

Synthetic Minor Determination and/or **Netting Determination**

Permit To Install **15-01518**

A. Source Description

Marathon Ashland Petroleum, LLC, Canton Refinery(MAP) will be modifying several emission units during their 2003/2004 Plant Turnaround(TAR) to be conducted in the fall of 2003 and winter of 2004. The company has submitted synthetic minor PTI applications for these modifications because actual vs. future potential emissions calculations indicate that the modifications appear to trigger significant increases in several criteria pollutants above current PSD threshold limits. MAP has requested synthetic minor PTI's to restrict PTE emissions below these threshold limits thereby eliminating the need for a PSD review.

Four emission units will be modified during the TAR:

Crude Heater(B015);
Vacuum Heater(B020);
FCC Unit(P002); and
Gas Con debutanizer.

Modifications to the Gas Con Debutanizer unit will result in only fugitive VOC emissions which are to be regulated under a recent prior PTI modification(15- For emission unit P013). The remaining 3 modified units will also result in fugitive VOC and HAP emissions which will be regulated under PTI 15-015 for emission unit P0 . Terms and conditions for the VOC and HAP fugitive emissions shall be submitted as a separate PTI. For the purpose of quantifying VOC emissions to be used in the forthcoming PSD analysis, MAP has estimated the VOC fugitive emissions from these modifications to be 12.3 tons VOC / year.

Because of these modifications, downstream emission units are affected by the resulting increase of 10 % throughput of crude oil and a 20 % increase in gasoline production(See Appendix B, Page B-8(MAP PTI application)). The effect of this production increase is an increase in emissions. The modifications will also debottleneck emission unit P007(asphalt oxidizer) allowing an increase in throughput for this emission unit. This will result in an increase in emissions at P007 which will contribute to the overall analysis. The following calculations will show the increase in emissions due to these changes specified above and the limitations needed to maintain a PTE increase below the PSD thresholds.

Based on the following calculations, MAP has requested PTE restrictions for the FCC Unit(P002)which will reduce the PTE for this project to below PSD thresholds. However, MAP has also requested federally enforceable restrictions on emission units B015, B019, B020, and B029 to ensure that the project is not a major modification under PSD regulations.

B. Facility Emissions and Attainment Status

MAP is a major source of sulfur oxides, nitrogen oxides, PM, CO, and HAPS. The area is in attainment for all criteria pollutants. It is currently subject to the 40 CFR Parts 63 Subpart CC(Refinery MACT) and 40 CFR Part 60, subparts Kb, J, and A. The Canton Refinery is located in Stark County, an area classified as attainment or unclassifiable for all criteria air pollutants. The refinery is a major stationary source of regulated air pollutant emissions for the purposes of PSD (OAC rule 3745-31-10 through 3745-31-20). The refinery is also a major stationary source for the purposes of the Title V operating permit program (OAC rule 3745-77). The refinery is also subject to 40 CFR Part 63, Subpart CC and UUU(Refinery MACTs)

C. Source Emissions

BASELINE (ACTUAL EMISSIONS)

FCC Unit(P002)

PM: 230 tpy = (Average PM/hr. rate from most recent stack test) x (8760/2000)

NOx: 64.5 tpy = (Calculated emissions from CEMS data averaged over the baseline period)
See calculations in Appendix D of the Permit application

SO2: 290.5 tpy = (Calculated emissions from CEMS data averaged over the baseline period)
See calculations in Appendix D of the Permit application

VOC: 6.0 tons VOC/year = (1.67 pound VOC/1000 bbls fresh feed) x 7146.7 M bbl/yr. x
(1/2000)

CO: 101.3 tpy CO = (1.7 lb CO/1000 lb coke burned) x 13.57 lb coke burned/hr. x
(8760/2000)

Basis: See Pages B-3 and B-4 in MAP PTI application, Appendix B

For modified heaters and Debottlenecked emission unit P007

For fuel information used in fuel burning equipment, see Appendix B, Page B-6(MAP PTI application)

Crude Heater(B015), Vacuum Heater(B020), and FCC Charge Heater(B019)

CO for (B015): 25.7 tpy = (50 lb CO/mmscf) x (1027.61 mmscf/yr.)/2000 lb/ton
CO for (B020): 10.5 tpy = (50 lb CO/mmscf) x (421.41 mmscf/yr.)/2000 lb/ton
CO for (B019): 5.09 tpy = (50 lb CO/mmscf) x (201.2 mmscf/yr.)/2000 lb/ton

Basis: Appendix B, Page B-16(MAP PTI application)

NOx or (B015): 156.2 tpy = (304 lb NOx/mmscf) x (1027.61 mmscf/yr.)/2000 lb/ton
NOx for (B020): 23.0 tpy = (109 lb NOx/mmscf) x (421.41 mmscf/yr.)/2000 lb/ton
NOx for (B019): 11.0 tpy = (109 lb NOx/mmscf) x (201.24 mmscf/yr.)/2000 lb/ton

Basis: Appendix B, Page B-14(MAP PTI application)

VOC for (B015): 3.1 tpy = (6.0 lb VOC/mmscf) x (1027.61 mmscf/yr.)/2000 lb/ton
VOC for (B020): 1.3 tpy = (6.0 lb VOC/mmscf) x (421.41 mmscf/yr.)/2000 lb/ton
VOC for (B019): 0.6 tpy = (6.0 lb VOC/mmscf) x (201.2 mmscf/yr.)/2000 lb/ton

Basis: Appendix B, Page B-17(MAP PTI application)

PM for (B015): 4.3 tpy = (8.3 lb PM/mmscf) x (1027.61 mmscf/yr.)/2000 lb/ton
PM for (B020): 1.7 tpy = (8.3 lb PM/mmscf) x (421.41 mmscf/yr.)/2000 lb/ton
PM for (B019): 0.8 tpy = (8.3 lb PM/mmscf) x (201.2 mmscf/yr.)/2000 lb/ton

Basis: Appendix B, Page B-13(MAP PTI application)

SO2 for (B015): $1.88 \text{ tpy} = (21.60 \text{ ppmv}) \times (0.1 \text{ grain H}_2\text{S/dscf}/159 \text{ ppmv H}_2\text{S}) \times (1 \text{ lb}/7000 \text{ grain}) \times (64 \text{ lb SO}_2/34 \text{ lb H}_2\text{S}) \times (1,139,616 \text{ mmBtu/yr.}) \times (1,000,000 \text{ Btu/mmBtu}) / (2000 \text{ lb/ton}) \times 1109 \text{ Btu/dscf}$

SO2 for (B020): $0.77 \text{ tpy} = (21.60 \text{ ppmv}) \times (0.1 \text{ grain H}_2\text{S/dscf}/159 \text{ ppmv H}_2\text{S}) \times (1 \text{ lb}/7000 \text{ grain}) \times (64 \text{ lb SO}_2/34 \text{ lb H}_2\text{S}) \times (4647,341 \text{ mmBtu/yr.}) \times (1,000,000 \text{ Btu/mmBtu}) / (2000 \text{ lb/ton}) \times 1109 \text{ Btu/dscf}$

SO2 for (B019): $0.37 \text{ tpy} = (21.60 \text{ ppmv}) \times (0.1 \text{ grain H}_2\text{S/dscf}/159 \text{ ppmv H}_2\text{S}) \times (1 \text{ lb}/7000 \text{ grain}) \times (64 \text{ lb SO}_2/34 \text{ lb H}_2\text{S}) \times (223,172 \text{ mmBtu/yr.}) \times (1,000,000 \text{ Btu/mmBtu}) / (2000 \text{ lb/ton}) \times 1109 \text{ Btu/dscf}$

Basis: Appendix B, Page B-15(MAP PTI application)

Asphalt Oxidizer(P007) Debottlenecked Emissions

The baseline(actual) emissions calculations were based on an average 2001/2002 production rate and refinery fuel gas usage. The average 2001 production and refinery fuel gas usage rates were 562, 140 tons asphalt/year and 11.8 mmscf/yr., respectively. The average 2002 production and refinery fuel gas usage rates were 530, 983 tons asphalt/yr. and 18.1 mmscf/yr., respectively. The total baseline emissions is the result of asphalt production and the burning of refinery fuel gas in the emissions unit. The table below shows the results of the following calculation:

