

## Section 3: Operational Control

An EMS is about “managing” or controlling your facility's environmental impacts and, in particular, operations and services from which your identified significant environmental impacts, objectives and targets, and regulatory requirements are derived. What is operational control and how do you document it? You probably already have procedures, work instructions, permits, maintenance manuals, and similar in place for many of your operations and services. In other words, documents, processes, and programs are in place for how you do a particular job or operation, who is responsible, etc. This shows control and management of an operation or service.

The following steps will allow your organization to determine which operations or services should be covered by documented procedures and work instructions and how those operations should be controlled.

### Step-by-Step Guide to Establishing Operational Control

- Step 1) Identify Significant Environmental Operations
- Step 2) Review and Draft Operational Controls
- Step 3) Review Maintenance and Calibration Requirements
- Step 4) Check Operational Controls for EMS Conformance
- Step 5) Communicate Operational Controls



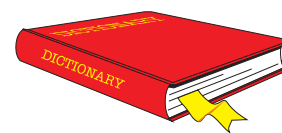
#### Step 1) Identify Significant Environmental Operations

Determining which operations should be covered by documented operational controls and how those operations should be controlled is an important step in developing your EMS. Review the operations and services that are related to your significant aspects and objectives and targets that you identified earlier. Now review your regulatory requirements in these areas.

Is it clear to your employees how you want these activities to be conducted and controlled? In other words, do these activities have manuals, procedures, work instructions, and similar documents and instructions to manage how their day-to-day tasks are accomplished?

Keep in mind that you might need documented operational controls in order to manage significant aspects and legal requirements, regardless of whether you established objectives and targets for each of them.

## Key Section Terms



**Operational Controls** – Documents that specify the way to execute a certain activity or operation. Operational controls are assigned to operations and services involving significant aspects and are documented through the use of work instructions, procedures, manuals, programs, etc. Examples include maintenance work, pretreatment operations, chemical ordering, etc.

**System Procedure** – An EMS – (ISO 14001) required document that establishes purpose, scope, roles & responsibilities, the tasks to be completed, and where and how the associated records and documents are maintained.

**Work Instruction** – A series of steps and activities directed to a very specific area or process. Examples include cleaning the rake at wastewater pretreatment operations and calibrating a pH meter.

### Three Lessons Learned (from wastewater facilities):

1. The most effective operational controls are short and to the point. Several examples from wastewater facilities are included in the appendices of this Handbook.
2. In determining which operations and activities need to be controlled, look beyond operations and services. Activities such as equipment maintenance, management of on-site contractors, and services provided by suppliers or vendors could affect your organization's environmental performance significantly.
3. Use photos and diagrams where applicable for your operational controls. For example, a diagram showing the direction and how far to turn a valve is much clearer than text.



## Three Things to Avoid

(from wastewater facilities):

1. Not including suppliers and contractors that provide operations, goods, and services that have a direct impact on your facility's significant aspects and objectives and targets. Cross-reference your significant environmental aspect list and your objectives and targets with the associated supplier and contractor operations to ensure operational control.
2. Starting from scratch when developing your operational controls. Most wastewater organizations had about 80% of the necessary documentation in place when they began their EMS implementation.
3. Overlooking the maintenance and calibration of equipment for significant environmental aspect areas and objectives and targets. Maintenance manuals and calibration records also demonstrate control.

### Involving Contractors and Temporary Staff

If your contractors and temporary staff are in areas or provide services that affect your significant environmental impacts, objectives and targets, or legal and other requirements, make sure that they have procedures, work instructions, and/or maintenance manuals, etc. that cover and show control of those operations and services. For example, if you use an off-site contractor to maintain a piece of equipment that is within one of your identified significant areas, make sure they have a documented work instruction that they follow to maintain the equipment.

## Step 2) Review and Draft Operational Controls

Once you have a list of operations and services that require documented operational controls, take a look at what you already have in place to manage these activities. Do your current procedures reflect what is actually being done at your wastewater facility? How do you control the operations now and are the controls adequate? Can the employees, whose work the procedures describe, easily understand them?

If you have documented operational control procedures already in place for your significant activities—great! Reference and document them in your EMS Manual (see EMS Documents and Records later in this section). If not, you will need to add language to current procedures and/or draft new procedures to ensure adequate control of your significant environmental operations, legal requirements and your objectives and targets.

*For an example of an Operational Control Procedure, see Appendix A.*

## Step 3) Review Maintenance and Calibration Requirements

Maintenance and calibration of equipment in areas that could have significant environmental impact must be considered for your wastewater EMS. Once you have identified operations that require control and have documented your procedures and work instructions for these, determine the maintenance and calibration requirements for these operations and services and document and maintain these records. Don't ignore the maintenance manuals that come with your equipment.

Some organizations place critical monitoring equipment under a special calibration and preventive maintenance program. This can help to ensure accurate monitoring and make your employees aware of which instruments are most critical for environmental monitoring purposes.

