

# Safety Culture Improvement Panel

Tailoring the Analysis of Safety Culture Health

Monitoring Means and Methods Working Group

January 2022



## Working Group Report and Recommendations



U.S. DEPARTMENT OF  
**ENERGY**

## **FORWARD**

This report provides the results of the Safety Culture Improvement Panel (SCIP) Monitoring Means and Methods Working Group (MMMWG) review of safety culture monitoring processes and data sources used to gauge the health of safety culture.

### **The Monitoring Means and Methods Working Group**

Jim Hutton	AU/HQ (Executive Sponsor)
Pamela Bailey	EM/EM NV (Chair)
Julie Goeckner	AU/HQ (Advisor)
Bill Schleyer	NNSA
Brad Davy	AU/HQ
John Walsh	HC/HQ
Rod Hamilton	EM/ORP
Scottie Fryer	EM/SR
Tom McDermott	SC

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## **BACKGROUND**

This report provides the results of the Safety Culture Improvement Panel (SCIP) Monitoring Means and Methods Working Group (MMMWG) review of safety culture monitoring data sources and processes used to gauge the health of safety culture from across the Department of Energy (DOE) complex and other government and commercial organizations. The 2016 Safety Culture and Monitoring Methods Report recommended the use of “dashboards” or performance thresholds. This report details a more qualitative and cognitive analysis reporting approach.

The purpose of this review was to identify recommendations on safety culture measuring, trending, and monitoring approaches for DOE organizations, DOE contractors, and the SCIP consistent with the MMMWG Charter signed on November 1, 2019. The outcomes were to develop performance data/indicators for use to successfully monitor the health of safety culture and recommend a framework that could be used by DOE organizations and SCIP to monitor and measure the health of safety culture. The team was comprised of highly experienced DOE professionals and managers.

## **REVIEW APPROACH AND METHODOLOGY**

The MMMWG collected information from Federal entities and DOE contractor partners from interviews, data calls, document reviews, and practices being implemented in DOE and DOE contractor organizations, as well as from Nuclear Regulatory Commission licensed commercial nuclear facilities. The many varied inputs and sources informed of the complexity of culture monitoring as well as the many variations in how organizations tailor and evaluate the data feed to yield information on safety culture. The MMMWG evaluated both manual and electronic system approaches for safety culture data mining and monitoring.

The MMMWG also interfaced with other SCIP working groups; particularly the Contracts Working Group to understand how the DOE sets safety culture expectations through M&O contracts. These expectations (regulations, DOE directives, and site-specific contract requirements) are important because of set goals and resources allocated to achieve contract expectations.

## **RECOMMENDED FRAMEWORK FOR MEASURING SAFETY CULTURE**

The purpose of a safety culture monitoring panel is to actively look for changes in organizational performance and culture rather than relying solely on thresholds that can look different from one organization to the next. Evaluating safety culture behaviors is different from established system and functional performance indicators because there are no established performance thresholds applicable to all organizations.

A key function of monitoring and measuring safety culture is obtaining evidence that can be analyzed, identify areas that may warrant further attention, and prompt leadership discussions. Upon starting the task, the

MMMWG and the SCIP perceived that it would identify “a critical few” data points that could provide this information. However, the team concluded early on that this was not possible as there is no single “right way” to monitor/measure safety culture/Safety Conscious Work Environment (SCWE).

The MMMWG evaluated the recommendations identified in the SCIP’s Safety Culture and Monitoring Means Report issued in 2016, as well as a wide range of practices, processes, and data currently being used from DOE, DOE contractors, the Energy Facilities Contractors Operating Group (EFCOG), licensed commercial nuclear utilities, and other Federal agencies.

The 2016 SCIP Safety Culture and Monitoring Means Report recommended modifying the NEI 09-07, Rev. 1, Model, for use by DOE, specifically for use at the facility/site level, Program Secretarial Office level, and for enterprise discussion, coupled with monitoring “dashboards” to provide a vehicle to view safety culture trends.

The MMMWG focused on identifying DOE Process Inputs within the NEI 09-07 recommended framework (Figure 1) that could be used to monitor and measure safety culture consistently across the DOE complex.

## PROCESS INPUTS

The examples provided during the MMMWG analysis offered a list of data feed that organizations are tracking to evaluate safety culture (See Attachment 1). The MMMWG binned example data feed into Common Safety Culture Areas as shown in Figure 2. This binning provides a way for monitoring panels to tailor specific data that already exists in most organizations during discussions of safety culture behaviors. Monitoring panels should identify data within the organization’s existing structure that fits within these common areas and adjust discussions and actions as key themes begin to emerge. The goal of a safety culture monitoring panel is to prompt leadership

