Start

Is the unit located within the Houston-Galveston-Brazoria Ozone Nonattainment Area?

Yes -> §117.300

No

Is the site a major stationary source of NOx as defined in §117.10?

Yes

No

§117.300

Is the unit a sulfur plant reaction boiler?

Yes

No

§117.303(a)(4)

Is the unit a boiler with a maximum rated capacity of 2.0 MMBtu/hr or less?

Yes

No

§117.303(a)(9)

End

30 TAC Chapter 117, Subchapter B, Division 3: ICI Boilers does not apply.

6

Last Modified: 3/23/2020

From 30 TAC Chapter 117, Effective June 14, 2007

These flowcharts are for use by sources subject to the Federal Operating Permit Program only and are subject to change.
The owner or operator shall use the mass emissions cap and trade program in Chapter 101, Subchapter H, Division 3 to comply with the NOx emission specifications.

Comply with the following:
- Standard §117.310(d)(3)
- §117.310(a), (b), [G][e](1), (e)(2)
- [G]§117.310(e)(3), (e)(4)
- §117.340(l)(2), (p)(1), (p)(3)
- [G]§117.335(a)(1), (a)(4), (b)
- §117.335(d), (g)
- §117.340(l)(2), (o)(1), (p)(1)
- Recordkeeping §117.345(a), (f), (f)(9)
- Reporting §117.335(b), (g)
- [G]§117.345(b)-(c)
- §117.8010, [G](1), (2), (2)(A)-(D)
- [G]§117.8010(3), (4), [G](5)
- §117.8010(6), [G](7)

Does the unit have an annual capacity factor of 0.0383 or less; and is the owner or operator choosing the alternative emission specification in §117.310(a)(17)?

Yes

Comply with the following:
- Standard §117.310(a)(17), (e)(5)
- 27

No

§117.310(a)(17)

Is the unit a boiler that was regulated by 40 CFR Part 266, Subpart H?

Yes

§117.310(a)(3)

No

8
8

Is the unit a gas-fired boiler?

§117.310(a)(1)

Yes

Is the max rated capacity equal to or greater than 100 MMBtu/hr?

Yes

Comply with the following:
Standard §117.310(a)(1)(A)

No

No

Is the max rated capacity less than 40 MMBtu/hr?

Yes

Comply with the following:
Standard §117.310(a)(1)(C)

No

Comply with the following:
Standard §117.310(a)(1)(B)
Is the max rated capacity equal to or greater than 100 MMBtu/hr?

Yes

Comply with the following:
Standard §117.310(a)(3)(A)

No

Comply with the following:
Standard §117.310(a)(3)(B)(i)-(ii)

27
Is the unit a coke-fired boiler?

Yes

Comply with the following:
Standard
§117.310(a)(4)

No

Is the unit a wood fuel-fired boiler?

Yes

Comply with the following:
Standard
§117.310(a)(5)

No

Is the unit a rice hull-fired boiler?

Yes

Comply with the following:
Standard
§117.310(a)(6)

No

This requirement is for a liquid-fired boiler.

Comply with the following:
Standard
§117.310(a)(7)
Is the unit part of an electric generating facility as specified in §117.320?

Yes

Comply with the following:
- Standard §117.320(a)-(b), [G][c], (i)-(k)
- Monitoring/Testing §117.320(d), [G][e], (h), (k)
- Recordkeeping §117.320(f)
- Reporting §117.320(g)

No
Does the unit utilize a CEMS or PEMS pursuant to §117.340?

Yes

§117.335(c)

Comply with the following:
- Monitoring/Testing
  - §117.335(c)
  - [G]§117.345(f)(2), (f)(8)
- Recordkeeping
  - §117.345(d), (d)(3)

No

Comply with the following:
- Standard
  - §117.340(p)(2)(C)
- Monitoring/Testing
  - §117.335(e)
  - §117.340(p)(2)(A)-(C)
  - §117.8000(b)-(c), (c)(1), (c)(3)
  - §117.8000(c)(5)-(6), [G](d)
- Reporting
  - §117.340(p)(2)(D)
Is the unit one of those listed in §117.340(a)(1)(B)(i)-(xiii) as requiring a totalizing fuel flow meter?

