

## Natural Gas STAR Annual Report - Gathering and Processing Segment

FORM VERSION: REPORTING SEASON 2021 (for activities completed in 2020)

RS2021GATHERV1

<b>Partner Name</b>	
<b>Reporting Year</b>	2020

Use the Table of Contents below to navigate to the different tabs of the form. You can use column B to indicate if you reported data on a specific tab.

Gathering & Processing Emission Sources	Data Reported	Information
<a href="#">Dehydrator Vents</a>	No	Install flash tank separators on glycol dehydrator vents
<a href="#">Equipment Leaks</a>	No	Directed inspection and maintenance at gas plants and booster stations
<a href="#">Pneumatic Controllers - Gathering &amp; B</a>	No	Convert high-bleed controllers to low-bleed; convert high-bleed or low-bleed controllers to zero-emitting controllers; remove controllers from service with no replacement.
<a href="#">Pneumatic Controllers - Processing</a>	No	
<a href="#">Additional Gathering and Processing A</a>	No	Use this tab to report all other methane reductions in the Gathering and Processing segment. You will be able to select the technology/practice used from the list of Natural Gas STAR Partner Reported Opportunities. If the activity you are reporting is not included in the list, please contact EPA at GasSTAR@epa.gov

Update Partner Information (If applicable)

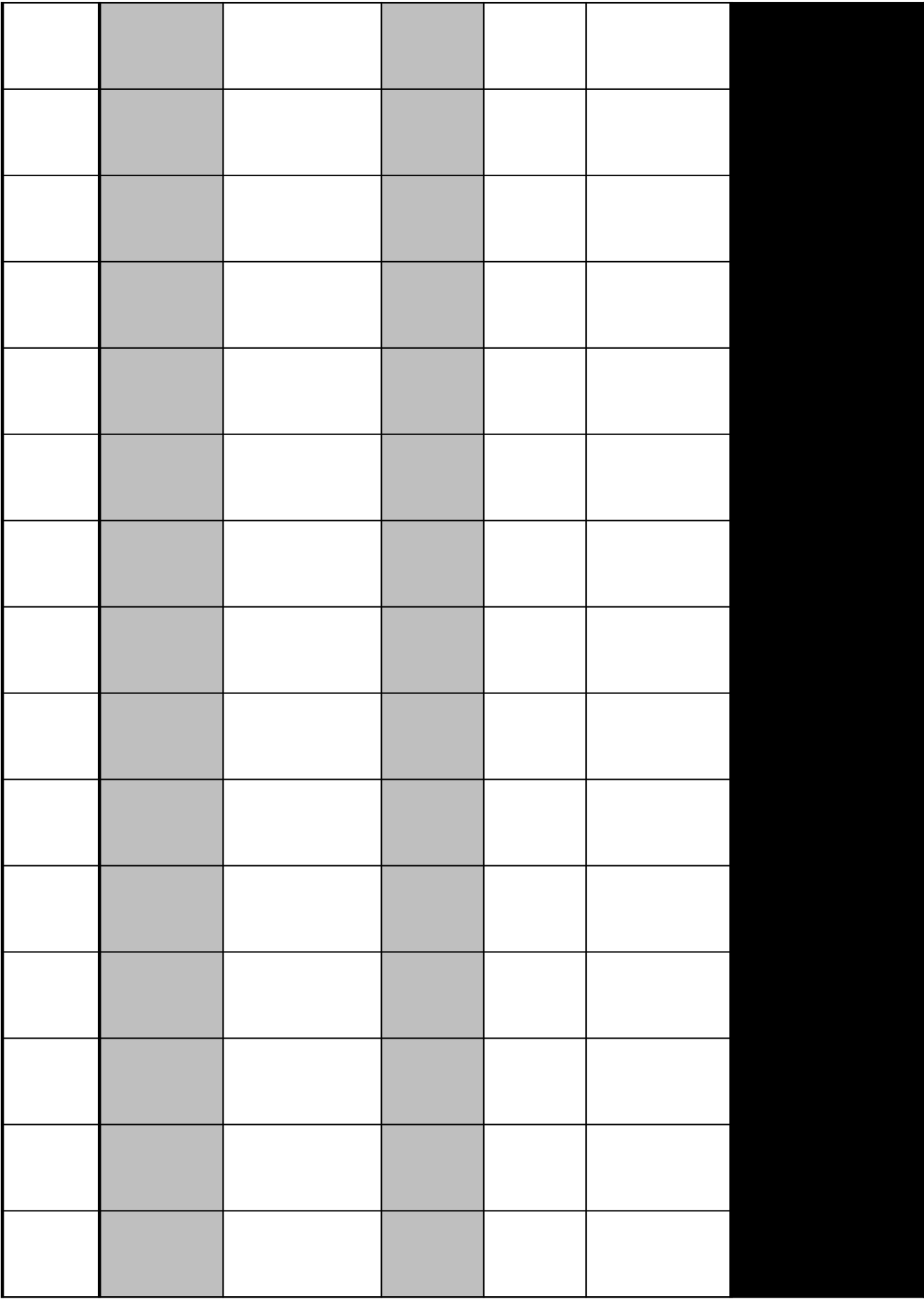
<b>New Partner Name</b>	
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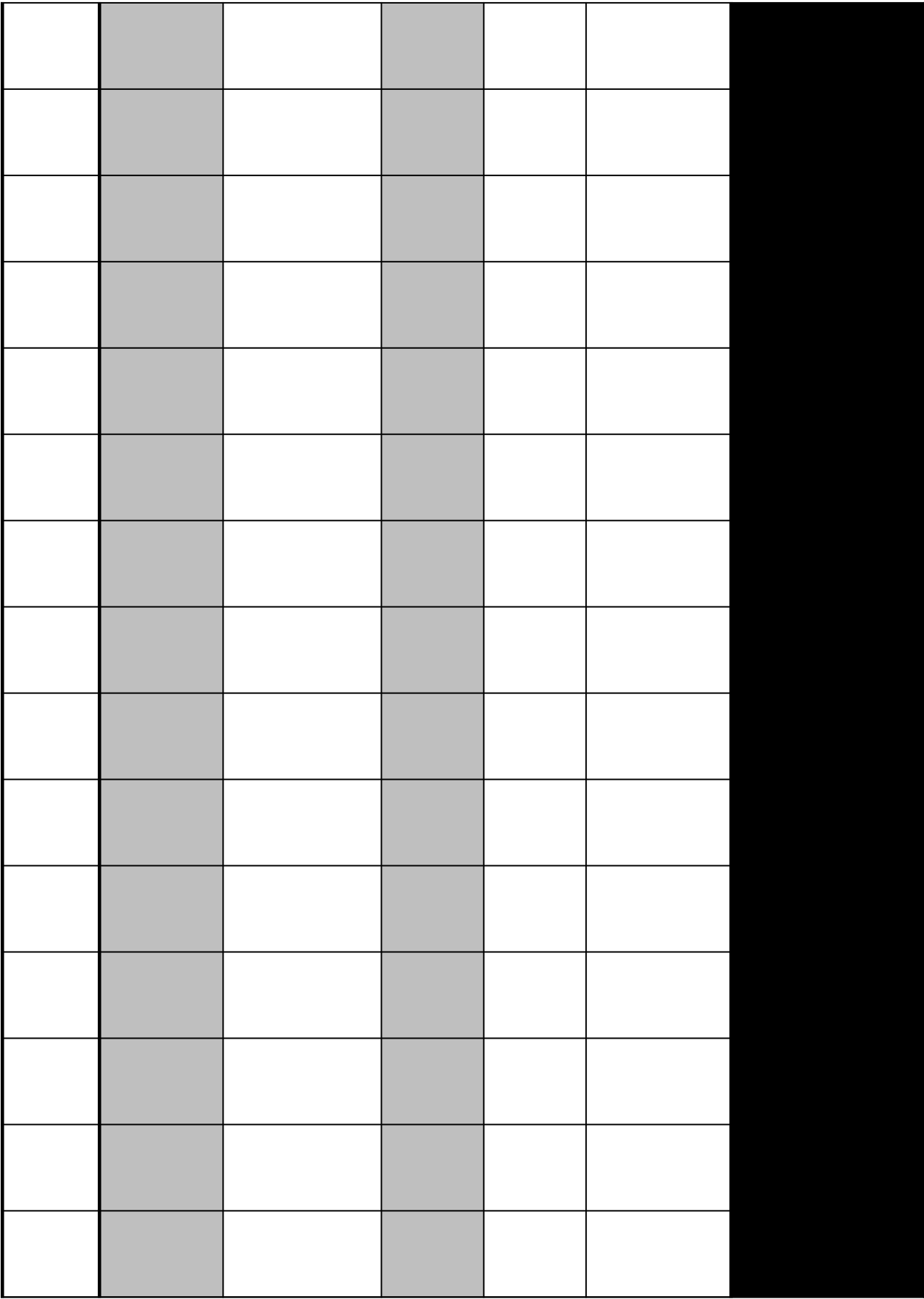
**U.S. ENVIRONMENTAL PROTECTION AGENCY  
Washington, DC 20460**

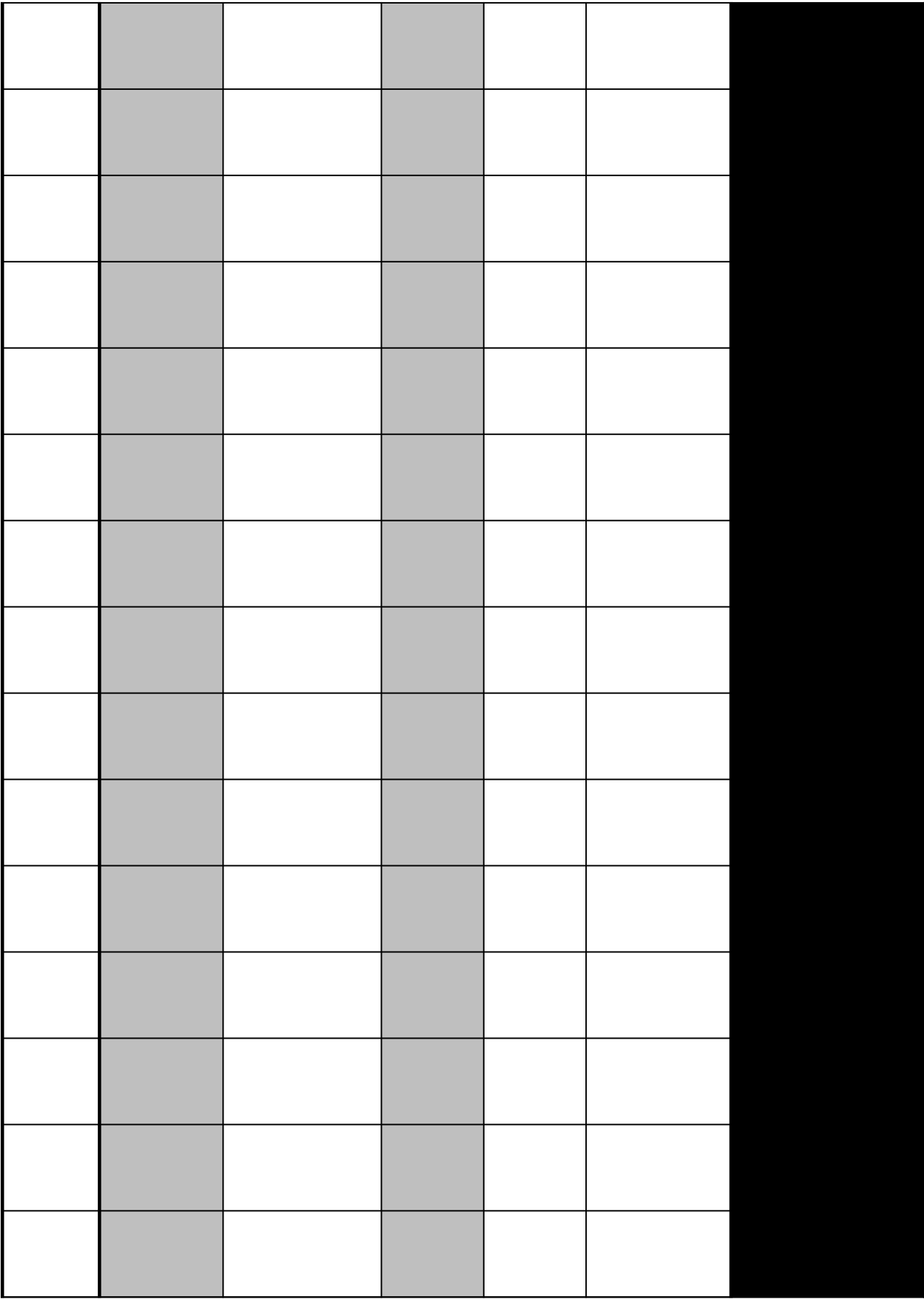
OMB Control No. 2060-0328  
Expires 04/30/2022

