STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
4601 N Monroe Street • Spokane, Washington 99205-1295 • (509)329-3400

October 28, 2014

Bob Glavan, Vice President of Data Center Operations
RS Manager Data Center
4949 Randolph Road, NE
Moses Lake, WA 98837

Re: APPROVAL ORDER No. 14AQ-E582

Dear Mr. Glavan:

The Department of Ecology Air Quality Program has changed the owner of record to RS Manager, Inc. from ASK.com. The 15-day review period has been completed. There were no public requests for a 30-day public comment period, so enclosed is APPROVAL ORDER No. 14AQ-E582.

Approval Condition 8 requires that RS Manager submit information to the Ecology Air Quality Registration Program. This information will be used to estimate annual air contaminant emissions. The AQP encourages you to submit the requested information by electronic mail to ciairreporting@ecy.wa.gov. The information you send will be printed, and a permanent copy will be placed in your AQP facility file at the Ecology Eastern Regional Office.

Ecology is committed to streamlining our permitting procedures and to maintaining a high level of staff responsiveness and assistance to permit applicants. To provide Ecology with feedback, please complete the short survey at http://www.ecy.wa.gov/programs/air/permit_register/Permitting_Feedback.htm. This will help us provide better service to you and our other clients.

All correspondence relating to this document should be directed to me at the Department of Ecology, Regional Air Quality Section, 4601 N. Monroe, Spokane, Washington 99205-1295. If you have any questions concerning the content of the document, please call me at (509) 329-3493.

Sincerely,

Robert Koster, P. E.
Commercial/Industrial Unit
Regional Air Quality Section

RK:lc

Certified Mail # 7012 3050 0000 1094 8743

Enclosure: APPROVAL ORDER No. 14AQ-E582

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

IN THE MATTER OF APPROVING A)
AIR CONTAMINANT SOURCE FOR) Approval Order No. 14AQ-E582
RS Manager Data Center – Moses Lake)

TO: Bob Glavan, VP of Data Center Operations
RS Manager Data Center – Moses Lake
4949 Randolph Road, NE
Moses Lake, WA 98837

On September 16, 2014, RS Manager submitted an NOC application notifying Ecology that ownership of the ASK.com data center in Moses Lake had been purchased by RS Manager. The present approval order is re-issued to RS Manager without change, except for approval condition 1 which rescinds the earlier Approval Order for this project. Discussion and findings for the earlier approval remain applicable and are as follows:

On December 3, 2007, ASK.com identified two issues in their order (issued on November 5th, 2007) that could lead to confusion: the table (2.1) in the findings summarizing emissions included typographical errors, and Condition 8.1.2 of the approval conditions was arranged so that it could be misinterpreted. Both items have been corrected in this Amendment 1 to Approval Order 07AQ-E236.

ASK.com submitted a Notice of Construction (NOC) application on September 4, 2007, for the installation and operation of Data Storage and Processing Center located at 4949 Randolph Road N.E., Moses Lake, WA, in Grant County. Air contaminant sources at the facility consist of two (2) Caterpillar Model 3516CDITA diesel powered generator units with a combined 100% standby rating capacity of 5 megawatts (MW) to be used for emergency backup power. Operation of each generator has been estimated at 3 hours per month for maintenance purposes and a predicted maximum of 300 hours per year of operation for emergency backup electrical generation. The diesel generators will exclusively burn ultra low sulfur (less than 0.0015 wt %), EPA on-road specification No. 2 distillate diesel oil.

The Department of Ecology Air Quality Program (AQP or Ecology) reviewed the September 4, 2007 NOC application and determined it complete for processing a preliminary determination of approval on September 11, 2007.

In relation to the above, the State of Washington Department of Ecology (Ecology), pursuant to Revised Code of Washington (RCW) 70.94.152, Washington Administrative Code (WAC) 173-460-040, and WAC 173-400-110, makes the following determinations:

1. The project, if constructed and operated as herein required, will be in accordance with applicable rules and regulations, as set forth in Chapter 173-400 WAC, and Chapter 173-460 WAC, and the operation thereof, at the location proposed, will not emit pollutants in concentrations that will endanger public health.

