

## APGA Planning Tool for Small Operators

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### **PSMS Principle**

*Operations procedures (operating, maintenance, emergency response, control of materials), consistent with the Operator's safety policies and objectives and which consider safe operating limits, which operations personnel follow and have responsibility / authority to raise concerns, get permission to deviate, and stop work meanwhile, are in writing for the following topics:*

- *initial start-up (new or modified facilities)*
- *normal operation*
- *temporary operations, as the need arises*
- *emergency operations, including emergency shutdowns*
- *normal shutdown*
- *start-up or restoration of operations following maintenance or outage*

### **#1A**

- A. We utilize generic written operating procedures that are not specific to our system.
- B. We have written operating procedures that are specific to our system and our operating conditions. Our procedures only cover normal operations.
- C. We have written operating procedures that are specific to our system and our operating conditions. Our procedures cover normal and known abnormal operations scenarios.

### **#1B**

- A. Our gas employees may be unaware that they have the right to “stop-the-job” if there is an unsafe condition.
- B. Our gas employees know that they have the right to “stop-the-job”, but there is no evidence that anyone has ever stopped a job due to an unsafe condition.
- C. We know of times when gas employees have “stopped-the-job” because they identified an unsafe condition.
- D. We know of times when gas employees have “stopped-the-job” because they identified an unsafe condition. We then use those situations as examples in training and share those scenarios with the rest of our gas employees.

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### **PSMS Principle**

*Operating procedures are routinely reviewed according to risk (at least annually) to identify improvements and lessons learned, and document changes.*

### **#2**

- A. We review our operating procedures as needed.
  - B. We review some of our operating procedures annually, but do not review all of them on an annual basis.
  - C. We review all of our operating procedures annually, but only to meet the regulatory requirements. We could be better at documenting and communicating the changes that are made.
  - D. We review all of them annually. and document and communicate the changes that are made.
  - E. We review all of them annually. We consider feedback and information gathered throughout the year to make the changes and we document the changes that are made.
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### **PSMS Principle**

*Systems are in place to ensure the design, purchasing, control of materials, manufacturing, fabrication, and installation of PSMS-covered pipeline systems occurs per the specified requirements, specifications, regulations, and applicable standards, with QC / inspection.*

#### **#3A**

Pertaining to the design and installation of our pipe and stations...

- A. We know how to do the work based upon how we were taught to do it. We don't have any written requirements, specifications, or systems to tell us how the work needs to be done.
- B. We have some written specifications for the design, but otherwise we are free to do the work as we think is best.
- C. We have written specifications for design. For construction and/or installation, we are allowed to deviate from the design without approval, but we have to document the changes that were made.
- D. We have written specifications for design. For construction and/or installation, we are allowed to deviate from the design, but have to get approval from whomever developed the design and we have to document the changes that were made.
- E. We have written specifications for the design. For the construction and/or installation, we are allowed to deviate from the design, but have to get approval from whomever developed the design and we have to document the changes that were made. We also have quality inspections to ensure that things are constructed per the design or approved changes.

#### **#3B**

Pertaining to the materials we use ...

- A. We are allowed to use whatever materials we need to get the job done.
- B. We have to follow the specified materials in the design but can get the materials from wherever we want.
- C. We have an approved material and vendor list that tells us what materials we can use. No one inspects to make sure we are using the approved materials though.
- D. We have an approved vendor list for procurement of our materials and have someone inspecting the materials to ensure they meet our approved list before we use the material in the field.
- E. We have an approved vendor list for procurement of our materials and have someone checking the materials to ensure they meet our approved list before we use the material in the field. There is another quality inspection in the field to make sure the materials used match the design specifications.

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### **PSMS Principle**

*Procedures are in place for operating and maintenance activities, including inspection and testing of safety devices.*

#### **#4A**

- A. We have generic O&M procedures that have no specificity for our system.
- B. We have O&M procedures specific to our system.

#### **#4B**

- A. We have generic procedures for the testing of safety devices.
- B. We have specific procedures for the testing of each of our safety devices.

