



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

**Form 23  
Rotary Kiln Incinerator**

Company \_\_\_\_\_  
 Site /Source \_\_\_\_\_  
 Date \_\_\_\_\_

There are federal standards and guidelines that govern incineration of:  
 Hospital/medical/infectious waste; municipal waste; commercial/industrial waste, cement kilns. Consult 40CFR60,  
 Subparts AAAA, DDDD, E<sub>C</sub>, and F, as appropriate

<b>General Information</b>	
1. Flow diagram designations of rotary kiln Incinerator described on this form	
2. Manufacturer of Incinerator: _____	3. Model name and number: _____
4. Description of material burned: _____ _____	5. Maximum amount of waste to be incinerated: _____ lb/hr
6. Estimated daily amount of waste to be incinerated: _____ pounds per day	7. Height of stack above grade: _____ feet
8. Height of tallest structures within 150 feet: _____ feet	9. Primary burner used: <input type="checkbox"/> Yes <input type="checkbox"/> No Maximum rating: _____ BTU/hr
10. Secondary Burner used: <input type="checkbox"/> Yes <input type="checkbox"/> No Maximum rating _____ BTU/hr	
11. Description of Typical Waste to Be Incinerated: <input type="checkbox"/> Medical/hospital/infectious <input type="checkbox"/> Municipal <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial	
<b>Operational Information</b>	
12. Average operation time of incinerator: _____ hrs/day _____ days/week _____ weeks/year	
13. Maximum operation time of incinerator: _____ hrs/day _____ days/week _____ weeks/year	
14. Residence time: Primary _____ seconds Secondary _____ seconds	
15. Proposed BACT (Best Available Control Technology): <input type="checkbox"/> Quench Tower <input type="checkbox"/> Heat Exchanger <input type="checkbox"/> Dry Scrubber (DAQ Form 9) <input type="checkbox"/> Wet Scrubber (DAQ Form 9) <input type="checkbox"/> Baghouse (DAQ Form 10) <input type="checkbox"/> Carbon Adsorption Unit	

**Form 23 - Rotary Kiln Incinerator (Continued)**

**Emission Information**

**16. Average Operation**

Contaminant	Concentration or Emission Rate per Identical Source	Method Used to Determine Concentration or Emission Rate
Particulate Matter PM <sub>10</sub>	_____ gr/dscf <input type="checkbox"/> lb/10 <sup>6</sup> BTU <input type="checkbox"/> lb/hr	
Particulate Matter PM <sub>2.5</sub>	_____ gr/dscf <input type="checkbox"/> lb/10 <sup>6</sup> BTU <input type="checkbox"/> lb/hr	
Carbon Monoxide CO	_____ ppm (vol) <input type="checkbox"/> lb/10 <sup>6</sup> BTU <input type="checkbox"/> lb/hr	
Nitrogen Oxides NO <sub>x</sub>	_____ ppm (vol) <input type="checkbox"/> lb/10 <sup>6</sup> BTU <input type="checkbox"/> lb/hr	
Volatile Organic Matter VOC	_____ ppm (vol) <input type="checkbox"/> lb/10 <sup>6</sup> BTU <input type="checkbox"/> lb/hr	
Sulfur Dioxide SO <sub>2</sub>	_____ ppm (vol) <input type="checkbox"/> lb/10 <sup>6</sup> BTU <input type="checkbox"/> lb/hr	
Carbon Dioxide (CO <sub>2</sub> )	_____ ppm (vol) <input type="checkbox"/> lb/10 <sup>6</sup> BTU <input type="checkbox"/> lb/hr	
Methane (CH <sub>4</sub> )	_____ ppm (vol) <input type="checkbox"/> lb/10 <sup>6</sup> BTU <input type="checkbox"/> lb/hr	
Nitrous Oxide (N <sub>2</sub> O)	_____ ppm (vol) <input type="checkbox"/> lb/10 <sup>6</sup> BTU <input type="checkbox"/> lb/hr	

