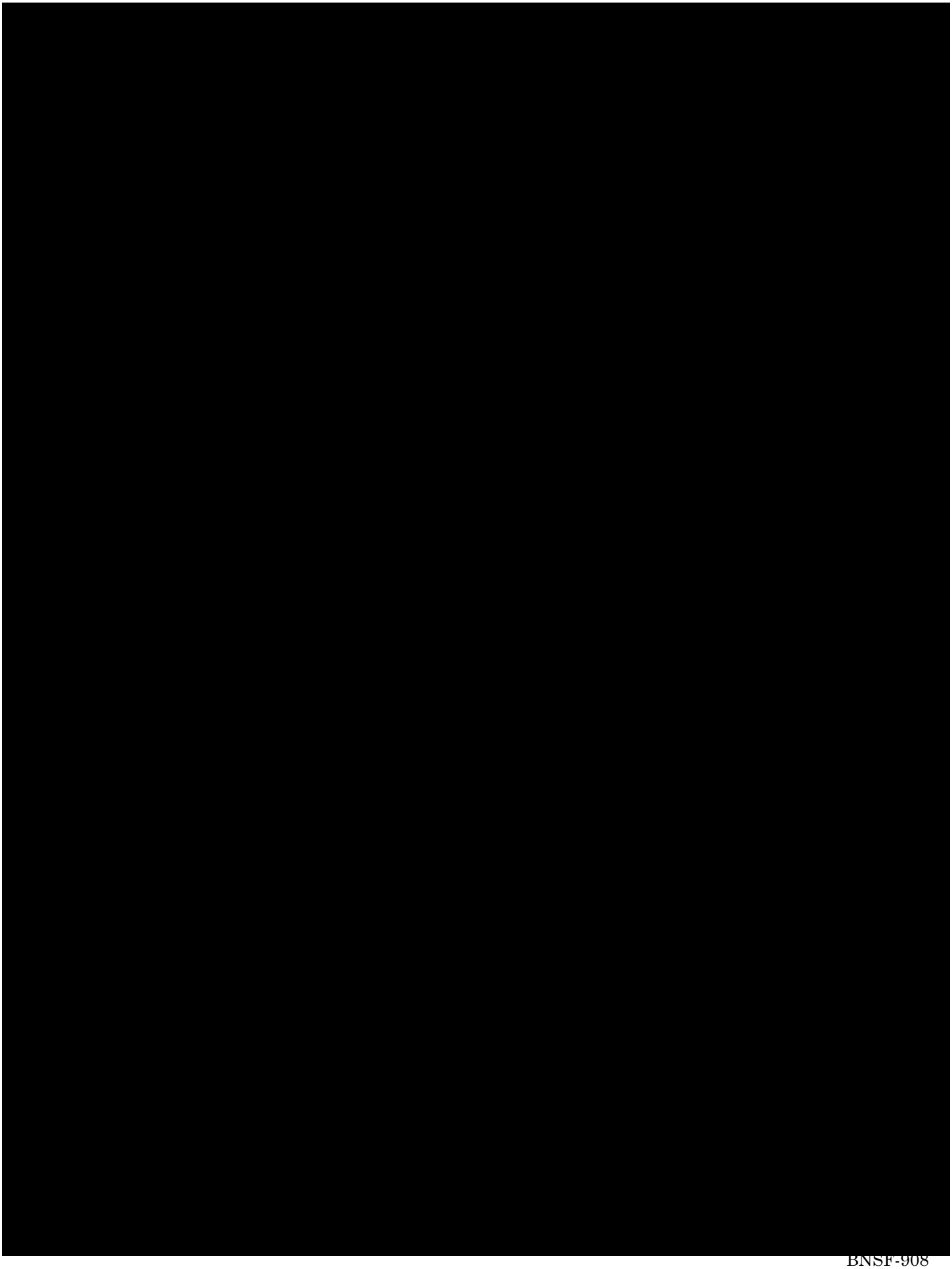


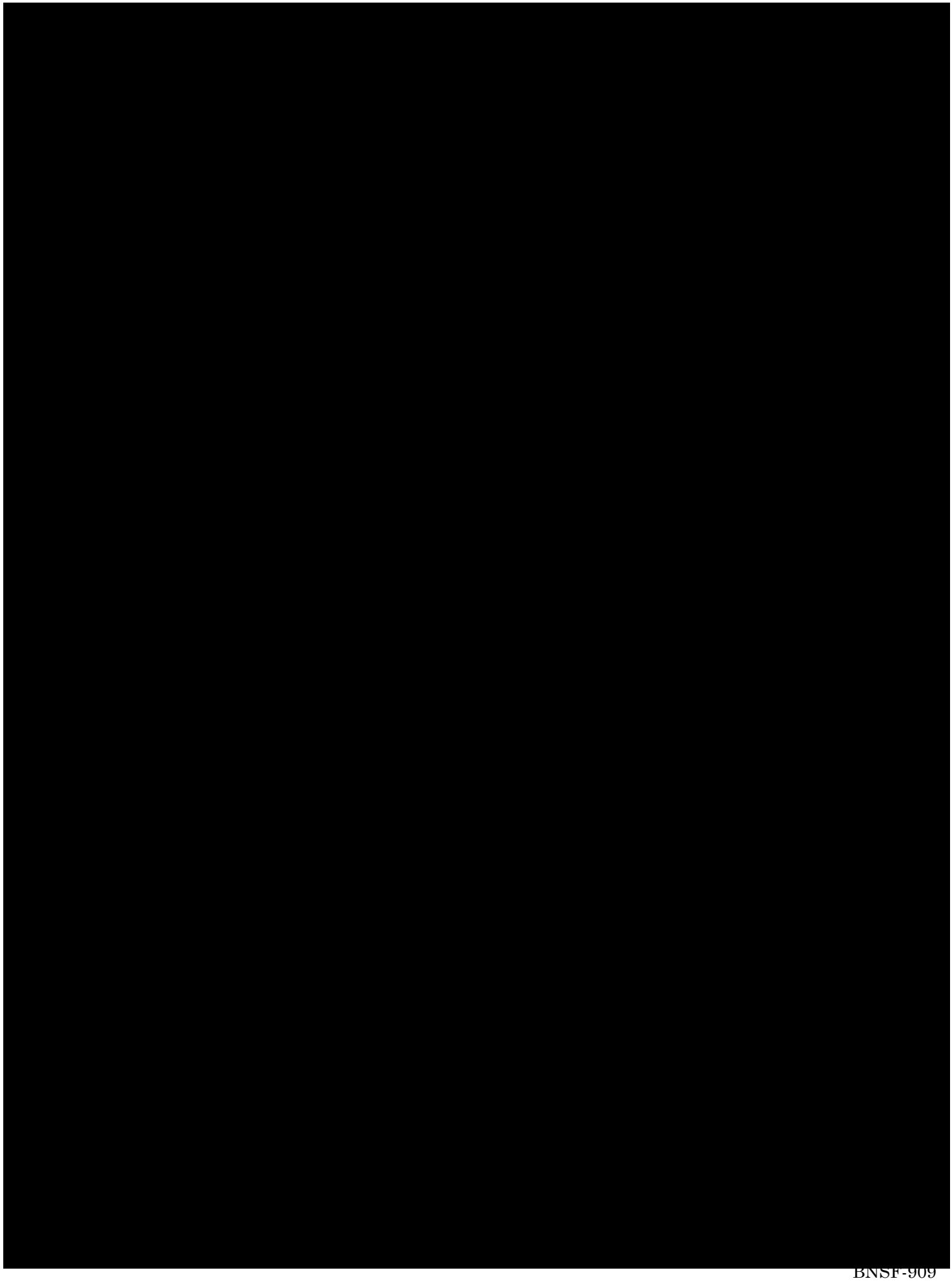


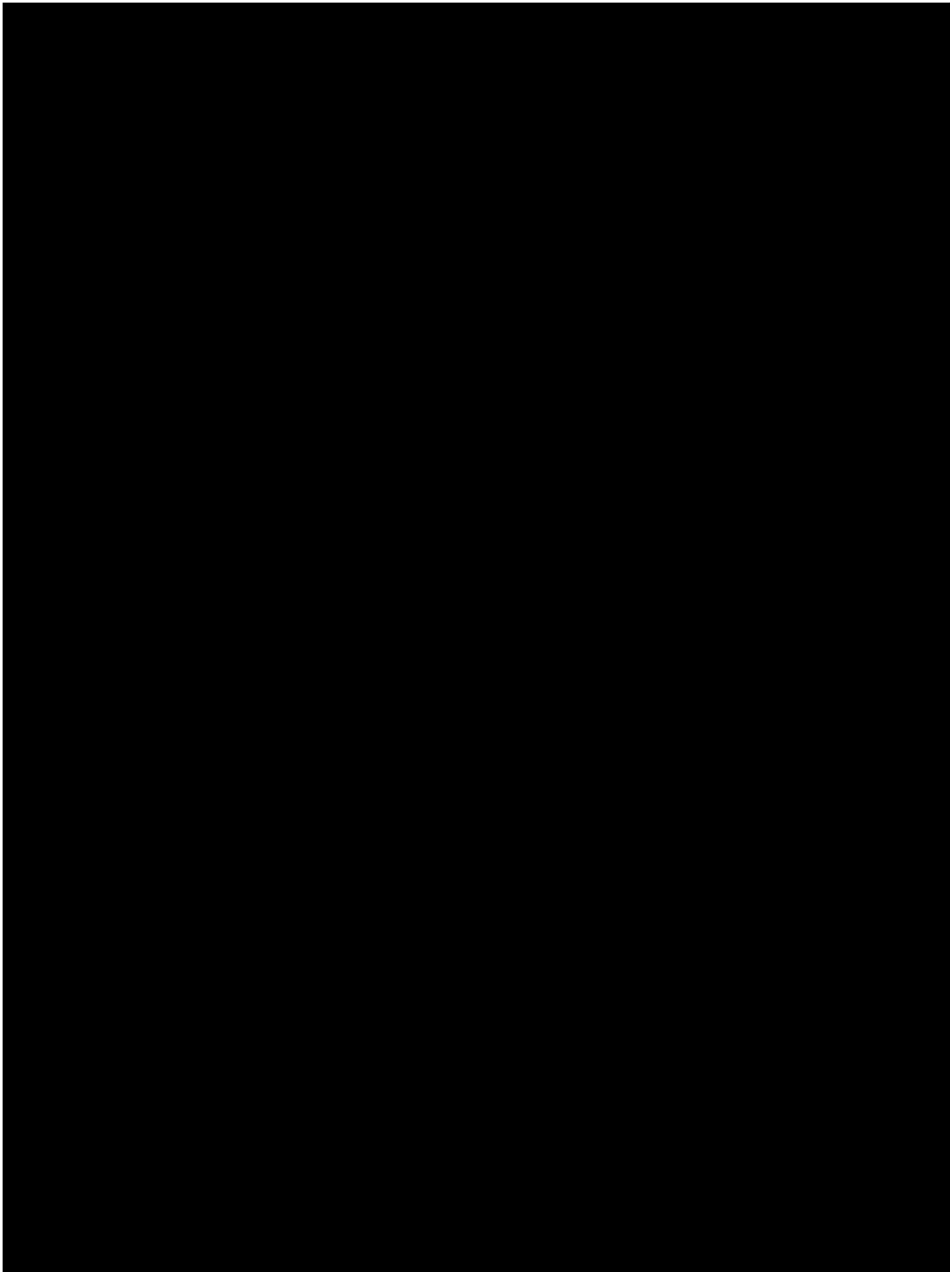
[redacted]



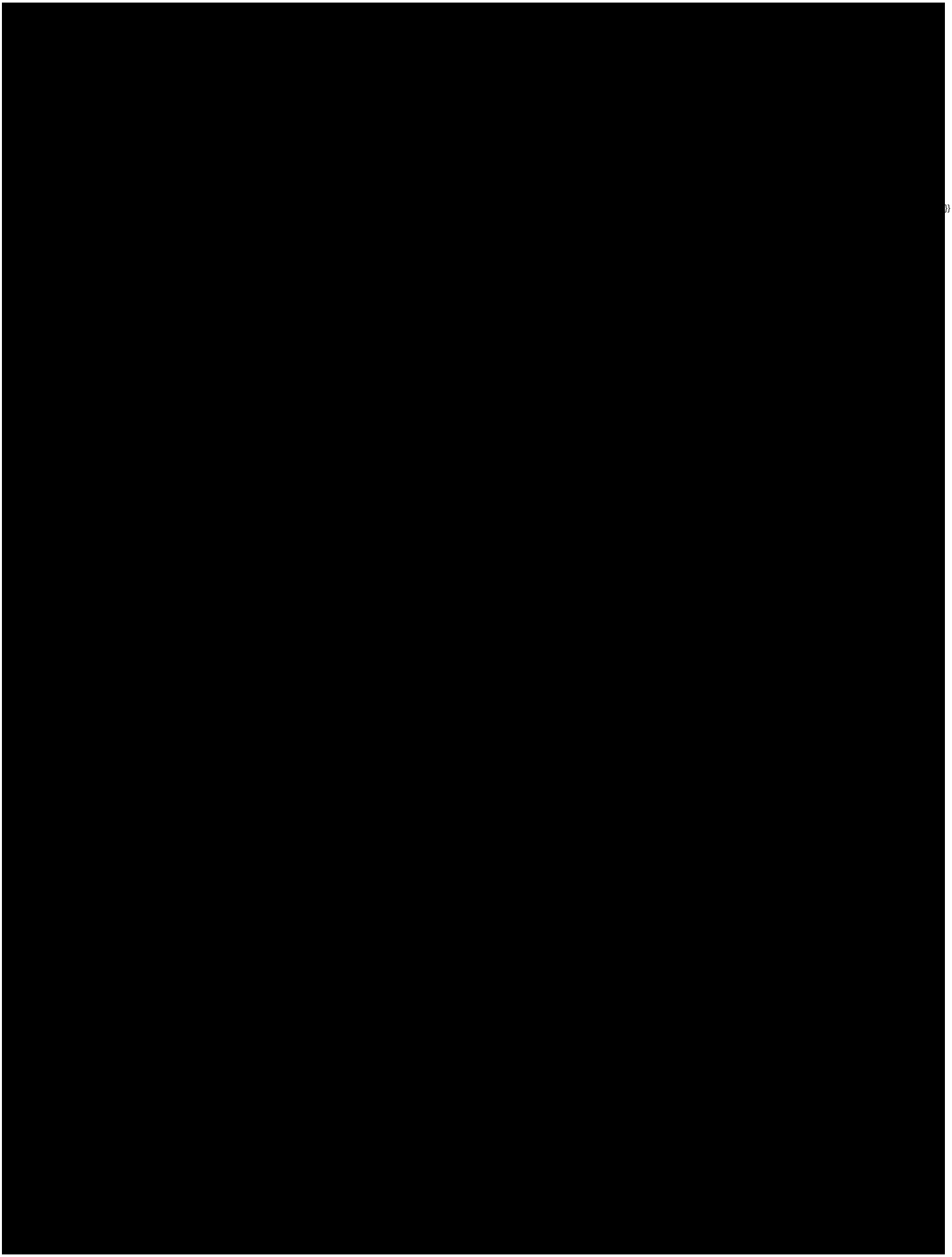








[redacted]