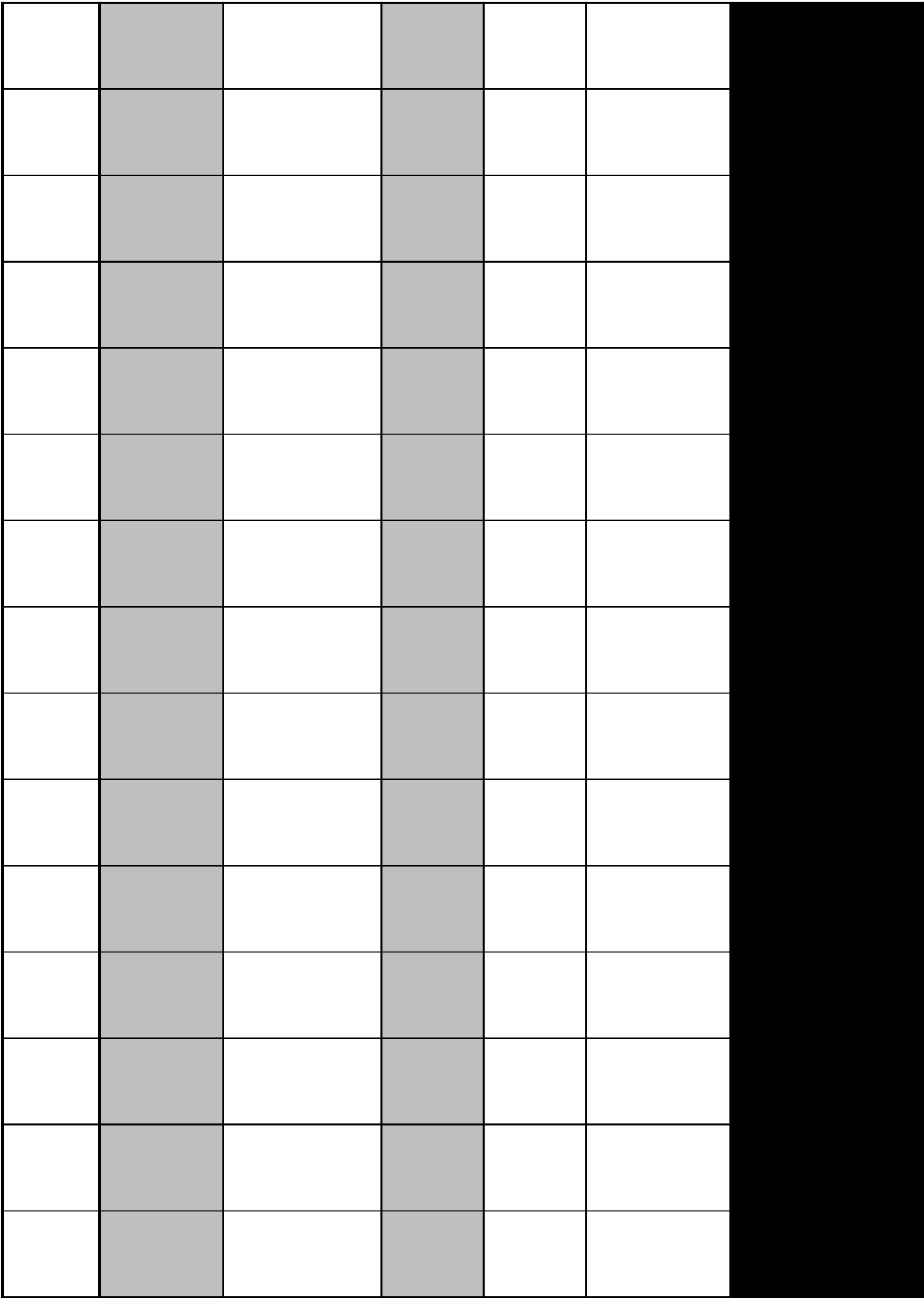
This collection of information is approved by OMB under the Paperwork Reduction Act, 44 U.S.C. 3501 et seq. (OMB Control No. 2060-0328). Responses to this collection of information are voluntary 42 USC 7403(g). An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The public reporting and recordkeeping burden for this collection of information is estimated to range from 20 to 51 hours per response. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates and any suggested methods for minimizing respondent burden to the Regulatory Support Division Director, U.S. Environmental Protection Agency (2821T), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed form to this address.

