



**S**afety  
**C**ulture  
**I**mprovement  
**P**anel

**U.S. Department of Energy  
Safety Culture Improvement Panel**

Produced by:

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## I. Introduction

The Department of Energy's (DOE) Safety Culture Improvement Panel (SCIP) was chartered by the Deputy Secretary in May of 2015 to:

- Establish a permanent, high-level organization devoted to promoting safety culture<sup>1</sup>;
- Provide cross-organizational leadership focused on continuous safety culture improvement; and
- Create an ongoing forum to exchange information and ideas that will establish, monitor, and sustain measures supporting a strong safety culture.

In May of 2016, the SCIP held its first Annual Meeting at which, among other things, it reviewed its accomplishments during its first year of existence and outlined a path forward for future activities. As part of this discussion, SCIP members recognized the need for a strategic plan, in addition to an annual plan to help guide its upcoming actions.

This SCIP Strategic Plan describes the Panel's goals for influencing behavior across the Department in a manner that promotes attaining and sustaining a strong safety culture at DOE. It also provides an overview and a context for the actions that the SCIP hopes to accomplish over the next three years. It will be supported by a SCIP 2016-2017 Annual Plan which will more precisely lay out actions planned for the upcoming year. In addition, with the creation of the Communications Working Group, the SCIP will be able to build new and strengthen and reinforce existing communication vehicles across the Department to help unify DOE's efforts to maintain a strong and enduring safety culture across the complex.

This Strategic Plan provides the SCIP's vision statement supported by three goals that derive from a group prioritization exercise conducted at the SCIP Annual Meeting.

## II. Vision Statement

- Safety culture is an integral part of DOE's DNA. It's how we execute our mission.

The SCIP plans to use the following strategic approach in support of this vision, working to move the Department toward an "ideal culture" as described below.

### Focus on People

For more than 70 years, the DOE has been successful because of the exceptional talent and tremendous contributions of Federal and contractor and laboratory partner employees. We must ensure that we continue to attract, retain, develop, and reward excellent people, through opportunities to develop their competencies and skills, and create a positive work environment that rewards and recognizes their talents and accomplishments. Our demographics are changing and must continue to change to support our journey into the future. Current and new employees need to be mentored by those with decades of

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<sup>1</sup> The DOE definition of "safety culture" is: "An organization's values and behaviors modeled by its leaders and internalized by its members which serve to make safe performance of work the overriding priority to protect the workers, the public, and the environment."

service who share and teach vital information specific to our missions, all while our workload is ever-changing. We must all be lifelong learners with a relentless pursuit of individual and collective excellence.

The SCIP will work to support DOE in attracting and retaining the people we need through an approach comprised of three elements: (1) inspire, (2) engage and include, and (3) understand and align to our vision and objectives. Through attaining these three elements, as described below, the Department can create a working environment such that every employee can see how his or her contribution supports the mission and moves us towards an “ideal culture.”

*Inspire:* Foster a work environment that enables and inspires all employees by building relationships, sustaining an engaged, diverse workforce, and creating cultivating and enriching careers.

*Engage and include:* Advance a culture guided by values, behavioral norms and clear principles of operation that promotes openness and inclusion and ensures input and feedback from employees in a safe (physical, emotional and personal) environment. This will include working with the Communications Subgroup to communicate the attached Core Values and Behaviors Matrix and the Commitment to Excellence Matrix (see fuller explanation below).

*Acknowledge every employee is a national asset and leader:* They are valued and need to be confident that their safety, involvement, input and perspectives are important and vital to continuous improvement. Leadership is engaged with all levels of the organization, and decision-making authority, ownership and accountability resides at the lowest appropriate level.

*Understand and align to our vision:* Provide clear guidance, direction and communications based on strategic partners and customer interaction and expectations. Provide a clear connection for all DOE employees to our strategic direction to understand and embrace.

