Organizational and Nuclear Safety Culture
(Assessment and Improvement)

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1993 Revised 2003

Abstract - This paper defines and describes Organizational Culture and specifically focuses on what constitutes a satisfactory Nuclear Safety Culture. The author differentiates between the two with Nuclear Safety Culture being a component or subset of Organizational Culture. The paper summarizes some of the key factors that should be considered when improving the nuclear safety culture and those that have a negative impact on organizational and human performance such as a hidden or abusive culture. It describes a methodology for evaluating the strengths and weaknesses of the nuclear safety culture using characteristics. performance or success indicators, and designing a culture improvement program from the results of a culture assessment. It also describes when it is necessary to assess culture conditions and implement an improvement program.

As a matter of public responsibility, the management of any nuclear facility has a duty and obligation to foster the development of the appropriate safety culture, and to provide a professional working environment in the control room and throughout the facility that assures safe operations. Beyond public responsibility, fostering safety is simply smart business. Insufficient attention to safety puts a plant at risk of extended outages that can cost hundreds of millions of dollars, threatening the economic viability of the investment. The history of the industry indicates that the plants that operate safest tend to be the most economical and productive as well.

Organizational Culture - There are conflicting views as to an exact definition as to what the word "culture" is and what it isn't. Although professionals like Pfeffer, 1981, and Schein, 1992, define and explain the term culture, there is no universally accepted definition. Schein divided culture into three levels related to people and organizations: 1) artifacts, 2) espoused values, and 3) the core, or essence of culture represented by the basic underlying assumptions and values. Nisberg, 1988, defined culture as: "The

body of beliefs, attitudes, values, patterns of behavior, social forms, language, and material adjuncts of a social group; by extension, the consistent habits, values, and customs of an organizational environment." The culture of an organization guides how its employees work, dress, make decisions, think, communicate, and behave. Changing culture can either be conscious or unintentional. Change will ruthlessly destroy a company with a culture that does not adapt. The smart leader changes the culture before he has to knowing that it is necessary to maintain a competitive edge. Culture change requires looking mostly at where the organization needs to go. It requires getting rid of the wrong behavior or getting rid of the people. The company vision defines where the culture is headed, and the company leader articulates the vision.

During operational review interviews at all levels of management in nuclear organizations, the author asked hundreds of interviewees to define their concept of the terms organizational culture. The answers could be summarized in two statements: 1) The culture is the way we do business around here, and it is not necessarily the way the company says how we do business, and 2) The culture of an organization is its personality, and it is unique like the personality of an individual.

The lack of any formalized or universally accepted definition of the word "culture" has hindered the development of strategies to change and improve it. Specifically, it has inhibited the development of a uniform standard and processes by which the nuclear industry can design programs to improve the nuclear safety culture. However, there are many success stories by progressive and successful organizations, including nuclear, that have transformed their organizational culture to meet present day needs and conditions. Some have done this by assessing the cultural conditions, as they exist, determining the appropriate or desired conditions in relation to the business climate, cost control, increasing production, competition and regulations, and then designing improvement programs to get the organization from "where it is to where it wants to be over time." It requires strong top management support, commitment, persistence, and patience to change organizational culture.

Nuclear Safety Culture - A good nuclear safety culture (NSC) is a work environment where a safety ethic permeates the organization and people's behavior focuses on accident prevention through critical self-assessment, pro-active identification of management and technical problems, and appropriate, timely, and effective resolution of the problems before they become crises. (Wert, 1986) **The culture is both fostered and revealed through human behavior, and is the overriding priority at a nuclear plant. It affects, for better or worse, a plant's ability to identify, resolve or correct safety**

problems.

The above working definition linked with the authors Required Safety Culture Characteristics for Nuclear Plants (or performance indicators) form the foundation for an effective methodology to measure the strengths and weaknesses of a nuclear safety culture at any nuclear facility.

