IN THE MATTER OF AN ARBITRATION UNDER CHAPTER ELEVEN OF THE NORTH AMERICAN FREE TRADE AGREEMENT AND THE UNCITRAL RULES OF 1976

BETWEEN:

WILLIAM RALPH CLAYTON, WILLIAM RICHARD CLAYTON, DOUGLAS CLAYTON, DANIEL CLAYTON AND BILCON OF DELAWARE, INC.

Claimants/Investors

AND:

GOVERNMENT OF CANADA

Respondent

REPLY WITNESS STATEMENT OF

GEORGE BICKFORD

August 8, 2017

I. INTRODUCTION

1. This statement is supplemental to my Witness Statement dated December 8, 2016 ("My Witness Statement") and responds to parts of the Expert Report of SC Market Analytics dated June 9, 2017 (the "SCMA Report").

II. OVERVIEW

2. In My Witness Statement, I describe how LB&W, together with John Wall, designed the Whites Point Quarry. I attach a "flow sheet" referred to as "Revision D", which was prepared by LB&W and which, subject to some subsequent changes, substantially reflects the Whites Point Quarry's design. I also explain generally how the quarry would operate to produce the marketable washed aggregate, concrete sand and grit.

3. I have reviewed the parts of the SCMA Report that address [redacted]

4. This is flat wrong. As I explain below, [redacted]

5. [redacted]

[redacted]

III. THE OPERATION OF THE WHITES POINT PLANT

6. The SCMA Report asserts that [redacted] This fundamentally misconceives the Whites Point crushing plant's design.

7. [redacted]

[redacted]

[redacted]

1

[redacted]

[2] [redacted]

[redacted]

8. [redacted]

9. [redacted]

10. [redacted]

[redacted]

11. [redacted]

12. [redacted]

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3 [redacted]

4

13. [redacted]

14. To better illustrate [redacted] LB&W used the software application "PowerPoint" to create a series of graphic slides that depict various sections and components [redacted] LB&W uses PowerPoint to depict a design, usually to assist clients to better understand LB&W's work-product.

IV.

15. [redacted]

[5] LB&W Engineering Ltd., PowerPoint Slides [redacted] (**Bickford Exhibit 1,** ***Investors' Schedule of Documents, Tab C1363***).

A. "AGGFLOW" SOFTWARE APPLICATION

16. AggFlow is a software application that simulates a crushing plant's operation. It has been available since the mid-1990s, [redacted]

17. AggFlow enables a designed crushing plant to be constructed, operated and verified virtually on a computer. It draws on extensive embedded data, including rock geology, equipment specifications, and screen throughput capacities to reliably model and verify the flow of aggregate through a plant and the final product yield and mix.

18. To verify a given design, initial information about the design must be inputted into AggFlow, including:

- type of rock to be crushed in the plant (e.g. basalt, granite);
- quantity of short tons per hour (STPH) to be processed through the plant;
- type of primary feeder;
- make, model, size and settings of the primary, secondary, and tertiary (if any) crushing equipment;
- numbers of screens and sizes of screen areas and openings; and
- connecting belt conveyors.

19. Once the information has been inputted, AggFlow performs calculations and generates an on-screen display called a "mass flow balance". The "mass flow balance" depicts the flow of aggregate from the primary dump hopper, across the belt conveyors, through the crushing and screening circuits, and to the final stockpiles. In doing so, it calculates the quantity of material (measured in short tons per hour) that will pass through or across all elements of the plant and ultimately be deposited onto each stockpile.

20. Critically, the "mass flow balance" identifies any aspect of the design that is incompatible with the desired volume and flow of material. For example, if a crusher or screen is too small or a proposed crusher setting is incompatible with the size or volume of material being deposited into the crusher, AggFlow will illuminate the item on the screen and generate data to explain the incompatibility. In this way, AggFlow allows changes to be made virtually to ensure that a designed plant will operate as desired and yield sufficient quantities of the required products.

21. AggFlow accounts for all of the inputted quarried rock except for the dust generated during the crushing process. Typically, the total amount of dust generated is less than 1% of the total volume of quarried rock processed, which is why AggFlow does not account for it.

22. In my experience, AggFlow is widely used by designers and producers in the aggregates industry, including for verifying plant designs, evaluating proposed design changes, and optimizing plant efficiency and outcome. As simulation software, it is capable of very closely approximating the actual operation and output of a given plant design.

23. AggFlow's public website is located at www.aggflow.com. The website describes AggFlow as the "most sophisticated and complete plant flow simulation program available today for the aggregate and mining industry". It also lists companies that use AggFlow, including Vulcan Materials Co., Martin Marietta Aggregates, Oldcastle Materials Inc., and Lafarge North America, Inc.[6]

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[6] Excerpts printed from http://www.aggflow.com/ (**Bickford Exhibit 2, *Investors Schedule of Documents, C1364***).

24. SCMA apparently attempted to [redacted] Page 31 of the SCMA Report states that a "Microsoft Excel simulation model using the grading analysis of the crusher products found in the manufacturer's literature for each crusher" was "created" to "calculate the production capacity" of the Whites Point crushing plant.

25. I have not used or been aware of anyone in the aggregates industry using Microsoft Excel or another spreadsheet application to simulate a crushing plant. Indeed, with the availability of AggFlow and other, similar OEM proprietary software applications (such as Metso Corporation's "Bruno") that have extensive embedded data, it is unlikely that Microsoft Excel would be accepted in the industry as a comparably reliable or comprehensive way to simulate a design.

B. LB&W'S USE OF AGGFLOW [redacted]

26. AggFlow is an important software tool for LB&W. [redacted]

27. [redacted]

28. [redacted]

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[7] LB&W Engineering, Inc., [redacted] (**Bickford Exhibit 3, *Investors Schedule of Documents, C1365***).

29. [redacted] I typically discussed any issues that came up with Mr. Wall, usually by telephone.

30. [redacted]

31. [redacted]

[8] LB&W Engineering, Inc., [redacted] (**Bickford Exhibit 4, *Investors Schedule of Documents, C1366***).

32. [redacted]

33.

34. Additionally, also as noted, the crushing process generates a certain amount of "non-product fines" that do not meet the grits and concrete sand specifications. These "non-product fines" are rinsed or extracted from other fines and deposited in the "mud" stockpile ultimately for use in site reclamation.

35. In June 2007, in response to a request from Mr. Wall, LB&W prepared a letter

36. [redacted]

