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

Natural Gas STAR Annual Report - Gathering and Processing Segment

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

RS2021GATHERv1

Partner Name	
Reporting Year	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.

Update Partner Information (If applicable)

New Partner Name	

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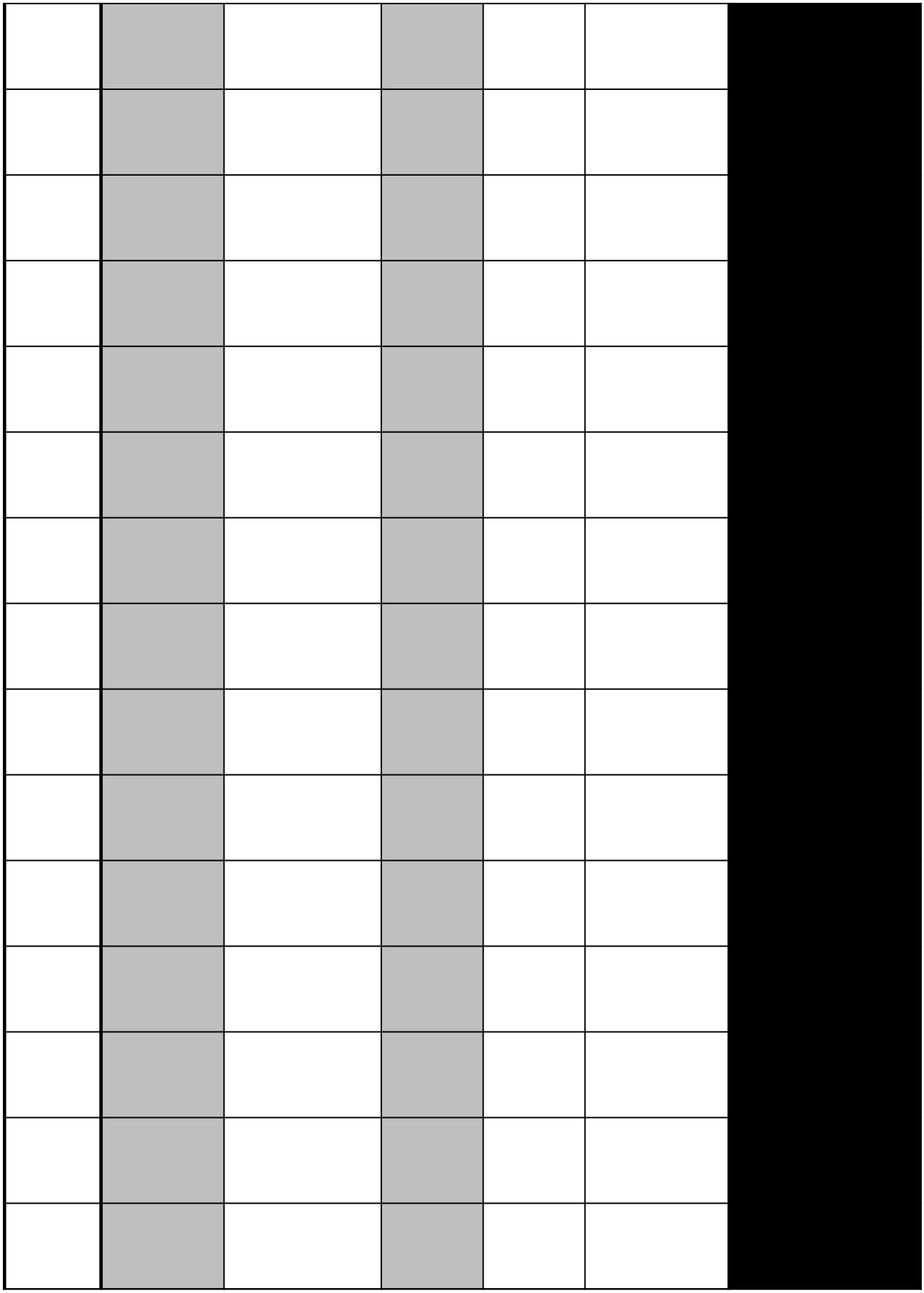
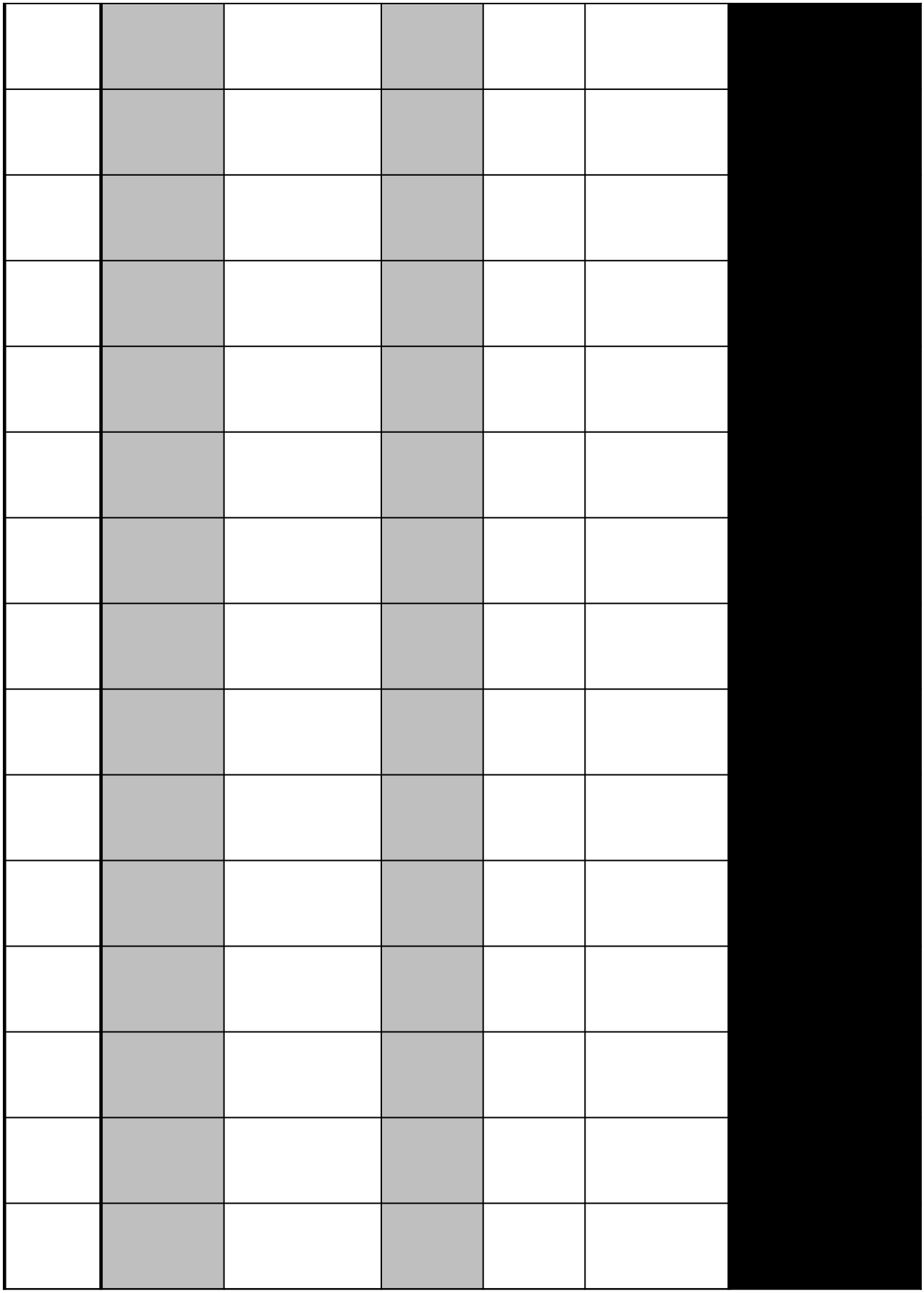
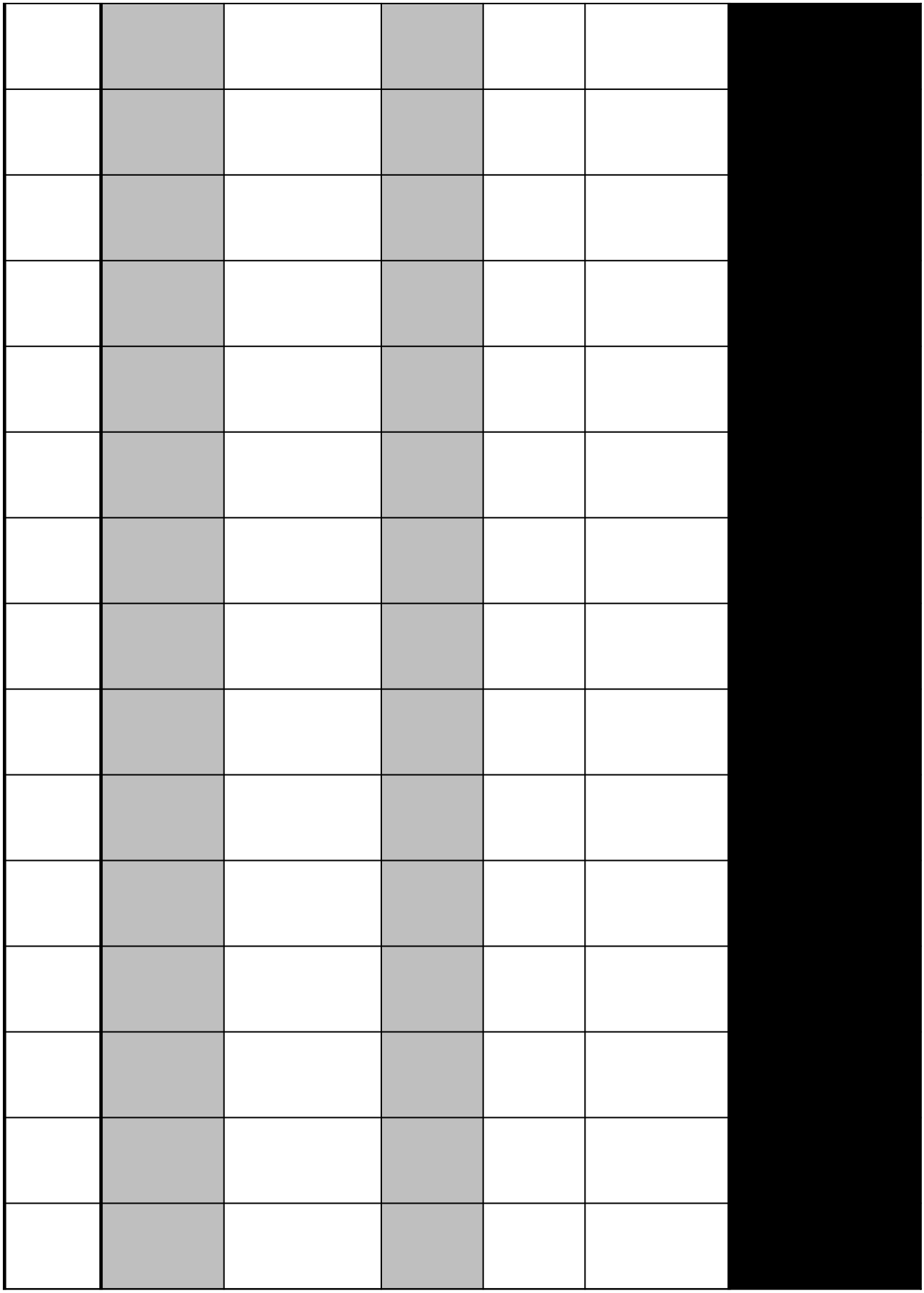
Dehydrator Vents