Carter Exhibit 05

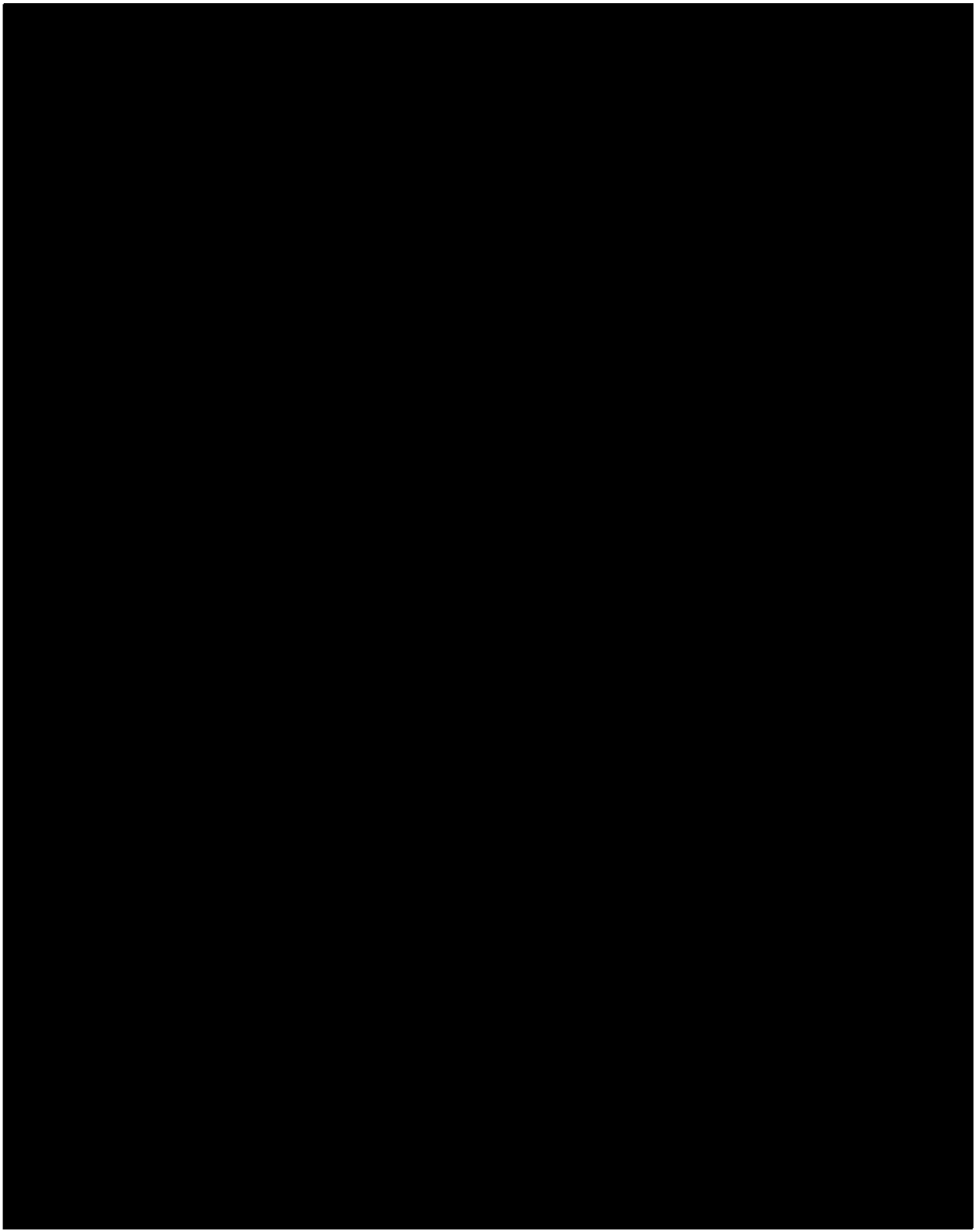
{{
PUBLIC VERSION – REDACTED – TO BE PLACED ON PUBLIC FILE

[redacted]

