

**Department of Energy**

Washington, DC 20585

February 3, 2004

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DNE SAFETY BOARD

The Honorable John T. Conway
Chairman
Defense Nuclear Facilities Safety Board
625 Indiana Ave, NW, Suite 700
Washington, DC 20004

Dear Mr. Chairman:

The purpose of this letter is to provide an interim status on the actions taken in response to your letter to Secretary Abraham of December 2, 2003, regarding the glovebox fire that occurred in Building 371 at the Rocky Flats Environmental Technology Site (RFETS) on May 6, 2003, and deficiencies in the Integrated Safety Management System.

Specific to your December 2, 2003, letter, significant deficiencies in both the Rocky Flats Field Office (now Rocky Flats Project Office, RFPO) and Kaiser-Hill, LLC organizations allowed the fire event to occur, and have implications for overall safety management at the RFETS. Both the Department and Kaiser-Hill have reviewed your letter in detail and are moving fairly aggressively. The RFPO manager took the deliberate decision to shape the analysis across a broader scope to identify common elements of failure and is taking steps to strengthened the RFPO oversight.

Kaiser-Hill has also initiated multiple independent assessments to address technical questions related to the fire event, and also programmatic issues regarding Integrated Safety Management. Although considerable progress has been made in sixty days, the full causal analysis and corrective action plan development process is not complete. Although not yet complete, I am including the Kaiser-Hill response to the RFPO as part of this interim response to your letter. Similarly, the RFPO causal analysis and corrective action plan is included.

Programmatic weaknesses have been identified that infiltrated the RFPO oversight program and inhibited their ability to provide an effective and appropriate degree of safety oversight. These weaknesses were manifest in the form of reduced quantity of technical assessments, degraded formality of oversight (i.e., modes of communicating issues, tracking issues and corrective actions, etc.), and the lack of a comprehensive assessment plan. In addition, our approach to improving the implementation of the RFETS work control process was flawed. Although the site made conscientious efforts to meet the commitment to the Board regarding work control, the methodology employed



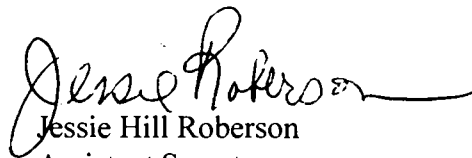
proved to be ineffective. The corrective actions delineated in the enclosure are focused on correcting programmatic issues that have implications for site activities through closure, rather than the specific symptoms, and will result in improved RFPO safety oversight. Likewise, the Kaiser-Hill corrective action plan satisfies the expectations in that it is built from a top-down philosophy looking ahead to project completion, and firmly commits senior management to reinforce and strengthen the safety culture at the site.

On a broader level, an independent review team has been chartered to identify and examine Department of Energy (DOE) wide events associated with fires involving radioactive materials. The objective is to understand what factors contribute to the occurrences of these fires as well as the Department's performance at taking effective corrective action to prevent these types of occurrences.

Additionally, based on the very powerful insights we have already gained from review of the Rocky Flats fire we are reinforcing our oversight of contractor's activities. We require significant events to be reported to the Acting Chief Operation Officer on a real time basis. Each event is discussed with the field manager to ensure a thorough review and follow up. The Safety Metrics we have identified for monitoring are tracked and discussed with all the field managers on a weekly basis. Complex wide trends are reviewed. Additionally, each DOE field manager reporting to me has signed up to performance expectations that require an average of eight hours per week in the facilities. Each field manager has also agreed to safety improvements tailored to their specific site and performance issues. The recent reorganization has helped to strengthen the ability of Headquarters to provide oversight.

We will continue to keep the Board staff informed of progress being made on the actions addressing your concerns. Also, the Department will provide the final response to your December 2, 2003 letter by April 1, 2004. If you have any questions concerning the Rocky Flats efforts please call me at (202) 586-7709 or Inès Triay, Deputy Chief Operating Officer, at (202) 586-0738.

Sincerely,



Jessie Hill Roberson
Assistant Secretary
for Environmental Management

Enclosures (3)

cc: Mark Whitaker, DR-1
Frazier Lockhart, RFPO

SEPARATION

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Corrective Action Plan for **Self Assessment and Causal Analysis of Safety Oversight Program**

This Corrective Action Plan is in response to the self assessment performed by the Rocky Flats Project Office (RFPO) on its safety oversight program. The self assessment and companion causal analysis were performed in response to concerns expressed by the Defense Nuclear Facilities Safety Board (DNFSB) in a December 2, 2003 letter to the Secretary of Energy. The issues and findings documented in the self assessment support the concerns expressed by the DNFSB, and indicate programmatic weaknesses that must be addressed for the RFPO to fulfill its mission of safe closure of the Rocky Flats Environmental Technology Site. The corrective actions committed to in this plan were developed to resolve the root, direct, and contributing causes of the aforementioned weaknesses and prevent their recurrence.

