TV FER/EIS Emissions Report (202124) for 2010
Duke Energy, Dicks Creek Station
1409010078
April 14, 2011

2010 Emissions Summary Report : 202124

Oct 11 2011, 13:28:44

- Report Data

Report Category: TV

Submitted Date: 04/14/2011

Approved Date 04/18/2011

Reporting Year: 2010

Reporting State Approved

- Reports Included

FER: X ES: EIS: X

- Facility Emissions

Pollutant	Code	$	Fugitive Amount	Stack Amount	Total	Units
PE (Cond) - Primary PM Condensible Portion Only (All Less than 1 Micron)	PM-CON		0.	0.0450495	0.0450495	TONs
SO2 - Sulfur Dioxide	SO2	X	0.	0.035215	0.035215	TONs
NOx - Nitrogen Oxides	NOX	X	0.	3.0672	3.0672	TONs
Organic Compounds	OC	X	0.	0.105435	0.105435	TONs
Pb - Lead	7439921	X	0.	0.	0.	TONs
PE (Filt) - Primary PM, Filterable Portion Only	PM-FIL	X	0.	0.123058	0.123058	TONs
PM10 (Filt) - Primary PM10, Filterable Portion Only	PM10-FIL		0.	0.123058	0.123058	TONs
PM2.5 (FILT) - Primary PM2.5, Filterable Portion Only	PM25-FIL		0.	0.123058	0.123058	TONs
VOC - Volatile Organic Compounds	VOC		0.	0.0201285	0.0201285	TONs
Ammonia	NH3		0.	0.03432	0.03432	TONs
CO - Carbon Monoxide	CO		0.	0.78597	0.78597	TONs
Total of Chargable Pollutants					3.33091	TONS

The following Hazardous Air Pollutant information was developed using Ohio EPA-generated hazardous air pollutant emission calculations. The values may be provided to USEPA by Ohio EPA as part of Ohio EPA's federal grant commitments. You may modify these Ohio EPA-generated hazardous air pollutant emission calculations, at the process level, if you have more accurate information. There is no certification of these values as part of the emissions report submission.

Pollutant	Code	Fugitive Amount	Stack Amount	Total	Units
Acetaldehyde	75070	0.	3.834E-04	3.834E-04	TONs
Acrolein	107028	0.	6.1344E-05	6.1344E-05	TONs

Benz[A]Anthracene	56553	0.	2.8755E-05	2.8755E-05	TONs
Benzene	71432	0.	1.1502E-04	1.1502E-04	TONs
Butadiene, 1,3-	106990	0.	2.06078E-06	2.06078E-06	TONs
Cadmium	7440439	0.	6.63761E-05	6.63761E-05	TONs
Chromium	7440473	0.	1.27385E-04	1.27385E-04	TONs
Ethyl Benzene	100414	0.	3.0672E-04	3.0672E-04	TONs
Fluoranthene	206440	0.	1.1502E-05	1.1502E-05	TONs
Formaldehyde	50000	0.	0.00680535	0.00680535	TONs
MN - Manganese	7439965	0.	7.68717E-04	7.68717E-04	TONs
Mercury, as HG; Alkyl & Aryl CMPNDS; Elemental & Inorganic Forms	7439976	0.	6.35487E-05	6.35487E-05	TONs
Naphthalene	91203	0.	1.24605E-05	1.24605E-05	TONs
Nickel	7440020	0.	0.0010994	0.0010994	TONs
PAH, 16-	40	0.	2.1087E-05	2.1087E-05	TONs
Phenol	108952	0.	1.2173E-04	1.2173E-04	TONs
Propylene Oxide	75569	0.	1.38982E-04	1.38982E-04	TONs
Toluene	108883	0.	0.00124605	0.00124605	TONs
Xylenes (Isomers and Mixture)	1330207	0.	6.1344E-04	6.1344E-04	TONs

- **Attachments**

Description	Type	Public Document	Trade Seceret Document	Trade secret Justification
2010 Dicks Creek B001, B003, B004, B005 FER Calculations	Calculations	X		
2010 Dicks Creek B001, B003, B004, B005 EIS Report	Other	X		

- **Notes**

User Name	Date	Note

Emission Units Without Detailed Emissions

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Emission Unit	Why Excluded	Company Equipment ID
B006	Less Than Reporting Requirement	Unit 1 Black Start Diesel

B007	Exemption Status = Permit Exempt	Unit 3 Black Start Diesel
L001	Exemption Status = De minimis	Cold Degreaser
Y001	Less Than Reporting Requirement	Gas Plt Boiler No. 1
Y002	Less Than Reporting Requirement	Gas Plt Boiler No. 2
Z001	Exemption Status = De minimis	Waste Oil Tank
Z002	Exemption Status = De minimis	Waste Oil Tank
Z003	Exemption Status = De minimis	Lube Oil Tank
Z004	Exemption Status = De minimis	Synthetic Oil Tank
Z005	Exemption Status = De minimis	Hydraulic Oil Tank
Z006	Exemption Status = De minimis	Seal Oil Tank
Z007	Exemption Status = De minimis	Black Start Fuel Tank #1
Z008	Exemption Status = De minimis	Odorant Tank
Z009	Exemption Status = Permit Exempt	Glycol Bath Heater
Z010	Exemption Status = Permit Exempt	Space Heaters (7)
Z011	Exemption Status = Permit Exempt	Hot Water Heaters

Report Pollutant Summary: Total Emissions (Tons)

Unit	SCC Id	PM-CON	SO2	NOX	OC	7439921	PM-FIL	PM10-FIL	PM25-FIL	VOC	NH3	CO
B001	**2-01-002-01**	0.004324	0.003128	0.2944	0.01012	0.	0.001748	0.001748	0.001748	0.001932	0.002944	0.07544
B003	**2-01-001-01**											
B003	**2-01-002-01**	0.0111155	0.01	0.7568	0.026015	0.	0.03311	0.03311	0.03311	0.0049665	0.01	0.19393
B004	**2-01-001-01**											
B004	**2-01-002-01**	0.0129015	0.01	0.8784	0.030195	0.	0.03843	0.03843	0.03843	0.0057645	0.01	0.22509
B005	**2-01-002-01**	0.0167085	0.012087	1.1376	0.039105	0.	0.04977	0.04977	0.04977	0.0074655	0.011376	0.29151
B005	**2-01-001-01**											
Total		0.0450495	0.035215	3.0672	0.105435	0.	0.123058	0.123058	0.123058	0.0201285	0.03432	0.78597

