

1-F Management of Change

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1.0 BACKGROUND

- (a) Natural gas transmission and distribution systems are complex, requiring a multitude of trained and specialized teams and individuals to design, construct, operate, maintain, and monitor them. It is not uncommon that their work results in changes and/or information that is important to others in the organization in order to ensure safe and reliable operations.
 - (1) Examples of information that can be important to others include:
 - (i) Plans, decisions, or projects that change how the gas systems operate;
 - (ii) Plans, decisions, or new information that can impact work being performed by others; and
 - (iii) Changes in system operations necessitated by real time system issues such as emergency response activities.
 - (iv) Changes which may impact the integrity of the pipeline system or the written Integrity Management Program.
- (b) If not properly planned, coordinated, and communicated, changes introduced by even the most benign work can lead to unintended consequences. Those changes can impact system reliability and safety.
- (c) Management of Change (MoC) procedures are a formal process used to ensure that changes and information are properly reviewed, approved, and communicated to minimize the risks of unintended impacts from these changes.

1.1 Changes Impacting the Transmission System

- (a) The MoC process systematically recognizes and communicates to the necessary parties changes of a technical, physical, procedural or organizational nature that can impact Transmission system integrity

- (b) A change impacting the Transmission system is defined as any modification to the pipeline system or the written TIMP plan, which may affect system integrity. These changes include technical, physical, procedural, and organizational changes that are either temporary or permanent in nature.

Operations performed within the established safe operating limits of the pipeline system, and changes classified as "Like Size and Kind" are not considered a change impacting the Transmission system.

A change that is of "Like Size and Kind", is a replacement in kind, and is not considered a Change under the MOC process. A "Like Size and Kind" change does not alter the technical, physical, procedural or organizational nature of the system and does not impact system integrity.

- (c) Any Change that may substantially affect the program's implementation or may significantly modify the program or schedule for carrying out the program elements is considered a Significant Change.

A significant change requires a notification to the appropriate jurisdictional agency (OPS, state, or local pipeline authority) within 30 days after adopting the change into its program.

Examples include but are not limited to:

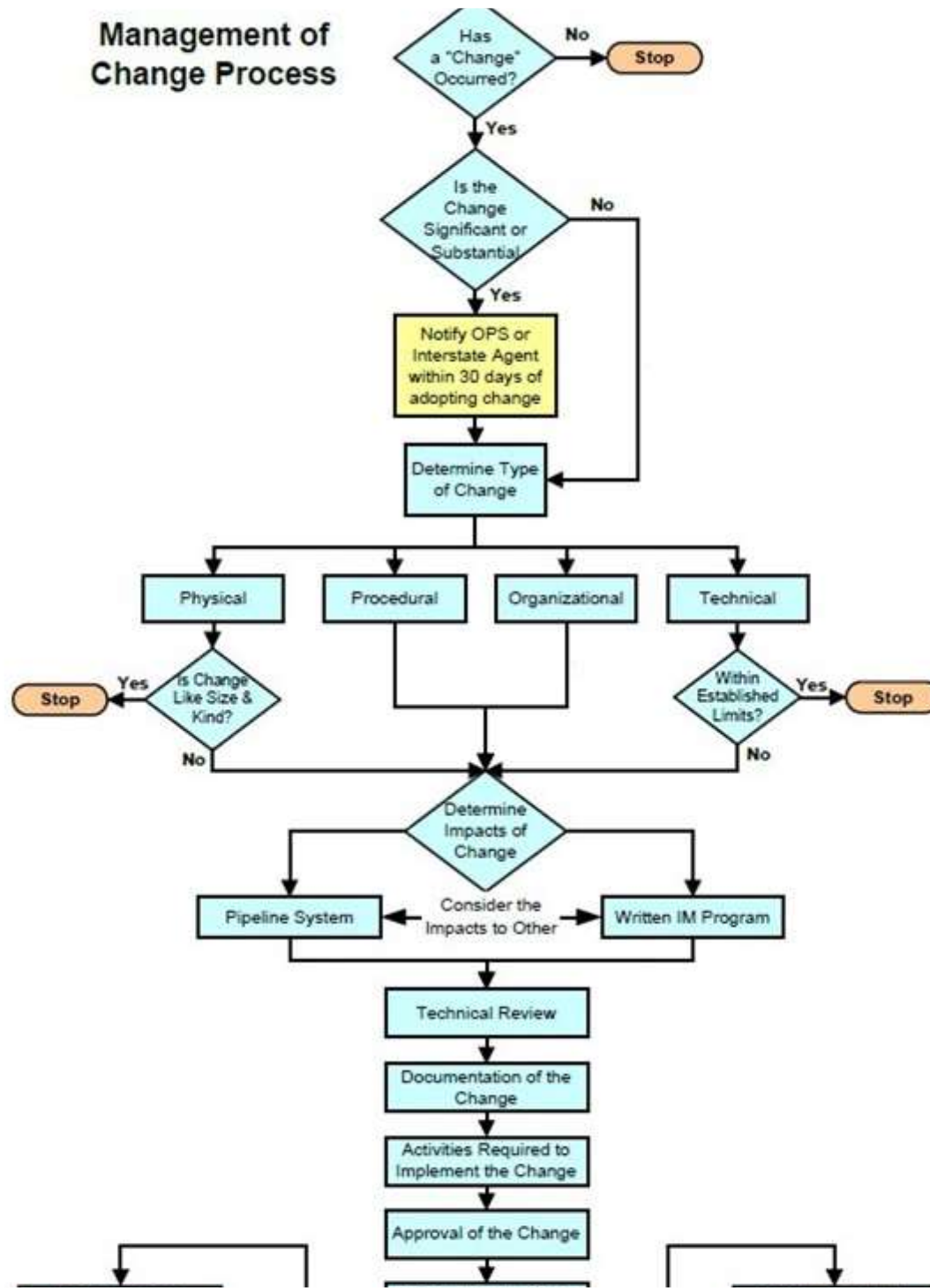
- (1) A merger of companies or major pipeline acquisition
- (2) Determination of susceptibility to SCC when previously considered unsusceptible
- (3) Introduction of an Assessment Methodology not previously used
- (4) Abandoning an Assessment Methodology previously planned for use

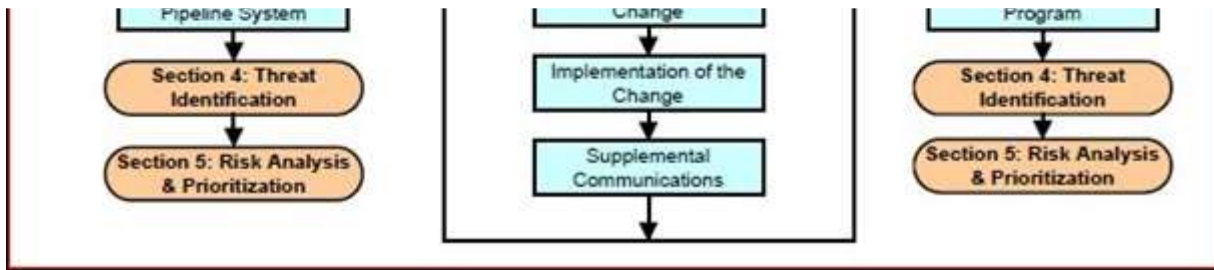
- (d) Employees are trained to recognize potential Changes or factors that should prompt a change to the TIMP plan that would require the use of the MOC process. These potential Changes can be identified in several different ways. The following are examples of activities that would trigger the IMP MOC process:

Change in land use affecting:	<ul style="list-style-type: none">• Consequence of an incident• Likelihood of an incident• Reevaluate threats
Assessment results indicate need for a change:	<ul style="list-style-type: none">• Changes to CP program• Reductions in operating pressure
Change in operating pressure from historical levels (e.g. closer to MAOP)	<ul style="list-style-type: none">• Reevaluate threats
Change in cyclical load – operating cycles	<ul style="list-style-type: none">• Reconsider cyclic fatigue threat



Management of Change Process





2.0 EFFECTIVE MANAGEMENT OF CHANGE

(a) Effective management of change should:

- (1) Recognize the type of change
- (2) Identify the originator of the change;
- (3) Identify the reason for the change;
- (4) Identify and inform the stakeholders needed to review and evaluate the proposed change;
- (5) Identify the duration of the change;
- (6) Document the change process; and
- (7) Be timely to allow for adequate review by others and any follow-up they may initiate prior to the change occurring or being implemented.