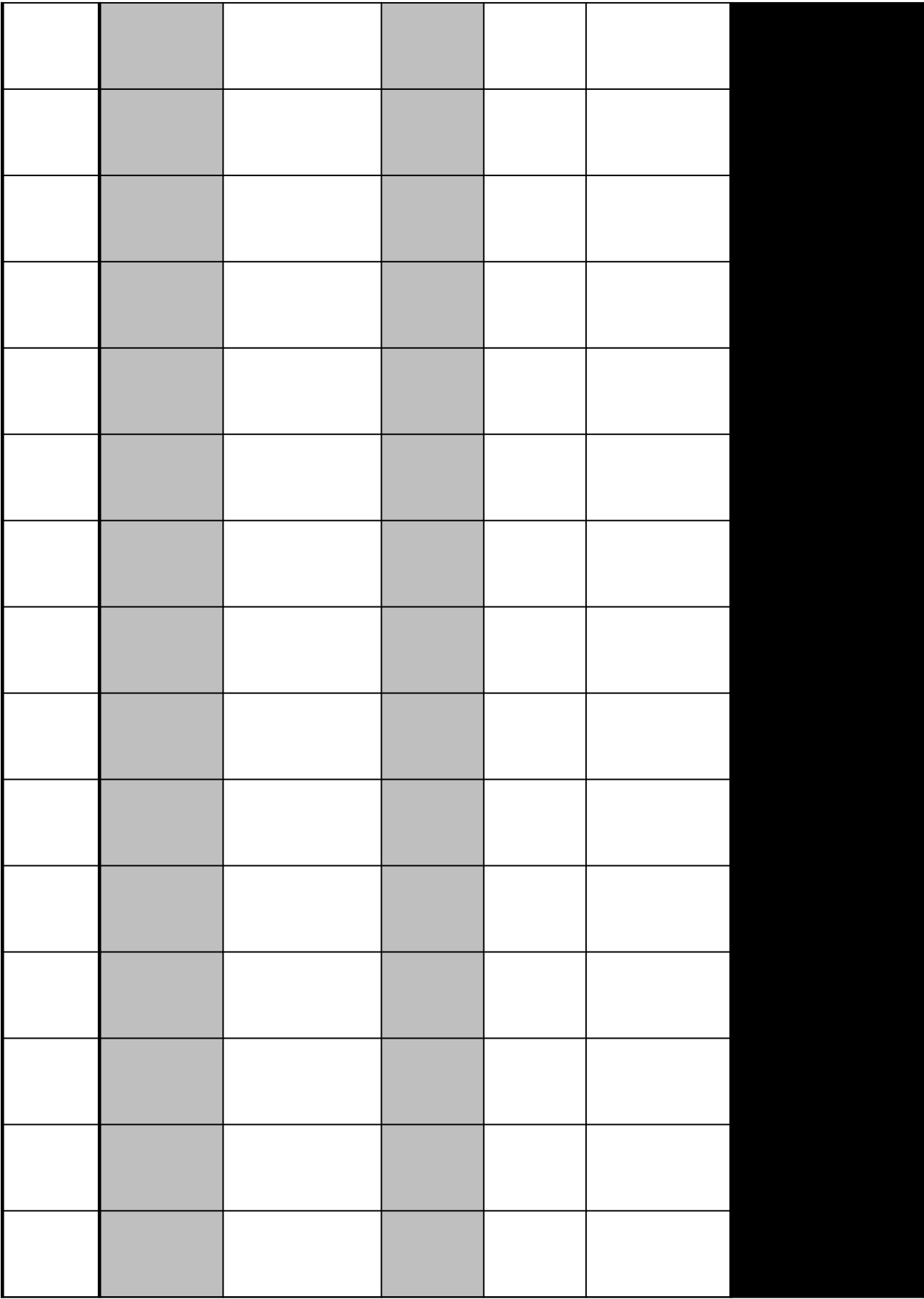


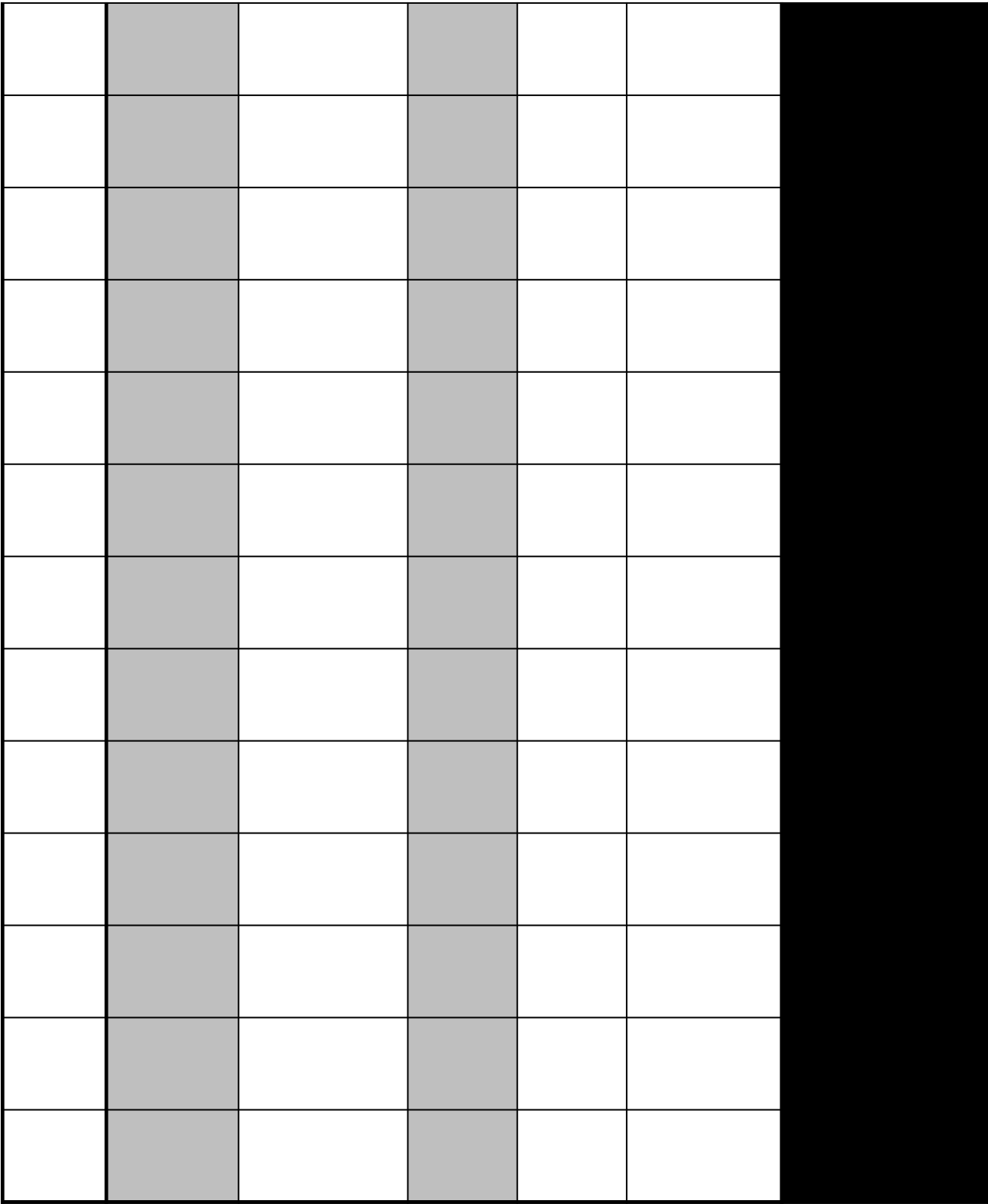




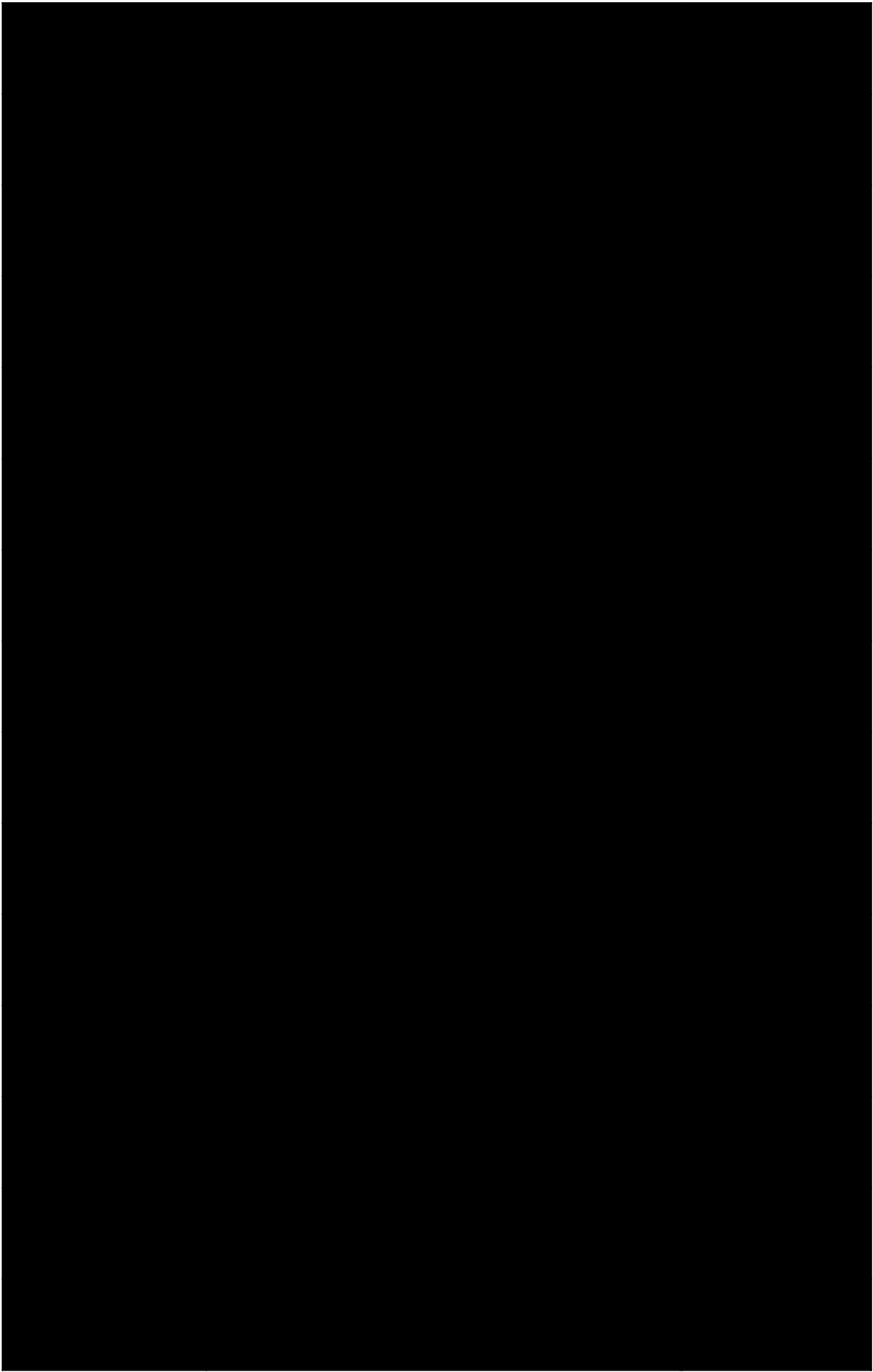


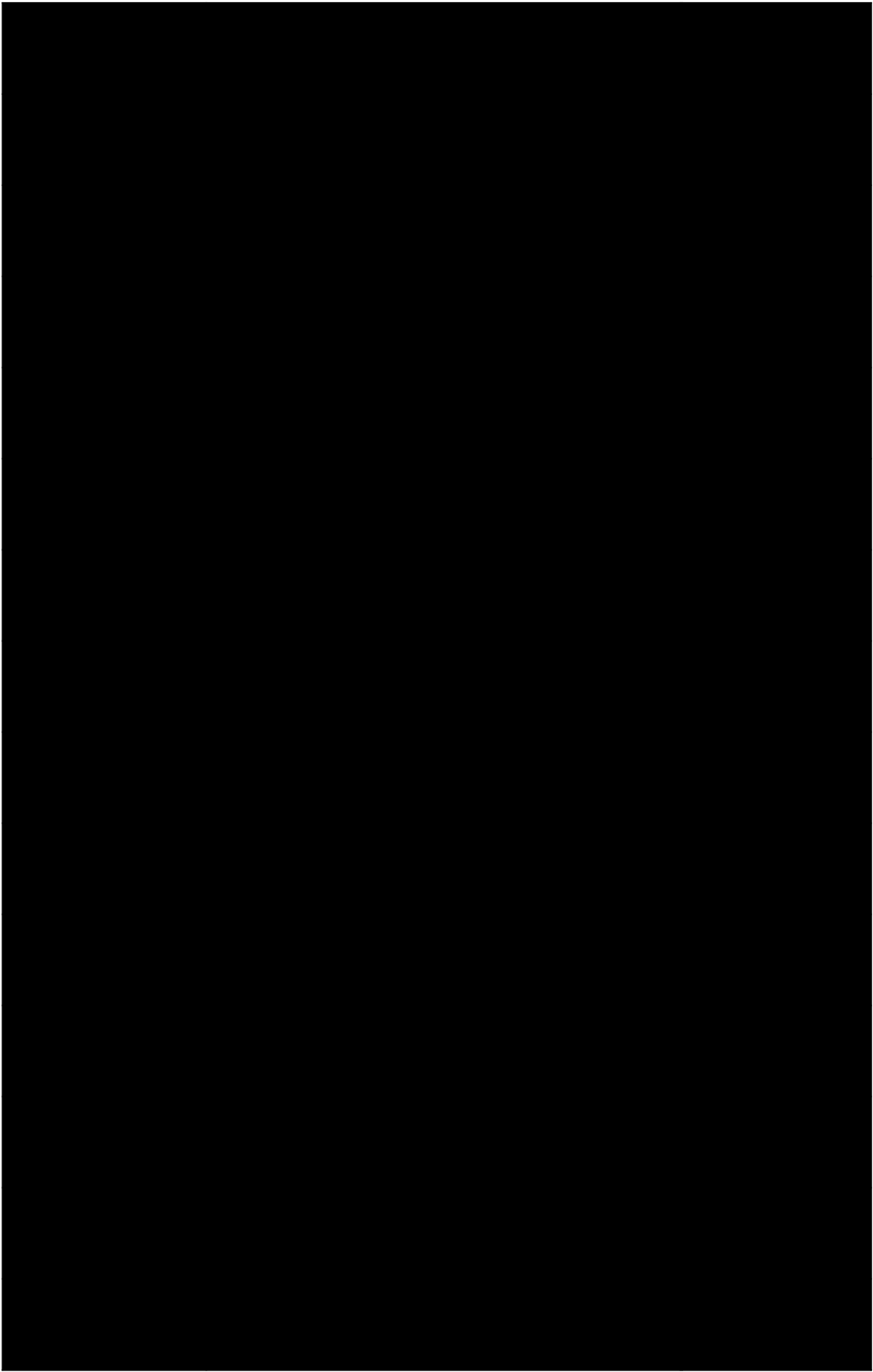


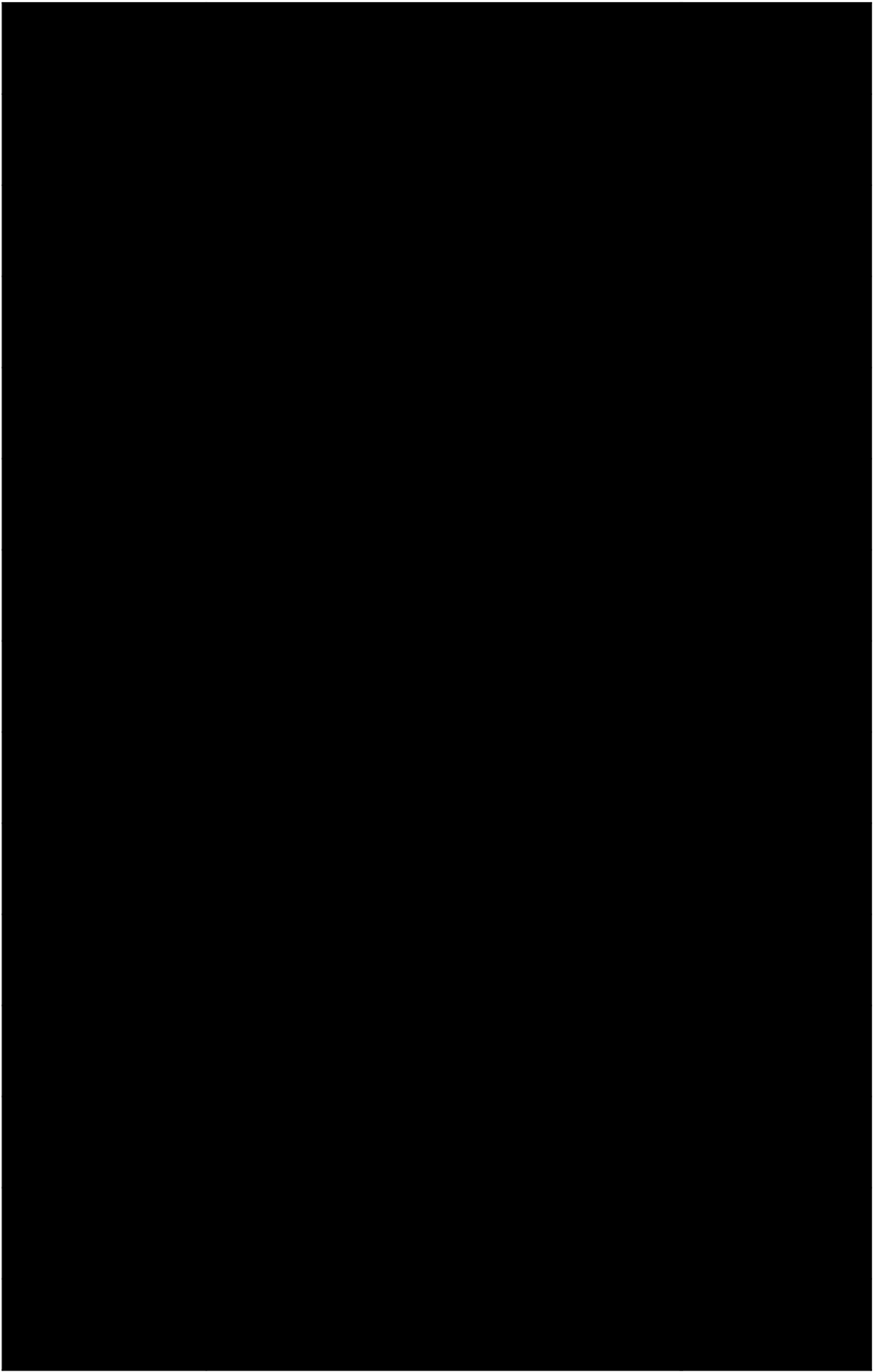


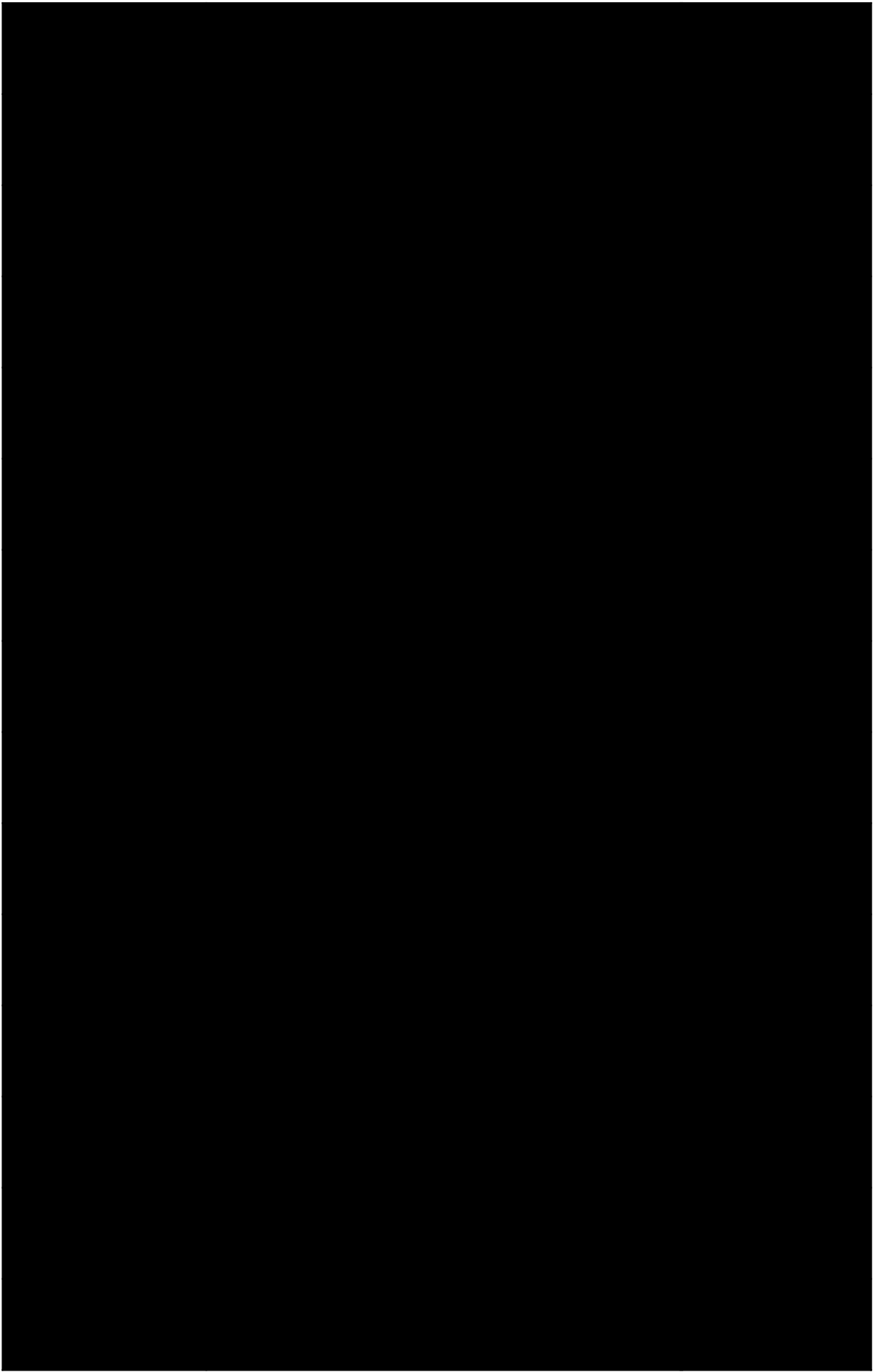