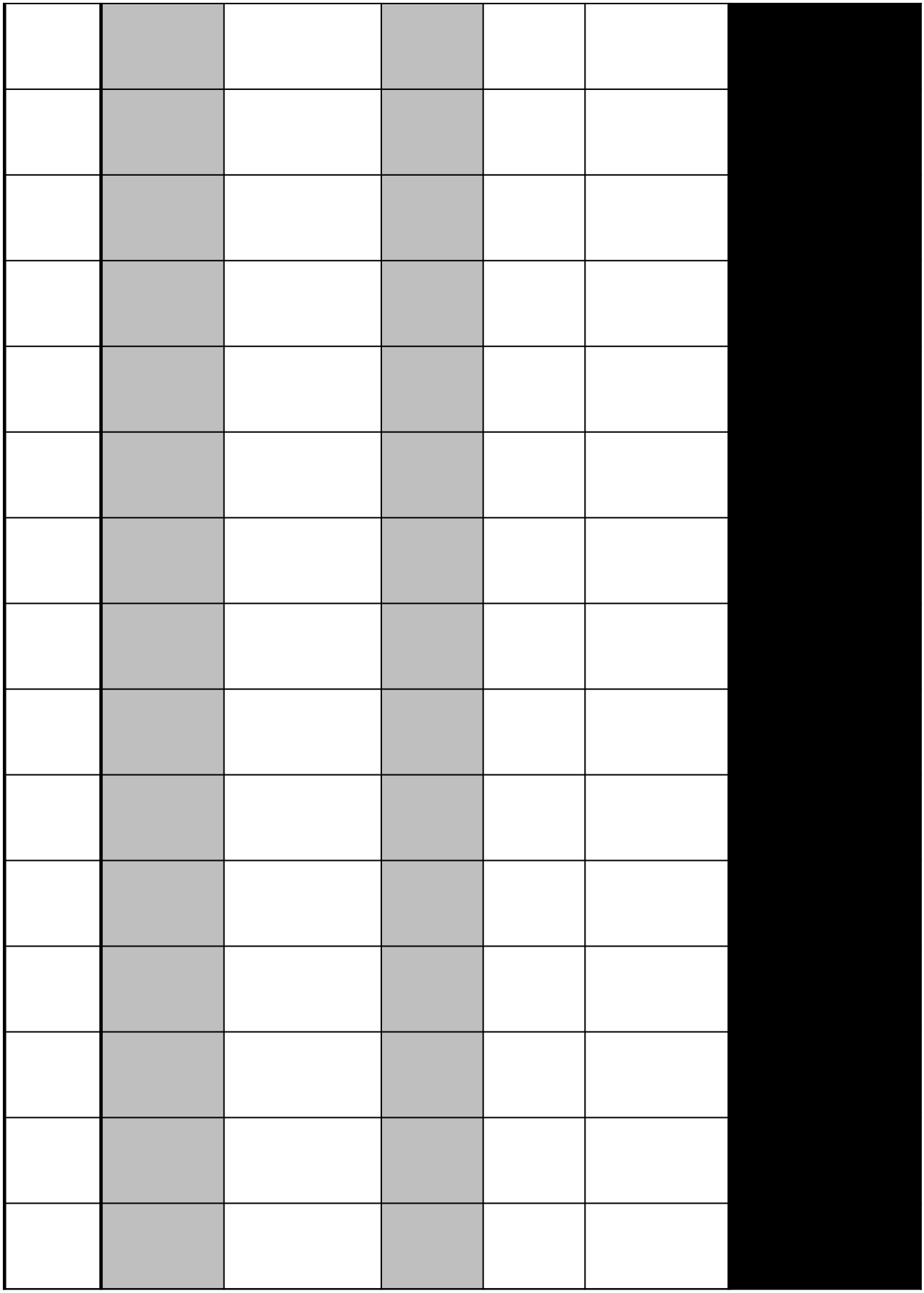
Install Flash Tank Separators on Glycol Dehydrators

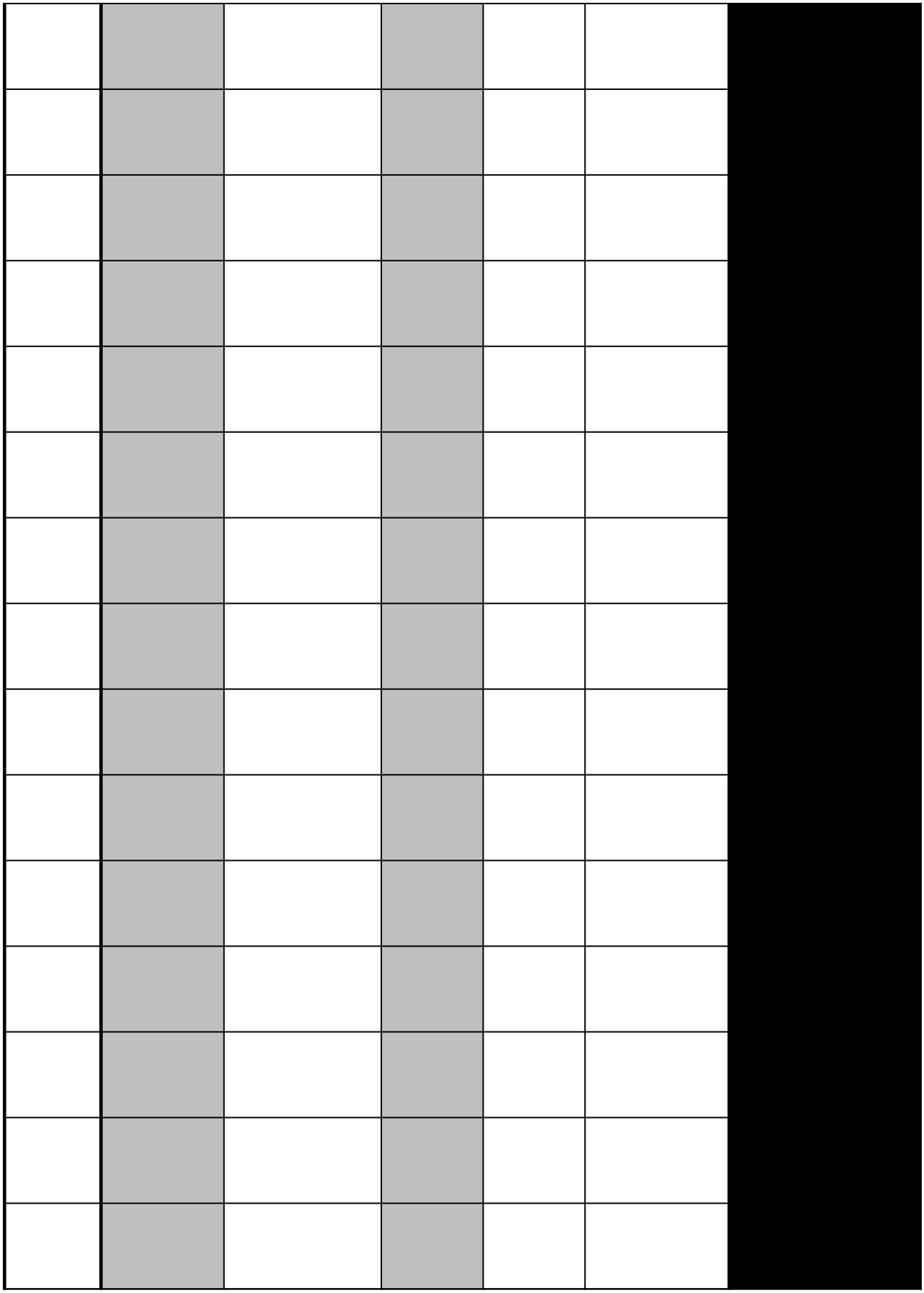
Start Year	Eligible Sunset Years for this Activity	Automatically calculate sunsets?	End Year	New or Ongoing?	Calculation Method: Default, Standard, or Other	Number of Flash Tank Separators Installed