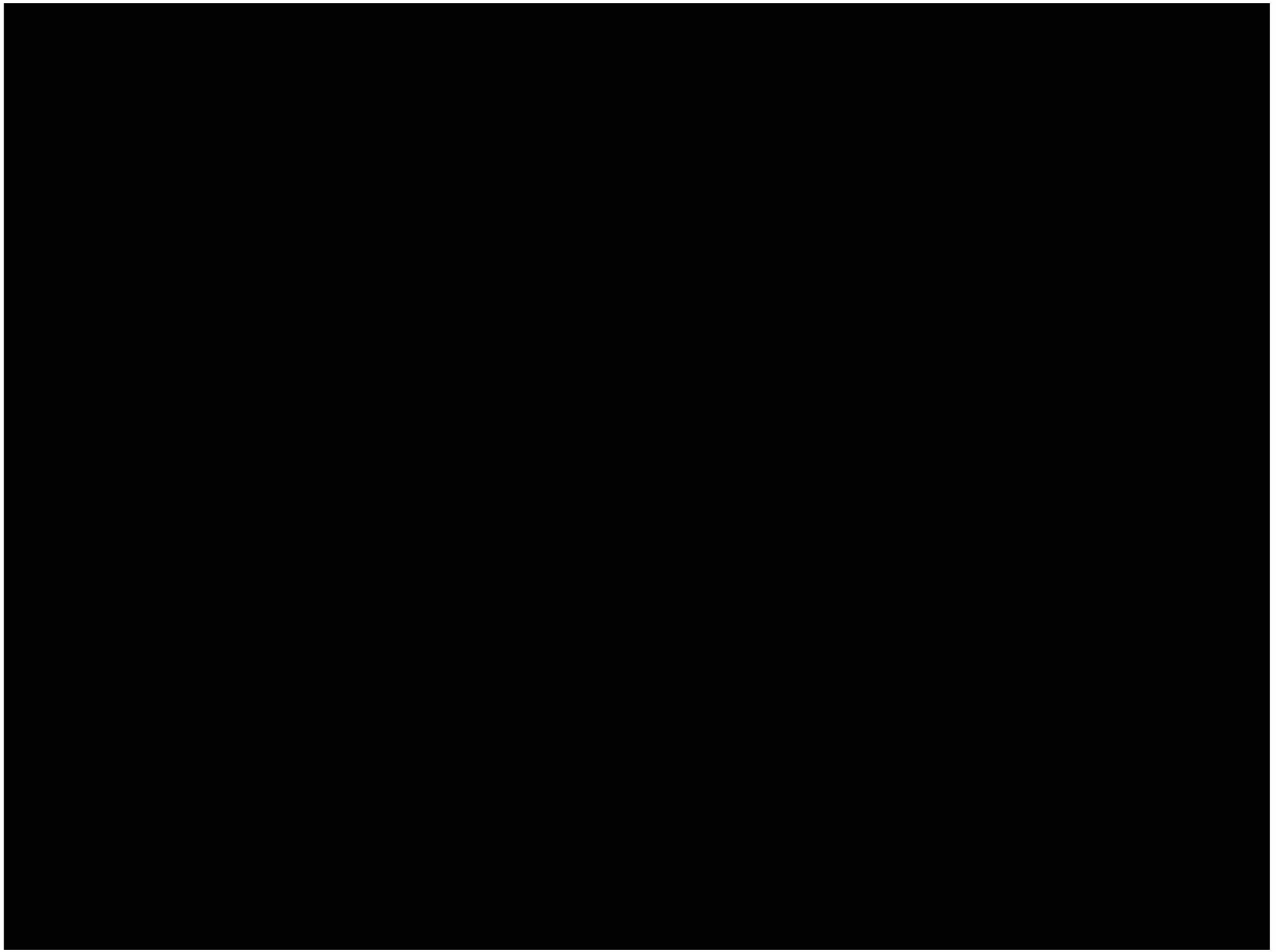
Dated: August 8, 2017

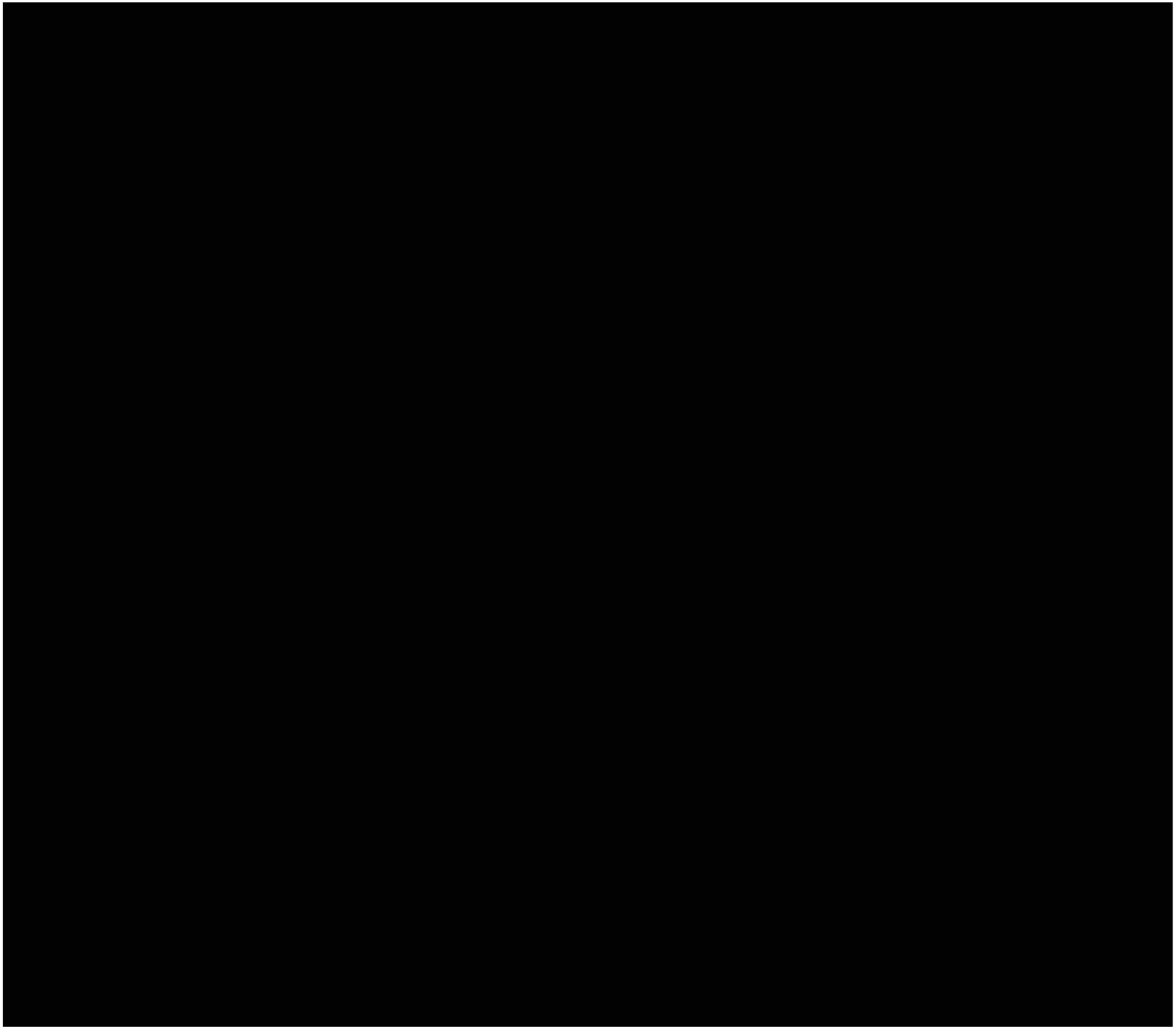
GEORGE BICKFORD

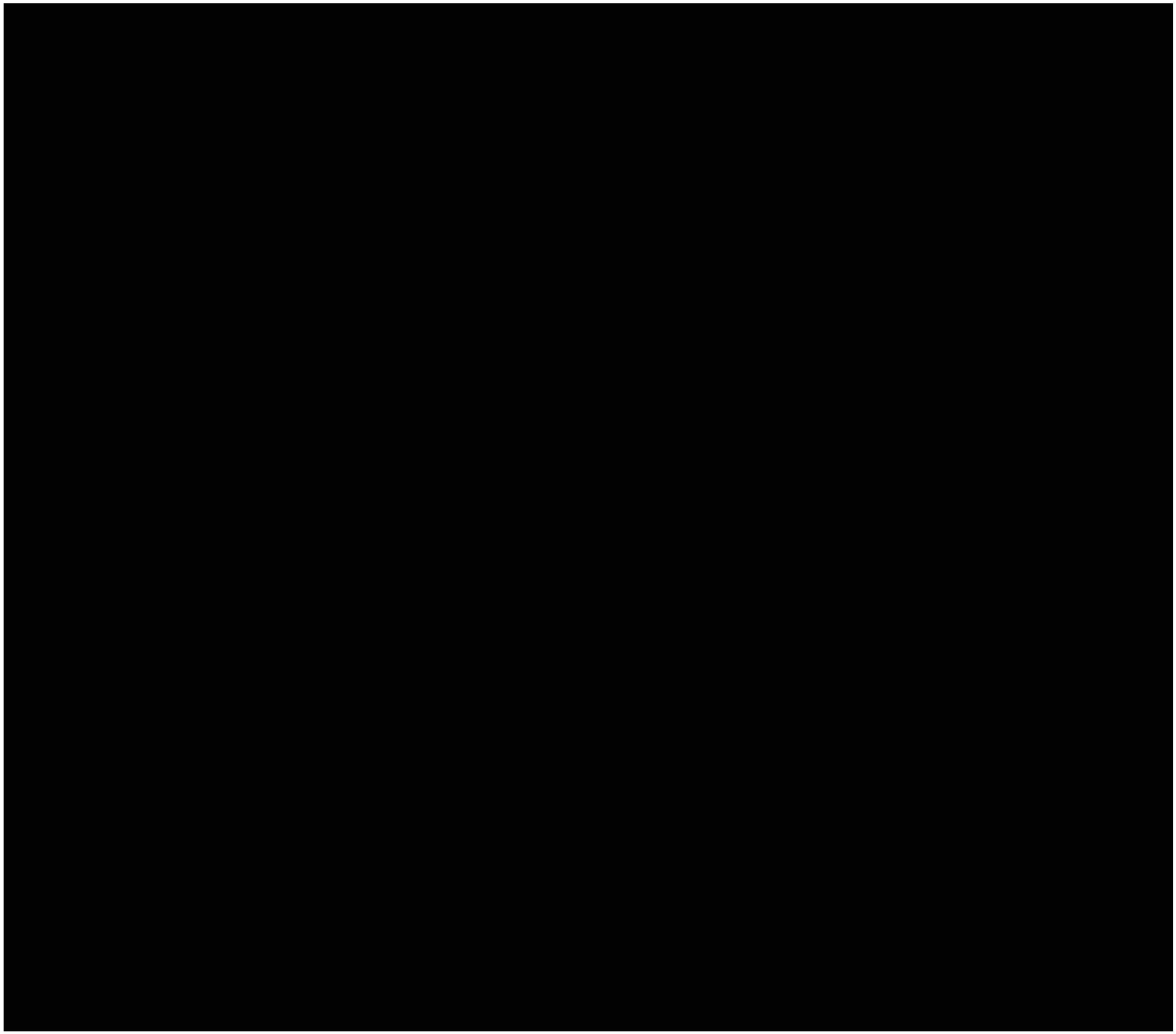
[9] LB&W Engineering, Inc., letter to Bilcon of Nova Scotia (attention: John Wall) dated June 25, 2007 (**Bickford Exhibit 5, *Investors' Schedule of Documents, C1367***).

