# Total Emissions Summary Report

**University of California, Santa Barbara**

*(Emissions from California operations)*

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**Contact:** Jill Richardson  
**Industry Type:** Education - University  
**SIC Code:**  
**Description:** University of California Santa Barbara is a 1,055 acre campus with many types of buildings such as administration, light and heavy research, as well as campus housing, residence halls, and off-campus reserves.

**Primary Calculation Methodologies:** We use the default factors in CARROT.

**Organizational structure disclosure:** Department within UCSB.

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### VERIFIED EMISSIONS INFORMATION

**Reporting Year:** 2008  
**Reporting Scope:** CA  
**Reporting Protocol:** General Reporting Protocol, Version 3.1, (January 2009)  
**Reporting Boundaries:** Management Control - Operational Criteria  
**Direct Baseline Year**  
**Indirect Baseline Year**

---

#### Direct Emissions

<table>
<thead>
<tr>
<th>Source</th>
<th>CO2e</th>
<th>CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>HFCs*</th>
<th>PFCs*</th>
<th>SF6</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mobile Combustion</td>
<td>1,406.11</td>
<td>1,392.31</td>
<td>0.12</td>
<td>0.04</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00 metric ton</td>
</tr>
<tr>
<td>Stationary Combustion</td>
<td>18,864.38</td>
<td>18,815.95</td>
<td>1.77</td>
<td>0.04</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00 metric ton</td>
</tr>
<tr>
<td>Process Emissions</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00 -</td>
</tr>
<tr>
<td>Fugitive Emissions</td>
<td>29.76</td>
<td>0.00</td>
<td>0.00</td>
<td>0.02</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00 -</td>
</tr>
<tr>
<td><strong>TOTAL DIRECT</strong></td>
<td>20,300.24</td>
<td>20,208.25</td>
<td>1.89</td>
<td>0.07</td>
<td>0.02</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00 metric ton</td>
</tr>
</tbody>
</table>

* HFCs and PFCs are classes of greenhouse gases that include many compounds. These columns may reflect the total emissions of multiple HFC and PFC compounds, each of which has a unique Global Warming Potential (GWP). Emissions of each gas are first multiplied by their respective GWP and then summed in the total CO2-equivalent column.

#### Indirect Emissions

<table>
<thead>
<tr>
<th>Source</th>
<th>CO2e</th>
<th>CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purchased Electricity</td>
<td>31,315.35</td>
<td>31,179.92</td>
<td>1.30</td>
<td>0.35</td>
<td>metric ton</td>
</tr>
<tr>
<td>Purchased Steam</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>-</td>
</tr>
<tr>
<td>Purchased Heating and Cooling</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>-</td>
</tr>
<tr>
<td><strong>TOTAL INDIRECT</strong></td>
<td>31,315.35</td>
<td>31,179.92</td>
<td>1.30</td>
<td>0.35</td>
<td>metric ton</td>
</tr>
</tbody>
</table>

---

*This report includes emissions from California sources*
Total Emissions Summary Report
University of California, Santa Barbara
(Emissions from California operations)

De Minimis Emissions

<table>
<thead>
<tr>
<th>Unit</th>
<th>SF6</th>
<th>PFCs*</th>
<th>HFCs*</th>
<th>CH4</th>
<th>N2O</th>
<th>CO2</th>
<th>CO2e</th>
<th>SF6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arbor - Chilled Displays</td>
<td>1.75</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>1.75</td>
</tr>
<tr>
<td>Bio II - Chiller</td>
<td>471.74</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.36</td>
<td>0.00</td>
<td>0.00</td>
<td>471.74</td>
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<tr>
<td>Bren - Freezer</td>
<td>4.78</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>4.78</td>
</tr>
<tr>
<td>Fire Extinguishers - Clean Agent</td>
<td>0.31</td>
<td>0.31</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.31</td>
</tr>
<tr>
<td>Fleet Vehicles A/C</td>
<td>5.90</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>5.90</td>
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<td>Gas Cylinders</td>
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<td>0.67</td>
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<td>0.00</td>
<td>0.00</td>
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<td>LSB - Freezer</td>
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<td>0.00</td>
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<td>2.62</td>
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<td>MSRB - Cold Rooms</td>
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<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>4.90</td>
</tr>
<tr>
<td>TOTAL DEMINIMIS</td>
<td>492.68</td>
<td>0.98</td>
<td>0.00</td>
<td>0.00</td>
<td>0.37</td>
<td>0.00</td>
<td>0.00</td>
<td>492.68</td>
</tr>
</tbody>
</table>

Percentage of Total Inventory: 0.95%

In 2007, one off-campus building, Santa Catalina Residential Hall, was excluded from the indirect emissions calculations, but included in the 2008 report. It is a small percentage of the overall indirect emissions, but a significant difference in off-campus electrical use from 2007 to 2008.

*The Movement Report documents changes in the members inventory. This data is not verified but must be completed by the member to help track changes in emissions over time.

VERIFICATION INFORMATION

Verification Company: SCS Engineers
Verifier Name: Cassandra B. Drotman
Lead Verifier Name: Raymond H. Huff, R.E.A.

The University of California, Santa Barbara (UCSB) submitted their 2008 greenhouse gas (GHG) emission inventory report to SCS Engineers (SCS) for verification. SCS reviewed the emission inventory against the Registry's General Reporting Protocol (Version 3.1, January 2009), following the procedures outlined in the Registry's General Verification Protocol (Version 3.0, August 2008).

On December 16, 2009, SCS issued a verification report to UCSB documenting verification activities as well as material/immaterial misstatements in the GHG inventory. No material misstatements were identified. SCS uploaded a completed verification opinion and verification activities checklist to CCAR on December 16, 2009.

Based on the information provided, SCS is able to verify UCSB's 2008 annual emissions report without qualification.

This report includes emissions from California sources
Total Emissions Summary Report
University of California, Santa Barbara
(Emissions from California operations)

Report Generated On: 01/14/2010 01:20 pm
Report Revision #: 3

Date Submitted: 12/16/09 01:20 pm
Verifier Comments:

OPTIONAL INFORMATION
Information in this section is voluntarily provided by the participant for public information, but is not required and thus, not verified under California Registry protocols.

