

10/27/89



ecology and environment, inc.

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International Specialists in the Environment
October 26, 1989

ALAMEDA COUNTY
DEPT. OF ENVIRONMENTAL HEALTH
HAZARDOUS MATERIALS

Mr. Ariu Levi
Alameda County Health Care Services Agency
Department of Environmental Health
Hazardous Materials Program
80 Swan Way, Room 200
Oakland, California 94621

Dear Mr. Levi:

On behalf of Southern Pacific Transportation Company (SPTCo.), Ecology and Environment, Inc., (E & E) is presenting this plan of action for Phase II Characterization and preliminary remediation at SPTCo.'s 744 High Street property in Oakland, California. This plan of action addresses comments on E & E's Environmental Assessment Report (September 5, 1989) presented to the Alameda County Health Care Services Agency (ACHCSA) in a letter dated October 5, 1989.

The characterization activities completed to date have identified the following contaminants of concern at the property:

- Total petroleum hydrocarbons (TPH) and total oil and grease (TOG) in soils;
- PCBs in soils and groundwater; and
- Lead in soils.

Action Levels and Areas Requiring Phase II Characterization and/or Remediation.

Since TOG can be naturally occurring and since past site activities at the property involved petroleum-related oils and greases, E & E feels that TPH is a more appropriate indicator of contamination than TOG.

Subsurface soils data and groundwater data indicate that TPH levels are highest in near-surface soils in specific locations on the property and that groundwater is not being impacted by these occurrences. An action level of 1000 mg/kg for TPH is therefore proposed. This action level is consistent with the action level for TPH in situations of leaking underground storage tanks where groundwater is not threatened.

mbe/levi/l

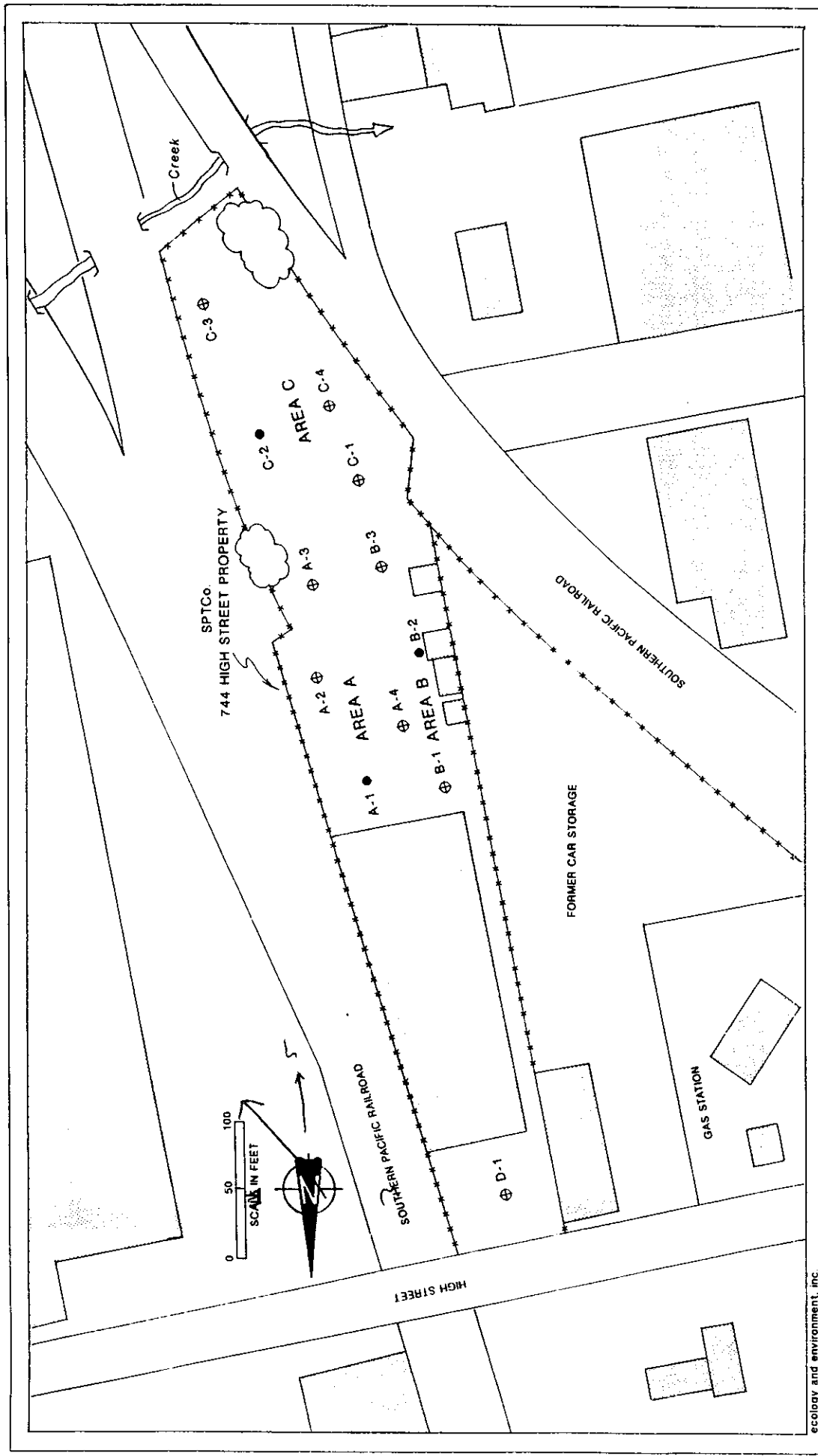
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Soil with TPH exceeding the proposed action level was detected in the near-surface sample from boring C-2 (see Figure 1-1 for boring locations and area designations). Further characterization will be needed in this area. Earlier sampling by Property Contamination Control (PCC) revealed TOG at 5920 ppm in a surface soil composite within E & E's area A and TOG at 4,565 ppm in an individual sample from E & E's area B. These sampling locations appear to correspond to areas of visible surface oil staining and will require remediation. ACHCSA UP BY
WHAT
APPROX. H.

