

**STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY**

<b>IN THE MATTER OF APPROVING A NEW )</b>	<b>DRAFT APPROVAL ORDER</b>
<b>AIR CONTAMINANT SOURCE FOR )</b>	<b>No. 15AQ-E636</b>
<b>SGL AUTOMOTIVE CARBON FIBERS, LLC )</b>	
<b>LINES 1–10 )</b>	
<b>MOSES LAKE, WA )</b>	

TO: Brian Radke, Head of Operations  
SGL Automotive Carbon Fibers, LLC  
8781 Randolph Road NE  
Moses Lake, WA 98837

Pursuant to the Washington State Clean Air Act Chapter 70.94 Revised Code of Washington (RCW) and the Washington State Department of Ecology (Ecology) general regulations for air pollution sources, Chapter 173-400 Washington Administrative Code (WAC), Ecology now finds the following:

**FINDINGS**

1. This Approval Order covers the following:
  - 1.1. This permit amendment addresses the addition of 50 portable oxidation electric ovens and a change in emission factors for the eight diesel-fuelled backup emergency generators.
  - 1.2. Six production lines (Lines 1, 2, 3, 4, 5, and 6) each consisting of four oxidation ovens with a regenerative thermal oxidizer (RTO) unit and a selective catalytic reduction (SCR) unit, two furnaces with a thermal oxidizer (TO) unit, and a main line stack with Continuous Emission Rate Monitoring System (CERMS) capable of measuring nitrogen oxides (NO<sub>x</sub>) emissions during all modes of operation except Shutdown Mode for Lines 2–6 as described in Findings 1.8.5. Each production line has six modes of operation.
  - 1.3. Four production lines (Lines 7, 8, 9, and 10), each consisting of four oxidation ovens with an RTO unit, two furnaces with a TO unit, and a main line stack with CERMS capable of measuring NO<sub>x</sub> emissions during all modes of operation except for Shutdown Mode as described in Findings 1.8.5. Each production line has five modes of operation that are identical to those in Lines 1–6 except there is no SCR Bypass Mode.
  - 1.4. Ten 454 brake horsepower (bhp) natural gas-fuelled internal combustion engines providing emergency power to safely shut down Lines 1 and 2 (L1EG1, L1EG2, L1EG3, L1EG4, L1EG5, L2EG1, L2EG2, L2EG3, L2EG4, and L2EG5).
  - 1.5. Eight 2,937 bhp diesel-fuelled compression ignition emergency power engines providing emergency power to safely shut down Lines 3–10 (L3EG, L4EG, L5EG, L6EG, L7EG, L8EG, L9EG, and L10EG).

1.6. Two 454 bhp natural gas-fuelled internal combustion engines providing electricity for two fire water pumps (FWP1 & FWP2).

1.7. The following operating modes are addressed in this approval.

1.7.1. Start-up Mode: Start-up mode has two periods. The first period is defined as the period of time when the ovens are heating up, but have not reached the off-gas reaction temperature of 220°C. No emissions are generated from the ovens or furnaces during this period. The second period is defined as the period of time when the ovens have exceeded the off-gas reaction temperature of 220°C, and process emissions are controlled by the RTOs, but the ovens are not yet to the process recipe temperatures or speeds. Heating the ovens to the recipe temperature is a critical process that is completed in multiple increments over a five- to six-hour period. Emissions during this period are less than Normal Operation Mode and are monitored by the CERMS at each mainline stack. During start-up mode, the oxidized carbon fibers from the ovens do not go through the furnaces for carbonization. These oxidized carbon fibers go into boxes as waste. There are no restrictions on operation in this mode.

1.7.2. Normal Operation Mode: For each of the Lines 1–6, fans pull emissions from the four oxidation ovens and direct them to the RTO where the polyacrylonitrile oxidation reaction byproducts are oxidized before exhausting through a selective catalytic reduction (SCR) unit installed to reduce NO<sub>x</sub> emissions and the 115-foot main line stack. The SCR has an associated natural gas preheater with a rated capacity of 4.6 million British thermal units per hour (MMBtu/hr). CERMS are installed on the Lines 1–6 main line stacks to measure NO<sub>x</sub> emissions. The RTO has an associated natural gas preheater with a rated capacity of 8.4 MMBtu/hr. Each line also has a backup RTO bed with its own 8.4 MMBtu/hr natural gas preheater.

