COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY
NORTHERN REGIONAL OFFICE
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L. Preston Bryant, Jr.
Secretary of Natural Resources

David K. Paylor
Director

STATE WATER CONTROL BOARD

ORDER BY CONSENT

ISSUED TO

HOWARD HUGHES MEDICAL INSTITUTE

SECTION A: Purpose

This is a Consent Order issued under the authority of Va. Code § 62.1-44.34:20 and Va. Code §§ 62.1-44.15 (8a) and (8d), between the State Water Control Board and Howard Hughes Medical Institute for the purpose of resolving certain violations of the State Water Control Law, regulations, and the VWP Permit.

SECTION B: Definitions

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

1. "Board" means the State Water Control Board, a permanent citizens' board of the Commonwealth of Virginia, as described in Va. Code §§ 10.1-1184 and 62.1-44.7.

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. "Howard Hughes" means Howard Hughes Medical Institute, a non-profit medical research organization with headquarters in Chevy Chase, Maryland, a "person" within the meaning of Va. Code § 62.1-44.3 and 9 VAC 25-210-10.

5. "Janelia Farm" means Howard Hughes Medical Institute's Janelia Farm Research

Campus located at 19700 Helix Drive in Ashburn, Virginia.

6. "Notice of Violation" or "NOV" means a type of Notice of Alleged Violation under Va. Code § 62.1-44.15.

7. "NRO" means the Northern Regional Office of DEQ, located in Woodbridge, Virginia.

8. "Oil" means oil of any kind and in any form, including but not limited to, petroleum, petroleum by-products, fuel oil, lubricating oils, sludge, oil refuse, oil mixed with other wastes, crude oils and all other liquid hydrocarbons regardless of specific gravity.

9. "Order" means this document, also known as a "Consent Order" or "Order by Consent", a type of Special Order under the State Water Control Law.

10. "Permit" means VWP general permit authorization No. WP4-03-1537 issued to Howard Hughes Medical Institute on September 5, 2003, for construction associated with the Janelia Farm complex and associated infrastructure in Loudoun County, Virginia.

11. "PFO" means Palustrine Forested Wetland.

12. "Pollutant" means any substance, radioactive material, or heat which causes or contributes to, or may cause or contribute to pollution. 9 VAC 25-210-10.

13. "Regulations" means the "Virginia Water Protection Permit Program Regulations" found at 9 VAC 25-210 *et seq.*

14. "State Water Control Law" means Chapter 3.1 (§ 62.1-44.2 *et seq.*) of Title 62.1 of the Va. Code. Article 11 (Va. Code §§ 62.1-44.34:14 through 62.1-44.34:23) of the State Water Control Law addresses Discharge of Oil into Waters, and Article 2.2 (Va. Code §§ 62.1 -44.15:20 through 62.1-44.14:23) of the State Water Control Law addresses the Virginia Water Resources and Wetlands Protection Program.

15. "State waters" means all water, on the surface and under the ground, wholly or partially within or bordering the Commonwealth or within its jurisdiction, including wetlands as defined in 9 VAC 25-210-10 and Va. Code § 62.1-44.3.

16. "Surface water" means all state waters that are not ground waters as defined in Va. Code § 62.1-255.

17. "Va. Code" means the Code of Virginia (1950), as amended.

18. "VAC" means the Virginia Administrative Code.

19. "VWP" means Virginia Water Protection.

20. "Wetlands" means those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas. 9 VAC 25-210-10.

SECTION C: Findings of Fact and Conclusions of Law

Article 11 Violation

1. On July 11, 2008, DEQ-NRO received notification of a discharge of Number 2 diesel fuel at Janelia Farm. Initial reports from the Virginia Department of Emergency Management Emergency Operations Center indicated up to 1300 gallons of Number 2 diesel fuel had leaked from a generator tank located on the Janelia Farm property. Number 2 diesel fuel is a petroleum product and is included in the definition of "oil" under Va. Code § 62.1-44.34:14. Howard Hughes immediately notified the appropriate regulatory authorities of the incident.

2. Howard Hughes alleges that the discharge occurred because the generator tank overflow system did not detect the fuel's flow capacity from a secondary tank, and there was a mechanical failure in the tank's overflow valve and overflow alarm.