Total annual baseline pollutant emissions(T), in tons/yr. = (Average annual pollutant rate due to asphalt production(AP), in tons pollutant per year) + (Average annual pollutant rate due to burning of refinery fuel gas(FG), in tons pollutant per year)

Average annual pollutant rate due to asphalt production(AP), in tons pollutant per year = ((Production rate P, tons asphalt/yr.) x (asphalt production rate emission factor(AEF), lbs pollutant per ton of asphalt))/2000

Average annual pollutant rate due to burning of refinery fuel gas(FG), in tons pollutant per year = ((Average annual refinery fuel gas usage(GEF), mmscf/yr.) x (refinery fuel gas usage rate(GUR), lbs pollutant per mmscf/yr.))/2000

POLLUTANT	GUR (MMS CF)	GEF (LBS/MM SCF)	P (TONS ASPHALT PER YEAR)	AEF (LBS PER TON OF ASPHALT)	AP (TONS POLLUTANT PER YEAR)	FG (TONS POLLUTANT PER YEAR)	T (TONS POLLUTANT PER YEAR)
VOC - 2001	11.8	6.1	562,140	0.00099	0.28	0.04	0.31
VOC - 2002	18.1	5.9	530,983	0.00099	0.26	0.05	0.32
BASELINE ANNUAL VOC EMISSIONS RATE, IN TONS PER YEAR							0.32
NO _x - 2001	11.8	110	562,140	0	0	0.65	0.65
NO _x - 2002	18.1	108	530,983	0	0	0.98	0.98
BASELINE ANNUAL NO _x EMISSIONS RATE, IN TONS PER YEAR							0.81
CO - 2001	11.8	92.4	562,140	0	0	0.54	0.54
CO - 2002	18.1	90.7	530,983	0	0	0.82	0.82
BASELINE ANNUAL CO EMISSIONS RATE, IN TONS PER YEAR							0.68
PM - 2001	11.8	8.4	562,140	0	0	0.05	0.05

PM - 2002	18.1	8.2	530,983	0	0	0.07	0.07
BASELINE ANNUAL PM EMISSIONS RATE, IN TONS PER YEAR							0.06

SO₂: 30 tons SO₂/yr. = 7.62 lb SO₂/hr. x 7874 hr/yr x (1 ton/2000 lb)
The emission factor is the result of a recent stack test conducted on P007.

FUTURE (POTENTIAL) POST MODIFICATION EMISSIONS

For the FCC Unit(P002)

The PTE for this emission unit was determined when this emission unit was previously modified. Find attached a hard copy of the previously modified PTI(15-01518) with all calculations.

<u>Pollutant</u>	<u>PTE(tons pollutant/yr.)</u>
PM	240
SO ₂	534.2
NO _x	300.9
VOC	7.5
CO	184

For modified heaters and Debottlenecked emission unit P007

For fuel information on fuel burning equipment, see Appendix B, Page B-6(MAP PTI application)

Crude Heater(B015), Vacuum Heater(B020), and FCC Charge Heater(B019)

- CO for (B015): $41.4 \text{ tpy} = (50 \text{ lb CO/mm}^3\text{scf}) \times (193 \text{ mmBtu/hr.} \times 8760) / ((1020 \text{ mmBtu/mm}^3\text{scf}) \times 2000 \text{ lb/ton})$
- CO for (B020): $13.7 \text{ tpy} = (50 \text{ lb CO/mm}^3\text{scf}) \times (64 \text{ mmBtu/hr.} \times 8760) / ((1020 \text{ mmBtu/mm}^3\text{scf}) \times 2000 \text{ lb/ton})$
- CO for (B019): $11.0 \text{ tpy} = (50 \text{ lb CO/mm}^3\text{scf}) \times (51.0 \text{ mmBtu/hr.} \times 8760) / ((1020 \text{ mmBtu/mm}^3\text{scf}) \times 2000 \text{ lb/ton})$

Basis: Appendix B, Page B-16(MAP PTI application)

- NO_x or (B015): $42.3 \text{ tpy} = (0.05 \text{ lb NO}_x \text{ /mm}^3\text{Btu}) \times (193 \text{ mmBtu/hr}) \times (8760/2000)$
- NO_x for (B020): $27.5 \text{ tpy} = (100 \text{ lb NO}_x \text{ /mm}^3\text{scf}) \times (64 \text{ mmBtu/hr.} \times 8760) / ((1020 \text{ mmBtu/mm}^3\text{scf}) \times 2000 \text{ lb/ton})$
- NO_x for (B019): $21.9 \text{ tpy} = (100 \text{ lb NO}_x \text{ /mm}^3\text{scf}) \times (51 \text{ mmBtu/hr.} \times 8760) / ((1020 \text{ mmBtu/mm}^3\text{scf}) \times 2000 \text{ lb/ton})$

Basis: Appendix B, Page B-14(MAP PTI application)

- VOC for (B015): $4.6 \text{ tpy} = (100 \text{ lb VOC/mm}^3\text{scf}) \times (193 \text{ mmBtu/hr.} \times 8760) / ((1020 \text{ mmBtu/mm}^3\text{scf}) \times 2000 \text{ lb/ton})$
- VOC for (B020): $1.5 \text{ tpy} = (5.5 \text{ lb VOC/mm}^3\text{scf}) \times (64 \text{ mmBtu/hr.} \times 8760) / ((1020 \text{ mmBtu/mm}^3\text{scf}) \times 2000 \text{ lb/ton})$

VOC for (B019): $1.2 \text{ tpy} = (5.5 \text{ lb VOC/mmscf}) \times (51 \text{ mmBtu/hr.} \times 8760) / ((1020 \text{ mmBtu/mmscf}) \times 2000 \text{ lb/ton})$

Basis: Appendix B, Page B-16(MAP PTI application)

PM for (B015): $6.3 \text{ tpy} = ((0.0075 \text{ lb PM/mmBtu}) \times (193 \text{ mmBtu/hr.} \times 8760)) / 2000 \text{ lb/ton.}$

PM for (B020): $2.1 \text{ tpy} = ((0.0075 \text{ lb PM/mmBtu}) \times (64 \text{ mmBtu/hr.} \times 8760)) / 2000 \text{ lb/ton.}$

PM for (B019): $1.7 \text{ tpy} = ((0.0075 \text{ lb PM/mmBtu}) \times (51 \text{ mmBtu/hr.} \times 8760)) / 2000 \text{ lb/ton.}$

Basis: Appendix B, Page B-13(MAP PTI application)

SO2 for (B015): $20.50 \text{ tpy} = ((21.60 \text{ ppmv}) \times (0.1 \text{ grain H}_2\text{S/dscf}/159 \text{ ppmv H}_2\text{S}) \times (1 \text{ lb}/7000 \text{ grain}) \times (64 \text{ lb SO}_2/34 \text{ lb H}_2\text{S}) \times (193 \text{ mmBtu/hr} \times 8760 \text{ hr./yr.}) \times (1,000,000 \text{ Btu/mmBtu})) / ((2000 \text{ lb/ton}) \times 1109 \text{ HHV Btu/dscf})$

SO2 for (B020): $6.8 \text{ tpy} = ((21.60 \text{ ppmv}) \times (0.1 \text{ grain H}_2\text{S/dscf}/159 \text{ ppmv H}_2\text{S}) \times (1 \text{ lb}/7000 \text{ grain}) \times (64 \text{ lb SO}_2/34 \text{ lb H}_2\text{S}) \times (64 \text{ mmBtu/hr} \times 8760 \text{ hr./yr.}) \times (1,000,000 \text{ Btu/mmBtu})) / ((2000 \text{ lb/ton}) \times 1109 \text{ HHV Btu/dscf})$

SO2 for (B019): $5.42 \text{ tpy} = ((21.60 \text{ ppmv}) \times (0.1 \text{ grain H}_2\text{S/dscf}/159 \text{ ppmv H}_2\text{S}) \times (1 \text{ lb}/7000 \text{ grain}) \times (64 \text{ lb SO}_2/34 \text{ lb H}_2\text{S}) \times (51 \text{ mmBtu/hr} \times 8760 \text{ hr./yr.}) \times (1,000,000 \text{ Btu/mmBtu})) / ((2000 \text{ lb/ton}) \times 1109 \text{ HHV Btu/dscf})$

Basis: Appendix B, Page B-15(MAP PTI application)

Asphalt Oxidizer(P007) Debottleneck

The future (Potential to Emit) post modification emissions were calculated as follows:

PM: $0.26 \text{ tons PM/yr.} = (8.00 \text{ mmBtu/hr}) / ((1109 \text{ mmBtu/scf}) \times (8.3 \text{ lb PM/mmscf}) \times ((8760 \text{ hr/yr.}/2000 \text{ lb/ton})))$

The emission factor of 8.3 lb PM/mmscf is from the most recent USEPA, AP-42, Section 1.4, Table 1.4-2. It has been modified for heating value.

