APPENDIX E

RISK ASSESSMENT

CAM-5, MACKAR INLET
RISK ASSESSMENT

APPENDIX E

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E. RISK ASSESSMENT

E.1 OVERVIEW

E.1.1 ASSESSMENT METHODS

The methodology used to assess the potential risks of contaminants found at the CAM-5 site was described in Volume 2, Section 3.3.1 entitled, Risk Assessment - Quantitative. This methodology was categorized according to data evaluation, exposure assessment, toxicity assessment, and risk characterization and results from the CAM-5 risk assessment are similarly organized in the following subsections.

E.1.2 GENERAL ASSESSMENT DATA

Risk assessment data which were common to all 21 DEW Line Sites were not repeated in each site report but rather they were documented in Volume 2, Section 3.3.1. General pathway equation variables used in the exposure assessment were described in Volume 2, Appendix G. References to toxicity information used in the CAM-5 toxicity assessment were also described in Volume 2, Section 3.3.1.4. This general data documented in Volume 2 has been repeated in the present volume only where necessary to clarify results.

E.2 DATA EVALUATION

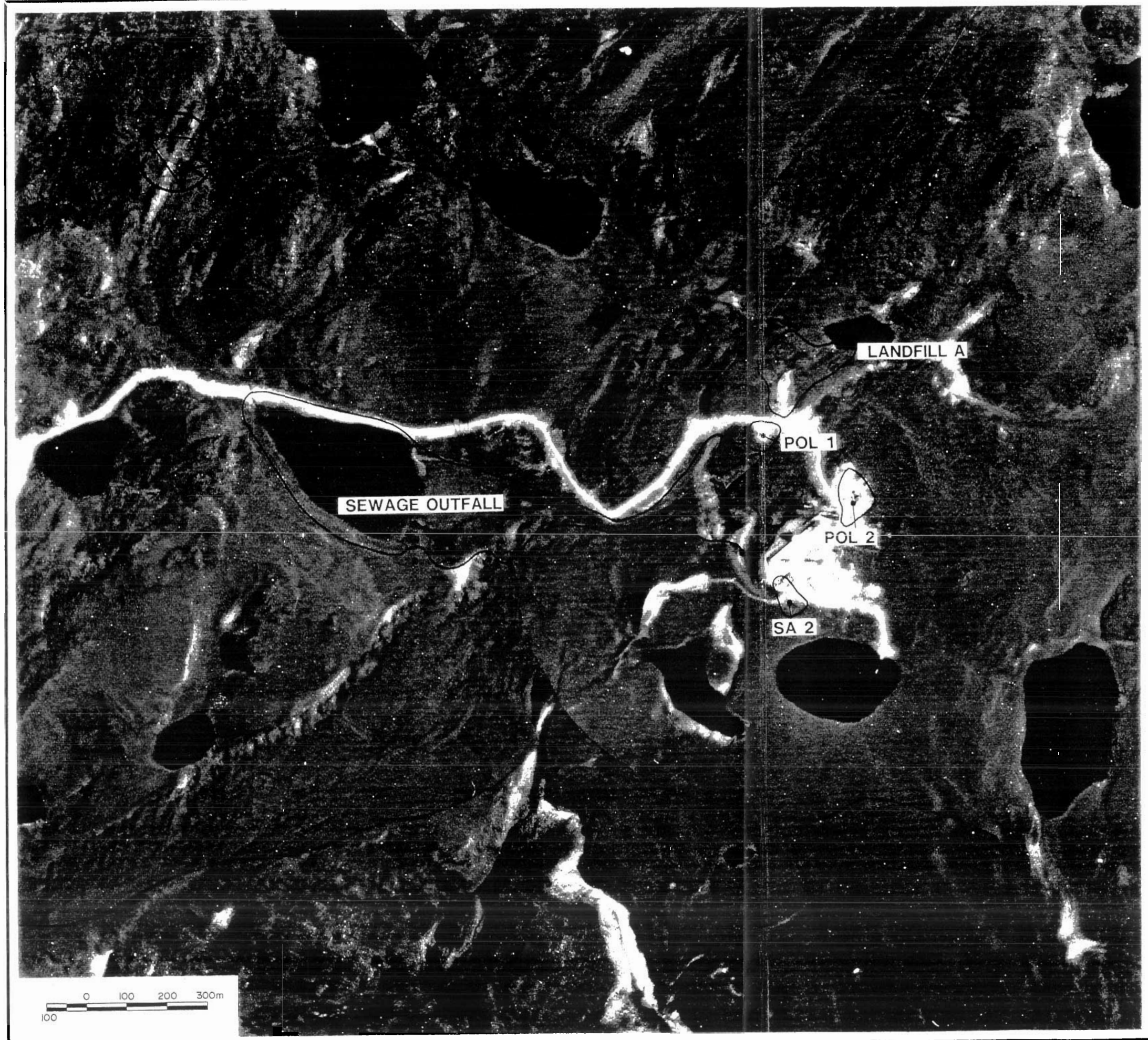
E.2.1 CONTAMINANT MAP

The areal extent of each contaminant was estimated qualitatively based on the field observations and the geological and hydrological data presented in Sections 3.0 and 6.0. Areas covered by contaminant sites such as landfills, outfalls, POLs and stain areas are shown in Figure E.1. For each of these sites, the areal extent of all significant contaminants was estimated along with the associated average concentration to provide the required inputs for the exposure assessment.