In our “ideal culture,” we aspire to create a safe, secure, productive and satisfying place to work. We also aspire to be good neighbors to the communities in which we operate. We acknowledge that the only way we can do so is for all of us, regardless of our roles, to work together. To realize true excellence, we must all be unwavering in our commitment to optimum performance at all levels—as individuals and as a group—in our personal performance, our processes, outcomes and the way we treat one another. Actions that need to be taken to this end include:

- Be accountable to and exhibit our principles, values and behaviors. Develop best practices for onboarding personnel in order to imbue these values on day one.
- Place safety at the forefront of all decision-making and actions and integrate safety into management and work practices at all levels, addressing all types of work and all types of hazards to ensure safety for workers, the public, and the environment.
- Strengthen processes and performance through continuous improvement and an enhanced sense of partnership with our Lab/M&O partners in this critical area.
- Maintain an environment where issues or concerns are raised without fear of retaliation and resolved through honest dialogue. This will include developing recommendations and best practices to incentive safety culture reporting.

- Provide an environment that promotes leadership, employee/worker engagement, and organizational learning.
- Strive for personal excellence and to earn the public trust which has been placed in us.

### III. Goal 1: Affect Behaviors to Improve our Work Environment

A unique aspect of work within DOE is our Integrated Safety Management System (ISMS). ISMS was adapted by DOE in the 1990s and has been the foundation for performance and safety improvement for 20 years. Adding a cultural element to ISMS was made a priority by DOE in the mid to late 2000s. After reviewing a number of related industry cultural models, a DOE-specific culture model was developed to enhance ISMS and take safety performance to the next level excellence which was incorporated into DOE ISMS Guide 450.4-1C. This Strategic Plan builds on DOE efforts to improve safety culture by building an even stronger ISMS.

The DOE ISMS Guide also contains a model for changing behavior to change culture, shown below in Figure 1. This model forms our general structure for affecting behaviors to improve our work environment.

