



AUDIT REPORT

“getting HSE right” Audit Report

BP South Houston

September 22, 2003

AUDIT NO: 2003 – 41

Audit Team

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Audit Team-Lead

Lead Auditor

Team Lead

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Executive Summary

The purpose of the audit is to contribute to stakeholder and operations assurance by providing an external opinion on the reasonableness of the HSE risks for the Refining and Chemical operations that compose the BP South Houston Regional Star Site, to assess how effectively those risks are being managed and to review the effectiveness of the HSE Management System.

Opinion

In the opinion of the audit team, the HSE Management System is in place and functional; however a coordinated self-monitoring and self-assessment process is not evident throughout the line organization. HSE risks are clearly identified at the site-wide level but the management of those risks has left some areas under addressed. The audit team identified an additional risk area concerning the Texas City Refinery dock operations to the site for consideration as a major risk.

Key Management System findings

1. The units and staff are actively managing infrastructure risks but **the current condition of the infrastructure and assets is poor at Texas City Refinery** and to a lesser extent the piping at the Chocolate Bayou Works.
2. At both Texas City and Chocolate Bayou, people throughout the organization perceive a positive change in leadership behaviors. This is demonstrated and reinforced through visible leadership example.
3. The limiting effect of the strong status-oriented culture within Texas City, the lack of broadly understood priorities across the site that take into account resource requirements, and the many initiatives interfere with the focus and follow through required to strengthen the HSE systems and to improve performance in general.

Most Important Strengths

- Good behavioral safety is reinforced by strong leadership and underpinned with good safety processes.
- South Houston is doing a great job managing the numerous infrastructure risks at the unit level supported by strong technical knowledge in the units and staff.
- At both Texas City and Chocolate Bayou, people throughout the organization perceive a positive change in the leadership.
- A high awareness of environmental impacts exists in the units; and that is supported by some excellent leadership examples.

Most Important Gaps

- The **“checkbox mentality”, blame, and status culture still exists throughout most of the Texas City Site; and this limits HSE and general performance.**
- The **condition of infrastructure and assets is poor at the Texas City Site** and to a lesser extent, piping infrastructure at Chocolate Bayou.
- South Houston leadership has not prioritized action plans based on resource availability; and the audit team is concerned there are insufficient resources to achieve all commitments and goals.
- **Leadership has not embedded or enrolled the Texas City Site organization in high performance execution.**

Recommendations

1. Break the cycle in the culture that tolerates HSE exceptions.
 - BPSH LT must establish the standard that makes overdue HSE actions and/or critical maintenance inspections or un-addressed major risks unacceptable to the Leadership Team.
 - Accept zero tolerance for exceptions to BP (global and local) HSE standards.
 - Embed Process Safety Management systems fully at all sites.
2. Focus on resources for “foundational” priorities first.
 - Specify plans for un-addressed major risks: “HSE operating envelope” and Infrastructure (piping, docks, demographics)
 - Create a partnership organization across hourly, contractor, and salaried employees
 - Embed best practice operating and maintenance procedures.
3. Develop and simplify assurance processes across BPSH
 - Embed at all levels.
 - Ensure that the processes are in service of the line but also provide robust and accurate Management Information.
 - Connect assurance processes to Performance Management and plan for proper resources.
4. Enroll and develop the organization
 - Create a two-way communication strategy more deeply throughout the organization.
 - Engage Functions and BU’s to help communication consistency.
 - Create sharper linkage of HSE to small capital projects.
 - Develop job reps that fully embrace HSE/Performance Management.

Audit Report Detail

Introduction

The audit has been conducted within objectives defined in the Terms of Reference (Appendix A) agreed among the site, Segment HSE London, and Internal Audit. This audit satisfies the requirement for external review as defined in Expectation 13.10, “annual assessment against these expectations are carried out by each Business Unit, along with external audits at least every three years.” As such this report will circulate to the Head of Assurance and the Vice President of HSE.

The objective of this audit is to contribute to stakeholder assurance by providing an external opinion on the reasonableness of the HSE risks identified for the BP South Houston Star site, to assess how effectively those risks are being managed and to review the overall effectiveness of the HSE Management System. This opinion was formed on the basis of interviews with all levels of the organization, direct observations of site operations, construction activities on site, and review of documentation.

HSE Risks

HSE risks for the site are summarized at a high level in the 2002 BPSH HSE Assurance Report. These risks as identified are reasonable for a site level view. Risks identified for the Texas City Refinery did include a number of HSE risks.

The audit team identified an additional risk concerning the dock operations at the Texas City Refinery for addition to the site's risk matrix. Two major areas of risk need to be addressed and these are "HSE operating envelope" and the infrastructure.

In addition, the **site wide risk assessment process is not robust enough** and as a consequence allows the risk picture to become fragmented across the region.

Golden Rules

The Golden Rules of Safety are embedded through existing procedures and verified through audits; however compliance is not thorough with all the Golden Rules and **self-monitoring is incomplete.**

HSE Management System

In the opinion of the audit team, the **HSE Management is in place** and functional **but a well coordinated self-monitoring process is not evident.** The additional feedback from a developed process for monitoring would enhance the performance and deployment of the system.

Below are the most important strengths and gaps noted against the Expectations of gHSEr.

Detailed Observations

Expectation 1: Leadership and Accountabilities

Strengths

- Increased visibility and accountability of BPSH LT around HSE, which is supported by behavior and examples.
- BPSH LT has taken time to look forward to develop a strategy for HSE, manufacturing, and culture.
- People perceive a change in leadership that is positive both at Chocolate Bayou and Texas City sites.

