



COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY
NORTHERN REGIONAL OFFICE

13901 Crown Court, Woodbridge, Virginia 22193
(703) 583-3800

www.deq.virginia.gov

Molly Joseph Ward
Secretary of Natural Resources

David K. Paylor
Director

Thomas A. Faha
Regional Director

**STATE AIR POLLUTION CONTROL BOARD
ENFORCEMENT ACTION - ORDER BY CONSENT
ISSUED TO
HOWARD HUGHES MEDICAL INSTITUTE
FOR
JANELIA FARM
Registration No. 73280**

SECTION A: Purpose

This is a Consent Order issued under the authority of Va. Code §§ 10.1-1309 and -1316, between the State Air Pollution Control Board and Howard Hughes Medical Institute, regarding the Janelia Farm Research Campus for the purpose of resolving certain violations of the Virginia Air Pollution Control Law and the applicable permit and regulations.

SECTION B: Definitions

Unless the context clearly indicates otherwise, the following words and terms have the meaning assigned to them below:

1. "Board" means the State Air Pollution Control Board, a permanent citizens' board of the Commonwealth of Virginia, as described in Va. Code §§ 10.1-1184 and -1301.
2. "Department" or "DEQ" means the Department of Environmental Quality, an agency of the Commonwealth of Virginia, as described in Va. Code § 10.1-1183.

3. "Director" means the Director of the Department of Environmental Quality, as described in Va. Code § 10.1-1185.
4. "Facility" means Howard Hughes Medical Institute's Janelia Farm Research Campus located at 19700 Helix Drive in Ashburn, Virginia.
5. "HHMI" means Howard Hughes Medical Institute, a non-profit medical research organization with headquarters in Chevy Chase, Maryland. HHMI is a "person" within the meaning of Va. Code § 10.1-1300.
6. "Notice of Violation" or "NOV" means a type of Notice of Alleged Violation under Va. Code § 10.1-1309.
7. "NRO" means the Northern Regional Office of DEQ, located in Woodbridge, Virginia.
8. "Order" means this document, also known as a "Consent Order" or "Order by Consent," a type of Special Order under the Virginia Air Pollution Control Law.
9. "PCE" means a partial compliance evaluation by DEQ staff.
10. "Permit" means a Minor New Source Review permit to construct and operate a medical research facility which was issued under the Virginia Air Pollution Control Law and the Regulations to Howard Hughes Medical Institute. The Permit was originally issued to HHMI on September 30, 2005. A significant amendment to the Permit was issued on September 28, 2010, and a minor amendment to the Permit was issued on August 10, 2011.
11. "Regulations" or "Regulations for the Control and Abatement of Air Pollution" mean 9 VAC 5 chapters 10 through 80.
12. "Va. Code" means the Code of Virginia (1950), as amended.
13. "VAC" means the Virginia Administrative Code.
14. "Virginia Air Pollution Control Law" means Chapter 13 (§ 10.1-1300 *et seq.*) of Title 10.1 of the Va. Code.

SECTION C: Findings of Fact and Conclusions of Law

1. HHMI owns and operates the Facility in Ashburn, Virginia. The Facility is a medical research facility which houses multiple emergency generators with and without Selective Catalytic Reduction (SCR) and multiple natural gas and propane fired boilers. The Facility is the subject of the Permit which allows HHMI to construct and operate a medical research facility.

