



CITY OF VANCOUVER INTERNAL AUDIT REPORT

Workplace Incident Corrective Action Follow-Up

Distribution:

Audit Committee
External Auditor – KPMG
Auditor General

Sandra Singh – Deputy City Manager
Lon LaClaire – General Manager, Engineering Services
Taryn Scollard – Deputy General Manager, Engineering Services
Magnus Enfeldt – Chief Safety Officer

EXECUTIVE SUMMARY

December 11, 2023

The Workplace Incident Corrective Action Follow-up audit reviewed the City's remediation steps and action plans related to two serious workplace incidents that occurred in January 2022 and involved Engineering Services staff. The objective of the audit was to verify that these remediation steps and action plans have been fully implemented and address the causes of the incidents, and that all related reporting requirements have been fulfilled.

The audit found that the City has implemented the majority of the remediation steps and action plans. Four of the 30 corrective actions identified have not yet been implemented, but are in progress. Additionally, we confirmed the corrective actions identified address the unsafe conditions, acts or procedures that led to the incidents and all related reporting requirements were fulfilled.

There are opportunities to enhance existing measures supporting the safety of City workers and improve the filing of documents to support the implementation of corrective actions, which are detailed below. The more significant findings and recommendations are:

F.1 Ensure the completion of the remaining corrective actions

Implementing the remaining corrective actions will ensure the underlying cause(s) of the incidents are fully addressed, and that processes and controls are in place to prevent similar incidents from occurring in the future.

F.2 Ensure systems and resources are in place to actively manage health and safety within the Street Operations and Sanitation Services branches

Having the systems and resources in place to ensure risk assessments, operating procedures and working guidelines are formalized for all work processes, and that employees are trained and adhering to these procedures and guidelines will demonstrate that the City is taking the necessary steps to protect workers from harm.

F.3 Centrally file documents supporting the completion of corrective actions

Gathering documents to support the implementation of corrective actions, and filing these documents in a central location can help to minimize any potential duplication of effort should they be requested as part of an audit or similar verification process.

Carmen Fuellbrandt, CPA, CMA, CIA
Chief of Internal Audit

A. BACKGROUND

A workplace incident is an event or occurrence arising in the course of work that resulted in or could have resulted in injury, illness or fatality. Incidents can be serious, moderate, minor or a near miss. Employers are required to immediately:

- Notify WorkSafeBC of any incident resulting in serious injury¹ or death; and
- Investigate any incident involving a serious injury or death, injury requiring medical treatment, or the potential for causing serious injury.

Investigations are comprised of four stages, as summarized in the table below.

#	Investigation Stage	Description
1	Preliminary investigation	Provides an opportunity for employers to identify unsafe conditions, acts or procedures that must be addressed so work can resume safely until a full investigation is completed.
2	Interim corrective actions	Actions taken to prevent the incident from happening again during the period between the incident and conclusion of the full investigation, and may include a full or partial shutdown of the worksite, removal of equipment, or reassignment of workers to other duties.
3	Full investigation	Determines the cause or causes of the incident.
4	Final corrective actions	Actions to be taken to address the unsafe conditions that led to the incident.

Investigations of any serious workplace incident at the City of Vancouver are led by the department/branch in which the incident occurred and are supported by a City safety specialist or safety superintendent. At the time of the two workplace incidents involving Engineering Services staff that occurred in January 2022, safety superintendents supporting the investigations were part of the OSSB (Operations Support and Safety Branch) within Engineering Services.

Following the two incidents in 2022, the Chief Safety Officer (CSO) role was established with the mandate to:

- Review the City’s current safety management systems and practices;
- Monitor safety outcomes and report results to the City’s leadership team and departments;
- Identify internal and external best practices;
- Establish organizational priorities for action; and
- Ensure alignment of departmental safety efforts.

In December 2022, the CSO restructured the safety resources from Human Resources and Engineering Services into a new division named Workplace Safety within the Office of the Chief Safety Officer.

¹ Serious injuries are those that are life-threatening or could cause permanent injury, including major fractures, amputations and serious burns.