Hidden Culture - Some organizations formally describe their culture in writing as being one where things are done a certain way according to policies and regulations, but they do the opposite in day-to-day operations. For example, at nuclear plants, the leaders may state in writing that there is an "open culture" or that they support a "questioning attitude" on one hand, while revealing an informal non-written "shoot the messenger" mentality or philosophy on the other hand. In summary, a hidden culture is the difference between what is said will be done by the organization leaders, and what is actually done by members of the organization.

Abusive Culture - Some present day organizations, including nuclear, are still fostering some aspects of an abusive industrial era culture in their transformation to an information age culture. An abusive culture stifles good ideas and innovation, the very things that are needed for long-term success and survival of an organization. Such abuse takes on many forms: "shoot the messenger" mentality, hidden agendas, harassment, increased surveillance, discrimination, demotion without cause, presenting an inconsistent management philosophy to employees, unclear values, conflicting values, disruptive leaders, destructive leaders, rampant emotionalism, dictatorial or authoritarian management styles, rewarding inappropriate behavior, over work or poor workload balance, we/they attitude, fragmentation, arbitrary dismissal, micromanagement, generation of fear and insecurity about the future, placing blame, withholding resources, humiliation, confrontation, antagonism, and making unreasonable demands. Such conditions bring about excessive stress, illness, nervous breakdowns, burnout, etc., which lead to lowered morale and motivation. This leads to people paying less attention to detail, increased human errors, and it has a negative impact on productivity and workplace safety. An abusive culture is devastating to any sound nuclear safety culture initiative. The downside of an abusive culture is that it punishes some of the behaviors that support nuclear safety. If the above forms of abuse are obvious to the leaders of any organization, it would behoove them to initiate a culture assessment and implement a change management program to improve the culture. See below: When a Safety Culture Assessment and Improvements are Necessary on other conditions that warrant a culture review and improvement program.

Safety Conscious Work Environment (SCWE) - A SCWE means basically the same thing as a good nuclear safety culture at a nuclear

facility. A SCWE means: 1. all employees have the duty to raise concerns regarding nuclear safety and quality-related issues that may effect safe operation of a nuclear plant; 2. all employees have the right to raise concerns without fear of reprisal; 3. there is a work environment in which employees feel free to raise safety concerns without fear of retaliation; and 4. that concerns be prioritized and promptly resolved with feedback provided to the concerned employee. Failure to foster a SCWE discourages employees and contract personnel from reporting safety and quality concerns or issues, and results in a "chilling effect." Examples of a "Chilling Effect" are employees that are reluctant to voice concerns for fear that they may be identified or retaliated against, employees or contractors that are discouraged from raising concerns as a result of awareness of discrimination, and management failing to act promptly to deal with acts of intimidation.

Empowerment and Nuclear Safety Culture - An empowerment component is an essential or fundamental aspect of nuclear safety culture, one which is characterized by: leaders or managers serving as enablers; planned change; people embracing change; employee involvement in the formulation of goals and decision-making processes; positive recognition or reward for exhibiting the appropriate behaviors; listening to associates; delegating responsibility with matching authority; well communicated and clarified expectations; trust; continuous improvement; high standards; coaching; people development; career planning; learning from mistakes; accepting ownership of problems; open communications; questioning attitude; innovation; individual and group accountability; providing routine, positive feedback on performance; timely problem resolution; doing the job right the first time; sharing knowledge; cross-functional communication; accepting risk but thinking it through; being a team player; looking in a 360 degree circle at problems and understanding the large organizational issues; flexibility; contributing; confidence; and monitoring and evaluating progress to obtain the desired results.

Culture Change Requirements - At a nuclear plant, the culture characteristics during the construction phase are different from a plant in the operations phase. If the same leaders are involved in the construction and operations phases, it is sometimes difficult, slower and can require many years to make the appropriate transition from one phase to the other. Culture characteristics, and the level of effort put into a safety culture program at a nuclear plant, must change with aging equipment, competition, regulations, opportunities, etc., in order for the organization to survive and grow. The generally accepted industry Required Safety Culture Characteristics for Nuclear Plants are attached to this paper or may be found at: www.mdi-wert.com These characteristics of a satisfactory safety culture may also be referred to as performance or success indicators. The level or degree to which each characteristic exists at any given nuclear plant can be measured effectively through interviews, tests, surveys, work

observation, and review of the operating record or documentation. For example, if a specific nuclear plant has accepted culture characteristics such as: "A comprehensive, well implemented safety culture that provides the supporting infrastructure needed to ensure high levels of production over the life of the plant; evidence of conservative decision making by management and defense-in-depth" one can determine the existence of, and level of commitment to such characteristics. With the above example, one would expect to find a well written or defined safety culture program. One element of this would be to analyze the record for conservative decision making in regard to operations. By following the assessment process proposed, one can describe the nuclear safety culture conditions of any plant in detail.

Required Safety Culture Characteristics That are Frequently Missing or Deficient - Most of the big safety problems at a nuclear plant can be prevented and fixed through improvement or corrective action initiatives related to eight safety culture characteristics or attributes: 1. A comprehensive, well implemented safety culture that provides the supporting infrastructure needed to ensure high levels of production over the life of the plant; 2. Maintaining a questioning attitude, expect the unexpected; 3. Reward for reporting safety problems and fixing them over keeping the plant on line...back to 1. (See also below: The Importance of a Sound Incentive or Reward System). Reward the required behaviors to maintain a good nuclear safety culture. Those behaviors must be written, communicated, understood and practiced in the workplace on a day-to-day basis; 4. Conservative decision making by management and defense-in-depth; 5. Pro-active problem identification with prioritization based upon safety significance...short and long-term safety and financial ramifications considered. Fix all problem as quickly as possible, but do the job right the first time; 6. Emphasis on individual accountability; 7. Clear mission, vision, values, culture statement, policies, standards or expectations communicated and clarified from top to bottom in the organization...putting the content of these into day-to-day practice, and 8. Sound management qualifications and training according to the position, authority and responsibility.

Early Founder Influence - The culture of an organization has often been created by a founder or early founders and fostered by its leaders from top to bottom in the organization over time. One could envision that the culture may have been designed, developed or fostered like a house being built a brick at a time. Anyone found removing any of these bricks to change things could bring the house down on their head, particularly if the founder is still in control and wants to keep or maintain the status quo. The bottom line is that organizational leaders are the prime determinant of the organizational and safety culture.

Culture Change Requires Time - **There are no quick fixes to changing organizational culture. It can occur more rapidly with top-level commitment or change outs, but it usually requires several years to change the culture of an organization. Safety culture conditions can be changed in less time than major organizational culture conditions.**

Safety First or Production First - **Most nuclear plants are operated safely, and that can easily be confirmed by a conservative decision making record, safety record, violations or fines. However, because so much money is lost by downtime, some plants are known for writing the problems away or not considering, prioritizing and quickly fixing the problems according to safety significance or risk relevance. In this case, the management may be more concerned about cost containment due to competition, and it places greater emphasis on short-term cost reduction over long-term costs or consequences. Experience has shown that fixing problems quickly or killing them dead, doing the job right the first time, and not putting them off until the next regularly scheduled outage, can save a lot of public relations, regulatory, and financial problems. Operating a safe plant reduces the overall cost of operations. Some leaders of nuclear plants will state in their communications that the first priority is safety, but their day-to-day operation records and views or perceptions of the employees indicate they are production driven.**