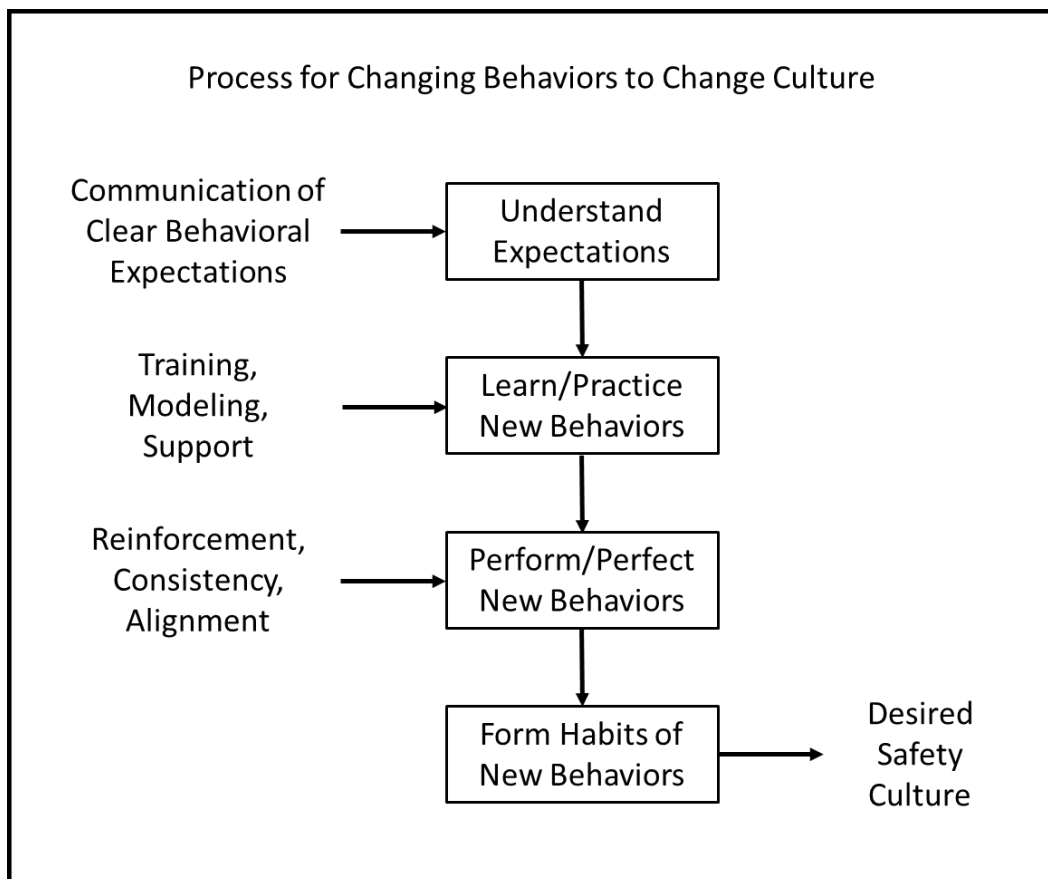


Figure 1 - Process for Changing Behaviors to Change Culture

Accordingly, the elements of this Strategic Plan’s Goal 1, as a means to improve the DOE work environment include workplace efforts that support:

- Understanding expectations
- Learning/practicing new behaviors
- Performing/perfecting new behaviors
- Forming habits of new behaviors

The SCIP is currently implementing an important mechanism by which to convey such expectations and new behaviors through the efforts of the Training Working Group. To this end, over 2,000 senior federal and contractor leaders have taken National Training Center (NTC) Course TLP-200, *Safety Culture for Senior Leaders*, and additional sessions are planned for the upcoming year. In addition, during the upcoming year, through the efforts of the Training Working Group, the NTC, and other training design partners, two additional courses will be rolled out: TLP-150, *Safety Culture for Front Line Leaders*, and TLP-100, *Safety Culture Employee Training*.

## IV. Goal 2: Make Safety Culture Second Nature to the Way We Do Business

Strategic Objectives under this goal are the following:

1. Establish the relevance of Safety Culture Focus Areas and Associated Attributes (DOG G 450.4-1C, Attachment 10) to all levels of work—why is safety culture important to:
  - Senior leaders
  - First-line supervisors
  - those who perform the work
2. Make the business case for how the Safety Culture Focus Areas and Associated Attributes (DOG G 450.4-1C, Attachment 10) add value—why a culture that pushes schedule over safety doesn’t pay off in the end for:
  - Senior leaders
  - First-line supervisors
  - those who perform the work
3. Measure return on investment of a positive safety culture – make the case to all supervisors that cost avoidance of events is worth the investment in a positive safety culture
4. Work with the Office of Acquisition Management to incorporate the recommendations of the SCIP’s Contract Clause Working Group into DOE contracts and requests for proposals to help embed safety culture principles into the way the Department conducts its business.

### *Plan Assumptions*

- This goal aligns with follow on activities for those senior leaders that have completed TLP-200.
- This goal will help supplement training under development for first line supervisors (TLP-150).
- This goal will help supplement training under development for line workers (TLP-100)

Accomplishment of this goal can best be achieved as a series of case studies pertinent to DOE and contractor leaders, supervisors and workers. Goal 1 is focused at affecting behaviors. This Goal is a natural “follow on” to using the behaviors defined in Goal 1 to show the business need for

implementation and follow through. Similarly, Goal 3 (Learn from Each Other) will be a natural follow on to capture best practices.

This plan will show case mini case studies that illustrate the business need for a healthy safety culture. This approach will start out with examples where safety culture issues resulted in catastrophic consequences. The case studies should show the consequences in terms of effect on the population, workforce, careers, recovery costs in time and money as well as public sentiment. Based on extensive operating experience in various industries, certain culture elements have been shown to have a significant influence on overall operational and safety performance. Formal reviews of recent major events have identified safety culture elements as significant contributing factors in the events. Example events with major cultural dimensions include the TMI accident, Chernobyl accident, Davis Besse head corrosion, Challenger and Columbia space shuttle events, and the British Petroleum Texas City explosion. Recent DOE examples of serious consequences resulting from a poor safety culture include:

1. HB Line criticality controls violations
2. Waste Isolation Pilot Plant underground fire
3. Los Alamos National Laboratory improper remediation that resulted in WIPP underground contamination