BNSF-914

HIGHLY CONFIDENTIAL

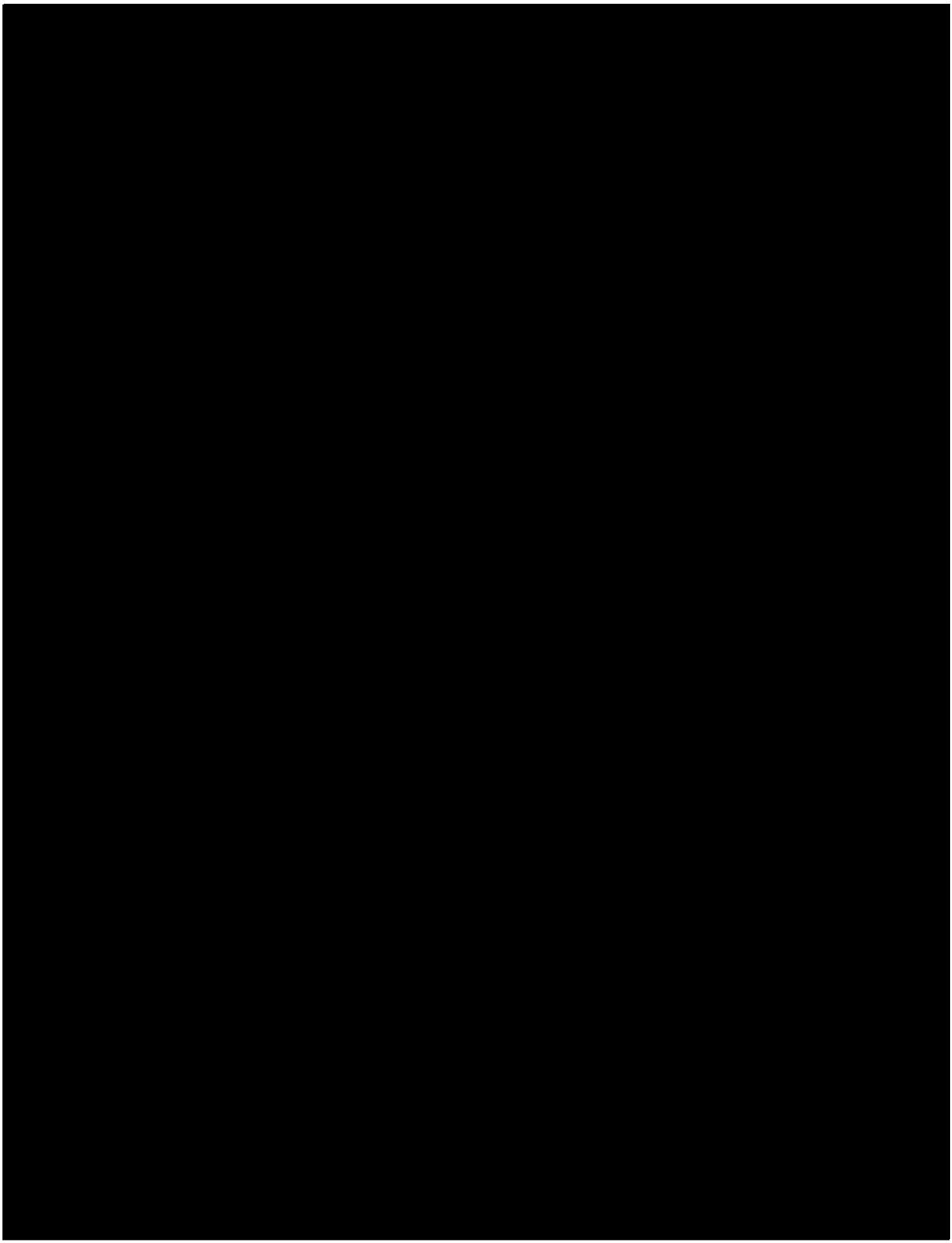
BNSF_EVERGY_0021666

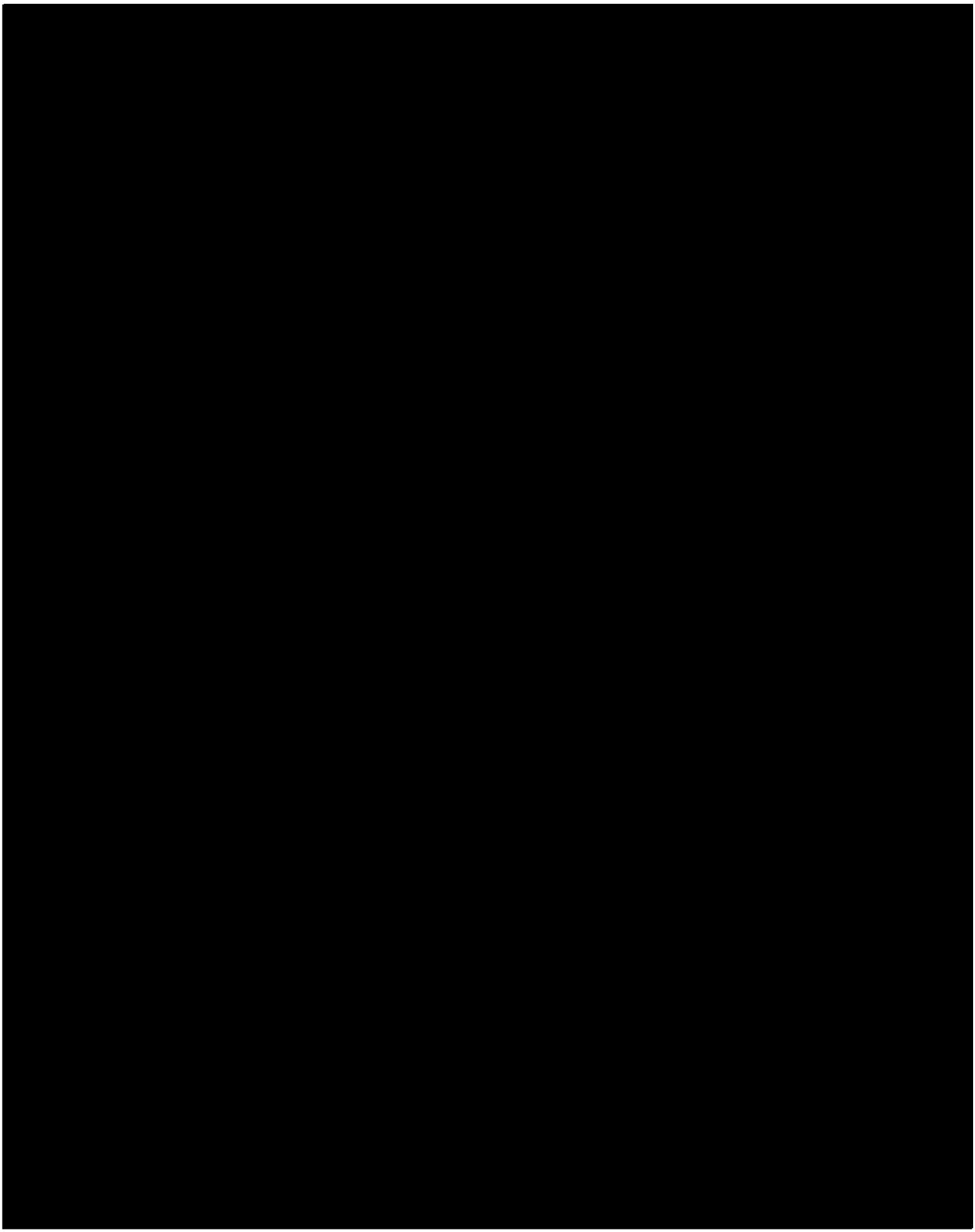


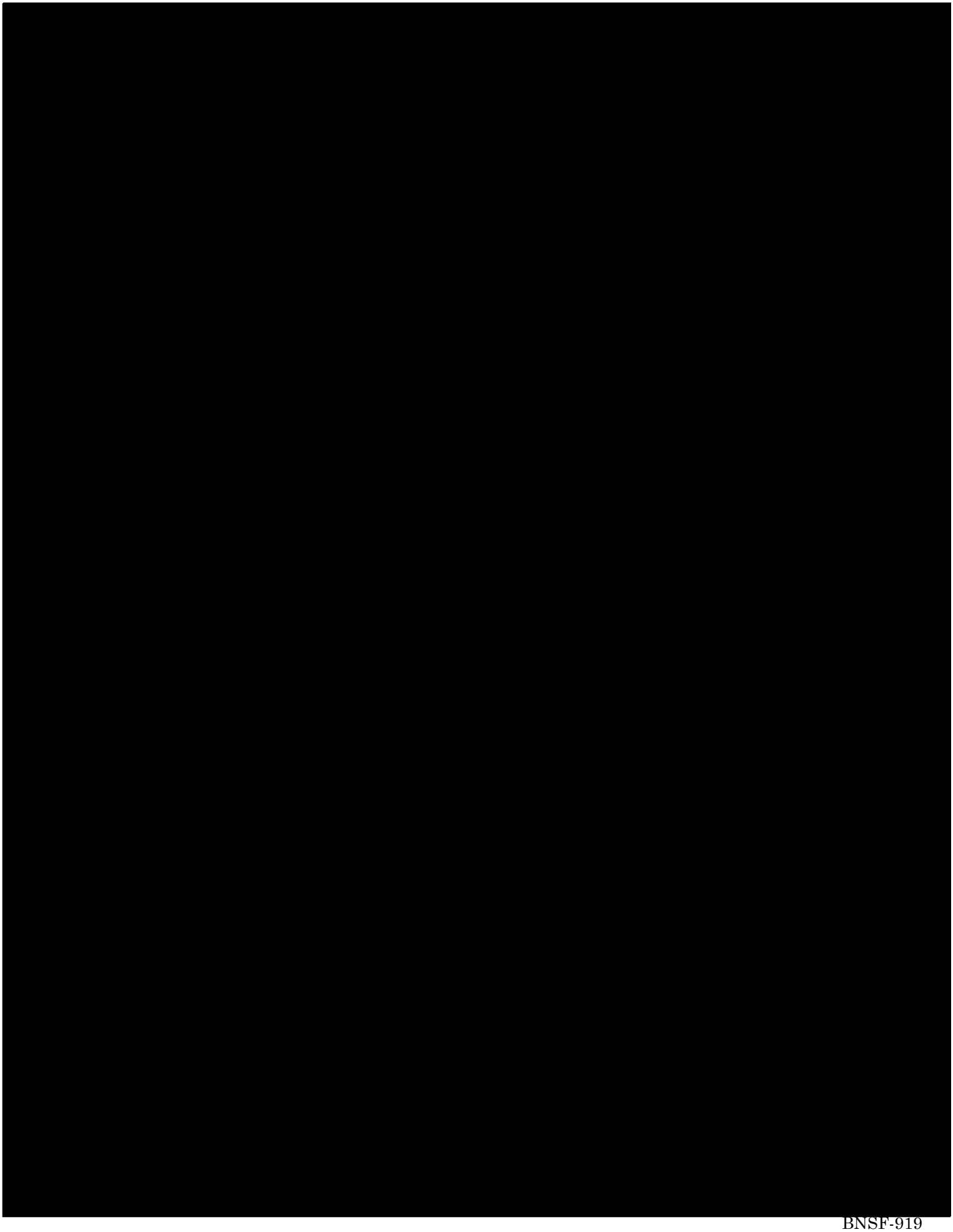
}}

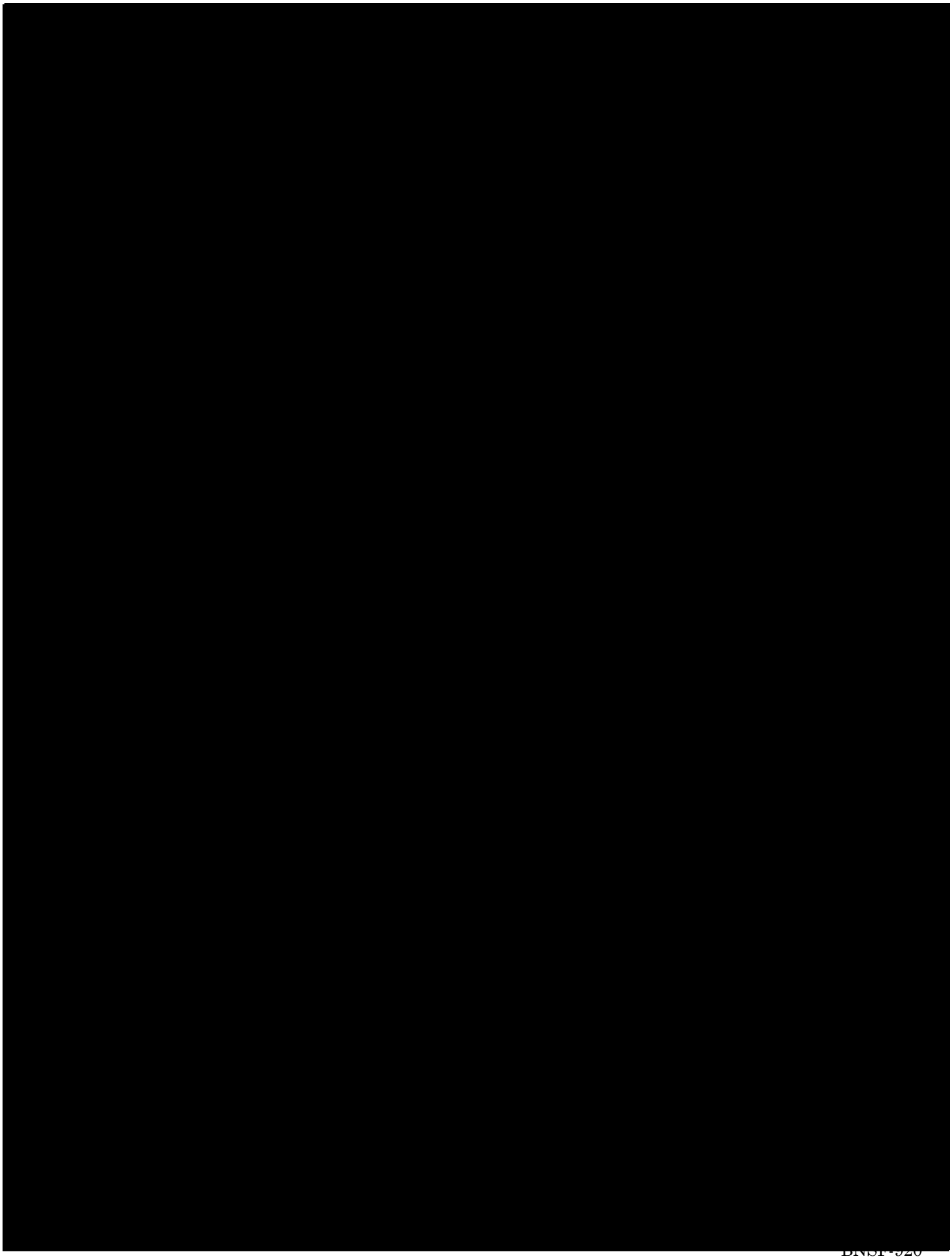
BNSF-915

Carter Exhibit 06





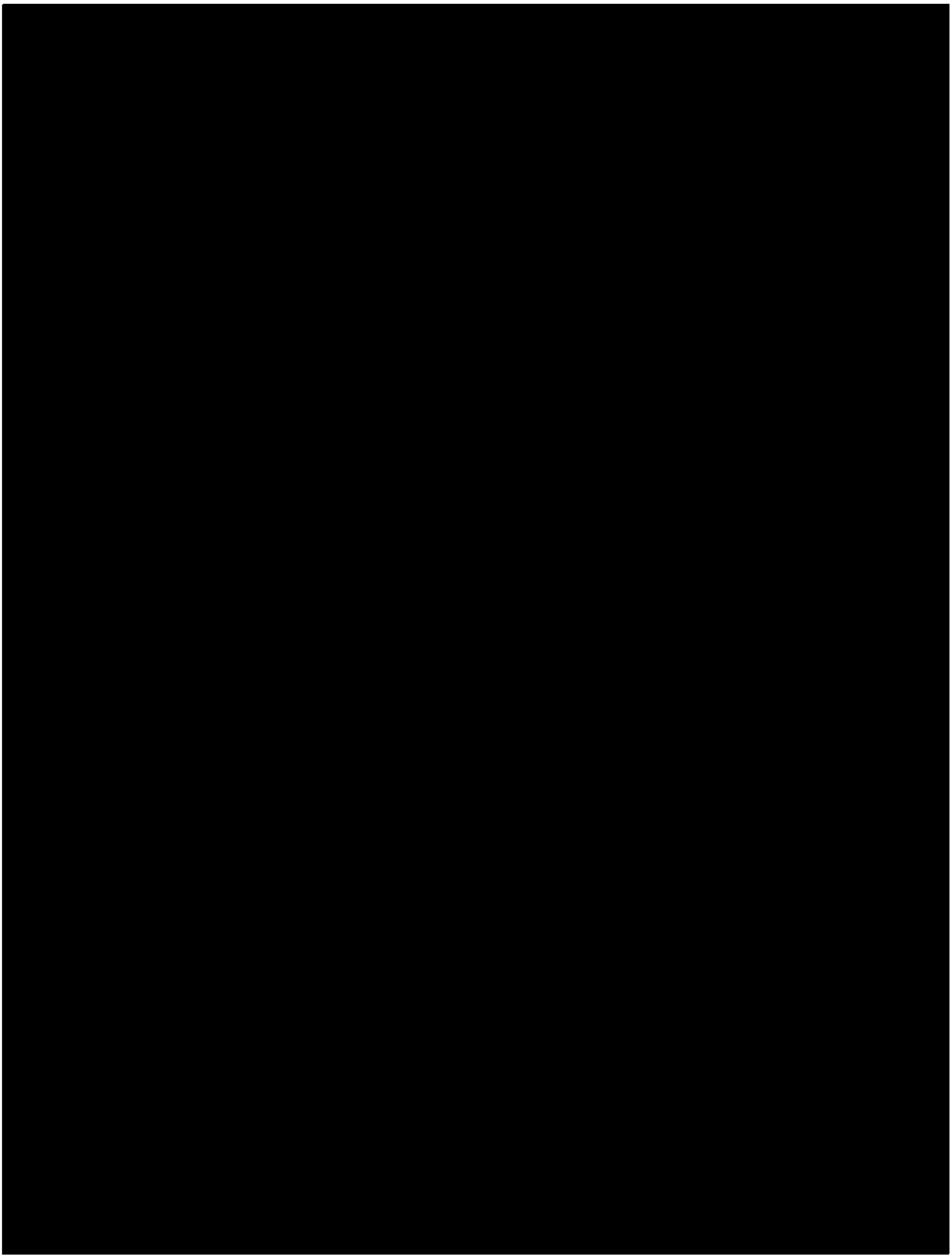


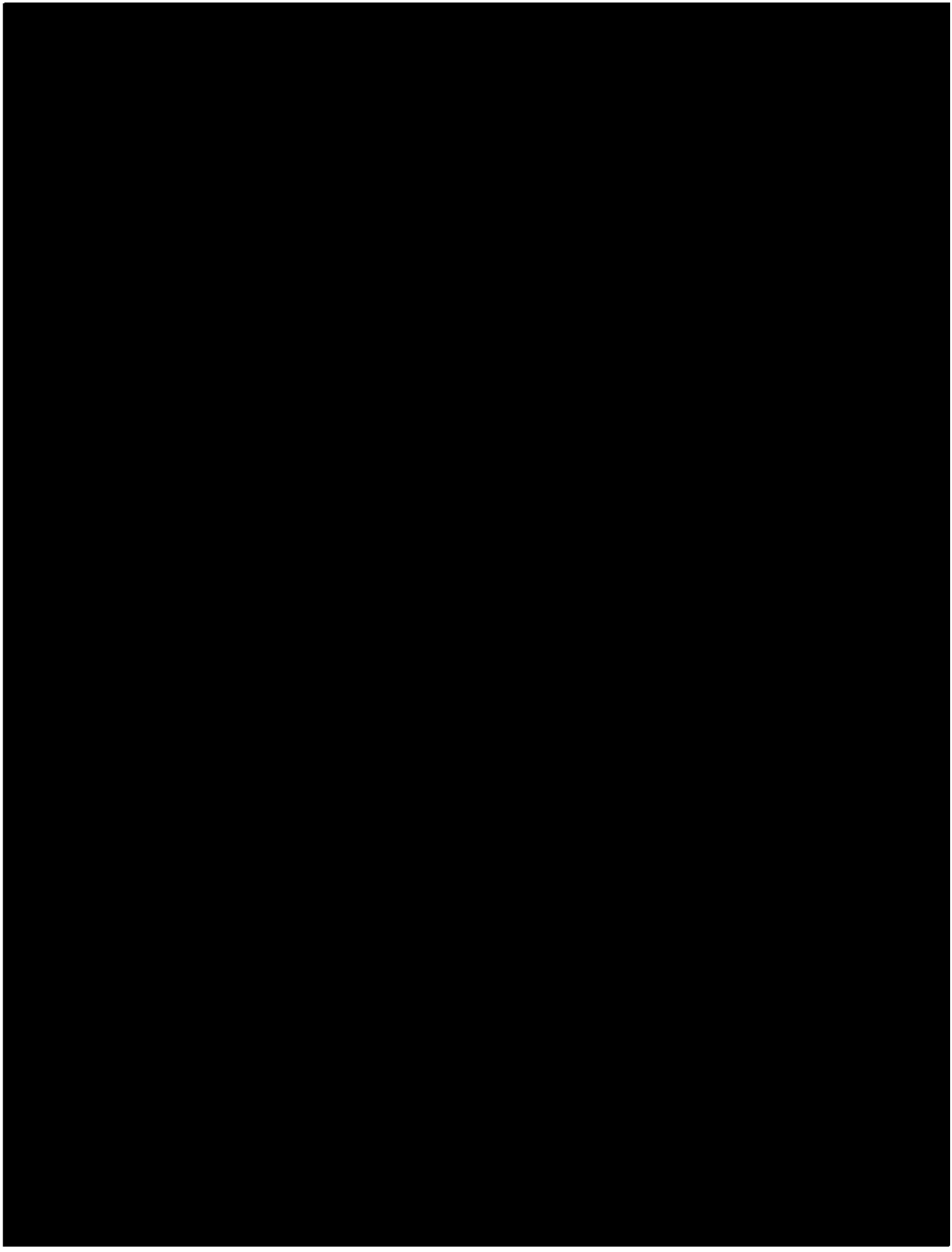


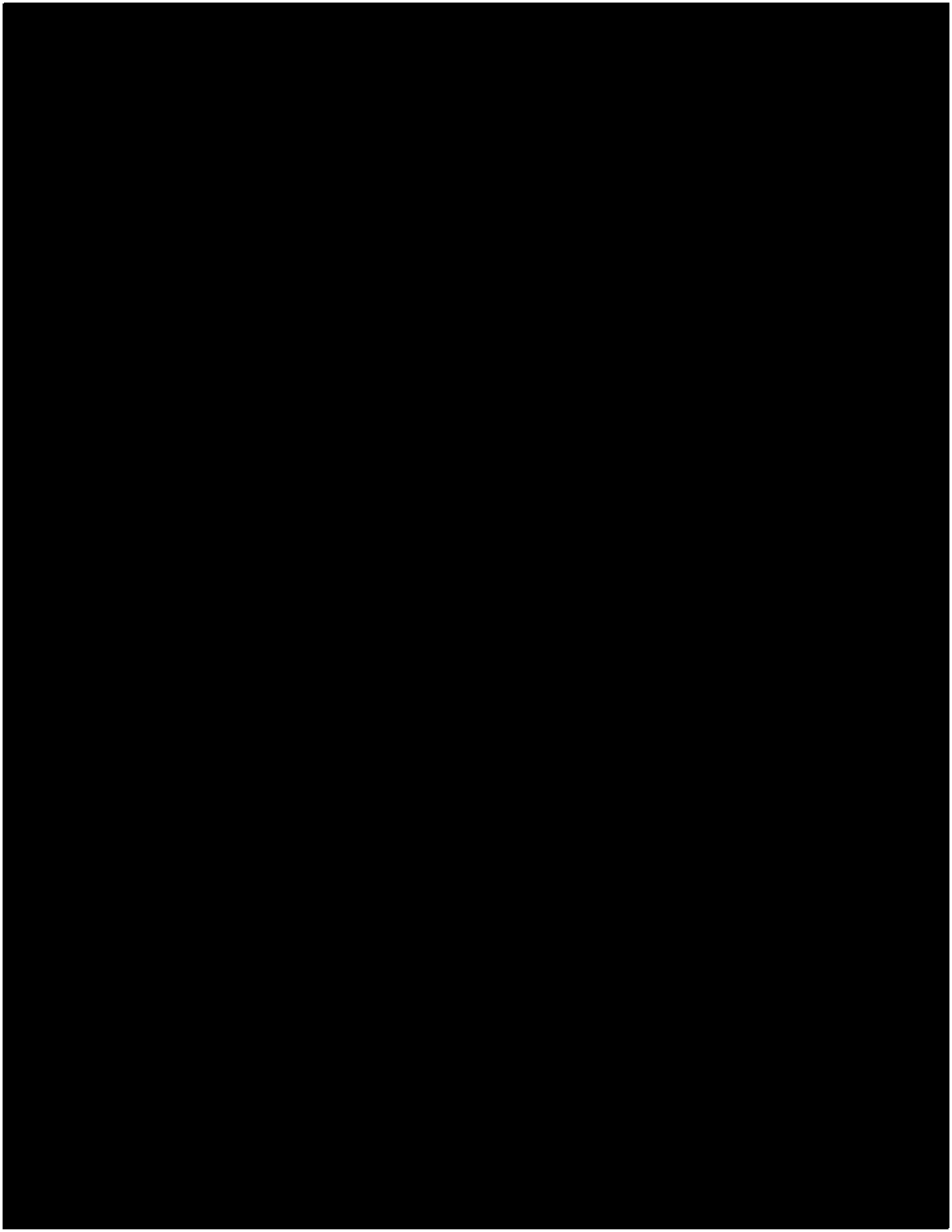


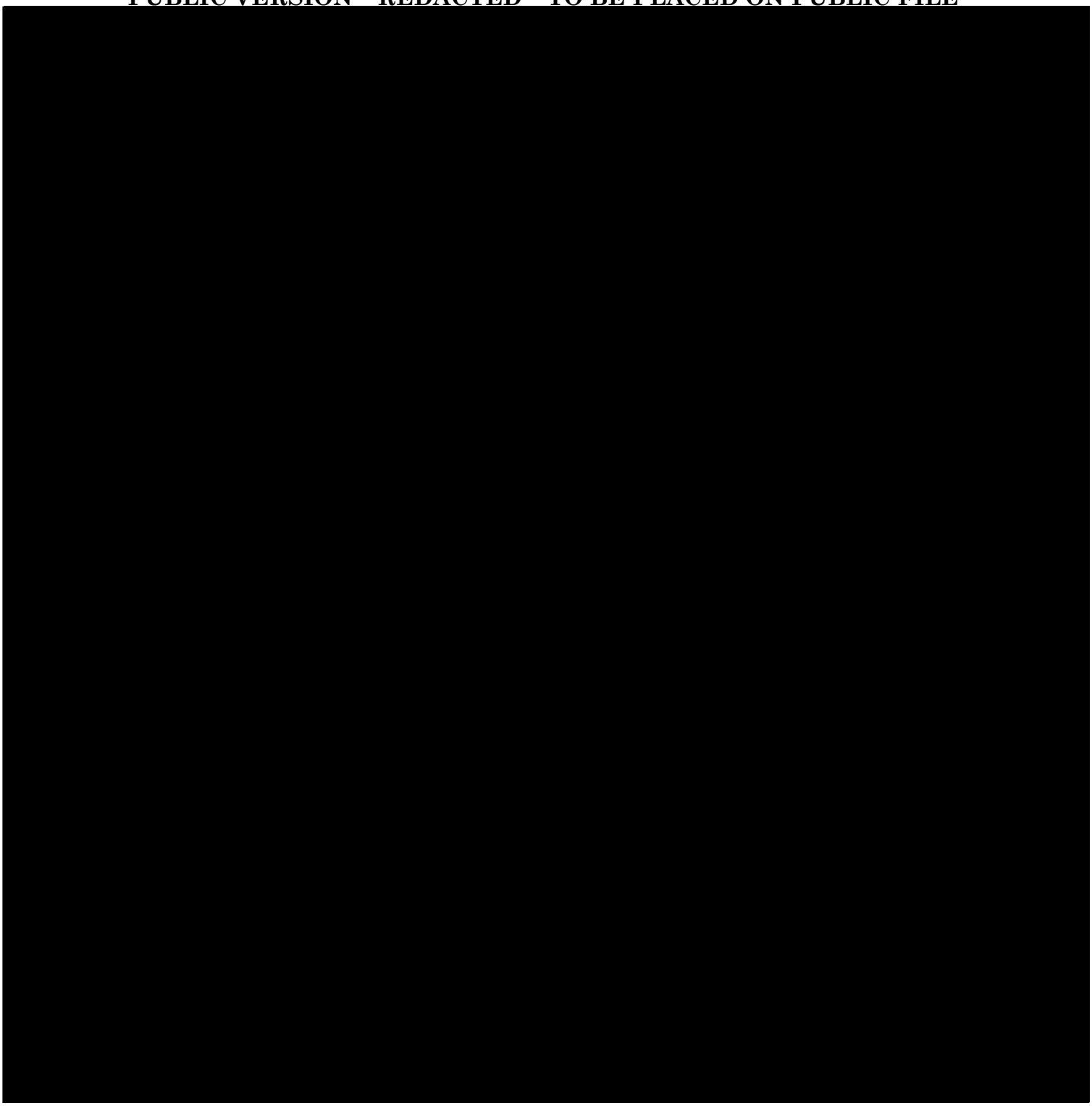
}}

Carter Exhibit 07



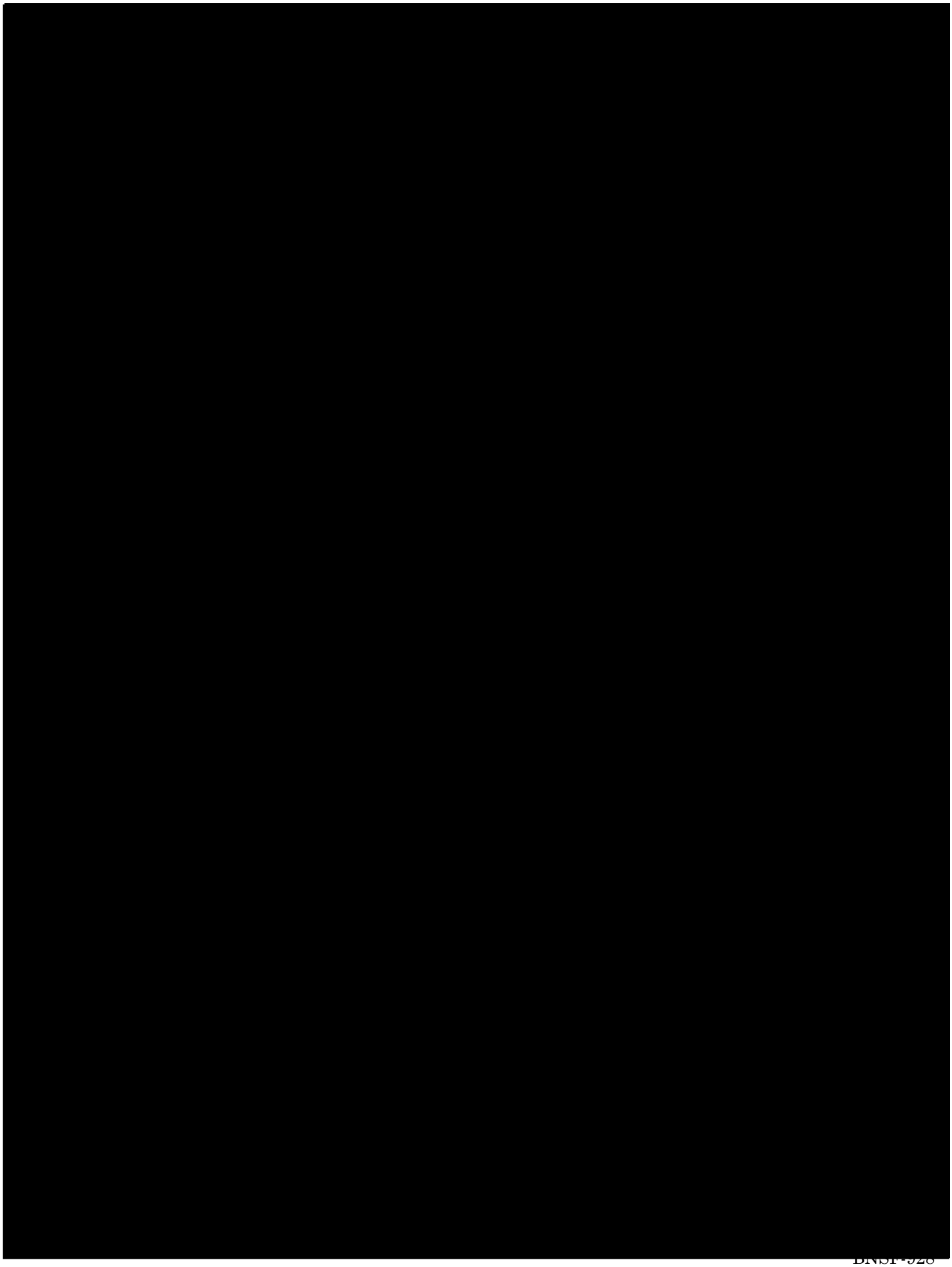






}}

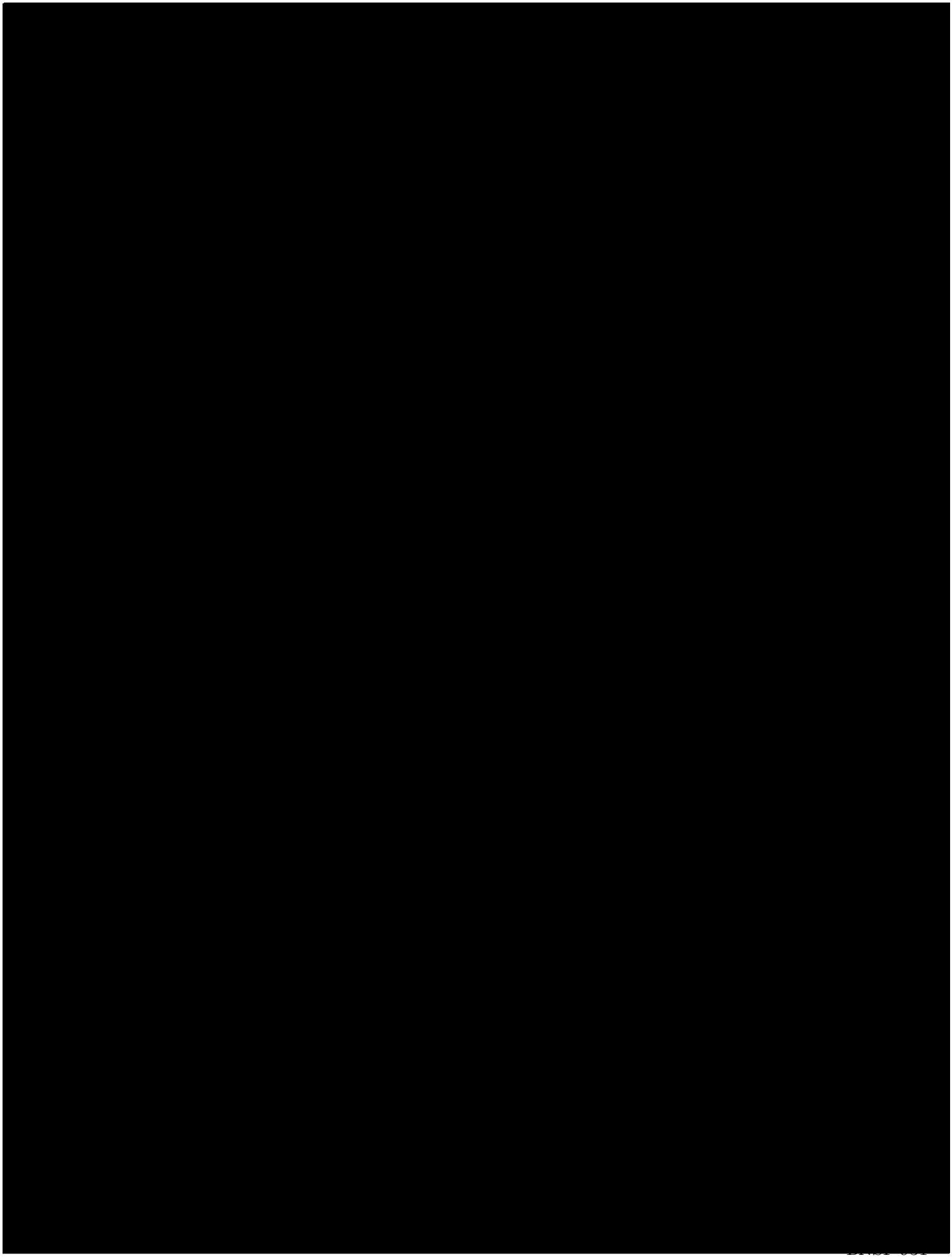
Carter Exhibit 08



[redacted]

}}

Carter Exhibit 9



[redacted]

}}

Witness Statement of Mr. Craig Morehouse

Craig Morehouse Witness Statement

My name is Craig Morehouse. I am the Vice President of South Region Operations, Transportation for BNSF Railway Company ("BNSF"), the Respondent in this proceeding. I previously served as the Vice President of North Region Operations, Transportation from September 16, 2020 to March 31, 2025 at BNSF. From June 1, 2019 to September 15, 2020, I worked as the General Manager, Division Operations, Transportation, and from September 1, 2017 to May 31, 2019, I was the General Director, Transportation at BNSF.

As Vice President of North Region Operations, Transportation in 2022, I was responsible for the operations of trains on the Evergy route. Like other portions of the rail network across the United States, operations on the Evergy route were very challenging in 2022 and we at BNSF worked hard to keep the network as fluid as possible given the resource constraints we faced. I am providing this verified statement to explain to the Surface Transportation Board ("STB" or the "Board") the unprecedented circumstances surrounding BNSF's operations and service in 2022; BNSF's response to these challenges; and the unique challenges of providing service to Evergy's Iatan and Lawrence plants.

As I explain below, during periods of congestion, it is critical for BNSF to maintain flexibility in managing trainsets online to keep traffic flowing across the network. Evergy clearly wanted more transportation service than we had the capacity to provide at the time, but so did many other shippers, particularly coal and grain shippers along the same Evergy route. In order to maintain the health of the broader rail network, BNSF was required to implement some restrictions on the number of trainsets in 2022 to alleviate congestion and to prevent further declines that would affect numerous other shippers. This flexibility is necessary to manage our network during periods of congestion. As evidenced below, I believe BNSF acted reasonably in

trying to provide as much service as we could to Evergy and other shippers during the difficult year of 2022.

I. 2022 Service Challenges

2022 presented unanticipated service challenges for the entire rail industry. BNSF's service in 2022 was impacted by severe congestion that resulted from a combination of different factors beginning in 2021 including extreme weather events, increased demand, inflated shipper requests and unloading times, and crew availability challenges. These were factors beyond our control and beyond our reasonable anticipation due to the unexpected events following the onset of the COVID pandemic.