The workplace incidents in scope for this audit were the National Yards and Sanitation incidents, both of which occurred in January 2022, and involved the Street Operations and Sanitation Services branches within Engineering Services, respectively. For each of these incidents, preliminary and full investigations were completed, corrective actions to prevent the recurrence of similar incidents were identified and related reports were shared with both WorkSafeBC and the Branch joint health and safety committees. A total of 30 corrective actions were identified for these two incidents, as summarized in Appendix A.

B. SCOPE

The Workplace Incident Corrective Action Follow-up audit was initiated to verify that remediation steps and action plans for the two recent serious workplace incidents involving Engineering Services staff have been fully implemented and address the causes of the incidents, and that all related reporting requirements have been fulfilled.

The scope of the audit included a review of the corrective actions and related reporting processes for the National Yards and Sanitation Services workplace incidents that occurred on January 7 and 23 of 2022, respectively.

Internal Audit performed the following procedures to complete this audit:

- Interviewed management and staff in Workplace Safety within the Office of the Chief Safety Officer, and the Street Operations and Sanitation Services branches within Engineering Services;
- Reviewed supporting documents related to the corrective actions identified, as well as the investigation reports and correspondence from WorkSafeBC for the two incidents in scope; and
- Conducted site visit to the National Yards worksite to inspect safety enhancements made to the work area related to the corrective actions.

C. CONCLUSION

With respect to the National Yards and Sanitation Services incidents that occurred in January 2022, the City has implemented the majority of the remediation steps and action plans. Four of the 30 corrective actions identified have not yet been implemented, but are in progress. Additionally, we confirmed the corrective actions identified address the unsafe conditions, acts or procedures that led to the incidents and all related reporting requirements were fulfilled.

There are opportunities to enhance existing measures supporting the safety of City workers and improve the filing of documents to support the implementation/ completion of corrective actions, which are detailed below.

Findings and recommendations have been discussed with appropriate management and responses incorporated in this report.

D. RISK ANALYSIS

The potential significant risks considered if controls were not in place are:

- Workplace incidents are not reported on a timely basis to supervisors/ managers, leading to delays in securing the scene, identifying witnesses, and completing investigations, resulting in non-compliance with WorkSafeBC reporting requirements and financial penalties;

- Workplace incident investigations are not conducted properly, leading to safety issues not being identified and addressed, and resulting in the recurrence of similar incidents and/or financial penalties;
- Corrective actions identified do not address the cause(s) of the incident and/or are not implemented, leading to safety issues going unaddressed and unmitigated risk to the health and safety of City workers.

E. POSITIVE OBSERVATIONS

E.1 Corrective actions have been completed and address the causes of the incidents

A total of 30 corrective actions were identified for the National Yards and Sanitation incidents, of which 26 were reported as complete. See Appendix A for a list of all corrective actions and their current status. Based on a review of supporting documents, including the related investigation reports, Internal Audit verified that all 30 corrective actions identified addressed the underlying causes of the incidents and that Engineering Services management and staff implemented all 26 corrective actions marked as complete.

E.2 City complied with all reporting requirements for workplace incidents

WorkSafeBC’s reporting requirements were met for both the National Yards and Sanitation incidents. Specifically:

- Incidents were immediately reported to WorkSafeBC as required by the legislation;
- A preliminary investigation report was prepared that detailed the facts of the incidents, sequence of events leading up to the incidents, and interim corrective actions;
- A full investigation report was prepared that identified the causes of the incidents, corrective actions to prevent similar incidents from occurring in the future, and the target completion dates and persons responsible for implementing the corrective actions; and
- The preliminary and full investigation reports for both incidents were shared with WorkSafeBC and the Branch joint health and safety committees.

F. AUDIT ISSUES, RECOMMENDATIONS AND MANAGEMENT RESPONSES

F.1 Ensure the completion of the remaining corrective actions

The following four of the 30 corrective actions identified for the National Yards and Sanitation incidents have not yet been fully implemented.

