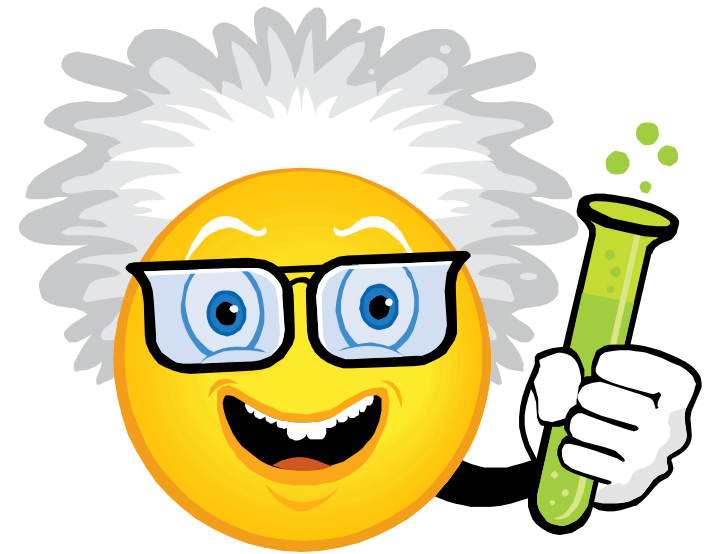


The Way We Do The Things We Do

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Have you ever...?

- ▶ Read a set of instructions that made no sense at all?
- ▶ Started to run a test only to find that the procedure was written 30 years ago and is no longer accurate or acceptable?
- ▶ Asked “Why?” only to be told, “Because that’s how we’ve always done it.”

“It is necessary, in order to know things well, to know the particulars of them.”

Duc De La Rochefoucauld Francois

Why we do what we do

- ▶ Because the EPA tells me to
Regulatory Requirements
- ▶ Satisfy expectations
The Plant, The Client or the Regulatory Agency
- ▶ To implement uniform practices

How do you do that?

- ▶ Implement an SOP
- ▶ An SOP is a detailed set of instructions written in “plain English” for completing a specific task in a safe manner that will produce a consistently accurate result.
- ▶ SOPs are a tool to plan, guide, record and document testing procedures from start to finish
- ▶ Remove all doubt! The goal is to have defensible data.

Standard Operating Procedures

- ▶ Lists all the equipment needed and the steps required to complete the task at hand in a standard format
- ▶ Keeps things running smoothly so your lab or plant is in compliance
- ▶ Effective and efficient lab work to reduce no brainer mistakes and errors
- ▶ Keeps your results reportable
- ▶ Reduces non compliance
- ▶ “Cookbook”

When is an SOP required

- ▶ A written procedure should be maintained for EVERY procedure in the lab, from running tests, to prepping standards and even housekeeping requirements.
- ▶ Modify the SOP when ever the procedure changes, or when new equipment is put in use
- ▶ Keep it current! Don't update the manual only when you have a lab audit or compliance inspection.

Who is writing it?

- ▶ SOPS are generally written from an administrator's point of view, only focusing on getting the necessary words on paper
- ▶ Should be written so that the person doing the task can understand and follow the steps.
- ▶ Get input from everyone involved to write a procedure that is comprehensive and still user friendly.

Involve Everyone

People tend to support something that they have been directly involved in

Have several people review the procedure, including the ones who will be running the test and the ones who will be maintaining the equipment being used.

Including employees at every step helps assure that the final product is useful and accepted.

First things First...

- ▶ Before you begin determine the intention and function of the procedure
- ▶ Define the scope of the SOP
- ▶ Arrange the process in a logical order
- ▶ Keep in mind that the purpose of the SOP is to streamline the task so that the whole process is efficient and effective.

Whats in it?

- ▶ A well written SOP should contain information that is specific to YOUR lab.
- ▶ Describe the procedure in detail, but not be so detailed that it creates confusion and doubt.
- ▶ People have difficulty remembering anything that has more than 10 or 12 steps.

What's In It?

- ▶ List all chemicals and equipment used
- ▶ QA and QC measures
- ▶ Calculations
- ▶ Sampling requirements including collection, handling, and storage
- ▶ Interferences and Troubleshooting
- ▶ Reference to the parent method
- ▶ Corrective Action
- ▶ Safety precautions

Gather Your Info

- ▶ User Information
- ▶ Makes the method easy to read and follow
- ▶ Specific to YOUR lab
- ▶ Consider who will be reading the procedure and the complexity of the task
- ▶ Technical information that is specific, accurate and current
- ▶ Refer to manufacturer's manuals, regulatory documents and MSDS sheets

Don't reinvent the wheel!

- ▶ It isn't always necessary to write an SOP from scratch! Search the internet for templates or borrow a method from another lab and insert the information that pertains to your lab.
- ▶ Ask the EPA Lab to e mail you a copy of theirs. They are more than happy to share that information with you.
- ▶ **Beware of copyright infringement!**



Individual SOP

- ▶ Title
- ▶ Method #, and reference to the parent method
- ▶ Scope and Application
- ▶ Apparatus and Reagents
- ▶ Step by Step instruction
- ▶ Calculations
- ▶ QC– Spikes and Duplicates
- ▶ Corrective Action
- ▶ Equipment Maintenance
- ▶ Date written or revised
- ▶ Name of the writer

The individual SOP

- ▶ Should be written in the same format
- ▶ Include pictures and diagrams if available, or take your own
- ▶ When changes are made make sure all staff members receive a copy of the change and remove the old method from the manual
- ▶ Train everyone on the new method to make sure its being done the same way

Its written, now what?

- ▶ An SOP provides consistency, which improves morale and creates a better work environment.
- ▶ Employees won't have to guess how the boss wants it done this time, and costly errors won't be made because of lack of certainty.
- ▶ Document staff training
- ▶ Use the manual as a training tool for new employees and to keep “procedural drift” in check

What is Procedural Drift?



- ▶ Straying away from the method as it is written because you have become too familiar with doing it, and you know where corners can be cut, and short cuts can be taken. Leads to errors and inconsistency.

It doesn't matter how well written your SOP is if it just sits on a shelf and never gets looked at.

Make sure **EVERYONE**, including YOU, reads and follows all procedures.

Questions?

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