The FSP HCA Process Leader is responsible for the day-to-day activities relative to HCA identification as required by §195.450(f)(1), including the preparation and maintenance of all procedures and forms.

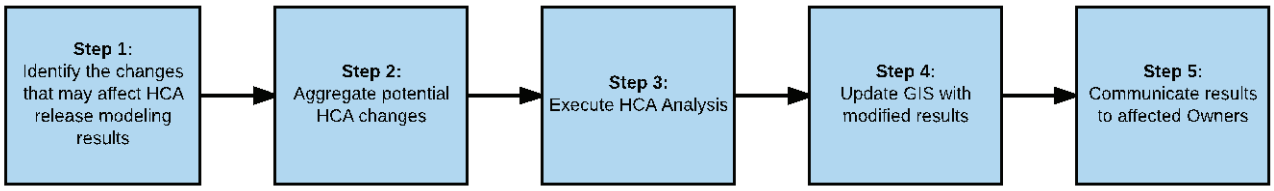
4.3 HCA Identification Process

The HCA Identification Process used by MPL focuses on managing current knowledge of how company assets relate to HCAs. Any changes to MPL assets or HCA boundaries that could require an update to the existing HCA Release Model are managed by the HCA Process Leader and communicated through the company-wide Management of Change (MOC) Process, reference Standard LNS-HES-00068-PRS (LS - Management of Change and Pre-Startup Safety Review Process). Breakdowns in the HCA Identification process are to be recorded in the Intelex. Breakdowns would include, but are not limited to:

- Pipeline changes with HCA Identification impact where control data was not identified prior to a Management of Change Request (MOCR) closure,
- Failure to document HCA Identification process per this standard, and
- IMP segments with CHCA's failing to show up in HCA reporting.

MPL uses a five-step process to identify changes that could result in the update of the HCA Release Model. MPL-DOT-01423-PRS (MPL - HCA Identification Process) provides a detailed process flow diagram of the HCA Identification Process, as summarized in the below figure, as well as the required actions for each step of the HCA Identification process.

Figure 4-2: HCA Identification Process



As part of the HCA identification process MPL considers the following impact factors:

- Nature and characteristics of the product.
- Operating conditions of the pipeline or facility.
- Terrain surrounding the pipeline or facility.
- Drainage systems, such as small streams and waterways.
- Proximity of roadways with ditches along the side.
- Tank and pipeline volumes, areas of containment (berms), and the potential release volume outside the containment and between isolation points.
- Hydraulic gradient of the pipeline.
- Diameter of the pipeline.

- Size of the tank.
- Potential physical pathways (terrain and surface water transport) between the pipeline or facility and the HCA.
- Potential natural forces inherent to the area (flood zones, earthquake zones, subsidence areas).
- Response capability (time to detect, confirm, and locate a release; time to respond; nature of response; etc.).

Details of each HCA impact factor as they relate to the HCA identification process is described in MPL-DOT-01423-PRS (MPL - HCA Identification Process, HCA Identification Process).

4.3.1 HCA Identification within the MOC Process

The MOC Process is the primary method used to initiate and communicate change of the HCA impact data. The MOC Process is designed to ensure that activities planned or performed by one group within the company with potential impact on critical operating procedures or documentation are clearly communicated to all other areas of the company that might be impacted. A detailed description of the MOC Process is available in Standard LNS-HES-00068-PRS (LS - Management of Change and Pre-Startup Safety Review Process).

If an MOCR is submitted for review of potential HCA impacts, and the change is identified as **Temporary** (90 days or less), then no review of potential HCA impacts will take place as an HCA review cannot be completed (including potential spill remodeling), within 90 days, at which point the temporary change will have been rescinded. If the change becomes permanent, then the HCA Identification Process will be executed.

The description of the five steps of the MOC Process, including how changes affecting the HCA Identification Process are communicated through the MOC Process, are detailed in MPL-DOT-01423-PRS (MPL - HCA Identification Process).

4.3.2 Annual HCA Identification

A secondary notification method of change will take place annually on April 1st. The TC system will automatically send a reminder to the GIS IT System Leader and the HCA Process Leader to ensure that the NPMS is checked for any HCA changes that may have occurred in the past year.