Lines 1–6 each have two furnaces with emissions routed to a TO that uses water injection to reduce NO<sub>x</sub> formation before exhausting through the main line stack. The TO also has a 4 MMBtu/hr natural gas heater. During this mode, an online tube cleaner will operate to maintain clean heat transfer surfaces in the waste heat recovery boilers associated with each TO.

For each of Lines 7–10, fans pull emissions from the four oxidation ovens and direct them to the RTO where the polyacrylonitrile oxidation reaction byproducts are oxidized before exhausting through the 115-foot main line stack. As with Lines 1–6, the RTO has an associated natural gas preheater with a rated capacity of 8.4 MMBtu/hr. Each line also has a backup RTO bed with its own 8.4 MMBtu/hr natural gas preheater. There are no SCR units installed on Lines 7–10. CERMS are installed on the Lines 7–10 main line stacks to measure NO<sub>x</sub> emissions.

Lines 7–10 each have two furnaces with emissions routed to a TO that uses water injection to reduce NO<sub>x</sub> formation before exhausting through the main line stack. The TO also has a 4 MMBtu/hr natural gas heater. During this mode, an online

tube cleaner will operate to maintain clean heat transfer surfaces in the waste heat recovery boilers associated with each TO.

- 1.7.3. RTO Bypass Mode: Emissions from the oxidation ovens bypass the RTO and the SCR, for Lines 1–6, and exhaust directly to the main line stack. For Lines 7–10 the oxidation ovens' emissions bypass the RTO and exhaust directly to the mainline stack. Emissions from the Lines 1–10 furnaces are the same as in Normal Operation Mode.
  - 1.7.4. SCR Bypass Mode: For Lines 1–6, emissions from the ovens are routed through the RTO and either bypass the SCR directly into the main line stack, or continue to be routed through the SCR (when it is not functional) into the main line stack. Furnace emissions during SCR Bypass Mode will continue to be routed through the TO and pass directly to the main line stack. Furnace emissions are the same as in Normal Operation Mode. Only one line may be in SCR Bypass Mode at a time. NO<sub>x</sub> emissions from the main line stack will continue to be measured by the CERMS. There are no SCRs installed on Lines 7–10.
  - 1.7.5. Shutdown Mode: For Lines 1–10, fans are used to increase air flow and reduce temperatures of the oxidation ovens. For Lines 2–10, approximately 78 percent of the emissions are routed to the shutdown stacks above the oxidation ovens (one stack for each oven), bypassing the RTO (and SCR for Lines 1–6), and NO<sub>x</sub> CERMS. The remaining 22 percent of emissions are routed to the RTO and SCR (for Lines 1–6) and NO<sub>x</sub> CERMS as they would during Normal Operation Mode. Line 1 does not have shutdown stacks located above the oxidation ovens, and all of the shutdown emissions are routed to the main line stack and are measured by the NO<sub>x</sub> CERMS. Furnace emissions are the same as in Normal Operation Mode.
  - 1.7.6. Standby Mode: Emissions during Standby Mode are from the TO and RTO natural gas-fired heaters (4 MMBtu/hr and (2) 8.6 MMBtu/hr, respectively) which are operated at a low firing rate to keep the TO and RTO warm. The oxidation ovens and Lines 1–6 SCRs are not operational. There are no restrictions on operation in this mode.
2. This Notice of Construction (NOC) Order of Approval covers two projects and six phases.
    - 2.1. The first project consists of Lines 1 and 2 and addresses emissions of carbon monoxide (CO), NO<sub>x</sub>, particulate matter smaller than 10 microns in diameter (PM<sub>10</sub>), PM smaller than 2.5 microns in diameter (PM<sub>2.5</sub>), sulfur oxides (SO<sub>x</sub>), volatile organic compounds (VOCs), and numerous toxic air pollutants (TAPs).
    - 2.2. The second project consists of Lines 3, 4, 5, 6, 7, 8, 9, and 10 and address emissions of CO, SO<sub>2</sub>, and TAPs from those lines.
      - 2.2.1. Lines 3, 4, 5, 6, 7, 8, 9, and 10 emissions of NO<sub>x</sub>, PM, PM<sub>10</sub>, PM<sub>2.5</sub>, and VOCs are addressed in Prevention of Significant Deterioration (PSD) permit 14-02 Amendment 1.