2. HHMI submitted a permit application to DEQ on December 30, 2015, requesting an amendment to their current Permit to allow for the installation of a 2,000 ekw diesel engine generator set and remove SCR systems on the three existing generator sets. The permit application also noted that HHMI had performed emission testing (w/ portable analyzer) on the three emergency generators G1, G2, and G3 on December 15, 2015, and that the SCR systems for all three generators were shut off during the testing of the three generators.
3. On August 22, 2016, as the result of permit application information received on December 30, 2015, Department staff conducted a PCE of the Facility for compliance with the requirements of the Virginia Air Pollution Control Law, the Permit, and the Regulations. Based on the evaluation and follow-up information, Department staff made the following observations:
 - a. Department staff reviewed the report for the testing conducted on December 15, 2015. An HHMI representative informed DEQ that the SCR systems for generators G1, G2, and G3 were shut off from each SCR's control panel during the portable analyzer testing that took place on December 15, 2015. The testing was not arranged with DEQ and no protocol was provided to the department for approval.
4. Permit Condition 2a (NOx Emission Controls) states that Nitrogen Oxide (NOx) emissions from the Cummins Generators (Unit Reference #s G1-G3) shall be controlled by selective catalytic reduction (SCR) systems. Each SCR system shall be equipped with temperature probes mounted in the catalyst bed. Subsequent to the issuance of this permit, engine exhaust gas shall be treated with urea when the catalyst bed exhaust temperature of 572°F is achieved, except for periods of start-up, shutdown, malfunction, or stack testing. In the event that engine exhaust gas temperature exceeds 932°F, urea injection shall be discontinued and any operations above that level will be considered a malfunction. Each SCR shall be at least 75% efficient. The 75% efficiency will be demonstrated by the stack testing requirements in Condition 15.
5. Permit Condition 5 (Monitoring Device Observation) states the monitoring systems used to continuously measure the temperature of the catalyst bed and the consumption of urea by SCR systems of the Cummins Generators (Unit Reference #s G1-G3) shall be observed by the permittee after each engine's operation. The permittee shall keep a log of observations from the monitoring system such as the catalyst bed temperature and urea consumption. The monitoring system used for each generator to monitor the number of start attempts, the number of times the generator (Unit Reference #s G1-G3) had run, the duration of the run time, and the kilowatts produced shall be observed by the permittee before and after engine operation. The permittee shall keep a log of the observations from the monitoring system such as number of start attempts, the number of times the generator (Unit Reference #s G1-G3) has run, the duration of the run time, and the kilowatts produced.
6. Permit Condition 18g (On Site Records) states that subsequent to the issuance of this permit, the permittee shall maintain records of emission data and operating parameters as

necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the Regional Air Compliance Manager of the DEQ's NRO at the address referenced in Condition 17. These records shall include but not be limited to: Operation and control device monitoring records for the SCR and engine operation as referenced in Condition 5.

7. On August 30, 2016, based on the observations noted during the PCE, the Department issued Notice of Violation No. ANRO000495 to HHMI for the violations described in paragraphs C(1) through C(4), above.
8. On September 23, 2016, Department staff met with representatives of HHMI to discuss the violations and requested permit amendment.
9. Based on the results of August 22, 2016, PCE and the September 13, 2016, meeting, the Board concludes that HHMI has violated Permit Condition 2a, 5 and and 18g, as described in paragraphs C(1) through C(4), above.
10. HHMI submitted a permit application to DEQ on December 30, 2015 which was considered complete by DEQ on August 10, 2016, that requests a permit modification that would resolve the aforementioned violations.
11. A permit modification which allowed HHMI to remove the SCR units from the three engines with subsequent testing requirements became effective December 6, 2016.

SECTION D: Agreement and Order

Accordingly, by virtue of the authority granted it in Va. Code §§ 10.1-1309 and -1316, the Board orders HHMI, and HHMI agrees to pay a civil charge of \$4,095.00 within 30 days of the effective date of the Order in settlement of the violations cited in this Order.

Payment shall be made by check, certified check, money order or cashier's check payable to the "Treasurer of Virginia," and delivered to:

Receipts Control
Department of Environmental Quality
Post Office Box 1104
Richmond, Virginia 23218

HHMI shall include its Federal Employer Identification Number (FEIN) with the civil charge payment and shall indicate that the payment is being made in accordance with the requirements of this Order for deposit into the Virginia Environmental Emergency Response Fund (VEERF). If the Department has to refer collection of moneys due under this Order to the Department of Law, HHMI shall be liable for attorneys' fees of 30% of the amount outstanding.

