**Utah Division of Air Quality**  
**New Source Review Section**  

**Form 12**  
**Incinerators**

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### General Information

1. Attach process diagrams of the incinerators described on this form.

2. Describe the source of waste:

3. Manufacturer of incinerator:  

4. Model name and number:

5. Type of incinerator:  
   - □ Flue  
   - □ Single Chamber  
   - □ Multiple Chamber

6. Maximum amount of waste to be incinerated:  
   ____________ lb/hr

7. Estimated daily amount of waste to be incinerated:  
   ____________ lb

8. Height of stack above grade: ____________ ft

9. Height of tallest structures within 150 feet:  
   ____________ ft

10. Primary burner used:  
    - □ Yes  
    - □ No
    Maximum rating ____________ BTU/hr

11. Secondary Burner used:  
    - □ Yes  
    - □ No
    Maximum rating ____________ BTU/hr

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### Description of Typical Waste to Be Incinerated

12. Type of waste to be incinerated:
   - □ Type 0 Trash with 8,500 BTU/lb  
     85% moisture, 5% incombustible
   - □ Type 1 Rubbish with 6,500 BTU/lb  
     25% moisture, 10% incombustible
   - □ Type 2 Refuse with 4,300 BTU/lb  
     50% moisture, 7% incombustible
   - □ Type 3 Garbage with 2,500 BTU/lb  
     70% moisture, 5% incombustible
   - □ Type 4 Human and animal parts, with 1,000 BTU/lb  
     10% moisture, 5% incombustible
   - □ Type 5 Industrial by-product wastes which are gaseous, liquid, & semi-liquid
   - □ Type 6 Industrial solid byproduct waste rubber, plastic, wood wastes
   - □ Type 7 Municipal sewage sludge wastes residue from processing of raw sludge
### Operational Information

13. Average operation time of incinerator: ______ hrs/day ______ days/week ______ weeks/year

14. Maximum operation time of incinerator: ______ hrs/day ______ days/week ______ weeks/year

15. Average Temperature: Primary ______ °F Secondary ______ °F

16. Residence time: Primary: ______ seconds Secondary: ______ seconds

17. Type of feed to incinerator: □ Manual □ Ram □ Other _____________________________

18. Proposed Control Technology:
   □ Quench Tower
   □ Heat Exchanger
   □ Dry Scrubber (attach DAQ Form 9)
   □ Wet Scrubber (attach DAQ Form 9)
   □ Baghouse (attach DAQ Form 10)

### Emission Information

19. Number of identical sources (describe)

20. **Average Operation**

<table>
<thead>
<tr>
<th>Pollutants</th>
<th>Concentration or emission rate per identical source</th>
<th>Method used to determine concentration or emission rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Particulate matter (PM$_{10}$)</td>
<td>gr/dscf</td>
<td>□ lb/10$^6$ BTU □ lb/hr</td>
</tr>
<tr>
<td>Particulate matter (PM$_{2.5}$)</td>
<td>gr/dscf</td>
<td>□ lb/10$^6$ BTU □ lb/hr</td>
</tr>
<tr>
<td>Carbon monoxide (CO)</td>
<td>ppm (vol)</td>
<td>□ lb/10$^6$ BTU □ lb/hr</td>
</tr>
<tr>
<td>Nitrogen oxides (NO$_x$)</td>
<td>ppm (vol)</td>
<td>□ lb/10$^6$ BTU □ lb/hr</td>
</tr>
<tr>
<td>Volatile organic Compounds (VOCs)</td>
<td>ppm (vol)</td>
<td>□ lb/10$^6$ BTU □ lb/hr</td>
</tr>
<tr>
<td>Sulfur dioxide (SO$_2$)</td>
<td>ppm (vol)</td>
<td>□ lb/10$^6$ BTU □ lb/hr</td>
</tr>
<tr>
<td>Carbon dioxide (CO$_2$)</td>
<td>ppm (vol)</td>
<td>□ lb/10$^6$ BTU □ lb/hr</td>
</tr>
<tr>
<td>Methane (CH$_4$)</td>
<td>ppm (vol)</td>
<td>□ lb/10$^6$ BTU □ lb/hr</td>
</tr>
<tr>
<td>Nitrous oxide (N$_2$O)</td>
<td>ppm (vol)</td>
<td>□ lb/10$^6$ BTU □ lb/hr</td>
</tr>
</tbody>
</table>
## Incinerator
Form 12 (Continued)

