

DEPARTMENT OF ENVIRONMENTAL QUALITY
 AIR QUALITY DIVISION
 ACTIVITY REPORT: Scheduled Inspection

P046830272

FACILITY: NEWBERRY CORRECTIONAL FACILITY		SRN / ID: P0468
LOCATION: 13747 EAST COUNTY ROAD 428, NEWBERRY		DISTRICT: Upper Peninsula
CITY: NEWBERRY		COUNTY: LUCE
CONTACT: CRAIG CARRUTHERS, PHYSICAL PLANT SUPERVISOR		ACTIVITY DATE: 07/15/2015
STAFF: Joel Asher	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MINOR
SUBJECT: boilers		
RESOLVED COMPLAINTS:		

On 7/15/2015 I conducted an unannounced inspection of this facility. My contact was the physical plant supervisor, Mr. Craig Corruthers. At the time of this inspection, Mr. Corruthers has been in this position for about 2 months. Discussions were held regarding PTI #143-13 and each of the conditions contained within the permit.

PTI #143-13 was issued to the Newberry Correctional Facility on 12/12/2013 for two boilers and a temporary boiler while one of the boilers was being installed. At this time the facility has two permanent boilers. EUB1 is the primary unit and EUB4 is the backup. EUB4 is shut down and drained but can be brought back on line if needed, this unit acts as the backup boiler. Both boilers are used for steam, domestic water, and heating needs. Both boilers can be fired with natural gas or fuel oil.

The facility primarily runs the boilers on natural gas. Fuel oil is a backup fuel in the event natural gas is not available. Fuel oil is also burned once each year for a 72 hour period to verify the boilers are capable of burning fuel oil. The facility has a 29,000 gallon fuel oil tank on site.

Special Condition (IV)(2) requires the facility to have a satisfactory device to records and monitor fuel usage. There is a flow meter on the wall of the boiler room that monitors natural gas flow. This is recorded on the log sheets. A monthly usage shet of natural gas usage was also provided. Mr. Corruthers will check on a flow meter for the fuel oil supplied to the boilers.

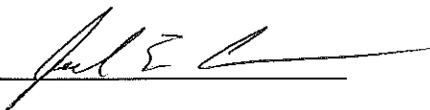
On 7/20, Mr. Corruthers emailed a copy of the last fuel oil shipment delivered on 12/30/2013. It specifies the sulfur content to be 15 PPM (.0015%). This is in compliance with Special Condition (II)(3).

Final determination of compliance will be made upon receipts of required information.

On 7/24/2015 I received information from Ms. Lillian Woolley, Senior Chemical Engineer with Fishbeck, Thompson, Carr & Huber, Inc. This firm appears to be helping the Department of Corrections with their air permitting at this and other locations. Ms. Woolley emailed information showing the facility last received a shipment of 7305 gallons of diesel fuel on 12/13/2013. This corresponds with the information provided by Mr. Corruthers. She was also able to provide information on monthly NOx emissions.

Ms. Woolley stated they will likely be submitting a request to modify PTI #143-13 to clean up some language and conditions they feel need attention. It is their intention to have all PTIs throughout the Department of Corrections contain similar language so staff will be able to understand the permits easier if they move from location to location.

This facility can be considered in compliance.