SECTION E: Administrative Provisions

1. The Board may modify, rewrite, or amend this Order with the consent of HHMI for good cause shown by HHMI, or on its own motion pursuant to the Administrative Process Act, Va. Code § 2.2-4000 *et seq.*, after notice and opportunity to be heard.
2. This Order addresses and resolves only those violations specifically identified in Section C of this Order. This Order shall not preclude the Board or the Director from taking any action authorized by law, including but not limited to: (1) taking any action authorized by law regarding any additional, subsequent, or subsequently discovered violations; (2) seeking subsequent remediation of the facility; or (3) taking subsequent action to enforce the Order.
3. For purposes of this Order and subsequent actions with respect to this Order only, HHMI admits the jurisdictional allegations, findings of fact, and conclusions of law contained herein.
4. HHMI consents to venue in the Circuit Court of the City of Richmond for any civil action taken to enforce the terms of this Order.
5. HHMI declares it has received fair and due process under the Administrative Process Act and the Virginia Air Pollution Control Law and it waives the right to any hearing or other administrative proceeding authorized or required by law or regulation, and to any judicial review of any issue of fact or law contained herein. Nothing herein shall be construed as a waiver of the right to any administrative proceeding for, or to judicial review of, any action taken by the Board to modify, rewrite, amend, or enforce this Order.
6. Failure by HHMI to comply with any of the terms of this Order shall constitute a violation of an order of the Board. Nothing herein shall waive the initiation of appropriate enforcement actions or the issuance of additional orders as appropriate by the Board or the Director as a result of such violations. Nothing herein shall affect appropriate enforcement actions by any other federal, state, or local regulatory authority.
7. If any provision of this Order is found to be unenforceable for any reason, the remainder of the Order shall remain in full force and effect.
8. HHMI shall be responsible for failure to comply with any of the terms and conditions of this Order unless compliance is made impossible by earthquake, flood, other acts of God, war, strike, or such other unforeseeable circumstances beyond its control and not due to a lack of good faith or diligence on its part. HHMI shall demonstrate that such circumstances were beyond its control and not due to a lack of good faith or diligence on its part. HHMI shall notify the DEQ Regional Director verbally within 24 hours and in writing within three business days when circumstances are anticipated to occur, are

occurring, or have occurred that may delay compliance or cause noncompliance with any requirement of the Order. Such notice shall set forth:

- a. the reasons for the delay or noncompliance;
- b. the projected duration of any such delay or noncompliance;
- c. the measures taken and to be taken to prevent or minimize such delay or noncompliance; and
- d. the timetable by which such measures will be implemented and the date full compliance will be achieved.

Failure to so notify the Regional Director verbally within 24 hours and in writing within three business days, of learning of any condition above, which the parties intend to assert will result in the impossibility of compliance, shall constitute a waiver of any claim to inability to comply with a requirement of this Order.

9. This Order is binding on the parties hereto and any successors in interest, designees and assigns, jointly and severally.
10. This Order shall become effective upon execution by both the Director or his designee and HHMI. Nevertheless, HHMI agrees to be bound by any compliance date which precedes the effective date of this Order.
11. This Order shall continue in effect until:
 - a. The Director or his designee terminates the Order after HHMI has completed all of the requirements of the Order;
 - b. HHMI petitions the Director or his designee to terminate the Order after it has completed all of the requirements of the Order and the Director or his designee approves the termination of the Order; or
 - c. The Director or Board terminates the Order in his or its sole discretion upon 30 days' written notice to HHMI.

Termination of this Order, or any obligation imposed in this Order, shall not operate to relieve HHMI from its obligation to comply with any statute, regulation, permit condition, other order, certificate, certification, standard, or requirement otherwise applicable.

12. Any plans, reports, schedules or specifications attached hereto or submitted by HHMI and approved by the Department pursuant to this Order are incorporated into this Order. Any non-compliance with such approved documents shall be considered a violation of this Order.

13. The undersigned representative of HHMI certifies that he or she is a responsible official authorized to enter into the terms and conditions of this Order and to execute and legally bind HHMI to this document. Any documents to be submitted pursuant to this Order shall also be submitted by a responsible official of HHMI.
14. This Order constitutes the entire agreement and understanding of the parties concerning settlement of the violations identified in Section C of this Order, and there are no representations, warranties, covenants, terms or conditions agreed upon between the parties other than those expressed in this Order.
15. By its signature below, HHMI voluntarily agrees to the issuance of this Order.

And it is so ORDERED this 3rd day of January, 2016⁷.



Thomas A. Faha, Regional Director
Department of Environmental Quality

------(Remainder of Page Intentionally Blank)-----

Howard Hughes Medical Institute voluntarily agrees to the issuance of this Order.

Date: 12/29/16 By: [Signature], DIRECTOR OF FACILITIES
(Person) (Title)
[Howard Hughes Medical Institute]
MARK ANDREW PHILIP

Commonwealth of Virginia
City/County of Loudoun

The foregoing document was signed and acknowledged before me this 29 day of December, 2016, by Mark Andrew Philip who is of Howard Hughes Medical Institute, on behalf of the Howard Hughes Medical Institute.

Emily Alecia Hayes
Notary Public
7684087

Registration No.

My commission expires: 10-31-2020

Notary seal:

