



# COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY  
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Secretary of Natural Resources

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Director

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**STATE WATER CONTROL BOARD  
ENFORCEMENT ACTION - ORDER BY CONSENT  
ISSUED TO  
DUPONT TEIJIN FILMS U.S. LIMITED PARTNERSHIP  
FOR  
DUPONT TEIJIN FILMS, HOPEWELL SITE  
VPDES Permit No. VA0003077**

## **SECTION A: Purpose**

This is a Consent Order issued under the authority of Va. Code § 62.1-44.15, between the State Water Control Board and DuPont Teijin Films U.S. Limited Partnership regarding the DuPont Teijin Films, Hopewell Site for the purpose of resolving certain violations of the State Water Control Law and the applicable permit and regulation.

## **SECTION B: Definitions**

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

1. "305(b) report" means the report required by Section 305(b) of the Clean Water Act (33 United States Code § 1315(b)), and Va. Code § 62.1-44.19:5 for providing Congress and the public an accurate and comprehensive assessment of the quality of State surface waters.
2. "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.
3. "BOD" means biochemical oxygen demand.
4. "CBOD" means carbonaceous biochemical oxygen demand.

5. "Category 5D waterbody" means the water quality standard is not attained where TMDLs for a pollutant(s) have been developed but one or more pollutants are still causing impairment requiring additional TMDL development.
6. "Department" or "DEQ" means the Department of Environmental Quality, an agency of the Commonwealth of Virginia, as described in Va. Code § 10.1-1183.
7. "Director" means the Director of the Department of Environmental Quality, as described in Va. Code § 10.1-1185.
8. "Discharge" means discharge of a pollutant. 9 VAC 25-31-10.
9. "Discharge of a pollutant" when used with reference to the requirements of the VPDES permit program means:
  - (a) Any addition of any pollutant or combination of pollutants to surface waters from any point source; or
  - (b) Any addition of any pollutant or combination of pollutants to the waters of the contiguous zone or the ocean from any point source other than a vessel or other floating craft which is being used as a means of transportation.
10. "DMR" means Discharge Monitoring Report.
11. "DTF" means DuPont Teijin Films U.S. Limited Partnership a limited partnership authorized to do business in Virginia and its affiliates, partners and subsidiaries. DTF is a "person" within the meaning of Va. Code § 62.1-44.3.
12. "Effluent" means wastewater – treated or untreated – that flows out of a treatment plant, sewer, or industrial outfall.
13. "EPA" means the Environmental Protection Agency.
14. "Facility" means the wastewater treatment system located at DuPont Teijin Films, 3600 Discovery Drive, Chesterfield, Virginia. The wastewater treatment system is comprised of two treatment plants. One plant is a process wastewater treatment plant and the second plant is a sanitary wastewater treatment plant. The process wastewater plant discharges through internal Outfall 101 and the sanitary wastewater plant discharges through internal Outfall 102. Both Outfalls 101 and 102 ultimately discharge to the James River via Outfall 001. These plants operate, treat and discharge treated effluent from DTF's business operations under VPDES Permit No. VA0003077.
15. "MGD" means million gallons a day.

16. "Notice of Violation" or "NOV" means a type of Notice of Alleged Violation under Va. Code § 62.1-44.15.
17. "O&M" means operations and maintenance.
18. "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.
19. "PCBs" means polychlorinated biphenyls.
20. "Permit" means VPDES Permit No. VA0003077, which was issued under the State Water Control Law and the Regulation to DTF on September 15, 2011 and expires on September 14, 2016.
21. "Pollutant" means dredged spoil, solid waste, incinerator residue, filter backwash, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials (except those regulated under the Atomic Energy Act of 1954, as amended (42 USC § 2011 *et seq.*)), heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural waste discharged into water... 9 VAC 25-31-10.
22. "Pollution" means such alteration of the physical, chemical, or biological properties of any state waters as will or is likely to create a nuisance or render such waters (a) harmful or detrimental or injurious to the public health, safety, or welfare or to the health of animals, fish, or aquatic life; (b) unsuitable with reasonable treatment for use as present or possible future sources of public water supply; or (c) unsuitable for recreational, commercial, industrial, agricultural, or other reasonable uses, provided that (i) an alteration of the physical, chemical, or biological property of state waters or a discharge or deposit of sewage, industrial wastes or other wastes to state waters by any owner which by itself is not sufficient to cause pollution but which, in combination with such alteration of or discharge or deposit to state waters by other owners, is sufficient to cause pollution; (ii) the discharge of untreated sewage by any owner into state waters; and (iii) contributing to the contravention of standards of water quality duly established by the Board, are "pollution." Va. Code § 62.1-44.3.
23. "PRO" means the Piedmont Regional Office of DEQ, located in Glenn Allen, Virginia.
24. "Regulation" means the VPDES Permit Regulation, 9 VAC 25-31-10 *et seq.*
25. "SOP" means standard operating procedure.
26. "State Water Control Law" means Chapter 3.1 (§ 62.1-44.2 *et seq.*) of Title 62.1 of the Va. Code.