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**PSMS Principle**

*A Management of Change (MOC) procedure is in place for changes to technology, equipment, procedures, or organization (not just procedures), whether permanent or temporary, and incorporates planning for the effects of the changes. The MOC procedure includes:*

- *Reason for change*
- *Authority for approving changes*
- *Analysis of implications and potential risks*
- *Acquisition of required work permits*
- *Documentation of change process*
- *Communication of change to affected parts of the organization*
- *Time limitations*
- *Qualification and training of personnel affected by the change*

**#5**

If a change needs to be made to our procedures, technology, equipment, or organization...

- A. We have no specified way to make and communicate changes to the appropriate employees
- B. We don't have a formal Management of Change program, but we have a process in place for making changes and communicating those changes.
- C. We have a formal Management of Change program but struggle to follow it in all instances.
- D. We have a formal Management of Change program. The program defines responsibilities & authorities, communication requirements, timelines for making changes and employees are trained on this MOC program.

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**PSMS Principle**

*Process(es) are in place for contractors, for:*

- *Communicating requirements of the PSMS applicable to the contractor's scope of work*
- *Defining responsibility, accountability, and authority for managing the outsourced activities*
- *Incorporating lessons learned into the operator's operations*
- *Training and orientation on safety policies*
- *Evaluating contractor safety performance*
- *Communicating risks at the work site*
- *Communicating the MOC procedure*

**#6**

For contractors...

- A. We utilize contractors but don't incorporate them in our employee safety or pipeline integrity management programs.
  - B. Our contractors go through our initial safety training and must follow our procedures and standards but we don't include them in our employee safety or pipeline integrity management programs.
  - C. We treat our contractors just as though they are our employees. They receive the same safety training, must follow all our procedures, and are included in our employee safety and pipeline integrity management programs.
  - D. We don't utilize any contractors for gas operations, engineering or construction.
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## **PSMS Principle**

*Procedures are in place for risk analysis / risk management, with assigned authorities, responsibilities, and accountabilities. They consider threat likelihood and consequence (including HCAs) and the potential for multiple / interactive threats. They consider incidents / lessons learned (both internal and external), and training / drills / scenarios / response capabilities. They consider equipment operability, including control systems and materials.*

### **#7A**

- A. We rely upon our integrity management plan (DIMP / TIMP) to manage the risk to our system. There is one individual (or group) responsible for the management and success of our DIMP program.
- B. We utilize our integrity management plan (DIMP / TIMP) to inform our risk management program. There is one individual (or group) responsible for the management and success of our DIMP program.
- C. We utilize our integrity management plan (DIMP / TIMP) to inform our risk management program. There is one individual (or group) responsible for the management of our integrity management program, but everyone is accountable for risk management.

### **#7B**

- A. Our integrity management plan's risk assessment does not account for likelihood & consequence of failure.
- B. We are unsure if our integrity management plan accounts for likelihood & consequence of failure in our risk assessment because we use a contractor or generic tool to create our integrity management plan.
- C. We consider likelihood & consequence of failure in our risk assessment.

### **#7C**

- A. Interactive threats are not considered in our integrity management plan's risk assessment.
- D. We are unsure if our integrity management plan accounts for interactive threats in our risk assessment because we use a contractor or generic tool to create our integrity management plan.
- B. We consider interactive threats in our risk assessment.

### **#7D**

- A. Lessons learned from incidents (both internal & external) are not considered in our integrity management plan's risk assessment.
- B. We are unsure if our integrity management plan accounts for lessons learned from incidents are considered in our risk assessment because we use a contractor or generic tool to create our integrity management plan.
- C. We consider lessons learned from internal incidents only in our risk assessment, but we do not include information from external incidents.
- D. We consider lessons learned from both internal and external incidents in our risk assessment.

### **#7E**

- A. The condition of our equipment (for example: inoperable valves) and material attributes are not considered in our integrity management plan's risk assessment.

- B. We are unsure if our integrity management plan accounts for equipment and material attributes in our risk assessment because we use a contractor or generic tool to create our integrity management plan.
- C. We consider the conditions of our equipment and material attributes in our risk assessment.