The International Atomic Energy Agency (IAEA) developed a safety culture maturity model that illustrates the 3 stages that an organization goes through in striving to achieve a mature and healthy safety culture. As discussed in the DOE ISM Guide, the model is relevant because it is important to recognize where an organization is in the culture development process so that we can identify where additional emphasis on improving safety culture would add the most benefit. An organization with a healthy and mature safety culture, Stage 3 in the IAEA model, will have adopted the principle of continuous improvement and applied the concept to safety performance. They will have a strong emphasis on communications, training, management style, and improving efficiency and effectiveness. In addition, strong safety leadership is evident along with a personal commitment to, and engagement in, safety by each individual in the organization. Furthermore, the organization seeks full participation of managers and workers in pursuit of continuous improvement in both safety and reliability; it is a learning organization.

Notable examples of where years of focus on building a healthy safety culture has resulted in both improved performance, schedule compliance and reduced spending include:

- The U.S. Commercial nuclear industry production and safety improvements over several decades are directly associated with a consistent focus on culture principles such as safety conscious work environment. This example clearly shows a strong relationship between a healthy safety culture, improved cost performance, and safe performance of work.
- Commercial airlines' focus on proactive identification of problems, thorough cause analysis, extent of condition reviews, and comprehensive corrective actions resulted in significant reduction in airline accidents, with similar improvements in overall performance.
- The Office of Environmental Management's Carlsbad Field Office is implementing revision 5 of the WIPP Documented Safety Analysis. Based the most recent analysis standards, this comprises significant upgrades to the safety controls. Management's focus on "what is the right thing to do?" empowered teams of experts to challenge the norms and focus on quality.

- The DOE Voluntary Protection Program (VPP) has several examples where organizations have achieved higher levels of results, at reduced costs, through employee engagement and development of a trusting organization.

## V. Goal 3: Learn from Each Other

The SCIP offers a corporate mechanism which can serve as a bridge to the wide array of safety culture practices and practitioners at work across the DOE complex, including work being done by our EFCOG and National Laboratory partners. Establishing a Safety Culture Community of Practice (COP) offers a mechanism to exchange ideas and lessons learned and strengthen a safety culture ethic across the Department whereby all work is planned, implemented, and completed in a workplace in which safety is the overriding priority.

In establishing a Safety Culture COP, the SCIP will take the following steps:

- Through SCIP members, obtain points of contact (POC) for site-level Safety Culture Improvement Panels or other management/worker forums
  - To gain the widest possible input these POCs should be from both the Federal workforce and that of our contractor partners
- Establish an SCIP Community of Practice Working Group or use the existing Employee Engagement Working Group to take this on
- Invite identified points of contact to join the Safety Culture Community of Practice (COP) and participate in regular webinars at which:
  - Best practices and lessons learned can be shared
  - Successful monitoring and measurement techniques can be discussed, including how the results of monitoring/measurement are used to improve safety culture and SCWE
  - Case studies are developed and disseminated for use by others
  - A support network is established whereby safety culture experts at one site (or multiple sites) can assist a site experiencing safety culture issues or has safety culture-related questions
- Have the SCIP Community of Practice Working Group or Employee Engagement Working Group make monthly presentations to the full SCIP, reporting on key highlights from COP meetings as well as identifying potential products that the SCIP could share on a DOE-wide basis
- Identify and share successful metrics and monitoring techniques used at sites to measure improvements in their safety culture.
- Working with the Communications Subgroup, establish a Powerpedia page, electronic bulletin board or other electronic means to post best practices, lessons learned, case studies, etc. to reach the widest possible DOE audience, including discussion forums
- Create a Best Practices Annual Report for submittal by the SCIP to the Deputy Secretary and for DOE-wide distribution