Emission Unit Summary: B001

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Emissions Unit ID: B001

Detailed Reporting

DAPC Description:

- Unit Emissions

Pollutant	Code	$	Fugitive Amount	Stack Amount	Total	Units	QA+
PE (Cond) - Primary PM Condensible Portion Only (All Less than 1 Micron)	PM-CON		0.	0.004324	0.004324	TONs	
SO2 - Sulfur Dioxide	SO2	X	0.	0.003128	0.003128	TONs	
NOx - Nitrogen Oxides	NOX	X	0.	0.2944	0.2944	TONs	
Organic Compounds	OC	X	0.	0.01012	0.01012	TONs	
Pb - Lead	7439921	X	0	0	0.	TONs	
PE (Filt) - Primary PM, Filterable Portion Only	PM-FIL	X	0.	0.001748	0.001748	TONs	
PM10 (Filt) - Primary PM10, Filterable Portion Only	PM10-FIL		0.	0.001748	0.001748	TONs	
PM2.5 (FILT) - Primary PM2.5, Filterable Portion Only	PM25-FIL		0.	0.001748	0.001748	TONs	
VOC - Volatile Organic Compounds	VOC		0.	0.001932	0.001932	TONs	
Ammonia	NH3		0.	0.002944	0.002944	TONs	
CO - Carbon Monoxide	CO		0.	0.07544	0.07544	TONs	
Total of Chargable Pollutants					0.309396	TONS	

The following Hazardous Air Pollutant information was developed using Ohio EPA-generated hazardous air pollutant emission calculations. The values may be provided to USEPA by Ohio EPA as part of Ohio EPA's federal grant commitments. You may modify these Ohio EPA-generated hazardous air pollutant emission calculations, at the process level, if you have more accurate information. There is no certification of these values as part of the emissions report submission.

Pollutant	Code	Fugitive Amount	Stack Amount	Total	Units
Acetaldehyde	75070	0.	3.68E-05	3.68E-05	TONs
Acrolein	107028	0.	5.888E-06	5.888E-06	TONs
Benz[A]Anthracene	56553	0.	2.76E-06	2.76E-06	TONs
Benzene	71432	0.	1.104E-05	1.104E-05	TONs
Butadiene, 1,3-	106990	0.	1.978E-07	1.978E-07	TONs
Cadmium	7440439	0.	6.371E-06	6.371E-06	TONs

Chromium	7440473	0.	1.22268E-05	1.22268E-05	TONs
Ethyl Benzene	100414	0.	2.944E-05	2.944E-05	TONs
Fluoranthene	206440	0.	1.104E-06	1.104E-06	TONs
Formaldehyde	50000	0.	6.532E-04	6.532E-04	TONs
MN - Manganese	7439965	0.	7.3784E-05	7.3784E-05	TONs
Mercury, as HG; Alkyl & Aryl CMPNDS; Elemental & Inorganic Forms	7439976	0.	6.0996E-06	6.0996E-06	TONs
Naphthalene	91203	0.	1.196E-06	1.196E-06	TONs
Nickel	7440020	0.	1.05524E-04	1.05524E-04	TONs
PAH, 16-	40	0.	2.024E-06	2.024E-06	TONs
Phenol	108952	0.	1.1684E-05	1.1684E-05	TONs
Propylene Oxide	75569	0.	1.334E-05	1.334E-05	TONs
Toluene	108883	0.	1.196E-04	1.196E-04	TONs
Xylenes (Isomers and Mixture)	1330207	0.	5.888E-05	5.888E-05	TONs

- Processes

- Process & Emissions Detail

Name: Unit 1 Natural Gas

Source Classification Code (SCC): 2-01-002-01

- Material Information, Annual Average Operating Schedule & Throughput Percent

Schedule Trade Secret:

Hours Per Day: 1

Days Per Week: 1

Weeks Per Year: 1

Hours Per Year: 1

Winter (Dec - Feb)%: 0

Spring (March-May)%: 0

Summer (June-Aug)%: 100

Fall (Sept-Nov)%: 0

Material	Material Action	Throughput	X Units
Natural Gas	Burned	1.84	MILLION CUBIC FEET

Variable	Amount	Meaning
HCg	1000	Gas Heat Content (Btu/Cubic Feet)

S	0	% Sulfur content by weight

- **Process Emissions**

Pollutant	Code	$	Method Used	Hours UnCont.	UnCont. Factor (LBS/X)	Fugitive Amount	Stack Amount	Total	Units	Explanation
PE (Cond) - Primary PM Condensible Portion Only (All Less than 1 Micron)	PM-CON		factor:ENG. JUDGEMENT	0	4.7	0.	0.004324	0.004324	TONs	Gas turbine emission factors taken from AP-42, Section 3.1, "Stationary Gas Turbines", (04/00)
SO2 - Sulfur Dioxide	SO2	X	factor:ENG. JUDGEMENT	0	3.4	0.	0.003128	0.003128	TONs	Gas turbine emission factors taken from AP-42, Section 3.1, "Stationary Gas Turbines", (04/00)
NOx - Nitrogen Oxides	NOX	X	factor:ENG. JUDGEMENT	0	320	0.	0.2944	0.2944	TONs	Gas turbine emission factors taken from AP-42, Section 3.1, "Stationary Gas Turbines", (04/00)
Organic Compounds	OC	X	factor:ENG. JUDGEMENT	0	11	0.	0.01012	0.01012	TONs	Gas turbine emission factors taken from AP-42, Section 3.1, "Stationary Gas Turbines", (04/00)
Pb - Lead	7439921	X	emissions: ENG. JUDGEMENT			0	0	0.	TONs	Gas turbine emission factors taken from AP-42, Section 3.1, "Stationary Gas Turbines", (04/00). Lead was not detected.
PE (Filt) - Primary PM, Filterable Portion Only	PM-FIL	X	factor:ENG. JUDGEMENT	0	1.9	0.	0.001748	0.001748	TONs	Gas turbine emission factors taken from AP-42, Section 3.1, "Stationary Gas Turbines", (04/00)
PM10 (Filt) - Primary PM10, Filterable Portion Only	PM10-FIL		factor:ENG. JUDGEMENT	0	1.9	0.	0.001748	0.001748	TONs	Gas turbine emission factors taken from AP-42, Section 3.1, "Stationary Gas Turbines", (04/00)
PM2.5 (FILT) - Primary PM2.5, Filterable Portion Only	PM25-FIL		factor:ENG. JUDGEMENT	0	1.9	0.	0.001748	0.001748	TONs	Gas turbine emission factors taken from AP-42, Section 3.1, "Stationary Gas Turbines", (04/00)
VOC - Volatile Organic Compounds	VOC		factor:ENG. JUDGEMENT	0	2.1	0.	0.001932	0.001932	TONs	Gas turbine emission factors taken from AP-42, Section 3.1, "Stationary Gas Turbines", (04/00)
Ammonia	NH3		factor:ENG. JUDGEMENT	0	3.2	0.	0.002944	0.002944	TONs	Ammonia emission factor taken from "Development and Selection of Ammonia Emission Factors", (USEPA, Aug, 1994) for natural gas fired boilers.

