Section II

Permit Condition 18265
Implementing Regulation 9, Rule 10, Nitrogen Oxides and Carbon Monoxide from Boilers, Steam Generators and Process Heaters in Petroleum Refineries

This section includes comments regarding Permit Condition 18265. The following changes should be made to Revision 1 of the Title V permit. For BAAQMD's convenience the condition has been corrected in strikeout mode at the end of this section.

Comments Regarding Title V Section VI

1. **Keep original permit condition language if possible.** Some of the new conditions reflect the future effective date of June 1, 2004. It would be cleaner to keep the original conditions. If Rev 1 comes out after the effective date of the new NOx conditions, replace the sunset conditions with the old condition (keeping the ones that still apply.)

2. **Clarify Part 5B.** In Part 5B, revise the condition based on the WSPA comment to clarify that startup and shutdown can be separate from curtailed operation or low firing rate conditions and do not have to meet the < 20% of the unit's rated capacity to qualify for the exemption.

3. **Revise Part 6 based on WSPA Comment**. In Part 6A, revise the condition based on the WSPA comment to allow extension of source test submittal with approval of BAAQMD. Also clarify that the source test must take place either at the next scheduled source test or within eight months. Delete "whichever is sooner".

4. **Revise Part 7 based on WSPA Comment.** In Part 7, revise the condition based on the WSPA comment to allow extension of source test submittal with approval of BAAQMD.

5. **Revise Part 7A2 based on WSPA Comment.** In Part 7A2, add WSPA comment for reduced source test frequency (similar to other permit conditions that allow this).

6. **Clarify that measurement of combined exhaust is allowed.** In Part 11, delete comment about Alternative Compliance Plan and retain the part of the condition that clearly allows measurement of NOx and O2 of combined exhaust for those heaters with common stacks or chimneys. This is a Shell issue and not part of the WSPA comments.

7. **Add Parts 12 – 15.** These sections are currently in the Title V permit and should not be sunset with the new revised condition since they have to do with IERC's. These sections are not addressed by the revised conditions.

8. **Add Part 16.** Shell and WSPA agree that there is a need to allow delay in source testing for heaters that are shutdown for prolonged periods until after the heater is back up. This is in the current permit for Boiler 5 (S1800) and needs to be stated in general. We have several heaters in Lubes that may never run again. Feed is not available to test these heaters. If we decide to operate them again, then testing would be required within 30 days of startup.

9. **Add Part 20, which is currently in the Title V permit and should not be sunset.** It

includes the ongoing requirement to maintain a fuel flow meter.

Comments Regarding Title V Section IV

10. **Delete Parts 8 and 16 Under Permit Condition #18265 from Section IV Tables AY, AZ, and CS.** Part 8 applies to sources subject to Permit Condition #18265 that currently have CEMS analyzers installed. Tables AY, AZ, and CS include only sources without CEMS analyzers; therefore, Parts 8 and 16 should be removed from Tables AY, AZ, and CS. Part 16 only applies to S1800 and should be removed from the listed tables in Section IV.

11. **Delete Parts 3, 4, 5, 6, 7, 9, 12, 16, 18, and 19 Under Permit Condition #18265 from Section IV Tables BA, BC, BD, BG, BL, and CU.** The tables listed above include only sources with CEMS analyzers currently installed. The parts listed above apply to sources without CEMS analyzers. These parts should be removed from Section IV tables that include only sources with CEMS analyzers.

Comments Regarding Title V Section VII

12. **Consolidate Line Items for NOx Limits Under BAAQMD 9-10-301 and 9-10-303 in Section VII Tables AP, AQ, AR, AT, AU, AX, BB, BL, CB, AND CE.** BAAQMD 9-10-301 should be consolidated into one line item and BAAQMD 9-10-303 should also be consolidated into one line item, all of which should reference the applicable parts of Permit Condition #18265. See table below for example.