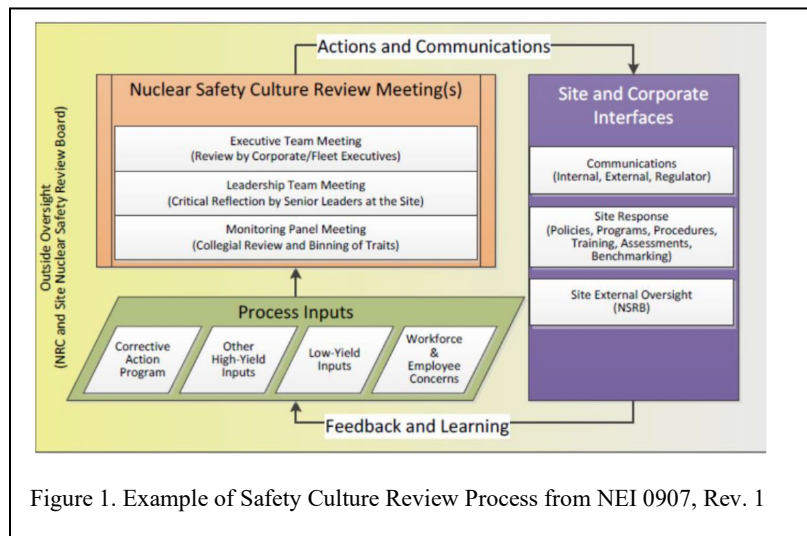


Figure 1. Example of Safety Culture Review Process from NEI 0907, Rev. 1

### DOE Process Inputs

#### Common Safety Culture Areas:

1. **Demonstrated Safety Leadership**
2. **Leadership Observations in the Field**
3. **Safety Culture Surveys and Assessments**
4. **Workforce Engagement**
5. **Work Process Improvements**
6. **Resources Spent on Safety Culture Initiatives**
7. **Safety Culture Communications**
8. **Contractor Assurance Systems Data Streams**
9. **Questioning Attitude**
10. **Workforce Issues & Concerns**
11. **Functional Area Metrics**

Figure 2. Common Safety Culture Areas

discussions in the Common Safety Culture Areas that would drive action to improve the organizational climate, safety culture, and SCWE.

**MODIFIED NEI 09-07, REV 1, FRAMEWORK FOR DOE TO MONITOR & MEASURE SAFETY CULTURE**

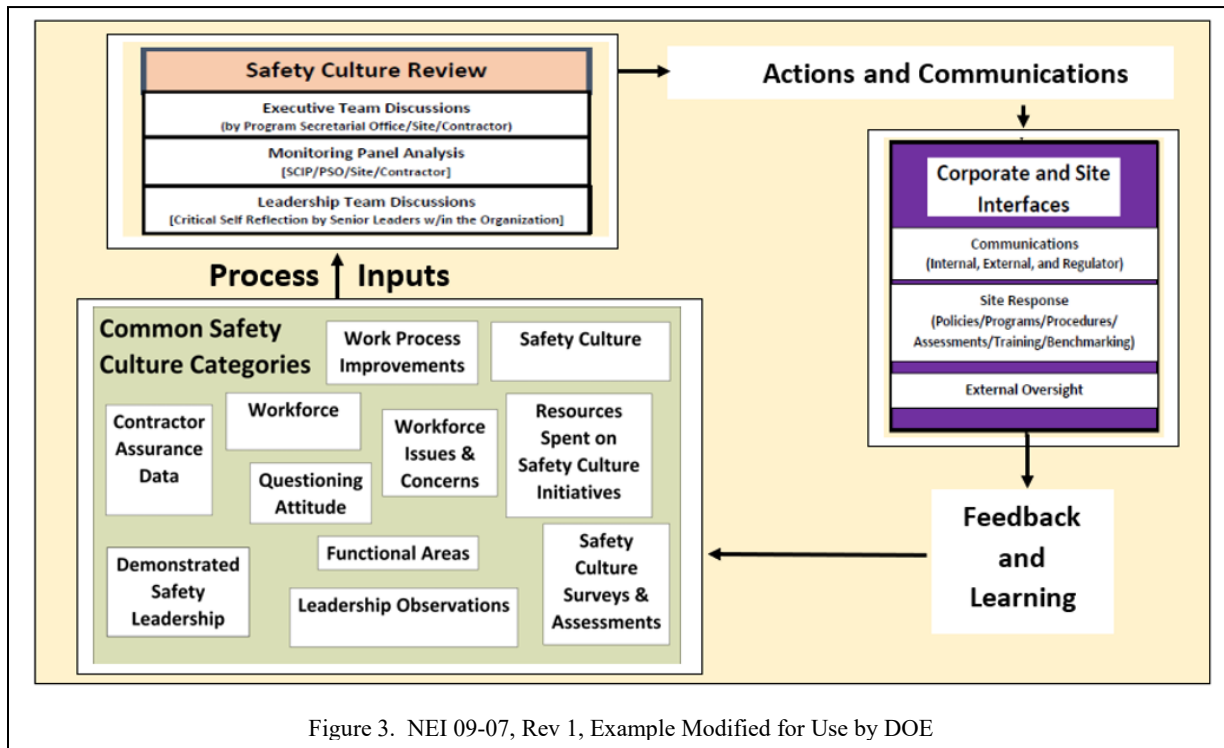


Figure 3. NEI 09-07, Rev 1, Example Modified for Use by DOE

**ROADMAP TOOLS**

To support discussion of the Common Safety Culture Categories, the MMMWG developed “Road Map” tools that crosswalk to the desired behaviors identified in DOE G 450.4-1C, ISM Guide, Attachment 10, *Safety Culture Focus Areas and Associated Attributes* [See Attachment 2].