2.3. The Lines 3–10 project will be built in phases:

- 2.3.1. Phase 1 will consist of the construction and operation of Lines 3, 4, and 5. Lines 1 and 2 are not part of Phase 1. Lines 3 through 5 are part of Phase 1 and are existing and operational.
- 2.3.2. Phase 2 will consist of the construction and operation of Line 6 and its associated support equipment.
- 2.3.3. Phase 3 will consist of the construction and operation of Line 7 and its associated support equipment.
- 2.3.4. Phase 4 will consist of the construction and operation of Line 8 and its associated support equipment.
- 2.3.5. Phase 5 will consist of the construction and operation of Line 9 and its associated support equipment.
- 2.3.6. Phase 6 will consist of the construction and operation of Line 10 and its associated support equipment.

3. Based upon the Technical Support Documents prepared on January 20, 2016, and the two applications, Ecology finds that all requirements for New Source Review (NSR) have been satisfied and will comply with all applicable ambient air quality standards. Approval of the NOC application is granted subject to the following conditions.

### **APPROVAL CONDITIONS**

- 1. This Approval Order supersedes 14AQ-E586 issued on April 13, 2015.
- 2. Facility-wide Requirements
  - 2.1. All pollution control and monitoring equipment, including the RTO, TO with water injection, as well as the CERMS NO<sub>x</sub> monitoring system shall be installed and operational upon start-up of each line. Start-up is defined as the first day that carbon fiber is produced for qualification testing. If qualification testing is not performed, start-up is defined as the first day carbon fiber is produced. Ecology shall be notified in writing in advance of the start-up of each production line and of the commissioning period of each emergency engine.
  - 2.2. Lines 1–6 must have SCR units installed and operational upon start-up of each line.
  - 2.3. Pollution control equipment such as RTOs, TOs, and SCR units must be operated at all times the associated line is running except as identified in Approval Condition 5.
  - 2.4. No more than fifty portable pre-oxidation splicing ovens are allowed on-site.

### 3. Phased Construction

- 3.1. Phase 1 consists of construction and operation of Lines 3, 4, and 5. Lines 3, 4 and 5 are constructed and operating.
- 3.2. Phase 2 consists of construction and operation of Line 6. If Phase 2 has not begun actual construction (as defined in WAC 173-400-030(11)) within eighteen (18) months of December 1, 2017, SGLACF must reapply for approval to construct and operate the line.
- 3.3. Phase 3 consists of construction and operation of Line 7. If Phase 3 has not begun actual construction (as defined in WAC 173-400-030(11)) within eighteen (18) months of June 1, 2020, SGLACF must reapply for approval to construct and operate the line.
- 3.4. Phase 4 consists of construction and operation of Line 8. If Phase 4 has not begun actual construction (as defined in WAC 173-400-030(11)) within eighteen (18) months of December 1, 2022, SGLACF must reapply for approval to construct and operate the line.
- 3.5. Phase 5 consists of construction and operation of Line 9. If Phase 5 has not begun actual construction (as defined in WAC 173-400-030(11)) within eighteen (18) months of June 1, 2025, SGLACF must reapply for approval to construct and operate the line.
- 3.6. Phase 6 consists of construction and operation of Line 10. If Phase 6 has not begun actual construction (as defined in WAC 173-400-030(11)) within eighteen (18) months of December 1, 2027, SGLACF must reapply for approval to construct and operate the line.
- 3.7. The expiration of SGLACF's authorization to continue construction of subsequent phases does not affect SGLACF's authorization to continue construction of previous phases, including existing or in construction equipment, which will remain subject to all applicable requirements of this permit.
- 3.8. The expiration of SGLACF's authorization to commence construction on an individual phase does not affect SGLACF's authorization to construct subsequent phases, which will remain subject to all applicable requirements of this permit.
- 3.9. Prior to beginning actual construction (as defined in WAC 173-400-030(11)) on Phases 3, 4, 5, and 6, SGLACF must submit a revised Best Available Control Technology (BACT) analysis. The review of the BACT analysis and its public review must be completed prior to beginning actual construction on Phases 3, 4, 5, and 6.

### 4. Purchasing Additional Land

- 4.1. Prior to beginning actual construction of Phase 3, 4, 5 or 6, SGLACF must purchase and control additional land should modeling indicate that acrylonitrile exceeds the ASIL for all phases of the project. Compliance will be reported in accordance with Approval Condition 11.