#	Incident	Corrective Action	Original Target Completion Date	Status
1	National Yards	Implement phased use of the Field Level Hazard Assessment (Item 13, Appendix A)	December 31, 2022	Alternate action identified
2	National Yards	Form a working committee to create a plan to standardize mobile equipment training in Engineering Services (Item 15, Appendix A)	December 31, 2022	In progress
3	Sanitation	Convene a working group to identify ways to encourage the	December 31, 2022	In progress

		reporting of unsafe behaviors (Item 24, Appendix A)		
4	Sanitation	Provide training on increased hazard awareness (Item 30, Appendix A)	December 31, 2022	Alternate action identified

Discussions with management revealed that:

- The field level hazard assessment (FLHA), related to items 1 and 4 above, comprises one of four documents that City workers would be required to fill out on a daily basis. A pilot project for this initiative was completed and management’s assessment of the results indicated that the FLHA duplicated existing processes and did not result in the desired change in worker behaviour. Therefore, Engineering Services will develop an enhanced tailgate talk form rather than continue to pursue the FLHA. A completion date for this alternate course of action has not yet been determined as management is formalizing the details and securing the necessary resources.
- The implementation of items 2 and 3 were stalled due to delays in hiring the needed resources and the re-direction of resources to a time-sensitive project, respectively. Management confirmed that the work is underway to address both of these corrective actions, and that both should be completed by Q4 of 2023.

The City has addressed the majority of corrective actions identified for the two incidents which substantially mitigates the risk of similar incidents occurring. However, addressing these four outstanding corrective actions will help to strengthen existing controls and procedures to prevent serious injury or death. Therefore, efforts should be made to prioritize their completion and implementation.

Recommendation:

F.1.1 The Deputy General Manager of Engineering oversee the completion of the outstanding corrective actions for the National Yards and Sanitation incidents by Street Operations and Sanitation Services, respectively. The following should be completed by March 31, 2024.

- **With respect to the field level hazard assessment, an action plan for the alternative course of action, including a target completion date, should be agreed upon; and**
- **The corrective actions to standardize mobile equipment training and convene a worker-led group to encourage the reporting of unsafe behaviours should be implemented.**

Management Response:

- | | |
|---|--|
| <input checked="" type="checkbox"/> Agree with the findings | <input checked="" type="checkbox"/> Agree with the recommendations |
| <input type="checkbox"/> Disagree with the findings | <input type="checkbox"/> Disagree with the recommendations |

Management Action Plan:

Additional work underway to meet the above recommendations include:

- Sewers Operation Branch piloted an updated safety talk/tail gate talk process following the feedback from the FLHA concerned about duplication.
- Additional project management resources have been secured (Operation Services Branch) to build on the Sewer Ops progress. Final input from the remaining Ops Branches and roll out and train teams a revised/combined Crew talk form and process. “Eng. Safety Talk

Standardization Project” item has been placed on the (newly created) Manager of Operations Services team performance/work plan for completion in 2024 to ensure tracking and follow up.

- A risk-based matrix produced the priority ranking of the 155 total program milestones required for the 19 distinct pieces of mobile equipment used in the Streets Operations Branch. By the end of 2023, at least 46 items will be complete, 40 in progress and the remaining 69 milestones put on the 2024 workplan of the Streets Operations Manager to ensure tracking and follow up. A focus on completing the Equipment Operator 4a, 4b, 5 and V equipment classifications.
- Develop Mobile Equipment Awareness Program for New Hires milestone has also be added to the Streets Operations Branch Manager work plan for 2024 to ensure tracking and follow up.
- A report will be received from the external consultant for the worker-led group in the Sanitation Branch before Dec. 31st 2023. Review and prioritization of actions coming out of the report will be put on the Manager of Sanitation Services work plan for 2024 to ensure tracking and follow up.

F.2 Ensure systems and resources are in place to actively manage health and safety within the Street Operations and Sanitation Services branches.

In our discussions with management in Street Operations and Sanitation Services, Internal Audit noted that resource and system limitations have led to the following gaps in actively managing health and safety in the workplace.

- Not all work processes are accompanied by a formalized risk assessment, standard operating procedures and/or standard working guidelines. For example, within Street Operations, management indicated that risk assessments and standard operating procedures have not been completed for 60-70 work processes, which is estimated to take three years to complete;
- Existing standard operating procedures and working guidelines are not reviewed annually for updates or changes. Rather, these reviews are primarily driven by risks (e.g. when an incident occurs), and it can take up to three years to complete the review of all procedures/guidelines; and
- Employee training activities are not sufficiently comprehensive to ensure the formalization of not only the original training program, but also of any necessary re-certifications and the documentation of training activity completion.