27. "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. Va. Code § 62.1-44.3
28. "Tier 1 water" means a water body which meets all adopted water quality standards and in which all existing instream water uses and level of water quality must be maintained and protected.
29. "TMDL" means total maximum daily load.
30. "TSS" means total suspended solids.
31. "Va. Code" means the Code of Virginia (1950), as amended.
32. "VAC" means the Virginia Administrative Code.
33. "VPDES" means Virginia Pollutant Discharge Elimination System.
34. "WLA" means waste load allocation.

### **SECTION C: Findings of Fact and Conclusions of Law**

1. DTF owns and operates two wastewater treatment plants at the Facility. One plant is a process wastewater treatment plant and the second plant is a sanitary wastewater treatment plant. The process wastewater plant discharges through internal Outfall 101 and the sanitary wastewater plant discharges through internal Outfall 102. Flow from both Outfalls 101 and 102 combine and ultimately discharge to the James River via Outfall 001. These plants operate under the Permit which allows DTF to discharge treated sewage and other industrial wastes from the Facility, in strict compliance with the terms and conditions of the Permit.
2. During the 2014 305(b)/303(d) Integrated Water Quality Assessment, the James River was assessed as a Category 5D waterbody. The Aquatic Life Use is impaired due to inadequate submerged aquatic vegetation (SAV), chlorophyll *a* criteria exceedances, and an altered benthic community. The Recreation Use is impaired due to *E. coli* exceedances. The Fish Consumption Use is impaired due to a Virginia Department of Health fish advisory for PCBs and due to exceedances of the water quality standard for PCBs; in addition, arsenic, mercury and kepone are considered non-impairing "observed effects". The Public Water Supply Use is impaired due to PCBs in the water column. The Wildlife Use is fully supporting. The James River is considered a Tier 1 water.
3. DTF was included in the Chesapeake Bay TMDL, which was approved by the EPA on December 29, 2010. The Facility is included in the aggregated wasteload allocations for total nitrogen, total phosphorus, and total suspended solids for non-significant wastewater

dischargers in the upper tidal freshwater James River estuary (JMSTF2). In addition, the Facility was addressed in the James River and Tributaries – City of Richmond Bacterial TMDL, which was approved by the EPA on November 4, 2010, and the Board on June 29, 2012. The Facility was initially assigned an *E. coli* wasteload allocation (WLA) of 1.74E+12 cfu/year; however, DTF subsequently reduced flow from the Facility to 0.009 MGD and the WLA was reduced to 1.57E+10 cfu/year through an interim modification.