NOx: $3.4 \text{ tons NO}_x \text{ per year} = (8.00 \text{ mmBtu/hr}) / ((1109 \text{ mmBtu/scf}) \times (109 \text{ lb NO}_x/\text{mmscf}) \times ((8760 \text{ hr/yr.}/2000 \text{ lb/ton})))$

The emission factor of 109 lb NO_x/mmscf is from the most recent USEPA, AP-42, Section 1.4, Table 1.4-2. It has been modified for heating value.

SO2: $33.4 \text{ tons SO}_2/\text{yr.} = 7.62 \text{ lb SO}_2/\text{hr.} \times 8760 \text{ hr/yr} \times (1 \text{ ton}/2000 \text{ lb})$

The emission factor is the result of a recent stack test conducted on P007.

CO: $1.6 \text{ tons CO/yr.} = (8.00 \text{ mmBtu/hr}) / ((1109 \text{ mmBtu/scf}) \times (50 \text{ lb CO/mmscf}) \times ((8760 \text{ hr/yr.}/2000 \text{ lb/ton})))$

The emission factor of 50 lb CO/mmscf is the result of a recent stack test conducted on P007.

VOC: $0.5 \text{ tons VOC/yr.} = (6.0 \text{ lb VOC/mmscf}) \times (8.0 \times 8760 \text{ mmBtu/yr.}) / ((1109 \text{ mmBtu/mmscf}) \times (2000 \text{ lb/ton})) + (0.00099 \text{ lb VOC/ton asphalt}) \times (618,354 \text{ tons asphalt/yr. max}) / (2000 \text{ lb/ton})$

The emission factor of 6.0 lb VOC/mmscf is from the most recent USEPA, AP-42, Section 1.4, Table 1.4-2. It has been modified for heating value.

EMISSION INCREASES FOR OTHER AFFECTED (PROJECT RELATED) EMISSION SOURCES

For Fuel burning emission units

The increase in emissions from these fuel burning emission units(Project Related emission units) is due to the modification of the emission units described previously since these units are operationally downstream of the modified emissions units. Since there is a 10 % increase in the crude oil throughput, the emissions increase due to this increase in crude oil throughput for these Project Related emission units was calculated by determining the gas usage for each emission unit, multiplying this value by 1.10(10 % increase) and using appropriate AP-42 emission factors. The gas increase was based on a 2-year average fuel usage by each emission unit. Increase in gas input for these units was calculated to be the following(see notes under the table) and are documented in Appendix B, Page B-7 of MAP's PTI application.

D.O.T heater(B016)	17 mmscf/yr.	18,722 mmBtu/yr.
Alky Isostripper Heater(B021)	32 mmscf/yr.	35,799 mmBtu/yr.
HDS heater(B022)	63 mmscf/yr.	69,539 mmBtu/yr.
NPT Heater(B023)	22 mmscf/yr.	24,883 mmBtu/yr.
Boiler No. 1(B024)	8 mmscf/yr.	8,449 mmBtu/yr.
Boiler No. 11(B026)	77 mmscf/yr.	85,912 mmBtu/yr.
Boiler No. 12(B027)	38 mmscf/yr.	42,420 mmBtu/yr.
CCR Stabilizer(B028)	19 mmscf/yr.	14, 918 mmBtu/yr.
CCR Charge Heater(B029)	148 mmscf/yr.	115,513 mmBtu/yr.
Claus SRU/SCOT (P011)	17 mmscf/yr.	18,396 mmBtu/yr.

Unit	Gas Usage Increase (mmscf/yr . - See note 7)	PM Emissions Increase (See note 3)		NOx Emissions Increase (See note 3)		SO2 Emissions Increase (See note 3)		VOC Emissions Increase (See note 3)		CO Emissions Increase (See note 3)	
		A (See note 1)	B (See note 2)	A (See note 1)	B (See note 2)	A (See note 1)	B (See note 2)	A (See note 1)	B (See note 2)	A (See note 1)	B (See note 2)
B016	17	8.3	0.07	109	0.92	0.0136	0.03	6.0	0.05	50	0.42
B021	32	8.3	0.13	109	1.76	0.0136	0.06	6.0	0.10	50	0.81
B022	63	8.3	0.26	109	3.42	0.0136	0.11	6.0	0.19	50	1.57
B023	22	8.3	0.09	109	1.22	0.0136	0.04	6.0	0.07	50	0.56
B024	8	8.3	0.03	109	0.42	0.0136	0.01	6.0	0.02	50	0.19
B026	77	8.3	0.32	0.17 (See note 5)	7.30	0.0136	0.14	6.0	0.23	50	1.94
B027	38	8.3	0.16	109	2.08	0.0136	0.07	6.0	0.11	50	0.96
B028	19	5.8	0.06	109	1.04	0.0070	0.02	4.2	0.04	50	0.48
B029	148	5.8	0.43	0(see note 4)	0	0.0070	0.14	4.2	0.31	50	3.70
P011	17	8.3	0.07	109	0.90	(See note 6)	1.08	6.0	0.05	50	0.41

Total Emission Increase	1.62		19.1		1.7		1.17		11.04
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- Note 1: A in the table = the appropriate AP - 42 and other emission factors(See Appendix B, Pages B-8 through B-12 of MAPs PTI application) for references. Emission factor units are lbs pollutant/mmscf.
- Note 2: B in the table = emissions increase in tons pollutant per year.
- Note 3: Increased Emissions, tpy = (emission factor A, lbs pollutant/mmscf) x (Increased gas usage, scf/yr.)/(2000 lb/ton)
- Note 4: Emission unit B029 will be equipped with Low NOx Burners by the Spring of 2004 so no increase is anticipated for this emission unit.
- Note 5: Based on average CEM NOx data for 2001 and 2002
- Note 6: Per 2001/2002 emission inventories, the actual SO2 emissions for the Claus unit averaged 10.81 tpy.
- Note 7: For fuel information on fuel burning equipment, see Appendix B, Page B-6(MAP PTI application)

For other VOC emission unit (Project Related sources) affected by TAR modifications

The following table indicates the anticipated VOC emission increases for select downstream affected emission units(Project Related Emission units):

Emission Unit Source	Baseline Emissions, in TPY VOC(a)	Increasing Factor	VOC Increase, in TPY	Basis for the VOC Increase
Loading Rack, J001	11.68	0.2	2.4	20 % Gasoline Production Increase
South Area Cooling Tower	2.97	0.1	0.3	10 % Crude Oil Throughput rate increase(b)
North Area Cooling Tower	3.28	0.1	0.3	10 % Crude Oil Throughput rate increase
IFR Gasoline Storage(c)	23.3	0.033	0.8	3.3 % increase based on 20 % gasoline production increase
EFR Gasoline Storage(d)	44.42	0.006	0.3	0.6 % increase based on 20 % gasoline production increase
Non-Gasoline Storage	27.75	0.1	2.8	10 % Crude Oil Throughput rate increase

- (a) Baseline emission rates for these units are from the 2000/ 2001 Title V emission inventory
- (b) 10% crude increase is maximum estimate from MAP project team.

- (c) The following Internal Floating Roof tanks' emissions increase will average 3.3% due to a 20% increase in throughput: Tanks 56,61,67,62,117,119,125,239,240,242,243,251,253; based on Tanks 4.09b emission estimation model.
- (d) The following External Floating Roof tanks' emissions increase will average 0.6% due to a 20% increase in throughput: Tanks 52,66,69,71,72,73; based on Tanks 4.09b emission estimation model.