Table VII – AR
Applicable Limits and Compliance Monitoring Requirements
S1486 – DH F-40 CU FEED, S1487 – DH F-41B VFU FEED, S1488 – DH F-41A VFU FEED,
S1491 – DH F-44 NHT FEED, S1492 – DH F-45 PRIMARY COLUMN REBOIL,
S1493 – DH F-46 STABILIZER REBOIL, S1495 – DH F-49 CRU PREHEAT,
S1496 – DH F-50 CRU, S1497 – DH F-51 CRU,
S1498 – DH F-52 CRU REBOIL, S1508 – CP F-63 CFH FEED,
1510 – CP F-66 CCU PREHEAT, S1511 – CP F-67 CCU LGO REBOIL

Type of Limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
NOx	BAAQMD 9-10-301	N		Refinery-wide NOx emission rate shall not exceed 0.033 lb/MMBtu, operating-day average	BAAQMD 9-10-502, 9-10-504.2, 9-10-505, 1-522 and 1-523; Condition # 18265 Parts 1,2,8,10,11-13,15,17,20-21	C	NOx and O_2 CEM, monitoring, records, and reporting

Table VII – AR
Applicable Limits and Compliance Monitoring Requirements
S1486 – DH F-40 CU FEED, S1487 – DH F-41B VFU FEED, S1488 – DH F-41A VFU FEED,
S1491 – DH F-44 NHT FEED, S1492 – DH F-45 PRIMARY COLUMN REBOIL,
S1493 – DH F-46 STABILIZER REBOIL, S1495 – DH F-49 CRU PREHEAT,
S1496 – DH F-50 CRU, S1497 – DH F-51 CRU,
S1498 – DH F-52 CRU REBOIL, S1508 – CP F-63 CFH FEED,
1510 – CP F-66 CCU PREHEAT, S1511 – CP F-67 CCU LGO REBOIL

Type of Limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
NOx	BAAQMD 9-10-303	Y		NOx emission rate shall not exceed 0.2 lb/MMBtu, operating-day average (facility-wide)	BAAQMD 9-10-502, 9-10-504.2, 9-10-505, 1-522 and 1-523; Condition # 18265 Parts 1,2,8,10,11-13,15,17,20-21	C	NOx and O_2 CEM, monitoring, records, and reporting

13. **Monitoring Requirement Citation for BAAQMD 9-10-301 and 9-10-303 in Section VII Tables AP, AQ, and CB Should Reference Permit Condition #18265 Parts 1-7, 9-15, and 17-21.** Tables AP, AQ, and CB include heaters that do not currently have CEMS installed. Parts 1-7, 9-15, and 17-21 of Permit Condition #18265 apply to heaters without CEMS and should be the only parts of Permit Condition #18265 listed in these tables. See table below for example.

Table VII – AQ
Applicable Limits and Compliance Monitoring Requirements
S1478 – LUBS F-26 FURFURAL RAFF, S1479 – LUBS F-27 FURFURAL EXTR,
S1480 – LUBS F-69 ASPHALT CIRCULATION, S1481 – OPCEN F-30 DSU,
S1483 – LUBS F-32 ASPHALT CIRCULATION,
S1484 – LUBS F-34 LHT CHARGE, S1506 – CP F-61 CGP FEED,
S1760 – OPCEN F-102 FXU STEAM SUPERHEATER

Type of Limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
NOx	BAAQMD 9-10-301	N		Refinery-wide NOx emission rate shall not exceed 0.033 lb/MMBtu, operating-day average	BAAQMD 9-10-502, 9-10-504.2, 9-10-505 and 1-523; Condition # 18265 Parts 1-7, 9-15, and 17-21	C	Monitoring, records, and reporting

Table VII – AQ
Applicable Limits and Compliance Monitoring Requirements
S1478 – LUBS F-26 FURFURAL RAFF, S1479 – LUBS F-27 FURFURAL EXTR,
S1480 – LUBS F-69 ASPHALT CIRCULATION, S1481 – OPCEN F-30 DSU,
S1483 – LUBS F-32 ASPHALT CIRCULATION,
S1484 – LUBS F-34 LHT CHARGE, S1506 – CP F-61 CGP FEED,
S1760 – OPCEN F-102 FXU STEAM SUPERHEATER