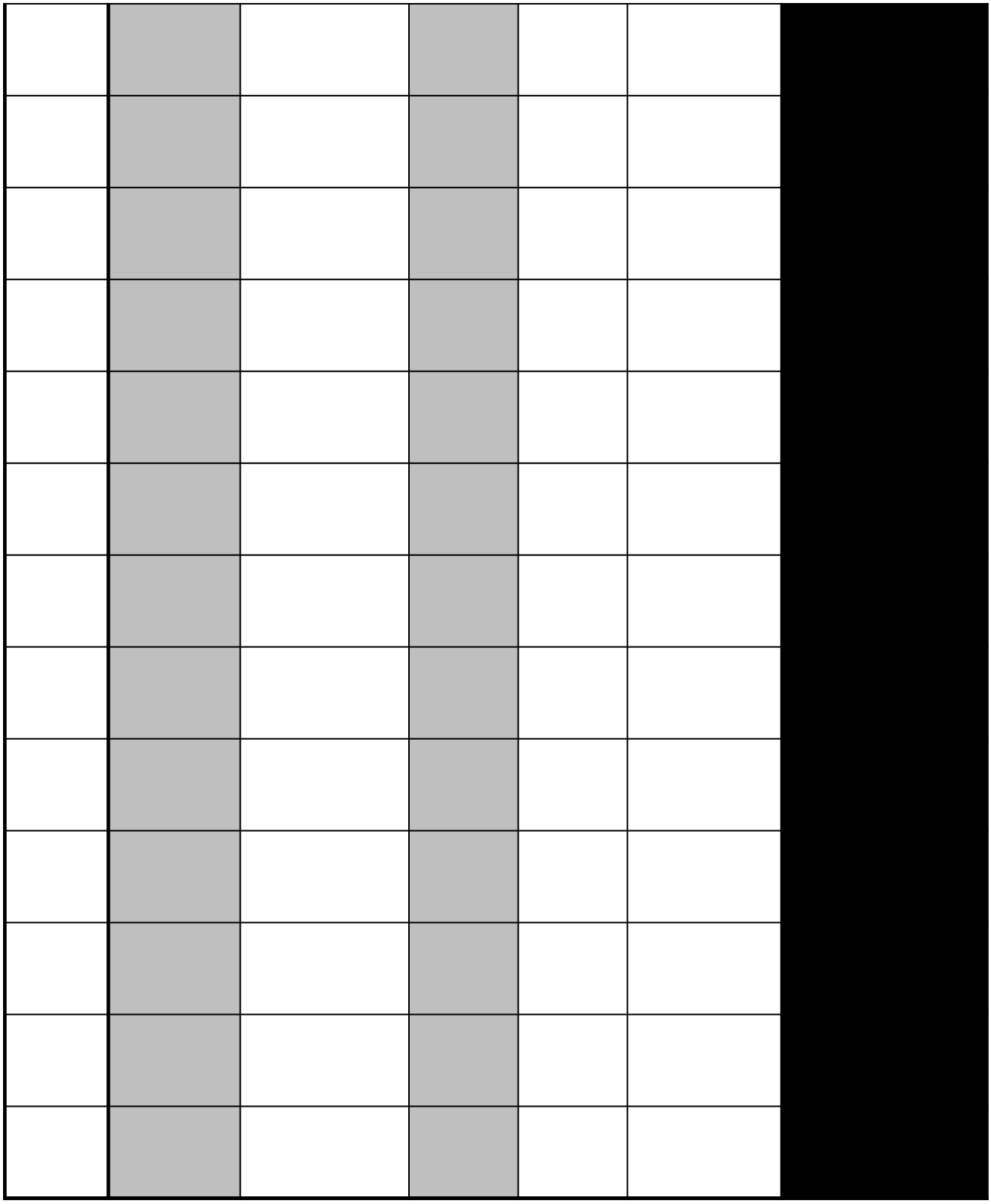












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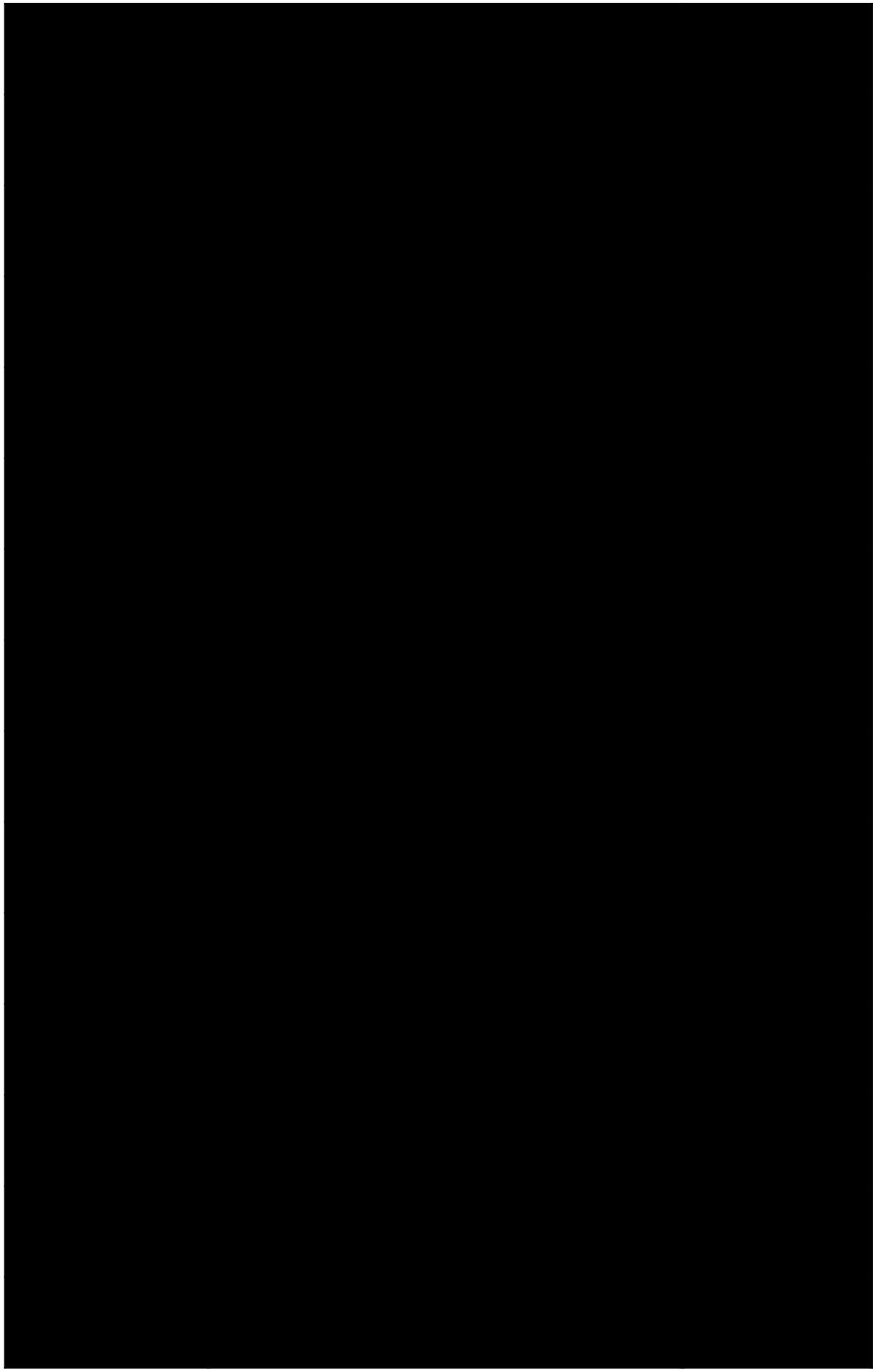
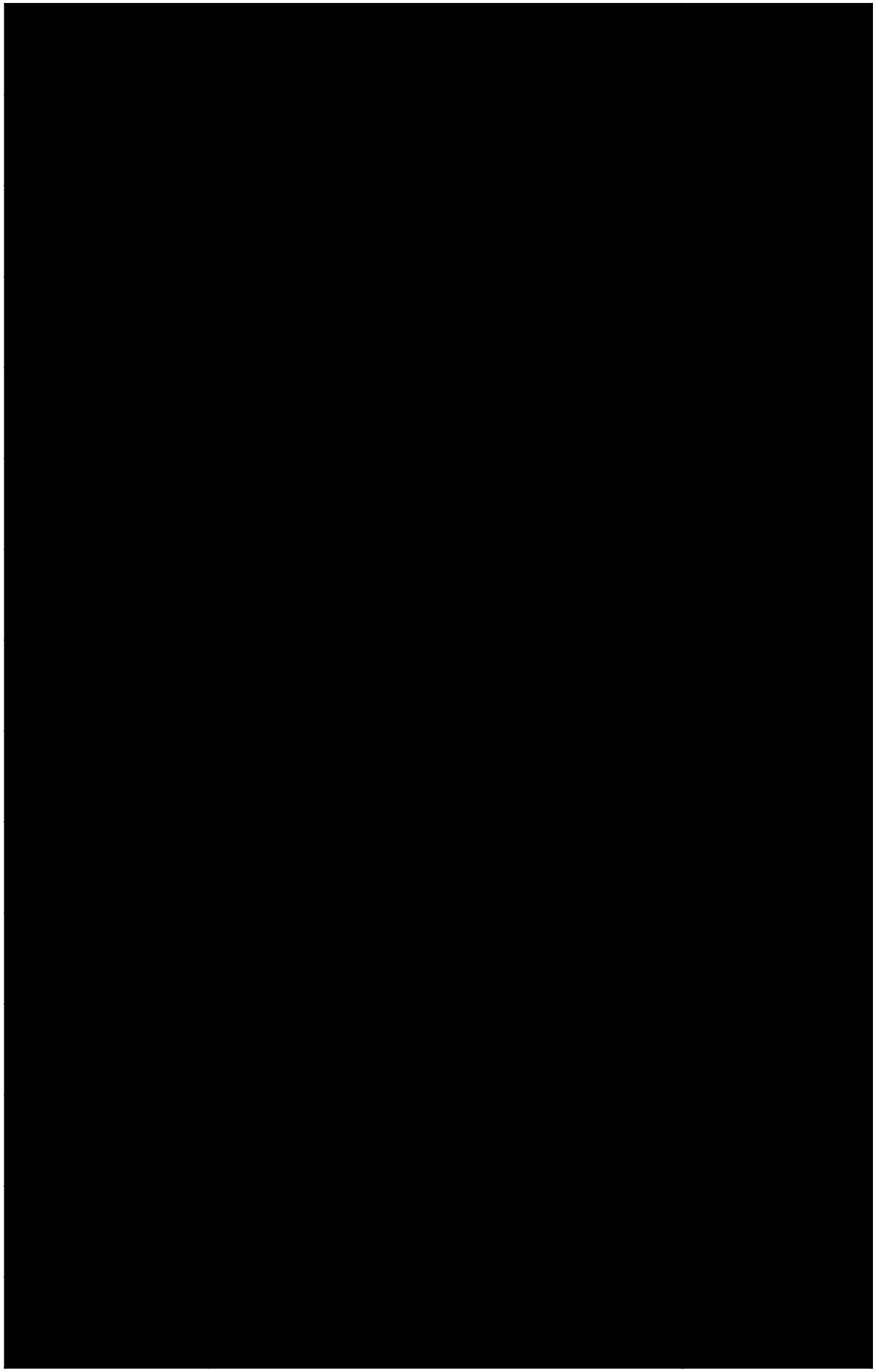
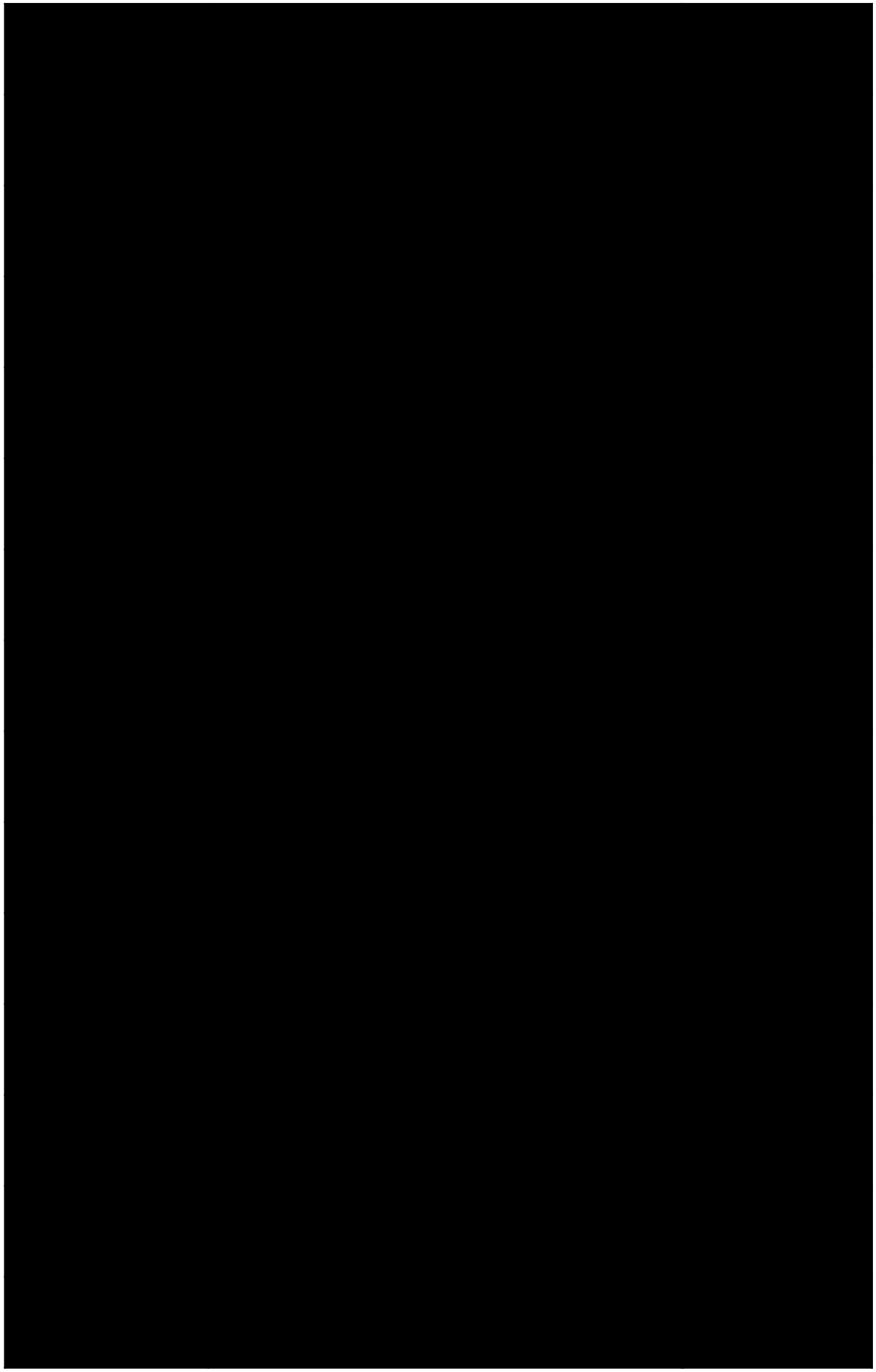
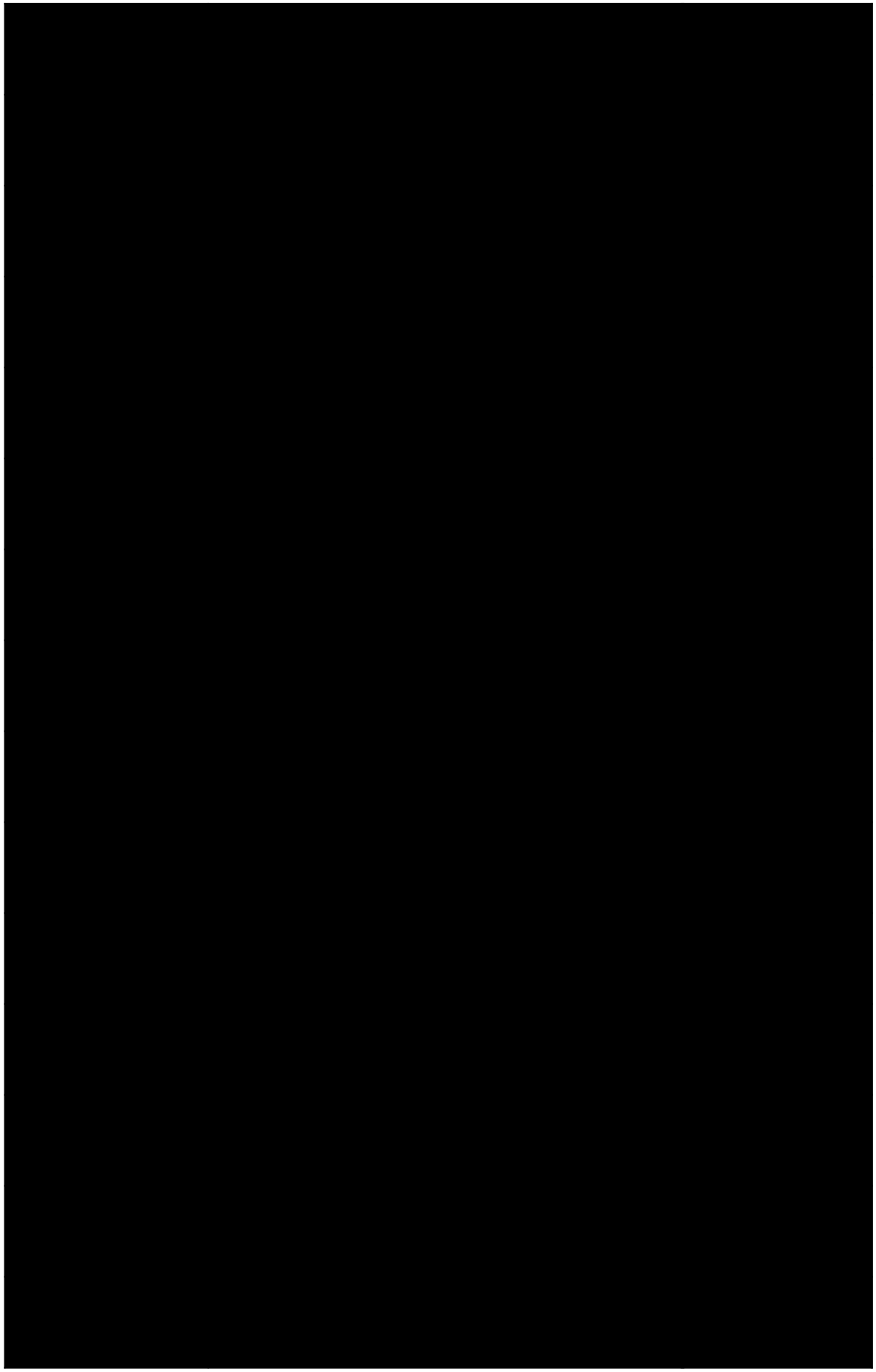