NAME 

DATE 7/24/15

SUPERVISOR _____

Utility Information FY2015

	Electric		Electric		Natural Gas		Metered Gas		Metered Gas		Fuel Oil		Water		Sewer		Chilled Water	
	18260000		1076700		DMB-Semco		Semco 0236238.500		Semco 0347858.500				Village of Newberry					
	KWH	Cost	KWH	Cost	CCF	Cost	CCF	Cost	CCF	Cost	Gals.	Cost	Gals.	Cost	Gals.	Cost	Tons	Cost
Oct '14	285,515	\$25,542.45	548	\$95.60	43,310	\$25,319.67			416	\$365.12			3,948,200		3,158,560	\$14,670.56		
Nov	284,029	\$25,601.09	1,206	\$176.31	61,294	\$35,051.77			485	\$425.33			4,767,900		3,814,320	\$17,821.48		
Dec	298,456	\$25,045.36	4,536	\$584.80	66,189	\$42,297.78			581	\$491.13			4,414,200		3,531,360	\$16,348.16		
Jan	301,538	\$25,050.41	5,077	\$630.45	76,087	\$41,687.82			532	\$423.77			4,514,900		3,611,920	\$16,710.68		
Feb	269,260	\$22,978.87	5,651	\$672.53	72,612	\$37,408.11			484	\$356.87			4,117,900		3,294,320	\$15,281.48		
Mar	286,860	\$23,434.74	5,133	\$613.48	65,759	\$39,018.15			591	\$389.21			4,136,900		3,309,520	\$15,349.88		
Apr	267,005	\$22,839.89	4,860	\$582.36	52,102	\$25,546.15			559	\$358.97			4,516,500		3,613,200	\$16,716.44		
May	266,763	\$21,941.61	4,368	\$526.28					510	\$332.05			4,619,540		3,695,632	\$17,087.38		
June			3,527	\$430.41														
July																		
Aug																		
Sept'15																		
	2,259,426	\$192,434.22	34,906	\$4,312.22	437,353	\$246,329.45	0	\$0.00	4,158	\$3,142.45			35,036,040	\$0.00	28,028,832	\$129,786.06		

BILL OF LADING OR DELIVERY TICKET

WHEN PRODUCT IS MOVED IN VEHICLES OWNED OR OPERATED BY THE CUSTOMER THIS DOCUMENT SHALL CONSTITUTE A DELIVERY TICKET OR RECEIPT FOR THE PRODUCT NAMED HEREIN AND SHALL NOT BE CONSIDERED A BILL OF LADING.

THIS IS TO CERTIFY THAT THE MATERIALS LISTED BELOW ARE PROPERLY CLASSIFIED, DESCRIBED, PACKAGED, MARKED AND LABELED, AND ARE IN PROPER CONDITION FOR TRANSPORTATION, ACCORDING TO APPLICABLE REGULATIONS OF THE D.O.T.

SUBJECT TO SECTION 7 OF THE CONDITIONS OF APPLICABLE BILL OF LADING, IF THIS SHIPMENT IS TO BE DELIVERED TO THE CONSIGNEE WITHOUT RECOURSE ON THE CONSIGNOR, THE CONSIGNOR SHALL SIGN THE FOLLOWING STATEMENT:

THE CARRIER SHALL NOT MAKE DELIVERY OF THIS SHIPMENT WITHOUT PAYMENT OF FREIGHT AND ALL OTHER CHARGES.

U.S. Oil

410 PRAIRIE AVE
GREEN BAY, WI 54303
Terminal Reg. # T39WI3077
EPA # 6504 - B1701

GASOLINE SOLD OR SHIPPED HEREUNDER MEETS APPLICABLE FEDERAL AND STATE RVP REQUIREMENTS.

THIS SHIPMENT IS RECEIVED, SUBJECT TO ANY TARIFFS OR CONTRACT IN EFFECT AS OF THIS DATE.

THE CARRIER CERTIFIES THAT THE CARGO TANK SUPPLIED FOR THIS SHIPMENT IS A PROPER CONTAINER FOR THE TRANSPORTATION OF THIS COMMODITY AS DESCRIBED BY THE SHIPPER.

THE DRIVER BY SIGNING THIS TICKET HEREBY CERTIFIES THAT TRANSPORTATION WAS LOADED AS SPECIFIED RECEIVED QUANTITIES IN GOOD ORDER.

SIGN
HERE

DATE 12/30/2013 7:46:41 AM

SHIPPER CONSIGNOR

SIGN
HERE

MARK WAGGONER

IN CASE OF TRANSPORTATION EMERGENCY INVOLVING PUBLIC SAFETY CALL CHEMTREC 800-424-9300 CUSTOMER # 215410

SHIPPING DESCRIPTIONS

NA1993, FUEL OIL, 3, PGIII, 1 Cargo Tank

7305 Gallons

SUPPLIER U.S. OIL Green Bay WI EPA #5504 425 Better Way Appleton, WI 54915		SHIP TO / DEST. 0643 AUTORE OIL COMPANY CEDARVILLE, MI		RELEASE #	
TRLR # Q7934		ACCESS 0643		MANIFEST # 0013381	
CARRIER 0075 - AUOL AUTORE OIL		SCAC AUOL		DRIVER NAME RICHARD SIROIS	
COMMENTS		IN DATE 12/30/2013 07:22		OUT DATE 12/30/2013 07:37	
		DRIVER # 6990		LOAD POS. 4	

PRODUCT	OCT	GROSS	TEMP	GRAV	NET
0704 ULS#2 DYED TUNDRA		4302	25.0	34.8	4371
0704 ULS#2 DYED TUNDRA		3003	15.8	34.8	3064
TOTAL QUANTITY		7305			7435

This diesel fuel additive complies with the Federal Low Sulfur content requirements for use in diesel motor vehicles and nonroad engines 15PPM SULFUR DYED DIESEL FUEL: NONTAXABLE USE ONLY. PENALTY FOR TAXABLE USE

P4303127
C4302709

GB/MEY (M.I.S.D.C.)