Type of Limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
NOx	BAAQMD 9-10-303	Y		NOx emission rate shall not exceed 0.2 lb/MMBtu, operating-day average (facility-wide)	BAAQMD 9-10-502, 9-10-504.2, 9-10-505 and 1-523; Condition # 18265 Parts 1-7, 9-15, 17-21	C	Monitoring, records, and reporting

14. **Monitoring Requirement Citation for BAAQMD 9-10-301 and 9-10-303 in Section VII Tables AR, AT, AU, AX, BB, BL, and CE Should Reference Permit Condition #18265 Parts 1, 2, 8, 10, 11, 12, 13, 15, 17, 20 and 21.** Sources listed in these tables currently have CEMS installed. These parts of Permit Condition #18265 apply to heaters with CEMS and should be the only parts listed in tables AR, AT, AU, AX, BB, BL, and CE.

15. **Citation of NOx Limit from Permit Condition #18265 Part 2 in Section VII Table AP Is Incorrect and Should Be Changed to Permit Condition #18265 Part 5.** The NOx limit specified in this line item comes from a table in Part 5(a) of the permit condition not Part 2. Part requires that the owner install and O2 analyzer. The citation of Permit Condition #18265 Part 2 should be changed to Permit Condition #18265 Part 5.

16. **Citation of Monitoring Requirements for BAAQMD 9-10-303 in Section VII Table AT Is Redundant.** The NOx limit and monitoring requirement for BAAQMD 9-10-303 is listed three times in Table AT, and should be consolidated into one line item referencing the applicable parts of Permit Condition #18265 under Monitoring Requirement Citation.

17. **Add BAAQMD 9-10-301 Requirements to Section VII Tables AU, AX, CB, And CE.** BAAQMD 9-10-301 is a less stringent NOx limit than required in 9-10-303, however, it still applies to the heaters listed in Tables AU, AX, CB, and CE. The citation of the NOx limit defined in Reg. 9-10-301 should be added to these tables. The applicable parts of Permit Condition #18265 should be referenced in the Monitoring Requirement Citation column.

18. **Add Condition 18265 Part 14 to Tables IV-BA, IV-BC, IV-BD, and IV-BG.** Part 14 should be added to these tables that have sources with common stacks.

For BAAQMD's convenience the condition has been corrected in strikeout mode below.

Condition # 18265
For S1476, LUBS F-24 Atmospheric Feed
S1477, LUBS F-25 Vacuum Feed
S1478, LUBS F-26 Furfural Raff
S1479, LUBS F-27 Furfural Extr
S1480, LUBS F-69 Asphalt Circulation
S1481, OPCEN F-30 DSU
S1483, LUBS F-32 Asphalt Circulation
S1484, LUBS F-34 LHT Charge
S1486, DH F-40 CU Feed
S1487, DH F-41B VFU Feed
S1488, DH F-41A VFU Feed
S1490, DH F-43 GOHT Feed
S1491, DH F-44 NHT Feed
S1492, DH F-45 Primary Column Reboil
S1493, DH F-46 Stabilizer Reboil
S1494, DH F-47 Secondary Column Reboil
S1495, DH F-49 CRU Preheat
S1496, DH F-50 CRU
S1497, DH F-51 CRU
S1498, DH F-52 CRU Reboil
S1499, DH F-53 CRU Regen
S1500, DH F-55 SGP Heat Medium
S1502, DH F-55 SGP Heat Medium
S1503, DH F-58 HCU Second Stage Feed
S1504, DH F-59 HCU Second Stage Reboil
S1505, DH F-60 HP1 Steam Methane Reformer
S1506, CP F-61 CGP Feed
S1508, CP F-63 CFH Feed
S1510, CP F-66 CCU Preheat
S1511, CP F-67 CCU LGO Reboil
S1514, UTIL F-70 Boiler 4
S1515, DH F-71 HCU First Stage Reboil
S1760, OPCEN F-102 FXU Steam Superheater
S1761, OPCEN F-104 HP2 Steam Methane Reformer
S1762, DH F-128 CRU Interheater
S1763, DH F-126 CU Feed Heater
S1800, UTIL F-88 Boiler 5
S4002, DC F-13425-A DCU
S4003, DC F-13425-B DCU
S4021, DC -F-13909 DHT Recycle
S4031, DC F-14012 HGHT Reboil
S4141, DC F-14011 HGHT Feed
S4161, DC H-101 HP3 Steam Methane Reformer
S4171, LUBS F-13000 LHT2 Feed