CO - Carbon Monoxide	CO		factor:ENG . JUDGEMENT	0	82	0.	0.07544	0.07544	TONs	Gas turbine emission factors taken from AP-42, Section 3.1, "Stationary Gas Turbines", (04/00)
Total of Chargable Pollutants								0.309396	TONS	

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- **Process Emissions**

Pollutant	Code	Method Used	Hours UnCont.	UnCont. Factor (LBS/X)	Fugitive Amount	Stack Amount	Total	Units	Explanation
Acetaldehyde	75070	factor:OEPA (auto calculate)	0	0.04	0.	3.68E-05	3.68E-05	TONs	
Acrolein	107028	factor:OEPA (auto calculate)	0	0.0064	0.	5.888E-06	5.888E-06	TONs	
Benz[A]Anthracene	56553	factor:OEPA (auto calculate)	0	0.003	0.	2.76E-06	2.76E-06	TONs	
Benzene	71432	factor:OEPA (auto calculate)	0	0.012	0.	1.104E-05	1.104E-05	TONs	
Butadiene, 1,3-	106990	factor:OEPA (auto calculate)	0	2.15E-04	0.	1.978E-07	1.978E-07	TONs	
Cadmium	7440439	factor:OEPA (auto calculate)	0	0.006925	0.	6.371E-06	6.371E-06	TONs	
Chromium	7440473	factor:OEPA (auto calculate)	0	0.01329	0.	1.22268E-05	1.22268E-05	TONs	
Ethyl Benzene	100414	factor:OEPA (auto calculate)	0	0.032	0.	2.944E-05	2.944E-05	TONs	
Fluoranthene	206440	factor:OEP	0	0.0012	0.	1.104E-06	1.104E-06	TONs	

		A (auto calculate)							
Formaldehyde	50000	factor:OEP A (auto calculate)	0	0.71	0.	6.532E-04	6.532E-04	TONs	
MN - Manganese	7439965	factor:OEP A (auto calculate)	0	0.0802	0.	7.3784E-05	7.3784E-05	TONs	
Mercury, as HG; Alkyl & Aryl CMPNDS; Elemental & Inorganic Forms	7439976	factor:OEP A (auto calculate)	0	0.00663	0.	6.0996E-06	6.0996E-06	TONs	
Naphthalene	91203	factor:OEP A (auto calculate)	0	0.0013	0.	1.196E-06	1.196E-06	TONs	
Nickel	7440020	factor:OEP A (auto calculate)	0	0.1147	0.	1.05524E-04	1.05524E-04	TONs	
PAH, 16-	40	factor:OEP A (auto calculate)	0	0.0022	0.	2.024E-06	2.024E-06	TONs	
Phenol	108952	factor:OEP A (auto calculate)	0	0.0127	0.	1.1684E-05	1.1684E-05	TONs	
Propylene Oxide	75569	factor:OEP A (auto calculate)	0	0.0145	0.	1.334E-05	1.334E-05	TONs	
Toluene	108883	factor:OEP A (auto calculate)	0	0.13	0.	1.196E-04	1.196E-04	TONs	
Xylenes (Isomers and Mixture)	1330207	factor:OEP A (auto calculate)	0	0.064	0.	5.888E-05	5.888E-05	TONs	

Emission Unit Summary: B003

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Emissions Unit ID: B003

Detailed Reporting

DAPC Description:

- Unit Emissions

Pollutant	Code	$	Fugitive Amount	Stack Amount	Total	Units	QA+
PE (Cond) - Primary PM Condensible Portion Only (All Less than 1 Micron)	PM-CON		0.	0.0111155	0.0111155	TONs	
SO2 - Sulfur Dioxide	SO2	X	0	0.01	0.01	TONs	
NOx - Nitrogen Oxides	NOX	X	0.	0.7568	0.7568	TONs	
Organic Compounds	OC	X	0.	0.026015	0.026015	TONs	
Pb - Lead	7439921	X	0	0.00	0.	TONs	
PE (Filt) - Primary PM, Filterable Portion Only	PM-FIL	X	0.	0.03311	0.03311	TONs	
PM10 (Filt) - Primary PM10, Filterable Portion Only	PM10-FIL		0.	0.03311	0.03311	TONs	
PM2.5 (FILT) - Primary PM2.5, Filterable Portion Only	PM25-FIL		0.	0.03311	0.03311	TONs	
VOC - Volatile Organic Compounds	VOC		0.	0.0049665	0.0049665	TONs	
Ammonia	NH3		0	0.01	0.01	TONs	
CO - Carbon Monoxide	CO		0.	0.19393	0.19393	TONs	
Total of Chargable Pollutants					0.825925	TONS	

