COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY
NORTHERN VIRGINIA REGIONAL OFFICE
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Secretary of Natural Resources

David K. Paylor
Director

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Regional Director

VIRGINIA WASTE MANAGEMENT BOARD ENFORCEMENT ACTION

ORDER BY CONSENT

ISSUED TO

CHEMETRICS INCORPORATED

SECTION A: Purpose

This is a Consent Order issued under the authority of Section 10.1-1455 of the Code of Virginia between the Virginia Waste Management Board and Chemetrics Inc., for the purpose of resolving certain violations of environmental laws and regulations.

SECTION B: Definitions

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

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

2. "Board" means the Virginia Waste Management Board, a permanent citizens' board of the Commonwealth of Virginia and described in Va. Code § 10.1-1401 and 10.1-1184.

3. "Department" or "DEQ" means the Department of Environmental Quality, an agency of the Commonwealth of Virginia as described in § 10.1-1183.

4. "Director" means the Director of the Department of Environmental Quality.

5. "Order" means this document, also known as a Consent Order.

6. "CFR" means the Code of Federal Regulations.

7. "Regulations" means the Virginia Hazardous Waste Management Regulations (VHWMR), 9 VAC 20-60-12 *et seq.*, which incorporate text from Title 40 of the Code of Federal Regulations.

8. "NVRO" means the Northern Virginia Regional Office of DEQ, located in Woodbridge, Virginia.

9. "Chemetrics" means Chemetrics Inc., a corporation registered and authorized to do business in Virginia.

SECTION C: Finding of Facts and Conclusions of Law

1. Chemetrics operates a facility located at 4295 Catlett Road (Route 28), Calverton, Virginia ("Facility"). At the Facility, Chemetrics manufactures water and wastewater analysis products that are marketed worldwide. Chemetrics has been in continuous operation at the Facility since 1979.

2. As part of its manufacturing process, Chemetrics evaluates the performance of a particular water analysis reagent in their Quality Control (QC) department by making small volumes of their standard solution that contain concentrations of the particular analyte being evaluated. Chemetrics' QC department tests its products by adding several drops of an accessory solution to the volume of the prepared standard solution.

3. DEQ inspected Chemetrics on October 16, 1998 in response to an anonymous complaint that the company was disposing of chemicals down the drains. DEQ's inspection detected no violations at the company and determined at that time that the company was in compliance with the Regulations.

4. On August 10, 2005, NVRO staff conducted a hazardous waste compliance evaluation inspection at the Facility. During the inspection, NVRO staff observed several apparent violations of the Regulations, namely, the Facility's personnel advised that small quantities of excess testing solutions contained in laboratory beakers were being disposed into the Facility's laboratory drains.

5. With regards to Chemetrics laboratory wastewater, it drains to a septic tank that discharges to a drainfield. The original septic system drainfield was constructed north of the Facility in 1979 ("1979 drainfield") with a larger one installed in a separate location south of the Facility in 1988 ("1988 drainfield"). Chemetrics operated both drainfields simultaneously until 2002. A portion of the flow from the labs and production area sinks and floor drains were directed into the 1979 drainfield by a diversion valve. In 2002, Chemetrics abandoned the 1979 and 1988 drainfields and replaced them with a new drainfield that is currently in use southwest of the Facility ("2002 drainfield").

6. In 2004, Chemetrics constructed a new warehouse on top of the abandoned 1988 drainfield area. The general contractor undercut the entire footprint of the building two feet and Chemetrics asserts that he did not get into the drainfield piping or the stone fill. The two feet of cut soil was used to form the sloping perimeter of the building.

7. A Phase I Site Assessment ("Site Assessment") of the Facility that was related to another matter was completed by Engineering Consulting Services, Ltd. ("ECS") and dated October 24, 2001. Among other things, ECS in the Site Assessment noted that the 1979 drainfield appeared not to be functioning properly and suggested that Chemetrics should either eliminate discharges of wastewater that contain chemical products from the lab sinks and floor drains or construct a pre-treatment system to remove contaminants from the wastewater prior to discharge into the septic tank.

8. Based upon Chemetrics written procedures and admissions from Facility personnel during NVRO's inspection, employees disposed of excess chemical solutions, which include cyanide, phenol, mercury, and other unknown chemicals, down the laboratory drains that discharge to the drainfields. Chemetrics failed to make a waste determination of the laboratory wastes prior to disposing of them down the drain as required by 9 VAC 20-60-262 and 40 CFR 262.11.