No.	Action	Due Date
	Management and Supervision	
1.1	Selection of RFPO Manager with site operations and project background.	Complete
1.2	Promulgate and distribute Safety and Oversight Policy.	2/13/2004
1.3	Create and fill a Senior Safety Advisor position to serve as RFPO safety advocate.	Complete
1.4	Reorganize to achieve line management accountability for safety.	Complete
1.5	RFPO will implement a post-RIF organization with limited, but high performing individuals as supervisors.	Complete
1.6	Incorporate safety oversight responsibilities into supervisory performance expectations.	2/13/2004
1.7	Update the Functions, Responsibilities and Authorities Manual.	3/12/2004
1.8	Update staff work plans to clearly identify oversight responsibilities, including expectations for direct observation of field work.	2/27/2004
	Assessment Program	
1.9	Establish a team to develop a two year assessment and oversight program based upon the existing Closure Project Oversight Program (CPOP) Manual.	Complete
1.10	Generate a formal assessment schedule.	2/13/2004
1.11	Identify an Assessment Coordinator.	Complete
1.12	Evaluate the Rocky Flats Corrective Action Tracking System (RCATS) and alternative for corrective action tracking, and make an appropriate selection.	2/27/2004
1.13	Provide training on the Oversight and Evaluation (O&E) database to RFPO staff.	2/27/2004
1.14	Issue formal guidance on O&E usage (increase scope of entries) and the expectations for performing follow-up activities and generating corresponding O&E entries.	2/13/2004

**Corrective Action Plan for
Self Assessment and Causal Analysis of Safety Oversight Program**

	Quality Assurance	
1.15	Host an external (EM HQ) assessment of the RFPO oversight program.	May 2004
1.16	Perform an internal Integrated Safety Management System assessment.	August 2004
	Work Package Reviews	
2.1	Prepare a procedure documenting the process and expectations for performing work package reviews, including a work package selection process.	2/27/2004
2.2	Develop a list of RFPO personnel with the appropriate background to perform work package reviews.	2/27/2004
2.3	Work package review efforts will be included in the Monthly Safety Reviews with senior management.	March 2004
2.4	Formally assess the work package review effort for efficacy.	May 2004

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Rocky Flats Project Office

Self-Assessment and Causal Analysis

of the

Safety Oversight Program

January 2004

Self-Assessment and Causal Analysis of the Safety Oversight Program

PURPOSE

The Rocky Flats Project Office (RFPO) recognizes that its safety oversight program requires improvement in order to achieve its mission of safe closure of the Rocky Flats Environmental Technology Site (RFETS). This evaluation and causal analysis is intended to assess the current status of the safety oversight program, document specific weaknesses and identify the root and contributing causes for those weaknesses.

Visits to the site by the Defense Nuclear Facilities Safety Board (DNFSB) staff over the latter half of 2003 provided the impetus for performing this assessment and causal analysis. The DNFSB's evaluation of the Department of Energy's oversight at the RFETS was documented by a letter to the Secretary of Energy on December 2, 2003. The DNFSB letter was the culmination of several visits to the RFETS following a glovebox fire in Building 371. This assessment and causal analysis will be utilized to develop a comprehensive corrective action plan focused on improving the scope, depth, and integration of the RFPO oversight program.

SCOPE

The December 2, 2003 letter from the DNFSB focused largely on the May 6, 2003 glovebox fire in Building 371, and weaknesses in the Integrated Safety Management System at the RFETS. This evaluation examined the overall safety oversight program implemented by the Department of Energy at the RFETS, and thus encompassed the focus areas of the DNFSB letter. Oversight of the major nuclear and non-nuclear facilities were evaluated as well as the infrastructure to document, transmit, track, and close observations and findings. The evaluation included a review of the formal and informal oversight techniques employed by the RFPO, and the management systems supporting these efforts.

APPROACH

The DNFSB letter and its attachment were reviewed by current senior RFPO managers and selected staff members. Although there are a few details in the DNFSB report that the RFPO disagrees with as factually incorrect, the conclusion that the RFPO safety oversight program has degraded is not disputed. The assessment team was established to evaluate in detail the RFPO oversight program, document the specific weaknesses and determine their cause(s). Traditional methodologies were employed to accomplish the assessment portion including personnel interviews and document reviews.

The team worked on a compressed schedule, and had to deal with certain gaps in information and historical decision making processes due to the unavailability of personnel due to a recent reduction in force. The statements of individual's were not accepted as fact unless corroborated by documentation or similar statements from other

Self-Assessment and Causal Analysis of the Safety Oversight Program

individuals. Upon completing the identification of what is believed to be a fairly comprehensive set of deficiencies an analysis was performed to determine their underlying causes. The primary causal analysis technique employed was change analysis, although some direct derivation techniques were employed.

RESULTS

The team identified deficiencies in all facets of the safety oversight program. These individual deficiencies were subsequently analyzed and combined into six (6) findings. Five of the findings fell directly under the auspices of the safety oversight program and lead the team to generate a significant issue involving the safety oversight program. The sixth finding, although related to oversight activities, was considered significant enough to be singularly elevated to an issue because it involved a commitment to an external oversight organization, in this case the DNFSB. This issues and supporting findings detailed below capture systemic breakdowns in the RFFO safety oversight program. The Rocky Flats Field Office (RFFO) name changed in January 2004 to Rocky Flats Project Office. The use of the RFFO acronym reflects to name at the time of the incident and the development of the findings.