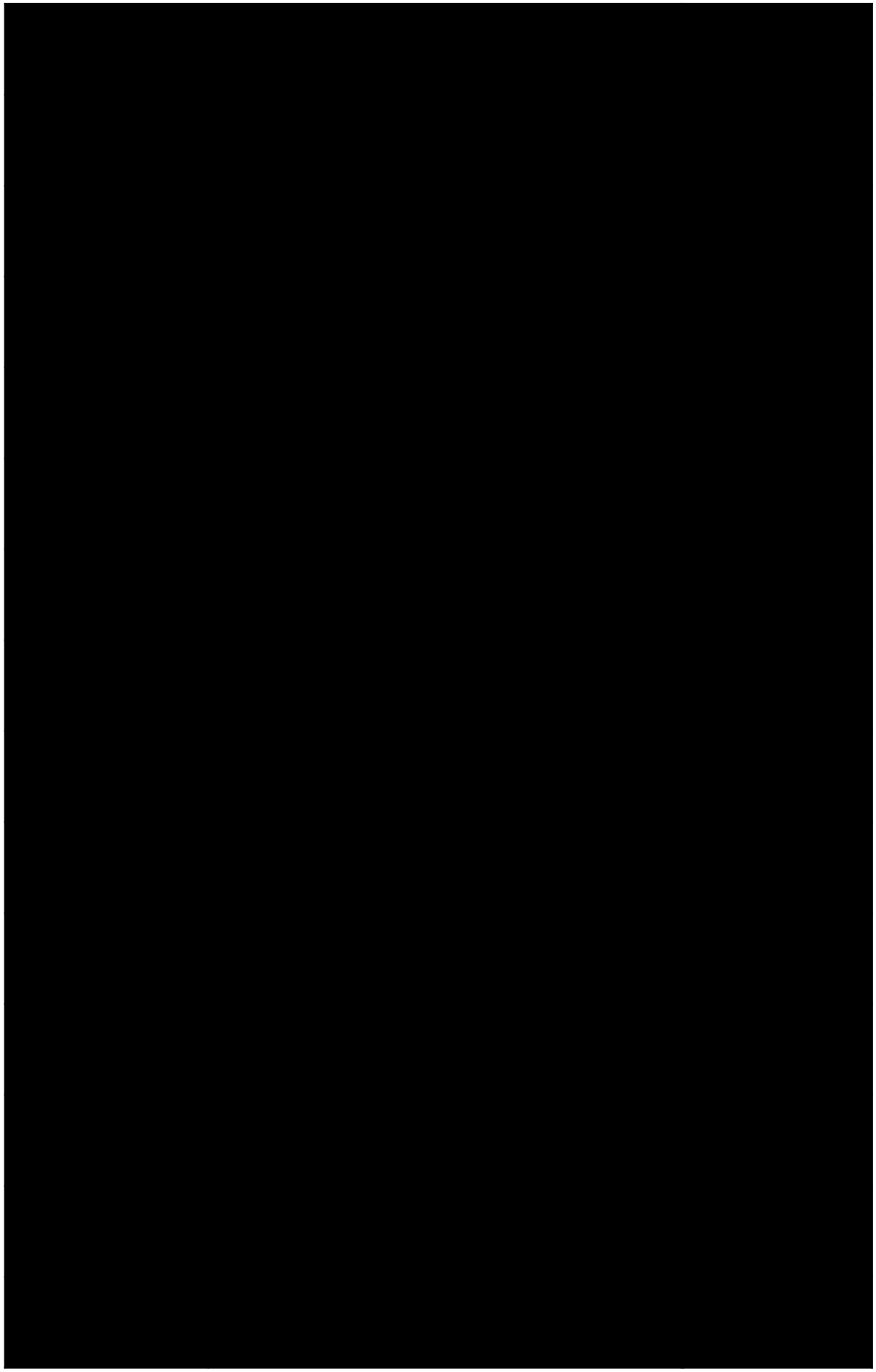
Calculate Using Default		
Average Gas Throughput (MMcf/yr)	Calculated Total Methane Emission Reduction Based on Default Values {[Number of Flash Tank Separators Installed]x[Average Gas Throughput]) x 170 scf/MMcf x 0.9] / 1000]}	TEG Circulation Rate (gal/hr)