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Pollutant	Code	Fugitive Amount	Stack Amount	Total	Units
Acetaldehyde	75070	0.	9.46E-05	9.46E-05	TONs
Acrolein	107028	0.	1.5136E-05	1.5136E-05	TONs
Benz[A]Anthracene	56553	0.	7.095E-06	7.095E-06	TONs
Benzene	71432	0.	2.838E-05	2.838E-05	TONs
Butadiene, 1,3-	106990	0.	5.08475E-07	5.08475E-07	TONs
Cadmium	7440439	0.	1.63776E-05	1.63776E-05	TONs

Chromium	7440473	0.	3.14308E-05	3.14308E-05	TONs
Ethyl Benzene	100414	0.	7.568E-05	7.568E-05	TONs
Fluoranthene	206440	0.	2.838E-06	2.838E-06	TONs
Formaldehyde	50000	0.	0.00167915	0.00167915	TONs
MN - Manganese	7439965	0.	1.89673E-04	1.89673E-04	TONs
Mercury, as HG; Alkyl & Aryl CMPNDS; Elemental & Inorganic Forms	7439976	0.	1.568E-05	1.568E-05	TONs
Naphthalene	91203	0.	3.0745E-06	3.0745E-06	TONs
Nickel	7440020	0.	2.71266E-04	2.71266E-04	TONs
PAH, 16-	40	0.	5.203E-06	5.203E-06	TONs
Phenol	108952	0.	3.00355E-05	3.00355E-05	TONs
Propylene Oxide	75569	0.	3.42925E-05	3.42925E-05	TONs
Toluene	108883	0.	3.0745E-04	3.0745E-04	TONs
Xylenes (Isomers and Mixture)	1330207	0.	1.5136E-04	1.5136E-04	TONs

- Processes

- Process & Emissions Detail

Name: Unit 3 Fuel Oil

Source Classification Code (SCC): 2-01-001-01

- Material Information, Annual Average Operating Schedule & Throughput Percent

Schedule Trade Secret:

Hours Per Day: 0

Days Per Week: 0

Weeks Per Year: 0

Hours Per Year: 0

Winter (Dec - Feb)%: 25

Spring (March-May)%: 25

Summer (June-Aug)%: 25

Fall (Sept-Nov)%: 25

Material	Material Action	Throughput	X Units
Distillate Oil (Diesel)	Burned	0	1000 GALLONS

Variable	Amount	Meaning
HCl		Liquid Heat Content (Btu/gallons)

S		% Sulfur content by weight

- **Process Emissions**

Pollutant	Code	$	Method Used	Hours UnCont.	UnCont. Factor (LBS/X)	Fugitive Amount	Stack Amount	Total	Units	Explanation
Total of Chargable Pollutants								0.	TONS	

- **Process & Emissions Detail**

Name: Unit 3 Natural Gas

Source Classification Code (SCC): 2-01-002-01

- **Material Information, Annual Average Operating Schedule & Throughput Percent**

Schedule Trade Secret:

Hours Per Day: 2

Days Per Week: 1

Weeks Per Year: 13

Hours Per Year: 26

Winter (Dec - Feb)%: 9

Spring (March-May)%: 26

Summer (June-Aug)%: 55

Fall (Sept-Nov)%: 10

Material	Material Action	Throughput	X Units
Natural Gas	Burned	4.73	MILLION CUBIC FEET

Variable	Amount	Meaning
HCg	1000	Gas Heat Content (Btu/Cubic Feet)
S	0	% Sulfur content by weight

- **Process Emissions**

Pollutant	Code	$	Method Used	Hours UnCont.	UnCont. Factor (LBS/X)	Fugitive Amount	Stack Amount	Total	Units	Explanation
PE (Cond) - Primary PM	PM-CON		factor:ENG.	0	4.7	0.	0.0111155	0.0111155	TONs	Emission factors found in AP-42, Section 3.1, "Stationary Gas Turbines", (4/00) were used: 0.0047 lbs/MMBtu.

Condensible Portion Only (All Less than 1 Micron)			JUDGEMENT							
SO2 - Sulfur Dioxide	SO2	X	emissions: ENG. JUDGEMENT			0	0.01	0.01	TONs	Emission factors found in AP-42, Section 3.1, "Stationary Gas Turbines", (4/00) were used: 3.4E-3 lbs/MMBtu.
NOx - Nitrogen Oxides	NOX	X	factor:OEPA (auto calculate)	0	320	0.	0.7568	0.7568	TONs	
Organic Compounds	OC	X	factor:OEPA (auto calculate)	0	11	0.	0.026015	0.026015	TONs	
Pb - Lead	7439921	X	emissions: ENG. JUDGEMENT			0	0.00	0.	TONs	Emission factors found in AP-42, Section 3.1, "Stationary Gas Turbines", (4/00) were used: lead was not detected..
PE (Filt) - Primary PM, Filterable Portion Only	PM-FIL	X	factor:OEPA (auto calculate)	0	14	0.	0.03311	0.03311	TONs	
PM10 (Filt) - Primary PM10, Filterable Portion Only	PM10-FIL		factor:OEPA (auto calculate)	0	14	0.	0.03311	0.03311	TONs	
PM2.5 (FILT) - Primary PM2.5, Filterable Portion Only	PM25-FIL		factor:OEPA (auto calculate)	0	14	0.	0.03311	0.03311	TONs	
VOC - Volatile Organic Compounds	VOC		factor:OEPA (auto calculate)	0	2.1	0.	0.0049665	0.0049665	TONs	
Ammonia	NH3		emissions: ENG. JUDGEMENT			0	0.01	0.01	TONs	Ammonia emission factors for natural gas combustion found in USEPA document "Development and Selection of Ammonia Emission Factors - Final Report" (08/94) were used: 3.12 lbs/million cubic feet.
CO - Carbon Monoxide	CO		factor:OEPA (auto calculate)	0	82	0.	0.19393	0.19393	TONs	
Total of Chargable Pollutants								0.825925	TONS	