The early part of 2021 was marked by Winter Storm Uri, which had an extreme impact in BNSF's service area, including the Southern Transcon, BNSF's main east-west route. BNSF saw demand for rail transportation rise from a pandemic low of {{ [redacted] }} units per week in 2020 to approximately {{ [redacted] }} units per week by summer 2021 across the network —– and only continued increasing from there, exceeding forecasted expectations and straining available resources. That kind of dramatic change in demand was unprecedented. This general trend was also reflected in coal transportation, with BNSF seeing coal demand rising sharply in 2021 and 2022. The challenges presented by the surge in coal demand were compounded by increased demand across other industries, cumulatively creating significant network-wide congestion as car inventory increased on the network to meet demand.

As demand increased and congestion began to be felt across the network, shipper responses contributed to the difficulties. It is a common and understandable reaction when faced with the prospect of slowing future deliveries for shippers to want to add even more cars[1] to the

[1] Or, in the case of unit-train shipments as with coal customers, entire additional trainsets.

network in the hope that adding cars would increase their total shipments. While adding car inventory, or requesting additional service, is an understandable reaction from a shipper, it has repeatedly proved over my long career to have the opposite of the intended effect. Similar to a highway traffic jam, adding more cars to the network in times of congestion only adds to the congestion–and slows velocity and shipper deliveries further. This effect was exacerbated further in 2022 because shippers themselves faced labor and other resource constraints that affected their ability to unload railcars. Congestion was made worse by shippers who were unable to unload shipments on a timely schedule, which led to even slower network velocity.

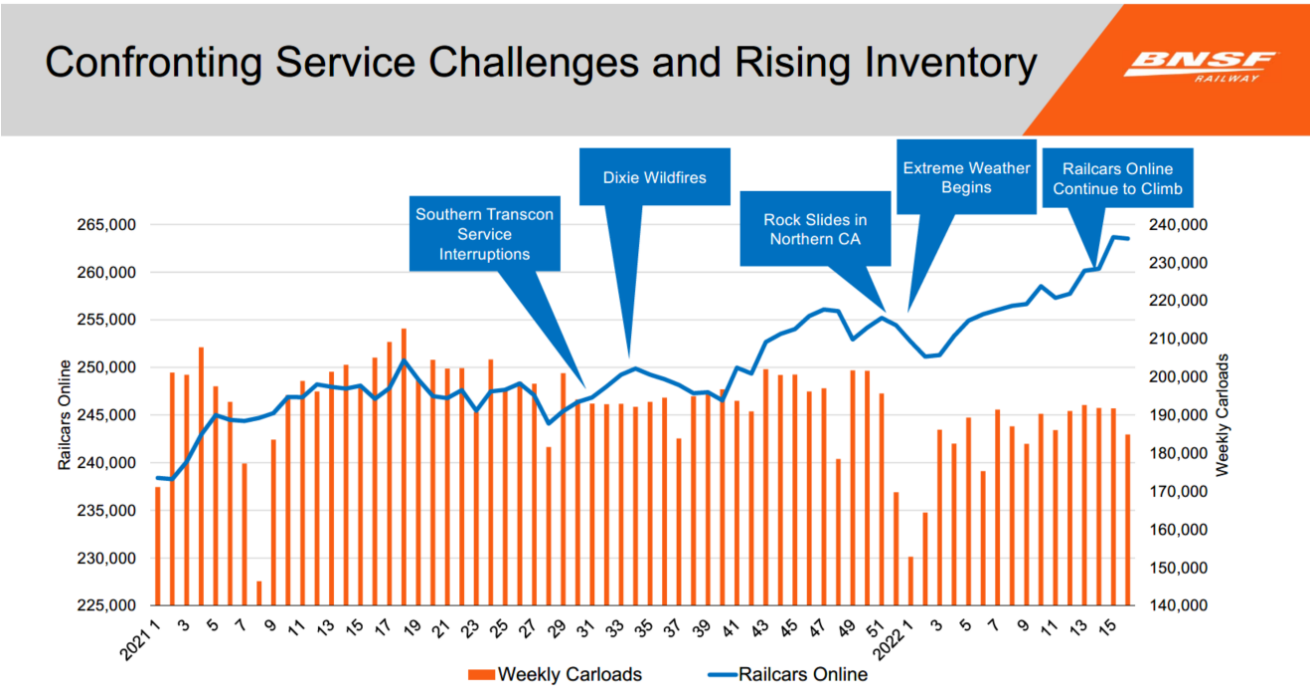
A further complication results from the expectation by some shippers for a type of "just-in-time" service. Evergy is an example of a shipper whose approach would make the railroad responsible for inventory management by asking for a varying level of service as the shipper's own needs change over time. But those kinds of rapid changes in demand for service cannot easily be accommodated, especially during periods of overall increasing demand. By the second half of 2021, BNSF was experiencing the effects of these demand increases. For example, as demonstrated by the August 2021 photos below of BNSF's Logistics Park Chicago terminal in Joliet, BNSF was facing record volumes in this period—and navigating how to maintain network velocity given distribution centers' shortages of chassis, drivers, and labor for unloading. Rather than retrieving their containers, customers—many of whom were also facing staffing shortages—let containers remain in BNSF yards.



