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JUN 2 4 2013

13-ECD-0051

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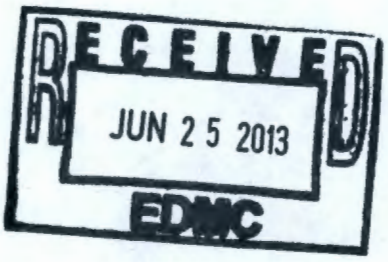

Addressees:

HANFORD SITE AIR OPERATING PERMIT (AOP) NOTIFICATION OF OFF-PERMIT CHANGE FOR DIESEL ENGINES USED AT THE WASTE TREATMENT AND IMMOBILIZATION PLANT (WTP) MATERIAL HANDLING FACILITY (MHF) AND WTP CONSTRUCTION SITE

Attached for your review and approval is a Hanford Site AOP Notification of Off-Permit Change for seven diesel generators and one liquid propane gas generator supporting construction activities at the WTP MHF and WTP Construction Site.

Five of the diesel generators support the WTP MHF laydown operations and were previously operated as "non-road" engines per Washington Administrative Code (WAC) 173-400-030(56). However, recent review of the diesel generators determined that the units no longer meet the definition of non-road engines; and, therefore these are operating as stationary engines. The remaining generators serve as "stationary emergency generators" at the WTP Construction Site.

Per WAC 173-401-530(2)(a), the engines cannot qualify as insignificant emission units, because each is subject to the 40 CFR 63, Subpart ZZZZ, National Emission Standard for Hazardous Air Pollutant for Stationary Reciprocating Internal Combustion Engines. Therefore, the engines are identified for incorporation into the Hanford Site AOP.

This notification is submitted per the requirements of WAC 173-401-724.

H-0-8
H-0-9

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If you have any questions, please contact me, or your staff may contact Dennis W. Bowser, Environmental Compliance Division, (509) 373-2566.

Kevin W. Smith
Manager

ECD:DWB

Attachment

cc w/attach:
O. L. Bostic, BNI
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cc w/o attach:
D. M. Busche, BNI
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Attachment
13-ECD-0051
(8 Pages)

Hanford Site Air Operating Permit Notification of Off-Permit Change

Dennis W. Bowser

HANFORD SITE AIR OPERATING PERMIT

Notification of Off-Permit Change

Permit Number: 00-05-006, Renewal 2

This notification is provided to Washington State Department of Ecology, Washington State Department of Health, and the U.S. Environmental Protection Agency as notice of an off-permit change described as follows.

This change is allowed pursuant to WAC 173-401-724(1) as:
1. Change is not specifically addressed or prohibited by the permit terms and conditions
2. Change does not weaken the enforceability of the existing permit conditions
3. Change is not a Title I modification or a change subject to the acid rain requirements under Title IV of the FCAA
4. Change meets all applicable requirements and does not violate an existing permit term or condition
5. Change has complied with applicable preconstruction review requirements established pursuant to RCW 70.94.152.

The following information is provided pursuant to WAC-173-401-724(3):

Description of the change:

The following engines #1 through #5 are used to support activities associated with the Hanford Tank Waste Treatment and Immobilization Plant (WTP) Material Handling Facility (MHF) laydown yards. In previous years, the engines were operated as "non-road" engines. Recent review of the engines show that they have remained in the same location for more than 12 contiguous months and the non-road engine designation is no longer applicable. As stationary sources, the engines are not subject to new source review (NSR) per WAC 173-400-110, and submittal of a Notice of Construction application is not required. Instead, the engines are exempt from this requirement per WAC 173-400-110(4)(c)(iv), because the diesel fuel used contains less than 0.05% sulfur (0.0015% sulfur fuel is used) and the aggregate heat input for each location is less than 1,000,000 Btu per hour (Btu/hr). The heat input capacities were estimated using EPA's AP-42, Chapter 3.3, Table 3.3-1 average brake horsepower-specific fuel consumption of 7,000 Btu/hp-hr.