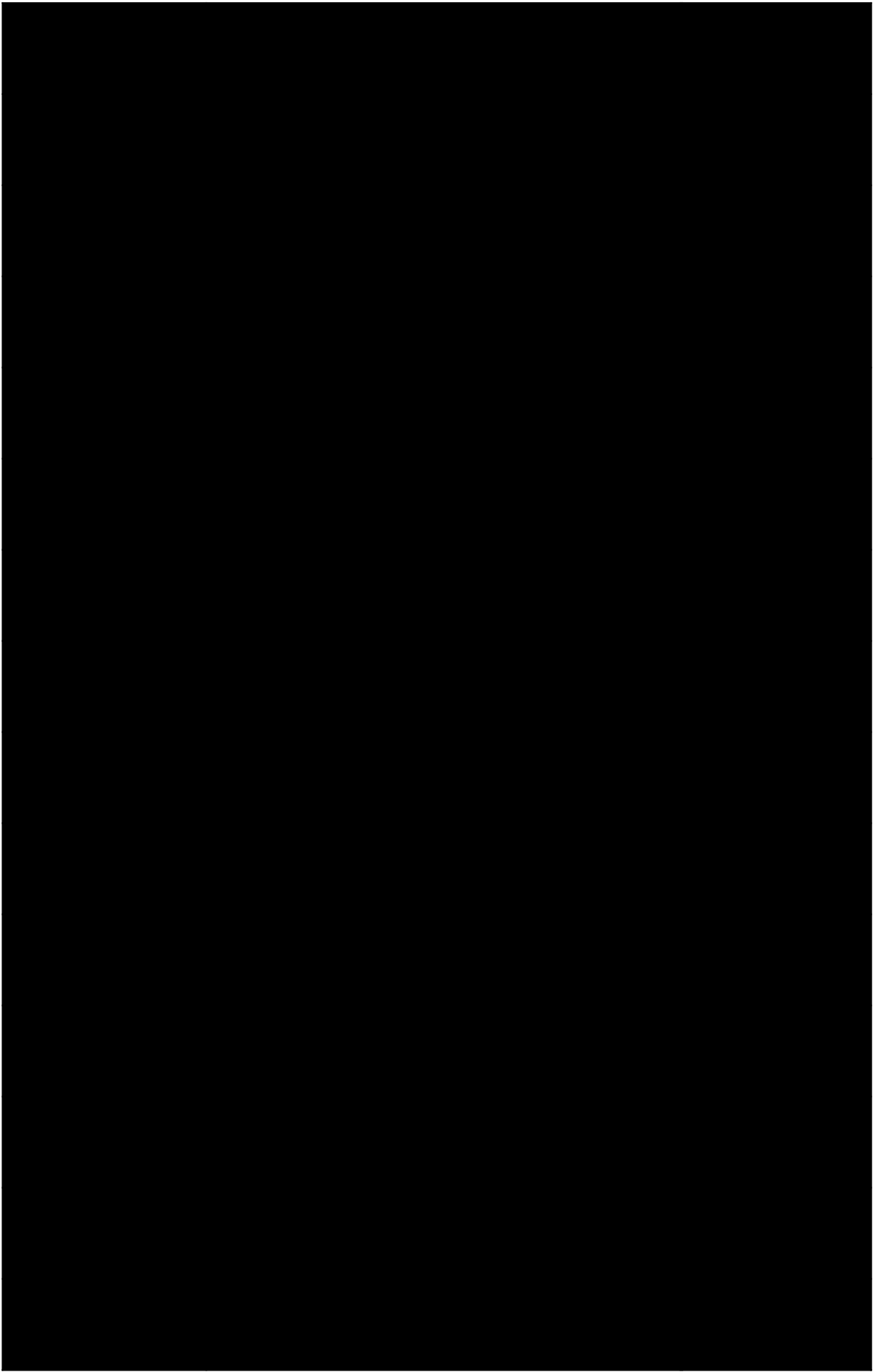
Calculate Using Default		
Average Gas Throughput (MMcf/yr)	Calculated Total Methane Emission Reduction Based on Default Values {[Number of Flash Tank Separators Installed]x[Average Gas Throughput] x 170 scf/MMcf x 0.9} / 1000}	TEG Circulation Rate (gal/hr)