4. On the December 2014 DMR, DTF reported a 12.9 kg/d BOD maximum loading which exceeds the Permit limit of 8.6 kg/d, and a 5.3 kg/d BOD average loading which exceeds the Permit limit of 3.2 kg/d.
5. On January 29, 2015, the Department issued DTF Warning Letter W2015-01-P-1004 citing it for the December 2014 BOD Permit effluent violations.
6. DTF submitted DMRs for the January, February April, May and June 2015 monitoring periods that indicate Permit effluent limit violations of BOD5, *E. coli*, TSS, and CBOD5, a failure to monitor flow at the required frequency, and a failure to collect an annual *E. coli* sample.
7. At the industrial process outfall 101, DTF reported BOD5 average loadings in April (>12.7 kg/d), May (>74.4 kg/d), and June (8.1 kg/d) of 2015 which exceeded the Permit limit of 3.2 kg/d. DTF reported BOD5 maximum loadings in April (>54.2 kg/d), in May (>126.2 kg/d), and in June (31.3 kg/d) of 2015 which exceeded the Permit limit of 8.6 kg/d.
8. At the sanitary wastewater outfall 102, DTF reported an *E. coli* sample results of 407.7 in January 2015 that exceeded the Permit limit of 126 #C/ml. In addition, in February 2015 DTF reported a TSS average concentration of 32.7 mg/L which exceeded the Permit limit of 30 mg/L, and a TSS maximum concentration violation of 50 mg/L which exceeded the Permit limit of 45 mg/L.
9. At the combined Outfall 001, DTF reported a CBOD5 average loading of 76.93 mg/L vs. a Permit limit of 69 mg/L in May 2015. In June 2015, DTF did not report a numerical value for flow rate because it failed to monitor flow continuously as required by the Permit.
10. On August 21, 2015, the Department issued NOV No.W2015-08-P-0003 citing DTF for the effluent and monitoring violations reported on the DMRs for the January through June 2015 monitoring periods.
11. On September 16, 2015, the Department met with DTF to discuss the citations in the NOV and a potential Consent Order to address the noncompliance issues.

12. On September 18, 2015, DTF submitted a conceptual engineering report for the installation of coarse bubble diffusers in the process wastewater equalization basin to help reduce negative impacts to the biomass from chemical spills and unexpected high strength influents.
13. DTF submitted DMRs for the January through April 2016 monitoring periods that indicated Permit effluent limit violations of BOD5 and *E. coli* effluent limits.
14. At the industrial process outfall 101, DTF reported BOD5 average loadings of >2.7 mg/L in January 2016 and >3.1 mg/L in April 2016 (Permit effluent limit of 3.2 mg/L) and BOD5 maximum loadings of >8.1 mg/L in January 2016 and > 5.4 mg/L in April 2016 (Permit effluent limit of 8.6 mg/L).
15. At the sanitary wastewater outfall 102, DTF reported an *E. coli* sample result of >98 (Permit effluent limit of 126) in November 2015 and a BOD5 maximum concentration of 64 mg/L (Permit effluent limit of 45.0 mg/L) in March 2016.
16. At the combined Outfall 001, DTF sampled, but failed to report a numerical value for *E. coli* for the October 2014 through September 2015 annual monitoring period. A DTF report indicates the sample was taken on October 6, 2015 and not during the Permit required monitoring period.
17. On May 19, 2016, the Department issued NOV No. W2016-05-P-0002 citing DTF for the BOD5 and *E. coli* effluent violations reported on the DMRs for the January through April 2016 monitoring periods and the failure to monitor for *E. coli* at outfall 001 during the October 2014 through September 2015 monitoring period.
18. A meeting was held on July 13, 2016, to discuss the NOV and the continuing compliance issues at the Facility. DTF stated that after discussions with its contract lab, it requested additional dilutions to the BOD test in order to cover the variable range of potency in wastewaters generated at the Facility. DTF stated that the > value for *E. coli* at outfall 102 was a lab error and a single isolated anomaly. In addition, DTF stated that the missed annual *E. coli* sample at outfall 001 was an oversight and three DTF staff members had set up calendar alerts to remember to collect that annual sample. DTF indicated it had process control changes and capital improvements planned to ensure compliance with the effluent issues at the Facility.
19. On January 17, 2017, Department staff conducted an inspection of the Facility and observed a number of compliance deficiencies. On March 6, 2017, the Department mailed an inspection report to DTF with a list of requested items to ensure compliance with the Permit. On April 5, 2017, DTF responded to the inspection report and provided a list of corrective actions and scheduled dates that are incorporated into the appendix of this Order.