By late 2021, BNSF was also facing crew availability shortages that further impacted service. In mid-2021, based on historical recall rates, BNSF had adequate staffing levels to meet reasonable fluctuations in volume demand. BNSF's headcount logically rises and falls with volume and BNSF's collective bargaining agreements provide the process whereby, should demand increase, BNSF can quickly recall furloughed employees. From mid-2021 through all of 2022, however, demand surged unexpectedly, and BNSF employee recall rates fell well below forecasted and historic trends, creating an unanticipated crew shortage. Although BNSF took immediate action to address shortages and increase hiring, deploying new Transportation, Yard, and Engine employees safely and consistently with regulatory obligations can take up to {{ [redacted] }}.

II. Capacity Constraints Require Train Set Management

The unanticipated changes in demand and difficulties in bringing employees back to work in sufficient numbers had a substantial impact on network fluidity. As BNSF explained to the STB in a hearing that the STB conducted in April of 2022, by the end of 2021, it was clear that BNSF needed to undertake special efforts to address growing congestion. We presented the following chart to the STB in that hearing:



As BNSF told the STB, in order to resolve severe network congestion, cars and trainsets must be removed from the network to improve velocity. This is a well-known and long-standing approach taken by railroads and other transportation providers to deal with congestion. In early 2022, BNSF removed {{ [redacted] }} trainsets from the coal network–a necessary step to improve fluidity and decrease congestion. These reductions in trainsets were not made based on the profitability of shippers, but rather based on customer need, customer inventories, and network fluidity. Decongestion can only be achieved by taking sets offline. BNSF's 2022 trainset reduction

strategy worked – velocities increased after sets were removed, improving service across the board for BNSF customers.

Part of BNSF's {{ [redacted] }} reduction strategy included removing {{ [redacted] }} set from Iatan service at the beginning of 2022. Iatan was a reasonable candidate for set reduction due to its relatively low burn rate and healthy stockpile levels. Iatan also faced several issues in January and February 2022, including {{ [redacted] }} which further decreased the plants' ability to receive coal shipments during this period. Iatan was also a good candidate for set removal because it is located on the critical St. Joseph's subdivision, a major corridor for grain moving from Nebraska, South Dakota, Iowa, and Missouri. By removing trainsets traversing St. Joseph's subdivision, including {{ [redacted] }} from Iatan, velocity was improved, benefitting all shippers on the St. Joseph's subdivision.

BNSF also needed to monitor the coal network to keep customers in the worst need from being driven to critical stockpile levels. BNSF carefully and regularly collected and examined data relating to coal stockpiles of its coal shippers so that it could adjust operations as needed to prevent severe dislocations in energy markets. This approach was applied in a non-discriminatory manner across all utilities. We did not single out any utility for preferential treatment simply because of its size, type of service (contract versus common carrier service), or profitability. Instead, our objective was to deliver the maximum amount of coal under constrained capacity and address the needs of individual shippers as much as possible.

Reducing the number of cars and trainsets online was the most practical and effective strategy for easing congestion and improving velocity. While Evergy may have wanted us to increase the number of trainsets in service to Evergy's facilities, it is important that BNSF has the discretion to reasonably manage trainsets to maintain the health of the overall network. Even

adding just one or two trainsets for a single customer shipper during congestion can slow the network and reduce velocity for all shippers. And when capacity is constrained, adding a single trainset to one customer likely would require taking a trainset away from another customer to maintain existing fluidity. If every shipper were allowed to add "just" one or two trainsets, the cumulative effect would overwhelm capacity and undermine network recovery efforts. BNSF allocates resources during times of capacity constraints fairly and reasonably based on the information made available to BNSF.

III. BNSF's Ability to Provide Service was Impacted by Evergy's Actions

Serving Evergy's Iatan and Lawrence plants poses unique and ongoing logistical challenges. The first problem relates to Evergy's refusal to provide inventory data that allows us to monitor coal flows across the rail network and their impact on our coal shippers. Compared to other shippers, Evergy is not forthcoming with clear and consistent inventory data. This lack of transparency makes it harder to optimize operations to meet the needs of all of our coal shippers, including Evergy. As I noted above, BNSF tracks customer reported inventory levels to help manage the network and identify plants with lower inventory levels so that delivery priorities can be adjusted accordingly. This monitoring process was particularly important during the service difficulties of 2022. During that time BNSF tracked customer reported inventory on a weekly basis, and we regularly met to discuss the collected data. We advised Evergy of the importance of providing that data and why it was important to our operational planning.[2] But Evergy then, as now, has consistently refused to provide this information to BNSF, even after BNSF adjusted its Rules Book to require customer reporting of stockpile information.[3] Most shippers regularly

[2] *See, e.g.*, Ex. CM-1, BNSF_EVERGY_0021960; Ex. CM-2, BNSF_EVERGY_0026101 { [redacted] }

[3] *See, e.g.*, Counsel's Exhibit 13, BNSF_EVERGY_0026163; Ex. CM-3, EVERGY-0019763.

provide this information to BNSF – but when shippers such as Evergy do not, BNSF must instead rely on estimates and the resulting uncertainty is a hindrance to adequate planning.

BNSF's service to Evergy was also impacted by Evergy's highly variable entries to BNSF's coal nominations database, the Coal Forecasting Tool ("CFT"). I understand that the CFT has been described in other materials being submitted to the STB so I don't go into detail about it here. The important point as a railroad operations leader is that the CFT nominations are important in planning service to particular customers. And as BNSF has consistently communicated to Evergy, the ratability of shipments is key to efficient service.[4] BNSF's goal is to transport coal efficiently and ratably within network constraints and based on customer-provided declarations. Ratability—steady, predictable shipment volumes—is essential to efficient coal transportation. Ratability requirements are designed to ensure operational efficiency across BNSF's network, particularly during times of high demand and limited capacity. But Evergy's CFT nominations were not consistent or ratable. Evergy's spikes in CFT nominations during high-demand periods such as summer would, if BNSF were required to meet those nominations, magnify congestion for all customers during tight capacity periods. Many utilities would likely want to increase shipments in summer and winter and reduce them in fall and spring to minimize their inventory costs. But if a railroad were required to accommodate such shipping patterns, it would need to carry large excess capacity in the off seasons.

[4] *See, e.g.*, Ex. CM-4, BNSF_EVERGY_0008001 { [redacted] }; Counsel's Exhibit 07, BNSF_EVERGY_0004848 { [redacted] }; Ex. CM-2, BNSF_EVERGY_0026101 { [redacted] }

An additional problem involves Evergy's long unloading times, which also impacts BNSF's ability to serve Evergy's plants. Unloading times at Evergy's plants – particularly at Lawrence[5] – are longer than at other customers' facilities, which increases cycle times and contributes to network inefficiencies.[6] Lawrence's unloading is complicated by its ladder track configuration and the process of unloading by individual car movement (rather than the continuous unload process found at many power plants).[7] BNSF's service to Lawrence also requires a {{ [redacted] }} making the plant especially difficult to serve in the tight crew supply environment in 2022.[8]

Finally, Evergy's decision to switch the Hawthorn and La Cygne plants to Union Pacific service in 2022 eliminated diversion options that had previously helped BNSF adjust traffic flows among Evergy plants to accommodate changing needs at particular Evergy facilities. Previously, BNSF served a larger portfolio of Evergy plants, allowing flexibility in providing service across Evergy's facilities. Evergy's decision to split service between BNSF and UP, eliminated an important source of flexibility that supported prior operations. Even with the remaining Lawrence and Iatan facilities, Evergy's own practices restrained BNSF's flexibility. For example, although BNSF suggested diverting sets between the Lawrence and Iatan plants in 2022 to improve efficiencies, Evergy refused to do so.

IV. Conclusion

BNSF took all available steps to proactively manage its rail network to increase and maintain fluidity during a period of extreme congestion and limited resources and acted

[5] At Lawrence, BNSF agreed to allow Evergy { [redacted] } hours of unloading time—{ [redacted] } times the standard allotted unloading time under the tariff.
[6] Iatan also unloads slower than the six hours allotted under the standard tariff—BNSF provides Iatan with { [redacted] } hours of unloading time ({ [redacted] } under certain circumstances), but even with the additional unloading time, Iatan still fr equently failed to unload within { [redacted] } hours. Ex. CM-6, BNSF_EVERGY_0007748.
[7] *See, e.g.*, Ex. CM-7, BNSF_EVERGY_0007958.
[8] *See, e.g.*, Ex. CM-8, BNSF_EVERGY_0006269.

reasonably in providing service to Evergy through the post-COVID challenges of 2022. The limited resources were not due to any cause within BNSF's reasonable control, but BNSF nevertheless allocated those limited resources fairly and reasonably and without discrimination among its shippers including Evergy.

Verification

I, Craig Morehouse, verify under penalty of perjury that the foregoing is true and correct. Further, I certify that I am qualified and authorized to file this statement.

