

**An Independent Evaluation of Safety
Culture at the
U.S. Department of Energy Office of Health, Safety
and Security– Headquarters (HSS)**

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FOREWORD

This report contains the results of an independent assessment of the organizational safety culture of the Office of Health, Safety and Security (HSS) within the U.S. Department of Energy (DOE). We arranged for this independent assessment to better understand our culture and identify improvements in order to make HSS a more effective organization and a better place to work for our employees.

HSS is a staff office within DOE Headquarters based in Washington DC, and is primarily responsible for safety and security policy, technical assistance, training, independent oversight, and regulatory enforcement functions. This assessment was conducted by highly experienced independent consultants against the traits of a positive safety culture established by the United States Nuclear Regulatory Commission (NRC), which are broadly applied by nuclear utilities at operating commercial nuclear facilities. The Independent consultants were contracted by HSS to support us in the conduct of safety culture assessments at large DOE nuclear projects, as directed by the Secretary of Energy in the Department's implementation plan for Defense Nuclear Facilities Safety Board Recommendation 2011-1, *Safety Culture at the Waste Treatment and Immobilization Plant (WTP)*. These assessments systematically identified the collective behaviors, attitudes and perceptions of managers and employees with respect to NRC's traits of a positive safety culture.

While the HSS organization is not responsible for management of nuclear projects or operational activities at any nuclear facility, and is not an organization within the scope of the Department's implementation plan for Board Recommendation 2011-1, we chose to apply the same rigorous assessment methodology for safety culture that is used to evaluate DOE nuclear projects and commercial nuclear facilities. The establishment and maintenance of a good safety culture within HSS is important to ensure our managers and employees share a common set of values and beliefs that make safety an over-riding priority, not only in our work environment in DOE headquarters, but also in the implementation of all of the core missions of the organization. Our analysis of the results from the Office of Personnel Management annual Federal Employee Viewpoint Survey helped us recognize that the HSS organization was not immune from the pressures and organizational issues that have contributed to weaknesses in safety culture at all DOE nuclear projects and other organizations assessed by HSS over the past two years.

The result of this assessment demonstrated numerous areas that need improvement in order for HSS to achieve a healthy safety culture and is further evidence that greater attention to safety culture is needed within the Department. We appreciate the honest and direct feedback provided by our Federal and contractor employees. We recognize that while this assessment was focused on the organization's safety culture, the organizational culture traits are applicable to all aspects of management. We are committed to fully evaluating the insights and perceptions documented in this assessment report, as well as using its conclusions and recommendations, to make HSS a better organization. In addition, we are committed to engaging our employees in the development of improvement actions that get to the heart of expressed concerns. Our Organizational Culture Group, representing managers and staff across every organization in HSS, is actively formulating strategies and actions for improvement. The information gained through safety culture assessments has taught us that there is no endpoint in the journey to achieve and maintain a both a healthy safety culture and a healthy organizational culture.

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EXECUTIVE SUMMARY

This report describes the results of an independent evaluation of the existing safety culture at the U.S. Department of Energy Office of Health, Safety, and Security (HSS). This evaluation was conducted at the request of the Department's Chief Health, Safety and Security Officer. The population addressed in the evaluation included all employees, federal and resident contractors, assigned to HSS. The evaluation was conducted in January and February of 2013 and included visits to the HSS Offices in Germantown, Maryland and the Forrestal Building in Washington, DC and telephone interviews with HSS employees working at the National Training Center in Albuquerque, NM.

The primary objective of the evaluation was to provide information regarding the status of the safety culture at HSS. The framework applied is that recently described by the U.S. Nuclear Regulatory Commission (NRC). The evaluation was conducted using the same methodology that aligns with the current U.S. NRC procedures for independent safety culture assessment. Positive observations and areas in need of attention with respect to the traits necessary for a healthy safety culture are presented. Conclusions regarding the results of the information collected on the safety culture traits are also presented to facilitate the identification of improvement strategies. Finally, recommendations are provided for some initial steps that the Independent Safety Culture Evaluation Team believes are necessary to effectively implement and execute the actions that will result in improved safe and reliable performance.

The safety culture components important for the existence of a healthy safety culture within a nuclear facility have been identified (INSAG-15, 2002; INPO Principles for a Strong Nuclear Safety Culture, 2004; U.S. NRC Inspection Manual 0305, 2006). The U.S. NRC and its stakeholders have recently agreed upon nine traits which are viewed to be necessary in the promotion of a positive safety culture. These include:

- **Leadership Safety Values and Actions**
- **Problem Identification and Resolution**
- **Personal Accountability**
- **Work Processes**
- **Continuous Learning**
- **Environment for Raising Concerns**
- **Effective Safety Communication**
- **Respectful Work Environment**
- **Questioning Attitude**

Particular behaviors and attitudes have been identified to evaluate the extent to which the organization has attained these traits.

While the methodology used in this evaluation was based upon work originally developed with the support of the U.S. NRC to assess the influence of organization and management on safety performance, the methodology has also been effectively implemented in non-nuclear organizations, such as mining, health care, research, engineering, and transportation. The

methodology entails collecting a variety of information that is largely based upon the perceptions of the individuals in an organization, as well as conducting observations of individuals performing work activities. Perceptions are often reality when it comes to influencing behavior and understanding basic assumptions. Therefore, the data collected regarding individuals' perceptions are critical to this type of evaluation.

The results of this evaluation have been presented using the 9 traits identified by the U.S. NRC as a framework for evaluating safety culture. In the context of that framework, the Independent Safety Culture Evaluation Team identified that there are positive observations and areas in need of attention within each of the traits and specific examples are presented in each of the areas. The results are presented as they apply specifically to HSS and all of the findings have implications for the organizational traits necessary to support a strong safety culture. In particular:

The Team recognized that the HSS Organization is generally comprised of dedicated professionals, many leading experts in their field, that are committed to ensuring the health, safety and security of the workers and the public across the DOE Complex

HSS Senior Management has recently acknowledged that there are gaps in the organization that need to be addressed. Better integration across the Offices, more effective communication, and the dispelling of legacy issues which still drive the beliefs and perceptions across the organization are some of the more significant gaps identified.