As suggested by the ACHCSA, an action level for PCBs in soils of 50 mg/kg is proposed. This level corresponds to the total threshold limit concentration (TTLC). Levels in wastes above the TTLC classify the waste as a hazardous waste. A PCB concentration in an individual soil sample at the property that exceeds 50 mg/kg has been detected in a surface soil sample from the vicinity of B-2 and in the near-surface composite sample from Area C. A PCB concentration that indicates that an individual sample making up the composite could potentially exceed the 50 mg/kg action level was detected. Subsequent analysis of individual samples from this area, however, suggests that PCB concentrations in Area C are generally low and evenly distributed. Further characterization of surface and/or near-surface soils is needed in Area C and in the vicinity of B-2 to determine the extent of remediation for PCBs. WHAT
SUBSEQUENT
ANALYSIS
RESPONSE

Since PCBs were detected in groundwater in monitoring well C-2, further characterization of groundwater for PCBs at and near the property will be needed. The need for groundwater remediation cannot be established at this time. A risk assessment will have to be performed which will take into account potential uses of the groundwater beneath the property. YES

Possible action levels for lead in soils include the TTLC of 1000 mg/kg, "background" lead levels, and the concentration above which leaching of lead could result in lead levels in groundwater above the EPA maximum contaminant level (MCL). Groundwater sampling indicates that lead in soils is not resulting in groundwater levels above the MCL beneath the property, therefore, leaching of lead does not appear to be environmentally significant. Because the land will be used for commercial purposes and the property will be paved, an action level of background concentration is not appropriate. An action level of background concentration might only be appropriate if future land use



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- ⊕ SOIL BORING
- SOIL BORING AND MONITORING WELL

Figure 1-1 PHASE I CHARACTERIZATION
SOIL BORING AND MONITORING WELL LOCATIONS

at the property would result in significant exposure potential to humans. In view of the lack of impact of lead on groundwater and the continued commercial use of, and proposed paving at, the property, an action level of 1000 mg/kg for soils is proposed. This corresponds to the state TTLC for lead, a level above which the soil would classify as a hazardous waste for disposal purposes. Lead in soil at the property that exceeds this action level was detected only in a near-surface soil sample from the vicinity of boring C-2. Further characterization near boring C-2 for lead will be needed to determine the extent of soil with lead at a concentration above 1000 mg/kg. ok