The Road Map tools emphasize three Safety Culture Focus Areas: Leadership, Employee/Worker Engagement, and Organizational Learning. Within the three Safety Culture Focus Areas are 15 Attributes (six under Leadership, four under Employee/Worker Engagement, and five under Organizational Learning). The MMMWG developed Road Maps for each of the 15 Attributes. The Road Maps identify examples of what to look for to provide

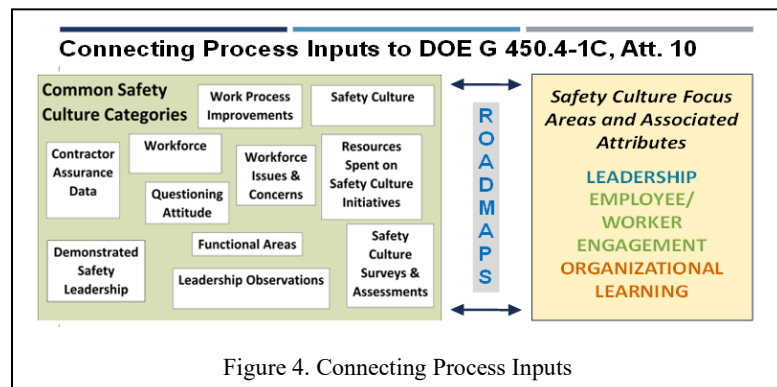


Figure 4. Connecting Process Inputs

evidence of the behavioral attribute. The Road Map tools enable organizations to extract specific data that may already exist in most organizations and how that information may be evaluated to support analysis within the Common Safety Culture Areas.

## OTHER MEASUREMENT AND MONITORING TOOLS

The team's primary focus of this report was to provide tools to support monitoring of safety culture. However, NEI 09-07, Rev. 1, also emphasizes the importance of measuring safety culture, specifically through periodic safety culture assessment (e.g., a biennial assessment that takes a detailed "snapshot" of the culture at a moment in time). Periodic assessment may provide a detailed, but static view that helps establish a baseline on a site/program's safety culture across the organization. It may also contribute diagnostic information that illuminates potential reasons for current culture in an organization.

NEI 09-07, Rev. 1, Section 3.1.3, identifies Low-Yield Inputs that should be considered which include: Operating Experience, Quality Assurance Items, Self-Assessments, Benchmarking Observations, and Site Performance Trends, and Other Sources (including a periodic safety culture survey), which assist in prompting collective discussions of cultural implications and help to identify the cultural changes that need to be addressed prior to the next biennial safety culture assessment.

The MMMWG identified that several Federal sites and contractor organizations perform safety culture surveys. However, Federal and contractor organization are administering different survey instruments, which vary in size and scope. There is no standard survey instrument that is being used across the DOE complex to measure safety culture consistently across the Department. This inconsistent approach may be introducing confusion and does not provide efficiencies for the Department. The MMMWG recommends the SCIP explore the use of a standard safety culture survey instrument for use across the DOE complex.

## RECOMMENDATIONS

The results of this report lay the foundation to initiate a methodical safety culture monitoring approach using defined DOE Process Inputs. The MMMWG's recommendations are:

- Socialize and pilot the DOE Process Inputs and Road Map tools.
- Solicit pilot organizations to provide feedback on the proposed monitoring/measuring methods.
- Evaluate the information obtained from the pilots for: consistency, integrity of data, reliability of data; and adjust the Road Map tools, as necessary.
- Institutionalize DOE Process Inputs and Roadmap tools.
- Evaluate the use of a standard safety culture survey instrument to be administered across the complex.

## **DOCUMENTS & REFERENCES**

A Guide to Safety Culture Evaluation (EFCOG – September 2015)

Campbell Institute, Practical Guide to Leading Indicators (2017)

Guide to Monitoring and Improving Safety Culture (EFCOG - April 2017)

NEI 09-07, Rev. 1., Fostering a Healthy Nuclear Safety Culture (March 2014)

Office of Enterprise Assessment (EA) Report, Assessment of Safety Culture Sustainment Processes at U.S. Department of Energy Sites (June 2020)

SCIP-16-001, Safety Culture and Monitoring Means Report (August 2016)





ATTACHMENT 2 – ROADMAP TOOL

SCIP ROADMAPS

Evidence and Data Sources at the Behavioral Attribute Level

	Leadership	Employee Engagement	Organizational Learning
Behavioral Attributes	Demonstrated Safety Leadership	Personal Commitment to Everyone's Safety Teamwork and Mutual Respect	Credibility, Trust and Reporting Errors
	Risk-Informed Conservative Decision Making	Participation in Work Planning and Improvement	Effective Resolution of Reported Problems
	Management Engagement and Time in Field	Mindful of Hazards and Controls	Performance Monitoring Through Multiple Means
	Staff Recruitment, Selection, Retention and Development		Use of Operating Experience
	Open Communication and Fostering an Environment Free from Retribution		Questioning Attitude
	Clear Expectations and Accountability		