There is a pervasive lack of trust across the HSS Organization for HSS Senior Management. This results from the perception that Senior Management has little respect for the professionals in the organization, has little understanding of many of the functional areas it is responsible for, displays favoritism among a select few and uses a very strong top down management style.

The lack of participation in the focus groups during this assessment, the high number of survey respondents who chose the Prefer Not to Respond category on the demographic variables, the number of Hotline inquiries, and requests made to the Team are all indicators of a fear of reprisal for raising potentially negative concerns or issues against HSS Senior Management.

There is a strong sense of pressure within the HSS Organization of being driven by external stakeholders. Many perceive that during the last 4 years there has been a shift in the relationship with the sites that has reduced the effectiveness of HSS in its efforts in enforcement and oversight. There is a perception that while some oversight still exists in the assessment mode, it is more collaborative than independent. The model of self-regulation implemented is being questioned by some HSS staff members for its effectiveness in being proactive about potential issues across the complex.

While not an issue necessarily specific to HSS, as a major Office in the Department there should be an effort to support the need for greater visibility, promotion, and acceptance of an Employee Concerns Program for HQ. HSS's support of the DOE HQ Employee Concern's Program (ECP) in its effort to improve the site ECP Offices does not provide the employees of HSS with an independent, anonymous reporting mechanism that it apparently needs.

1.1 Introduction

This report describes the results of an independent evaluation of the existing Safety Culture at the U.S. Department of Energy (DOE) Office of Health, Safety, and Security (HSS). This evaluation was conducted at the request of the Department's Chief Health, Safety and Security Officer. The population of the evaluation was all employees, federal and resident contractors assigned to HSS. The evaluation was conducted between January and February 2013. The primary objective of the evaluation was to provide information regarding the status of the safety culture traits at HSS. The evaluation was conducted using the same methodology that aligns with the current U.S. Nuclear Regulatory Commission (NRC) procedures for independent safety culture assessment. In addition, the framework applied to the collection and analysis of data is that recently described by the NRC. Positive observations and areas in need of attention with respect to the traits necessary for a healthy safety culture are presented. Conclusions regarding the results of the information collected on the safety culture traits are also presented to facilitate the identification of improvement strategies. Finally, recommendations are provided for some initial steps that the Independent Safety Culture Evaluation Team believes are necessary to effectively implement and execute the actions that will result in improved safe and reliable performance.

1.2 Background

Evaluating the safety culture of a particular organization poses some challenges. Cultural assumptions, which influence behavior and, therefore, safety performance, are not always clearly observable. Schein (1992) presents a model of culture that helps in understanding how the concept can be assessed. In Schein's model, culture is assumed to be a pattern of shared basic assumptions, which are invented, discovered or developed by an organization as it learns to cope with problems of survival and cohesiveness.

According to Schein's three-level model, an organization's safety culture can be assessed by evaluating the organization's artifacts, claimed values, and basic assumptions. On the first level of the model are the organization's artifacts. Artifacts are the visible signs and behaviors of the organization, such as its written mission, vision, and policy statements. The second level consists of the organization's claimed or espoused values. Examples of claimed values might include mottos such as, "safety first" or "maintaining an open reporting work environment." The third level is comprised of the basic assumptions of the individuals within the organization. Basic assumptions are the beliefs and attitudes that individuals bring into the organization or that are developed because of experience within the organization. Examples of basic assumptions may include, "safety can always be improved" or "everyone can contribute to safety." The organization's basic assumptions regarding safety culture are less tangible than the artifacts and claimed values. They are often taken for granted within the organization that shares the culture.

Artifacts, claimed values, and basic assumptions are evaluated to identify the presence or absence of the of the safety culture traits that have been found to be important for the existence of a healthy safety culture within a nuclear facility (INSAG-15, 2002; INPO Principles for a Strong Nuclear Safety Culture, 2004; NRC Inspection Manual Chapter 0305, 2012). The U.S. Nuclear Regulatory Commission (NRC) and its stakeholders have recently agreed upon nine

traits which are viewed to be necessary in the promotion of a positive safety culture. These include:

- **Leadership Safety Values and Actions**
- **Problem Identification and Resolution**
- **Personal Accountability**
- **Work Processes**
- **Continuous Learning**
- **Environment for Raising Concerns**
- **Effective Safety Communication**
- **Respectful Work Environment**
- **Questioning Attitude**

Particular behaviors and attitudes have been identified to evaluate the extent to which the organization has attained these attributes. A variety of different methods are employed to collect information about the various behaviors and attitudes identified.

Most of the methodology used in this evaluation was originally developed with the support of the U.S. Nuclear Regulatory Commission (Haber, et. al., 1991) to assess the influence of organization and management on safety performance. The methodology entails collecting a variety of information that is largely based upon the perceptions of the individuals in an organization, as well as conducting structured observations of individuals performing work activities. Perceptions are often reality when it comes to influencing behavior and understanding basic assumptions. Therefore, the data collected regarding individuals' perceptions are critical to this type of evaluation.

1.3 Scope of Safety Culture Evaluation

The scope of this evaluation was defined to include all employees, federal and resident contractors assigned to HSS. The Safety Culture Data Collection Team was on site at HSS during January and February, 2013. In addition, the Organizational Safety Culture Survey was electronically administered from January 14 through January 30, 2013.

The Safety Culture Data Collection Team was comprised of four consultants from Human Performance Analysis, Corp. Two of these consultants have been involved in the collection of similar data at other DOE facilities as part of the Extent of Condition project being conducted by DOE-HSS. The other two consultants have had extensive experience implementing the methodology in numerous other organizations.

This safety culture evaluation is a 'point in time' snapshot of HSS. Although the team recognizes that HSS may be making organizational and process changes to continue improving safety culture since the point in time at which the evaluation was conducted, the team has not evaluated the impact of those actions. Therefore, changes that have occurred subsequent to the time of the evaluation are not discussed in this report.

