



PHASE III: DO

Phase III is the transition phase from the "Plan" to the "Do" stage of the P-D-C-A cycle. This phase is designed to follow-up on the legal requirements, objectives and targets, and the significant aspects you identified and defined in Phase II, and begin to focus specifically on how you can best address these issues within your organization. The phase encompasses two main EMS elements: managing significant aspects and developing environmental management programs (EMPs). The development of EMPs will lay the foundation for how you will get from "here" to "there," in the most economically and environmentally efficient manner. To accomplish this phase you will refine, and in some cases create, standard operating procedures and controls, define implementation team roles and responsibilities, and enhance internal and external lines of communication.

This phase is critical in bringing together your ideas and your EMS Team, and making sure that everyone is on-board and ready to make this thing a reality. The empowerment of employees, at various levels within your organization, is paramount to successfully completing this phase of activities. By involving every level of your organization, you will be able to more effectively define and control your significant environmental impacts, which will result in better integrated operating procedures and an understanding of each employee's connection to the larger organizational goals.

Activities of Phase III include (8 months):

- Establishing a sound method for operational control, including analysis of your existing standard operating procedures and the systematic documentation of all procedures.
- EMS Awareness training and understanding on an individual, fenceline, and organization-wide level. Clearly define roles and responsibilities, particularly in regard to significant aspects.
- Establish effective mechanisms for information to flow top-down, bottom-up, and across your entire fenceline. It is important that these lines of communication extend outside the organization as well.
- Establish a viable system ensuring documents and records are current, legible, easily accessed, and archived when appropriate.
- Identify potential emergency situations that could arise from everyday activities and operations, and review or create plans to address these potential incidents. A crucial ingredient is to develop an on-going training program.
- Develop your "plan of action," a series of systematic environmental management programs, which will be the vehicles for meeting your objectives and targets.



TROUBLESHOOTER'S GUIDE

Reality check your EMPs with line managers, department heads, and supervisors whose operational staff and management are involved

- ♦ Is the appropriate staff responsible?
- ♦ Does the timing conflict with other operational priorities?
- ♦ Do the tasks seem logical and sufficient for accomplishing the target?

Many cities ask managers to initial the EMPs to confirm their agreement with the plans. Their support in keeping the EMS a priority is an important key to success in maintaining the schedule.

Check in frequently with designated staff to head off or manage hurdles or problems that may arise.

Communicate progress and any challenges to the Core Team. Don't be afraid to enlist management support if deadlines consistently are not being met.

ENVIRONMENTAL MANAGEMENT PROGRAMS

Congratulations! You're more than half way through the "Planning" phase of the EMS P-D-C-A cycle. In this phase you'll complete the "Do" process by developing and implementing Environmental Management Programs, or EMPs, for your Objectives and Targets.

DEVELOPING ENVIRONMENTAL MANAGEMENT PROGRAMS

Environmental Management Programs -- EMPs are action plans or the vehicle you will use for accomplishing your objectives and targets. It's no surprise that like every other action plan you have developed, EMPs tell:

1. WHO
2. WHAT THEY WILL DO?
3. WHEN THEY WILL DO IT
4. THE ESTIMATED HUMAN/FINANCIAL RESOURCES REQUIRED

EMPs allow you to track and assess your progress in accomplishing your objectives and targets and your policy commitments and they also help you quantify the economic and environmental benefits of the EMS.



Here's a real-life example of an EMP developed by an Implementation Team at a vehicle maintenance facility. This EMP is linked to a policy commitment to efficiently use resources and implement conservation measures to reduce impact. The objective is to consume less water when washing the exterior of vehicles. The target is a 10% monthly reduction in ccf's (100 cubic feet) associated with washing. The Performance Indicator (i.e., how they will measure their achievements) is 25% reduction in water fees in bus facilities for calendar year 2001 compared to 2000.