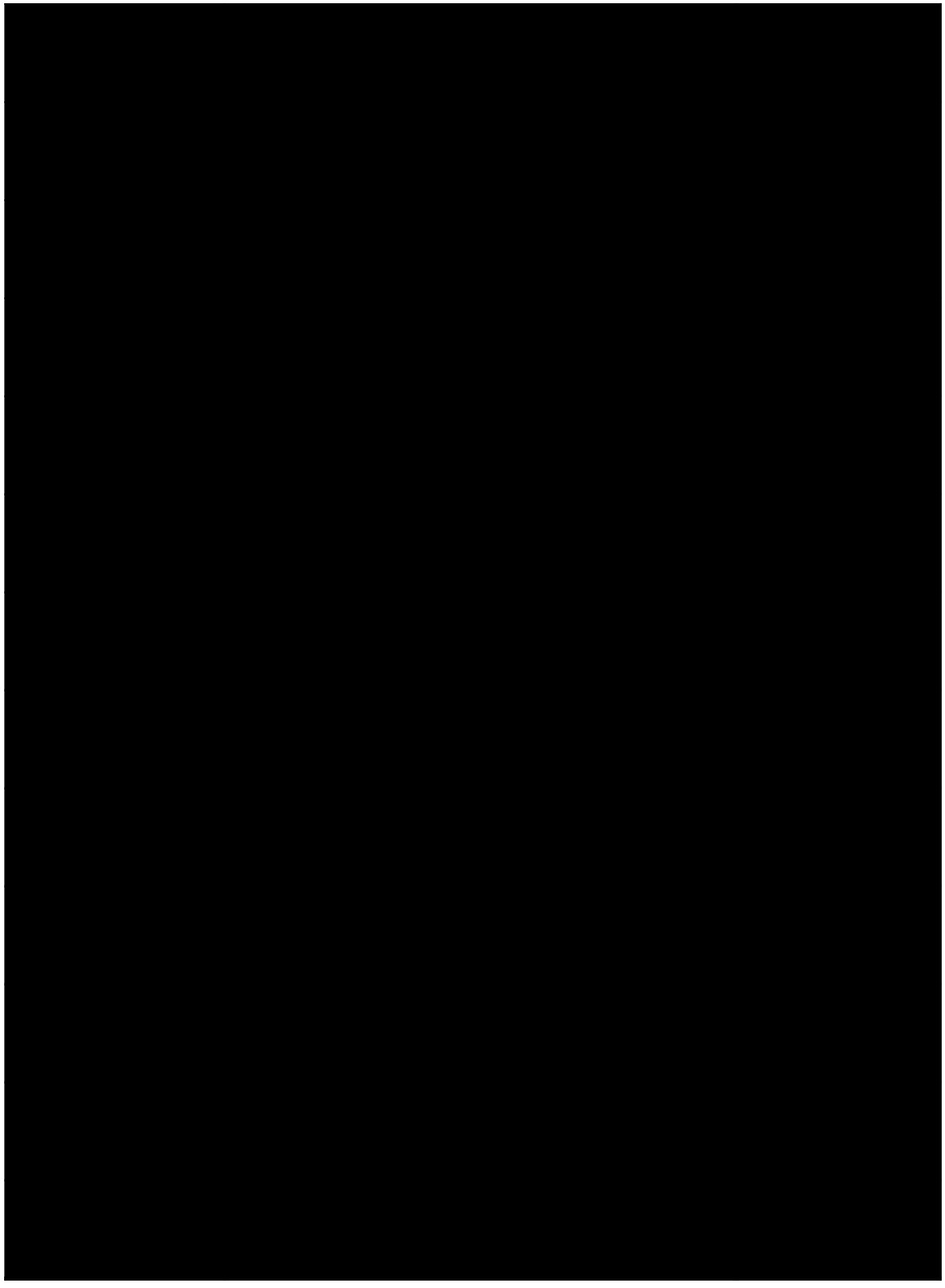












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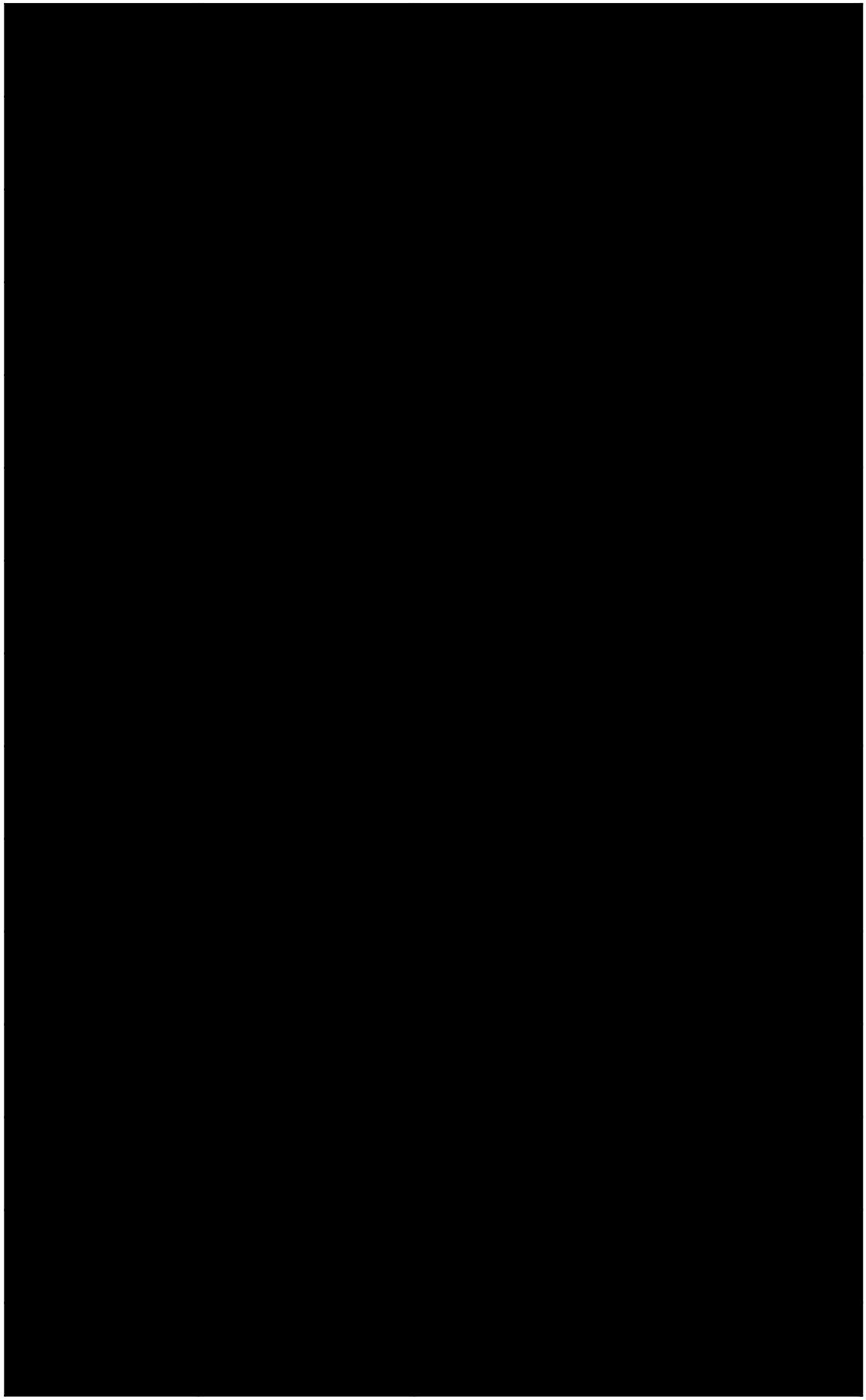
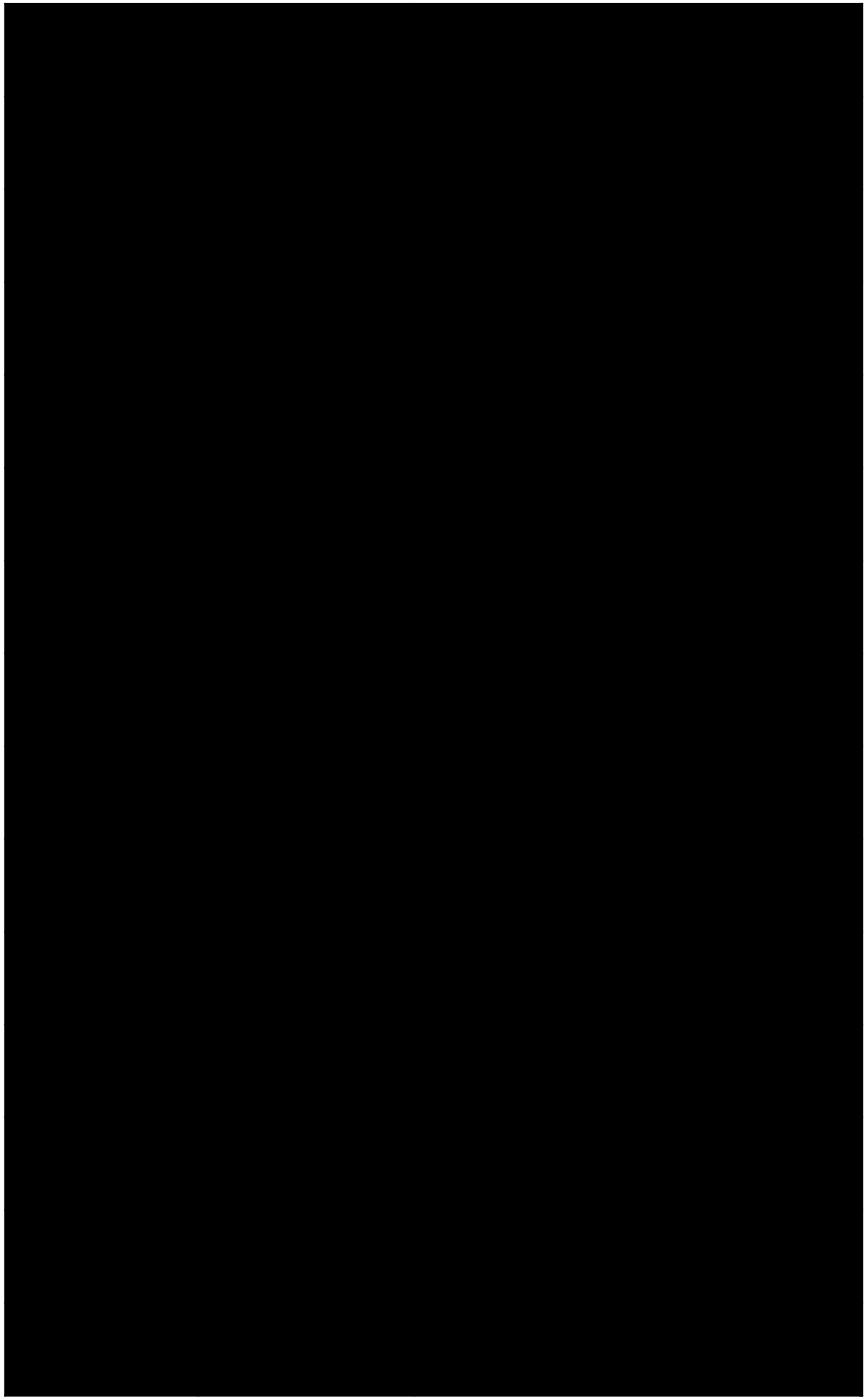
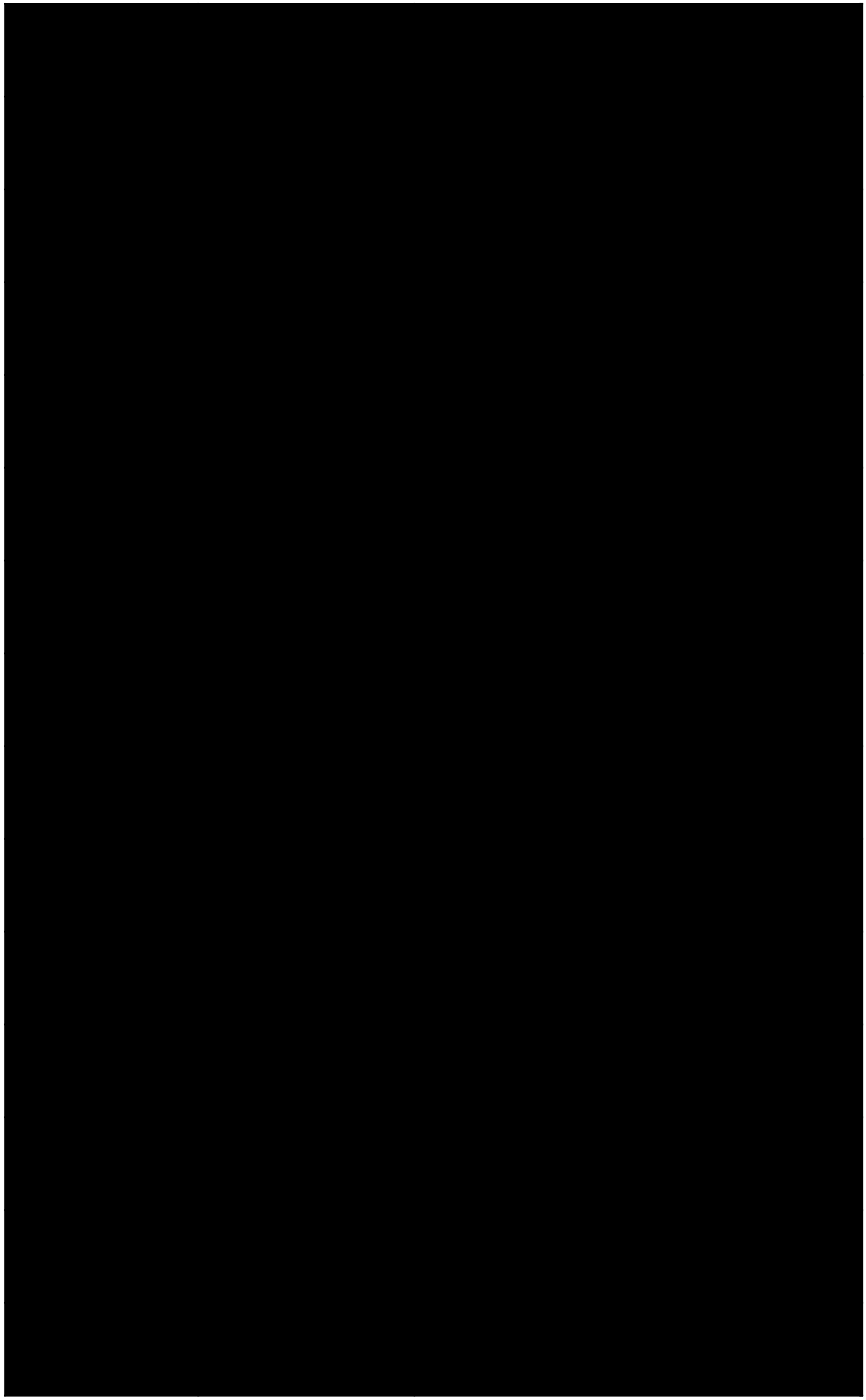
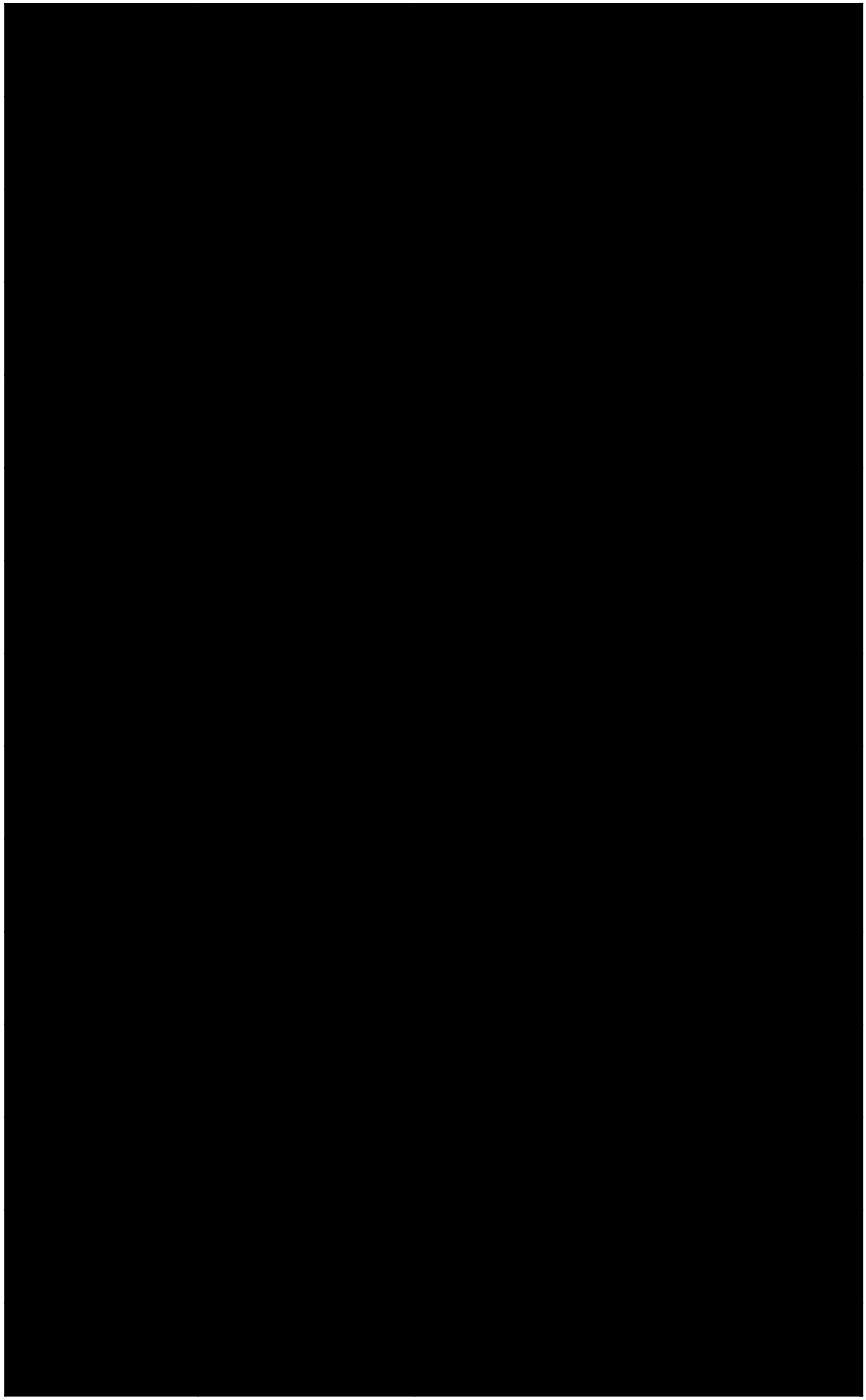
