Independent Oversight Assessment of Nuclear Safety Culture at the Pantex Plant

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Office of Safety and Emergency Management Evaluations
Office of Enforcement and Oversight
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Acronyms

BARS	Behavioral Anchored Rating Scales
BBS	Behavior Based Safety
DNFSB	Defense Nuclear Facilities Safety Board
DOE	U.S. Department of Energy
DPO	Differing Professional Opinion
ECP	Employee Concerns Program
HRO	High Reliability Organization
HSS	Office of Health, Safety and Security
IPOD	Integrated Plan of the Day
MTC	Metal Trades Council
NES	Nuclear Explosive Safety
NNSA	National Nuclear Security Administration
NRC	Nuclear Regulatory Commission
POD	Plan of the Day
SOAR	Safety Observations Achieve Results
PGU	Pantex Guards Union

1. Introduction

The U.S. Department of Energy (DOE) Office of Enforcement and Oversight (Independent Oversight), within the Office of Health, Safety and Security (HSS), conducted an independent assessment of nuclear safety culture[1] at the Pantex Plant. The primary objective of the evaluation was to provide information regarding the status of the safety culture at the Pantex Plant. The data collection phase of the assessment occurred during June – August 2012.

The Pantex Plant has a long-term mission to safely and securely maintain the nation's nuclear weapons stockpile and dismantle weapons retired by the military. Within DOE, the National Nuclear Security Administration (NNSA) has line management responsibility for the Pantex Plant. At the site level, line management responsibility for the Pantex Plant falls under the NNSA Production Office, which recently combined and replaced NNSA's former Pantex and Y-12 site offices. Under contract to DOE, B&W Pantex is responsible for managing and operating the Pantex Plant.

During the time HSS was performing a series of reviews of the extent of condition of safety culture concerns at nuclear design/construction projects, HSS received information about potential safety culture issues at the Pantex Plant. Specifically, two B&W Pantex employees told Defense Nuclear Facilities Safety Board (DNFSB) staff members about instances of perceived retaliation for raising a safety concern. Subsequently, the DNFSB referred the matter to HSS, and HSS decided to perform a safety culture assessment at the Pantex Plant as part of the ongoing extent of condition evaluations.

The safety culture extent of condition assessments are being performed in accordance with a Secretarial commitment to the DNFSB related to DNFSB Recommendation 2011-1, *Safety Culture at the Waste Treatment and Immobilization Plant*. Specifically, in the Department's Implementation Plan dated December 27, 2011, the Secretary of Energy directed HSS to perform safety culture assessments of major ongoing large nuclear design/construction projects to determine the extent of condition of safety culture concerns identified at the Hanford Site Waste Treatment and Immobilization Plant.

Before starting the assessment, HSS enhanced its capability to assess safety culture processes and capability, through consultation with the U.S. Nuclear Regulatory Commission (NRC), several nuclear power generating utilities, and associated support organizations to benchmark their processes. Recognizing that it has significant expertise in nuclear safety and issues management but limited on-staff expertise in systematic application of behavioral science-based methodologies for performing safety culture assessments, HSS contracted with an external company that specializes in human performance analysis to support the data collection and analysis efforts.

[1] While there are various safety culture models, the definition used in the Energy Facility Contractors Group report, which was accepted by the Deputy Secretary and referenced in the DOE Integrated Safety Management Guide is: An organization's values and behaviors modeled by its leaders and internalized by its members, which serve to make safe performance of work the overriding priority to protect workers, the public, and the environment.

2. Scope and Methodology

This Independent Oversight assessment covered all contractor employees at the Pantex Plant, including B&W Pantex employees and subcontractors.

An experienced HSS manager led the assessment. Onsite data collection was conducted primarily by HSS personnel. To ensure a valid and effective assessment of the existing safety culture, HSS used external independent safety culture experts to analyze various sources of data and perform an independent evaluation. The independent safety culture experts have extensive experience in the development and application of safety culture assessment methodologies used by commercial nuclear and other industries. Appendix A provides additional information about the composition of the Independent Oversight team, including the credentials of the independent safety culture experts.

With the guidance of the external independent safety culture experts, the Independent Oversight team selected a methodology for the assessment that provides an objective and systematic measurement of the organizational behaviors that impact safety performance, using multiple data collection tools to assess organizational behaviors. These tools include functional analysis, semi-structured focus group and individual interviews, observations, and behavioral anchored rating scales (BARS).

The Independent Oversight team also arranged for the external independent safety culture experts to conduct a culture survey for plant personnel using commonly used survey tools and techniques. The culture survey was conducted and analyzed by the external independent safety culture experts. The population sampled in the survey included a random sample drawn from B&W Pantex employees and sub-contractors.

The evaluation was conducted using the same methodology that aligns with the current NRC procedures for independent safety culture assessment, which identifies nine traits that are viewed to be necessary in the promotion of a positive safety culture:

- 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.

HSS tasked the independent safety culture experts to analyze the data collected during assessment in accordance with their established methodology. Appendix B provides additional information about the methods and framework for the safety culture assessment.

3. Results and Conclusions

The safety culture evaluation performed by the external independent safety culture experts is provided in Appendix B, which provides positive observations and identifies areas in need of attention for each of the nine traits of a healthy safety culture. The independent safety culture experts evaluated the collective results to formulate the following conclusions about the status of the safety culture at the Pantex Plant, which are intended to facilitate the identification of improvement strategies.

The success and strength of the Pantex Plant lies in the employees' individual patriotic commitment to the mission of the organization. To succeed in this mission, employees want to do the best job they can do and will do whatever they can to seek the approval of the customer for their efforts.