E.2.2 SUMMARY OF SIGNIFICANT CONTAMINANTS

Laboratory results and implications of these results for all contaminants found at CAM-5 were described in Section 6.0. The examined sites were assessed and contaminant concentrations in both soil and water were compared with Canadian Federal and Provincial clean-up criteria. Laboratory data were reviewed in terms of concentrations calculated, error estimates, and minimum equipment detection limits and then compared with background values and government regulations and guidelines. The assessment criteria and rationale were previously described in Section 1.3.

A summary of the significant soil contaminants found at CAM-5 is given in Table E.1. Each location shown in Figure E.1 is listed in this table if a significant soil contaminant concentration was found from the lab analysis. No significant contaminants were found in Landfill B, Pallet Line 1, POL 1 or Stain Area 1. As may be seen, ten contaminants were found in one or more locations and the number of contaminant concentrations found to be greater than the method detection limit (MDL) in any one location varied from 1 to 4. Three contaminants, barium, nickel and chromium were found generally throughout the site. PAHs included both fluorene and phenanthrene which were evaluated as a group. Silver and mercury were found in only one sample in the Sewage Outfall. Low concentrations of barium were only found in Landfill A.



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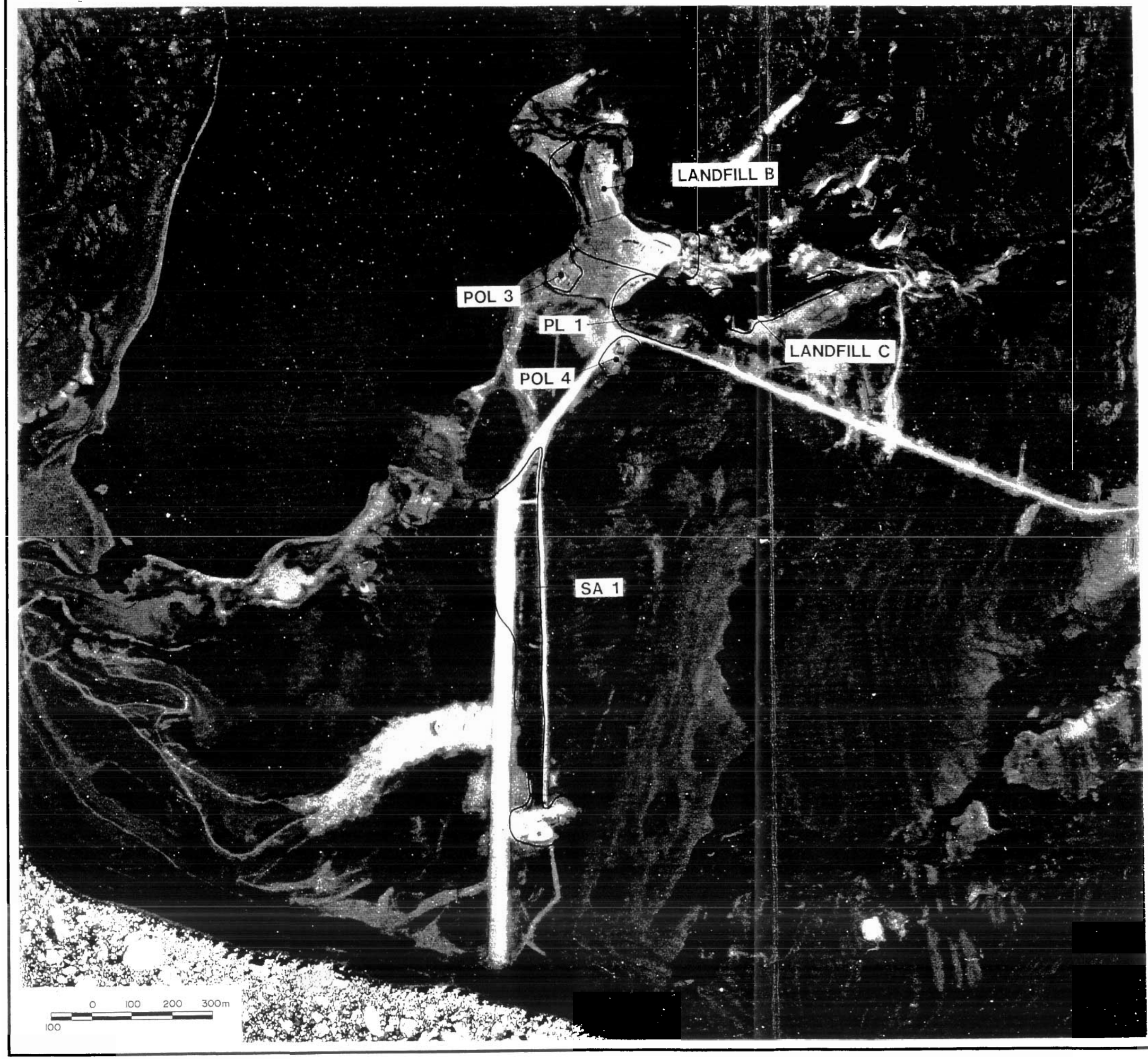
⬭	CONTAMINANT BOUNDARY
SA 1	SPILL AREA
PL 1	PALLET AREA

CAM-5 MACKAR INLET

STATION AREA CONTAMINANT MAP

FIGURE E.1



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CONTAMINANT BOUNDARY

SA 1 SPILL AREA

PL 1 PALLET AREA

CAM-5 MACKAR INLET

AIRSTRIP AREA CONTAMINANT MAP

FIGURE E.2