20. DTF's records indicate that it discharged treated wastewater from the Facility every day from October 1, 2014, through May 1, 2017.
21. Va. Code § 62.1-44.5 states that: "except in compliance with a certificate issued by the Board, it shall be unlawful for any person to discharge into state waters sewage, industrial wastes, other wastes, or any noxious or deleterious substances."
22. The Regulation, at 9 VAC 25-31-50, also states that except in compliance with a VPDES permit, or another permit issued by the Board, it is unlawful to discharge into state waters sewage, industrial wastes or other wastes.
23. Va. Code § 62.1-44.15(5a) states that a VPDES permit is a "certificate" under the statute.
24. The Department has issued no other VPDES permits or certificates regarding the operating requirements discussed herein to DTF other than VPDES Permit No. VA0003077.
25. The James River is a surface water located wholly within the Commonwealth and is a "state water" under State Water Control Law.
26. Based on the September 16, 2015, and July 13, 2016, meetings, documentation submitted by DTF and the January 17, 2017 inspection, the Board concludes that DTF has violated the Permit, Va. Code § 62.1-44.5 and 9 VAC 25-31-50, by discharging treated effluent from the Facility while concurrently failing to comply with the conditions of the Permit, as described in the paragraphs above.
27. In order for DTF to complete its return to compliance, DEQ staff and representatives of DTF have agreed to the Schedule of Compliance, which is incorporated as Appendix A of this Order.

**SECTION D: Agreement and Order**

Accordingly, by virtue of the authority granted it in Va. Code §§ 62.1-44.15, the Board orders DTF and DTF agrees to:

1. Perform the actions described in Appendix A of this Order; and
2. Pay a civil charge of \$28,000.00 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

DTF 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, DTF 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 DTF for good cause shown by DTF, 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, DTF admits the jurisdictional allegations, findings of fact, and conclusions of law contained herein.
4. DTF 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. DTF 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 DTF 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. DTF 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. DTF shall demonstrate that such circumstances were beyond its control and not due to a lack of good faith or diligence on its part. DTF 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 DTF. Nevertheless, DTF 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 DTF has completed all of the requirements of the Order;
  - b. DTF 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 DTF.

Termination of this Order, or any obligation imposed in this Order, shall not operate to relieve DTF 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 DTF 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 DTF certifies that he or she is a responsible official or officer authorized to enter into the terms and conditions of this Order and to execute and legally bind DTF to this document. Any documents to be submitted pursuant to this Order shall also be submitted by a responsible official of DTF.
- 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, DTF voluntarily agrees to the issuance of this Order.

And it is so ORDERED this 17 day of August, 2017.

  
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Jefferson D. Reynolds,  
Department of Environmental Quality  
Enforcement Division Director

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DuPont Teijin Films U.S. Limited Partnership voluntarily agrees to the issuance of this Order.

Date: 6/15/2017 By: *Mark W. Allen*, for Teijin-DuPont Films, Inc.,  
(Person)

General Partner for DuPont Teijin Films U.S. Limited Partnership

Commonwealth of Virginia  
~~City/County of~~ Chesterfield

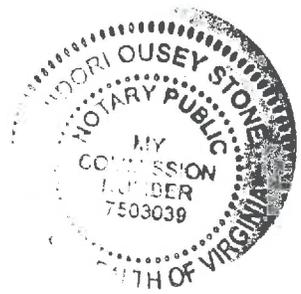
The foregoing document was signed and acknowledged before me this 15<sup>th</sup> day of June, 2017, by Mark W. Allen, for Teijin-DuPont Films, Inc., General Partner, on behalf of DuPont Teijin Films U.S. Limited Partnership, a limited partnership.

*Mideri Ousey Stone*  
Notary Public

7503039 Registration #: 7503039  
Registration No. Commission Expires: June 30, 2019

My commission expires: June 30, 2019

Notary seal:



## APPENDIX A

DTF shall:

1. Within thirty days of the issuance of this Order, submit to the Department a copy of a written formal request to its current contract laboratory requesting an increase in the number of dilutions analyzed to prevent dilution errors.
2. From July 1, 2017 through December 31, 2017, conduct split sampling with another VELAP accredited lab for the outfall 101 BOD analyses. For DMR reporting from 2 labs, DTF shall average the results from the split samples that are within Quality Assurance (QA) specifications in the geometric mean calculation. The laboratory should run proper dilutions in order to obtain actual numbers for the split samples. Additionally DTF shall note in the DMR comments section how the data is derived.
3. Within 60 days of the issuance of this Order, submit to the Department for review and approval a Corrective Action Plan (CAP) and schedule detailing operation and maintenance procedures and capital improvement projects, including an analysis of potential hydraulic and organic overloading of the process wastewater treatment plant, that it will implement to prevent the loss of biomass and effluent violations from variable strength influent. DTF shall implement the plan and schedule within thirty days of receipt of DEQ approval.
4. Within 180 days of the issuance of this Order, submit to the Department an updated Operation and Maintenance (O&M) Manual for the Bioplant prepared in compliance with 9 VAC25-790-950. The update shall include the following:
  - Detailed site map/location data and procedures for handling, storing and disposing of all process water and pollutants in the 174,000 gallon “Big Blue” tank, the 50,000 gallon “Holding Tank” (adjacent to the Bioplant), the “Effluent Pit” and the “Line 40/45” sump.
  - Operational details, practices and procedures for the “Line 40/45” sump.
  - Operational details, practices and procedures for the “Effluent Pit.”
  - A detailed water balance with discussion on sources, including all production lines, storage tanks, and the return activated sludge (RAS) line, and how DTF calculates influent flows.
  - A detailed description of the “Bio Health” process control testing at the Bioplant utilized by DTF to include information on how the test is performed, how the results are interpreted, and which actions should be taken based on the results.
  - Procedures and a routine schedule for maintaining spill control gates in operable condition.

- Procedures for maintaining compliance with the Permit while conducting annual maintenance of the membrane filters.
  - Communication procedures and responsibilities between production staff and the process wastewater treatment plant operators to ensure the operators' awareness of the volume and characteristics of influent and/or any process upsets that could negatively impact the process wastewater treatment plant.
5. On or before August 1, 2017, submit to the Department a detailed review of the Facility's storm-water pollution prevention program and a SWPPP which addresses the deficiencies and recommendations of the detailed review as well as the requirements for the SWPPP contained in the Permit. As part of its review, DTF shall collect, analyze, and submit results to the Department for the pollutant specific tests per Permit Part I.E.1.a. that were required to be collected in 2016. Samples shall be collected and analyzed in accordance with Part I.E. of the Permit.
  6. On or before July 30, 2017, submit to the Department documentation that the RAS flow meters for the Bioplant have been purchased and installed at the process wastewater treatment plant.
  7. On or before August 1, 2017, provide documentation to the Department that the aeration basin wall in the sanitary sewer plant has been repaired.
  8. Beginning with the effective date of this Order and until this Order is terminated, submit to the Department quarterly routine Facility inspection reports as required in Part I E.3.b.(6)(b)(v) of the Permit.
  9. DTF shall perform the following EMS identified below in the manner specified in this Appendix and/or obtain ISO 14000 certification.

**General EMS Provision:**

A comprehensive compliance-focused EMS shall be developed, implemented, and maintained by DTF. The EMS shall address, at a minimum, the 12 key elements listed below, and shall be described in an "Environmental Management System Manual."

**I. Definitions**

**"Action Plan"** means a comprehensive plan for bringing the Facility as defined below, into full conformance with the EMS provisions specified in Paragraph II.D, of this Appendix and fully addressing all Audit Findings identified in the Audit Report.

**"Audit Finding"** means a written summary of all instances of non-conformance with the provisions specified in Paragraph II.D, of this Appendix noted during the EMS audit, and

all areas of concern identified during the course of the audit which merit further review or evaluation for potential EMS, environmental, or regulatory impacts.

“**Audit Report**” means a report setting forth the Audit Findings resulting from the audit of the Facility by the Auditor, which meets all of the requirements set forth in Paragraph II.M, of this Appendix.

“**Auditor**” means the appropriately trained company personnel or independent third-party hired by DTF to conduct an EMS audit at the Facility, and who meets the requirements set forth in Paragraph II.G, of this Appendix.

“**Corrective Measures**” means those measures or actions appropriate to bring the Facility into full conformance with the EMS provisions of Paragraph II.D, of this Appendix.

“**Environmental Requirements**” means all applicable federal, state, and local environmental statutes and regulations, including permits and enforceable agreements between the DTF and the respective environmental regulatory agencies.

“**Initial Auditor**” means individual(s) meeting the requirements of Paragraph II.A, below, who are selected and/or contracted to perform the Initial EMS Review and Evaluation.