Significant efforts have been placed on the formalization of the processes that are required for the Plant to execute its work. Processes and tools, such as pre-job briefings, change control procedures, peer checking and management of meetings, are implemented on a routine basis. In some cases, these efforts are perceived as excessive (e.g., Hazardous Energy Control) and, in some situations, they are understood as necessary (e.g., verbatim compliance to production procedures).

Efforts to communicate and implement the principles of a High Reliability Organization (HRO) have been ongoing for several years. The Plant has recently undertaken efforts to self-assess the values and beliefs associated with HROs in its survey development work with Texas Tech University. The realization of the HRO principles has not yet been internalized by the Plant, as demonstrated by the lack of effective communication processes, the absence of a learning organization, and the implementation of consequences that deal primarily with providing short-term solutions, rather than considering their impact on the long term goals of the organization.

The belief that the organization places a priority on safety is undermined by employee observations of poor facility conditions, lack of focus on meeting personal needs (work quality of life), and a sense of cronyism. While the employee population is committed to the mission of the organization, there is a strong perception that the organization is not equally committed to its employees. This creates a negative effect on employee morale and commitment to the organization and has created the perception among many employees that the financial bottom line is the only focus that matters.

There is a strong perception that retaliation exists for 'rocking the boat.' The consequences may be subtle (e.g., risk of losing qualifications, punishing an entire group for the actions of one individual, increasing work load because reporting often creates new processes that are put into place) but they may also include being transferred out of a position or job or termination of employment. The perception has created an environment where the raising of questions or identification of problems is not the consistently accepted way of doing business.

The Pantex Plant has not been successful in understanding the organizational and programmatic behaviors that are necessary for a healthy safety culture. The Pantex Plant is managed with a very strong focus on creating processes and looking at individual and local behavior around those processes. Consequently, organizational barriers have been created that will prevent successful implementation of the initiatives needed to enhance safe and reliable performance. The barriers are evident in the differences obtained in the values and perceptions between organizational work groups but more significantly between Senior Management and most of the rest of the organization. The barriers are also evident in the lack of respect, difficulty in effective communication, the non-alignment between the perceptions around the unions and management relationships and the notion of 'need to know' being extended to almost everything.

With the strong processes that have been put in place, coupled with the motivated and committed staff there does exist a strong basis from which improvements to the safety culture can be accomplished. These will only be realized, however, when the organizational and programmatic barriers have been overcome.

4. Recommendations

A healthy safety culture is most often found within an aligned organization that has effective processes, and motivated people. The following recommendations identify 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:

- Significant efforts are needed by Pantex Senior Management to gain the respect and trust of the employee population. Behaviors that demonstrate the commitment to the principles and values of an HRO must become obvious and internalized by the Management Team in order to model the efforts that they should expect and want from the employees.

- Management should take prompt actions to improve the quality of work life at the Plant. Small changes would go a long way to engaging the employee population in believing that the organization is committed not only to the mission, the customer and the award fees, but to the employees as well.

- Consider additional efforts to enhance awareness of the employee concerns program (ECP) and differing professional opinion (DPO) process.

NNSA and B&W Pantex should evaluate the results of this Independent Oversight safety culture report in its entirety, including the culture insights provided in Appendix B and the above conclusions and recommendations, in accordance with established issues management processes and initiate appropriate causal analysis, corrective actions, organizational enhancements, and effectiveness reviews as appropriate.

Appendix A
Supplemental Information

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Dates of Review

Scoping Visit	June 13-14, 2012
Onsite Data Collection:	July 23 – August 2, 2012
Survey Open Period	June 25 – July 13, 2012
Closeout:	August 27-28, 2012

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Dr. Deborah A. Shurberg, Independent Safety Culture Expert

Expertise and Credentials of the Independent Safety Culture Experts

Human Performance Analysis Corporation (HPA) is one of the leading consulting groups working to assist organizations in **performance improvement** through the understanding and leveraging of the individual, process, and organizational behaviors necessary to facilitate safe operating performance.

The HPA team is composed of experts in **organization and management, safety culture,** and **human performance analysis**. HPA has decades of experience working across numerous different industries where high safety performance is required, both in the United States and abroad.

HPA provides performance improvement services to public and private sector clients conducting safety-sensitive operations across a wide range of industries including nuclear, healthcare, mining, research, engineering, transportation, and energy.

The principals are:

Sonja B. Haber, Ph.D. Dr. Haber has been conducting work in the area of human performance analysis for over 30 years. She has been involved in the evaluation and intervention of human performance strategies in various applications, including nuclear facilities. For the last 23 years, Dr. Haber's work has focused on improving human performance within organizations that must operate with a high degree of reliability. She has been extensively involved in conducting fieldwork for various international agencies in efforts related to enhancing human performance. Her work has also included cross-cultural analysis of organizational issues in the areas of safety culture and management and supervisory skills. Most recently, Dr. Haber has been conducting safety culture evaluations in various organizations; providing consultation in organizational interventions including leadership and management training, enhanced communication, and observational skills training; and working toward the development of performance measures for organization and management processes.

Deborah A. Shurberg, Ph.D. Dr. Shurberg's primary interests lie in the development and implementation of methodological tools useful for the analysis and improvement of organizational functioning and in the assessment and evaluation of human resource practices critical to effective organizational performance. In particular, her work focuses on improving human performance within organizations that must function with a high degree of reliability and the assessment and improvement of organizational behaviors that impact safety culture. Dr. Shurberg has extensive experience across a variety of industries and countries, providing support in the diagnosis of organizational and management strengths and areas in need of improvement. She has significant experience in the development and implementation of intervention strategies within the nuclear industry, particularly on human-performance related topics including communication skills, observational skills, and management and supervisory skills.

More information can be found at: http://hpacorp.com/

Appendix B

An Independent Evaluation of Safety Culture at the Pantex Plant

Independent Safety Culture Evaluation Team:

Dr. Sonja B. Haber, Consultant, HPA
Dr. Deborah A. Shurberg, Consultant, HPA

Appendix B
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B.1 Introduction

This Appendix describes the results of an independent evaluation of the existing Safety Culture at the DOE Pantex Plant. The population of the evaluation was all employees of the Pantex Plant, located near Amarillo Texas. The evaluation was conducted during June, July, and August, 2012. The primary objective of the evaluation was to provide information regarding the status of the safety culture traits at the Pantex Plant.

The evaluation was conducted using the same methodology that aligns with the current U.S. 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. The detailed results presented in this Appendix support the summary results and recommendations provided in the main report.

B.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 0305, 2006). The 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 NRC in the 1991 timeframe 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.

B.3 Scope of Safety Culture Evaluation

The scope of this evaluation was defined to include all contractor employees of the Pantex Plant, including B&W Pantex personnel and subcontractors. The Safety Culture Data Collection Team was on site at the Pantex Plant during portions of June and July 2012. In addition, the Organizational Safety Culture Survey was electronically administered, with the survey being open for completion by employees from June 25 to July 13, 2012.

The Safety Culture Data Collection Team was used by the Independent Safety Culture Evaluation Team to assist in collecting onsite data and was comprised of the HSS Independent Oversight Team. The HSS staff had been trained on applying data collection techniques and conducting focus group interviews.

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

B.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.

B.4.1 Functional Analysis

The purposes of the Functional Analysis are to: (1) clearly identify the organizational units of the Pantex Plant, (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.

In addition, a scoping visit was conducted June 13-14, 2012 so that documentation could be reviewed at the facility and select interviews could be conducted so that plans for the onsite evaluation could be developed. During the scoping visit, interviews or focus groups were conducted with 33 individuals associated with the Pantex Plant.

Documentation Review

During the Data Collection Team's activities, a wide variety of documents were reviewed including Pantex program and project plans, Pantex technical and administrative procedures, work instructions, organization charts, interoffice memoranda, applicable DOE regulations and technical standards, corrective action reports, and root cause analyses.

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.

B.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 38 individual interviews and 44 focus groups were conducted as part of the evaluation. A total of 296 individuals were involved in one these activities (38 in interviews and 258 in focus groups). 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 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 1152 BARS were collected representing 10 organizational behaviors. The data from the BARS is presented as the percentage of

people who had a negative view of the behavior (rating of less than 3), a neutral view of the behavior (a rating of 3) or a positive view of the behavior (a rating of greater than 3). Qualitatively, a neutral view of a behavior is typically treated as a non-positive response and is grouped with negative behaviors as it suggests that personnel are uncertain about the importance of that behavior within the organization.

B.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, approximately 30 observations were conducted. The data represent observations of work activities, various Maintenance Plan of the Day (POD) Meetings, Integrated Plan of the Day (IPOD) Meetings, various Maintenance work activities, Joint Company and Union Safety Council Meeting, President's Safety Council Meetings, ES&H Senior Staff Meeting, Production Staff Meeting, Executive Issues Review Board, Projects Meeting, and a Safety Observations Achieve Results (SOAR) Meeting.

B.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 50 different organizations.

A 20 percent random sample of the total Pantex Plant population, stratified by Work Groups was invited to participate in the survey. This means that 20% of each Work Group, or a minimum of ten individuals from each Work Group (whichever was larger), was randomly selected to participate in the survey. This yielded a total survey sample size of 701 employees of which 437 actually completed the survey, representing a response rate of 62.3%**.** While this response rate is considered to be an acceptable rate of response from which representative conclusions regarding perceptions and attitudes concerning the work environment can be made, it is lower than desirable. Of note, within the Safeguards and Security Division the response rate to the survey was 31.3% while within the Human Resources Division the response rate was 40.0%. Other Divisions with response rates that were especially low include: Manufacturing Division at 50%, Supply Chain Division at 51.3% and Deputy General Manager Division at 53.8%. The especially low response rates in these Work Groups suggest that caution should be taken in extrapolating the survey data from the respondents in these Work Groups out to the larger Work Group populations.

B.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. Developing a massive amount of corrective actions only perpetuates a compliance mentality, which is not conducive to creating and promoting a 'healthy safety culture.'

B.5.1 Leadership Safety Values and Actions

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

Positive Observations

- Most interviewees identified that the General Manager constantly emphasizes that safety, security, and quality must be considered for everything that is done at the Plant.
- Several managers indicated that one of the biggest challenges for the Plant is to try to change a non-nuclear attitude on the part of many of the employees to a more nuclear operations focus and procedure based attitude.
- Examples identified by interviewees and the Team of a management commitment and focus on safety include:
  - Board out front that displays red, yellow or green light to indicate if a safety or security incident has occurred;
  - The Stop Work Authority which anyone in the Plant has the ability to use;
  - Pause campaign to promote the use of a momentary work stoppage to have a discussion and clarification of an identified problem or concern;
  - Formalized meetings that address and discuss safety topics, e.g., President's Safety Council Meeting, Joint Union and Management Safety Meeting;
  - Meetings by various groups at which safety, security and quality are discussed, e.g., Executive Issues Review Board, Utilities morning meetings, ES&H Senior Staff Meeting, SOAR Meetings.
- Some interviewees indicated that management generally does not have a problem missing schedule milestones if it is because of a safety or security issue.
- Some interviewees indicated that management feels a lot of pressure to try to shield workers on the line from production pressures.
- Observations by the Team indicated that while there is much work to be done, there is no direct sense of schedule pressure on the work force and there are always volunteers for overtime if needed.
- Several interviewees indicated that in all likelihood the pressure that employees feel is self-imposed.