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**PSMS Principle**

*The Operator maintains data needed for risk analysis and defining safe operating conditions and maintenance (assets, environment, high consequence areas, history, incidents), updates and evaluates this data, and continually closes gaps in data over the pipeline lifecycle through on-going work related to operations, maintenance, and pipeline integrity. The Operator uses conservative assumptions about data gaps.*

**#8A**

- A. We struggle to identify and maintain the data needed to perform our integrity management risk analysis and for the identification of safe operating conditions (for example: MAOP).
- B. We have identified the data we need to run our risk analysis and to determine safe operating conditions, but we struggle to maintain that data.
- C. We have identified the data we need to run our risk analysis and to determine safe operating conditions and we maintain that data.
- D. We have identified the data we need to run our risk analysis and to determine safe operating conditions and we maintain that data. On a routine basis we review that data set to determine if additional data is needed.

**#8B**

- A. We do not know what data is missing for our risk management program or to determine safe operating practices.
- B. We have identified the data that is missing to perform our risk management program or to determine safe operating practices. We do not have an established standard for what to use in place of missing data.
- C. We have identified the data that is missing to perform our risk management program or to determine safe operating practices. We have a plan for how to fill those data gaps, but in the interim we do not have a standard for what to use in place of missing data.
- D. We have identified the data that is missing to perform our risk management program or to determine safe operating practices. We have a plan for how to fill those data gaps, and we have established conservative assumptions to use in the interim.
- E. We have evaluated our asset data and believe we have no gaps in our data to perform our risk management program and to determine our safe operating practices.

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**PSMS Principle**

*The Operator identifies and analyzes risks and updates its analysis with data, information, knowledge, experience, as well as changing conditions. The risk analysis is reviewed at least annually.*

**#9**

- A. We don't have a DIMP and / or TIMP plan.
- B. We have a DIMP and / or TIMP plan but struggle to follow and update it.
- C. We have a DIMP and / or TIMP plan that we update occasionally with new data and information, such as: leaks, corrosion reads, new material installations, etc.

- D. We have a DIMP and / or TIMP plan and update it annually with new data and information, such as: leaks, corrosion reads, new material installations, etc.
- E. We have a DIMP and / or TIMP plan and update it annually with new data and information, such as: leaks, corrosion reads, new material installations, etc. We then use that new data to update our plan to determine if the risks to our system has changed.

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**PSMS Principle**

*The Operator has developed and implemented monitoring, preventive, and mitigative measures for risk reduction. Preference is given to preventive measures which eliminate or reduce the likelihood or consequences of abnormal operating conditions, unintended releases, and other incidents.*

**#10**

- A. We only perform O&M activities required by regulatory code. We don't perform any additional risk reducing activities (increased leak surveys, pipeline replacement programs, stand-bys at excavations near your pipelines, etc.)
- B. Our Integrity Management Plan (DIMP or TIMP) identifies accelerated actions and/or preventative measures, but we struggle to incorporate those suggestions.
- C. Our Integrity Management Plan (DIMP or TIMP) identifies accelerated actions and/or preventative measures. We develop action plans to perform those activities or measures.
- D. Our Integrity Management Plan (DIMP or TIMP) identifies accelerated actions and/or preventative measures. We prioritize those activities based upon how much perceived risk will be reduced on our system by performing those activities or measures and we develop action plans to perform them.

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**PSMS Principle**

*The risk management results, including risk mitigation methods, is reviewed with Top Management at least annually.*

**#11**

The results of our DIMP or TIMP risk analysis are...

- A. Only known by the person responsible for our integrity management plan.
- B. Are shared with gas employees periodically but are never explained.
- C. Are shared with gas employees annually but are never explained.
- D. Are shared with gas employees annually, including our senior leadership, and the selection of risk reduction projects that are being planned for the next year are explained.

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**PSMS Principle**

*The Operator promptly investigates incidents and potentially significant near misses, identifies causes, contributing factors, (potential) consequences, and makes recommendations / notes lessons learned; communicates findings to appropriate personnel and back to risk assessment and control processes; tracks recommendations to completion; and maintains documentation. The Operator periodically reevaluates previous investigations to determine if the organization has learned and to glean new learnings.*

**#12**

After an incident or near miss...

- A. We go back to doing our job.

