Matthew R. Bernier
Associate General Counsel

July 27, 2021

VIA ELECTRONIC FILING

Adam J. Teitzman, Commission Clerk
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, Florida 32399-0850

Re: *Fuel and purchased power cost recovery clause with generating performance incentive factor; Docket No. 20210001-EI*

Dear Mr. Teitzman:

Please find enclosed for electronic filing on behalf of Duke Energy Florida, LLC ("DEF"), the redacted direct testimony of James McClay and DEF's redacted 2022 Risk Management Plan for Fuel Procurement.

The confidential information at issue is being submitted under separate cover.

Thank you for your assistance in this matter. Please feel free to call me at (850) 521-1428 should you have any questions concerning this filing.

Respectfully,

s/Matthew R. Bernier

Matthew R. Bernier

MRB/mw
Enclosures

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Duke Energy Florida, LLC
Docket No.: 20210001
CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a true and correct copy of the foregoing has been furnished via electronic mail this 27th day of July, 2021, to all parties of record as indicated below.

s/Matthew R. Bernier
Attorney

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IN RE: PETITION ON BEHALF OF DUKE ENERGY FLORIDA, LLC.
FOR

FUEL AND CAPACITY COST RECOVERY
FINAL TRUE-UP FOR THE PERIOD
JANUARY THROUGH JULY 2021

FPSC DOCKET NO. 20210001-EI

DIRECT TESTIMONY OF
James McClay

July 27, 2021

I. INTRODUCTION AND QUALIFICATIONS

Q. Please state your name and business address.

A. My name is James McClay. My business address is 526 South Church Street, Charlotte, North Carolina 28202.

Q. By whom are you employed and in what capacity?

A. I am employed by Duke Energy Carolinas ("DEC"), an affiliate company of Duke Energy Florida, LLC ("DEF", "Petitioner" or "Company") as the Director of Trading. I manage the Southeast power trading, Midwest financial activities, oil procurement and natural gas group procurement, scheduling and hedging activities in the Trading and Dispatch Section of the Fuels and Systems Optimization Department for the Duke Energy regulated generation fleet. This group is responsible for the hourly trading, financial hedging activities, oil procurement and natural gas procurement and scheduling needed to support the gas generation needs for Duke Energy Indiana, Duke Energy Kentucky, Duke Energy Carolinas, Duke Energy Progress and Duke Energy Florida.

Q. Please describe your education background and professional experience.

A. I received a Bachelor Degree in Business Administration majoring in Finance from St. Bonaventure University. I joined Progress Energy in 1998 as the Manager of Power Trading and held that position through early 2003 and then became the Director of Power Trading and Portfolio Management for Progress Energy Ventures through February 2007. From March 2007 through late 2008, I was the Director of Power Trading for Arclight Energy Marketing. From March 2009 through present I've been employed in various managerial roles at Progress Energy and Duke Energy overseeing Natural Gas and Oil trading, hedging procurement. Prior to my tenure with Duke Energy, I was employed for approximately 13 years in Capital Markets as a U.S. Government fixed income securities trader with various banks, and broker/ dealers.

Q. What is the purpose of your testimony?

A. The purpose of this testimony is to outline DEF's hedging objectives and activities for 2022, and outline DEF hedging results for January 2021 through July 2021.

Q. Are you sponsoring any exhibits to your testimony?

A. Yes, I am sponsoring the following exhibit:

- Exhibit No.___ (JM-1P) – 2022 Risk Management Plan (*filed July 27, 2021*).

Q. What are the objectives of DEF's hedging activities?

A. The objectives of DEF's hedging program are to reduce fuel price volatility risk and provide greater cost certainty for DEF's customers.

Q. Describe the hedging activities that the Company will execute for 2022.

A. DEF will hedge a percentage of its projected natural gas burns utilizing approved financial agreements. With respect to hedging activity, natural gas represents the largest component of DEF's overall hedging activity given it is the largest fuel cost component. DEF's target hedging percentage ranges are between [redacted] to [redacted] percent of its forecasted calendar annual burns. Hedging in the ranges provided allows DEF to monitor actual fuel burns, updated fuel forecasts, and make any adjustments as needed throughout the year. Since DEF is starting its hedging program in 2022 without existing hedges in place and as the hedging program begins to mature it will take DEF all of 2022 and 2023 to execute the layered hedging strategy and reach the minimum levels outlined.

DEF's hedging activities do not involve price speculation or trying to "out-guess" the market. All hedging transactions are executed at the prevailing market price that exists at the time the hedging transactions are executed. The results of hedging activities may or may not result in net fuel cost savings due to differences between the monthly settlement prices and the actual hedge price of the transactions that were executed over time. The volumes hedged over time are based on periodic updated fuel forecasts and the actual hedge percentages for any month, rolling period, or

calendar annual period may come in higher or lower than the target minimum hedge percentages and hedging ranges because of actual fuel burns versus forecasted fuel burns. DEF's approach to executing fixed price transactions over time is a reasonable and prudent approach to reduce price risk and provide greater cost certainty for DEF's customers.

Q. What were the results of DEF's hedging activities for January through July 2021?

A. As approved by the Commission, DEF is currently under a moratorium on hedging and has not executed any financial hedges for any periods since October 21, 2016, and therefore does not have any hedges in place for 2021.

Q. Does this conclude your testimony?

A. Yes.

Duke Energy Florida, LLC
Risk Management Plan for
Fuel Procurement and Wholesale Power Purchases
For 2022

Duke Energy Florida, LLC (DEF) is submitting its 2022 Risk Management Plan (Plan) for review by the Florida Public Service Commission (FPSC). The Plan includes the required items as outlined in Attachment A of Order No. PSC-02-1484-FOF-EI and specifically items 1 through 9, and items 13 through 15 as set forth in Exhibit TFB-4 to the prefiled testimony of Todd F. Bohrmann in Docket No. 011605-EI and further clarified in Order No. PSC-08-0667-PAA-EI of Docket No. 080001-EI.

Several groups play key roles in the management, monitoring, and execution of the activities outlined in DEF's Plan. These groups include Fuels and System Optimization (FSO), the Regulated Risk Management and Credit Risk Management teams within Global Risk Management & Insurance (GRMI), Regulated Accounting, Internal Audit, Legal, and Information Technology. The activities supported by these groups include, subject to reliability constraints, procuring competitively priced fuel, performing active asset optimization and portfolio management, executing DEF's approved hedging strategy, monitoring and reporting against established oversight limits for credit and margin limits, performing credit evaluations and monitoring credit limits and credit exposure, performing deal validation, volume actualization, preparing and reviewing transactions and contracts, preparing journal entries to account for fuel and power related activities, performing billing and payments under the various fuel and purchased power contracts, performing audits, and maintaining and supporting needed systems to capture, track, and account for these activities.

Based on the Summer 2021 Fuels and Operations Forecast (FOF), DEF's estimated fuel consumption and economy power transactions projections for 2022 are as follows:

Coal

Based on current projections, DEF forecasts to burn approximately [redacted] tons of coal in 2022. DEF's forecasted coal requirements for 2022 will primarily be purchased under term coal supply agreements. Currently the coal supply will be delivered to DEF's plants via barge and rail transportation agreements as needed Spot purchases will be made as needed to supplement the term purchases.

Light Oil

Based on current projections, DEF forecasts to burn approximately [redacted] barrels of light oil in 2022. DEF's forecasted light fuel oil requirements for 2022 are expected to be purchased primarily under term supply enabling agreements with volume flexibility at indexed market prices. Spot market purchases will be made as needed to supplement term purchases.

Natural Gas

Based on current projections, DEF forecasts to burn approximately [redacted] of natural gas in 2022, comprised of approximately [redacted] at DEF's generating plants and [redacted] at gas-tolling purchased power facilities where DEF has the responsibility to provide the natural gas. DEF's forecasted natural gas requirements for 2022 are expected to be purchased primarily under term supply agreements based on market index pricing, with supplemental seasonal, monthly, and daily purchases of natural gas being made as needed.

Economy Power Purchases and Sales

Based on current projections, DEF forecasts to purchase approximately [redacted] of economy power and sell approximately [redacted] of economy power in 2022. DEF actively seeks to purchase and sell economy power as opportunities arise based on market prices, dispatch costs, and available transmission capacity.

Item 1. Identify the company's overall quantitative and qualitative Risk Management Plan Objectives.

DEF's identified Plan Objectives are, to ensure an adequate fuel supply, and subject to reliability constraints to effectively manage its overall fuel and purchased power costs for its customers by engaging in competitive fuel procurement practices and activities, performing active asset optimization and portfolio management activities, and continuing to execute the Company's hedging program to reduce price risk and volatility, and provide greater fuel cost certainty for DEF's customers. These items are discussed further in Item 8.

Item 2. Identify the minimum quantity of fuel to be hedged and the activities to be executed for 2022.

DEF utilizes a phased hedging program where financial hedge transactions are executed over time with the objectives of reducing price risk and volatility and providing greater fuel cost certainty for DEF's customers. The financial hedging program outlined in this Plan includes executing approved financial

agreements over time for natural gas exposures. Natural gas hedging activity represents the largest component of DEF's hedging program as natural gas represents the largest fuel cost component of DEF's overall generation fuel costs.

The volumes hedged over time for natural gas represent a portion of DEF's forecasted burns with higher hedging target ranges in the near term and lower hedging target ranges in the outer period. The hedge percentage target ranges outlined provide a framework for consistently executing the layered hedging strategy over time. DEF currently uses two types of financial transactions to hedge which are swaps and costless collars. DEF cannot predict future prices and DEF's hedging program does not involve speculation or trying to "out-guess" the market. All hedges are executed at the prevailing market price for any given period that exists at the time the financial hedging transactions are executed. The results of the hedging activities may or may not result in net fuel cost savings due to differences between the monthly settlement prices and the actual hedge price of the transactions that were executed over time. The volumes hedged over time are based on periodic updated fuel forecasts and the actual hedge percentages for any month, rolling period, or calendar annual period may come in higher or lower than the target hedge percentages and hedging ranges because of actual fuel burns versus forecasted fuel burns. Actual burns can deviate from forecasted burns because of dynamic variables such as weather, unforeseen unit outages, actual load, and changing fuel prices. DEF's multi-year approach to executing fixed price transactions over time is a reasonable and prudent approach to reduce price risk and volatility and provide greater fuel cost certainty for DEF's customers.

Outlined below is the minimum and maximum percentage ranges to be hedged during 2022:

<u>Natural Gas</u>

Natural gas represents DEF's largest fuel cost component and represents the largest component of DEF's hedging activities. DEF plans to execute its phased financial hedging program over a rolling 36-month time period through time for natural gas during 2022 within the following hedge percentage ranges:

- 1 to 12 months – [redacted]
- 13 to 24 months – [redacted]
- 25 to 36 months – [redacted]

Since DEF is starting it's hedging program in 2022 without existing hedges in place and as the hedging program begins to mature it will take DEF all of 2022 and 2023 to execute the layered hedging strategy and reach the minimum levels outlined above especially for months 1 to 12.

The 2022 Risk Management Plan was developed after consideration regarding the hedge percentages, DEF's overall fuel mix, the continued uncertainty in future natural gas prices and volatility, and the need to maintain a balanced approach to the management of fuel cost risk. DEF believes having a rolling approach that gradually increases hedging percentages over time by layering in hedging transactions represents a balanced fuel price risk management approach that results in greater certainty of fuel costs for a portion of projected fuel costs while providing customers a percentage of exposure to actual market prices. In addition, DEF believes continuing to hedge a portion for the rolling future periods beyond the front 12 months by gradually increasing hedging percentages over time by executing transactions provides benefits by ensuring a consistent execution approach over a multi-year period given the number of factors that can ultimately impact prices and trends. In addition, this approach ensures a degree of price and volatility risk mitigation from one fuel period to another. Given DEF's hedging percentage targets, DEF will continue to participate in the spot natural gas market for a portion of its overall estimated natural gas usage.

Summary

During 2022, DEF will continue to monitor its fuel forecast and will execute hedges over time to attempt to manage to the hedge percentage targets outlined for a portion of its projected burns for natural gas, with the exceptions discussed above. This hedging approach is consistent with DEF's strategy and allows DEF to continue to monitor the market and fuel forecast updates. The hedging targets for each of the respective periods are included in DEF's Regulated Electric Risk Limits in **Attachment A.**

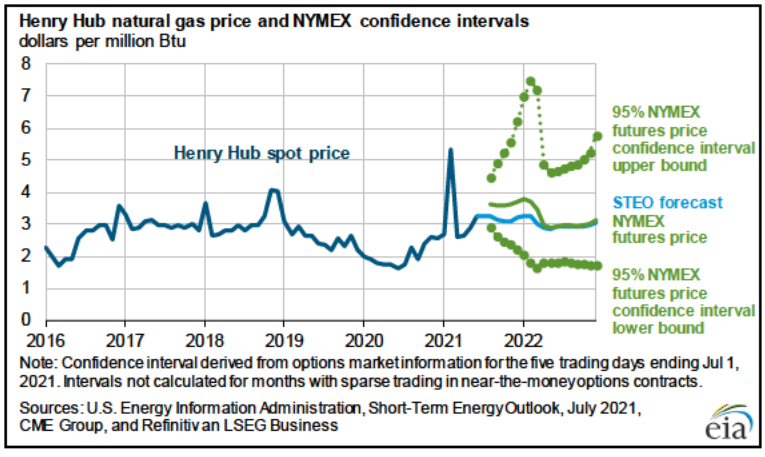
Item 3. Identify and quantify each risk, general and specific, that the utility may encounter with its fuel procurement.

DEF has identified specific and general risks associated with the procurement of fuels and power optimization activities. The specific risks include fuel price risk, supplier performance and default risk, credit risk, liquidity risk, Dodd-Frank compliance, product availability risk, and changes in forecasted volumes. The general risks include weather related events such as hurricanes, extreme weather variations from forecast, forced plant outages, business continuity, and changes in environmental rules and regulations. Described below is further information on these general risks, and DEF's activities to manage overall exposure to these risks including the processes that DEF has in place to monitor and quantify risks.

Fuel Price Risk

Commodity prices are constantly changing and as a result by definition contain volatility. DEF's customers are exposed to the risk of fuel price movements over time which could result in variability in projected and actual fuel costs. As noted in Item 2 above, natural gas makes up the largest component of DEF's overall fuel costs and hedging activities. Natural gas the physical fuel is procured under bilaterally negotiated industry contracts that are based on published market index pricing that exists during the time period the fuel is delivered. The published market index prices paid by DEF for natural gas will fluctuate with changes in market prices until the respective first of the month market index or daily published market index price settles and the product is delivered. As a result of fuel cost risks and volatility, DEF has implemented an approved financial hedging plan to reduce the risk of future price movements for a percentage of its fuel exposure for natural gas by executing financial hedging transactions over time that lock in prices. By definition, fixed prices are no longer subject to future price movement and as a result volatility and fuel cost risks are reduced. With respect to coal, DEF executes physical supply agreements to fix and/or collar the price of the underlying coal but is exposed to fuel surcharges in the transportation agreements. Absent hedging as defined by Order No. PSC-02-1484-FOF-EI (i.e. the Hedging Order), Order No. PSC-08-0667-PAA-EI (i.e. Clarifying Hedging Order), and fixed price coal supply contracts, the projected fuel costs for coal and natural gas could vary significantly due to changing market prices over time.

With respect to quantifying the potential statistical range of natural gas prices within a 95% confidence interval of natural gas prices for 2022, DEF is providing information from the US Energy Information Administration (EIA) July 2021 Short-Term Energy Outlook. EIA is forecasting Henry Hub spot prices to average $3.00/MMBtu in 2022 with a lower and upper limit with a 95% confidence interval of $1.81/MMBtu and $5.53/MMBtu.



Neither DEF nor any forecaster can predict with certainty where actual prices and volatility will be in the future and DEF's fuel hedging practices are not

intended to “out-guess” the market. This information above regarding projected natural gas prices and ranges is being provided because fuel costs are impacted by changing and uncertain fuel prices and volatility over time.

DEF will manage and reduce fuel price risk and volatility for a portion of its forecasted natural gas by utilizing financial transactions over time as outlined above for natural gas. In addition, DEF enters into coal supply physical agreements to fix the price of the underlying commodity. As a result of these actions, DEF reduces its overall risk to changing prices in projected fuel costs for its customers over time.

With respect to monitoring and quantifying fuel price risk, the company’s Risk Management function independently monitors and reports on the financial hedging activities and the percentage of projected fuel burns that have been procured as compared to the established procurement ranges and targets for each respective product and period. In addition, the Company performs multiple periodic fuel and purchased power cost forecast updates each year, which incorporate any updates needed for hedge positions, fuel and emission prices, unit maintenance schedules, load forecasts, and other operating parameters. The updated fuel and purchased power forecasts are point in time estimates and are summarized and published to ensure there is a regular review of projected fuel and purchased power costs. In addition, the Company performs standard statistical stress tests and portfolio analyses on an as needed basis.

Supplier Performance and Default Risk

Supplier performance and default risk represents the risk of additional cost and/or supply loss that DEF could incur if a supplier defaults on a physical or financial obligation and is not able to fulfill the terms of an agreement. The estimated aggregate dollar amount of supplier performance and default risk for the portfolio is based on the volume, duration, and price of the agreements as compared to the current estimated market value of the agreements.

DEF reduces supplier performance risk by engaging in business with a number of credit-approved suppliers, executing agreements within contract approval limits and credit parameter limits, monitoring delivery performance of suppliers, and, if possible, incorporating contractual provisions that allow for non-performance remedies in the case of default. In addition, if a supplier defaults, DEF also maintains off-site inventories for natural gas, coal and fuel oil and on-site inventories for coal and fuel oil. For activities associated with hedging under financial agreements, the Credit function within Risk Management monitors all open positions and reviews the estimated exposure for each third-party company to ensure that DEF maintains the appropriate collateral balances as compared to contractual thresholds established.

With respect to monitoring and quantifying the level of supplier performance and default risk in fuel agreements, the Credit function within Risk Management reviews the financial strength of suppliers, sets credit limits for sales transactions, and approves long term purchase transactions under RFPs for physical fuel agreements. The Credit Risk Management team also monitors the creditworthiness of financial counterparties and establishes and monitors exposure limits for financial hedging. Exposure is based on amounts due or owed between the counterparties as well as current estimated market value of the agreements considering the contractual volumes, duration, and prices for the transactions with each counterparty.

Credit Risk

Counterparty credit exposure is calculated and reported on a daily basis utilizing industry-standard valuation practices. The Credit function monitors exposure for each third-party company and the credit quality of the third-party companies to ensure that the appropriate level of collateral is posted or received as compared to contractually established thresholds. To date, DEF has not experienced any credit losses with respect to its hedging program activities.

With respect to financial transactions, prior to executing any financial transaction with a third-party company, DEF and the third-party company must have an ISDA Master Agreement (ISDA) in place. The ISDA Master Agreement is a standard industry contract published by the International Swaps and Derivatives Association that is used by industry participants to enter into Over the Counter bilateral transactions (OTC transactions). All ISDA agreements are negotiated by the Legal group and reviewed as needed with Credit, FSO, and Accounting to ensure the appropriate terms and conditions are included. As part of the process of setting up a new financial agreement, a credit evaluation is performed on the third-party company by the Credit function. Credit rating agencies establish credit ratings for companies based on methodologies that consider many factors including both qualitative factors and quantitative metrics. Among these are company size, industry characteristics and trends, profitability, liquidity, cash flow, interest coverage, and capital structure. DEF's counterparty evaluation methodology considers third-party credit ratings when available as well as an internal evaluation. The credit rating process includes obtaining counterparty background and financial information, researching available third-party ratings, and performing a financial statement analysis. The financial statement analysis includes balance sheet metrics such as percentage of debt to total capitalization, and net worth as well as income statement metrics such as net income and earnings before interest, taxes, and depreciation ("EBITDA"), coverage ratios such as interest coverage and debt to EBITDA, and cash flow metrics such as operating cash

flows and/or funds from operations. If the counterparty is a bank, Tier I and Total Capital Ratios are also typically included. The Credit Risk function uses the credit evaluation to determine the credit limit and duration of financial hedging transactions that DEF can enter into with the counterparty.

On a daily basis the Credit Risk function monitors reports of any required collateral calls or returns and sends collateral calls and/or return requests to counterparties as needed. In addition, with respect to agreements that require the posting of margin based on established contractual thresholds, the company may be required to post collateral to the counterparty to maintain their exposures to DEF within established contractual thresholds. The Credit Risk function responds to any such collateral calls from counterparties and posts required collateral (see Liquidity Risk).

Liquidity Risk

Liquidity risk represents the risk that DEF could not meet the collateral requirements generated from physical agreements and financial agreements. As discussed above, DEF currently manages natural gas price risk and volatility for a portion of its forecasted fuel costs through the use of financial hedging agreements. To manage default risk, agreements contain provisions that require the posting of collateral if exposure as defined above exceeds the contractual thresholds established for each counterparty in the agreements.

DEF manages and reduces liquidity risk by conducting business with a number of counterparties to maximize the collateral threshold levels in individual agreements. For activities associated with hedging under financial agreements, the Credit function within Risk Management monitors all open positions and reviews the estimated market exposure for each third-party company on a daily basis to ensure that DEF only posts the appropriate collateral balances as compared to contractual thresholds.

Dodd-Frank Compliance

DEF continues to monitor and comply with the Dodd-Frank Wall Street Reform and Consumer Protection Act and the Commodity Futures Trading Commission's rules that implement the Dodd-Frank Act (collectively, the "Dodd-Frank Act").

The Dodd-Frank Act provides for the comprehensive regulation of swaps and security-based swaps, applying in respects to all "swaps" (as defined by the Dodd-Frank Act), including the bilateral and over-the-counter (OTC) derivatives markets, as well as swaps and options embedded in physical forward transactions.

The Dodd-Frank Act also has rules and requirements for record keeping and

reporting. Every party to a swap must keep records over certain periods of the transaction. DEF is maintaining records in accordance with the requirements of the CFTC regulations. As an end-user, DEF can shift, and does shift, the reporting obligation to swap counter parties.

As noted above, DEF continues to comply with the requirements of the Dodd-Frank Act, as well as monitor any rule making.

Product Availability and Changes in Forecasted Volumes

DEF must have access to needed physical fuel supplies, adequate product delivery capabilities and inventory to meet projected fuel requirements. Without access to needed fuel supply and inventory, DEF is exposed to the risk of not being able to economically and reliably dispatch the generation fleet for its customers.

DEF manages and reduces this risk by entering into physical supply contracts, as well as needed pipeline, railroad, barge and trucking agreements for the purchase and delivery of coal, natural gas, and fuel oil that provide the ability to meet projected burns. In addition, DEF maintains on-site inventory for coal and fuel oil to provide fuel supplies to support on-going operations and ensure supplies are available if unexpected delivery delays, storm curtailments, or other events that could affect fuel supply availability occur. DEF also holds off-site coal and fuel oil inventory and off-site onshore high deliverability natural gas storage capacity that provides additional access for a portion of its current generation natural gas needs when natural gas supplies are curtailed. In addition, DEF currently has firm transportation on Gulfstream Natural Gas, Florida Gas Transmission (FGT), Sabal Trail Transmission and Southern Natural Gas (Sonat) and has access to onshore gas supplies via contractual volumes delivered on Southeast Supply Header, the Transco Mobile Bay South Lateral and an agreement for supply from Elba Island LNG into FGT via the Sonat-Cypress lateral to meet its current generation needs. DEF actively monitors forecasted fuel burns, actual fuel burns, and fuel inventory levels. Based on its on-going monitoring efforts DEF may make procurement adjustments to manage any changes to the forecasted volume and delivery timing of contracted supplies because of actual burns, changes to forecasted fuel burns, and inventory levels that can be caused by factors such as weather deviations, fuel prices, plant outages, and purchased power opportunities.

With respect to monitoring and quantifying the level of risk associated with ensuring adequate fuel supply, Risk Management independently monitors and reports on the amount of fuel procured versus projected burns. In addition, the front office performs analyses that quantify the amount of fuel and transportation needed to support projected burns and inventory needs. Lastly, the Company performs periodic forecast for fuel burns and purchased power

and produces summary reports for review and monitoring of projected fuel burns.

General Risk

DEF is subject to weather events and hurricanes. As detailed above, DEF reduces the overall risks associated with weather events and other potential fuel delivery curtailments and delays by maintaining on-site inventories, off-site inventories and continuing to diversify its natural gas supply to more secure onshore locations as the Company's overall gas generation has grown. DEF is also subject to events that could require FSO employees to perform required work functions at locations other than their normal work location. With respect to this risk, the FSO Department has business continuity plans in place that are reviewed and tested periodically to ensure that offsite locations are functional. Lastly, DEF is subject to changes in environmental rules and regulations.

Item 4. Describe the company's oversight of its fuel procurement activities.

The Finance and Risk Management Committee (FRMC) of the Board of Directors is primarily responsible for the oversight of financial risk and enterprise risk at Duke Energy. The Finance and Risk Management Committee reviews the financial exposure of Duke Energy, as well as mitigation strategies, reviews Duke Energy's enterprise risk exposures, and provides oversight for the process to assess and manage enterprise risk. The Company's Senior Management, defined as the Chief Executive Officer (CEO) and his/her direct reports, provides guidance for the oversight of Duke Energy's financial risks. The Chief Risk Officer (CRO) updates the FRMC of any material risks and risk management activities of the enterprise at periodic committee meetings. The Transaction and Risk Committee (TRC) is responsible for oversight of the Corporation's Risk Management activities. The TRC is comprised of senior executives from varying functional areas. The CRO is responsible for annually reviewing the corporate Commodity Risk Policy and Corporate Credit Policy, and the TRC is responsible for approving substantive changes to the policies. The CRO reviews corporate risks, resulting mitigation decisions including fuel hedging, and procurement activities. The TRC reviews transactions that exceed individual senior management committee approval authorities. Senior management committee approval authorities are outlined in the Company's Approval of Business Transaction policy (ABT). In addition, the Company maintains a risk management control manual, together with specific risk and credit limits that apply to the activities of DEF. These policies, processes, and limits are reviewed at least annually by the Front Office and Risk Management and are approved by CRO or the Chief Financial Officer (CFO) as required.

DEF has included the Regulated Electric Risk Management Control Manual, the Duke Energy Commodity Risk Policy, the Duke Energy Credit Policy, the DEF Regulated Electric Risk Limits and the DEF Regulated Utilities Credit Limits as **Attachments G, C, D, A, and E,** respectively.

With respect to day-to-day independent oversight and controls in place to oversee FSO's activities, the company uses the "three-office" structure which includes FSO and Energy Supply Analytics (Front Office), Risk Management (Middle Office), and Regulated Accounting (Back Office) to provide the necessary independent oversight and monitoring of its fuel procurement, power optimization, and hedging activities.

The "three-office" structure is an accepted industry practice with the Front Office, Middle Office, and Back Office each functioning as independent departments, which ensures the required segregation of duties and the existence of independent oversight and controls over key activities. In addition, the Legal organization provides critical contractual support to ensure that the Front Office contracts are reviewed with FSO and contain legal provisions that reduce risks that could affect the Company. The IT Enterprise Application Solution Support organization provides on-going support related to trading system operations and functioning. Treasury and Disbursement Services provide appropriate support when disbursing funds to counterparties via checks, wires, or automated clearinghouse payments. These support organizations are independent from the Front Office.

<u>Front Office</u>

DEF has a structured procurement process where Requests for Proposals are issued periodically to procure needed competitive fuel supply. As noted above, the fuel procurement contracting, and settlement activity is supported by the Legal and Regulated Accounting function. Front Office management is responsible for ensuring employees are authorized before they are allowed to trade commodities on the Company's behalf. In addition, there is a corporate Energy Supply Bulk Power Marketing & Trading Delegation of Authorities as well as a corporate Approval of Business Transactions Delegation of Authorities, which provides the required approvals for fuel related procurement activity based on estimated costs and duration of fuel related contracts. Front Office management is also responsible for ensuring that employees who trade commodities on the Company's behalf attend required periodic training conducted by Risk Management and Regulatory Compliance. DEF has included the Duke Energy Commodity Risk Policy, Duke Energy Credit Policy, DEF Regulated Electric Risk Limits and DEF Regulated Utilities Credit Limits in **Attachments C, D, A, and E,** respectively. In addition, DEF has included the Duke Energy Supply Bulk Power Marketing & Trading Delegation of Authorities, the Duke Energy Commodities Approval Matrix from the ABT and

the Risk Management Employee Acknowledgement as **Attachments F, B, and H,** respectively.

Middle Office

Risk Management monitors Front Office activity by quantifying, monitoring, and reporting risks associated with fuel procurement, power optimization, and hedging activities. Risk Management is accountable to the enterprise for independent oversight, measurement and reporting of Front Office activities to management. Risk Management monitors and reports on Front Office activities and will report immediately any non-compliance as required within the reporting and control limit structures as defined by the Risk Management Guidelines. Lastly, Risk Management publishes credit limit and exposure reports to ensure that counterparty credit limits are monitored and adhered to and administers margin activity as required under agreements with counterparties to reduce credit and default risk.

Regulated Accounting

Accounting is also independent from Front Office and performs control functions on a daily, weekly or monthly basis which include, among other things, deal validation, transaction confirmations, close accounting, general ledger balance sheet account reconciliations, settlements/cash transfers, processing payments/receipts, accounting for hedging activities and derivatives, and performing certain compliance activities as defined and/or required by various regulatory agencies (e.g. Securities and Exchange Commission, Financial Accounting Standards Board, Federal Energy Regulatory Commission, Public Service Commission). Related to accounting for hedging activities and derivatives, Duke Energy's Derivatives policy is followed. This policy is reviewed and updated as necessary and at least annually.

Item 5. Verify that the utility provides its fuel procurement activities with independent and unavoidable oversight.

As described in Item 4, the Company has a robust independent oversight culture and organizational design with processes in place to ensure the identification, monitoring, and reporting of risks accompanying independent controls for monitoring and reporting on fuel procurement, power optimization, and hedging activities. The key components of the oversight functions and processes are further described below.

The Finance and Risk Management Committee of the Board of Directors

The FRMC is primarily responsible for the oversight of financial risk and enterprise risk at Duke Energy. This oversight function includes, but is not

limited to, review of Duke Energy's risk exposure as related to the overall enterprise portfolio and review of the financial exposures undertaken by the company. Such exposures include market, liquidity, and credit risks related to physical and financial positions in the commodities markets. The Committee is comprised of a minimum of two members of the Board.

Transaction and Risk Committee (TRC)

The TRC is responsible for oversight of the corporation's risk management activities as well as reviewing proposed business transactions and risk management activities that require approval by the President and CEO, the Board of Directors, or a committee of the Board of Directors in accordance with the ABT Policy. The membership of the Committee shall consist of Senior Management Committee members of the Corporation, as designated by the President and CEO, plus the following individuals:

- Chief Risk Officer
- Treasurer

Additional members of executive leadership may be appointed to the Committee by the President and CEO. These appointments should be reviewed by the President and CEO on an annual basis.

Regulated Electric Risk Management (Risk Management)

Duke Energy has an independent Risk Management department that reports to the Chief Risk Officer (CRO). The Risk Management group includes both a credit risk management function and a market risk management function. Risk Management's credit function provides independent credit evaluation of trading and procurement counterparties, performs credit reviews of Duke Energy's suppliers and customers, assists in drafting and reviewing credit language in various agreements, and monitors and reports on credit exposures. Risk Management's market risk function independently reports on fuel procurement and hedging activities and performs independent analysis as required. Risk Management independently develops the methodologies for measuring and evaluating risk.

Regulated Electric Risk Management Control Manual and Regulated Electric Risk Limits

As part of the overall risk management structure and oversight process at the Company, the Company has a Regulated Electric Risk Management Control Manual, Regulated Electric Risk Limits, and Regulated Utilities Credit Limits. These are reviewed by Front Office and Risk Management and approved by the CRO or the Chief Financial Officer as required.

The Regulated Electric Risk Management Control Manual provides the

descriptions of the objectives and operations of the regulated businesses, the overall control environment in which they operate, and the structure and responsibilities of the various groups involved in the control function. DEF's Regulated Electric Risk Limits contain the limits and approved activities for DEF. In aggregate, these documents provide for the oversight and controls, roles and responsibilities, and the approved activities associated with fuel procurement contracts, fuel hedging activities and power activities. Duke Energy's Credit Policy provides the overall objectives and general operating practices for evaluating, measuring, mitigating, and reporting credit risk associated with FSO activities.

Internal Audit

Internal Audit provides independent assurance and consulting services that ensure compliance, effective corporate governance, adherence to established procedures, and operational effectiveness for all major areas of the Company. With respect to FSO activities, Internal Audit performs periodic audits that focus on items such as compliance with established procedures, off-premise activity, payment terms under fuel contracts, and other trading and procurement activities.

Legal and Regulated Accounting

Legal performs contract reviews with the Front Office during drafting and prior to final execution. In addition, Regulated Accounting which includes the Back Office performs, among other things, on a daily, weekly, or monthly basis, deal validation, transaction confirmations, close accounting, general ledger balance sheet account reconciliations, settlements/cash transfers, processing payments/receipts, accounting for hedging activities and derivatives, and compliance activities as defined and required.

Item 6. Describe the utility's corporate risk policy regarding fuel procurement activities.

The Company has a Regulated Electric Risk Management Control Manual, a Commodity Risk Policy, a Credit Policy, and Regulated Electric Risk Limits and Regulated Utilities Credit Limits. In addition, the Company has the Duke Energy Supply Bulk Power Marketing & Trading Delegation of Authority, and the Duke Energy Commodities Approval Matrix from the Approval of Business Transactions policy that outline the approval requirements for procurement activities for respective individuals and management levels based on the tenor and estimated dollar amounts of agreement, subject to the requirements of the Approval of Business Transactions policy.

These documents and processes in aggregate outline the expectations,

policies, responsibilities, and limits associated with the corporate risk oversight and approved activities for the Company's fuel procurement practices. In addition, as described in detail in item 4, the Company has developed oversight functions and processes that are followed with respect to fuel procurement, power optimization, and hedging activities. DEF has included the Regulated Electric Risk Management Control Manual, Duke Energy Commodity Risk Policy, Duke Energy Credit Policy, the DEF Regulated Electric Risk Limits, the DEF Regulated Utilities Credit Limits, the Duke Energy Supply Bulk Power Marketing & Trading Delegation of Authorities, the Duke Energy Commodities Approval Matrix from the ABT, and the Risk Management Employee Acknowledgement as **Attachments G, C, D, A, E, F, B**, **and H,** respectively. The fuel purchase and related activities are identified under the Duke Energy Supply Bulk Power Marketing & Trading Delegation of Authority, DEF Regulated Electric Risk Limits and the Duke Energy Commodities Approval Matrix from the ABT.

Item 7. **Verify that the utility's corporate risk policy clearly delineates individual and group transaction limits and authorizations for all fuel procurement and hedging activities.**

DEF has approval requirements, policies, and authorizations in place that outline authorizations for fuel procurement and financial hedging activities. DEF has included DEF's Regulated Electric Risk Limits and corporate Duke Energy Commodity Risk Policy in **Attachments A and C,** respectively. These policies and guidelines outline roles and responsibilities of each group, deal execution processes, and allowed products, as well as control limits such as volumetric, tenor, and liquidity limits and deal validation and valuation processes. Additionally, the Duke Energy Supply Bulk Power Marketing & Trading Delegation of Authority and the Duke Energy Commodities Approval Matrix from the ABT outline the approval requirements for procurement activities for respective individuals and management levels based on the tenor and estimated dollar amounts of agreement, subject to the requirements of the Approval of Business Transactions policy. The Duke Energy Supply Bulk Power Marketing & Trading Delegation of Authorities, and the Duke Energy Commodities Approval Matrix from the ABT are included in **Attachments F and B,** respectively.

Item 8. **Describe the utility's strategy to fulfill its risk management objectives.**

As outlined in Item 1, DEF's Plan objectives are to effectively manage its overall fuel and purchased power costs for its customers by engaging in competitive

fuel procurement practices and activities, performing active asset optimization and portfolio management activities, and continuing to execute the Company's hedging program to reduce fuel price volatility risk and provide greater cost certainty for DEF's customers. Outlined below is the strategy to fulfill the risk management objectives.

First, the strategy is executed by experienced professionals who conduct and execute their activities to achieve the objectives of the plan.