Areas in Need of Attention

- Many interviewees indicated that they do not perceive that Pantex Management consistently demonstrates the strongest commitment to safety. Examples included:
  - There is a perception by several interviewees that with budget constraints, safety and training are the first areas to be reduced;
  - Interviewees expressed the belief that support functions, e.g., Fire Department and Security, are viewed as a drain on resources and that production is the main goal;
  - Once Star Status was achieved in the Voluntary Protection Program, there is the perception that the emphasis on that program has diminished;
  - Interviewees indicated that if an action related to safety does not cost anything it will be implemented, e.g., policy on shoe wear, but if money is involved it becomes a battle;
  - Interviewees expressed the belief that the Authorization Basis Group should not be inside the Engineering Division, but outside the line, similar to what was done with the Nuclear Explosive Safety (NES) Group;

- Some interviewees expressed the belief that lightning warnings have been cancelled if something needs to be done in production, e.g. lightning warnings ignored for moves;
- Interviewees described that in the past, Personnel Accountability Drills established a 15 minute criteria to account for all individuals; since B&W has been at Pantex the criteria has changed to 30 minutes and there hasn't been such a drill in some time;
- Some interviewees described that during a recent Plant wide drill with the purpose of ensuring that everyone knew where their outside muster stations were, most individuals did not know where to report and the drill was subsequently cancelled shortly after it was initiated. At least two weeks later, personnel had still not been informed as to where their outside muster stations were located.

- Many interviewees indicated that the Stop Work Authority is not well understood, most individuals do not want to use it, and it requires the Division Manager's approval. Interviewees explained that Management says they want you to use it, but interviewees perceived that if you do, there will be repercussions in the future.
- There is the perception by some interviewees that some of the new managers are not as accepting of the HRO principles as much as the previous management was, e.g., some Division Managers do not want you to talk to them until you talk to their Department Managers.
- Some interviewees expressed their perceptions that the primary emphasis on safety at the Plant is industrial and occupational safety. Management actions or inactions related to nuclear safety, explosive safety and radiation safety have created the perception that production takes priority over safety and that such actions have triggered external inquires like this evaluation.
- Interviewees provided many examples of problems that needed to be fixed to improve quality of the work environment and ensure personnel safety and security, e.g., lack of air conditioning in the Security towers which cannot be used, scalding hot water in the ladies locker room with repetitive efforts to correct, toilets that are unusable for extended periods of time, ceiling openings that allow insects to deposit on desks and office floors.
- Most interviewees indicated that there is a lot of overtime being used because resources are not being replaced when they leave.
- Interviewees indicated that new hires that are in training are counted in the group's resource planning even though they are not qualified to work.
- Interviewees perceive there is a low priority on the maintenance and upkeep of Security equipment, e.g. radio systems are becoming archaic, difficulty in getting personal protective equipment replaced.
- Some interviewees expressed the idea that if management says that a product has to be delivered by a certain date, there will be a product, but it may not be a quality product. Some individuals' performance reviews are perceived to be based upon their meeting schedule dates, even when they have indicated that it is not possible to do so.
- The Team believes that the minimally acceptable response rate to the survey and issues with getting participation in some interviews and focus groups are indications that the message to participate in the evaluation was not communicated well or perceived to be important enough for individuals to act upon. Some interviewees also indicated that many individuals in Security were not interested in supporting efforts for management unless they perceived some direct benefit from the activity.
- Results on the Behavioral Anchored Rating Scale for Attention to Safety indicate that approximately 28% of the Pantex Non-Manager interviewees that completed this scale had negative perceptions about the value of safety in the organization and an additional 30% provided a mid-range score. Such ratings reflect a view that management displays a delicate balance of emphasizing safety, while at the same time making it clear that there is a need to keep up production. Among Pantex Managers completing this scale approximately 68% perceived that safety is clearly understood to be a priority for the organization.
- Results from the Behavioral Anchored Rating Scale on Resource Allocation indicate that 88% of the Non-Manager interviewees that completed this scale are either uncertain or do not perceive that employees have sufficient resources to implement corporate goals, nor do they perceive that the

employees understand how these goals relate to their daily activities. Among Managers approximately 28% had negative perceptions about the allocation of resources and an additional 50% were uncertain in their perceptions about how resources are allocated at the Plant.

- Results from the Behavioral Anchored Rating Scale on Time Urgency indicate that overall about 60% of the individuals that completed this scale perceive that most tasks are completed on time without compromising safety or quality. Only about 50% of Pantex Non-Manager individuals that completed this scale perceive that to be true while 75% of the Managers that completed this scale had a positive perception about Time Urgency.
- Results on the Attention to Safety Scale on the electronic survey were the lowest scores obtained to date compared to a database of other similar organizations' responses to the same questions. This indicates that survey respondents at Pantex had a more negative perception of the importance that safety has to success in their organization as measured by the perceived value the organization places on various safety promoting behaviors. Within the Plant, there were no statistically significant differences between the organizational work groups, but there were statistically significant differences between employee categories on the Attention to Safety Scale. Senior and Department Managers had significantly higher scores on this scale than respondents in all of the non-management employee categories.