D. Conclusion

**ANALYSIS OF POTENTIAL VS ACTUAL EMISSIONS DUE TO
EMISSION UNIT MODIFICATIONS
FOR RESTRICTING PTE TO LEVELS UNDER PSD
THRESHOLD LIMITS**

The following 2 tables provide a comparative analysis of the emission increases due to the modifications during MAP's TAR and an estimate of the emission increases due to debottlenecking and other related impacts. The tables reflect the emissions calculated above rounded to the nearest ton per year. The first table shows the emission increases without the benefit of PTE restrictions. The data indicates that PTE restrictions are needed for NOx, SO2, and CO pollutants. In table 2, shows the affect of restrictions proposed by MAP. The restrictions proposed to the FCC Unit NOx, SO2, and CO pollutants will limit the overall PTE for these pollutants to below PSD thresholds. These restricted values are shown in the table as bolded and located in filled cells. The bolded, underlined, and italicized restricted values in the table are emission limits requested by MAP and, in some cases, are the result of a recent consent agreement between USEPA and MAP.

**SIGNIFICANT EMISSION INCREASES DUE TO MODIFICATIONS
(ACTUAL VS POTENTIAL)**

POLLUTANTS	P O T E N T I A L V S	A C T U A L	EMISSION INCREASES BY AFFECTED EMISSION UNITS (IN TONS PER YEAR)							PSD T H R E S H O L D	
			B	B	P	P	B	TRP Emission Increases	Other VOC Emission Increases (Including fugitives)		TOTAL EMISSION
			0 1 5	0 2 0	0 0 2	0 0 7	0 1 9				
PARTICULATE MATTER(PM)	POT.		6.3	2.1	240	0.26	1.7	1.6	0	252	
	ACT.		4.3	1.7	230.0	0.06	0.8	0	0	237	
PM EMISSION INCREASE =										15	25
NITROGEN OXIDES	POT.		42.3	27.5	301	3.4	21.9	19.1	0	415	
	ACT.		156.2	23.0	64.5	0.81	11.0	0	0	256	
NITROGEN OXIDES EMISSION INCREASE =										159	40

SULFUR DIOXIDE	POT.	20.5	6.8	534	33.4	5.42	1.7	0	662	
	ACT.	1.88	0.77	290.5	30.0	0.37	0	0	323	
SULFUR DIOXIDE EMISSION INCREASE =									321	40
CARBON MONOXIDE	POT.	41.4	13.7	184	1.6	11.0	11.0	0	263	
	ACT.	25.7	10.5	101.3	0.7	5.0	0	0	146	
CARBON MONOXIDE EMISSION INCREASE =									117	100
VOC	POT.	4.6	1.5	7.5	1.2	0.5	1.2	19.2	35.3	
	ACT.	3.1	1.3	6.0	0.6	0.32	0	0	11	
VOC EMISSION INCREASE =									24.3	40

RESTRICTED EMISSIONS FOR THE PURPOSE OF AVOIDING PSD

POLLUTANTS	P O T E N T I A L V S	A C T U A L	EMISSION INCREASES BY AFFECTED EMISSION UNITS (IN TONS PER YEAR)							PSD T H R E S H O L D
			B 0 1 5	B 0 2 0	P 0 0 2	P 0 0 7	B 0 1 9	TRP Emission Increases	Other VOC Emission Increases (Including fugitives)	
PARTICULATE MATTER(PM)	POT.	6.3	2.1	<u>63.1</u>	0.26	1.7	1.6	0	-----	
	ACT.	4.3	1.7	230.0	0.06	0.8	0	0	-----	
POT. minus Actual		2.03	0.34	0	0.20	0.83	1.6	0	5.0	
PM EMISSION INCREASE =									5.0	25
NITROGEN OXIDES	POT.	<u>42.3</u>	<u>27.5</u>	67.3	3.4	21.9	19.1	0	-----	
	ACT.	156.2	23.0	64.5	0.81	11.0	0	0	-----	
POT. minus Actual		0	4.5	2.8	2.6	10.9	19.1	0	39.9	
NITROGEN OXIDES EMISSION INCREASE =									39.9	40
SULFUR DIOXIDE	POT.	<u>20.5</u>	<u>6.80</u>	295.6	33.4	5.42	1.7	0	-----	
	ACT.	1.88	0.77	290.5	30.0	0.37	0	0	-----	
POT. minus Actual		18.62	6.03	5.1	3.4	5.05	1.7	0	39.9	
SULFUR DIOXIDE EMISSION INCREASE =									39.9	40
CARBON MONOXIDE	POT.	<u>41.4</u>	<u>13.7</u>	164.4	1.6	11.0	11.0	0	-----	
	ACT.	25.7	10.5	101.3	0.7	5.0	0	0	-----	

POT. minus Actual	15.8	3.2	63.1	0.9	5.9	11.0	0	99.9	
CARBON MONOXIDE EMISSION INCREASE =								99.9	100
VOC	POT.	4.6	1.5	7.5	1.2	0.5	1.2	19.2	-----
	ACT.	3.1	1.3	6.0	0.6	0.32	0	0	-----
POT. minus Actual	1.5	0.2	1.5	0.6	0.18	1.2	19.2	24.4	
VOC EMISSION INCREASE =								24.4	40

Based on these calculations, MAP has requested PTE restrictions for the FCC Unit(P002)which will reduce the PTE for this project to below PSD thresholds. However, MAP has also requested federally enforceable restrictions on emission units B015, B019, B020, and B029 to ensure that the project is not a major modification under PSD regulations.



State of Ohio Environmental Protection Agency

Street Address:

Lazarus Gov. Center
122 S. Front Street
Columbus, OH 43215

TELE: (614) 644-3020 FAX: (614) 644-2329

Mailing Address:

Lazarus Gov. Center
P.O. Box 1049
Columbus, OH 43216-1049

**RE: DRAFT PERMIT TO INSTALL
STARK COUNTY
Application No: 15-01518**

CERTIFIED MAIL

	TOXIC REVIEW
	PSD
Y	SYNTHETIC MINOR
Y	CEMS
40 CFR PART 63, SUBPART CC	MACT
	NSPS
	NESHAPS
	NETTING
	MAJOR NON-ATTAINMENT
	MODELING SUBMITTED
	GASOLINE DISPENSING FACILITY

DATE: 9/30/2003

Marathon Ashland Petroleum LLC-Canton
Brent McNeese
2408 Gambrinus Avenue SW
Canton, OH 44706

You are hereby notified that the Ohio Environmental Protection Agency has made a draft action recommending that the Director issue a Permit to Install for the air contaminant source(s) [emissions unit(s)] shown on the enclosed draft permit. This draft action is not an authorization to begin construction or modification of your emissions unit(s). The purpose of this draft is to solicit public comments on the proposed installation. A public notice concerning the draft permit will appear in the Ohio EPA Weekly Review and the newspaper in the county where the facility will be located. Public comments will be accepted by the field office within 30 days of the date of publication in the newspaper. Any comments you have on the draft permit should be directed to the appropriate field office within the comment period. A copy of your comments should also be mailed to Robert Hodanbosi, Division of Air Pollution Control, Ohio EPA, P.O. Box 1049, Columbus, OH, 43266-0149.

A Permit to Install may be issued in proposed or final form based on the draft action, any written public comments received within 30 days of the public notice, or record of a public meeting if one is held. You will be notified in writing of a scheduled public meeting. Upon issuance of a final Permit to Install a fee of **\$700** will be due. Please do not submit any payment now.

The Ohio EPA is urging companies to investigate pollution prevention and energy conservation. Not only will this reduce pollution and energy consumption, but it can also save you money. If you would like to learn ways you can save money while protecting the environment, please contact our Office of Pollution Prevention at (614) 644-3469. If you have any questions about this draft permit, please contact the field office where you submitted your application, or Mike Ahern, Field Operations & Permit Section at (614) 644-3631.