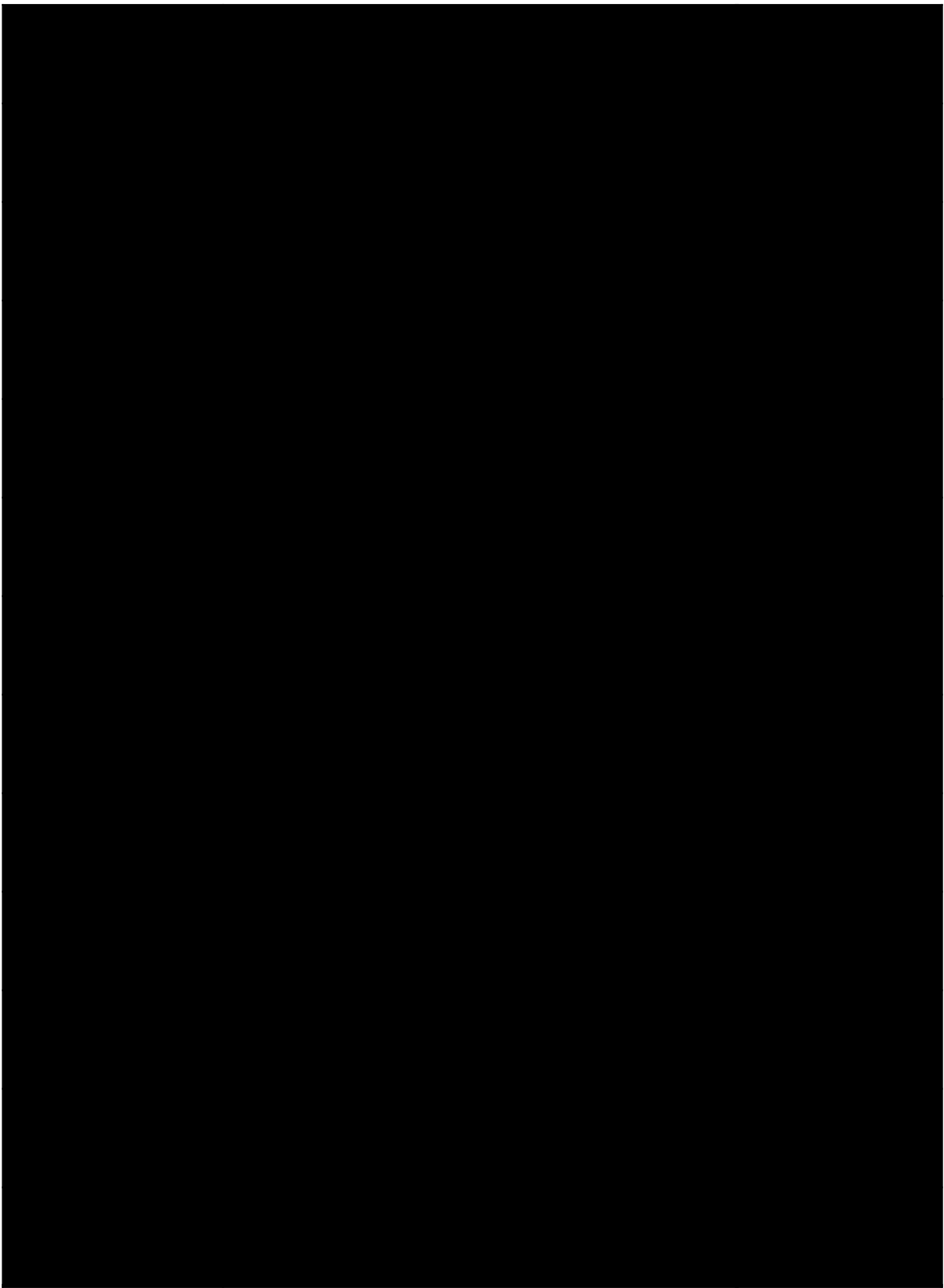






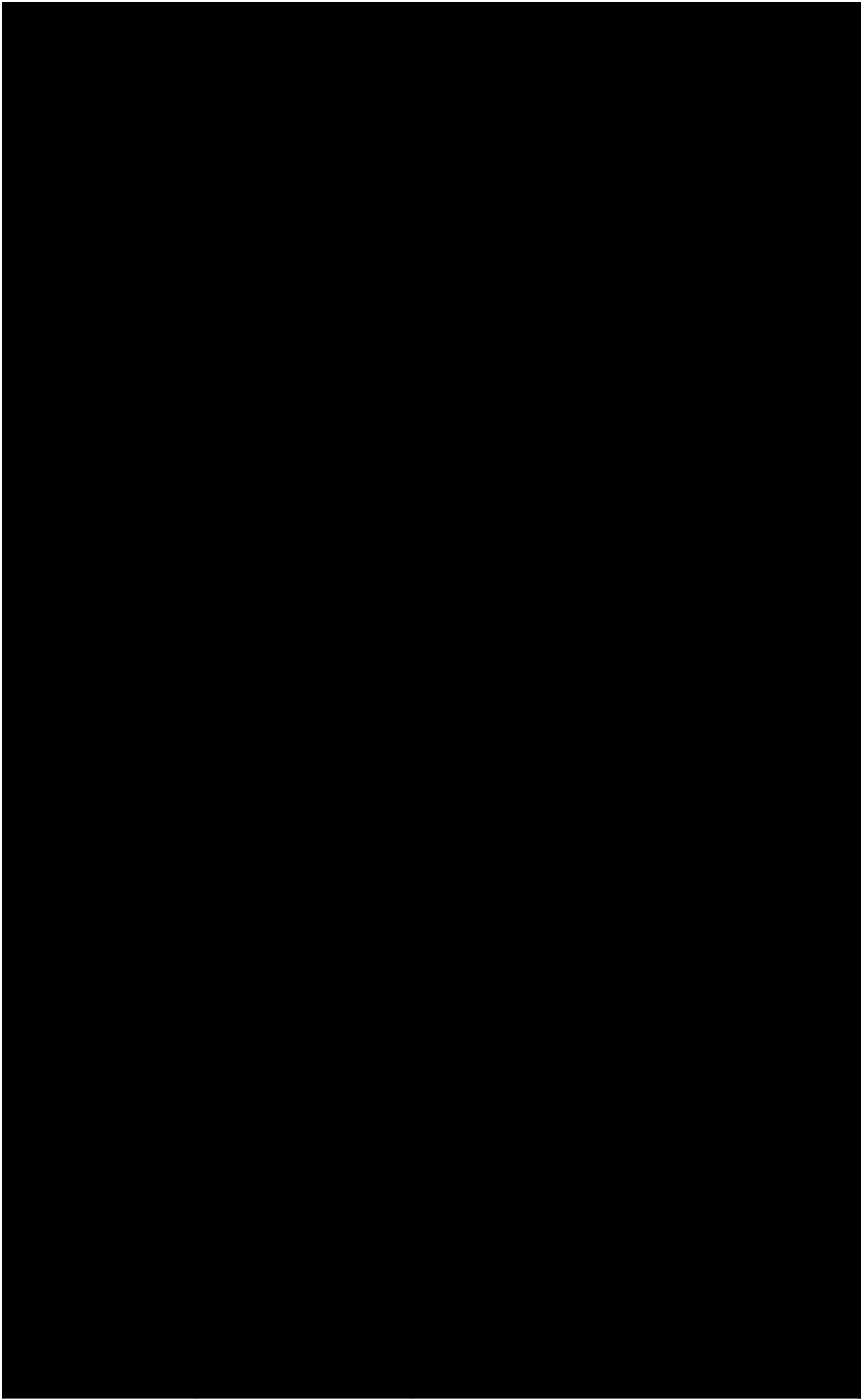


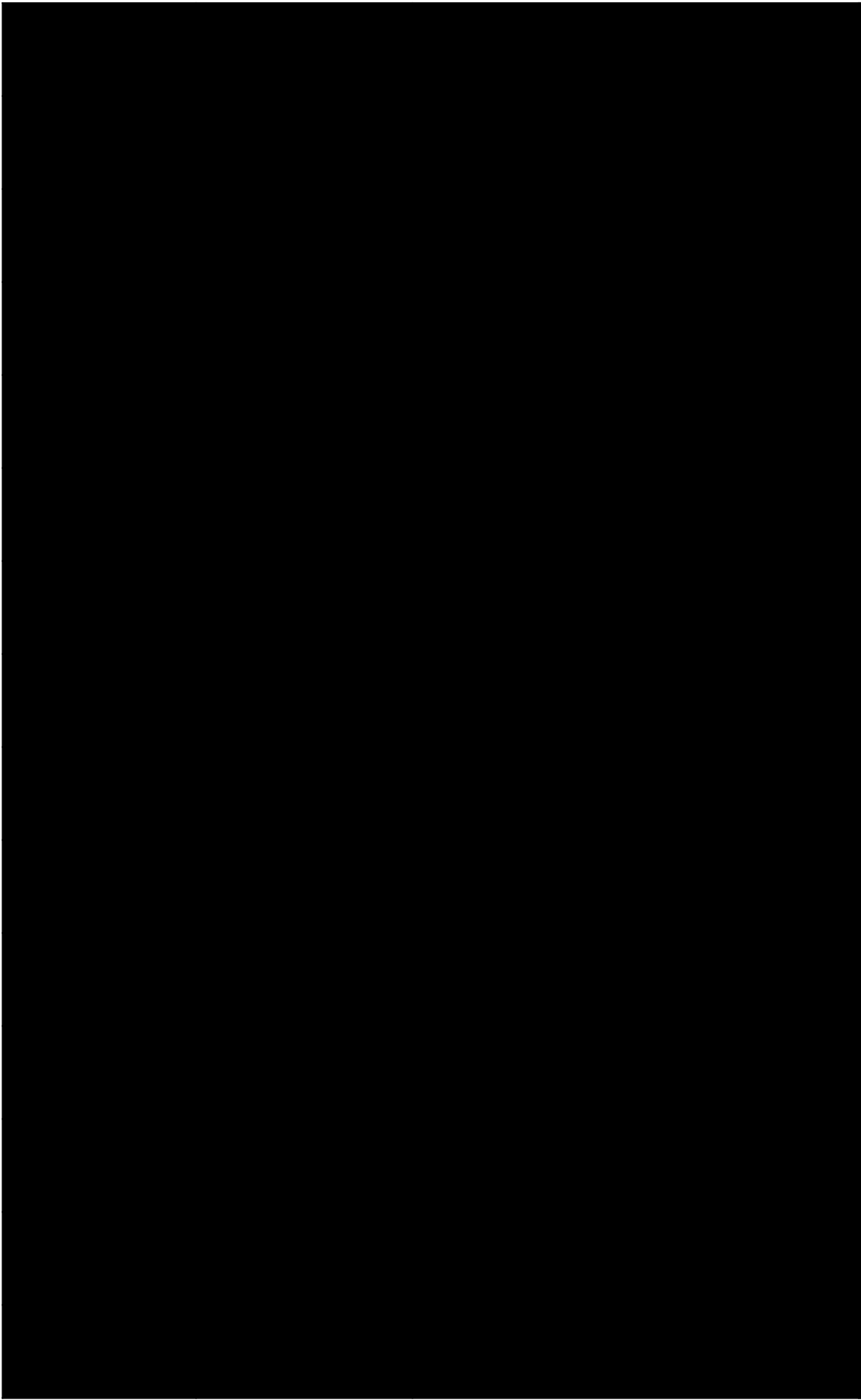


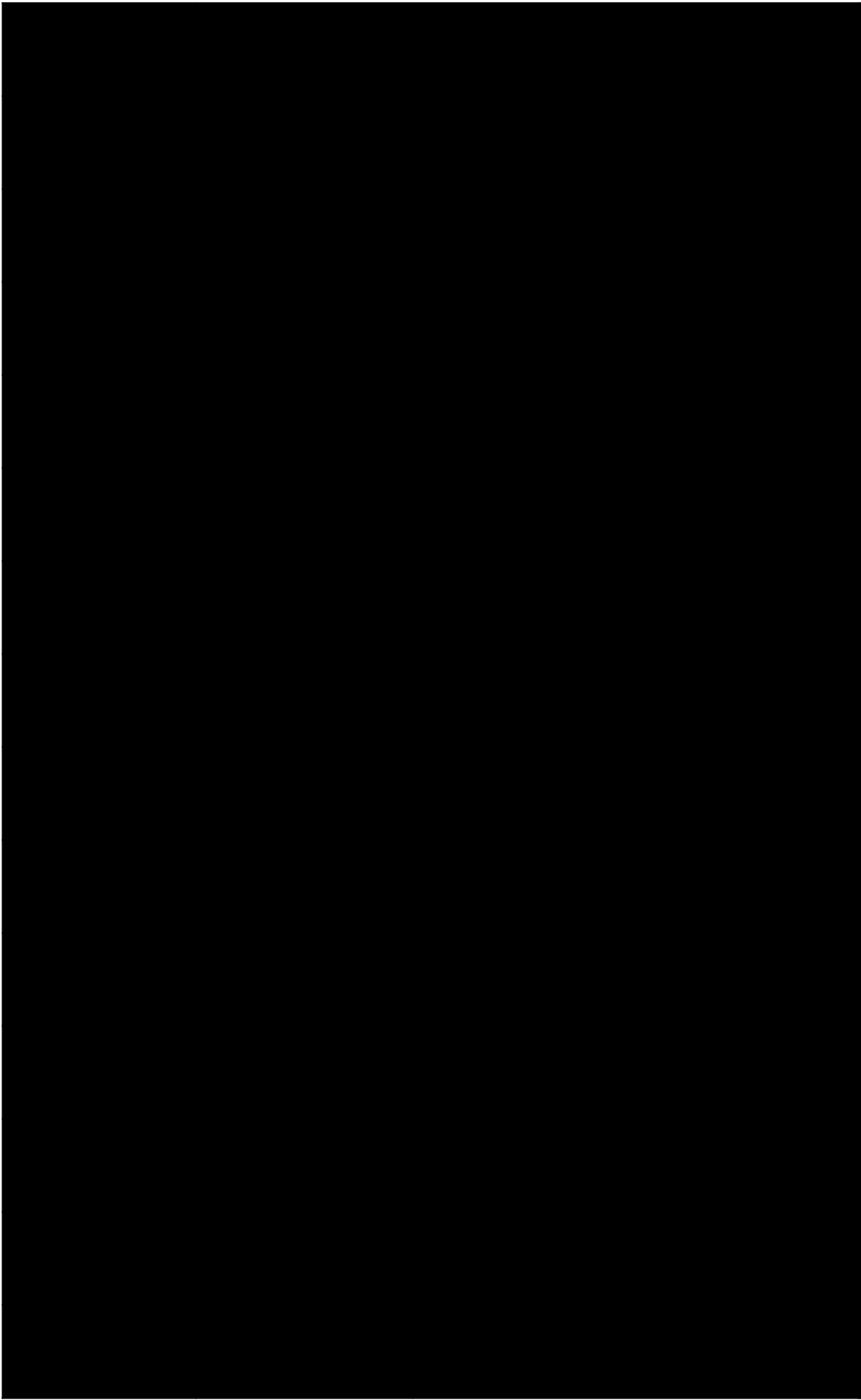


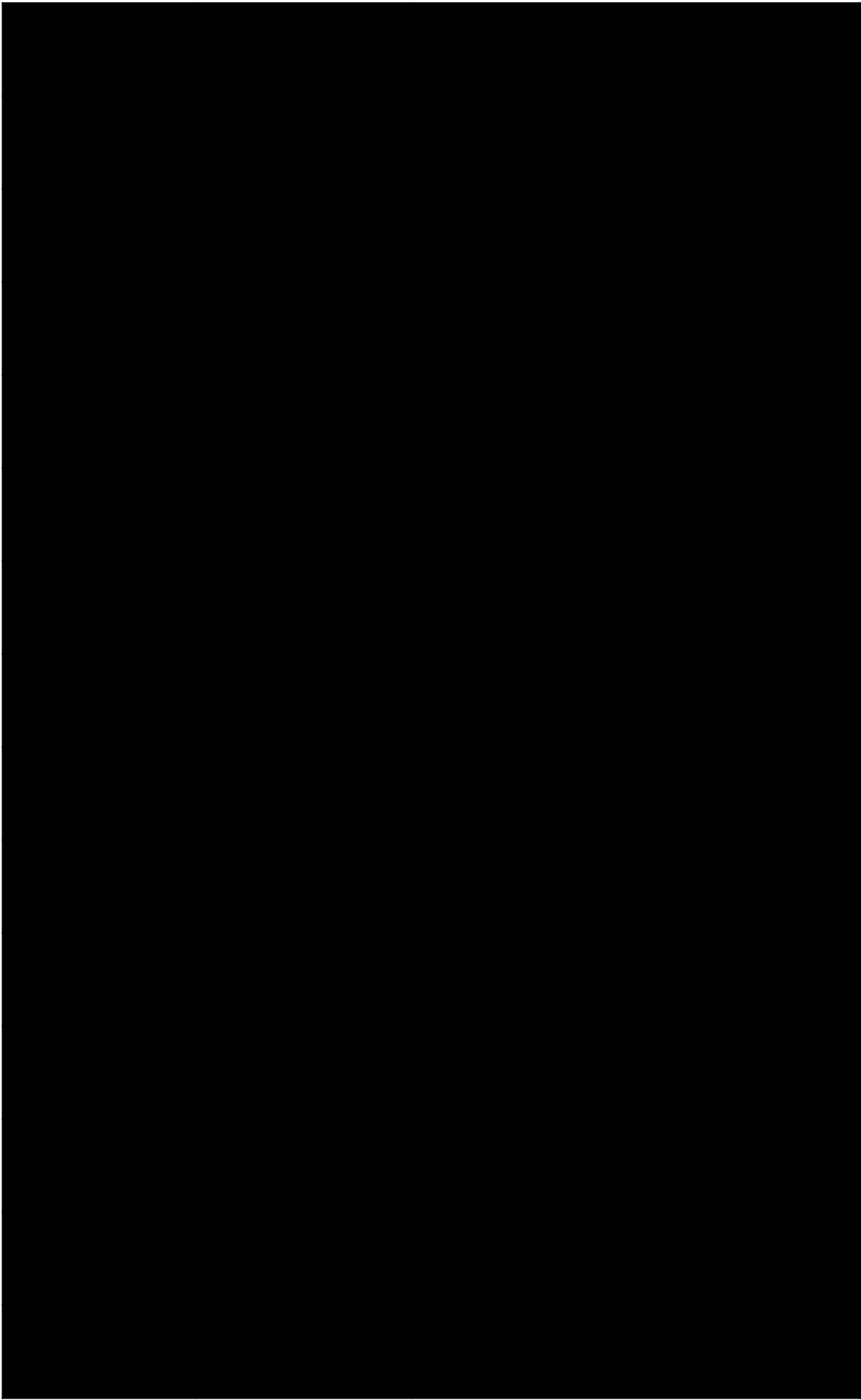
[Contents](#)

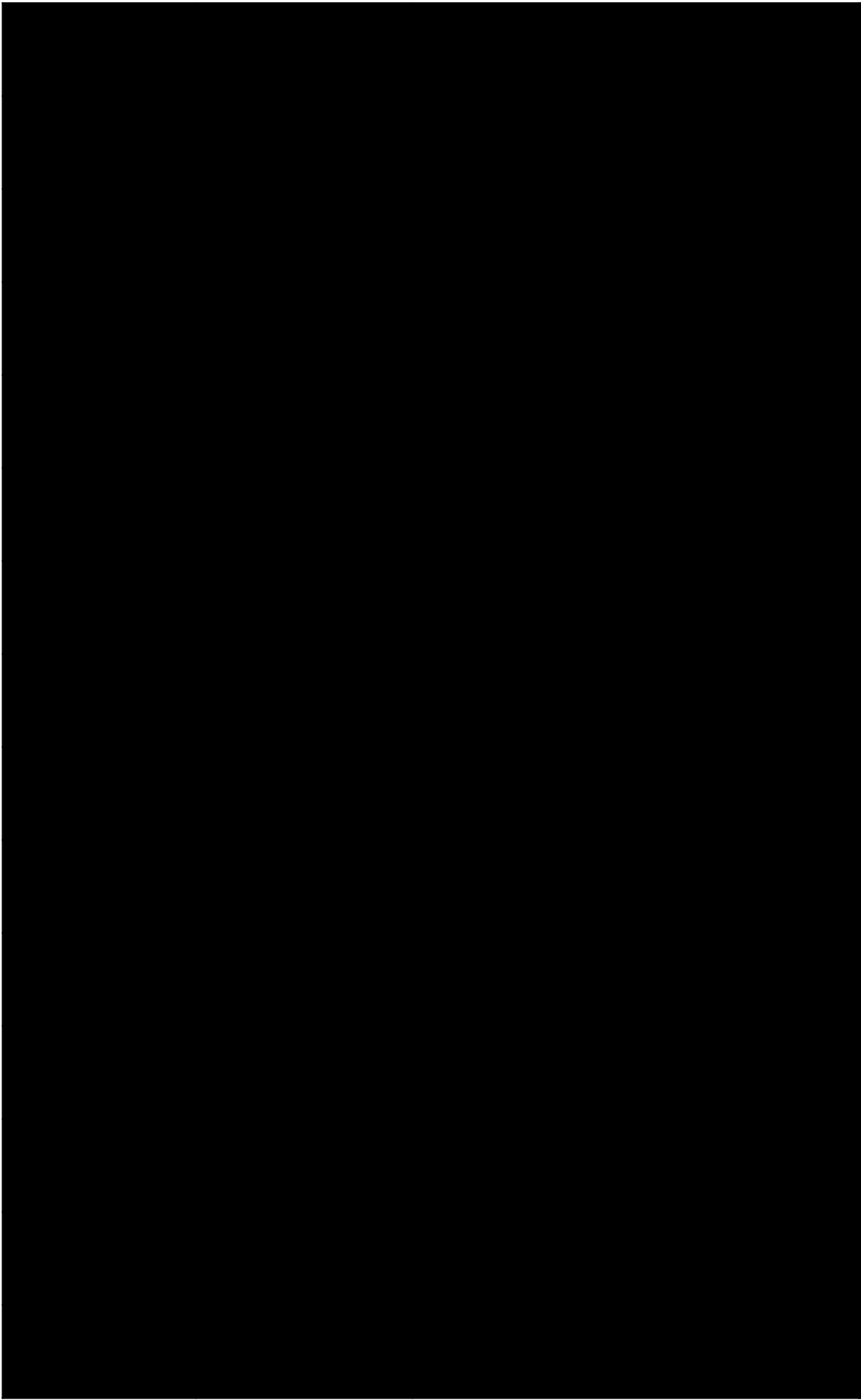
Calculate Using Standard Calculation		
Methane Entrainment Rate (scf/gal)	Hours of Operation (hrs/yr)	Calculated Total Methane Emission Reduction Based on Standard Calculation {[TEG Circulation Rate]x [Methane Entrainment Rate]x[Hours of Operation] x 0.90} / 1000}