B.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 within Pantex were described by interviewees including:
  - Stop Work Authority,
  - Open Door Policy,
  - No More Surprises Program,
  - PULSE,
  - Various meetings,
  - Individual dialogues,
  - DPO,
  - ECP,
  - DOE,
  - Human Resources,
  - Safety Committees,
  - Audits and assessments,
  - Email, etc.
- Some interviewees indicated that there was nothing to inhibit the identification of problems.
- Some interviewees indicated that there are multiple mechanisms for observations for problem identification including, Management By Walking Around, Behavioral Based Safety, Quality Group, Safety Representatives, Executive Issues Review Board.
- Interviewees described that every department has to do self-assessments based upon risk models.
- Interviewees indicated that they make sure that they take care of each other by reporting problems, e.g., snakes, diesel fuel in building where welding was to take place.

Areas in Need of Attention

- Interviewees identified some issues that might inhibit the identification of problems or concerns. These included:
  - A large workload;
  - Individual may not want to take ownership of the problem;
  - Concern over how a manager will respond to the messenger raising issues;
  - Different priorities within the organization;
  - A lack of feedback drives behavior not to raise any more issues;
  - The perception that the culture is not conducive to being open about problems, want to give the appearance that everything is in place, don't make the group or department or plant look bad;
  - Perception that if you raise problems you are a troublemaker, especially if you stop production;
  - Don't want to generate more paperwork;
  - Desire just to get the job done;
  - Very tenured workforce, people may be hesitant to bring things up;
  - Suggestion system has gone quiet; etc.
- Many interviewees indicated that the DPO process is not effective because:
  - It is not well known or advertised;
  - If it has been used the results are not communicated;
  - Unclear when the process should be used and what it applies to, e.g., quality issue between Design and Engineering, Engineering wanted to use DPO, Design said it was not applicable to quality issue (procedure issue); were trying to resolve at the time of this evaluation.
- The most frequently identified issue around problem identification and resolution is the resolution of items that are identified.
  - Several interviewees indicated that the Behavior Based Safety (BBS) observations are not valuable, yet they are required to do a certain number a month; even if problems are identified they won't get fixed.
  - There are multiple and independent databases that are used to enter observation data. Integration to understand commonalities and similar causes to resolve issues appears to be lacking.
  - Interviewees describe that there are no more actions, only reactions; not being proactive, only reactive.
  - There is a strong perception that if the issue identified is not related to production then it will not get fixed or it will take an inordinate amount of time to fix, e.g., two years to get a door stop fixed.
  - There is a belief that the Plant does not do enough causal analysis to really understand how to fix repetitive problems, e.g., Security issue on cell phones is pervasive and repetitive yet no formal causal analysis could be identified.
  - Observations by the Team indicated a lack of any discussion during a meeting on the increase of Problem Event Reports (potential safety precursors) on 27 nuclear safety events, on the spike in precursor events (nuclear, explosive and injuries), on issues with authorization basis, safety basis and unreviewed safety questions, on explosives issues dominated by procedures, and on fire protection deficiencies.
- Many interviewees indicated that work order originators are not routinely provided feedback on their issues when closure is by others.
- Some interviewees indicated that there is a Performance Evaluation Plan objective to keep safety work orders low, below a certain threshold so there is motivation to close those out quickly even if they are not really fixed, e.g. tripping hazard – place a cone over it which mitigates the hazard but doesn't necessarily fix the problem.
- Data from the Behavioral Anchored Rating Scale on Problem Identification and Resolution indicated that only 53% of the interviewee respondents who completed this scale provided a high rating indicating that they perceived that the organization encourages plant personnel to draw upon knowledge, experience and current information to identify and resolve problems positively.

B.5.3 Personal Accountability

All individuals take personal responsibility for safety.

Positive Observations

- Almost all interviewees indicated that they have pride in their work and that they believe they are doing a great patriotic service for their country by working at Pantex.
- Most interviewees indicated that they do what they are supposed to do, that they want to do a good job, and that they want to please the customer.
- Most interviewees believe that people at the Plant are accountable for safety.
- Some interviewees believe that people are held accountable through formalized processes such as pre-job briefings, procedures, qualifications, one on ones.
- Interviewees indicated that a performance management system for non-bargaining unit employees has been recently implemented at B&W Pantex for the first time.
- Senior Management interviewees perceive a cohesive, communicative and team focused management group.
- Both unions at the Plant, the Metal Trades Council, (MTC) and the Pantex Guards Union, (PGU) have safety officers.

Areas in Need of Attention

- Accountability is perceived by several groups to be an issue across the Pantex Organization. Some examples include:
  - The concept of the HRO is being driven largely by a very small group of individuals and there has been a lack of ownership for the consistent implementation of the HRO principles across the Plant.
  - Monetary compensation for safety by individuals was terminated for fear that incidents would not be reported because of the potential loss of compensation, yet interviewees perceive that Senior Managers are compensated for not reporting because they receive safety-related contract bonuses. While plant management has indicated that Senior Managers do not receive either a safety or production related contract bonus, the perception of plant personnel is that they are being compensated with a safety related bonus which in turn is impacting reporting frequencies.
  - Interviewees perceive differential treatment dependent upon organizational level, race and gender, e.g., individuals were told to conduct some battery work without the appropriate paperwork; when the battery blew up the individuals got disciplined while the supervision that instructed them to perform the work was not supportive and was not held accountable.
  - Many interviewees described inconsistent implementation of expectations by supervision and management across the Plant.
  - Some B&W policies at the Pantex Plant are not followed by the DOE Site Office, e.g., shoe policy.
  - Interviewees indicated that there is now more work with fewer people and that individuals are given tasks that they have not been trained for yet they are held accountable for their performance.
  - Human Resources is perceived by many interviewees to be part of the accountability problem because they don't always look at the whole event before attributing blame and disciplining individuals. Interviewees described a lack of an organizational and programmatic evaluation around an event, noting that programmatic evaluation may yield different conclusions.
- Many interviewees indicated that the sick leave behavior among the Security Officers is an example of a lack of accountability not only on the part of the Officers but on the part of Management to allow

the bargaining agreement to support the behavior. The perception of the relationship between the unions and management as described by interviewees from both sides is discrepant.

