LANDAU ASSOCIATES

June 9, 2017

Washington State Department of Ecology
Eastern Regional Office
4601 North Monroe Street
Spokane, WA 99205

Attn: Karen Wood

Transmitted via e-mail to: *kwoo461@ecy.wa.gov*

Re: Approval Order and Construction Schedule Amendment Request
Yahoo! Data Center
Quincy, Washington
Project No. 0967011.010

Dear Ms. Wood:

Yahoo! Inc. (Yahoo) operates a data center complex at 1500 M Street NE and 1010 Yahoo Way in Quincy, Washington under Approval Order No. 16AQ-E012 (Approval Order) from the Washington State Department of Ecology (Ecology).

This letter and its attachments, prepared by Landau Associates Inc. (LAI) on behalf of Yahoo, constitute a request for an administrative change to the existing Approval Order to address the following items:

1. Request for approval of a revised emergency generator installation schedule
2. Correction to the naphthalene potential-to-emit in Table 1.3 of the Approval Order
3. Corrections to the nitrogen oxides (NO_x) and nitrogen dioxide (NO_2) emission limits in Conditions 5.3 and 5.4 of the Approval Order for emergency generators installed prior to 2016
4. Update the equipment list and serial numbers in Table 1.1 of the Approval Order.

A completed Notice of Construction (NOC) application form (ECY Form No. 070-410) is provided in Attachment 1.

Revised Emergency Generator Installation Schedule

The Approval Order, issued on May 25, 2016, provided for a phased emergency generator installation schedule, which was originally anticipated to be completed within 18 months of issuance (i.e., by November 24, 2017). However, due to current market conditions it has taken longer than anticipated to build out the available space in the buildings, and to date, only 26 of 48 emergency generators have been installed. As Lisa Karstetter shared with you in recent discussions, Yahoo would like to request a

schedule extension at this time to allow generators to be installed after November 24, 2017; this letter and its attachments constitute that request. Based on current market conditions, Yahoo's plans for facility expansion will consist of the following emergency generator phasing schedule:

- First quarter 2018: Four 2.0-megawatt (MW) generators
- Third quarter 2018: Four 2.0-MW generators and one 2.75-MW generator
- First quarter 2019: Four 2.0-MW generators and one 2.75-MW generator
- Fourth quarter 2019: Seven 2.0-MW generators and one 2.75-MW generator.

Note, market conditions may result in changes (i.e., a delay or an acceleration) to each phase (or portions thereof) of this schedule; however, based on current market demand, Yahoo anticipates that full buildout and installation of the remaining permitted generators will be completed by November 24, 2019.

To accommodate this phasing schedule, Yahoo requests a 24-month extension to the generator installation deadline that is identified in Condition 2.4 of the Approval Order, which would allow Yahoo to install currently permitted emergency generators on or before November 24, 2019.

We understand that the November 24, 2017 installation deadline in the Approval Order was intended to afford Ecology the opportunity to assess whether 1) the generators to be installed are expected to cause air quality impacts greater than those evaluated in the issuance of the Approval Order, or 2) the Best Available Control Technology (BACT) determination in the Approval Order continues to be suitable in the context of technological developments. With respect to air quality impacts, there are no projected increases in emission rates for the proposed generators; therefore, air quality impacts are the same as those evaluated in the issuance of the Approval Order. With respect to BACT, recent BACT evaluations for other projects with similarly-sized emergency generators continue to demonstrate that performance complying with US Environmental Protection Agency (EPA) Tier 2 certification requirements represents BACT for emergency generators. All of the generators to be installed at the Yahoo Data Center are EPA Tier 2-certified and are either 2.0- or 2.75-megawatt (MW) capacity as specified in the Approval Order. On that basis, we request the generator installation deadline be extended without requiring a new BACT evaluation.

Note, in accordance with Condition 10.1, construction of the project commenced within 18 months of permit issuance and there are no modifications to the generators contrary to the information submitted to Ecology in the Revised NOC Application Supporting Information Report dated December 23, 2015. Additionally, all generators will satisfy the equipment restrictions identified in Condition 2 of the Approval Order. Further, there are no modifications to the equipment invoking Condition 10.5.

Correction to Naphthalene Potential-to-Emit

The Approval Order lists the facility-wide potential-to-emit for naphthalene as 0.0022 tons per year (tons/yr). However, LAI calculated the naphthalene potential-to-emit as 0.0058 tons/yr, which is

documented in Table 16 of the Revised NOC Application Supporting Information Report dated December 23, 2015. Yahoo requested a correction to the naphthalene potential-to-emit after review of the draft preliminary determination; however, the correction was inadvertently omitted from the final Approval Order. We request that the naphthalene potential-to-emit be revised to 0.0058 tons/yr in the Approval Order.