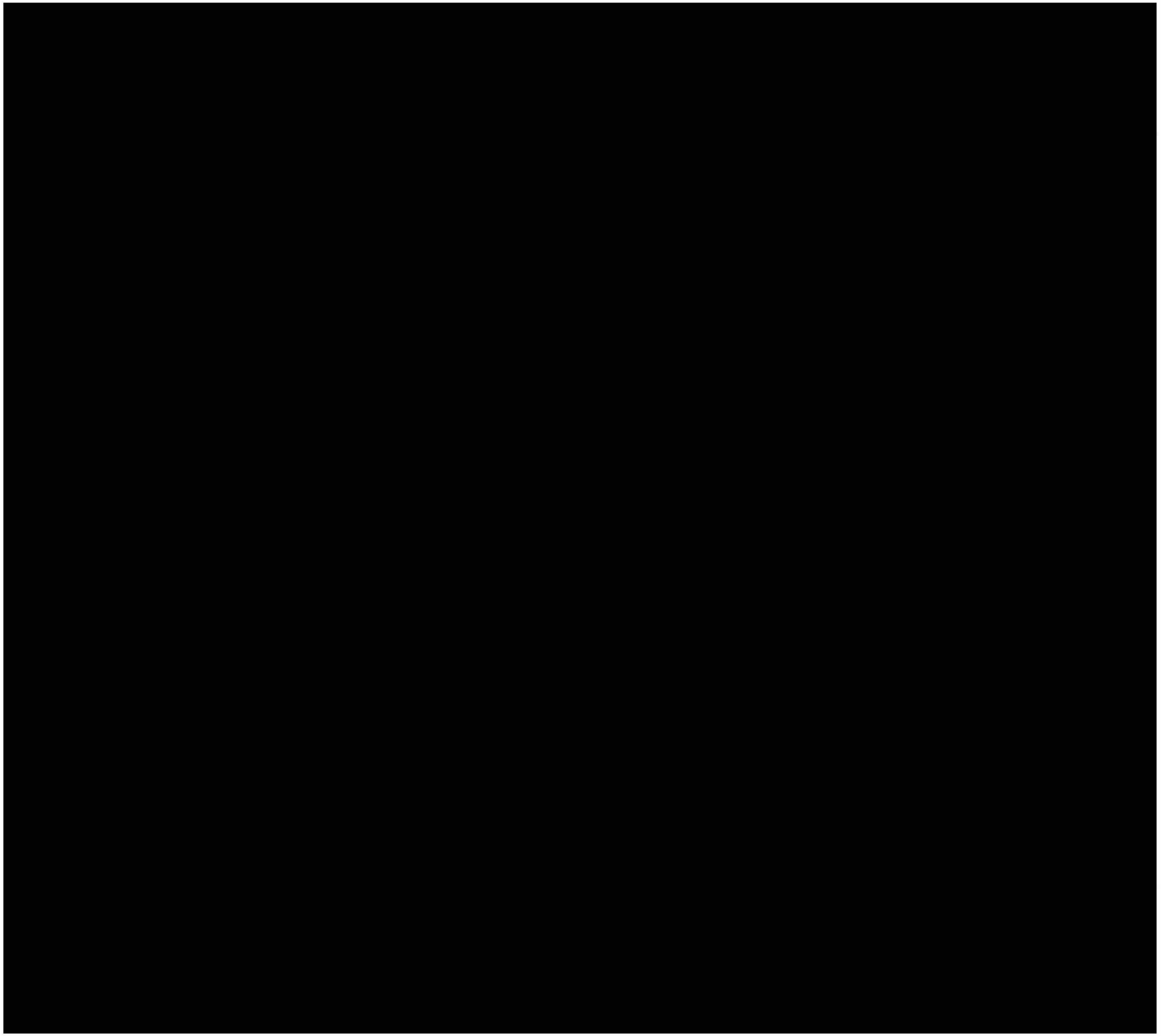
EXHIBIT 1

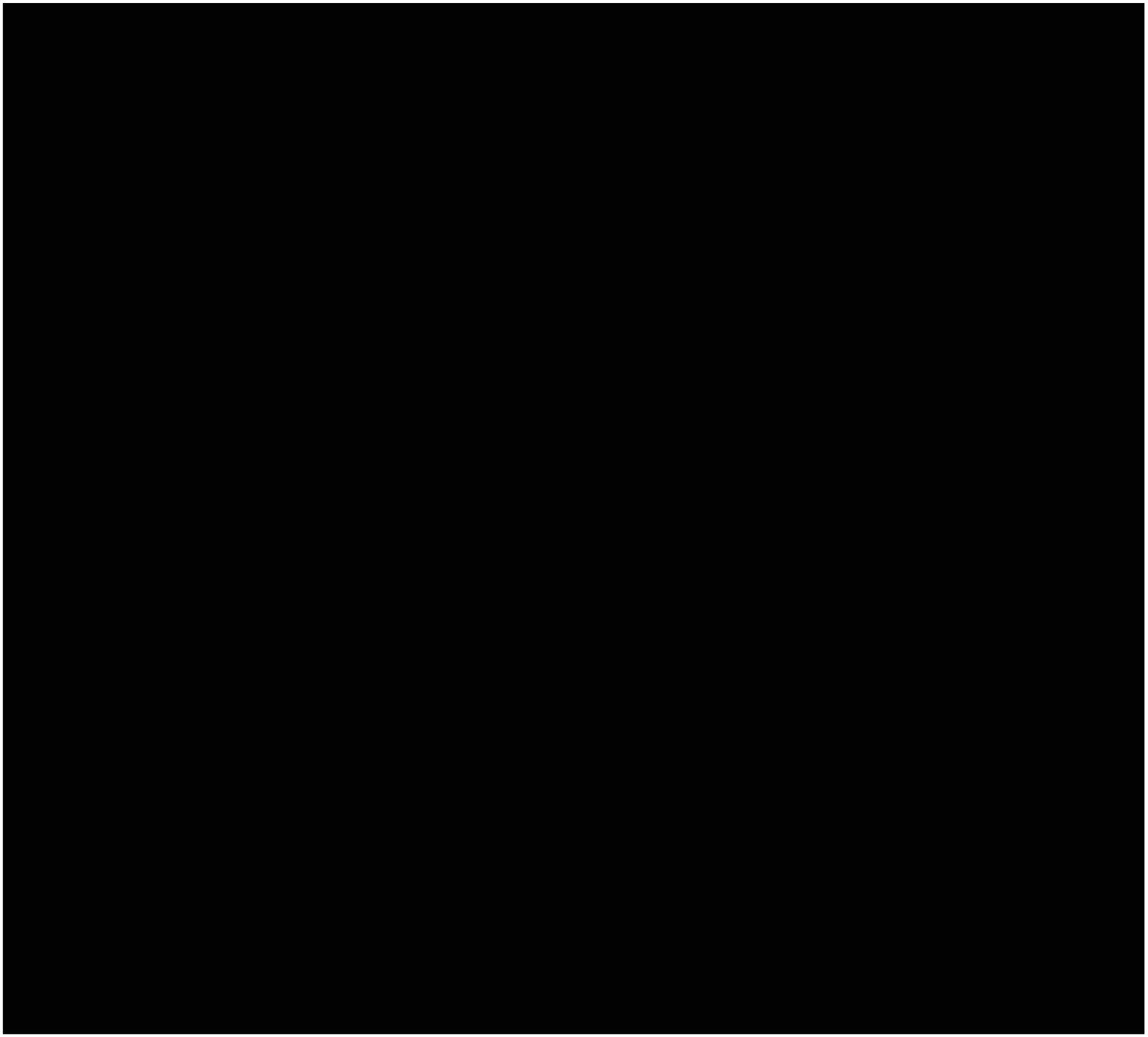
REPLY WITNESS STATEMENT OF GEORGE BICKFORD