## II. Environmental Management System

- A. Initial Auditor Selection. Within 60 days of the effective day of this Order, DTF shall submit to DEQ in writing:
- the name and affiliation of the Initial Auditor(s) selected by DTF to conduct the Initial EMS Review and Evaluation;
  - evidence that each Initial Auditor(s) satisfies the qualification requirements of International Organization for Standardization (ISO) 14012 (First edition, 1996-10-01), and that the team conducting the Initial EMS Review and Evaluation, in composite, has a working process knowledge of the Facility or similar operations, and has a working knowledge of federal and state environmental requirements which apply to the Facility;
  - a schedule, including milestones, for conducting the Initial EMS Review and Evaluation.
- B. Initial Environmental Management System Review and Evaluation. DTF shall direct the Initial Auditor(s) identified pursuant to paragraph II.A, above, to conduct and complete an Initial EMS Review and Evaluation (commonly referred to as a “gap” analysis) for DTF. The designated Initial Auditor(s) shall review and

evaluate DTF's current EMS or environmental auditing system, using the elements set forth in paragraph II.D, below to identify where systems or subsystems have not been adequately developed or implemented. The results of the Initial EMS Review and Evaluation shall be documented in a report prepared by the Initial Auditor(s) and provided to DTF.

- C. Comprehensive Environmental Management System. Based on the Initial EMS Review and Evaluation results and other information, DTF shall develop a Comprehensive EMS for the Facility addressing, at a minimum, the twelve key elements presented in paragraph II.D, below. The purpose of developing the Comprehensive EMS is to assist DTF in its efforts to comply with federal, state and local environmental requirements.
- D. Environmental Management System Manual. Within two hundred seventy (270) days of the effective date of this Order, DTF shall complete the preparation of an "EMS Manual" which shall describe and document the Comprehensive EMS and contain an EMS implementation schedule for each of the described systems and subsystems not already implemented. For each of the elements identified in Paragraph II.D, below, as appropriate, the manual shall describe the EMS, in detail, by explaining how the activity or program is or will be:
- established as a formal system, subsystem or task,
  - integrated into ongoing department operations,
  - continuously evaluated and improved.

The Environmental Management System Manual shall describe respective management systems, subsystems, and tasks for the following elements:

### **1. Environmental Policy**

- a. This policy, upon which the EMS is based, must clearly communicate management commitment to achieving compliance with applicable federal, state, and local environmental statutes, regulations, enforceable agreements, and permits (hereafter, "environmental requirements") and continual improvement in environmental performance. The policy should also state management's intent to provide adequate personnel and other resources for the EMS.

### **2. Organization, Personnel, and Oversight of EMS**

- a. Describes, organizationally, how the EMS is implemented and maintained.

- b. Includes organization charts that identify units, line management, and other individuals having environmental performance and regulatory compliance responsibilities.
- c. Identifies and defines specific duties, roles, responsibilities, and authorities of key environmental program personnel in implementing and sustaining the EMS (e.g., could include position descriptions and performance standards for all environmental department personnel, and excerpts from others having specific environmental program and regulatory compliance responsibilities).
- d. Includes ongoing means of communicating environmental issues and information to all organization personnel, on-site service providers, and contractors, and for receiving and addressing their concerns.

### **3. Accountability and Responsibility**

- a. Specifies accountability and environmental responsibilities of organization's managers, on-site service providers, and contractors for environmental protection practices, assuring compliance, required reporting to regulatory agencies, and corrective actions implemented in their area(s) of responsibility.
- b. Describes incentive programs for managers and employees to perform in accordance with compliance policies, standards and procedures.
- c. Describes potential consequences for departure from specified operating procedures, including liability for civil/administrative penalties imposed as a result of noncompliance.

### **4. Environmental Requirements**

- a. Describes the process for identifying, interpreting, and effectively communicating environmental requirements to affected organization personnel, on-site service providers, and contractors, and then ensuring that Facility activities conform to those requirements (i.e., ongoing compliance monitoring). Specifies procedures for prospectively identifying and obtaining information about changes and proposed changes in environmental requirements, and incorporating those changes into the EMS (i.e., regulatory "change management").
- b. Establishes and describes processes to ensure communication with regulatory agencies regarding environmental requirements and regulatory compliance.