3.0 WHERE AND HOW DOES MANAGEMENT OF CHANGE APPLY?

MoC procedures address proposed changes in the following areas:

(a) Policies, procedures, standards, materials, and tools

- (1) Changes in these can require training and sometimes requalification to a broad group of employees to ensure continued safety. These changes include:
 - (i) OM and Emergency Procedure Changes
 - (ii) Engineering Procedures and Standard Changes
 - (iii) Pipeline Material Changes
 - (iv) Tools and Equipment Changes
 - (v) Technology Changes
 - (vi) OQ Program Changes

(vii) Safety Procedures

(b) Applicable Organizational roles

An example of a change in this role includes an employee with a role in a compliance process accepting a new work assignment, requiring a new designee to assume that employee's role in the process. Changes in these areas can also require new access/permissions for employees to utilize software platforms, or equipping employees for new roles with new training, tools/ equipment, operator qualifications, etc.

(c) System, Pressures, Ratings, or Flows

- (1) Communication of changes in these areas are important to ensure that these changes have been reviewed and approved to ensure they won't impact safety or reliability.
- (2) Examples of these changes include:
 - (i) Projects/Work Plans Affecting Stations or Their Operation
 - (ii) Shutting in System Stations
 - (iii) Modifying Pressures/Flows on Distribution Lines
 - (iv) Raising or Lowering Distribution Pressures
 - (v) Upgrading Distribution Lines
 - (vi) Modifying Distribution MAOP
 - (vii) Other Changes Requiring Station Operation
- (3) Projects on the transmission systems which disrupt or have the potential to impact flows on the lines are critical to coordinate across the business. These kinds of projects include:
 - (i) Modifying Pressures/flow on Transmission Lines
 - (ii) Upgrading Distribution Lines
 - (iii) Cleaning and Pigging Operations (running inline inspection tools in an in-service pipeline given their potential to become stationary)
 - (iv) Raising or Lowering Transmission Pressures (or taking major lines or transmission pipelines or sections of those lines out of service for repairs)
 - (v) Distribution Project Involving Tie-ins
- (4) The MoC process will ensure these projects are reviewed individually but also collectively to ensure other project schedules don't create conflicts for resources as well as to ensure projects occurring simultaneously do not compromise overall system reliability.
- (5) Gas Control will maintain a log of these transmission pipeline projects to view an overall project plan for these purposes.

- (6) There is also specific information which is helpful to share broadly that impact ongoing risk evaluations. Examples of this kind of information include:
 - (i) Certain projects and situations which can create incremental risk of over-pressurization on the gas systems.
 - (ii) Examples these conditions can include running inline inspection tools, performing work on low pressure systems or stations that serve them, and notifications of potentially lower quality gas entering and introducing liquids or debris into the system.

(d) Integrity Management Programs

- (1) The MoC process will ensure these projects are reviewed individually but also collectively to ensure other project schedules don't create conflicts for resources as well as to ensure projects occurring simultaneously do not compromise overall system reliability.
- (2) Gas Control will maintain a log of these transmission pipeline projects to view an overall project plan for these purposes.
- (3) There are also other examples of information which is important to Integrity Management processes and employees charged with evaluating threats as well as implementing actions to address new or elevated risks. This information can include:
 - (i) Leaks, Damages, or Failures, on Transmission Lines
 - (ii) Potential changes to HCAs around Transmission Lines
 - (iii) Confirmed Changes to HCAs
 - (iv) Discovery of New Threat or Risk Categories
 - (v) Repairs made to Transmission Lines
 - (vi) Pipeline Exposures on Transmission Lines
 - (vii) New Loads that may cause pressure swings or cycles
 - (viii) Planned Modifications to Transmission Lines (Replacements, Relocations, Retirements, etc.)