Corrections to NO_x and NO_2 Emission Limits

Conditions 5.3.1 and 5.4.1 of the Approval Order provide NO_x and NO_2 emission limits that apply to all permitted generators at the site. A NO_x emission limit of 44.3 pounds per hour (lbs/hr) and an NO_2 emission limit of 4.43 lbs/hr are identified for all 43 permitted 2.0-MW generators. However, these NO_x and NO_2 emission limits are based on the manufacturer's guaranteed not-to-exceed emission rates only for 2.0-MW generators that are installed on or after 2016, not the existing 2.0-MW generators that were installed prior to 2016. The older (pre-2016) 2.0-MW generators have NO_x and NO_2 manufacturer's guaranteed not-to-exceed emission rates of 46.2 lbs/hr and 4.62 lbs/hr, respectively. Note, these higher not-to-exceed emission rates for the older 2.0-MW generators were used to calculate the facility-wide potential-to-emit in Table 16 of the Revised NOC Application Supporting Information Report and have, therefore, been incorporated into the evaluation and demonstration of compliance with air quality regulations as part of the Approval Order preparation process.

Since the Approval Order requires emissions testing on the pre-2016 2.0-MW generators (per Condition 4.2.2), the incorrect NO_x and NO_2 emission limits that are currently identified in the Approval Order represent a significant compliance risk for Yahoo. We request that all 2.0-MW emergency generators that were installed prior to 2016 be assigned separate, higher emission limits that are based on the manufacturer's guaranteed not-to-exceed emission rates of 46.2 lbs/hr for NO_x and 4.62 lbs/hr for NO_2. Manufacturer's not-to-exceed emissions data for the older 2.0-MW generators are provided in Attachment 2.

Equipment List and Serial Numbers

In 2016, Yahoo notified Ecology that it was entering into a binding contract to purchase and install four emergency generators. Information needed to fill out Table 1.1 of the Approval Order for those four generators is provided in the table below.

Site Project Phase No.	Unit ID	Manufacturer & Model No.	Rated MW	Pkg SN	Engine SN	Generator SN	Engine Build Date
Genesis Phase 1	13A	Caterpillar 3516C	2.00	SFJ0 0874	DD60 0870	G7F0 0223	1/21/2016
Genesis Phase 1	13B	Caterpillar 3516C	2.00	SFJ0 0873	DD60 0872	G7F0 0224	1/21/2016
Genesis Phase 1	R4	Caterpillar C175	2.75	WYB0 1865	0202176-4	G7J0 0631	1/12/2016
Genesis Phase 1	H1	Caterpillar C175	2.75	WYB0 1867	0202177-6	G7J0 0633	1/14/2016

Please contact me if you have any comments or questions about this request for an administrative amendment to the Approval Order. Thank you for your time and consideration of our request.

Respectfully submitted,

LANDAU ASSOCIATES, INC.

Mark Brunner
Associate

MWB/CPH/ccy
P:\967\011\R\Approval Order Amendment Request\LAI_Yahoo Permit Amendment Request_ltr - 06-09-17.docx

Attachments:

Attachment 1: Notice of Construction Application
Attachment 2: Manufacturer's Emissions Data

cc: Lisa Karstetter, Yahoo! Inc.
Brett Illers, Yahoo! Inc.
Jolaine Johnson, Washington State Department of Ecology

ATTACHMENT 1

Notice of Construction Application

Notice of Construction Application

A notice of construction permit is required before installing a new source of air pollution or modifying an existing source of air pollution. This application applies to facilities in Ecology's jurisdiction. Submit this application for review of your project. For general information about completing the application, refer to Ecology Forms ECY 070-410a-g, "Instructions for Ecology's Notice of Construction Application."

Ecology offers up to 2 hours of free pre-application help. We encourage you to schedule a pre-application meeting with the contact person specified for the location of your proposal (see below). For more help than the initial 2 free hours, submit Part 1 of the application and the application fee. You may schedule a meeting with us at any point in the process.