1.4 Methodology

The complete details of most of the methodology used in this evaluation are presented elsewhere (Haber and Barriere, 1998), but are briefly described in this section. Five methods are used to collect information on the organizational behaviors associated with the safety culture traits. These methods are:

- Functional Analysis
- Structured Interviews and Focus Groups
- Behavioral Anchored Rating Scales (BARS)
- Behavioral Observations
- Organizational and Safety Culture Survey

The use of multiple methods to assess any organizational behavior assures adequate depth and richness in the results obtained. In addition, confirming the results obtained through the use of one method with results obtained through the use of another method provides convergent validity for the results. A brief description of each method is provided below.

1.4.1 Functional Analysis

The purposes of the Functional Analysis are to: (1) clearly identify the organizational units of HSS, (2) gain an understanding of each organizational unit's functions and interfaces, (3) examine the way in which information flows within and between units, and (4) identify the key supervisory and managerial positions of each organizational unit. Information to support this activity was obtained primarily through the review of the documentation identified below, some semi-structured interviews, and some observations of organizational activities. The organizational behaviors to be evaluated were identified from the information collected during this analysis.

Documentation Review

During the Data Collection Team's activities, a wide variety of documents were reviewed including DOE Orders, Policies and Programs related to the scope of the evaluation. HSS organizational charts, interoffice memoranda, and applicable standard operating procedures were also reviewed.

Organizational Behaviors

Based upon the information obtained from the Functional Analysis, the following organizational behaviors were identified for evaluation:

Attention to Safety – Attention to Safety refers to the characteristics of the work environment, such as the norms, rules, and common understandings that influence site personnel's perceptions of the importance that the organization places on safety. It includes the degree to which a critical, questioning attitude exists that is directed toward site improvement.

Communication – Communication refers to the exchange of information, both formally and informally, primarily between different departments or units. It includes both the top-down (management to staff) and bottom-up (staff to management) communication networks.

Coordination of Work – Coordination of Work refers to the planning, integration, and implementation of the work activities of individuals and groups.

Formalization – Formalization refers to the extent to which there are well-identified rules, procedures, and/or standardized methods for routine activities as well as unusual occurrences.

Organizational Learning – Organizational learning refers to the degree to which individual personnel and the organization, as whole, use knowledge gained from past experiences to improve future performance.

Performance Quality – Performance quality refers to the degree to which site personnel take personal responsibility for their actions and the consequences of the actions. It also includes commitment to and pride in the organization.

Problem Identification and Resolution – Problem identification and resolution refers to the extent to which the organization encourages facility personnel to draw upon knowledge, experience, and current information to identify and resolve problems.

Resource Allocation – Resource Allocation refers to the manner in which the facility distributes its resources including personnel, equipment, time and budget.

Roles & Responsibilities – Roles and responsibilities refer to the degree to which facility personnel's positions and departmental work activities are clearly defined and carried out.

Time Urgency – Time urgency refers to the degree to which facility personnel perceive schedule pressures while completing various tasks.

These behaviors are then used to provide information on the nine traits according to the following framework:

- Leadership Safety Values and Actions – Attention to Safety; Resource Allocation; Time Urgency
- Problem Identification and Resolution – Problem Identification and Resolution
- Personal Accountability – Performance Quality; Roles and Responsibilities
- Work Processes – Coordination of Work; Formalization
- Continuous Learning – Organizational Learning
- Environment for Raising Concerns – Safety Conscious Work Environment Questions from electronic survey
- Effective Safety Communication – Communication
- Respectful Work Environment – Communication Trust Scale from electronic survey
- Questioning Attitude – Attention to Safety

1.4.2 Structured Interview and Focus Group Protocol and Behavioral Anchored Rating Scales (BARS)

The Structured Interview and Focus Group Protocol was derived from a database of interview questions. A particular subset of questions can be selected to provide a predefined focus to an interview or focus group session. The Independent Safety Culture Evaluation Team selected a set of questions to gather information related to the safety culture traits from the organizational behaviors identified from the Functional Analysis.

A total of 20 individual interviews and 15 focus groups were conducted as part of the assessment. A total of 74 individuals were involved in one these activities, with 20 individuals being individually interviewed and 54 participating in focus groups. Nine out of the 15 focus groups had a 50% or lower participation rate (i.e., of the number of participants randomly selected to participate, 50% or more did not). Each interview lasted one hour and each focus group lasted approximately one and a half hours. A few less formal follow-up interviews were conducted to provide further clarification when necessary.

The Behavioral Anchored Rating Scales (BARS) were administered to most individuals who participated in the structured interviews and/or focus groups. Each interviewee was administered the BARS associated with four different organizational behaviors. The BARS provided the opportunity to quantitatively summarize qualitative data associated with the interviewee's perceptions of the organization. Approximately 280 BARS were collected representing 10 organizational behaviors.

1.4.3 Behavioral Observations

The use of behavioral observations provides an unobtrusive assessment of particular organizational behaviors and critical processes including work planning, work performance, management meetings, department meetings, and responses to planned or unplanned events. The selected organizational behaviors are specifically identified in the evaluation of the activities observed.

During the course of the Safety Culture Evaluation, a few observations were conducted of scheduled meetings based on the list of meetings provided by HSS scheduled to occur during the evaluation period.

1.4.4 Organizational and Safety Culture Survey

The primary purpose of administering a survey is to measure, in a quantitative and objective way, topics related to the behaviors of interest. By conducting a survey, a broad sample of the individuals in the organization can be obtained and it is possible to gather information from a larger number of personnel than can be reached through the interview process alone. The survey used in this evaluation has been administered previously by the Independent Safety Culture Evaluation Team Lead at over 60 different organizations.

A total population of approximately 448 personnel was invited to participate in the survey of which 327 actually completed the survey, representing a response rate of 72.7%. While this response rate is considered to be acceptable for the purposes of drawing representative conclusions regarding perceptions and attitudes about the work environment, a large percentage of participants elected to place themselves in the “prefer not to respond” category on a number of the demographic variables. Because of this high percentage of participants in the “prefer not to respond” category, for most Tier 1 Offices the recorded response rate was between 50 and 60% with a few Tier 1 Offices having lower response rates. The lowest recorded response rate obtained was within HS-10 which had a response rate of 35.3%.