The Importance of a Proper Incentive or Reward System Design- **Care must be taken when designing an incentive or bonus program so it does not place too much emphasis on production, reliability, exceeding outage goals, and not enough on identifying, reporting, and fixing all safety problems. Bonuses given to individuals (managers) or groups for keeping the plant on line and not fixing safety significant problems when they arise until the next regularly scheduled outage, can work against a good nuclear safety culture. They tend to motivate people to ignore or write problems away to justify continued operation, and can contribute to a "shoot the messenger" mentality. Instead, individuals who report problems, that if not fixed, could result in a lot of down time, lost revenue and expense, should be positively recognized and financially rewarded.**

Defense In Depth (DiD) - **A sound DiD environment combines multi-functional area engineering design strategies, appropriate training and capabilities of operators and maintainers, comprehensive operational, maintenance and test procedures (verbatim compliance), and additional containment and security technologies to establish multiple and integrated layers of safety protection, all intended ultimately to keep fission products contained in the fuel. Thus, the nuclear plant environment provides multiple, overlapping protections that work independently or in conjunction to minimize the risk that both anticipated and unanticipated fission product escape paths exist. While some technical people try to define the**

probabilities associated with all of this, the real goal is to make such paths and their associated scenarios as literally impossible as can be achieved. The goal is zero fission products getting into the environment for the next million years even with many thousands of nuclear plants online. Any claims to lesser goals merely reflect man's limitations in achieving that goal, which argues for adding as many layers to the DiD environment that we can reasonably define. The bottom line is that a poor or degraded safety culture defeats the purpose of DiD.

Complacency and Arrogance Influence - When equipment at a plant is new, operating it may appear to be easier to the casual observer than with aging equipment. However, new plants experience a relatively high number of instances of problems or transients, and as these get worked out and the staff becomes skilled in operating the equipment, the number of them settles out at a relatively lower number of instances. Then as the equipment ages and reaches design limits, wear limits, etc., the number of instances of problems or transients begin to increase. The initial experience of improving operations may actually lead to a higher level of complacency than one would expect. Maintaining safety is more challenging in these instances. Constant training, qualification, high standards of performance and drills were some of the tools used in the nuclear Navy to keep the crew sharp and minimize complacency. The presence of the two conditions of arrogance and complacency can lead to financial disaster for the owners of nuclear facilities. To be safe, one must use the best industry practices, track the performance problems at other similar plants during their life cycle, and continually strive for excellence in operations. This includes anticipating problems, and being proactive in resolving them or preventing them from ever occurring. It also includes benchmarking against international standards to ensure that the nuclear plant is in step with internationally accepted standards.

Technical/Management Skills Balance - The leaders of nuclear facilities need a balance between their technical and management expertise. It is a known fact that some technically trained individuals lack the appropriate people/management skills, and they don't fully appreciate the importance of management skills or those elements commonly referred to as "soft" management issues or "touchy, feely" things. Sometimes highly technically trained people refuse to accept that things such as organizational and safety culture can be measured. If they have been trained in the military, they may exhibit an arrogant, autocratic or dictatorial management style, which leads to lowered employee morale and motivation in their associates or subordinates. When this type of leader doesn't change his/her style or isn't retrained or replaced, complex human performance issues develop, and these can have a negative effect on human performance and nuclear safety.

Board, President, Chief Nuclear Officer Role is Critical to Success - Although it may not be a widely accepted view, the Board, President, and Chief Nuclear Officer (CNO) have the primary responsibility for establishing, changing, monitoring, and evaluating both the appropriate organizational and nuclear safety culture. Continuous high level leadership, commitment, and support is required to nurture and maintain a good safety culture. This requires that the CNO communicates a clear message that nuclear safety is the highest priority. The expectations from the top must be in writing and communicated down though the organizational layers to employees until they are clarified, understood, and put into practice. Before safety culture can be measured it must be defined with benchmarks along with the required behaviors. What gets measured gets done. Changing and improving safety culture requires changing individual behavior. The top leaders must be mindful that a good safety culture can be quickly undermined, fail or go into decline, and that it is perishable. It is important to note that a review of inspection results revealed that the basic root cause of many safety problems ended up being tracked back to the doorstep of management...poor, wrong, delayed or no decision.