Completing the application, enclose it with a check for the initial fee and mail to:

WA Department of Ecology
Cashiering Unit
P.O. Box 47611
Olympia, WA 98504-7611

For Fiscal Office Use Only:
001-NSR-216-0299-000404

Check the box for the location of your proposal. For help, call the contact listed below.		
	Ecology Permitting Office	**Contact**
☐ **CRO**	**Chelan, Douglas, Kittitas, Klickitat, or Okanogan County** Ecology Central Regional Office – Air Quality Program	Lynnette Haller (509) 457-7126 lynnette.haller@ecy.wa.gov
☒ **ERO**	**Adams, Asotin, Columbia, Ferry, Franklin, Garfield, Grant, Lincoln, Pend Oreille, Stevens, Walla Walla, or Whitman County** Ecology Eastern Regional Office – Air Quality Program	Jolaine Johnson (509) 329-3452 jolaine.johnson@ecy.wa.gov
☐ **NWRO**	**San Juan County** Ecology Northwest Regional Office – Air Quality Program	Dave Adler (425) 649-7267 david.adler@ecy.wa.gov
☐ **IND**	**Kraft and Sulfite Paper Mills and Aluminum Smelters** Ecology Industrial Section – Waste 2 Resources Program Permit manager: _____	James DeMay (360) 407-6868 james.demay@ecy.wa.gov
☐ **NWP**	**U.S. Department of Energy Hanford Reservation** Ecology Nuclear Waste Program	Phil Gent (509) 372-7983 phil.gent@ecy.wa.gov

To request ADA accommodation, call (360) 407-6800, 711 (relay service), or 877-833-6341 (TTY).

DEPARTMENT OF ECOLOGY
State of Washington

Notice of Construction Application

Check the box for the fee that applies to your application.

New project or equipment

☐	**$1,500: Basic project** initial fee covers up to 16 hours of review
☐	**$10,000: Complex project** initial fee covers up to 106 hours of review

Change to an existing permit or equipment

☒	**$200: Administrative or simple change** initial fee covers up to 3 hours of review Ecology may determine your change is complex during completeness review of your application. If your project is complex, you must pay the additional $675 before we will continue working on your application.
☐	**$875: Complex change** initial fee covers up to 10 hours of review
☐	**$350** flat fee: **Replace or alter control technology equipment** (WAC 173-400-114) Ecology will contact you if we determine your change belongs in another fee category. You must pay the fee associated with that category before we will continue working on your application.

Read each statement, then check the box next to it to acknowledge that you agree.

☒	The initial fee you submitted may not cover the cost of processing your application. Ecology will track the number of hours spent on your project. If the number of hours Ecology spends exceeds the hours included in your initial fee, Ecology will charge you $95 per hour for the extra time.
☒	You must include all information in this application. Ecology may not process your application if it does not include all the information requested.
☒	Submittal of this application allows Ecology staff to inspect your facility.

DEPARTMENT OF ECOLOGY
State of Washington

Notice of Construction Application
Part 1: General Information

I. Project, Facility, and Company Information

1. Project Name Request for administrative amendment to Approval Order
2. Facility Name Yahoo! Data Center
3. Facility Street Address 1010 Yahoo Way and 1500 M Street NE, Quincy, WA 98848
4. Facility Legal Description Grant County Parcel Nos. 312823000 and 312824001
5. Company Legal Name (if different than Facility Name) Yahoo! Inc.
6. Company Mailing Address (street, city, state, zip) 701 First Avenue, Sunnyvale, CA 94089

II. Contact Information and Certification

1. Facility Contact Name (who will be on-site) Brian Huck	
2. Facility Contact Mailing Address (if different than Company Mailing Address) 1010 Yahoo Way, Quincy, WA	
3. Facility Contact Phone Number 509-237-9422	4. Facility Contact Email bhuck@yahoo-inc.com
5. Billing Contact Name (who should receive billing information) Mark Brunner	
6. Billing Contact Mailing Address (if different than Company Mailing Address) 601 Union Street, Suite 1606, Seattle, WA 98101	
7. Billing Contact Phone Number 206-631-8695	8. Billing Contact Email mbrunner@landauinc.com
9. Consultant Name (optional – if 3rd party hired to complete application) Mark Brunner	
10. Consultant Organization/Company Landau Associates	
11. Consultant Mailing Address (street, city, state, zip) 601 Union Street, Suite 1606, Seattle, WA 98101	
12. Consultant Phone Number 206-631-8695	13.Consultant Email mbrunner@landauinc.com
14. Responsible Official Name and Title (person responsible for project policy or decision-making) Mozan Totani, Director of Data Center Development and Delivery	
15. Responsible Official Mailing Address 701 First Avenue, Sunnyvale, CA 94089	
16. Responsible Official Phone 408-349-2363	17. Responsible Official Email mtotani@yahoo-inc.com
18. Responsible Official Certification and Signature I certify that the information on this application is accurate and complete. Signature _____ Date 6.9.17	

Notice of Construction Application
Part 2: Technical Information

The Technical Information may be sent with this application to the Ecology Cashiering Unit, or may be sent directly to the appropriate Ecology office along with a copy of this application.