<table>
<thead>
<tr>
<th>Optional Emissions</th>
<th>CO2e</th>
<th>CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>HFCs*</th>
<th>PFCs*</th>
<th>SF6</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biogenic - Mobile</td>
<td>0.77</td>
<td>0.75</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>metric ton</td>
</tr>
<tr>
<td>Employee Commuting and Business Travel</td>
<td>32,639.00</td>
<td>32,639.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>metric ton</td>
</tr>
<tr>
<td>TOTAL OPTIONAL</td>
<td>32,639.77</td>
<td>32,639.75</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>metric ton</td>
</tr>
</tbody>
</table>

Emissions Efficiency metric:
Emissions Management Programs:
Emissions Reduction Projects:
Emissions Reduction Goals:

REFERENCE DOCUMENTS

<table>
<thead>
<tr>
<th>Title</th>
<th>Author</th>
<th>Document Status</th>
<th>Publish Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Verification Activity Log</td>
<td>SCS Engineers</td>
<td>Private</td>
<td>12/16/2009 12:00:00AM</td>
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</tbody>
</table>
## FACILITY INFORMATION

<table>
<thead>
<tr>
<th>Facility Name</th>
<th>Airline Travel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facility ID</td>
<td>2008</td>
</tr>
<tr>
<td>Reporting Year</td>
<td>2008</td>
</tr>
<tr>
<td>Facility Address</td>
<td>Santa Barbara, CA 93106, United States</td>
</tr>
<tr>
<td>Facility PO Box</td>
<td></td>
</tr>
<tr>
<td>Facility Contact Person</td>
<td>Jill Richardson</td>
</tr>
<tr>
<td>Facility Contact Phone</td>
<td>805-893-8367</td>
</tr>
<tr>
<td>Facility Contact Email</td>
<td><a href="mailto:jill.richardson@vcadmin.ucsb.edu">jill.richardson@vcadmin.ucsb.edu</a></td>
</tr>
<tr>
<td>Facility Description</td>
<td></td>
</tr>
<tr>
<td>SIC Code</td>
<td></td>
</tr>
<tr>
<td>NAIC Code</td>
<td></td>
</tr>
<tr>
<td>Industry Type</td>
<td>Education - University</td>
</tr>
</tbody>
</table>

### Direct Emissions

<table>
<thead>
<tr>
<th></th>
<th>CO2e</th>
<th>CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>HFCs*</th>
<th>PFCs*</th>
<th>SF6</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mobile Combustion</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>-</td>
</tr>
<tr>
<td>Stationary Combustion</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>-</td>
</tr>
<tr>
<td>Process Emissions</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>-</td>
</tr>
<tr>
<td>Fugitive Emissions</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>-</td>
</tr>
<tr>
<td>TOTAL DIRECT</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>-</td>
</tr>
</tbody>
</table>

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### Indirect Emissions

<table>
<thead>
<tr>
<th></th>
<th>CO2e</th>
<th>CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purchased Electricity</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>-</td>
</tr>
<tr>
<td>Purchased Steam</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>-</td>
</tr>
<tr>
<td>Purchased Heating and Cooling</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>-</td>
</tr>
<tr>
<td>TOTAL INDIRECT</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>-</td>
</tr>
</tbody>
</table>

### De Minimis Detail

<table>
<thead>
<tr>
<th></th>
<th>CO2e</th>
<th>CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>HFCs*</th>
<th>PFCs*</th>
<th>SF6</th>
<th>Unit</th>
</tr>
</thead>
</table>

Percentage of Total Inventory:

### Optional Emissions

<table>
<thead>
<tr>
<th>Optional Emissions</th>
<th>CO2e</th>
<th>CO2</th>
<th>CH4</th>
<th>N2O</th>
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<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employee Commuting and Busin</td>
<td>32,639.00</td>
<td>32,639.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>metric ton</td>
</tr>
<tr>
<td>TOTAL OPTIONAL</td>
<td>32,639.00</td>
<td>32,639.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>metric ton</td>
</tr>
</tbody>
</table>

**Facility Emission Reduction Goals:**

Increase the amount of teleconferencing on campus to reduce the number of flights needed by faculty and staff.

**Environmental Programs/Policies:**

**Other Public Information:**

**Primary Calculation Methodologies:**

Calculated by converting amount spent on airline travel across campus multiplied by average cents per mile to give miles traveled.

**Equity Share:**

100.00

*This report includes emissions from California sources*
<table>
<thead>
<tr>
<th>Source</th>
<th>Emission Category</th>
<th>Calc. Method</th>
<th>Fuel Name</th>
<th>Fuel/Mileage</th>
<th>Emission Category</th>
<th>Methodol./ Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Airplanes</td>
<td>Employee Commuting and Business Travel</td>
<td>Pre-Calc</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Used the amount of dollars spent on airline travel multiplied by the average cents per passenger mile (corrected by 20% for taxes/fees). Then used CleanAir CoolPlanet calculator (which uses miles) to convert to kgCO2, then MTCO2.

This report includes emissions from California sources.
## FACILITY INFORMATION

<table>
<thead>
<tr>
<th>Facility Name</th>
<th>Diesel Emergency Generators</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facility ID</td>
<td>2008</td>
</tr>
<tr>
<td>Reporting Year</td>
<td>2008</td>
</tr>
<tr>
<td>Facility Address</td>
<td>Santa Barbara, CA 93106, United States</td>
</tr>
<tr>
<td>Facility PO Box</td>
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<table>
<thead>
<tr>
<th>Source</th>
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</thead>
<tbody>
<tr>
<td>Mobile Combustion</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td></td>
</tr>
<tr>
<td>Stationary Combustion</td>
<td>91.45</td>
<td>90.89</td>
<td>0.01</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>metric ton</td>
</tr>
<tr>
<td>Process Emissions</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td></td>
</tr>
<tr>
<td>Fugitive Emissions</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td></td>
</tr>
<tr>
<td>TOTAL DIRECT</td>
<td>91.45</td>
<td>90.89</td>
<td>0.01</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
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</tr>
</tbody>
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<th>PFCs*</th>
<th>SF6</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Purchased Electricity</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Purchased Steam</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Purchased Heating and Cooling</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL INDIRECT</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### De Minimis Detail