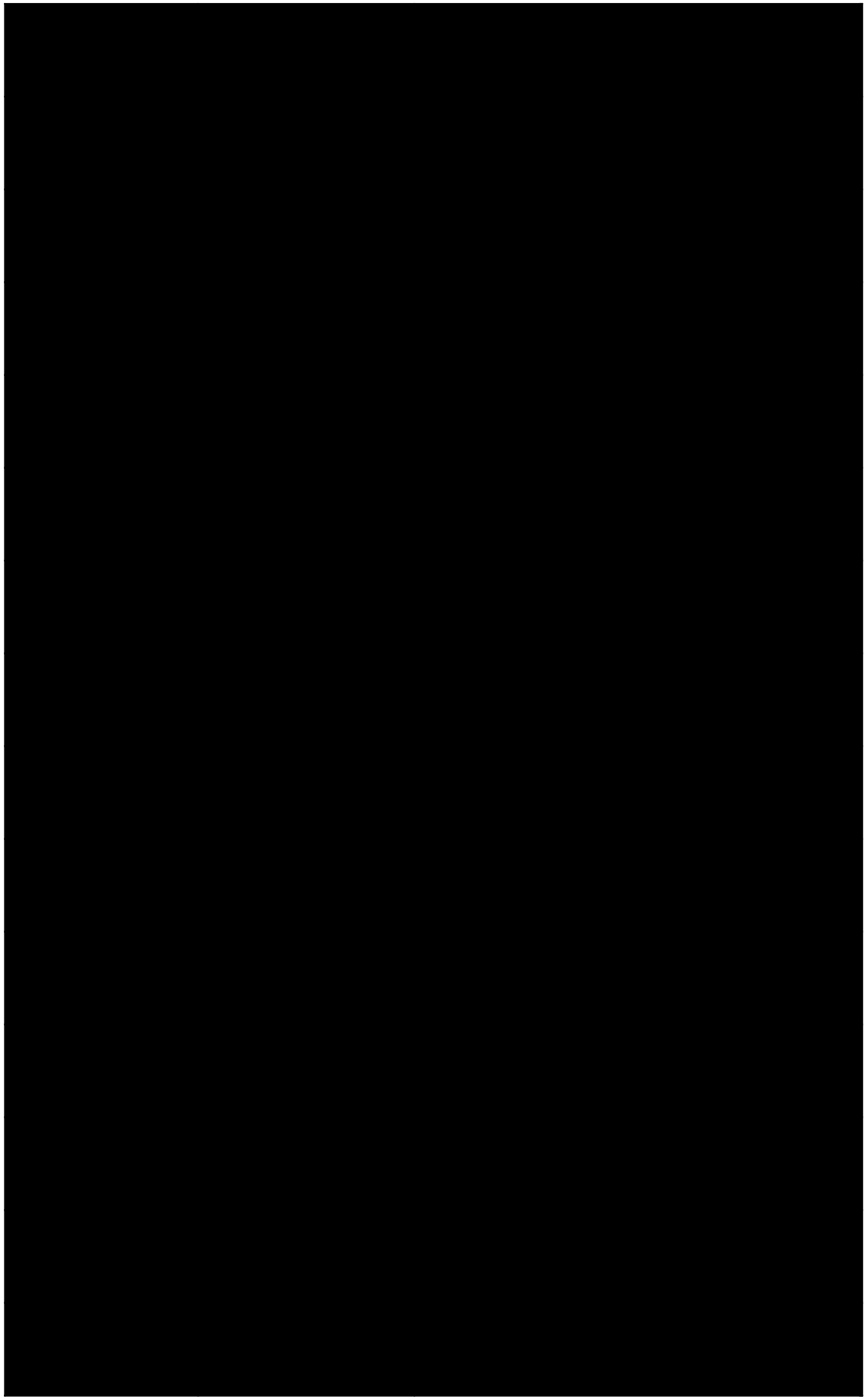
Calculate Using Standard Calculation		
Methane Entrainment Rate (scf/gal)	Hours of Operation (hrs/yr)	Calculated Total Methane Emission Reduction Based on Standard Calculation {[TEG Circulation Rate]x [Methane Entrainment Rate]x[Hours of Operation] x 0.90] / 1000}