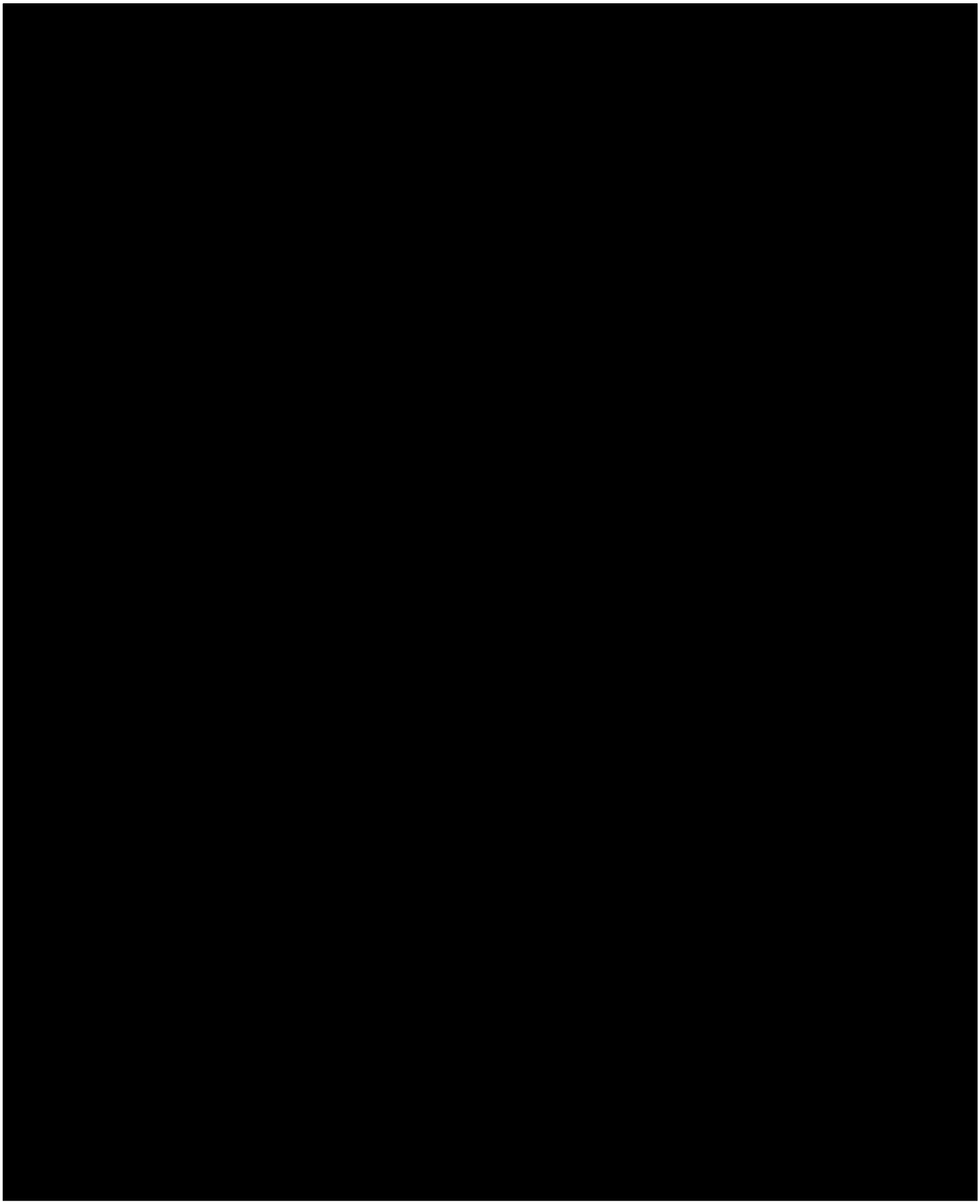


Craig Morehouse

Executed on October 21, 2025

Morehouse Exhibit 01

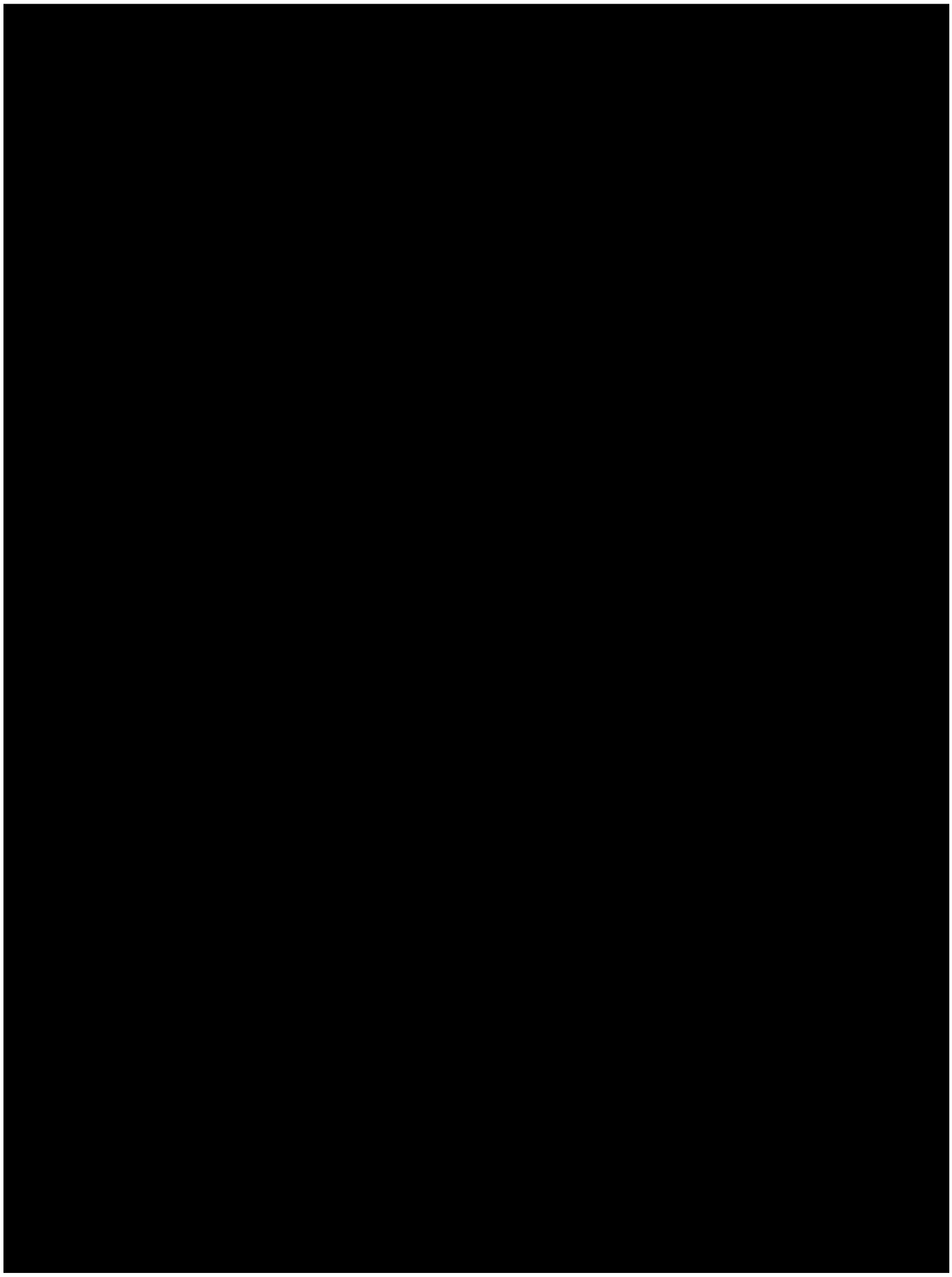
{{

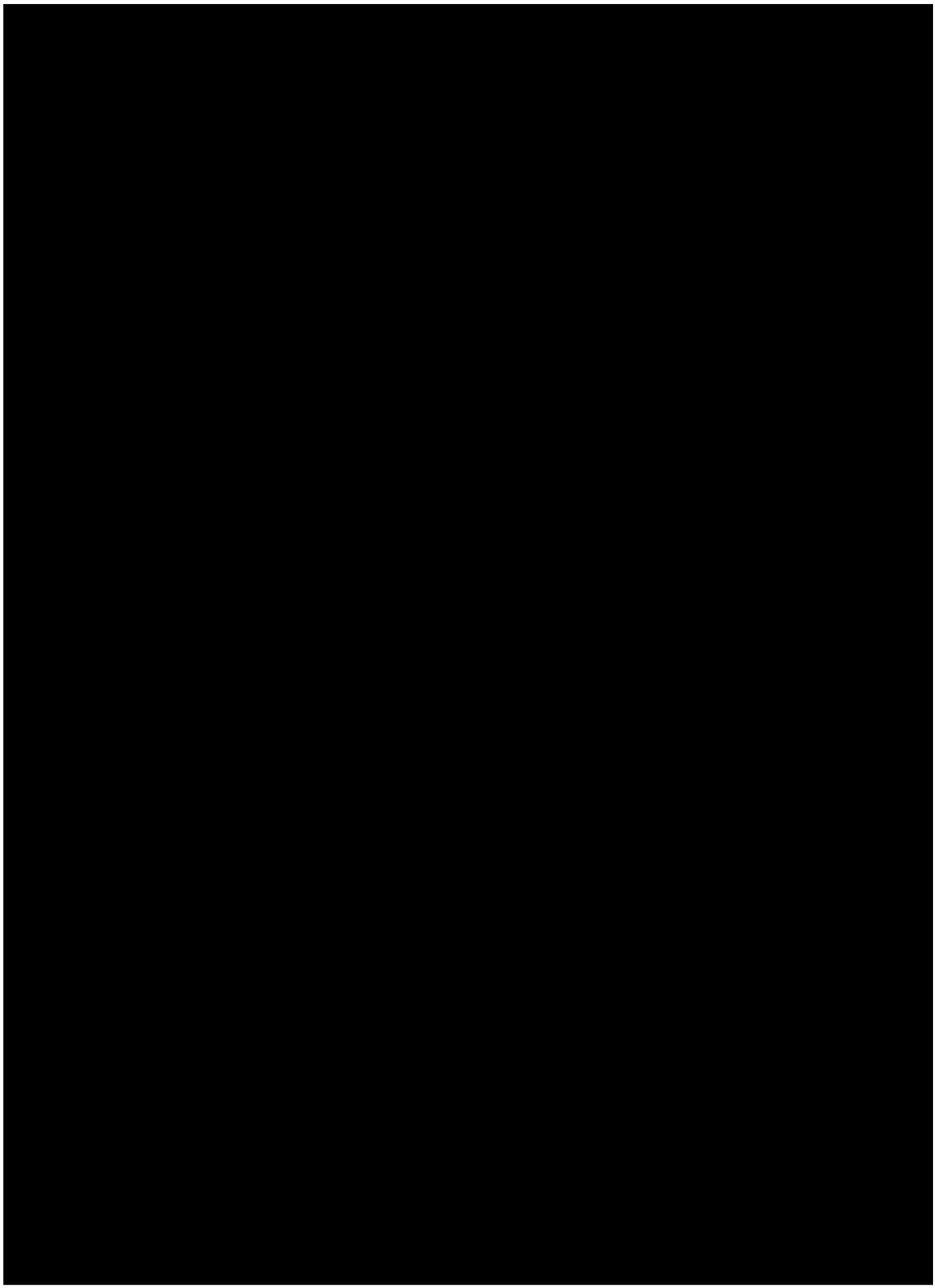


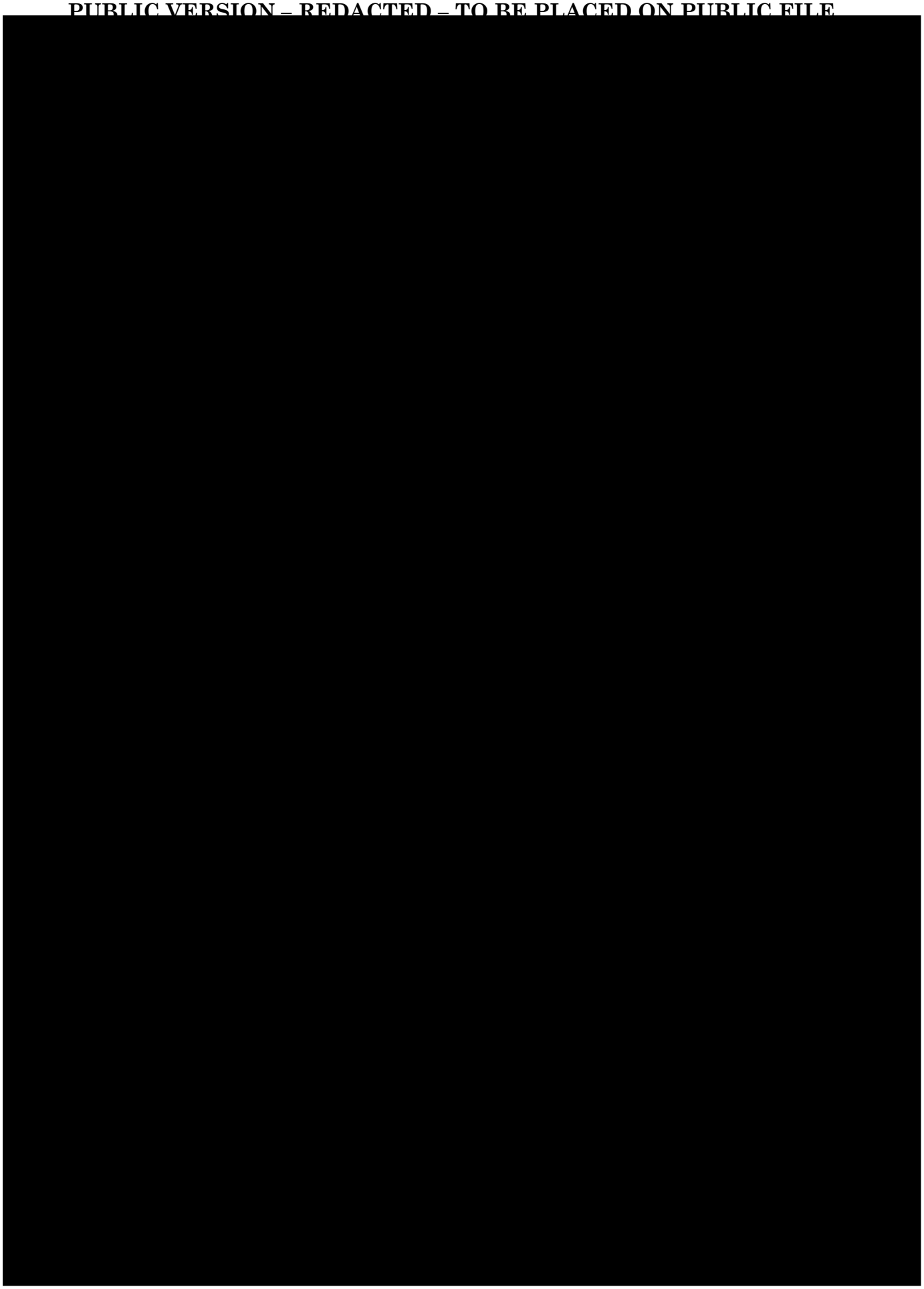
}}

Morehouse Exhibit 02

{{



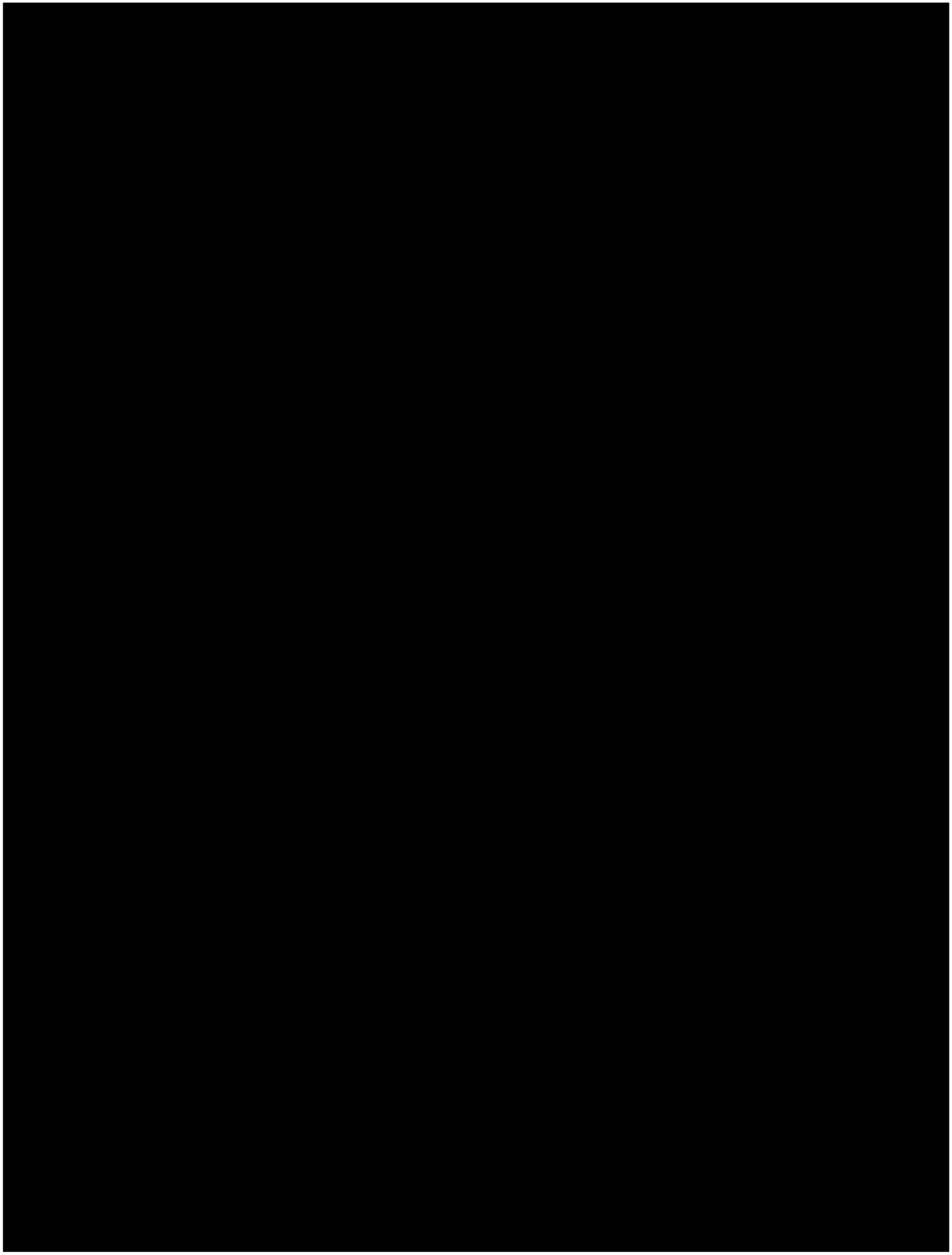


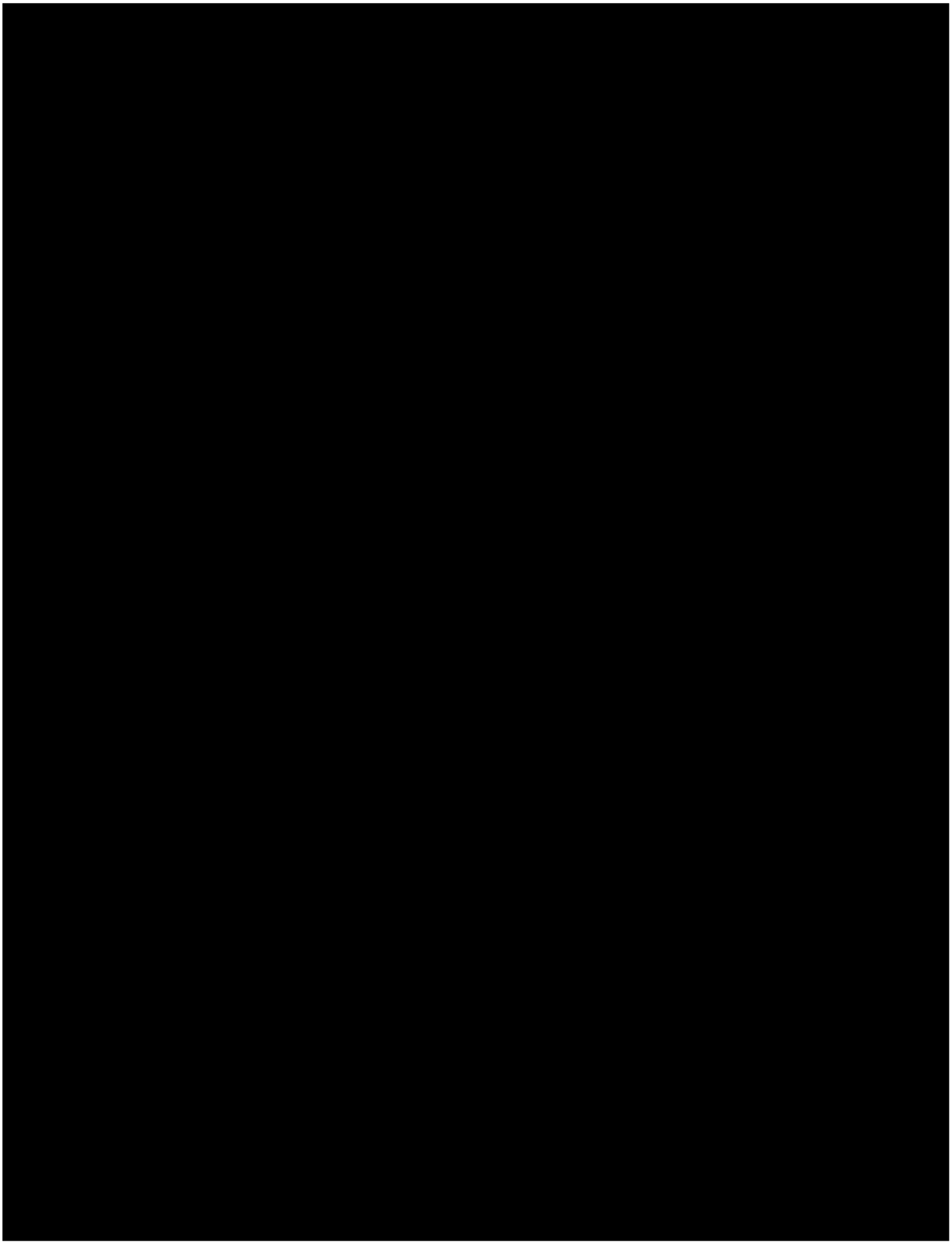


}}

Morehouse Exhibit 03

{