FOUR EASY STEPS TO AN EMP

- 1. First list the tasks you have planned.** It is important to involve staff and managers in these decisions when their operations are involved to increase involvement and promote buy-in. Many Core Teams like to reference the significant aspects or policy commitments that drive each EMP. It's also a good idea to start date each EMP and indicate when you want it completed.

Objective: Consume less water when washing exterior of vehicles

Target: 10% monthly reduction in ccf's (100 cubic feet) associated with washing
Performance indicator: 25% reduction in water fees in bus facilities for calendar year 2001 compared to 2000

Policy Commitment: Efficiently use resources and implement conservation measures to reduce impact

Start Date: 2/15/01 **Completion Date** 11/15/01

Tasks	Staff	Deadlines	Time	Cost
Create Baseline data				
Communicate intentions to staff				
Brief Supervisors				
Investigate alternatives: Reengineer or retrofit existing systems				
Communicate operational changes to staff				
Track water usage and compare figures against Targets				

TROUBLESHOOTER'S GUIDE

This information keeps the EMS visible and interesting (everyone likes good news), and it is information management can use in their own department and division reports and meetings to show how they are achieving organizational goals. At the end of six months you will have quite a list of benefits.

Here are some examples of qualitative benefits reported by managers:

- ♦ *Increased awareness of environmental and safety issues by the whole workforce*
- ♦ *I sleep better at night knowing that my environmental hotspots are well managed.*
- ♦ *We have a much better idea of how to prioritize our resources in a very proactive way.*
- ♦ *Because we use a significant number of seasonal and part-time employees, the EMS has helped untrained, inexperienced individuals understand what we do, how we operate and that the environment is important to us as an organization. Ask management to publicly acknowledge and reward your staff's diligence, progress, and accomplishments.*

Email reminders of approaching deadlines at regular intervals in advance of deadlines

Nothing succeeds like success. Publish good news bulletins widely at council meetings, department meetings, public meetings. Acknowledge and reward progress. Recognition builds energy, enthusiasm and buy-in.



2. Next, assign responsibility, both for the overall EMP and for the individual tasks. Again, confirm with operational managers and staff as necessary.

Objective: Consume less water when washing exterior of vehicles

Target: 10% monthly reduction in ccf's (100 cubic feet) associated with washing

Performance indicator: 25% reduction in water fees in bus facilities for calendar year 2001 compared to 2000

Policy Commitment: Efficiently use resources and implement conservation measures to reduce impact

Start Date: 2/15/01 **Completion Date** 11/15/01

Person Responsible: Bill Smith

Tasks	Staff	Deadlines	Time	Cost
Create Baseline data	Smith			
Communicate intentions to staff	Jones			
Brief Supervisors	Smith			
Investigate alternatives: Reengineer or retrofit existing systems	Weston			
Communicate operational changes to staff	Jones			
Track water usage and compare figures against Targets	Bradley			



3. Now, plan for some intermediate deadlines. If you expect to accomplish your objective in one year, you won't want to wait until the 300th day to assess your progress. Make the necessary adjustments if the schedule is in conflict with high operational periods.

Objective: Consume less water when washing the exterior of vehicles

Target: 10% monthly reduction in ccfs (100 cubic feet) associated with washing

Performance indicator: 25% reduction in water fees in bus facilities for calendar year 2001 compared to 2000

Policy Commitment: Efficiently use resources and implement conservation measures to reduce impact

Start Date: 2/15/01 Completion Date 11/15/01

Person Responsible: Bill Smith

Tasks	Staff	Deadlines	Time	Cost
Create Baseline data	Smith	3/15/01		
Communicate intentions to staff	Jones	3/15/01		
Brief Supervisors	Smith	3/15/01		
Investigate alternatives: Reengineer or retrofit existing systems	Weston	4/1/01		
Communicate operational changes to staff	Jones	5/15/01		
Track water usage and compare figures against Targets	Bradley	9/15/01		



4. Finally, estimate how much staff time is needed. Are there other direct costs for materials? Equipment? Outside services? Again, confirm with managers that the resources are consistent with the budget management has approved. With this type of cost data readily available, it's easy to compute the economic benefits of EMS implementation.