## **5. Assessment, Prevention, and Control**

- a. Identifies an ongoing process for assessing operations, for the purposes of preventing and controlling releases, ensuring environmental protection, and maintaining compliance with statutory and regulatory requirements. This section shall describe monitoring and measurements, to ensure sustained compliance. It shall also include identifying operations and waste streams where equipment malfunctions and deterioration, operator errors, and discharges or emissions may be causing, or may lead to:
  - releases of hazardous waste or other pollutants to the environment,
  - threat to human health or the environment, or
  - violations of environmental requirements.
- b. Describes process for identifying operations and activities where documented standard operating practices (SOPs) are needed to prevent potential violations or pollutant releases, and defines a uniform process for developing, approving and implementing the SOPs.
- c. Describes a system for conducting and documenting routine, objective, self inspections by department supervisors and trained staff, especially at locations identified by the process described in a. above, to check for malfunctions, deterioration, worker adherence to SOPs, and unauthorized releases.
- d. Describes the process for ensuring input of environmental requirements (or concerns) in planning, design, and operation of ongoing, new, and/or changing buildings, processes, equipment, maintenance activities, and products (i.e., operational “change management”).

## **6. Environmental Incident and Noncompliance Investigations**

- a. Describes standard procedures and requirements for internal and external reporting of potential violations and release incidents.
- b. Establishes procedures for investigation, and prompt and appropriate correction of potential violations. The investigation process includes root-cause analysis of identified problems to aid in developing the corrective actions.
- c. Describes a system for development, tracking, and effectiveness verification of corrective and preventative actions.
- d. Each of these procedures shall specify self-testing of such procedures, where practicable.

### **7. Environmental Training, Awareness, and Competence**

- a. Identifies specific education and training required for organization personnel, as well as a process for documenting training provided.
- b. Describes the program to ensure that organization employees are aware of its environmental policies and procedures, environmental requirements, and their roles and responsibilities within the environmental management system.
- c. Describes the program for ensuring that personnel responsible for meeting and maintaining compliance with environmental requirements are competent on the basis of appropriate education, training, and/or experience.

### **8. Environmental Planning and Organizational Decision-Making**

- a. Describes how environmental planning will be integrated into organizational decision-making, including plans and decisions on capital improvements, product and process design, training programs, and maintenance activities.
- b. Requires establishing written targets, objectives, and action plans by at least each operating organizational subunit with environmental responsibilities, including those for contractor operations conducted at the Facility, and how specified actions will be tracked and progress reported. Targets and objectives must include actions which reduce the risk of noncompliance with environmental requirements.

### **9. Maintenance of Records and Documentation**

- a. Identifies the types of records developed in support of the EMS (including audits and reviews), who maintains them and where, and protocols for responding to inquiries and requests for release of information.
- b. Specifies the data management systems for any internal waste tracking, environmental data, and hazardous waste determinations.
- c. Specifies document control procedures.

### **10. Pollution Prevention Program**

- a. Describes an internal program for preventing, reducing, recycling, reusing, and minimizing waste and emissions, including procedures to encourage material substitutions. Also includes

mechanisms for identifying candidate materials to be addressed by program and tracking progress.

### **11. Continuing Program Evaluation and Improvement**

- a. Describes the program for periodic (at least annually) evaluation of the EMS, including incorporating the results of the assessment into program improvements, revisions to the manual, and communicating findings and action plans to affected employees, onsite service providers, and contractors.
- b. Describes a program for periodic audits (at least annually) of Facility compliance with environmental requirements by an independent auditor(s). Audit results are reported to upper management and potential violations are addressed through the process described in element 6 above.

### **12. Public Involvement/Community Outreach**

- a. Describes a program for ongoing community education and involvement in the environmental aspects of DTF's operations and general environmental awareness.
- E. Environmental Management System Manual. Within three hundred (300) days of the effective date of this Order, DTF shall submit a complete EMS Manual to DEQ.
- F. Quarterly Reports. DTF shall submit implementation status reports to DEQ on a quarterly basis (i.e., reports for periods of January-March, April-June, July-September, and October-December). The status reports shall be due within thirty (30) days after the end of each quarter and every quarter thereafter until the Audit set forth in Paragraph II.J, is completed.
- G. Auditor Selection. DTF shall select an independent Auditor who:
- was not involved in the Initial EMS Review and Evaluation,
  - meets the qualification requirements of ISO 14012 (First edition, 996-10-01),
  - has expertise and competence in the regulatory programs under federal and state environmental laws.
  - the Auditor shall be paid by DTF in an amount sufficient to fully carry out the provisions of this Appendix. The Auditor must not be an employee of DTF or of any firm contracted to perform work on behalf of DTF, and must have no other direct financial stake in the outcome of the EMS audit conducted pursuant to this Order. The Auditor must be capable of

