

## APPENDIX B

### ENVIRONMENTAL MANAGEMENT SYSTEM

1. This Appendix B is incorporated by reference into the Administrative Order by Consent ("AOC") issued by the Department of Environmental Services ("DES") to the Department of Transportation ("DOT").
2. The primary objectives of the Environmental Management System ("EMS") shall be to assist in ensuring DOT's compliance with applicable environmental requirements and to improve overall environmental performance at DOT's Division of Operations Facilities ("Facilities", or, individually, "Facility") as operated by the Bureaus of Bridge Maintenance, Mechanical Services, Traffic, Turnpikes and Highway Maintenance ("Bureau" or "Bureaus"). In addition, the EMS shall promote employee awareness, education, and involvement in the environmental aspects of the DOT's operations.
3. Not later than November 1, 2007, DOT shall propose to DES for acceptance or rejection, the selection of an independent environmental consulting firm ("EMS Consulting Firm") to conduct an Initial Review and Evaluation as described in Paragraph 6 of this Appendix B. DOT shall also submit a schedule, including milestones, for conducting the Initial EMS Review and Evaluation as described in Paragraph 6 of this Appendix B.
4. The EMS Consulting Firm must certify that its project manager: (a) meets the qualification requirements of ISO 19011, Section 7 (First edition, 2002-10-01,

and as later amended); and (b) has expertise and competence in the regulatory programs under federal and state environmental laws. The EMS Consulting Firm and its employees, agents, and subcontractors who work on the EMS (the "EMS Consultants") must not be former State of New Hampshire employees, and must have no other direct financial stake in the outcome of the Initial EMS Review and Evaluation conducted pursuant to this AOC. If DOT has any other contractual relationship with the EMS Consulting Firm, DOT shall disclose to DES such past or existing contractual relationships. DOT shall submit to DES a description of the EMS Consulting Firm's qualifications and the certifications required above. DES will notify DOT in writing of its acceptance or rejection of the EMS Consulting Firm as expeditiously as possible.

5. If DES determines that the proposed EMS Consulting Firm does not meet the qualifications set forth in the previous paragraph, or that past or existing relationships with the State of New Hampshire would potentially affect its ability to exercise the independent judgment and discipline required to conduct the Initial Review and Evaluation, such EMS Consulting Firm shall be rejected and another EMS Consulting Firm shall be proposed by DOT within 30 days of its receipt of DES's determination.
6. DOT, in consultation with the EMS Consulting Firm, shall conduct an initial review and evaluation of the current environmental management systems<sup>1</sup>,

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<sup>1</sup> For the purposes of this Administrative Order by Consent, DOT shall refer to the definition of an EMS provided by the International Organization for Standardization ("ISO") in conducting its review and evaluation of the current environmental system. ISO defines an EMS as "that part of the overall management system which includes organizational structure, planning activities, responsibilities, practice, procedures, processes and resources for developing, implementing, achieving reviewing, and maintaining [the organization's] environmental policy". The EMS provides the structure by which specific activities related to environmental protection and compliance can be effectively and efficiently carried out. See ISO 14001 (First Edition, 1996-09-01, 3.5, and as later amended).

relating to the operations at the Facilities by both DOT and its Contractors (“Initial Review and Evaluation”). The term “Contractor” shall mean any contractor operating for any Bureau or at any Facility and any successor to any contractor operating at any Bureau Facility providing services that could affect DOT’s obligations under the Listed Statutes and Regulations and Environmental Permits identified in Appendix A of the AOC.

7. DOT and the EMS Consulting Firm shall review and evaluate the current environmental management system to identify gaps using the elements set forth in Paragraphs 10(A) through 10(K) below.
8. DOT and the EMS Consulting Firm shall submit to DES a report documenting the results of the Initial Review and Evaluation, including a proposed schedule for development of EMS Manuals for each of the Bureaus of the Division of Operations.
9. Based on the Initial Review and Evaluation results and other information, including, but not limited to, information available to DOT as a result of the compliance audit conducted pursuant to Appendix A of the AOC, and following DES approval of the schedule proposed by DOT pursuant to Paragraph 8, DOT and the EMS Consulting Firm shall prepare a written Environmental Management System Manual (“EMS Manual”) for each Bureau, Facility or group of related Facilities as determined to be appropriate and in accordance with the primary objectives of the EMS as set forth in Paragraph 2 of this Appendix B addressing, at a minimum, the elements presented in Paragraphs 10(A) through 10(K) below. The EMS Manuals shall also contain an EMS implementation schedule for