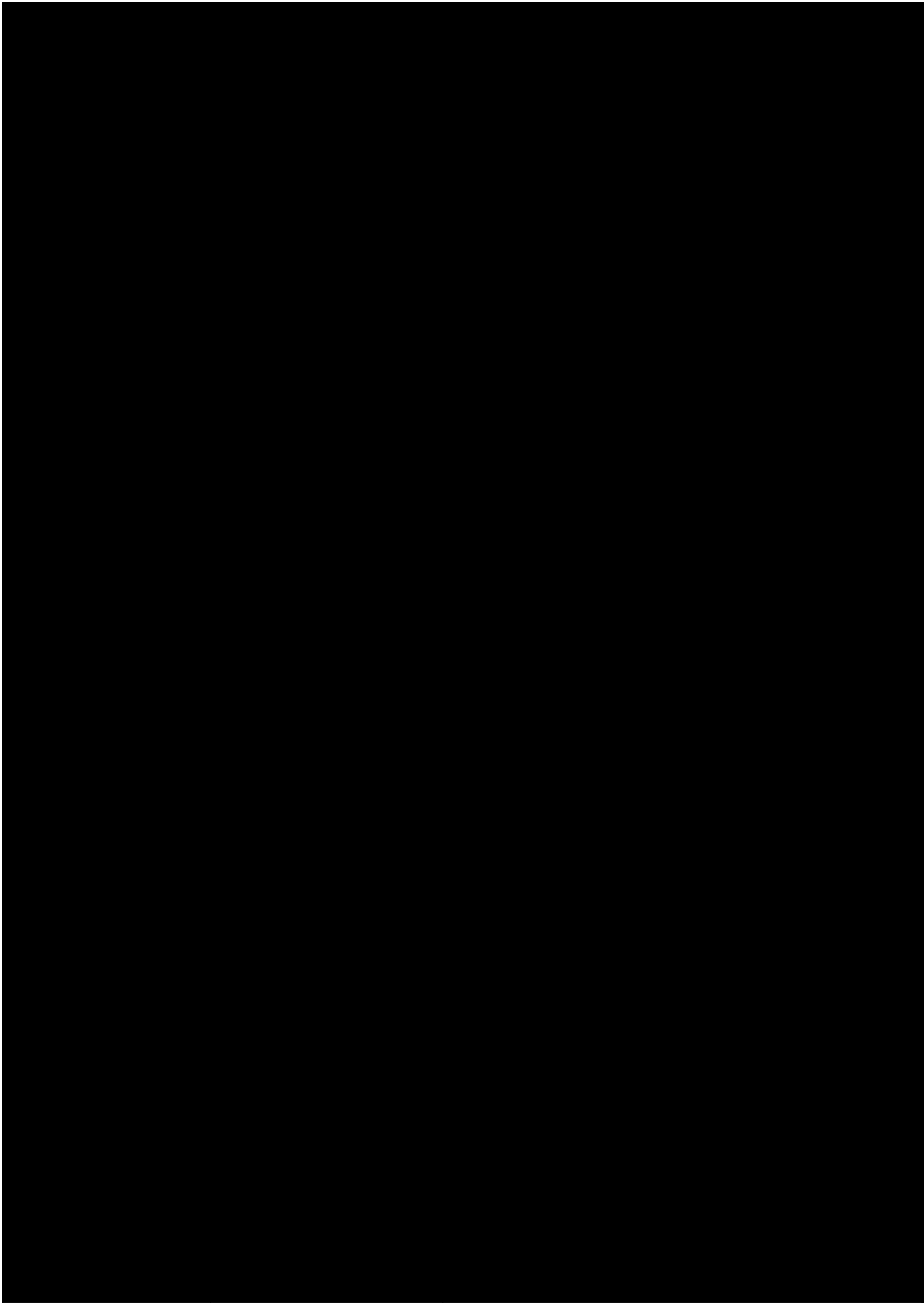








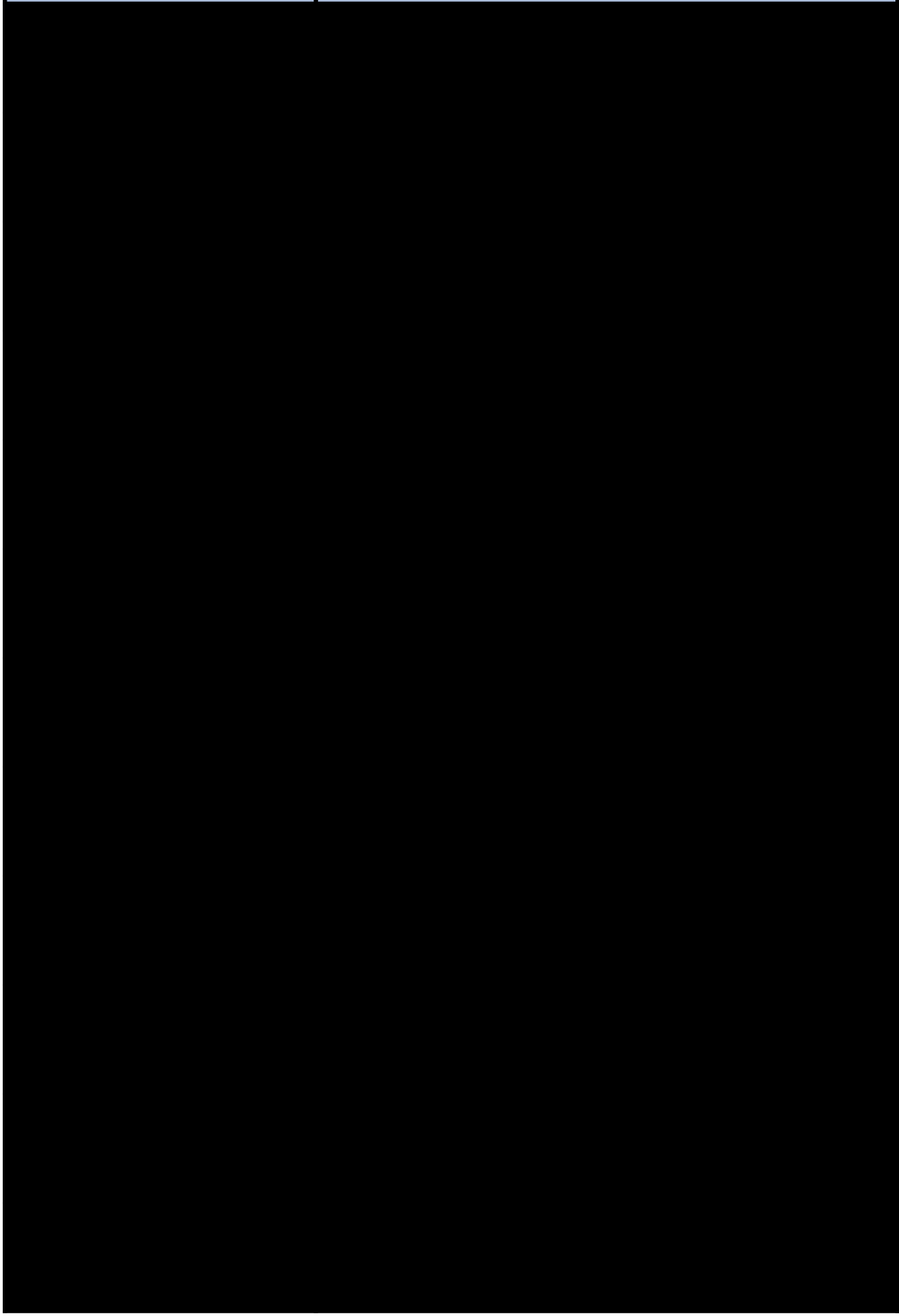


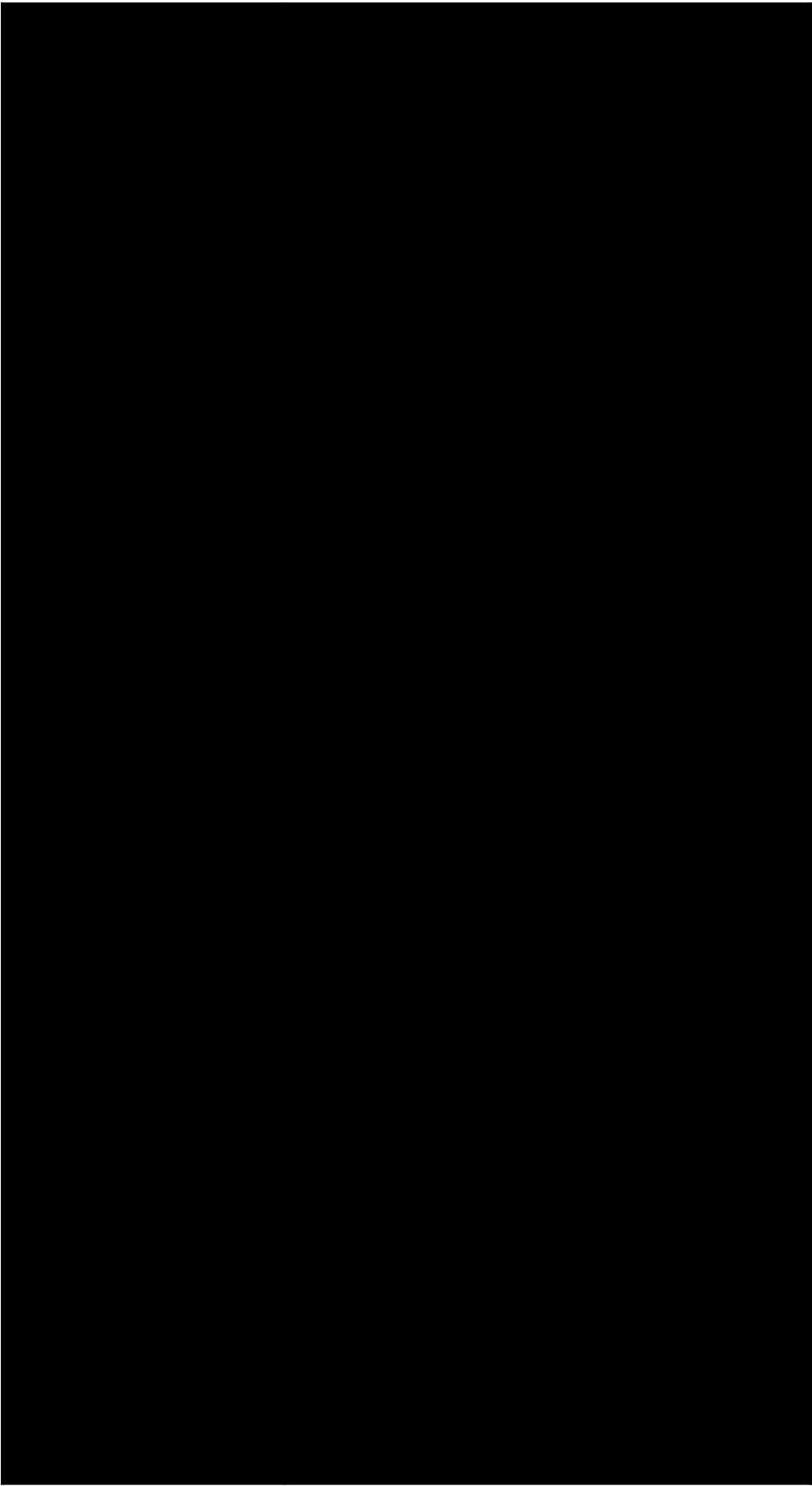


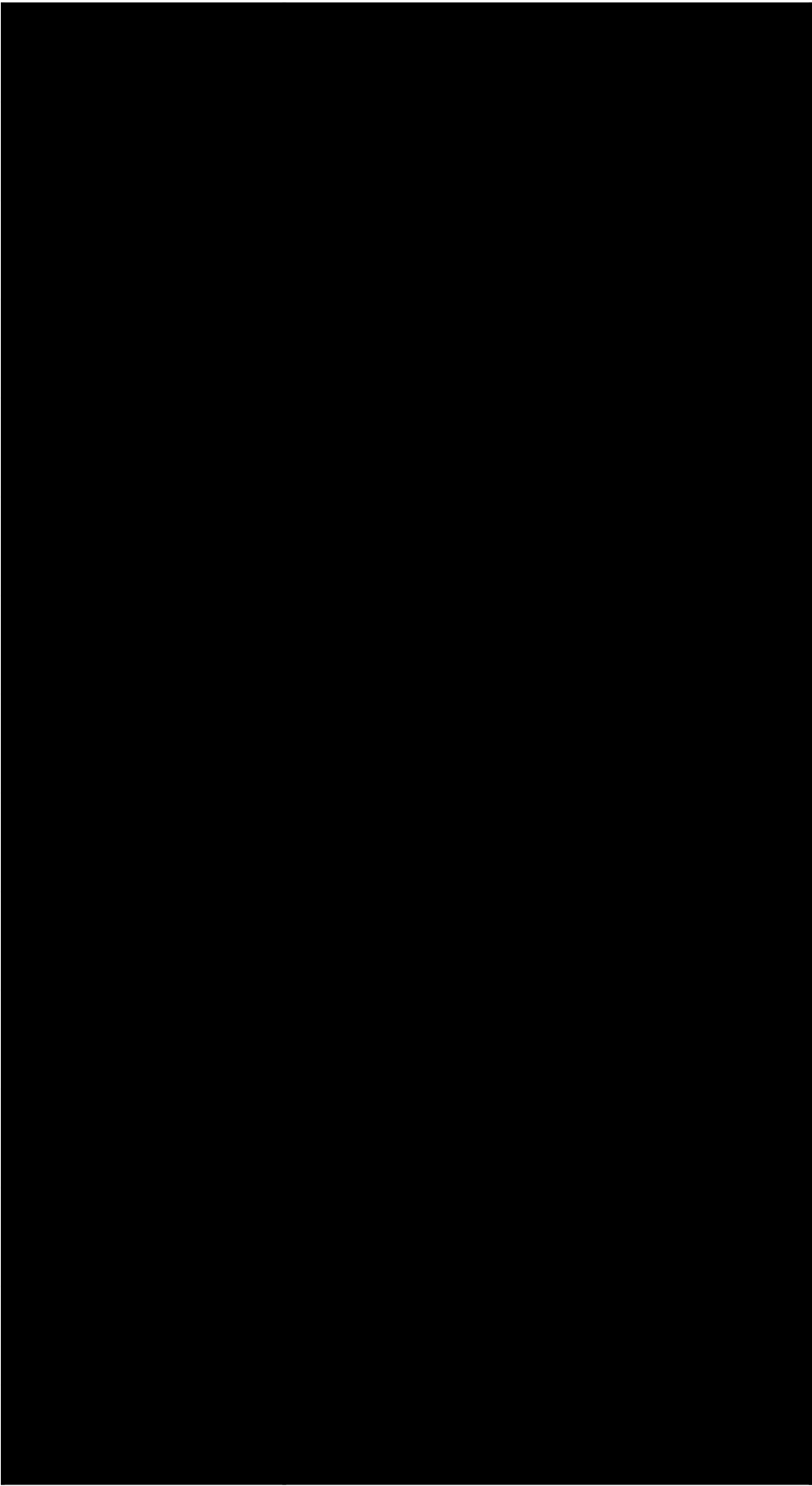
**Other Calculation**

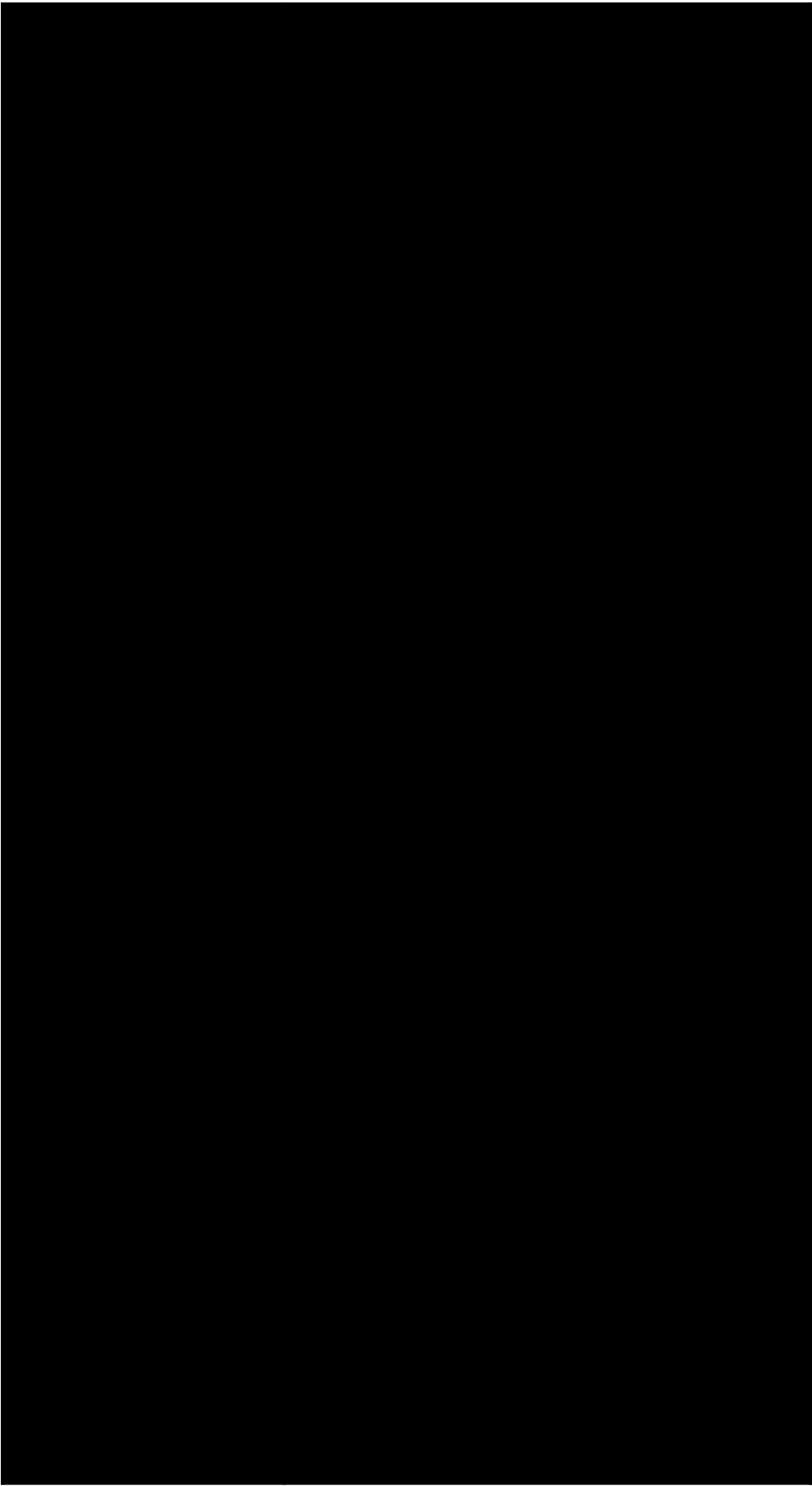
Total Methane Emission  
Reduction Based on Other  
Assumptions  
(Mcf/yr)