- Interviewees indicated that many identified problems involve several organizations and it is often not clear who really owns the problem, e.g., procedure problems can cut across 2 to 3 groups (Training, Production, Engineering) and can be difficult to resolve; material moves involve inside and outside groups, usually multiple groups and each group can only resolve their own problems, not those of other groups.
- Data on the Behavioral Anchored Rating Scale for Performance Quality indicates that about 55% of the interviewees who completed this scale are either negative or uncertain in their perceptions that plant personnel take personal responsibility for their actions and the consequences of the actions.
- Data on the Behavioral Anchored Rating Scale for Roles and Responsibilities indicated that 66% of 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.
- Scores across Pantex on the Organizational Commitment Scale from the electronic survey were low in comparison to other DOE contractor organizations that took the same survey. Additionally, statistically significant differences within the Pantex Organization were obtained on the Commitment Scale. The General Manager and Supply Chain Management Divisions had more positive scores on the Commitment Scale than the Project, Safeguards & Security, ES&H, Explosives Technology/R&D, Engineering, Special Nuclear Materials Divisions, and the Prefer Not to Respond Group. The Management Employee Categories had significantly more positive scores on the Commitment Scale than all of the other Non-Management Employee Categories.

B.5.4 Work Processes

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

Positive Observations

- Interviewees and observations by the Team indicated that Pantex holds regularly scheduled meetings to communicate status and discuss work around the Plant. In most cases there are formal agendas, time management of the meeting, and good participation by all parties in the room. Meetings include the IPOD, Maintenance PODs, Production Staff Meeting, Shift Turnover Meetings, Readiness Reviews for production procedures, Executive Issues Review Board, etc.
- The Team made multiple observations of pre-job briefings and maintenance activities during the evaluation. Several examples of well executed processes were identified indicating the capability of the organization to implement work according to industry best practices and standards.
- Interviewees discussed that most of the Support Groups were helpful in getting things done. In particular, the Maintenance Group, Radiation Protection Safety, Planning and the BBS Team were identified.
- Several interviewees indicated that management expects verbatim compliance for following procedures, especially on the production lines. If the procedure cannot be followed the stated expectation is to stop work, discuss it with supervision and process engineering and if necessary the procedure change process will be implemented.
- Some interviewees identified that the change control process for technical documents in the Engineering Division has been recognized by the DNFSB as a process to be used as a benchmark for the DOE Complex.
- Interviewees described a very systematic and formalized organizational change management process to implement a new dress code policy for the Plant.
- Human Performance Improvement Coordinator works with the Safety Team and Human Error team from BBS to conduct human performance evaluations.

- Data on the Behavioral Anchored Rating Scale for Formalization indicates that 70% of the interviewee respondents to this scale have a positive perception of the extent to which there are well-identified rules, procedures, and/or standardized methods for routine activities as well as unusual occurrences. The responses to this scale were the most positive out of all of the behaviors evaluated at Pantex.

Areas in Need of Attention

- Interviewees indicated that perceived issues with formalization included:
  - Inconsistencies in the quality of procedures across the Plant;
  - Needed improvement in the use of post job briefs and the association of the lessons learned from the job into their daily work activities;
  - Processes have become too complicated and in some cases defy logic, and that they are not always followed, e.g., calling a 32 psi water line as hazardous as a high voltage line;
  - Revising and complicating the lockout tagout procedure so that work becomes difficult and time consuming but allows an individual to get qualified on the procedure in 1.5 hours;
  - New Hazardous Energy Control Process has hindered ability to conduct maintenance work, yet contractors do not have to follow the same procedure.
- Interviewees and observations by the Team indicated that there is a lot of emphasis on metrics for processes and in particular comparisons to previous data, but there is not a lot of discussion on how the metrics fit into the Plant goals.
- The coordination of work across the Plant was identified by interviewees as an area in need of improvement. Reasons given included:
  - A lack of qualified workers in some areas can delay work activities, e.g., painters;
  - There is a lack of sharing of labor in a world of limited resources;
  - The Plant has difficulty in keeping engineers and so some things move slowly through that Division;
  - Work packages do not always contain contingency planning, e.g., no planning for the lack of availability of transportation to get parts to a job;
  - A lot of departments at the Plant work in stovepipes (silos) which impacts work and communication across the organization;
  - The weapons programs work independently and often doesn't communicate with other groups, which puts the support groups in a 'traffic controller' role;
  - No real long term planning, basically plan for a couple of days;
  - No integrated POD for the different Maintenance Groups, each work on their own schedule;
  - The IPOD is perceived as a place to discuss 'hot topics' and the goal is to try to stay off the IPOD; and
  - Prioritization of work conflicts are independently managed by each Facility Manager or if necessary by the Department Manager.
- Some interviewees indicated that there is not a uniform sense of respect for Security procedures across the Plant, e.g., piggybacking; Security is not perceived to be a high priority under the same M&O Contractor; there is a military style of management without concern for the reaction of the organization to their directions; and that things are often done to look good so people will believe it must be good, e.g., uniforms, mission statements.
- Data on the Behavioral Anchored Rating Scale for Coordination of Work indicates that overall 55% of the respondents to this scale have a negative or neutral perception of the planning, integration, and implementation of work activities of individuals and groups. Among Managers who responded to this scale 50% 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 organizational work groups or employee

categories on this scale, the overall score was lower than for similar organizations that have taken the same survey.