## Process Inputs

### Common Areas Where Safety Culture Data Exists

- 1) Leadership
- 2) Observations in the Field
- 3) Workforce Engagement
- 4) CAS Data Streams
- 5) Work Process Improvements
- 6) Resources Spent on Safety Culture Initiatives
- 7) Safety Culture Communications
- 8) Safety Culture Surveys and Assessment
- 9) Questioning Attitude
- 10) ECP/DPO Concerns
- 11) Functional Area Metrics

# LEADERSHIP

## Demonstrated Safety Leadership

### Evidence of Behavioral Attribute

Expectations are frequently communicated using various tools.	Leaders are in the field and take time out for discussions.
Responsibilities, policies and work planning and control are defined in procedures.	Managers maintain open communications / seek feedback.
Responsibilities are included in annual performance reviews.	Work is prioritized and completed in a safe manner.
Training includes R2A2 elements.	Workers stop/pause work when questions arise / managers respond effectively.
Balanced reward, recognition, and disciplinary processes.	Workarounds are non-existent
Employee and management expectations are consistent.	Effective corrective action processes.
	Lessons Learned implemented.

### Data Sources That Provide Evidence of Behavior

Documented observations in the field or assessments can identify disconnects between expectations and actual behaviors **(Process Input 2)**

Resources are spent on communications, reward and recognition programs, culture improvement initiatives, and/or morale building activities. Desired behaviors are reinforced (e.g., Attach 10, mission and vision) **(Process Input 6)**

Demonstrated Safety Leadership behavioral attributes are embedded in safety culture communications and work processes/procedures **(Process Input 7)**

ECP/DPO concerns can provide evidence that leaders are behaving in accordance with expectations. Leaders are addressing issues and adequately staffing investigations **(Process Input 10)**

CAS data streams and results from functional area metrics can reveal the level of employee’s questioning attitude and trends or reoccurring problems **(Process Input 4)**

Results from safety culture surveys can identify if employees and managers expectations differ **(Process Input 8)**

# LEADERSHIP

## Risk Informed Conservative Decision-Making

### Evidence of Behavioral Attribute

Managers are cautious and frequently communicate safety/quality attributes.

Managers evaluate external information/events to identify potential operational impacts.

Leaders communicate influences and provide realistic strategies to deal them.

Managers interact with workers to identify potential influences.

Workers ask frequent questions before conducting work.

Leaders look for, and intervene in, unsafe or at-risk behaviors.

Workers pause work to evaluate unexpected conditions.

Workers do no attempt workarounds.

Workers ensure controls are in place before proceeding.

Leaders acknowledge workers for identifying hazards.

Everyone is engaged in pre-job briefings

### Data Sources That Provide Evidence of Behavior

Observations in the field or assessments can identify that leaders mentor expectations and confirm safe conditions **(Process Input 2)**

Safety culture surveys can identify the level of trust to challenge peers and leaders when processes are not understood or followed **(Process Input 8)**

Resources spent can reveal the value leadership places on raising issues and providing recommendations to improve by how it recognizes the workforce for this attribute **(Process Input 6)**

This behavioral attribute is embedded in safety culture communications (such as production pressures vs. safe conduct of work) and work processes/procedures **(Process Input 7)**

ECP/DPO concerns can reveal how leaders respond to workforce recommendations. Processes are in place for workers to challenge technical assumptions **(Process Input 10)**

CAS data streams and results from functional area metrics can reveal the number of pauses or mentoring activities in the field **(Process Input 4)**

# LEADERSHIP

## Management Engagement and Time in Field

### Evidence of Behavioral Attribute

Managers conduct one-on-one mentoring with the workforce.

Leaders conduct pre-job briefs and/or toolbox meetings to discuss expectations.

Leaders communicate correct approaches and behaviors in the field.

Managers conduct walk-downs with workers. Pertinent lessons learned are communicated before work starts. The use of PPE is enforced.

Leaders provide ongoing safety culture briefings.

Line expectations are clearly communicated to the workforce.

Line managers support improvements and preventive actions identified by the workforce.

Management engagement expectations are included in performance plans.

Leaders generate and communicate lessons learned from observations.

### Data Sources That Provide Evidence of Behavior

The number/types of meetings or hands on training can be revealed through observations in the field or assessments. Improvements in incident rates and near misses can be attributed to leadership engagement **(Process Input 2)**

Safety culture surveys can reveal how well leaders encourage questions on work plans and whether they seek feedback to improve **(Process Input 8)**

There are frequent safety culture communications in the field **(Process Input 7)**

Results from post job briefings are incorporated into work processes (such as work plans, procedures and/or lessons learned) **(Process Input 5)**

ECP/DPO concerns can reveal how often leaders spend time in the field **(Process Input 10)**

CAS data streams and results from functional area metrics can reveal the percentage/number of deviations identified and corrected by employees or managers during pre-job briefs **(Process Input 4)**

## LEADERSHIP

### Staff Recruitment, Selection, Retention and Developments

#### Evidence of Behavioral Attribute

Succession planning, recruitment, competency development, and retention activities meet mission needs.