Yes

Comply with the following:
Monitoring/Testing
§117.340(a)(1)(B)
§117.340(a)(2)(B)

No

Is the unit venting to a common stack and using a shared CEMS and a single totalizing fuel flow meter?

Yes

Comply with the following:
Monitoring/Testing
§117.340(a)(2)(B)

No

Comply with the following:
Monitoring/Testing
§117.340(a)(2)(A)

§117.340(a)(2)(A)

Comply with the following:
Monitoring/Testing
§117.340(a)(2)(B)

§117.345(f)(1)
32

Is the unit a boiler with a rated heat input \(> 100\) MMBtu/hr operated with an annual heat input \(> 2.2\left(10^{11}\right)\) Btu/yr?

Yes

§117.340(b)(1)(A)-(B)

No

Is the unit a wood only fuel-fired boiler?

Yes

§117.340(b)(2)(C)

No

Comply with the following:
Monitoring/Testing
§117.340(b)(1), (b)(3)

35

34

Does the unit use a chemical reagent for reduction of NO\(_x\)?

Yes

§117.340(c)(1)(D)

No
Does the unit have a rated heat input greater than or equal to 100 MMBtu/hr

§117.340(c)(1)(G)

Is the unit subject to the NOx CEMS requirements of 40 CFR Part 75?

§117.340(c)(2)(B)

Comply with the following:
Monitoring/Testing
§117.340(c)(1), [G](c)(3)

Is compliance demonstrated according to the requirements of §117.8000?

§117.335(e)

Comply with the following:
Monitoring/Testing
§117.340(c)(3)
30 TAC Ch. 117, S, Houston-Galveston-Brazoria Ozone Nonattainment Area: ICI Boilers

(12 of 24)

36

**CO**

- Is the unit a boiler that was regulated by 40 CFR Part 266, Subpart H?
  - Yes: §117.310(c)(4)(A)
  - No:
    - Yes: §117.310(a)(17)
    - No: 40

- Does the unit have an annual capacity factor of 0.0383 or less; and is the owner or operator choosing the alternative emission specification in §117.310(a)(17)?
  - Yes: §117.310(a)(17)
  - No: 48

- Is the unit meeting an emission specification for CO different from §117.310(c), as approved by the executive director?
  - Yes: §117.325(a)
  - No: 40

Comply with the following:

- Standard
  - §117.325(a)(1)
- Monitoring/Testing
  - [G]§117.335(a)(1), (a)(4), (b)
  - §117.335(d), (g)
- Recordkeeping
  - §117.345(a), (f), (f)(9)
- Reporting
  - §117.335(b), (g)
  - [G]§117.345(b)-(c)
  - §117.8010, [G](1), (2), (2)(A)-(B)
  - [G]§117.8010(3), (4), [G](5)
  - §117.8010(6), [G](7)

43
Is the unit a wood fuel-fired boiler for which the owner or operator is choosing a CO emission specification of 775 ppmv at 7.0% O₂, dry basis?

Comply with the following:
Standard
§117.310(c)(1)
§117.310(c)(3)
Monitoring/Testing
[G]§117.335(a)(1), (a)(4), (b)
§117.335(d), (g)
Recordkeeping
§117.345(a), (f), (f)(9)
Reporting
§117.335(b), (g)
[G]§117.345(b)-(c)
§117.8010, [G](1), (2), (2)(A)-(B)
[G]§117.8010(3), (4), [G](5)
§117.8010(6), [G](7)
**Does the unit utilize a CEMS or PEMS pursuant to §117.340?**

- **Yes**: 
  - §117.335(c)
  - §117.310(c)(1)(B)
  - Comply with the following:
    - Standard §117.310(c)(1)(B)

- **No**: 
  - Is the unit complying with §117.310(c)(4)(B)(i), (B)(ii), (B)(iii) or §117.325(a) for CO?
    - **Yes**: 
      - §117.310(c)(1)(A)
      - Comply with the following:
        - Standard §117.310(c)(1)(A)
    - **No**: 
      - Comply with the following:
        - Monitoring/Testing §117.335(c), (f), (f)(3)
        - Recordkeeping [G]§117.345(f)(2), (f)(8)
        - Reporting §117.345(d), (d)(2)-(5)

---

**Is the unit complying with §117.310(c)(4)(B)(i), (B)(ii), (B)(iii) or §117.325(a) for CO?**

- **Yes**: 
  - Comply with the following:
    - Monitoring/Testing §117.335(e)
    - §117.8000(b)-(c), (c)(2)
    - §117.8000(c)(3), (c)(5)-(6)
    - [G]§117.8000(d)

- **No**: 44

---

Last Modified: 3/23/2020 From 30 TAC Chapter 117, Effective June 14, 2007

These flowcharts are for use by sources subject to the Federal Operating Permit Program only and are subject to change.
Is the device a CEMS?