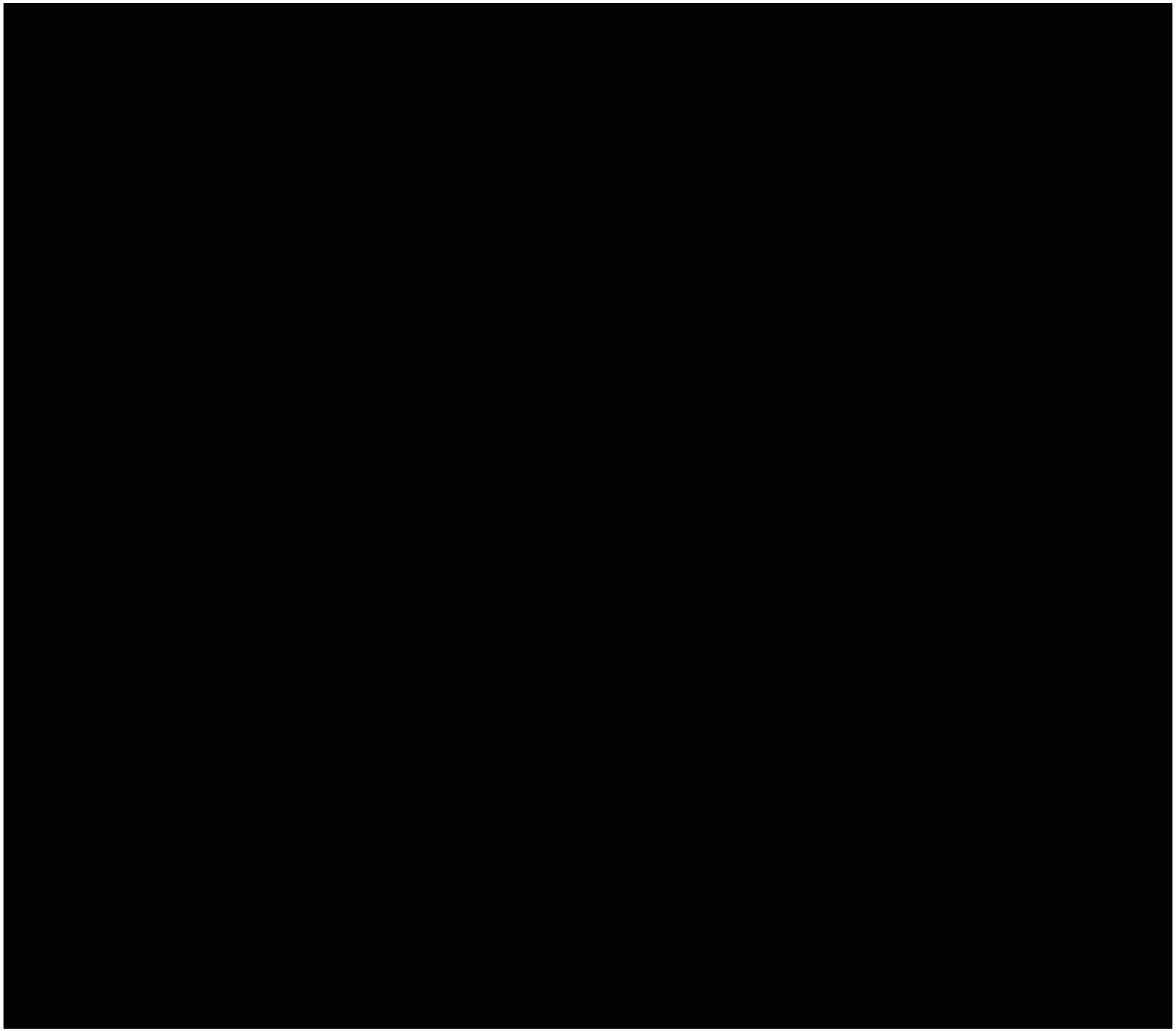


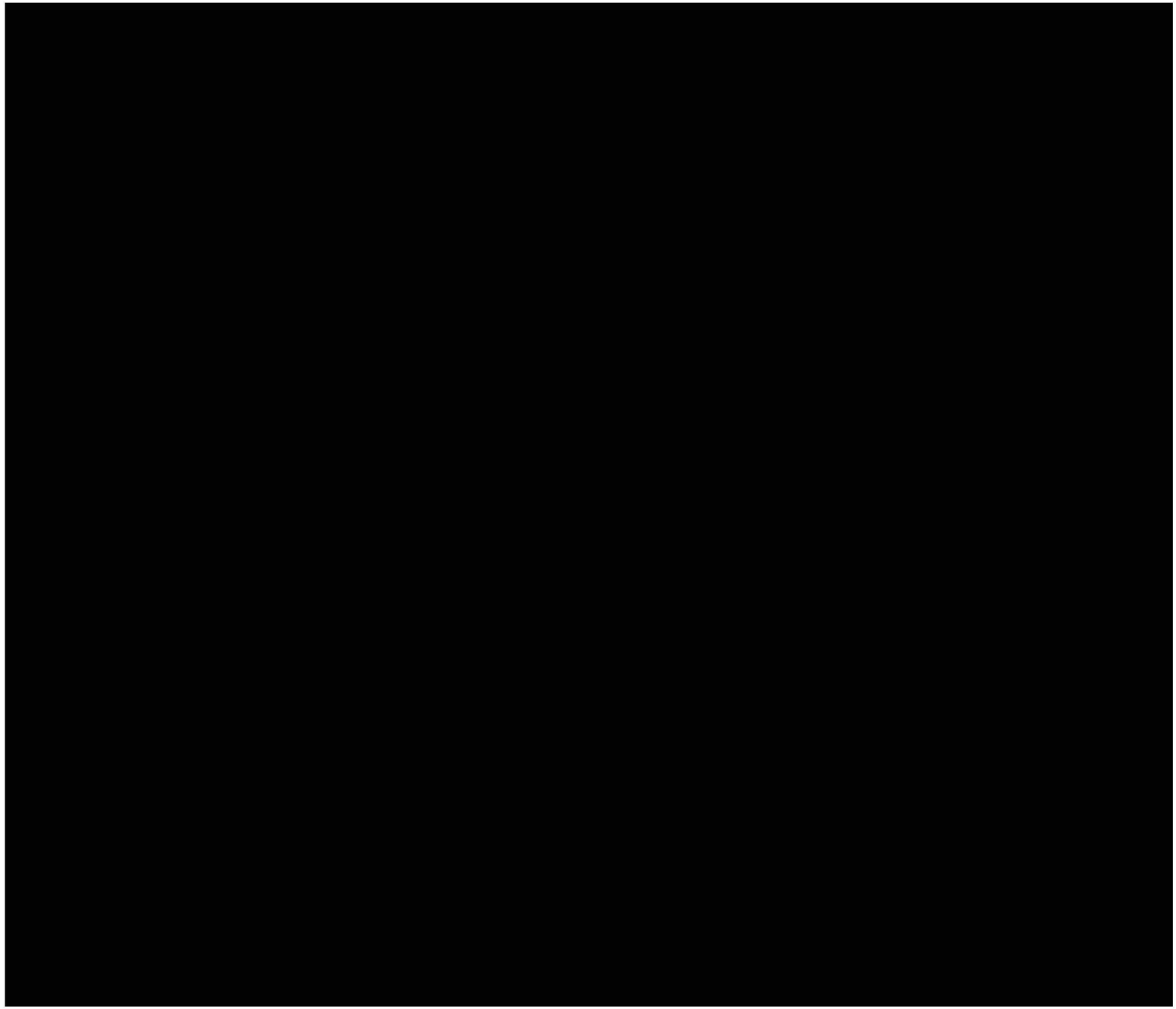


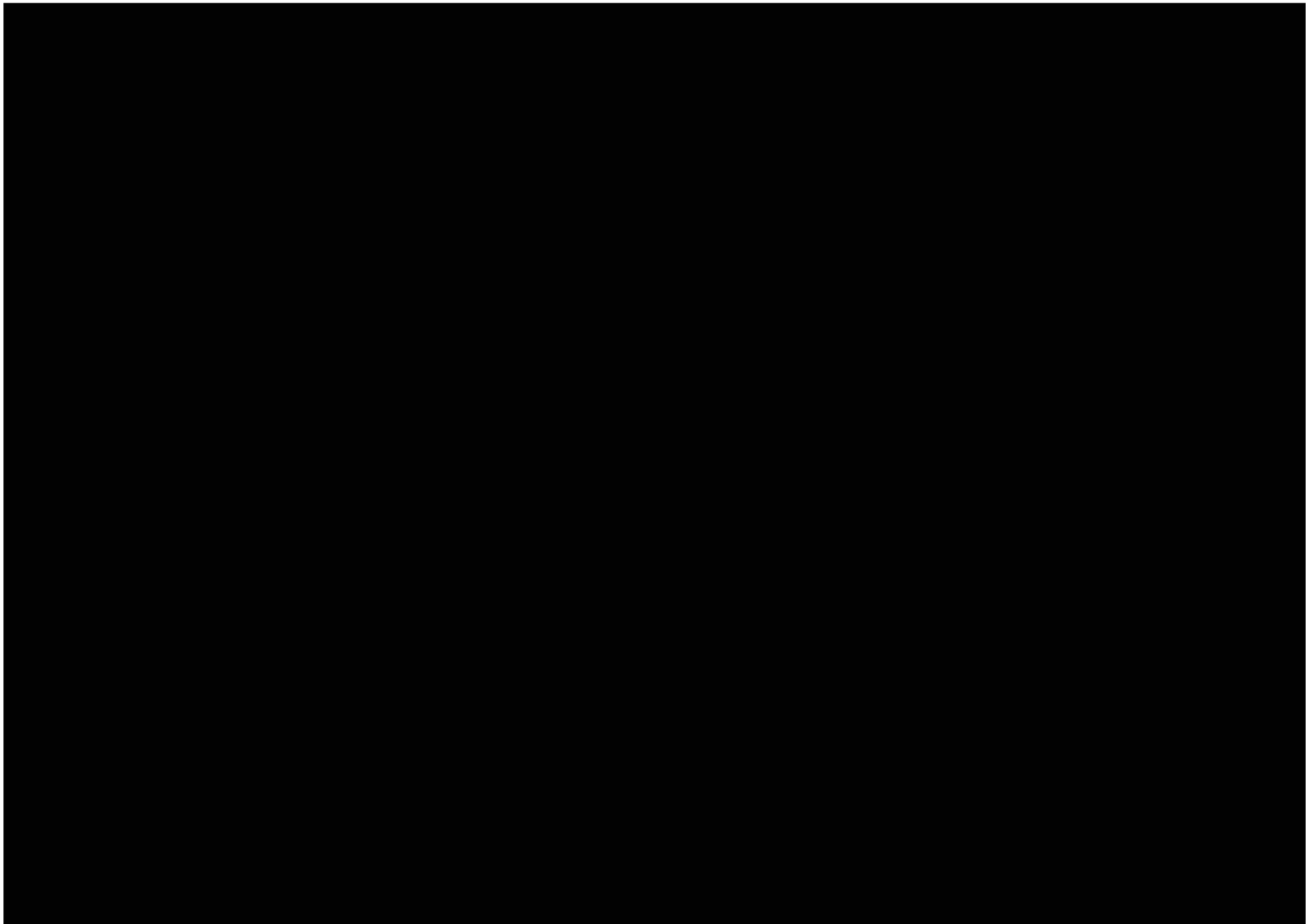


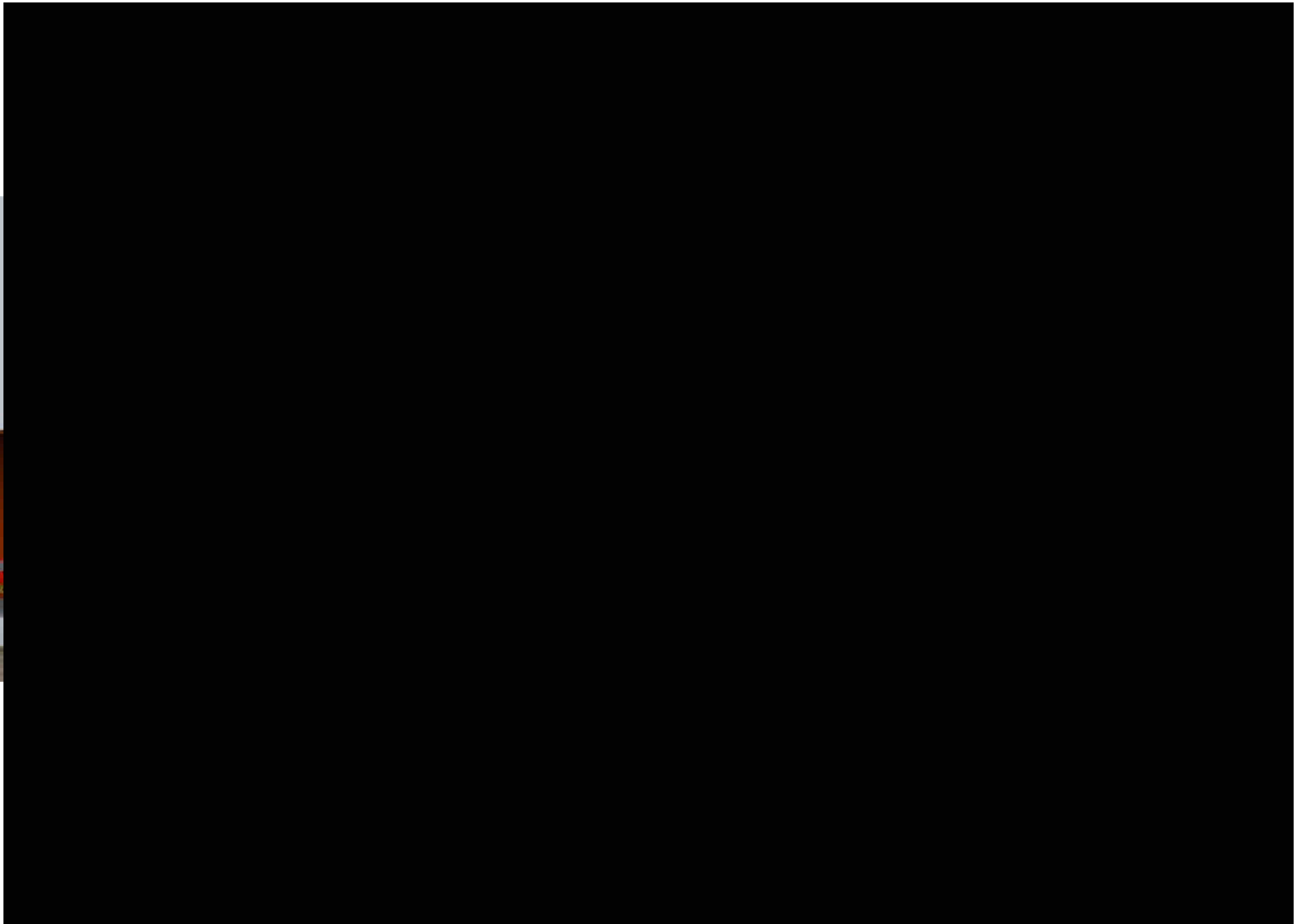


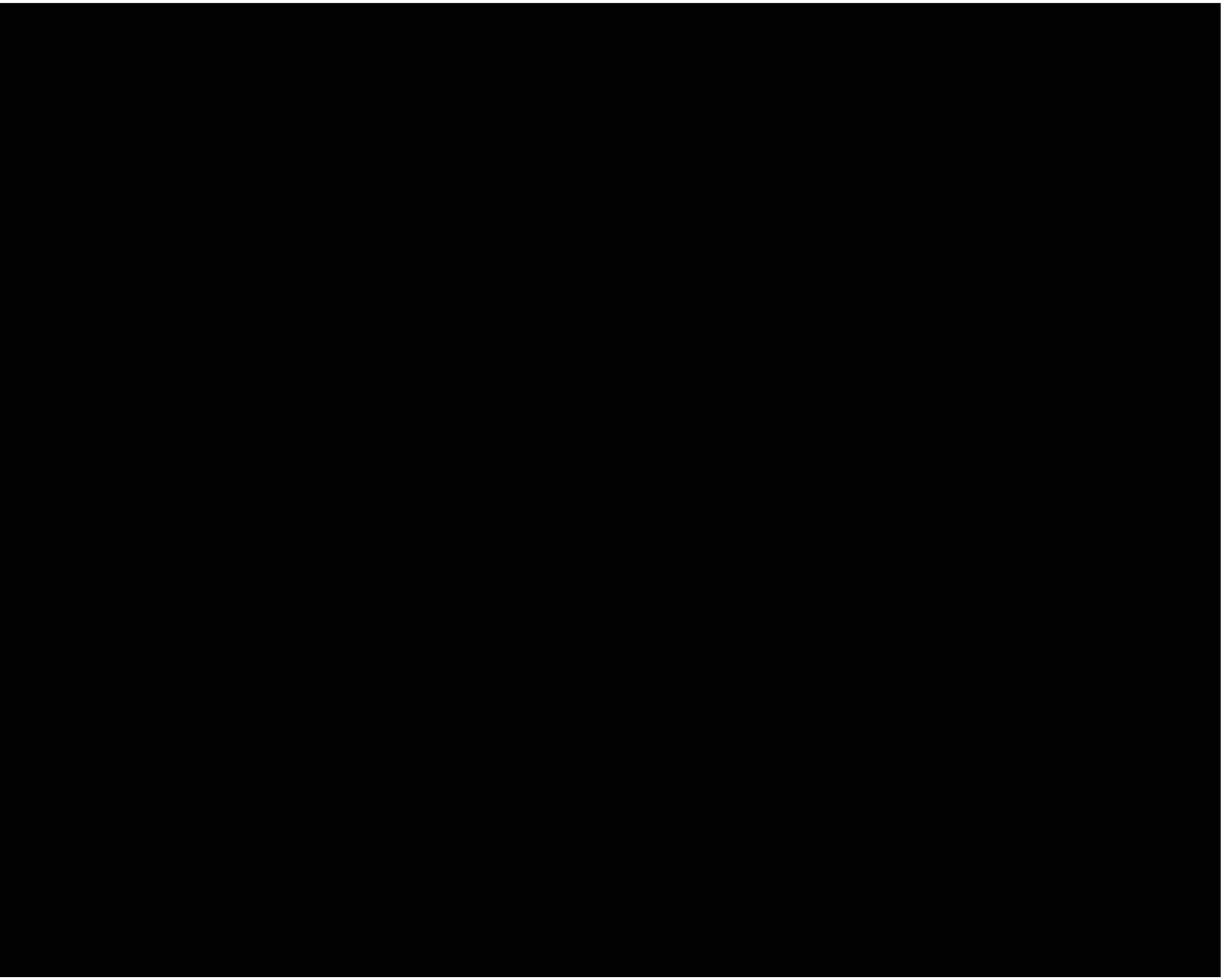


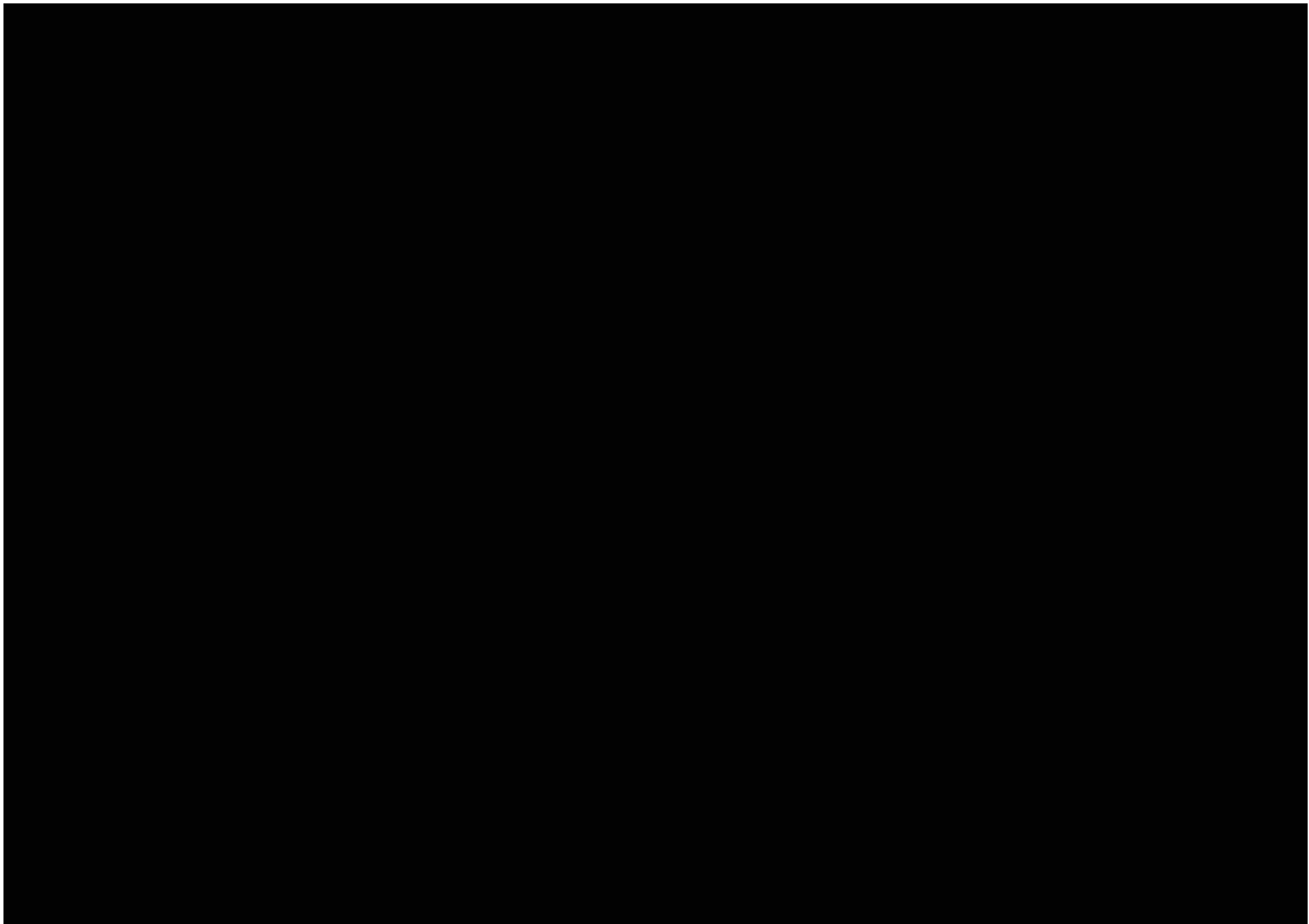


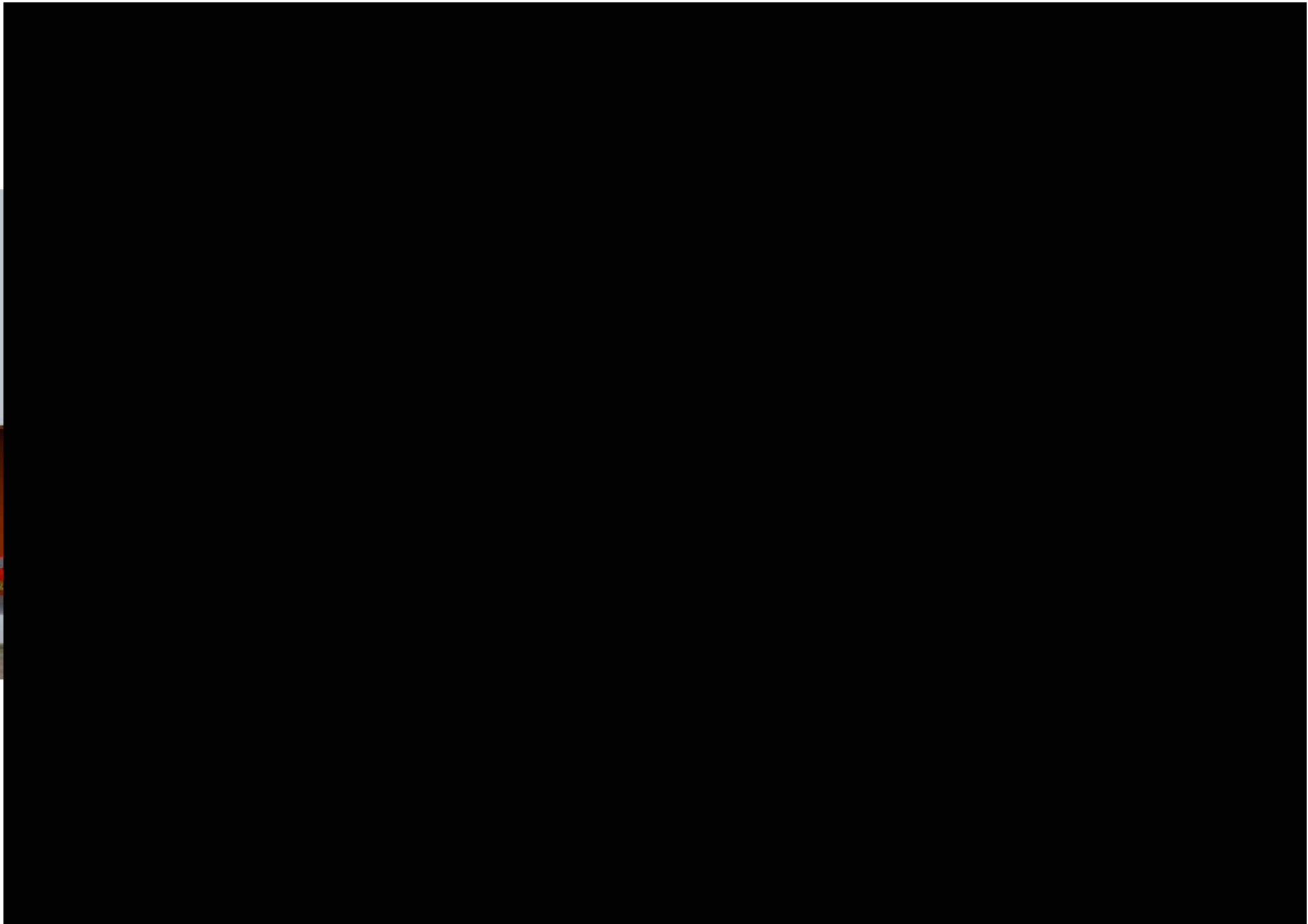


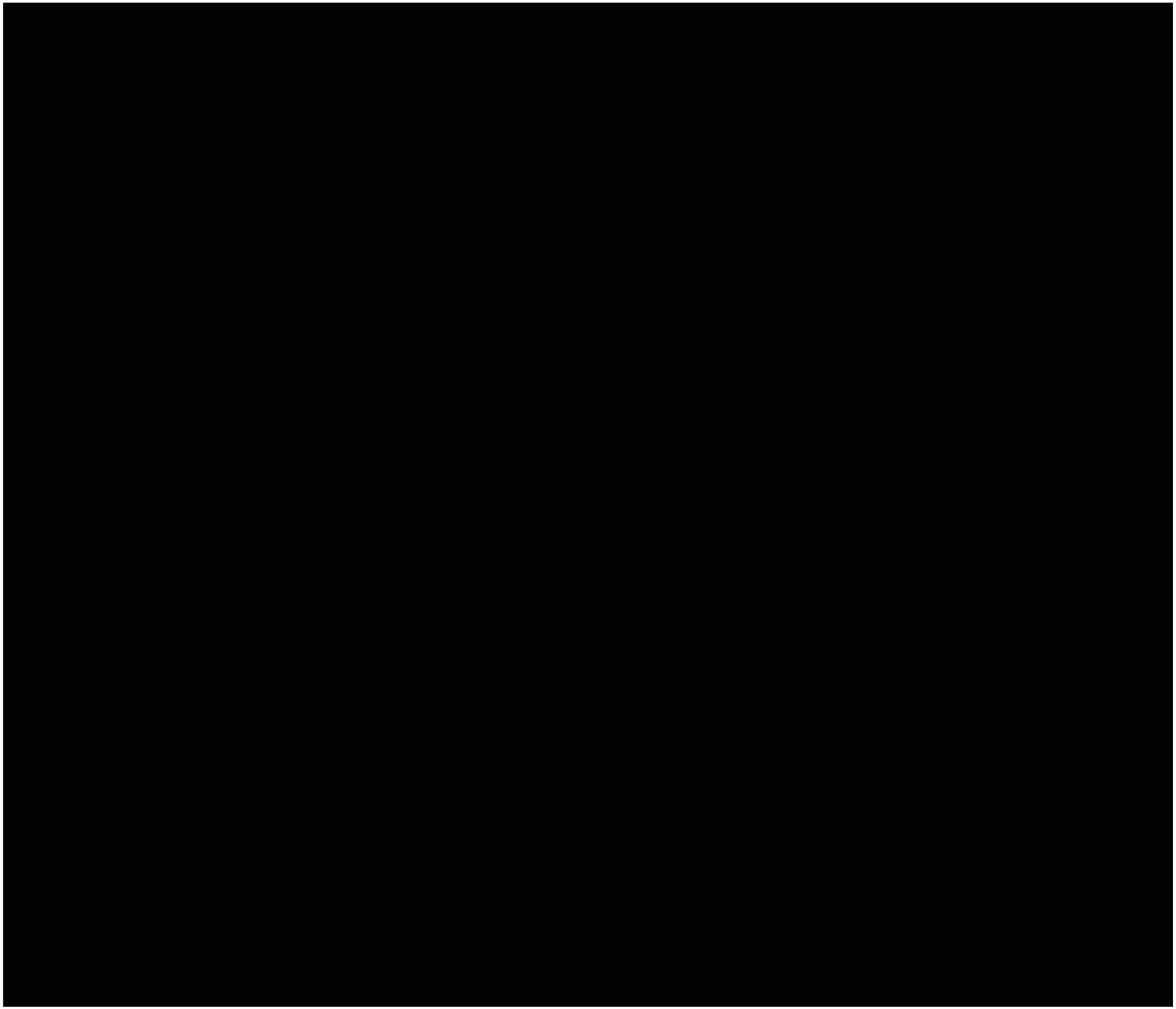


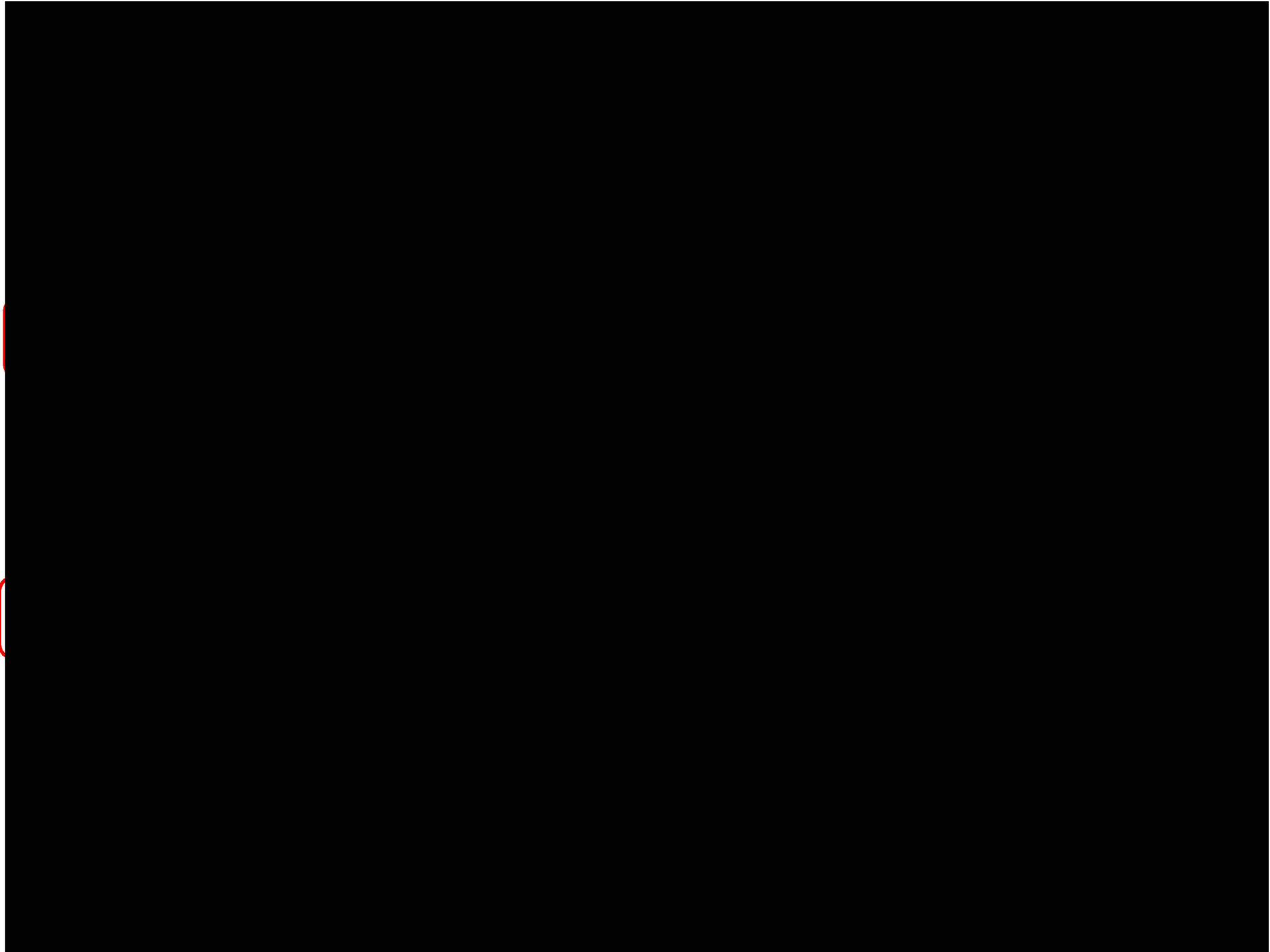


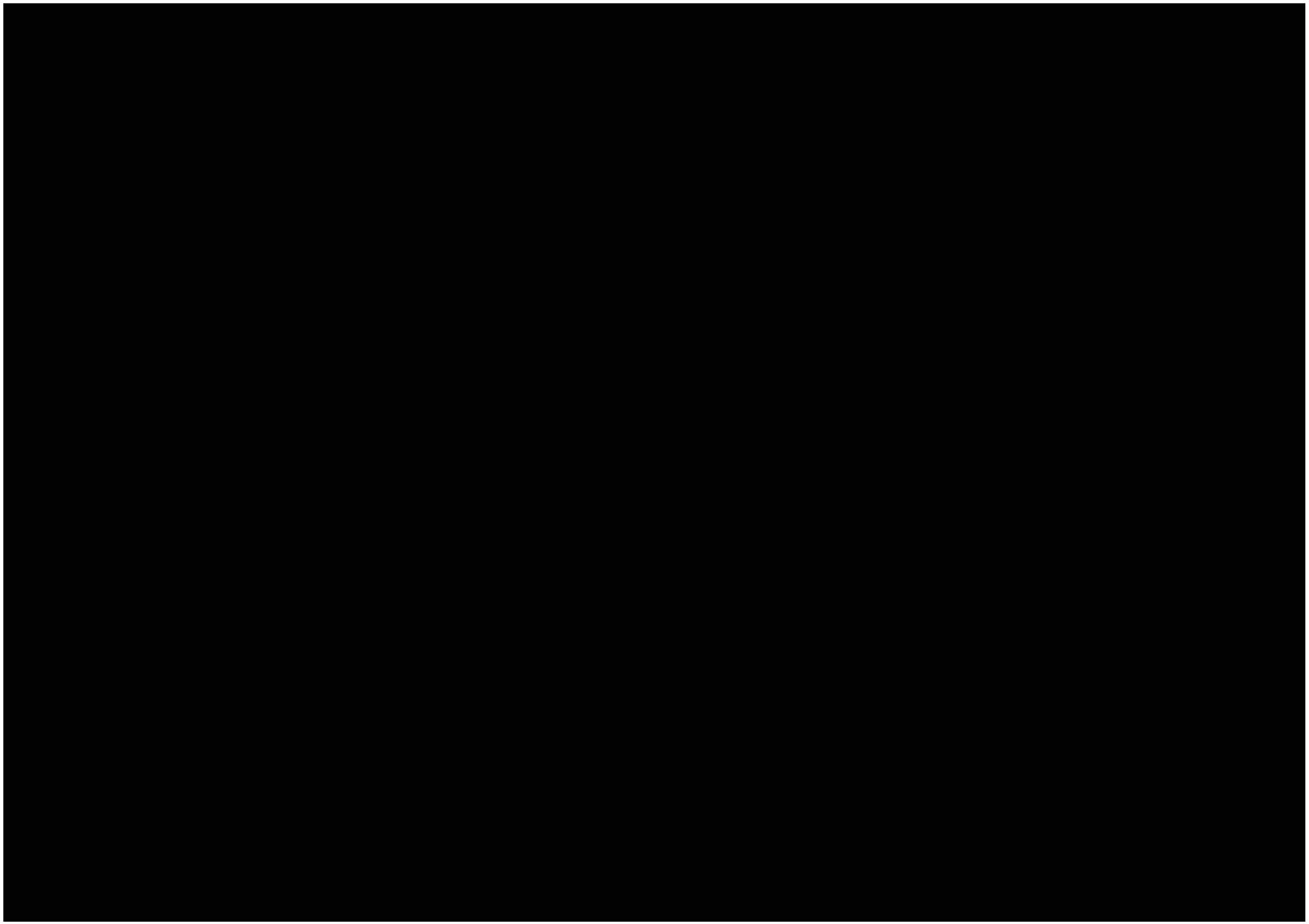


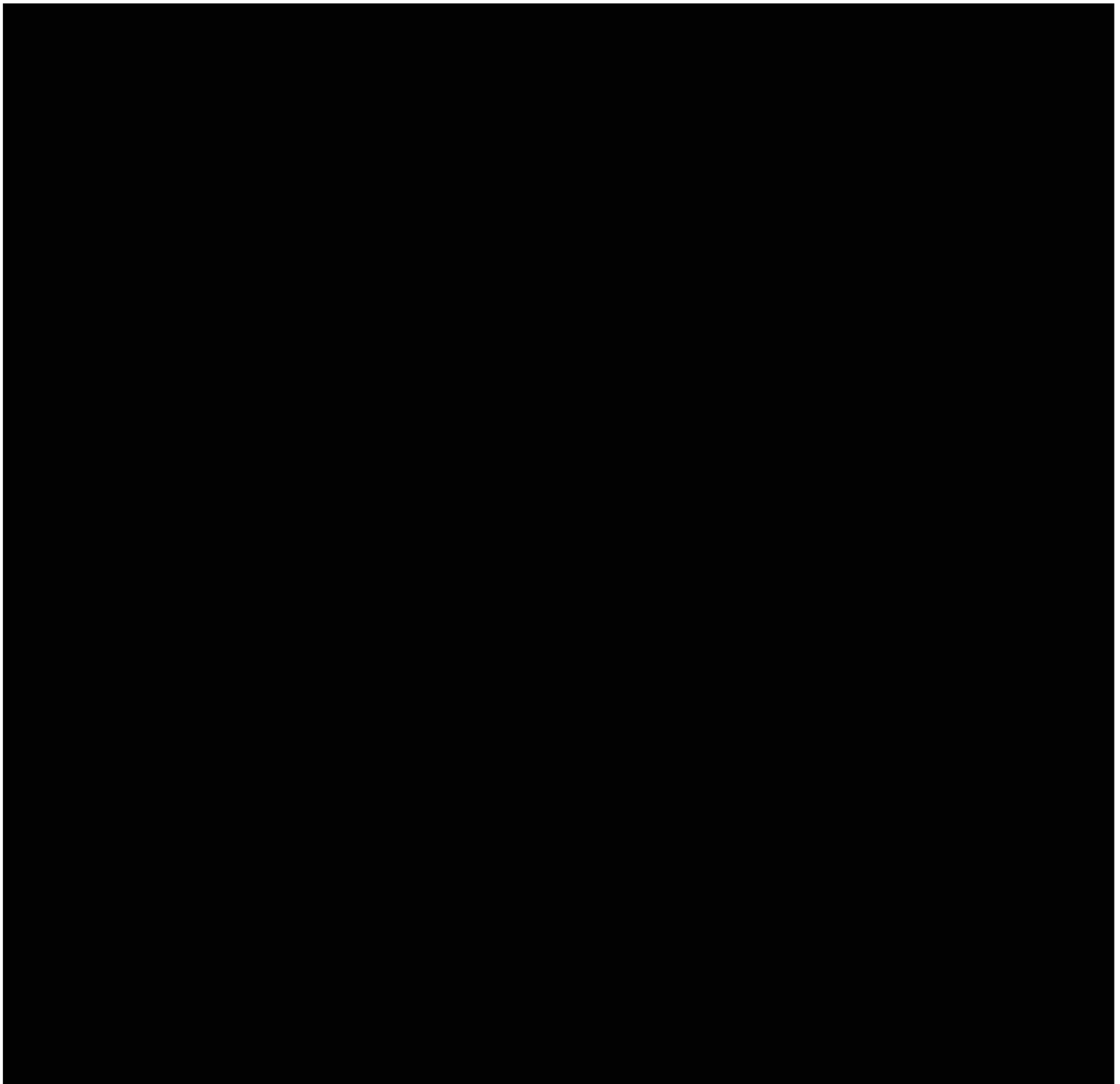


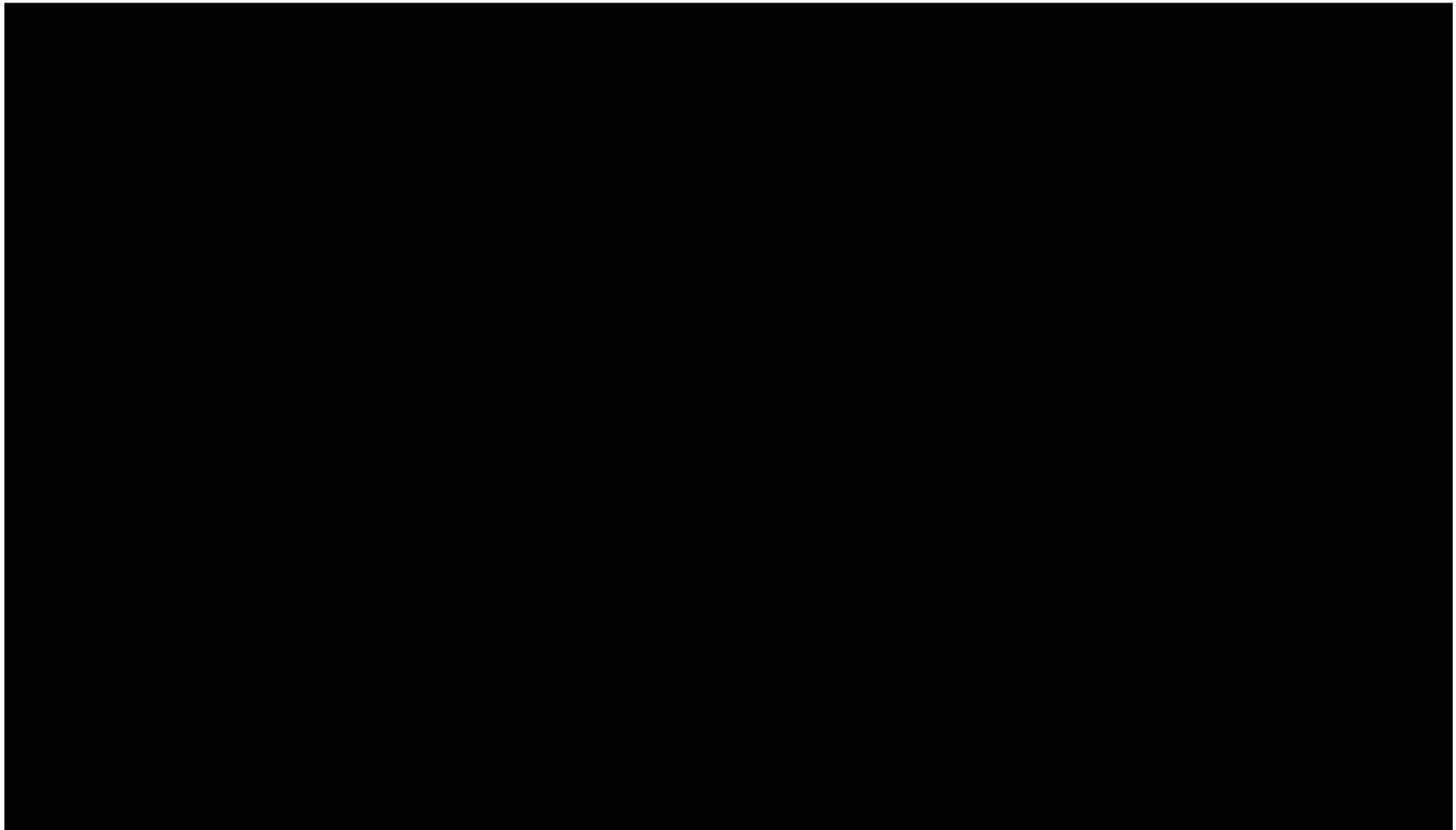


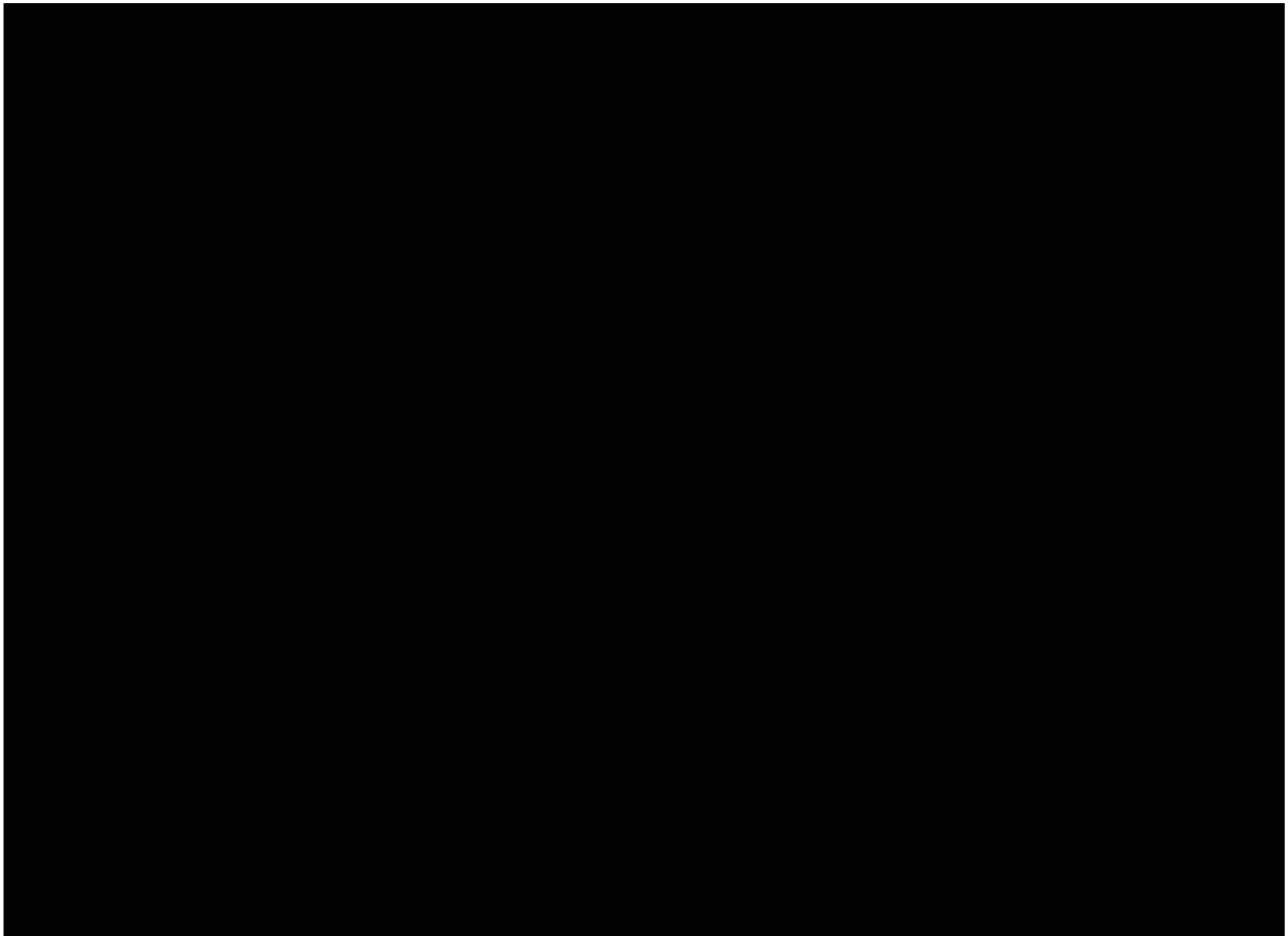


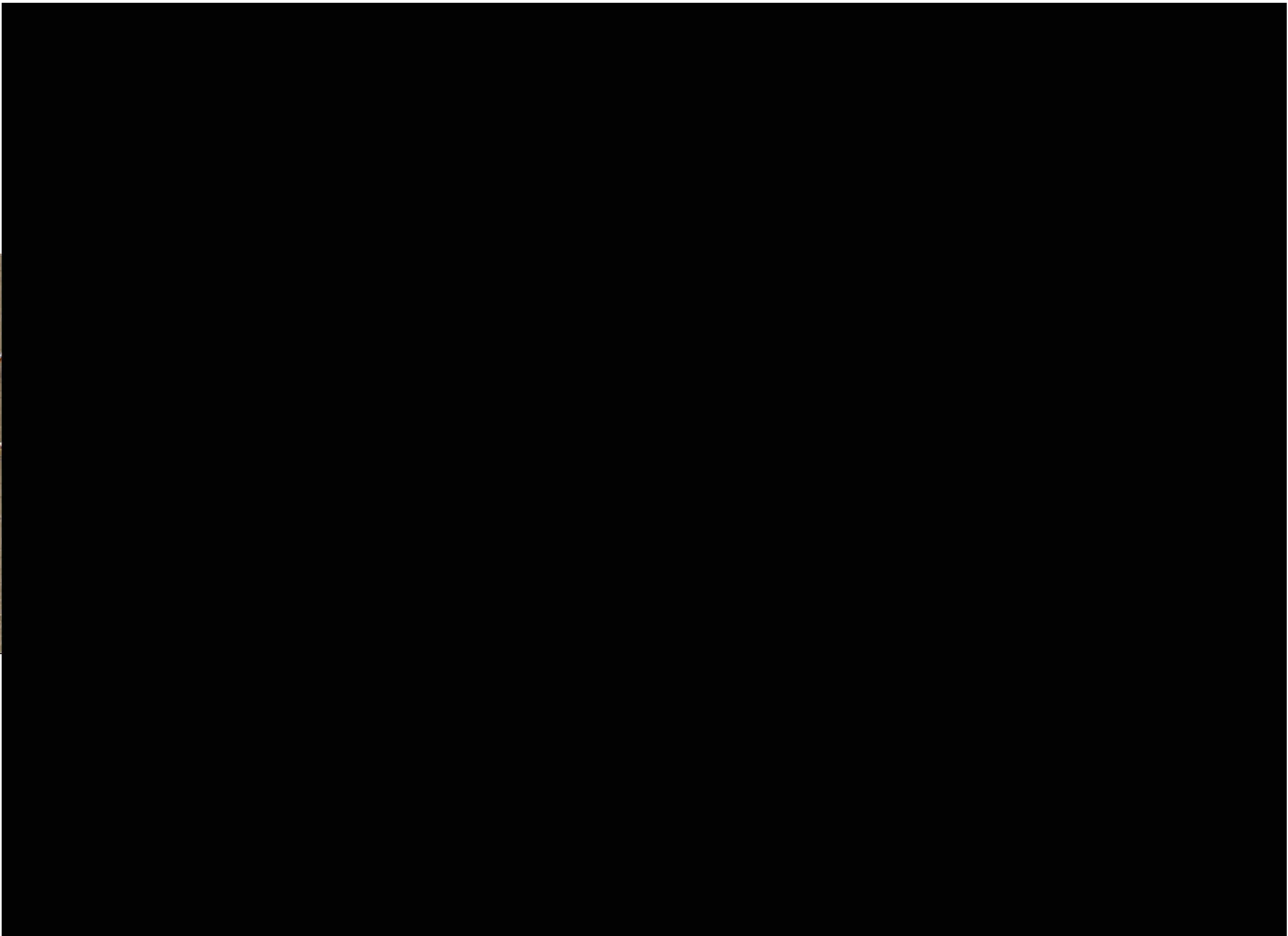


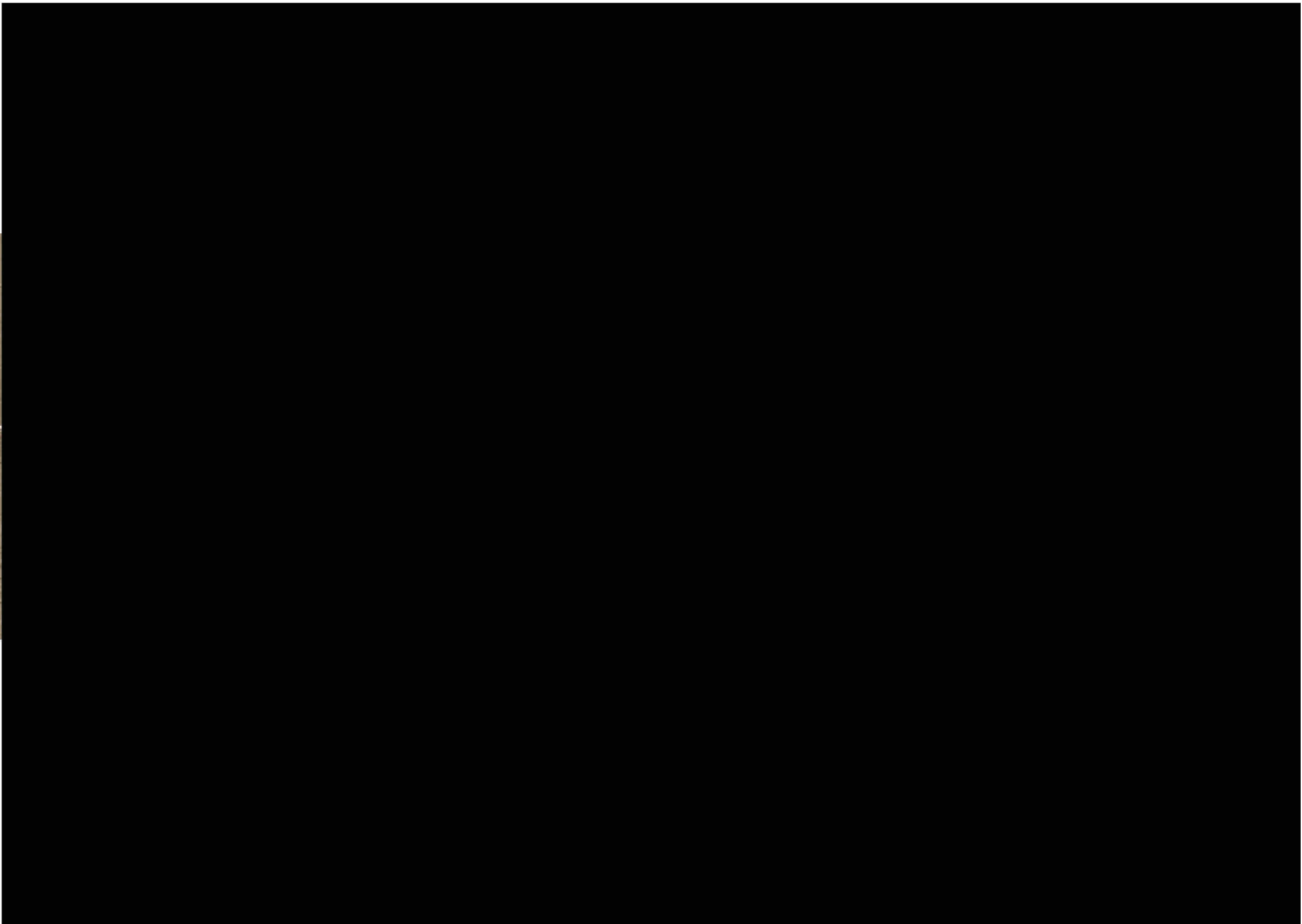












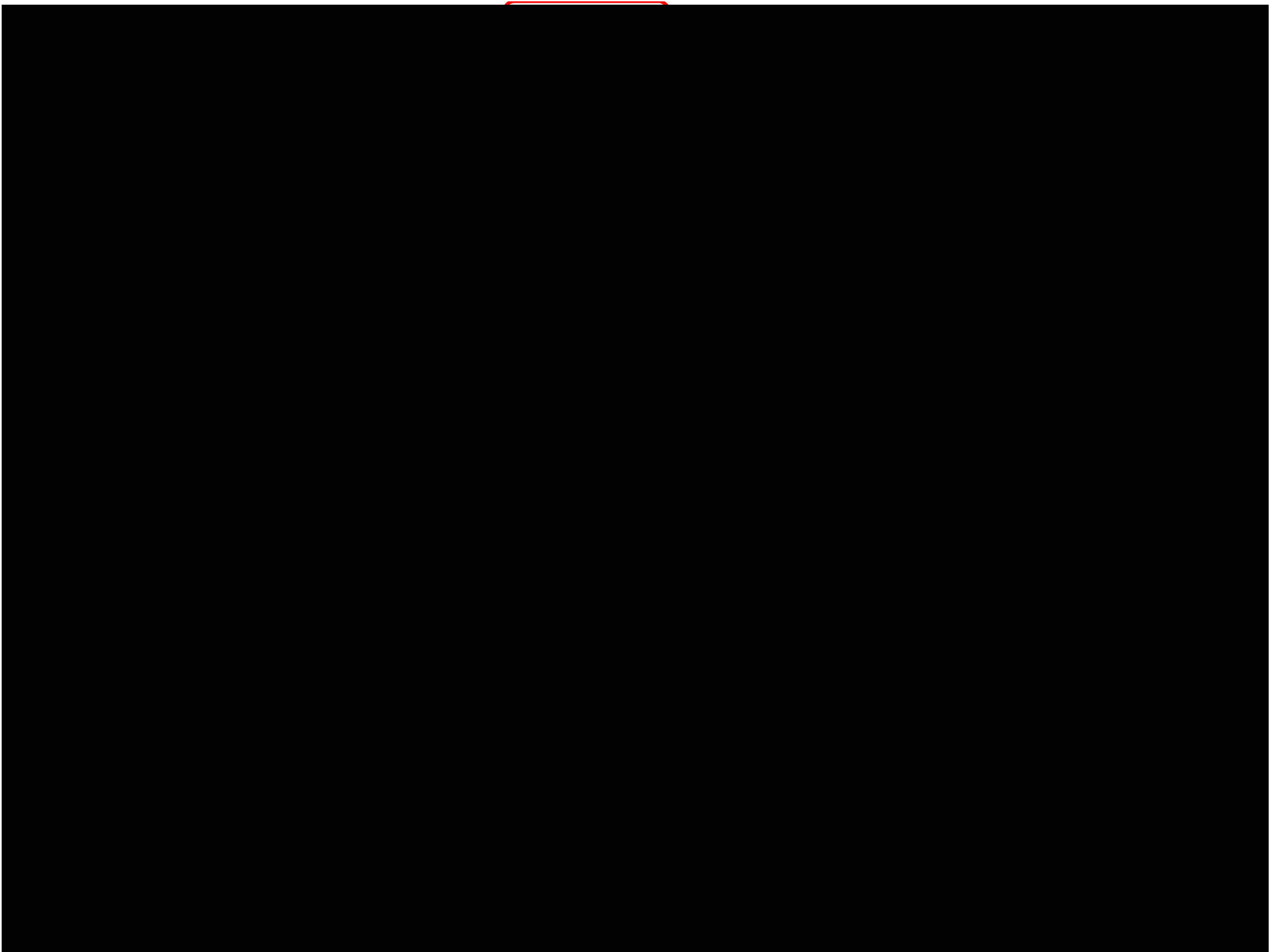


EXHIBIT 2

REPLY WITNESS STATEMENT OF GEORGE BICKFORD

What is AggFlow?

AggFlow software products are used by aggregate producers, miners, equipment manufacturers, engineers and dealers to simulate aggregate and mining operations. The software enables users to build both simple and complex crushing, screening and/or washing plants on the computer screen. By choosing equipment types and settings, monitoring flow rates and gradations at desired points, and then virtually running the plant, users can compare calculated results to actual field results. AggFlow helps identify and highlight the differences between what the plant should produce and what is does produce.