Skill set, knowledge, and expertise are identified and monitored.

Performance gaps caused by open positions are understood.

High performers are openly recognized.

Low performing staff are mentored and counseled.

Project and work teams have diversely represented expertise.

In-house capabilities are evaluated before contracting out work.

There is little attrition within the organization.

There is cross training and cross matrix application of resources.

Existing contracts provide just in time technical and professional support.

Individual Development Plans are statused often and successfully implemented.

Onboarding workforce includes safety culture elements.

#### Data Sources That Provide Evidence of Behavior

Observations in the field or assessments can identify where additional training may be necessary. Leaders verify qualifications against corporate standards (**Process Input 2**)

Attrition rates and onboarding and training activities are frequently monitored. The number and types of vacancies are tracked (**Process Input 2**)

Safety culture surveys can reveal how well technical, programmatic and safety expertise work together to solve problems and drive innovation (**Process Input 8**)

Resources spent to provide access to online and classroom training commensurate with learning plans. Work processes are improved through a diverse workforce (**Process Input 6**)

Leadership communications focus on succession planning and knowledge base (**Process Input 7**)

ECP/DPO concerns can reveal how well technical, programmatic and safety expertise work together to solve problems and drive innovation. Exit interviews can glean information on why the workforce leaves (**Process Input 10**)

## LEADERSHIP

### Open Communication and Fostering an Environment Free of Retaliation

#### Evidence of Behavioral Attribute

Leader and human capital resources and processes define disciplinary actions.	A “zero threshold” issues management system is available to the workforce.
Leaders define trust values concretely and demonstrate expected behaviors.	There are a variety of ways to raise issues.
Alliances between organizations is evident. There are diverse work teams.	Questions in the field and recommendations to improve are tracked to closure.
Information is easy to find.	Work planning activities engage workers.
Issues and incidents are discussed and analyzed with honest commitment to improve.	Leaders communicate the importance of reporting errors and respond effectively.
Leaders report errors themselves.	Issues are dealt with in a timely manner.

#### Data Sources That Provide Evidence of Behavior

Observations in the field or assessments focus on worker perceptions (**Process Input 2**)

Safety culture surveys can reveal whether the workforce believes that the organization acts consistently and dependably or that leaders respond justly and fairly (**Process Input 8**)

Resources spent (**Process Input 6**)

This behavioral attribute is embedded in safety culture communications (such as production pressures vs. safe conduct of work) and work processes/procedures (**Process Input 7**)

ECP/DPO (**Process Input 10**)

CAS data streams and results from functional area metrics can reveal the number of pauses or mentoring activities in the field (**Process Input 4**)



# LEADERSHIP

## Clear Expectations and Accountability

### Evidence of Behavioral Attribute

Key responsibilities and expectations are embedded in performance plans.

Quarterly reviews are performed and documented.

The workforce understands how their roles and responsibilities support the mission.

The workforce shares a common understanding of management expectations. Employee aligns with management expectations.

Deadlines are met.

The workforce frequently utilizes performance documents and checklists.

Leaders take time to train/brief/explain new and revised procedures.

Leaders respond effectively to human and at-risk behaviors.

### Data Sources That Provide Evidence of Behavior

Leaders frequently meet with the workforce one-on-one to outline roles and responsibilities. Immediate feedback is provided when expectations aren't clear or met. Leaders regularly monitor progress and report status **(Process Input 1)**

Observations in the field or assessments focus on how well leaders are driving performance through feedback and engagement **(Process Input 2)**

Safety culture communications frequently highlight and encourage workforce discussions on process steps/work processes before work begins **(Process Input 7)**

ECP/DPO data can reveal whether leaders set clear and measurable goals **(Process Input 10)**

CAS data streams and results from functional area metrics are binned to gain an understanding of how well the workforce embraces expectations (e.g., questioning attitude, number of individual contributor entries, procedure use and adherence problems, etc.). Can functional area improvements be tied to workforce feedback? **(Process Input 4)**

# EMPLOYEE ENGAGEMENT

## Personal Commitment to Everyone’s Safety

### Evidence of Behavioral Attribute

Employees can state, in general terms, what leaders expect of them regarding safety.

Employees and managers statements of expectations and standards are consistent with each other.

Employees exercise pause/stop work to evaluate conditions or concerns before proceeding with work.

Managers encourage and workers accept interruptions to question actions as normal.

Each employee has clearly defined roles, responsibilities, and authorities, designated in writing

Employees are trained and competent to implement their roles and responsibilities for safety.

Personnel at all levels of the organization hold themselves accountable for shortfalls.

Contracts define safety responsibilities as critical elements.

Training includes how to use communications and teamwork to raise and resolve concerns.

The workforce at all levels is aware of each other’s issues and concerns.

