

# BIOSOLIDS EMS MANUAL

## ELEMENT 10.0

### OPERATIONAL CONTROL OF CRITICAL CONTROL POINTS



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REVISION	EFFECTIVE DATE	APPROVAL SIGNATURE
10	08/03/2016	

#### **PURPOSE**

The purpose of this procedure is to ensure that the organization systematically establishes, implements and maintains the necessary operational control procedures, work instructions and other management controls to ensure it is meeting and exceeding the overall requirements of its biosolids management policy, voluntarily adopting requirements for biosolids quality, and public acceptance and progress toward improvement goals and objectives is being achieved.

#### **SCOPE**

This procedure applies to all the organization's biosolids management activities at all critical control points throughout the biosolids value chain that are under the organization's direct control or influence.

#### **KEY WORDS**

- EMS Management Team
- Operational Control Procedure
- Other Management Controls
- Standard Operating Procedure (SOP)

#### **RESPONSIBILITY**

The EMS Management Team is responsible for ensuring the necessary training, guidance, and assistance in identifying, developing, documenting, and implementing needed operational control procedures.

#### **PROCEDURE**

Based on the identified list of control points in Element 3.0, the EMS Management Team determines the activities, products, and services for which operational control procedures work instructions and other management control methods are needed. The EMS Master Table in Element 3.0 lists the operation control procedures associated with the identified control points and their place within the biosolids value chain. The table also provides the locations where hard copies of the procedures may be found.

Element 4.0 lists the relevant legal requirements associated with the biosolids value chain that the operational control procedures are designed to meet within the biosolids value chain, including activities performed by contractors.

#### **Standard Operating Procedures (SOP)—Village Creek Water Reclamation Facility (VCWRF)**

Village Creek Water Reclamation Facility maintains a current set of SOPs for plant processes in the Administration Library. The SOP manuals are identified by process and by location, they include:

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Influent Flow	Reclaimed Water
Headworks	Biosolids
Primary	Drying Beds
Grit	Control Room
Gravity Thickeners	Plant
Gravity Belt Thickeners	Instrumentation/Electrical
Dissolved Air Flootation Thickeners	Tech Services
Digesters	Warehouse
Secondary	Blowers
Filters	Turbines
Disinfection	Odor Control
High Rate Clarification	Storm Conditions

The operating control procedures/standard operating procedures consist of step-by-step operational and safety procedures for each other plant processes. The City keeps the original “controlled” copy in the VC Administration Library. Electronic copies of the plant operational control procedures for plant processes are on the VCWRF network at: \\fwwvc02\VC\_Lib\SOP\Current\_SOPs

#### **Standard Operating Procedures (SOP)—Contractor**

The City Biosolids Contractor also maintains a set of SOPs for their operations. The control copies of these SOPs are kept in the Contractor’s office at the Sludge Only Landfill. Copies of specific SOPs are located at the dewatering facility and in each truck. The Contractor maintains a table of contents listing all the SOPs. Copies of specific monitoring SOPs are kept in the VC Administration Library.

#### **Operation and Maintenance Manuals for Plant Equipment—Village Creek**

Village Creek Water Reclamation Facility maintains a set of operation and maintenance manuals for plant equipment. The operation and maintenance manuals for plant equipment consist of step-by-step operational, repair and safety procedures for each piece of plant equipment. The City keeps the original “controlled” copy of the operational and maintenance manuals in the Maintenance Section Library. Electronic copies of the plant operational control procedures are on the City’s intranet at: [\\Fwwvc02\VC\\_Lib\O&M\\_Manuals](\\Fwwvc02\VC_Lib\O&M_Manuals)

#### **Maximo**

The Water Department and VCWRF also uses specialized computer software to provide management and operational control over plant processes, maintenance and work activities. The Maximo program creates work orders, records and tracks employee labor hours, equipment history and cost, area history and cost, and facility history and cost. Water Department personnel predetermined preventative maintenance schedules for equipment and/or areas into Maximo. The system provides tailored Parts Maintenance (PM) work orders with information including preventive maintenance procedures, meter and equipment calibration data, standard operating procedures, safety procedures, etc. Maximo also provides reporting capability to help evaluate equipment failures and efficiency, to evaluate employee labor efficiency, and to have accurate cost of equipment repairs to support maintenance budgets.

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#### **Training**

The EMS Management Team provides the necessary training and guidance to support the development, implementation, and maintenance of the needed operational control procedures, as outlined in Element 8.0. The operational control procedures contain operating criteria, e.g. process specifications and parameters, product characteristics and service instructions.

#### **Communication**

The EMS Management Team ensures that it has developed, documented, and implemented the operational control procedures, and communicated them to relevant employees and marketing agents, as outlined in Element 9.0.

#### **Implementation**

The EMS Management Team oversees the implementation of operational control procedures in the respective activity areas. This includes ensuring that employees in each activity area receive the necessary resources, training and support services to properly implement the operation controls.

#### **Review**

The EMS Management Team shall review the operational control procedures regularly during EMS internal audits as outlined in Element 16.0 and work with managers to revise them according to the changes in the facility's critical control points.

#### **REFERENCES**

- BMP Guidance Manual, (NBP): <http://www.weftec.org/Biosolids/page.aspx?id=7733>
- Code of Good Practice, (NBP): <http://www.weftec.org/Biosolids/page.aspx?id=7733>
- Manual of Good Practice for Biosolids, (NBP): <http://www.weftec.org/Biosolids/page.aspx?id=7733>

#### **EMS Cross References**

Element 3.0 Critical Control Points  
Element 4.0 Legal and Other Requirements  
Element 8.0 Training  
Element 9.0 Communication and Public Outreach  
Element 16.0 Internal EMS Audit  
Element 17.0 Periodic Management Review of Performance

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#### REVISION HISTORY

Revision #	Date	Revision Description
10	08/03/2016	Merged element to new EMS format, included Maximo software under Procedure
09	10/06/2014	Updated links
08	10/11/2013	Updated SOP list
07	08/05/2013	Updated references
06	04/18/2012	Update Procedures
05	11/16/2010	Update definition of EMS Management Team and references. Review and update critical control points (EMS Master Table)
04	05/15/2008	Audit (YR2) 2007
03	06/29/2007	Audit (YR1) 2006
02	11/29/2004	2004 Issue
01.a	10/18/2004	Internal Audit Revisions
01	10/01/2004	Approval Draft
SR	01/30/2004	Issued for Status Review