(e) Specific information requirements to Gas Control

- (1) Examples of these changes include:
 - (i) Changes to Alarm Settings
 - (ii) Planned Field Projects/Work That May Affect SCADA Information Displayed
 - (iii) Changes to SCADA Monitoring Instructions
 - (iv) Significant New Customer Loads and Tie Ins On Transmission Lines
- (2) This information is crucial to ensuring that Gas Control is adequately informed to understand the current conditions of the gas systems particularly in light of projects and/or changes made to the systems.

(f) Other

This classification includes any projects, work, situations, or conditions not categorized above but which are believed to be important in communicating pipeline safety related information. An example could be a notification received from an upstream supplier of potentially lower quality gas or a diminished odorant level.

4.0 EMPLOYEE RESPONSIBILITIES

- (a) Employees or teams who are responsible for initiating projects should be trained to understand the definition of a "Change" and the MOC process, to be able to identify potential changes as they are proposed or conceived, and ensure an MOC form is initiated prior to implementation.
- (b) These employees are also responsible for thinking through those changes to determine the applicability of the MoC process, as they are proposed and scheduled.
- (c) For organizational changes, the responsible supervisor should consider the personnel involved and any processes or technologies they interface with to determine if an MoC is required.
- (d) Initiating MoC Communications

Responsible employees should initiate an MoC form through the MoC SharePoint site. Employees who initiate a change form should complete the portions of the form which describe the description and reason for the proposed change.

(e) Receiving MoC Notifications

Managers, Supervisors, and other employees who receive notifications via the MoC process are responsible for reviewing the notifications and determining if additional action is warranted on their part, including:

- (1) Notifying the initiator of the proposed change of any concerns or clarifying questions to ensure the change will safely and effectively accomplish the intended result; and
- (2) Forwarding the proposed change along to any others who should evaluate the proposed change.

Each employee receiving MoC notifications should recognize the corporate expectation to exercise stop-work authority where there are concerns or questions regarding proposed changes.

(f) Technical Reviewer

An employee responsible for performing the technical review, which analyzes the implications of the change to the pipeline system and the written Integrity Management Program.

(g) Qualified Manager

The Qualified Manager is a designated member of management with the ultimate responsibility to determine whether a proposed change affecting a Transmission Line is subject to the MOC process.

The Qualified Manager is responsible for:

- (1) Ensuring the MOC process is followed

- (2) Assigning qualified staff to perform the Technical Review
- (3) Ensuring the Technical Review includes:
 - (i) The reason for the Change
 - (ii) An analysis of the implications of the Change
 - (iii) Qualified Staff performing the Technical Review
 - (iv) Names of the Initiator and Technical Reviewer
- (4) Assessing the staff's qualifications to implement and maintain the change
- (5) Providing training, as necessary to implement and maintain the Change
- (6) Ensuring the Change is communicated to all affected parties
- (7) Ensuring all required work permits have been acquired
- (8) Ensuring the time limits of the Change are specified
- (9) Ensuring the MOC process is documented using the designated form
- (10) Upon receiving the MOC form, the Qualified Manager or his designee will make a determination of whether the change may constitute a Significant Change requiring notification of the appropriate jurisdictional authority (OPS, state, or local pipeline authority).
- (11) Approving the implementation of the Change

5.0 E-TOOL FOR PROCESSING MANAGEMENT OF CHANGE NOTIFICATIONS

- (a) The electronic form should be utilized to initiate, route, review, and document the MoC notification process. The form can be accessed in each state's respective SharePoint site. These can be saved as a bookmark or favorite in employees' internet browsers.

Each newly initiated MOC form will be saved on a state specific SharePoint Site, depending on the state affected.