These activities are important for ensuring the necessary steps are taken to protect workers from harm, including identifying and addressing workplace hazards. Both Street Operations and Sanitation Services have identified a need to hire compliance officers to complete this work, and are working with Human Resources to do so.

Recommendation:

F.2.1 The Deputy General Manager of Engineering should ensure systems and resources are in place by June 30, 2024 to:

- **Complete risk assessments for high risk work processes;**
- **Formalize a plan for updating operating procedures and working guidelines for all work processes on a regular basis; and**
- **Ensure employees are trained on and are adhering to established procedures and guidelines.**

Management Response:

Agree with the findings

Agree with the recommendations

Disagree with the findings

Disagree with the recommendations

Management Action Plan:

- Review of risk assessments for high risk processes will be on individual Branch Annual OH&S Improvement plans across Engineering for tracking and monitoring on completion for those that have not been updated in the last 18 months. Ops Branches lead with Office of the Chief Safety Officer (OCSO) team to support.
- Plans and schedules will be developed/reviewed and approved for updating work procedures associated with the outcomes of the above risk assessments, keeping in mind the current realities of a mainly paper based system. These will make up part of the Branch's Annual OH&S Improvement Plans. Information gathered during this process will be used in part of a business case to increase future efficiencies around updating and training processes and automating and digitizing future systems for tracking, review and updating required documentation.
- Streets Operations has identified the top 54 processes from a risk based lens and determined that 18 need to be updated and 36 needed to be created and documented. 34 have been completed in 2023 and the remaining 20 will be added to the 2024 work plan of the Streets Operations Manager to ensure tracking and follow up.
- Learning from Sewers training and compliance checks pilot program will be reviewed to see if larger program application across Engineering Operations. Items found will be placed on either individual branch Annual OH&S improvement plans and/or the work plan of Operations Services Branch Manager depending on scope.
- DGM continue to partner with Chief Risk Officer and Driver Services team to implement a digital pre/post trip vehicle inspection form pilot including tablets and data analytic options in 2024. Learnings to be translated to larger back end Operational system transformation increasing efficiency, record keeping and document control.
- DGM Eng to participate in the OCSO procurement/replacement Safety Management System (SMS) advisory/steering team to support the 2024 procurement with anticipated roll out in 2025.
- DGM Eng in partnership with Chief Human Resources Officer trialing modified content delivery method for updated Bully and Harassment policy in early 2024 an effort to increase uptake and retention of content. Learnings will be reviewed for wider application and funding consideration in future training of off-network staff.
- DGM Eng to continue to research options for external/hybrid training delivery for quality and effectiveness. If an appropriate organization/course is found, review procurement options and external delivery business case for value and risk.
- DGM Eng in partnership with OCSO will continue to generally advance/advocate corporately non paper based systems to be funded and put in place to increase the ease, efficiency and effectiveness of OH&S information in the field and that all staff understand their role in actively managing health and safety with in the branches.

F.3 Centrally file documents supporting the completion of corrective actions

Corrective actions for both the National Yards and Sanitation incidents were tracked and presented to the Steering Committee. Updates included the status (completed, on track, delayed) of each

corrective action, actions taken to address the corrective actions, and any discussion points raised. However, documents to support the completion of corrective actions were not referenced in these slides nor were they centrally filed. Documents were either filed in Vandocs, with the Engineering Services branch managers or by a manager in OCSO. The need to obtain documents from multiple locations and sources made it difficult and time consuming to complete our review.

Documents to support the completion of corrective actions should be gathered at the time the corrective action is noted as being complete, and immediately filed in a central location to minimize any potential duplication of effort later down the line should these documents be requested as part of an audit or similar verification process. For this purpose, it may be worthwhile to consider using SharePoint, which may enable each corrective action to be tracked separately, including status, target and actual completion dates and person responsible for implementation, as well as allow for any relevant documents to be uploaded or linked.

