CA001.2 Identify and Manage Issues

Purpose

Outlines a standardized method for evaluating and resolving an issue based on a graded, risk-based approach that takes into account the issue's significance.
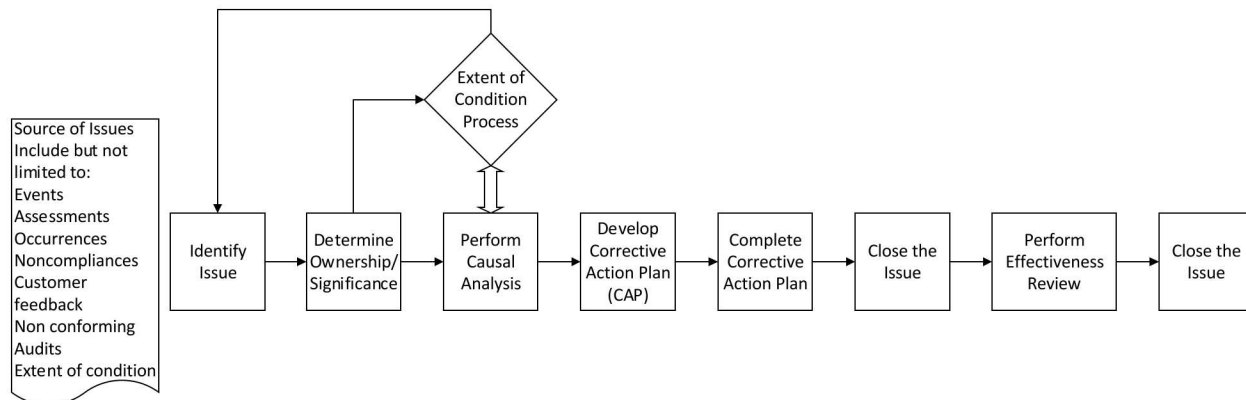
Applicability

This process applies to all Sandia National Laboratories (SNL) organizations and Members of the Workforce.

- Issues involving subcontractors, vendor personnel, or visitors are the responsibility of the SNL requisitioning or host organization.

- This process applies to classified issues. However, classified issues require the use of appropriate reporting tools on the Sandia Classified Network (SCN) instead of Sandia's Assurance Information System (AIS). See [FutureLink: <SS003, *Classified Matter Protection and Control (CMPC) Policy>*] for information about properly handling classified information.

Process Tables

The figure below provides a high-level overview of the issue identification and management process.

[FutureImage: MA001.2_image_1]

- Select groups, including Environment Safety & Health (ES&H), Nuclear Deterrence (ND), and Security, have additional requirements related to identifying and managing issues. Supplement this process with local requirements where applicable.

- To ensure proper handling and protection of classified information, perform classification reviews throughout all phases of this process. See [FutureLink: <SS001, *Derivative Classifiers Policy>*], [FutureLink: <SS002, *Identifying Classified Information Policy>*], and [FutureLink: <SS003, *Classified Matter Protection and Control (CMPC) Policy>*] for more information about handling classified matter.
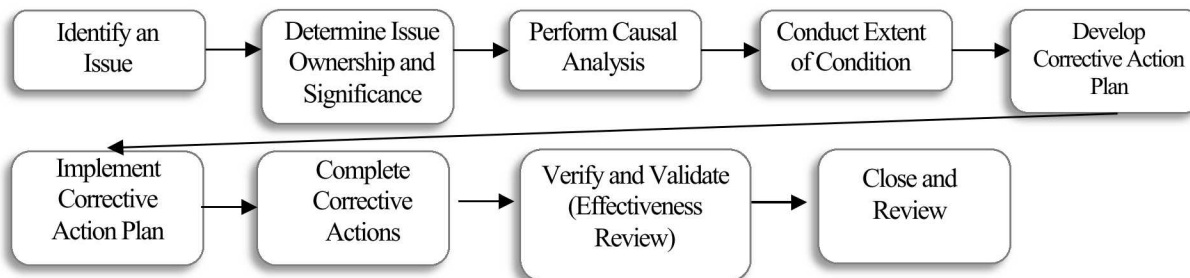
Q1. What issues management-related task do you need to perform?

A1: Identify and Manage an Issue

A2: Qualified Causal Analyst Qualification

A3: Senior Causal Analyst Qualification

Q1.A1: Identify and Manage an Issue

Sequence IDs	Responsible Party	Required Actions
Q1.A1.S1	**Identify an Issue**	
Q1.A1.S1.1	Member of the Workforce	• Identify an issue (see Issue Sources for examples of where issues can be found and identified). If emergency response is needed, call: • SNL/NM: 911 or (505) 844-0911, 845-0911, or 284-0911. • SNL/CA: 911 or (925) 294-2222. If the issue is related to environment, safety, or health (ES&H), call: • SNL/NM: 311 or (505) 844-6515, 844-0311, 845-0311, or 284-0311. • SNL/CA: 311 or (925) 294-2300. If this issue is related to Security, call Security Connection at (505) 845-1321 (all sites). o If an issue is identified independent of a formal Sandia oversight or reporting process, gain concurrence of management before proceeding. o If immediate compensatory measure actions are needed to sustain a safe, stable, and secure condition, then notify management and take the compensatory measures. o If the issue originates from an internal or external assessment/audit report finding, do not proceed with this process until the report's factual accuracy review

Sequence IDs	Responsible Party	Required Actions

		is complete and the final report is approved and issued. If that report confirms the existence of the issue, then continue use of this process.
		
		   o If the issue pertains to a nonconforming product or service, follow the steps in [FutureLink: <MA002.1, *Control Nonconforming Products and Services*>].
		
		   o If the issue has the potential to be classified or involve classified information, ensure that all pertinent documents are reviewed by a Derivative Classifier (DC) or Review and Approval (R&A) before proceeding. Until classification is determined, treat all information at the highest potential classification level.
		
		     See [FutureLink: <SS001, *Derivative Classifiers Policy*>], [FutureLink: <SS002, *Identifying Classified Information Policy*>], and [FutureLink: <SS003, *Classified Matter Protection and Control (CMPC) Policy*>] for more information about handling classified matter.
		
		• Enter the issue in an appropriate tracking system:
		   o For classified issues, use an appropriate tool on the local Sandia Classified Network (SCN).
		   o For other issues, use Sandia's Assurance Information System (AIS).
		
		• Attach, or specify the location of, any supporting documents for the issue in the AIS or SCN tracking system.
		
		•

Q1.A1.S2	**Determine Issue Ownership and Significance**	
Q1.A1.S2.1	Responsible Manager	• Assign the issue to the appropriate Issue Owner. TheIssue Owner is responsible for coordinating and monitoring the issue through its lifecycle. The individual is also responsible for communicating status and ensuring that the issue is monitored for accuracy, efficiency and effectiveness. Examples of Issue Owners include: AIS System coordinator, reporting specialist, quality partner, and issue coordinator. • Enter the Issue Owner in the Assurance Information System (AIS) corrective action record as the "Alternate" or as a team member, or enter the Issue Owner in the Sandia Classified Network (SCN) tracking system.

Sequence IDs	Responsible Party	Required Actions

		• Use the Issue Significance Categorization Framework to determine the issue significance.
		
		Issues with "high" significance are managed with a higher degree of rigor in terms of causal analysis, extent of condition (EoC) review, corrective action plan (CAP) development, and effectiveness review.
		
		• If the issue falls into multiple significance categories, or has impacts that align to multiple significance levels, then either:
		  o Evaluate if there are multiple issues and separate the issues accordingly, or
		  o Align the issue to the highest significance level applicable.
		• If the issue significance is lower than "low," assign a significance category of "find and fix."
		
		Consult the Issues Management Timeline to determine the timeframe for each step of managing the issue:
		
		• Escalate the issue as needed using the Escalation Criteria.

Q1.A1.S2.2	Issue Owner	If the Issue Owner disagrees with the significance level determination, forward a request to the Issues Management Review Board Chair for significance level re-evaluation.
Q1.A1.S3	**Perform Causal Analysis**	
Q1.A1.S3.1	Issue Owner	• For *low-significance* issues, if only an apparent or likely cause is needed to address the Issue, then document the likely cause(s) and enter the issue into the Assurance Information System (AIS) or Sandia Classified Network (SCN) tracking system. For instance, if an issue is "People keep running into a chair," the apparent or likely cause is that the chair is in a poor location and should be moved. • In AIS or SCN tracking system, assign each apparent or likely cause an appropriate DOE cause code as described in DOE-STD-1197-2011. • For *moderate-significance* issues, identify and assign a Qualified Causal Analyst to facilitate the causal analysis. • For *high-significance* issues, identify and assign an independent Senior Causal Analyst to facilitate the causal analysis.