State Specific: South Carolina

- DESC SharePoint Site: <https://dominionenergyo365.sharepoint.com/sites/MoCDESC>

- (b) The E-Form allows employees to describe proposed work and initiate MoC Notifications by selecting a series of dropdowns, comment fields, and including attachments as appropriate.
- (c) The notifications route via email to designated email distribution lists determined by the information entered in the E-Form, to ensure changes are communicated to all affected parties within the affected Region.

- (d) Notifications can be forwarded on to others for review if/as appropriate.
- (e) MoC notifications are documented and archived, including attachments, and can be accessed at the same website above.
- (f) The SharePoint form will be maintained and supported by the Integrity Management and Compliance department.

5.1 Initiating the MOC Process

- (a) The MOC Process begins when an Initiator formally initiates the process by completing and submitting the MOC E-Form. The Initiator is an employee that understands the definition of a "Change" under the MOC process, and has the authority to initiate the MOC process.
- (b) The Initiator completes those portions of the form which describe the description and reason for the proposed change. This form is then submitted to the appropriate Qualified Manager or his designee.
- (c) Upon receiving the MOC form, the Qualified Manager or his designee will make a determination of whether the change may constitute a Significant Change requiring notification of the appropriate jurisdictional authority (OPS, state, or local pipeline authority) and mark the appropriate box on Form F14-1.

(d) Changes to the Transmission pipeline system

- (1) If the change is related to the Transmission pipeline system, the Qualified Manager or his designee will make a determination of the type of Change proposed (Technical, Physical, Procedural, or Organizational).
- (2) Physical changes will be reviewed to determine if the "Like, Size, & Kind" exemption applies to the proposed change.
- (3) Technical changes will be reviewed to determine if the proposed change is operating within the established safe operating limits of the pipeline system and thus not considered a change.
- (4) The Qualified Manager or his designee will also designate whether the change is temporary or permanent. If the change is temporary, the anticipated duration should be designated on the form.

(5) Technical Review and Analysis of Implications

The Qualified Manager is responsible for ensuring that a technical review and impact analysis of any proposed change has been performed, if needed.

The Qualified Manager will determine the impacts of the change for both the pipeline system and the written integrity management program.

- (6) Upon completion of the technical review and impact analysis, the Qualified Manager will document relevant findings and attached it to the Management of Change Form for documentation purposes.

The Qualified Manager will also indicate any required activities necessary to implement the change.

- (7) The Qualified Manager will evaluate the results of the technical review and any required activities specified. The Qualified Manager will also consider the following items which may be associated with the change:

- Acquisition of Work Permits

- Qualifications of Staff
- Additional Training

- (8) Upon a thorough review of the impacts of the change, the Qualified Manager will determine whether to approve the change.
- (9) Upon approval of the change, the change is communicated to all affected parties. The Qualified Manager is responsible for assuring the change is communicated to all affected parties.
- (10) Upon completion of the previous procedural steps and the formal approval of the change by the Qualified Manager, the implementation of the change will commence.
- (11) Supplemental Communications will be provided to all affected parties for the following events:
- Extension of a time frame or limitation (e.g. temporary change)
 - Modification of a Change
 - Completion of the Change

6.0 CHANGES MANAGED OUTSIDE OF THE MANAGEMENT OF CHANGE E-FORM

- (a) There are some communications of activities and changes that are managed outside of this process and the E-Form. Examples include:
- (1) Notifications to gas control when valves are operated for non-maintenance purposes which are handled by telephonic notice to Gas Control;
 - (2) Entry into a station monitored by SCADA which is handled by telephonic notice to Gas Control;
 - (3) Changes to pre-engineered and approved job specific work plans & procedures which are handled in accordance with [Field Change Review](#) procedures;
 - (4) Daily operations and maintenance activities which are handled in accordance with the company's operating & maintenance procedures;
 - (5) Discovery of abnormal operating conditions that trigger emergency response activities which are handled in accordance with the company's emergency response procedures.
- (b) The appropriate jurisdictional agency (OPS, state, or local pipeline authority) shall be notified within 30 days of adopting a Significant Change to the integrity management program. (OPS shall be notified by email to InformationResourcesManager@dot.gov, or in writing, in accordance with 192.18)

(UNCONTROLLED IF PRINTED)