One of the components of DEF's Plan objectives is to engage in competitive fuel procurement practices. Examples of the strategy executed to fulfill this objective include the issuance of periodic RFP's to solicit competitive term supply bids for coal, natural gas, and fuel oil. In addition, DEF actively manages its day-to-day fuel needs and participates in the short-term marketplace to access competitive supply and work closely with suppliers as needed. With respect to the strategy executed to achieve the objective of performing active asset optimization and portfolio management activities, the Portfolio Management Unit within FSO performs daily forecast to determine optimal unit commitment and dispatch based on generation costs and market prices, and together with the Power Trading Unit within FSO, monitors the hourly cost to dispatch the generation fleet compared to available market opportunities. The Power Trading Unit actively seeks opportunities to execute least cost economic purchases and sales that reduce costs for the customers. Lastly, with respect to the strategy executed to fulfill the objectives of the financial hedging program, DEF by virtue of locking in fixed price for a portion of forecasted usage over time via its financial hedging program, achieves this objective as a portion of DEF's fuel costs are no longer subject to changing price risk and volatility due to changing fuel markets.

Along with the examples noted above, DEF's Plan activities are governed by independent controls and audits, strong processes, appropriate organizational design and oversight, deal approval requirements, and the existence of needed guidelines and procedures. The Company has established controls, guidelines, procedures, and organizations to support and independently monitor fuel procurement, hedging, and power optimization activities. As noted in items 4 and 5, the Company has a robust oversight culture and processes that include oversight by the TRC, periodic audits by Internal Audit, and independent reporting and credit monitoring by Risk Management to ensure adherence to established guidelines and procedures.

Item 9. <u>Verify that the utility has sufficient policies and procedures to implement its strategy.</u>

DEF maintains sufficient guidelines and procedures to implement its strategy. Please see **Attachment I** for a summary listing of the applicable guidelines and procedures.

Item 13. Describe the utilities reporting system for fuel procurement activities.

The Company utilizes multiple systems and applications to track, record, account, and report on executed fuel procurement activities. Descriptions of the primary systems, software, and other tools are provided below.

Fuel burn projections are prepared by the Company using a production cost simulation model called PowerSimm. Fuel and other commodity price forecasts, load forecasts, purchased power, generating unit operating characteristics, maintenance schedules, and other pertinent data are inputs into PowerSimm which then simulates the system and computes a projected fuel burn. PowerSimm utilizes historic weather information to simulate numerous scenarios of future weather and commodity prices. For each of these scenarios, system load and commodity prices (gas, coal, oil, and power) are all calculated in a correlated manner using historical correlations with each other and with weather. The resulting forecasts from PowerSimm gives the Company not only expected fuel burns, but also the range of fuel burns and the probability associated with each range.

CXL is a software application used by the Company to capture natural gas physical procurement transactions as well as financial natural gas transactions. In addition to deal capture, CXL is used for deal valuation, position management, mark-to-market calculations, and settlements. CXL is integrated with the GasOps which is a natural gas scheduling tool used to match supply and deliveries. Once volumes are updated in GasOps with actual volumes, there is a process that systematically updates the physical deals in CXL.

GasOps is a software application used by the Company to match supply, transport, and deliveries for natural gas purchases, sales, and transport activity and the administration of associated contracts. The system is integrated with CXL as outlined above, which provides for greater efficiency and controls for gas related activities.

Comtrac is a software application used by the Company to capture and track physical procurement activity for coal, reagents, and fuel oil. The system assists with administering contract terms and conditions, maintaining inventory levels, capturing fuel consumption information, and issuing monthly closeout processes, including invoicing, and settlements.

Risk Management utilizes a separate Credit and Market Risk System that is integrated with CXL to monitor and report on fuel procurement transactional activity and counterparty credit exposure.

Front Office, Risk Management, and Accounting utilize other programs such as Business Objects and Excel to summarize, evaluate, and report on fuel procurement transactions and counterparty credit evaluations. In addition, Energy Supply Analytics and Risk Management utilize Matlab, a computer programming language, to model potential forward exposures and run other fuel scenarios as needed by the business units.

Lastly, the Company has agreements with vendors to provide real time pricing feeds to monitor real-time natural gas, fuel oil, and power market prices.

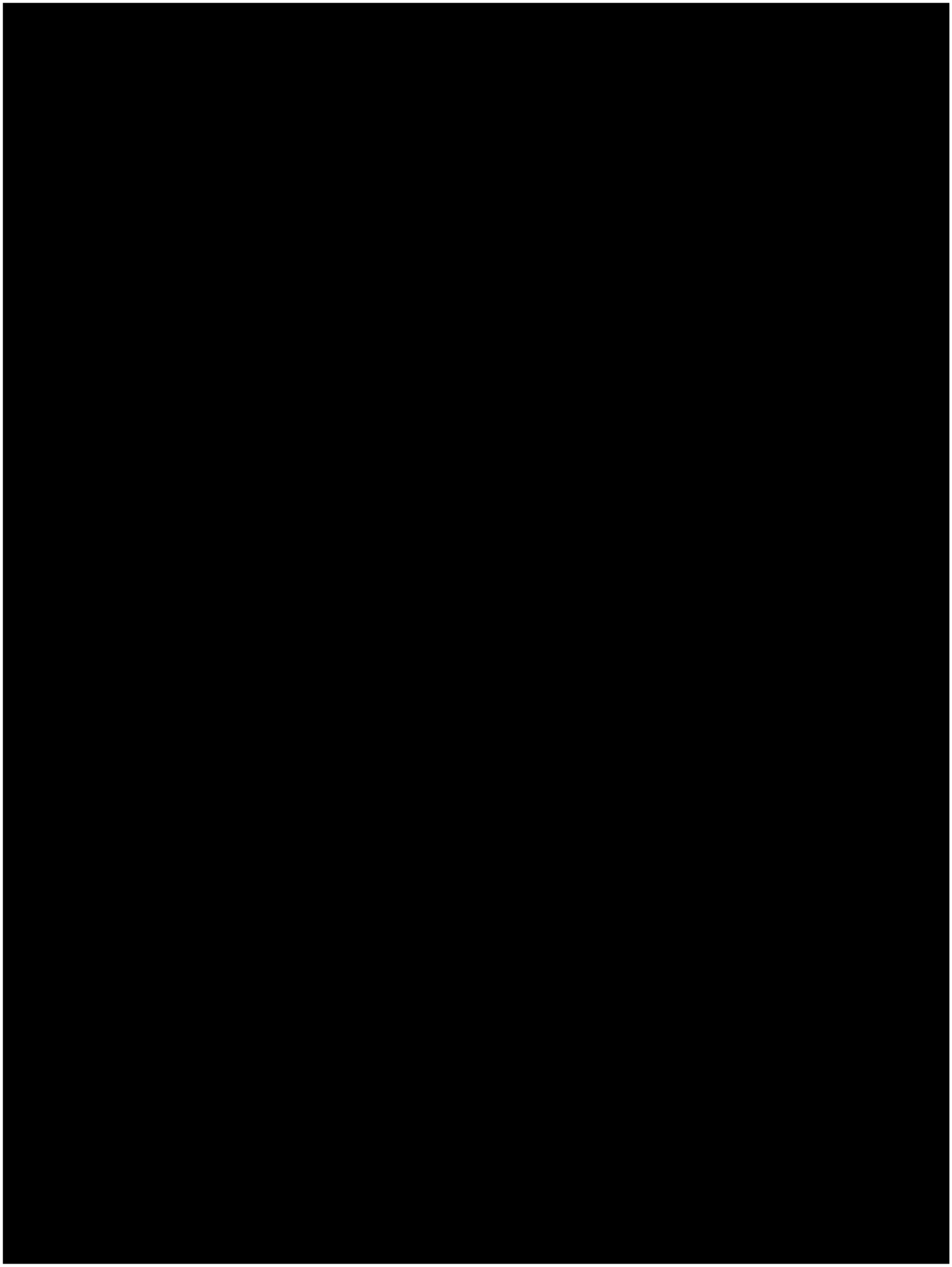
Item 14. Verify the utility's reporting system and other tools consistently and comprehensively identifies, measures and monitors all forms of risk associated with fuel procurement activities.

As outlined in the response to item 13, the Company utilizes several applications to ensure procurement and financial hedging activities are captured, measured, monitored, confirmed, accounted for, and reported. The Company uses standard industry reporting templates, valuation techniques and applications. The current applications utilized by the Company provide the necessary functionality for capturing deals, summarizing fuel positions, calculating mark-to-market valuations, calculating credit and collateral exposures, generating confirmations, supporting billing and payment requirements, and maintaining needed historical information such as prices and trade data.

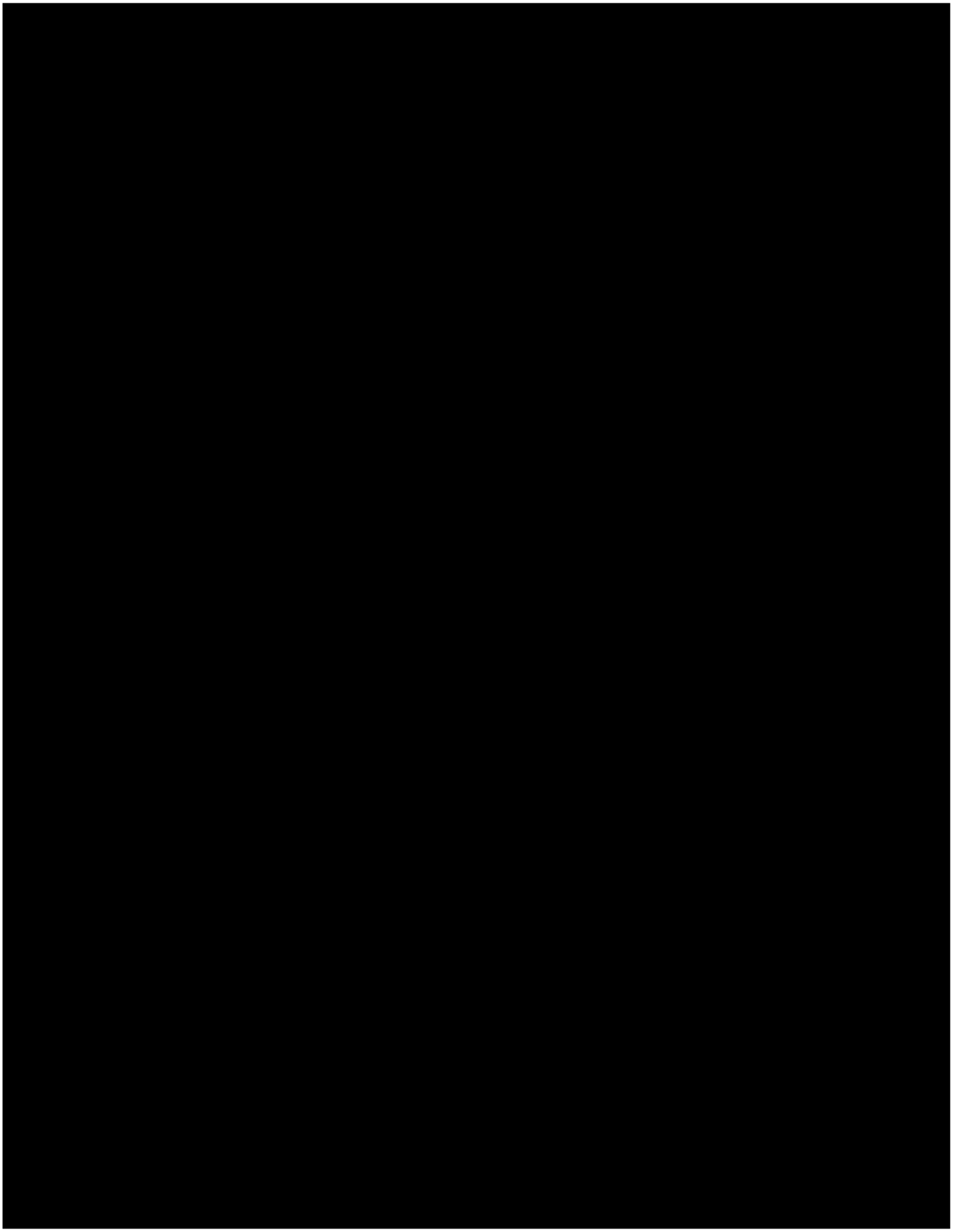
Item 15. If the utility has current limitations in implementing certain hedging techniques that would provide a net benefit to ratepayers, provide the details of a plan detailing the resources, policies, and procedures for acquiring the ability to use effectively the hedging techniques.

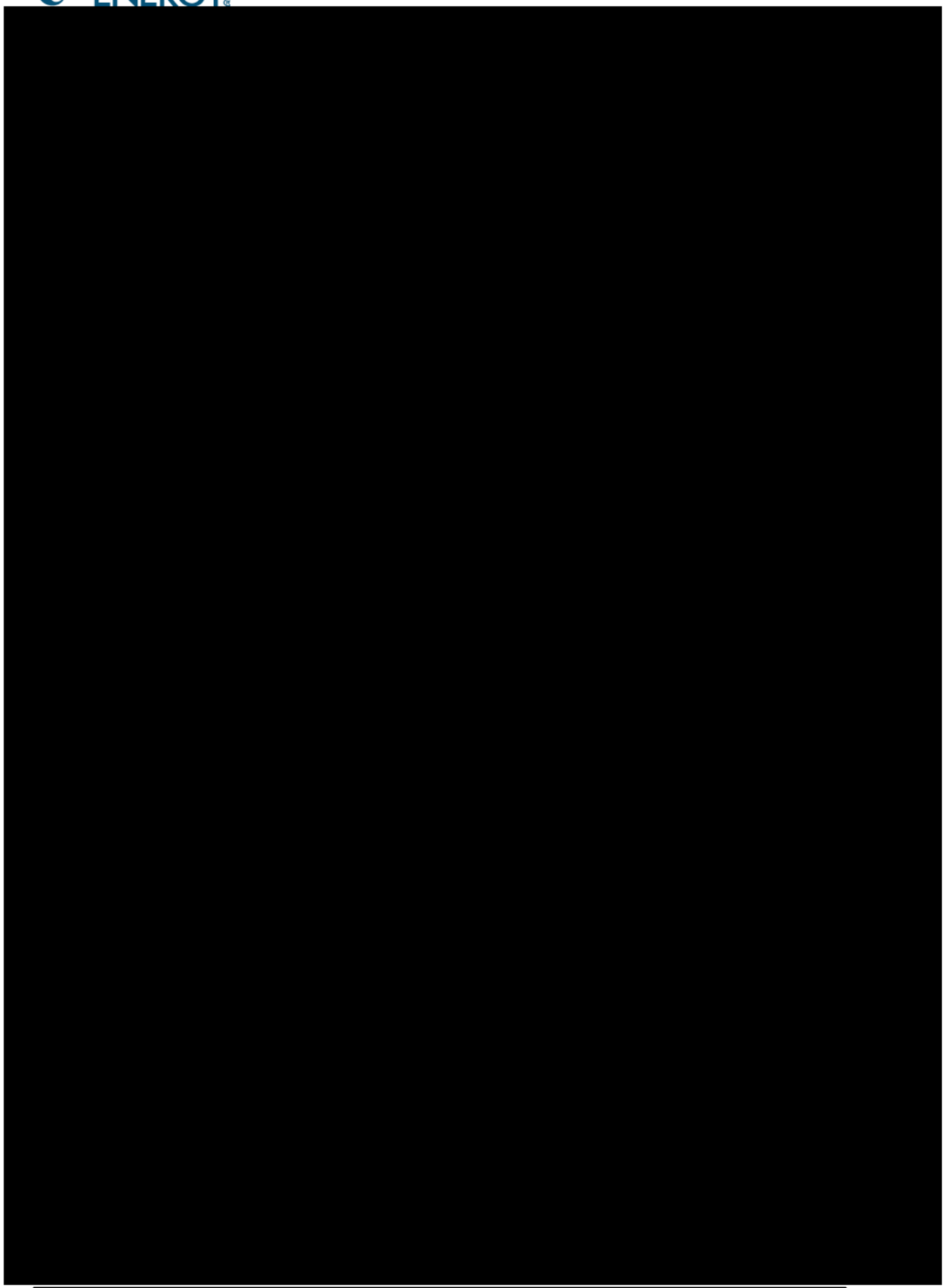
DEF does not believe that there are any current limitations to execute its hedging strategy in a reasonable and prudent manner.

Regulated Electric Risk Limits



Regulated Electric Risk Limits





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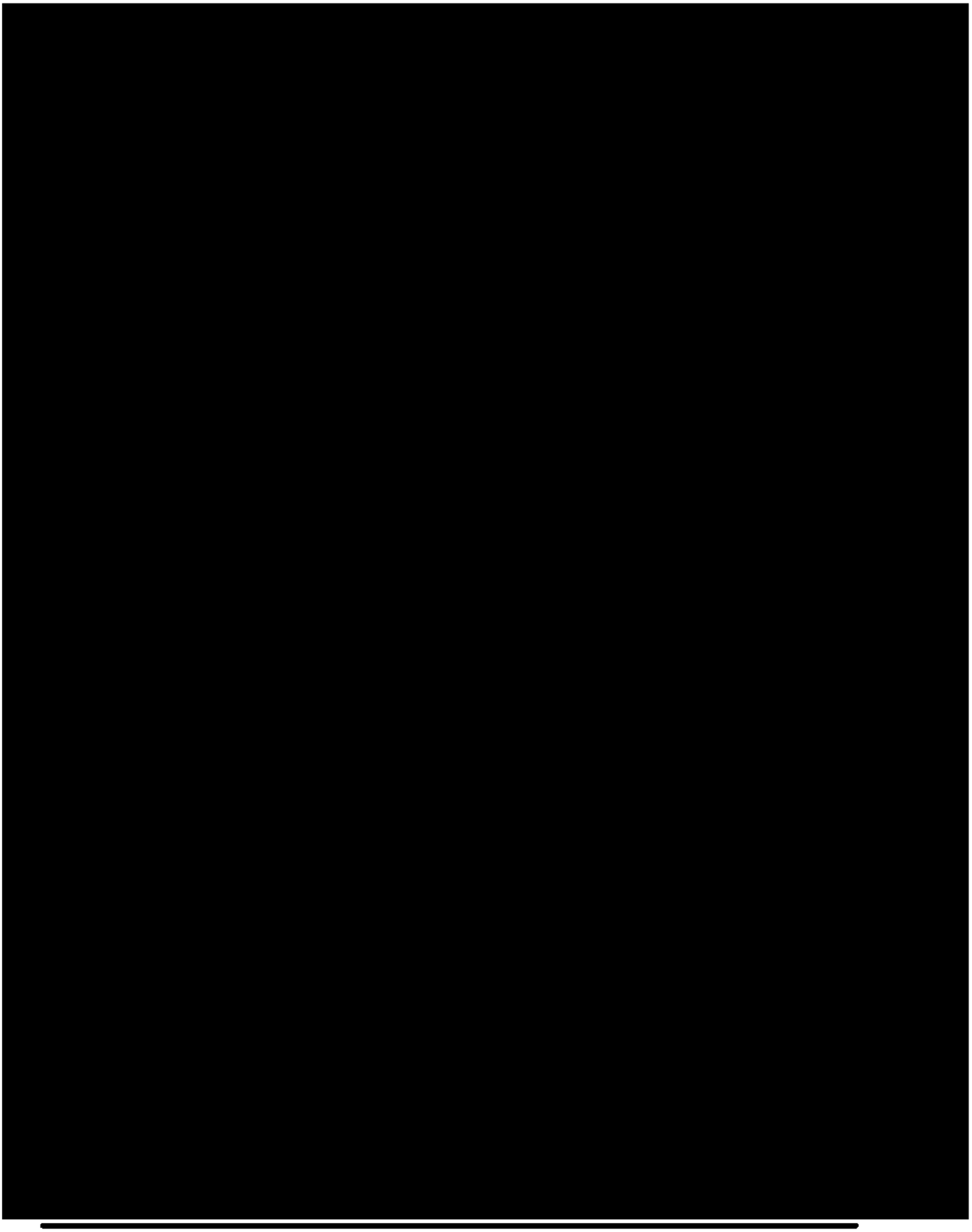

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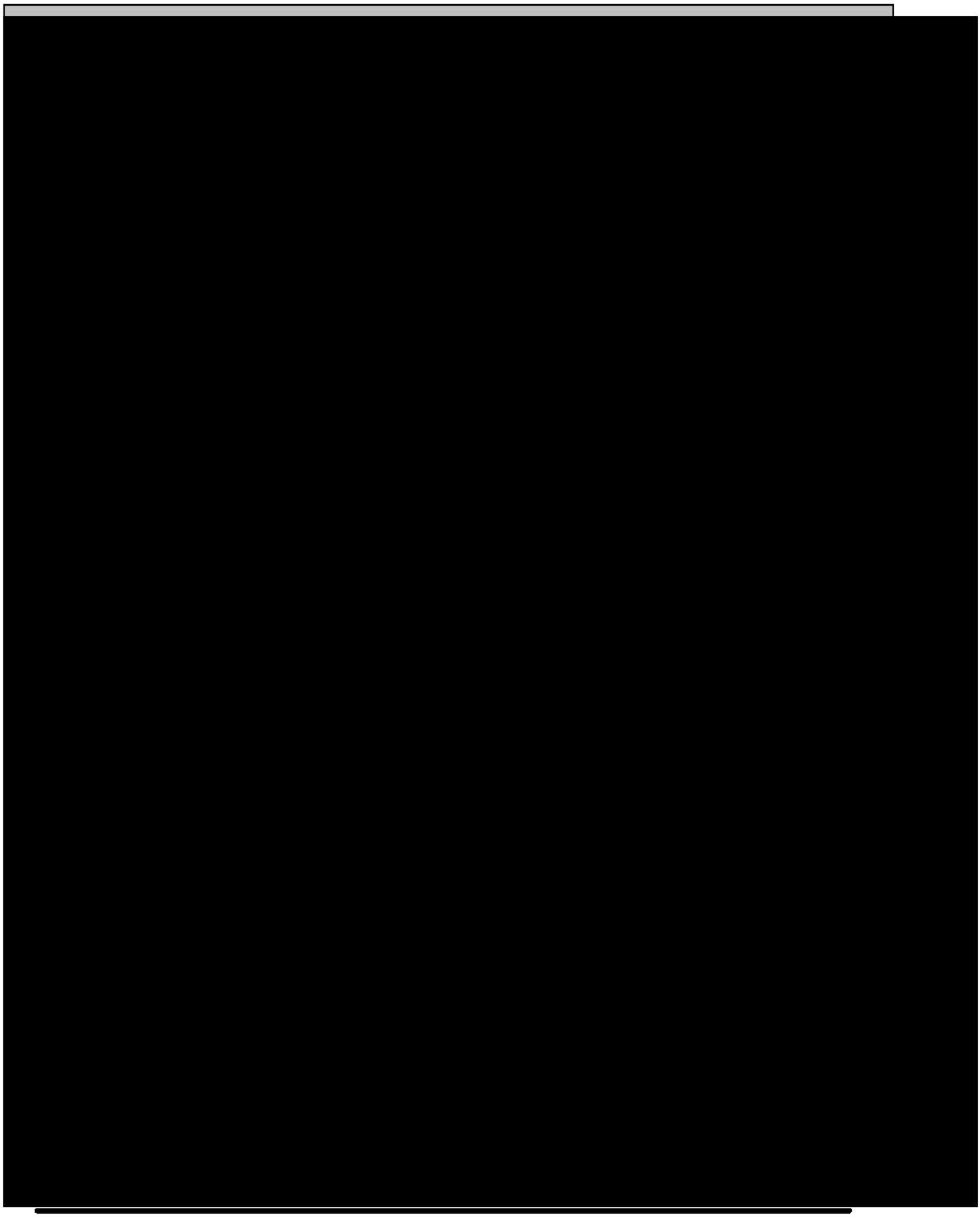

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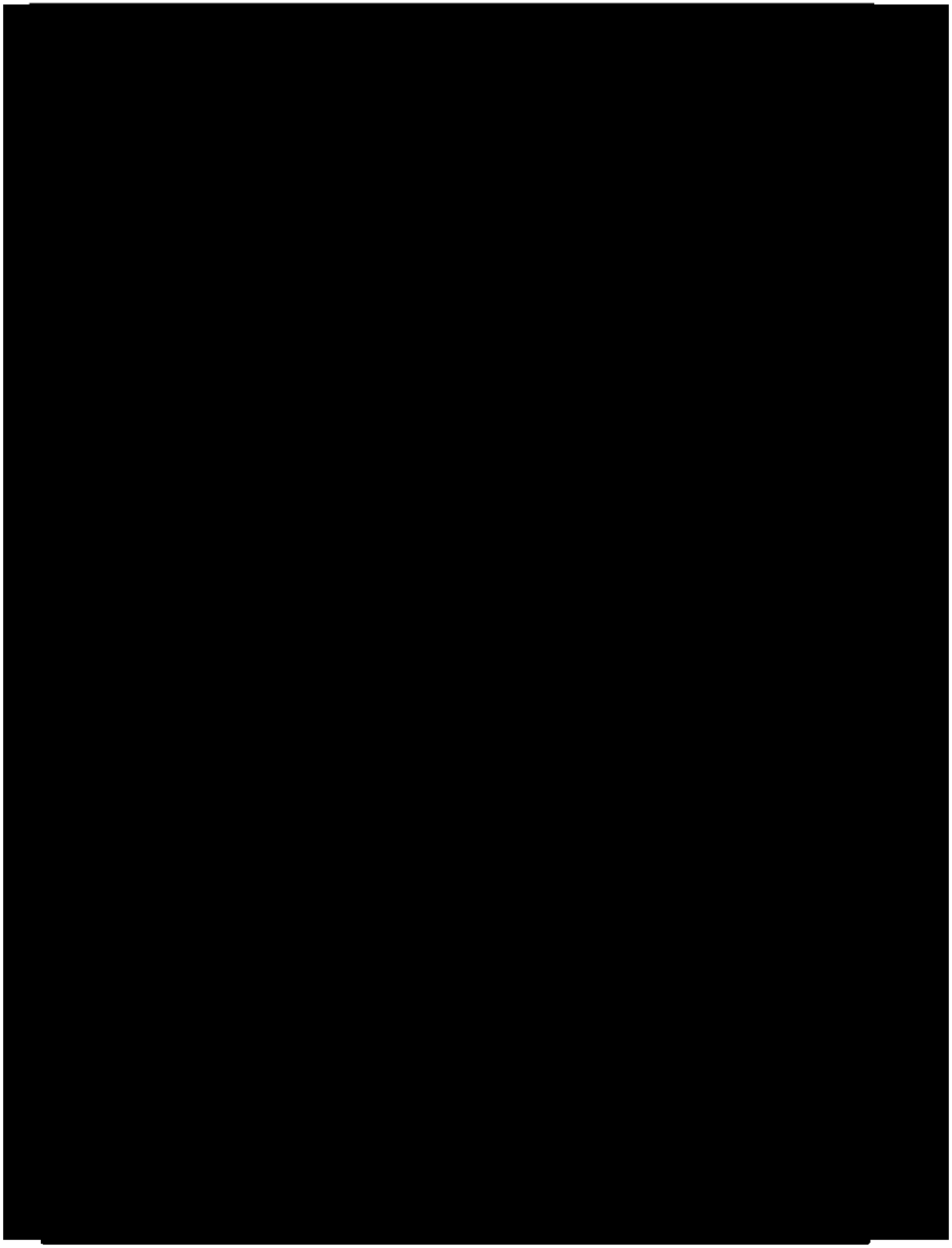

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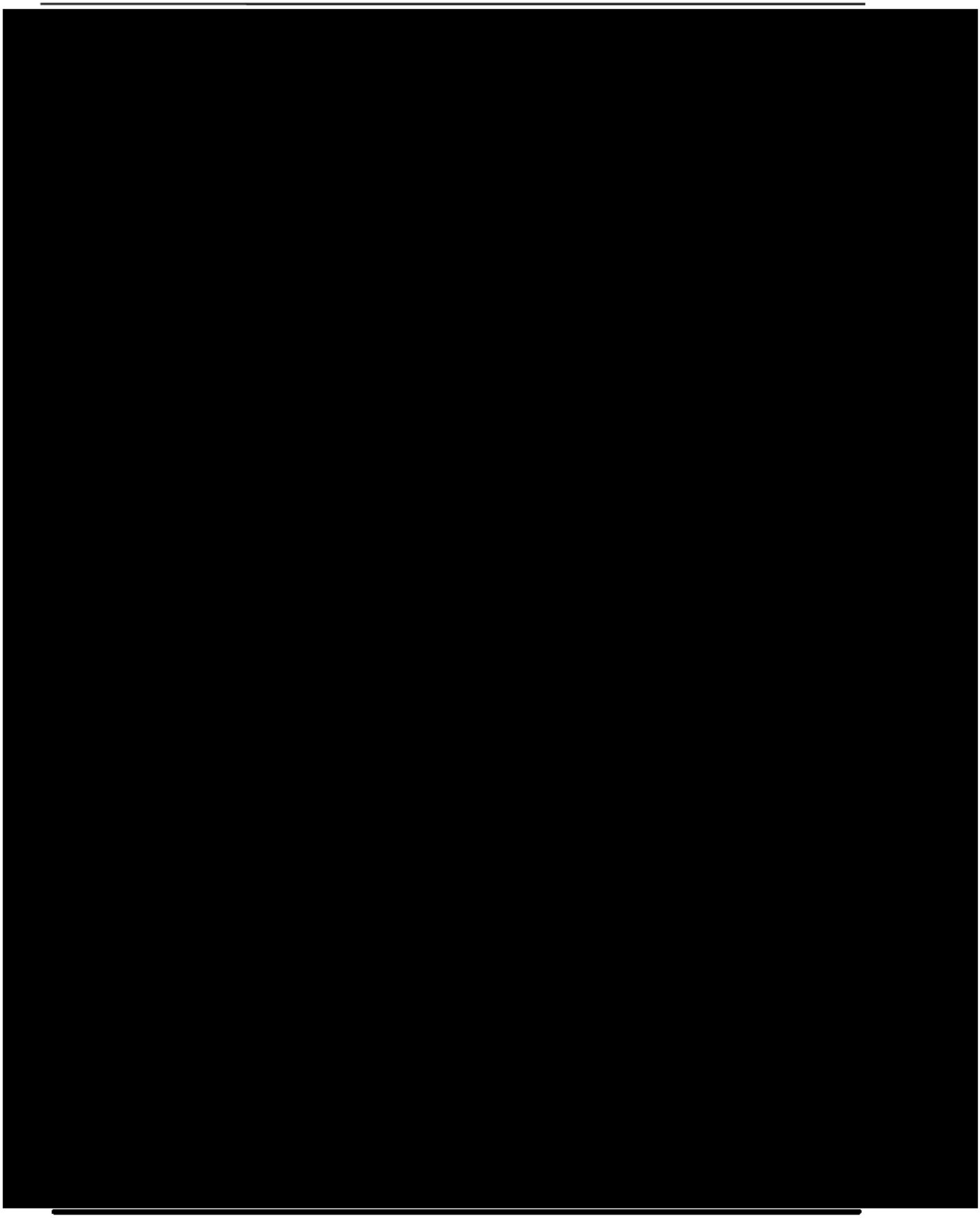

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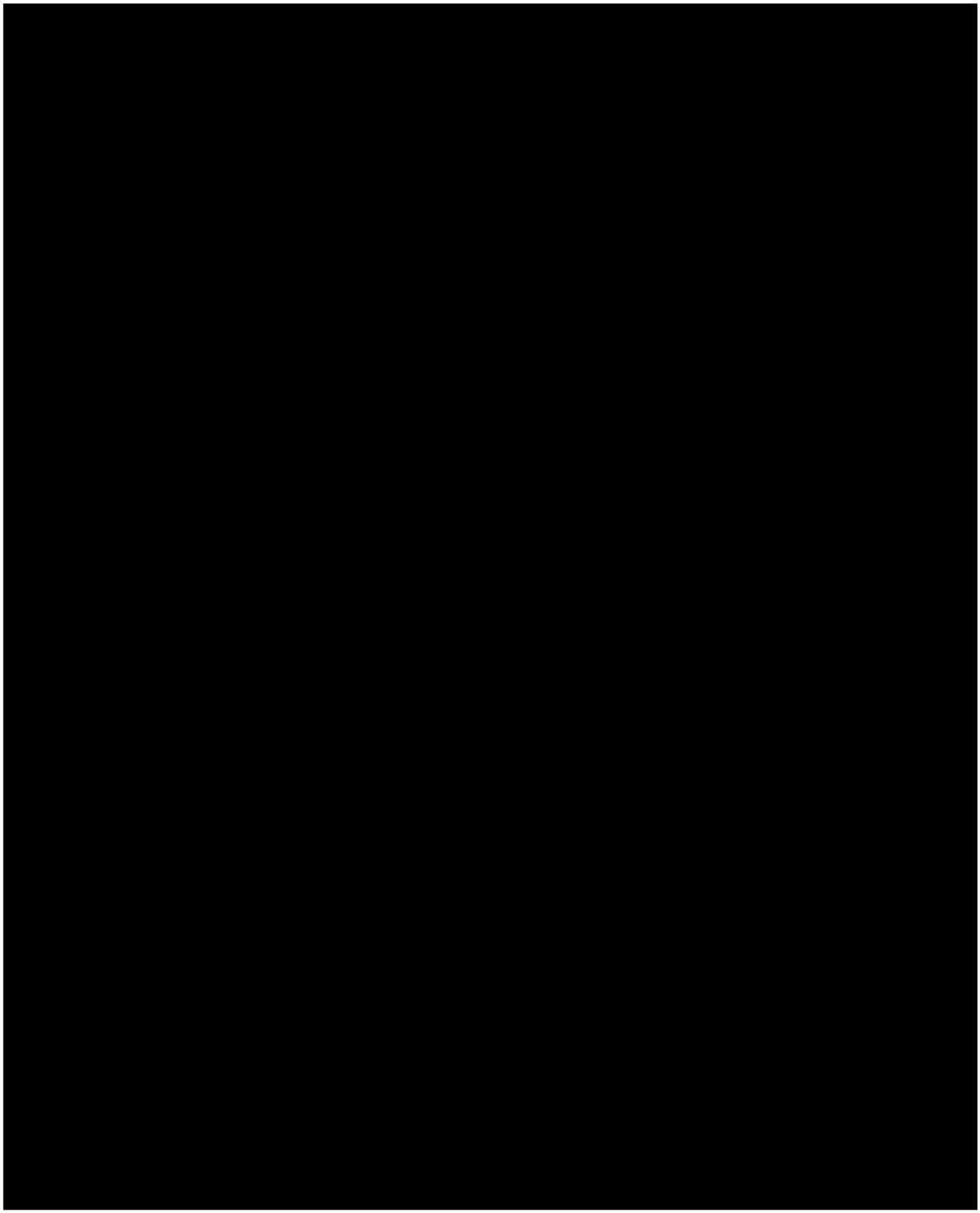