9. Generally, mercury, cyanide, and phenol are "hazardous wastes" pursuant to 9 VAC 20-60-261, 40 CFR 261.20 and 40 CFR 261.33 because they have characteristics of, or are listed as hazardous wastes. Chemetrics failed to identify and treat the laboratory wastes as hazardous waste prior to disposing of them down the drain and to the drainfields.

10. Pursuant to 9 VAC 20-60-268 and 40 CFR 268.7(a), a generator of hazardous waste must determine if the waste has to be treated before it can be land disposed.

11. Neither the Director of the Department, his predecessor-in-interest, nor the Board has ever issued a permit under the Regulations for land disposal of hazardous waste at the Facility by Chemetrics. Chemetrics has not applied for or been granted either interim status or a permit for the operation of a hazardous waste treatment, storage or disposal facility.

12. Pursuant to Va. Code § 10.1-1426, 9 VAC 20-60-270, and 40 CFR 270.1(c), a person is required to have a permit from the Director to treat, store, or dispose of hazardous waste.

13. Chemetrics is a "person" as that term is defined by 9 VAC 20-60-260 and 40 CFR 260.10.

14. The 1979, 1988, and 2002 drainfields are "Hazardous waste management units" as that term is defined by 9 VAC 20-60-260 and 40 CFR 260.10.

15. The Facility is a "facility" as that term is defined by 9 VAC 20-60-260 and 40 CFR 260.10.

16. DEQ alleges that the operation of the Facility for land disposal of hazardous waste without a permit violated Va. Code § 10.1-1426.A (general permit requirement) and the applicable standards and permit requirements of 40 CFR 264 and 268. DEQ alleges that in operating the Facility that Chemetrics failed to comply with the following requirements: (1) 40 CFR 262.10, 40 CFR 262.11 (hazardous waste determination); (2) 40 CFR 262 Subpart B (manifest requirement); (3) 40 CFR 262 Subpart C (pre-transport requirements); (4) 40 CFR 262 Subpart D (record keeping and reporting); (5) 40 CFR 264 Subpart B (general facility standards); (6) 40 CFR 264 Subpart C (preparedness and prevention); (7) 40 CFR 264 Subpart D (contingency plan and emergency procedures); (8) 40 CFR 264 Subpart E (manifest system, record keeping and reporting); (9) 40 CFR 264 Subpart F (releases from solid waste management units); (10) 40 CFR 264 G (closure and post-closure); (11) 40 CFR 264 Subpart H (financial requirements); (12) 40 CFR 268 Subpart A (land disposal restrictions) and (13) 40 CFR 270 (permit requirements). Furthermore, DEQ alleges that the failure of Chemetrics to notify DEQ of the disposal activities at the Facility violated Va. Code § 10.1-1426.B, 9 VAC 20-60-305, 9 VAC 20-60-315, and 9 VAC 20-60-325.

17. NVRO issued a Notice of Violation to Chemetrics on October 13, 2005 ("October 2005 NOV") that alleged improper management of hazardous waste and that the Facility was an unpermitted hazardous waste treatment, storage, and disposal facility pursuant to Va. Code § 10.1-1426, 9 VAC 20-60-270, and 40 CFR 270.1.

18. In response to the October 2005 NOV, Chemetrics asserts that it has been aggressive in making changes to its hazardous waste management practices and has addressed most of the compliance issues detailed in the October 2005 NOV. Chemetrics has agreed to perform the actions described in Appendix A to address the remaining compliance issues.

SECTION D: Agreement and Order

Accordingly, the Virginia Waste Management Board, by virtue of the authority granted it in Va. Code § 10.1-1182 *et seq.* and § 10.1-1402, 10.1-1405, and 10.1-1455, orders Chemetrics, and Chemetrics voluntarily agrees that:

1. Chemetrics shall perform the actions described in Appendix A of this Order to remedy violations described above and achieve compliance with the Virginia Hazardous Waste Management Regulations.

2. Chemetrics shall pay a civil charge of $19,000 in settlement of the alleged violations cited in this Order as follows: (i) $9,500 within 30 days of the effective date of this Order; and (ii) $9,500 within 90 days of submittal of site

3. characterization plans (SCPs). If Chemetrics fails to submit the SCPs it shall submit a payment of $9,500 to the Department within 90 days after the effective date of this Consent Order. Payment shall be made by check payable to the "Treasurer of Virginia",

Receipts Control
Department of Environmental Quality
P.O. Box 10150
Richmond, Virginia 23240

Either on a transmittal letter or as a notation on the check, Chemetrics shall indicate that this payment is submitted pursuant to this Order and shall include the Federal Identification Number for Chemetrics.

SECTION E: Administrative Provisions

1. The Board may modify, rewrite, or amend the Order with the consent of Chemetrics, for good cause shown by Chemetrics, or on its own motion after notice and opportunity to be heard.

