**Form INV-2 Emission Point Description**

1. **Company/Facility Name**: ACME HOSPITAL
2. **Form INV-2 Page**: 1 of 1

3. **Release Point Identifier**: EP-001

4. Is this release point used as an emergency bypass stack?  
   - No ☒  
   - Yes ☐

If YES, for which release point(s)? List release point identifiers:

5. **Release Point Type**
   - Downward-facing Vent ☐
   - Indoor Vented ☐
   - Fugitive (specify) ☐
   - Vertical ☐
   - Goose Neck ☐
   - Vertical with Rain Cap ☐
   - Horizontal ☐

6. **Release Point Description**: DUAL FUEL GENERATOR STACK

7. **Operating Status**
   - Operating ☒
   - Permanently Shutdown ☐
   - Temporarily Shutdown ☐

8. **Operating Status Date** (Please enter the date the shutdown occurred. The status date should be blank if the status above was entered as operating.)

9. **Stack Height Above Ground**: 30 feet

10. **Stack Shape and Dimensions**: (interior dimensions at exit point)
    - Circular Diameter: 1.25 feet
    - Rectangular Dimensions: feet x feet

11. **Composition Of Exhaust Stream**
    - Exhaust Stream Characteristics
    - Release Point Composition of Exhaust Stream
    - Units of Measure
    - Temperature: 500 Degree Fahrenheit
    - Flow Rate: 4,000 ACFM

12. **Bypass Stacks**
    - Bypass Stack – Release Point Identifier
    - Bypass Stack Description
    - Bypass Stack – Release Point Identifier
    - Bypass Stack Description

13. **List of Emission Unit Identifiers Venting Through This Release Point Identifier**
    - Emission Unit Identifier
    - EU-001
**Form INV-4 Process Description - Actual Emissions**

1. Company/Facility Name | ACME HOSPITAL
2. Form INV-4 Page | 1 of 2

3. Release Point Identifier | EP-001
4. Release Point Description | DUAL FUEL GENERA
5. Emission Year | 2017
6. Emission Unit Identifier | EU-001
7. SCC Number | 20200401
8. Description of Process | DIESEL COMBUSTION

### Annual Throughput

9. Annual Throughput | 2,100
10. Throughput Unit of Measure | MMBTU
11. Throughput Type (Input, Output, or Existing) | I
12. Throughput Material | DIESEL FUEL

### Actual Operating Rate/Schedule

13. Average Hours/Day | 2.5
14. Average Days/Week | 4
15. Average Weeks/Year | 20
16. Actual Hours For Year | 200

### Seasonal Operations

17. January, February & December (%) | 10
18. March, April & May (%) | 30
19. June, July & August (%) | 40
20. September, October & November (%) | 20

### Associated Control Devices

21. Control Device Identifier
22. Control Device Description
23. Control Device Identifier
24. Control Device Description

### Actual Emissions

<table>
<thead>
<tr>
<th></th>
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<tbody>
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<td>PM-2.5</td>
<td>0.05</td>
<td>LBS/MMBTU</td>
<td>WEBFIRE</td>
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<tr>
<td>PM-10</td>
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<tr>
<td>Ammonia</td>
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</tbody>
</table>

Duplicate this form for EACH EMISSIONS PROCESS.
### ACTUAL EMISSIONS – Individual HAPs and additional regulated air pollutants – list each individual pollutant name in Column 25

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>LBS/MMBTU</th>
<th>AP-42</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benzene</td>
<td>0.000776</td>
<td>AP-42</td>
<td>0.00</td>
</tr>
<tr>
<td>Formaldehyde</td>
<td>0.0000789</td>
<td>AP-42</td>
<td>0.00</td>
</tr>
<tr>
<td>Toluene</td>
<td>0.000281</td>
<td>AP-42</td>
<td>0.00</td>
</tr>
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</table>

*Calculation Methods: CEMS – Engineering Judgment – Manufacturer’s Specification – Material Balance – Other (Specify) – State or Local Speciation Profile – Site Specific – Stack Test – Trade Group – US EPA - Vendor*
**FORM INV-4 PROCESS DESCRIPTION - ACTUAL EMISSIONS**

1. Company/Facility Name | ACME HOSPITAL

2. Form INV-4 Page 2 of 2

3. Release Point Identifier | EP-001

4. Release Point Description | DUAL FUEL GENERA

5. Emission Year | 2017

6. Emission Unit Identifier | EU-001

7. SCC Number | 20200402

8. Description of Process | DUAL FUEL COMBUS

### Annual Throughput

9. Annual Throughput | 2,100

10. Throughput Unit of Measure | MMBTU

11. Throughput Type (Input, Output, or Existing) | I

12. Throughput Material | DUAL FUEL

### Actual Operating Rate/Schedule

13. Average Hours/Day | 2.5

14. Average Days/Week | 4

15. Average Weeks/Year | 20

16. Actual Hours For Year | 200

### Seasonal Operations

17. January, February & December (%) | 10

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20. September, October & November (%) | 20

### Associated Control Devices

21. Control Device Identifier

22. Control Device Description

23. Control Device Identifier

24. Control Device Description

### ACTUAL EMISSIONS

<table>
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<tr>
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<td>0.0556</td>
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<td>SO₂</td>
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<td>0.21</td>
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<td>1.16</td>
<td>LBS/MMBTU</td>
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<td></td>
<td>1.22</td>
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<td>Lead</td>
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<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Amount (LBS/MMBTU)</th>
<th>Methodology</th>
<th>Note</th>
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</thead>
<tbody>
<tr>
<td>Benzene</td>
<td>0.00445</td>
<td>AP-42</td>
<td></td>
</tr>
<tr>
<td>Formaldehyde</td>
<td>0.0054</td>
<td>AP-42</td>
<td></td>
</tr>
<tr>
<td>Toluene</td>
<td>0.00523</td>
<td>AP-42</td>
<td></td>
</tr>
</tbody>
</table>