Sequence IDs	Responsible Party	Required Actions
		• Consider organization and analyst specialization (e.g. ES&H coordinator, security coordinator, policy analyst) when selecting a causal analyst for moderate and high significant issues. • For assistance or questions about selecting a causal analyst, email the Issues Management Subject Matter Expert (SME).

Q1.A1.S3.2	Qualified or Senior Causal Analyst	For moderate and high-significance issues:
		
		• Identify a Causal Analysis team that includes appropriate SMEs from impacted organizations.
		
		• Facilitate the causal analysis using one or more of the approved methods:
		
		    o Five Whys
		    o Failure Modes (and Effects) Analysis (FMA/FMEA)
		    o Timeline Analysis
		    o Change Analysis
		    o Barrier Analysis
		    o Cause Mapping
		    o Causal Factor Analysis
		    o Kepner-Tregoe Analytical Troubleshooting
		    o Human Performance Improvement (HPI) Analysis
		
		Due to the severity of the high significance issues and the associated risks, manage the analysis of high-significance issues with a higher degree of rigor and attention to detail. Use at least two causal analysis methods to determine the root cause.
		
		• Compile and document the causal analysis in the AIS or SCN tracking system.
		
		• Compile the Causal Analysis Report for management with availability to Sandia Field Office (SFO).
		
		• Assign each cause an appropriate DOE cause code as described in DOE-STD-1197-2011.

Q1.A1.S4	**Conduct Extent of Condition**	
Q1.A1.S4.1	Issue Owner	• Identify, document, and take into consideration the Extent of Condition (EoC) when determining the root cause and the corrective actions.

Sequence IDs	Responsible Party	Required Actions
		Manage the EoC of high-significance issues with the breadth and depth required, a higher degree of rigor, and attention to detail.
		Ensure documentation for the EoC review for the issue is attached in the Assurance Information System (AIS) or Sandia Classified Network tracking system, and is marked and protected according to sensitivity.
Q1.A1.S5	**Develop Corrective Action Plan**	

Q1.A1.S5.1	Issue Owner	A good corrective action plan (CAP) rectifies the issue and significantly reduces the likelihood of recurrence. It addresses the causes identified by the causal analysis and the scope of the issue found in the Extent of Condition (EoC), where the EoC review does not result in additional issues. The plan considers the significance of the issue and related activities.
		
		 • Develop a CAP in consideration of:
		    o Implementing compensatory measures and Corrective actions to correct the immediate issue.
		    o Corrective actions to correct and prevent the causal factors.
		    o Corrective actions to address the results of the EoC review, as applicable.
		    o Actions to verify corrective action effectiveness and resolution of the issue, as applicable.
		
		 Develop the CAP for high-significance issues with a higher degree of rigor and attention to detail.
		
		 • Coordinate CAP development with stakeholders, such as other organizations who own actions included in the CAP.
		
		 • If the issue or actions are classified, document the following in the Sandia Classified Network (SCN) tracking system:
		    o Information showing the unclassified description for the actions, including the date. Ensure the information is marked and protected at the appropriate level, category, and if applicable, caveat.
		    o The tracking of actions in the tracking system
		
		 • Obtain any required stakeholder approvals of the CAP and attach approval in the Assurance Information System (AIS) or SCN tracking system.
		
		 • Submit the CAP for approval in the AIS or SCN tracking system.