<table>
<thead>
<tr>
<th>Source</th>
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<th>CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>HFCs*</th>
<th>PFCs*</th>
<th>SF6</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Optional Emissions</td>
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<td>0.00</td>
<td>0.00</td>
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<tr>
<td>TOTAL OPTIONAL</td>
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<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td></td>
</tr>
</tbody>
</table>

**Facility Emission Reduction Goals:**

**Environmental Programs/Policies:**

**Other Public Information:**

**Primary Calculation Methodologies:**

**Equity Share:** 100.00

---

*This report includes emissions from California sources*
## Total Emissions Summary Report
### University of California, Santa Barbara
#### (Emissions from California operations)

This report includes emissions from California sources.
**FACILITY INFORMATION**

<table>
<thead>
<tr>
<th>Facility Name</th>
<th>Gas Cylinders - Laboratories</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reporting Year</td>
<td>2008</td>
</tr>
<tr>
<td>Facility Address</td>
<td>Santa Barbara, CA 93106, United States</td>
</tr>
<tr>
<td>Facility Contact Person</td>
<td>Jill Richardson</td>
</tr>
<tr>
<td>Facility Contact Phone</td>
<td>805-893-8367</td>
</tr>
<tr>
<td>Facility Contact Email</td>
<td><a href="mailto:jill.richardson@vcadmin.ucsb.edu">jill.richardson@vcadmin.ucsb.edu</a></td>
</tr>
<tr>
<td>Facility Description</td>
<td>Laboratories across campus use gas cylinders for experiments, etc. The department of Environmental Health &amp; Safety monitor their use and replacement.</td>
</tr>
</tbody>
</table>

**Direct Emissions**

<table>
<thead>
<tr>
<th>Unit</th>
<th>CO2e</th>
<th>CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>HFCs*</th>
<th>PFCs*</th>
<th>SF6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mobile Combustion</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>-</td>
</tr>
<tr>
<td>Stationary Combustion</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>-</td>
</tr>
<tr>
<td>Process Emissions</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>-</td>
</tr>
<tr>
<td>Fugitive Emissions</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>-</td>
</tr>
<tr>
<td>TOTAL DIRECT</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>-</td>
</tr>
</tbody>
</table>

* HFCs and PFCs are classes of greenhouse gases that include many compounds. These columns may reflect the total emissions of multiple HFC and PFC compounds, each of which has a unique Global Warming Potential (GWP). Emissions of each gas are first multiplied by their respective GWP and then summed in the total CO2-equivalent column.

**Indirect Emissions**

<table>
<thead>
<tr>
<th>Unit</th>
<th>CO2e</th>
<th>CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>HFCs*</th>
<th>PFCs*</th>
<th>SF6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purchased Electricity</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Purchased Steam</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Purchased Heating and Cooling</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL INDIRECT</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>-</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**De Minimis Detail**

<table>
<thead>
<tr>
<th>Unit</th>
<th>CO2e</th>
<th>CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>HFCs*</th>
<th>PFCs*</th>
<th>SF6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fire Extinguishers - Clean Agent</td>
<td>0.31</td>
<td>0.31</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00 metric ton</td>
</tr>
<tr>
<td>Gas Cylinders</td>
<td>0.69</td>
<td>0.67</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00 metric ton</td>
</tr>
<tr>
<td>TOTAL DEMINIMIS</td>
<td>0.99</td>
<td>0.98</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00 metric ton</td>
</tr>
</tbody>
</table>

Percentage of Total Inventory: 100.00%

**Optional Emissions**

<table>
<thead>
<tr>
<th>Unit</th>
<th>CO2e</th>
<th>CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>HFCs*</th>
<th>PFCs*</th>
<th>SF6</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOTAL OPTIONAL</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>-</td>
</tr>
</tbody>
</table>

Facility Emission Reduction Goals:

Environmental Programs/Policies:

Other Public Information:

Primary Calculation Methodologies:

Equity Share: 100.00
### Total Emissions Summary Report
University of California, Santa Barbara
(Emissions from California operations)

Report Generated On: 01/14/2010 01:20 pm

Report Revision #: 3

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Fire Extinguishers - Clean Agent</td>
<td>Fugitive Emissions</td>
<td>Pre-Calc</td>
<td>CO2</td>
<td></td>
<td>0.31 metric ton</td>
<td></td>
<td></td>
<td>We have approximately 150 clean agent fire extinguishers on campus, half (75) of which are serviced (discharged/recharged) annually. A conservative estimate on the size of the canisters are 9 pounds of material per extinguisher.</td>
</tr>
<tr>
<td>Gas Cylinders</td>
<td>Fugitive Emissions</td>
<td>Pre-Calc</td>
<td>CO2</td>
<td></td>
<td>0.67 metric ton</td>
<td></td>
<td></td>
<td>The is an estimation of fugitive emissions based on volume of CO2 purchased in 2008 - it is probably an overly conservative estimate of the actual fugitive emissions. 12,709 ft³ CO2 = 1.87 kg/m³.</td>
</tr>
<tr>
<td>Gas Cylinders</td>
<td>Fugitive Emissions</td>
<td>Pre-Calc</td>
<td>CH4</td>
<td></td>
<td>0.00 metric ton</td>
<td></td>
<td></td>
<td>The is an estimation of fugitive emissions based on volume of CH4 purchased in 2008 - it is probably an overly conservative estimate of the actual fugitive emissions. 30.5 R3 CH4 = 0.68 kg/m³.</td>
</tr>
</tbody>
</table>
### FACILITY INFORMATION

<table>
<thead>
<tr>
<th>Facility Name</th>
<th>Main Campus and Auxiliary Electricity Usage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facility ID</td>
<td>2008</td>
</tr>
<tr>
<td>Reporting Year</td>
<td>Santa Barbara, CA 93106, United States</td>
</tr>
<tr>
<td>Facility Address</td>
<td><a href="mailto:jill.richardson@vcadmin.ucsb.edu">jill.richardson@vcadmin.ucsb.edu</a></td>
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### Direct Emissions

<table>
<thead>
<tr>
<th>Source</th>
<th>CO2e</th>
<th>CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>HFCs*</th>
<th>PFCs*</th>
<th>SF6</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mobile Combustion</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>-</td>
</tr>
<tr>
<td>Stationary Combustion</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>-</td>
</tr>
<tr>
<td>Process Emissions</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>-</td>
</tr>
<tr>
<td>Fugitive Emissions</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>-</td>
</tr>
<tr>
<td>TOTAL DIRECT</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>-</td>
</tr>
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### Indirect Emissions