7305 (#2) Dyed (Tundra)

ACCOUNTING CODE

0100

U.S. OIL
a Division of U.S. Venture, Inc.
425 Better Way
Appleton, WI 54915

AUTORE OIL COMPANY
 P O BOX 68
 CEDARVILLE MI 49719
 (906) 484-2233

Invoice

RECEIVED

JAN 06 2014
 Invoice Date 12/30/13 Ship Date 12/30/13
 NCP Business Office

011616194

Bill To Number	Ship To Number	Inst. P.O.#	Bl #	Terr./Sales
5414	5414HBB			1 1
Fuel Supplier Manifest #		13381		

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 NEWBERRY CORRECTIONAL
 3001 NEWBERRY AVE
 NEWBERRY MI 49868

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 NEWBERRY CORRECTIONS
 3001 NEWBERRY AVE
 NEWBERRY MI 49868

Shipped Via MATT

Order Number 666349.00

Product No.	Description	Price	Ordered	Shipped	Extension	
104	BK #2 DYED ULS W/AD	13381	\$3.20150	7305	7305.0	23386.96
	Sub-Total					23386.96
DDSLX	FED DIESEL EXEMPT		\$0.00000	7305.0	0.00	
IDSIX	STATE DSL EXEMPT		\$0.00000	7305.0	0.00	
USTFA	MICH MUST FUND -.00875		\$0.00875	7305.0	63.92	
PTLL	SPILL TAX		\$0.00190	7305.0	13.88	
UPERF	FED SUPER FUND(LUST)		\$0.00100	7305.0	7.31	
	Invoice Total					23,472.07

Net Due: 10 Days

Due Date: 01/09/14

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CUSTOMER COPY

Asher, Joel (DEQ)

From: Woolley, Lillian L. <lwoolley@ftch.com>
Sent: Friday, July 24, 2015 11:59 AM
To: Asher, Joel (DEQ)
Cc: Lebarre, Trever (MDOC); Hassen, Bruce (DTMB); Carruthers, Craig E. (MDOC); Ferrier, David A.; Caudell, John F.
Subject: Newberry Correctional Facility - Air Quality Records
Attachments: MDOC Emissions Summary - Newberry.pdf

Hi,

I know you said you would be out of the office next week, so I wanted to get you this information today and make sure this is the information you had requested. I enclosed 12 months of fuel consumption records and total NOx emissions for that period. The spread sheets shows the two boilers operating in compliance with the 16.7 tpy NOx limit included in their PTI 143-13. In addition, the facility burned only 3941 gallons of diesel fuel, far less than the 650,000 gallon per year limit.

In addition, their most recent fuel delivery was 7305 gallons on December 13, 2013. It was a dyed ultra –low sulfur diesel (ULSD), which (by definition) is diesel fuel having less than 15 ppm sulfur, or 0.0015% sulfur. This fuel delivery shows fuel in compliance with the 0.5% (5000 ppm) limit included in their permit 143-13.

If you needed anything else, please let me know. Otherwise I will follow up with a hard copy. Thanks so much for your patience!