Very truly yours,

Michael W. Ahern, Supervisor
Field Operations and Permit Section
Division of Air Pollution Control

CC: USEPA

Canton LAA

Stark Co Area Transportation Study

WV

PA

STARK COUNTY

PUBLIC NOTICE

**ISSUANCE OF DRAFT PERMIT TO INSTALL 15-01518 FOR AN AIR CONTAMINANT SOURCE FOR
MARATHON ASHLAND PETROLEUM LLC-CANTON**

On 9/30/2003 the Director of the Ohio Environmental Protection Agency issued a draft action of a Permit To Install an air contaminant source for **Marathon Ashland Petroleum LLC-Canton**, located at **2408 Gambrinus Avenue SW, Canton, Ohio**.

Installation of the air contaminant source identified below may proceed upon final issuance of Permit To Install 15-01518:

FCC UNIT P002 - THIS IS A MODIFICATION TO THIS PERMIT TO LIMIT PTE FOR SELECT POLLUTANTS TO BELOW PSD THRESHOLD LIMITS.

Comments concerning this draft action, or a request for a public meeting, must be sent in writing to the address identified below no later than thirty (30) days from the date this notice is published. All inquiries concerning this draft action may be directed to the contact identified below.

Dan Aleman, Canton City Health Department, 420 Market Avenue, Canton, OH 44702-1544 [(330)489-3385]



**Permit To Install
Terms and Conditions**

**Issue Date: To be entered upon final issuance
Effective Date: To be entered upon final issuance**

DRAFT PERMIT TO INSTALL 15-01518

Application Number: 15-01518

APS Premise Number: 1576000301

Permit Fee: **To be entered upon final issuance**

Name of Facility: Marathon Ashland Petroleum LLC-Canton

Person to Contact: Brent McNeese

Address: 2408 Gambrinus Avenue SW
Canton, OH 44706

Location of proposed air contaminant source(s) [emissions unit(s)]:

**2408 Gambrinus Avenue SW
Canton, Ohio**

Description of proposed emissions unit(s):

FCC UNIT P002 - THIS IS A MODIFICATION TO THIS PERMIT TO LIMIT PTE FOR SELECT POLLUTANTS TO BELOW PSD THRESHOLD LIMITS.

The above named entity is hereby granted a Permit to Install for the above described emissions unit(s) pursuant to Chapter 3745-31 of the Ohio Administrative Code. Issuance of this permit does not constitute expressed or implied approval or agreement that, if constructed or modified in accordance with the plans included in the application, the above described emissions unit(s) of environmental pollutants will operate in compliance with applicable State and Federal laws and regulations, and does not constitute expressed or implied assurance that if constructed or modified in accordance with those plans and specifications, the above described emissions unit(s) of pollutants will be granted the necessary permits to operate (air) or NPDES permits as applicable.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Director

Part I - GENERAL TERMS AND CONDITIONS

A. State and Federally Enforceable Permit To Install General Terms and Conditions

1. Monitoring and Related Recordkeeping and Reporting Requirements

- a. Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall maintain records that include the following, where applicable, for any required monitoring under this permit:
 - i. The date, place (as defined in the permit), and time of sampling or measurements.
 - ii. The date(s) analyses were performed.
 - iii. The company or entity that performed the analyses.
 - iv. The analytical techniques or methods used.
 - v. The results of such analyses.
 - vi. The operating conditions existing at the time of sampling or measurement.
- b. Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include, but not be limited to, all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.
- c. Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall submit required reports in the following manner:
 - i. Reports of any required monitoring and/or recordkeeping of federally enforceable information shall be submitted to the appropriate Ohio EPA District Office or local air agency.
 - ii. Quarterly written reports of (i) any deviations from federally enforceable emission limitations, operational restrictions, and control device operating parameter limitations, excluding deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06, that have been detected by the testing, monitoring and recordkeeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) any corrective actions or preventive measures taken, shall be made to the appropriate Ohio EPA District Office or local air agency. The written reports shall be submitted quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year and shall cover the

previous calendar quarters. See B.9 below if no deviations occurred during the quarter.

- iii. Written reports, which identify any deviations from the federally enforceable monitoring, recordkeeping, and reporting requirements contained in this permit shall be submitted to the appropriate Ohio EPA District Office or local air agency every six months, i.e., by January 31 and July 31 of each year for the previous six calendar months. If no deviations occurred during a six-month period, the permittee shall submit a semi-annual report, which states that no deviations occurred during that period.
- iv. Each written report shall be signed by a responsible official certifying that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete.

2. Scheduled Maintenance/Malfunction Reporting

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. The malfunction, i.e., upset, of any emissions units or any associated air pollution control system(s) shall be reported to the appropriate Ohio EPA District Office or local air agency in accordance with paragraph (B) of OAC rule 3745-15-06. (The definition of an upset condition shall be the same as that used in OAC rule 3745-15-06(B)(1) for a malfunction.) The verbal and written reports shall be submitted pursuant to OAC rule 3745-15-06.

Except as provided in that rule, any scheduled maintenance or malfunction necessitating the shutdown or bypassing of any air pollution control system(s) shall be accompanied by the shutdown of the emission unit(s) that is (are) served by such control system(s).

3. Risk Management Plans

If the permittee is required to develop and register a risk management plan pursuant to section 112(r) of the Clean Air Act, as amended, 42 U.S.C. 7401 et seq. ("Act"), the permittee shall comply with the requirement to register such a plan.

4. Title IV Provisions

If the permittee is subject to the requirements of 40 CFR Part 72 concerning acid rain, the permittee shall ensure that any affected emissions unit complies with those requirements. Emissions exceeding any allowances that are lawfully held under Title IV of the Act, or any regulations adopted thereunder, are prohibited.

5. Severability Clause

A determination that any term or condition of this permit is invalid shall not invalidate the force or effect of any other term or condition thereof, except to the extent that any other term or

condition depends in whole or in part for its operation or implementation upon the term or condition declared invalid.

6. General Requirements

- a. The permittee must comply with all terms and conditions of this permit. Any noncompliance with the federally enforceable terms and conditions of this permit constitutes a violation of the Act, and is grounds for enforcement action or for permit revocation, revocation and reissuance, or modification, or for denial of a permit renewal application.
- b. It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the federally enforceable terms and conditions of this permit.
- c. This permit may be modified, reopened, revoked, or revoked and reissued, for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or revocation, or of a notification of planned changes or anticipated noncompliance does not stay any term and condition of this permit.
- d. This permit does not convey any property rights of any sort, or any exclusive privilege.
- e. The permittee shall furnish to the Director of the Ohio EPA, or an authorized representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying, reopening or revoking this permit or to determine compliance with this permit. Upon request, the permittee shall also furnish to the Director or an authorized representative of the Director, copies of records required to be kept by this permit. For information claimed to be confidential in the submittal to the Director, if the Administrator of the U.S. EPA requests such information, the permittee may furnish such records directly to the Administrator along with a claim of confidentiality.

7. Fees

The permittee shall pay fees to the Director of the Ohio EPA in accordance with ORC section 3745.11 and OAC Chapter 3745-78. The permittee shall pay all applicable Permit To Install fees within 30 days after the issuance of this Permit To Install.

8. Federal and State Enforceability

Only those terms and conditions designated in this permit as federally enforceable, that are required under the Act, or any of its applicable requirements, including relevant provisions designed to limit the potential to emit of a source, are enforceable by the Administrator of the U.S. EPA, the State, and citizens under the Act. All other terms and conditions of this permit shall not be federally enforceable and shall be enforceable under State law only.

9. Compliance Requirements

- a. Any document (including reports) required to be submitted and required by a federally applicable requirement in this permit shall include a certification by a responsible official that, based on information and belief formed after reasonable inquiry, the statements in the document are true, accurate, and complete.
- b. Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Director of the Ohio EPA or an authorized representative of the Director to:
 - i. At reasonable times, enter upon the permittee's premises where a source is located or the emissions-related activity is conducted, or where records must be kept under the conditions of this permit.
 - ii. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit, subject to the protection from disclosure to the public of confidential information consistent with ORC section 3704.08.
 - iii. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.
 - iv. As authorized by the Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit and applicable requirements.
- c. The permittee shall submit progress reports to the appropriate Ohio EPA District Office or local air agency concerning any schedule of compliance for meeting an applicable requirement. Progress reports shall be submitted semiannually, or more frequently if specified in the applicable requirement or by the Director of the Ohio EPA. Progress reports shall contain the following:
 - i. Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.
 - ii. An explanation of why any dates in any schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.