Regulation 9-10 Refinery-Wide Compliance

*1. Effective June 1, 2004, the following sources are subject to the refinery-wide NOx emission rate and CO concentration limits in Regulation 9-10: (basis: Regulation 9-10-301 & 305)

S#	Description	CEM (Y/N)
S1476	LUBS F-24 Atmospheric Feed	N
S1477	LUBS F-25 Vacuum Feed	N
S1478	LUBS F-26 Furfural Raff	N
S1479	LUBS F-27 Furfural Extr	N
S1480	LUBS F-69 Asphalt Circulation	N
S1481	OPCEN F-30 DSU	N
S1483	LUBS F-32 Asphalt Circulation	N
S1484	LUBS F-34 LHT Charge	N
S1486	DH F-40 CU Feed	Y
S1487	DH F-41B VFU Feed	Y
S1488	DH F-41A VFU Feed	Y
S1490	DH F-43 GOHT Feed	Y
S1491	DH F-44 NHT Feed	Y
S1492	DH F-45 Primary Column Reboil	Y
S1493	DH F-46 Stabilizer Reboil	Y
S1494	DH F-47 Secondary Column Reboil	Y
S1495	DH F-49 CRU Preheat	Y
S1496	DH F-50 CRU	Y
S1497	DH F-51 CRU	Y
S1498	DH F-52 CRU Reboil	Y
S1499	DH F-53 CRU Regen	Y
S1500	DH F-55 SGP Heat Medium	Y
S1502	DH F-57 HCU 1st Y	Y
S1503	DH F-58 HCU Second Stage Feed	Y
S1504	DH F-59 HCU Second Stage Reboil	Y
S1505	DH F-60 HP1 Steam Methane Reformer	Y
S1506	CP F-61 CGP Feed	N
S1508	CP F-63 CFH Feed	Y
S1510	CP F-66 CCU Preheat	Y
S1511	CP F-67 CCU LGO Reboil	Y
S1514	UTIL F-70 Boiler 4	Y
S1515	DH F-71 HCU First Stage Reboil	Y
S1760	OPCEN F-102 FXU Steam Superheater	N
S1761	OPCEN F-104 HP2 Steam Methane Reformer	Y
S1762	DH F-128 CRU Interheater	Y
S1763	DH F-126 CU Feed Heater	Y
S1800	UTIL F-88 Boiler 5	Y
S4002	DC F-13425-A DCU	Y
S4003	DC F-13425-B DCU	Y
S4021	DC -F-13909 DHT Recycle	N
S4031	DC F-14012 HGHT Reboil	Y
S4141	DC F-14011 HGHT Feed	Y
S4161	DC H-101 HP3 Steam Methane Reformer	Y
S4171	LUBS F-13000 LHT2 Feed	N

*2. The owner/operator of each source listed in Part 1 shall properly install, properly maintain, and properly operate an O2 monitor and recorder. This Part shall be effective September 1, 2004. (basis: Regulation 9-10-502)

*3. Effective June 1, 2004, the owner/operator shall operate each source listed in Part 1, which does not have a NOx CEM within specified ranges of operating conditions (firing rate and oxygen content) as detailed in Part 5. The ranges shall be established by utilizing data from district-approved source tests. (Reg. 9-10-502)

A. The NOx Box for units with a maximum firing rate of 25 ~~MMBH~~ MMBTU/hr or more shall be established using the procedures in Part 4.

B. The NOx Box for units with a maximum firing rate less than 25MMBH shall be established as follows: High-fire shall be the maximum rated capacity. Low-fire shall be 20% of the maximum rated capacity. There shall be no maximum or minimum O2.