Issue 1: The RFFO safety oversight program has degraded over the past two years.

This issue is based upon the five findings described below and represents a programmatic breakdown in a fundamental responsibility of the field office. The findings address all levels of the safety oversight program, from policy to assessment performance and corrective action tracking.

Finding 1: RFFO management gave the perception that safety had become less important.

This finding is based almost exclusively upon personnel interviews. Several safety personnel felt that management did not really want them to be identifying safety concerns. They felt management's primary concern was schedule acceleration and that thorough safety oversight was an impediment to that objective. It is also possible for these statements to be viewed as an excuse for poor individual performance.

The arrival of a new RFFO Manager in mid-2002 brought a clear change in management style. The new RFFO Manager challenged his staff to support and defend their conclusions and recommendations with facts. This approach included requiring his safety staff to present convincing data when they believed a safety issue existed. In addition, prior to advocating safety related responses that could impact schedules (i.e., safety stand-downs or safety pauses) data demonstrating the effectiveness of these tools was requested. The RFFO safety organization was not accustomed to this approach and perceived these requests to be an indication of reduced concern for the safety program.

Self-Assessment and Causal Analysis of the Safety Oversight Program

During interviews safety personnel also expressed concern that RFFO senior management had informal discussions on safety issues with contractor management, with no RFFO safety personnel present. Several personnel also indicated that the Manager became more energized on issues potentially impacting schedule, as compared to issues impacting safety. The combination of the conditions described above produced the perception that safety had become less important. However, it should be noted that the Manager never stated that safety was unimportant or less important, rather emphasizing the vital role of safe work performance.

Finding 2: The RFFO formal assessment program was poorly utilized.

The RFFO Manual 220.1, Closure Project Oversight Program (CPOP), describes and proceduralizes a rigorous oversight and assessment program. The CPOP manual has chapters ranging from assessment performance to verification and closure of assessment findings. It includes the Rocky Flats Corrective Action Tracking System (for tracking assessment results) as well as use of the Oversight and Evaluation (O&E) database. There are chapters dedicated to self-assessment and Technical Evaluation Reports (TERs). Unfortunately, the CPOP appears to have been virtually ignored, particularly in 2003. The following specific weaknesses were identified in the evaluation.

- The RFFO integrated assessment schedule was no longer maintained. It is unclear why this was allowed to occur. The individual responsible for maintaining the assessment schedule and tracking schedule performance was assigned a new position in late 2002, and the responsibility was apparently not reassigned.
- A substantial decrease in the number of formal assessments performed by the RFFO occurred between 2002 and 2003. Records indicate only five assessments were performed in 2003.
- There were no records of TERs over the past twelve months. The TER process is designed to document technical issues identified by RFFO staff, forwarding them to the appropriate RFFO Subject Matter Expert, and tracking the issue to closure.

The CPOP remains an active and appropriate RFFO procedure and provides the necessary formality for achieving an effective oversight posture. However, the failure to use this document represents a significant programmatic weakness.

Finding 3. Over reliance on Facility Representatives for performing safety oversight.

Although the Facility Representatives comprised only twenty-five (25) percent of the Safety Programs organization they represented the vast majority of the documented safety oversight performed by the RFFO. In addition, based upon the indicators below it is clear that senior management relied primarily on their assessment of operational safety.

Self-Assessment and Causal Analysis of the Safety Oversight Program

- More than 95% of the entries in the O&E database are from the Facility Representatives. The CPOP requires the use of the O&E database by all RFFO staff and managers to document routine oversight activities performed. This evaluation also noted inconsistent O&E reporting by the Facility Representatives despite the impressive percentage of entries they generated.
- A review of Monthly Safety Briefings for 2003 indicates a clear focus on Facility Representative assessment of activities based upon briefing time allotted.
- The performance expectations for Safety Programs personnel, other than Facility Representatives, were not closely monitored by direct supervision or senior management. Consequently, there is little documentation of oversight activities performed.
- The majority of the Safety and Health Division positions in the RFFO organization were eliminated in the Position and Functional Analysis published eleven months before the effective date of the Reduction in Force.
- A large percentage of Safety and Health Division personnel were focused on finding alternative employment during 2003, and unlike Facility Representatives, participated in numerous voluntary details to other agencies. It should also be noted that several Facility Representatives left during 2003, but these individuals retired or requested reassignments to other EM sites (and one to the Golden Field Office).

Management relied substantially on Facility Representative efforts and failed to complement their daily oversight with the necessary support from other SMEs in the project and safety organizations.

Finding 4. The RFFO did not formally transmit safety observations and findings or track them to closure.

The formal transmittal of safety issues and concerns from the RFFO staff did not occur. The CPOP provided the necessary guidance, but more informal and timely methods were used.