1.5 Results

The results presented below summarize the insights gained from the evaluation team’s analyses of the structured interviews and focus groups, BARS, observations, and survey data. The results are presented in terms of the Safety Culture traits. Positive Observations and Areas in Need of Attention related to each trait are presented and provide the observations, insights and data to understand their impact on the overall health of Safety Culture. In addressing improvements, the Areas in Need of Attention should be considered and used as examples for an action that would address a behavior that would help several if not all of these points. It is not the intention that each Area in Need of Attention result in a corrective action as would occur with an Area for Improvement. Developing a massive amount of corrective actions only perpetuates a compliance mentality, which is not conducive to creating and promoting a ‘healthy safety culture’.

1.5.1 Leadership Safety Values and Actions

Leaders demonstrate a commitment to safety in their decisions and behaviors.

Positive Observations

- Many interviewees described HSS as having made more progress in the area of Safety than in the areas of Oversight and Security.
 - The new Chief Medical Officer is perceived to have made some worker safety and health programs at several sites meet their qualifications.
 - There is a perception that many of the safety directives have been modified and updated without any loss of the important safety constructs.
 - Quality is perceived to be more important than timeliness by several interviewees.
- Interviewees and the Team observed that many HSS employees are committed to their roles and believe that they can make a difference to help improve performance across the DOE Complex.
- While some interviewees indicated that there is a lot less contracting in HSS than there was 5 years ago, some groups still have access to contractor resources to get support with their activities as needed.
- Some interviewees indicated that HSS is beginning to do systematic workforce planning.

Areas in Need of Attention

- Many interviewees expressed concerns regarding DOE and HSS' Senior Management commitment and priority to safety. Examples included:
 - Many interviewees indicated that they did not perceive the Secretary and Deputy Secretary as real champions of safety.
 - Safety is perceived to be important only when there is an accident or an event.
 - Interviewees described that safety and quality are not as prominent as they should be in the Contract Award Fee and that they perceive that DOE is too liberal and highly inconsistent in how fees are awarded.
 - There is a belief that HSS Senior Management was not interested in workplace issues until safety culture became a visible topic.
 - There is the perception that there is no real independent oversight of worker safety, health, or the environment.
 - There is a perception that professional opinions are not respected or understood by management and only certain opinions or recommendations are listened to.
 - Interviewees expressed frustration that there was no opportunity to look at precursors to issues but only to be reactive to events.
 - Several interviewees indicated that they perceived that HSS Senior Management only pays lip service to programs like Employee Concerns, Voluntary Protection Program (VPP), because they have to.
- Interviewees described several examples where they believed that HSS Senior Management gave in to political pressures that outweighed safety significant decisions on the part of HSS Staff because of a lack of understanding of the implications, e.g., enforcement decisions around failure to post signage, personnel exposures.
- Several interviewees indicated the perception that championing safety happens at different levels throughout the DOE Complex with some Site Managers being more committed to safety than others.
- HSS Senior Management is perceived by many interviewees to create barriers to getting work done. Most often expressed is the frustration with the approval of all expenditures, regardless of amount, through HS-1.
- Several interviewees indicated that while they are driven by deadlines and time pressures the level of approvals required by HSS Senior Management often creates delays in meeting the commitments to deliver their products to those outside HSS.
- The overall results on the Behavioral Anchored Rating Scale for Attention to Safety indicate that approximately 24% of the HSS individuals that completed this scale had negative perceptions about the value of safety in the organization and an additional 32% of the respondents that completed this scale provided a mid-range score which indicates that they perceive that management reflects a delicate balance of emphasizing safety, while at the same time making it clear that there is a need to keep things on schedule. Among HSS Managers completing this scale 75% perceived that safety is clearly understood to be a priority for the organization. Among respondents from various Offices within HSS those in HS-40 had the most negative perceptions about the value of safety in the organization (0% positive), while 40% of the respondents in HS-60 had positive perceptions about the value of safety.
- Results from the Behavioral Anchored Rating Scale on Resource Allocation indicate that overall only 10% of the HSS interviewees that completed this scale are positive in their perceptions that employees have sufficient resources to implement corporate goals and

that they perceive that the employees understand how these goals relate to their daily activities. Among HSS Managers approximately 75% had either negative or uncertain perceptions about the allocation of resources. Among Tier 1 Office respondents that answered this scale only 10% of the interviewees in HS-60 had positive perceptions about resource allocation within HSS.

- Results from the Behavioral Anchored Rating Scale on Time Urgency indicate that overall approximately 37% of HSS individuals that completed this scale perceive that most tasks are completed on time without compromising safety or quality. HSS Managers perceived this to a slightly greater extent than Non-Managers did. Among Tier 1 Office respondents to this scale, 100% of those in HS-1 and approximately 75% in HS-90 had positive perceptions about this behavior, while respondents in HS-60 and HS-80 had more negative perceptions.
- Results on the Attention to Safety Scale on the electronic survey were among the lowest scores compared to a database of other responses from DOE organizations, including both federal and contractor respondents at Headquarters and at DOE field locations. The pattern of low scoring responses by HSS indicates that HSS survey respondents had a more negative perception of the value the organization places on various behaviors which are used to promote safety.

1.5.2 Problem Identification and Resolution

Issues potentially impacting safety are promptly identified, fully evaluated, and promptly addressed and corrected commensurate with their significance.

Positive Observations

- Multiple mechanisms for identifying problems were described by interviewees including:
 - Health and Safety Information Tracking System (HSIT);
 - All hands meetings;
 - Supervision;
 - Federal Employee Occupational Safety and Health Program;
 - ECP,
 - Safety Shares;
 - Union;
 - Safety walk downs;
 - VPP outputs;
 - Email, etc.
- HSS Senior Management's decision to conduct this Independent Assessment of Organizational and Safety Culture is a proactive step to identify those areas where there are gaps that should be addressed and corrected. There has been some acknowledgement that the HSS Organization needs to be better integrated as a team.

