

OPERATION & MAINTENANCE MANUAL REVIEW CHECKLIST

Project Information

Project Name: _____

SRF Project #: _____

Consultant: _____

Collection System: _____ Treatment Plant: _____

Design Flow Capacity: _____

Receiving Stream: _____

Process Modifications:

Section I - Introduction

	<u>YES</u>	<u>NO</u>	<u>N/A</u>
1. Table of Contents	_____	_____	_____
2. Operation and Managerial Responsibility			
Operator responsibilities defined	_____	_____	_____
List of available training	_____	_____	_____
Manager responsibilities	_____	_____	_____
List of recommended publications	_____	_____	_____
3. Treatment Plant Requirements			
Type of treatment - brief description of major processes	_____	_____	_____
Treatment requirements/effluent limitations	_____	_____	_____
Description of plant type - brief description of individual units	_____	_____	_____
Flow pattern with diagram	_____	_____	_____
4. Collection System Requirements			
Line sizes and lengths	_____	_____	_____
Lift station size and capacity	_____	_____	_____

Section II - Description, Operation & Control of Treatment Facilities

1. For each unit process, general coverage of the following:	<u>YES</u>	<u>NO</u>	<u>N/A</u>
Description, function, flow routing	_____	_____	_____
Listing of major components and mechanical equipment	_____	_____	_____
Relationship to adjacent units	_____	_____	_____
Methods of control for unit processes	_____	_____	_____
Discussion of common operating problems and control	_____	_____	_____
Discussion of laboratory tests and controls for unit process	_____	_____	_____
Start up procedures for unit process	_____	_____	_____
2. For each unit process, specific coverage of the following:			
Normal Operation (valve positions, sludge depth, etc.)	_____	_____	_____
Alternative operational modes	_____	_____	_____

Section III - Description, Operation & Control of Sludge Handling Facilities

1. For each sludge handling unit process, general coverage of the following:	<u>YES</u>	<u>NO</u>	<u>N/A</u>
Description, function, flow routing and design efficiency	_____	_____	_____
List of major components and mechanical equipment	_____	_____	_____
Methods of control for unit processes	_____	_____	_____
Discussion of common operating problems and control	_____	_____	_____
Discussion of laboratory tests and controls for unit process	_____	_____	_____
Start up procedures for unit process	_____	_____	_____
Sludge Disposal (land fill, land apply, etc.)	_____	_____	_____

Page 2 Comments:

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DIVISION OF WATER AND WASTE MANAGEMENT**

Section IV - Personnel

	<u>YES</u>	<u>NO</u>	<u>N/A</u>
1. Staffing Plan			
Supervisory	_____	_____	_____
Clerical	_____	_____	_____
Operators	_____	_____	_____
Laboratory	_____	_____	_____
Yard Maintenance	_____	_____	_____
2. Qualifications			
Training	_____	_____	_____
Skills Required	_____	_____	_____
Experience	_____	_____	_____
Certification Required	_____	_____	_____
3. Certification			
Copy of State Rules and Regulations	_____	_____	_____
Certification requirements for this facility	_____	_____	_____

Section V - Laboratory Testing

Outline of sampling and testing program, discussion of purpose	_____	_____	_____
Recommended list of laboratory references	_____	_____	_____
Discussion of laboratory results, expected ranges	_____	_____	_____
Provision of sample laboratory worksheets, instructions	_____	_____	_____

Page 3 Comments:

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DIVISION OF WATER AND WASTE MANAGEMENT**

Section VI - Records

YES NO N/A

1. Instructions & Recommendations

Sample, daily operating log of process operations, instructions	_____	_____	_____
Sample, monthly operating report to state agency, instructions	_____	_____	_____
Sample, annual report format	_____	_____	_____
Operating cost record keeping system recommendations	_____	_____	_____
Personnel record system recommendations	_____	_____	_____
Emergency conditions; bypass reports, permit violations, etc.	_____	_____	_____
Maintenance and laboratory records, if not provided elsewhere	_____	_____	_____

2. Equipment Record System

Equipment numbering system	_____	_____	_____
Equipment catalog (configuration list)	_____	_____	_____
Nameplate data cards, all major equipment	_____	_____	_____
Maintenance record cards, instructions	_____	_____	_____

3. Planning and Scheduling

Preventative maintenance schedule provided	_____	_____	_____
Work order system and sample forms	_____	_____	_____

Section VII - Maintenance

Conceptual description of maintenance provided	_____	_____	_____
Recommended list of spare parts	_____	_____	_____
Lubrication schedule & lubricant list	_____	_____	_____
For major equipment items; maintenance procedures	_____	_____	_____

Section VIII - Emergency Operating Plan

Vulnerability Analysis	_____	_____	_____
Emergency Equipment List	_____	_____	_____
Police/Fire Coordination	_____	_____	_____
Emergency operations/ failsafe features	_____	_____	_____
Mutual Aid List	_____	_____	_____
List of Industrial Sources	_____	_____	_____
Emergency Operating Plan	_____	_____	_____

Page 4 Comments:

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DIVISION OF WATER AND WASTE MANAGEMENT**

Section IX - Safety

YES NO N/A

1. Recommended Safety Program

2. Content

Emergency phone list

Sewer Hazards

Mechanical Equipment Hazards

Safety Equipment List

Electrical Hazards

Explosion and fire hazards

Health Hazards

Oxygen deficiency/gases

Process chemicals

Chlorine Hazards

Laboratory Hazards

Section X - Utilities

List of utility suppliers, contact list

Section XI - Electrical System

Description

Emergency power for WWTP (generator, etc.)

Emergency power for pump stations (portable/permanent generator)

Section XII - Appendix

Manufacturer's manuals

As-built/record drawings **generally provided 60 days after construction*

Page 5 Comments:

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DIVISION OF WATER AND WASTE MANAGEMENT

Summary Comments:

Summarize the apparent inadequacies revealed by the review of the submitted manual and describe the resolution of each. If necessary, summarize pertinent conversations and cite specific correspondence with the consulting engineer and/or owner.

Project Manager

Date

Engineering Branch Leader

Date