## 5. Production Lines Operating Modes and Limitations

- 5.1. Start-up Mode: There are no limitations of operation in this mode. Records of hours of operation in Start-up Mode will be recorded as Normal Operation Mode.
- 5.2. Normal Operation Mode: There are no limitations of operation in this mode. Records of hours of operation must be kept as per Approval Condition 10.
- 5.3. Shutdown Mode: Shutdown Mode from Lines 1–10 is limited to 90 seconds per occurrence and 9.13 hours per 12-month rolling period for each line. Records of hours of operation in Shutdown Mode must be kept as per Approval Condition 10.
- 5.4. RTO Bypass Mode: RTO Bypass Mode is limited to a combined total from Lines 1–2 of 1½ hours per calendar day and for each line, a total of 4½ hours per 12-month rolling period. RTO Bypass Mode is limited to a combined total from Lines 3–10 of 1½ hours per calendar day and for each line, a total of 4½ hours per 12-month rolling period. Records of daily, monthly, and 12-month rolling period must be kept as per Approval Condition 10.
- 5.5. SCR Bypass Mode: Operation of Lines 1–6 in SCR Bypass Mode is limited to 100 hours in any 12-month rolling period. No more than one line may operate in SCR Bypass Mode at the same time. There are no SCR units installed on Lines 7–10. Records of hours of operation in SCR Bypass Mode shall be kept as per Approval Condition 10.
- 5.6. Standby Mode: There are no limitations of operation in this mode. Records of hours of operation in Standby Mode must be kept as per Approval Condition 10.

## 6. Emergency Operation and Limitations

- 6.1. The eight (8) diesel-fuelled emergency power generators (L3EG, L4EG, L5EG, L6EG, L7EG, L8EG, L9EG, and L10EG) are limited to an aggregate of 136 hours of operation in any 12-month rolling period. During reliability and performance testing, no more than one generator engine may operate concurrently. Records of hours of operation must be kept for each generator in accordance with Approval Condition 10.
- 6.2. Operation of the 10 natural gas-fuelled emergency power generators (L1EG1, L1EG2, L1EG3, L1EG4, L1EG5, L2EG1, L2EG2, L2EG3, L2EG4, and L2EG5) is limited to an aggregate of 340 hours per 12-month rolling period for maintenance, testing, and emergency operation. Records of hours of operation must be kept for each generator in accordance with Approval Condition 10.
- 6.3. Operation of the two natural gas-fuelled fire water pump engines (FWP1 and FWP2) is limited to an aggregate of 76 hours per 12-month rolling period for maintenance, testing, and emergency operation. Records of hours of operation must be kept for each fire water pump in accordance with Approval Condition 10.

- 6.4. A non-resettable hour meter shall be installed on each emergency power generator and emergency fire water pump engine.
- 6.5. All diesel-fuelled compression ignition engines must be fuelled by ultra-low sulfur diesel fuel with a sulfur content of no more than 0.0015 percent by weight. Records must be kept for each diesel-fuelled compression ignition in accordance with Approval Condition 10.

7. Emission Limits

- 7.1. Emissions from each main line stack are limited to the following when operating in Normal Operation Mode.

Pollutant	Emission Limit	Avg. Period
CO Lines 1–10	1.3 lb/hr	One hour
NO <sub>x</sub> Lines 1 & 2	8.5 lb/hr	One hour
PM <sub>10</sub> /PM <sub>2.5</sub> Lines 1 & 2	3.0 lb/hr	One hour
SO <sub>2</sub> Lines 1–10	0.70 lb/hr	One hour
VOC (as propane) Lines 1 & 2	1.7 lb/hr	One hour
Acrylonitrile Lines 1–10	5.60x10 <sup>-3</sup> lb/hr	One hour
HCN Lines 1–10	1.40 lb/hr	One hour
NH <sub>3</sub> Lines 1–10	3.00 lb/hr	One hour

- 7.2. Each of the eleven 454 bhp internal combustion natural gas-fired emergency engines and fire water pump (L1EG1, L1EG2, L1EG3, L1EG4, L1EG5, L2EG1, L2EG2, L2EG3, L2EG4, L2EG5, and FWP1) must use the emission limits in the following table to quantify emissions:

Pollutant	Emission Limit	Avg. Period
CO	4.00 lb/hr	One hour
NO <sub>x</sub>	2.00 lb/hr	One hour
PM <sub>10</sub> /PM <sub>2.5</sub>	0.08 lb/hr	One hour
SO <sub>2</sub>	0.003 lb/hr	One hour
VOC	1.00 lb/hr	One hour

- 7.3. FWP2, a 454 bhp internal combustion natural gas-fired emergency engine, must use the emission limits in the following table to quantify emissions.