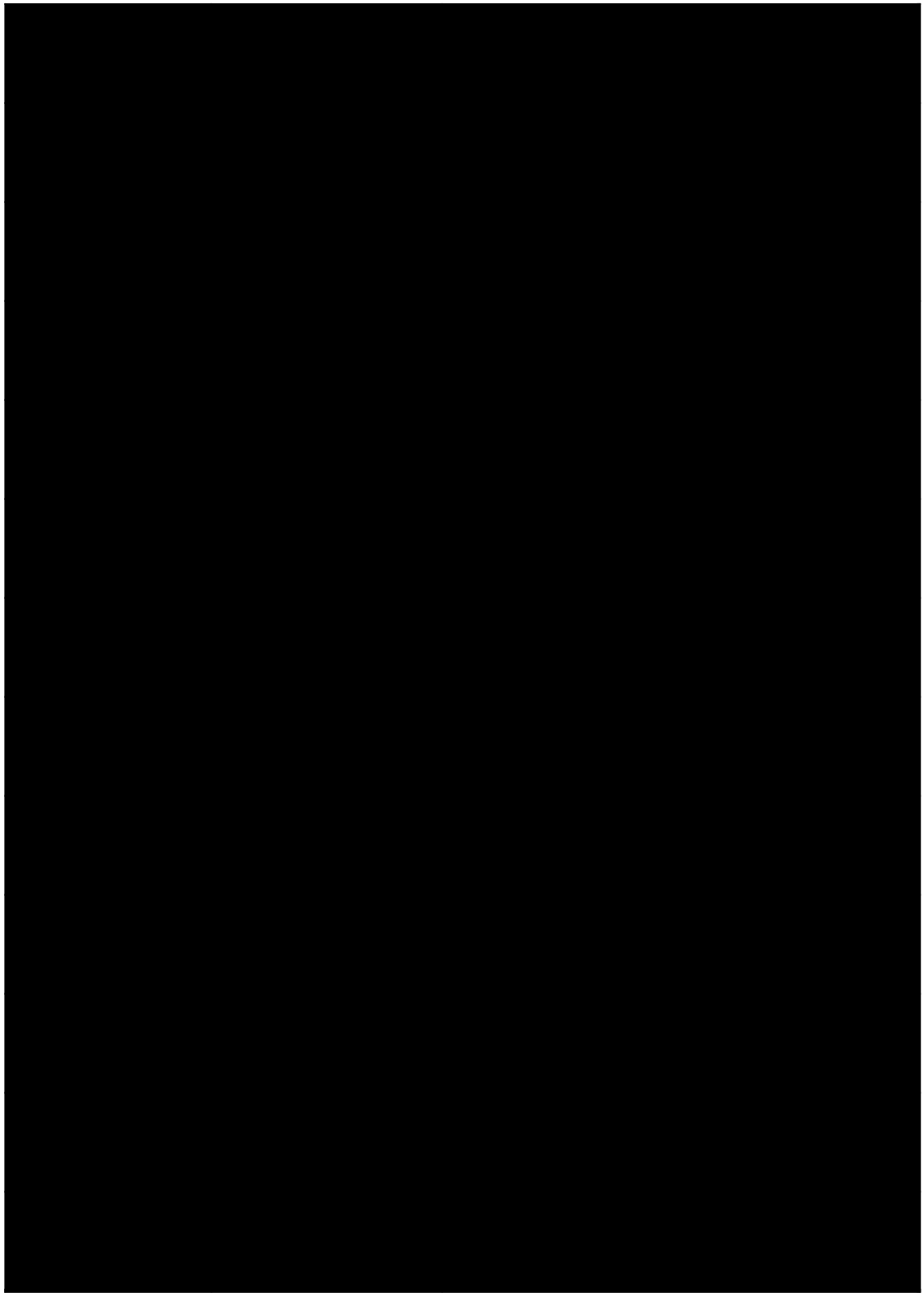




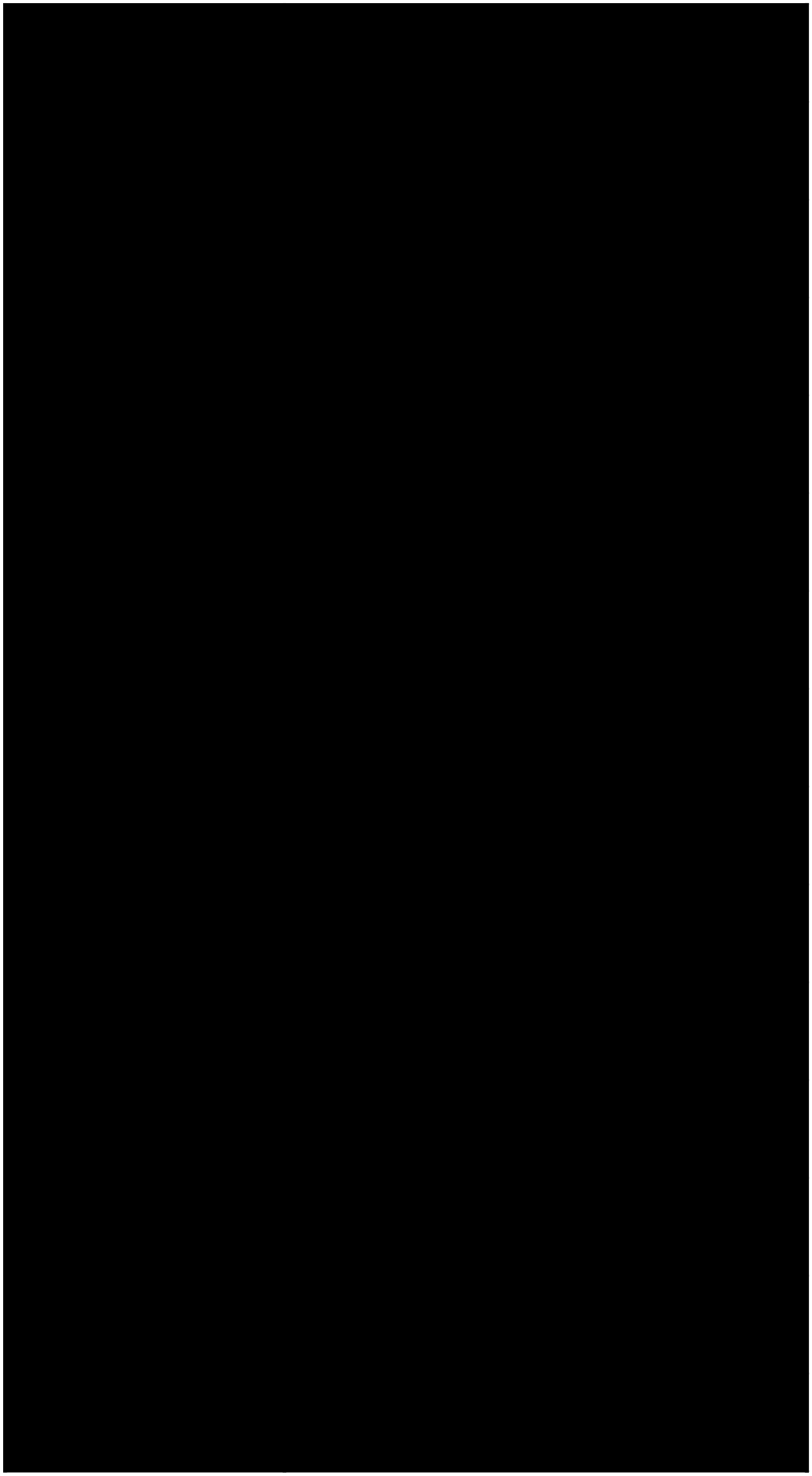


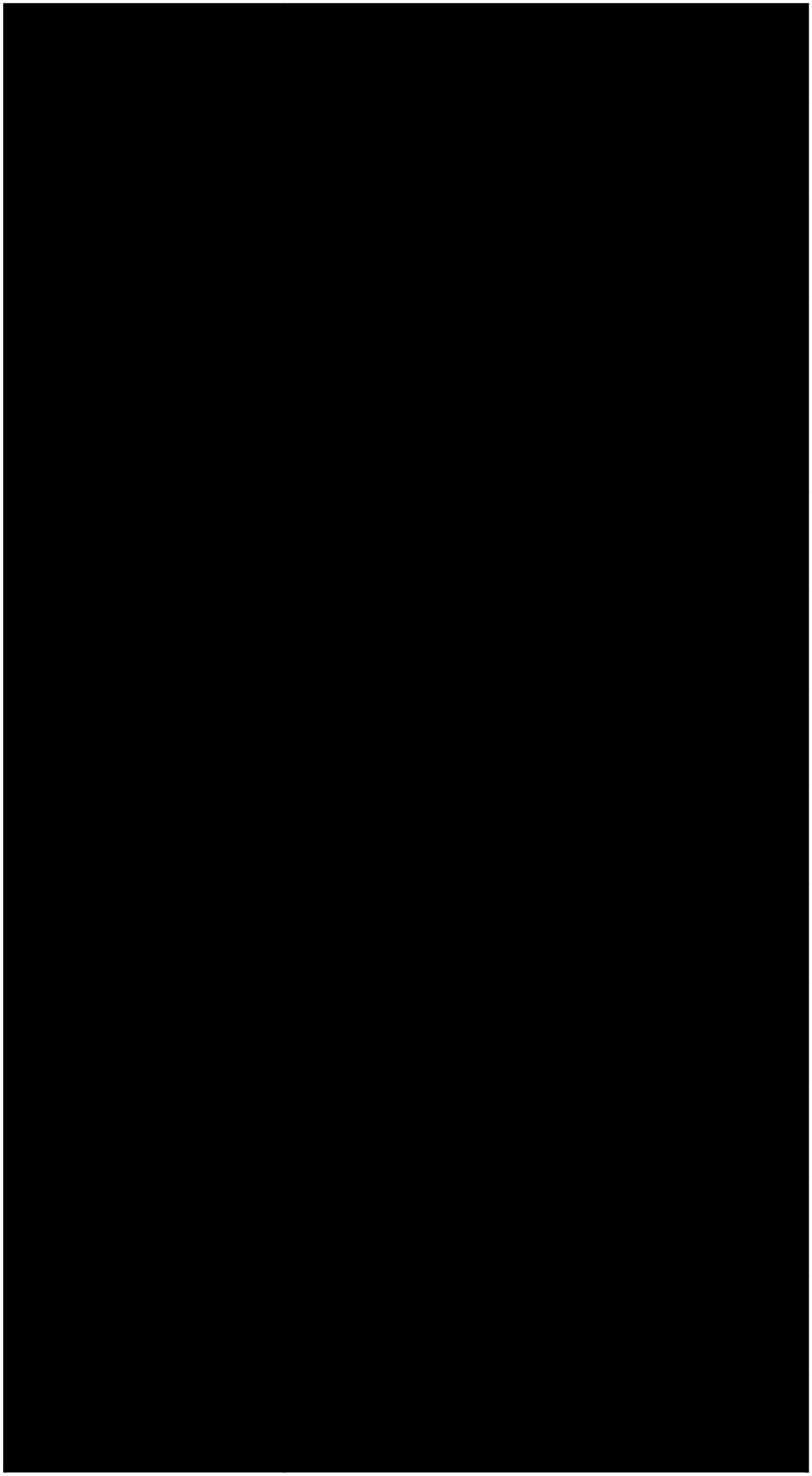


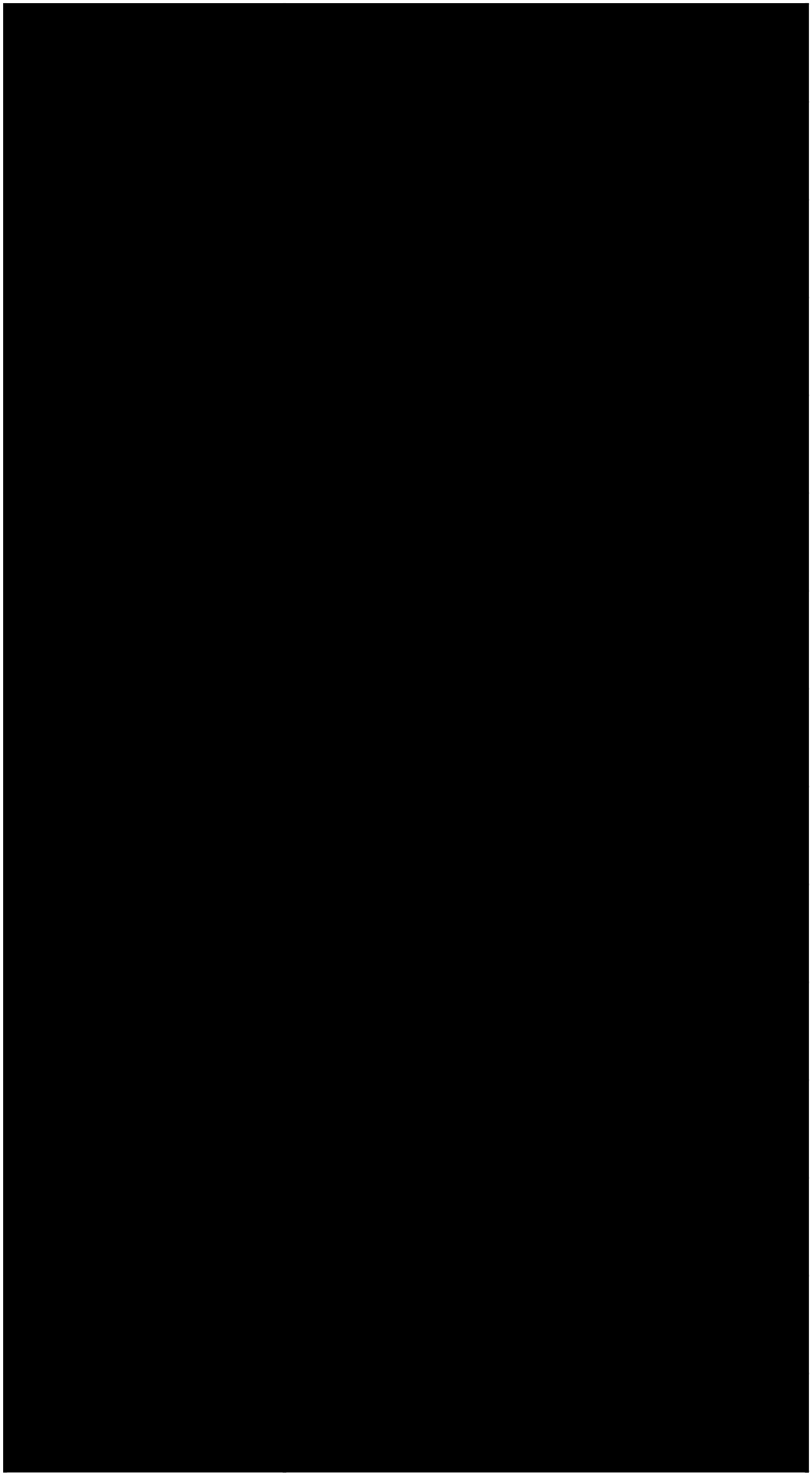


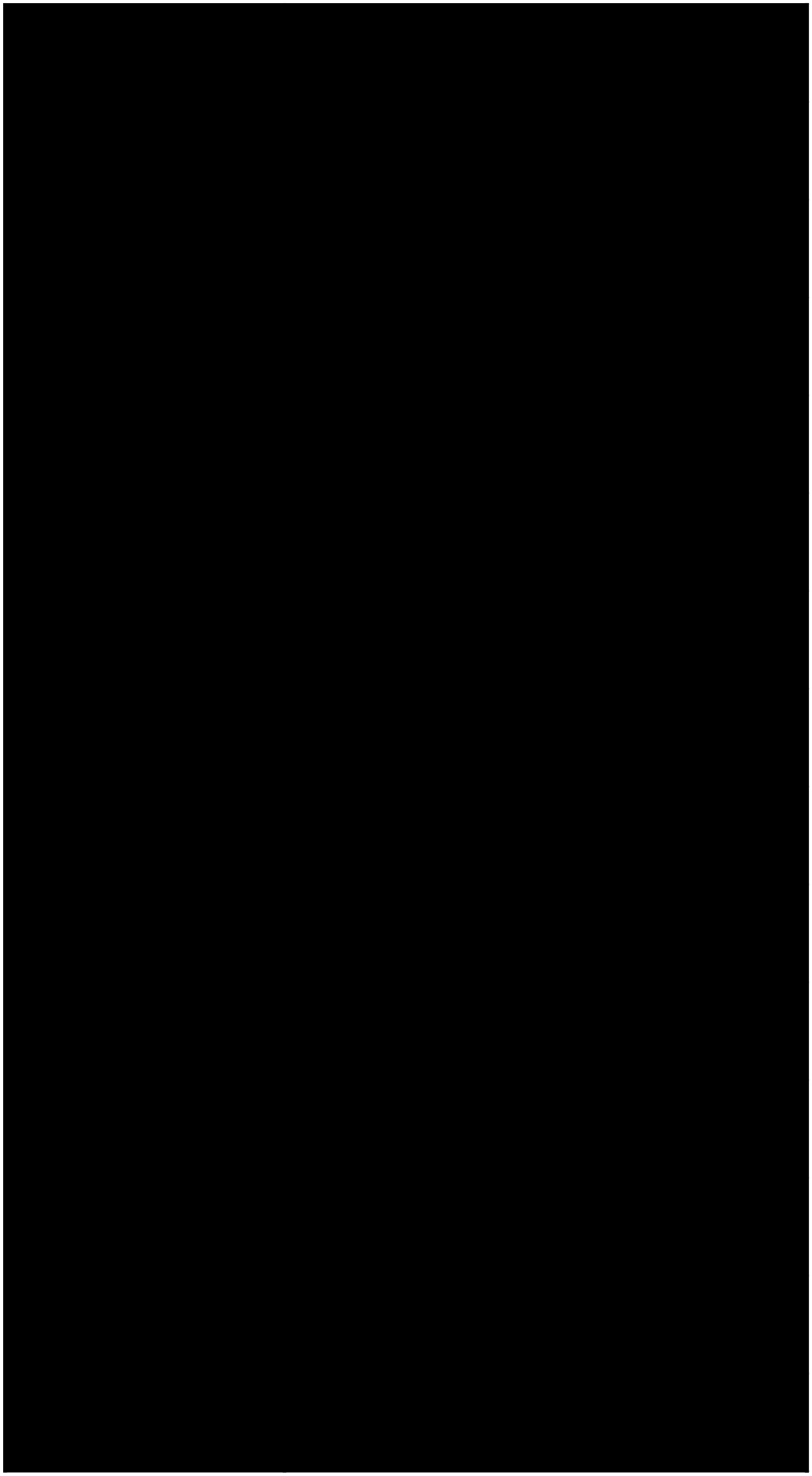


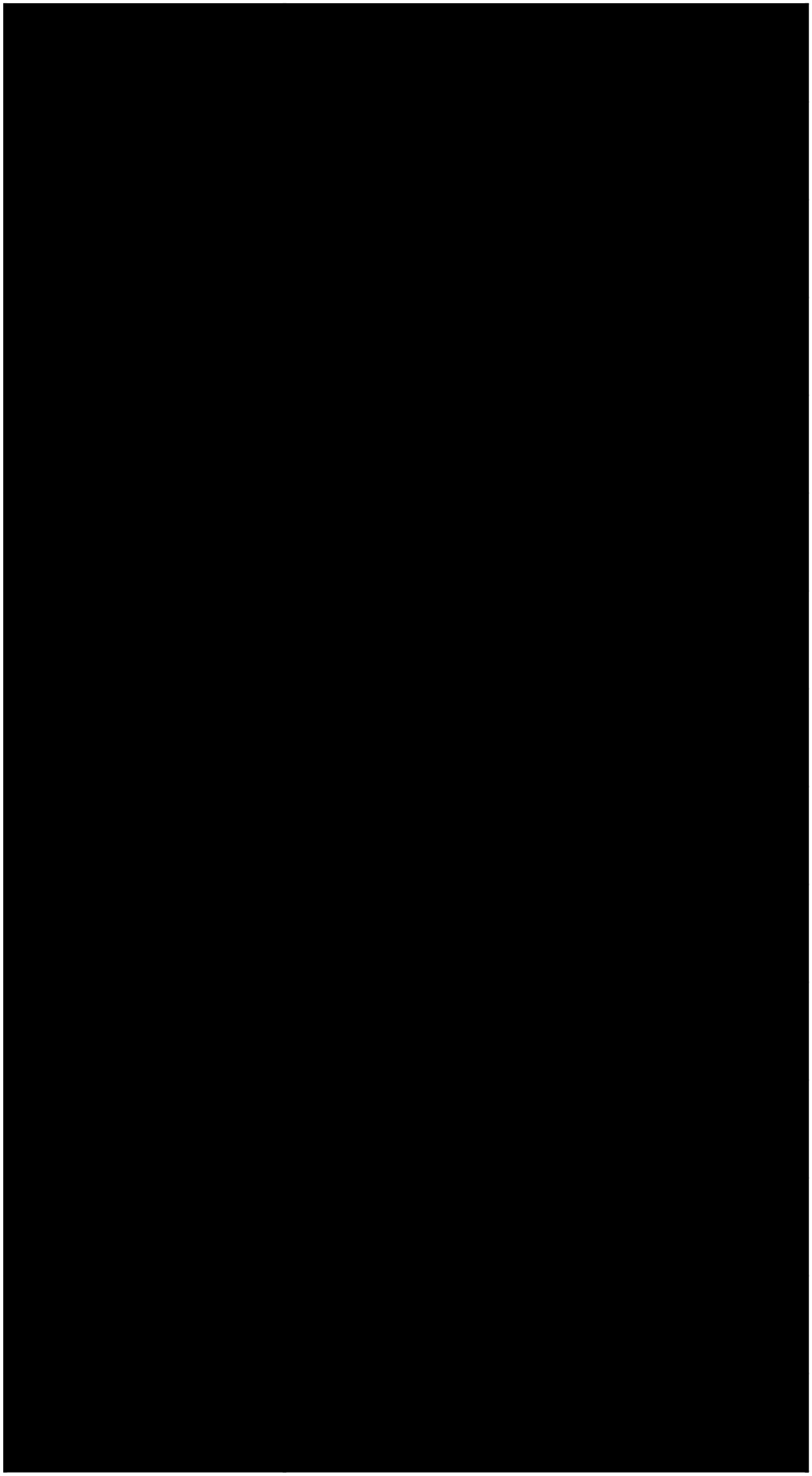
Other Calculation	
Total Methane Emission Reduction Based on Other Assumptions (Mcf/yr)	Explain Reduction Calculation Used

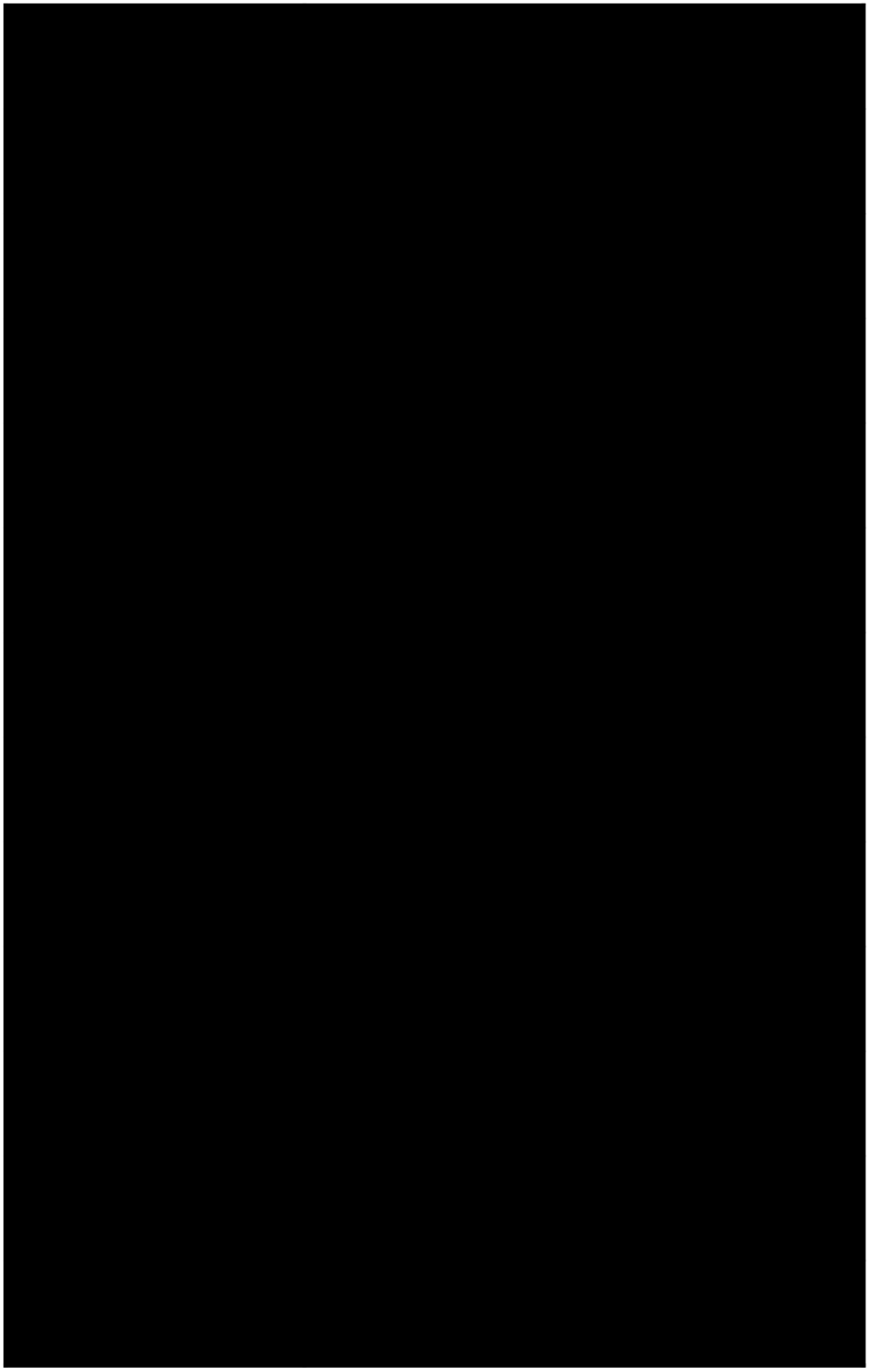












Provide additional comments or detail about how your company implemented this BMP

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

Pneumatic Controllers - Gathering and Boosting

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Convert high-bleed controllers to low-bleed; convert high-bleed or low-bleed controllers to zero-emitting controlle

				Convert high-bleed to low-bleed	
Start Year	New or Ongoing?	Average Methane Content of Gas (enter as a decimal; leave blank to use default 82.1% methane)	Average annual operating hours (leave blank to use default 8760 hours)	Number of controllers converted	Calculated Total Methane Emission Reductions (Mcf/yr)

Contents

ers; remove controllers from service with no replacement

Convert high-bleed to zero-bleed/remove from service		Convert low-bleed to zero-bleed/remove from service	
Number of controllers converted/removed from service	Calculated Total Methane Emission Reductions (Mcf/yr)	Number of controllers converted/removed from service	Calculated Total Methane Emission Reductions (Mcf/yr)

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

Pneumatic Controllers - Processing

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Convert high-bleed controllers to low-bleed; convert high-bleed or low-bleed controllers to zero-emitting controlle

				Convert high-bleed to low-bleed	
Start Year	New or Ongoing?	Average Methane Content of Gas (enter as a decimal; leave blank to use default 82.1% methane)	Average annual operating hours (leave blank to use default 8760 hours)	Number of controllers converted	Calculated Total Methane Emission Reductions (Mcf/yr)