Sequence IDs	Responsible Party	Required Actions
Q1.A1.S5.2	Responsible Manager	• Review the CAP and indicate approval or rejection in the tracking system. • If rejected, provide rationale for rejection.
Q1.A1.S5.3	Issue Owner	• Resolve rejections and resubmit the CAP for approval until it is approved. Escalate rejection resolution to management as needed. • If the issue was identified by an external audit, then confirm the CAP entered in the tracking system is consistent with the external response. • If any CAP cannot be developed by the scheduled due date, then notify the Responsible Manager and document justification and the new due date in the AIS or SCN tracking system.
Q1.A1.S6	**Implement Corrective Action Plan**	
Q1.A1.S6.1	Issue Owner and/or Responsible Manager, as appropriate	Use Assurance Information System (AIS) or Sandia Classified Network (SCN) tracking system to identify and assign Corrective Action Owners for each corrective action in the Corrective Action Plan (CAP). • These Corrective Action Owners are given the responsibility to complete the corrective actions to which they are assigned. • AIS will automatically inform the Corrective Action Owners that they have been assigned corrective actions. For classified issues, if the SCN tracking system in use does not perform this function automatically, the Issue Owner or Responsible Manager will email the Corrective Action Owners to inform them of their assignments.
Q1.A1.S6.2	Corrective Action Owner	If a corrective action cannot be completed as scheduled or defined, inform the Issue Owner.
Q1.A1.S6.3	Issue Owner	• Ensure the CAP is implemented as defined. • If corrective actions cannot be completed as scheduled, escalate them to the Responsible Manager or, if necessary, to the Issues Management Review Board. • If there are changes to corrective action descriptions, corrective action due dates, or the issue due date, document these changes in the AIS or SCN tracking system and submit them to the Responsible Manager for approval.
Q1.A1.S6.4	Responsible Manager	• Review CAP changes and indicate approval or rejection in the tracking system. • If rejected, provide rationale for rejection.

Sequence IDs	Responsible Party	Required Actions
Q1.A1.S7	**Complete Corrective Actions**	
Q1.A1.S7.1	Corrective Action Owner	- Complete assigned corrective actions. - Ensure the corrective action not only eliminates the causes of the existing Issue but also addresses action to eliminate the cause of a potential Issue, defect, or other undesirable sitation in order to prevent occrruence. - If there are any changes in the evidence or method of implementation of corrective actions from the original closure criteria entered in Assurance Information System (AIS) or Sandia Classified Network (SCN) tracking system, document the changes in the tracking system. - Attach evidence for completed corrective actions in the tracking system. Inclue a summary or an index for multiple evidence elements associated with an action. - Review the closure evidence for each action for completeness and for clear documentation that aligns to specific issues. Either approve or reject closure. If rejected, provide rationale for rejection. - Once action is approved, mark the corrective action as "Completed" in the tracking system.
Q1.A1.S7.2	Issue Owner	Ensure that corrective actions are completed as described.
Q1.A1.S8	**Verify and Validate (Effectiveness Review)**	
Q1.A1.S8.1	Issue Owner	- Perform Effectiveness Review after corrective actions are completed and before the closure of the issue, as required. - The Effectiveness Review is intended to evaluate the effectiveness of the corrective actions in resolving the underlying causes of the issue and preventing recurrence of the same or similar issues. The review should look beyond completion of the corrective actions to conclude whether the Corrective Action Plan (CAP) achieved the intended outcome. - Manage the Effectiveness Reviews of high-significance issues with a higher degree of rigor and attention to detail. - Conduct verification by evaluating if the actions in the CAP have been completed as intended and documented evidence of completion is adequate. - Once verification has been completed, create a Validation Plan and perform the corresponding Validation Assessment

Sequence IDs	Responsible Party	Required Actions
		between 90 and 360 days after all corrective actions have been implemented.
		• A Validation is required for all High-Significance Issues, recommended for Moderate-Significance Issues, and Optimal for Low-Significance Issues.
		The Validation Plan should determine the methods that will be used to assess if the implementation of the corrective actions have eliminated the cause(s) for the issue. These methods will be carried out during the Validation Assessment. The methods may include, but are not limited to: • Observe active work. • Inspect changes to equipment or facility. • Assess (by management or independent reviewer) whether the causes still exist. • Chart performance from problem identification to current time. • Review records/data for occurrence of similar problems since the last corrective action. • Run a test to challenge the process. • Interview managers and workers for consistency and correctness in their understanding of changes.
		o Coordinate with the Responsible manager to identify and assign a Lead Assessor to manage and lead the Validation Assessment. o For high-significance issues, the Lead Assessor must be an independent assessor and cannot report, either directly or through a matrix agreement, to the management chain responsible for the issue. Email the Issues Management Subject Matter Expert (SME) to arrange for an independent assessor. • Document the Validation Plan and results of the Validation Assessment in the Assurance Information System (AIS) or Sandia Classified Network (SCN) tracking system. If the plan or assessment results are too long to neatly fit in the tracking system used, host a document on EIMS or an appropriate classified information hosting system and link to that document in the tracking system. • If the Effectiveness Review concludes that the CAP was ineffective:

Sequence IDs	Responsible Party	Required Actions

		o Conduct an analysis to determine why the CAP was ineffective.
		
		o Document the results of the analysis.
		
		o Revise the CAP in the tracking system to include:
		
		   ▪ Additional corrective actions needed to effectively resolve the issue, and
		
		   ▪ Another Effectiveness Review action, including the scope to be evaluated.