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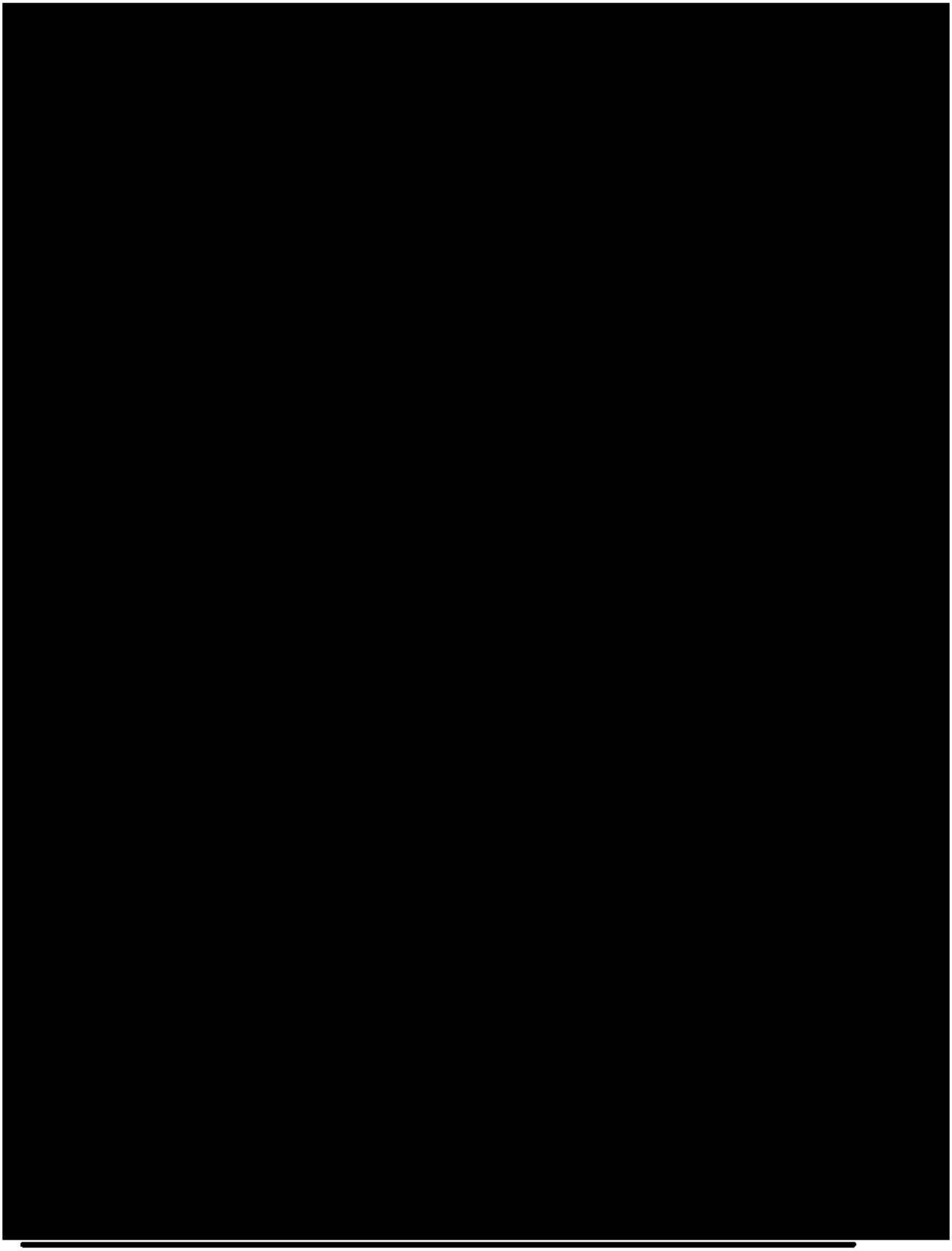

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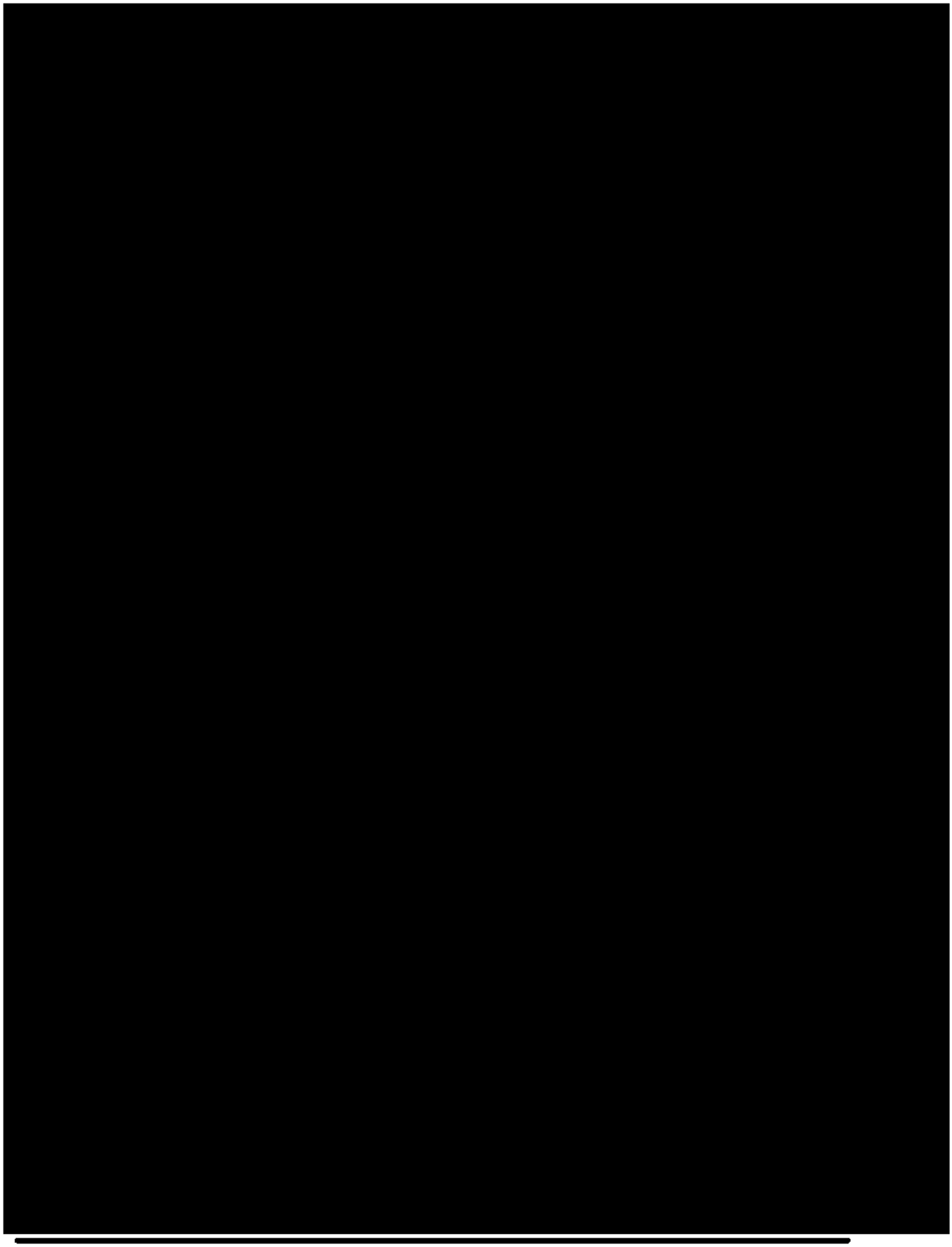

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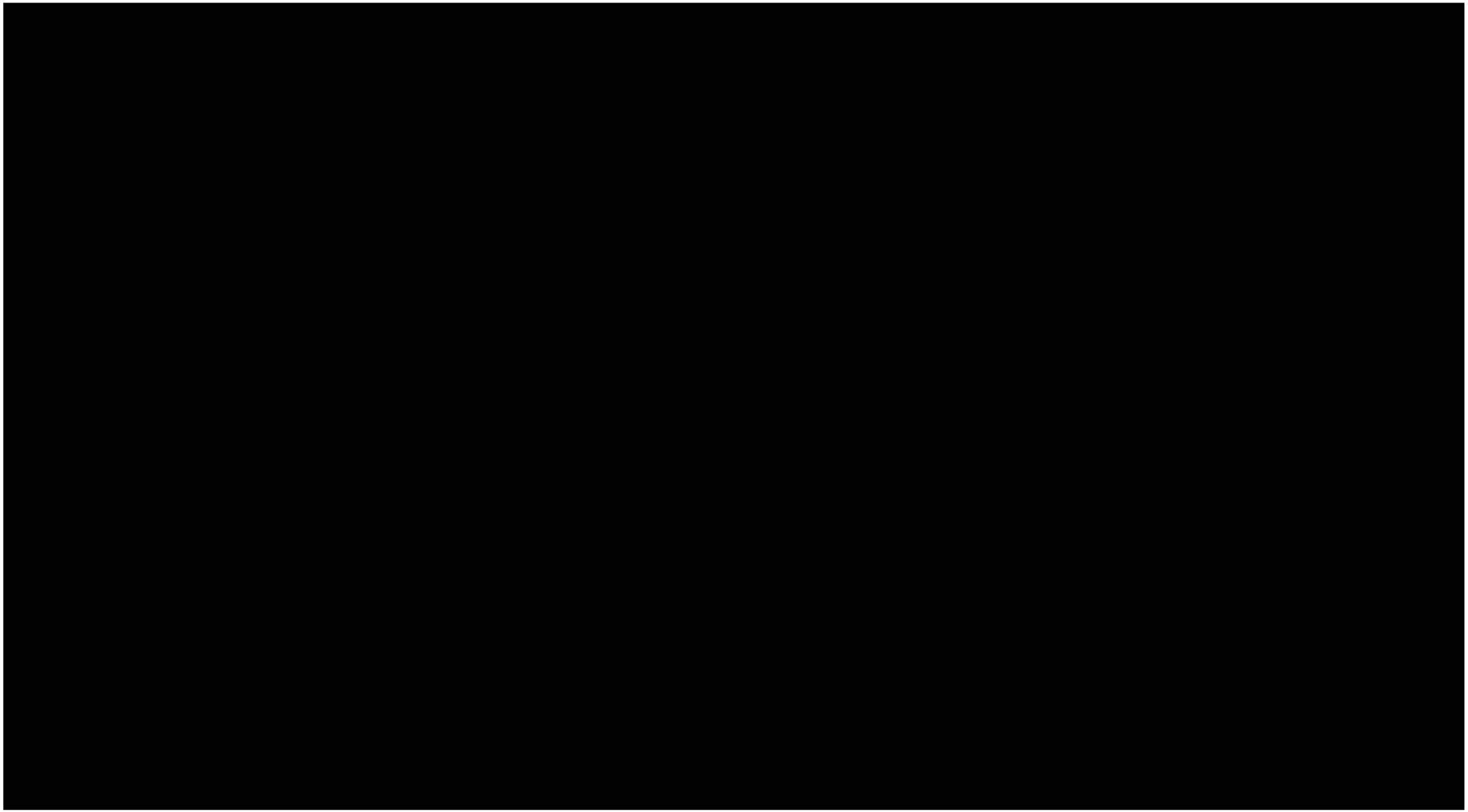
Attachment B - REDACTED

Authority Limit Matrix



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Footnotes

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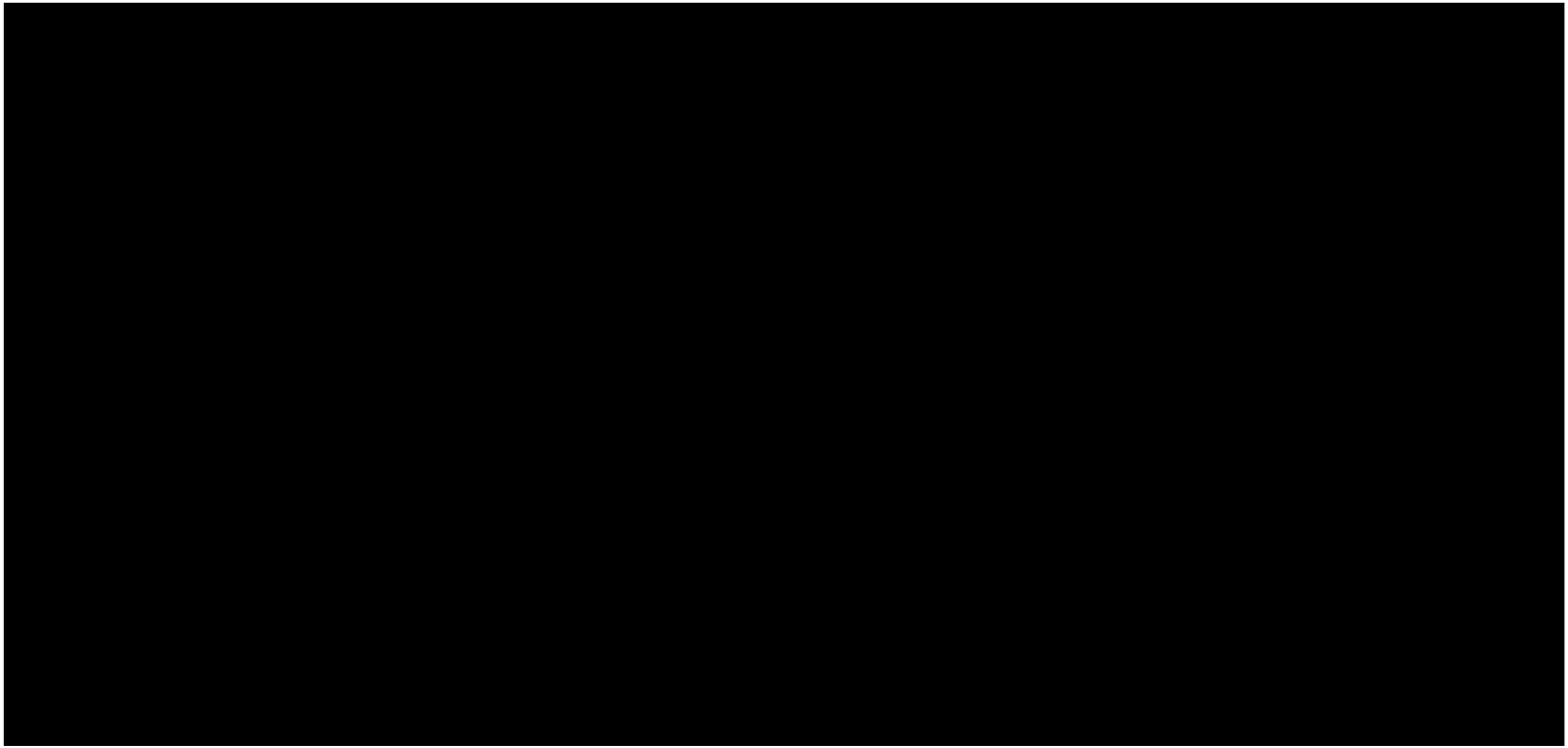

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Commodity Risk Policy

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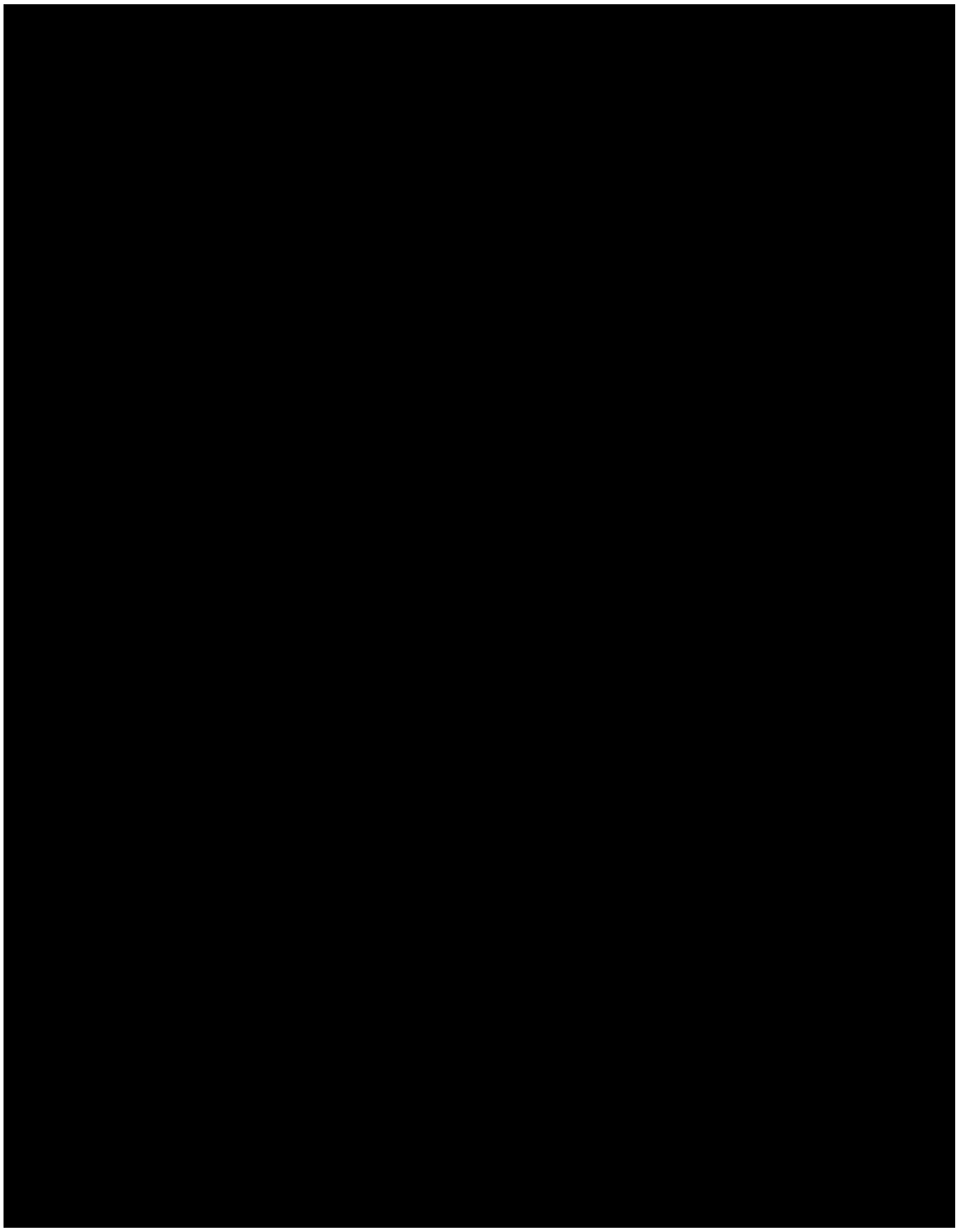

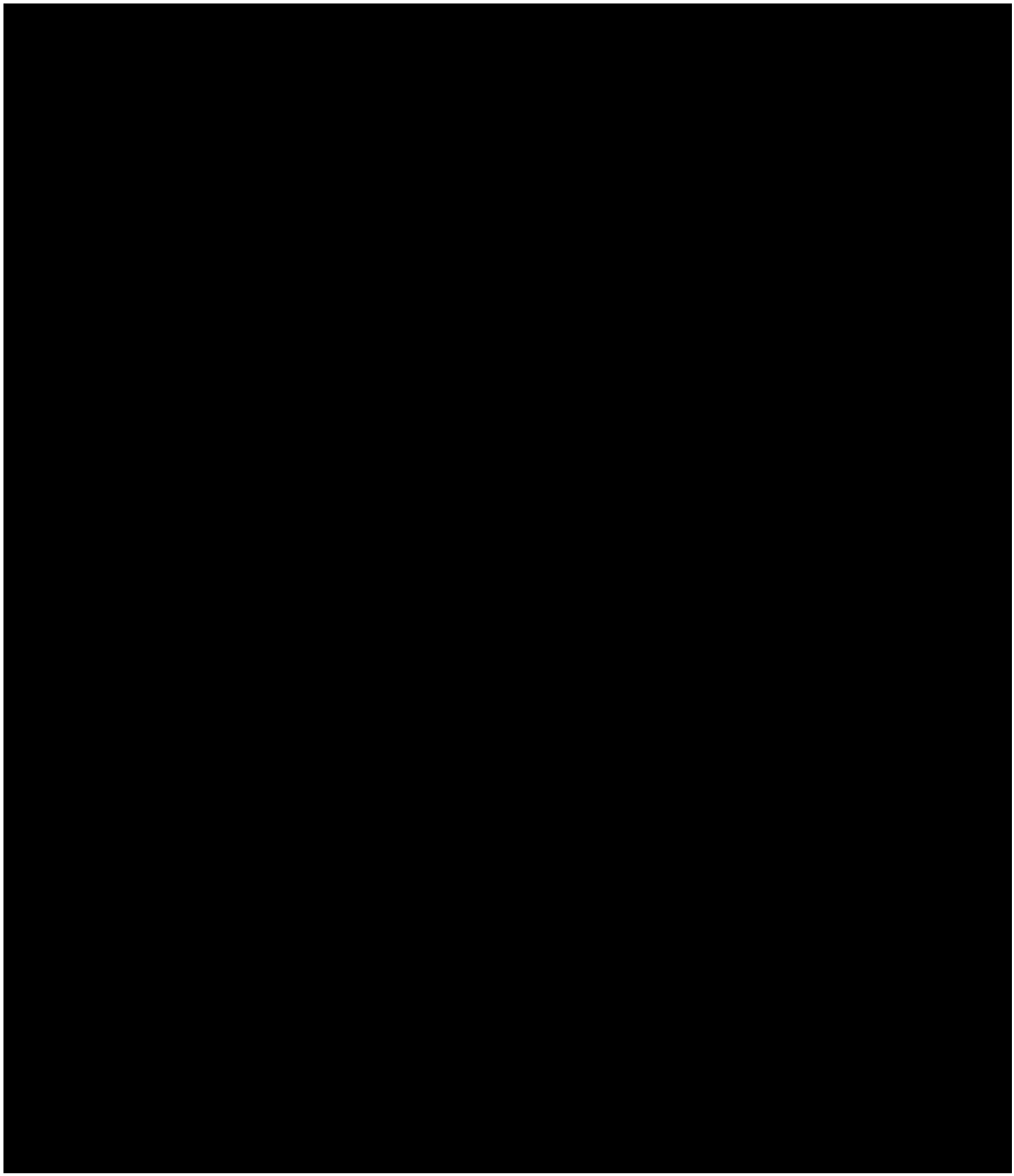

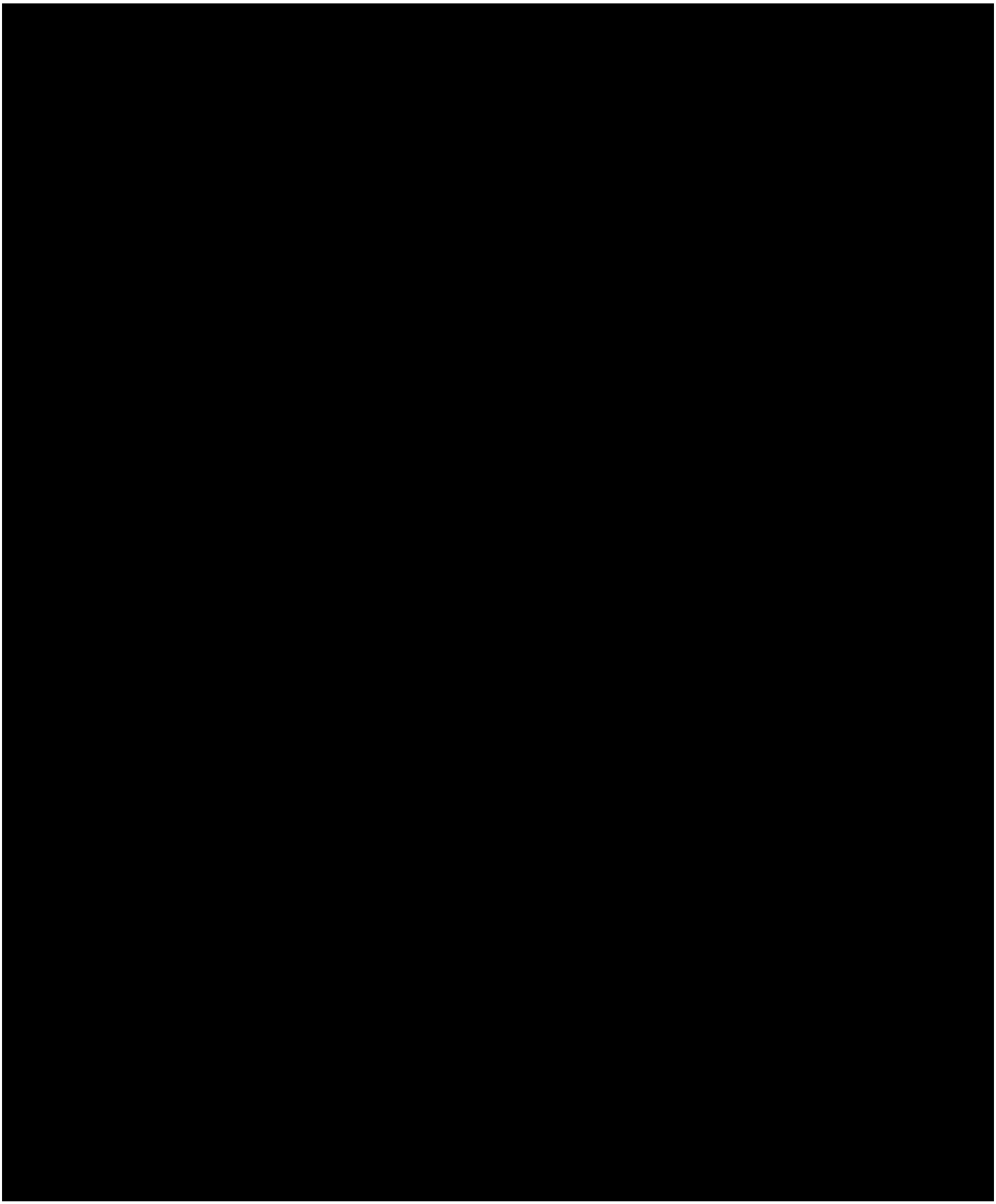

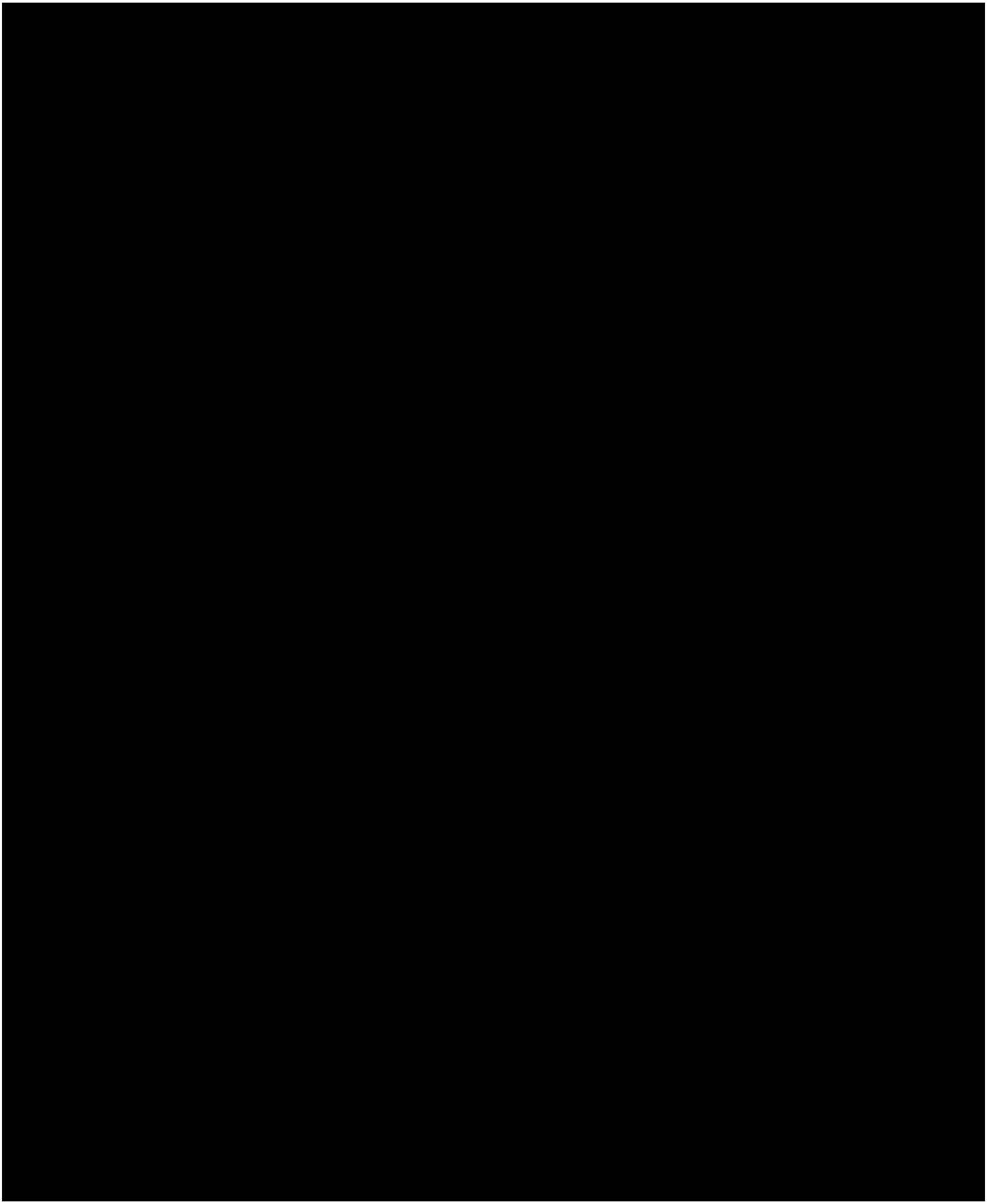

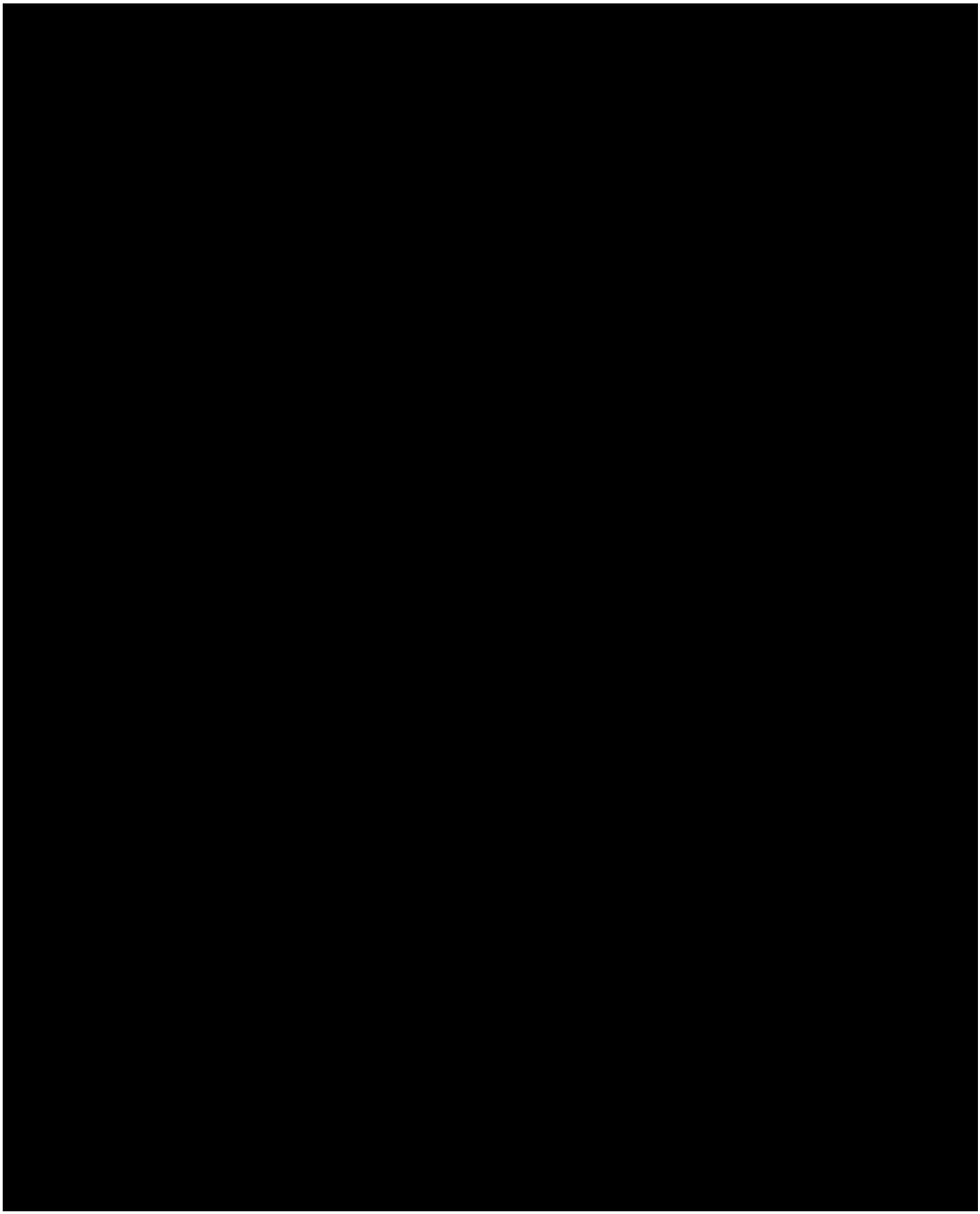

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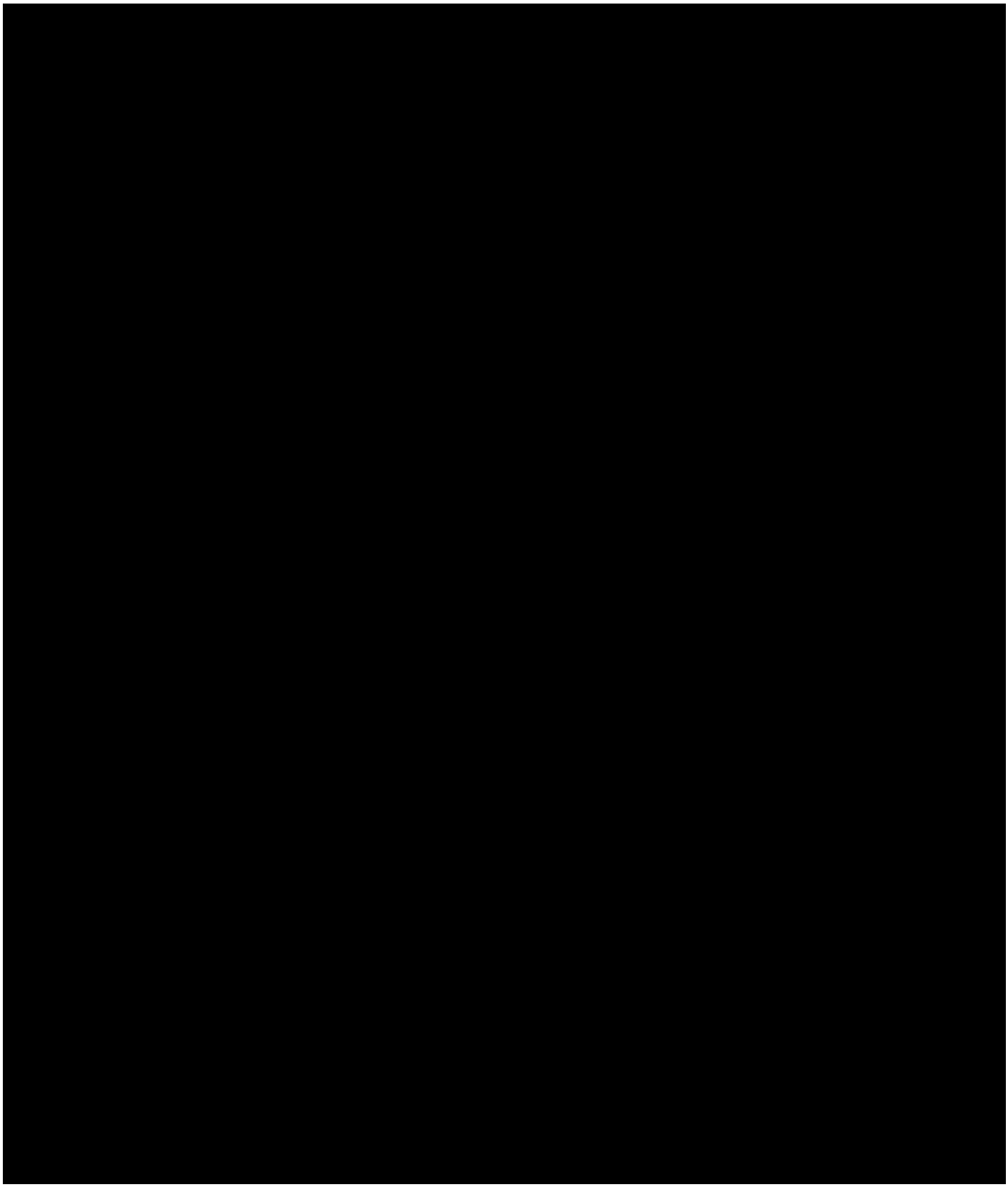