10. Permit To Operate Application

- a. If the permittee is required to apply for a Title V permit pursuant to OAC Chapter 3745-77, the permittee shall submit a complete Title V permit application or a complete Title V permit modification application within twelve (12) months after commencing operation of the emissions units covered by this permit. However, if the proposed new or

modified source(s) would be prohibited by the terms and conditions of an existing Title V permit, a Title V permit modification must be obtained before the operation of such new or modified source(s) pursuant to OAC rule 3745-77-04(D) and OAC rule 3745-77-08(C)(3)(d).

- b. If the permittee is required to apply for permit(s) pursuant to OAC Chapter 3745-35, the source(s) identified in this Permit To Install is (are) permitted to operate for a period of up to one year from the date the source(s) commenced operation. Permission to operate is granted only if the facility complies with all requirements contained in this permit and all applicable air pollution laws, regulations, and policies. Pursuant to OAC Chapter 3745-35, the permittee shall submit a complete operating permit application within ninety (90) days after commencing operation of the source(s) covered by this permit.

11. Best Available Technology

As specified in OAC Rule 3745-31-05, all new sources must employ Best Available Technology (BAT). Compliance with the terms and conditions of this permit will fulfill this requirement.

12. Air Pollution Nuisance

The air contaminants emitted by the emissions units covered by this permit shall not cause a public nuisance, in violation of OAC rule 3745-15-07.

B. State Only Enforceable Permit To Install General Terms and Conditions

1. Compliance Requirements

The emissions unit(s) identified in this Permit to Install shall remain in full compliance with all applicable State laws and regulations and the terms and conditions of this permit.

2. Reporting Requirements

The permittee shall submit required reports in the following manner:

- a. Reports of any required monitoring and/or recordkeeping of state-only enforceable information shall be submitted to the appropriate Ohio EPA District Office or local air agency.
- b. Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (a) any deviations (excursions) from state-only required emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and recordkeeping requirements specified in this permit, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the appropriate Ohio EPA District Office or local air agency. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

3. Permit Transfers

Any transferee of this permit shall assume the responsibilities of the prior permit holder. The appropriate Ohio EPA District Office or local air agency must be notified in writing of any transfer of this permit.

4. Termination of Permit To Install

This permit to install shall terminate within eighteen months of the effective date of the permit to install if the owner or operator has not undertaken a continuing program of installation or modification or has not entered into a binding contractual obligation to undertake and complete within a reasonable time a continuing program of installation or modification. This deadline may be extended by up to 12 months if application is made to the Director within a reasonable time before the termination date and the party shows good cause for any such extension.

5. Construction of New Sources(s)

The proposed emissions unit(s) shall be constructed in strict accordance with the plans and application submitted for this permit to the Director of the Ohio Environmental Protection Agency. There may be no deviation from the approved plans without the express, written approval of the Agency. Any deviations from the approved plans or the above conditions may lead to such sanctions and penalties as provided under Ohio law. Approval of these plans does not constitute an assurance that the proposed facilities will operate in compliance with all Ohio laws and regulations. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed sources cannot meet the requirements of this permit or cannot meet applicable standards.

If the construction of the proposed emissions unit(s) has already begun or has been completed prior to the date the Director of the Environmental Protection Agency approves the permit application and plans, the approval does not constitute expressed or implied assurance that the proposed facility has been constructed in accordance with the approved plans. The action of beginning and/or completing construction prior to obtaining the Director's approval constitutes a violation of OAC rule 3745-31-02. Furthermore, issuance of the Permit to Install does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. Approval of the plans in any case is not to be construed as an approval of the facility as constructed and/or completed. Moreover, issuance of the Permit to Install is not to be construed as a waiver of any rights that the Ohio Environmental Protection Agency (or other persons) may have against the applicant for starting construction prior to the effective date of the permit. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed facilities cannot meet the requirements of this permit or cannot meet applicable standards.

6. Public Disclosure

The facility is hereby notified that this permit, and all agency records concerning the operation of this permitted source, are subject to public disclosure in accordance with OAC rule 3745-49-03.

7. Applicability

This Permit To Install is applicable only to the emissions unit(s) identified in the Permit To Install. Separate Permit To Install for the installation or modification of any other emissions unit(s) are required for any emissions unit for which a Permit To Install is required.

8. Construction Compliance Certification

The applicant shall provide Ohio EPA with a written certification (see enclosed form) that the facility has been constructed in accordance with the Permit To Install application and the terms and conditions of the Permit to Install. The certification shall be provided to Ohio EPA upon completion of construction but prior to startup of the source.

9. Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations (See Section A of This Permit)

If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters.

C. Permit To Install Summary of Allowable Emissions

The following information summarizes the total allowable emissions, by pollutant, based on the individual allowable emissions of each air contaminant source identified in this permit.

**SUMMARY (for informational purposes only)
TOTAL PERMIT TO INSTALL ALLOWABLE EMISSIONS**

<u>Pollutant</u>	<u>Tons Per Year</u>
Particulate Matter	63.1
Nitrogen Oxides	67.3
Sulfur Dioxide	295.6
Carbon Monoxide	164.4
VOC	7.5

Part II - FACILITY SPECIFIC TERMS AND CONDITIONS

A. State and Federally Enforceable Permit To Install Facility Specific Terms and Conditions

None

B. State Only Enforceable Permit To Install Facility Specific Terms and Conditions

None

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P002 - FLUIDIZED CATALYTIC CRACKING UNIT	OAC rule 3745-31-05(A)(3)	71 lbs NOx per hour The requirements of this rule also include compliance with the requirements of 40 CFR Part 60, Subpart A and J, OAC rule 3745-17-07(A), and OAC rule 3745-18-82(E)(5).
	OAC rule 3745-31-05(D)	63.1 tons PE per year as a rolling, 12 month summation of emissions 295.6 tons SO2 per year as a rolling, 12 month summation of emissions 67.3 tons NOx per year as a rolling, 12 month summation of emissions 164.4 tons CO per year as a rolling, 12 month summation of emissions
	OAC rule 3745-17-07(A)	Visible emissions shall not exceed 20% opacity as a 6-minute average, unless otherwise specified by the rule
	OAC rule 3745-17-11(A)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to 40 CFR Part 60, subpart J.
	OAC rule 3745-18-82(E)(5)	0.62 pound of sulfur dioxide per one thousand pounds of fresh feed.
	40 CFR Part 60, Subpart A and J	1.0 lb PE per 1000 lb coke burned See section A.I.2.d.
	OAC rule 3745-21-09(T)	See section A.I.2.b.

40 CFR Part 63 Subpart CC	See section A.I.2.b.
40 CFR Part 63 Subpart UUU OAC rule 3745-21-09(VV)	See section A.I.2.c. See section A.I.2.a.

2. Additional Terms and Conditions

- 2.a** The temperature of the flue gas exiting the regenerator section of the FCC unit shall not be less than 1,300 degrees Fahrenheit as a 3-hour rolling average while the FCC is operating. The temperature shall be monitored at the point where the flue gas exits the regenerator.
- 2.b** The permittee shall comply with all applicable equipment leak terms and conditions found in 40 CFR Part 60.648 (Subpart CC) and OAC rule 3745-21-09(T).
- 2.c** The permittee shall comply with all the applicable requirements, emission limitations and work practice standards for existing sources in 40 CFR Part 63 Subpart UUU by no later than April 11, 2005 unless an extension of compliance is granted under 40 CFR 63.1563(c).
- 2.d** The permittee shall limit CO emissions from the FCCU to 500 parts per million by volume on a dry basis (ppmvd) as a one-hour average. The CO limit shall not apply during periods of startup, shutdown or malfunction of the FCCU provided that during startup, shutdown or malfunction MAP shall, to the extent practicable, maintain and operate the affected facility in a manner consistent with good air pollution control practices for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on monitoring results, review of operating and maintenance procedures, and inspection of the source.
- 2.e** The regenerator shall be operated such that the oxygen content in the flue gas stream is maintained at a level of 0.50%, by volume, or greater
- 2.f** The emissions of sulfur dioxide from this emissions unit shall not exceed 295.6 tons per year, based upon a rolling, 12 month summation of the monthly emissions.
- 2.g** The emissions of nitrogen oxide emissions from this emissions unit shall not exceed 67.3 tons per year, based upon a rolling, 12 month summation of the monthly emissions.
- 2.h** The emissions of CO from this emissions unit shall not exceed 164.4 tons CO per year, based upon a rolling, 12 month summation of the monthly emissions.
- 2.i** The requirements of this rule also includes compliance with the requirements of all other Applicable Rules/Requirements listed in section A.I.1.