For all sections, check the box next to each item as you complete it.

III. Project Description

Attach the following to your application:

- ☐ Description of your proposed project
- ☐ Projected construction start and completion dates
- ☐ Operating schedule and production rates
- ☐ List of all major process equipment with manufacturer and maximum rated capacity
- ☐ Process flow diagram with all emission points identified
- ☐ Plan view site map
- ☐ Manufacturer specification sheets for major process equipment components
- ☐ Manufacturer specification sheets for pollution control equipment
- ☐ Fuel specifications, including type, consumption (per hour and per year), and percent sulfur

IV. State Environmental Policy Act (SEPA) Compliance

Check the appropriate box below.

☐ SEPA review is complete.
Include a copy of the final SEPA checklist and SEPA determination (e.g., DNS, MDNS, EIS) with your application.

☐ SEPA review has not been conducted.

☐ If SEPA review will be conducted by another agency, list the agency. You must provide a copy of the final SEPA checklist and SEPA determination before Ecology will issue your permit.

Agency Reviewing SEPA:

_____

☐ If SEPA review will be conducted by Ecology, fill out a SEPA checklist and submit it with your application. You can find a SEPA checklist online at http://www.ecy.wa.gov/programs/sea/sepa/forms.htm.

DEPARTMENT OF ECOLOGY
State of Washington

Notice of Construction Application

V. Emissions Estimations of Criteria Pollutants

Does your project generate air pollutant emissions? ☐ Yes ☐ No

If yes, provide the following information about your air pollutant emissions:

☐ Air pollutants emitted, such as carbon monoxide (CO_2), lead (Pb), nitrogen dioxide (NO_2), ozone (O_3), and volatile organic compounds (VOC), particulate matter ($PM_{2.5}$, PM_{10}, TSP), sulfur dioxide (SO_2)

☐ Potential emissions of criteria air pollutants in tons per hour, tons per day, and tons per year (include calculations)

☐ Fugitive air pollutant emissions – pollutant and quantity

VI. Emissions Estimations of Toxic Air Pollutants

Does your project generate toxic air pollutant emissions? ☐ Yes ☐ No

If yes, provide the following information about your toxic air pollutant emissions:

☐ Toxic air pollutants emitted (specified in WAC 173-460-150[1])

☐ Potential emissions of toxic air pollutants in pounds per hour, pounds per day, and pounds per year (include calculations)

☐ Fugitive toxic air pollutant emissions - pollutant and quantity

VII. Emission Standard Compliance

Does your project comply with all applicable standards identified? ☐ Yes ☐ No

☐ Provide a list of all applicable new source performance standards, national emission standards for hazardous air pollutants, national emission standards for hazardous air pollutants for source categories, and emission standards adopted under the Washington Clean Air Act, Chapter 70.94 RCW.

VIII. Best Available Control Technology

☐ Provide a complete evaluation of Best Available Control Technology (BACT) for your proposal.

[1] http://apps.leg.wa.gov/WAC/default.aspx?cite=173-460-150

DEPARTMENT OF ECOLOGY
State of Washington

Notice of Construction Application

IX. Ambient Air Impacts Analyses

Does your project cause or contribute to a violation of any ambient air quality standard or acceptable source impact level? ☐ Yes ☐ No

Provide the following:

☐ Ambient air impacts analyses for criteria air pollutants (including fugitive emissions)

☐ Ambient air impacts analyses for toxic air pollutants (including fugitive emissions)

☐ Discharge point data for each point included in ambient air impacts analyses (include only if modeling is required)

- ☐ Exhaust height
- ☐ Exhaust inside dimensions (diameter or length and width)
- ☐ Exhaust gas velocity or volumetric flow rate
- ☐ Exhaust gas exit temperature
- ☐ Volumetric flow rate
- ☐ Discharge description (i.e., vertically or horizontally) and if there are any obstructions (e.g., raincap)
- ☐ Emission unit(s) discharging from the point
- ☐ Distance from the stack to the nearest property line
- ☐ Emission unit building height, width, and length
- ☐ Height of tallest building on-site or in the vicinity, and the nearest distance of that building to the exhaust
- ☐ Facility location (urban or rural)