initiating each component of the EMS. The purpose of preparing the EMS Manuals is to assist DOT in its program to comply with federal and state environmental statutes, regulations, permits, and enforceable agreements ("Environmental Requirements"). For each of the elements identified in Paragraphs 10(A) through 10(K) below, as appropriate, the EMS Manuals shall provide a detailed blueprint of the EMS, describing how the activity or program is or will be: (a) established as a formal system, subsystem or task; (b) integrated into ongoing department operations; and (c) contributing to the maintenance of compliance with applicable environmental requirements and improvement of overall environmental performance.

10. The EMS Manuals shall address the following elements:

A. Management Policies and Procedures.

1) DOT's Environmental Policy – This policy must clearly communicate management commitment to achieving and maintaining compliance with applicable environmental requirements.

2) Site-specific Environmental Procedures and Practices.

a. Includes a compilation of general principles, policies, rules, and procedures for site-specific environmental practices.

b. Describes a process for developing, approving, and communicating standard operating practices for activities having potentially adverse environmental or regulatory compliance impacts.

- c. Clearly identifies organizational responsibilities for maintaining regulatory compliance, including required reporting to regulatory agencies.
- d. Includes a means of ongoing communication of duties and responsibilities under the EMS to employees, on-site service providers, and contractors, and for receiving and addressing their concerns.
- e. Establishes and describes processes to ensure sustained interaction with regulatory agencies, as appropriate, and within the agency (e.g., between the various divisions, contractors, and officials and employees responsible for environmental, health and safety issues) regarding environmental requirements and regulatory compliance.

B. Organization, Personnel, and Oversight of EMS.

- 1) Describes, organizationally, how the EMS is implemented and maintained.
- 2) Includes organization charts that identify units, line management, and other individuals having environmental performance and regulatory compliance responsibilities.
- 3) Identifies and defines 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 officials and employees responsible for environmental, health and safety issues, and excerpts from others having specific environmental program and regulatory compliance responsibilities.)

C. Accountability and Responsibility.

- 1) Describes accountability and responsibilities of DOT's management, on-site service providers, and contractors for environmental protection practices, compliance, required reporting to regulatory agencies and to the public, and corrective actions implemented in their area(s) of responsibility.
- 2) Describes potential consequences for departure from specified operating procedures, including, but not limited to, liability for civil/administrative penalties imposed as a result of noncompliance.

D. Environmental Requirements.

- 1) Describes process for identifying, interpreting, and effectively communicating environmental requirements to affected DOT personnel, on-site service providers, and contractors, and ensuring that facility activities conform to those requirements.
- 2) Establishes procedures for prospectively identifying and obtaining information about changes and proposed changes in environmental requirements that may be applicable to DOT's operations and facilities, and incorporating those changes into the EMS as appropriate.

E. Assessment, Prevention, and Control.

- 1) Identifies an ongoing process for assessing operations for the purposes of preventing and controlling pollutant releases, ensuring environmental protection, and maintaining compliance with statutory and regulatory

requirements. This section shall describe monitoring and measurements, as appropriate, to ensure sustained compliance.

- 2) Describes process for identifying those operations, activities and waste streams where equipment malfunctions and deterioration, operator errors, and discharges or emissions may be causing, or may lead to: (a) adverse environmental impacts and/or regulatory noncompliance; (b) releases of hazardous waste or other pollutants to the environment; or (c) a threat to human health or the environment. Identifies where documented standard operating practices need to be developed (see element 9.A.2.b. above).
- 3) Describes a system for conducting and documenting routine, objective, self-inspections by designated and trained staff, especially at locations identified by the process described in 9.E.2. above.
- 4) Describes a process for evaluating identified problems using root-cause analysis or other appropriate techniques in order to develop remedies and prevent recurring issues.
- 5) Describes a process for ensuring input of environmental requirements or other relevant considerations in planning, design, and operation of ongoing, new and/or changing buildings, processes, maintenance activities, and products.