- Facility Representatives' observations and deficiencies were transmitted via e-mail to the Safety Analysis Center. Typically, O&E database entries were reviewed by the Field Assessment Division Director daily and those deemed to be notable were transmitted electronically to the contractor for inclusion in the Safety Analysis Center (SAC) daily report. Although this method achieved timeliness, it lacked formality and often tended to reduce the RFFO's involvement in issue closure and verification.
- Facility Representative observations and findings were not tracked to closure. As stated above, the SAC process was often a point of closure for RFFO issues. However, this closure process is not consistent with the CPOP and did not produce an auditable record. Also, very few follow-up entries were found in the O&E database documenting corrective actions taken in response to an earlier O&E.
- Verification of corrective action implementation performed on the informally

Self-Assessment and Causal Analysis of the Safety Oversight Program

transmitted issues and concerns was also missing from the record. While it is not expected that all corrective actions will be verified, evidence of a sampling process was not found.

- The RCATS database was the official database for tracking issues and concerns (per the CPOP), and this database was archived in early 2003. A replacement system for the RCATS did not exist when the system was archived and does not exist currently.

Finding 5. The Oversight and Evaluation (O&E) database was relied upon as the primary documentation of oversight, but was not effectively implemented.

The O&E database is included in the CPOP, and expectations for its use are documented. Facility Representative Work Plans were reviewed and found to explicitly require the use of this database for documenting oversight activities. Other organizational work plans were not reviewed, but personnel acknowledged the requirement for using the database.

- As stated earlier over 95% of all O&E entries were made by Facility Representatives. Other Safety Programs organizations had few, if any, entries in 2003. This lack of documentation from other safety organizations represents a gap in verifiable oversight activities performed.
- RFFO project personnel had a modest number of entries regarding Predetermined Work Activities. The entries from project personnel establish the fact that entering data into the O&E was a known requirement.
- A review of Facility Representative entries identified a disturbing trend: entries appear to have drifted towards documenting events, rather than documenting actual oversight activities performed. Discussions with several Facility Representatives identified confusion as to what was required to be entered. Some individuals felt it unnecessary to document routine oversight that did not identify a concern. They indicated that no entry for a particular day meant that observed activities were meeting expectations. They also indicated a desire to document events such as skin contaminations for trending purposes.
- Facility Representative logkeeping did not fill in the gaps in O&E to definitively ascertain what activities were observed and how frequently. When the O&E database was first released and requirements issued for its use, some Facility Representatives complained about duplicate reporting (in logs and in O&E) of oversight performed. It was decided, but not documented, that you had to document your oversight in at least one of these mediums. However, any deficiencies had to be in the O&E. Knowledge of this direction has apparently been forgotten over time.
- Several individuals stated they had not made O&E entries because they were unaware of the specific requirement to use it (in the CPOP), and did not know how to access the database.

Self-Assessment and Causal Analysis of the Safety Oversight Program

Issue 2 / Finding 6. RFFO's response (and subsequent commitment) to the DNFSB's 2002 concern and letter regarding work control was ineffective.

This finding was elevated to a stand alone issue due to its significance, and the desire to have a separate causal analysis (due to the distinct nature of this finding). In 2002 the RFFO committed to perform a series of reviews on work packages in order to improve work control at the RFETS. Although the RFFO efforts were well intended they failed to produce the desired outcome for the following reasons:

- The selection process for identifying specific work packages for review was not documented, and was left to the discretion of an individual who was not an SME on work control. Consequently, the work packages selected were often already closed by the time RFFO staff received them.
- The RFFO review often resembled a quality control check more than an objective evaluation of work package content and appropriateness. This was exacerbated by the number of closed work packages reviewed.
- The desired results were not well understood, nor was the process for performing the reviews. Although the individuals performing the review were not work control SMEs, they had been trained on the RFETS Integrated Work Control Program, and briefed on what to look for when evaluating the packages.
- Walkdowns of high hazard work packages were performed sporadically and were reviewer dependent. A requirement to walkdown work areas was not established, nor were other activities such as attending work package development meetings.

Self-Assessment and Causal Analysis of the Safety Oversight Program

CAUSES

As mentioned in the Approach section of this report, causal analysis was performed on the identified issues using change analysis and direct derivation techniques. The causal analysis is performed to ensure that the corrective action plan will focus on the areas requiring improvement in order to avoid of recurrence of the stated issues. The root cause for issue one is followed by the direct and contributing causes for issue 1, and then the causes for issue two are presented.

Issue 1 Root Cause: RFFO senior management became complacent regarding safety performance at the site, partly due to satisfaction with the improved safety trend statistics.

When the new senior management team (Manager, Deputy Manager, and Assistant Manager for Safety) arrived at the RFETS in 2002 they were provided numerous briefings on all aspects of site status and performance metrics. With respect to site safety, the briefings presented contained graphs and charts of safety performance in comparison to prior years. Overall, the safety metrics (i.e., criticality infractions, skin contaminations, lost work days, OSHA reportable events, etc.) sent a positive message regarding safety performance at the site. The statistical data in combination with no significant personnel injuries created a comfort level with the status quo. This ultimately led to complacency regarding the safety oversight program, and the belief that the field office could be reducing the rigor of its safety oversight.