2. This Order addresses and resolves those violations specifically identified herein, including those matters addressed in the NOV issued on October 13, 2005 and listed in Section C above. 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 occurring after the date of this Order; (2) seeking subsequent remediation of the facility as may be authorized by law; or (3) taking subsequent action to enforce the Order. This Order shall not preclude appropriate enforcement actions by other federal, state, or local regulatory authorities for matters not addressed herein.

3. For the purpose of this Order only, Chemetrics admints the jurisdictional allegations in the Order but does not admit the factual allegations or legal conclusions contained herein.

4. Chemetrics 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. Chemetrics acknowledges that it has received fair and due process under the Administrative Process Act, Va. Code § 2.2-4000 *et seq.*, and the Virginia Waste Management Act, 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 enforce this Order.

6. Failure by Chemetrics to comply with 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. Chemetrics shall be responsible for failure to comply with any of the terms and conditions by this Order unless compliance is made impossible by earthquake, flood, other acts of God, war, strike, or such other occurrence. Chemetrics shall show that such circumstances were beyond its control and not due to a lack of good faith or diligence on its part. Chemetrics shall notify the DEQ Regional Director in writing 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 within three (3) business days of learning of any condition above, which Chemetrics intends 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, their successors in interest, designees and assigns, jointly and severally.

10. Any plans, reports, schedules, permits, or specification attached hereto or submitted by Chemetrics 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.

11. This Order shall become effective upon execution by both the Director or his designee and Chemetrics. Notwithstanding the foregoing, Chemetrics agrees to be bound by any compliance date, which precedes the effective date of this Order.

12. This Order shall continue in effect until the Director or Board terminates the Order in his or its sole discretion upon 30 days written notice to Chemetrics. Termination of this Order, or any obligation imposed in this Order, shall not operate to relieve Chemetrics from its obligation to comply with any statute, regulation, permit condition, other order, certificate, certification, standard, or requirement otherwise applicable.

13. The undersigned representative of Chemetrics 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 Chemetrics to this document. Any documents submitted pursuant to this Order shall also be submitted by a responsible office of Chemetrics.

14. By its signature below, Chemetrics voluntarily agrees to the issuance of this Order.

And it is so ORDERED this day of _____, 2006.

_____

Jeffery A. Steers, Regional Director
Northern Virginia Regional Office
Department of Environmental Quality

Chemetrics voluntarily agrees to the issuance of this Order.

By: Bruce H. Rampy
Bruce H. Rampy, Vice-President
Chemetrics, Inc.

Date: August 3 2006

Commonwealth of Virginia
City/County of Fauquier

The foregoing document was signed and acknowledged before me this 3rd day of August, 2006, by Bruce H. Rampy, Vice-President of Chemetrics, Inc., on behalf of Chemetrics, Inc.

Gloria M. Crittenden
Notary Public

My commission expires: 2/29/08

APPENDIX A
SCHEDULE OF COMPLIANCE

Chemetrics shall:

1. Upon the effective date of this Order and until all applicable items in the schedule of compliance are complete, Chemetrics shall operate the Facility in accordance with 40 CFR 264 Subpart B and 40 CFR 264.226, to the extent that these requirements are applicable.

2. Within thirty (30) days of the date of execution of the Order by Chemetrics and the Director, Chemetrics shall submit to DEQ for review and approval,site characterization plans ("SCPs") for potential soil and groundwater contamination at the 1979, 1988, and 2002 drainfields to assess the nature and extent of hazardous waste constituents associated with waste residues, contaminated system components, contaminated subsoils, structures, and equipment contaminated with waste and leachate to determine what, if any, actions need to be taken to meet the closure requirements of 40 CFR 264.228. Such site characterizations will include the determination of background levels of hazardous waste constituents in areas unaffected by hazardous waste management activities and from a soil of similar geology and soil type as the unit subsoil for the purposes of determining applicable cleanup levels as established by the DEQ's "Guidance Manual for Closure Plans and Post-closure Plans for Hazardous Waste Management Facilities" (dated September 28, 2001).

   Upon DEQ's approval, Chemetrics shall promptly implement and diligently pursue the requirements of the SCP and shall submit the results to DEQ by no later than seventy-five (75) days after DEQ's written approval of the plan.

