Black & McDonald
Behavioural & Causal Factor Analysis
Human Performance
SCR-N-2013-03560

Utilizing the Human Performance Evaluation System (HPES) conducted Behavioural Analysis, Causal Factor Analysis, Barrier Analysis and Task Analysis, the results of which are included in this report.

Description of Initiating Action & Consequences:
Sequence of Events:

OPG project manager and staff were performing a walk down of the box drain pump out work area when they discovered that the Pump out Drain hose was incorrectly routed to the Forebay, instead of being routed to drain to a textile membrane and then allowed to run to ground. This is a repeat of an issue identified by the same staff last week and documented under SCR N-2013-03426

An action was given to B&M to have the work order task instruction clarified to ensure that the hose was routed correctly. (It is worth noting that the work plan contained a hold point to verify that the hose was routed correctly before pumping operations were to begin.) Work order task 2631271-05 instructions were clarified as requested.

Summary of Factors That Influenced Human Performance:

Once the task instructions were re-written, a copy of the new instructions were not given to the group executing the work, as a result they did not know that the routing expectations had changed Once the task instructions were re-written, a copy of the new instructions were not given to the group executing the work, as a result they did not know that the routing expectations had changed.

Type of Inappropriate Action:
Omission – the failure to perform the following actions:

- Failure to utilize appropriate Human Performance Error Reduction Tools.
- Validate Assumptions
- Precision in Communications
- Peer Checking

Behavioural Function in Which the Inappropriate Action Occurred:
The term "behaviour" is the action, either observable or non-observable, taken to achieve a result. (Non-observable behaviour includes mental processing, sensing, etc.) These worker's behaviours were shaped by how the causal factors affected his/her ability to perform the following:

Action/Implementation Omission
Work Practices – Error Detection Practices

- Inadequate Pre-Job Brief. Procedure Use & Adherence, Self Checking, Questioning Attitude & Conservative Decision Making not utilized.
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Internal Factors Affecting the Ability to Order/Direct, Sense, Interpret or Act:
Internal behavioural factors that affect the ability of the worker to order/direct, sense, interpret, or act the situation:

Wrong Mindset/Tunnel Vision, evaluating and taking action without considering or realizing the impact this action will have on the entire situation. Proceeding with the task

without considering, potential consequences and outcome of the actions taken. Failure in communicating that the instruction for the task had been revised in passport

External Factors Affecting the Ability to Order/Direct, Interpret, Act or Sense:
External behavioural factors that affect the worker to order/direct, sense, interpret or act the situation:

Less than adequate Questioning Attitude and Conservative Decision Making in conjunction with Precision in Communication and Validating Assumptions

Causal Factors That Led to the Inappropriate Actions:
Behavioural factors are indicators of the applicable causal factors:

Skill-Based and Knowledge Based Errors – Work Practices

- Precision in Communication
- Validate Assumptions
- Inadequate Pre-Job Brief
- Procedure Use & Adherence, Self-Checking, Questioning Attitude and Conservative Decision Making Not Applied.

Corrective Actions:

CA1: Crew was stood down and the incident discussed in detail.

CA2: B&M will institute a policy that will require any changes made to a source document be communicated in person to the work group supervisor executing the work…**What is the TCD for Completion of this Assignment?**