Recommendation:

F.3.1 The Deputy General Manager of Engineering should consider using SharePoint to track corrective actions and centrally file any supporting documents for any workplace incidents impacting Engineering Services going forward. A decision on the tool to be used to manage future corrective actions, including the filing of supporting documents, should be made by March 31, 2024.

Management Response:

Please check one:

- Agree with the findings
- Disagree with the findings

Please check one:

- Agree with the recommendations
- Disagree with the recommendations

Management Action Plan:

- Eng will work with OCSO to explore options in Sharepoint to meet the variety of document needs on a complex file and determine procedures going forward e.g. Some documents being restricted and confidential and some being working documents;
- Eng to cross reference the roll out of enhanced tools (Sharepoint) in Engineering to determine timing of communication roll out to teams; and
- Communicate procedure changes for document management to Eng Managers and OCSO team for distribution in early 2024.

G. APPENDIX 1 – CORRECTIVE ACTIONS

Table G.1 - Corrective Actions		
NATIONAL YARDS INCIDENT		
#	Description	Status
1	Get a third party to inspect the E1209 Tandem and D2134 Loader.	Completed
2	Share findings from the third party inspections with WorkSafeBC.	Completed
3	Deliver the “National Yard Salt & Brine Lineup Procedure” crew talk to all Engineering Services staff involved in winter maintenance activities.	Completed
4	Review existing procedures for the safe operation around National Yard Salt Shed and loading and unloading of salt and brine.	Completed
5	Send all staff the “Working around Mobile Equipment” crew talk.	Completed
6	Establish a working group and action plan to review and track the completion of corrective actions.	Completed
7	Perform a risk assessment and develop Safe Working Guideline (SWG) to reinforce the accepted practices of the existing “National Yards Salt/Brine Line Up Procedure” map.	Completed
8	Integrate the “National Yards Salt/Brine Line Up Procedure” into the annual “Snow & Ice” training provided through Drivers Services.	Completed
9	Perform a traffic flow assessment for National Yard.	Completed
10	Define and visually delineate the “designated work zone” for loader operations at the National Yard Salt Pile.	Completed
11	Install the signage recommended in the traffic flow assessment.	Completed
12	Evaluate the use of two-way radios as a means of communication between Loader Operator and anyone entering the “designated work zone”.	Completed
13	Implement a phased use of Field Level Hazard Assessment.	In progress
14	Assess the appropriate use of beacon lights for equipment within the Loader’s “designated work zone”.	Completed
15	Form a working committee to create a plan to standardize mobile equipment training in Engineering Services.	In progress
SANITATION INCIDENT		
16	Remove vehicle E1570 from service for inspection.	Completed
17	Get a third party to inspect vehicle E1570.	Completed
18	Deliver a safety crew talk on the incident and hazard alert document to all Sanitation staff scheduled on 24 January 2022, and post the hazard alert at the worksite.	Completed
19	Deliver a safety crew talk on the incident and hazard alert document to all Sanitation staff at the return of their first shift, and post hazard alert at worksite.	Completed
20	Use semi-automated rear loading packers to complete Christmas tree pick-ups.	Completed
21	Cease the practice of having two people work in side loading automated packers until the practice is reviewed.	Completed
22	Review standard operating procedures for clearing stuck/trapped debris with each operator.	Completed
23	Establish a working group and action plan to review and track the completion of corrective actions.	Completed
24	Convene a working group to identify ways to encourage the reporting of unsafe behaviors.	In progress
25	Review use of ASL trucks for Christmas tree collection.	Completed
26	Conduct a risk assessment for the use of ASL trucks to perform non-standard work, including Christmas tree and leaf bag collection, and create standard operating procedures for removing a jam or tote in the hopper.	Completed

Table G.1 Corrective Actions - continued		
27	Review the interior monitor location of similar truck models to identify options for standardizing equipment location and ensure ergonomic standards continue to be met if modifications are proposed.	Completed
28	Ensure vehicle warning labels on ASL trucks are visible and readable and consider adding a visual decal confirmation to the pre-trip inspection.	Completed
29	Create a checklist and training plan for vehicle functions not covered by the pre-trip inspection.	Completed
30	Provide training on increased hazard awareness.	In progress