Contents

ers; remove controllers from service with no replacement

Convert high-bleed to zero-bleed/remove from service		Convert low-bleed to zero-bleed/remove from service	
Number of controllers converted/removed from service	Calculated Total Methane Emission Reductions (Mcf/yr)	Number of controllers converted/removed from service	Calculated Total Methane Emission Reductions (Mcf/yr)

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

Additional Gathering & Processing Activities

Start Year	Select the Activity	New or Ongoing?	Eligible Sunset Years for this Activity

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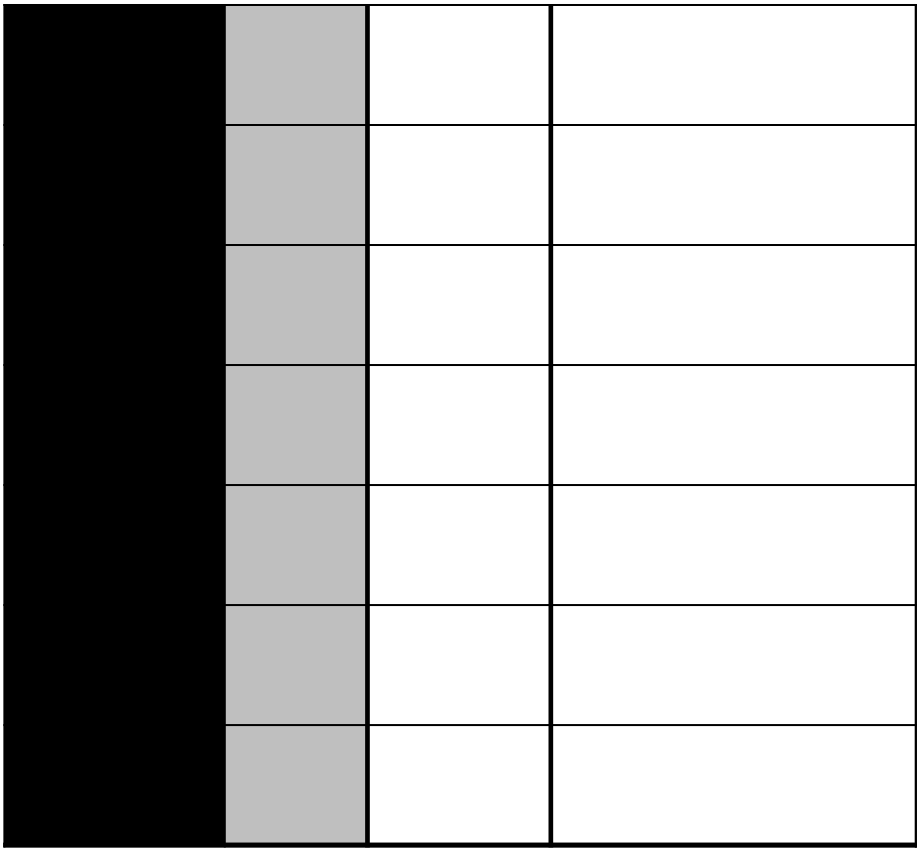
Automatically calculate sunsets (if Sunset Years >1)?	End Year	Total Methane Emission Reduction (Mcf/yr)	Basis for Emission Reduction Estimate



Explain Reduction Calculation Used

Describe how your company implemented this activity (e.g., number of units installed or other activities conducted)

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[1]	170	scf/MMcfd
Efficiency[2]	0.9	percent (expressed as decir

Pneumatic Controllers

Emission Factors - Gathering and Boosting *Source: 40 CFR 98, Table W-1A (Population Emissior*

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), https://www. 04/2018_ghgi_natural_gas*

Notes:

[1] Derived from “Methane Emissions from the Natural Gas Industry,” Volume 14, Glycol Dehydrators, co-spon

[2] Derived from “Optimize Glycol Circulation And Install Flash Tank Separators In Glycol Dehydrators” Lessons

›f the values used, please contact EPA at GasSTAR@epa.gov

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year

se Gas Emissions and Sinks: 1990-2016, Annex 3.6
epa.gov/sites/production/files/2018-
_systems_annex_tables.xlsx

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