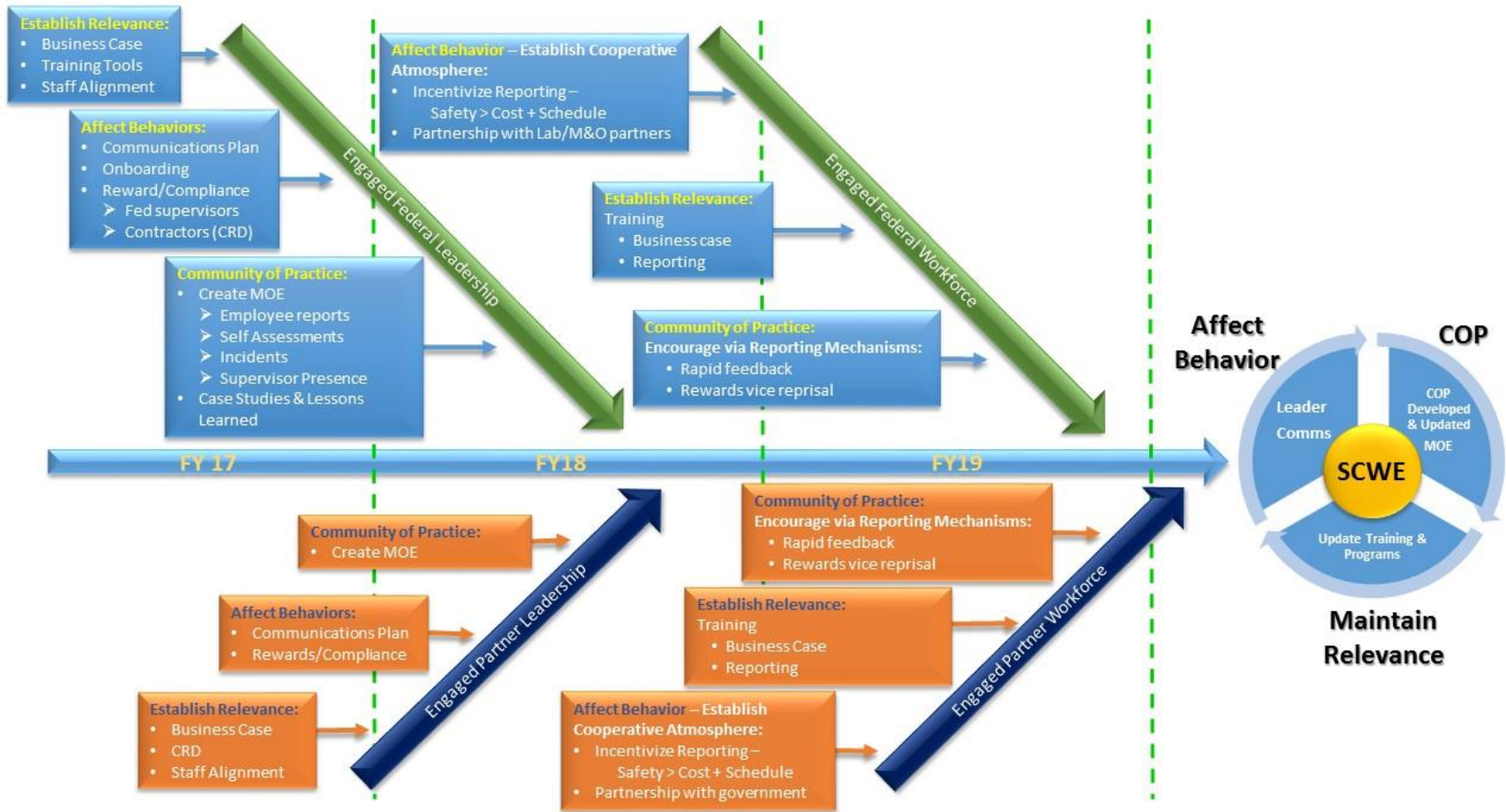


## VI. Conclusion

This Plan sets for an ambition strategic agenda for the SCIP. Attachment 1 depicts how the various elements of this Strategic Plan will be sequenced over the next three years. While the progression in each goal area is depicted separately, it is recognized and expected that these goals will, by necessity, overlap with each other. However, this Plan is designed to be flexible enough to accommodate “spillage” from one goal to the next whenever such actions strengthen the SCIP’s overall efforts.

In addition to their value in helping engage and include our workforce, the Core Values and Behaviors Matrix (Attachment 2) and the Commitment to Excellence Matrix (Attachment 3) provide additional ways that we can affect behavior across DOE in a manner that will help embed safety culture as part of DOE’s DNA.