AggFlow Helps Producers

Producers can use the software to virtually identify bottlenecks and inefficiencies in the plant, then simulate unlimited "what-if?" scenarios to accurately assess the impact of potential changes for maximizing plant efficiency and achieving optimum production mixes.

AggFlow Helps Plant Designers

Likewise, engineers, equipment manufacturers and dealers can use the program to compare and contrast the impact of different machinery, plant setups and operating modes. The program is an excellent tool for the design of new plants in order to optimize the proposed plant layout and identify what equipment will best meet intended goals.

Introducing AggFlow DM

AggFlow DM (Design and Manage) is the latest version of AggFlow. While it still is a software program that must be installed on an individual computer, it now employs secure online data storage, eliminating the need for a hardware USB key. AggFlow DM itself offers two separate licensing options. The AggFlow Design license continues to provide plant design assistance for equipment suppliers, engineers and producers. Design users can hold a Design license, and can create an unlimited number of design projects. AggFlow Manage Project licenses allows customers to buy individual project licenses and invite an unlimited number of users per project license to access that project. Both sides of AggFlow DM store work on BedRock Software's secure servers, allowing easy access and sharing through a simple, protected login process.

AggFlow, created by BedRock Software, Inc., is the most sophisticated and complete plant flow simulation program available today for the aggregate and mining industry. The software enables users to build a crushing, screening and/or washing plant on the computer screen; choose equipment types and settings; monitor flow rates and gradations at desired points; and then virtually run the plant. By experimenting with different types of equipment and their settings, users can fully optimize crushing, screening and washing equipment to maximize production of desired products. Aggregate producers, equipment manufacturers, equipment dealers, engineers and consultants around the world use AggFlow to reduce calculation time and increase productivity of aggregate and mining operations.

Do You Know AggFlow? (https://www.aggflow.com/what-aggflow)

Order Now (http://dm.aggflow.com/design/signin.asp)

Are You A Producer Or A Miner? (https://www.aggflow.com/manage-project-and-production-scheduler)

Are You An Equipment Manufacturer? (https://www.aggflow.com/aggflow-design)