Pollutant	Emission Limit	Avg. Period
CO	4.00 lb/hr	One hour
SO <sub>2</sub>	0.003 lb/hr	One hour

7.4. Emissions from each of the eight 2,937 bhp compression ignition diesel-fuelled emergency power engines (L3EG, L4EG, L5EG, L6EG, L7EG, L8EG, L9EG, and L10EG) must not exceed the emission limits listed in the table below unless in engine Start-up Mode. The following table lists the limits to use when quantifying diesel engine in Normal Operation Mode.

Pollutant	Emission Limit
CO	0.54 g/hp-hr
SO <sub>2</sub>	1.2x10 <sup>-5</sup> lb/hp-hr
DEEP	0.034 g/hp-hr

7.5. Diesel engine Start-up Mode is defined as and limited to the first 10 minutes of operation. The following table lists the emission factors to use when quantifying diesel engine Start-up Mode emissions from each of the eight 2,937 bhp compression ignition diesel-fuelled emergency power engines (L3EG, L4EG, L5EG, L6EG, L7EG, L8EG, L9EG, and L10EG).

Pollutant	Emission Factor
CO	3.3 g/hp-hr
SO <sub>2</sub>	1.2x10 <sup>-5</sup> lb/hp-hr
DEEP	0.034 g/hp-hr

7.6. Aggregate emissions from Lines 1 and 2 and support equipment shall not exceed the following:

Pollutant	Emissions
NO <sub>x</sub>	76 tons per 12-month rolling period
CO	12 tons per 12-month rolling period
SO <sub>2</sub>	7 tons per 12-month rolling period
PM <sub>10</sub> /PM <sub>2.5</sub>	27 tons per 12-month rolling period
VOC	15 tons per 12-month rolling period
Acrylonitrile	102 pounds per 12-month rolling period
Ammonia	156 pounds per day
Hydrogen cyanide	110 pounds per day

7.7. Aggregate emissions from Lines 3–10 and support equipment shall not exceed:

Pollutant	Emissions
CO	47 tons per 12-month rolling period
SO <sub>2</sub>	25 tons per 12-month rolling period
Acrylonitrile	408.5 pounds per 12-month rolling period
Ammonia	595 pounds per day
Hydrogen cyanide	310 pounds per day

8. Testing Requirements for Lines 1–10

- 8.1. Within 180 days of start-up of Lines 5, 6, 7, 8, 9, and 10, SGLACF shall performance test each main line stack in accordance with 40 CFR 60.8 (except that Administrator shall mean Director of Ecology) to demonstrate compliance with the emission limits in Approval Condition 7.
- 8.2. Within 12 months of the first diesel engine’s installation, May 23, 2014, and every 60 months thereafter, SGLACF must measure emissions of Diesel Engine Particulate Exhaust (DEEP) from at least one representative engine’s exhaust stack. The testing will serve to demonstrate compliance with the emission limit contained in Approval Condition 7.4 and as an indicator of proper operation of the engines. The selection of the engine(s) to be tested must be subject to prior approval of Ecology and must be defined in the source test protocol submitted to Ecology no less than 30 days in advance of any compliance-related stack sampling conducted by SGLACF.
- 8.3. The following testing is required to demonstrate compliance with the emission limits in Approval Condition 7 for each production line while operating in Normal Operation Mode and each diesel engine.

<b>Performance and Compliance Testing</b>			
<b>Pollutant</b>	<b>Test Method</b>	<b>Initial Performance Test</b>	<b>Ongoing Compliance Test Frequency</b>
NO <sub>x</sub> (Lines 1 & 2)	40 CFR 60 Appendix A Method 7E or 40 CFR 63 Appendix A Method 320	Required within 180 days of start-up.	Annually
PM <sub>2.5</sub> (Lines 1 & 2)	40 CFR 60 Appendix A Method 5, or Method 201A, and Method 202	Required within 180 days of start-up.	Every 2 years
PM <sub>10</sub> (Lines 1 & 2)	40 CFR 60 Appendix A Method 5, or Method 201A and Method 202	Required within 180 days of start-up.	Every 2 years
VOC (Lines 1 & 2)	40 CFR 60 Appendix A Method 25 A	Required within 180 days of start-up.	Annually
CO	40 CFR 60 Appendix A Method 10 or 40 CFR 63 Appendix A Method 320	Required within 180 days of start-up.	Not required
SO <sub>2</sub>	40 CFR 60 Appendix A Method 6 or 6C or 40 CFR 63 Appendix A Method 320	Required within 180 days of start-up.	Not required
Acrylonitrile	EPA Method TO-15 or an Ecology-approved equivalent	Required within 180 days of start-up.	Quarterly