- B. We briefly discuss what happened.
- C. We perform an incident investigation and the findings are shared with the individuals involved in the incident or the near miss.
- D. We perform an incident investigation and communicate the findings with all relevant employees.
- E. We perform an incident investigation, document the findings, and communicate findings with all relevant employees.
- F. We perform an incident investigation, document the findings, and communicate findings with all relevant employees. The results of all incidents are periodically reviewed for trends.

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**PSMS Principle**

*The Operator evaluates the effectiveness of emergency response procedures relevant to each incident.*

**#13**

After an incident...

- A. We move on.
- B. We evaluate if emergency response procedures were followed and address the findings with the individuals involved.
- C. We evaluate if emergency response procedures were followed and share the results with all relevant employees.
- D. We evaluate if emergency response procedures were followed and share the results with all relevant employees. We also determine if the emergency response procedures could be improved based upon our review of the incident.

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**PSMS Principle**

*The Operator has a process to learn from external events.*

**#14**

- A. We often don't know about what is happening on other gas systems.
- B. We participate in a state, regional, and/or national trade association(s) to learn about events happening on other gas systems. However, we don't make specific efforts to apply their lessons learned at our system.
- C. We participate in a state, regional, and/or national trade associations to learn about events happening on other gas systems. We then take the lessons learned from those operators and see if we can make improvements to decrease the chance of the same event happening on our system.

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**PSMS Principle**

*The Operator identifies Internal (includes contractors) and External (includes regulators) stakeholders through ongoing use of appropriate company and public processes, events, social media, and other methods.*

**#15**

- A. We make sure we are meeting the regulatory requirements for Public Awareness, but don't do much else.

- B. We meet the regulatory requirements for Public Awareness and try to do additional external outreach to ensure the stakeholders are receiving our safety messages.
- C. We've made a conscious decision to go above and beyond the regulatory requirements for Public Awareness. We even share the important safety related messages beyond the stakeholders required by regulation.

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**PSMS Principle**

*The Operator has identified specific engagement objectives, the types of information to be shared (and its value) and personnel responsible for sharing and receiving information with internal and external stakeholders (including those who live, work, and play in proximity to the pipelines). It has a process and plan for 2-way communication with internal and external stakeholders about the PSMS including:*

- o Operator's risk identification and management*
- o Operator's safety performance / lessons learned*

**#16**

- A. We have identified specific public awareness engagement objectives for each stakeholder audience. (Yes/No)
- B. We have identified the types of information to be shared with each stakeholder audience. (Yes/No)
- C. We have identified the value of information to be shared. (Yes/No)
- D. We have identified the personnel responsible for sharing and receiving information with internal and external stakeholders. (Yes/No)
- E. We have process for 2-way communication with internal and external stakeholders about PSMS. (Yes/No)

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**PSMS Principle**

*Processes are in place to ensure employees and contractors understand the policies, goals, objectives, and procedures pertinent to their work that are driven by the PSMS and the importance of meeting PSMS requirements.*

**#17**

- A. Most gas employees (and contractors, if applicable) that work on our system have never heard of PSMS.
- B. We have introduced our gas employees (and contractors, if applicable) to the concept of PSMS, but they likely do not know how they contribute to the goals & objectives of PSMS.
- C. We have provided high-level training to all our gas employees (and contractors, if applicable) on PSMS. They all understand that they play a part in achieving our goals & objectives for PSMS.
- D. We have provided training to all gas employees (and contractors, if applicable) on PSMS. The training included details on the roles those employees play in achieving our goals & objectives for PSMS.

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**PSMS Principle**

*Processes are in place for employees and contractors to raise concerns and make recommendation for improvements in risk identification, prevention, and mitigation (maybe anonymous).*

**#18**



- A. Employees (and contractors, if applicable) have not been encouraged to communicate risks that they identify on the system.
- B. Employees (and contractors, if applicable) are encouraged to communicate risks that they identify on the system but we do not have a system in place for communicating these risks.
- C. We utilize contracts and have a way for them to share their concerns about risks on our system or make recommendations on how we can reduce risk but have not developed something similar for our own employees.
- D. We have a way for employees to share their concerns about risks on our system or make recommendations on how we can reduce risk but have not developed something similar for the contractors that work on our system.
- E. We have a way for employees to share their concerns about risks on our system or make recommendations on how we can reduce risk. We do not utilize any contractors on our system.
- F. We have a system in place for both employees and contractors to share their concerns about risks on our system or make recommendations on how we can reduce risk.