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Process Emissions

Pollutant	Code	Method Used	Hours UnCont.	UnCont. Factor (LBS/X)	Fugitive Amount	Stack Amount	Total	Units	Explanation
Acetaldehyde	75070	factor:OEPA (auto calculate)	0	0.04	0.	9.46E-05	9.46E-05	TONs	
Acrolein	107028	factor:OEPA (auto calculate)	0	0.0064	0.	1.5136E-05	1.5136E-05	TONs	
Benz[A]Anthracene	56553	factor:OEPA (auto calculate)	0	0.003	0.	7.095E-06	7.095E-06	TONs	
Benzene	71432	factor:OEPA (auto calculate)	0	0.012	0.	2.838E-05	2.838E-05	TONs	
Butadiene, 1,3-	106990	factor:OEPA (auto calculate)	0	2.15E-04	0.	5.08475E-07	5.08475E-07	TONs	
Cadmium	7440439	factor:OEPA (auto calculate)	0	0.006925	0.	1.63776E-05	1.63776E-05	TONs	
Chromium	7440473	factor:OEPA (auto calculate)	0	0.01329	0.	3.14308E-05	3.14308E-05	TONs	
Ethyl Benzene	100414	factor:OEPA (auto calculate)	0	0.032	0.	7.568E-05	7.568E-05	TONs	
Fluoranthene	206440	factor:OEPA (auto calculate)	0	0.0012	0.	2.838E-06	2.838E-06	TONs	
Formaldehyde	50000	factor:OEPA (auto calculate)	0	0.71	0.	0.00167915	0.00167915	TONs	
MN - Manganese	7439965	factor:OEP	0	0.0802	0.	1.89673E-04	1.89673E-04	TONs	

		A (auto calculate)							
Mercury, as HG; Alkyl & Aryl CMPNDS; Elemental & Inorganic Forms	7439976	factor:OEP A (auto calculate)	0	0.00663	0.	1.568E-05	1.568E-05	TONs	
Naphthalene	91203	factor:OEP A (auto calculate)	0	0.0013	0.	3.0745E-06	3.0745E-06	TONs	
Nickel	7440020	factor:OEP A (auto calculate)	0	0.1147	0.	2.71266E-04	2.71266E-04	TONs	
PAH, 16-	40	factor:OEP A (auto calculate)	0	0.0022	0.	5.203E-06	5.203E-06	TONs	
Phenol	108952	factor:OEP A (auto calculate)	0	0.0127	0.	3.00355E-05	3.00355E-05	TONs	
Propylene Oxide	75569	factor:OEP A (auto calculate)	0	0.0145	0.	3.42925E-05	3.42925E-05	TONs	
Toluene	108883	factor:OEP A (auto calculate)	0	0.13	0.	3.0745E-04	3.0745E-04	TONs	
Xylenes (Isomers and Mixture)	1330207	factor:OEP A (auto calculate)	0	0.064	0.	1.5136E-04	1.5136E-04	TONs	

Emission Unit Summary: B004

Oct 11 2011, 13:28:44

Emissions Unit ID: B004

Detailed Reporting

DAPC Description:

- Unit Emissions

Pollutant	Code	$	Fugitive Amount	Stack Amount	Total	Units	QA+
PE (Cond) - Primary PM Condensible Portion Only (All Less than 1 Micron)	PM-CON		0.	0.0129015	0.0129015	TONs	
SO2 - Sulfur Dioxide	SO2	X	0	0.01	0.01	TONs	
NOx - Nitrogen Oxides	NOX	X	0.	0.8784	0.8784	TONs	
Organic Compounds	OC	X	0.	0.030195	0.030195	TONs	
Pb - Lead	7439921	X	0	0.00	0.	TONs	
PE (Filt) - Primary PM, Filterable Portion Only	PM-FIL	X	0.	0.03843	0.03843	TONs	
PM10 (Filt) - Primary PM10, Filterable Portion Only	PM10-FIL		0.	0.03843	0.03843	TONs	
PM2.5 (FILT) - Primary PM2.5, Filterable Portion Only	PM25-FIL		0.	0.03843	0.03843	TONs	
VOC - Volatile Organic Compounds	VOC		0.	0.0057645	0.0057645	TONs	
Ammonia	NH3		0	0.01	0.01	TONs	
CO - Carbon Monoxide	CO		0.	0.22509	0.22509	TONs	
Total of Chargable Pollutants					0.957025	TONS	

The following Hazardous Air Pollutant information was developed using Ohio EPA-generated hazardous air pollutant emission calculations. The values may be provided to USEPA by Ohio EPA as part of Ohio EPA's federal grant commitments. You may modify these Ohio EPA-generated hazardous air pollutant emission calculations, at the process level, if you have more accurate information. There is no certification of these values as part of the emissions report submission.

Pollutant	Code	Fugitive Amount	Stack Amount	Total	Units
Acetaldehyde	75070	0.	1.098E-04	1.098E-04	TONs
Acrolein	107028	0.	1.7568E-05	1.7568E-05	TONs
Benz[A]Anthracene	56553	0.	8.235E-06	8.235E-06	TONs
Benzene	71432	0.	3.294E-05	3.294E-05	TONs
Butadiene, 1,3-	106990	0.	5.90175E-07	5.90175E-07	TONs
Cadmium	7440439	0.	1.90091E-05	1.90091E-05	TONs

Chromium	7440473	0.	3.6481E-05	3.6481E-05	TONs
Ethyl Benzene	100414	0.	8.784E-05	8.784E-05	TONs
Fluoranthene	206440	0.	3.294E-06	3.294E-06	TONs
Formaldehyde	50000	0.	0.00194895	0.00194895	TONs
MN - Manganese	7439965	0.	2.20149E-04	2.20149E-04	TONs
Mercury, as HG; Alkyl & Aryl CMPNDS; Elemental & Inorganic Forms	7439976	0.	1.81994E-05	1.81994E-05	TONs
Naphthalene	91203	0.	3.5685E-06	3.5685E-06	TONs
Nickel	7440020	0.	3.14852E-04	3.14852E-04	TONs
PAH, 16-	40	0.	6.039E-06	6.039E-06	TONs
Phenol	108952	0.	3.48615E-05	3.48615E-05	TONs
Propylene Oxide	75569	0.	3.98025E-05	3.98025E-05	TONs
Toluene	108883	0.	3.5685E-04	3.5685E-04	TONs
Xylenes (Isomers and Mixture)	1330207	0.	1.7568E-04	1.7568E-04	TONs