Yes

No

Comply with the following:

- Standard
- [G][§117.340(f)(1)]
- Monitoring/Testing
- [G][§117.340(f)(2)]
- §117.8100(a), (a)(1), (a)(1)(A)-(B)
- §117.8100(a)(1)(B)(ii)-(iii), (a)(1)(C)
- §117.8100(a)(2), [G][§117.8100(a)(3), (a)(4)-(5)]
- §117.8100(a)(5)(A)-(B)
- [G][§117.8100(a)(5)(D)-(E), (a)(6)]
- Recordkeeping
- §117.8100(a)(5)(C)
- Reporting
- [G][§117.8010(8)]
- §117.8100(c)

Comply with the following:

- Monitoring/Testing
  - [G][§117.340(g)]
  - §117.8100(b), (b)(1), [G](b)(1)(A)
  - §117.8100(b)(1)(B), (b)(2)-(3)
  - §117.8100(b)(3)(A)-(B)
  - §117.8100(b)(4), (b)(4)(A)
  - §117.8100(b)(4)(A)(i)(II)
  - §117.8100(b)(4)(A)(i)(III)
  - [G][§117.8100(b)(4)(B)]
  - §117.8100(b)(4)(C), (b)(4)(C)(i)-(iii)
  - §117.8100(b)(4)(C)(iii)(I)
  - §117.8100(b)(4)(C)(iii)(II)
  - §117.8100(b)(4)(C)(iii)(II)-(a–)
  - §117.8100(b)(4)(C)(iii)(II)-(b–)
  - §117.8100(b)(5)-(6)
- Reporting
  - [G][§117.8010(8)]
  - §117.8100(c)
Is the unit one of those listed in §117.340(a)(1)(B)(i)-(xiii) as requiring a totalizing fuel flow meter?

Yes → §117.340(a)(1)(B), §117.340(a)(2)(B)

No → §117.340(a)(2)(B)

Is the unit venting to a common stack and using a shared CEMS and a single totalizing fuel flow meter?

Yes → §117.340(a)(2)(B)

No → Comply with the following:
Monitoring/Testing
§117.340(a)
Recordkeeping
§117.345(f)(1)

Comply with the following:
Monitoring/Testing
§117.340(a)(2)(A)

Comply with the following:
Monitoring/Testing
§117.340(a)(2)(B)
Is the unit a boiler with a rated heat input ≥ 100 MMBtu/hr operated with an annual heat input > 2.2(10^{11}) Btu/yr?

- Yes: §117.340(b)(1)(A)-(B)
- No: §117.340(b)(2)(C)

Is the unit a wood only fuel-fired boiler?

- Yes: Comply with the following:
  - Monitoring/Testing
  - §117.340(b)(1), (b)(3)
- No: 50
Is urea or ammonia injected into the exhaust stream for NOx control?

Yes

§117.310(c)(2)

No

End

Is the unit meeting an emission specification for NH₃ different from §117.310(c), as approved by the executive director?

Yes

§117.325(a)

No

End

Comply with the following:

- Standard §117.325(a)
- Monitoring/Testing §117.335(a)(2), (a)(4), (b) §117.335(d), (g) §117.340(d) §117.8130
- Recordkeeping §117.345(a), (f)(9), (f)(11)
- Reporting §117.335(b), (g) [G]§117.345(b)-(c) §117.8010, [G](1), (2), (2)(A)-(B) [G]§117.8010(3), (4), [G](5), (6) [G]§117.8010(7)
30 TAC Ch. 117, S, Houston-Galveston-Brazoria Ozone Nonattainment Area: ICI Boilers

(20 of 24)

Is the unit a boiler that was not regulated by 40 CFR Part 266, Subpart H?