Are You A Dealer, Engineer or Consultant? (https://www.aggflow.com/aggflow-design)

Companies Who Use AggFlow (https://www.aggflow.com/companies-who-use-aggflow)

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(/news/quick-tips%C2%A0%E2%80%93-monitors-machine-ids%C2%A0custom-text-and-shortcuts)
Monitors are used to show information on any item placed on a worksheet. Monitors can be added or...

more (/news/quick-tips%C2%A0%E2%80%93-monitors-machine-ids%C2%A0custom-text-and-shortcuts)

Coming Soon: New AggOpti Feature Will Help Improve Plant Efficiency (/news/coming-soon-new-aggopti-feature-will-help-improve-plant-efficiency)

(/news/coming-soon-new-aggopti-feature-will-help-improve-plant-efficiency)
Bedrock Software Inc. is planning the release of AggOpti in 2017. AggOpti is a new AggFlow feature...

more (/news/coming-soon-new-aggopti-feature-will-help-in

AggFlow USB Program Updated to work with AggFlow DM Projects and Files (/news/aggflow-usb-program-updated-work-aggflow-dm-projects-and-files)

(/news/aggflow-usb-program-updated-work-aggflow-dm-projects-and-files)

A new update for the AggFlow USB program has been released that brings the USB program to the same...

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Companies Who Use AggFlow

(http://aggflow.com) (http://es.aggflow.com)