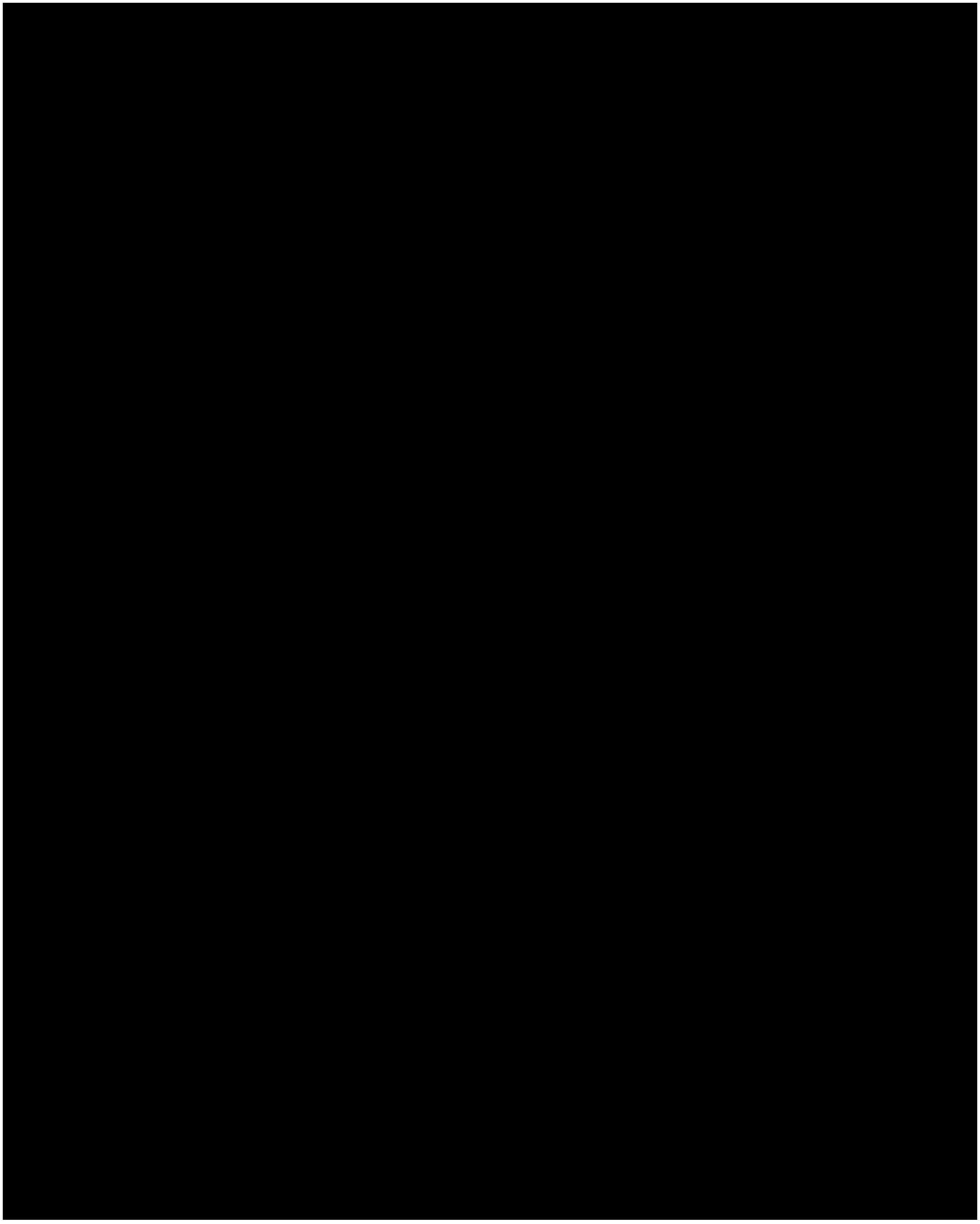

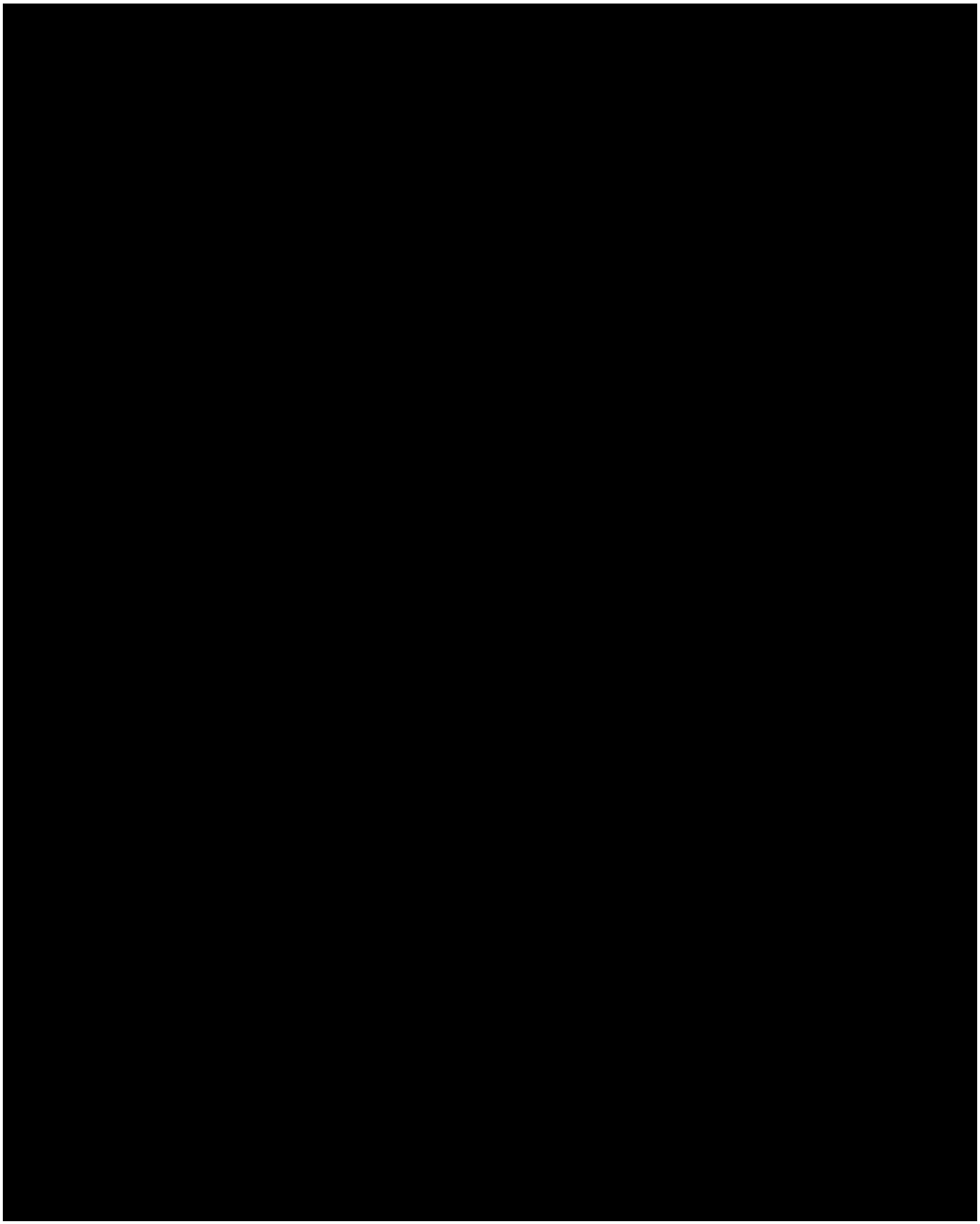

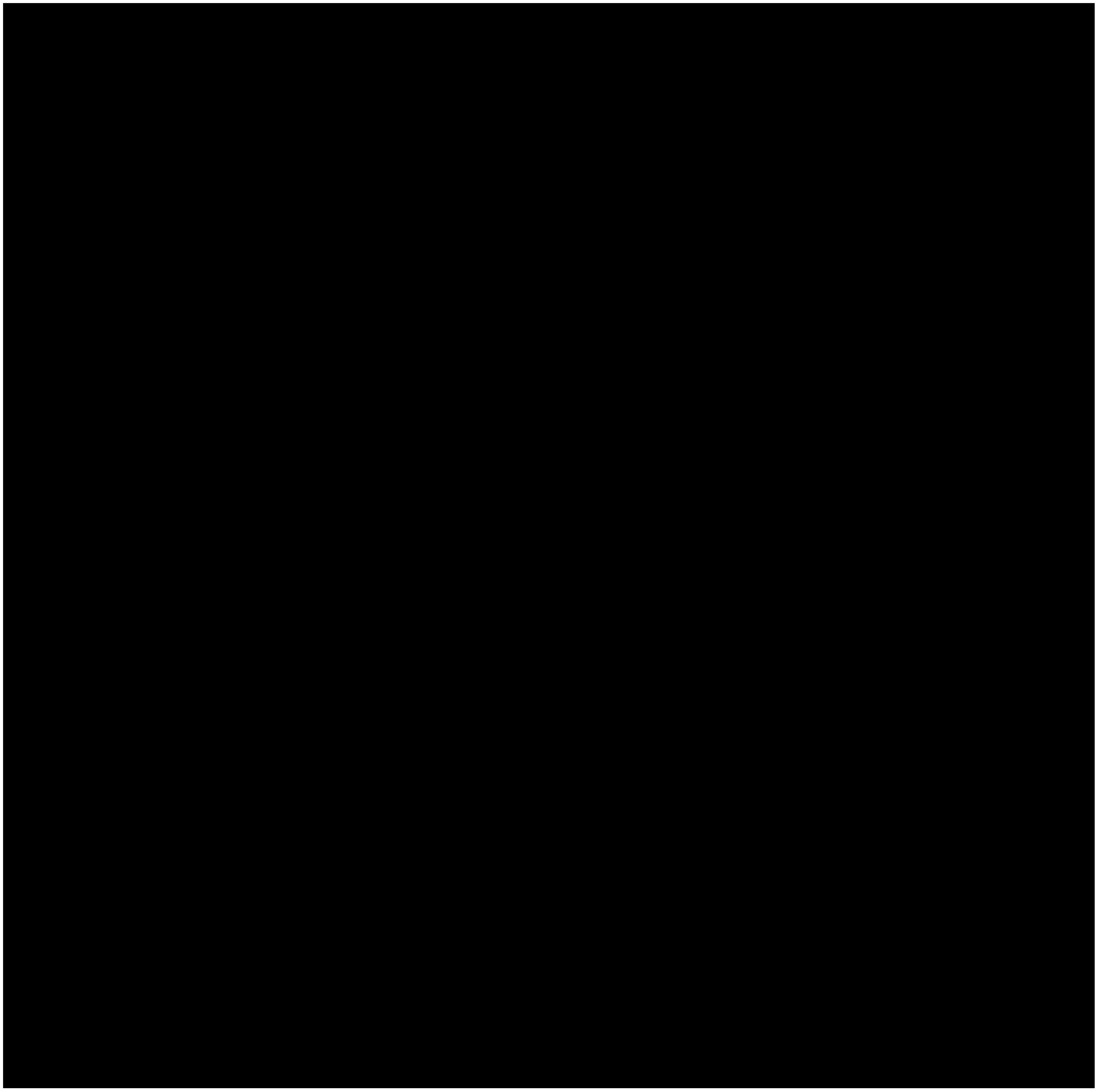

Regulated Utilities Credit Limits (DEF)

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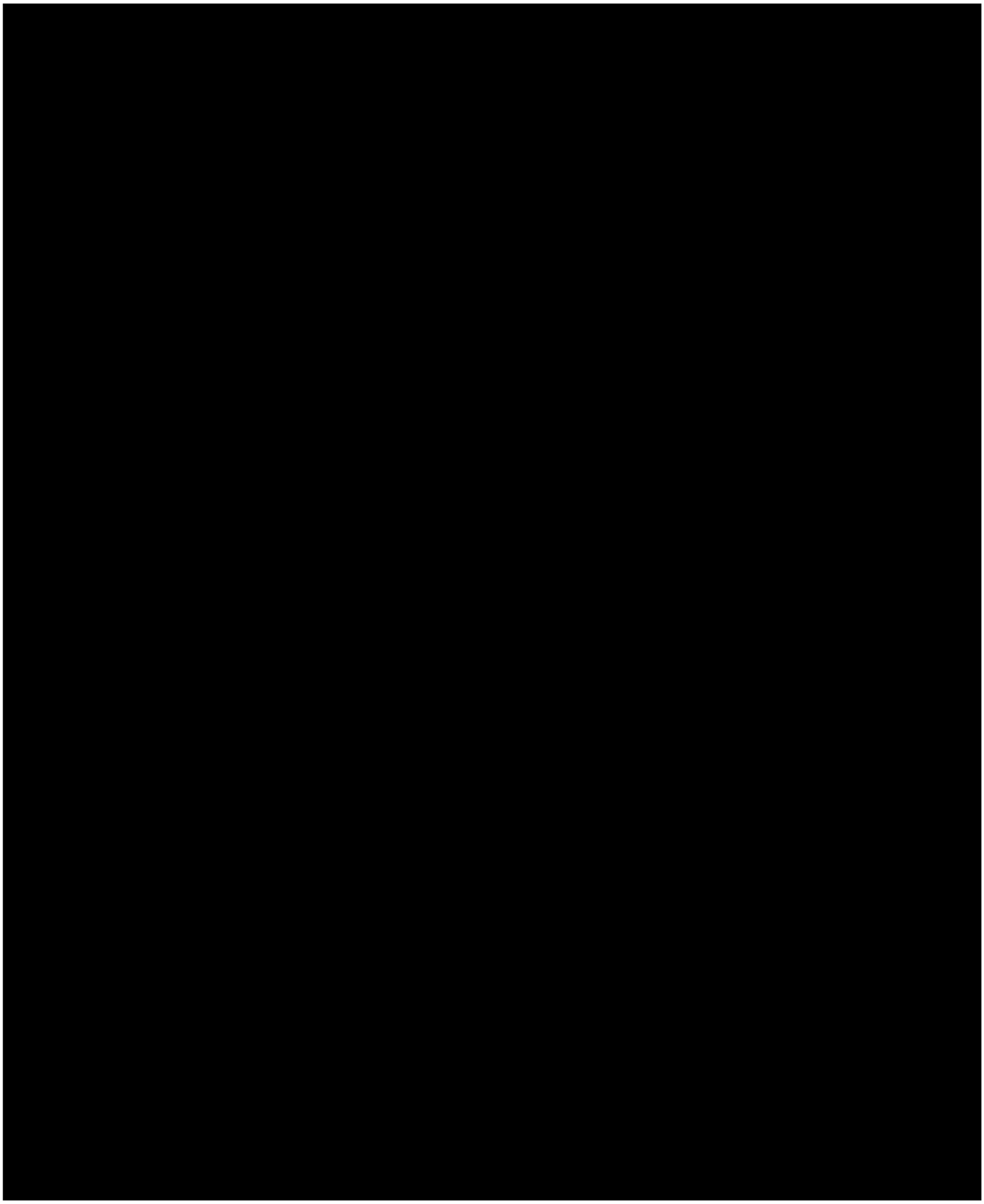
Regulated Utilities Credit Limits (DEF)



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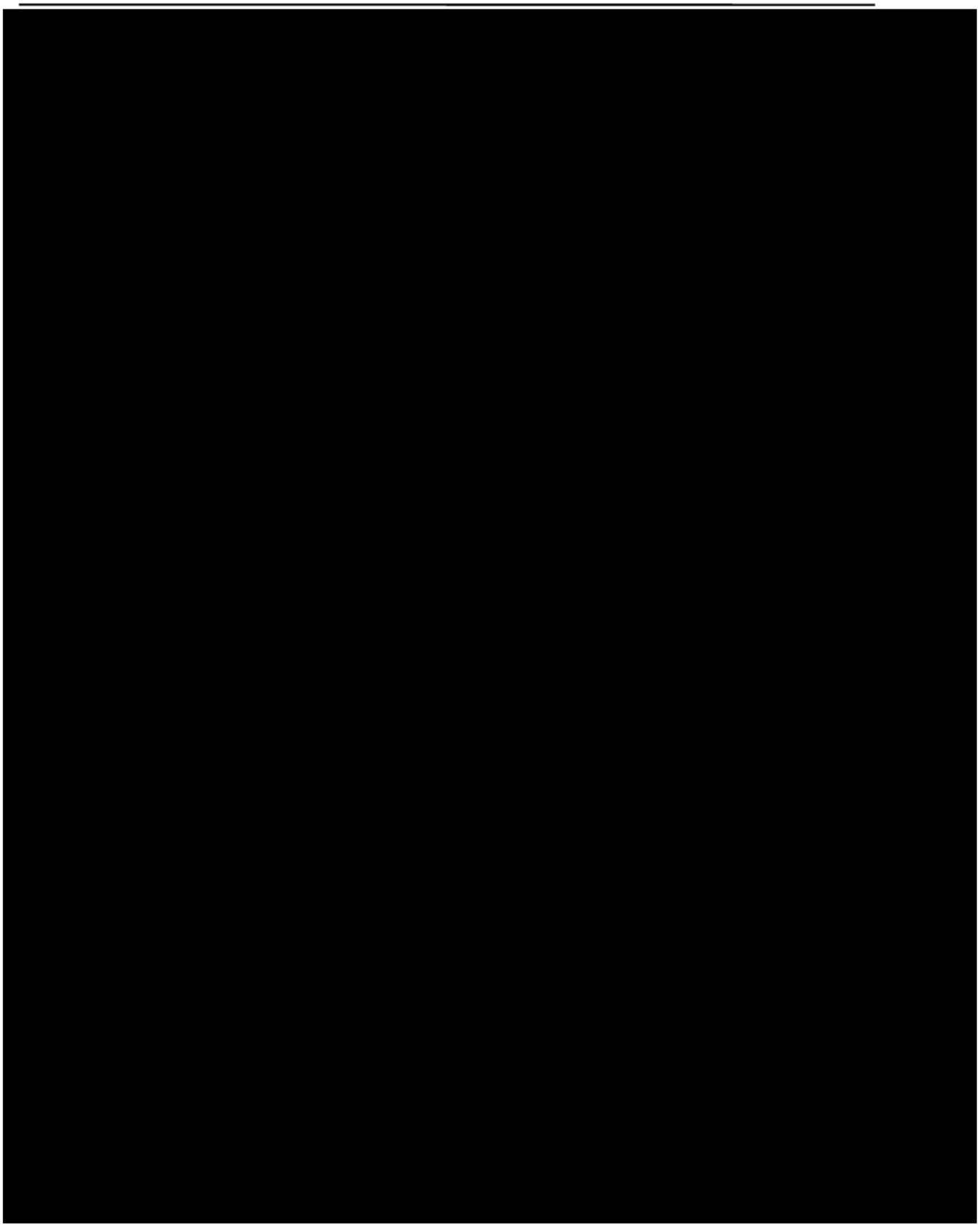

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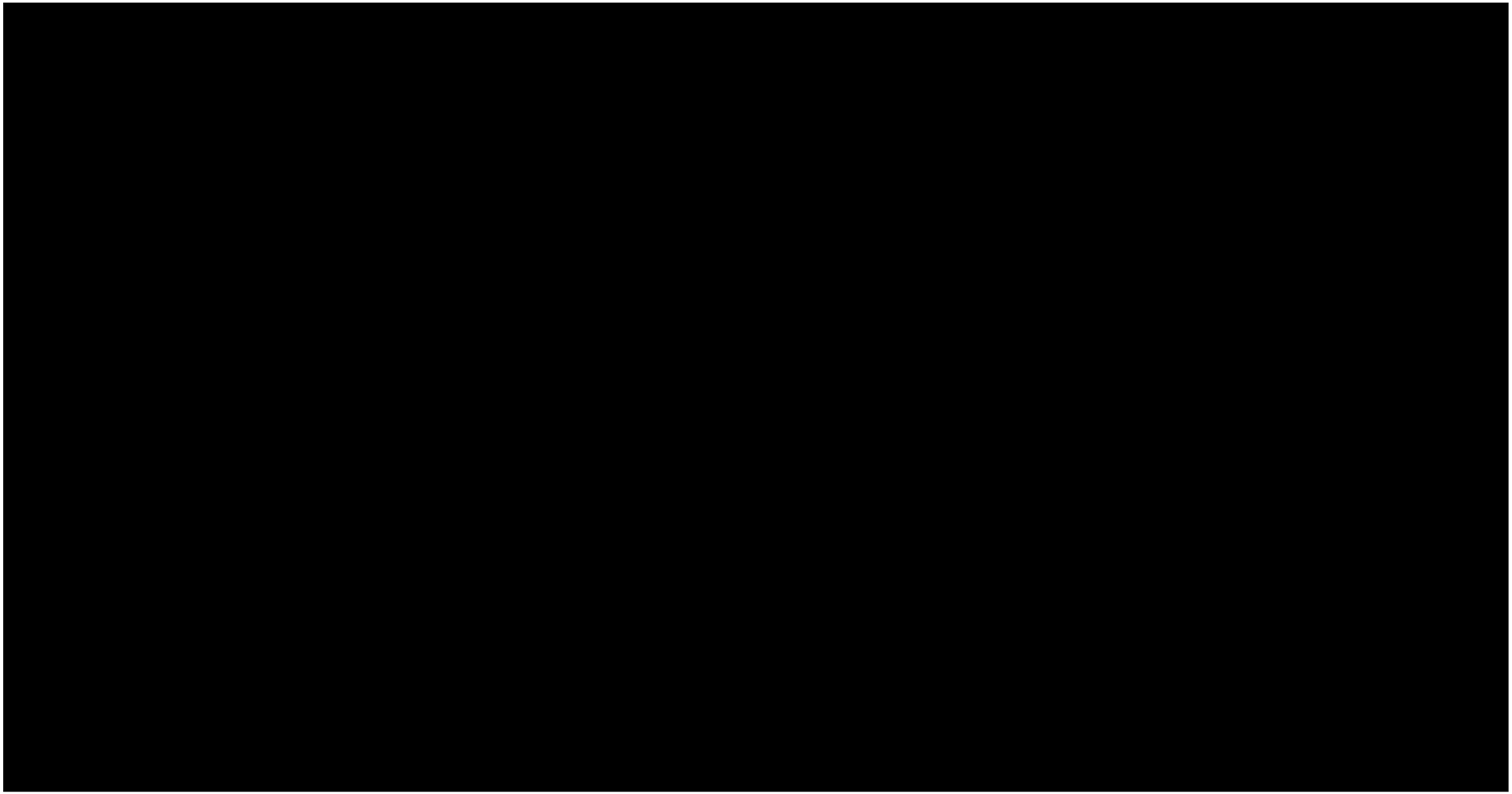
ENERGY SUPPLY BULK POWER MARKETING & TRADING



Duke Energy Corporation
Regulated Electric
Risk Management Control Manual

January 2019

Risk Management Controls and Procedures for Fuels & Systems Optimization and Distributed Energy Resources

Confidential Information

The information contained within this manual is confidential and proprietary to Duke Energy Corporation's Regulated Utilities group, particularly the Fuels & Systems Optimization (FSO) and Distributed Energy Resources (DER) groups, and the various groups supporting these operations as further discussed in this manual. Confidential and proprietary information is a valuable resource, and release of this information to the general public could lead to a competitive disadvantage for Duke Energy Corporation and its subsidiaries ("Duke Energy").

Also, release of this information to the Non-Regulated portions of Duke Energy could result in violation of regulatory rules (e.g., FERC Affiliate Restrictions/Standards of Conduct). Confidential and proprietary information must be protected from unauthorized use, modification, disclosure, or destruction whether intentional or unintentional. Duke Energy employees must also comply with, and periodically acknowledge review of, the Code of Business Ethics policy.

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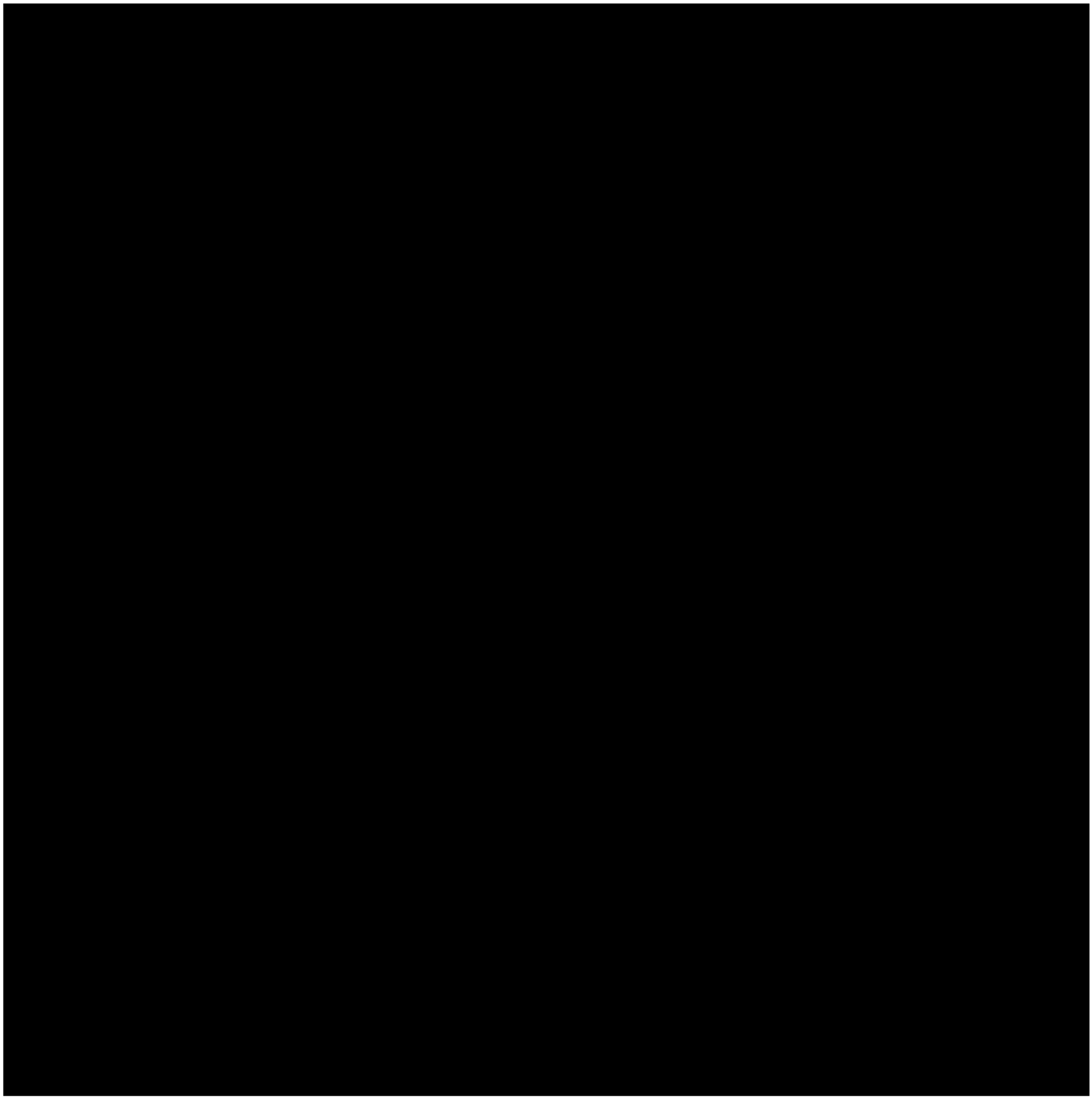
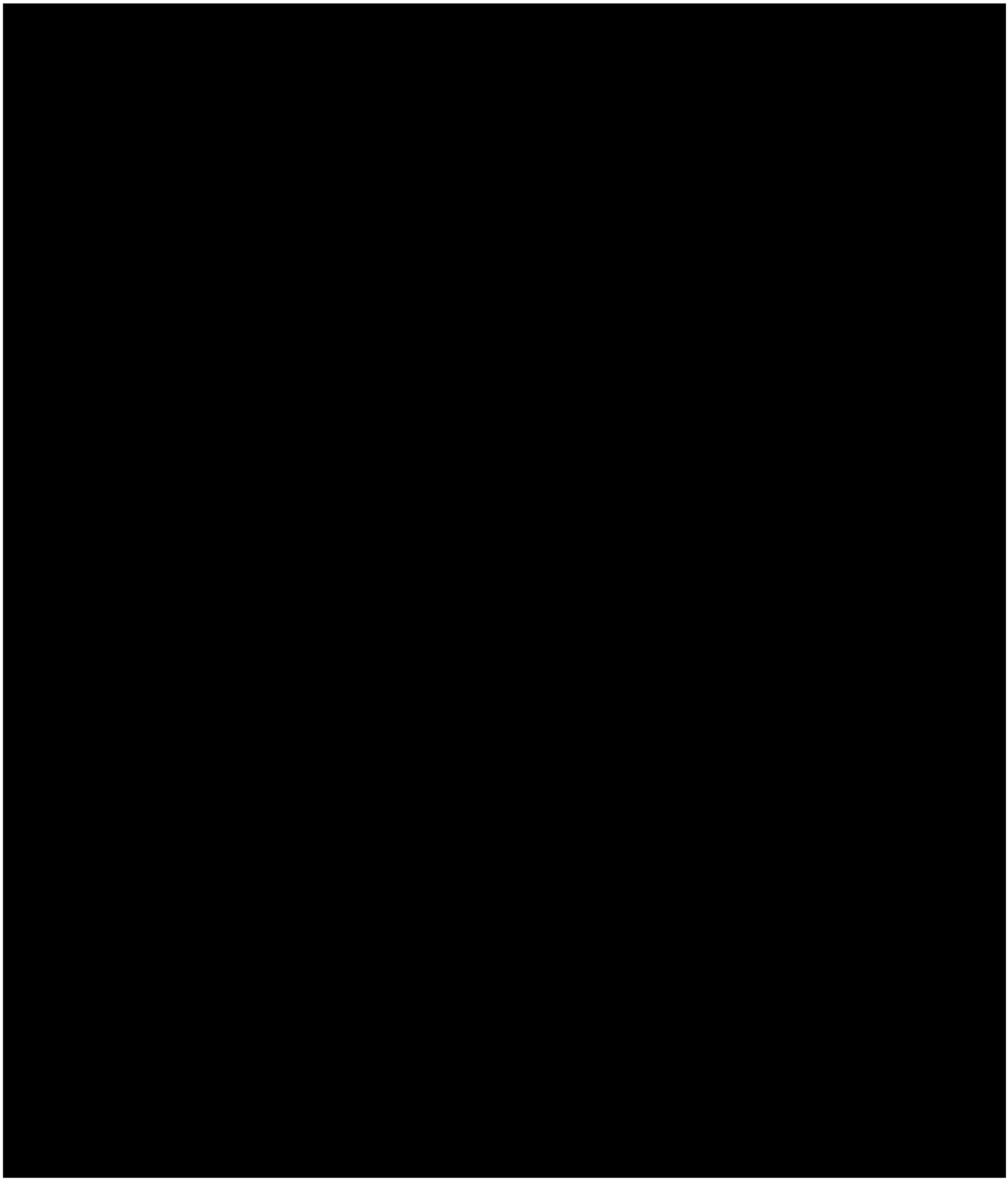
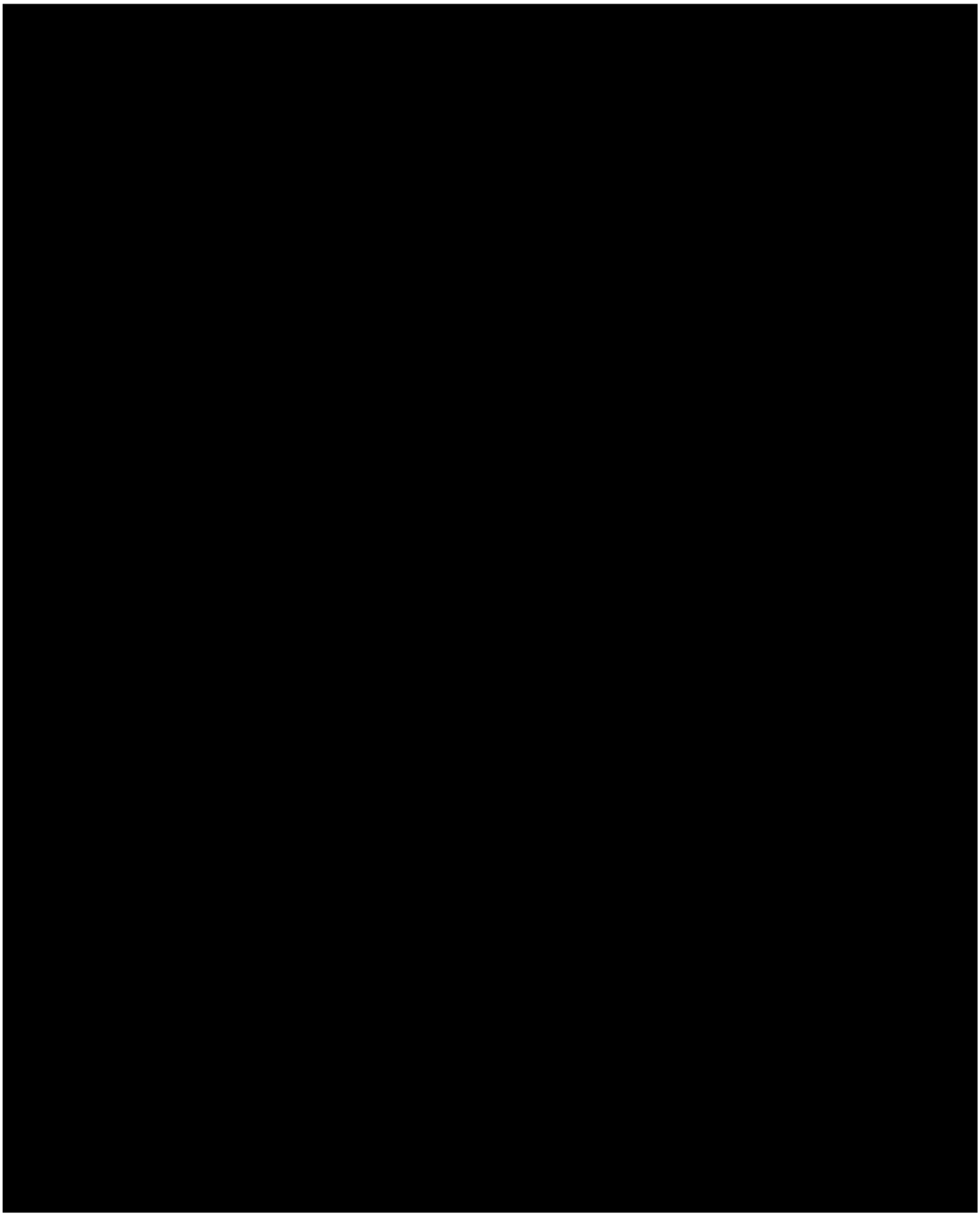
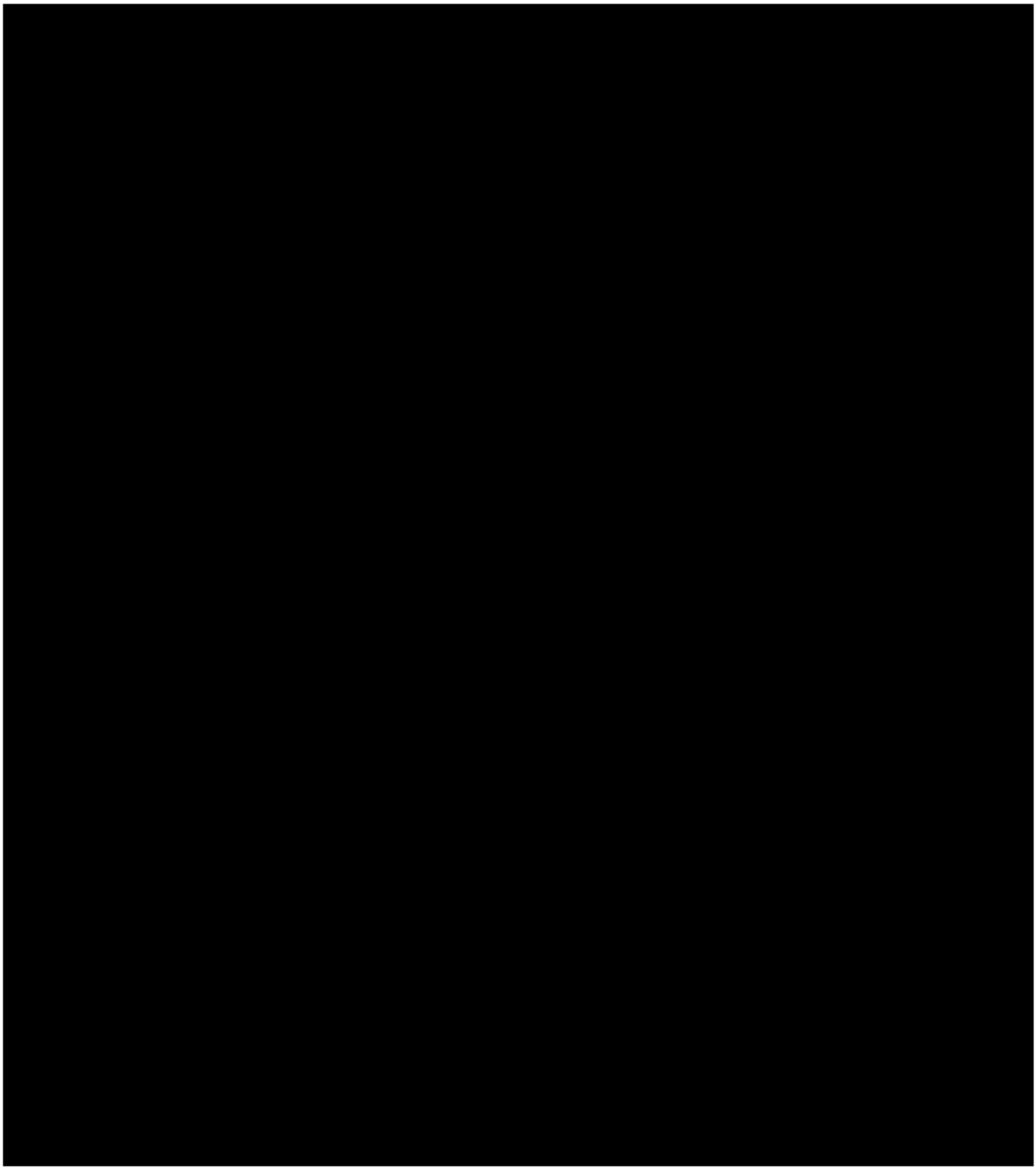
Appendices:

I. Introduction and Purpose









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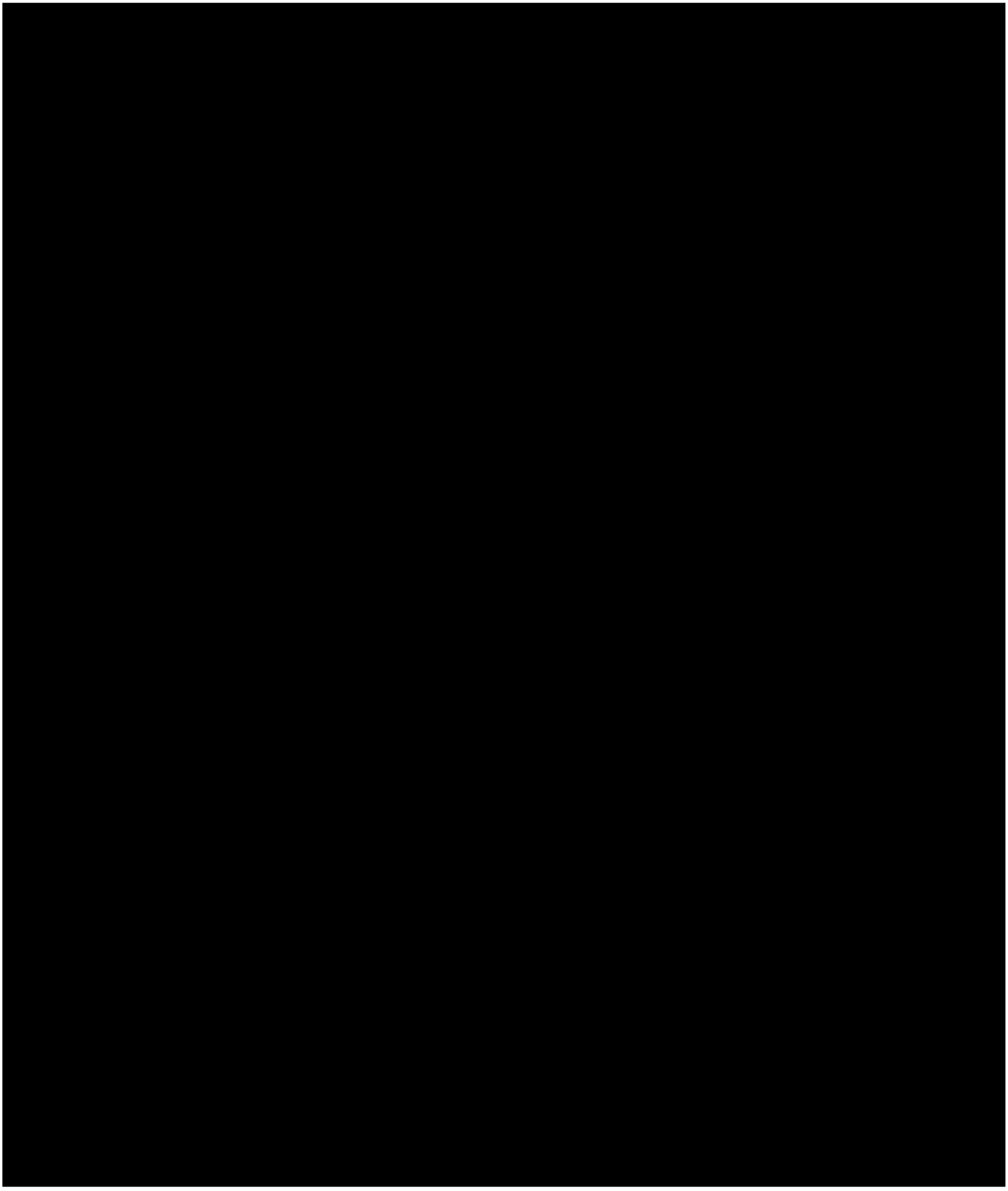

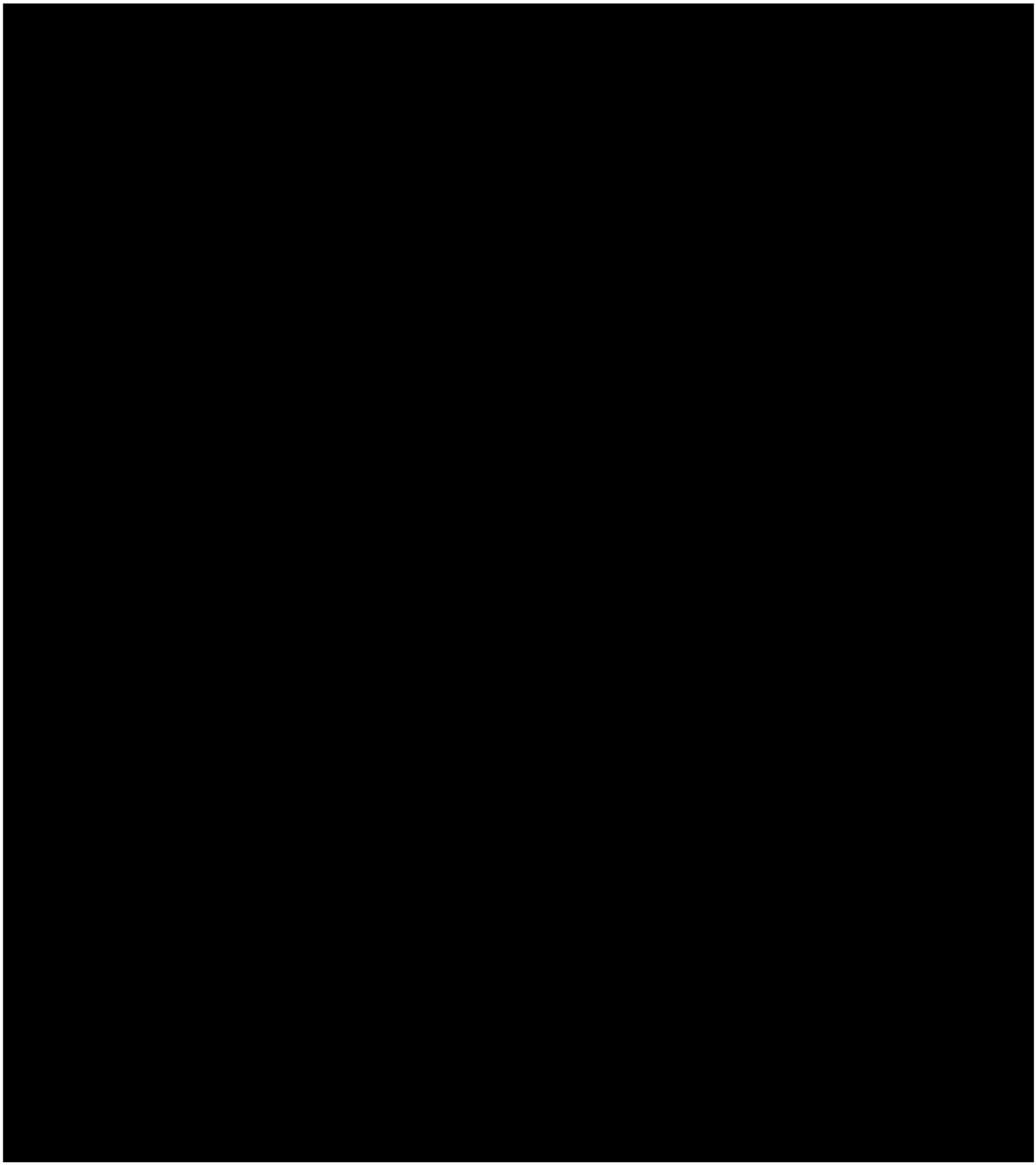

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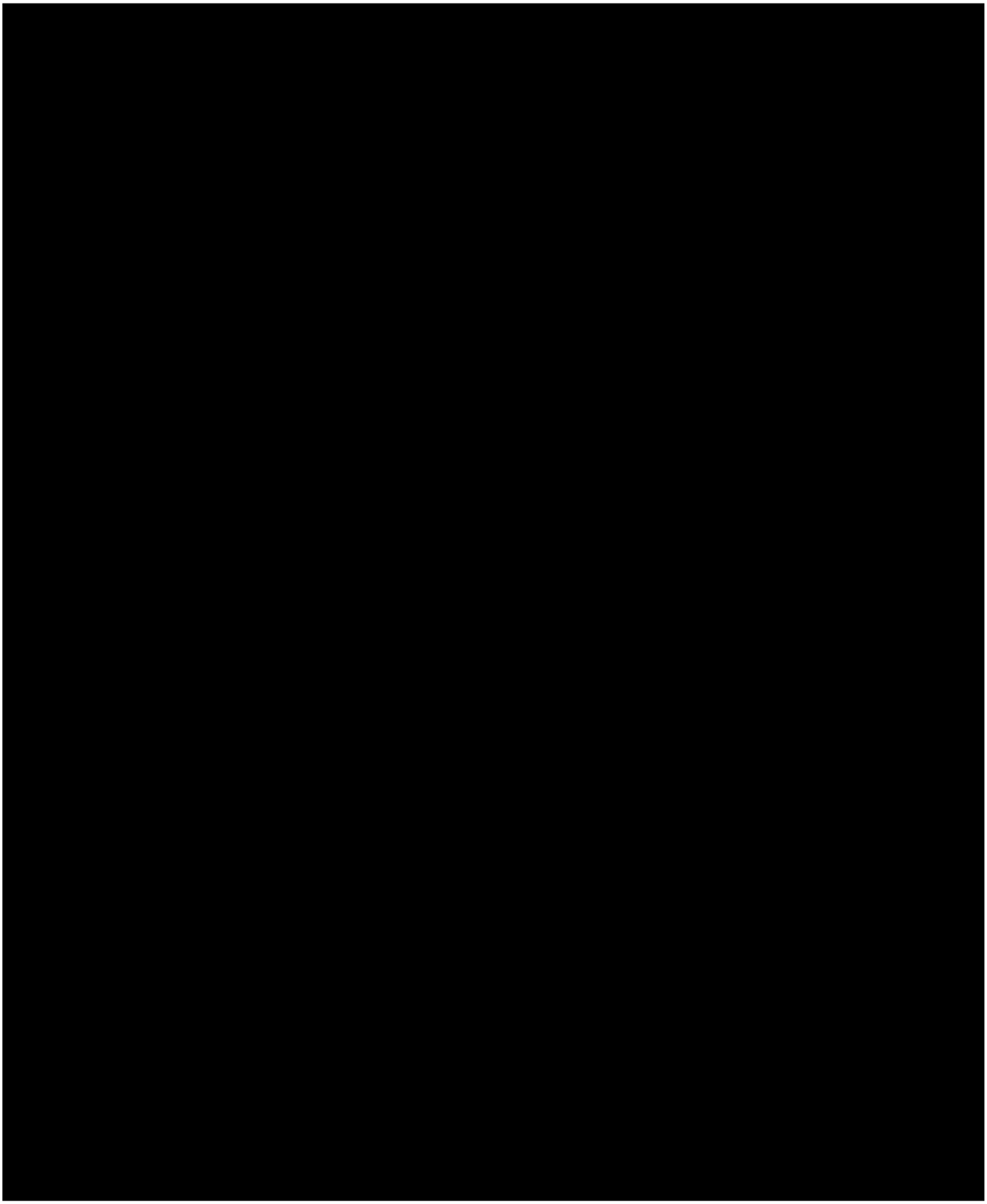

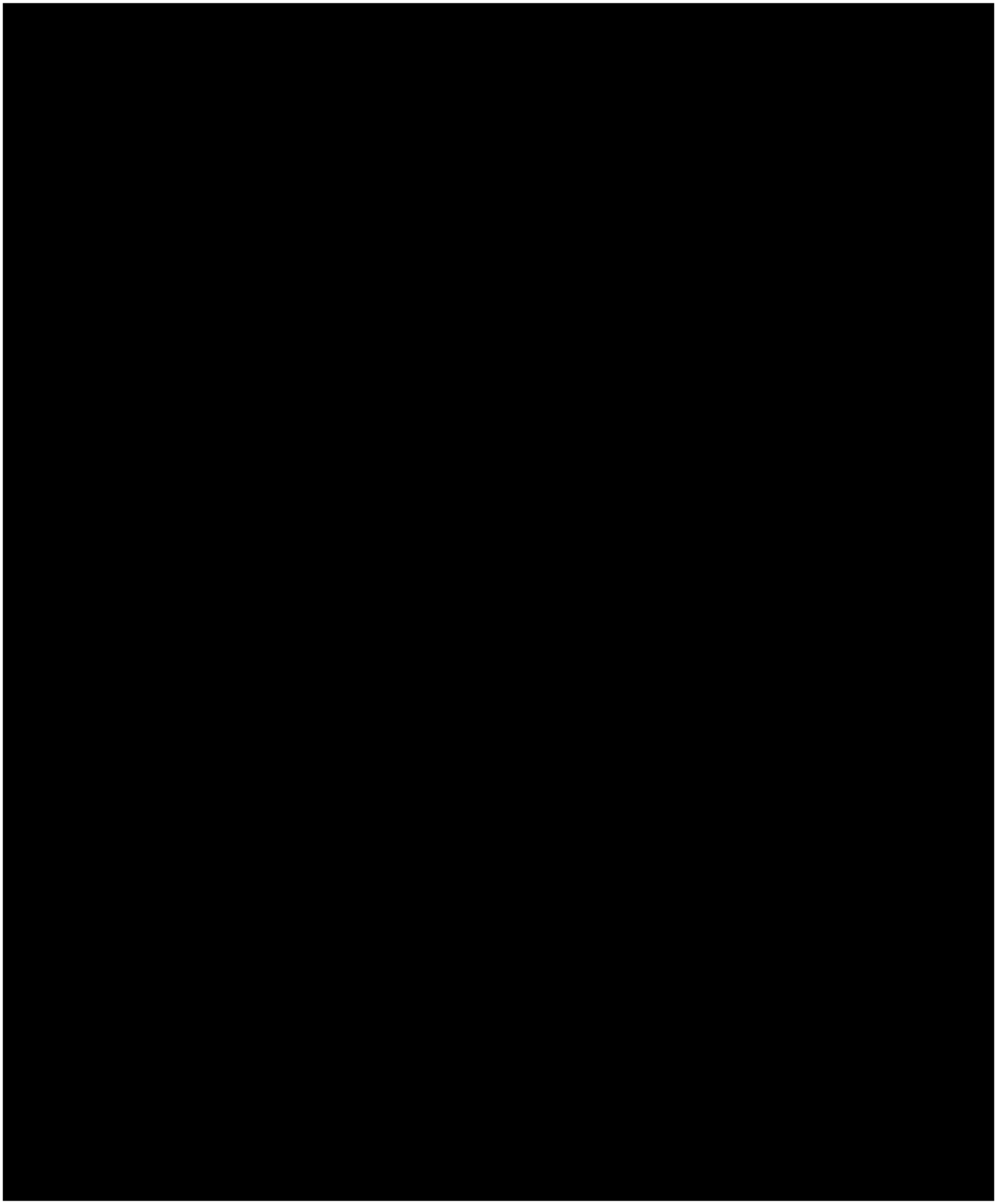

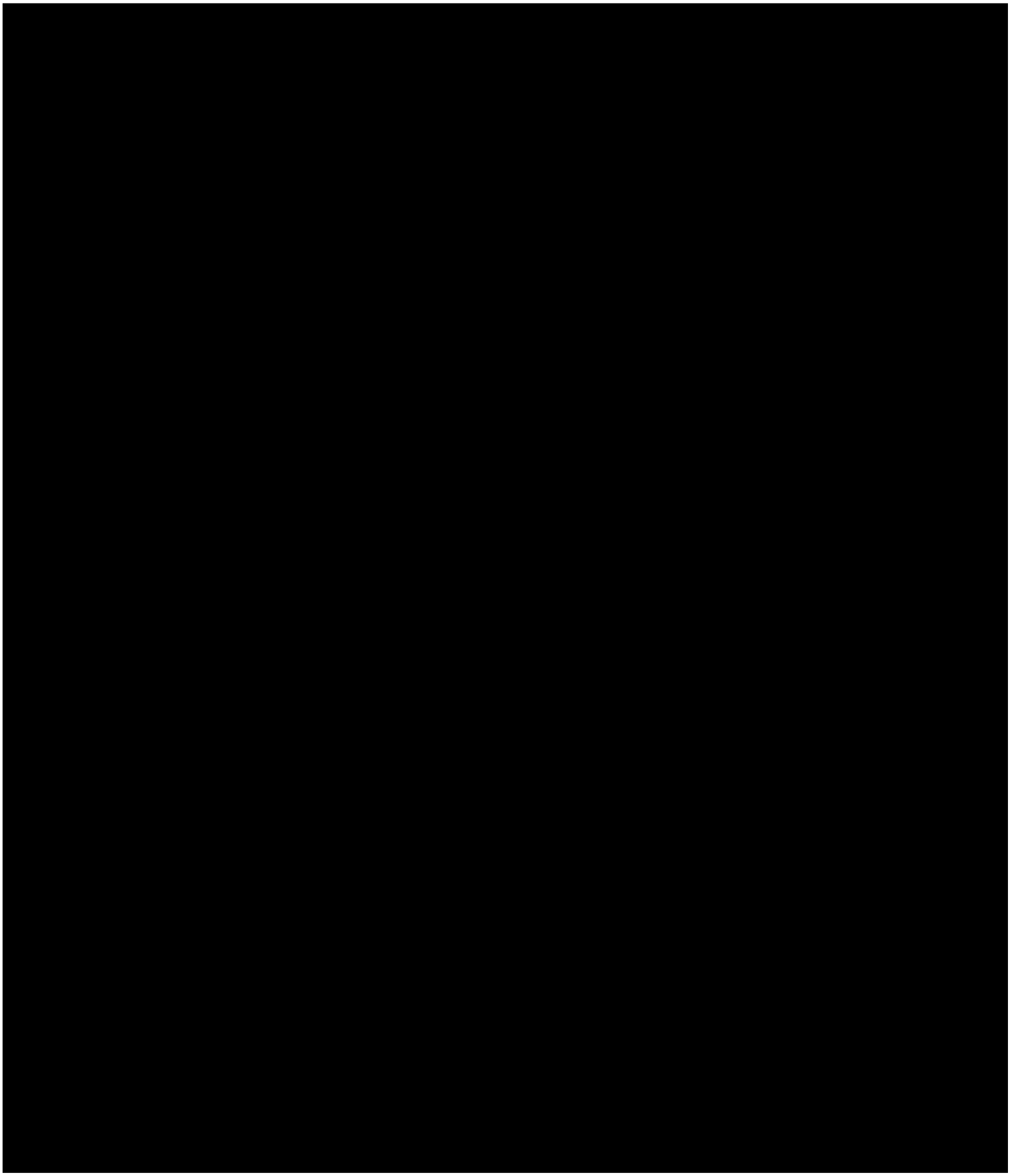

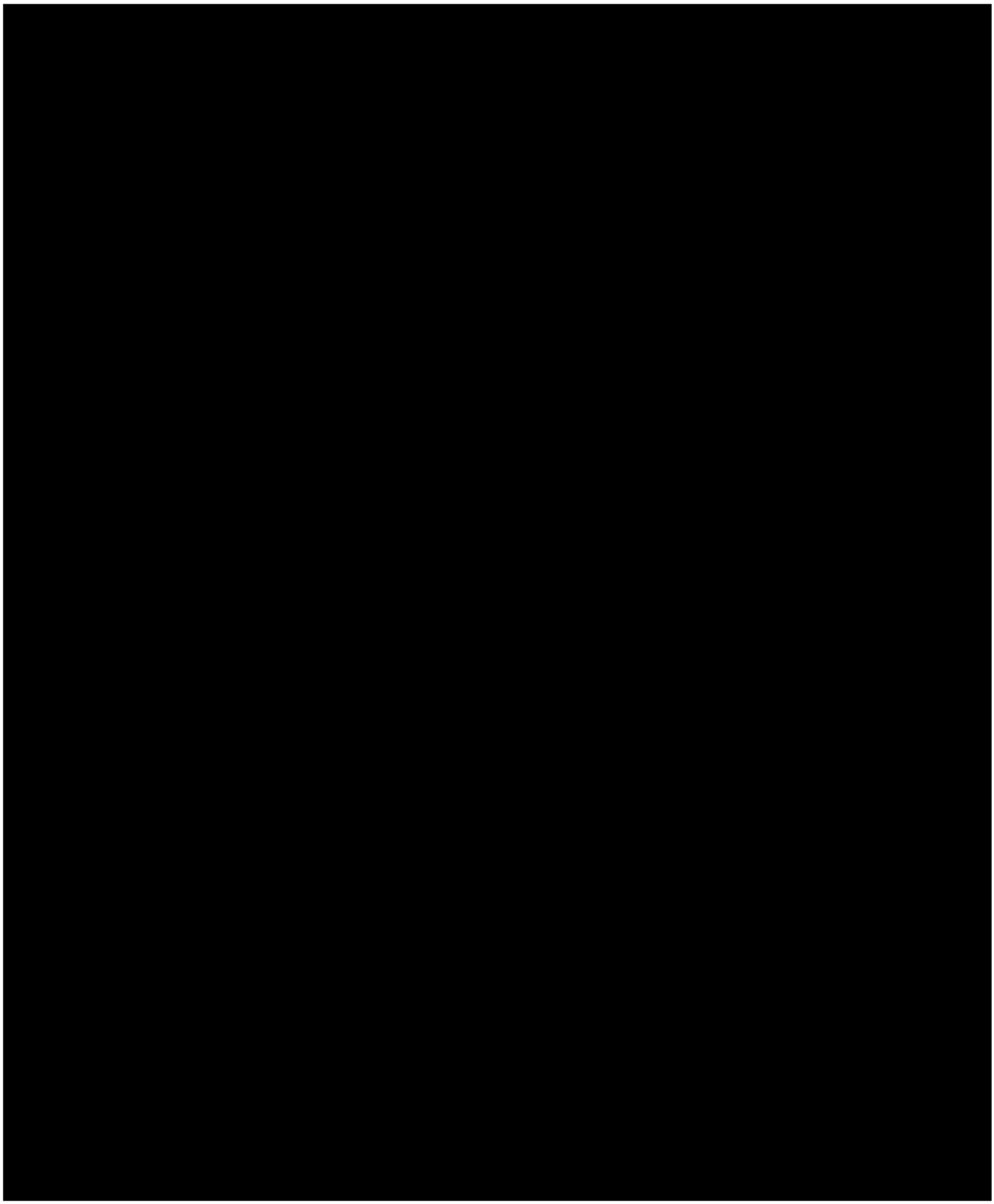

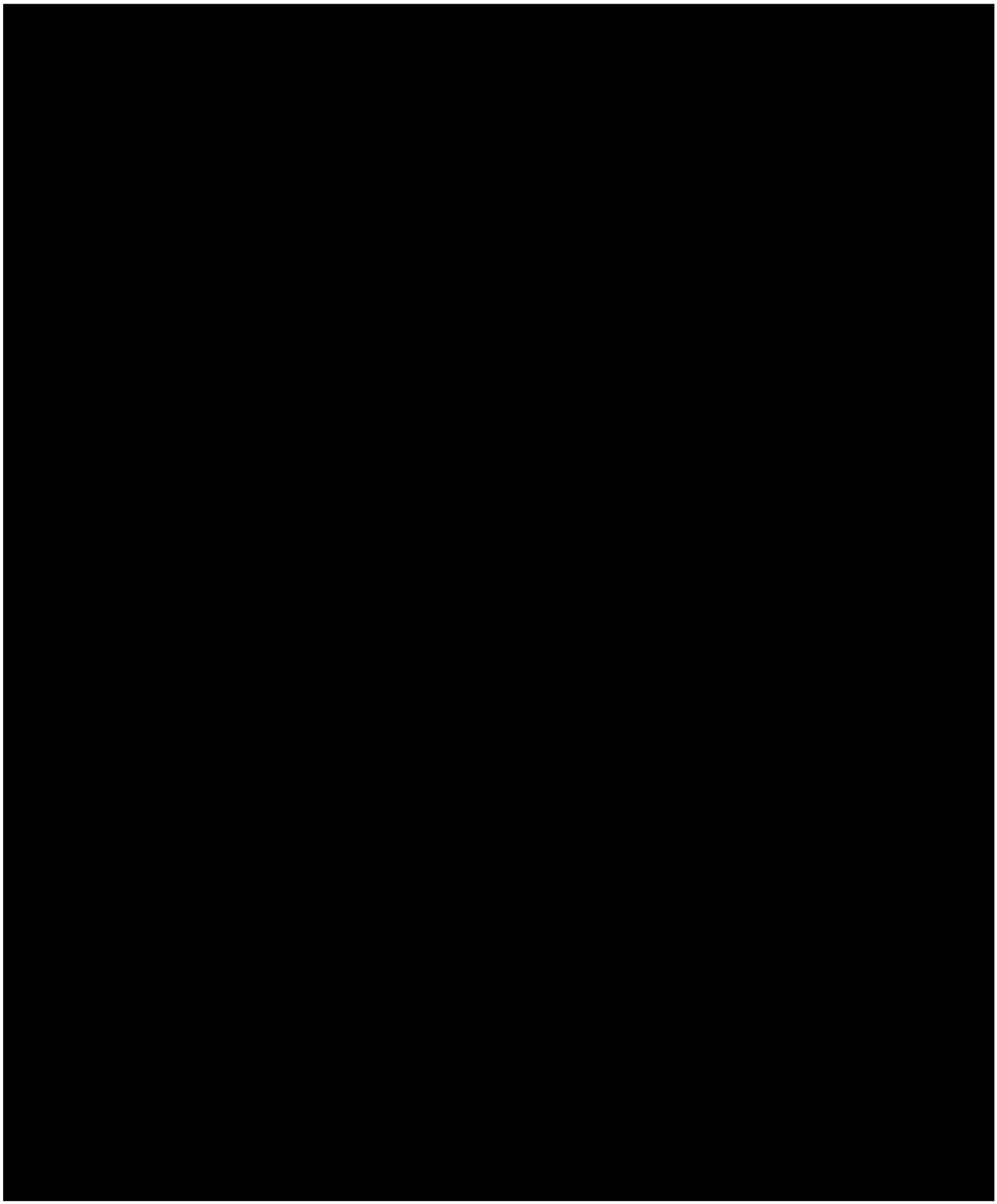

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IV. Control Requirements and Activities

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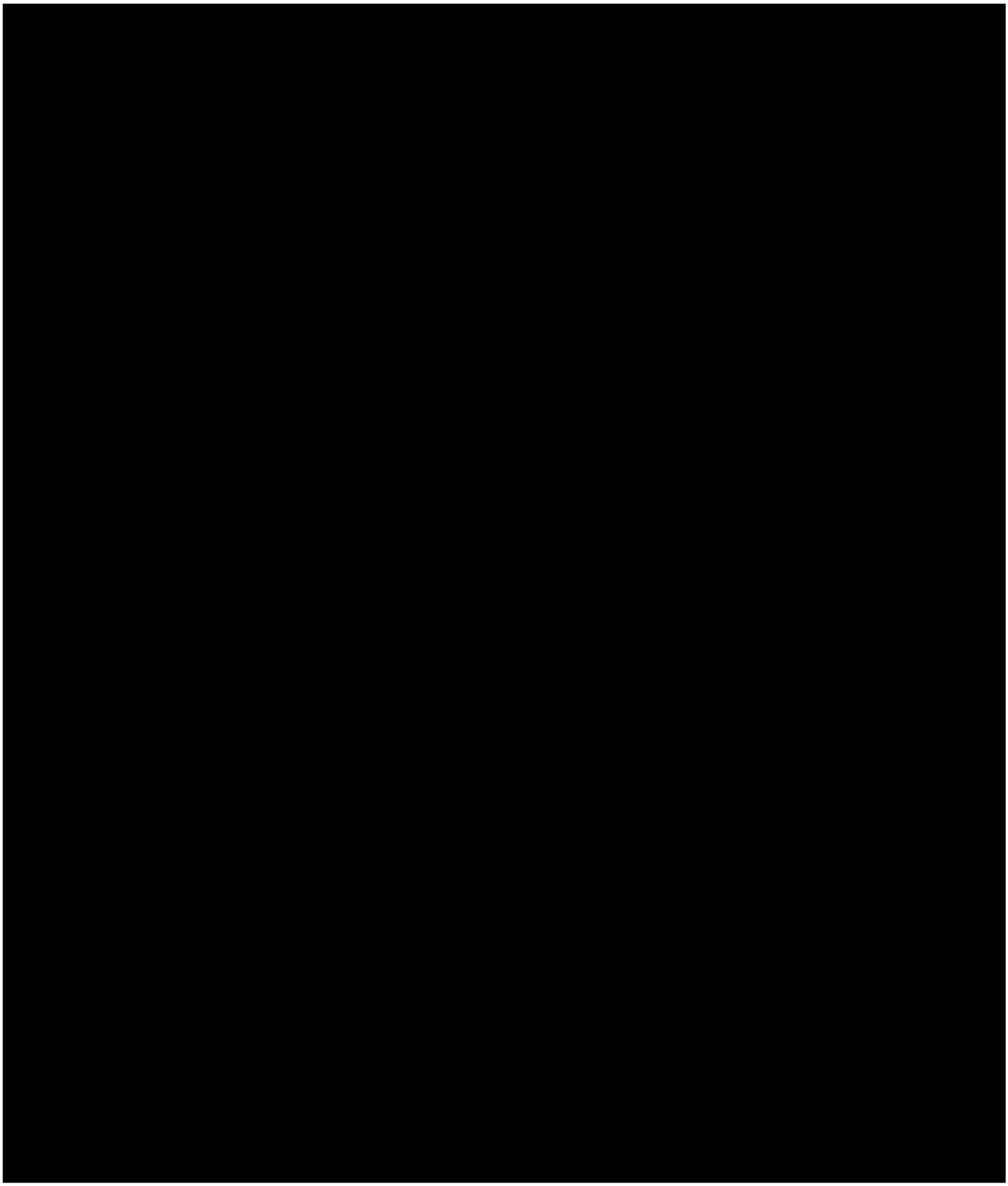