- Processes

- Process & Emissions Detail

Name: Unit 4 Fuel Oil

Source Classification Code (SCC): 2-01-001-01

- Material Information, Annual Average Operating Schedule & Throughput Percent

Schedule Trade Secret:

Hours Per Day: 0

Days Per Week: 0

Weeks Per Year: 0

Hours Per Year: 0

Winter (Dec - Feb)%: 25

Spring (March-May)%: 25

Summer (June-Aug)%: 25

Fall (Sept-Nov)%: 25

Material	Material Action	Throughput	X Units
Distillate Oil (Diesel)	Burned	0	1000 GALLONS

Variable	Amount	Meaning
HCl		Liquid Heat Content (Btu/gallons)

S		% Sulfur content by weight

- **Process Emissions**

Pollutant	Code	$	Method Used	Hours UnCont.	UnCont. Factor (LBS/X)	Fugitive Amount	Stack Amount	Total	Units	Explanation
Total of Chargable Pollutants								0.	TONS	

- **Process & Emissions Detail**

Name: Unit 4 Natural Gas

Source Classification Code (SCC): 2-01-002-01

- **Material Information, Annual Average Operating Schedule & Throughput Percent**

Schedule Trade Secret:

Hours Per Day: 2

Days Per Week: 1

Weeks Per Year: 20

Hours Per Year: 40

Winter (Dec - Feb)%: 21

Spring (March-May)%: 27

Summer (June-Aug)%: 40

Fall (Sept-Nov)%: 12

Material	Material Action	Throughput	X Units
Natural Gas	Burned	5.49	MILLION CUBIC FEET

Variable	Amount	Meaning
HCg	1000	Gas Heat Content (Btu/Cubic Feet)
S	0	% Sulfur content by weight

- **Process Emissions**

Pollutant	Code	$	Method Used	Hours UnCont.	UnCont. Factor (LBS/X)	Fugitive Amount	Stack Amount	Total	Units	Explanation
PE (Cond) - Primary PM	PM-CON		factor:ENG.	0	4.7	0.	0.0129015	0.0129015	TONs	

Condensible Portion Only (All Less than 1 Micron)			JUDGEMENT							
SO2 - Sulfur Dioxide	SO2	X	emissions: ENG. JUDGEMENT			0	0.01	0.01	TONs	Emission factors found in AP-42, Section 3.1, "Stationary Gas Turbines", (4/00) were used: 3.4E-3 lbs/MMBtu.
NOx - Nitrogen Oxides	NOX	X	factor:OEPA (auto calculate)	0	320	0.	0.8784	0.8784	TONs	
Organic Compounds	OC	X	factor:OEPA (auto calculate)	0	11	0.	0.030195	0.030195	TONs	
Pb - Lead	7439921	X	emissions: ENG. JUDGEMENT			0	0.00	0.	TONs	Emission factors found in AP-42, Section 3.1, "Stationary Gas Turbines", (4/00) were used: lead was not detected..
PE (Filt) - Primary PM, Filterable Portion Only	PM-FIL	X	factor:OEPA (auto calculate)	0	14	0.	0.03843	0.03843	TONs	
PM10 (Filt) - Primary PM10, Filterable Portion Only	PM10-FIL		factor:OEPA (auto calculate)	0	14	0.	0.03843	0.03843	TONs	
PM2.5 (FILT) - Primary PM2.5, Filterable Portion Only	PM25-FIL		factor:OEPA (auto calculate)	0	14	0.	0.03843	0.03843	TONs	
VOC - Volatile Organic Compounds	VOC		factor:OEPA (auto calculate)	0	2.1	0.	0.0057645	0.0057645	TONs	
Ammonia	NH3		emissions: ENG. JUDGEMENT			0	0.01	0.01	TONs	Ammonia emission factors for natural gas combustion found in USEPA document "Development and Selection of Ammonia Emission Factors - Final Report" (08/94) were used: 3.12 lbs/million cubic feet.
CO - Carbon Monoxide	CO		factor:OEPA (auto calculate)	0	82	0.	0.22509	0.22509	TONs	
Total of Chargable Pollutants								0.957025	TONS	

The following Hazardous Air Pollutant information was developed using Ohio EPA-generated hazardous air pollutant emission calculations. The values may be provided to USEPA by Ohio EPA as part of Ohio EPA's federal grant commitments. You may modify these Ohio EPA-generated hazardous air pollutant emission calculations, at the process level, if you have more accurate information. There is no certification of these values as part of the emissions report submission.

Process Emissions

Pollutant	Code	Method Used	Hours UnCont.	UnCont. Factor (LBS/X)	Fugitive Amount	Stack Amount	Total	Units	Explanation
Acetaldehyde	75070	factor:OEPA (auto calculate)	0	0.04	0.	1.098E-04	1.098E-04	TONs	
Acrolein	107028	factor:OEPA (auto calculate)	0	0.0064	0.	1.7568E-05	1.7568E-05	TONs	
Benz[A]Anthracene	56553	factor:OEPA (auto calculate)	0	0.003	0.	8.235E-06	8.235E-06	TONs	
Benzene	71432	factor:OEPA (auto calculate)	0	0.012	0.	3.294E-05	3.294E-05	TONs	
Butadiene, 1,3-	106990	factor:OEPA (auto calculate)	0	2.15E-04	0.	5.90175E-07	5.90175E-07	TONs	
Cadmium	7440439	factor:OEPA (auto calculate)	0	0.006925	0.	1.90091E-05	1.90091E-05	TONs	
Chromium	7440473	factor:OEPA (auto calculate)	0	0.01329	0.	3.6481E-05	3.6481E-05	TONs	
Ethyl Benzene	100414	factor:OEPA (auto calculate)	0	0.032	0.	8.784E-05	8.784E-05	TONs	
Fluoranthene	206440	factor:OEPA (auto calculate)	0	0.0012	0.	3.294E-06	3.294E-06	TONs	
Formaldehyde	50000	factor:OEPA (auto calculate)	0	0.71	0.	0.00194895	0.00194895	TONs	
MN - Manganese	7439965	factor:OEP	0	0.0802	0.	2.20149E-04	2.20149E-04	TONs	