Per WAC 173-401-530(2)(a), the engines cannot qualify as insignificant emission units because they are subject to NESHAP Subpart ZZZZ or NSPS, Subpart IIII. Therefore, this notification of off-permit change is submitted to the Washington State Department of Ecology (Ecology) per WAC 173-401-724 to incorporate the engines into the Hanford Site Air Operating Permit (AOP). The engines details include:

Engine #1: WTP MHF South-40 Laydown Critical Equipment Storage

General Information	
Description	Diesel generator
Location	WTP Material Handling Facility South-40 Laydown Critical Equipment Storage Location
BNI Equipment Number	Rented equipment (MQ Power DCA70USIXF) WhisperWatt 70 or equivalent unit
Engine Specifications	
Make/Model	Isuzu/BJ4JJ1X
Model Year	2011
Displacement	3 Liter
Gross Power Output	97.9 Hp (73 kW)
Fuel Type	0.0015% Sulfur Diesel
Heat input capacity	685,300 Btu/hr
EPA Engine Certification Family	BSZXL03.OJXB
Regulatory Status	
WAC 173-400	Exempt from New Source Review per WAC 173-400-110(4)(c)(iv)
WAC 173-401	Subject to Hanford Site AOP per WAC 173-401-530(2)(a)
40 CFR 60, Subpart IIII	Subject to standard per 40 CFR 60.4200(a)(2)
40 CFR 63, Subpart ZZZZ	Requires compliance with 40 CFR 60, Subpart IIII per 40 CFR 63.6590(c)(7)

Engine #2: WTP MHF South-40 Laydown Entry Gate

General Information	
Description	Diesel engine powered light tower
Location	WTP Material Handling Facility South-40 Laydown Yard Entry Gate
BNI Equipment Number	JO-53-056 or equivalent unit
Engine Specifications	
Make/Model	Amida/AL5080D-4MH
Model Year	2004
Maximum power output	12 Hp
Fuel Type	0.0015% Sulfur Diesel
Heat input capacity	84,000 Btu/hr
Regulatory Status	
WAC 173-400	Exempt from New Source Review per WAC 173-400-110(4)(c)(iv)
WAC 173-401	Subject to Hanford Site AOP per WAC 173-401-530(2)(a)
40 CFR 60, Subpart IIII	Exempt per 40 CFR 60.4200(a)(2)
40 CFR 63, Subpart ZZZZ	Subject per 40 CFR 63.6590(a)(1)(ii)

Engine #3: WTP MHF North-10 Laydown Area

General Information	
Description	Diesel engine powered light tower
Location	WTP Material Handling Facility North-10 Laydown Yard
BNI Equipment Number	JO-53-015 or equivalent unit
Engine Specifications	
Make/Model	Amida/AL5080D-4MH
Model Year	2001
Maximum power output	12 HP
Fuel Type	0.0015% Sulfur Diesel
Heat input capacity	84,000 Btu/hr
Regulatory Status	
WAC 173-400	Exempt from New Source Review per WAC 173-400-110(4)(c)(iv)
WAC 173-401	Subject to WAC 173-401-530(2)(a)
40 CFR 60, Subpart IIII	Exempt per 40 CFR 60.4200(a)(2)
40 CFR 63, Subpart ZZZZ	Subject per 40 CFR 63.6590(a)(1)(ii)

Engine #4: WTP MHF North-10 Laydown Area

General Information	
Description	Diesel generator powered light tower
Location	WTP Material Handling Facility North-10 Laydown Yard
BNI Equipment Number	JO-53-021 or equivalent unit
Engine Specifications	
Make/Model	Amida/AL5080D-4MH
Model Year	2001
Maximum power output	12 HP
Fuel Type	0.0015% Sulfur Diesel
Heat input capacity	84,000 Btu/hr
Regulatory Status	
WAC 173-400	Exempt from New Source Review per WAC 173-400-110(4)(c)(iv)
WAC 173-401	Subject to WAC 173-401-530(2)(a)
40 CFR 60, Subpart IIII	Exempt per 40 CFR 60.4200(a)(2)
40 CFR 63, Subpart ZZZZ	Subject per 40 CFR 63.6590(a)(1)(ii)

Engine #5: WTP Material Handling Facility South-40 Laydown Yard East X-Ray Tent

General Information	
Description	Diesel generator powered light tower
Location	WTP Material Handling Facility South-40 Laydown Yard East X-Ray Tent
BNI Equipment Number	JO-53-057 or equivalent unit
Engine Specifications	
Make/Model	Amida/AL5080D-4MH
Model Year	2004
Maximum power output	12 HP
Fuel Type	0.0015% Sulfur Diesel
Heat input capacity	84,000 Btu/hr
Regulatory Status	
WAC 173-400	Exempt from New Source Review per WAC 173-400-110(4)(c)(iv)
WAC 173-401	Subject to WAC 173-401-530(2)(a)
40 CFR 60, Subpart IIII	Exempt per 40 CFR 60.4200(a)(2)
40 CFR 63; Subpart ZZZZ	Subject per 40 CFR 63.6590(a)(1)(ii)

The following WTP Construction Site stationary emergency engines #6 through #8 are not subject to NSR per WAC 173-400-110, and submittal of a NOC application is not required. Instead, the engines are exempt from this requirement per WAC 173-400-110(h)(xxxix), because the emergency engine's aggregate horsepower at each location is less than 500 brake horsepower.