The role of the leader in shaping the culture includes, but is not limited to: 1. defining the required culture (organizational and safety) , and describing culture conditions, values, beliefs, vision, goals, and expectations, 2. defining and clarifying change so it is understood and less disruptive, 3. building two-way trust at all levels in the organization, 3. ensuring that employees have the necessary training and skills, 4. showing genuine care and concern for people, 5. presenting a consistent management philosophy, 6. leading by example, being a role model or hero, 7. managing value conflicts, 8. keeping promises, 9. frequently writing about the company's culture, 10. showing trust through delegation of work, and 11. promoting good communications upward, downward, and sideways. As a part of, or in addition to the above, the company leader can also help shape, maintain or improve the culture conditions by: being a champion in the safety culture crusade, serving as an agent in bringing about simultaneous changes, providing visionary leadership and creating the energy for culture transformation, replacing turf wars with better team work, creating strategic visioning and a visionary strategy, developing a vision of the future, aligning the organization to its vision, creating resources or reallocating them to support the culture transformation, being a good listener and developing good feedback mechanisms, and being able to reposition the company organization quickly.

Downsizing Effect On Culture - A poorly planned and executed downsizing program to cut costs can have a drastic, negative impact on safety culture due to the instability it creates. Maintaining stability is the key to a sound nuclear safety culture. A poorly thought out downsizing initiative destroys trust that is essential between an employer and employee. It

humiliates people, creates fear and uncertainty in those who leave, and the "walking wounded" that remain behind. Unless it can maximize performance for those that stay, what appears to be a "quick fix" for reducing costs will be at long-term expense. And, downsizing can be done without destroying the lives of people. Downsizing for cost containment can have a very negative impact on morale, productivity, and safety. If a nuclear plant begins a downsizing initiative at a time when its safety performance is already questionable with the regulator, it can lead to financial disaster.

Perception and Culture - If, for example, interviewees at a nuclear plant perceive that the plant is "production driven" over "safety first driven," there is a problem whether this is fact or fiction. Steps must be taken to fix the problem(s) and/or the perceptions. Perception defines reality in many businesses today.

When a Safety Culture Assessment and Improvements are Necessary - The highest production record has little significance when its not achieved safely or if the safety culture is failing. If one or more of the conditions listed below applies to your nuclear organization, then it most likely needs an evaluation of its culture: 1. When there is no safety culture policy being promoted from the Chief Nuclear Officer down, the words "safety culture" and required behaviors haven't been defined in writing, communicated, understood, and put into practice from top to bottom in the organization. Before you can correct or improve safety culture, you must know what "safety culture" means, and understand the human behavior and performance factors that make it strong and/or weak; 2. When you are operating with significant known problems or degraded equipment conditions; 3. When you are coming off a record production run. Success may create an organizational self-concept that is not anticipatory of failure; 4. When you haven't considered nuclear safety culture conditions as a part of inspection information in its totality, in order to have a sound, overall reading on performance for decision making; 5. When the increasing importance of safety culture is not recognized as your plant ages, for example, when aging equipment is running 90% of the time as opposed to 50% in past years; 6. Whenever you don't have an independent and current second opinion on your plants' safety culture; 7. When you are operating on assumptions and promoting "safety first," but do not question whether you have prioritized and corrected all problems according to their safety significance, and committed the necessary resources to fix them, and 8. When the workforce is gradually retiring and replaced with persons that do not have the same extended frame of reference and shared experience as past workers. The erosion of a plant's experience base can lead to degraded nuclear safety culture conditions.