# Attachment 1: DRAFT DIAGRAM FOR SCIP STRATEGIES PLAN



## Attachment 2: CORE VALUES and BEHAVIORS MATRIX

Core Value	Positive Behavior	Negative Behavior
<p><b>Integrity</b> <i>We seek and speak the truth, confront ethical challenges, and always “do the right thing.”</i></p>	<p>Follow through on commitments Communicate bad news quickly Verify information before passing it on Address difficult issues Admit when you are wrong</p>	<p>Withhold information (lack of transparency) Portray something as better or worse than it is Fix blame or take credit inappropriately Make decisions only to please</p>
<p><b>Trust</b> <i>We enter into every interaction with the belief that the person is acting with positive intentions, and we always behave in the way that earns trust from employees, customers, and co-workers.</i></p>	<p>Ask for clarification Seek to understand Allow risk taking in self and others (with acceptable consequence) Allow venting and address negative comments Openly share information Celebrate self-disclosure of issues Do what you say</p>	<p>Leave issues unsaid and festering Hesitate to ask for help Conceal weaknesses or mistakes Speculate on the intentions of others Over-promise, but under-deliver Reverse positions without sharing new information</p>
<p><b>Respect</b> <i>We foster an inclusive environment where all employees are comfortable contributing their unique perspectives. We value all opinions.</i></p>	<p>Assume positive intent Treat others as you want to be treated Value people regardless of roles Be on time to meetings – no side bars, limit devices Understand the perspective of the other person</p>	<p>Use derogatory references about people Talk behind people’s backs Usurp authority Initiate last-minute changes to schedules or priorities Belittle recommendations of others</p>
<p><b>Teamwork</b> <i>We actively partner with peers, colleagues, and stakeholders across the Enterprise to reach our goals.</i></p>	<p>Encourage healthy debate until the decision is made Support team decisions, even if you disagree Collaborate actively and point out contributions of others Be accountable to each other Focus on achieving collective results Celebrate team achievements</p>	<p>Inattentive or not engaged during team interactions Finger pointing at team members Poor or untimely communications Insufficient priority for team efforts Criticize decisions that were not your preference</p>
<p><b>Excellence</b> <i>We strive for precision in our work execution and in the basis for every decision.</i></p>	<p>Present verified source data Evaluate decisions based on defined criteria and technical or programmatic merit Make decisions based on written justification Verify continued validity of assumptions for previous decisions</p>	<p>Accept “good enough” thinking Assume someone else will check the details Leaving loose ends unanswered</p>

## Attachment 3: COMMITMENT TO EXCELLENCE MATRIX

Our Ambition (We each strive to . . .)	Our Principles (achieve the ideal state . . .)	Our Enabling Actions (by demonstrating . . .)
Be fully accountable for our own work	<b>Know before do</b>	Ensure you understand why an action you are considering is the right thing to do before taking the action
	<b>Own the outcome of every task</b>	When completing work of any kind, self-check the details and verify the work is correct; <b>assume potential errors might slip past others reviewing the work.</b>  On August 30, 2007, the USAF inadvertently ferried 6 nuclear weapons from Minot, ND to Barksdale, LA. As a result 65 airmen lost their Personal Reliability Program certification - anyone of whom, had they acted in accordance with requirements, could have prevented the incident.
	<b>Make the right decision for the right reasons</b>	When executing work, ensure you understand both the intended way the work is to be done and the intended outcome of the work. Make sure both objectives are met, or make sure the right person is aware of any reason both could not be met.  When developing a recommendation, always propose the action that is in the best interest of national security based on technical and programmatic considerations only.  When acting on a recommendation, respect the obligation of the person making the recommendation to propose what is right from their perspective. When it is appropriate to take other considerations into account, explain why and take responsibility for the decision.  When signing a document, ensure the work is complete and accurate to the best of your ability.
Work with planned margin so success is not compromised by process upsets	<b>Set high standards</b>	Hold yourself accountable to meet both required and expected quality with flawless execution.  Think through what might go wrong on a job, including the possibility of previously unknown problems, and establish margin that ensure of objectives and compliance with requirements.  Ensure the planned margin is sufficient to accommodate normal process fluctuation.
Ensure we always meet all requirements	<b>Execute work with verbatim compliance</b>	Understand both the intent (the why) and the specified approach (how), and ensure you are confident the specified approach will accomplish the intended purpose before starting the work.  If there is doubt that the process will accomplish the intended purpose, pause and ask for help. Execute the instruction as written, with no workarounds. If you can't, stop and obtain help.