<table>
<thead>
<tr>
<th>Source</th>
<th>CO2e</th>
<th>CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purchased Electricity</td>
<td>29,787.18</td>
<td>29,658.36</td>
<td>1.24</td>
<td>0.33</td>
<td>metric ton</td>
</tr>
<tr>
<td>Purchased Steam</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>-</td>
</tr>
<tr>
<td>Purchased Heating and Cooling</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>-</td>
</tr>
<tr>
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<td>metric ton</td>
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</tbody>
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<th>HFCs*</th>
<th>PFCs*</th>
<th>SF6</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Optional Emissions</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>-</td>
</tr>
<tr>
<td>TOTAL OPTIONAL</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
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<td>-</td>
</tr>
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</table>

Facility Emission Reduction Goals:

Environmental Programs/Policies:

Other Public Information:

Primary Calculation Methodologies:

Equity Share: 100.00
<table>
<thead>
<tr>
<th>Source</th>
<th>Emission Category</th>
<th>Calc. Method</th>
<th>Fuel Name</th>
<th>Fuel/ Mileage</th>
<th>Emission Factor</th>
<th>Fract. Oxid.</th>
<th>GHS</th>
<th>Amount</th>
<th>Unit</th>
<th>Methodol./ Source</th>
<th>General Info</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purchased Electricity</td>
<td>CARROT</td>
<td></td>
<td>90297452</td>
<td>KWh</td>
<td>0.72 lb/KWh</td>
<td></td>
<td>CO2</td>
<td>29,658.36</td>
<td>metric ton</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Purchased Electricity</td>
<td>CARROT</td>
<td></td>
<td>90297</td>
<td>MWh</td>
<td>0.03 lb/MWh</td>
<td></td>
<td>CH4</td>
<td>1.24</td>
<td>metric ton</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Purchased Electricity</td>
<td>CARROT</td>
<td></td>
<td>90297</td>
<td>MWh</td>
<td>0.01 lb/MWh</td>
<td></td>
<td>N2O</td>
<td>0.33</td>
<td>metric ton</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

This report includes emissions from California sources.
Total Emissions Summary Report  
University of California, Santa Barbara  
(Emissions from California operations)

Facility Information

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<td>805.893.8367</td>
</tr>
<tr>
<td>Facility PO Box</td>
<td><a href="mailto:jill.richardson@vcadmin.ucsb.edu">jill.richardson@vcadmin.ucsb.edu</a></td>
</tr>
</tbody>
</table>

| Mobile Combustion | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | - |
| Stationary Combustion | 17,165.47 | 17,121.58 | 1.61 | 0.03 | 0.00 | 0.00 | 0.00 | 0.00 metric ton |
| Process Emissions | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | - |
| Fugitive Emissions | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | - |
| TOTAL DIRECT | 17,165.47 | 17,121.58 | 1.61 | 0.03 | 0.00 | 0.00 | 0.00 | 0.00 metric ton |

Indirect Emissions

| Purchased Electricity | 0.00 | 0.00 | 0.00 | 0.00 | - |
| Purchased Steam | 0.00 | 0.00 | 0.00 | 0.00 | - |
| Purchased Heating and Cooling | 0.00 | 0.00 | 0.00 | 0.00 | - |
| TOTAL INDIRECT | 0.00 | 0.00 | 0.00 | 0.00 | - |

De Minimis Detail

Optional Emissions

Facility Emission Reduction Goals:
- Environmental Programs/Policies:
- Other Public Information:
- Primary Calculation Methodologies:
  - Equity Share: 100.00

This report includes emissions from California sources
# Total Emissions Summary Report
## University of California, Santa Barbara
### (Emissions from California operations)

**Report Generated On:** 01/14/2010 01:20 pm
**Report Revision #:** 3

<table>
<thead>
<tr>
<th>Source</th>
<th>Emission Category</th>
<th>Calc. Method</th>
<th>Fuel Name</th>
<th>Fuel/ Mileage</th>
<th>Emission Factor</th>
<th>Fract. Oxid.</th>
<th>GHG</th>
<th>Amount</th>
<th>Unit</th>
<th>Methodol./ Source</th>
<th>General Info</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stationary Combustion</td>
<td></td>
<td>CARROT</td>
<td>Natural Gas</td>
<td>3226834 therm</td>
<td>5.31 kg/therm</td>
<td>100</td>
<td>CO2</td>
<td>17,121.58</td>
<td>metric ton</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stationary Combustion</td>
<td></td>
<td>CARROT</td>
<td>Natural Gas</td>
<td>3226834 therm</td>
<td>0.00 kg/therm</td>
<td>CH4</td>
<td></td>
<td>1.61</td>
<td>metric ton</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stationary Combustion</td>
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<td>3226834 therm</td>
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<td></td>
<td>0.03</td>
<td>metric ton</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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### FACILITY INFORMATION

- **Facility Name:** Marine Vessels
- **Facility ID:** 2008
- **Reporting Year:** 2008
- **Facility Address:** Santa Barbara, CA 93106, United States
- **Facility Contact Person:** Jill Richardson
- **Facility Contact Phone:** (805) 993-8367
- **Facility Contact Email:** jill.richardson@vcadmin.ucsb.edu

### Direct Emissions

<table>
<thead>
<tr>
<th>Source</th>
<th>CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>HFCs</th>
<th>PFCs</th>
<th>SF6</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mobile Combustion</td>
<td>122.90</td>
<td>0.01</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00 metric ton</td>
</tr>
<tr>
<td>Stationary Combustion</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>-</td>
</tr>
<tr>
<td>Process Emissions</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>-</td>
</tr>
<tr>
<td>Fugitive Emissions</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>-</td>
</tr>
<tr>
<td><strong>TOTAL DIRECT</strong></td>
<td>122.90</td>
<td>0.01</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00 metric ton</td>
</tr>
</tbody>
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<tr>
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<th>CH4</th>
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<th>HFCs</th>
<th>PFCs</th>
<th>SF6</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purchased Electricity</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>-</td>
</tr>
<tr>
<td>Purchased Steam</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>-</td>
</tr>
<tr>
<td>Purchased Heating and Cooling</td>
<td>0.00</td>
<td>0.00</td>
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<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>-</td>
</tr>
<tr>
<td><strong>TOTAL INDIRECT</strong></td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
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</table>