Key Culture Assessment Questions - The key questions covered in any culture assessment include: 1. What positive and negative cultural

conditions exist or were found? (This is the what, when, where, and how step) 2. What are the required or desired cultural conditions that should exist or be found? (This is the step comparing what is with what should be.) 3. What caused the negative cultural conditions? (This is the step for identification of the cause and not the symptom.) 4. What are the negative effects of the cultural conditions found? (This is the step to determine the present or potential impact on the operations.) 5. What should be done to fix the negative cultural conditions? (This is the step to determine what needs to be done to correct the situation or conditions.). These questions must be asked and answered for each of the Required Organizational and Safety Culture Characteristics for Nuclear Plants...or their exact opposites. These five steps also apply to any other problems found during the assessment.

Culture Assessment Process - The culture assessment process relies mainly upon interviews, work observation, and review of documentation. It may also include the use of tests and survey instruments. The author prefers not to use survey instruments as a primary means to assess safety culture conditions, because the respondents know what the survey results will be used for and will not always give objective or accurate responses. For example, some nuclear utilities provide the survey results to the regulator as an indication of culture change and improvement. When respondents know their future existence is linked to their answers, they tend to give what they perceive to be the company line responses. However, there have been known cases where employees were objective in their responses. When employees do answer surveys objectively, and the results indicate a degraded safety culture, very serious safety concerns exist that need to be addressed.

Summary - Because the business environment is constantly changing from increased competition, cost control, deregulation, and shift to a global economy, and the organizational culture determines how the company does business, it is crucial for all nuclear plant owners to conduct periodic assessments of cultural conditions and make improvements. A good nuclear safety culture is a work environment where a safety ethic permeates the organization and worker behavior focuses on accident prevention through critical self-assessment, pro-active identification of management and technical problems, and appropriate, timely, and effective resolution of the problems before they become crises. (Wert, 1986) The safety culture program must be constantly nurtured. Maintaining a good nuclear safety culture program should include an empowerment component. The owners of nuclear plants must initiate a nuclear safety culture renaissance that includes empowering leaders and fostering cross-functional communications and teamwork throughout the organization. Organizational life is no longer predictable and as stable as it once was. Unplanned change and a deteriorating, abusive or inappropriate culture for the time creates

instability, fear, insecurity, and stress, exactly the opposite of what is needed for operating at a level of excellence at a nuclear plant. Such conditions de-motivate and lead to lower morale which in turn has a negative impact on human performance, productivity, and safety.

The nuclear safety culture at a nuclear plant can be measured by determining the presence or level of existence of industry accepted safety culture characteristics. By using these characteristics as a guide, conducting interviews, observing work, and reviewing relevant documentation, the strengths and weaknesses of the nuclear safety culture may be described in detail. This information can be used to develop an effective safety culture change management program, one that will yield measurable results in the shortest amount of time.

Note: MDI has developed and field tested the tools to measure a good or failing nuclear safety culture, describe the specific nuclear safety culture conditions at a nuclear facility, and ensure that a nuclear plant owners program actually reflect and promote the appropriate cultural attributes, and that these attributes are being communicated, understood, and applied at all levels within the nuclear organization. Other success indicators and questions to be asked of interviewees, and during work observation and review of documentation, have not been included in this paper.

We know the best options for how to improve nuclear safety culture. Please contact us with any questions, and for additional details.

Attachment

Required Organizational and Safety Culture Characteristics for Nuclear Stations

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Note to reader: ***This comprehensive listing of organizational culture and nuclear safety culture characteristics (performance or success indicators) can be used for the following purposes:***

Developing a policy or culture statement for your company

Developing expectations, procedures, and standards

Developing questions for your annual employee attitude survey

Developing measures for evaluating human performance

Developing job descriptions or specifications

Evaluating the effectiveness of existing policies and procedures

Developing a safety policy

Determining the strengths, weaknesses, opportunities, and threats (SWOT) for improving organizational and nuclear safety culture

Developing the appropriate reward system

Developing a sound training program for safety culture transformation

Developing a change management plan or program to maintain or improve nuclear safety culture

MDI has developed its culture assessment and improvement strategies around this listing of characteristics or performance indicators. They can be used to determine the extent to which each characteristic exists at a nuclear plant or has been instilled in the behaviors of plant personnel. This is done through the conduct of: interviews, tests, surveys, review of documentation, and work observation.