B.5.5 Continuous Learning

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

Positive Observations

- Some interviewees indicated that they believe that Pantex does communicate and learn from its successes, e.g., celebrations, giving of gifts, discussions around decisions in the IPOD and other meetings.
- The last success most frequently identified by interviewees was achieving 5 million hours without a Lost Time Accident.
- Interviewees indicated that failures are discussed, there is a lessons learned program and that some information is shared from other sites.
- Interviewees identified that there is a Lessons Learned Coordinator within each department that reviews and provides information both internal and external to the Plant.
- ESTARS is used for reading lessons learned. Recent projects were identified as successful and provided as examples, e.g., use of modular buildings brought in to serve as office buildings, teamwork in the design and construction of a boiler project; timely support from engineering in the installation of electrical panels.
- Interviewees described and the Team observed situations in which lessons learned have been or are routinely communicated:
  - Tailgates each morning;
  - Stand downs after significant events, e.g., electrical event in which several individuals received electrical shocks;
  - Various Maintenance Plan of the Day Meetings discuss lessons learned internal to the Plant, e.g. use of improper electrical cord, and from events external to the Plant, e.g. article in the newspaper on arc flash burn.
  - Interviewees indicated that Plant Management sends both positive and negative lessons learned information and statistics to contractor organizations.

Areas in Need of Attention

- While many interviewees identified the concept of lessons learned, the organization is missing opportunities to use this information as part of a learning process.
  - Most interviewees indicated that they were not formally made aware of the NES event that happened in the December 2011 - January 2012 time frame. Those that were aware of the event had received their information informally and the information was fairly inconsistent across interviewees.
  - During the time of this evaluation, no formal lessons learned had yet been captured and communicated about the NES event, even some that would be at the highest generic level.
  - Some interviewees indicated that the only way they are able to learn about successes or learn from success is to go looking for them on the Plant's website and even then they are not obvious.
  - Several interviewees indicated that they perceive there is less information being transmitted than in the past and that they are getting more by reading other sites' web pages than what they get from Pantex internally.
  - When some interviewees were asked about lessons learned they indicated that there are lots of them but they can't remember any of them.

- Interviewees indicated that the Plant keeps making the same mistakes again because the effectiveness of the corrective actions is never properly evaluated.

- Data on the Behavioral Anchored Rating Scale for Organizational Learning indicated that 52% of 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.

B.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., Stop Work, Pause Work, open door policy with supervision, Quality Organization, Operations Center, DOE Site Office.
- Some interviewees indicated that they don't perceive a fear to raise concerns or any inhibitors to reporting problems.
- Some interviewees indicated that the ECP did hold information confidential.

Areas in Need of Attention

- Interviewees and observations by the Team indicated that the ECP could be a more effective program. Examples included:
  - Many interviewees were not familiar with the ECP.
  - The ECP Coordinator reports to the Division Manager of Human Resources rather than directly to the General Manager or Corporate Office.
  - The ECP Coordinator does not attend Senior Staff meetings and is not HRP so cannot go to the South End.
  - There is currently only one ECP Coordinator for 3500 employees. Previously there had been 3 individuals.
  - The Pantex ECP has not been benchmarked against nuclear industry standards.
  - Management does not utilize the ECP as much as it should and has not made it as visible as it should be.
- Many interviewees indicated they perceived subtle forms of retaliation or reprimand for raising concerns, self – reporting, or identifying problems. Examples included being transferred out of a job, denied a raise, fear of being terminated, and being removed as a supervisor.
- Interviewees described that the results of a survey conducted by Pantex as part of the NES event investigation indicated that 8 out of 10 employees believe it is a career limiting move to raise concerns.
- On the electronic survey associated with this evaluation the statement that management does not tolerate retaliation of any kind for raising concerns was agreed to by only 65% of the survey respondents.
- Among all survey respondents, about 65% agreed with the statement that everyone in the organization is responsible for identifying problems. While overall this represents a higher percentage of people agreeing than disagreeing, it still indicates that about 35% of the population did not fully agree with this statement.
- Among survey respondents only 30% of employees feel that they can openly challenge decisions made by management.

- Approximately 30% of the survey respondents believe that constructive criticism is encouraged.
- Approximately 45% of the survey respondents agreed with the statement that they feel that they can approach the management team with concerns.
- Among survey respondents 45% agreed with the statement related to management wants concerns reported.
- Approximately 40% of the survey respondents agreed with the statement that concerns raised are addressed.
- Statistically significant differences among the Pantex Work Groups were obtained on 3 of the Safety Conscious Work Environment Questions from the electronic survey. Questions addressing feeling free to openly challenge management, approaching management with concerns and management wants concerns reported and willingly listens to problems indicated that the Safeguards and Security Division, the Engineering Division, and Special Nuclear Materials Division had significantly lower perceptions of these behaviors than the other work groups had. In addition, the group Prefer Not to Respond also had statistically significantly lower scores on these questions.
- There were statistically significant differences among Employee Categories on all of the Safety Conscious Work Environment Questions; Senior and Department Managers consistently scored higher on all the questions than the other employee categories. Section Managers and First Line Supervisors had statistically significantly higher scores on several of the questions than all of the non –management employee categories, with the exception of the Bargaining/MTC respondents who had more positive scores on feeling free to openly challenge management.