II. Operational Restrictions

1. The FCC unit regenerator shall be operated in a total burn mode and the catalyst cooler shall be employed when the regenerator is in operation.
2. The permittee shall operate and maintain a flare system in accordance with 40 CFR Part 63.11(b) to control emissions vented from the FCC unit.

III. Monitoring and/or Recordkeeping Requirements

1. Pursuant to the requirements of 40 CFR Part 51, Appendix P, "Minimum Emission Monitoring Requirements", the permittee shall operate and maintain a continuous opacity monitoring system (COM) for continuously monitoring and recording the opacity of particulate emissions from this emissions unit. The COM shall comply with the requirements specified in 40 CFR Part 60.13. The continuous emission monitoring system consists of all the equipment used to acquire data and includes the sample extraction and transport hardware, sample conditioning hardware, analyzers, and data recording/processing hardware and software.
 - a. The permittee shall maintain records of all data obtained by the COM system including percent opacity on an instantaneous (one-minute) and six-minute block average basis, results of daily zero/span calibration checks, and magnitude calibration adjustments.
 - b. A statement of certification of the existing continuous opacity monitoring system shall be maintained on site and shall include a letter from Ohio EPA detailing the results of an agency review of the certification tests and a statement by Ohio EPA that the system is considered certified in accordance with the requirements of 40 CFR Part 60, Appendix B, Performance Specification 1. Proof of certification shall be made available to the Canton LAA upon request.
2. The permittee shall continue to operate and maintain existing equipment to continuously monitor and record oxygen from this emissions unit in units of percent oxygen. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13.
 - a. The permittee shall maintain records of all data obtained by the continuous oxygen monitoring system including, but not limited to, percent oxygen on a instantaneous (one-minute) basis, results of daily zero/span calibration checks, and magnitude of manual calibration. Records shall be maintained at the facility for a period not less than three years.
 - b. The permittee shall monitor, calculate, and record the average percent oxygen level for each hour of operation of the FCC unit. These oxygen levels shall be compared to 0.50% oxygen for the purpose of determining compliance with OAC rule 3745-21-09(VV)(1)(d).
 - c. A statement of certification of the existing continuous oxygen monitoring system shall be maintained on site and shall consist of a letter from the Ohio EPA detailing the results of

an Agency review of the certification tests and a statement by the Agency that the system is considered certified in accordance with the requirements of 40 CFR Part 60, Appendix B, Performance Specification 3. Proof of certification shall be made available to the Canton local air agency upon request.

3. The permittee shall utilize a continuous temperature monitoring system to calculate and record the rolling three-hour average temperature of the regenerator flue gas for each hour of operation of the FCC unit. The temperature shall be measured in units of degrees Fahrenheit. The monitoring device shall consist of a type K thermocouple having an accuracy of at least +/- 0.35% or better. The monitor and recording device shall be operated and maintained in accordance with the manufacturer's recommendations.
4. A statement of certification of the existing continuous CO monitoring system shall be maintained on site and shall consist of a letter from the Ohio EPA detailing the results of an Agency review of the certification tests and a statement by the Agency that the system is considered certified in accordance with the requirements of 40 CFR Part 60, Appendix B, Performance Specification 4 and 40 CFR Part 60, Appendix F, Procedure 1. Proof of certification shall be made available to the Director of Ohio EPA or the local air agency upon request.

The permittee shall operate and maintain existing equipment to continuously monitor and record CO from this emissions unit in units of ppmv, on a dry basis. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13 and 40 CFR Part 60. 105.

The permittee shall maintain records of all data obtained by the continuous CO monitoring system including, but not limited to, parts per million CO on an instantaneous(one-minute) basis, results of daily zero/span calibration checks, and magnitude of manual calibration adjustments.

5. A statement of certification of the existing continuous NOx monitoring system shall be maintained on site and shall consist of a letter from the Ohio EPA detailing the results of an Agency review of the certification tests and a statement by the Agency that the system is considered certified in accordance with the requirements of 40 CFR Part 60, Appendix B, Performance Specification 6 and 40 CFR Part 60, Appendix F, Procedure 1. Proof of certification shall be made available to the Director of Ohio EPA or the local air agency upon request.

The permittee shall operate and maintain existing equipment to continuously monitor and record NOx from this emissions unit in units of ppmv, on a dry basis and in pounds NOx per hour. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13.

The permittee shall maintain records of all data obtained by the continuous NOx monitoring system including, but not limited to, parts per million NOx on an instantaneous(one-minute) basis, results of daily zero/span calibration checks, and magnitude of manual calibration adjustments.

6. A statement of certification of the existing continuous SO₂ monitoring system shall be maintained on site and shall consist of a letter from the Ohio EPA detailing the results of an Agency review of the certification tests and a statement by the Agency that the system is considered certified in accordance with the requirements of 40 CFR Part 60, Appendix B, Performance Specification 6 and 40 CFR Part 60, Appendix F, Procedure 1. Proof of certification shall be made available to the Director of Ohio EPA or the local air agency upon request.

The permittee shall operate and maintain existing equipment to continuously monitor and record SO₂ from this emissions unit in units of ppmv, on a dry basis and in lbs SO₂/1000 lbs of fresh feed. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13.

The permittee shall maintain records of all data obtained by the continuous SO₂ monitoring system including, but not limited to, parts per million SO₂ on an instantaneous(one-minute) basis, results of daily zero/span calibration checks, and magnitude of manual calibration adjustments.

7. The permittee shall maintain records of the quantity of oil processed through this emissions unit on a daily basis in gallons or barrels.
8. All recorded monitoring data for oxygen and temperature shall be retained at the facility for a minimum period of five years.

IV. Reporting Requirements

1. Pursuant to 40 CFR Parts 60.7 and 60.13(h), the permittee shall submit reports within 30 days following the end of each calendar quarter to the Canton local air agency documenting all instances of opacity values in excess of the limitations specified in OAC rule 3745-17-07, detailing the date, commencement and completion times, duration, magnitude (percent opacity), reason (if known), and corrective actions taken (if any) of each 6-minute block average above the applicable opacity limitation(s).
2. The permittee shall submit reports within 30 days following the end of each calendar quarter to the Canton local air agency documenting any continuous opacity monitoring system downtime while the emissions unit was on line (date, time, duration and reason) along with any corrective action(s) taken. The permittee shall provide the emissions unit and control equipment malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall be included in the quarterly reports.
3. If there are no excess emissions during the calendar quarter, the permittee shall submit a statement to that effect along with the emissions unit operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time period of emissions unit, control equipment, and/or monitoring systems malfunctions. The total operating time of the emissions was on line also shall be included in the quarterly report. The quarterly excess

emission reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall address the data obtained during the previous calendar quarter.

4. The permittee shall submit a summary of the excess emission report pursuant to 40 CFR Part 60.7. The summary shall be submitted to the Canton local air agency within 30 days following the end of each calendar quarter in a manner prescribed by the Canton local air agency.
5. Pursuant to 40 CFR Parts 60.7 and 60.13(h), the permittee shall submit reports within 30 days following the end of each calendar quarter to the Canton local air agency documenting all instances when the hourly average oxygen values deviate from the limitation specified in OAC 3745-21-09(VV), detailing the date, commencement and completion times, duration, magnitude, reason (if known), and corrective actions taken (if any).

The permittee shall submit reports within 30 days following the end of each calendar quarter to the Canton local air agency documenting any continuous oxygen monitoring system downtime while the emissions unit was on line (date, time, duration, and reason) along with any corrective action(s) taken. The permittee shall provide the emissions unit and control equipment malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall be included in the quarterly reports. If there are no excess emissions during the calendar quarter, the permittee shall submit a statement to that effect.