Direct and Contributing Causes:

Senior management's commitment to safety was ambiguous.

The RFFO Manager stated he wanted work performed safely and he wanted to accelerate schedule. Some RFFO staff believed that these desires were in conflict, and that questioning the effectiveness of a safety stand-down was an example of surreptitious means to keep work on or ahead of schedule. Although this was not the former Manager's intent, the lack of a formal safety policy made his actual position on safety unclear to staff members.

RFFO senior managers had no prior field experience and did not value existing oversight infrastructure.

The management team assembled in 2002 was well versed in project management, but had no recent experience in field oversight. They were subsequently on a steep learning curve from the moment of their arrival, familiarizing themselves with project and management activities as well as the safety program. The three most important senior managers for safety issues at RFFO changed at essentially the same time resulting in a sharp loss in site corporate-level knowledge. Decisions to move away from the more

Self-Assessment and Causal Analysis of the Safety Oversight Program

rigid structure of the CPOP, and formal systems such as RCATS (which is not user-friendly), are now known to have been premature and can be attributed to a lack of historical knowledge of these programs (why and how they were developed) and a lack of personal investment in these systems. The impending Reduction in Force, the extensive resources required to implement CPOP and RCATS, and the favorable safety performance data provided management sufficient information at that time to make the decisions. However, a streamlined replacement infrastructure should have been developed.

Supervision was less than adequate.

Staff work plans for 2003 specified oversight activities to be performed and methods for communicating results. Many staff were not supervised to their work plans, and revised work plans were not generated by their supervisors. Many supervisors were less demanding of their staff due to the impending Reduction in Force, and their desire to allow personnel to look for alternate employment.

The impending reduction in force impacted productivity.

The looming Reduction in Force reduced morale and many (not all) individuals' desire to perform their jobs at expected levels. Many staff member were allowed to pursue details at other federal agencies to assist in job placement. Performing job searches and preparing applications was allowed during the normal duty day, all of which impacted the productivity of the field office.

Safety personnel were often pitted against RFFO project personnel.

Part of the reason safety personnel felt safety had become less important was that they were confronted by RFFO project staff on safety issues. The safety staff indicated a discomfort with RFFO project personnel presenting the contractor's arguments, and believed this stemmed from a desire to accelerate schedule and indicated a loss of objectivity.

The role of the Safety Analysis Center (SAC) within the context of the RFFO oversight program was not documented.

The SAC has been in use for several years, but its role is not documented in any field office procedure or policy document. The transmittal of safety related issues and events to the SAC is not defined, nor is the end result of this transmittal. It appears to be a common perception that once an issue appears in a SAC report the originator is relieved of further action. This has created gaps in issue tracking and closure.

Self-Assessment and Causal Analysis of the Safety Oversight Program

Issue 2 Root Cause: The methodology and expectations for performing work package reviews were inadequate.

With the exception of an informal outline for performing quarterly work package reviews, there were no procedures to detail how work package reviews were to be performed. The quality of the reviews and the resulting reports were dependent primarily on the experience, motivation, and integrity of the assessor. Considering the limited work control experience of several of the assessors this was a glaring omission.

Direct and Contributing Causes:

Supervision of the work package reviews was less than adequate.

There was little coordination or supervision provided for the review effort. Although supervision acknowledged that the products of the reviews were not always of sufficient quality, there was little effort placed in correcting the deficiencies. Supervision found it extremely difficult to motivate the staff due to the perception that their (Safety and Health Division personnel) efforts were not being supported by management.

Personnel performing the reviews were Subject Matter Experts in areas other than work control and lacked specific knowledge of work planning and execution.

Although most of the Safety Programs personnel attended customized training on reviewing work packages, they did not have adequate knowledge of the Integrated Work Control Program or possess the necessary assessor skills to effectively perform the reviews. The results (Findings) of many of the reviews were not defensible and thus were considered of little value by the contractor.

The work package selection process was poor.

In order to perform effective reviews of work packages, the choice of work packages should be based on the complexity of the activity and the risk/hazards associated with the performance of that activity. The work packages chosen in the majority of reviews did not consider these factors. The need to consider these factors had been discussed, but was not documented. Also, there was no consideration regarding the current status of the work packages (i.e., the best choice of work packages to review would be approved packages that have not yet commenced work). Many work packages that were reviewed were completed packages. There is little value in telling the contractor what they should have done after the work has been completed.