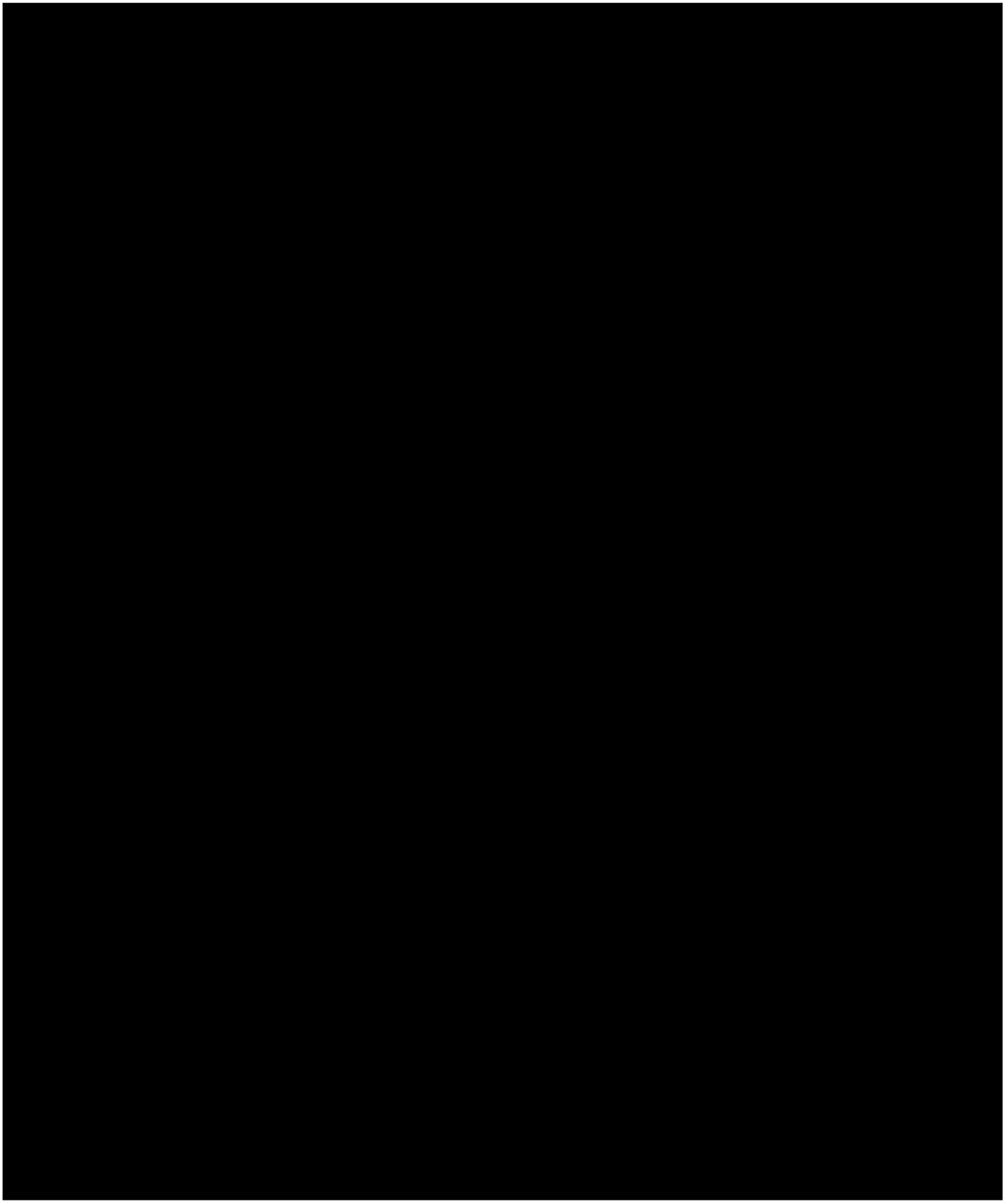

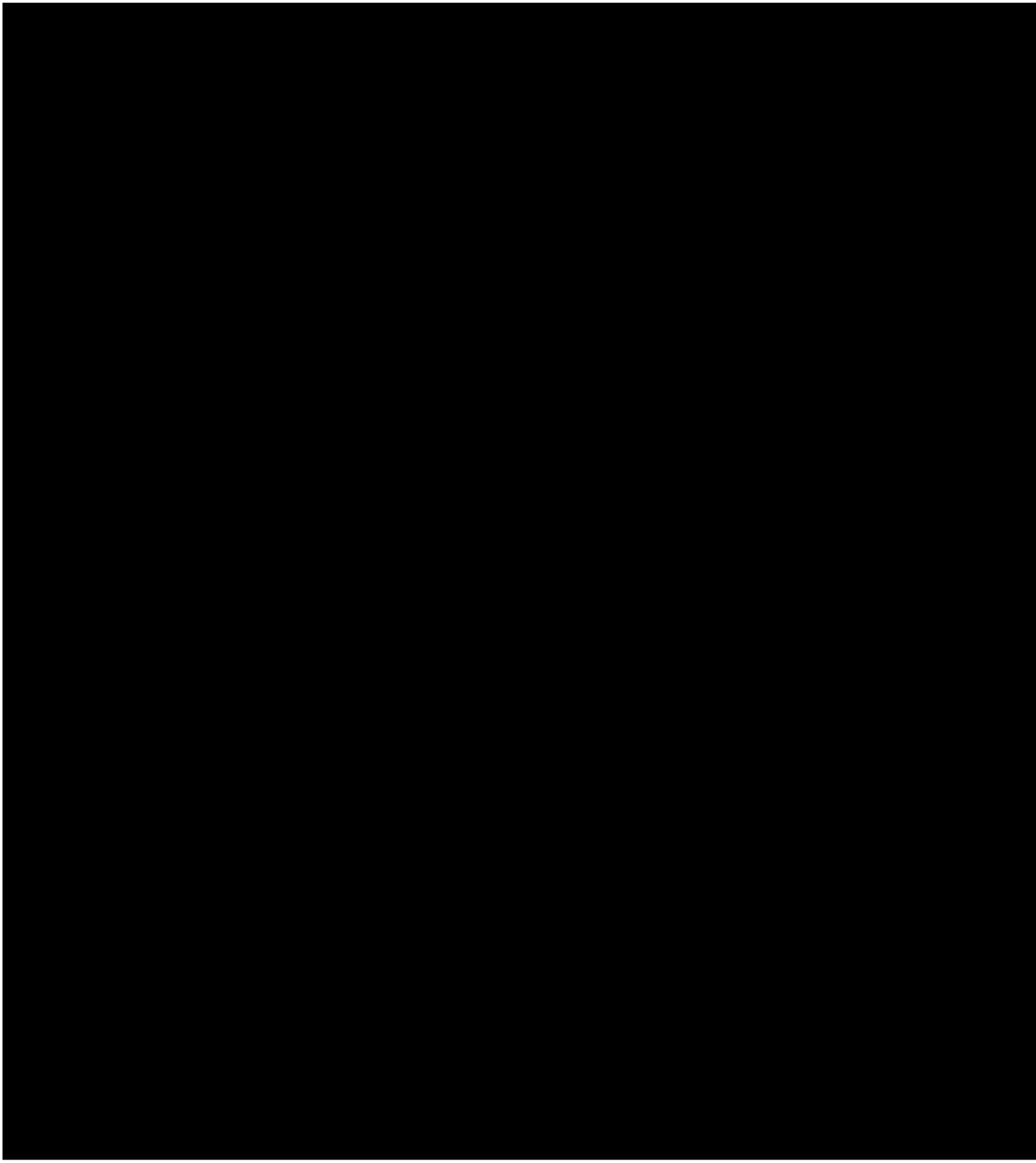

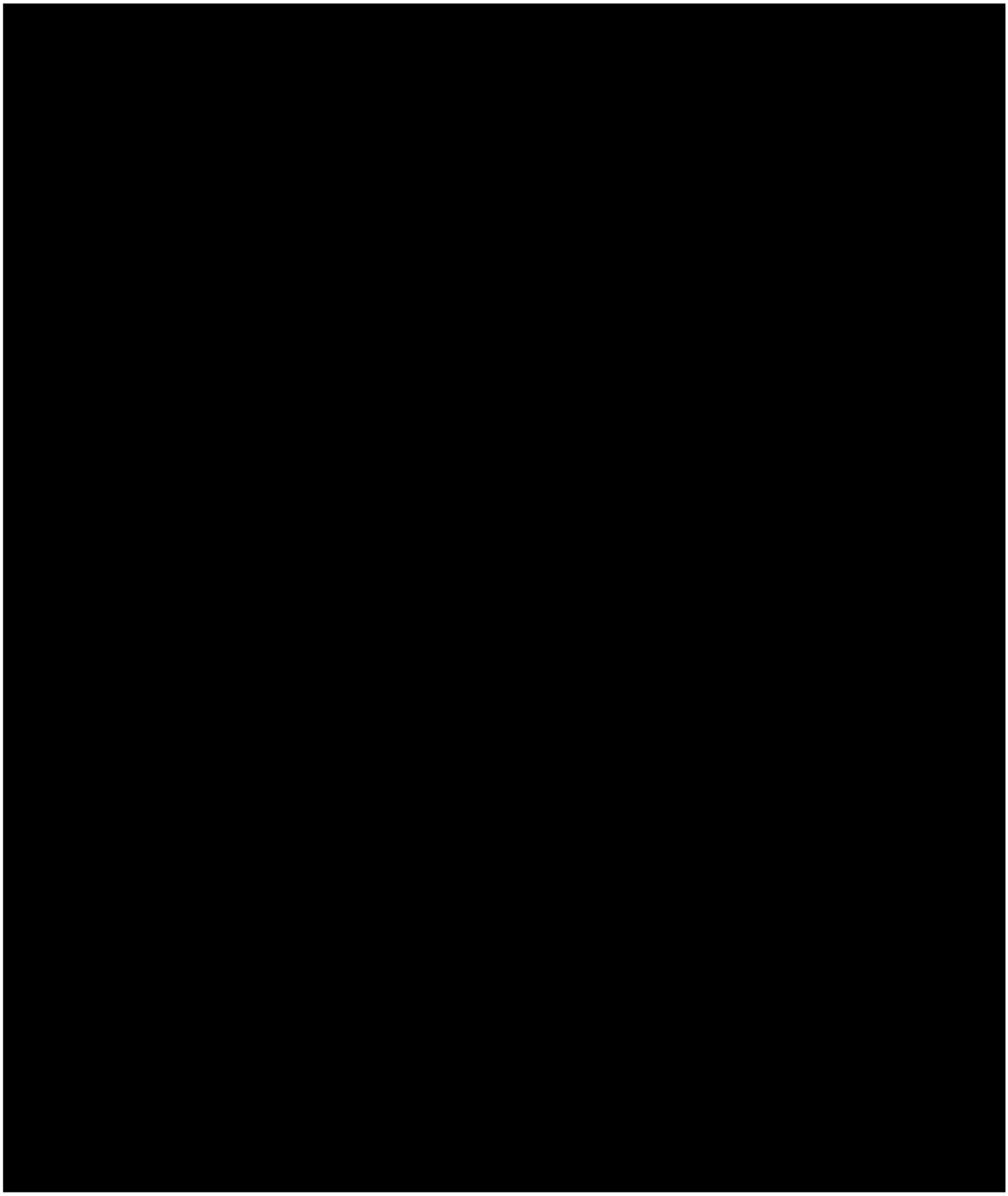

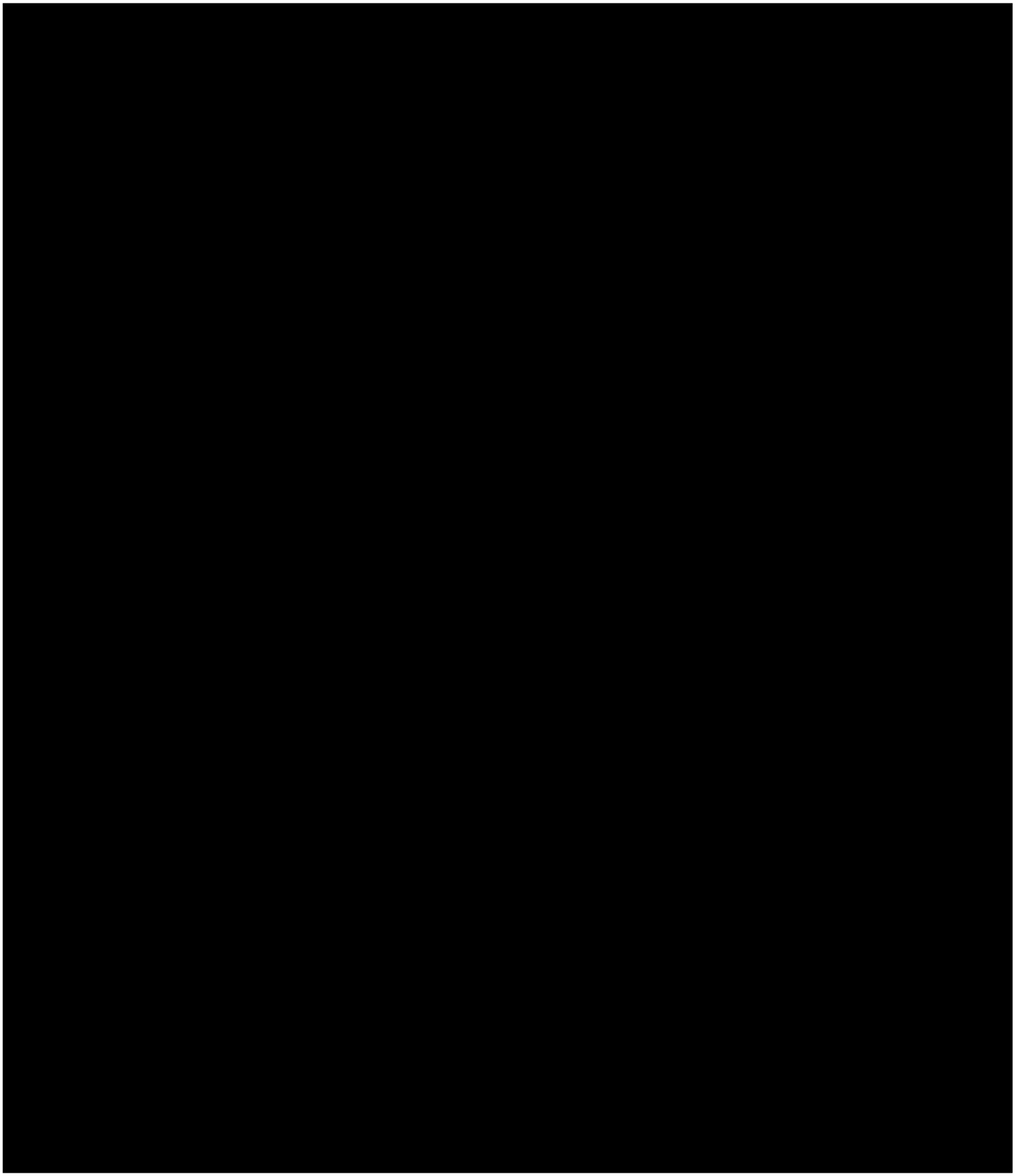

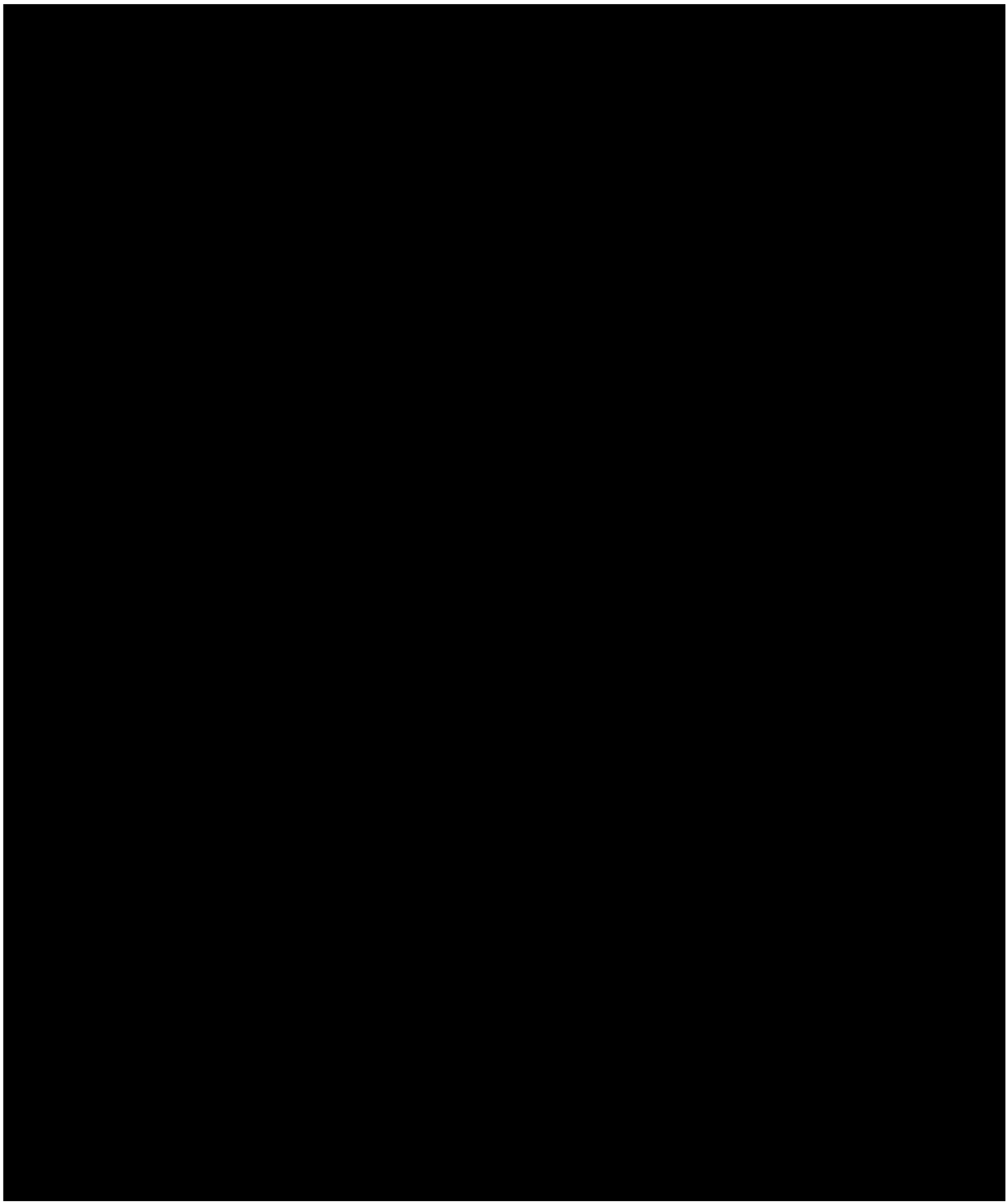

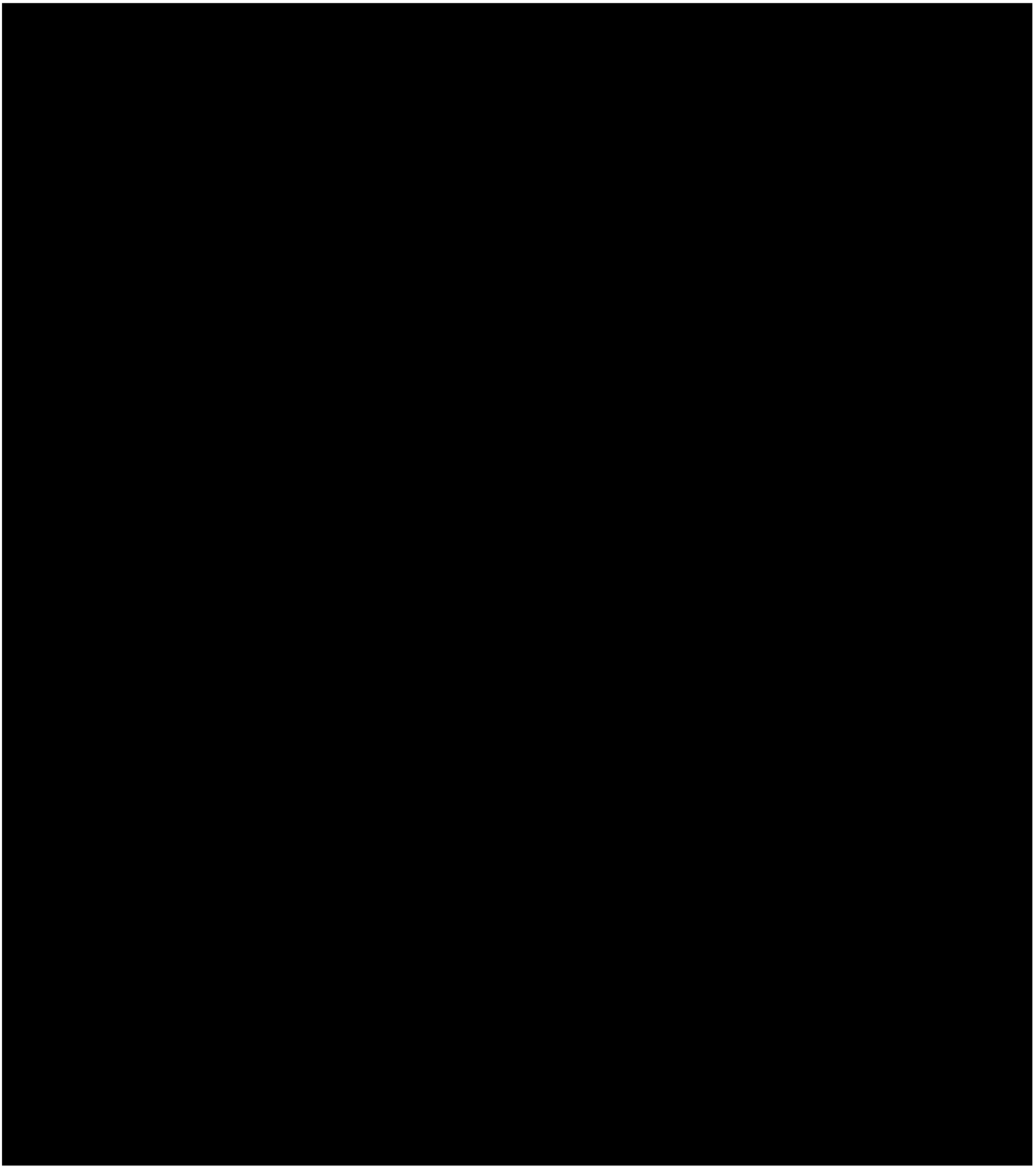

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V. Dodd-Frank

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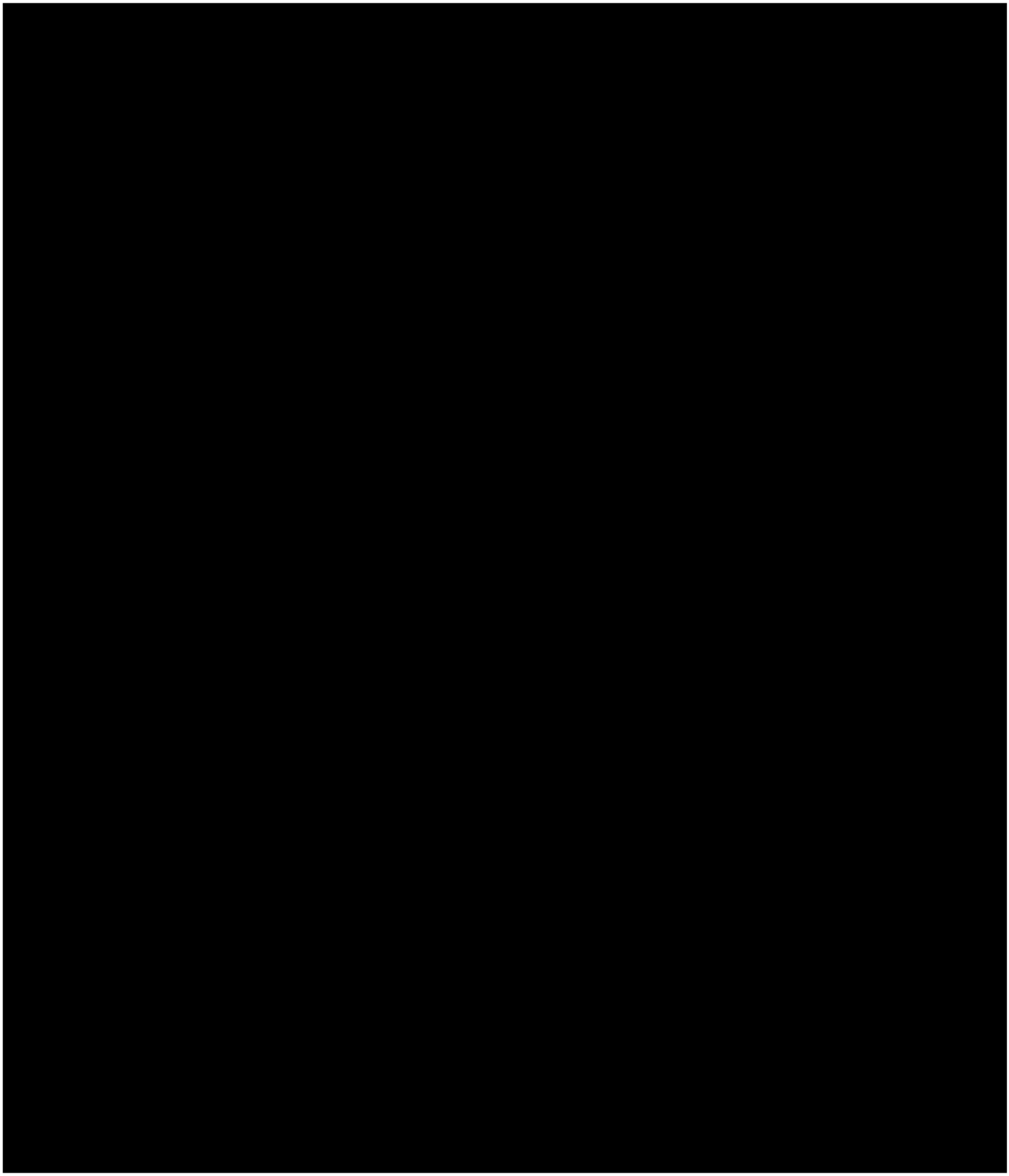
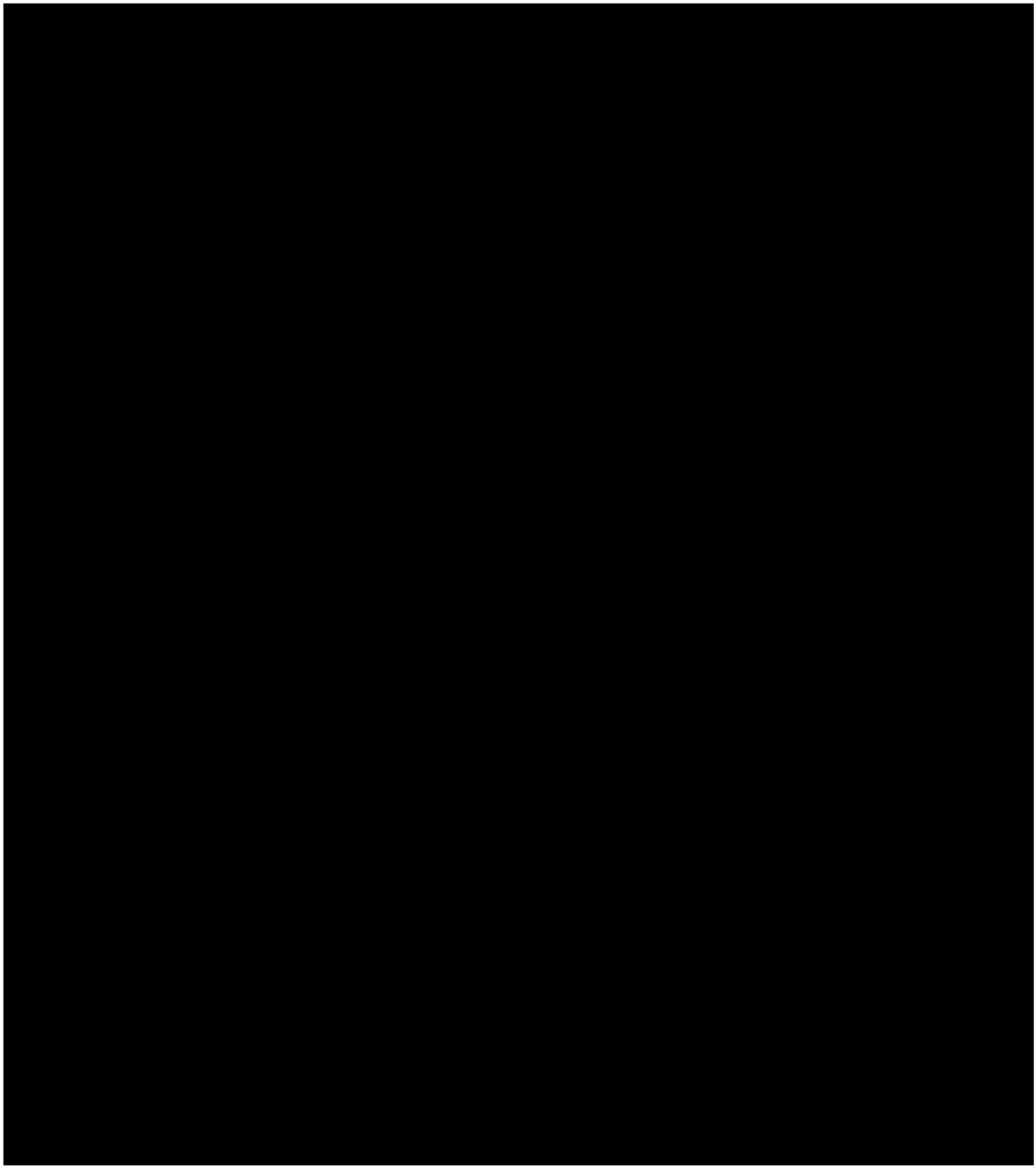
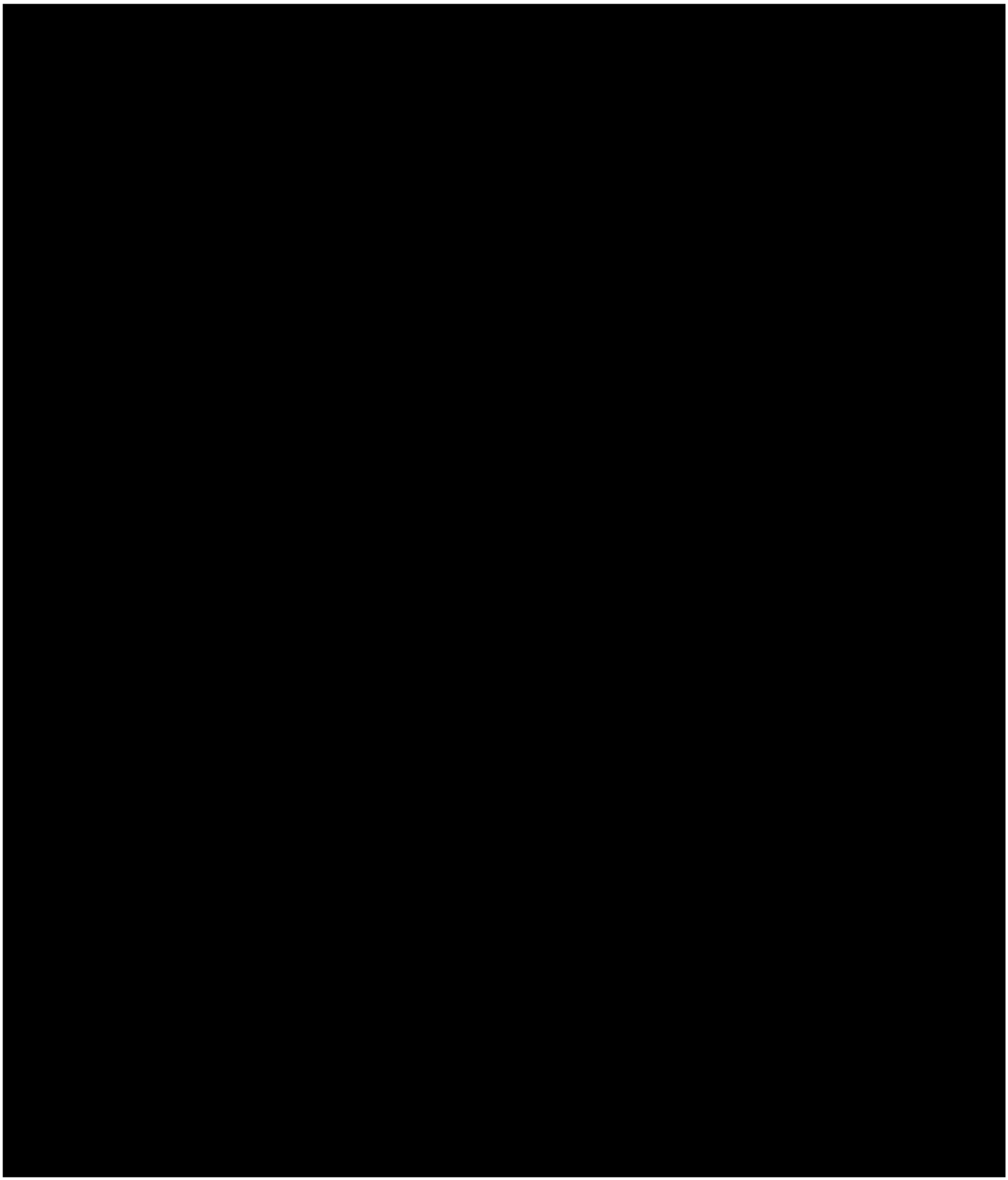
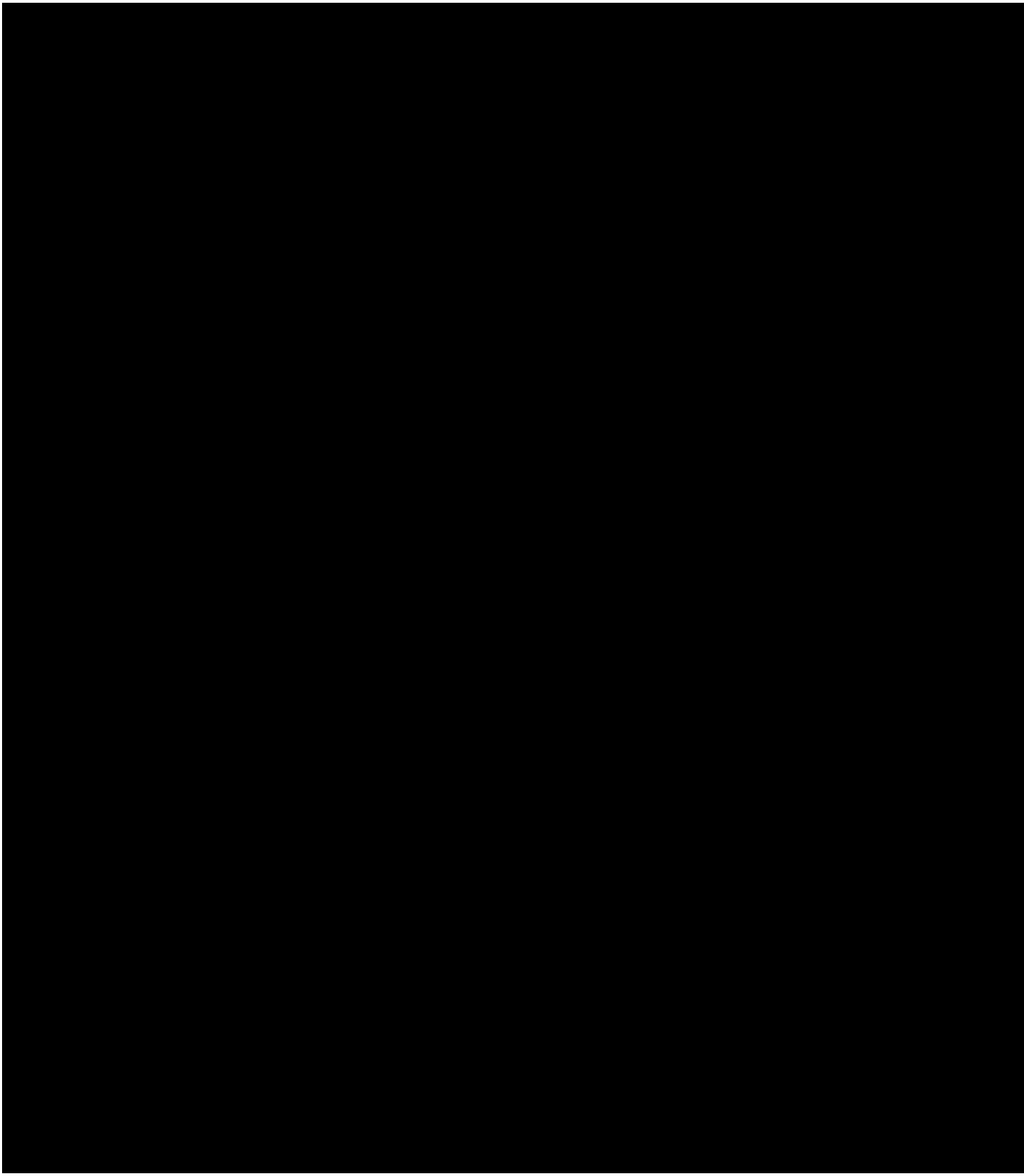


Appendix A





Appendix B



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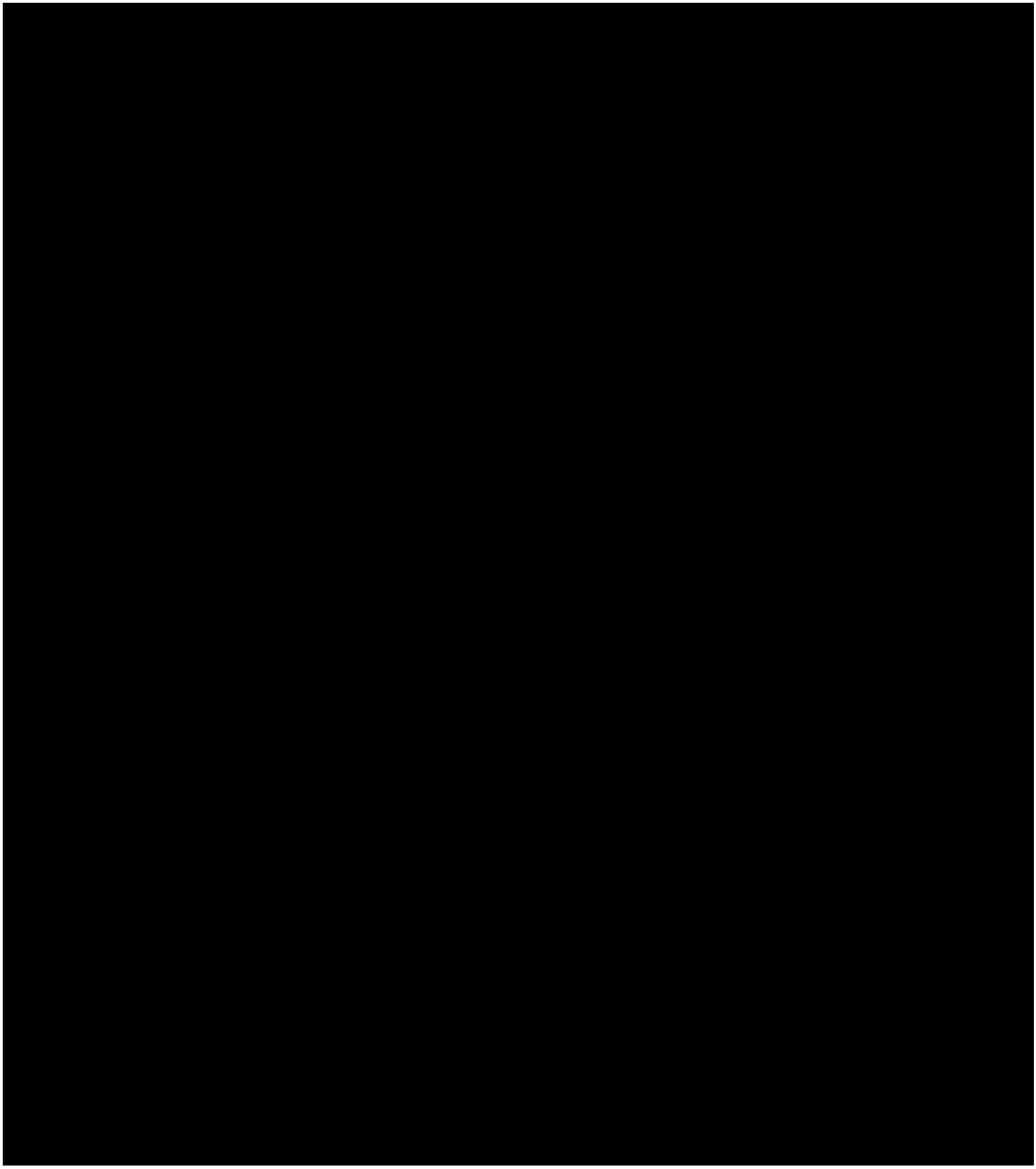