### Data Sources That Provide Evidence of Behavior

Leadership ensures that R2A2 is apparent in policies, work control processes, procedures, and performance reports. Leaders actively coach and mentor. Observations in the field can document worker actions during abnormal conditions **(Process Input 1)**

Resources spent on training that is customized to specific job class or tasks **(Process Input 6)**

CAS Data Streams can track this commitment to safety (e.g., BBS, HPI). The number of pauses in the field can provide a data point when considering the level of Questioning Attitude. When abnormal situations occur, information from CAS can track whether the workforce respond appropriately, make decisions, and identify solutions **(Process Input 4)**

There are multiple means to communicate expectations and standards (newsletters, websites, meetings, posters, small groups). How far down the organization is the information flowed? **(Process Input 7)**

Safety Culture Surveys, Assessments or ECP/DPO results can identify areas where employee and manager expectations and standards differ significantly (e.g., production pressures, fear of enacting R2A2s, etc.). Look for this attribute in contractor self- assessments **(Process Input 8)**

# EMPLOYEE ENGAGEMENT

## Teamwork and Mutual Respect

### Evidence of Behavioral Attribute

Leaders interact with and seek feedback from all levels of the workforce.

All levels of workers are willing to offer critical observations, no matter their position.

When disagreements occur, personnel openly and civilly discuss their positions until a resolution is reached.

Employees identify and interrupt at-risk behaviors or actions by coworkers without fear of reprisal.

Workers use three-way communication.

Workforce statements about problem resolution approaches are consistent.

Workers are well informed about decisions, such as contract changes, staffing levels, production target changes, new requirements, etc.

Event critiques demonstrate a strong emphasis on fact finding and not fault finding (focusing on the issues, not people).

The workforce cooperates as a team to achieve solutions.

Managers openly discuss both good and bad news with workers.

Managers are alert to rumors, and rapidly address those rumors in public settings.

### Data Sources That Provide Evidence of Behavior

Observations in the field may document that disagreements are resolved by mutual understanding and cooperation. Look for evidence from observations of worker interactions and coaching opportunities to reinforce problem-solving techniques **(Process Input 2)**

Positive Workforce Engagement is evident in survey results. This data may document how the workforce feels about inclusion in/exclusion from resolution of issues or reveal trust issues between workers and managers (noting that trust is a vital prerequisite for crucial communications) **(Process Input 3)**

Safety Culture Assessment/Assist Visits can identify the extent/quality of workforce communication and teamwork or how well the workforce uses problem-solving techniques **(Process Input 8)**

CAS Data Streams or ECP/DPO Concerns may reveal unreported problems, or workers may “work around” a problem to avoid blame or an unwillingness to share bad news with managers **(Process Input 4)**

Resources Spent on Safety Culture Initiatives includes training on problem-solving techniques and methods or provide for regular forums for workforce at all levels (including contractors) to discuss safety issues **(Process Input 6)**

# EMPLOYEE ENGAGEMENT

## Participation in Work Planning and Improvement

### Evidence of Behavioral Attribute

The workforce at all levels is actively engaged in identification, planning, and improvement of work and practices.

The workforce follows procedures.

Workers stop work or pause if they cannot perform the procedure or process per the identified steps.

Employees identify and challenge problematic work practices or procedures during pre-job briefings or interviews.

Temporary employees and others such as visiting researchers are paired with knowledgeable personnel to ensure they are not taking risks or violating safety rules.

Written procedures define the stop or pause work process.

The workforce is trained on conduct of operations and procedural compliance.

Managers treat stop or pause work as a positive action and measure the usage or stop/pause work.

The workplace has up to date 10 CFR 851 Worker Protection Posters prominently displayed.

The work control and training development programs delineate the appropriate elements of continuous improvement.

### Data Sources That Provide Evidence of Behavior

Observations in the field can document the number of pauses related to procedure processes. Leadership communications focus on procedure compliance and recognition of good performance **(Process Input 2)**

Worker’s written comments and feedback on completed work can be used to track how work processes are improved. Safety Culture Sustainment Plans demonstrate continuous improvement **(Process Input 5)**

Records for work control documents include employee feedback comments which demonstrates effective Workforce Engagement. Work packages are rarely sent back to planning for corrections as a result of worker feedback **(Process Input 3)**

CAS Data Streams and results from Functional Area Metrics can track work planning statistics (e.g., work started and completed as planned). Maintenance Backlog and trends may show planning delays and issues due to lack of worker involvement or input. Look for trends of non-compliances with work practices or procedures **(Process Input 4)**

Safety Culture Surveys, Assessments and ECP Concerns can confirm that employees are involved in work planning and reveal opinions about procedure compliance or stop work policy **(Process Input 8)**

# EMPLOYEE ENGAGEMENT

## Mindful of Hazards and Controls

### Evidence of Behavioral Attribute

Organizational safety roles and responsibilities are clearly defined.

Workforce at all levels understand safety R2A2s and are held accountable for S&H performance.

Employees receive regular communications from management on S&H related matters.

DOE reviews, verifies, and approves the ES&H standards and requirements in the contractor's ISM System Description document.

Workforce at all levels participate in safety working groups, teams, or committees.

Emphasis is placed on designing the work and/or controls to reduce or eliminate the hazards.

Workers are informed of their rights and responsibility by appropriate means, including posting the DOE-designated Worker Protection Poster in the workplace where it is accessible to all workers.