*4. The owner/operator shall establish the initial NOx box for each source subject to Part 3 by June 1, 2004. The NOx Box may consist of two operating ranges in order to allow for operating flexibility and to encourage emission minimization during standard operation. (Reg. 9-10-502)The procedure for establishing the NOx box is

A. Conduct district approved source tests for NOx and CO, while varying the oxygen concentration and firing rate over the desired operating ranges for the furnace;

B. Determine the minimum and maximum oxygen concentrations and firing rates for the desired operating ranges (Note that the minimum O2 at low-fire may be different than the minimum O2 at high-fire. The same is true for the maximum O2). The owner/operator shall also verify the accuracy of the O2 monitor on an annual basis.

C. Determine the highest NOx emission factor (lb/Mmbtu) over the preferred operating ranges while maintaining CO concentration below 200 ppm; the owner/operator may choose to use a higher NOx emission factor than tested.

D. Plot the points representing the desired operating ranges on a graph. The resulting polygon(s) are the NOx Box, which represents the allowable operating range(s) for the furnace under which the NOx emission factor from part 5a is deemed to be valid.

1) The NOx Box can represent/utilize either one or two emission factors.
2) The NOx Box for each emission factor can be represented either as a 4- or 5-sided polygon The NOx box is the area within the 4- or 5-sided polygon formed by connecting the source test parameters that lie about the perimeter of successful approved source tests. The source test parameters forming the corners of the NOx box are listed in Part 5.

E. Upon establishment of each NOx Box, the owner/operator shall prepare a graphical representation of the box. The representation shall be made available on-site for APCO review upon request. The box shall also be submitted to the BAAQMD with permit amendments.

(basis: Regulation 9-10-502)

*5. Except as provided in part 5B & C, the owner/operator shall operate each source within the NOx Box ranges listed below at all times of operation. This part shall not apply to any source that has a properly operated and properly installed NOx CEM. (Reg. 9-10-502)

A. NOx Box ranges

Source No.	Emission Factor (lb/MMBtu)	Min O2 at Low Firing (O2% , MMBtu/hr)	Max O2 at Low Firing (O2% , MMBtu/hr)	Min O2 at High Firing (O2% , MMBtu/hr)	Mid O2 at Mid/High Firing (polygon) (O2% , MMBtu/hr)	Max O2 at High Firing (O2% , MMBtu/hr)
S1476	0.18	3.9, 35.7	12.7,35.7	3.9, 72.2	n/a	12.7, 72.2
S1477	0.16	4.1, 10.6	14.2, 10.6	4.1, 26.6	n/a	14.2, 26.6
S1478	0.16	3.5, 2.3	12.4, 2.3	3.5, 11.5	n/a	12.4, 11.5
S1479	0.16	3.7, 10.3	12.0, 10.3	3.7, 19.3	n/a	12.0, 19.3
S1480	0.20	n/a	n/a	n/a	n/a	n/a
S1481	0.16	n/a	n/a	n/a	n/a	n/a
S1483	0.16	n/a	n/a	n/a	n/a	n/a
S1484	0.16	n/a	n/a	n/a	n/a	n/a
S1506	0.2	n/a	n/a	n/a	n/a	n/a
S1760	0.05	1.0, 17	7.5, 17	1.0, 100	n/a	7.5, 100
S4021	0.029	0.7, 11.9	5.6, 11.9	0.7, 33.7	n/a	5.6, 33.7
S4171	0.029	n/a	n/a	n/a	n/a	n/a

The limits listed above are based on a calendar day averaging period for both firing rate and O2%.

B. Part 5A. does not apply during periods of startup or shutdown where either lasts 5 days or less or during periods of curtailed operations lasting 5 days or less. Curtailed operations include conditions such as heater idling, where the heater is at low firing rate (~~to low firing rate conditions (i.e., firing rate~~ less than ~~or equal to~~ 20% of the unit's rated capacity). ~~during startup or shutdown periods or periods of curtailed operation (ex. during heater idling, refractory dryout, etc.) lasting 5 days or less.~~ During these conditions the means for determining compliance with the refinery wide limit shall be accomplished using the method described in 9-10-301.2 (i.e. units out of service & 30-day averaging data).

C. Part 5A. does not apply during any source test required or permitted by this condition. (Reg. 9-10-502). See Part 7 for the consequences of source test results that exceed the emission factors in Part 5.