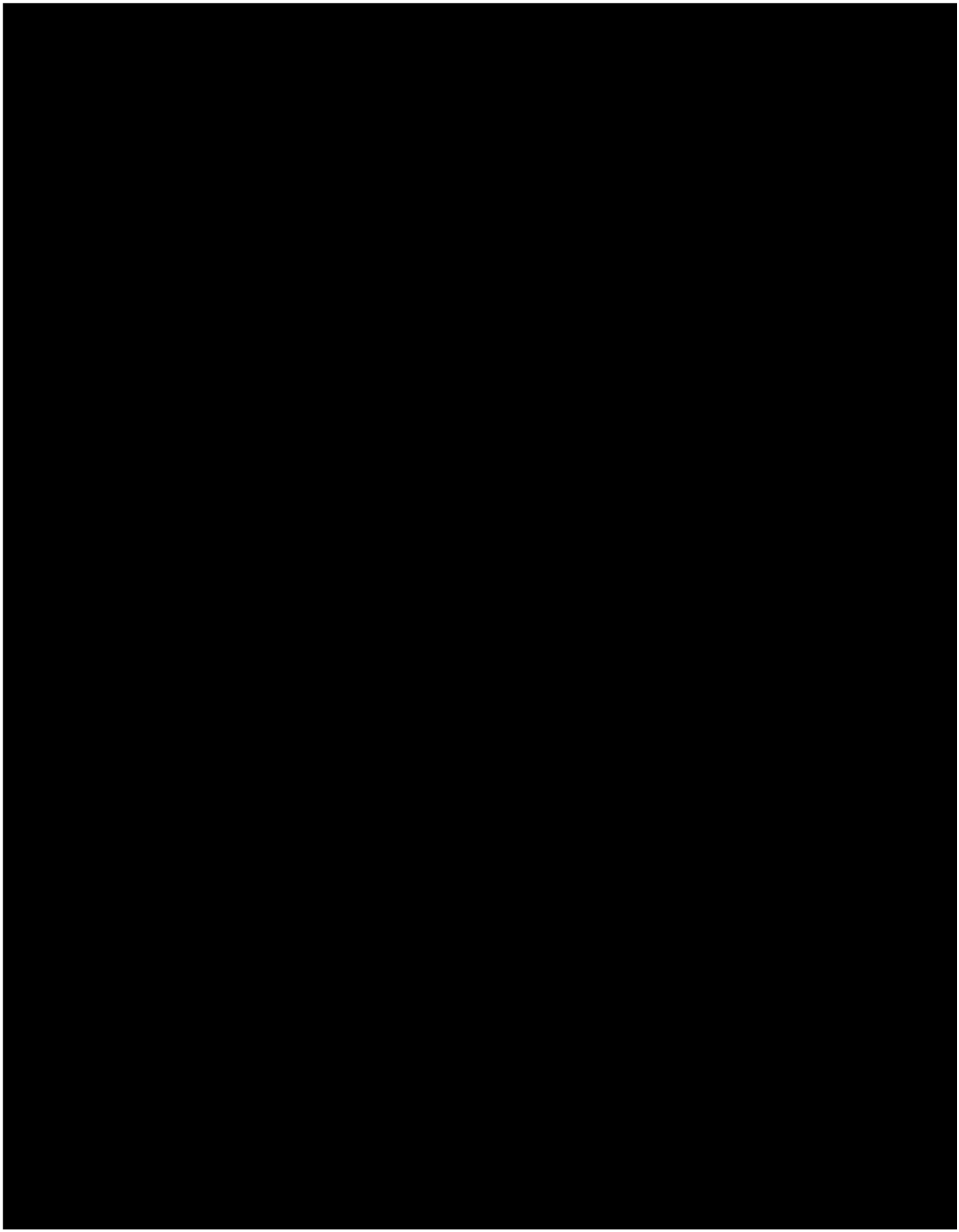


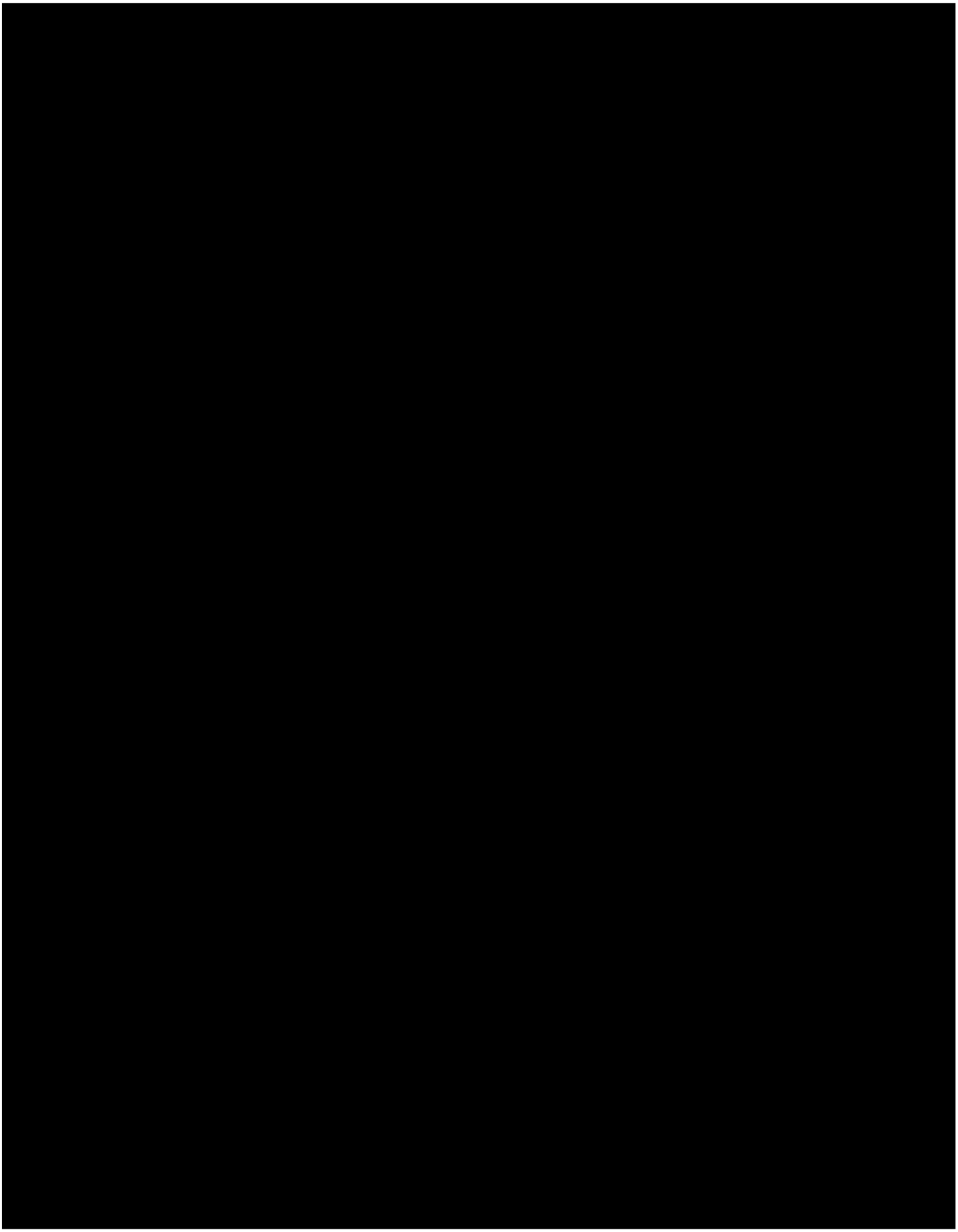


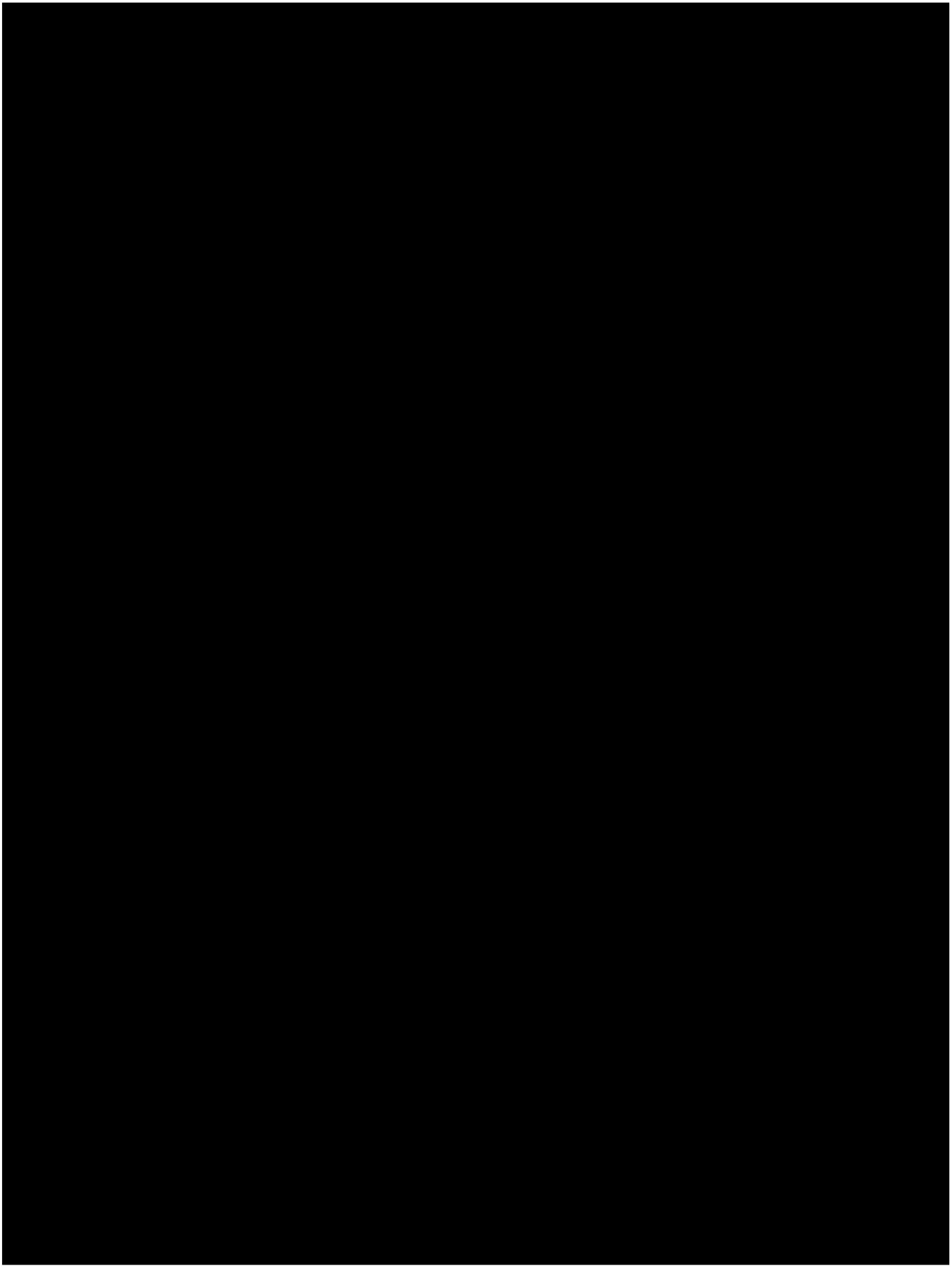
}

Morehouse Exhibit 04

{





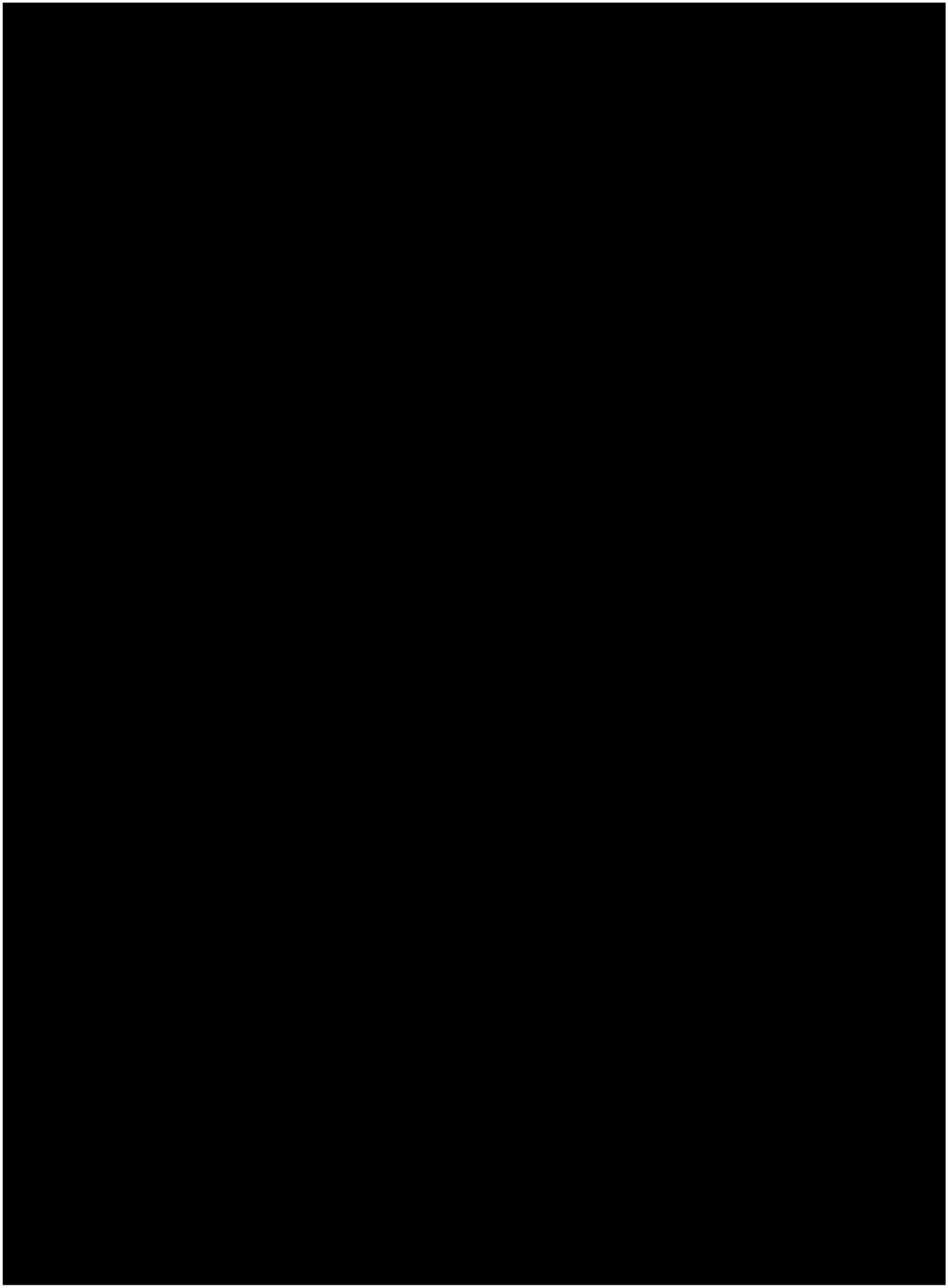


}

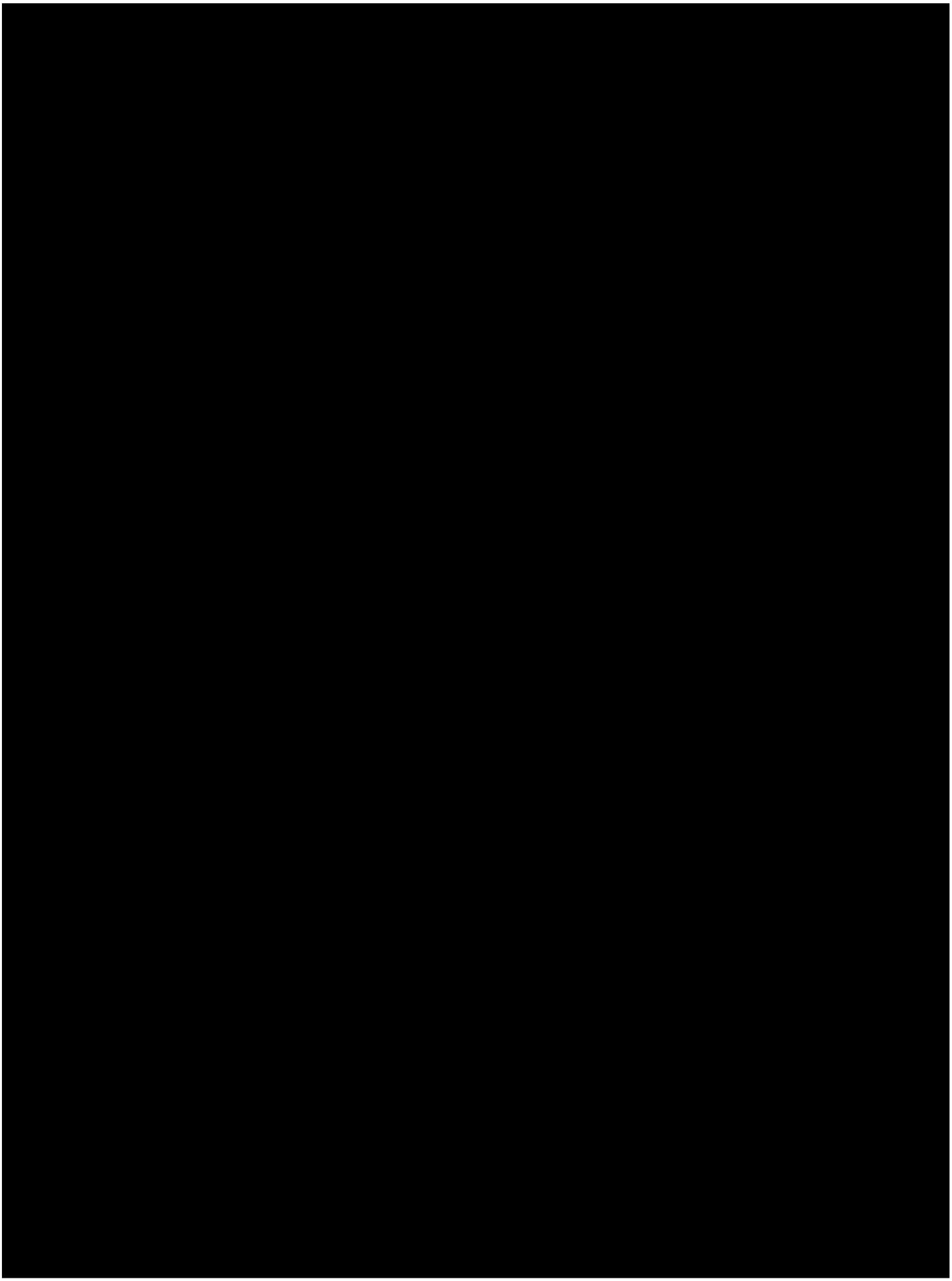
BNSF-957

Morehouse Exhibit 05

{



BNSF-959

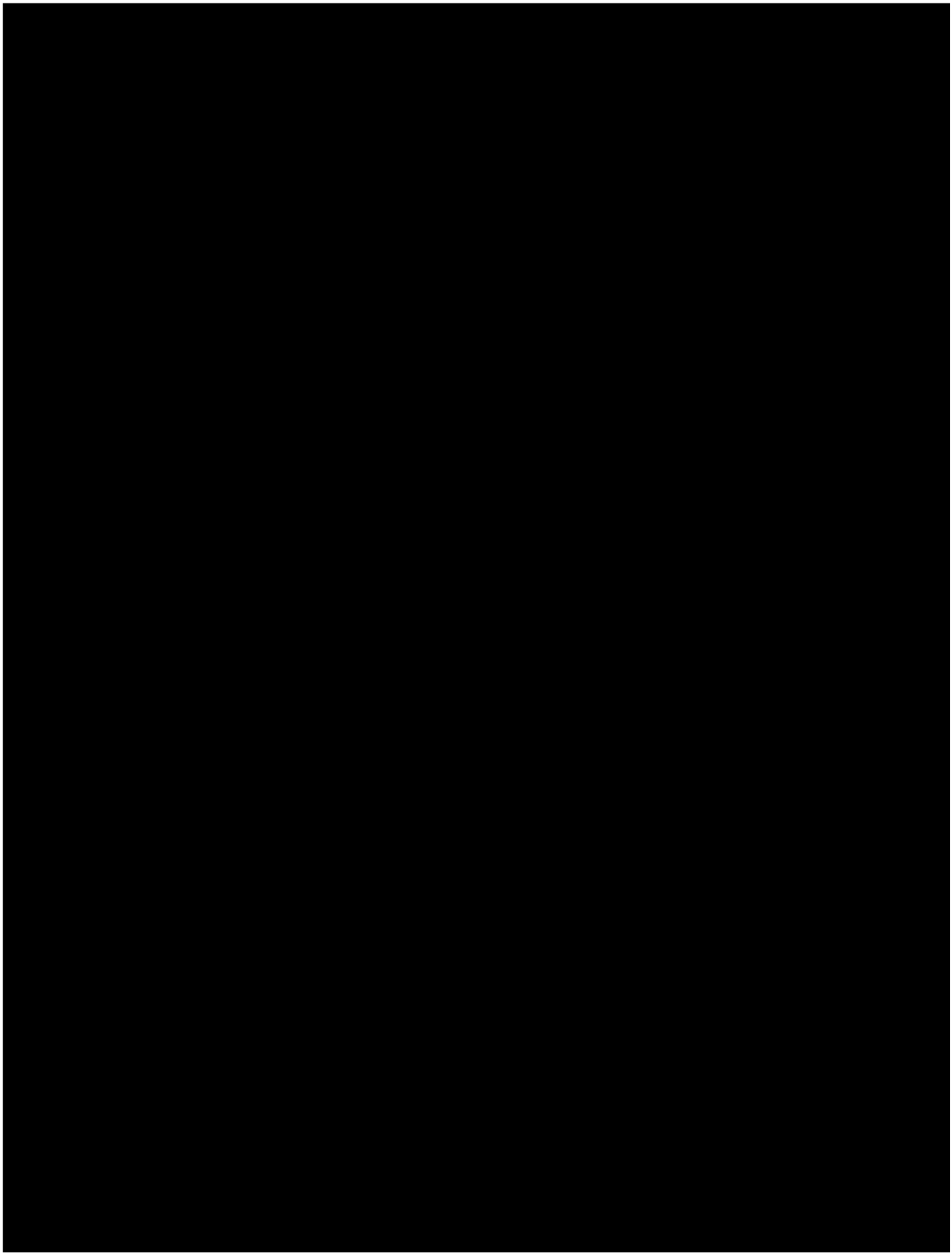


}

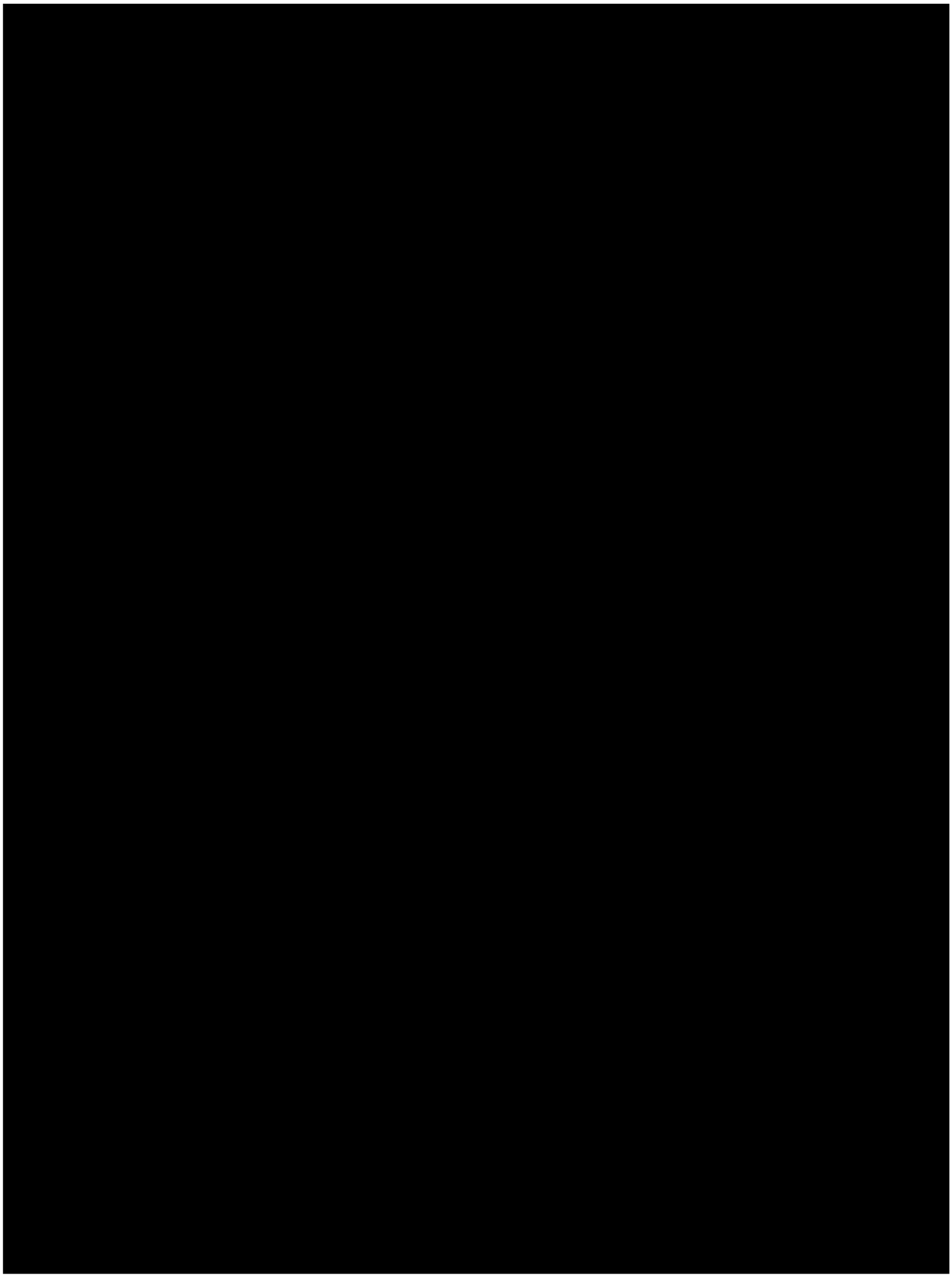
BNSF-960

Morehouse Exhibit 06

