

Wastewater Treatment Project Safety Management System Review

Report by Jim Allman



Phone: (778) 425-1707

Email: Info@Allman-safety.com

Website: www.allman-safety.com

CONTENT

EXECUTIVE SUMMARY	3
SAFETY MANAGEMENT SYSTEM OVERVIEW	4
PURPOSE OF CONDUCTING THE REVIEW	5
THE BASIC STEPS OF THIS REVIEW	5
KEY FINDINGS	6
POLICY AND COMMITMENT	6
WORKPLACE ASSESSMENTS & MONITORING	6
DUE DILIGENCE	7
POSITIVE INSPECTION RESULTS	7
OPPORTUNITIES FOR IMPROVEMENT IDENTIFIED DURING INSPECTIONS.....	8

EXECUTIVE SUMMARY

At the request of the Wastewater Treatment Project Board Jim Allman of Allman Safety Consulting Corp. with the assistance of project management and field staff audited the Wastewater Treatment Project during March 2019. The audit was conducted March 13 - 14. In addition to site visits, Allman Safety Consulting Corp. reviewed all relevant current and historical health and safety system documentation.

Sites visited

- Hartland Landfill
- Macaulay Point
- McLoughlin Point
- Segment 1 Residual Solids Conveyance Line
- Dallas Road Pipe Installation
- Clover Point Pump station

There is strong and obvious commitment from senior management to remove or minimize risk in the workplace.

The Safety Management System meets or exceeds industry health and safety standards and regulatory requirements.

Prime contractor safety programs have improved under the direction of the project team to be complete and compliant.

The communication strategy for safety improvement from contractors to the project team and from the project team to the contractors is both electronic and verbal and is effective in both directions.

There is evidence that the organization has continuing strategies to reduce unsafe conditions.

Leading and lagging indicators are reported and reviewed to focus attention on target areas.

There has been continuous improvement in safety response by contractors, with still more room for improvement.

There has been strong focus on ensuring proper procedures as a strategy to reduce accident risk. This should be balanced with focus on ensuring the prime contractors are fulfilling their contractual obligation to maintain the owner's land and premises that are being used as a workplace in a manner that ensures the health and safety of persons at or near the workplace.

SAFETY MANAGEMENT SYSTEM OVERVIEW

This is a complex project with a number of sites and contracting scenarios.

There are a number of Prime Contractors, each responsible both for coordination of safety activities on their site, and ensuring compliance with WorkSafeBC OHS Regulations. As well, each of the employers on site is responsible to ensure the health and safety of their workers.

The owner of the project (CRD) is responsible to identify pre-existing hazards for the prime contractors and to provide and maintain the workplace in a manner that ensures the health and safety of persons at or near the workplace, including members of the public.

The owner must not direct day to day safety activities of the prime contractor (how to perform the work) but must ensure regulatory and contractual requirements for a safe site are being met.

Construction safety management systems usually fit within the historical safety structure of the organization. This project is a stand-alone one-time construction project that could not rely on past CRD history with large infrastructure projects.

The CRD Project Safety Manager has developed an appropriate and robust stand-alone safety management system that is implemented by the project management team.

PURPOSE OF CONDUCTING THE REVIEW

At the request of the Wastewater Treatment Project Board:

- Determine if the safety management system for contractors and CRD employees is appropriate and robust.
- Determine if the Safety Management System meets or exceeds industry health and safety standards and regulatory requirements.
- Identify strengths that can be leveraged for improvement of the Safety Management System.
- Review due diligence protocols and assist in ensuring any new strategies will be effective.
- Ensure that security systems are adequate to prevent inadvertent public access and subsequent risk.

THE BASIC STEPS OF THIS REVIEW

1. Establish the audit process.
2. Gather the necessary information:
 - a) Documents
 - b) Interviews.
 - c) Observation/Inspection
3. Analyze the information.
4. Report the findings.

The Project Director, Construction Manager, and Safety Manager assisted in the audit.

KEY FINDINGS

POLICY AND COMMITMENT

Occupational health and safety guidance and direction for the contractors is given in contract language and through careful, extensive and complete review of each contractor's site-specific safety program by the project team.

The review of contractor site-specific safety programs uses the WorkSafeBC Certificate of Recognition audit guide which is designed to ensure that contractors meet or exceed industry standards and regulatory compliance.

Contractors are held accountable for their compliance with their site-specific safety plan

This process results in prime contractors formulating a complete and compliant site-specific safety plan which will minimize risk to workers

Recommendation: When reviewing prime contractor site safety plans for completeness, always reference the applicable Regulation.

WORKPLACE ASSESSMENTS & MONITORING

Regular inspections of all of the sites are conducted and an inspection checklist and protocol are used. Each of the areas is formally inspected every month. On site CRD monitors perform regular inspections.

Inspections are not closed out until substandard conditions have been rectified

The following assessments have been documented:

- Fall protection plans and procedures for working at height
- Work in excavations
- Work in confined space
- Work around powerlines
- Traffic control
- Emergency preparedness

Inspections are frequent enough that contractors rely on them as a quality control rather than quality assurance.

Recommendation: Increased focus on inspections as a quality assurance process will help contractors fulfil their quality control role

Repetitive violations are documented and result in written instructions to contractors.

Recommendation: Review of contractor inspection protocols for continuous improvement will improve compliance.

There has been no gap analysis of training requirements for on-site CRD monitors to ensure they have the required knowledge to identify non-compliant performance

Recommendation: Develop a list of required knowledge and measure training needs of on-site monitors against this standard.

DUE DILIGENCE

The Worker's Compensation Act requires the owner of the workplace to provide and maintain the owner's land and premises that are being used as a workplace in a manner that ensures the health and safety of persons at or near the workplace.

The Worker's Compensation act also requires every employer to ensure the health and safety of all workers working for that employer, and any other workers present at a workplace at which that employer's work is being carried out.

The Capital Regional District is both an owner and an employer on this project.

As an employer, CRD has systems in place to ensure the safety of workers in the project management office, as well as CRD employees on-site. Health and safety procedures are developed and monitored, and the project workers are represented on the CRD safety committee.

As an owner, the wastewater project management team has focused inspections and documentation reviews on ensuring that prime contractors are fulfilling their contractual obligation to ensure compliance on the site and coordinate activities. The emphasis has been on safe work procedures and regulatory compliance as an accident prevention model. There has been less emphasis on audits of site condition

Recommendation: Ensure that site condition audits to ensure a safe site are documented

POSITIVE INSPECTION RESULTS

All workers at height were equipped and wearing proper fall protection equipment.

The housekeeping standards to prevent trips and falls were good on all sites and excellent at Hartland and Macaulay Point.

Field level hazard assessments are completed and shared with all new entrants into the jobsite to ensure awareness of hazards and their controls

There was excellent crane coordination and use of spotters and warning signals to prevent workers being placed at risk by overhead loads.

Guardrails are in place on all structural leading edges

Engineers written directions were available for all excavations.

Emergency procedures were in place and well explained during orientation at all sites.

OPPORTUNITIES FOR IMPROVEMENT IDENTIFIED DURING INSPECTIONS

Traffic control signage did not give adequate warning to the travelling public on the residual line construction sites

Recommendation: Use of daily dash-cam documentation of traffic control signage location will ensure compliance with the provincial traffic control manual.

Although the public was protected from accessing the excavation, the fall protection system for workers was inadequate at the side of an excavation on Dallas Road.

Recommendation: Ensure the same level of protection afforded the public is in place for workers at all excavations

A confined space was not identified by signage at Hartland

Recommendation: Ensure all confined spaces are identified.