(basis: Regulation 9-10-502)

*6. NOx Box Deviations [Effective June 1, 2004] (Reg. 9-10-502)

A. The owner/operator may deviate from the NOx Box (either the firing rate or oxygen limit) provided that the owner/operator conducts a district approved source test which replicates the past operation outside of the established ranges. The source test

representing the new conditions shall be conducted no later than the next regularly scheduled source test period, or within eight months~~, whichever is sooner~~. The source test results will establish whether the source was operating outside of the emission factor utilized for the source. The source test results shall be submitted to the district source test manager within 45 days of the test. If the source test result submission deadline cannot be met, an extension may be requested from the District Source Test Manager. Upon approval by the Manager, the test can be submitted at a later agreed upon date.As necessary, a permit amendment shall be submitted.

1. Source Test <= Emission Factor

   If the results of this source test do not exceed the higher NOx emission factor in Part 5, or the CO limit in Part 9, the unit will not be considered to be in violation during this period for operating out of the "box."

   a. The facility may submit an accelerated permit program permit application to request an administrative change- of the permit condition to adjust the NOx Box operating range(s), based on the new test data.

2. Source Test > Emission Factor

   If the results of this source test exceed the permitted emission concentrations or emission rates then the actions described below must be followed:

   a. Utilizing measured emission concentration or rate, the owner/operator shall perform an assessment, retroactive to the date of the previous source test, of compliance with Section 9-10-301. The unit will be considered to have been in violation of 9-10-301 for each day the facility was operated in excess of the refinery wide limit.

   b. The facility may submit a permit application to request an alteration of the permit condition to change the NOx emission factor and/or adjust the operating range, based on the new test data.

B. Reporting - The owner/operator must report conditions outside of box within 96 hours of occurrence.

(basis: Regulation 9-10-502)

*7. Effective June 1, 2004, for each source subject to Part 3, the owner/operator shall conduct source tests at the schedule listed below. The source tests are performed in order to measure NOx, CO, and O2 at the as-found firing rate, or at conditions reasonably specified by the APCO. The source test results shall be submitted to the district source test manager within 45 days of the test. . If the source test result submission deadline cannot be met, an extension may be requested from the District Source Test Manager. Upon approval by the Manager, the test can be submitted at a later agreed upon date. (Reg.9-10-502)

A. Source Testing Schedule

1. Heater < 25 MMBtu/hr

One source test per consecutive 12 month period. The time interval between source tests shall not exceed 16 months.

2. Heaters ≥ 25 MMBtu/hr

Two source tests per consecutive 12 month period. The time interval between source tests shall not exceed 8 months and not be less than 5 months apart. The source test results shall be submitted to the district source test manager within 45 days of the test. (Reg.9-10-502)

The Source Test Manager may be petitioned for a reduced source testing schedule if the facility can demonstrate four (4) successful rounds of testing in which the emission factor(s) measured are within a reasonable tolerance and demonstrate statistical repeatability.

B. Source Test Results > NOx Box Emission Factor

If the results of any source test under this part exceed the permitted concentrations or emission rates the owner/operator shall follow the requirements of Part 6A2 If the owner/operator chooses not to submit an application to revise the emission factor, the owner/operator shall conduct another Part 7 source test, at the same conditions, within 90 days of the initial test.

*8. Effective June 1, 2004, for each source listed in Part 1 with a NOx CEM installed, the owner/operator shall conduct semi-annual district approved CO source tests at as-found conditions. The time interval between source tests shall not exceed 8 months. District conducted CO emission tests associated with District-conducted NOx CEM field accuracy tests may be substituted for the CO semi-annual source tests. (basis: Regulation 9-10-502, 1-522)

*9. Effective June 1, 2004, for any source listed in Part 1 for which any two source test results over any consecutive five year period are greater than or equal to 200 ppmv CO at 3% O2, the owner/operator shall properly install, properly maintain, and properly operate a CEM to continuously measure CO and O2. The owner/operator shall install the CEM within the time period allowed in the District's Manual of Procedures. (basis: Regulation 9-10-502, 1-522)

*10. Effective June 1, 2004~~-~~, in addition to records required by 9-10-504, the facility must maintain records of all source tests conducted to demonstrate compliance with Parts number 1 and 5. These records shall be kept on site for at least five years from the date of entry in a District approved log and be made available to District staff upon request. (basis: recordkeeping, Regulation 9-10-504)

*11. ~~Until June 1, 2004, the owner/operator shall operate a continuous emission monitor (CEM) to measure the NOx and O2 concentrations from the following sources that are subject to this Alternative Compliance Plan.~~ In the case where two or more sources exhaust through a common stack, a single NOx and O2 CEM may be used to measure the combined concentrations from all sources that exhaust through the stack.

