

Table 8-1: Summary of 2009 Update Review Recommendations

| <u>Aspect</u> | <u>Action Items</u> |
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| Groundwater Monitoring | <ul style="list-style-type: none"> • Deeper groundwater monitoring wells should be installed at intermediate locations in the flow system. • The geochemical evolution of groundwater in the flow system should be examined. • A numerical model(s) of groundwater flow and contaminant transport should be developed. This model should be used as a tool to refine various facility aspects such as monitoring program, liner design, long term care. • “Trigger” concentrations should be established for the different groundwater “types” and taking into consideration the baseline data collected in 1997. These values should be compared with the previously derived trigger parameters to assess what effect this approach has on the trigger concentrations. The most stringent trigger parameters, which would be expected to be the revised ones, should be adopted for use. • Data interpretation and related statistical approach should be supported with documentation. Documentation should include industry recognized standard adopted (e.g. USEPA), advantages/ disadvantages of the selected approach, and other relevant information. • The underdrain water quality should be periodically monitored at each cell location. |
| Issues Related to Domestic Wells | <ul style="list-style-type: none"> • Include domestic well water sample results in the GIS information system. • Revamp the domestic well monitoring program such that, among other things, the locations of the wells in the program be selected on the basis of a technical rationale (e.g. location of individual wells in the regional flow system). • Revise list of participants to reflect technical criteria (e.g. hydrogeological aspects). • Establish a sampling, data management and data interpretation protocol to facilitate use and integration of the domestic well sampling results into the overall facility monitoring program. • Include full suite of General Chemistry parameters as defined in current Approval to Operate #94 in future testing. • Develop specific and detailed plans within the EMP regarding domestic wells in the event of impact to the potable groundwater resource (e.g. identify options, put funding in place). |

| <u>Aspect</u> | <u>Action Items</u> |
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| Leachate Management, Landfill Liner, and Reporting | <ul style="list-style-type: none"> • Develop and implement a comprehensive strategy for monitoring, interpretation and reporting of leachate levels. This should include consideration of implication of leachate buildup, if any, regarding liner leakage. Results of this work should be provided in regular update reports. • Comparison of leachate leakage rates should be completed for various liner options. The various options should be compared using site specific modelling to determine optimal liner system for minimizing contaminant flux to the subsurface. The objective is to minimize to the extent practical leachate contaminant loadings to the subsurface and thereby mitigate potential impact on groundwater quality and downgradient domestic water supply wells. • establish a record and change management system to record and manage changes in landfill construction, operation, monitoring and reporting so that landfill aspects can be tracked more easily by CMEI and FRSWC. |
| Handling and Control of On Site Surface Water | <ul style="list-style-type: none"> • Develop specific stormwater management plans for each phase of construction. • Mitigative measures should be implemented if TSS exceedances continue to be observed. |
| Perpetual Care | <ul style="list-style-type: none"> • Develop more detailed contingency plans regarding potential impact to domestic wells and long term monitoring and post closure of the site. • Complete a detailed economic analysis which addresses all aspects relevant to the closure plans and long term perpetual care to ensure that sufficient funds are accumulated. • Assess whether the 30 year post-closure planing timeline for the perpetual care fund is adequate for the Crane Mountain landfill. |