### Maximum Operation

<table>
<thead>
<tr>
<th>Contaminant</th>
<th>Concentration or Emission Rate per Identical Source</th>
<th>Method used to determine concentration or emission rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Particulate matter (PM(_{10}))</td>
<td>gr/dscf</td>
<td>□ lb/10(^6) BTU □ lb/hr</td>
</tr>
<tr>
<td>Particulate matter (PM(_{2.5}))</td>
<td>gr/dscf</td>
<td>□ lb/10(^6) BTU □ lb/hr</td>
</tr>
<tr>
<td>Carbon monoxide (CO)</td>
<td>ppm (vol)</td>
<td>□ lb/10(^6) BTU □ lb/hr</td>
</tr>
<tr>
<td>Nitrogen oxides (NO(_x))</td>
<td>ppm (vol)</td>
<td>□ lb/10(^6) BTU □ lb/hr</td>
</tr>
<tr>
<td>Volatile organic Compounds (VOCs)</td>
<td>ppm (vol)</td>
<td>□ lb/10(^6) BTU □ lb/hr</td>
</tr>
<tr>
<td>Sulfur dioxide (SO(_2))</td>
<td>ppm (vol)</td>
<td>□ lb/10(^6) BTU □ lb/hr</td>
</tr>
<tr>
<td>Carbon dioxide CO(_2))</td>
<td>ppm (vol)</td>
<td>□ lb/10(^6) BTU □ lb/hr</td>
</tr>
<tr>
<td>Methane (CH(_4))</td>
<td>ppm (vol)</td>
<td>□ lb/10(^6) BTU □ lb/hr</td>
</tr>
<tr>
<td>Nitrous oxide (N(_2)O)</td>
<td>ppm (vol)</td>
<td>□ lb/10(^6) BTU □ lb/hr</td>
</tr>
</tbody>
</table>

### Metals (Maximum Operation)

<table>
<thead>
<tr>
<th>Metal</th>
<th>Concentration</th>
<th>Method used to determine concentration or emission rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arsenic</td>
<td>pounds/hour</td>
<td>Manganese pounds/hour</td>
</tr>
<tr>
<td>Barium</td>
<td>pounds/hour</td>
<td>Mercury pounds/hour</td>
</tr>
<tr>
<td>Cadmium</td>
<td>pounds/hour</td>
<td>Nickel pounds/hour</td>
</tr>
<tr>
<td>Hexavalent chromium</td>
<td>pounds/hour</td>
<td>Selenium pounds/hour</td>
</tr>
<tr>
<td>Total chromium</td>
<td>pounds/hour</td>
<td>Silver pounds/hour</td>
</tr>
<tr>
<td>Copper</td>
<td>pounds/hour</td>
<td>Tin pounds/hour</td>
</tr>
<tr>
<td>Lead</td>
<td>pounds/hour</td>
<td>Dioxins/furans pounds/hour</td>
</tr>
</tbody>
</table>

### Exhaust Point Information

21. **Exhaust Point Information**

Flow diagram designation(s) of exhaust point(s):

Description of exhaust point (location in relation to buildings, direction, hooding, etc.):

Exhaust height above grade: Feet  Exhaust diameter: Inches
Greatest height of nearby buildings: Feet  Exhaust distance from nearest plant boundary: Feet

### Average Operation  Maximum Operation
**Instructions - Form 12 Incinerator**

**NOTE:**
1. **Submit this form in conjunction with Form 1 and Form 2.**
2. Call the Division of Air Quality (DAQ) at (801) 536-4000 if you have problems or questions in filling out this form. Ask to speak with a New Source Review engineer. We will be glad to help!

1. Attach flow diagram of the described incinerator.
2. Please describe the source of waste to be incinerated.
3. Supply the name of the manufacturer of the incinerator.
4. Supply the model and number of the incinerator.
5. Indicate the type of incinerator.
6. Specify the maximum amount of waste to be incinerated.
7. Specify the daily amount of waste to be incinerated.
8. Indicate the height of the stack above ground level.
9. Indicate the height of tallest structure within 150 feet.
10. Supply the specifications for primary burner used.
11. Supply the specifications for secondary burner used.
12. Indicate the type of typical waste to be incinerated.
13. Supply the average operation time of the incinerator.
14. Supply the maximum operation time of the incinerator.
15. Supply the average temperature in the primary and secondary chambers.
16. Supply the residence time in the primary and secondary chambers.
17. Indicate what type of feed is used to load the incinerator.
18. Indicate the control technology to be use. Submit the corresponding form, if available, for the control technology. Submit specifications for control technology which a form is not available for. Forms available are the following:

   Form 3  Afterburners  
   Form 4  Flares  
   Form 5  Adsorption Unit  
   Form 6  Cyclone  
   Form 7  Condenser  
   Form 8  Electrostatic Precipitators  
   Form 9  Scrubber  
   Form 10  Fabric Filter  

19. Indicate how many incinerators units are being used.
20. Specify the concentration or emission rate of the listed contaminants for both the average and maximum feed rate.
21. Supply the exhaust specifications listed.