### De Minimis Detail

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<th>HFCs</th>
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<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Optional Emissions</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>-</td>
</tr>
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<td><strong>TOTAL OPTIONAL</strong></td>
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</tr>
</tbody>
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**University of California, Santa Barbara**

**(Emissions from California operations)**

**Report Generated On:** 01/14/2010 01:20 pm

**Report Revision #:** 3

<table>
<thead>
<tr>
<th>Source</th>
<th>Emission Category</th>
<th>Calc. Method</th>
<th>Fuel Name</th>
<th>Fuel/ Mileage</th>
<th>Emission Factor</th>
<th>Fract. Oxid.</th>
<th>GHG</th>
<th>Amount</th>
<th>Unit</th>
<th>Methodol./ Source</th>
<th>General Info</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gas Consumption</td>
<td>Mobile Combustion</td>
<td>CARROT</td>
<td>Gasoline</td>
<td>13822 gallon</td>
<td>8.81 kg/gallon</td>
<td>CO2</td>
<td>121.77</td>
<td>metric ton</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gas Consumption</td>
<td>Mobile Combustion</td>
<td>CARROT</td>
<td>Gasoline</td>
<td>13822 gallon</td>
<td>0.64 g/gallon</td>
<td>CH4</td>
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<td>metric ton</td>
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<tr>
<td>Gas Consumption</td>
<td>Mobile Combustion</td>
<td>CARROT</td>
<td>Gasoline</td>
<td>13822 gallon</td>
<td>0.22 g/gallon</td>
<td>N2O</td>
<td>0.00</td>
<td>metric ton</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>
### FACILITY INFORMATION

- **Facility Name**: Off Campus Housing & Reserves Electricity Usage
- **Facility ID**: 2008
- **Reporting Year**: 2008
- **Facility Address**: Santa Barbara, CA 93106, United States
- **Facility PO Box**: 805-893-8367
- **Facility Contact Person**: Jill Richardson
- **Facility Contact Email**: jill.richardson@vcadmin.ucsb.edu

### Direct Emissions

<table>
<thead>
<tr>
<th>Source</th>
<th>CO2e</th>
<th>CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>HFCs*</th>
<th>PFCs*</th>
<th>SF6</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mobile Combustion</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>-</td>
</tr>
<tr>
<td>Stationary Combustion</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>-</td>
</tr>
<tr>
<td>Process Emissions</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>-</td>
</tr>
<tr>
<td>Fugitive Emissions</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>-</td>
</tr>
<tr>
<td><strong>TOTAL DIRECT</strong></td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>-</td>
</tr>
</tbody>
</table>

* HFCs and PFCs are classes of greenhouse gases that include many compounds. These columns may reflect the total emissions of multiple HFC and PFC compounds, each of which has a unique Global Warming Potential (GWP). Emissions of each gas are first multiplied by their respective GWP and then summed in the total CO2-equivalent column.

### Indirect Emissions

<table>
<thead>
<tr>
<th>Source</th>
<th>CO2e</th>
<th>CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>HFCs*</th>
<th>PFCs*</th>
<th>SF6</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purchased Electricity</td>
<td>1,528.17</td>
<td>1,521.56</td>
<td>0.06</td>
<td>0.02</td>
<td></td>
<td></td>
<td></td>
<td>metric ton</td>
</tr>
<tr>
<td>Purchased Steam</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td></td>
<td></td>
<td></td>
<td>-</td>
</tr>
<tr>
<td>Purchased Heating and Cooling</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td></td>
<td></td>
<td></td>
<td>-</td>
</tr>
<tr>
<td><strong>TOTAL INDIRECT</strong></td>
<td>1,528.17</td>
<td>1,521.56</td>
<td>0.06</td>
<td>0.02</td>
<td></td>
<td></td>
<td></td>
<td>metric ton</td>
</tr>
</tbody>
</table>

### De Minimis Detail

<table>
<thead>
<tr>
<th>Source</th>
<th>CO2e</th>
<th>CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>HFCs*</th>
<th>PFCs*</th>
<th>SF6</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Optional Emissions</td>
<td>0.00</td>
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<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td></td>
<td>-</td>
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<tr>
<td>TOTAL OPTIONAL</td>
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<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td></td>
<td>-</td>
</tr>
</tbody>
</table>

**Facility Emission Reduction Goals:**

- Environmental Programs/Policies:
- Other Public Information:
- Primary Calculation Methodologies:

**Equity Share:** 100.00
<table>
<thead>
<tr>
<th>Source</th>
<th>Emission Category</th>
<th>Calc. Method</th>
<th>Fuel Name</th>
<th>Fuel/ Mileage</th>
<th>Emission Factor</th>
<th>Fract. Oxid.</th>
<th>GHG</th>
<th>Amount</th>
<th>Unit Methodol./ Source</th>
<th>General Info</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purchased Electricity</td>
<td>CARROT</td>
<td>4632522 KWh</td>
<td>0.72</td>
<td>CO2</td>
<td>1,521.56</td>
<td>metric ton</td>
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<td></td>
<td></td>
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</tr>
<tr>
<td>Purchased Electricity</td>
<td>CARROT</td>
<td>4633 MWh</td>
<td>0.03</td>
<td>CH4</td>
<td>0.06</td>
<td>metric ton</td>
<td></td>
<td></td>
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<tr>
<td>Purchased Electricity</td>
<td>CARROT</td>
<td>4633 MWh</td>
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<td>N2O</td>
<td>0.02</td>
<td>metric ton</td>
<td></td>
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</tr>
</tbody>
</table>

This report includes emissions from California sources
## FACILITY INFORMATION

**Off-Campus Housing & Reserves Natural Gas Usage**

- **Facility ID**: 2008
- **Reporting Year**: 2008
- **Facility Address**: Santa Barbara, CA 93106, United States
- **Facility PO Box**: 805-893-8367
- **Facility Contact Person**: Jill Richardson
- **Facility Contact Email**: jill.richardson@vcadmin.ucsb.edu