*Calculation Methods: CEMS – Engineering Judgment – Manufacturer’s Specification – Material Balance – Other (Specify) – State or Local Speciation Profile – Site Specific – Stack Test – Trade Group – US EPA - Vendor*
### FORM INV-5 CALCULATIONS

1. **Company/Facility Name**: ACME HOSPITAL

2. **Form INV-5 Page**: 1 of 2

3. **Release Point Identifier**: EP-001

4. **Emission Unit Identifier**: EU-001

5. **SCC Number**: 20200401

Calculations are provided in support of information reported on Form INV – 4 for the SCC Number listed above.

#### 6. Emissions Calculations

**PROCESS**: DIESEL COMBUSTION > 600 BHP

**FUEL**: DIESEL FUEL

**ACTUAL THROUGHPUT**: \((15,000 \text{ GALLONS} \times 0.14 \text{ MMBTU/GALLON}) = 2,100 \text{ MMBTU}\)

<table>
<thead>
<tr>
<th>POLLUTANT</th>
<th>EMISSION FACTORS FROM AP-42 (SCC NUMBER 20200401)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM-2.5</td>
<td>0.05 LBS PER MMBTU BURNED</td>
</tr>
<tr>
<td>PM-10</td>
<td>0.14 LBS PER MMBTU BURNED</td>
</tr>
<tr>
<td>SO2</td>
<td>1.01S (S = 0.5) LBS PER MMBTU BURNED</td>
</tr>
<tr>
<td>NOX</td>
<td>3.2 LBS PER MMBTU BURNED</td>
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<tr>
<td>VOC</td>
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<td>CO</td>
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<td>BENZENE</td>
<td>0.000776 LBS PER MMBTU BURNED</td>
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<tr>
<td>FORMALDEHYDE</td>
<td>0.0000789 LBS PER MMBTU BURNED</td>
</tr>
<tr>
<td>TOLUENE</td>
<td>0.000281 LBS PER MMBTU BURNED</td>
</tr>
</tbody>
</table>

#### CALCULATIONS

**ACTUAL PM-2.5 TONS**
\[(2,100 \text{ MMBTU}) \times (0.05 \text{ LBS/MMBTU}) \times (1 \text{ TON}/2,000 \text{ LBS}) = 0.05 \text{ TONS}\]

**ACTUAL PM10 TONS** = 0.15 TONS

**ACTUAL SO2 TONS** = 0.53 TONS

**ACTUAL NOX TONS** = 3.36 TONS

**ACTUAL VOC TONS** = 0.09 TONS

**ACTUAL CO TONS** = 0.89 TONS

**ACTUAL BENZENE TONS** = 0.00 TONS

**ACTUAL FORMALDEHYDE TONS** = 0.00 TONS

**ACTUAL TOLUENE TONS** = 0.00 TONS
### Form INV-5 Calculations

1. **Company/Facility Name**: ACME HOSPITAL
2. **Form INV-5 Page**: 2 of 2
3. **Release Point Identifier**: EP-001
4. **Emission Unit Identifier**: EU-001
5. **SCC Number**: 20200402

Calculations are provided in support of information reported on Form INV – 4 for the SCC Number listed above.

#### 6. Emissions Calculations

**PROCESS**: DUAL FUEL COMBUSTION > 600 BHP

**FUEL**: DUAL FUEL

**ACTUAL THROUGHPUT**: 
\[
(1,900,000 \text{ CUBIC FEET} \times 0.00105 \text{ MMBTU/CUBIC FEET}) + (750 \text{ GALLONS} \times 0.140 \text{ MMBTU/GALLON}) = 2,100 \text{ MMBTU}
\]

**EMISSION FACTORS FROM AP-42 (SCC NUMBER 20200401)**

<table>
<thead>
<tr>
<th>POLLUTANT</th>
<th>EMISSION FACTORS</th>
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<tr>
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<td>0.0556 LBS/MMBTU</td>
</tr>
<tr>
<td>PM-10</td>
<td>0.0573 LBS/MMBTU</td>
</tr>
<tr>
<td>SO2</td>
<td>0.05(S) (S=0.5) LBS/MMBTU</td>
</tr>
<tr>
<td>NOX</td>
<td>2.7 LBS/MMBTU</td>
</tr>
<tr>
<td>VOC</td>
<td>0.2 LBS/MMBTU</td>
</tr>
<tr>
<td>CO</td>
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<td>TOLUENE</td>
<td>0.00523 LBS/MMBTU</td>
</tr>
</tbody>
</table>

**CALCULATIONS**

**ACTUAL PM-2.5 TONS**
\[
(2,100 \text{ MMBTU}) \times (0.0556 \text{ LBS/MMBTU}) \times (1 \text{ TON}/2,000 \text{ LBS}) = 0.06 \text{ TONS}
\]

**ACTUAL PM10 TONS** = 0.06 TONS

**ACTUAL SO2 TONS** = 0.05 TONS

**ACTUAL NOX TONS** = 2.84 TONS

**ACTUAL VOC TONS** = 0.21 TONS

**ACTUAL CO TONS** = 1.22 TONS

**ACTUAL BENZENE TONS** = 0.00 TONS

**ACTUAL FORMALDEHYDE TONS** = 0.01 TONS

**ACTUAL TOLUENE TONS** = 0.01 TONS