{



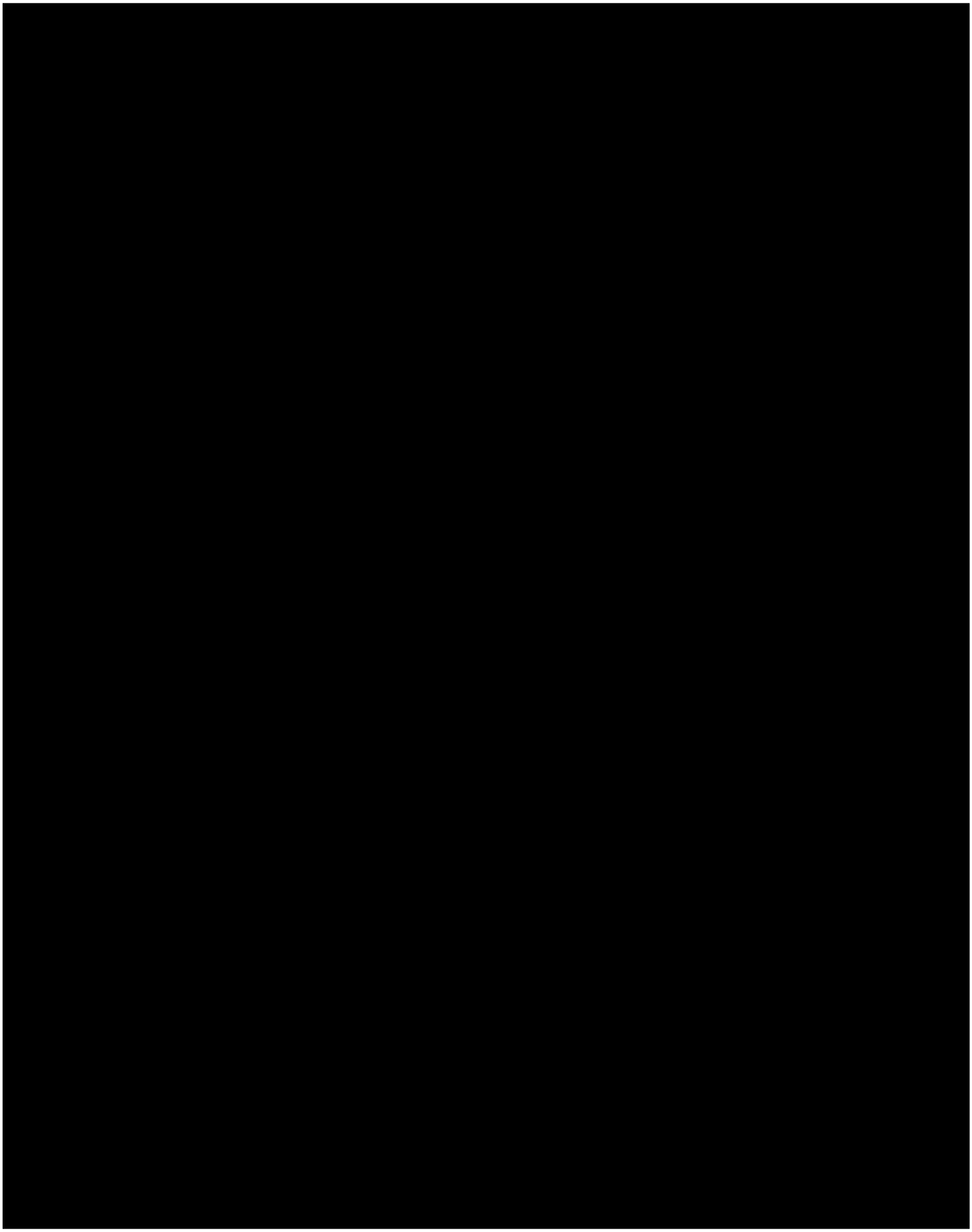
BNSF-962



}

BNSF-963

Morehouse Exhibit 07



}}

CERTIFICATE OF SERVICE

I hereby certify that I have caused the foregoing *Reply of BNSF Railway Company* to be served electronically or by first-class mail, postage pre-paid, on all parties of record in this proceeding.

/s/ Tara Woods

Tara Woods
Counsel for BNSF Railway Company

November 20, 2025