Q1.A1.S9	**Close and Review**	
Q1.A1.S9.1	Issue Owner	• Review the information in the Assurance Information System (AIS) or Sandia Classified Network (SCN) tracking system for the corrective action and plan/issue response and the corrective action closure documentation. • If the corrective actions are implemented, documentation is complete, and the implementation is determined to be effective in correcting the issue and preventing recurrence, then submit the issue closure for approval in the AIS or SCN tracking system.
Q1.A1.S9.2	Responsible Manager	Review closure evidence for the issue, and either approve or reject closure pending reasons for rejections.

Q1.A1.S9.3	Issue Owner	• If the closure is approved, then close the issue in the AIS or SCN tracking system.
		
		• If the closure is rejected, then:
		
		   o Review why the issue closure was rejected.
		
		   o Add any necessary additional corrective actions and effectiveness reviews due to ineffective corrective actions.
		
		   o Resolve other concerns.
		
		   o Resubmit for approval until closure of the issue is approved.

Q1.S1.S9.4	Responsible Manager	Once the issue has been closed, monitor the issue for a period of time through assessments or performance metrics to ensure the corrective actions are effective and sustainable.

Q1.A2: Qualified Causal Analyst Qualification

Sequence IDs	Responsible Party	Required Actions

Q1.A2.1	Qualified Causal Analyst Candidate	• Complete DTA200, *Determine and Take Action* or external training in one of the following:
		   o Sologic® (formerly Apollo)
		   o REASON® - 2-day course
		   o ThinkReliability® Cause Mapping I and II
		   o DOE Human Performance Improvement (HPI) and Event Investigations
		   o Kepner-Tregoe Decision Making and Problem Solving
		   o American Society for Quality (ASQ) Root Cause Analysis
		
		Email or call the Issues Management Subject Matter Expert (SME) for more information about external training options and for approval of external training.
		
		• Within the previous two years:
		   o Lead a causal analysis under the direction of a Senior Causal Analyst, OR
		   o Assist on two causal analysis events.
		• Demonstrate ability to lead a causal analysis while being mentored by a Senior Causal Analyst.
		• Demonstrate proficiency in the application of causal analysis methodologies, as determined by the mentoring Senior Causal Analysis.
		• Meet a minimum of 3.0 quality review score for the most recent causal analysis, as determined by the mentoring Senior Causal Analyst.
		
		Records of causal analysis proficiency and quality review scores are documented internally by the mentoring Senior Causal Analyst.

Q1.A3: Senior Causal Analyst Qualification

Sequence IDs*	Responsible Party	Required Actions

Q1.A3.1	Senior Causal Analyst Candidate	• Complete RCA300, *Root Cause Analysis 3* or one of these external equivalents:
		   o REASON® - 5-day course
		   o ThinkReliability® Advanced Practitioner's Boot Camp

Sequence IDs*	Responsible Party	Required Actions
		○ Failure Modes and Effects Analysis Email or call the Issues Management Subject Matter Expert (SME) for more information about external training options and for approval of external training. - In addition, complete one of the following trainings: ○ DTA200, *Determine and Take Action* or external training in one of the following: ▪ Sologic® (formerly Apollo) ▪ REASON® - 2-day course ▪ ThinkReliability® Cause Mapping I and II ▪ DOE Human Performance Improvement (HPI) and Event Investigations ▪ Kepner-Tregoe Decision Making and Problem Solving ▪ American Society for Quality (ASQ) Root Cause Analysis Email or call the Issues Management SME for more information about external training options and for approval of external training. ○ LSS200, *Lean Six Sigma Black-Belt* ○ NQT600, *Using Systemic Mistake Proofing to Prevent Defects* - Within the previous two years, lead a causal analysis under the direction of a Senior Causal Analyst for an issue that was determined to need a Senior Causal Analyst. - Demonstrate ability to lead a causal analysis while being mentored by a Senior Causal Analyst. - Demonstrate proficiency in the advanced application of causal analysis methodologies, as determined by the mentoring Senior Causal Analysis. - Meet a minimum of 3.0 quality review score for the most recent causal analysis, as determined by the mentoring Senior Causal Analyst. Records of causal analysis proficiency and quality review scores are documented internally by the mentoring Senior Causal Analyst.