		A (auto calculate)							
Mercury, as HG; Alkyl & Aryl CMPNDS; Elemental & Inorganic Forms	7439976	factor:OEP A (auto calculate)	0	0.00663	0.	1.81994E-05	1.81994E-05	TONs	
Naphthalene	91203	factor:OEP A (auto calculate)	0	0.0013	0.	3.5685E-06	3.5685E-06	TONs	
Nickel	7440020	factor:OEP A (auto calculate)	0	0.1147	0.	3.14852E-04	3.14852E-04	TONs	
PAH, 16-	40	factor:OEP A (auto calculate)	0	0.0022	0.	6.039E-06	6.039E-06	TONs	
Phenol	108952	factor:OEP A (auto calculate)	0	0.0127	0.	3.48615E-05	3.48615E-05	TONs	
Propylene Oxide	75569	factor:OEP A (auto calculate)	0	0.0145	0.	3.98025E-05	3.98025E-05	TONs	
Toluene	108883	factor:OEP A (auto calculate)	0	0.13	0.	3.5685E-04	3.5685E-04	TONs	
Xylenes (Isomers and Mixture)	1330207	factor:OEP A (auto calculate)	0	0.064	0.	1.7568E-04	1.7568E-04	TONs	

Emission Unit Summary: B005

Oct 11 2011, 13:28:44

Emissions Unit ID: B005

Detailed Reporting

DAPC Description:

- Unit Emissions

Pollutant	Code	$	Fugitive Amount	Stack Amount	Total	Units	QA+
PE (Cond) - Primary PM Condensible Portion Only (All Less than 1 Micron)	PM-CON		0.	0.0167085	0.0167085	TONs	
SO2 - Sulfur Dioxide	SO2	X	0.	0.012087	0.012087	TONs	
NOx - Nitrogen Oxides	NOX	X	0.	1.1376	1.1376	TONs	
Organic Compounds	OC	X	0.	0.039105	0.039105	TONs	
Pb - Lead	7439921	X	0.	0.	0.	TONs	
PE (Filt) - Primary PM, Filterable Portion Only	PM-FIL	X	0.	0.04977	0.04977	TONs	
PM10 (Filt) - Primary PM10, Filterable Portion Only	PM10-FIL		0.	0.04977	0.04977	TONs	
PM2.5 (FILT) - Primary PM2.5, Filterable Portion Only	PM25-FIL		0.	0.04977	0.04977	TONs	
VOC - Volatile Organic Compounds	VOC		0.	0.0074655	0.0074655	TONs	
Ammonia	NH3		0.	0.011376	0.011376	TONs	
CO - Carbon Monoxide	CO		0.	0.29151	0.29151	TONs	
Total of Chargable Pollutants					1.23856	TONS	

The following Hazardous Air Pollutant information was developed using Ohio EPA-generated hazardous air pollutant emission calculations. The values may be provided to USEPA by Ohio EPA as part of Ohio EPA's federal grant commitments. You may modify these Ohio EPA-generated hazardous air pollutant emission calculations, at the process level, if you have more accurate information. There is no certification of these values as part of the emissions report submission.

Pollutant	Code	Fugitive Amount	Stack Amount	Total	Units
Acetaldehyde	75070	0.	1.422E-04	1.422E-04	TONs
Acrolein	107028	0.	2.2752E-05	2.2752E-05	TONs
Benz[A]Anthracene	56553	0.	1.0665E-05	1.0665E-05	TONs
Benzene	71432	0.	4.266E-05	4.266E-05	TONs
Butadiene, 1,3-	106990	0.	7.64325E-07	7.64325E-07	TONs
Cadmium	7440439	0.	2.46184E-05	2.46184E-05	TONs

Chromium	7440473	0.	4.7246E-05	4.7246E-05	TONs
Ethyl Benzene	100414	0.	1.1376E-04	1.1376E-04	TONs
Fluoranthene	206440	0.	4.266E-06	4.266E-06	TONs
Formaldehyde	50000	0.	0.00252405	0.00252405	TONs
MN - Manganese	7439965	0.	2.85111E-04	2.85111E-04	TONs
Mercury, as HG; Alkyl & Aryl CMPNDS; Elemental & Inorganic Forms	7439976	0.	2.35697E-05	2.35697E-05	TONs
Naphthalene	91203	0.	4.6215E-06	4.6215E-06	TONs
Nickel	7440020	0.	4.07759E-04	4.07759E-04	TONs
PAH, 16-	40	0.	7.821E-06	7.821E-06	TONs
Phenol	108952	0.	4.51485E-05	4.51485E-05	TONs
Propylene Oxide	75569	0.	5.15475E-05	5.15475E-05	TONs
Toluene	108883	0.	4.6215E-04	4.6215E-04	TONs
Xylenes (Isomers and Mixture)	1330207	0.	2.2752E-04	2.2752E-04	TONs

- Processes

- Process & Emissions Detail

Name: Unit 5 Natural Gas

Source Classification Code (SCC): 2-01-002-01

- Material Information, Annual Average Operating Schedule & Throughput Percent

Schedule Trade Secret:

Hours Per Day: 1

Days Per Week: 1

Weeks Per Year: 37

Hours Per Year: 37

Winter (Dec - Feb)%: 17

Spring (March-May)%: 21

Summer (June-Aug)%: 53

Fall (Sept-Nov)%: 9

Material	Material Action	Throughput	X Units
Natural Gas	Burned	7.11	MILLION CUBIC FEET

Variable	Amount	Meaning
HCg	1000	Gas Heat Content (Btu/Cubic Feet)