### Direct Emissions

<table>
<thead>
<tr>
<th>Emission Source</th>
<th>CO2e</th>
<th>CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>HFCs*</th>
<th>PFCs*</th>
<th>SF6</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mobile Combustion</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td></td>
</tr>
<tr>
<td>Stationary Combustion</td>
<td>1,559.62</td>
<td>1,555.63</td>
<td>0.15</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>metric ton</td>
</tr>
<tr>
<td>Process Emissions</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td></td>
</tr>
<tr>
<td>Fugitive Emissions</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
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</tr>
<tr>
<td><strong>TOTAL DIRECT</strong></td>
<td>1,559.62</td>
<td>1,555.63</td>
<td>0.15</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>metric ton</td>
</tr>
</tbody>
</table>

*HFCs and PFCs are classes of greenhouse gases that include many compounds. These columns may reflect the total emissions of multiple HFC and PFC compounds, each of which has a unique Global Warming Potential (GWP). Emissions of each gas are first multiplied by their respective GWP and then summed in the total CO2-equivalent column.

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<table>
<thead>
<tr>
<th>Emission Source</th>
<th>CO2e</th>
<th>CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>HFCs*</th>
<th>PFCs*</th>
<th>SF6</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purchased Electricity</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Purchased Steam</td>
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<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Purchased Heating and Cooling</td>
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<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td><strong>TOTAL INDIRECT</strong></td>
<td>0.00</td>
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<td>0.00</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### De Minimis Detail

<table>
<thead>
<tr>
<th>Emission Source</th>
<th>CO2e</th>
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<th>CH4</th>
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<th>PFCs*</th>
<th>SF6</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Optional Emissions</strong></td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
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<td></td>
</tr>
<tr>
<td><strong>TOTAL OPTIONAL</strong></td>
<td>0.00</td>
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<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
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<td></td>
</tr>
</tbody>
</table>

**Facility Emission Reduction Goals:**

**Environmental Programs/Policies:**

**Other Public Information:**

**Primary Calculation Methodologies:**

**Equity Share:** 100.00

---

This report includes emissions from California sources
### Emissions Summary

**Stationary Combustion**

- **Fuel Name:** Natural Gas
- **Fuel/ Mileage:** 2,01183 therm
- **Emission Factor:** 5.31 kg/therm
- **Fract. Oxid.:** 100
- **GHG:** CO2
- **Amount:** 1,555.63 metric ton

The amount of natural gas used to calculate stationary combustion was the usage amount from the gas bill minus the amount of NG used to power Housing vehicles, which will be calculated in mobile combustion.

<table>
<thead>
<tr>
<th>Source</th>
<th>Emission Category</th>
<th>Calc. Method</th>
<th>Fuel Name</th>
<th>Fuel/ Mileage</th>
<th>Emission Factor</th>
<th>Fract. Oxid.</th>
<th>GHG</th>
<th>Amount</th>
<th>Unit</th>
<th>Methodol./ Source</th>
<th>General Info</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stationary Combustion</td>
<td>CARROT</td>
<td>Natural Gas</td>
<td>2,01183 therm</td>
<td>5.31 kg/therm</td>
<td>100 CO2</td>
<td>1,555.63 metric ton</td>
<td>The amount of natural gas used to calculate stationary combustion was the usage amount from the gas bill minus the amount of NG used to power Housing vehicles, which will be calculated in mobile combustion.</td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>
### FACILITY INFORMATION

<table>
<thead>
<tr>
<th>Facility Name</th>
<th>Facility ID</th>
<th>Reporting Year</th>
<th>Facility Address</th>
<th>Facility PO Box</th>
<th>Facility Contact Person</th>
<th>Facility Contact Phone</th>
<th>Facility Contact Email</th>
<th>Facility Description</th>
<th>SIC Code</th>
<th>NAIC Code</th>
<th>Industry Type</th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>2008</td>
<td>Santa Barbara, CA 93106, United States</td>
<td></td>
<td>Jill Richardson</td>
<td>805-893-8367</td>
<td><a href="mailto:jill.richardson@vcadmin.ucsb.edu">jill.richardson@vcadmin.ucsb.edu</a></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Direct Emissions

<table>
<thead>
<tr>
<th>Component</th>
<th>CO2e</th>
<th>CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>HFCs*</th>
<th>PFCs*</th>
<th>SF6</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mobile Combustion</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>metric ton</td>
</tr>
<tr>
<td>Stationary Combustion</td>
<td>47.84</td>
<td>47.84</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>metric ton</td>
</tr>
<tr>
<td>Process Emissions</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>metric ton</td>
</tr>
<tr>
<td>Fugitive Emissions</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>metric ton</td>
</tr>
<tr>
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<td>47.84</td>
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<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>metric ton</td>
</tr>
</tbody>
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<th>PFCs*</th>
<th>SF6</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purchased Electricity</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>-</td>
</tr>
<tr>
<td>Purchased Steam</td>
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<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>-</td>
</tr>
<tr>
<td>Purchased Heating and Cooling</td>
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<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>-</td>
</tr>
<tr>
<td>TOTAL INDIRECT</td>
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<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>-</td>
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</tbody>
</table>

### De Minimis Detail

<table>
<thead>
<tr>
<th>Component</th>
<th>CO2e</th>
<th>CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>HFCs*</th>
<th>PFCs*</th>
<th>SF6</th>
<th>Unit</th>
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</thead>
<tbody>
<tr>
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<td>0.00</td>
<td>0.00</td>
<td>-</td>
</tr>
<tr>
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<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
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<td>-</td>
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</tbody>
</table>

### Facility Emission Reduction Goals:
- Environmental Programs/Policies:
- Other Public Information:
- Primary Calculation Methodologies:
- Equity Share: 100.00
# Total Emissions Summary Report