~~Phase I (effective July 1, 2000)~~

~~S1494 DH F-47 Secondary Column Reboil~~
~~S1500 DH F-55 SGP Heat Medium~~
~~S1502 DH F-55 SGP Heat Medium~~
~~S1503 DH F-58 HCU Second Stage Feed~~
~~S1504 F-59 HCU 2nd Stage Reboiler~~
~~S1505 DH F-60 HP1 Steam Methane Reformer~~
~~S1515 DH F-71 HCU First Stage Reboil~~
~~S1761 OPCEN F-104 HP2 Steam Methane Reformer~~
~~S1763 DH F-126 CU Feed Heater~~
~~S1800 UTIL F-88 Boiler 5~~
~~S4002 DC F-13425-A DCU~~
~~S4003 DC F-13425-B DCU~~
~~S4031 DC F-14012 HGHT Reboil~~
~~S4141 DC F-14011 HGHT Feed~~
~~S4161 DC H-101 HP3 Steam Methane Reformer~~

~~**Phase II (effective July 1, 2002)**~~
~~S1486 DH F-40 CU Feed~~
~~S1487 DH F-41B VFU Feed~~
~~S1488 DH F-41A VFU Feed~~
~~S1490 DH F-43 GOHT Feed~~
~~S1491 DH F-44 NHT Feed~~
~~S1492 DH F-45 Primary Column Reboil~~
~~S1493 DH F-46 Stabilizer Reboil~~
~~S1495 DH F-49 CRU Preheat~~
~~S1496 DH F-50 CRU~~
~~S1497 DH F-51 CRU~~
~~S1498 DH F-52 CRU Reboil~~
~~S1499 DH F-53 CRU Regen~~
~~S1510 CP F-66 CCU Preheat~~
~~S1511 CP F-67 CCU LGO Reboil~~
~~S1514 UTIL F-70 Boiler 4~~
~~S1762 DH F-128 CRU Interheater~~

*12. Until June 1, 2004, for the following sources for which there is not a CEM, NOx emissions shall not exceed the emission rates indicated below, in the units of pounds of NOx per million BTU of fuel fired (lb NOx/MM BTU). These emission rates shall be used to calculate daily NOx emissions. These emission rates may be adjusted, subject to District approval, based on source testing results. The Permit Holder may elect to use a more conservative (higher) emission factor than would be require solely based on source testing results. If the owner/operator chooses to install NOx and O2 CEM's on any source listed below, the maximum emission rate listed below will no longer be in effect, and daily NOx emissions from that source will be calculated using the CEM NOx concentration.

Phase I (effective July 1, 2000)		lb/MM BTU
S4021	DC -F-13909 DHT Recycle	0.029
S4171	LUBS F-13000 LHT2 Feed	0.029

Phase II (effective July 1, 2002)	lb/MM BTU

S1476	LUBS F-24 Atmospheric Feed	0.180
S1477	LUBS F-25 Vacuum Feed	0.160
S1478	LUBS F-26 Furfural Raff	0.160
S1479	LUBS F-27 Furfural Extr	0.160
S1480	LUBS F-69 Asphalt Circulation	0.20
S1481	OPCEN F-30 DSU	0.160
S1483	LUBS F-32 Asphalt Circulation	0.160
S1484	LUBS F-34 LHT Charge	0.160
S1506	CP F-61 CGP Feed	0.20
S1508	CP F-63 CFH Feed	0.20
S1760	OPCEN F-102 FXU Steam Superheater	0.18

*13. ~~Until June 1, 2004, o~~On a daily basis, the owner/operator shall determine the amount of IERC's necessary for compliance with Regulation 9, Rule 10. IERC's shall be calculated using a District-approved spreadsheet that calculates actual daily NOx emissions and allowable NOx emissions based on the Reg. 9-10 limit of 0.033 lb/MM BTU. (Table 2 of the Engineering Evaluation Report for AN 498 is an example of a District-approved daily spreadsheet.)