**16. Maximum Operation - Continued**

Contaminant	Concentration or Emission Rate per Identical Source	Method Used to Determine Concentration or Emission Rate
Particulate Matter PM <sub>10</sub>	_____ gr/dscf <input type="checkbox"/> lb/10 <sup>6</sup> BTU <input type="checkbox"/> lb/hr	
Particulate Matter PM <sub>2.5</sub>	_____ gr/dscf <input type="checkbox"/> lb/10 <sup>6</sup> BTU <input type="checkbox"/> lb/hr	
Carbon Monoxide CO	_____ ppm (vol) <input type="checkbox"/> lb/10 <sup>6</sup> BTU <input type="checkbox"/> lb/hr	
Nitrogen Oxides NO <sub>x</sub>	_____ ppm (vol) <input type="checkbox"/> lb/10 <sup>6</sup> BTU <input type="checkbox"/> lb/hr	
Volatile Organic Matter VOC	_____ ppm (vol) <input type="checkbox"/> lb/10 <sup>6</sup> BTU <input type="checkbox"/> lb/hr	
Sulfur Dioxide SO <sub>2</sub>	_____ ppm (vol) <input type="checkbox"/> lb/10 <sup>6</sup> BTU <input type="checkbox"/> lb/hr	
Carbon Dioxide (CO <sub>2</sub> )	_____ ppm (vol) <input type="checkbox"/> lb/10 <sup>6</sup> BTU <input type="checkbox"/> lb/hr	
Methane (CH <sub>4</sub> )	_____ ppm (vol) <input type="checkbox"/> lb/10 <sup>6</sup> BTU <input type="checkbox"/> lb/hr	
Nitrous Oxide (N <sub>2</sub> O)	_____ ppm (vol) <input type="checkbox"/> lb/10 <sup>6</sup> BTU <input type="checkbox"/> lb/hr	

**16. Maximum Operation - Metals and Toxins- Continued**

Cadmium: _____ milligram/dscf	Mercury: _____ pounds per hour
Lead: _____ pounds per hour	Dioxins/furins: _____ pounds per hour

**17. Exhaust Point Information**

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

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

Exhaust height above grade: _____ feet	Exhaust diameter: _____
Greatest height of nearby buildings: _____ feet	Exhaust distance from nearest plant boundary: _____ feet
<b>Average Operation</b>	<b>Maximum Operation</b>
Exhaust gas temperature: _____	Exhaust gas temperature: _____
Gas flow rate through each exhaust point: _____	Gas flow rate through each exhaust point: _____

### Form 23 - Rotary Kiln Incinerator (Continued)

Emissions Calculations (PTE)	
18. Calculated emissions for this device	
PM <sub>10</sub> _____ Lbs/hr _____ Tons/yr	PM <sub>2.5</sub> _____ Lbs/hr _____ Tons/yr
NO <sub>x</sub> _____ Lbs/hr _____ Tons/yr	SO <sub>x</sub> _____ Lbs/hr _____ Tons/yr
CO _____ Lbs/hr _____ Tons/yr	VOC _____ Lbs/hr _____ Tons/yr
CO <sub>2</sub> _____ Tons/yr	CH <sub>4</sub> _____ Tons/yr
N <sub>2</sub> O _____ Tons/yr	
HAPs _____ Lbs/hr (speciate) _____ Tons/yr (speciate)	
Submit calculations as an appendix. If other pollutants are emitted, include the emissions in the appendix.	

### Instructions

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!
3. Attach spec. sheets for all burners, pollution control equipment, etc.

1. Attach flow diagram of the described incinerator.
2. Supply the manufacturer of the incinerator.
3. Supply the model and number of the incinerator.
4. Please describe the source of waste to be incinerated.
5. Supply the maximum amount of waste to be incinerated.
6. Specify the daily amount of waste to be incinerated.
7. Indicate the height of the stack above ground level.
8. Indicate the height of tallest structure within 150 feet.
9. Supply the specifications for primary burner used.
10. Supply the specifications for secondary burner used.
11. Indicate the type of typical waste to be incinerated.
12. Supply the average operation time of the incinerator.
13. Supply the maximum operation time of the incinerator.
14. Supply the residence time in the primary and secondary chambers.
15. 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 upon request are the following:
 

_____	Form 3	Afterburners
_____	Form 4	Flares
_____	Form 5	Adsorption Unit
_____	Form 6	Cyclone
_____	Form 7	Condenser
_____	Form 8	Electrical Precipitators
_____	Form 9	Scrubber

\_\_\_\_ Form 10 Fabric Filter

16. During average and maximum operation, specify the concentration or emission rate of the listed contaminants.
17. Supply the exhaust specifications listed.
18. Supply calculations for all criteria pollutants, greenhouse gases and HAPs. Use AP-42 or Manufacturers data to complete your calculations.

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