Yes

Comply with the following:

Standard
§117.310(c)(2)

Monitoring/Testing
§117.335(a)(2), (a)(4), (b)
§117.335(d), (g)
§117.340(d)
§117.8130

Recordkeeping
§117.345(a), (f), (f)(9), (f)(11)

Reporting
§117.335(b), (g)
[G]§117.345(b)-(c)
§117.8010, [G](1), (2), (2)(A)-(B)
[G]§117.8010(3), (4), [G](5), (6)
[G]§117.8010(7)

No

§117.310(c)(2)

These requirements are for a boiler that was regulated by 40 CFR Part 266, Subpart H.

Comply with the following:

Standard
§117.310(c)(2)

Monitoring/Testing
§117.335(a)(2), (a)(4), (b)
§117.335(d), (g)
§117.340(d)
§117.8130

Recordkeeping
§117.345(a), (f), (f)(9), (f)(11)

Reporting
§117.335(b), (g)
[G]§117.345(b)-(c)
§117.8010, [G](1), (2), (2)(A)-(B)
[G]§117.8010(3), (4), [G](5), (6)
[G]§117.8010(7)
Is the unit a boiler with a rated heat input > 100 MMBtu/hr operated with an annual heat input > $2.2 \times 10^{11}$ Btu/yr?

- Yes
  - §117.340(b)(1)(A)-(B)
- No
  - §117.340(b)(2)(C)

Is the unit a wood only fuel-fired boiler?

- Yes
  - Comply with the following:
    - Monitoring/Testing
    - §117.340(b)(1), (b)(3)
- No
Does the unit utilize a CEMS or PEMS pursuant to §117.340?

Yes

§117.335(c)

Is the unit complying with §117.325(a) for NH₃?

§117.330(c)(2)(B)

No

Comply with the following:

Standard

§117.310(c)(2)(B)

Comply with the following:

Monitoring/Testing

§117.335(c)

Recordkeeping

[G]§117.345(f)(2), (f)(8)

Reporting

§117.345(d), (d)(2)-(5)

Yes

57

56

59
Is the unit complying with §117.325(a) for NH$_3$?  

Yes  

Comply with the following:  
Standard  
§117.310(c)(2)(A)  
Monitoring/Testing  
§117.335(e)  
§117.8000(b)-(c)  
§117.8000(c)(3)-(6), [G](d)

No  

Is the unit using mass balance for NH$_3$ monitoring?  

Yes  

§117.8130(1)

Comply with the following:  
Monitoring/Testing  
§117.8130(1)

No  

Is the unit using oxidation of ammonia to nitric oxide (NO) for NH$_3$ monitoring?  

Yes  

§117.8130(2)

Comply with the following:  
Monitoring/Testing  
§117.8130(2)

No  

The unit is using stain tubes for NH$_3$ monitoring.

Comply with the following:  
Monitoring/Testing  
§117.8130(3)

End
Is the device a CEMS?

Yes

Comply with the following:
- Standard
  - §117.340(f)(1)
- Monitoring/Testing
  - [G]§117.340(f)(2)
  - §117.8100(a), (a)(1), (a)(1)(A)-(B)
  - §117.8100(a)(1)(B)(ii), (a)(1)(C)
  - §117.8100(a)(2), [G](a)(3), (a)(4)-(5)
  - §117.8100(a)(5)(A)-(B)
  - [G]§117.8100(a)(5)(D)-(E), (a)(6)
  - §117.8130(4)
- Recordkeeping
  - §117.8100(a)(5)(C)
- Reporting
  - [G]§117.8010(8)
  - §117.8100(c)

Comply with the following:
- Monitoring/Testing
  - [G]§117.340(g)
  - §117.8100(b), (b)(1), [G](b)(1)(A)
  - §117.8100(b)(1)(B), (b)(2)-(3)
  - §117.8100(b)(3)(A)-(B)
  - §117.8100(b)(4), (b)(4)(A)
  - §117.8100(b)(4)(A)(i)(II)
  - [G]§117.8100(b)(4)(B)
  - §117.8100(b)(4)(C), (b)(4)(C)(i)-(iii)
  - §117.8100(b)(4)(C)(iii)(I)
  - §117.8100(b)(4)(C)(iii)(II)
  - §117.8100(b)(4)(C)(iii)(II)(–a–)
  - §117.8100(b)(6)
  - §117.8130(4)
- Reporting
  - [G]§117.8010(8)
  - §117.8100(c)

No

§117.340(f)

End