<b>Performance and Compliance Testing</b>			
<b>Pollutant</b>	<b>Test Method</b>	<b>Initial Performance Test</b>	<b>Ongoing Compliance Test Frequency</b>
HCN	EPA Method CTM-033, EPA Method 320, or an Ecology-approved equivalent	Required within 180 days of start-up.	Annually
NH <sub>3</sub>	BAAQMD ST-1B-1, EPA Method 320, or an Ecology-approved equivalent	Required within 180 days of start-up.	Annually
DEEP emergency generators	40 CFR 60 Appendix A Method 5 All testing must be performed in excess of 70% engine load.	One representative engine within 12 months of the first engine commissioning.	One engine every five years thereafter. <sup>1</sup>
<sup>1</sup> A different engine must be tested until each of the engines have been compliance tested.			

- 8.4. Testing shall be performed at the times and frequencies specified in this Approval Order. A request to change compliance test frequency may be submitted by SGLACF once they have demonstrated compliance in previous tests with stable emissions below all authorized limits. Requests to change compliance test frequency must be submitted in writing, and approved in writing by Ecology.
- 8.5. Testing shall utilize the test methods identified in Approval Condition 8.3 unless an alternative method is requested by the permittee and approved by Ecology in writing.
- 8.6. Testing Logistics: The permittee shall provide testable emission points, sampling ports, safe access to sampling points and ports, and utilities for sampling and testing.
- 8.7. Throughput during Testing: During testing, the process shall be operated at a minimum of ninety percent (90%), except as noted in Approval Condition 8.3 above, of rated line capacity for process lines with less than 12 months operating history, or 90 to 110 percent of the maximum daily process rate recorded during the preceding 12-month period for lines operated for 12 months or more. Operation of the process during testing outside of the specified range may be proposed, but may result in an operational restriction that will be amended to this Approval Order. Records of operating history must be kept in accordance with Approval Condition 10.
- 8.8. Submittal of Test Plan: A written test protocol that includes a description of the equipment to be tested, the process and control device operating information to be collected during the test, and the sampling and analytical method(s) proposed, shall be submitted to Ecology at least 30 calendar days prior to the start of any required performance or compliance test.
- 8.9. Notification of Inability to Conduct Test: If the permittee is unable to conduct any test as scheduled, Ecology shall be notified at least 24 hours before the test at the address listed in Approval Condition 11, or by telephone.

- 8.10. Plant Operator during Testing: The plant process equipment shall be operated and controlled by normal plant operators during the period when the testers are on-site to conduct testing and during actual testing.
- 8.11. Testing Results: The results of all initial performance testing and all other periodic testing shall be sent to Ecology at the address listed in Approval Condition 11. One copy of the completed test report shall be submitted to Ecology no later than 60 days after the last day of the testing, 75 days for EPA Reference Method 202 PM test reports.

9. NO<sub>x</sub> Monitoring for Lines 1 and 2

SGLACF shall install and operate a CERMS on Lines 1 and 2 that measures actual NO<sub>x</sub> emission concentrations, emission rates, and stack flow rates during all operational modes (Normal Operation, RTO Bypass, SCR Bypass, Standby, and Shutdown). Note: Shutdown Mode for Line 2 is different from Line 1. See Approval Condition 10.3 for the differences. The CERMS must meet the requirements of Performance Specifications 2 and 6 contained in 40 CFR Part 60, Appendix B, and quality control/quality assurance requirements of 40 CFR Part 60, Appendix F as in effect on March 10, 2015.

- 9.1. The calibration drift test procedure must be performed prior to any automatic or manual adjustments made to the CERMS calibration or zero settings in accordance with Performance Specification 2, Section 6, 40 CFR Part 60, Appendix B.
- 9.2. The CERMS on each line must meet the continuous emission monitoring system operating requirements contained in WAC 173-400-105(7) as in effect on March 10, 2015.
- 9.3. Relative Accuracy Test Audits (RATA) shall be performed once every four calendar quarters and cylinder gas audits (CGA) shall be conducted in three of four calendar quarters on the CERMS for each line. The RATA and CGA shall be conducted in accordance with 40 CFR Part 60, Appendix B and Appendix F. The RATA must meet the testing requirements in Approval Conditions 8.4 through 8.11. Data assessment reports as contained in Appendix F shall be submitted to Ecology quarterly.
- 9.4. CERMS must be installed and operational upon start-up. CERMS must meet all applicable performance specifications within 45 days of start-up of each line as identified in Appendix B and Appendix F (see Approval Condition 9.3).
- 9.5. The facility shall monitor, calculate as needed, and record actual instantaneous emission concentrations, and stack gas flow and actual instantaneous, hourly, monthly, and 12-month rolling mass emissions for each production line.