SEPARATION

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January 23, 2004

04-RF-00105

Frazer R. Lockhart
Manager
DOE, RFPO

KAISER-HILL COMPREHENSIVE CORRECTIVE ACTION PLAN – AMP-001-04

Ref: John T. Conway, Chairman, DNFSB, ltr, to The Honorable Spencer Abraham,
December 2, 2003

The Defense Nuclear Facilities Safety Board (the Board) requested that the Department of Energy, Rocky Flats Project Office (DOE-RFPO) provide a corrective action plan regarding how DOE and its contractor at the Rocky Flats Environmental Technology Site (RFETS) will address the findings documented in the referenced correspondence. This letter outlines the major actions being taken by Kaiser-Hill Company, LLC (Kaiser-Hill) in response to the concerns and issues raised. These actions are specifically targeted to address the problems that are associated with:

- Implementing the five core functions of Integrated Safety Management.
- Improving work planning, with particular attention paid to hazard analysis.
- Strengthening our Safety Management Program with a major focus on the combustible control program.
- Fully understanding the Building 371 Glove Box 8 fire event and failures, including mistakes made during the building evacuation.

Building 371 Glovebox 8 Fire

Mark Spears, my Vice President and Project Manager for Material Stewardship, is leading an independent investigation focused on the glove box 8 fire in Building 371. That investigation is underway with a well-qualified team of independent experts. To ensure his full attention to this investigation, I have directed him to delegate the day-to-day operations of Material Stewardship to his Deputy Project Manager.

The current schedule for that investigation includes:

- Interviews and field investigation work, completed January 20, 2004.
- Discussion of investigation and preliminary results with Board staff (Massie), completed January 21, 2004.
- Investigation Report review and approval, scheduled for February 6, 2004.

- Completion of the Independent Fire Cause and Origin report by February 2, 2004.
- Briefings with the DNFSB and DOE Headquarters staff the week of February 16, 2004.

Sitewide Implications and Corrective Actions

The fire, your report, and our subsequent evaluations have raised larger questions about the health of the Site's ISM system implementation. Independent from the investigation of the fire, I have embarked on four additional reviews to address these broader issues:

1. A cause analysis of three events (Valve Vault 14 demolition, isolation of incorrect fire protection riser in Building 440, and Zone I duct removal in Building 707 E Module) that had been reported to the Price Anderson Office of Enforcement. This cause analysis was performed by the Safety, Engineering, and Quality Programs (SE&QP) staff with Project support. In addition to the three events cited above, I asked the team to evaluate other significant work planning and work control events that have occurred over the past year. This team reviewed over 1500 events reported through our Safety Analysis Center (SAC) and identified 103 with specific work planning and execution issues requiring in-depth analysis.

The results of the analysis indicated that 31% of the work control events over the last year were related to inadequate work package development, and 47% were related to inadequate work package compliance.

2. A review of several significant events during FY03. These include the issues identified in the DNFSB letter concerning Integrated Safety Management (ISM), the glovebox fire in B371, and the Price Anderson Investigation Summary. The team developed a list of underlying, common causes and recommended a comprehensive corrective action plan to address those causes.
3. An independent review of key safety functions including cause analysis, corrective actions, and assessments by a corporate team from CH2M Hill. This review was started January 12, 2004.
4. An independent review of our Integrated Safety Management System by a team from Washington Safety Management Solutions, LLC. This review is scheduled to begin January 26, 2004.

Based on the results from 1 and 2 above, it is clear that the following weaknesses exist:

- As the Site has progressed from nuclear operations to D&D, we have seen an erosion of compliance with work packages and procedures. Analysis of work control related events and workforce feedback indicate that some levels of supervision and some work teams do not view D&D work packages and procedures as necessary to performing work safely.
- A number of successes in production, reductions in significant nuclear hazards as the Special Nuclear Material (SNM) has left the Site, a transition to conventional industrial hazards, and improvements in OSHA statistics led to overconfidence and a tendency to downplay the significance of events, errors and leading indicators.
- The emphasis on line management ownership of safety led to a lack of balance between project authority and independent compliance and safety functions.

To address these weaknesses, a comprehensive set of corrective actions was developed and approved by the newly formed Executive Safety Review Board (ESRB). Further corrective actions will be developed as items 3 and 4 above are completed. Attached is an initial, draft corrective action plan that focuses on these underlying weaknesses to begin to strengthen three basic areas:

- Work Planning and Execution
- Cause Analysis and Corrective Actions
- Assessments

The corrective action starts with me. I have made my performance and safety expectations clear throughout line management. I have met collectively and individually with my project managers and reinforced my expectations in the areas of:

- Accountability for both safety and performance
- Critical cause analyses and effective corrective actions
- Floor presence and mentoring by Senior Management and Safety Professionals
- Open internal and external reporting

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Frazer R. Lockhart
AMP-001-04
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- Procedural compliance
- Self and independent assessments

To drive enduring results I have formed and personally chair the ESRB. The ESRB was established to oversee the identification, analysis, reporting, and corrective actions of safety significant events and issues with programmatic implications. The purpose of the ESRB is:

- Provide senior, seasoned crosscutting perspective
- Ensure root causes are accurately determined
- Ensure proposed corrective actions adequately address the causes
- Provide strong corporate support for corrective action implementation
- Provide assurance that corrective actions have achieved the desired results
- Provide feedback and senior management direction concerning the focus and conduct of assessments

I have taken steps to promote an active and productive interaction between SE&QP and the Projects that emphasizes a self-critical, objective assessment of safety and compliance. A balanced set of critical independent assessments and self-assessments is being scheduled based on risk and potential consequences. These are aimed at providing useful and timely information to line management for identifying safety issues, preventing future events, and highlighting opportunities for improvement.