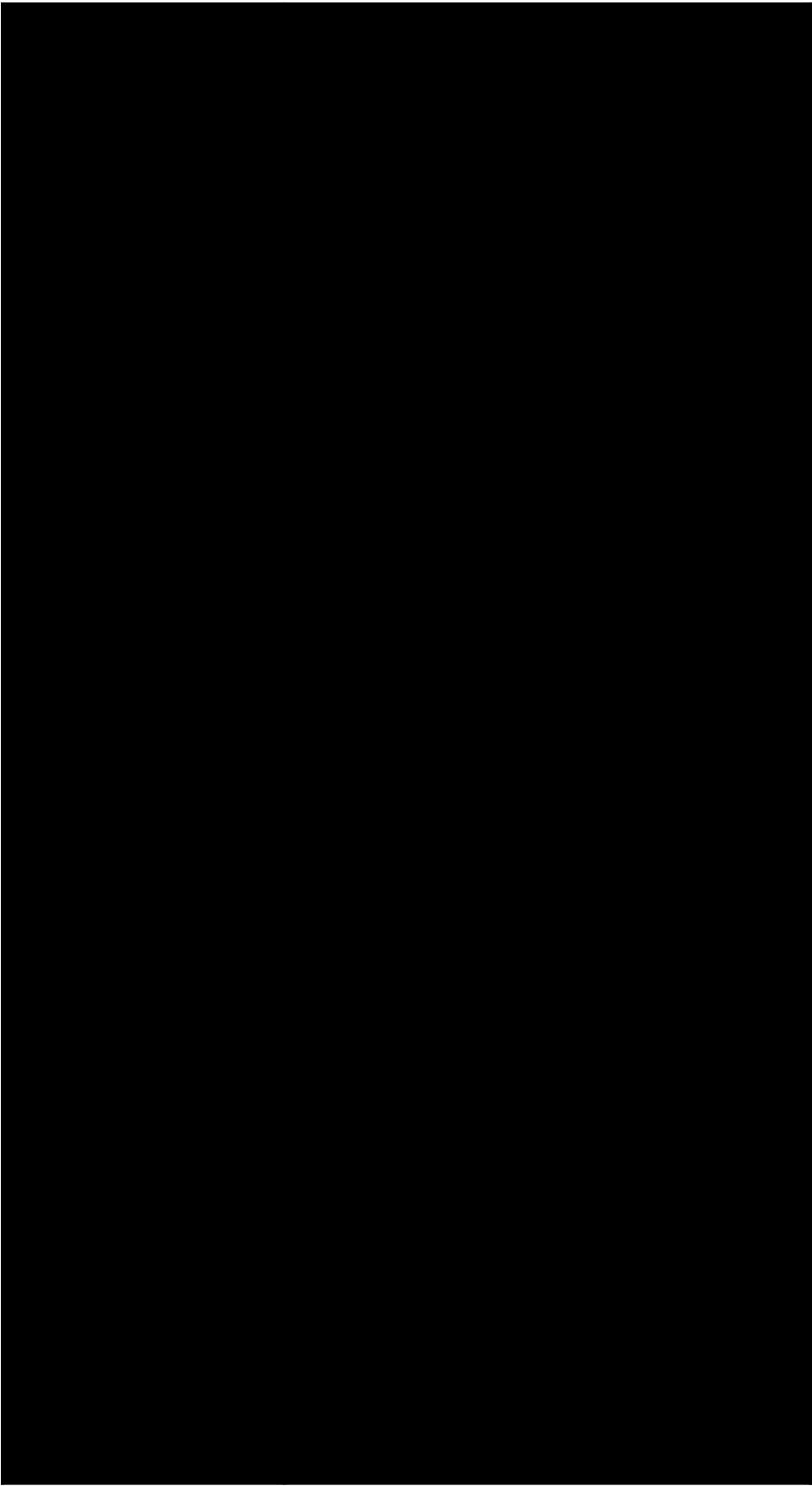
Explain Reduction Calculation Used

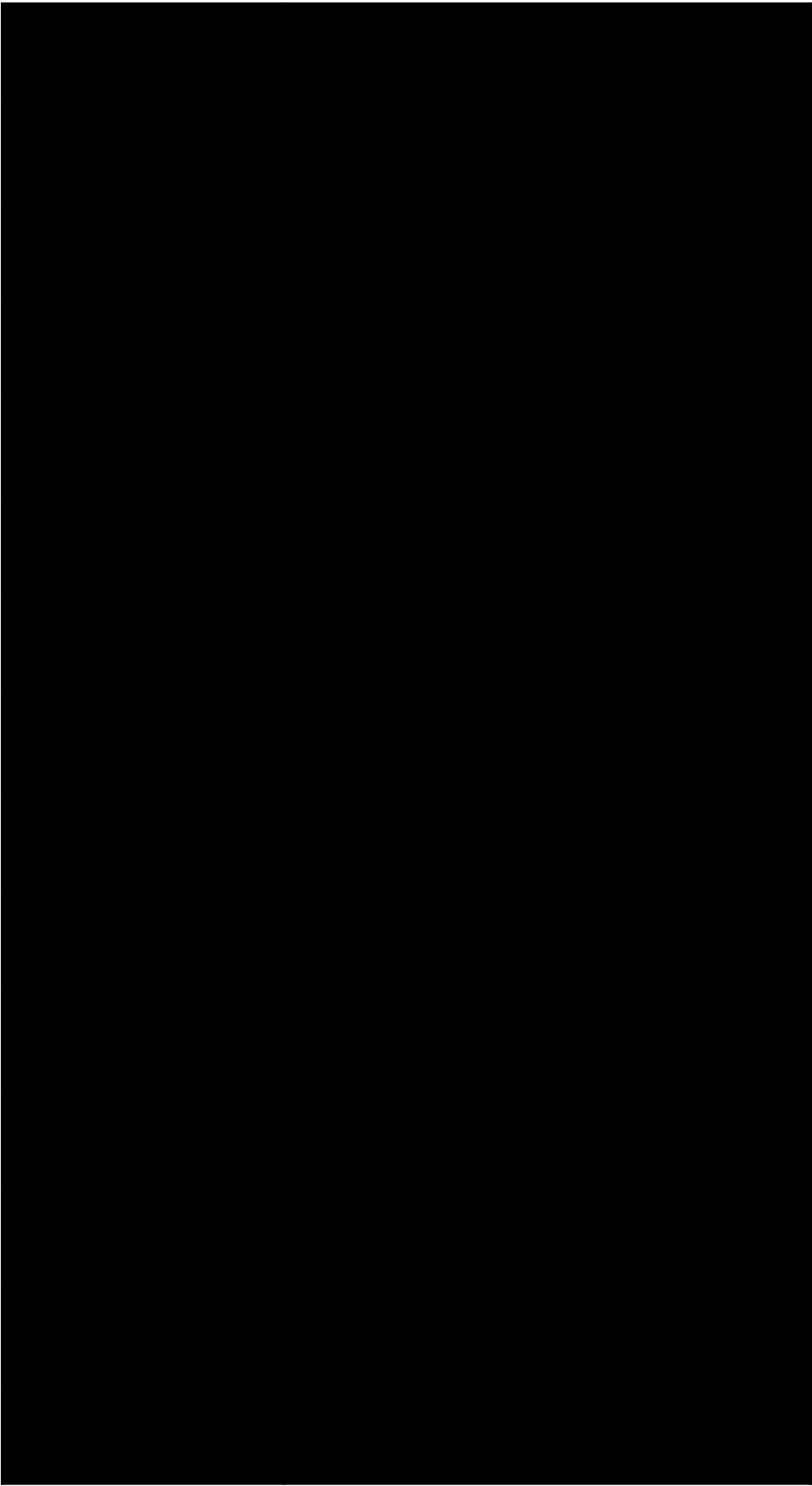


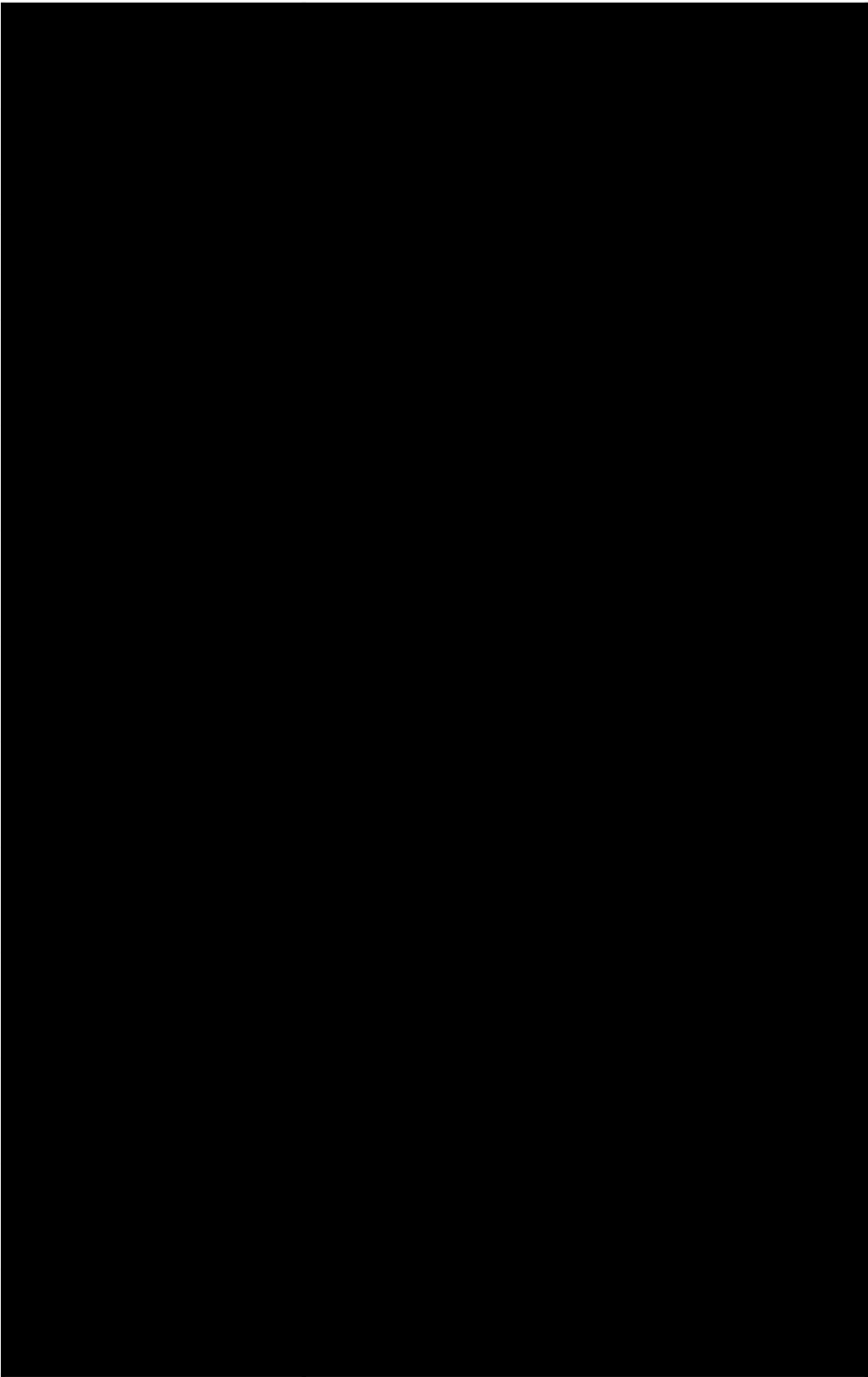












Provide additional comments or detail about how your company implemented this BMP

A series of 16 empty horizontal lines provided for entering text.













# Equipment Leaks

*Directed inspection and maintenance at gas plants and booster stations*

Year	Total Number of Surveys Conducted	Total Number of Leaks Found	Total Number of Leaks Repaired	Total Number of Facilities at Which Leaks Repaired	Basis for Emission Reduction Estimate

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Total Methane Emission Reductions (Mcf/yr)	Explain Reduction Calculation Used

Provide additional comments or detail about how your company implemented this BMP

















































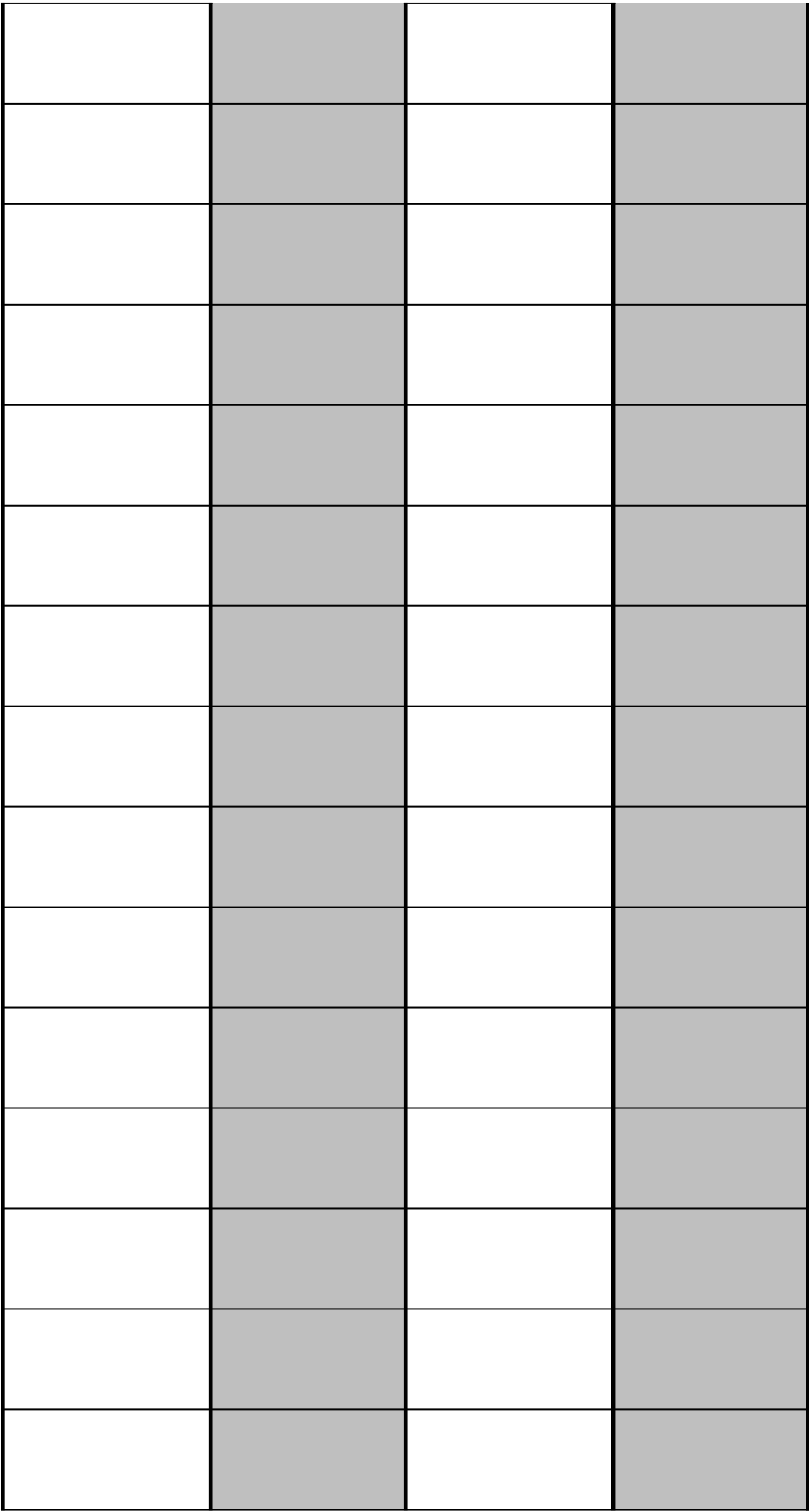


















































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Automatically calculate sunsets (if Sunset Years >1)?	End Year	Total Methane Emission Reduction (Mcf/yr)	Basis for Emission Reduction Estimate
[Redacted]			









































This sheet summarizes values used in calculations in this workbook. If you have questions on any c

### Install Flash Tank Separators on Glycol Dehydrators

#### Default Values

Emission Factor <sup>1</sup>	170	scf/MMcfd
Efficiency <sup>2</sup>	0.9	percent (expressed as decim

#### Pneumatic Controllers

##### Emission Factors - Gathering and Boosting

Source: 40 CFR 98, Table W-1A (Population Emission

Low Continuous Bleed Pneumatic Device Vents	1.39	scf whole gas / hour / devic
High Continuous Bleed Pneumatic Device Vents	37.3	scf whole gas / hour / devic

##### Emission Factors - Processing

Source: 40 CFR 98, Table W-3B [Transmission segme

Low Continuous Bleed Pneumatic Device Vents	1.37	scf whole gas / hour / devic
High Continuous Bleed Pneumatic Device Vents	18.2	scf whole gas / hour / devic

#### Default Values

Operating hours	8760	Assumes 24/7 operation all
Methane content of natural gas	82.1%	Inventory of U.S. Greenhous (Table 3.6-3), <a href="https://www.">https://www.</a> 04/2018_ghgi_natural_gas.

#### Notes:

- <sup>1</sup> Derived from "Methane Emissions from the Natural Gas Industry," Volume 14, Glycol Dehydrators, co-spon:
- <sup>2</sup> Derived from "Optimize Glycol Circulation And Install Flash Tank Separators In Glycol Dehydrators" Lessons

of the values used, please contact EPA at [GasSTAR@epa.gov](mailto:GasSTAR@epa.gov)

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Factors, Gas Service)

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ent factors used as a proxy for Processing]

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year

Gas Emissions and Sinks: 1990-2016, Annex 3.6  
[epa.gov/sites/production/files/2018-  
\\_systems\\_annex\\_tables.xlsx](https://epa.gov/sites/production/files/2018-01/systems_annex_tables.xlsx)

sored by the Gas Research Institute and EPA, June 1996  
Learned document, EPA, October 2006.