ATTACHMENT 2

Manufacturer's Emissions Data

Inhaltsverzeichnis
Contents

	Genset	Marine	O & G	Rail	C & I
Application	X				
Engine model	16V4000G83				
Application group	3B,3F,3G				
Emission Stage/Optimisation	EPA Tier 2				
Test cycle	D2				
Data Set	EPA Tier 2				
Fuel sulphur content [ppm]	5				

				MTU Friedrichshafen GmbH			Benennung/Title **Emissionsdatenblatt** **Emission Data Sheet**
					Datum/Date	Name/Name	Zeichnungs-Nr./Drawing No.
a	garantierte Werte hinzugefügt	08.04.15	Lenhof	Bearbeiter/Drawn by	11.01.2012	Lenhof	
-	Freigabe	09.02.12	Link	Geprüft/Checked	09.02.2012	Rehm	**EDS 4000 0427**
Buchstabe/ Revision	Änderung Modifikation	Datum Date	Name Name	Org.-Einheit/Dept.	TKF	Veser	

Vers.2.0

Revision *Change index*	-				

Motordaten

engine data

	Genset	Marine	O & G	Rail	C & I
Application	X				
Engine model	16V4000G83				
Application group	3B,3F,3G				
Emission Stage/Optimisation	EPA Tier 2				
Test cycle	D2				
fuel sulphur content [ppm]	5				
mg/mN³ values base on residual oxygen value of [%]					

Motor Rohemissionen*

*Engine raw emissions**

Cycle point	[-]	n1	n2	n3	n4	n5	n6	n7	n8
Power (P/PN)	[-]	1	0,75	0,50	0,25	0,10			
Power	[kW]	2280	1710	1140	570	228			
Speed (n/nN)	[-]	1	1	1	1	1			
Speed	[rpm]	1800	1800	1800	1800	1800			
Exhaust temperature after turbine	[°C]	443	386	352	310	277			
Exhaust massflow	[kg/h]	16298	12846	10492	7544	6056			
Exhaust back pressure	[mbar]	-	-	-	-	-			
NOx	[g/kWh]	7,1	5,6	4,5	4,6	6,8			
	[mg/mN³]	1540	1145	755	531	382			
CO	[g/kWh]	0,6	0,6	0,9	2,0	4,5			
	[mg/mN³]	106	105	134	202	225			
HC	[g/kWh]	0,11	0,15	0,23	0,47	0,55			
	[mg/mN³]	22	28	34	48	28			
O2	[%]	12,0	12,1	13,4	14,8	16,2			
Particulate measured	[g/kWh]	0,06	0,10	0,18	0,34	0,68			
	[mg/mN³]	11	18	26	35	34			
Particulate calculated	[g/kWh]	-	-	-	-	-			
	[mg/mN³]	-	-	-	-	-			
Dust (only TA-Luft)	[mg/mN³]	-	-	-	-	-			
FSN	[-]	0,5	0,6	1,0	1,1	1,4			
NO/NO2**	[-]	-	-	-	-	-			
CO2	[g/kWh]	648,2	663,6	699,8	822,0	1267,5			
	[mg/mN³]	125002	121600	103865	84099	64006			
SO2	[g/kWh]	0,002	0,002	0,002	0,003	0,004			
	[mg/mN³]	0,4	0,4	0,3	0,3	0,2			

* Emission data measurement procedures are consistent with the respective emission evaluation process. Noncertified engines are measured to sales data (TVU/TEN) standard conditions.
These boundary conditions might not be representative for detailed dimensioning of exhaust gas aftertreatment, in this case it is recommended to contact the responsible department for more information.
Measurements are subject to variation. The nominal emission data shown is subject to instrumentation, measurement, facility, and engine-to-engine variations.
All data applies to an engine in new condition. Over extended operating time deterioration may occur which might have an impact on emission.
Exhaust temperature depends on engine ambient conditions.

