NDDN Briefing – Contaminated Sites Study

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Executive Summary

National Defence manages federal contaminated sites across multiple departments, contractors, databases, and reporting structures. While many dedicated professionals work within these systems, the information itself is fragmented across silos that collect only pieces of a much larger picture. Across Canada, both legacy and newly identified contamination concerns continue to emerge. These may involve solvents, petroleum hydrocarbons, PFAS/firefighting foam contaminants, heavy metals, and other hazardous substances.

While significant environmental work is conducted across multiple departments and contractors, environmental information is frequently distributed across separate systems, classifications, project structures, and reporting streams. This may limit the ability of organizations, physicians, provincial health, occupational-health specialists, Veterans Affairs Canada (VAC), Workers' Compensation systems, and affected individuals to fully understand long-term occupational or environmental exposure concerns.

This briefing proposes a modernized environmental-health governance framework focused on:
- integrated environmental-health review,
- occupational exposure tracking,
- longitudinal surveillance,
- transparent communication,
- and improved risk management.

Governance and Fragmentation Challenges

A recurring challenge within contaminated-sites management is that environmental, infrastructure, occupational-health, health monitoring, remediation, and historical information may exist across multiple departments, contractors, databases, and reporting systems without a centralized environmental-health coordination structure capable of consistently assembling the full picture.

Environmental information may exist within:
- contaminated-sites programs,
- ADM(IE),
- Real Property Operations (RP Ops),
- contractors,
- occupational health records,
- infrastructure assessments,
- inventories,
- PFAS/firefighting foam investigations,
- provincial health records,
- wastewater systems,
- provincial environmental systems,
- Workers' Compensation systems,
- and Veterans Affairs Canada processes.

However, these datasets may not always be interoperable or reviewed collectively through an occupational-health lens.

This fragmentation may contribute to:
• difficulty reconstructing historical exposure pathways decades later,
• delayed recognition of occupational-health concerns,
• inconsistent long-term tracking,
• challenges for VAC or WCB adjudication,
• reduced ability to identify population-level health trends,
• delayed recognition of occupational illness,
• and reduced institutional trust when affected individuals struggle to obtain understandable information regarding environmental concerns.

Operational Examples and Emerging Concerns

Examples of contamination concerns across federal defence properties may include:
• PFAS/firefighting foam investigations,
• fuel or petroleum contamination,
• solvent exposure concerns,
• groundwater or runoff migration,
• chemical management,
• and long-term infrastructure contamination associated with historical operational activities.

In some situations, environmental assessments, remediation projects, or occupational concerns may be managed across multiple contracts, project scopes, contractors, or classifications.

Concerns have been raised and documentation collected in situations such as the Moose Jaw contaminated-sites context regarding:
• fragmented environmental information,
• changing Statements of Work (SOW) prior to or during the contracting process,
• differing remediation scopes,
• environmental concerns managed across separate contracting structures,
• and the difficulty of assembling a complete historical environmental-health picture from multiple systems.

The concern is that fragmented contracting structures, handovers, evolving project scopes, differing classifications, and siloed administrative systems may create challenges in maintaining complete historical continuity and integrated environmental-health review. This may contribute to underestimated remediation scopes, inconsistent classifications, or incomplete environmental-health assessment.

Environmental Warnings, Transparency, and Public Access

Environmental warnings, contamination notices, remediation activities, and significant occupational-health concerns should be communicated through transparent, accessible, and publicly findable systems. Currently, environmental information may exist across technical reports, internal databases, contractor records, environmental assessments, and fragmented reporting systems that are difficult and sometimes not possible for affected individuals or healthcare providers to locate or interpret.

A modernized environmental-health framework should include:
• public-facing environmental warning systems,
• searchable and user-friendly information portals,
• plain-language summaries,
• standardized exposure summaries,
• occupational-health referral pathways,
• and ongoing updates regarding remediation or investigation activities.

Individuals seeking environmental-health information are often not toxicologists, environmental scientists, or occupational-health experts. Yet they may be attempting to:
• understand potential health concerns,
• support Workers' Compensation claims,
• support Veterans Affairs claims,
• provide meaningful information to physicians,
• or assess whether occupational or environmental exposure concerns may warrant further medical review.

Occupational Health and Environmental Data Integration

Environmental data should be recognized as medically and occupationally relevant information where potential exposure concerns may exist.

Without meaningful access to environmental exposure information, physicians and occupational-health professionals may face limitations in:
• assessing potential occupational exposure pathways,
• identifying environmental-health risks,
• supporting informed monitoring,
• or providing evidence-informed medical opinions.

Environmental-health review processes should therefore support:
• integrated environmental and health review,
• standardized exposure summaries,
• physician-support mechanisms,
• occupational-health referral pathways,
• exposure tracking.

Need for a Centralized Environmental-Health Coordination Structure

A centralized environmental-health coordination structure should be established.

This structure should:
• integrate environmental data from all relevant sources,
• support occupational-health review,
• identify exposure pathways,
• improve historical continuity,
• support epidemiological surveillance,
• coordinate communication,
• and track concerns from identification through resolution.

Importantly, this framework should involve qualified professionals capable of integrating complex environmental and health information, including:
• environmental scientists,
• epidemiologists,
• occupational medicine specialists,
• toxicologists,
• public-health experts,
• occupational health and safety professionals,
• and data-management specialists.

The framework should also establish clear guidance regarding:
• departmental responsibilities,
• escalation pathways,
• environmental-warning thresholds,
• occupational-health review triggers,
• communication obligations,
• and long-term monitoring responsibilities.

Prevention, Surveillance, and Long-Term Risk Reduction

Integrated environmental-health systems support not only response and remediation, but also prevention, early identification, and long-term risk reduction.

A coordinated system could improve:
• early recognition of occupational illness patterns,
• epidemiological surveillance capacity,
• long-term exposure tracking,
• preventative health measures,
• environmental-health communication,
• and evidence-informed risk reduction strategies.

Potential Committee Recommendations

Potential areas for committee consideration may include:

• creation of a centralized environmental-health coordination framework;
• improved interoperability between environmental and occupational-health systems;
• occupational exposure tracking and surveillance;
• standardized contaminated-site classification frameworks;
• standardized exposure-summary processes;
• public-facing environmental transparency and warning systems;
• physician and occupational-health referral mechanisms;
• integrated environmental-health review triggers;
• strengthened epidemiological surveillance partnerships;
• and clearer governance structures regarding environmental-health responsibilities and communication pathways.

Consideration may also be given to increased coordination between:
• DND,

• Veterans Affairs Canada,
• provincial health and environmental ministries,
• Workers' Compensation systems,
• occupational-health researchers,
• and public-health agencies.

Conclusion

The management of contaminated sites should be viewed not solely as an engineering or remediation issue, but also as a long-term occupational-health, governance, and risk-management issue.

Improved interoperability between environmental and health systems would support:
• earlier identification of occupational-health concerns,
• fairer adjudication pathways,
• improved physician support,
• stronger epidemiological capacity,
• improved public trust,
• and more effective long-term risk management.

Most importantly, it would help ensure that environmental and health information are meaningfully connected in ways that support informed occupational-health review, prevention, and long-term care for individuals potentially affected by environmental exposure concerns.