Per WAC 173-401-530(2)(a), the engines cannot qualify as insignificant emission units because they are subject to NESHAP Subpart ZZZZ (40 CFR 63.6580). Therefore, this notification of off-permit change is submitted to the Washington State Department of Ecology (Ecology) per WAC 173-401-724 to incorporate the engines into the Hanford Site Air Operating Permit (AOP). The engines details include:

Engine #6: WTP Construction Site Pretreatment Facility Tower Crane Emergency Generator

General Information	
Description	Tower Crane Emergency Diesel generator
Location	WTP Construction Site Pretreatment Facility
BNI Equipment Number	JO-14-019A
Engine Specifications	
Make/Model	Caterpillar/D125P2
Model Year	2002
Maximum power output	170 HP
Fuel Type	0.0015% Sulfur Diesel
Regulatory Status	
WAC 173-400	Exempt from New Source Review per WAC 173-400-110(h)(xxxix)
WAC 173-401	Subject to WAC 173-401-530(2)(a)
40 CFR 60, Subpart IIII	Exempt per 40 CFR 60.4200(a)(2)
40 CFR 63, Subpart ZZZZ	Subject per 40 CFR 63.6590(a)(1)(ii)

Engine #7: WTP Construction Site High-Level Waste Facility Tower Crane Emergency Generator

General Information	
Description	Tower Crane emergency diesel generator
Location	WTP Construction Site High-Level Waste Facility
BNI Equipment Number	JO-14-018A
Engine Specifications	
Make/Model	Caterpillar/ D125P2
Model Year	2002
Maximum power output	170 HP
Fuel Type	0.0015% Sulfur Diesel
Regulatory Status	
WAC 173-400	Exempt from New Source Review per WAC 173-400-110(h)(xxxix)
WAC 173-401	Subject to WAC 173-401-530(2)(a)
40 CFR 60, Subpart IIII	Exempt per 40 CFR 60.4200(a)(2)
40 CFR 63, Subpart ZZZZ	Subject per 40 CFR 63.6590(a)(1)(ii)

Engine #8: WTP Construction Site Building T-14 Emergency Generator

General Information	
Description	Propane Emergency Generator
Location	WTP Construction Site Building T-14
BNI Equipment Number	Not Applicable - Subcontractor Operated
Engine Specifications	
Model	Cummins Residential Generator Series 45000 Model 47GGFE-3288
Model Year	2002
Displacement	4.2 Liter
Maximum power output	74 HP
Fuel Type	Liquid Propane Gas, Spark Ignition
Regulatory Status	
WAC 173-400	Exempt from New Source Review per WAC 173-400-110(4)(h)(xxxix)
WAC 173-401	Subject to WAC 173-401-530(2)(a)
40 CFR 60, Subpart JJJJ	Exempt per 40 CFR 60.4230(4)(iii)
40 CFR 63, Subpart ZZZZ	Subject per 40 CFR 63.6590(a)(1)(ii)

Date of Change:

The diesel engines #1 through #5 were previously operated as a non-road engines. The engines are now being operated as stationary engines exempt from NSR per WAC 173-400-110(4)(c)(iv) but subject to 40 CFR 63, Subpart ZZZZ. Engine #1 is also subject to 40 CFR 60, Subpart IIII. The engines #6 through #8 are being operated as stationary emergency engines exempt from NSR per WAC 173-400-110(4)(h)(xxxix) but subject to 40 CFR 63, Subpart ZZZZ. The compliance date for each engine is May 3, 2013.

This notification is being submitted to Ecology and EPA consistent with WAC 173-401-724 requirements.

Describe the emissions resulting from the change:

The emission rates for criteria pollutants and Toxic Air Pollutants (TAP) from engines #1 through #7 will be estimated, upon request, using calculations based on manufacturer emission factors or from the U. S. EPA's, *Compilation of Air Pollutant Emission Factors*, AP-42, Section 3.3, Gasoline and Diesel Industrial Engines.

Emission rates for criteria pollutants and TAPs from Engine #8 will be estimated, as necessary, using calculations based on emission factors from the U. S. EPA's, *Compilation of Air Pollutant Emission Factors*, AP-42, Section 3.2, Natural Gas-Fired Reciprocating Engines.