University of California, Santa Barbara

**(Emissions from California operations)**

Report Generated On: 01/14/2010 01:20 pm

Report Revision #: 3

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### Total Emissions Summary

<table>
<thead>
<tr>
<th>Source</th>
<th>Emission Category</th>
<th>Calc. Method</th>
<th>Fuel Name</th>
<th>Fuel/ Mileage</th>
<th>Emission Factor</th>
<th>Fract. Oxid.</th>
<th>GHE</th>
<th>Amount</th>
<th>Unit Methodol./ Source</th>
<th>General Info</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetylene Torches</td>
<td>Stationary Combustion</td>
<td>CARROT</td>
<td>Acetylene</td>
<td>228 ft³</td>
<td>0.10 kg/ft³</td>
<td>100</td>
<td>CO₂</td>
<td>0.02</td>
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<td></td>
</tr>
<tr>
<td>Ammunition</td>
<td>Stationary Combustion</td>
<td>Pre-Calc</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>CO₂</td>
<td>0.00</td>
<td>metric ton</td>
<td></td>
</tr>
<tr>
<td>Ammunition</td>
<td>Stationary Combustion</td>
<td>Pre-Calc</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>CH₄</td>
<td>0.00</td>
<td>metric ton</td>
<td></td>
</tr>
<tr>
<td>Propane - Reserves</td>
<td>Stationary Combustion</td>
<td>CARROT</td>
<td>Propane</td>
<td>8330 gallon</td>
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<td>100</td>
<td>CO₂</td>
<td>47.82</td>
<td>metric ton</td>
<td></td>
</tr>
</tbody>
</table>

This report includes emissions from California sources.
**FACILITY INFORMATION**

<table>
<thead>
<tr>
<th>Facility Name</th>
<th>Refrigerants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facility ID</td>
<td>2008</td>
</tr>
<tr>
<td>Reporting Year</td>
<td>Santa Barbara, CA 93106, United States</td>
</tr>
<tr>
<td>Facility Address</td>
<td>Jill Richardson</td>
</tr>
<tr>
<td>Facility PO Box</td>
<td>805-893-8367</td>
</tr>
<tr>
<td>Facility Contact Person</td>
<td><a href="mailto:jill.richardson@vcadmin.ucsb.edu">jill.richardson@vcadmin.ucsb.edu</a></td>
</tr>
</tbody>
</table>

| Mobile Combustion   | 0.00          | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | metric ton |
| Stationary Combustion| 0.00         | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | metric ton |
| Process Emissions  | 0.00          | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | metric ton |
| Fugitive Emissions | 29.76         | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.00 | metric ton |
| TOTAL DIRECT       | 29.76         | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.00 | metric ton |

* HFCs and PFCs are classes of greenhouse gases that include many compounds. These columns may reflect the total emissions of multiple HFC and PFC compounds, each of which has a unique Global Warming Potential (GWP). Emissions of each gas are first multiplied by their respective GWP and then summed in the total CO2-equivalent column.

| Purchased Electricity | 0.00          | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | metric ton |
| Purchased Steam       | 0.00          | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | metric ton |
| Purchased Heating and Cooling | 0.00         | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | metric ton |
| TOTAL INDIRECT        | 0.00          | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | metric ton |

| Arbor - Chilled Displays | 1.75          | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | metric ton |
| Bio II - Chiller        | 471.74        | 0.00 | 0.00 | 0.00 | 0.00 | 0.36 | 0.00 | metric ton |
| Bren - Freezer          | 4.78          | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | metric ton |
| Fleet Vehicles A/C      | 5.90          | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | metric ton |
| LSB - Freezer           | 2.62          | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | metric ton |
| MSRB - Cold Rooms       | 4.90          | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | metric ton |
| TOTAL DEMINIMIS         | 491.69        | 0.00 | 0.00 | 0.00 | 0.00 | 0.37 | 0.00 | metric ton |
| Percentage of Total Inventory: | 94.29% |

| Optional Emissions | 0.00          | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | metric ton |
| TOTAL OPTIONAL     | 0.00          | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | metric ton |

**Facility Emission Reduction Goals:**

**Environmental Programs/Policies:**

**Other Public Information:**

**Primary Calculation Methodologies:**

**Equity Share:** 100.00
<table>
<thead>
<tr>
<th>Source</th>
<th>Emission Category</th>
<th>Calc Method</th>
<th>Fuel Name</th>
<th>Fuel/ Mileage</th>
<th>Fract. Oxid.</th>
<th>Emission Factor</th>
<th>GHG</th>
<th>Amount</th>
<th>Unit</th>
<th>Methodol./ Source</th>
<th>General Info</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arbor - Chilled Displays</td>
<td>Fugitive Emissions</td>
<td>Pre-Calc</td>
<td>HFC-125</td>
<td>0.00</td>
<td>metric ton</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Arbor - Chilled Displays</td>
<td>Fugitive Emissions</td>
<td>Pre-Calc</td>
<td>HFC-134a</td>
<td>0.00</td>
<td>metric ton</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arbor - Chilled Displays</td>
<td>Fugitive Emissions</td>
<td>Pre-Calc</td>
<td>HFC-143a</td>
<td>0.00</td>
<td>metric ton</td>
<td></td>
<td></td>
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<tr>
<td>Bio II - Chiller</td>
<td>Fugitive Emissions</td>
<td>Pre-Calc</td>
<td>HFC-134a</td>
<td>0.36</td>
<td>metric ton</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>Bren - Freezer</td>
<td>Fugitive Emissions</td>
<td>Pre-Calc</td>
<td>HFC-125</td>
<td>0.00</td>
<td>metric ton</td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>Bren - Freezer</td>
<td>Fugitive Emissions</td>
<td>Pre-Calc</td>
<td>HFC-134a</td>
<td>0.00</td>
<td>metric ton</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bren - Freezer</td>
<td>Fugitive Emissions</td>
<td>Pre-Calc</td>
<td>HFC-143a</td>
<td>0.00</td>
<td>metric ton</td>
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<tr>
<td>De La Guerra - Chiller</td>
<td>Fugitive Emissions</td>
<td>Pre-Calc</td>
<td>HFC-152a</td>
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<td>metric ton</td>
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<tr>
<td>Fleet Vehicles A/C</td>
<td>Fugitive Emissions</td>
<td>Pre-Calc</td>
<td>HFC-134a</td>
<td>0.00</td>
<td>metric ton</td>
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<td></td>
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<tr>
<td>LSB - Freezer</td>
<td>Fugitive Emissions</td>
<td>Pre-Calc</td>
<td>HFC-125</td>
<td>0.00</td>
<td>metric ton</td>
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<td>LSB - Freezer</td>
<td>Fugitive Emissions</td>
<td>Pre-Calc</td>
<td>HFC-134a</td>
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<td>metric ton</td>
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<td>LSB - Freezer</td>
<td>Fugitive Emissions</td>
<td>Pre-Calc</td>
<td>HFC-143a</td>
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<td>metric ton</td>
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<td></td>
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<tr>
<td>MSRB - Cold Rooms</td>
<td>Fugitive Emissions</td>
<td>Pre-Calc</td>
<td>HFC-125</td>
<td>0.00</td>
<td>metric ton</td>
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<tr>
<td>MSRB - Cold Rooms</td>
<td>Fugitive Emissions</td>
<td>Pre-Calc</td>
<td>HFC-134a</td>
<td>0.00</td>
<td>metric ton</td>
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<tr>
<td>MSRB - Cold Rooms</td>
<td>Fugitive Emissions</td>
<td>Pre-Calc</td>
<td>HFC-143a</td>
<td>0.00</td>
<td>metric ton</td>
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<tr>
<td>Ortega - Chiller</td>
<td>Fugitive Emissions</td>
<td>Pre-Calc</td>
<td>HFC-152a</td>
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<tr>
<td>PSNB - Chiller</td>
<td>Fugitive Emissions</td>
<td>Pre-Calc</td>
<td>HFC-134a</td>
<td>0.01</td>
<td>metric ton</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