A comprehensive, well implemented safety culture that provides the supporting infrastructure needed to ensure high levels of production over the life of the plant; evidence of conservative decision making by management and defense-in-depth.

Individuals maintain a questioning attitude; expect the unexpected; good planning evident for contingencies or emergencies.

Design and licensing bases maintained according to the operating license; sound configuration management and control program.

Procedures upgraded in a timely manner and followed.

Management recognizes or rewards the required and appropriate behaviors or performance of individuals and groups.

Sound program for proactive problem identification through prioritization based upon safety significance, and resolution, and root cause determination resulting in an effective corrective action program (CAP). A fully implemented CAP helps management in identifying, documenting, tracking, and correcting any safety related deficiencies.

Individuals identify, report to management and accept ownership for problems; problems are "killed dead"; few, if any, repetitive problems.

Sound oversight of nuclear operations, primarily in the areas of QA/QC, but also by the various internal and external oversight entities.

No willingness to live with problems evident as indicated by large task backlogs (both Maintenance and Engineering) and excessive "work arounds"; no problems of a long-standing nature.

Cost-containment program which emphasizes safety over production and cost.

Attention to detail regarding promised improvement programs and commitments made to the regulator.

Total quality practiced with excellence in operations and continuous improvement evident.

Effective employee concerns program with management commitment evident; open problem solving culture evident; no "kill the messenger" mentality or retaliation.

Effective and efficient work control programs, primarily in their utilization by operations, maintenance and engineering.

No hidden culture or leadership saying one thing and doing another; leaders showing genuine care and concern for people, and TRUST between and among executives, managers, supervisors, and employees at all levels of the organization is evident.

Long-term, solid solutions to problems over short-term, quick fixes.

Consistency in communicating the appropriate management philosophy for the business until it is understood at all levels in the organization.

Decisions based upon facts, not half truths, rumors or assumptions.

Emphasis on direct management involvement, management by walking around, and supervision and coaching with routine feedback provided to individuals on their performance.

Attention to people concerns and human relations issues; timely conflict resolution.

Emphasis on team work ... working together.

Job security and reward based upon performance and results.

Emphasis on smart work over busy work.

Emphasis on participatory management.

Proactive over reactive response mode on problem resolution; little or no evidence of crisis management and being externally driven.

Open, honest, and cooperative working relationship with regulators.

Emphasis on individual accountability with the authority to match

responsibility.

Work simplification or process improvement over needless complication and duplication.

Organization stability; carefully planned and sequenced change to minimize disruptions to people.

Risk taking, not risk avoidance, but accepting responsibility and never proceeding in the face of uncertainty.

Emphasis on improving communications in all directions, and controlling rumors and misinformation.

Highly qualified and skilled management team with varied nuclear plant operating experience.

Clear mission, vision, values, standards or expectations communicated and understood, and translated into action plants down to the worker level.

People are generally happy and there is evidence of good morale.

Emphasis is on career planning and developing the skills of people.

Turnover is low.

High performance standards are evident.

Office politics are discouraged and kept to a minimum.

Individuals are not "burned out" from excessive overtime.

Effective and fully implemented self-assessment program evident.

There is a healthy level of tension or stress.

There is little, if any, evidence of a "we or they" attitude between employees and their leaders...placing blame.

There are recognized heroes, leaders or role models who lead by example.

No evidence of excessive arrogance, complacency or isolationism.

Effective use of industry experience, best practices, and consistent implementation of high standards.

An effective NSRB in identifying abnormal trends.

There is a sound management succession program for all key people.

Understanding what the risk is and staying below certain thresholds; knowing the risks and hazards of non-safe actions; determining how safe is safe enough for decision making.