APPENDIX D

QUALITY ASSURANCE/QUALITY CONTROL RESULTS

D. QUALITY ASSURANCE/QUALITY CONTROL RESULTS

D.1 QA/QC WATER

The quality assurance/quality control program (QA/QC) consisted of evaluation of the following sets of data generated from each site:

- Field duplicates
- Field replicates
- Trip blank

For this study, a duplicate was determined to be a sample submitted to the laboratory but given a different code and was unrecognisable by the laboratory as a duplicate. A replicate was identified as such to the laboratory. For CAM-5 the QA/QC samples consisted of:

- 1 trip blank
- 1 field blank (water)
- 1 method blank (soil)
- 2 matrix spikes (soil)
- 1 duplicate sample for the water
- 6 duplicate sample sets for the soil collected and 4 analyzed
- 8 field replicate samples for soil collected and 7 analyzed
- surrogate recoveries for all samples analyzed for organics

This QA/QC program was carried out for twenty-four of the fifty-two soil sample locations and eight water samples from seven sample locations.

D.1 QA/QC WATER

Of the eight samples procured, C5-C and C5-D were sampled as duplicates. The trip blank consisted of a sample of distilled water which was opened briefly on-site, resealed and returned to the laboratory. The results are given in Appendix C-2. Duplicates are identified by "D". For all samples, the EPA 624 and 625 parameters were reported to be below detection limits with the exception of nickel and trace quantities of bis(2 ethylhexyl) phthalate and di-n-octyl phthalate. Sample C5-C reported nickel at 120 ug/L and below detection in the duplicate. Recoveries of the surrogates for the volatiles and the base neutral acid extractables were acceptable.

D.2 QA/QC SOIL

From a total of twenty-four soil samples submitted, six sets of field duplicates and seven field replicate samples were analyzed. The results are given in Appendix C-1.

One set of samples, C5-005 and C5-006, were submitted for duplicate analyses of metals, TPH and PCBs. Reproducibility was generally good for metals although the PCB and TPH results varied. Sample variation for TPH and PCBs are likely resultant from inhomogeneous soil matrices. Sample C5-020 and C5-021 were submitted for duplicate analyses for the full suite of indicator chemicals and field replicate C5-021(R) for TPH and PCBs only. The compared results between these three samples were good for all chemicals. Samples C5-030, C5-030(R), C5-031 as well as C5-040 and C5-041 were submitted for the full suite of indicator chemicals except volatiles. All results from both these sample locations showed good reproducibility. Field replicates C5-045 and C5-050 were submitted for TPH and PCB analyses and showed good

results except for TPH in C5-050. Sample variations for TPH are likely resultant from inhomogeneous soil matrices. Replicate sample C5-026 was submitted for volatiles and showed good reproducibility. Sample C5-058 was also submitted for volatiles as well as BNAs and gave good results. Replicate sample C5-057 was submitted for BNAs only and gave good comparable results.

Recoveries of the surrogates for the volatiles and the base neutral acid extractables were acceptable.

Overall, the results of the quality assurance/quantity control of the field sampling and reporting of the results were very consistent for CAM-5. The recoveries of the surrogates for base neutral acid extractables and volatiles for all samples were acceptable, falling well within the limits set for the QA/QC program.