I am in the process of personally re-emphasizing to line management (Vice Presidents through job supervisors) their accountability for compliance with Kaiser-Hill and DOE requirements.

We have looked carefully and introspectively at the Board letter and at other indications of our safety performance. A detailed crosswalk was used to evaluate our proposed corrective actions to each of the specific issues in the Board letter. I believe the commitments contained in the table below will effectively address both the findings and the root causes of the issues identified in the letter.

January 23, 2004
Frazer R. Lockhart
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Action	Investigation/ Assessment	Report Completion	Corrective Actions Identified	Corrective Actions Implemented	Effectiveness Assessment
Independent Building 371 GB 8 Fire Investigation	12/19/04 - 2/2/04	2/6/04	March 2004	TBD	TBD
Cause Analysis of 3 events reported under PAAA (Item 1)	10/29/03 - 11/24/03	12/10/03	January 2004	May 2004	November 2004
Collective review of corrective action plans for FY03 significant events (Item 2)	12/29/03 - 1/9/04	1/9/04	1/21/04	May 2004	October 2004
Corporate independent review of key safety functions (Item 3)	1/12/04 - 1/16/04	1/30/04	February 2004	TBD	TBD
Independent review of ISM System (Item 4)	1/26/04 - 2/6/04	2/13/04	March 2004	TBD	TBD

As line management is accountable for safety, I am looking forward to working with you and your staff as we work together to ensure the site is closed safely.



Alan M. Parker
President & CEO
Kaiser-Hill Company, LLC

Attachment:
As Stated

Original and 1cc – Frazer R. Lockhart

cc:
Ed Westbrook – DOE, RFPO

DRAFT A

KAISER-HILL COMPREHENSIVE CORRECTIVE ACTION PLAN

Site Issue	Desired Outcome	Corrective Actions	Schedule
<p>Site performance, work force feed back, and analyses of work control related events over the last year indicate that 47% of work control failures were the result of procedural non-compliance, 31% were poorly written, and that some levels of supervision and some work teams do not view D&D work packages and procedures as necessary to performing work safely.</p> <p>A number of successes in production, reductions in significant nuclear hazards, a transition to conventional industrial hazards, and improvements in OSHA statistics led to overconfidence and a tendency to downplay the significance of events, errors and leading indicators.</p>	<p>All levels of the workforce, including subcontractors, develop work control documents that provide adequate controls and follow those documents.</p>	<p>1 CEO clarify expectations with VPs on:</p> <ul style="list-style-type: none"> • Accountability and Performance • The need for robust, self critical cause analyses; ensuring that cause analysis teams are sufficiently staffed; and effective corrective actions • Value of on-the-floor presence of all levels of Management and Safety Professionals, and mentoring as an effective tool • Need for open internal and external reporting • Importance of Procedural Compliance • Value and importance of both self & independent assessments <p>CEO discuss the initiating deficiencies, causes, and corrective actions of this plan, and expectations and accountability with managers down to the job supervisor level.</p> <p>VPs clarify expectations with the workforce on importance of procedural compliance.</p>	<p>Parker 1/30/04</p> <p>Parker 2/27/04</p> <p>Project VPs 2/27/04</p>
	<p>The CEO is confident that the workforce understands and believes messages being sent by management.</p>	<p>2 CEO establish communication method with job supervisors to verify that messages being sent to the workforce are being accurately received.</p>	<p>Parker 2/27/04</p>
	<p>The prepared procedures and work packages are useful to the work team in getting the work done safely and efficiently.</p> <p>Work teams use work packages and procedures to complete work activities.</p>	<p>3 Provide clear guidance and expectations for effectively developing and using procedures and work packages.</p> <p>a. Revise IWCP to reduce unnecessary complexity and provide clear, concise, adequate guidance which includes but is not limited to:</p> <ul style="list-style-type: none"> • Scope definition, • Hazard identification and analysis, • Walk downs, • Tailoring of instructions and controls, • Responsibilities of reviewers and SMEs • Revisions and pen & ink changes, • Post Job Reviews (PJR). <p>b. Clearly communicate changes and appropriately train the workforce to effectively implement IWCP changes.</p>	<p>Williams 3/31/04</p> <p>Projects 4/30/04</p>