Objective: Consume less water when washing exterior of vehicles

Target: 10% monthly reduction in ccf's associated with washing

Policy Commitment: Efficiently use resources and implement conservation measures to reduce impact

Performance Indicator: 25% reduction in water fees in bus facilities for calendar year 2001 compared to 2000

Start Date: 2/15/01 **Completion Date** 11/15/01
Person Responsible: Bill Smith

Tasks	Staff	Deadlines	Time	Cost
Create Baseline data	Smith	3/15/01	7	\$\$\$
Communicate intentions to staff	Jones	3/15/01	7	\$\$\$
Brief Supervisors	Smith	3/15/01	7	\$\$\$
Investigate alternatives: Reengineer or retrofit existing systems	Weston	4/1/01	5	\$\$\$
Communicate operational changes to staff	Jones	5/15/01	2	\$\$\$
Track water usage and compare figures against Targets	Bradley	9/15/01	20	\$\$\$
List other direct costs				N/A

Total Estimated cost for this EMP \$\$\$



Has management approved the resources necessary to implement this EMP? *Rcf* YES

Once the EMPs are developed, you'll want to confirm that everyone understands his/her tasks and deadlines. Additionally, everyone should understand their connection to the larger organizational goals AND to the significant aspect or policy commitment their efforts are supporting. This connection, called a system linkage in EMS terms, reinforces that the EMS is a program that requires employee involvement at every level and function in the organization. When the goals are realized, everyone has a share of the success and benefit.

Congratulations! You've completed your first EMP. It's an iterative process, so continue developing these action plans for all of your objectives and targets and policy commitments.



MANAGING SIGNIFICANT ASPECTS

TROUBLESHOOTER'S GUIDE

Municipalities have found it particularly important to involve their operational personnel in this phase of EMS activity. For many folks "on the shop floor" it's the first time they've been invited to provide input. It is a terrific opportunity for operations and the environmental department to share knowledge and learn from each other and often results in a number of simple fixes and immediate improvements.

With the implementation of your EMPs you are moving forward with the "Do" of the Plan-Do-Check-Act cycle. You will also design and actually implement some planned improvements for managing your significant environmental issues more effectively and with more control.

GETTING STARTED

First, identify the operations related to significant impacts and legal requirements. Ultimately the EMS will help you review your existing procedures and practices in these "hotspots" with the people who actually do the work. Do your procedures reflect what is really being done on site? Is there a better, cheaper, faster, safer, greener way? Your Implementation Teams will probably find a number of ways to improve what you are currently doing. If you're looking for more consistent and efficient management of your environmental issues, increased pollution prevention benefits, better operational control, more thorough employee understanding and stewardship, fewer accidents, and better compliance assurance - well here's where you'll find it.

Ready to begin?

SIX KEY EMS ELEMENTS

During the review process your Core and Implementation Teams will check your activities and arrangement in six areas.

- ♦ OPERATIONAL CONTROLS
- ♦ ROLES AND RESPONSIBILITIES
- ♦ TRAINING
- ♦ COMMUNICATION
- ♦ CONTROLLING DOCUMENTS AND MANAGING RECORDS
- ♦ EMERGENCY PREPAREDNESS AND RESPONSE

OPERATIONAL CONTROLS



A good place to start is by first determining which operations should be covered by documented procedures and how those operations should be controlled. You probably have existing procedures that address most of your activities relating to the environment. Do the Standard Operating Procedures (SOPs) say what you want them to say or do they need improvement? Are the SOPs documented and readily available? What operational controls are most important for avoiding accidents or environmental impacts? Are these SOPs and operational controls easily located, accessible and legible? Are they current? Can the employees, whose work the SOPs describe, easily understand them?

