Form 10-A
Checklist for Operations and Maintenance (O&M) Manual Review

A. PROJECT IDENTIFICATION & DESCRIPTION

Project Name

Project Number PWS Number

Location

Owner

Design Engineer

Address

Design Flow Capacity

Source and Treatment

B. O&M MANUAL: TABLE OF CONTENTS

1. List of figures included? ◯Y ◯N
2. List of tables included? ◯Y ◯N
3. Manual organized well? ◯Y ◯N
4. Manual tabbed for easy reference? ◯Y ◯N
5. Page numbers used to refer to other parts of manual? ◯Y ◯N

C. O&M MANUAL: INTRODUCTION AND OVERVIEW

1. Brief explanation of how to use manual? ◯Y ◯N
2. Purpose of manual explained? ◯Y ◯N

D. O&M MANUAL: OPERATOR RESPONSIBILITY

1. Manager's responsibilities explained? ◯Y ◯N
2. Owner's responsibilities explained? ◯Y ◯N ◯N/A

3. Training requirements for operator listed? ☐Y ☐N

4. List of standard reference publications operator may consult? ☐Y ☐N

E. O&M MANUAL: PERMITS AND STANDARDS

1. Drinking Water Rules included? ☐Y ☐N

2. Treatment and monitoring requirements included? ☐Y ☐N

F. O&M MANUAL: GENERAL PLANT DESCRIPTION

1. Source and type of treatment described? ☐Y ☐N

2. Principal design criteria listed? ☐Y ☐N

3. Flow diagram included? ☐Y ☐N

4. Hydraulic capacity analysis included? ☐Y ☐N

5. Backflow prevention program and ordinance explained? ☐Y ☐N

6. List of unit operations given? ☐Y ☐N

G. O&M MANUAL: DESCRIPTION, OPERATION, AND CONTROL OF UNIT PROCESSES

1. Description of process included? ☐Y ☐N

2. Function of process explained? ☐Y ☐N

3. Normal operation or control of process (valve position, flow rate) described? ☐Y ☐N

4. Major components and mechanical equipment listed? ☐Y ☐N

5. Relationship to adjacent units described? ☐Y ☐N ☐N/A

6. Schematic diagram of each unit included? ☐Y ☐N

7. Special features explained? ☐Y ☐N ☐N/A

8. Discussion of common operating problems included? ☐Y ☐N

9. Emergency operation or alternate operation explained? ☐Y ☐N

10. Bypassing unit described? ☐Y ☐N ☐N/A

11. Laboratory tests for unit control discussed? ☐Y ☐N ☐N/A

12. Startup procedures for equipment and unit processes described? ☐Y ☐N

13. Brief operation instructions included for each piece of equipment, with reference to manufacturer's O&M manual? ☐Y ☐N

H. O&M MANUAL: LABORATORY TESTING

1. Sampling and testing program outlined? ☐Y ☐N

2. Sampling location, time, and method identified? ☐Y ☐N

3. List of laboratory references included? ☐Y ☐N ☐N/A

4. Monitoring requirements explained? ☐Y ☐N

5. Interpretation and significance of expected ranges of lab results given? ☐Y ☐N ☐N/A

6. Sample laboratory worksheets included? ☐Y ☐N ☐N/A

I. O&M MANUAL: MAINTENANCE

1. Purpose of maintenance discussed? ☐Y ☐N

2. General maintenance information included? ☐Y ☐N

3. Sample maintenance information included? ☐Y ☐N

4. Preventive maintenance schedule given? ☐Y ☐N

5. Troubleshooting charts or guides included which reference pages in O&M manual and manufacturer's O&M manual? ☐Y ☐N

6. Housekeeping requirements included? ☐Y ☐N

7. Equipment record system explained for each type of equipment or machinery? ☐Y ☐N

   a) Equipment numbering system explained? ☐Y ☐N

   b) Equipment catalog available? ☐Y ☐N

   c) Nameplate data cards available? ☐Y ☐N ☐N/A

   d) Maintenance record cards available? ☐Y ☐N ☐N/A

8. Manufacturer's maintenance schedule summarized for routine adjustment, lubrication, etc., with reference to page numbers in manufacturer's O&M manual? ☐Y ☐N