Areas in Need of Attention

- Interviewees identified some issues that might inhibit the identification of problems or concerns. These included perceptions related to:
 - Fear of reprisal and retaliation;

- Lack of recognition for expertise;
 - Communication is all top-down;
 - Nothing gets done;
 - The culture is not conducive to being open about problems;
 - If you raise problems you are labeled as a troublemaker;
 - If you raise a problem you better know how to solve it;
 - Uncertainty about how the message will be received;
 - There is no way to report things anonymously;
 - It is important to ensure that you make management look good; and
 - There is no real electronic, formal reporting system for HSS employees to use to identify problems or concerns of all types.
- Interviewees indicated that they perceive that the Differing Professional Opinion (DPO) process has been put ‘in the closet’ and that only something very significant would warrant its use.
 - While interviewees described several programs (those mentioned above) that would facilitate problem identification and resolution, most indicated that they do not have a lot of information about the programs and that they do not perceive that management is committed to these programs, e.g., VPP.
 - Interviewees indicated a lot of talk about an open door policy and yet several individuals identified that within HSS they do not perceive that management’s door is as open as they claim it is.
 - Data from the Behavioral Anchored Rating Scale on Problem Identification and Resolution indicated that overall only 37% of the HSS interviewee respondents who completed this scale provided a high rating indicating that they perceived that the organization encourages personnel to draw upon knowledge, experience and current information to identify and resolve problems positively. Among HSS Managers who completed this scale 62% had positive perceptions about the behavior. Among Tier 1 Office respondents to this scale 50% in HS-40 and 20% in HS-30 had positive perceptions about problem identification and resolution.

1.5.3 Personal Accountability

All individuals take personal responsibility for safety.

Positive Observations

- Many interviewees indicated that roles and responsibilities within offices in HSS generally work well.
- Most interviewees indicated that annual and interim performance reviews are conducted.
- The National Training Center employees receive the same performance review as the rest of the HSS staff. These are the same reviews that are used throughout DOE for federal employees.
- Some interviewees indicated that they perceived having HSS headed by a non-political appointee provided the right stability to the stated purpose of the Office.

Areas in Need of Attention

- Several interviewees indicated that DOE and site contractors are not working to the same standards. Examples included:
 - ORPS reporting;
 - Injury reporting;
 - Requirements for fall protection;
 - Traffic violations, etc.
- Interviewees indicated that HSS has several issues with oversight and enforcement including;
 - Enforcement and Oversight Groups have not looked at HQ on compliance issues, e.g., mold, wiring, dust, asbestos.
 - HSS Management is perceived to frequently jump to conclusions without looking at all the information.
 - The role of oversight in HSS is perceived to have transitioned into more of a resource and assist mode, rather than as a true oversight group.
 - There is the perception that HSS has been more variable and less rigorous in its conclusions even when safety significance is a factor.
 - There has been a significant drop in enforcement perceived to be due to the ‘us versus them’ from the site offices’ perspective.
 - There is a perception that political influences may be impacting reports, and the Quality Review Boards are perceived to be more concerned with whether a report is well written, not necessarily technically accurate. There is the perception that items may be downgraded from a finding to an opportunity for improvement, not always recognizing the important content.
- Data on the Behavioral Anchored Rating Scale for Performance Quality indicates that overall about 82% of the HSS HQ interviewees who completed this scale are either negative or uncertain in their perceptions that personnel take personal responsibility for their actions and the consequences of the actions. Perceptions of Performance Quality across HSS Managers and Non-Managers were similarly low. Twenty-five percent of the respondents in HS-30 who completed this scale perceive the behavior positively.
- Accountability is perceived by many interviewees to be an issue at HSS. Some examples include:
 - Perception exists that the merger of the 3 organizations into HSS was not well thought out and has resulted in significant organizational integration issues for the Office.
 - Perception exists that it is very difficult for Federal Supervisors to hold people accountable and that it is viewed as a very arduous process and most supervisors are unwilling to do it.
 - Perception exists that deadlines are never met at the top of the HSS Organization and it impacts the performance of those below who are held accountable. Performance reviews require specific products but there is the perception that 80% of your time is out of your control.
 - Several interviewees indicated that the performance reviews are so limiting that they are worthless and that HSS Senior Management favorites get the jobs, the promotions, etc.
 - Within the Security area promotion to GS-14 provides new opportunities but interviewees indicated that no one has been promoted to that level for years.

- Some interviewees do not believe that Enforcement and Oversight should be under the same manager. Enforcement is congressionally mandated for contractor performance while Oversight can comment on the Federal side as well as the Contractor side. Assessment is delegated to the Site Offices for day to day activities.
- Some interviewees do not perceive that the Site Offices and the Contractors understand HSS roles and responsibilities as well or in the same way that HSS does internally. Expectations between the parties are not always consistent resulting in criticism of the role that HSS often assumes.
- Within HSS, most Tier 1 Offices do not have control over their budgets.
- At the supervisory level, Office Directors do not perceive themselves to have much control of anything as everything from reviews to budgets to contractors has to go through many levels and all the way to the top of HSS Management.
- Senior HSS Management has indicated a willingness to delegate some responsibilities but has not to date provided those individuals with the authorities they need to implement those responsibilities.
- Some interviewees indicated that contractors have sat in on the review of budgets of the offices within HSS.
- Use and integration of contractors creates some special issues for those in Enforcement. Interviewees believe that enforcement should be the responsibility of federal employees.
- Interviewees expressed frustration in the area of Security because of the various offices, confusion in their roles and responsibilities, and the lack of integration with other functions in the HSS Organization.
- Data on the Behavioral Anchored Rating Scale for Roles and Responsibilities indicated that overall 72% of HSS interviewees who completed this scale provided a low or mid-rating indicating a perception that employees do not or may not understand their duties, know who to go to when a task needs to be done or clearly understand their role in completing cooperative activities. HSS Managers and Non-Managers who completed this scale had similar perceptions about roles and responsibilities across the organization.
- Scores across HSS on the Commitment Scale from the electronic survey were the lowest in comparison to similar organizations that took the same survey. Statistically significant differences were obtained between HQ Organizations with Contractors having significantly more positive perceptions about commitment to the organization. Within Tier 1 Offices statistically significant differences were also obtained with HS-70, HS-40, and HS-60 having significantly more positive perceptions than those in the Prefer Not to Respond to Group and to those in HS-30.