There is an effective and systematic approach for identifying and evaluating hazards and for developing control strategies to prevent or mitigate risks associated with the hazards.

Appropriate assessment and workplace monitoring/testing methodologies are in place, as needed (such as accredited laboratories).

### Data Sources That Provide Evidence of Behavior

Observations in the field may identify workers do not know who their safety representatives are or how to contact personnel from the safety department for support. Observations may reveal an over reliance on skill of the craft for complex hazards. Leaders are seen addressing safety concerns identified by the workers and verify readiness before work commences **(Process Input 2)**

Resources spent on SC initiatives ensure that workers are allowed time to perform safety related roles and responsibilities, functions, and participate on teams and committees **(Process Input 6)**

Safety Culture Assessments/Assist Visits may demonstrate workforce comfort levels to discuss safety problems with individuals outside their management chain. Independent assessment teams may identify individual or groups that have widely varying opinions from the majority. These differing views may reveal ideas for action **(Process Input 8)**

Levels of participation of teams and committees can demonstrate Workforce Engagement. Workers identify and agree on controls **(Process Input 3)**

CAS Data Streams may indicate contractors' reportable occurrences and repeat occurrences are tracked, trended, and managed effectively **(Process Input 4)**

# ORGANIZATIONAL LEARNING

## Credibility, Trust and Reporting Errors

### Evidence of Behavioral Attribute

The workforce has multiple avenues to provide honest, open, and transparent feedback.

Leaders manage expectations, follow through on commitments and respond effectively to events.

The workforce takes accountability for the work performed.

Office gossip/rumors is never tolerated and addressed quickly.

Leaders share bad news quickly and commit to status improvement plans.

Accurate and timely information is acknowledged / rewarded.

Investments are made to ensure systems provide accurate knowledge.

A clearly defined and implemented change management and strategic planning processes.

Mistakes/errors and the resulting solutions/corrective actions are discussed publicly.

A positive reward system is developed that encourages error reporting.

Fair compensation methods are implemented and transparent.

Leaders convey their expectation to practice integrity and ethics and “do the right thing” all of the time, including self-identification of errors.

The workforce readily owns up to mistakes. The cause of errors is understood.

A clear and consistent framework for identifying and reporting errors.

### Data Sources That Provide Evidence of Behavior

Effective Leadership can be demonstrated by how often the workforce is encouraged to look for potential error and risk points. The amount of time leaders spend out of their office and in contact with workers can build trust in leadership commitment **(Process Input 1)**

Observations in the field document the number of mentoring opportunities taken in the field. Track number/type of issues reported to leaders in the field **(Process Input 2)**

Resources are spent on activities such as lunch and learn sessions that focus on trust building. Incentives lead to an increase in error reporting **(Process Input 6)**

Agendas and notes from all-hands meetings can demonstrate how leaders communicate expectations and follow-up on issues and concerns **(Process Input 7)**

Surveys and assessments may indicate openness/willingness to share news and that the workforce is confident in reporting errors. Can also track whether the workforce feels it has the resources needed to complete their work **(Process Input 8)**

CAS Data Streams that track trends of individually contributed concerns or opportunities to improve. The days it takes to respond to workforce input can strengthen workforce trust. Cause analysis process that includes behavioral contributors to errors **(Process Input 4)**

ECP/DPO Concerns may reveal that Leader behaviors observed by workers are contrary to stated or written policies **(Process Input 10)**

# ORGANIZATIONAL LEARNING

## Effective Resolution of Reported Problems

### Evidence of Behavioral Attribute

Leaders establish error reporting goals that are revised as lessons are learned.

The organization performs safety culture monitoring.

Key performance indicators include safety culture elements.

Diverse safety committees are established to watch for indications of trends and recommend actions as needed.

Senior leaders regularly visit workplaces and engage with workers.

Safety committee charters encourage diverse and strong workforce engagement.

Written work control procedures define process improvement expectations.

Leaders ensure there is specific and adequate funding and time allotted for issue resolution.

Safety culture surveys are regularly administered and include issues management elements.

### Data Sources That Provide Evidence of Behavior

All-hands meeting agendas can demonstrate safety leadership by including a “safety share” or other S&H topic. Look for worker recognitions and S&H committee actions/ideas. Number of times leaders attend safety committees and act as process champions (**Process Input 1**)

Observations in the field track time supervisors and leader spent with the workforce. Documentation should include number and types of mentoring opportunities (**Process Input 2**)

Surveys and Assessments show workers are attentive, engaged and have a strong questioning attitude (**Process Input 8**)

Timecards track resources spent on safety culture improvement initiatives (**Process Input 6**)

CAS Data Streams may show trends in specific safety programs resulting from managers failing to empower the workforce and resolve problems. Work processes are improved as a result of CAS data. Document revision history reflects process improvement elements (**Process Input 4**)



# ORGANIZATIONAL LEARNING

## Performance Monitoring Through Multiple Means

### Evidence of Behavioral Attribute

Independent oversight is planned and stated.

Assessment schedules include ongoing management assessments.

Leader engagement in the field is apparent and often.

Performance monitoring panels evaluate safety culture behaviors.