To maintain qualification as a Causal Analyst

Requirement Drivers – Policies

- [FutureLink: <MA001, *Enterprise Risks, Opportunities, Issues Management Policy*>]
- [FutureLink: <SS001, *Derivative Classifiers Policy*>]
- [FutureLink: <SS002, *Identifying Classified Information Policy*>]
- [FutureLink: <SS003, *Classified Matter Protection and Control (CMPC) Policy*>]

Resources

Related Processes

[FutureLink: <MA002.1, *Control Nonconforming Products and Services*>]

Reference Documents and Supplemental Documents

- Qualified Causal Analyst List
- DOE-STD-1197-2011
- Escalation Criteria
- Issue Significance Categorization Framework
- Issue Sources

Forms and Templates

N/A

Systems, Applications, Websites

- Assurance Information System (AIS)
- EIMS

Tools

N/A

Measures and Metrics

See Operational Management Review (OMR) Information.

Records Retention and Disposition Schedule

This process follows record series CP-101-227-000, *Policy System Documents*. See the Records Retention and Disposition Schedule to determine the retention requirements for records created when following this process. See IT010, *Manage Records Policy*, for additional information.

Training

Role	Required	Recommended

Qualified Causal Analyst	DTA200, *Determine and Take Action* or external training in one of the following: • Sologic® (formerly Apollo) • REASON® - 2-day course • ThinkReliability® Cause Mapping I and II • DOE Human Performance Improvement (HPI) and Event Investigations • Kepner-Tregoe Decision Making and Problem Solving • American Society for Quality (ASQ) Root Cause Analysis	• HPI100, *Human Factors* • COMM401, *Building Essential Workplace Communication Skills* • COMM602, *Effective High Stakes Communications and Negotiations*

Senior Causal Analyst	• RCA300, *Root Cause Analysis 3* or one of these external equivalents:
	  ○ REASON® - 5-day course
	  ○ ThinkReliability® Advanced Practitioner's Boot Camp
	  ○ Failure Modes and Effects Analysis
	• One of the following trainings:
	  ○ DTA200, *Determine and Take Action* or external training in one of the following:
	    ▪ Sologic® (formerly Apollo)
	    ▪ REASON® - 2-day course
	    ▪ ThinkReliability® Cause Mapping I and II
	    ▪ DOE Human Performance Improvement (HPI) and Event Investigations
	    ▪ Kepner-Tregoe Decision Making and Problem Solving
		• HPI200, *Managing Human Performance*
		• LDR311, *Leading at the Speed of Trust*
		• COMM410, *Influencer*
		• PMP105, *Risk Management*
		• FMD104, *Occurrence Reporting*
		• ENV-ISO14001 (ISO 14001 Audit Training)

		▪ American Society for Quality (ASQ) Root Cause Analysis ○ LSS200, *Lean Six Sigma Black-Belt* ○ NQT600, *Using Systemic Mistake Proofing to Prevent Defects*	

Contacts

Process SME(s)	Policy Lead (PL)	Process Manager(s) (PRM)	Legal Advisor(s)	Policy Manager (PM)
Shashi Presser	Charlene Therese MacBain ("Char")	Michael Joseph Famiglietta, JR.	Samantha Updegraff	Paul D. Yourick

Exceptions

Exception requests to this process must be approved in advance by the Policy Manager, or the Process Manager, if delegated. Click the Exception Request button to begin an exception request.

Consequences

Process violations or failure to follow the Laboratory Policy System exception process may be cause for disciplinary action up to and including termination of employment.

Important Notice

A printed copy of this process may not be the version currently in effect. The official version is located on the Sandia National Laboratories Sandia Restricted Network (SRN). Refer to IT011, *Prepare and Release Information Policy*, before externally releasing any Laboratory Policy System document.

Metadata	
(will not appear in published text)	
Field	Values
Enterprise Taxonomy Area For example: Management & Support Services, Financial Services, Human Resources/Workforce Management	Mission Assurance
Original CPS Document Number	N/A
Keywords for Search List words for controlled vocabulary search. Enter ONLY words that are not found in the document (these are automatically included in tool search)	lifecycle, life cycle