9. Work order system described? ☐Y ☐N

10. Sample forms provided? ☐Y ☐N ☐N/A

J. O&M MANUAL: RECORDS & REPORTS

1. Importance and location of records and reports, including record drawings, described? ☐Y ☐N

2. Daily operating log described, with sample format provided? ☐Y ☐N

3. Maintenance records described, with examples given? ☐Y ☐N

4. Laboratory records and reports described, with samples provided? ☐Y ☐N

5. Monthly report described, with format shown? ☐Y ☐N

6. Requirements of monitoring reports explained, with examples given? ☐Y ☐N

7. Annual report explained, with sample format provided? ☐Y ☐N

8. Operating cost record keeping system explained? ☐Y ☐N

9. Personnel record keeping system explained? ☐Y ☐N

10. Method for reporting system problems explained? ☐Y ☐N

11. Method for maintaining an accident report explained? ☐Y ☐N

K. O&M MANUAL: STOREROOM AND INVENTORY SYSTEM

1. List of spare parts recommended? ☐Y ☐N

2. Inventory sample forms and records included? ☐Y ☐N ☐N/A

3. Special tools list included? ☐Y ☐N ☐N/A

4. Cross-reference lubricant list included? ☐Y ☐N ☐N/A

5. List of warranted equipment and warranty provisions included? ☐Y ☐N

6. List of outside contract maintenance tasks included? ☐Y ☐N ☐N/A

7. List of manufacturers of equipment included? ☐Y ☐N

L. O&M MANUAL: PERSONNEL

1. Manpower requirements given? ☐Y ☐N

2. Qualifications of personnel given? ☐Y ☐N

3. Licensure of personnel explained? ☐Y ☐N

M.O&M MANUAL: EMERGENCY OPERATING PLAN

1. Vulnerability analysis included? ☐Y ☐N

2. Emergency equipment list given? ☐Y ☐N

3. Police/fire departments coordination explained? ☐Y ☐N

4. Mutual aid list included? ☐Y ☐N ☐N/A

5. Chemicals used and their potential hazards explained? ☐Y ☐N

6. Procedures outlined to follow in case of electrical emergency? ☐Y ☐N

7. Detailed list included of jobs each person must carry out during emergency? ☐Y ☐N

N. O&M MANUAL: SAFETY PROGRAM

1. Emergency phone list included? ☐Y ☐N

2. Safety equipment list included? ☐Y ☐N

3. System hazards and precautions explained? ☐Y ☐N

4. Mechanical equipment hazards described? ☐Y ☐N

5. Electrical hazards described? ☐Y ☐N

6. Explosion and fire hazards described? ☐Y ☐N

7. Health hazards described? ☐Y ☐N

8. Chlorine hazards described? ☐Y ☐N ☐N/A

9. Oxygen deficiency hazards described? ☐Y ☐N ☐N/A

10. Laboratory hazards described? ☐Y ☐N ☐N/A

11. Chemical hazards described? ☐Y ☐N

O. O&M MANUAL: APPENDIX

1. Detailed design criteria included? ☐Y ☐N

2. Schematics included? ☐Y ☐N

3. Sample forms provided? ☐Y ☐N

4. List of lab chemicals included? ☐Y ☐N ☐N/A

5. Manufacturer's manuals referenced? ☐Y ☐N

6. Warranties included? ☐Y ☐N

7. Valve indices or schedule included? ☐Y ☐N

8. Approved shop drawings included? ☐Y ☐N

9. Construction photos included? ☐Y ☐N

10. Drinking Water Rules included? ☐Y ☐N

11. Piping color code included? ☐Y ☐N ☐N/A

12. Recommended references included? ☐Y ☐N

13. Drinking water ordinance included? ☐Y ☐N ☐N/A

14. Backflow prevention ordinance included? ☐Y ☐N ☐N/A

P. O&M MANUAL: UTILITIES

1. Description of utilities included? ☐Y ☐N

2. Distribution system described? ☐Y ☐N

3. Diagrams and manufacturers' drawings included? ☐Y ☐N

4. Electrical emergency procedures described? ☐Y ☐N

5. Gas and/or water capacities and limitations of responsibility described? ☐Y ☐N

6. Heat described? ☐Y ☐N

7. Telephone services described? ☐Y ☐N

8. Emergency procedures described? ☐Y ☐N

Q. O&M MANUAL: FINAL TEST OF MANUAL

Is the manual written so that a reasonably experienced reviewer could adequately operate and maintain the facility by using the manual?

Comments:

Signature of Environmental Engineer

Date