exercising the same independent judgment and discipline that a certified public accounting firm would be expected to exercise in auditing a publicly held corporation. If DTF has any other contractual relationship with the Auditor, DTF shall disclose to DEQ such past or existing contractual relationships.

- H. DTF shall identify any and all site-specific safety and training requirements for the Auditor(s), and shall ensure that the requirements are met prior to conducting the audit.
- I. Audit Plan. DTF shall require the Auditor to prepare an EMS Audit Plan.
- J. Audit. DTF shall require the Auditor to conduct an EMS Audit twelve (12) months after the completion of the EMS Manual, to evaluate the adequacy of EMS implementation, from top management down, throughout each major organizational unit at the Facility, and to identify where further improvements should be made to the EMS. The EMS Audit shall be conducted in accordance with ISO 14011 (First edition, 1996-10-01), using ISO 14010 (First edition, 1996-10-01), as supplemental guidance. The Auditor shall assess conformance with the elements specified in Paragraph II.D, above and with the EMS Manual, and shall determine the following:
- whether there is a defined system, subsystem, program, or planned task for the respective EMS element;
  - to what extent the system, subsystem, program, or task has been implemented, and is being maintained
  - adequacy of each Operation's internal self-assessment procedures for programs and tasks composing the EMS;
  - whether the Facility is effectively communicating environmental requirements to affected parts of the organization, Contractors and on-site service providers;
  - whether further improvements should be made to the EMS;
  - whether there are observed deviations from the Facility's written requirements or procedures;
  - and, whether continuous improvement is occurring.
- K. Designated representatives from DEQ and other environmental regulatory agencies may participate in the EMS audit as observers. DTF shall make timely notification to designated regulatory contacts regarding audit scheduling in order to make arrangements for observers to be present. DTF personnel or consultants may also participate in the on-site audits as an observer(s), but may not interfere with the independent judgment of the Auditor.

- L. Audit Reports. DTF shall direct the Auditor to develop and concurrently submit an Audit Report to itself and DEQ for the EMS audit as required by this Order, within sixty (60) days following the completion of the on-site portion of the audit. The Audit Report shall present the Audit Findings and shall, at a minimum, contain the following information:
- audit scope, including the period of time covered by the audit;
  - the date(s) the on-site portion of the audit was conducted;
  - identification of audit team members;
  - identification of any company, facility, or consulting representatives and regulatory agency personnel observing the audit;
  - the distribution for the EMS Audit Report;
  - a summary of the audit process, including any obstacles encountered;
  - detailed Audit Findings, including the basis for each finding and each area of Concern identified;
  - identification of any Audit Findings corrected or Areas of Concern addressed during the audit, and a description of the corrective measures and when they were implemented; and,
  - certification by the Auditor that the EMS Audit was conducted in accordance with the provisions of this Appendix.
- M. Follow-Up Corrective Measures & Action Plan. Upon receiving the Audit Report, DTF shall conduct a root cause analysis of the identified Audit Findings, investigate all areas of concern and develop an Action Plan for expeditiously bringing the Facility into full conformance with the EMS provisions in Paragraph II.D of this Appendix and the EMS Manual. The Action Plan shall include the results of any root-cause analysis, specific deliverables, responsibility assignments, and an implementation schedule. The Action Plan shall be submitted to DEQ within forty-five (45) days of receiving the Audit Report. Upon DEQ approval, the Action Plan and implementation schedule shall be an enforceable part of this Order. Deviations from the Action Plan and implementation schedule require prior written authorization from DEQ.

Documents to be submitted to the Department, other than the civil charge payment described in Section D of the Order, shall be sent to:

Frank Lupini  
VA DEQ  
P.O. Box 1105,  
Richmond, Virginia 23218  
Frank.Lupini@deq.virginia.gov