GETTING STARTED: ASK YOURSELF

CASE STUDY

The City of San Diego, CA hired two interns to assist with word processing documents and conducting research. They found this to be a cost effective and easy solution to reducing the work load of developing draft and final documents.

For additional information, please contact Mark ZuHone, City of San Diego, CA, at 858-573-1247 or MZuHone@sandiego.gov

- ♦ Which operations are related to significant impacts and legal requirements?
- ♦ Is there a better, cheaper, faster, safer, greener way to conduct our business?
- ♦ Do our practices and procedures reflect what is actually being done on site?
- ♦ How do we control this operation now and are the controls adequate?
- ♦ What type of monitoring/measurement equipment calibration is needed?
- ♦ What expectations should we communicate to suppliers and contractors?

Suppliers and contractors may provide goods and services that have a direct impact on your organization's environmental performance. You will want to cross-reference this with the significant environmental aspect list to ensure they take appropriate measures to control the significant aspects that are associated with their goods or services.

TROUBLESHOOTER'S GUIDE

OPERATIONAL CONTROLS

Be sure to check in with all your operational shifts as well as with your satellite offices for improvement suggestions, to truth test your SOPs and to get involvement and buy-in to the EMS. If changes are made to policies and procedures make sure affected personnel are trained.

Procedures tell who will do what, when it will be done, and where the information will be stored. The most effective procedures and work instructions are short and to the point. Several examples are included in the appendices of this guide.

If possible avoid using the words "shall" and "must" and try to use an active rather than a passive voice. A good check on the effectiveness of the procedure is to ask someone unfamiliar with activity if they could complete the work using what is written in the document.

Resist the temptation to "start fresh" when writing procedures and work instructions. Most organizations already have about 85% of what they need for the EMS. Keep it simple! Use what you have - improve as needed. Simple tweaks and adjustments to your existing procedures will make your EMS process easier and less time consuming and keep your paper work to a minimum.



ROLES AND RESPONSIBILITIES

TROUBLESHOOTER'S GUIDE

ROLES AND RESPONSIBILITIES

EMS responsibilities are not responsibilities separate from daily activities or to be done during lunch or after hours. Management makes EMS a priority so schedules are balanced accordingly.

We have already learned that the Environmental Management Representative (EMR) is responsible for ensuring the EMS is established and implemented on schedule. But the responsibility of ensuring successful implementation and operation of the EMS does not fall to the EMR alone. Everyone in the organization has an important role to play. The EMR and Core Team's ability to delegate is an important key to success in the EMS program.

To ensure that the EMS functions properly, personnel throughout your organization need to understand their EMS roles and responsibilities. The level of responsibility will vary from person to person depending on their designated function in your organization, but everyone in the organization has an important role to play. The respective roles and responsibilities of all personnel should be documented and communicated. Are roles and responsibilities clearly defined (notice that these are listed by job function not name) particularly with respect to significant aspects?

Human Resources
training requirements and records

Purchasing
contractor specifications, pollution prevention (P2) preferred purchasing

Legal Department
identifying regulatory requirements and keeping the information current

Information Technology
document control and management

Accounting and Finance
tracking cost savings and resource expenditures

Public Relations
communication and outreach to stakeholders

CASE STUDY

The Port of Houston Authority had each employee sign a form indicating their environmental responsibilities related to significant aspects and the EMS

*For additional information, please contact
Laura Fiffick, Port of Houston, TX, at
713-670-2440 or lfiffick@poha.com*