System and process improvements can be readily tied to performance monitoring.

Leadership engagement in cause analysis is apparent.

Reports from monitoring panels are provided to the workforce.

Lessons learned are often communicated and implemented such that processes are improved.

Critiques are conducted quickly after events. Causes of events are well understood.

Readily accessible websites contain performance monitoring information.

Corrective actions are identified and implemented in a timely manner.

The workforce is often seen collaborating on activities.

### Data Sources That Provide Evidence of Behavior

Number of times leaders participate in oversight activities or seek workforce input on safety goals and objectives can demonstrate leadership. Routine senior and midlevel leader meetings include status of issues and organization (**Process Input 1**)

Document the number of time results from ongoing monitoring is communicated to the workforce. Look for how often leaders communicate improvements were made as a result of performance monitoring. Strategic goals/organizational priorities are posted/visible throughout the organization (**Process Input 7**)

Metrics from lessons learned programs are tracked and evaluated (e.g., OPEXShare, # of times LLs result in process improvement, etc.). Track the number of times safety culture goals, objectives and performance measures are updated as a result of ongoing monitoring (**Process Input 11**)

Track the number of observations in the field and times leaders discuss safety goals, lessons learned and engages SMEs to develop and implement process improvements (**Process Input 2**)

CAS Data Streams can be used to track the number of times monitoring has resulted in process improvements. Management-assessments can evaluate and track effectiveness of trend analysis (**Process Input 4**)



# ORGANIZATIONAL LEARNING

## Use of Operating Experience

### Evidence of Behavioral Attribute

Temporary employees and others such as external assessors / researchers are paired with knowledgeable personnel to ensure they are not taking risks or violating safety rules.

Ongoing analysis of operating experience / lessons learned is evident.

Leader performance plans include mentoring and communications of the importance of lessons learned.

Procedures implement expectations to evaluate OE / lessons learned (LL) before assessment and other task planning.

Management and external assessments are the norm.

Workers are aware and knowledgeable of hazards and risks associated with each activity.

“Hot washes” occur quickly after significant events.

The organization openly analyze and discuss events when mistakes occur with an emphasis on understanding the failures of the process leading to the event, not on assigning blame.

Worker feedback is consistently documented, evaluated for consideration, tracked, and responded to in an open environment.

Peers collaborate and consider improvements to work processes often.

### Data Sources That Provide Evidence of Behavior

Leaders are often seen sharing stories and explanations of what went into decision-making. Look for the number of times leaders seek workforce feedback **(Process Input 1)**

Resources are spent to ensure that a lesson learned program is properly resourced **(Process Input 6)**

Safety culture communications consistently highlight OE and LL examples applicable to the organization’s activities **(Process Input 7)**

CAS Data Streams can track when improvement to work processes are identified. Safety Culture Sustainment Plans demonstrate process improvement. Track the use of OE / LL in work planning, safety walkdowns and pre-job **(Process Input 4)**

Results from Safety culture surveys and assessments demonstrates an emphasis on the use of the lessons learned system and ample evidence of the consistent application. Look for whether employee and manager statements of use of LL is consistent **(Process Input 8)**

ECP/DPO Coordinators consider applicable OE and LL issues related to employee concerns **(Process Input 10)**

# ORGANIZATIONAL LEARNING

## Questioning Attitude

### Evidence of Behavioral Attribute

<p>Requirements and polices are clear that employees are involved in work planning on all work activities not just worker planned work.</p> <p>Employee stop work authority is clearly defined and encouraged in policies and procedures.</p> <p>Employee led pre-job briefs or toolbox safety discussions occur often.</p> <p>Post job critiques are initiated quickly.</p> <p>Supervisor responsibilities in fostering a questioning attitude are included in annual performance reviews.</p>	<p>Management reinforces expectations using balanced reward and recognition processes.</p> <p>Employees can state, in general terms, what leaders expect of them regarding questioning attitude.</p> <p>Employees and managers statements of expectations are consistent with each other.</p> <p>Employees exercise pause/stop work to evaluate conditions or concerns before proceeding with work.</p> <p>The workforce is known for its ability to learn and adapt.</p>
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### Data Sources That Provide Evidence of Behavior

Leaders take the time to help the workforce understand areas of complacency (self-awareness). Leaders often identify critical decision points and promote pause to discuss **(Process Input 1)**

Observations in the field can track whether problems increase/decrease due to how workers implement pause/stop work when conditions deviated form expected/planned work conditions **(Process Input 2)**

Look for the # of preventive actions from employee-initiated stoppages or recommendations implemented to gauge how work processes are improved **(Process Input 5)**

Leaders surround themselves with workforce that aren't afraid to engage/speak up and say it like it is. Leaders encourage change often, which helps the workforce remain vigilant and focused (engaged) **(Process Input 3)**

CAS Data Streams can track the numbers of employee issues raised, trends, and recurring problems may reveal issues that are inconsistent with expectations and standards. Lessons learned can identify error points where a pause to discuss path forward could have made the difference **(Process Input 4)**

The workforce often to focus on work process improvements as outcomes are understood **(Process Input 5)**