F. Environmental Incident and Noncompliance Investigations.

- 1) Describes standard procedures and requirements for incident and noncompliance reporting.



- 2) Establishes procedures for investigation of incidents and potential noncompliance.
- 3) Describes a system for development, tracking, and effectiveness verification of corrective and preventive actions.
- 4) Each of these procedures shall specify testing of such procedures, where applicable.

G. Environmental Training, Awareness, and Competence.

- 1) Identifies specific environmental education and training required for DOT personnel, and a process for documenting the training provided.
- 2) Describes a program to ensure that DOT employees receive or have received the environmental education and training identified in 9.G.1., above, are aware of its environmental policies and procedures, environmental requirements, and their roles and responsibilities within the environmental management system.
- 3) Describes a plan 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.

H. Record Keeping and Document Control.

- 1) Describes a system of identification, control and maintenance of documents required under and in support of the EMS and a protocol for responding to inquiries and requests for release of information.



- 2) To the extent not encompassed within the system developed pursuant to 9.H.1., above, specifies the data management systems for any internal waste tracking environmental data, and hazardous waste determinations.

I. Pollution Prevention Policy.

Describes an internal policy for preventing, reducing, recycling, reusing, and minimizing waste and emissions, including procedures to encourage material substitutions, as appropriate.

J. Continuing Program Evaluation and Improvement.

- 1) Describes a program for periodic (at least annually) evaluation of the EMS by management and appropriate trained personnel, including incorporating the results of the assessment into program improvements, revisions to the EMS Manual, and communicating findings and action plans to affected employees, on-site service providers, and contractors.
- 2) Describes a program for periodic audits of facility compliance with environmental requirements. Audit results are reported to upper management and potential violations are addressed through the process described in Element F. above. Such periodic audits shall take place at least once every three years. DOT shall provide to DES a copy of the audit report following its first periodic audit within 30 days of completion of the first periodic audit conducted after the Audit sequence describe in Appendix A.

K. Annual Reporting.

Describes a plan for annual reporting to the general public, legislators, DES and other stakeholders about the progress made in implementing the EMS and the environmental and other benefits achieved through EMS implementation.

11. DOT shall submit the complete Environmental Management System Manuals to DES for review and comment upon completion.
12. DOT shall, within 30 days of receipt of DES's comments on a proposed EMS Manual, submit to DES a supplement to the EMS Manual or a written response, as appropriate, addressing DES's comments.
13. Upon notification by DES that it has no further comments or within 14 days of receipt of any additional comments from DES, DOT shall address DES's comments and commence implementation of the EMS Manual in accordance with the schedule contained in the EMS Manual. DOT shall submit status reports regarding the implementation to DES, on a quarterly basis, beginning no later than 30 days from commencing implementation of the EMS Manual. The status reports shall be due on the 15<sup>th</sup> day of the first month of the next quarter and every quarter thereafter until implementation is complete.
14. Within three years of the date of this AOC, DOT shall propose to DES for acceptance or rejection the selection of an independent environmental auditing firm ("Comprehensive EMS Audit Firm" or "Audit Firm") not involved in the Initial EMS Review and Evaluation to conduct the Comprehensive EMS Review and Evaluation described below. DOT and the Comprehensive EMS Audit Firm

shall comply with the provisions of Paragraphs 4 and 5 of Appendix B of the AOC for the purposes of proposing the Comprehensive EMS Audit Firm. DOT shall also submit at this time a schedule, including milestones, for conducting the Comprehensive EMS Review and Evaluation. DES's acceptance or rejection approval of the Comprehensive EMS Audit Firm shall be conducted pursuant to the procedure described in Paragraphs 4 and 5.