10. Recordkeeping Lines 1–10 (unless otherwise noted)

All required records shall be kept on-site and made available for inspection by Ecology upon request. The records shall be organized in a readily accessible manner and cover a minimum of the most recent 60-month period. The records to be kept shall include the following:

- 10.1. Hourly, monthly, and 12-month rolling total records of Lines 1 and 2 NO<sub>x</sub> emissions in accordance with Approval Conditions 7.1 and 7.6.
- 10.2. NO<sub>x</sub> emissions during periods of CERMS non-operation for Lines 1 and 2 shall be calculated and included in monthly and 12-month rolling facility-wide totals.
- 10.3. NO<sub>x</sub> emissions during Shutdown Mode for production Line 2 shall be the total of the calculated NO<sub>x</sub> value from the bypass stacks using an emission factor of 8.5 lb/hr (0.00236 lb/sec) plus the NO<sub>x</sub> as measured by the CERMS. For Line 1, all Shutdown Mode emissions shall be measured by the CERMS.
- 10.4. Normal Operation Mode: Annual records of operation in Normal Operation Mode must be kept for each line. Records of hours of operation in Start-up Mode will be recorded as Normal Operation Mode.
- 10.5. Shutdown Mode: Daily records of the date and duration (in seconds) of operation in Shutdown Mode must be kept for each line. Daily records shall be used to calculate monthly and 12-month rolling total time in Shutdown Mode for each line.
- 10.6. RTO Bypass Mode: Daily records of the date, time, cause, and duration (in minutes) of operation in RTO Bypass Mode must be kept for each line. Daily records shall be used to calculate monthly and 12-month rolling total time in RTO Bypass Mode for each production line.
- 10.7. SCR Bypass Mode: Daily records of the date, time, cause, and duration (in hours) of Lines 1–6 operating in SCR Bypass Mode must be kept for each line. Daily records shall be used to calculate monthly and 12-month rolling total time in SCR Bypass Mode for Lines 1–6. These records must also identify if more than one line is in SCR Bypass Mode at a time.
- 10.8. Standby Mode: Annual records of operation in Standby Mode must be kept for each production line.
- 10.9. NO<sub>x</sub> emissions from the natural gas-fired emergency engines and fire water pump engine (FWP1) shall be calculated using emission factors specified in Condition 7.2.
- 10.10. Daily, monthly, and 12-month rolling totals of the hours of operation for each diesel-fuelled emergency power generator shall be kept, and monthly and 12-month rolling totals of the hours of operation for each natural gas-fuelled emergency engine and fire water pump emergency engine shall be kept to demonstrate compliance with Approval Conditions 6.1 through 6.3. Records must also identify if more than one diesel-fuelled generator engines operate concurrently in reliability and performance testing modes.
- 10.11. Records of sulfur content for each shipment of diesel fuel, based on bill of lading, must be kept.
- 10.12. Monthly and 12-rolling total emissions records of acrylonitrile emissions shall be kept to demonstrate compliance with Approval Conditions 7.6 and 7.7.

10.13. Compliance and performance test reports.

10.14. Operation and Maintenance (O&M) records for the process and air pollution control equipment listed in Approval Condition 12.4.

## 11. Reporting

11.1. SGLACF shall submit semi-annual reports of NO<sub>x</sub> emissions for Lines 1 and 2. The reports shall be submitted to Ecology every six months, by July 31, for the January through June reports and by January 31 for the July through December reports. These reports must include parameters used for calculating emissions, including duration for each line in operating modes other than Normal Operation Mode. The report must include:

11.1.1. The number of hours that each line operated during each month of the reporting period and the 12-month rolling total NO<sub>x</sub> emissions.

11.1.2. The number of valid hours of monitoring data that each CERMS recovered during facility operation.

11.1.3. The date, time period, and cause of each failure to meet the data recovery requirements of Approval Condition 9.2 and any actions taken to ensure adequate collection of such data.

11.1.4. The date, time period, and cause of each failure to recover valid hourly monitoring data for at least 90 percent of the hours that each line operated each day.