2. The proposed project, if constructed and operated as herein required, will utilize best available control technology and best available control technology for toxic air pollutants.

FINDINGS:

1. LAWS AND REGULATIONS

The installation and operation of the Moses Lake Data Center is regulated by the requirements specified in:

1.1 Chapter 70.94 Revised Code of Washington (RCW), Washington Clean Air Act,
1.2 Chapter 173-400 Washington Administrative Code (WAC), General Regulations for Air Pollution Sources,
1.3 Chapter 173-460 WAC, Controls for New Sources of Toxic Air Pollutants, and
1.4 40 CFR Part 60 Subpart IIII

All state and federal laws, statutes, and regulations cited in this approval shall be the versions that are current on the date the final approval order is signed and issued.

2. EMISSIONS

2.1 Operation of the two 2007 model year Caterpillar Model 3516CDITA diesel engines, coupled to Caterpillar generators, will result in the following potential emissions based on 72 combined engine hours of planned diagnostic testing and 600 combined engine hours of full standby operation per year. Emission factors for Criteria Pollutants are based upon emission rate guarantees by the manufacturer. The Toxic Air Pollutants (TAPs) are based on AP-42 emission factors.

Table 2.1: Generator Engines Potential to Emit (Combined 672 hr Annual Total)

Pollutant	**Hourly Emissions**	**Annual Emissions**
Criteria Pollutant (Caterpillar)	(lbs/hr)	(lb/yr)
2.1.1 Nitrogen Oxides (NO_x)	80.2	13470
2.1.2 Carbon Monoxide (CO)	6.5	1092
2.1.3 Sulfur Dioxide (SO_2)	0.074	24.8
2.1.4 Particulate Matter (PM_{10})	0.46	77.3
2.1.5 Hydrocarbons (HC)	1.6	268.8
Toxic Air Pollutants (AP-42)		
2.1.6 Nitric Oxide (NO)	49.7	8346
2.1.7 Acrolein	0.0004	0.13
2.1.8 Benzene	0.04	12.4
2.1.9 Toluene	0.013	4.48
2.1.10 Xylenes	0.0092	3.1
2.1.11 Formaldehyde	0.0037	1.26
2.1.12 Acetaldehyde	0.0012	0.40

3. BACT

As required by WAC 173-400-113, this project shall use Best Available Control Technology (BACT) to control criteria air contaminant emissions. BACT for the diesel electric generators is as follows:

3.1 The use of EPA on-road specification No. 2 distillate fuel oil with a sulfur content of 0.0015 weight percent or less.

3.2 The use of generator engines certified to EPA Tier II (40 CFR 89) emission standards for NOx, CO, and HC.

3.3 Limiting use of the engines to only the hours necessary for testing and maintenance, except during periods of demonstrated need for emergency power.

4. T-BACT

As required in WAC 173-460-040(4)(b), this project shall use Best Available Control Technology for Toxics (T-BACT) to control toxic emissions. T-BACT for this project is the same as BACT.

5. EQUIPMENT

5.1 Two Caterpillar Model 3516CDITA diesel powered electric generators have been installed at the RS Manager Moses Lake Data Center.

5.2 The RS Manager Moses Lake Data Center has only the two standby generator sets requiring evaluation under Washington air quality regulations. No cooling towers are used.

6. MODELING

Screening dispersion modeling was conducted by the applicant (and revisited by Ecology) to evaluate impacts of RS Manager emissions. The modeling evaluation did not result in any exceedances of either criteria or toxic ambient air quality standards.

6.1 The dispersion modeling was conducted using the Screen3 model for criteria and toxic air pollutants from the two (2) diesel electric generators. No TAPs exceeded the acceptable source impact level (ASIL) and no criteria pollutants exceeded the NAAQS.