Site Issue	Desired Outcome	Corrective Actions	Schedule
		c. Develop examples for Type 1, Standard, and Craft Work IWCP packages.	Williams 3/31/04
	Each Project has a process for review of work packages and procedures that validates the adequacy of work documents for use.	4 Evaluate and revise if necessary, the current process for Project review and release of work packages and procedures to ensure the process: <ul style="list-style-type: none"> • Validates the type of package • Ensures the scope is appropriately defined and hazards identified • Ensures the level of detail for controls and instructions is appropriate 	Projects 3/31/04
	Pre-work execution communications: <ul style="list-style-type: none"> • Identify and resolve potential conflicts with other activities and facility functions, • Ensure the work crew understands the daily work scope, hazards, and controls 	5 Provide clear guidance and expectations for conducting effective Pre-Evolution Briefings and conducting effective Plan of the Day meetings. Revise Site Conduct of Operations Manual, MAN-066-COOP to: <ul style="list-style-type: none"> • Enhance the Pre-evolution brief process to ensure that the work crew and supervisor fully understand the daily work scope, hazards, and controls and are ready to go to work. • Enhance the Plan Of the Day (POD) process to require discussion of concurrent/sequential work activities than may interact, interfere or impact other activities at the POD. Clearly communicate changes and appropriately train the workforce to effectively implement COOP changes.	Williams 1/19/04 Complete 1/15/04 Projects 02/02/04
	Existing Standing Orders are still appropriate to disseminate information or instructions to Site personnel.	6 Review Standing Orders and revise, extend, supercede, delete, or incorporate as appropriate.	Complete 12/26/03
The emphasis on line management ownership of safety led to a lack of balance between project authority and independent compliance and safety functions.	There is an organization with the charter to ensure that safety significant events and programmatic issues are critically analyzed, reported, and corrected as appropriate.	7 Establish Executive Safety Review Board (ESRB) to oversee the identification, analysis, reporting, and corrective actions of safety significant events and issues with programmatic implications.	Complete 12/12/03

Site Issue	Desired Outcome	Corrective Actions	Schedule
	<p>There is an active and productive interaction between SE&QP and the Projects that ensures a self-critical objective assessment of safety and compliance performance.</p> <p>A balanced set of critical independent assessments and self-assessments are scheduled based on risk and potential consequences, and performed to provide useful information for identifying safety issues and opportunities for improvement. Qualified resources are available to conduct assessments. They are knowledgeable, critical, independent, and can speak with authority and credibility.</p>	<p>8 Revise CY04 Integrated Assessment schedule based on risk priorities. Augment assessment teams as necessary with internal and external resources. Include the following:</p> <p>INDEPENDENT ASSESSMENT</p> <ul style="list-style-type: none"> • ISM/work control implementation • Implementation of training in the Projects • Self assessment process effectiveness • Cause Analysis and Corrective Action Process including implementation <p>SELF-ASSESSMENTS</p> <ul style="list-style-type: none"> • Work control execution • Combustible control implementation • COOP – accountability, formality of ops, HIS 20, housekeeping 	<p>Ford 1/31/04</p>
	<p>Site Safety Management Program (SMP) owners provide information useful to the Site in identifying needed SMP improvements and SMP weaknesses.</p>	<p>9 Meet with all Site Safety Management Program (SMP) owners to reaffirm expectations and accountability for their role as SMP owners in assessing SMP health, communicating issues, and establishing SMP Assessment Criteria.</p>	<p>Lyle 2/13/04</p>
	<p>The Safety Analysis Center (SAC) information is used by the Site in recognizing individual, multiple, and programmatic safety issues and effecting corrective action..</p>	<p>10 Enhance the Safety Analysis Center (SAC) process to:</p> <ul style="list-style-type: none"> • Improve identification of programmatic & collective significance of events, potential trends, and precursor conditions • Establish an active interface with the ESRB and criteria for referring events and analyses to the ESRB • Adopt ORPS Cause codes • Establish and report on procedural compliance metrics • Clarify process for dispositioning of DOE Facility Representative comments • Collect and disseminate Independent and Self Assessment data to SMP owners • Provide input to Communications on trends, emerging, or cyclic issues for use in employee communication tools. 	<p>Williams 2/20/04</p>

DRAFT A

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Site Issue	Desired Outcome	Corrective Actions	Schedule
	Questions about the independence, sincerity, and depth of the GB-8 fire investigation are satisfied.	11 Conduct an independent review of GB-8 fire, investigation, Cause Analysis, corrective actions.	Spears 2/6/04
	The K-H self assessment program meets the highest standards and provides useful, self critical information for projects to use in continuous improvement.	12 Benchmark assessment programs at other sites. Evaluate assessment processes and revise as necessary to include appropriate treatment of precursor conditions	Ford 3/31/04
	K-H's safety and compliance status is verified by corporate assessments.	13 CH2M Hill Corporate perform periodic assessments of selected safety functions. Include evaluation of the impact that communications have had on safety culture on the floor.	Christopher 1/30/04 (Initial)
	Implementation of work control, combustible control, conduct of operations, and formality of operations is measured by critical self-assessments.	14 Perform self assessments in the following areas: <ul style="list-style-type: none">• Work control and execution• Combustible control program implementation• Use of accountability boards• Formality of operations in CCA offices• Use of HIS 20 system• Housekeeping in out of the way areas	Projects 3/31/04