Gaps

- Leadership **has not prioritized action plans** based on resource demand.
- Leadership **has not embedded or enrolled** the organization to a high performance expectation for HSE throughout the organization. HSE action items are allowed to become past due and remain in that status without intervention.
- There has been **a lack of continuity in leadership, systems, and goals** required to sustain the current focus and direction.

Expectation 3: People, Training and Behaviors

Strengths

- Active programs to help drive HSE improvement at all sites.
- BPSH leadership recognizes cultural change and clear values are foundational to improve HSE and general performance.
- People want to do the right thing. There is evidence of a strong behavioral safety focus.

Gaps

- “Checkbook mentality” still exists in many parts of the organization.**
- Culture still allows for acceptance of marginal actions, behaviors, and internal standards.
- Training in most areas is not up to the challenge of performance expectations and anticipated turnover; effectiveness loop is not closed.

Expectation 4: Working with Contractors and Others

Strengths

- Well designed and documented contractor HSE management program
- TAR and Project contractor processes are delivering improved performance.

Gaps

- Embedded contractors treated as second-class citizens.**
- No systemic performance reviews or performance improvement process are in place to ensure contractors achieve and maintain HSE compliance.
- BP and Fluor management cultures are not aligned** which causes confusion and less effective execution in the field.
- Job reps play a critical role but the quality and quantity is limiting.

Expectation 6: Operations and Maintenance

Strengths

- Strong technical knowledge exists at the unit level; including operators, supervisors, inspectors, and maintenance.
- BPSH is doing a good job of managing the high-level infrastructure risks at the unit level and are willing to intervene.
- High awareness level of environmental issues exists at the unit level.

Gaps

•The condition of infrastructure and assets is poor.

- BPSH is running site environmental controls to their limits.
- Budget and HSE priorities are not aligned.

Expectation 13: Assessment, Assurance and Improvement

Strengths

- Healthy attitude to enlistment of external viewpoints (e.g. peer review, peer assists)
- HSE has developed an Assurance Program (audits, training, & communication) for use with/by Manufacturing Area Teams.
- Evidence was found of internal audit activity and the work demonstrated at least one cycle of improvement.
- Strong behavior safety programs exist (CATS, GATOR, SEAHAWK)

Gaps

- BPSH have not documented the rationale for why some audit activities are tracked and reviewed in Traction and others are not.
- A process for prioritization and the tracking of findings from the line-owned assurance processes does not appear to be robust/coherent. There is **no apparent overview of all action items.**
- The practice of **risk identification and the development of mitigation plans is not evident** across the site.
- Question whether sufficient attention is paid to relatively lower impact/higher probability risk/behaviors (e.g. road safety, civil structures, etc.)

Appendix A – Terms of Reference

**gHSEr Audit
BP South Houston
September 22-26
Terms of Reference 2003-41**

Objectives

- Provide an objective assessment of the extent to which the BP South Houston HSSE Management System is in place, supports sound HSE practice (in line with relevant Group requirements and gHSEr) and is being followed within the Site.
- Share best practice from elsewhere in BP focusing on expectations and issues contained in the scope of this Terms of Reference.
- Review the HSSE risk assessment for the site, and the level of control offered by their associated action plans to manage the risks and highlight any areas where risks are not being adequately addressed.
- Identify areas of opportunity for material improvements in HSE processes for the site consistent with the HSSE risks identified.

Background

The triennial gHSEr audit provides assurance to the Group HSE function that the site HSE Management Systems are fit, effective, and operating as intended to manage key Site HSE risks. These audits also provide an external perspective to the site around their HSE practices and behaviors, suggests best practices and recommends interventions that effect improvements in the HSE systems and methods. Audits are positioned to aid the site in the ongoing development of their systems and make appropriate recommendations based on the relative level of development of the HSE procedures and methods.

BPSH is a large complex site with multiple BUs, locations and segments. This complexity adds to challenge of defining and ensuring that a consistent set of gHSEr principles are embedded in the many operations. BPSH is as well a material business enterprise for BP contributing a significant level of performance and establishing a business presence in the region.

Scope

- The audit will review and assess key risks agreed with the BPSH including the following:
 - Expectation 3 -- People, Training and Behaviors,
 - Expectation 4-- Working with Contractors and Others and
 - Expectation 6 -- Operations and Maintenance.
- Group requirements are: Review Leadership (expectation 1 gHSEr), Assurance (expectation 13 gHSEr) and the implementation of the Golden Rules.
- Travel to all sites within the Site, which includes: Texas City Refinery, Texas City Chemical, Chocolate Bayou, and Deer Park.
- **Audit does not include a review of the compliance management system.**

Engagement Time Period/Deliverable

An audit team composed of BULs, an Internal Audit Lead, and several Subject Matter Experts will assess Site HSE Management System. This team will provide an opinion and recommendations for improvements to the business regarding the effectiveness of their HSE Management System. A teleconference with the Site Leader of the business to be audited, the BULs leading the audit team and the Audit Lead is required to define the risks and to complete the Terms of Reference.

The gHSEr team will need to prepare by reviewing the HSE basic assurance documents, background on the business and be able to travel as needed. One teleconference will be required before the team meets for the first time on the Sunday prior to the opening meeting with the Site Leadership Team on Monday.

The opening meeting with the Site Leadership will be Monday September 22nd. The audit team will hold daily review sessions with a key business representative to review the findings and advise on the progress of the audit. An exit meeting will be held with the Site Leadership Team on Friday September 26, 2003 to discuss key findings. A final audit report will follow within five weeks of the exit meeting. Findings and agreed actions from the final report are to be documented in Tr@ction.

Audit Team

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Audit Stakeholders

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