TRAINING

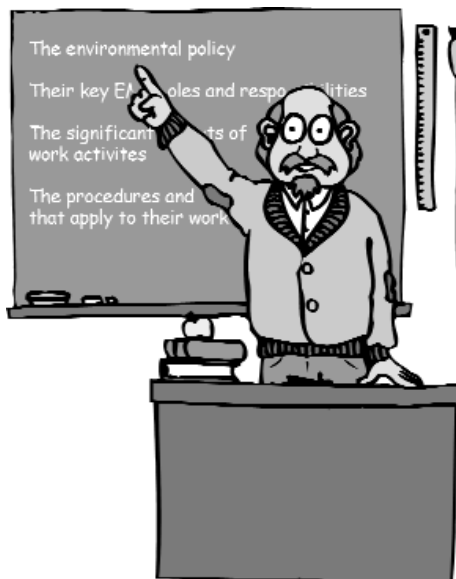
One of the central features of the EMS approach is that employees up, down and across your organization become part of your environmental staff. Environmental awareness and stewardship are the responsibility of every employee in the organization and are solidified by regular training. All employees have to understand:

- ♦ The environmental policy
- ♦ Their key EMS roles and responsibilities
- ♦ The significant impacts of their work activities
- ♦ The procedures and work instructions that apply to their work
- ♦ The potential consequences to the organization of NOT following EMS requirements (e.g., violations and fines, poor public image, health and safety problems, monetary impacts)

As part of the EMS process you will verify (in EMS terms that means you'll have documented records) that everyone has received awareness training about your EMS as well as about the environmental policy and what it means to how each employee does his/her job.

You will verify that everyone whose job involves a significant aspect is trained and competent to implement procedures, policies, and regulations in order to minimize the environmental impact of their operations.

If you have changed any SOPs as a result of the Phase III reviews, the EMS will help you update and maintain your training material to make sure that everyone has the most current information and know-how.



TROUBLESHOOTER'S GUIDE

Training

Training can be expensive and time consuming, and it doesn't always have to be done in a classroom setting. Municipalities have gotten quite creative in developing their training materials.

It is important to build on what works. Do you have an existing training process that has worked well in the past? If so, use this for your EMS.

For large municipalities, the EMR and Core Team found it cost effective to use a video for EMS awareness training. Others have identified champions within the fenceline to assist with the training. The champions, typically from the shop floor, were familiar faces to the class which helped the material resonate.

CASE STUDY

An effort is being made to combine the future training requirements of the Safety and EMS programs. Combining the training programs, operational requirements, and documentation controls will help reduce the overall time spent in training and administration of these programs. For example, 127 full and part time positions will need training in these programs. By combining the training requirements, it is estimated that 7.5 hours will be saved each year per employee. This amounts to 127 additional workdays that will be available to perform normal work activities.

New Hampshire Department of Transportation - Bureau of Traffic

For additional information, please contact Fred Murphy at 603-271-3226 or fmurphy@dot.state.nh.us



GETTING STARTED: ASK YOURSELF

- ♦ What job functions affect the environment?
- ♦ What training do we currently conduct in these areas?
- ♦ Can EMS roles/responsibilities/controls be included in this training?
- ♦ Can we tweak the training material we already have or do we need to develop additional training materials?
- ♦ How do we currently maintain training records?

CASE STUDY

We felt it was important to use a video as a training aid because it enabled us to show our employees doing work that had impacts on the environment while also being the work they do everyday. The video was an excellent resource in that it helped establish a consistent message about the EMS by communicating the program to maintenance staff and to leadership teams. In a training session the video is used to explain the concepts, we then hand out a sheet that points out employee's environmental responsibilities, the adopted GREEN policy, and hand out the Environmental SOP's (our supervisor's are expected to train their staff during shift meetings and document their efforts on a training log).

*For additional information,
please contact Kevin Considine at
503-962-2471 or considin@trimet.org*

Training doesn't always have to be done in a classroom setting. The City of San Diego Refuse Disposal Division conducted some of its awareness and competency training in what it called "tail gate sessions." Rather than pull personnel off site for training the training came to them. Before starting the equipment up in the morning or during breaks personnel would gather round and receive training on the environmental policy or work instructions. This approach saved a significant amount of time and eliminated the need to pull personnel off site for training.