<b>Our Ambition</b> <i>(We each strive to . . .)</i>	<b>Our Principles</b> <i>(achieve the ideal state . . .)</i>	<b>Our Enabling Actions</b> <i>(by demonstrating . . .)</i>
Fix small errors and known conditions before they get worse	<b>Pay attention to the details</b>	Seek precision in all work execution.  When the product is written material, use simple, precise language to ensure a reader is very likely to understand the author's intent correctly.
	<b>Eliminate undesirable conditions</b>	Fix known deficiencies as quickly as possible and ensure adequate mitigation for deficiencies that cannot be fixed quickly.  Have a sound technical basis when known deficiencies cannot be addressed in the short term.
Understand the reason why	<b>Ensure complete staff work</b>	Provide data and objective analysis to support decisions with balanced consideration of alternatives, verified data, and sufficient justification for readers to reach their own conclusion. Make sure the user or next reviewer of your work has received the very best you can produce.  Ensure common understanding of the pedigree of information used in decision making: <ul style="list-style-type: none"> <li>• Sharing "I've heard..." information is often necessary or appropriate, such as when quick reporting is essential; however, it cannot be the basis for decision or action.</li> <li>• Using "I think it is true that..." is appropriate when the source of the information is the person or group that is actually responsible for that topic; however, information simply "thought to be true" must be verified before using it to make decisions or take actions.</li> <li>• Using "I have concluded that..." is appropriate only when written objective evidence exists that demonstrates the basis for the conclusion.</li> </ul>
	<b>Promote a questioning attitude</b>	Start evaluation of situations and concerns assuming the worst possible outcome; use the facts to determine whether the conclusion should improve.  Act quickly on observed conditions, indicators and data that convey possible problems.  Challenge the "good news" and question answers that "tell you what you expect to hear." Avoid accepting answers that sound right on the surface without interrogating the evidence.  <i>In July 1999 a crane working to install the retractable roof for Miller Park baseball stadium in Milwaukee collapsed when a load above the crane's rating was lifted, killing 3 workers and injuring several others, causing \$100M in damages and awards of nearly \$100M in punitive and compensatory damages to the families of the 3 workers killed in the accident.</i>

<b>Our Ambition</b> <i>(We each strive to . . .)</i>	<b>Our Principles</b> <i>(achieve the ideal state . . .)</i>	<b>Our Enabling Actions</b> <i>(by demonstrating . . .)</i>
Vigorously debate options decisions and execute with unity after decisions	<b>Participative decision making and unified decision execution</b>	<p>Make an intentional decision on who should make a decision (organization level and role) and whether the decision should be participative or directive.</p> <p>As a team member working toward a participative decision, engage assertively to ensure representation of your experience and perspective.</p> <p>As a leader, ensure open engagement of participants, timely resolution of differences, and clear communication to participants on the reasons for the decision.</p> <p>When leading a participative decision process, the leader remains individually responsible for the clarity and timeliness of the decision.</p> <p>As a team member, execute decisions once made with the same ownership of the path forward regardless of whether the selected option was your preference.</p>
Learn from every success and every failure	<b>Constantly improve</b>	<p>Understand what should have happened when something goes wrong; improve the core process instead of adding layers of complexity.</p> <p>Develop the skills and capabilities to improve our processes and work performance at all levels of the organization.</p> <p>The Wisconsin Aluminum Foundry in 2000 experienced 166 workers compensation claims totaling \$388,970. Within 3 years, by investing \$1M in new controls and redesigning operations, they had reduced claim cost by a factor of 4, recouping the investment through saved claims.</p> <p>Safety is not an expense, it is an investment.</p>