Describe the new applicable requirements that will apply as a result of the change:

Engine #1

New Source Performance Standards (NSPS) Applicability: 40 CFR 60, Subpart IIII

Per 40 CFR 60.4200(a)(2), the provisions of NSPS, Subpart IIII applies to the engine because it was constructed after July 11, 2005, manufactured after April 1, 2006, and is not a fire pump engine. The engine #1 was manufactured in 2011. Per 40 CFR 60.4204(b), owners or operators of 2007 model year and later non-emergency stationary compression ignition engines with a displacement of less than 30 liters per cylinder must comply with the emission standards for new compression ignition (CI) engines in 40 CFR 60.4201 which refer to standards in 40 CFR 89.112, 40 CFR 89.113, 40 CFR 1039.101, 40 CFR 1039.102, 40 CFR 1039.104, 40 CFR 1039.105, 40 CFR 1039.107, and 40 CFR 1039.115, as applicable.

40 CFR 89 and 40 CFR 1039 present emission standards for new CI engines. The 40 CFR 89 applies to the engine since its 73 kW gross engine power output is greater than 37 kW but less than 75 kW and the engine was manufactured after January 1, 1998 (40 CFR 89.102(a)(3)). The 40 CFR 1039 standards do not apply to the engine #1 since its 73 kW gross engine power output is greater than 56 kW but less than 130 kW and the engine was manufactured before 2012 (40 CFR 1039.1(b)(1) Table 1)). The Table below summarizes the certified emissions for the engine as well as the applicable emission standards under 40 CFR 89.102. As shown in the table, the certified emissions are below the applicable limits.

Pollutant	40 CFR 89.112 Table 3 Limits (g/kW-hr)	Engine #1 Certified Emissions (g/kW-hr)
NOx + NMHC	4.7	2.8
PM	0.24	0.166

National Emissions Standards for Hazardous Air Pollutants (NESHAP) Applicability (40 CFR 63, Subpart ZZZZ

Per 40 CFR 63.6590(c)(7), Engine #1 must meet the requirements of 40 CFR 60, Subpart IIII. No other requirements under 40 CFR 63, Subpart ZZZZ apply.

Engines #2 through #5

New Source Performance Standards (NSPS) Applicability: 40 CFR 60, Subpart IIII

Per 40 CFR 60.4200(a)(2), the provisions of NSPS Subpart IIII do not apply to the engines because each commenced construction prior to July 11, 2005.

National Emissions Standards for Hazardous Air Pollutants (NESHAP) Applicability: 40 CFR 63, Subpart ZZZZ.

Per 40 CFR 63.6590(a)(ii), the applicable provisions of NESHAP Subpart ZZZZ applies to the engines because they are stationary compression ignition reciprocating internal combustion engines (RICE) and located at a major source of hazardous air pollutant emissions (i.e., the Hanford Site). Because each engine was manufactured prior to June 12, 2006, each is classified as an "Existing stationary RICE." Requirements for Existing Compression Ignition Stationary RICE Located at a Major Source of HAP Emissions with a capacity rating less than 100 horsepower include:

- Change oil and filter every 1000 hours of operations or annually, whichever comes first
- Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first
- Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary

Engines #6 and #7

New Source Performance Standards (NSPS) Applicability: 40 CFR 60, Subpart IIII

Per 40 CFR 60.4200(a)(2), the provisions of NSPS Subpart IIII do not apply to the engines because each commenced construction prior to July 11, 2005.

National Emissions Standards for Hazardous Air Pollutants (NESHAP) Applicability: 40 CFR 63, Subpart ZZZZ.

Per 40 CFR 63.6590(a)(ii), the applicable provisions of NESHAP Subpart ZZZZ apply to the engines because they are stationary reciprocating internal combustion engines (RICE) and located at a major source of hazardous air pollutant emissions (i.e., the Hanford Site). Because each engine was manufactured prior to June 12, 2006, each is classified as an "Existing stationary RICE." Per 40 CFR 63. Subpart ZZZZ, Table 2c, (emergency stationary CI RICE) must meet the following work practices, except during periods of startup:

- Change oil and filter every 500 hours of operations or annually, whichever comes first
- Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first
- Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first
- Minimize the engines time spent at idle and minimize the engines startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes

Engine #8

NSPS Applicability: 40 CFR 60, Subpart JJJJ

Per 40 CFR 60.4230(a)(4)(iii), the provisions of NSPS Subpart JJJJ do not apply to the engine because the unit commenced construction prior to July 1, 2008.

National Emissions Standards for Hazardous Air Pollutants (NESHAP) Applicability: 40 CFR 63, Subpart ZZZZ.

Requirements identical to those identified for Engines #6 and #7 above.