** No standard test. To be measured on demand.

				MTU Friedrichshafen GmbH			Benennung/Title **Emissionsdatenblatt** **Emission Data Sheet**
					Datum/Date	Name/Name	Zeichnungs-Nr./Drawing No.
a	garantierte Werte hinzugefügt	08.04.15	Lenhof	Bearbeiter/Drawn by	11.01.2012	Lenhof	
-	Freigabe	09.02.12	Link	Geprüft/Checked	09.02.2012	Rehm	**EDS 4000 0427**
Buchstabe/ Revision	Änderung Modifikation	Datum Date	Name Name	Org.-Einheit/Dept.	TKF	Veser	

Vers.2.0

Revision *Change index*	a				

Motordaten

engine data

	Genset	Marine	O & G	Rail	C & I
Application	X				
Engine model	16V4000G83				
Application group	3B,3F,3G				
Emission Stage/Optimisation	EPA Tier 2				
Test cycle	D2				
fuel sulphur content [ppm]	5				
mg/mN³ values base on residual oxygen value of [%]	measured				

Not to exceed Werte*

*not to exceed values**

Cycle point	[-]	n1	n2	n3	n4	n5	n6	n7	n8
Power (P/PN)	[-]	1	0,75	0,50	0,25				
Power	[kW]	2280	1710	1140	570				
Speed (n/nN)	[-]	1	1	1	1				
Speed	[rpm]	1800	1800	1800	1800				
Exhaust back pressure	[mbar]	-	-	-	-				
NOx	[g/kWh]	9,2	7,2	5,9	7,0				
	[mg/mN³]	2002	1488	982	797				
CO	[g/kWh]	0,9	1,0	1,7	4,0				
	[mg/mN³]	181	178	255	405				
HC	[g/kWh]	0,19	0,26	0,44	0,95				
	[mg/mN³]	37	48	65	97				
O2	[%]	12,0	12,1	13,4	14,8				
Particulate measured	[g/kWh]	0,08	0,16	0,26	0,52				
	[mg/mN³]	16	29	39	53				

* Calculated values are not proven by tests and therefore the accuracy cannot be guaranteed.

Emissions data measurement procedures are consistent with those described in the applicable rules and standards.

The NOx, CO, HC and PM emission data tabulated here were taken from a single new engine under the test conditions shown above and are valid for the following conditions:

- Ambient air pressure 1 bar
- Air intake temperature approx. 25°C
- Rel. Humidity 30%-60%
- New Engine
- New standard- air filter
- Exhaust gas back pressure according the given value in this EDS
- Fuel according to EN 590 or US EPA 40CFR89
- Coolant and Lubricants according MTU Fuels and Lubricants Specification

The nominal emissions data shown is subject to instrumentation, measurement, facility and engine to engine variations. Emissions data is based on single operating points and thus cannot be used to compare to EPA regulations which use values based on a weighted cycle. Emissions data may vary depending on the type of exhaust gas aftertreatment that may be installed on the engine, therefore it is suggested that the engine manufacturer be contacted directly for further information.

Field emission test data are not guaranteed to these levels. Actual field test results may vary due to test site conditions, installation, fuel specification, test procedures, and instrumentation. Over time deterioration may occur which may have an impact on emission levels. Engine operation with excessive air intake or exhaust restriction beyond published maximum limits, or with improper maintenance, may results in elevated emission levels.

MTU Friedrichshafen GmbH has made efforts to ensure that the information in this data sheet is accurate, but reserves the right to amend specifications and information without notice and without obligation or liability. No liability for any errors, facts or opinions is accepted. Customers must satisfy themselves as to the suitability of this product for their application. No responsibility for any loss as a result of any person placing reliance on any material contained in this data sheet will be accepted.

GASEOUS EMISSIONS DATA MEASUREMENTS ARE CONSISTENT WITH THOSE DESCRIBED IN EPA 40 CFR PART 60 SUBPART IIII FOR MEASURING HC, CO, PM, AND NOX.						
Locality	**Agency**	**Regulation**	**Tier/Stage**	**Max. Limit G/(kW -HR)**		
					T2	T3
U.S. (INCL CALIF)	EPA	Stationary	Emergency Stationary Tier 2 (>560kW) Tier 3 (<560kW)	NOx+ NMHC: CO: PM:	6,4 3,5 0,20	4,0 3,5 0,20

** No standard test. To be measured on demand.

				MTU Friedrichshafen GmbH		
					Datum/Date	Name/Name
a	garantierte Werte hinzugefügt	08.04.15	Lenhof	Bearbeiter/Drawn by	11.01.2012	Lenhof
-	Freigabe	09.02.12	Link	Geprüft/Checked	09.02.2012	Rehm
Buchstabe/ Revision	Änderung Modifikation	Datum Date	Name Name	Org.-Einheit/Dept.	TKF	Veser

Benennung/Title

Emissionsdatenblatt
Emission Data Sheet

Zeichnungs-Nr./Drawing No.

EDS 4000 0427

Vers.2.0