1.5.4 Work Processes

The process of planning and controlling work activities is implemented so that safety is maintained.

Positive Observations

- Interviewees described informal efforts (e.g., self-initiated groups) to facilitate better interactions across the offices within HSS.

- Several interviewees identified efforts that help to get their jobs done. Some examples included:
 - Access to experts;
 - Tools to research correspondence;
 - Access to management;
 - Some relationships between the field and HQ are facilitative; and
 - Participation in working groups.
- Interviewees discussed how a lot of safety directives were revised without losing content or safety constructs.
- HSS provides technical support to DOE HQ ECP for the field ECPs.

Areas in Need of Attention

- Interviewees described several barriers within HSS to getting work done. Examples included:
 - Many individuals indicated that HSS was stove piped and that the division between groups was only crossed unofficially.
 - The time to get things signed off was described as 2 to 6 months and in some cases even a minor policy change could take over 2 years to complete.
 - There is a perception that there is no delegation of authority; HS-1 has to see everything.
 - HSS Senior Management is perceived as having knee jerk reactions to things and it can be disruptive to getting other work done.
 - There is a perception that HSS groups are often using outdated technology and software.
 - There is a perception that it is difficult to appease all stakeholders.
 - There is a perceived problem in coordinating with other offices in HSS because not all groups adhere to the same SOPs.
- Interviewees indicated that there is no strategic vision of goals for HSS but only to react to situations that come up. The lack of mission, policy and objectives in HSS is described as the best thing, because it allows flexibility, and the worst thing, because often what is done is not well regarded.
- Many interviewees describe various issues between HQ, field offices and site contractors. For example, site contractors believe that HSS is making them do more, but HSS believes that all that they ask is in the Contractors' contracts. The DOE line management asks for more prescriptive rules from HSS to get the contractors to perform to certain standards.
- Interviewees perceive that differences across the DOE Complex in policies and processes are hurting performance, e.g., differences between NNSA and DOE Security policies affected the Y-12 event.
- Many interviewees indicated that DOE has few rules and regulations compared to what is rolled down to the contractor organizations.
- Attempts to observe 'scheduled meetings' by the Team often resulted in the observation that many of those meetings do not actually regularly occur.
- Data on the Behavioral Anchored Rating Scale for Formalization indicates that overall 70% of the HSS Respondents to this scale have a negative or neutral perception of the extent to which there are well-identified rules, procedures, and/or standardized methods

for routine activities as well as unusual occurrences. Among HSS Managers who responded to this scale 60% had negative or neutral perceptions about formalization compared to 80% among Non-Managers.

- Data on the Behavioral Anchored Rating Scale for Coordination of Work indicates that overall 82% of the HSS Respondents to this scale have a negative or neutral perception of the planning, integration, and implementation of work activities of individuals and groups. Among HSS Managers who responded to this scale only 12% had a positive perception about the coordination of work.
- Data from the Coordination of Work Scale on the electronic survey indicated that while there were no statistically significant differences between the different HSS Tier 1 Offices on this scale, the overall score was the lowest among similar organizations that have taken the same survey. Statistically significant differences were obtained between the HSS Organizations with Contractors having significantly more positive perceptions about the Coordination of Work than Federal Employees and those in the Prefer Not to Respond category.

1.5.5 Continuous Learning

Opportunities to learn about ways to ensure safety are sought out and implemented.

Positive Observations

- Interviewees indicated that some of the field sites have attempted to reinforce reporting so that lessons learned can be captured.
- The National Training Center is trying to broaden its engagement in the larger training community by participating in the Federal Technical Capability Panel to develop qualification standards across DOE.
- Interviewees described situations in which some informal lessons learned have been communicated:
 - Recurring problems with lock out/tag out;
 - Implications of the Y-12 Security Event; and
 - Videos from other governmental agencies as well keyword searches on the internet.

Areas in Need of Attention

- Interviewees perceive that HSS does not do a good job of organizational learning because they indicated that when events or injuries occur they are not reported. This non-reporting occurs because of the paperwork involved in reporting, individuals don't want to spend the time, and they don't want to be perceived as causing trouble.
- Several interviewees identified that the only organizational learning and sharing of information that occurs within HSS is from what management says. Information is perceived to come largely from word of mouth.
- Interviewees indicated that there had been no formal presentations on the lessons learned from the Y-12 event, no training that addresses the event directly.
- The perception is that it is up to the Office Directors to get the information, understand it, learn from it and improve performance.

- Data on the Behavioral Anchored Rating Scale for Organizational Learning indicated that overall 75% of HSS interviewee respondents provided negative or neutral ratings suggesting that they do not believe that individuals and groups of employees pay close attention to past behaviors and how they can be improved in the future. They do not believe that information about past activities is necessarily formalized and available for future reference. Among HSS Managers who responded to this scale 60% had negative or neutral ratings about this behavior, while 82% of the Non-Manager respondents had negative or neutral ratings about Organizational Learning.

1.5.6 Environment for Raising Concerns

A safety conscious work environment is maintained where personnel feel free to raise safety concerns without the fear of retaliation, intimidation, harassment, or discrimination.

Positive Observations

- Most interviewees indicated that there are multiple mechanisms available to identify safety concerns, e.g., supervisors, managers, ECP, HR, and Hotline.
- Some efforts are being considered, by DOE ECP HQ, to make the program more visible and available to HQ personnel in the future.

Areas in Need of Attention

- Several interviewees indicated that they perceive there is a fear of reprisal and retaliation among most of the groups in HSS. Moving people out of their jobs, denying them promotions, lowering their performance appraisals, and sanctioning them from going to the sites were cited as examples.
- The low turnout for focus group participation combined with the number of hotline calls that came into the Team is indicative of an environment where raising concerns is not viewed as a way of doing business.
- Interviewees and observations by the Team indicated that the DOE HQ ECP does not appear to be an effective program. Examples included:
 - Several interviewees expressed the perception that they believe that management thinks that if issues are brought to ECP it looks bad for them.
 - Several interviewees were not aware that there was an ECP for DOE HQ.
 - Many interviewees are not convinced that there is any truly anonymous reporting mechanism available to them.
 - DOE ECP focuses on support and guidance for the field ECPs.
 - DOE ECP is supported by HSS for technical support in the field.
- Among HSS survey respondents, only about 55% agreed with the statement that everyone in the organization is responsible for identifying problems. The HSS scores on this question were the lowest among other similar organizations that hand responded to the same question.
- The statement on the electronic survey that management does not tolerate retaliation of any kind for raising concerns was agreed to by 67% of the HSS survey respondents.