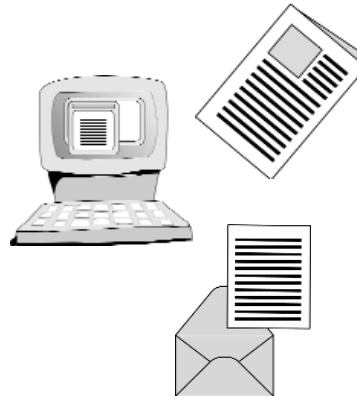
COMMUNICATION



Cities and counties most commonly reported improved communication as an unexpected benefit of EMS implementation both with stakeholders inside and outside the organization. Because everyone in your organization is involved in developing, implementing and maintaining the EMS, you will need effective mechanisms for information to flow top-down, bottom-up and across your entire fenceline. You'll also be considering how to communicate your significant environmental impacts to neighbors and community groups and reviewing your interactions with your contractors and vendors.

TYPICAL INFORMATION THAT GETS COMMUNICATED:

- Environmental policy (to all employees and available to the public)
- Objectives and targets
- Legal and other requirements
- Requirements to suppliers and contractors
- Roles and Responsibilities
- Significant aspects



GETTING STARTED

- Who are your key internal and external stakeholders? How do you currently communicate with them? What are their concerns?
- Do you know who to contact and where, when, and how to reach them both inside and outside the organization? In emergency situations? With questions for contractors/suppliers? About legal requirements? About calibration and maintenance? About changes in SOPs?

External Stakeholder Examples

- Facility's non-management employees
- Local business interests
- Local citizen groups
- Other Local governments
- Local environmental groups
- State environmental groups
- National environmental groups
- Unions
- Community Advisory
- Local Emergency Planning Committee (LEPC)

CASE STUDY

In an effort to educate outside stakeholders and reward personnel, Jefferson County, AL sponsored an EMS event at the Birmingham Barons minor league baseball game. Free admission was given to employees who received EMS information at the admissions gate while other ticket holders were give information as they entered the game. Occasional EMS announcements were made over the loudspeaker.

For additional information, please contact Bill Peters, Jefferson County, AL, at 205-325-8712 or petersb@jcc.co.jefferson.al.us

TROUBLESHOOTER'S GUIDE

One of the questions most commonly asked by cities is "What happens to the EMS if there is a political change?"

To a great extent, the answer depends on you and how frequently, regularly, and effectively you communicate the economic and environmental benefits the EMS brings to your organization. Cataloguing both quantitative and qualitative data and communicating the information up, down, and across your organization is a regular part of your EMS activity and can help you sustain your EMS over time.

It is useful to send a monthly message of 3 "good news bullets" up through the management ranks.



CONTROLLING DOCUMENTS AND MANAGING RECORDS

TROUBLESHOOTER'S GUIDE

Want to avoid distributing reams of documents that quickly become obsolete? Here's some troubleshooter tips.

Early in the EMS program, develop a document format that will immediately identify the contents as EMS materials. Use an existing document format and numbering or control system if one is already available.

Next develop a document control procedure. There will be numerous changes to procedures, policies and work instructions, particularly throughout the first two phases of the EMS. Instead of printing and distributing revision after revision, which frustrates and confuses your Core and Implementation Teams, create a file on your Intranet that will house your EMS documents. Remind staff that ONLY the electronic version is the most current document. This helps significantly in managing the large number of documents being generated and reduces the number of obsolete documents that may be in circulation.