15. Within 60 days of DES's acceptance or rejection of the Comprehensive EMS Audit Firm, the Comprehensive EMS Audit Firm shall submit a proposed EMS audit work plan and schedule ("Audit Work Plan") to DOT and DES for review and comment.
16. DES will review the Audit Work Plan and, with written notice to DOT, accept it or identify the deficiencies. If DES comments on the Audit Work Plan, DOT shall incorporate DES's comments and submit a revised Audit Work Plan to DES within 15 days after receiving DES's comments. DES's acceptance or rejection of the Audit Work Plan is within its sole discretion.
17. DOT shall require the Comprehensive EMS Audit Firm to conduct an EMS Audit to evaluate the adequacy of EMS implementation within the Bureaus or at the Facilities, including upper management, and to identify where further improvements should be made to the EMS. The EMS Audit shall be conducted in accordance with ISO 19011 (First edition 2002-10-01, and as later amended). The Comprehensive EMS Audit Firm shall assess conformance with the elements specified in Paragraphs 9(A) through (J) above and with the EMS Manual, and shall, at a minimum determine the following:

- a. Whether there is a defined system, subsystem, program, or planned task for the respective EMS element;
  - b. To what extent the system, subsystem, program, or task has been implemented, and is being maintained;
  - c. Adequacy of each operation's internal self-assessment procedures for programs and tasks composing the EMS;
  - d. Whether DOT is effectively communicating environmental requirements to affected parts of the organization, contractors and on-site service providers;
  - e. Whether further improvements should be made to the EMS;
  - f. Whether there are observed deviations from DOT's written requirements or procedures; and
  - g. Whether there is a system to ensure maintenance of compliance and environmental improvement objectives.
18. Designated representatives from DES and the Attorney General's Office may participate in the EMS audit as observers. DOT shall make timely notification to designated regulatory contacts regarding audit scheduling in order to make arrangements for observers to be present. DOT personnel may also participate in the on-site audit as an observer(s), but may not interfere with the independent judgment of the Comprehensive EMS Audit Firm.
19. Audit Report. DOT shall direct the Audit Firm to develop and concurrently submit an Audit Report to DOT and DES for the EMS Audit as required by this AOC,. The Audit Report shall present the audit findings and shall, at a minimum, contain the following information:



- a. Audit scope, including the period of time covered by the audit;
  - b. The date(s) the on-site portion of the audit was conducted;
  - c. Identification of audit team members;
  - d. Identification of DOT representatives and regulatory agency personnel observing the audit;
  - e. The distribution for the EMS Audit Report;
  - f. A summary of the audit process, including any obstacles encountered;
  - g. Detailed audit findings, including the basis for each finding and each area of concern identified;
  - h. 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;
  - i. Recommendations for improvements to the Comprehensive EMS; and
  - j. Certification by the Comprehensive EMS Audit Firm that the Comprehensive EMS Audit was conducted in accordance with the provisions of this Consent Decree.
20. If the Comprehensive EMS Audit Firm believes that additional time is needed to analyze available information or to gather additional information, DOT, with the concurrence of DES, may grant the Comprehensive EMS Audit Firm such additional time as needed to prepare and submit the Audit Report.
21. Corrective Measures. Within 60 days after receipt of the Audit Report, DOT shall provide to DES for review and comment a written response to the recommendations presented in that Report identifying those recommendations it

does and does not intend to implement and/or plans to implement with modification(s). DOT shall include in its response an explanation of its rationale for not implementing and/or modifying any recommendations and an Action Plan for implementing any changes to the EMS based on the Audit Report. The Action Plan shall include specific deliverables, responsibility assignments, and an implementation schedule.

22. DES shall review the Audit Report and DOT's written response and Action Plan and provide written comments to DOT.
23. DOT shall, within 30 days of receipt of DES's comments, submit to DES for review and comment a written response to such comments identifying those recommendations it does and does not intend to implement and/or plans to implement with modification(s). DOT shall include in its response an explanation of its rationale for not implementing and/or modifying any recommendations and an Action Plan for implementing any changes to the EMS based on DES's comments. The Action Plan shall include a root cause or other appropriate analysis and a corrective action evaluation incorporating, as necessary, specific deliverables, responsibility assignments, and an implementation schedule.
24. Within 30 days after all items or activities in the Action Plan have been completed, DOT shall submit a written Action Plan Completion Certification to DES.