3. Howard Hughes reported that approximately 600 gallons of fuel entered a storm drain inlet located near the generator tank, and flowed into an unnamed tributary of the Potomac River. This unnamed tributary is a state water.

4. The Howard Hughes onsite hazardous spill team immediately began to contain and remediate the spill by siphoning 300 gallons of Number 2 diesel fuel left on the generator tank floor with a manual pump, and by placing spill booms in the stream to capture residual contamination in the stream channel.

5. A consultant hired by Howard Hughes conducted soil remediation and excavation of the stream bed areas for 48 hours immediately following the spill. The consultant also collected stream bed samples and submitted them for chemical analysis.

6. DEQ staff conducted a site inspection on July 14, 2008, and observed no sheen or

free product present on the stream surface.

7. DEQ-NRO issued NOV No. W2008-09-N-003 on September 23, 2008, to Howard Hughes Medical Institute, identifying alleged violations which shall be considered specifically identified for the purposes of this Order, and citing a violation of Va. Code § 62.1-44.34:18 for discharging oil onto state waters, lands, or storm drains.

8. DEQ-NRO staff met with Howard Hughes representatives on November 19, 2008, to discuss the NOV. Howard Hughes representatives presented an overview and timeline of the incident as well as the steps that Janelia Farm has taken to ensure that a similar incident will not occur in the future. On December 11, 2008, Howard Hughes submitted a document entitled Activity Costs and Summary, which summarized these items.

11. Based on the foregoing information collected by DEQ, the State Water Control Board concludes that Howard Hughes Medical Institute, by discharging approximately 1,300 gallons of oil, violated the following statutory and/or regulatory provisions:

- VA Code § 62.1-44.34:18, which prohibits the discharge of oil into or upon state waters, lands, or storm drain systems.

VWP Violations

1. As a result of the 1300 gallon oil spill at the Janelia Farm Research Campus described above, approximately 600 gallons of oil entered a surface water located on the Janelia Farm Research Campus.

2. In an effort to remediate the spill, Howard Hughes' hazardous spill team placed spill booms in the stream. In addition, soil remediation and excavation of the stream channel occurred, impacting approximately 437 linear feet of stream channel.

3. DEQ-NRO staff conducted a site inspection and file review of the permit file on July 16, 2008, and observed impacts that appeared to be in exceedance of the Permit.

4. As a result of the site inspection and file review, DEQ-NRO issued NOV No.2008-09-NRO-001on September 3, 2008, to Howard Hughes Medical Institute, identifying alleged violations which shall be considered specifically identified for purposes of this Order.

5. Based on the foregoing information collected by DEQ, the State Water Control Board concludes that Howard Hughes Medical Institute, violated the following

statutory and/or regulatory provisions for exceeding permitted impacts to approximately 0.01 acre of PFO associated with the permit issued on September 5, 2003, and by impacting approximately 437 linear feet of stream channel associated with the July 11, 2008, oil spill at Janelia Farm:

- 9 VAC 25-210-50.D
- Va. Code § 62.1-44.15:20

SECTION D: Agreement and Order

Accordingly, by virtue of the authority granted it in Va. Code §§ 62.1-44.34:20 and 62.1-44.15 (8a) and (8d), the Board orders Howard Hughes Medical Institute and Howard Hughes Medical Institute agrees to:

1. Perform the actions described in Appendix A of this Order; and

2. Pay a civil charge of $16,718.00 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

Howard Hughes Medical Institute shall include its Federal Identification number with the civil charge payment and shall indicate that the payment is being made in accordance with the requirements of this Order.

SECTION E: Administrative Provisions

1. The Board may modify, rewrite, or amend the Order with the consent of Howard Hughes, for good cause shown by Howard Hughes, 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 this Order.

3. For purposes of this Order and subsequent actions with respect to this Order only, Howard Hughes admits the jurisdictional allegations, findings of fact, and conclusions of law contained herein.

4. Howard Hughes 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. Howard Hughes declares it has received fair and due process under the Administrative Process Act, and the State Water 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 Howard Hughes 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. Howard Hughes 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 other such occurrence. Howard Hughes shall show that such circumstances were beyond its control and not due to a lack of good faith or diligence on its part. Howard Hughes 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 this 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 Howard Hughes Medical Institute intends to assert will result in the impossibility of compliance, shall constitute a waiver of any claim of inability to comply with a requirement of this Order.