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### **PSMS Principle**

*The emergency preparedness and response procedures address the following types of emergencies:*

- *Spills*
- *releases*
- *weather events*
- *security threats*
- *fires*
- *loss of utilities (power, water, etc.)*
- *pandemics*
- *civil disturbances*
- *self-identified risks (list here)*

*The following emergency types are applicable to the next two questions:*

- *Releases (Leaks)*
- *Releases (Ruptures)*
- *Weather events*
- *Security threats (physical & cyber)*
- *Fires*
- *Loss of utilities (including communications, power & water, etc.)*
- *Pandemics*
- *Civil disturbances*
- *Other Self-identified risks*

#### **#19A**

- A. Our emergency response procedures do not address any of the emergency types listed above.
- B. Our emergency response procedures address some of the emergency types listed above.
- C. Our emergency response procedures address all of the emergency types listed above.

#### **#19B**

- A. Our emergency response procedures are not specific to our system and operations.
- B. Our emergency response procedures are somewhat specific to our system and operations.

- C. Our emergency response procedures are fully specific to our system and operations.

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**PSMS Principle**

*The Operator assures an appropriate level of competence for personnel, including contractors, through education, training, knowledge, and experience.*

**#21**

- A. We have specific education requirements for our personnel. (Yes/No)
- B. We have specific education requirements for contractor personnel. (Yes/No/NA)
- C. We have specific training requirements for our personnel. (Yes/No)
- D. We have specific training requirements for contractor personnel. (Yes/No/NA)
- E. We have specific knowledge requirements for our personnel. (Yes/No)
- F. We have specific knowledge requirements for contractor personnel. (Yes/No/NA)
- G. We have specific experience requirements for our personnel. (Yes/No)
- H. We have specific experience requirements for contractor personnel. (Yes/No/NA)

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**PSMS Principle**

*The Operator has defined the need for and provided training to employees and contractors to enable development and implementation of the PSMS elements, with refresher training as appropriate and awareness training when opportunities for improvement are identified. Training and updates cover applicable PSMS requirements or execution problems, new or changing risks, improvement opportunities, and the importance of following processes and procedures. This training is documented.*

**#22A**

- A. Our employees have not been trained on PSMS.
- B. We have introduced our employees to PSMS but have not trained them on the elements.
- C. We have provided initial training to our employees on PSMS and the elements of PSMS.
- D. We have provided initial and refresher training to our employees on PSMS and the elements of PSMS.

**#22B**

- A. Our contractors have not been trained on PSMS.
- B. We have introduced our contractors to PSMS but have not trained them on the elements.
- C. We have provided initial training to our contractors on PSMS and the elements of PSMS.
- D. We have provided initial and refresher training to our contractors on PSMS and the elements of PSMS.
- E. We do not utilize contractors

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**PSMS Principle**

*The Operator has procedures regarding identification, distribution, approvals, retention, and version control of legible and readily accessible documents (including revisions, translations, updates) related to the PSMS, including elimination / marking of obsolete documents. All PSMS procedures are established, documented, implemented, and maintained.*

*Note: The APGA Gap Analysis Tool does not specifically ask about PSMS procedures. Instead this tool encourages users to consider their procedures related to operations & safety activities.*

**#23A**

For operations & safety records...

- A. We have no formal recordkeeping policy for any operations or safety related documents.
- B. We have formal recordkeeping policies for documents related to regulatory requirements, but no policies on other operations or safety related documents.
- C. We have formal recordkeeping policies for all operations & safety documents (beyond compliance), but do not have standards or procedures on how we manage version controls, approvals, etc.
- D. We have formal recordkeeping policies for all operations & safety documents (beyond compliance), and have procedures or standards that provide guidance on the management of version controls, approvals, etc.

**#23B**

For operations & safety documents...