This map is generated from AggFlow use over the last few years. When users check online for updates, we record the request. The map shows the location as provided by the user during their record creation. If users were not online or behind corporate firewalls during program use, we would not have them on this map.

Top 25 US Producers Use AggFlow

1. Vulcan Materials Co.
2. Martin Marietta Aggregates
3. Oldcastle Materials, Inc.
4. Lehigh Hanson, Inc.
5. Cemex S.A.B. de C.V.
6. Lafarge North America, Inc.
7. Carmeuse Lime & Stone
8. Rogers Group, Inc.
9. Holcim Group/Aggregate Industries Management, Inc.
10. Lhoist North America
11. New Enterprise Stone & Lime Co., Inc.
12. Luck Stone Corp.
13. Ash Grove Cement Co.
14. Summit Materials, LLC.
15. Dolese Bros. Co.
16. National Lime & Stone Co.
17. Vecellio & Grogan, Inc.
18. Texas Industries, Inc. (became part of Martin Marietta, July 2014)
19. Buzzi Unicem USA Inc.
20. Eucon Corp.
21. Eagle Materials Inc.
22. Graymont Ltd.
23. The H&K Group
24. Mulzer Crushed Stone, Inc.
25. Texas Crushed Stone Co., Inc.

Top 25 info based on our records and Aggregates Manager article (June 4, 2015) (http://www.aggman.com/the-nations-top-25-crushed-stone-producers/)

EXHIBIT 3

REPLY WITNESS STATEMENT OF GEORGE BICKFORD

EXHIBIT 4

REPLY WITNESS STATEMENT OF GEORGE BICKFORD

EXHIBIT 5

REPLY WITNESS STATEMENT OF GEORGE BICKFORD