*After you have identified your significant environmental aspects, there are two separate paths to follow (a fork in the road). The first is setting your objectives and targets and then developing environmental management programs to achieve your targets. The second path is to ensure that you have or develop operational controls to deal with any other significant aspects you have identified that may not be covered under your current objectives and targets and the associated programs to meet them.*

Donna Adams  
Eugene, Oregon  
Wastewater Division

## REMEMBER



You probably already have some of the procedures, work instructions, maintenance manuals, etc. that demonstrate control of your identified significant environmental operations and services. Now it's simply a matter of documenting what you have in place OR establishing and writing new procedures and work instructions in your significant areas that need them.

### Step 4) Check Operational Controls for EMS Conformance

About two or three months after you have documented and implemented your Operational Controls procedures, check if they are working according to your plan. Here are some questions to investigate:

#### Check ✓

1. Have you identified all operations and activities associated with significant environmental aspects, legal requirements and environmental objectives & targets?
2. Are these operations and activities under control through programs, documented procedures, work instructions, etc.?
3. Have you communicated and trained your employees, suppliers, vendors, and contractors on applicable procedures, work instructions, and policies?

### Step 5) Communicate Operational Controls

Review your documented procedures and work instructions (controls) with all applicable employees. Communicating your procedures with the people who will need to implement them will help secure their input. Also remember to communicate operational controls with applicable vendors, contractors, suppliers and temporary staff.

## NOTE



Operational control is demonstrated and can be communicated through other EMS elements, including training, communication, document control, records management, and emergency preparedness and response. Use your current procedures, work instructions, and manuals relevant to these elements as ways to demonstrate control.

*Initially, establish control for all your identified significant aspects. Then, establish controls for all your aspects and activities. This will bring consistency and accountability to those on your frontline who are ensuring environmental stewardship.*

Rick Bickerstaff  
Charleston, South Carolina  
Commissioners of Public Works

## Three Keys to Success




(from wastewater facilities):



1. Check in with all of your shifts and satellite offices for improvement suggestions, to test your procedures and to get involvement and buy-in to the EMS. If changes are made to procedures, make sure affected personnel are communicated with and trained accordingly.
2. Keep the language in your procedures and work instructions clear and simple. A good check is to ask someone unfamiliar with the activity if he/she could complete the work using the instructions provided.
3. Start by looking at the significant environmental aspects and legal requirements that you identified in Phase 1. Identify the operations and services that are related and then consider what types of controls are needed to manage these environmental aspects and compliance requirements.

### Examples of Operations and Services that may Require Operational Controls:

- Management/disposal of wastes
- Approval of new chemicals
- Storage & handling of raw materials and chemicals
- Equipment maintenance & servicing
- Wastewater pretreatment
- Management of contractors



## Operational Control

*(Cut out this section for handy reference)*




The **Purpose** of this EMS element is to:

- Define and implement a procedure for controlling (procedures, work instructions, manuals, etc.) the significant operations and services, objectives and targets, and compliance requirements of your organization.

The **Results** of this EMS element are:

- Documented methods to control (e.g., procedures, work instructions, maintenance manuals, etc.) operations and services that affect your facility's significant environmental aspects, objectives and targets, and compliance requirements.

**Before you Begin** this EMS element:

- Complete your significant environmental aspects analysis.
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ISO 14001 Requirements	Links to Other EMS Elements	Required Documents & Records	Optional Documents & Records
<p><i>Operational Control</i></p> <p>The organization shall identify those operations and activities that are associated with the identified significant environmental aspects in line with its policy, objectives and targets. The organization shall plan these activities, including maintenance, in order to ensure that they are carried out under specified conditions by:</p> <p>a) Establishing and maintaining documented procedures to cover situations where their absence could lead to deviations from the environmental policy and the objectives and targets;</p> <p>b) Stipulating operating criteria in the procedure;</p> <p>c) Establishing and maintaining procedures related to the identifiable significant environmental aspects of goods and services used by the organization and communicating relevant procedures and requirements to suppliers and contractors.</p>	<p><b>Policy</b> - To satisfy the commitments made in your environmental policy, operations and activities must be controlled.</p> <p><b>Environmental Aspects</b> - Identified significant environmental aspects must have documented procedures (i.e., controls) in place.</p> <p><b>Legal and Other Requirements</b> - Regulated operations must have documented procedures (i.e., controls) in place.</p> <p><b>Objectives and Targets</b> - The environmental goals set by your organization must have documented procedures (i.e., controls) in place.</p> <p><b>Training</b> - Training is required for employees, vendors, service providers, and contractors that could significantly affect the environment.</p> <p><b>Monitoring and Measurement</b> - Equipment in potentially significant areas must be properly maintained and calibrated.</p>	<p>Documented operational controls (e.g., procedures, work instructions, manuals, etc.) for significant aspects and areas and for your objectives and targets.</p>	<p>A list of operations and services related to your significant environmental aspects, objectives and targets, and compliance programs.</p>