This report includes emissions from California sources.
### FACILITY INFORMATION

Facility Name: University of California, Santa Barbara  
Facility Address: Santa Barbara, CA 93106, United States  
Facility Contact Person: Jill Richardson  
Facility Contact Email: jill.richardson@vcadmin.ucsb.edu

| Facility ID | Reporting Year | Facility Address | Facility ID | Reporting Year | Facility Address | Facility ID | Reporting Year | Facility Address | Facility ID | Reporting Year | Facility Address | Facility ID | Reporting Year | Facility Address | Facility ID | Reporting Year | Facility Address | Facility ID | Reporting Year | Facility Address | Facility ID | Reporting Year | Facility Address |
|-------------|----------------|------------------|-------------|----------------|------------------|-------------|----------------|------------------|-------------|----------------|----------------|-------------|----------------|----------------|-------------|----------------|----------------|-------------|----------------|----------------|
|             | 2008           | Santa Barbara, CA 93106, United States |             |                |                  |             |                |                  |             |                |                  |             |                |                  |             |                |                  |             |                |                  |             |

### Transportation Fuel Usage

- **Mobile Combustion**: 1,283.21 metric ton
- **Stationary Combustion**: 0.00 metric ton
- **Process Emissions**: 0.00 metric ton
- **Fugitive Emissions**: 0.00 metric ton
- **TOTAL DIRECT**: 1,283.21 metric ton

- *HFCs and PFCs are classes of greenhouse gases that include many compounds. These columns may reflect the total emissions of multiple HFC and PFC compounds, each of which has a unique Global Warming Potential (GWP). Emissions of each gas are first multiplied by their respective GWP and then summed in the total CO2-equivalent column.*

### Direct Emissions

<table>
<thead>
<tr>
<th>Source</th>
<th>CO2e</th>
<th>CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>HFCs*</th>
<th>PFCs*</th>
<th>SF6</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mobile Combustion</td>
<td>1,283.21</td>
<td>1,270.54</td>
<td>0.11</td>
<td>0.03</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>metric ton</td>
</tr>
<tr>
<td>Stationary Combustion</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>-</td>
</tr>
<tr>
<td>Process Emissions</td>
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<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>-</td>
</tr>
<tr>
<td>Fugitive Emissions</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>-</td>
</tr>
<tr>
<td>TOTAL DIRECT</td>
<td>1,283.21</td>
<td>1,270.54</td>
<td>0.11</td>
<td>0.03</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>metric ton</td>
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</table>

### Indirect Emissions

<table>
<thead>
<tr>
<th>Source</th>
<th>CO2e</th>
<th>CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purchased Electricity</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>-</td>
</tr>
<tr>
<td>Purchased Steam</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>-</td>
</tr>
<tr>
<td>Purchased Heating and Cooling</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>-</td>
</tr>
<tr>
<td>TOTAL INDIRECT</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>-</td>
</tr>
</tbody>
</table>

### De Minimis Detail

<table>
<thead>
<tr>
<th>Source</th>
<th>CO2e</th>
<th>CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>HFCs*</th>
<th>PFCs*</th>
<th>SF6</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Optional Emissions</td>
<td>0.77</td>
<td>0.75</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>metric ton</td>
</tr>
</tbody>
</table>

### Facility Emission Reduction Goals:

- Environmental Programs/Policies:
- Other Public Information:
- Primary Calculation Methodologies:
- Equity Share: 100.00

This report includes emissions from California sources
## Total Emissions Summary Report

### University of California, Santa Barbara

*(Emissions from California operations)*

<table>
<thead>
<tr>
<th>Source</th>
<th>Emission Category</th>
<th>Calc. Method</th>
<th>Fuel Name</th>
<th>Fuel/ Mileage</th>
<th>Emission Factor</th>
<th>Fract. Oxid.</th>
<th>GHG</th>
<th>Amount</th>
<th>Unit</th>
<th>Methodol./ Source</th>
<th>General Info</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biodiesel</td>
<td>Biogenic - Mobile</td>
<td>Pre-Calc</td>
<td></td>
<td></td>
<td>CO2</td>
<td>0.75</td>
<td>metric ton</td>
<td>79.4 gallons of biodiesel (in the form of B10), used in 2008 = 751 kg</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Biodiesel</td>
<td>Biogenic - Mobile</td>
<td>Pre-Calc</td>
<td></td>
<td></td>
<td>CH4</td>
<td>0.00</td>
<td>metric ton</td>
<td>79.4 gallons, estimated mpg on trucks = 15 mpg 1191 miles traveled, conversion factor CH4 = .06 g/mile 72 g = .000072 MT</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Biodiesel</td>
<td>Biogenic - Mobile</td>
<td>Pre-Calc</td>
<td></td>
<td></td>
<td>N2O</td>
<td>0.00</td>
<td>metric ton</td>
<td>79.4 gallons, estimated mpg on trucks = 15 mpg 1191 miles traveled, conversion factor N2O = .05 g/mile 56 g = .000086 MT</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

This report includes emissions from California sources