gathering all analytical data generated during the site investigation and sorting the data by medium; evaluating analytical methods; evaluating the quality of data with respect to sample quantitation limits, qualifiers, codes, and blanks; evaluating tentatively identified compounds; comparing potential site-related contamination with background concentrations; and producing a set of data that qualifies for use in the RA. For the purposes of this RA, all data points above instrument detection limits (U qualified data) were considered quantifiable values.

Within HPIA, four AOCs were sampled for intermediate and deep groundwater, and for surface soils. The location of the AOCs are shown in Figure 2-1 and the specific locations of soil sample collection within each AOC are illustrated in Figures 2-2 through 2-4. ESE's scope of work did not allow soil samples to be collected from Site 22, therefore, only the contaminants associated with groundwater were addressed in this RA. A more detailed description of actual samples collected and analyses conducted for each matrice and AOC are summarized in the following sections.

2.1.1.1 Soil

Shallow soil borings (0 to 2 feet deep) were collected at three of the AOCs using carbon steel split spoons. The objective of the soil sampling was to evaluate the chemical and physical nature of shallow (above the water table) soil contamination in the vicinity of Buildings 902, 1202 and 1601-1602. Samples were collected from each boring for chemical analysis, with ten percent of the samples analyzed for full Target Compound List (TCL) parameters. The remaining 90 percent were analyzed for volatile organic compounds (VOAs), pesticides and polychlorinated biphenyls (PCBs), and Toxicity Characteristic Leaching Procedure metals (TCLP metals).

Soil boring samples numbered 1 through 10 were collected within the immediate vicinity of Building 902, while samples 11 through 20, and 21 through 30 were collected from areas around Buildings 1202 and 1602, respectively. Only the data derived from samples collected from the ground surface to a depth of 2 feet were used for the quantification of risk associated to soil exposure. Surface soil samples were not collected for soil borings 14, 18, and 27. A total of 27 surface soil samples were analyzed. The deeper soil samples (2 to 10 feet deep) were addressed qualitatively for comparative purposes only, and not to determine the extent of contaminant leaching. Results of the surface soil sample analyses for all four AOCs are summarized in Table 2-1.

2.1.1.2 Intermediate and Deep Groundwater

In December 1990, four groundwater monitoring well clusters (Figure 2-5) were installed downgradient of the four AOCs. Both intermediate and deep wells were installed at each location to evaluate the vertical distribution of contamination in the groundwater downgradient of the AOCs. The intermediate and deep wells tap the same aquifer. Therefore, data from both types of wells were combined for the determination of exposure concentrations. The maximum detected concentrations were used for the exposure concentration. All groundwater samples were analyzed for full TCL parameters and in-field measurements of pH, specific

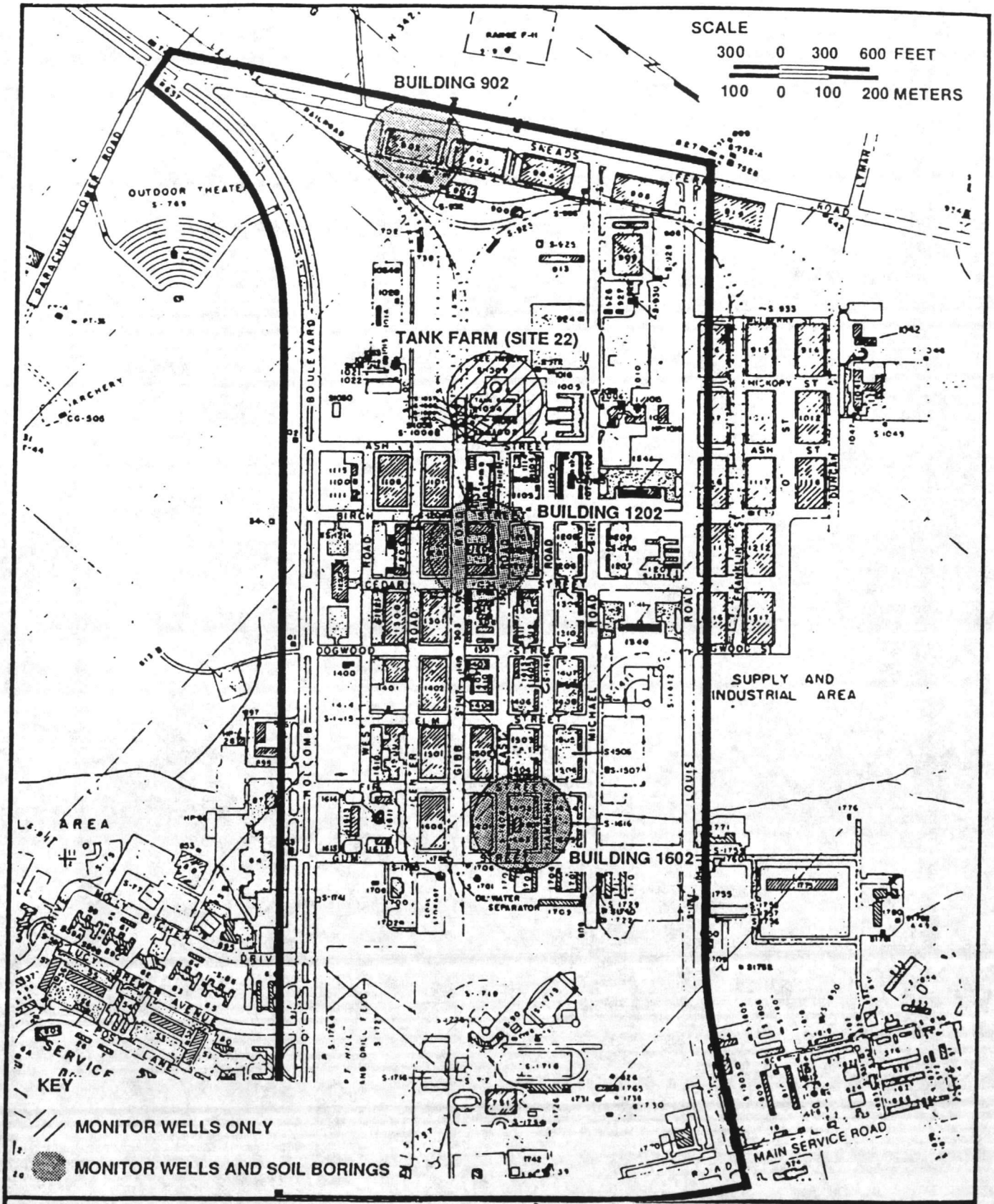

Figure 2-1
LOCATION OF AREAS OF CONCERN WITHIN HPIA

SOURCE: CAMP LEJEUNE, 1987.

MARINE CORPS BASE
CAMP LEJEUNE