6. The permittee shall submit quarterly deviation (excursion) reports that identify each period when any rolling, 3-hour average temperature is below 1300 degrees Fahrenheit.
7. Pursuant to 40 CFR Parts 60.7 and 60.13(h), the permittee shall submit reports within 30 days following the end of each calendar quarter to the Canton local air agency documenting all instances of CO values in excess of the limitations specified in section A.I.1 detailing the date, commencement and completion times, duration, magnitude, reason (if known), and corrective actions taken (if any). The permittee shall also comply with the reporting requirements of 40 CFR Part 60.105.

The permittee shall submit reports within 30 days following the end of each calendar quarter to the Canton local air agency documenting any continuous CO monitoring system downtime while the emissions unit was on line (date, time, duration and reason) along with any corrective action(s) taken. The permittee shall provide the emissions unit and control equipment malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall be included in the quarterly reports.

8. Pursuant to 40 CFR Parts 60.7 and 60.13(h), the permittee shall submit reports within 30 days following the end of each calendar quarter to the Canton local air agency documenting all instances of NO_x values in excess of the limitations specified in section A.I.1 detailing the date, commencement and completion times, duration, magnitude, reason (if known), and corrective actions taken (if any).

The permittee shall submit reports within 30 days following the end of each calendar quarter to the Canton local air agency documenting any continuous NO_x monitoring system downtime

while the emissions unit was on line (date, time, duration and reason) along with any corrective action(s) taken. The permittee shall provide the emissions unit and control equipment malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall be included in the quarterly reports.

If there are no excess emissions during the calendar quarter, the permittee shall submit a statement to that effect along with the emissions unit operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time period of emissions unit, control equipment, and/or monitoring systems malfunctions. The total operating time of the emissions was on line also shall be included in the quarterly report. The quarterly excess emission reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall address the data obtained during the previous calendar quarter.

The permittee shall submit a summary of the excess emission report pursuant to 40 CFR Part 60.7. The summary shall be submitted to the Canton local air agency within 30 days following the end of each calendar quarter in a manner prescribed by the Canton local air agency.

9. Pursuant to 40 CFR Parts 60.7 and 60.13(h), the permittee shall submit reports within 30 days following the end of each calendar quarter to the Canton local air agency documenting all instances of SO₂ values in excess of the limitations specified in section A.I.1 detailing the date, commencement and completion times, duration, magnitude, reason (if known), and corrective actions taken (if any).

The permittee shall submit reports within 30 days following the end of each calendar quarter to the Canton local air agency documenting any continuous SO₂ monitoring system downtime while the emissions unit was on line (date, time, duration and reason) along with any corrective action(s) taken. The permittee shall provide the emissions unit and control equipment malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall be included in the quarterly reports.

If there are no excess emissions during the calendar quarter, the permittee shall submit a statement to that effect along with the emissions unit operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time period of emissions unit, control equipment, and/or monitoring systems malfunctions. The total operating time of the emissions was on line also shall be included in the quarterly report. The quarterly excess emission reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall address the data obtained during the previous calendar quarter.

The permittee shall submit a summary of the excess emission report pursuant to 40 CFR Part 60.7. The summary shall be submitted to the Canton local air agency within 30 days following the end of each calendar quarter in a manner prescribed by the Canton local air agency.

10. The permittee shall submit deviation(excursion) reports which identify all exceedances of the rolling, 12 month emission limitations for nitrogen oxides, sulfur dioxides, CO, and PE.

11. The permittee shall submit annual reports that identify any exceedances of the rolling, 12 month production rate limitation, as well as the corrective actions that were taken to achieve compliance. These reports shall be submitted by January 31 of each year.

V. Testing Requirements

1. Compliance with the emission limitation(s) in Section A.I. of these terms and conditions shall be determined in accordance with the following method(s):

- a. Emissions Limitation:

20 percent opacity as a six-minute average, except as provided by rule.

Applicable Compliance Method:

The monitoring and record keeping requirements under A.III.1 shall be used to demonstrate compliance. If required, Method 9 of 40 CFR Part 60, Appendix A shall be used to demonstrate compliance.

- b. Emissions Limitation:

0.62 pound sulfur dioxide per thousand pounds of fresh feed
295.6 tons SO₂ per year

Applicable Compliance Method:

The monitoring and record keeping requirements under A.III.6 shall be used to demonstrate compliance with the pounds sulfur dioxide per 1000 pounds of fresh feed limitation. If required, the procedures specified under OAC rule 3745-18-04(A) shall be used to demonstrate compliance with the pounds sulfur dioxide per 1000 pounds of fresh feed limitation. The permittee shall calculate a rolling, 12 month summation of the total monthly SO₂ emissions to demonstrate compliance with the annual rolling, 12 month limitation. The total monthly SO₂ emissions shall be calculated as shown below:

(Average daily SO₂ emission rate, in tons SO₂/day calculated from the CEMS data) x (number of operating days for the FCC unit per month) = total calculated monthly SO₂ emissions, in tons SO₂/month. The permittee shall calculate a 12-month rolling summation of tons of SO₂ for the year.

- c. Emissions Limitation:

71 lbs NO_x per hour
67.3 tons NO_x per year

Applicable Compliance Method:

The monitoring and record keeping requirements in section A.III.5 shall be used to demonstrate compliance with the hourly emission limitation. The permittee shall calculate a rolling, 12 month summation of the total monthly NO_x to demonstrate compliance with the annual rolling, 12 month limitation. The total monthly NO_x shall be calculated as specified below:

(Average daily NO_x emission rate, in tons NO_x/day calculated from the CEMS data) x (number of operating days for the FCC unit per month) = total calculated monthly NO_x emissions, in tons NO_x/month. The permittee shall calculate a 12-month rolling summation of tons of NO_x for the year

d. **Emissions Limitation:**

500 ppmvd CO as a one-hour average
164.4 tons CO per year

Applicable Compliance Method:

The Monitoring and/or Record keeping Requirements of A.III 4 shall be used to demonstrate compliance with the ppmv limitation. If required, Method 10 of 40 CFR Part 60, Appendix A shall be used to demonstrate compliance. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA. The permittee shall calculate a rolling, 12 month summation of the total monthly CO to demonstrate compliance with the annual rolling, 12 month summation limitation. The total monthly CO shall be calculated as specified below:

(Average daily CO emission rate, in tons CO/day calculated from the CEMS data) x (number of operating days for the FCC unit per month) = total calculated monthly CO emissions, in tons CO/month. The permittee shall calculate a 12-month rolling summation of tons of CO for the year.

e. **Emissions Limitation:**

The temperature of the flue gas exiting the regenerator section of the FCC unit shall not be less than 1300 degrees Fahrenheit as a 3-hour rolling average while the FCC is operating. The oxygen content of the flue gas shall be maintained at 0.5%, by volume, or greater.

Applicable Compliance Method:

The Monitoring and/or Record keeping Requirements of A.III.2 and A.III.3, respectively, shall be used to demonstrate compliance.

f. Emission Limitations:

1.0 lbs PE per 1000 lbs coke burned in the FCC regenerator.

63.1 tons PE per year

Applicable Compliance Method:

The procedures specified under 40 CFR Part 60.106(b)(including USEPA Methods 5B and 5F shall be used to demonstrate compliance with the emission limit of 1.0 lbs PE per 1000 lbs of Coke burned in the FCC regenerator on a daily basis. Compliance with the annual PE limit shall be demonstrated by maintaining records of the PE emissions from the FCC Unit on a rolling, 12-month basis, as follows:

Average daily PE emission rate, in tons PE/day as calculated using the procedure specified in 40 CFR Part 106) x (number of operating days for the FCC Unit per month) = total calculated monthly PE emissions, in tons PE/month. The permittee shall calculate a 12-month rolling summation of tons of CO for the year.

VI. Miscellaneous Requirements

None

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

- 1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P002 - FLUIDIZED CATALYTIC CRACKING UNIT	OAC rule 3745-31-05	LIMIT(s)

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None