- Among HSS survey respondents only 21% of employees feel that they can openly challenge decisions made by management.
- Approximately 25% of HSS survey respondents believe that constructive criticism is encouraged.
- Approximately 38% of the HSS survey respondents agreed with the statement that they feel that they can approach the management team with concerns.
- Among HSS survey respondents 33% agreed with the statement related to management wants concerns reported.
- Approximately 30% of HSS survey respondents agreed with the statement that concerns raised are addressed.
- Statistically significant differences among the HSS Tier 1 Offices were obtained on several of the Safety Conscious Work Environment Questions from the electronic survey. The Prefer Not to Respond and HS-30 Work Groups had consistently more negative responses to the questions.
- There were statistically significant differences between the HSS Organization Categories on several of the Safety Conscious Work Environment Questions with Contractors exhibiting more positive responses than the Federal Employees or those in the Prefer Not to Respond Category.
- Statistically significant differences were also obtained between Federal Employee Grades on several of the Safety Conscious Work Environment Questions with SES respondents having significantly more positive perceptions about these issues than those in the other categories.

1.5.7 Effective Safety Communication

Communications maintain a focus on safety.

Positive Observations

- Interviewees identified mechanisms for communication in the HSS Organization
 - Management meetings;
 - Group meetings;
 - All hands meetings;
 - One on one communication;
 - Emails;
 - Open door policy.
- Most interviewees indicated communication with their peers works well.
- Observations by the Team indicated that when meetings occur efforts are made to include all parties regardless of their locations. Most meetings observed did include call in parties from other locations.

Areas in Need of Attention

- Many interviewees indicated that there are issues around the effectiveness of communication in HSS. Examples included:
 - There is a perceived need to communicate better with each other across the organization.

- There is the perception that poor communication is the downfall of the HSS organization and that most communication never gets down to the staff level.
- Interviewees describe that the only interaction with management is when things go wrong. Management is always in meetings, they are so busy they don't have time to share information, and while there might not be a need to know some things, it would be nice to know some things from time to time.
- There is a perception that communication from the top down needs to be improved.
- There is a perception that HSS is permeated with distrust.
- Some interviewees indicated that they receive more information from the field than from their management.
- Interviewees indicated that for non-supervisory staff to communicate with another organization they must go up the HSS chain of command and then wait for the opportunity for the information to come down the other side of the other organization.
- The Team and interviewees identified the lack of 'regularly scheduled' staff meetings across the HSS Organization as missed opportunities to enhance the communication process within HSS.
- Data from the Behavioral Rating Scale on Communication indicated that overall only 18% of the HSS interviewee respondents who completed that scale had positive perceptions about the exchange of information, both formal and informal, between the different offices in the HSS Organization, including the top-down and bottom-up communication networks. Among HSS Managers who responded to this scale 60% had positive perceptions about communication while among Non-Managers only 6% had positive perceptions about this behavior. Among Tier 1 Offices who responded to this scale no respondents had positive perceptions about communication within the HSS Organization.
- Data from the electronic survey on several of the Communication Scales indicated that HSS survey respondents had low scores across the database on their opinions about perceived Trust in Communication, perceived Accuracy in Communication Accuracy and Desire for Interaction compared to similar organizations that responded to the same scales.

1.5.8 Respectful Work Environment

Trust and respect permeate the organization

Positive Observations

- Some interviewees described efforts being made by HSS Senior Management to re-engage with the workforce.
- Scores obtained on the Cohesion Scale from the electronic survey indicated that some Tier 1 Offices had significantly more positive perceptions about their day to day Tier 1 Offices than others. Respondents in HS-40 and HS-60 had significantly more positive perceptions about their day to day Tier 1 Offices than respondents in HS-30 and the Prefer Not to Respond Work Groups.

Areas in Need of Attention

- Many interviewees described the concept of the ‘inner circle’ when discussing the work environment in HSS. A handful of individuals are perceived to be the drivers of the way that others are perceived and treated in the organization. Those that are outside the ‘circle’ expressed distrust of those in the group and fear of retaliation, however subtle, for actions not approved or favored by the select few.
- HSS survey respondents indicated low scores on their perceptions of Trust in Communication regarding the freedom they feel to discuss the problems and difficulties in their jobs with an immediate supervisor without jeopardy. This was the second lowest score obtained in the database across similar organizations that have taken the same survey. Statistically significant differences were obtained between Tier 1 Offices on the Communication Trust Scale with respondents in HS-70 and HS-50 having significantly more positive perceptions about this behavior than respondents in HS-30, HS-90, and the Prefer Not to Respond work groups.
- Results from the Organizational Culture Scales on the electronic survey indicated that respondents perceived both Constructive and Passive-Defensive Cultural Styles being valued by HSS Management. Behaviors of dependency and conventionalism were perceived to be valued more or equal to those of being sensitive to the needs of others and being affiliative with members of the organization. Statistically significant differences were obtained between some of the Tier 1 Offices on these behaviors with HS-70, 10, 40 and 50 having more positive perceptions than respondents in HS-30 and the Prefer Not to Respond groups. In addition, statistically significant differences were obtained between HSS Organizational Groups with Contractors have significantly more positive perceptions than Federal Employees or those in the Prefer Not to Respond groups.

1.5.9 Questioning Attitude

Individuals avoid complacency and continuously challenging existing conditions and activities in order to identify discrepancies that might result in error or inappropriate action.