The HCA Process Leader will monitor for HCA changes communicated by the NPMS on annual basis. All such changes will be analyzed for impact on MPL pipeline segments and facilities. If such changes occur, the resulting update to the pipeline segments or facilities will be integrated as appropriate into the IMP process within one year of identification. Newly constructed assets (e.g., pipe and tanks) that are subject to IMP will be assessed to determine their impact to HCAs and integrated into the IMP process (as applicable) prior to operation of the asset. Routine pipe and tank maintenance, identified via the MOC Process, with the potential of impacting HCA identification will be analyzed and submitted quarterly for spill modeling impact, as appropriate. A newly activated tank in a facility currently classified as having an HCA impact will be treated as routine tank maintenance with respect to the timing of could-affect HCA analysis.

5.3.3 Updating Threat and Sub-Factor Weightings

Table 5-3 Updating Threat and Sub-Factor Weightings identifies the roles and responsibilities for updating threat and sub-factor weightings.

Table 5-3 Updating Threat and Sub-Factor Weightings

Who	Step	What
Risk Analyst	1	Add previous year's Pipeline and Hazardous Materials Safety Administration (PHMSA) industry releases and MPL releases to the Combined Releases spreadsheet.
	2	Update Pivot Tables.
	3	Send Combined Releases document to SMEs.
SME	4	Review Pivot tables and updates the MPL Priority Weighting.
Risk Analyst	5	Use the finalized Weighting Score to update the Risk Intelligence Completes Platform (RIPL) Total Risk Evaluation Model.

5.4 Risk Identification and Analysis

MPL uses risk assessment software that utilizes a relative risk modeling tool to provide relative risk values (numeric risk scores) for individual dynamic segments within the assessment segment. These risk scores can be compared on a threat-specific basis, or on the basis of the total Risk of Failure (ROF). The risk scores provide for comparison of one dynamic segment to another, as well as facilitate the determination of the dynamic segment(s) with the highest risk. Relative risk scores are used by the following processes:

- Section 6 Integrity Assessment Interval and Method Selection
- Section 8 Preventive & Mitigative Measures (P&MM)
- Section 8.5 Leak Detection Evaluation Process
- Section 8.6 Emergency Flow Restricting Devices (EFRD)

The results of the Relative Risk Scoring are used to complete the Mainline Risk Assessment, and Additional P&MM Evaluation. For each of the identified dynamic segments and threats, the Risk Analyst will evaluate the relative risk algorithm inputs and scoring to determine which threats and/or sub-factors are driving the risk score. The purpose is to identify the locations that have the highest risk, as well as other locations that have potential for risk reduction, and to further identify the threats and sub-factors that are driving the risk.

5.4.1 Risk Factors Identification and Analysis

The following describes the PHMSA risk factors that determine composite risk scores for each assessment segment based on 195.452(e)(1):

- Results of a previous assessment:
    - Defect type and size, and
    - Environmental factors that may influence defect growth rate.

- Stress Corrosion Cracking potential.
- Pipe characteristics, such as:
    - Pipe size,
    - Material,
    - Manufacturing information,
    - Coating type and condition, and
    - Seam type.
- History information, such as:
    - Leak history,
    - Repair history, and
    - Cathodic protection history.
- Product transported, including:
    - Petroleum and Petroleum Products as defined in 49 CFR §195.2.
- Release impact, such as:
    - Spill modeling for size and volume of a potential spill to the location,
    - Size, and
    - Type of High Consequence Area (HCA).
- Operating stress levels.
- Existing or projected construction activities in an area resulting in increased One-Call requests.
- Local environmental factors that could affect the pipeline, such as:
    - Soil type, and
    - Climatic, such as:
        - Flooding,
        - Lightning,
        - Extreme temperatures, and
        - Hurricanes.
- Geotechnical Hazards, such as:
    - Subsidence, and
    - Earthquakes.
- Physical support of the segment, such as:
    - Cable, and
    - Suspension bridge.