B.5.7 Effective Safety Communication

Communications maintain a focus on safety.

Positive Observations

- Interviewees identified multiple mechanisms for communication in the Pantex Organization
  - Monday morning staff meetings;
  - Monthly Manager meetings;
  - Weekly meetings;
  - Union/Management meetings;
  - One on one communication;
  - Emails;
  - PULSE;
  - Public Address System;
  - IPOD;
  - TV monitors in cafeteria and other places;
  - Turnovers;
  - Open door policy, etc.
- Many interviewees indicated that the small group meetings being held by the General Manager and Deputy General Manager were positive and something new for this management team.
- Most interviewees indicated that they believe they are well informed within their groups of what is going on.
- Observations by the Team indicated that:
  - The Maintenance PODs, the IPOD and some other meetings started with a safety topic.
  - Most meetings were formal, agenda driven and time managed, e.g., IPOD had 27 groups to acknowledge in 30 minutes.
  - Good interaction and discussion was observed in the Production Staff Meeting.

Areas in Need of Attention

- Several interviewees indicated that there are issues around the effectiveness of communication in the Plant. Examples included:
  - Many interviewees indicated that they want to see more managers in the field.
  - There is the perception that people are talked at and not listened to.
  - Interviewees described communication between supervisors across the Plant as poor.
  - Information is not perceived to flow down well from the top of the organization; lateral and upward communication is perceived more positively.
  - Many interviewees indicated that they only know about their own group and don't receive information about others.
  - Interviewees generally described information at the Plant as being 'stovepiped.'
  - Interviewees indicated a lack of communication between several levels in the organization, e.g., SPOs and management.
  - The size of the plant was often identified as being an impediment to communication.
  - Senior management is described as only being seen at larger group meetings and typically only when there has been problem.
  - There is a perceived cultural gap in the preferred modes of communication across employee age generations, e.g., texting versus face to face.
- The Team and interviewees identified several examples of missed opportunities to enhance the communication process within the Plant:
  - Lack of information around the NES event; only the change in personnel and organizational structure were communicated and that information was described by interviewees as inconsistent across the Plant.
  - Interviewees indicated that there has not been a formal change management process on the Stop Work Procedure since the NES event and the application of that process is highly subjective.
  - Interviewees on the South End were not aware of the survey for this evaluation or for the reasons that it was being conducted; some were not aware that they had email and yet they have been here for several years.
- Many interviewees indicated that communication for everything is on a need to know basis and is also dependent upon what department you work in.
- Data from the Behavioral Anchored Rating Scale on Communication indicated that only 33% of the interviewee respondents who completed that scale had positive perceptions about the exchange of information, both formal and informal, between the different units in the Pantex Organization, including the top-down and bottom-up communication networks.
- Data from the electronic survey on several of the Communication Scales indicated that Pantex survey respondents had some of the lowest scores across the DOE database on their opinions about perceived Trust in and Desire for Communication.
- Statistically significant differences were obtained between Employee Categories on the Perceived Accuracy in and Desire for Communication Scales with Senior and Department Managers having significantly higher scores than all other categories including Section Managers.
- No statistically significant differences were obtained between the Pantex Work Groups on any of the Communication Scales indicating that the low perceptions around the communication process is a pervasive opinion across the organization.

B.5.8 Respectful Work Environment

Trust and respect permeate the organization

Positive Observations

- Some interviewees described efforts by the General Manager to improve relationships and communication through the small group meetings being held across the Plant.

Areas in Need of Attention

- Many interviewees indicated that the quality of the work environment at Pantex was poor. In addition to the facilities and infrastructure being old and in need of upgrading, many interviewees also perceived that B&W Senior Management had little respect or concern for employees. Numerous individuals described examples of intimidation and threat if they were perceived to be creating difficulties.
- Pantex 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 lowest score obtained in the database across similar organizations that have taken the same survey.
- Results from the Communication Trust Scale on the electronic survey indicated no statistically significant differences between work groups or employee categories among survey respondents. The lack of differences between groups within the organization indicates that the lack of trust in communication is pervasive throughout the Plant.
- Results obtained on the Communication-Interaction Scale from the electronic survey indicated that overall Pantex survey respondents have the most negative perceptions regarding the desire for interaction from other organizational levels (superiors, subordinates, and peers) in the database across similar organizations that have taken the same survey.
- Statistically significant differences were obtained between Employee Categories on the Communication – Interaction Scale with Senior and Department Managers and Section Managers having significantly higher scores than respondents in the Non-Management Groups with the exception of Bargaining Unit- PGU. No significant differences were obtained on this scale across organizational work groups.

B.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

- Members of the Team observed a questioning attitude on the part of the General Manager during a meeting that was evaluating data and proposing corrective actions to resolve issues where there was an inadequate amount of information and data to fully understand the causes of the problems.
- Observations by the Team of various PODs and work activities generally indicated good participation by the individuals present.

Areas in Need of Attention

- Many interviewees indicated that they perceived that a questioning attitude was most often not encouraged or appreciated. While many individuals acknowledged that Senior Management said they wanted a questioning attitude, multiple examples were provided of individuals being intimidated to raise concerns or identify problems.
- Interviewees indicated that while formal processes exist to promote a questioning attitude the actual use of these processes, e.g., DPO, Stop Work, are not well received by Senior Management and often require their approval to be implemented thereby inhibiting many individuals from actually using them.

B.6 References

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