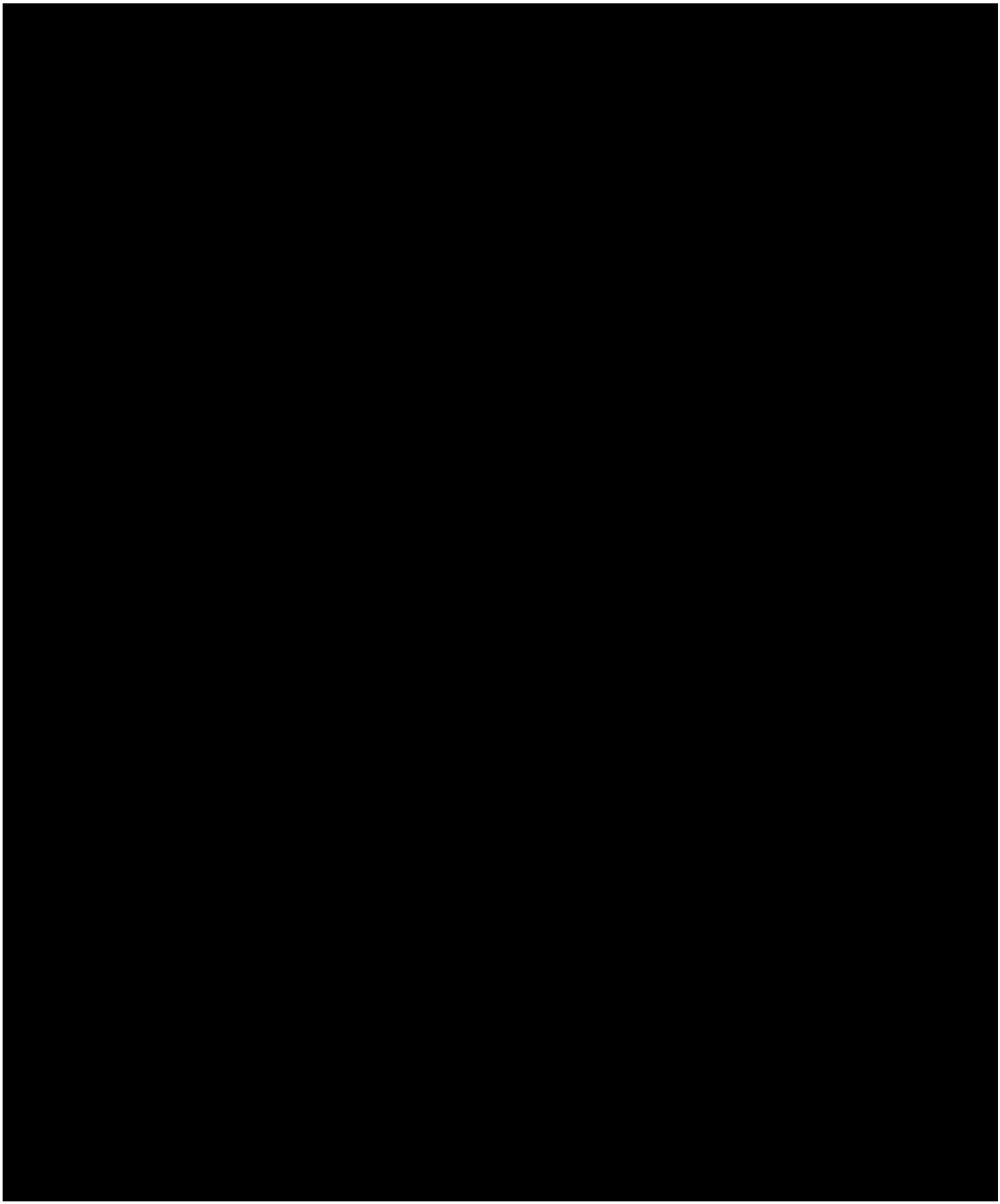

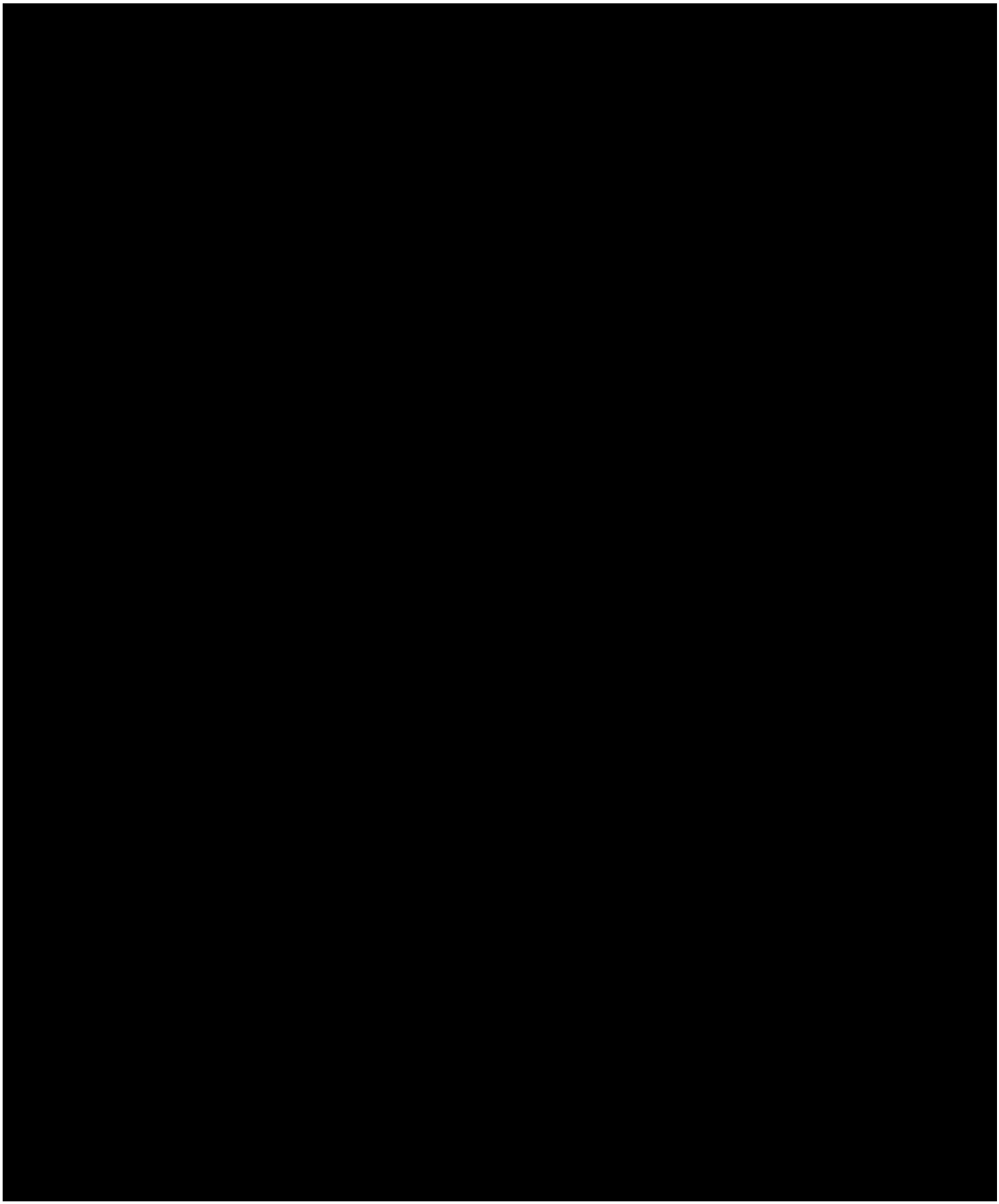

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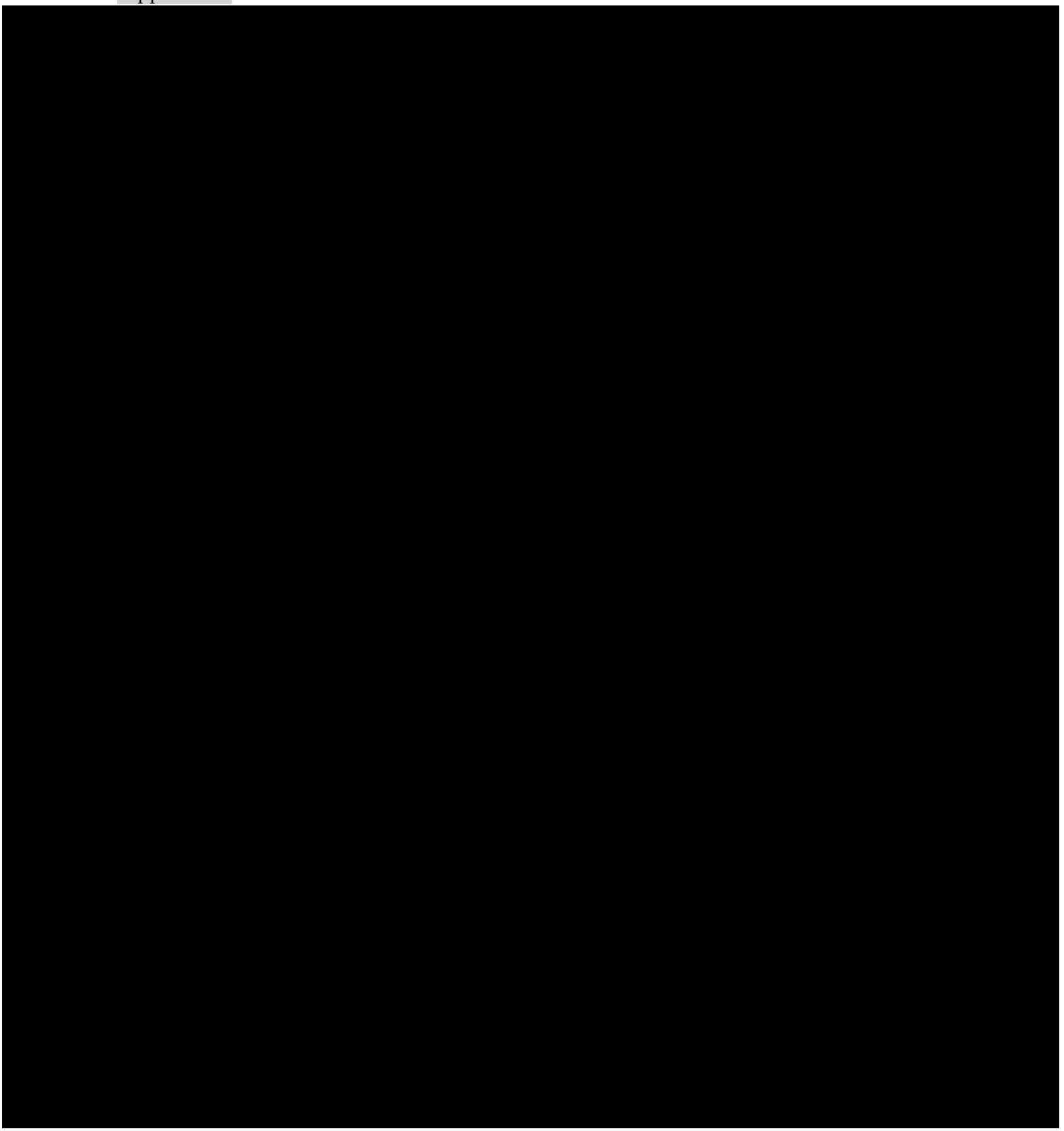

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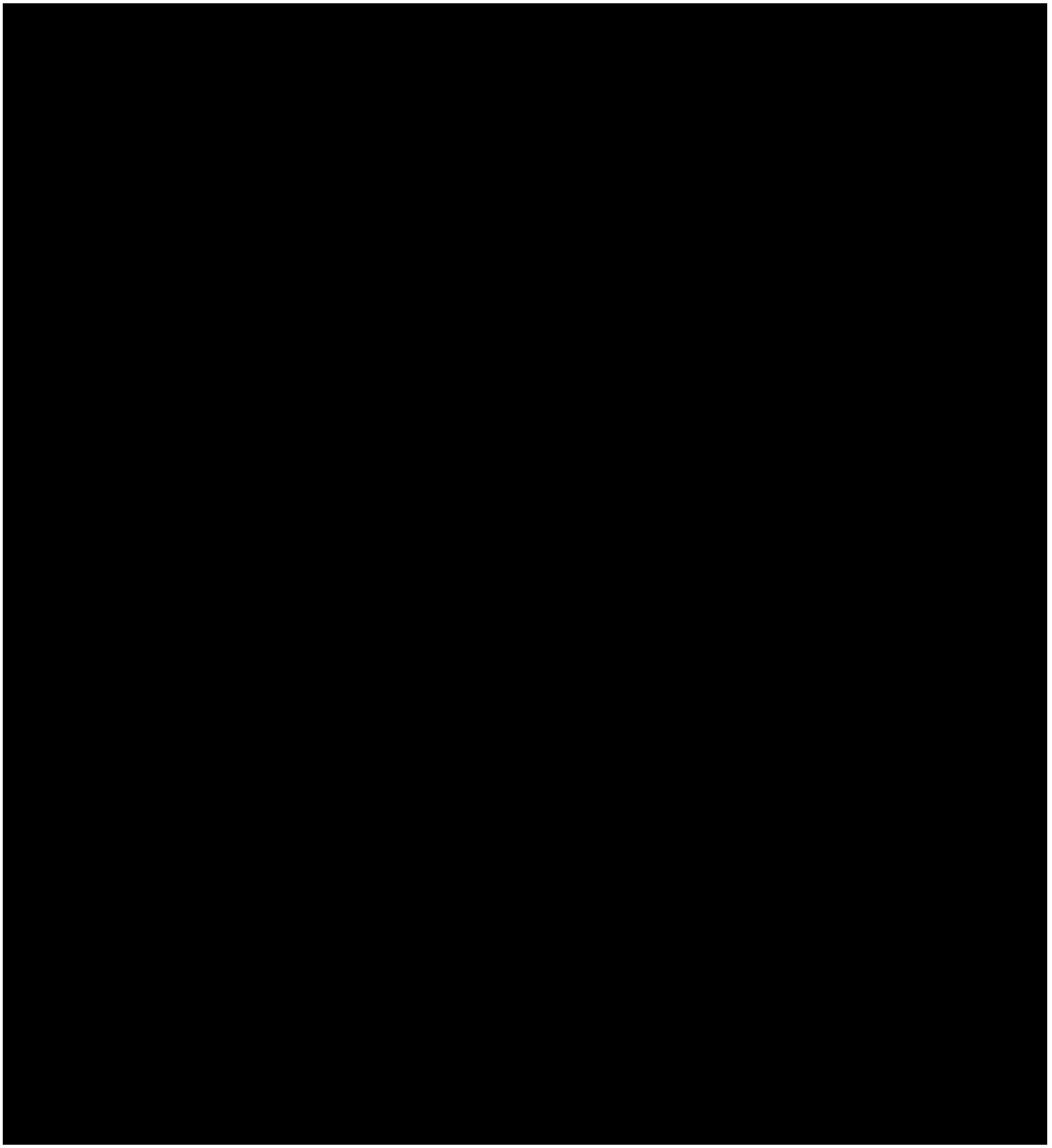

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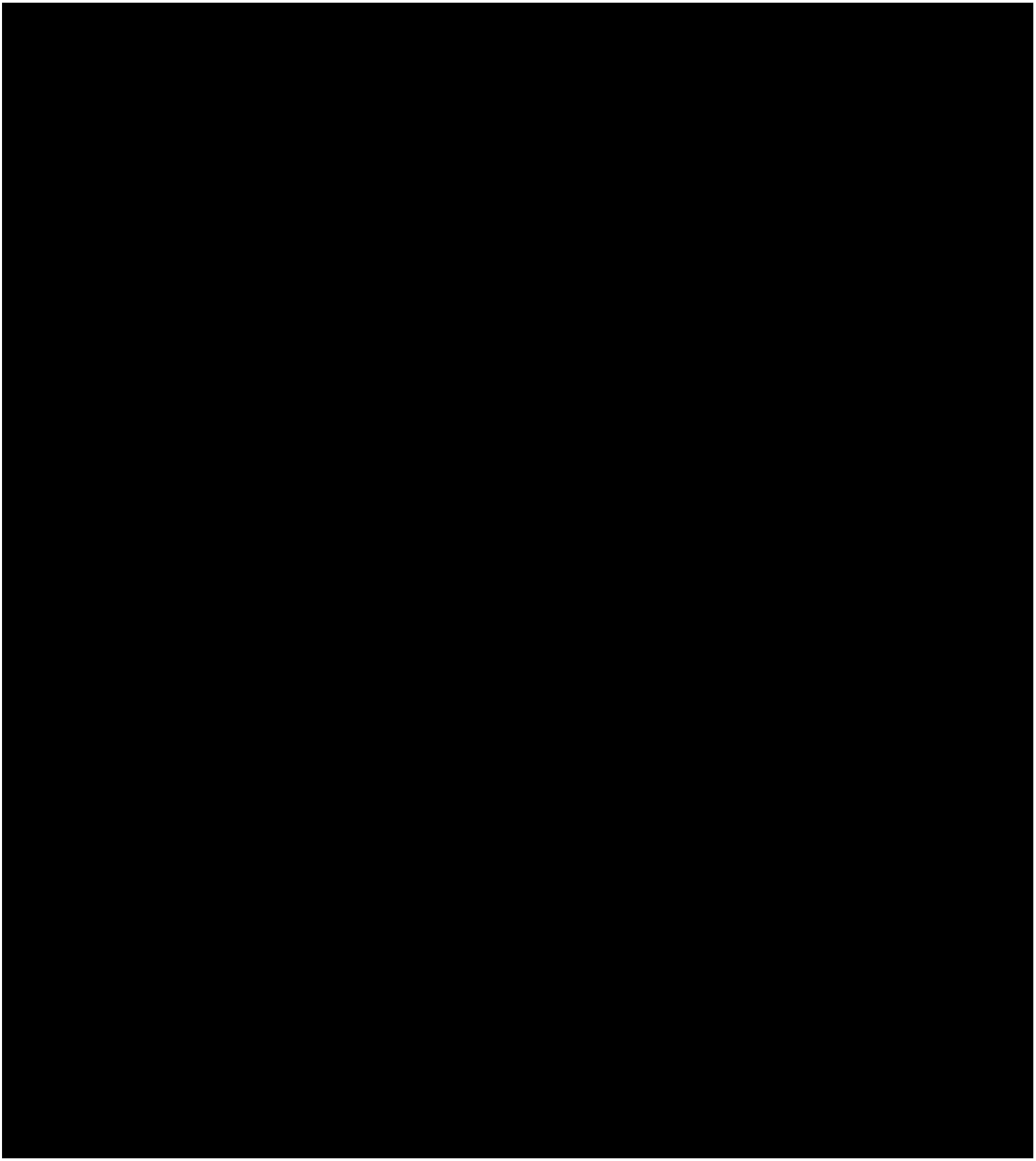

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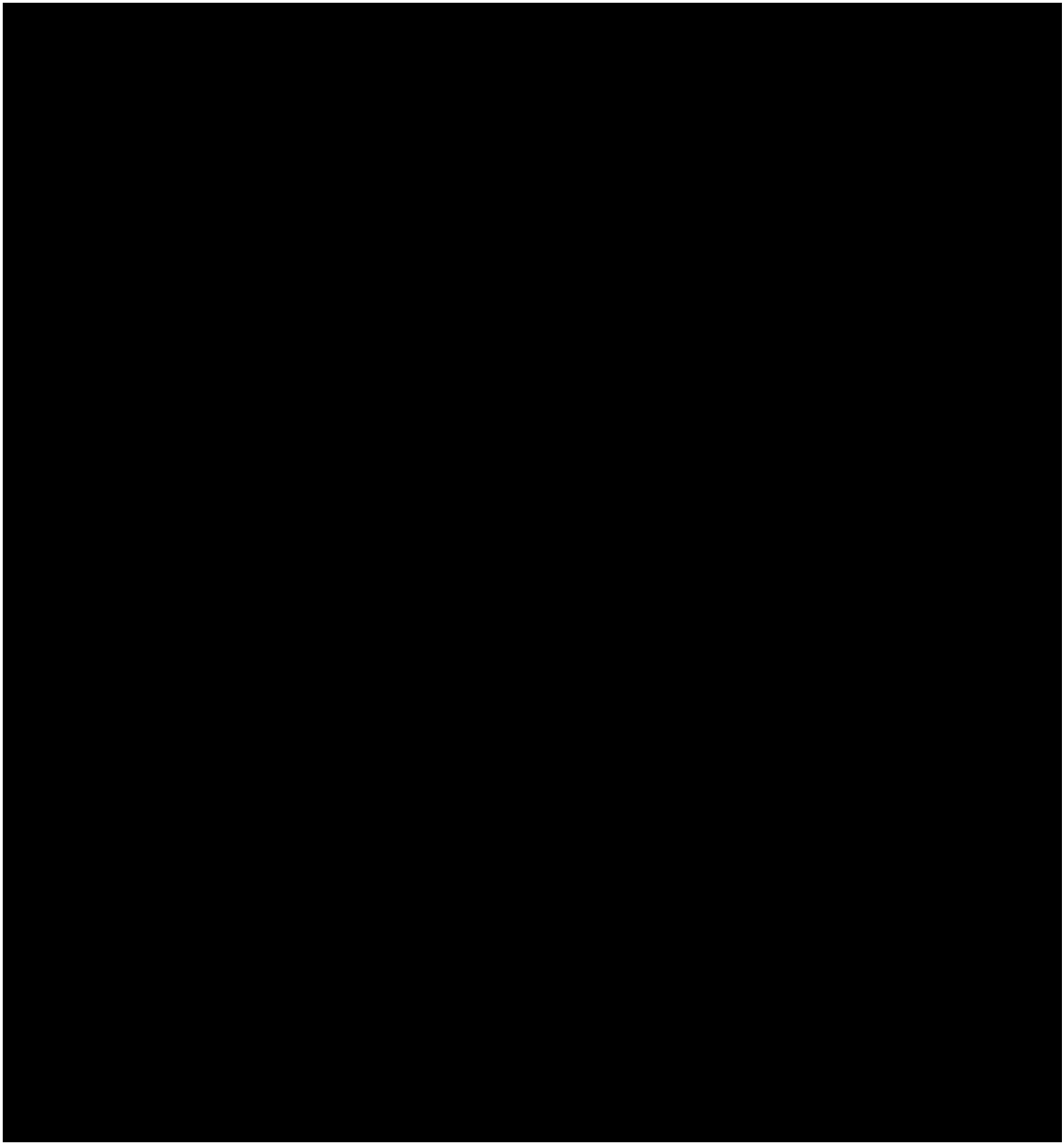

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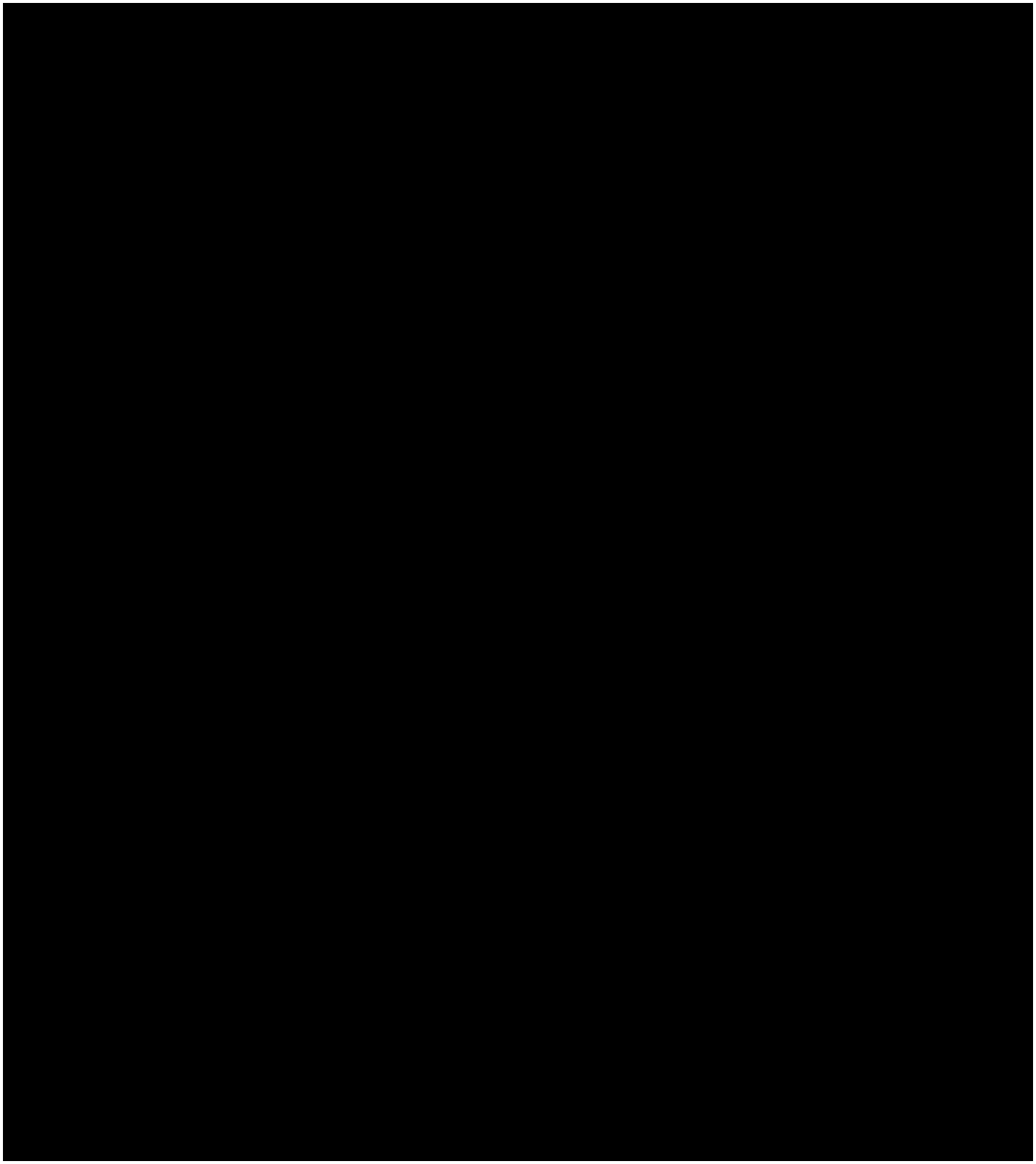
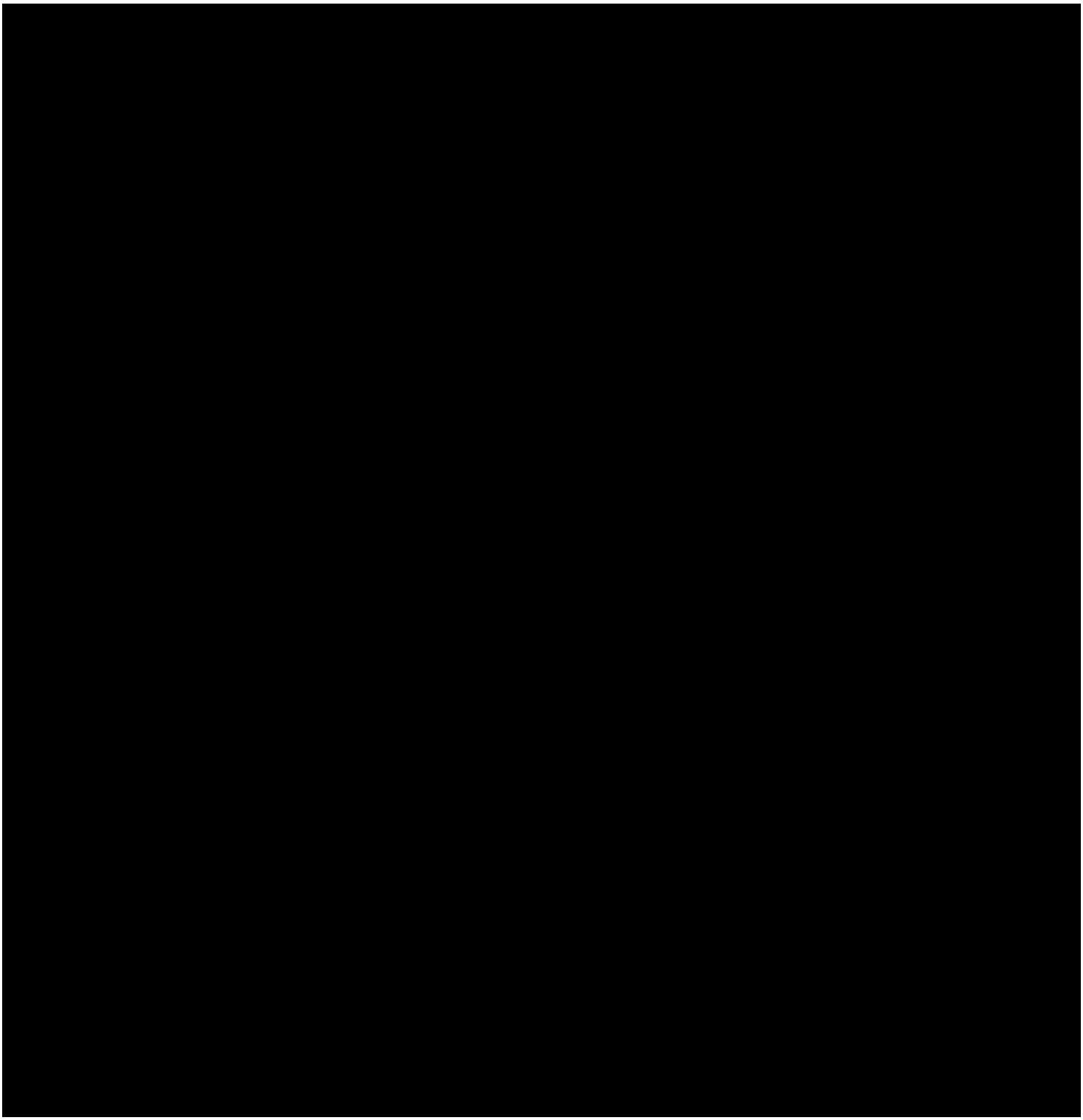


Appendix I



Appendix J

Risk Management Employee Acknowledgment

Employee Name:_____
(Please print)

RISK MANAGEMENT EMPLOYEE ACKNOWLEDGMENT

Global Risk Management has a combination of Policies, Risk Limits, Guidelines and procedures referred to as the "Risk Documents" that contain certain information regarding the governance and procedures of certain Duke Energy activities. Please read and review the appropriate Risk Documents. If you have any questions regarding the Risk Documents, you are to contact your immediate supervisor. It is very important that you understand how the Risk Documents apply to your current position. After reading and understanding the appropriate Risk Documents, please check the Risk Documents read and understood below and sign the Risk Management Employee Acknowledgment as instructed in the last line below.

Check all that apply:

- Duke Energy Commodity Risk Policy (applies across all entities) ☐
- Duke Energy Credit Policy (applies across all entities) ☐
- Model Review and Approval Process (applies across all entities) ☐
- Derivative Transaction Policy (applies across all entities) ☐
- Duke Energy Regulated Utilities Risk Management Control Manual ☐
- Duke Energy Forward Market Price and Volatility Curve Control Manual ☐
- Duke Energy Carolinas & Duke Energy Progress Risk Limits ☐
- Duke Energy Florida Electric Risk Limits ☐
- Duke Energy Indiana Electric Risk Limits ☐
- Duke Energy Kentucky Electric Risk Limits ☐
- Duke Energy Ohio (Reg) Electric Risk Limits ☐
- Duke Energy Credit Limits for DEC, DEP, DE-IN, DE-KY ☐
- Duke Energy Florida Credit Limits ☐
- Delegation of Authority – Fuels & Systems Optimization ☐

I have read the Risk Documents as indicated above outlining Duke Energy's expectations of me. I understand and acknowledge these Risk Documents apply to my position. I acknowledge and agree that it is my responsibility to comply with all aspects of the Risk Documents as well as any future revisions made to the Risk Documents. If I encounter a situation in which I do not know how the Risk Documents applies, I will contact my immediate supervisor.

I further acknowledge and agree that I will contact my immediate supervisor should my responsibilities at Duke Energy change and questions arise regarding the application of the Risk Documents to my new position and/or responsibilities.

I understand and acknowledge that my failure to comply with the Risk Documents will result in corrective action, up to and including termination.

I ACKNOWLEDGE AND UNDERSTAND THAT NEITHER THE RISK DOCUMENTS EMPLOYEE ACKNOWLEDGMENT NOR ANY OF DUKE ENERGY'S POLICIES OR PROCEDURES, INDIVIDUALLY OR TOGETHER, CONSTITUTE A GUARANTEE OF CONTINUED EMPLOYMENT, CREATE A CONTRACT OF EMPLOYMENT OR ALTER THE AT-WILL NATURE OF MY EMPLOYMENT IN ANY WAY.