The Risk Analyst performs the following steps during the Risk Factor Identification Process:

1. Reviews description and evaluation of risk factors. All of the above risk factors are evaluated for applicability to the segment being considered.
2. Reviews description and evaluation of risk variables. All risk variables are evaluated, including the following as applicable:
    - Long-Seam Susceptibility:
        - If Long-Seamed Susceptibility Analysis results in observed, susceptible or monitored, then use “yes or maybe” in the risk assessment.
        - If Long-Seamed Susceptibility Analysis results in not susceptible, then use “no long-seam susceptibility” in the risk assessment.
    - Corrosion Control Adequacy Test:
        - If the CCAT is known from a previous assessment, then use the previous CCAT results.
        - If the Assessment Methodology Selection Flowchart results in a Hydrotest and/or External Corrosion Direct Assessment (ECDA) as an assessment method, then request new CCAT analysis.

5.4.2 Calculating the Relative Risk Score

The steps followed by the Risk Analyst in calculating the relative risk score are:

1. Verifies that the following Mainline Risk Assessment Components are up-to-date and accurate in the risk management software:
    - Risk factor data,
    - Threats and sub-factor influences weightings, and
    - Risk algorithm.
    - If all of the above are accurate, then updates the risk algorithm.
2. Calculates the threat-specific Likelihood of Failure (LOF) and Consequence of Failure (COF) for each dynamic segment using the risk management software application.
3. Calculates the threat-specific Risk of Failure (ROF) for each dynamic segment using the Risk Management Software application.
4. QA/QCs Relative Risk results.
5. Contact Information Technology Services (ITS) to request a snapshot copy of the current year’s database.
6. Provides Relative Risk scores to the associated process leaders. Examples include:
    - Leak Detection Adequacy Process Leader,
    - Reinspection Interval Process Leader,
    - Long Seam Susceptibility SME,
    - Stress Corrosion Cracking Susceptibility Process Leader, and
    - Depth-of-Cover Process Leader.

5.4.3 Analysis of Relative Risk Results

Following are the steps followed the Risk Analyst in analyzing the relative risk results.

1. Prepares the Risk Assessment Report (RAR) using a template that pulls the current data from the risk model
2. Identifies the following dynamic segments and threats for further analysis:
    - Dynamic segments which have the highest ROF, COF and LOF scores, and
    - Threat-specific LOF scores that fall within the top five percent of all MPL relative risk scores.
3. Develops graphs as needed to highlight variations in risk scores.
4. Performs intuitive evaluation of tables and graphs to identify the following and develop a narrative to include in the report:
    - Spikes/peaks in risk score,
    - Coincident peaks of two or more threats, and
    - Step-change shifts in risk score.
5. Evaluates the relative risk algorithm inputs and scoring to determine which risk factors are driving the risk score variations, and develops a narrative to include in the report.
6. Identifies the follow actions
    - Dynamic Segments that are candidates for further evaluation of Preventative and Mitigative Measures (P&MM).
    - Data validation candidates.
7. Reviews the following data sources for pertinent historical data:
    - Incident Report System,
    - Audit Tracking System, and
    - Previous Risk Report.
8. Completes draft of Risk Assessment Report.
9. Schedules Risk Assessment Meeting (RAM) to evaluate existing and identify additional P&MMs. **Note**: Refer to Section 5.4.4 for SME Panel Experts.

5.4.4 SME Panel Experts

Table 5-4 SME Panel Experts lists the SME Panel Experts and their areas of expertise.

Table 5-4 SME Panel Experts

Position	IMP Integrity Threat								
	EQ	IO	OFT	WNF	EC	IC	CC	MD	CFD
Risk Analyst	X	X	X	X	X	X	X	X	X
Mainline Integrity Process Leader			X	X	X	X	X	X	X
IAS Integrity Engineer			X	X	X	X	X	X	X
System Integrity Leader	X	X	X	X	X	X	X	X	X
Corrosion Control Process Leader					X	X	X		
Depth-of-Cover Process Leader			X	X					
Damage Prevention Supervisor			X						
Operations Center Specialist		X							
Hydraulics and Controls Engineer	X	X							
Mechanical Specialist	X	X							
IMP Plan Coordinator	X	X	X	X	X	X	X	X	X
Area Manager or Operations Supervisor	X	X	X	X	X	X	X	X	X

Note: EQ – Equipment Failures, IO – Incorrect Operations, OFT – Outside Force Threat, WNF - Weather Natural Force, EC – External Corrosion, IC – Internal Corrosion, CC – Corrosion Cracking, MD – Manufacture/Material Defect, CFD – Construction and Fabrication Defects