11.1.5. The date, time period, and cause of each failure to recover valid hourly monitoring data for at least 95 percent of the hours that the equipment (required to be monitored) is operated during each calendar month except for periods of monitoring system downtime, provided that the owner or operator demonstrated that the downtime was not a result of inadequate design, operation, or maintenance, or any other reasonable preventable condition, and any necessary repairs to the monitoring system are conducted in a timely manner.

11.1.6. The results of all cylinder gas audits conducted during the month.

11.1.7. A certification of truth, accuracy, and completeness signed by a responsible official of SGLACF.

11.2. SGLACF shall notify Ecology and provide proof that the land purchase required in Approval Condition 4.1 has been completed.

11.3. SGLACF shall submit an inventory of emissions from the source each year. The inventory shall include stack and fugitive emissions of PM, PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>x</sub>, NO<sub>x</sub>, CO, total reduced sulfur compounds (TRS), fluorides, lead, VOCs, ammonia, and

other contaminants. The format of the emission inventory will be specified by Ecology.

- 11.4. Other reports shall be submitted within 30 days following the end of the calendar year, unless otherwise specified by Ecology, to the following address:

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

## 12. General Requirements

- 12.1. No visible emissions shall be allowed beyond the property line, as determined by 40 CFR Part 60, Appendix A, Method 22.
- 12.2. Access to the source by EPA or Ecology shall be allowed for the purposes of compliance assurance inspections. Failure to allow access is grounds for revocation of this Approval Order and enforcement under applicable regulations.
- 12.3. SGLACF must prepare and follow Operation and Maintenance (O&M) manual(s). The O&M manual must contain design, performance, and operation specifications for process and pollution control equipment, including SCRs, TOs, and RTOs. The O&M manual(s) must be kept up to date.
- 12.4. Legible copies of this Approval Order and O&M manual(s) shall be available to employees in direct operation of the SGLACF Moses Lake facility and be available for review upon request by Ecology.
- 12.5. Operation of the SGLACF facility shall be conducted in accordance with all data and specifications submitted as part of the NOC application and in accordance with the O&M manual. Emissions that result from failure to follow the O&M manual or manufacturer's instructions may be considered proof that the SGLACF facility was not properly operated, maintained, and tested.
- 12.6. Any activity undertaken by SGLACF or others, in a manner that is inconsistent with information in the NOC application materials or this Approval Order, shall be subject to Ecology enforcement under applicable regulations.
- 12.7. Nothing in the Approval Order based on this preliminary determination shall be construed to relieve the permittee of its obligations under any local, state, or federal laws or regulations.

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

Nothing in this Approval Order 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 there under.

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

1. Violation of any terms or conditions of this authorization.
2. Obtaining this authorization by misrepresentation or failure to disclose fully all relevant facts.

The provisions of this Approval Order are severable and, if any provision of this authorization, or application of any provisions of this authorization to any circumstance, is held invalid, the application of such provision to their circumstances, and the remainder of this authorization, shall not be affected thereby.

### **YOUR RIGHT TO APPEAL**

You have a right to appeal Order to the Pollution Control Hearings Board (PCHB) within 30 days of the date of receipt of this Order. The appeal process is governed by Chapter 43.21B RCW and Chapter 371-08 WAC. "Date of receipt" is defined in RCW 43.21B.001(2).

To appeal you must do all of the following within 30 days of the date of receipt of this Order:

- File your appeal and a copy of this Order with the PCHB (see addresses below). Filing means actual receipt by the PCHB during regular business hours.
- Serve a copy of your appeal and this Order on Ecology in paper form - by mail or in person. (See addresses below.) E-mail is not accepted. You must also comply with other applicable requirements in Chapter 43.21B RCW and Chapter 371-08 WAC.

### **ADDRESS AND LOCATION INFORMATION**

<b>Street Addresses</b>	<b>Mailing Addresses</b>
<b>Department of Ecology</b> Attn: Appeals Processing Desk 300 Desmond Drive SE Lacey, WA 98503	<b>Department of Ecology</b> Attn: Appeals Processing Desk P.O. Box 47608 Olympia, WA 98504-7608
<b>Pollution Control Hearings Board</b> 1111 Israel Road SW, Suite 301 Tumwater, WA 98501	<b>Pollution Control Hearings Board</b> P.O. Box 40903 Olympia, WA 98504-0903

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 \_\_\_\_ day of February 2016.

PREPARED BY:

APPROVED BY:

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Richard B. Hibbard, P.E.  
Air Quality Program  
Department of Ecology  
State of Washington

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