*14. ~~Until June 1, 2004, f~~For each source (or group of sources with a common stack), the owner/operator shall summarize the daily actual emissions, daily allowable emissions, and actual NOx emission rate (lb/MM BTU), on a monthly basis. This monthly summary shall done using a District-approved spreadsheet. (Table 3 of the Engineering Evaluation Report for AN 498 is an example of a District-approved monthly source-by-source summary spreadsheet.)

*15. ~~Until June 1, 2004, T~~the owner/operator shall summarize the daily IERC's on a monthly basis, using a District-approved spreadsheet. (Table 4 of the Engineering Evaluation Report for AN 498 is an example of a District-approved monthly IERC summary spreadsheet.)

*16. ~~Until June 1, 2004, t~~he initial source testing that is required by Reg. 9-10-501 has not been performed on source S1800 because this source has not been operating. If the owner/operator uses S1800 in the future, the owner/operator shall conduct a District-approved source test for NOx and CO emissions within 30 days of the initial operation of S1800. If a source is shutdown for prolonged periods equal to or greater than the source testing interval for that source, then the source test is not required until 30 days after start up of the source.

*17. Until June 1, 2004, all sources covered by this Alternative Compliance Plan are subject to the District's policy for "NOx, CO and O2 Monitoring Compliance with Regulation 9, Rule 10", dated June 23, 2000 (and any subsequent revisions).

*18. Until June 1, 2004, in accordance with Section II C of the monitoring policy in condition 7, the District will limit the operating range for S1476, S1477, S1478, S1479, S1508, S1760 and S4021, as indicated in Condition 9.

*19. Until June 1, 2004, except during startup and shutdown, the allowable operating ranges for S1476, S1477, S1478, S1479, S1508, S1760 and S4021 are as follows:

Source (F-#)	O2-min	O2-max	Firing-min	Firing-max
1476 (F-24)	3.9	12.7	35.7	72.2

1477 (F-25)	4.1	14.2	10.6	26.6
1478 (F-26)	3.5	12.4	2.3	11.5
1479 (F-27)	3.7	12.0	10.3	25.7
1508 (F-63)	2.1	8.5	32.2	94.0
1760 (F-102)	1.8	4.4	54.9	90.5
4021 (F-13909)	0.7	5.6	11.9	33.7

The O2 concentrations are expressed as percent, and the firing rates are in million BTU/hr, higher heating value.

In the event that the owner/operator operates any source outside of its associated operating range above, the owner/operator shall perform a source test to determine NOx emissions, in accordance with the monitoring policy in Condition 7. If NOx emissions are less than or equal to the emission rate indicated in Condition 2, the source testing results may be used to expand the allowable operating range above. If NOx emissions exceed the emission rate indicated in Condition 2, this source is in violation for each day it operated outside of the defined operating range.

*20. ~~Until June 1, 2004, t~~The owner/operator shall operate and maintain a fuel flow meter for each fuel line on each source included in this ACP.

*21. Until June 1, 2004, the owner/operator shall maintain permanent hourly continuous emission monitoring or equivalent system parameter records and fuel-rate records, in a form suitable for inspection for a period of at least five (5) years. Such records shall be retained for a minimum of 5 years from date of entry and made available to the APCO upon request. These records shall include, but are not limited to:

a. The continuous emission monitoring measurements or equivalent system parameters for NOx, CO, and O2 in ppmv and lb/hour;
b. The type, quantity (BTU/hr), and higher heating value of fuel burned and the injection rate for any reactant chemicals used by the emission control system(s) on a daily basis.
c. The date, time, and duration of any start-up, shutdown or malfunction in the operation of any unit, emission control equipment, or emission monitoring equipment; and
d. The results of performance testing, evaluations, calibrations, checks, adjustments, and maintenance of any continuous emission monitors that have been installed pursuant to Section 9-10-502 of this Rule.