THEREFORE, IT IS ORDERED that the project as described in the Notice of Construction application and more specifically detailed in plans, specifications, and other information submitted to Ecology is approved for construction and operation, provided the following are met:

APPROVAL CONDITIONS

1. ADMINISTRATIVE

1.1. Upon issuance of this approval order (No. 14AQ-E582), Order No. 07AQ-E236, Amendment 1, is rescinded and replaced by the evaluations, terms and conditions of this approval.

2. EQUIPMENT RESTRICTIONS

2.1. All engines used to power the electrical generators shall be certified by the manufacturer to 40 CFR 89 Tier II emission levels.

2.2. The only generating units approved for operation at the facility are those listed in the following Table:

Table 2.2: Engine & Generator SN			
Unit ID	Engine SN	Generator SN	Build date
1	SBK00298	G4B00238	6/29/07
2	SBK00297	G4B00239	6/29/07

2.3. Replacement of failed engines with identical engines (same manufacturer and model) requires notification of Ecology prior to installation.

2.4. Modifications that change emission rates from this project, including replacement of engines with engines with different emission rates requires a Notice of Construction application.

2.5. The two (2) generator exhaust stack heights shall be greater than or equal to 24 feet above ground level.

3. OPERATING LIMITATIONS

3.1. RS Manager generators shall be fired exclusively with on-road specification No. 2 distillate fuel oil (less than 0.0015 weight percent sulfur).

3.2. Combined use of the 2 generators shall not exceed 672 hours in any 12 month period.

4. GENERAL TESTING AND MAINTENANCE REQUIREMENTS

4.1. RS Manager will follow Caterpillar recommended diagnostic testing and maintenance procedures to ensure that each individual engine will conform to 40 CFR 89 Tier II emission specifications throughout the life of each engine.

4.2. At the conclusion of the manufacturer's warranty term (60 months from engine delivery date or 3,000 hours of operation), RS Manager shall pursue one of the following options:

4.2.1 Emission testing of each engine for NOx, CO, and non-methane hydrocarbon (NMHC) emission rates to determine continuing compliance with the 40 CFR 89 Tier II emission standards (the applicant may replace the dynamometer requirement in Subpart E of 40 CFR 89 with corresponding measurement of gen-set electrical output). The testing of each engine shall be repeated every 60 months after its first test. The engine testing may be staged to test one engine in each 12 month period; or

4.2.2 Re-evaluating BACT and T-BACT and health risk of the facility's operations; or

4.2.3 Satisfying the equipment manufacturer's (Caterpillar) requirements to renew or extend the emissions control equipment warranty; or

4.2.4 Any combination of the above three options.

4.3. Each engine shall be equipped with a properly installed and maintained non-resettable hours meter.

4.4. Periodic emission testing requirements: no regularly scheduled stack sampling is required by this Approval Order. Ecology may require stack testing in the future, in accordance with WAC-173-400-105(4).

5. EMISSION LIMITS

5.1. The sum of NO_x plus NMHC emissions from each diesel electric generator exhaust stack shall not exceed 6.4 g/kw-hr.
5.2. CO emissions from each diesel electric generator exhaust stack shall not exceed 3.5 g/kw-hr.
5.3. PM emissions from each diesel electric generator exhaust stack shall not exceed 0.20 g/kw-hr.
5.4. Visual emissions from each diesel electric generator exhaust stack shall be no more than 5 percent, with the exception of a ten (10) minute period after unit start-up. Visual emissions shall be measured by using the procedures contained in 40 CFR 60, Appendix A, Method 9.
5.5. SOx emissions from each diesel electric generator exhaust stack shall not exceed 0.04 lbs/hr.

6. OPERATION AND MAINTENANCE MANUALS

A site-specific O&M manual for the diesel electric generation facility shall be developed and followed. Manufacturers' operating instructions and design specifications for the engines, generators, cooling towers, and associated equipment shall be included in the manual. The O&M manual shall be updated to reflect any modifications of the equipment or its operating procedures. Emissions that result from failure to follow the operating procedures contained in the O&M manual or manufacturer's operating instructions may be considered proof that the equipment was not properly installed, operated, and/or maintained. The O&M manual for the diesel electric generation units and associated equipment shall at a minimum include:

6.1. Caterpillar testing and maintenance procedures that will ensure that each individual engine will conform to 40 CFR 89 Tier II specifications throughout the life of the engine.
6.2. Normal operating parameters and design specifications.
6.3. Operating maintenance schedule.