Positive Observations

- Some interviewees described feeling responsible to continue to challenge conditions and activities regardless of the outcome of their opinions and proposed recommendations

Areas in Need of Attention

- Several interviewees indicated that they believed that HSS was sometimes compromising its roles and responsibilities in enforcement and oversight activities because of political pressures and unwillingness for HSS Senior Management to deliver unfavorable messages up to the Secretary.
- Interviewees indicated that a questioning attitude was not promoted by HSS Senior Management nor did they perceive that it was really appreciated or desired.
- Many interviewees do not perceive that there is an appropriate mechanism for them to express their concerns or raise their questions.

1.6 Conclusions

The results of this evaluation have been presented using the 9 traits recently identified by the U.S. NRC and their stakeholders for evaluating the attributes important for a healthy safety culture. The integration of those results can be formulated into several conclusions for the HSS HQ Organization, all of which have implications for the support of a strong safety culture.

- 1.6.1. The Team recognizes that the HSS Organization is generally comprised of dedicated professionals, many leading experts in their field, that are committed to ensuring the health, safety and security of the workers and the public across the DOE Complex.
- 1.6.2. HSS Senior Management (those above the Tier 1 Office Directors) has recently acknowledged that there are gaps in the organization that need to be addressed. To this end, this evaluation was conducted at the request of the Department's Chief Health, Safety and Security Officer. The need for better integration across the Offices, more effective communication, and the dispelling of legacy issues which still drive the beliefs and perceptions across the organization are some of the more significant gaps identified by this evaluation.
- 1.6.3 There is a pervasive lack of trust for HSS Senior Management across the HSS Organization. This results from the perception that Senior Management has little respect for the professionals in the organization, has little understanding of many of the functional areas it is responsible for, displays favoritism among a select few and uses a very strong top down management style
- 1.6.4 The lack of participation in the focus groups during this assessment, the high number of survey respondents who chose the Prefer Not to Respond category when answering the demographic questions, the number of Hotline inquiries and requests made to the Team are all indicators of a fear of reprisal for raising potentially negative concerns or issues against HSS Senior Management.
- 1.6.5 There is a strong sense of pressure within the HSS Organization of being driven by external stakeholders. Many perceive that during the last 4 years there has been a shift in the relationship with the sites that has reduced the effectiveness of HSS in its efforts in enforcement and oversight. There is a perception that while some oversight still exists in the assessment mode, it is more collaborative than independent. The model of self-regulation implemented is being questioned by a number of HSS staff members for its effectiveness in being proactive about potential issues across the complex.
- 1.6.6 While not an issue necessarily specific to HSS, as a major Office in the Department there should be an effort to support the need for greater visibility, promotion, and acceptance of an Employee Concerns Program for HQ. The

current ECP for HQ does not provide the employees of HSS with an independent, anonymous reporting mechanism.

1.7 Recommendations

A healthy safety culture is most often found within an aligned organization that has effective processes, and motivated people. The recommendations from this Independent Evaluation of Safety Culture for the HSS Organization are:

- 1.7.1 Efforts to better integrate the various offices within the HSS Organization need to begin with a foundation of defining mission, vision, values and objectives for the entire organization. These efforts should involve representatives from all of the offices and from different organizational levels to provide input to the process. Solicitation of ideas and engagement from the workforce will help to facilitate a common understanding and definition of what HSS's role is in the DOE Complex. In spite of changes which may occur as a function of political transitions, the core business of HSS must be self-identified so that it is clear that those roles and responsibilities will be fulfilled in order to meet DOE's obligations, both mandated and expected by its various stakeholders.
- 1.7.2 HSS Senior Management needs to gain the trust and respect of all employees in its organization. Efforts in delegating responsibility, better communication, and the opening of the 'inner circle' must be initiated.
 - The Senior Management Team has indicated a desire to delegate more responsibility, however their actions do not support successful accomplishment of this goal. Individuals cannot be given responsibility for activities without the appropriate authority to execute them. For example, administrative controls in the budget area can be defined to allow accountability for expenditures to be consistently applied across programs offices.
 - Communication efforts must begin by holding all groups accountable to have regularly scheduled meetings where information can be provided in a systematic and consistent forum. Formalized agendas, or briefing sheets, when information important to the HSS Organization needs to be disseminated, should be used to ensure that all individuals receive the same and necessary information.
 - A reporting system for the identification of concerns or issues needs to be available to the HSS Organization. The system must also allow for the anonymous reporting of concerns so that fears of reprisal will not inhibit the discussion of potentially important issues. Input as to the most effective way to achieve this should be done with the engagement of those who will be the potential users.
 - The 'inner circle' perception must be addressed. The negative impact this perception has on the organization is significant. Efforts to physically separate offices, greater inclusion of 'outsiders' to meetings, and office rotations are a few ideas to consider. Initiatives in

this area will go a long way to demonstrate the sincerity of trying to dispel the perception of favoritism in the organization.

- 1.7.3 The decision to conduct this assessment was a proactive step on the part of HSS Senior Management to identify the gaps and issues that impact the organization. Providing the feedback to the HSS Organization on the results of the assessment is another positive step in working towards understanding and resolving some of the issues. Senior Management now needs to move forward to take some direct steps in trying to change some of the beliefs and perceptions while the momentum for talking about and discussing these results is still meaningful to everyone in HSS.

1.8 References

Haber, S.B. and Barriere, M.T. (1998). "Development of a regulatory organizational and management review method." Research Report RSP-0060, Canadian Nuclear Safety Commission, Research Report, Ottawa, Canada.

Haber, S.B., O'Brien, J.N., Metlay, D.S., and Crouch, D.A. (1991). "Influences of Organizational Factors on Performance Reliability," NUREG/CR-5538, U.S. Nuclear Regulatory Commission, Washington, D.C.

Institute of Nuclear Power Operations (2004). "INPO Principles for a Strong Nuclear Safety Culture."

International Nuclear Safety Advisory Group, INSAG-15 (2002). "Key Practical Issues in Strengthening Safety Culture," International Atomic Energy Agency, Vienna, Austria.

Nuclear Regulatory Commission (2012), Inspection Manual Chapter 0305 "Operating Reactor Assessment Program," U.S. Nuclear Regulatory Commission, Washington, D.C.

Schein, E.H. (1992). "Organizational Culture and Leadership," Jossey-Bass, San Francisco, CA.