Lillian L. Woolley, PE | Senior Chemical Engineer | 248.324.4785 | lwoolley@ftch.com
Fishbeck, Thompson, Carr & Huber, Inc. | Engineers, Scientists, Architects, Constructors

MICHIGAN DEPARTMENT OF CORRECTIONS, NEWBERRY CORRECTIONAL FACILITY
EMISSIONS AND FUEL CONSUMPTION - JUNE, 2014 through May, 2015

Pollutant	Natural Gas Emission Factors ^[1] (lb/mmcf)	Fuel Oil Emission Factors ^[2] (lb/10 ³ gal)	June 2014 (mmscf/mo)	July 2014 (mmscf/mo)	August 2014 (mmscf/mo)	September 2014 (mmscf/mo)	October 2014 (mmscf/mo)	October 2014 2014 (gal/mo fuel oil)*	November 2014 (mmscf/mo)	December 2014 (mmscf/mo)	January 2015 (mmscf/mo)	February 2015 (mmscf/mo)	March 2015 (mmscf/mo)	April 2015 (mmscf/mo)	May 2015 (mmscf/mo)	Natural Gas Usage (mmscf/yr)	Fuel Oil Usage (gal/yr)	Annual Emissions - Natural Gas (tons/yr)	Annual Emissions - Fuel Oil (tons/yr)	Total Annual Emissions (tons/yr)
Nitrogen Oxides	100	20	2.89	2.89	2.86	2.86	4.37	3941	6.18	6.68	7.66	7.31	6.64	5.27	3.96	59.56	3,941	2.98	0.00	2.98
Carbon Monoxide	84	5	2.89	2.89	2.86	2.86	4.37	3941	6.18	6.68	7.66	7.31	6.64	5.27	3.96	59.56	3,941	2.50	0.00	2.50
Total Organic Compounds	11	0.252	2.89	2.89	2.86	2.86	4.37	3941	6.18	6.68	7.66	7.31	6.64	5.27	3.96	59.56	3,941	0.33	0.00	0.33
Non-methane Organic Compounds	5.5	0.2	2.89	2.89	2.86	2.86	4.37	3941	6.18	6.68	7.66	7.31	6.64	5.27	3.96	59.56	3,941	0.16	0.00	0.16
Sulfur Dioxide ^[3]	0.6	7.1	2.89	2.89	2.86	2.86	4.37	3941	6.18	6.68	7.66	7.31	6.64	5.27	3.96	59.56	3,941	0.02	0.00	0.02
Filterable PM	1.9	2	2.89	2.89	2.86	2.86	4.37	3941	6.18	6.68	7.66	7.31	6.64	5.27	3.96	59.56	3,941	0.06	0.00	0.06
Condensable PM	5.7	1	2.89	2.89	2.86	2.86	4.37	3941	6.18	6.68	7.66	7.31	6.64	5.27	3.96	59.56	3,941	0.17	0.00	0.17
PM-10 (total)	7.6	2.343	2.89	2.89	2.86	2.86	4.37	3941	6.18	6.68	7.66	7.31	6.64	5.27	3.96	59.56	3,941	0.23	0.00	0.23
PM-2.5	7.6	1.716	2.89	2.89	2.86	2.86	4.37	3941	6.18	6.68	7.66	7.31	6.64	5.27	3.96	59.56	3,941	0.23	0.00	0.23
Carbon Dioxide	120,000	22,300	2.89	2.89	2.86	2.86	4.37	3941	6.18	6.68	7.66	7.31	6.64	5.27	3.96	59.56	3,941	3,574	3.57	3577
Methane	0.009	0.052	2.89	2.89	2.86	2.86	4.37	3941	6.18	6.68	7.66	7.31	6.64	5.27	3.96	59.56	3,941	0.000	0.00	0.00
N ₂ O	0.003	0.003	2.89	2.89	2.86	2.86	4.37	3941	6.18	6.68	7.66	7.31	6.64	5.27	3.96	59.56	3,941	0.000	0.00	0.00
CO _{2e}																		3,574	3.57	3577

* Newberry Correctional Facility did a test burn on 10/27/14 through 10/29/14 on fuel oil. That is the only fuel oil burned in the boilers during this reporting period.

Notes:

Total Annual Emissions (tons/yr) = emission factor (lb/mmcf) x fuel consumption (lb/mmcf) x (ton/2000 lb)

GWP = Methane is 25; N₂O is 298 Table A-1 of Subpart A, Part 98 Global Warming Potentials, November 29, 2103

[1] Emissions factor from "Compilation of Air Pollutant Emission Factors (AP-42, Fifth Edition)", Section 1.4

[2] Emissions factor from "Compilation of Air Pollutant Emission Factors (AP-42, Fifth Edition)", Section 1.3 (May, 2010)

[3] Sulfur content of fuel oil was assumed 0.05% or 500 ppmw, SO₂ emissions from 142 x (0.05) = 7.1 lb/1000 gallons fuel oil