Although at times you may think you are drowning in paper, documents and records are essential to the establishment of the EMS and the management of your significant aspects. Documents are written instruments used to keep the EMS functioning. Records are objective evidence, or proof that the organization is

There are numerous companies that sell software that provides guidance on how to implement an EMS. A component of this software also addresses the document control requirement of an EMS. Examples of software can be found in Appendix F.

actually implementing the EMS as designed and that EMS procedures and work instructions are being carried out. Employees need to work from approved and current documents. New policies, procedures and work instructions will be generated and revisions will improve old ones. It is quickly obvious that you need a

system for managing all of this paper. EMS documentation might include:

DOCUMENTS	RECORDS
Maintenance manuals	Training records
Standard Operating Procedures	Delivery logs/bills of lading
Contractor contact information	Calibration results
Contracts	Audit Reports
Permits	List of Significant Aspects

You will be

giving some consideration to where to store your EMS documentation and if your documents and records are current, legible, easily accessed, and archived when appropriate.

GETTING STARTED: ASK YOURSELF

What document format works best for our organization?

Will a paper process or an electronic process or a combination of the two suit our needs?

Who has the responsibility and authority for creating and revising documents?

Which documents should be controlled?

- Prepare a document control index
- Highlight changes in revised documents to make it easier for readers to identify changes

The City of Cincinnati expanded the City's intranet site to house its EMS documentation and records. The site is password protected and will allow only city personnel access to the site. The final environmental policy, EMS procedures, and work instructions will be housed in this virtual library. The Tri-County Metropolitan Transportation District - Portland, OR on the other hand purchased EMS implementation software which addressed its documentation control and records requirement.





EMERGENCY PREPAREDNESS AND RESPONSE

Accidents happen, even in the best-managed operations. Is your organization prepared in the event of an accident? Have you identified the potential emergency situations that could arise from your everyday activities and operations? Do you have response mechanisms in place?

The intent of the EMS is that effective plans are available, easily accessible, and clearly understood by everyone who might need them and that the plans include actions that will minimize any environmental impact that could occur as a result of the accident. Certainly you already have a number of emergency response plans. Start with these and ask: Are they current? When was the last time we tested them? Is training up do date? Have new employees been trained?

The EMS also asks us to revisit the emergency plans after an incident and to make any improvements that seem prudent.

It is easy to see why the Implementation Teams are involved in the thorough review of each significant aspect. They are the ones closest to the operation and in the best position to suggest and implement improvements. The Core Team reviews the planned improvements and verifies that they are realistic operationally, environmentally, technologically, and financially.



CASE STUDY: MANAGING SIGNIFICANT ASPECTS

The Gaithersburg USPS facility convened operational personnel during lunch to develop the procedures needed to manage the significant environmental aspect of underground storage tanks and fuel delivery. Examining the fuel delivery process, personnel reviewed the process flow diagram (PFD) for that particular activity. Building on the PFDs, personnel added additional information and tasks to ensure proper management of the fuel delivery activities. Personnel also identified the associated records, generated by this activity, related documentation, appropriate emergency response actions, and the required training requirements. Personnel also identified contractor/supplier issues because the fuel was delivered by a vendor. This required communicating specific requirements to the contractor to ensure they were aware of their specific role and responsibility for proper management of this significant aspect. This information was then refined and compiled into a standard operation procedure. All documents are actual samples of work that Implementation completed during their brainstorming sessions.



Fuel Delivery Program

An outside contractor delivers approximately 7,000 gallons of diesel fuel to the VMF each week. Deliveries are made during Tour 2 of Operations. The Fuel Delivery Procedure is as follows:

Segn Impact

Truck arrives at the facility date.

- A general clerk logs in the delivery *date and time* *Records training*
- The Supervisor/Administrative Clerk checks the Veeder-Route Sentry readings *is this recorded anywhere???* *HOW IS THE RESPONSIBLE EMPLOYEE TRAINED*
- The Supervisor/Admin Clerk indicates which tank to fill and unlocks the fill cap

USPS Ref 2 yrs arch.

Driver prepares to fill the tank(s)

Remember Gov contract Licensed?