9. This Order is binding on the parties hereto, their 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 Howard Hughes Medical Institute. Nevertheless, Howard Hughes Medical Institute agrees to be bound by any compliance data which precedes the effective date of this Order.

11. This Order shall continue in effect until:

    a. Howard Hughes 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

    b. The Director or Board terminates the Order in his or its sole discretion upon 30 days written notice to Howard Hughes Medical Institute.

    Termination of this Order, or any obligation imposed in this Order, shall not operate to relieve Howard Hughes 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 Howard Hughes 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 Howard Hughes 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 Howard Hughes to this document. Any documents to be submitted pursuant to this Order shall also be submitted by a responsible official of Howard Hughes.

14. This Order constitutes the entire agreement and understanding of the parties concerning the 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, Howard Hughes voluntarily agrees to the issuance of this Order.

And it is so ORDERED this _____day of _____, 2010.

_____
Thomas A. Faha, Regional Director
Northern Department of Environmental Quality

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

By: Craig A. Alexander

Title: Vice President & General Counsel

Date: 11/16/09

State of Maryland
City/County of PRINCE GEORGES

The foregoing document was signed and acknowledged before me this 16th day of NOVEMBER, 2009, by CRAIG A. ALEXANDER, who is
(name)

VP & GEN COUNSEL of Howard Hughes Medical Institute.
(title)

Janet Sharon Lucas
Notary Public

My commission expires: January 1, 2011.

APPENDIX A

Howard Hughes Medical Institute shall:

1. Perform compensation for unauthorized impacts to approximately 0.01 acre of palustrine forested wetland by purchasing 0.02 credits from a DEQ approved wetland mitigation bank located within the same U.S.Geologic Survey Hydrologic Unit Code (HUC) as the project site or an adjacent HUC located within the Potomac River watershed. Proof of said purchase shall be submitted to DEQ within 30 days of the execution of this Consent Order.

2. Complete 437 linear feet of stream stabilization in accordance with the DEQ approved final stream stabilization plan prepared for Howard Hughes by Wetland Studies and Solutions, Inc. dated May 14, 2009. The stream stabilization performed in accordance with the approved plan shall be implemented by Howard Hughes within one year of the execution of this Consent Order. Howard Hughes shall submit notification to DEQ within 30 days of completion of construction.

3. Complete and submit a monitoring report to DEQ no earlier than 12 months after completion of the activities described in the DEQ approved stream stabilization plan, and no later than December 31, 2010. This one year monitoring event (scheduled after the first full growing season) is to verify the success criteria have been met. The required success criteria are as follows:
    i. Using three randomly located 10-foot diameter plots to measure herbaceous plant coverage, herbaceous plant coverage of at least 30% must be achieved by the end of the first growing season.

    ii. Woody plant coverage (from live-stakes, tublings, container grown material, and volunteers) along stream banks shall achieve a density of at least 1 stem per 8 linear feet of streambed by the end of the first growing season.

    iii. The cross sectional area of three permanent cross sections (located at approximate stations 1+00, 1+75, and 3+00) shall not increase or decrease by an amount greater than 25% from the post construction cross sectional area. For comparison purposes, the baseline elevation used to determine the cross sectional area shall be the as-built (post construction) top of bank elevation.

    The monitoring report will include ground level photographs depicting site conditions present prior to construction, during construction, immediately after construction, and one year after construction. The report shall also include a narrative description of

overall site conditions one year post construction, including but not limited to a discussion of overall stream stabilization, any observed or known alterations, maintenance, and or major storm events.

4. Complete compensation monitoring for the Palustrine Forested Wetland creation site which is in the final year, Year 5, of monitoring, in accordance with the DEQ approved compensation plan. Success of the compensation site will be determined if the monitoring reports indicate that success criteria in the DEQ approved plan have been met. Confirmation from DEQ that the site meets the success is required for compliance with this provision of Appendix A.

5. Assuming compliance with Appendix A, modification of VWP Permit No. WP4-03-1537 is not required.

6. This Order resolves all violations alleged in NOV No.W2008-09-N-003 and NOV No.2008-09-NRO-001.