- A. We have no document control policy that dictates how long records are to be retained.
- B. We have written document control policy that dictates how long records are to be retained and when they are to be eliminated.

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**PSMS Principle**

*The Operator evaluates safety culture, including methods to assess employee perception of the safety culture. Management reviews these evaluations and takes actions to improve.*

**#31**

- A. We have never discussed the safety culture at our system.
- B. We have defined our safety culture, but we have never surveyed our gas employees on their perception of that culture.
- C. We have defined our safety culture and we have surveyed our gas employees on their perception of that culture. However, the results of that survey did not change any of our policies or programs.
- D. We have defined our safety culture and we have surveyed our gas employees on their perception of that culture. Management used those results to modify our safety programs and policies to enhance our safety culture.

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**PSMS Principle**

*Top Management determines policies, goals, and objectives (measurable and consistent with overall safety policies and objectives) for the PSMS, with high-level performance measures. (see Section 10 Safety Assurance when answering this question).*

**#37**

- A. Gas Management is not aware of PSMS.
- B. Gas Management is aware of PSMS, but not involved with its implementation.
- C. Gas Management is directly involved with the implementation of PSMS.
- D. Gas Management has prioritized involvement with PSMS and has linked goals to the success of PSMS.

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**PSMS Principle**

*Top Management ensures that the PSMS has clear accountabilities (including executives and managers), objective-focused day-to-day activities, exception reporting, coordination between interrelated functions, and adequate resources.*

**#38**

- A. Gas Management has not committed to the implementation of PSMS.
- B. Gas Management is supportive of PSMS, but we have not assigned PSMS responsibilities to our employees.
- C. Gas Management is supportive of PSMS and we have assigned PSMS responsibilities to our employees.
- D. Gas Management is supportive of PSMS and we have assigned PSMS responsibilities to our employees. Those employees are held accountable for PSMS related activities.

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**PSMS Principle**

*Top Management creates an open and healthy safety culture promoting mutual trust with a focus on risk identification and management (see intro page xi)*

**#41A**

- A. Gas Management not involved in the prioritization of gas operations & maintenance activities.
- B. Gas Management is only briefed annually on the prioritization and selection of gas operations & maintenance activities.
- C. Gas Management is involved in the prioritization and selection of gas operations & maintenance activities.

**#41B**

- A. Gas Management only wants us to perform the O&M tasks required for regulatory compliance.
- B. Gas Management only wants us to perform the O&M tasks that are required for regulatory compliance or actions that are suggested by our regulators.
- C. Gas Management encourages us to identify O&M tasks that go beyond compliance, but we don't always get the resources we need to complete those tasks.
- D. Gas Management encourages us to identify O&M tasks that go beyond compliance and is dedicated to providing us the resources for the tasks that have been identified and justified.

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**PSMS Principle**

*Management ensures that budgets and resources are adequate for the PSMS, allocates resources, and seeks additional resources when necessary.*

**#45**

- A. Gas Management has not committed to the implementation of PSMS.
- B. Gas Management is supportive of PSMS, but no resources have been assigned to ensuring the success of PSMS.
- C. Gas Management is supportive of PSMS and we have assigned limited resources to PSMS activities.
- D. Gas Management is dedicated to the success of PSMS by ensuring that adequate resources are assigned to PSMS activities.

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**PSMS Principle**

*Employees follow procedures.*

**#48**

- A. Our employees follow procedures, but we never verify.
- B. Our employees follow procedures and we occasionally verify.
- C. Our employees follow procedures and we have a system in place to verify.

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**PSMS Principle**

*Employees identify and suggest improvements to procedures, including addressing abnormal conditions or nonconforming processes or procedures.*

**#49**

- A. Our employees are trained to identify and suggest improvements that they find in the field.
- B. Our employees are trained and encouraged to identify and suggest improvements that they find in the field.
- C. Our employees are trained and encouraged to identify and suggest improvements that they find in the field. We have a system in place to assist them in submitting those improvements.
- D. Our employees are trained and encouraged to identify and suggest improvements that they find in the field. We have a system in place to assist them in submitting those improvements and we provide follow-up responses to all suggestions, regardless if the suggestion is implemented.