V-R tells how much

employees have a checklist

- *Sup/Shop personnel* blocks the storm drain across from the tank
- *Responsible party* sets up spill kit/burn in the fill area
- Driver "sticks" the tank to determine # of inches and consults a conversion *chart* to approximate amount of fuel in the tank
- Driver records amount of fuel in the tank on the delivery ticket.
- Driver ~~estimates~~ *estimates* amount of fuel to be delivered. **QUESTION: IS THIS AMOUNT RECORDED, DISCUSSED, VERIFIED WITH A VMF RESPONSIBLE PARTY**
- Driver hooks up the NEED THE NAME OF THE EQUIPMENT HERE *Vapor Recovery System or V-R*
- *give title or employee function* is responsible for contractor oversight. **HOW IS THE RESPONSIBLE EMPLOYEE TRAINED**

Police Contractor Ref. Record

training
Put Vapor Recovery System or opening used for diesel

Spiller Valve
System failure
Vapor emissions

Driver fuels the tank(s)

- Contractor oversight is provided by *give employee title* during the fueling process **QUESTION: WHAT SPECS ARE INCLUDED IN THE CONTRACT REGARDING REDUCING OR MITIGATING ENVIRONMENTAL IMPACT????**
- Emergency response procedures during this phase of fueling include **NOTE: NOT SURE IF ANY ARE NEEDED HERE**

Filling is completed; Driver records amount of fuel delivered

- When tank fill is completed, the Driver "sticks" the tank and ~~uses the conversion chart~~ *Press V-R to see also* to estimate amount of fuel deposited in the tanks
- The Driver records ~~this~~ *inches* amount on the delivery ticket

**DESCRIPTION:**

The Vehicle Maintenance Facility (VMF) fleet uses approximately 350,000 gallons of diesel fuel annually, delivered by a contractor in weekly installments of about 7,000 gallons. The fuel is stored in two double-walled fiberglass 12,000-gallon holding tanks located on site. Two overflow tanks are adjacent to the tanks. A Veeder-Route Fuel Sentry monitoring system is used continually to detect the amount of fuel in each of the UST's and the integrity of each tank. Additionally, the contractor who installed the tanks conducts tank inspections.

POTENTIAL ENVIRONMENTAL IMPACT:

1. Possible leaks and spills during filling, storage and delivery of fuel may cause soil contamination and exposure to personnel
2. Storage or pipes or valves may fail causing soil and groundwater contamination. Large volume in tanks may result in significant contamination.
3. Transfer of diesel during filling and delivery to fleet may result in emissions through evaporation of fumes. VOC emissions are a large contributor to SMOG (ground-level ozone).

IS THIS ACTIVITY REGULATED: YES**OBJECTIVES AND TARGETS:**

1. No leaks or spills from fuel delivery and storage
2. Maintain integrity of storage tanks and associated pipes and valves
3. Prevent soil and groundwater contamination
4. Prevent avoidable emissions

OPERATIONAL CONTROLS:

1. Inspection, maintenance and calibration of the Veeder-Route Sentries
2. Inspection and maintenance of the fuel tanks
3. Vapor recovery system
4. Spill containment and blocks to storm drains when filling UST's

STRUCTURE, AUTHORITIES, RESPONSIBILITIES:

Tour 1, 2, 3 Supervisors – checking Veeder-Route Sentries
Tour 2 Administrative Clerk – checking Veeder-Route Sentries, blocking storm drain, setting up spill kit, unlocking fill cap on UST's
Tour 2 General Clerk – archives delivery tickets
(need title) Columbia office (archives tank inspection records)
Capital District UST Coordinator (Veeder-Route emergency response)
Tour 2 employees – responding to Veeder-Route alarm

RECORDS:

Fuel Order Log containing Veeder-Route readings
Training log for Veeder-Route operation, monitoring, maintenance and calibration
Training log for tank fill procedure
Tank inspection reports

Sample documentation for Phase III can be found in Appendix D on page D-1.