_____/_____

Employee Signature / Date

_____

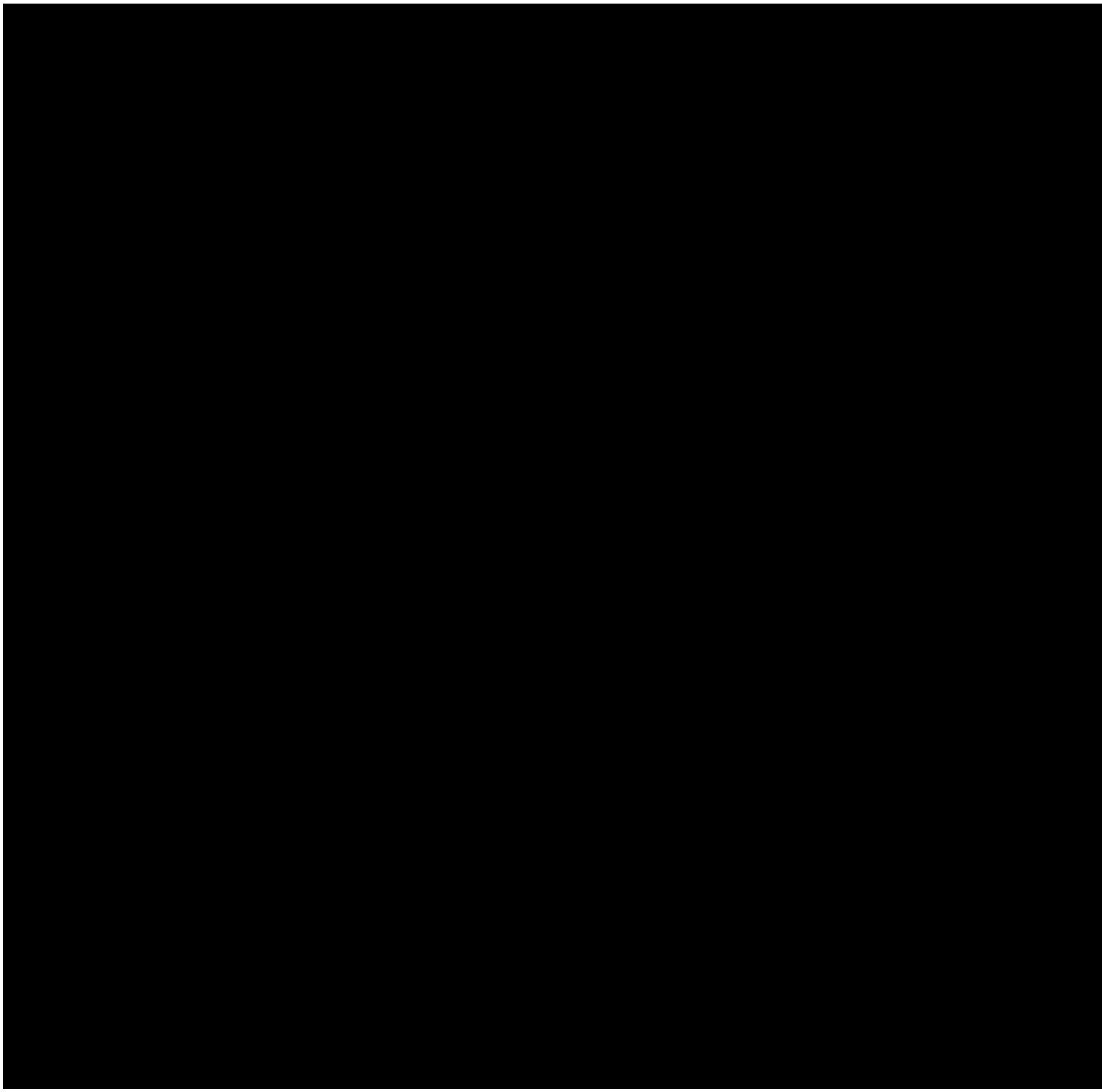
Employee Title

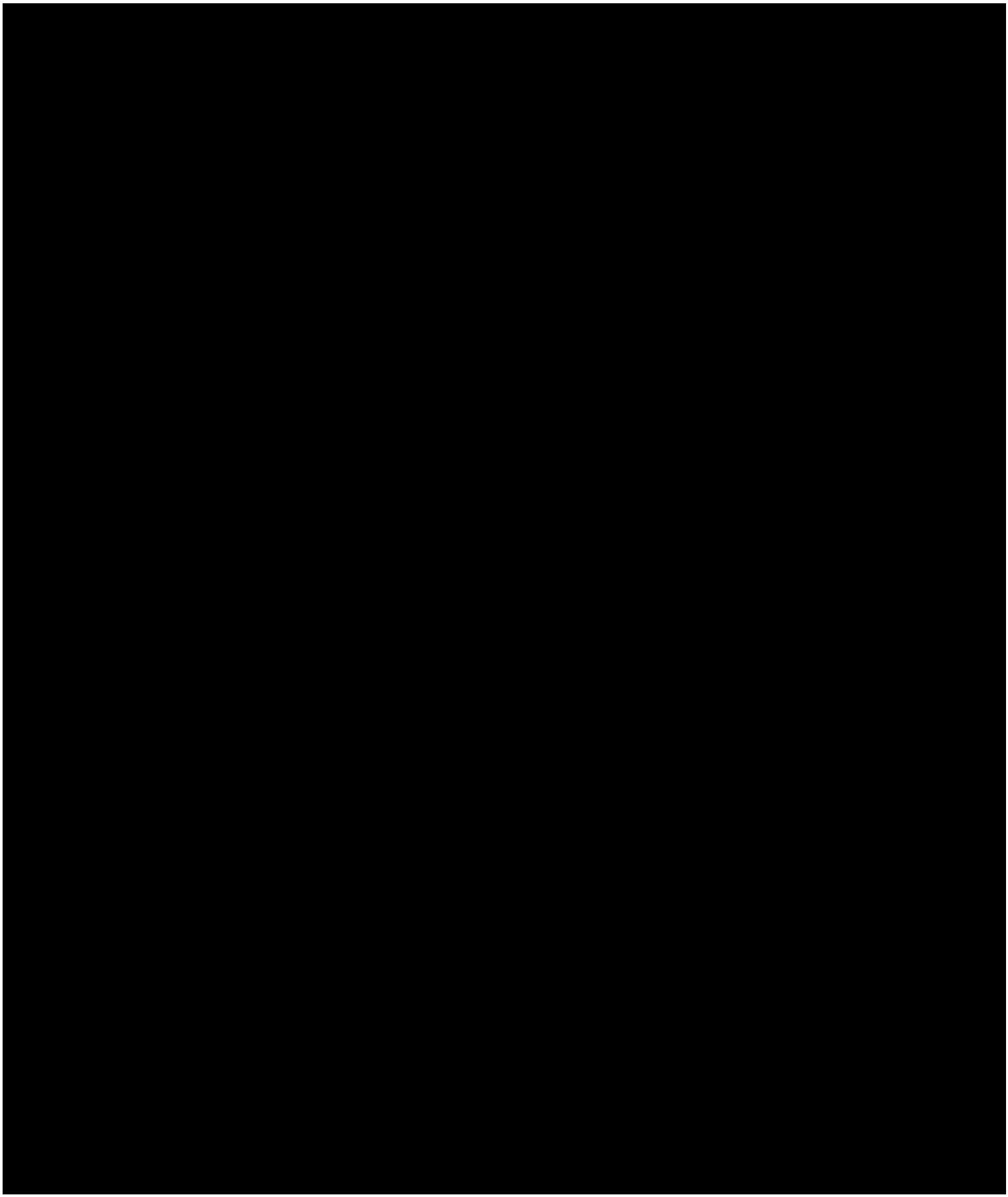
_____

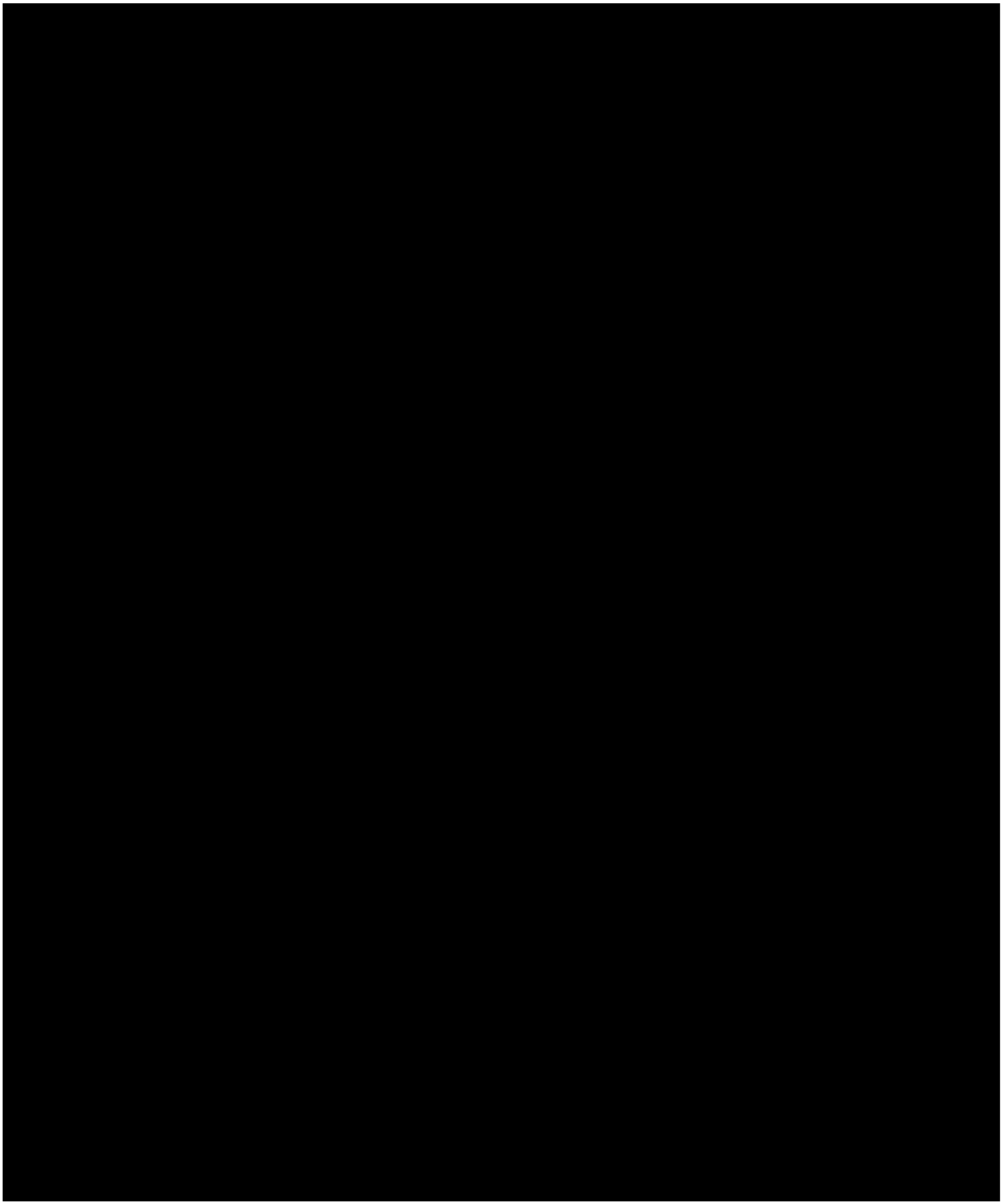
Print Full Name

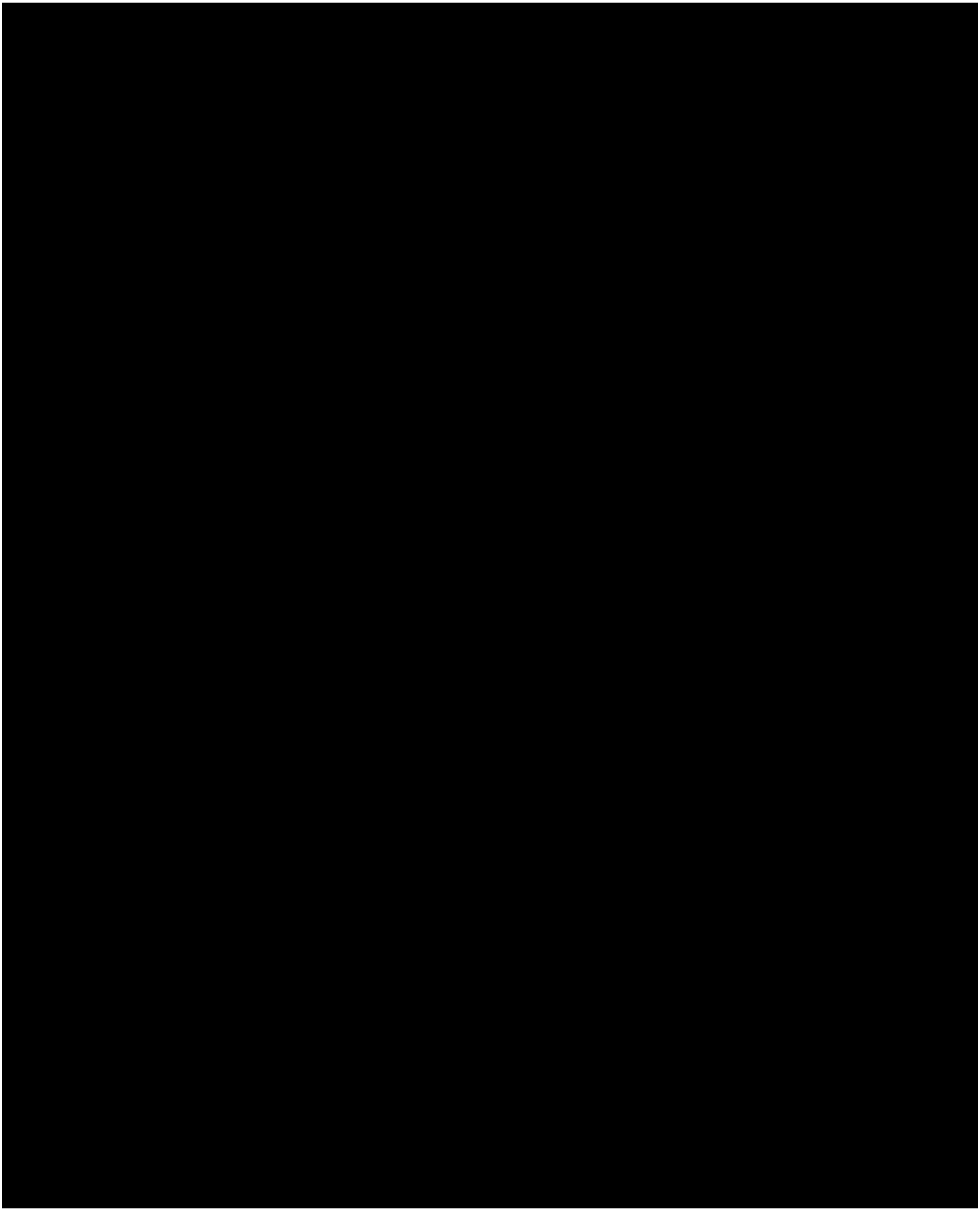
Appendix K

FERC 741 Officer Certification Process



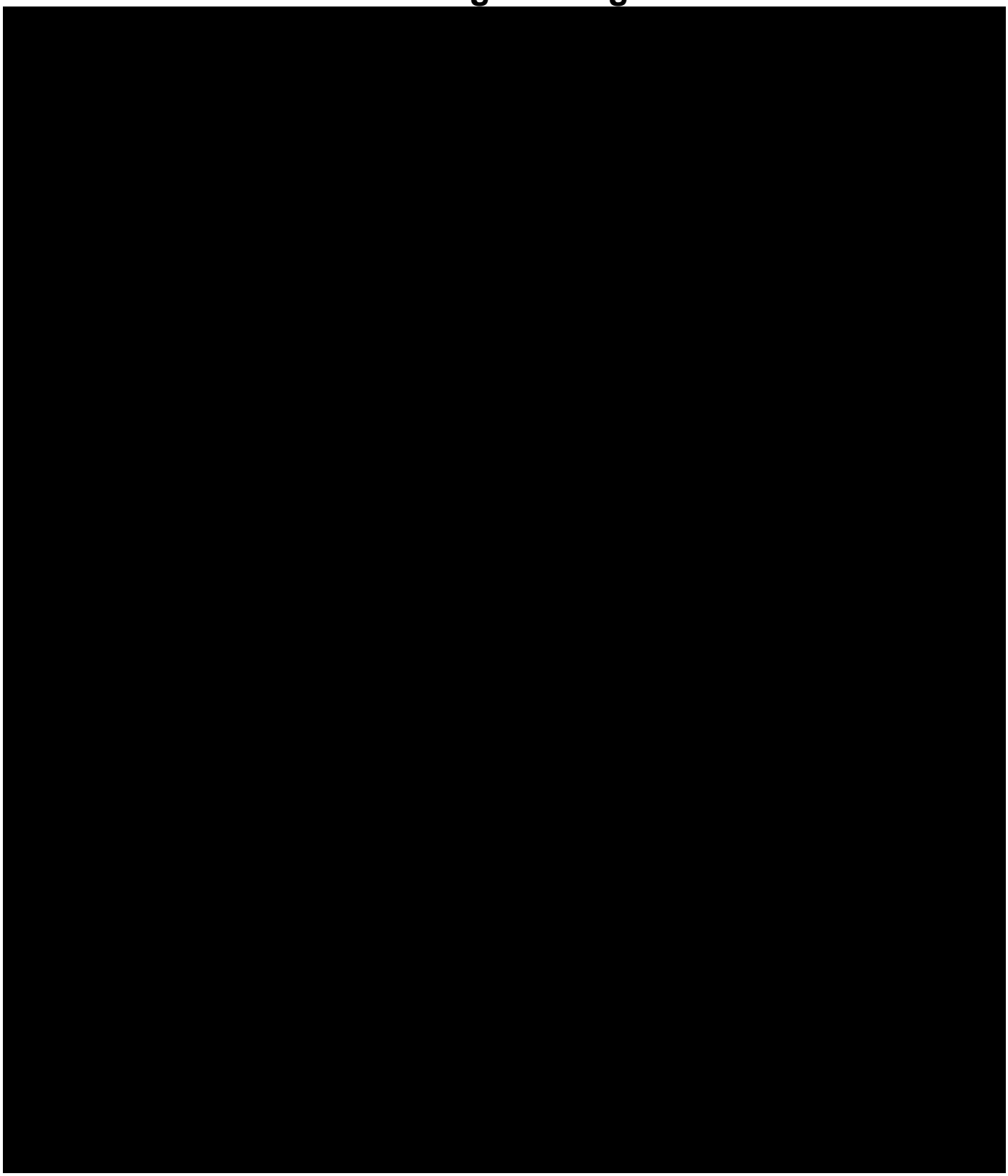


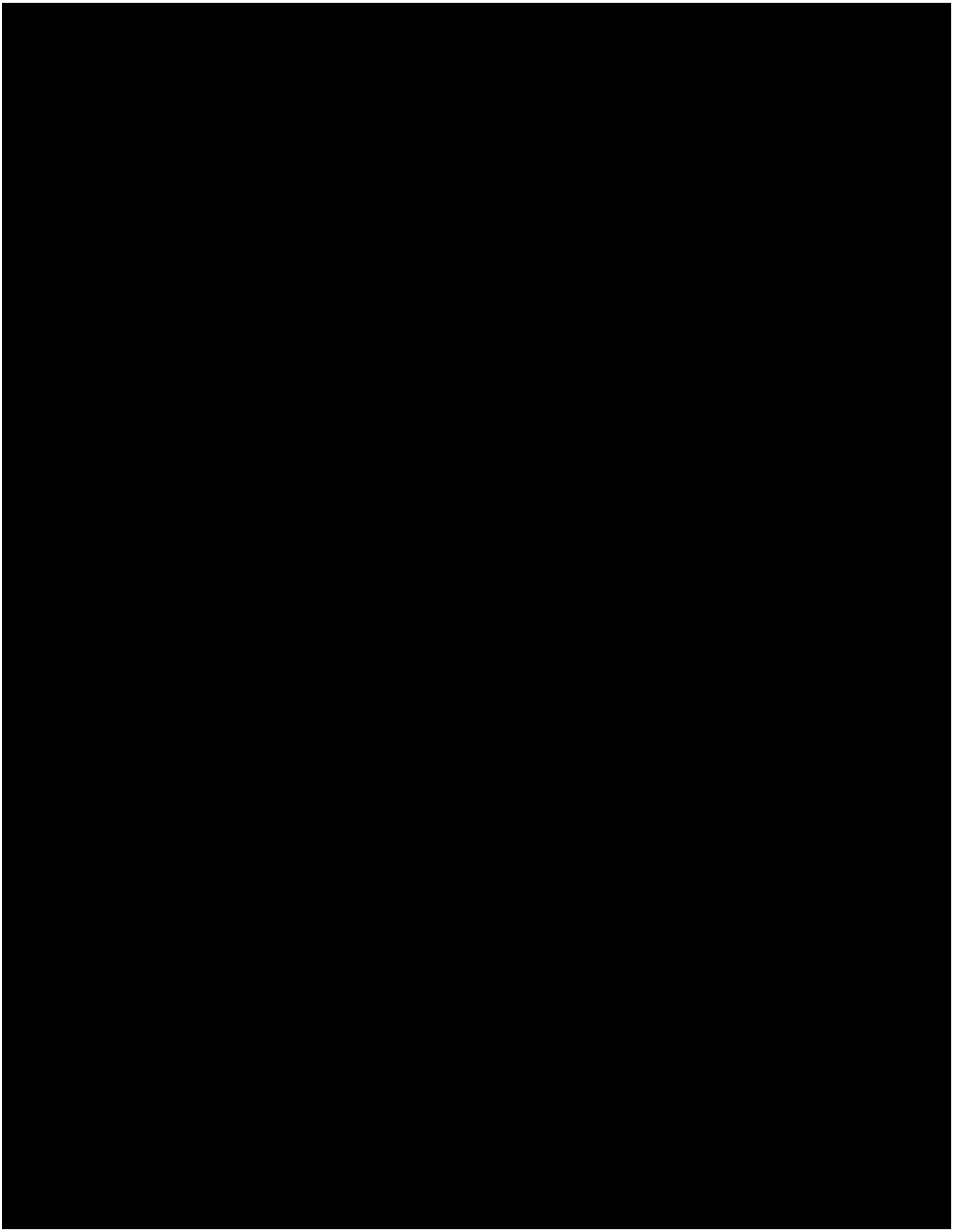




Appendix L

Fuels and Systems Optimization
Electronic Futures Exchange Management Procedures





Attachement H

FERC 741
Risk Management Employee Acknowledgment

Employee Name:_____
(Please print)

RISK MANAGEMENT EMPLOYEE ACKNOWLEDGMENT

Global Risk Management & Insurance has a combination of Policies, Risk Limits, Guidelines and procedures referred to as the "Risk Documents" that contain certain information regarding the governance and procedures of certain Duke Energy activities. Please read and review the appropriate Risk Documents. If you have any questions regarding the Risk Documents, you are to contact your immediate supervisor. It is very important that you understand how the Risk Documents apply to your current position. After reading and understanding the appropriate Risk Documents, please check the Risk Documents read and understood below and sign the Risk Management Employee Acknowledgment as instructed in the last line below.

Check all that apply:

- Duke Energy Commodity Risk Policy (applies across all entities) ……. ☐
- Duke Energy Credit Policy (applies across all entities) …….. ☐
- Model Review and Approval Process (applies across all entities) ..…… ☐
- Derivative Transactions Governance Policy (applies across all entities) ……. ☐
- Duke Energy Regulated Utilities Risk Management Control Manual……. ☐
- Duke Energy Forward Market Price and Volatility Curve Control Manual……. ☐
- Duke Energy Carolinas & Duke Energy Progress Risk Limits …… ☐
- Duke Energy Florida Electric Risk Limits ……..…… ☐
- Duke Energy Indiana Electric Risk Limits ……..……..…….. ☐
- Duke Energy Kentucky Electric Risk Limits……..……... ☐
- Duke Energy Ohio (Reg) Electric Risk Limits ……. ☐
- Duke Energy Credit Limits for DEC, DEP, DE-IN, DE-KY..……..……... ☐
- Duke Energy Florida Credit Limits……....…….. ☐
- Delegation of Authority – Fuels & Systems Optimization …….. ☐

I have read the Risk Documents as indicated above outlining Duke Energy's expectations of me. I understand and acknowledge these Risk Documents apply to my position. I acknowledge and agree that it is my responsibility to comply with all aspects of the Risk

Documents as well as any future revisions made to the Risk Documents. If I encounter a situation in which I do not know how the Risk Documents applies, I will contact my immediate supervisor.
I further acknowledge and agree that I will contact my immediate supervisor should my responsibilities at Duke Energy change and questions arise regarding the application of the Risk Documents to my new position and/or responsibilities.

I understand and acknowledge that my failure to comply with the Risk Documents will result in corrective action, up to and including termination.

I ACKNOWLEDGE AND UNDERSTAND THAT NEITHER THE RISK DOCUMENTS EMPLOYEE ACKNOWLEDGMENT NOR ANY OF DUKE ENERGY'S POLICIES OR PROCEDURES, INDIVIDUALLY OR TOGETHER, CONSTITUTE A GUARANTEE OF CONTINUED EMPLOYMENT, CREATE A CONTRACT OF EMPLOYMENT OR ALTER THE AT-WILL NATURE OF MY EMPLOYMENT IN ANY WAY.

_____/_____
Employee Signature / Date

_____
Employee Title

_____
Print Full Name

Attachment I

Company Guidelines and Procedures

Document Title	Document Summary
Approval of Business Transactions Policy	The Approval of Business Transactions (ABT) Policy outlines the minimum reviews and approvals required for the execution of transactions, documents and forms necessary for the conduct of business.
Authority Limit Matrix from the Approval of Business Transactions Policy	Duke approval limits for specific employees for purchase or sale of commodities, storage, transportation or capacity or other sales.
Coal and Emission Reducing Chemicals Procurement Procedure	This policy defines the roles, responsibilities, and requirements of negotiation, execution and administration of contracts for the purchase and transportation of fuel and emission reducing chemicals (e.g., coal, lime, limestone, trona, ammonia, urea, freeze-proofing, railcar lease and maintenance, etc.) within the U.S. Franchised Electric and Gas organization of Duke Energy Corporation ("Duke Energy" or the "Corporation" or the "Company"). Specific topics addressed include required approvals, the sourcing process, documentation, segregation of duties, and standards of business conduct.
Coal Combustion Products (CCPs) Reuse Procedure	The purpose of this procedure is to define the process by which coal combustion products (CCPs) are commercially reused. CCPs are formed during the combustion of coal and may include, but are not limited to, fly ash, bottom ash, and synthetic gypsum.
Commodity Risk Policy	The purpose of the Commodity Risk Policy ("the Policy") is to provide clear and consistent directives in the identification, quantification, management and communication of commodity risk across the Enterprise. This Policy covers all sales or purchases of commodities, storage, transport, capacity or fuel procurement and related services, and contracts with embedded commodity exposure. Approved commodities include both standardized products as well as structured contractual products and must be listed in the Approved Commodities section of the applicable risk limits for each Business Unit.
Constrained Operations Application	This procedure establishes the roles and responsibilities for use of the Constrained Operation Application by System Operations Energy Control Center (ECC), Fuels and System Optimization (FSO), and Fossil Hydro Operations (FHO) personnel. Specifically, this procedure defines the functions of these organizations and the communications necessary to support the planning and implementation of unit constraints, including testing, maintenance, and derates, in an economic manner, considering margins required for system reliability. This procedure supports compliance to NERC Standard TOP-003-1, Planned Outage Coordination.
Credit Policy	Extending and monitoring credit to customers and counterparties is integral to all of Duke Energy Corporation's businesses. Global Risk Management (GRM) has established standards of practice related to the management of credit risk across Duke Energy Corporation and its subsidiaries ("Duke Energy"). This policy governs the extension of credit related to wholesale business activity (including fuel procurement), enterprise sourcing (including major construction projects), and other business activities as described herein.
Delegation of Authority Policy	The Delegation of Authority (DOA) Policy (Policy) establishes the approval authority limits for all employees within the organization below the Senior Management Committee (SMC). Approval authority limits for the President and Chief Executive Officer (CEO) and SMC members are defined in the Approval of Business Transactions (ABT) Policy.
Derivative Transactions Governance Policy	Duke Energy companies engage in derivative transactions, including swap transactions, to hedge or mitigate commercial risk. These transactions may be subject to laws in the United States, the European Union, and other countries that are designed to mitigate systemic risk to financial systems, increase transparency, and promote market integrity, among other goals. Duke Energy intends to comply with all such applicable laws and regulations.
Duke Energy Corporation Regulated Electric Risk Management Control Manual	This document, the Regulated Utilities Risk Management Control Manual (Control Manual), is intended to present a description of the internal control environment and related control procedures for the regulated trading functions including but not limited to power, gas, emissions, coal and renewable energy certificates.
Duke Energy Global Risk Management Credit Delegation Of Authority	his Credit Delegation of Authority ("Credit DOA") document contains various required credit activities and standards involved in setting credit limits including the delegation of credit authority. It bridges the Credit Policy and evolving market conditions as well as provides guidance for best practices to ensure consistent application across Duke Energy Corporation and its subsidiaries ("Duke Energy"). As such, the Credit DOA may be more frequently reviewed and updated than the Credit Policy. Business Units ("BU") are required to conform with this Credit DOA in conjunction with the requirements of the Approval of Business Transactions Policy.
Duke Energy Global Risk Management Credit Procedures Manual	The purpose of this Credit Procedures Manual ("Credit Manual") is to set forth guidelines to help business units and Global Risk Management (GRM) develop consistent procedures throughout the enterprise with regard to measuring, monitoring, and reporting credit risk. It is intended to complement the Credit Policy and Credit Delegation of Authority (DOA), by providing more specific guidance, primarily for GRM personnel assigned to support specific business units.
Duke Energy Supply Bulk Power Marketing & Trading Delegation of Authority	Delegation of Authority approval limits for specific employees
Duke Energy's Enterprise NERC Compliance Program	Duke Energy's commitment to operate its electric utility business in a manner that ensures the reliability of the North American Bulk Electric System including compliance with the NERC Reliability Standards ("NERC Standards") developed and enforced by the North American Electric Reliability Corporation ("NERC"). The Compliance Program provides a solid framework for structuring a comprehensive range of compliance activities.
Duke Energy's FERC Compliance Program	Duke Energy's Federal Energy Regulatory Commission (FERC) Compliance Program was developed to minimize the company's risk of violating FERC rules.

Attachment I

Company Guidelines and Procedures

Document Title	Document Summary
Duke Energy's Standards of Conduct Written Procedures	The Federal Energy Regulatory Commission (FERC) issued Order No. 717 which revised the Standards of Conduct rules adopted in Order No. 2004 that apply to interstate natural gas pipelines and electric utilities ("Transmission Providers"). The Standards of Conduct rules govern the relationship between a Transmission Provider's transmission function employees and its marketing function employees. The Compliance Procedures are applicable to Transmission Providers of the franchised electric utilities of Duke Energy Corporation (collectively, the Franchised Utilities).
FPO Operational Communications	The purpose of this procedure is to establish protocols for routine daily / hourly communications and interaction between Marketing Function Employees (MFEs) within the Fuels and System Optimization (FSO) Department and Transmission Function personnel at the respective Energy Control Centers (ECCs) and Regulated Renewable Operations Center (RROC).
FSO – DEC and DEF Desk Top Gas Trading/Confirmation Procedure Spot/Next-Day Transactions	This procedure defines the daily deal capture process to be performed by trading and scheduling, for all same-day and next-day transactions for the company's gas generation facilities.
FSO – DEC and DEF Gas Trading Procedure for Off-Premise Transactions	This procedure defines the process in which off-premise gas procurement, scheduling and trading shall be conducted for all the company's gas generation facilities in the Carolinas and in Florida.
FSO - DEF Long-Term Gas Supply RFP Process	The purpose of this process is to outline the Long-Term RFP process by which Duke Energy Florida (DEF) procures competitively priced natural gas to meet its longer-term projected fuel needs at its owned and tolled gas generation facilities in Florida.
FSO – DEF Short-Term Gas Procurement and RFP Procedure	The purpose of this procedure is to outline the Short-Term RFP process by which Duke Energy Florida (DEF) procures competitively priced natural gas to meet its shorter-term projected fuel needs at the company's owned and tolled gas generation facilities in Florida. For clarity: short-term RFP gas procurement activities typically are for monthly, seasonal and annual periods for the current year and the following year for which natural gas supplies are projected to be needed to meet DEF's daily, monthly, seasonal and annual needs at its owned and tolled gas generation facilities. DEF procures a portion of its projected fuel needs through the short-term RFP processes and as needed will procure competitively priced natural gas supply through informal market solicitations based on the specific business opportunities and need. Also, DEF may procure gas on a short-term spot basis for seasonal, monthly, or daily needs based on changing forecast. There may be instances due to timing and business needs that there is an overlap between activities that are defined as the short-term and long-term activities. In following this procedure, it may also be necessary for DEF to have related capacity release activities that need to be followed which are outlined in the FSO - DEF Short-Term Transportation Capacity Procedure (STDP-MKT-FSO-00004).
FSO - DEF Short-Term Transportation Capacity Procedure	This procedure defines the process by which the Trader procures or releases short-term capacity greater than one (1) month based on projected need and ensures compliance with FERC capacity release regulations.
FSO – Natural Gas Employee Removal	The removal procedure ensures that when an employee leaves the natural gas group, the person is no longer authorized to conduct business for Duke Energy Carolinas (DEC), Duke Energy Progress (DEP), Duke Energy Florida (DEF), Duke Energy Indiana (DEI) and Duke Energy Kentucky (DEK) have been removed from the appropriate systems. The procedure ensures that external notification has been given to all approved counterparties.
FSO – Requirements for Natural Gas Optimization Tracking	This purpose of this procedure is to ensures that the natural gas group is meeting requirements of all applicable natural gas optimization tracking, reporting and documentation for natural gas assets for Duke Energy Carolinas (DEC), Duke Energy Progress (DEP), Duke Energy Florida (DEF), Duke Energy Indiana (DEI) and Duke Energy Kentucky (DEK).
FSO Long-Term Firm Natural Gas Transportation Process – Florida	This procedure defines the process by which Duke Energy Florida ("DEF") procures reliable and competitively priced long-term firm transportation for DEF for a term of one year or greater to meet projected long-term needs for owned generation facilities and tolled generation facilities where DEF has responsibility for the natural gas supply.
FSO NERC E-Tag for Physical Power Deals	Define process developed to ensure compliance with NERC Interchange (INT) Standards; specifically, those related to the completion and validation of NERC E-Tag electronic documents for physical power transactions. The valid ETag will serve as notice that the Arranged Interchange has been submitted to the Interchange Authority.
FSO Power Trader Authorization and Removal Procedure	The Trader Risk Management Employee Acknowledgment form (Appendix E) has been developed to ensure that Power Traders understand their authorized trading boundaries, including limitations specifically placed by the FERC on DEC's, DEP's and DEF's wholesale power sales.
FSO –Regulated Oil Procurement Procedure for Off-Premise Transactions	This procedure defines the process in which off-premise oil procurement (physical spot purchase) shall be conducted with a supplier not under current contract, for Duke Energy Florida (DEF), Duke Energy Progress (DEP), Duke Energy Carolinas (DEC), Duke Energy Indiana (DEI) and Duke Energy Kentucky (DEK).
Fuel and System Optimization (FSO) DEF Emissions Trading Process & Procedure Check List	The Fuel and System Optimization (FSO) department which manages SO2 & NOx allowance under Cap and Trade programsCap and Trade programs as well as other REC related programs for Duke Energy Florida's(DEF) generation system as applicable as applicable. The purpose of managing these emissions credits for DEF is to ensure compliance with any Federal EPA cap and trade regulations as well as any additional regulation adopted by State or Federal legislation.

Attachment I

Company Guidelines and Procedures

Document Title	Document Summary
Fuel and System Optimization (FSO) DEF Oil Procurement Process	The purpose of this process is to ensure that appropriate volumes of competitively priced fuel oil and transportation are available for Duke Energy Florida (DEF) native load oil-fired generation in order to meet peaking and baseload fuel oil requirements, utilizing approved processes and procedures. The purpose of this DEF Long-Term Oil Procurement & RPF Process is the following. As needed establish "requirements type" fuel oil supply commitments for No. 2 fuel oil of up to one year or longer , with the ability to renew for additional periods if there are no material changes to contract terms,pricing, fuel specifications or overall fuel need. Balance fuel oil procurement under term contracts with spot contracts. Define the process to solicit, evaluate, and recommend fuel oil transactions to meet DEF's fuel oil requirements
Fuel and System Optimization (FSO) Spot Market DEF Oil Procurement Process	To ensure that appropriate volumes of competitively priced fuel oil are available for Duke Energy Florida (DEF) native load oil-fired generation in order to meet peaking and base load fuel oil requirements, utilizing approved processes and procedures. The purpose of this Spot Market DEF Oil Procurement Process is to describe the process to acquire fuel oil in addition to what is available under long term contracts.
Fuel Oil Emergency Procedure - PEF	Gas, Oil, and Emissions within FSO are responsible for maintaining fossil, combustion turbine (CT) and combined-cycle (CC) power plant fuel oil inventories through ordering of fuel oil to be delivered to each DEF plant. This procedure outlines the process required when a fuel oil emergency occurs.
Generating Unit Maintenance Scheduling	This procedure establishes the process for the development and revision of the Generating Unit Maintenance Schedule (GMS). The GMS process focuses on mid-term optimization for system economics, market opportunities, and craft resources given necessary constraints for system reserve levels, budget, and regulatory constraints. GMS revision process includes the semi-annual optimization and Outage Change Request (OCR) processes.
GenTrader Schedule of Authorities	The purpose of this document is to define the responsibilities of Portfolio Management (PM), and Information Technology (IT) positions related to management and use of the Fuels & System Optimization (FSO) GenTrader (GT) system.
GenTrader Usage Procedure	The purpose of this document is to describe the procedures to be followed when using the Fuels & System Optimization (FSO) GenTrader (GT) system used by FSO Portfolio Management (PM) groups and related downstream or support users.
Model Review and Approval Process	Model risk, the risk originating from using models for valuation and hedging, can be significant for any company with exposure to complex assets and financial positions. At Duke Energy, the vast majority of positions are marked-to-model. Very few positions are truly marked-to-market; that is, liquid market prices are seldom available. As such, model risk becomes extremely important. Model risk may be thought of as originating from three sources: 1) poor or incorrect modeling, including input estimation errors and poor data, 2) trade limitations such as lack of liquidity and transaction costs, and 3) improper use of an otherwise valid model. In such a situation, the review or vetting of models and their use becomes crucial to the business as a way of reducing model risk [1, 2]. This document is a description of the review process at Duke Energy.
Operational Post Analysis and Transaction Costing Process	This procedure establishes the process for Operational Post Analysis and after-the-fact costing (Recosting) of excess generation sales and economy purchases.
Regulated Electric Risk Limits	This document contains the limits applicable to Duke Energy Florida (and its successor), including regulated wholesale generation activities, and other approved activities within the Regulated Utilities business that entail some form of commodity price risk as described herein.
Regulated Utilities Credit Limits	This document contains guidance for compliance with the limits applicable to Duke Energy Florida's regulated wholesale generation activities, and other approved activities within the regulated business as described herein.

Note: Policies and procedures are as of June 9, 2021