3. Based on the results of the SCPs, within forty-five (45) days after delivery of each SCP report to DEQ and DEQ notifies Chemetrics that it has completed its review of the SCP reports, Chemetrics shall submit a closure plan or closure plans for closure by removal or decontamination of all waste residues, contaminated system components, contaminated subsoils, structures, and equipment contaminated with waste and leachate for the 1979, 1988, and 2002 drainfields. The closure plan shall meet the requirements of 40 CFR 264 Subpart G and 40 CFR 264.228 and may reflect that no further action is required because, inter alia, contaminants are not found at levels above clean-up levels as established in Pararagh 2 above. DEQ shall approve, or modify and approve, this plan in accordance with the Regulations. The closure plan shall also include, but is not limited to, the following:

   a) Provisions allowing for risk-based closure through the conduct of a risk-based assessment, which may be developed as an alternative to the non-detection

decontamination standard or the statistical comparison to background levels to determine site-specific decontamination standards, and which will comply with risk-based closure criteria and the document titled "Guidance for the Development of Health Based Cleanup Goals Using Decision Tree/Risk Exposure and Analysis Modeling System (REAMS) Program, 1994 and Risk Based Methodology" prepared by DEQ, as amended.

b) A groundwater monitoring plan for the 1979, 1988, and 2002 drainfields, if needed, that meet the requirements of 40 CFR 264 Subpart F, modified as necessary to meet the closure performance standard of 40 CFR 264.111. DEQ shall approve, or modify and approve, this plan in accordance with the Regulations. Chemetrics shall implement these plans (closure and groundwater monitoring) within thirty (30) days after receipt of DEQ's written notice of approval.

c) Initial contingent closure and contingent post-closure plans, prepared in accordance with 40 CFR 264 Subpart G and 40 CFR 264.310 for the 1979, 1988, and 2002 drainfieldsin the event Chemetrics is unable to satisfy the requirements for closure by removal or decontamination under 40 CFR 264.228 or by risk-based closure referenced above. DEQ shall provide for public notice, and shall approve, or modify and approve, these plans in accordance with 40 CFR 264.112(d)(4).

d) Evidence of financial assurance in accordance with 40 CFR 264 Subpart H for the 1979, 1988, and 2002 drainfields. Please refer to 40 CFR 264.228(c)(2) for the cost estimates that are also required in the plan. Chemetrics shall modify the amount of such financial assurance as necessary in response to any modifications of the closure plan approved of by DEQ.

4. Upon receipt of DEQ's written notice of approval, Chemetrics shall complete closure of the drainfields in accordance with the schedule in the approved closure or contingent closure plans, whichever applies, which includes all modifications approved by DEQ.

5. If the 1979, 1988, and 2002 drainfields are closed in accordance with the approved closure plan, Chemetrics shall provide DEQ owner/operator and professional engineer certifications as required by 40 CFR 264.115. However, if closure in accordance with the closure plan cannot be achieved (i.e., "clean closure"), Chemetrics shall notify DEQ in writing within five (5) days of Chemetrics such determination and begin implementation of the approved contingent closure and contingent post-closure plans as applicable. The notification of contingent closure shall constitute a determination that the 1979, 1988, and 2002 drainfields must be closed as landfills in accordance with 40 CFR 264.310.

6. Within thirty (30) days of Chemetrics notification to DEQ that closure in accordance with the closure plan cannot be achieved and/or it cannot be demonstrated that groundwater contaminant levels are at or below risk based levels as established by Safe Drinking Water Act MCLs or at or below background concentrations, Chemetrics shall submit evidence of financial assurance for contingent plans for closure and post-closure care as a hazardous waste landfill in accordance with 40 CFR 264 Subpart H. Chemetrics shall modify such financial assurance as necessary in response to any changes approved by DEQ in the closure and/or post-closure plans.

7. Within 180 days of Chemetrics notification to DEQ that closure in accordance with the closure plan cannot be achieved and/or it cannot be demonstrated that groundwater contaminant levels are below risk based levels, Chemetrics shall submit to DEQ a permit application and required application fees, for groundwater monitoring, Corrective Action, and, if applicable, post-closure care pursuant to 40 CFR 264 Subpart F, 40 CFR 264.117 through 264.120, 40 CFR Subpart N, 40 CFR 270.1, and 40 CFR 270 Subpart B.

8. Chemetrics shall respond to any Notice of Deficiencies issued with respect to the groundwater monitoring plan, the closure and post-closure plans, and/or the permit application by the time period provided in the Notice unless Chemetrics has both requested and received an extension(s). If an extension(s) is granted, failure to respond by the end of the extension constitutes failure to respond to the Notice of Deficiency and may constitute a violation of this Order.

9. Chemetrics shall submit all materials required by Appendix A to:

Carl Ciccarelli
Regional Enforcement Specialist
Virginia Department of Environmental Quality
Northern Virginia Regional Office
13901 Crown Court
Woodbridge, VA 22193