7. SUBMITTALS

All notifications, reports, and other submittals shall be sent to:

Washington State Department of Ecology
Air Quality Program
4601 N. Monroe Street
Spokane, WA 99205-1295

8. RECORDKEEPING

All records, Operations and Maintenance Manual, and procedures developed under this Order, shall be organized in a readily accessible manner and cover a minimum of the most recent 60-month period. The following records are required to be collected and maintained.

8.1. Fuel receipts with amount of diesel and sulfur content for each delivery to the facility.

8.2. Annual hours of operation for each diesel electric generator.

8.3. Upset condition log for each engine and generator that includes date, time, duration of upset, cause, and corrective action.

9. REPORTING

9.1. The following information will be submitted to the AQP at the address in Condition 7 above by January 31 of each calendar year.

9.1.1 Annual summary of air contaminant emissions, and annual total hours of operation.

9.2. Written notification that the O&M manual has been developed and completed shall be submitted within 60 days after the issuance of this Order.

10. STACK TESTING

10.1. Any emission testing performed to satisfy conditions of this Approval Order or for submittal to Ecology in support of this facility's continued operations shall be conducted as follows:

10.1.1 At least 30 days in advance of such testing, the Permittee shall submit a testing protocol for Ecology approval that includes the following information:

10.1.1.1 The location and Unit ID of the equipment proposed to be tested.

10.1.1.2 The operating parameters to be monitored during the test and the personnel assigned to monitor the parameters during the test.

10.1.1.3 A description of the source including manufacturer, model number and design capacity of the equipment, and the location of the sample ports or test locations.

10.1.1.4 Time and date of the test and identification and qualifications of the personnel involved.

10.1.1.5 A description of the test methods or procedures to be used.

10.1.2 Test Reporting: test reports shall be submitted to Ecology with 45 days of completion of the test and shall include, at a minimum, the following information:

10.1.2.1 A description of the source including manufacturer, model number and design capacity of the equipment, and the location of the sample ports or test locations.

10.1.2.2 Time and date of the test and identification and qualifications of the personnel involved.

10.1.2.3 A summary of results, reported in units and averaging periods consistent with the applicable emission standard or limit.

10.1.2.4 A summary of control system or equipment operating conditions.

10.1.2.5 A summary of production related parameters.
10.1.2.6 A description of the test methods or procedures used including all field data, quality assurance/quality control procedures and documentation.
10.1.2.7 A description of the analytical procedures used including all laboratory data, quality assurance/quality control procedures and documentation.
10.1.2.8 Copies of field data and example calculations.
10.1.2.9 Chain of custody information.
10.1.2.10 Calibration documentation.
10.1.2.11 Discussion of any abnormalities associated with the results.
10.1.2.12 A statement signed by the senior management official of the testing firm certifying the validity of the source test report.

11. GENERAL CONDITIONS

11.1. **Commencing/Discontinuing Construction and/or Operations:** This approval shall become void if the construction of this diesel electric generation facility is discontinued for a period of eighteen (18) months, unless prior written notification is received by Ecology at the address in Condition 7 above.

11.2. **Compliance Assurance Access:** Access to the source by representatives of Ecology or the EPA shall be permitted upon request. Failure to allow such access is grounds for enforcement action under the federal Clean Air Act or the Washington State Clean Air Act, and may result in revocation of this Approval Order.

11.3. **Availability of Order and O&M Manual:** Legible copies of this Order and the O&M manual shall be available to employees in direct operation of the diesel electric generation equipment, and be available for review upon request by Ecology.

11.4. **Equipment Operation:** Operation of the Caterpillar Model 3516CDITA units and related equipment shall be conducted in compliance with all data and specifications submitted as part of the NOC application and in accordance with the O&M manual, unless otherwise approved in writing by Ecology.

