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Operation And Maintenance Manuals
(Year 2000 Printing)

Effective Date: 8-31-93
Program Applicability
Supersedes Policy, SOP or Guidance #:
Approved by: David Y. Terry

Policy, SOP or Guideline # 93-02

Purpose

This policy and accompanying checklist has been adopted to provide general guidance for the development of operations and maintenance manuals for new or rehabilitated water treatment facilities.

General

The operations and maintenance manual are the documents that describe the general mechanical operation and chemical functions of a water treatment facility, along with providing the necessary manufacturer materials for maintenance and repair of equipment.

Operations

The operations manual can be used as the study guide for personnel during training sessions, conducted by the consultant. The manual will provide specific instructions to the daily testing and operation of the facility and day to day tasks, which must be accomplished to meet the design objectives.

Operations manuals will contain the following information:

Table of Contents

1. Introduction to water system, source watersheds and facilities(s).
2. Water Quality Standards
3. Responsibilities of operations and supervision personnel
4. Description of facility operations and hydraulics
5. Description of facility equipment and relationships
6. Instrumentation and computer console and system functions
7. Common operating problems and solutions
8. Chemical applications and AWWA standards for purity
9. Facility start-up and operation
10. Laboratory testing and operator responsibility
11. Sludge handling and discharge limits
12. Emergency power conditions, sequencing and general operation

13. Shut-down
14. Records and daily logs to be completed
15. OSHA safety requirements and facility safety
16. Calculation for chemical usages and dosages
17. EPA and DEP water quality, testing and permit reporting requirements.

List of Figures

1. Schematic diagrams of flow within the facility
2. Line drawings of equipment and process components
3. Chemical applications

Appendices

- A. Design Criteria
- B. Board of Certification of Drinking Water Operator Regulations
- C. Definitions
- D. Required permits and requirements
- E. Required facility operations, laboratory, and maintenance forms

Water Treatment Facilities

CHECKLIST FOR PERMITS

- (1) Granted-Issued
- (2) Review Completed
- (3) Order of Conditions
- (4) Review Ongoing
- (5) Variance
- (6) Contractor Application

<u>Phase/Permit</u>	<u>Status as of</u>	<u>Comments</u>	<u>Approval</u>
<u>Construction</u>			
Army of Corps of Engineers			
Massachusetts Environmental Policy Act			
Conservation			
Application to Construct A septic tank (Board of Health)			
Zoning Board of Appeals			
DEP Water Quality Certification for (Re Ch. 91 application for intake construction)			
Town Special Permit for Construction in Westlands Historical Commission			
Building Permit			

Operations

Groundwater Discharge Permit, DEP-Division of Water Pollution Control			
Wastewater Discharge or NEDES Permit, DEP Division of Water Pollution Control			
Municipal Water Purchase Agreements			

<u>Phase/Permit</u>	<u>Status as of</u>	<u>Comments</u>	<u>Approval</u>
Air-Stripping Installations Permit DEP-Air Pollution Control			
DPW-Highway Permit (Assoc. Regional Systems			
MBTA			