S	0	% Sulfur content by weight

- **Process Emissions**

Pollutant	Code	$	Method Used	Hours UnCont.	UnCont. Factor (LBS/X)	Fugitive Amount	Stack Amount	Total	Units	Explanation
PE (Cond) - Primary PM Condensible Portion Only (All Less than 1 Micron)	PM-CON		factor:ENG. JUDGEMENT	0	4.7	0.	0.0167085	0.0167085	TONs	Gas turbine emission factors taken from AP-42, Section 3.1, "Stationary Gas Turbines", (04/00)
SO2 - Sulfur Dioxide	SO2	X	factor:ENG. JUDGEMENT	0	3.4	0.	0.012087	0.012087	TONs	Gas turbine emission factors taken from AP-42, Section 3.1, "Stationary Gas Turbines", (04/00)
NOx - Nitrogen Oxides	NOX	X	factor:OEPA (auto calculate)	0	320	0.	1.1376	1.1376	TONs	
Organic Compounds	OC	X	factor:OEPA (auto calculate)	0	11	0.	0.039105	0.039105	TONs	
Pb - Lead	7439921	X	factor:ENG. JUDGEMENT	0	0.	0.	0.	0.	TONs	Gas turbine emission factors taken from AP-42, Section 3.1, "Stationary Gas Turbines", (04/00). Lead was not detected.
PE (Filt) - Primary PM, Filterable Portion Only	PM-FIL	X	factor:OEPA (auto calculate)	0	14	0.	0.04977	0.04977	TONs	
PM10 (Filt) - Primary PM10, Filterable Portion Only	PM10-FIL		factor:OEPA (auto calculate)	0	14	0.	0.04977	0.04977	TONs	
PM2.5 (FILT) - Primary PM2.5, Filterable Portion Only	PM25-FIL		factor:OEPA (auto calculate)	0	14	0.	0.04977	0.04977	TONs	
VOC - Volatile Organic Compounds	VOC		factor:OEPA (auto calculate)	0	2.1	0.	0.0074655	0.0074655	TONs	
Ammonia	NH3		factor:ENG. JUDGEMENT	0	3.2	0.	0.011376	0.011376	TONs	Gas turbine emission factors taken from AP-42, Section 3.1, "Stationary Gas Turbines", (04/00)

CO - Carbon Monoxide	CO		factor:OEPA (auto calculate)	0	82	0.	0.29151	0.29151	TONs	
Total of Chargable Pollutants								1.23856	TONS	

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The following Hazardous Air Pollutant information was developed using Ohio EPA-generated hazardous air pollutant emission calculations. The values may be provided to USEPA by Ohio EPA as part of Ohio EPA's federal grant commitments. You may modify these Ohio EPA-generated hazardous air pollutant emission calculations, at the process level, if you have more accurate information. There is no certification of these values as part of the emissions report submission.

- **Process Emissions**

Pollutant	Code	Method Used	Hours UnCont.	UnCont. Factor (LBS/X)	Fugitive Amount	Stack Amount	Total	Units	Explanation
Acetaldehyde	75070	factor:OEPA (auto calculate)	0	0.04	0.	1.422E-04	1.422E-04	TONs	
Acrolein	107028	factor:OEPA (auto calculate)	0	0.0064	0.	2.2752E-05	2.2752E-05	TONs	
Benz[A]Anthracene	56553	factor:OEPA (auto calculate)	0	0.003	0.	1.0665E-05	1.0665E-05	TONs	
Benzene	71432	factor:OEPA (auto calculate)	0	0.012	0.	4.266E-05	4.266E-05	TONs	
Butadiene, 1,3-	106990	factor:OEPA (auto calculate)	0	2.15E-04	0.	7.64325E-07	7.64325E-07	TONs	
Cadmium	7440439	factor:OEPA (auto calculate)	0	0.006925	0.	2.46184E-05	2.46184E-05	TONs	
Chromium	7440473	factor:OEPA (auto calculate)	0	0.01329	0.	4.7246E-05	4.7246E-05	TONs	
Ethyl Benzene	100414	factor:OEPA (auto calculate)	0	0.032	0.	1.1376E-04	1.1376E-04	TONs	
Fluoranthene	206440	factor:OEP	0	0.0012	0.	4.266E-06	4.266E-06	TONs	

		A (auto calculate)							
Formaldehyde	50000	factor:OEP A (auto calculate)	0	0.71	0.	0.00252405	0.00252405	TONs	
MN - Manganese	7439965	factor:OEP A (auto calculate)	0	0.0802	0.	2.85111E-04	2.85111E-04	TONs	
Mercury, as HG; Alkyl & Aryl CMPNDS; Elemental & Inorganic Forms	7439976	factor:OEP A (auto calculate)	0	0.00663	0.	2.35697E-05	2.35697E-05	TONs	
Naphthalene	91203	factor:OEP A (auto calculate)	0	0.0013	0.	4.6215E-06	4.6215E-06	TONs	
Nickel	7440020	factor:OEP A (auto calculate)	0	0.1147	0.	4.07759E-04	4.07759E-04	TONs	
PAH, 16-	40	factor:OEP A (auto calculate)	0	0.0022	0.	7.821E-06	7.821E-06	TONs	
Phenol	108952	factor:OEP A (auto calculate)	0	0.0127	0.	4.51485E-05	4.51485E-05	TONs	
Propylene Oxide	75569	factor:OEP A (auto calculate)	0	0.0145	0.	5.15475E-05	5.15475E-05	TONs	
Toluene	108883	factor:OEP A (auto calculate)	0	0.13	0.	4.6215E-04	4.6215E-04	TONs	
Xylenes (Isomers and Mixture)	1330207	factor:OEP A (auto calculate)	0	0.064	0.	2.2752E-04	2.2752E-04	TONs	

- **Process & Emissions Detail**

Name: Unit 5 Fuel Oil

Source Classification Code (SCC): 2-01-001-01

- **Material Information, Annual Average Operating Schedule & Throughput Percent**

Schedule Trade Secret:

Hours Per Day: 0

Days Per Week: 0

Weeks Per Year: 0

Hours Per Year: 0

Winter (Dec - Feb)%: 25

Spring (March-May)%: 25

Summer (June-Aug)%: 25

Fall (Sept-Nov)%: 25

Material	Material Action	Throughput	X Units
Distillate Oil (Diesel)	Burned	0	1000 GALLONS

Variable	Amount	Meaning
HCl		Liquid Heat Content (Btu/gallons)
S		% Sulfur content by weight

- **Process Emissions**

Pollutant	Code	$	Method Used	Hours UnCont.	UnCont. Factor (LBS/X)	Fugitive Amount	Stack Amount	Total	Units	Explanation
Total of Chargable Pollutants								0.	TONS	