11.5. **Modifications:** Any modification to the generators, or engines and their related equipment's operating or maintenance procedures, contrary to information in the NOC application, shall be reported to Ecology at least 60 days before such modification. Such modification may require a new or amended NOC Approval Order.

11.6. **Activities Inconsistent with the NOC Application and this Approval Order:** Any activity undertaken by the permittee or others, in a manner that is inconsistent with the NOC application and this determination, shall be subject to Ecology enforcement under applicable regulations.

11.7. **Obligations under Other Laws or Regulations:** Nothing in this Approval Order shall be construed to relieve the permittee of its obligations under any local, state or federal laws or regulations.

11.8. **Fees:** Per WAC 173-400-116, this Preliminary Determination and related regulatory requirements have a fee associated for review and issuance. This Order is effective upon Ecology's receipt of the fee, for which Ecology's fiscal office will provide a billing statement.

All plans, specifications, and other information submitted to the Department of Ecology relative to this project, and further documents and any authorizations or approvals or denials in relation thereto, shall be kept at the Eastern Regional Office of the Department of Ecology in the "Air Quality Controlled Sources" files, and by such action shall be incorporated herein and made a part thereof.

Nothing in this approval shall be construed as obviating compliance with any requirement of law, other than those imposed pursuant to the Washington Clean Air Act and rules and regulations, thereunder.

A one-month testing and break-in period is allowed, after any part or portion of this project becomes operational, to make any changes or adjustments required to comply with applicable rules and regulations pertaining to air quality and conditions of operation imposed herein. Thereafter, any violation of such rules and regulations, or of the terms of this approval, shall be subject to the sanctions provided in Chapter 70.94RCW.

Authorization may be modified, suspended, or revoked in whole or part for cause including, but not limited to the following:

a. Violation of any terms or conditions of this authorization;

b. Obtaining this authorization by misrepresentation or failure to disclose fully all relevant fact.

The provisions of this authorization are severable and, if any provision of this authorization, or application of any provisions of their circumstances, and the reminder of this authorization, shall not be affected thereby.

You have a right to appeal this Approval Order. To appeal you must:

- File your appeal with the Pollution Control Hearings Board within 30 days of the "date of receipt" of the Approval Order. Filing means actual receipt by the Board during regular office hours
- Serve your appeal on the Department of Ecology within 30 days of the "date of receipt" of the Approval Order. Service may be accomplished by any of the procedures identified in WAC 371-08-305(10). "Date of receipt" is defined at RCW 43.21B.001(2).

Be sure to do the following:

- Include a copy of (1) the Approval Order you are appealing and (2) the application for the Approval Order.
- Serve and file your appeal in paper form; electronic copies are not accepted.

1. To file your appeal with the Pollution Control Hearings Board

Mail appeal to:

The Pollution Control Hearings Board
PO Box 40903
Olympia WA 98504-0903

OR

Deliver your appeal in person to:

The Pollution Control Hearings Board
4224 – 6th Ave SE Rowe Six, Bldg 2
Lacey, WA 98503

2. To serve your appeal on the Department of Ecology

Mail appeal to:

The Department of Ecology
Appeals Coordinator
P.O. Box 47608
Olympia, WA 98504-7608

OR

Deliver your appeal in person to:

The Department of Ecology
Appeals Coordinator
300 Desmond Dr SE
Lacey, WA 98503

3. And send a copy of your appeal to:

Department of Ecology
Air Quality Program
4601 N. Monroe Street
Spokane, WA 99205-1295

For additional information visit the Environmental Hearings Office Website:
http://www.eho.wa.gov
To find laws and agency rules visit the Washington State Legislature Website:
http://www1.leg.wa.gov/CodeReviser

DATED at Spokane, Washington, this 29th day of October, 2014.

PREPARED BY:

Robert Koster, P.E.
Regional Air Quality Section
Department of Ecology
State of Washington

APPROVED BY:

Karen K. Wood, Section Manager
Regional Air Quality Section
Department of Ecology
State of Washington