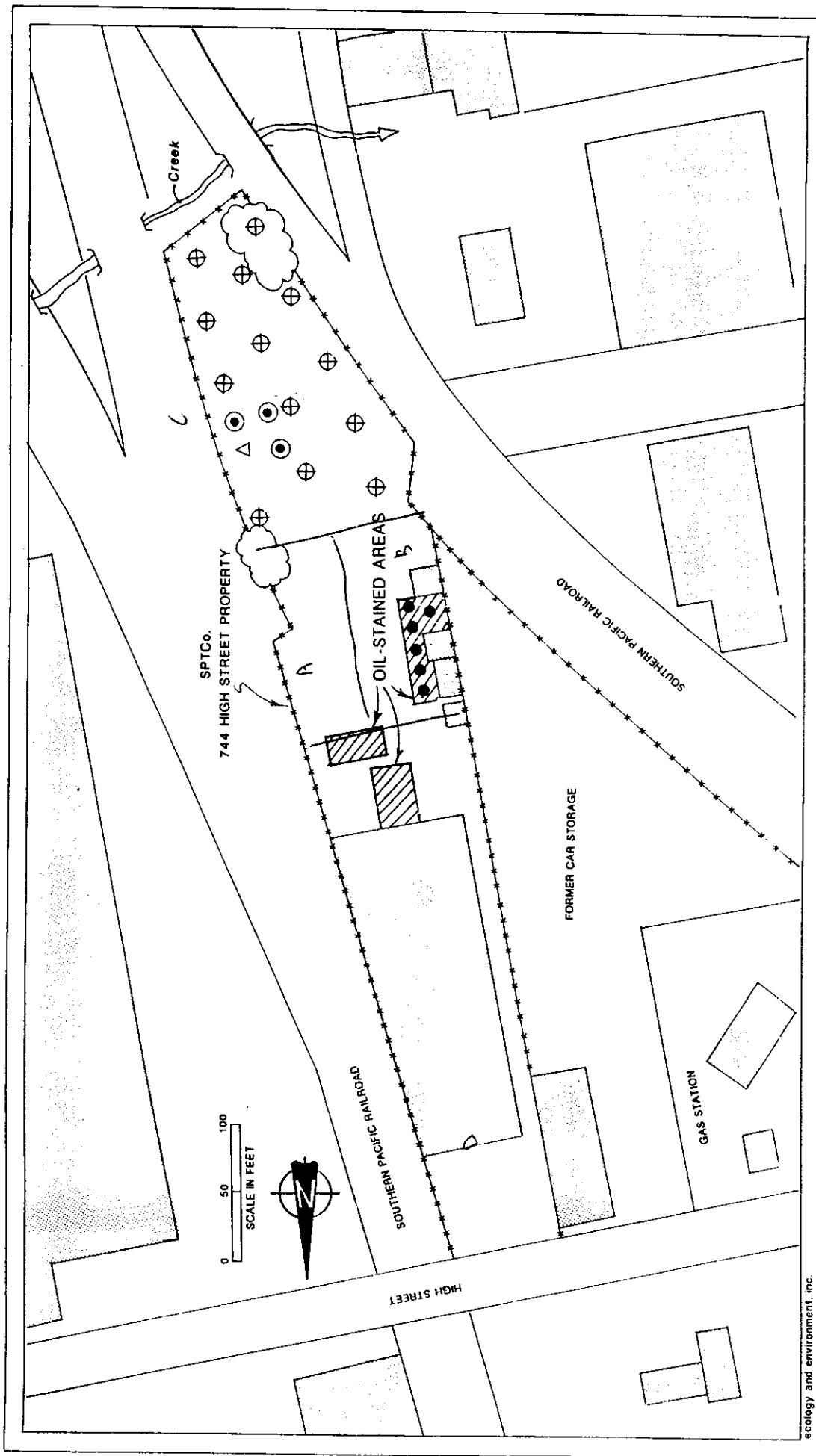
Proposed Phase II Characterization Activities and Preliminary Remedial Measures.

Proposed soil sampling locations discussed in the sections below are presented in Figure 1-2 and proposed groundwater monitoring well locations are presented in Figure 1-3.

Boring B-2: Sampling by PCC detected PCBs at 260 ppm in a sample of surface soil from near boring B-2. PCBs were not detected in subsurface samples from E & E's borings in Area B. This suggests that PCBs in this vicinity may be restricted to the surface. To further assess PCBs in this area, six surface soil samples will be collected from a grid pattern with 15 foot spacing between sample points centered on boring B-2. Samples will be analyzed for PCBs by a screening procedures as a cost-effective measure. WHAT SCREENING PROCEDURE? MONITORING COST.

Area C: The near-surface composite sample from borings in Area C indicated that the action level for PCBs of an individual sample making up the composite may be exceeded. Environmentally significant levels of PCBs do not appear to occur in this area at a depth of 5 feet. To further assess the extent of PCBs in area C, samples will be collected from surface soils on an approximately 50 foot by 50 foot grid pattern. This will result in fourteen sampling locations. Samples will be collected from the top of the old soil surface below the debris fill. Samples will be analyzed for PCBs by a screening procedures as a cost-effective measure. OK ENCL. P. 1
FOR SCREENING

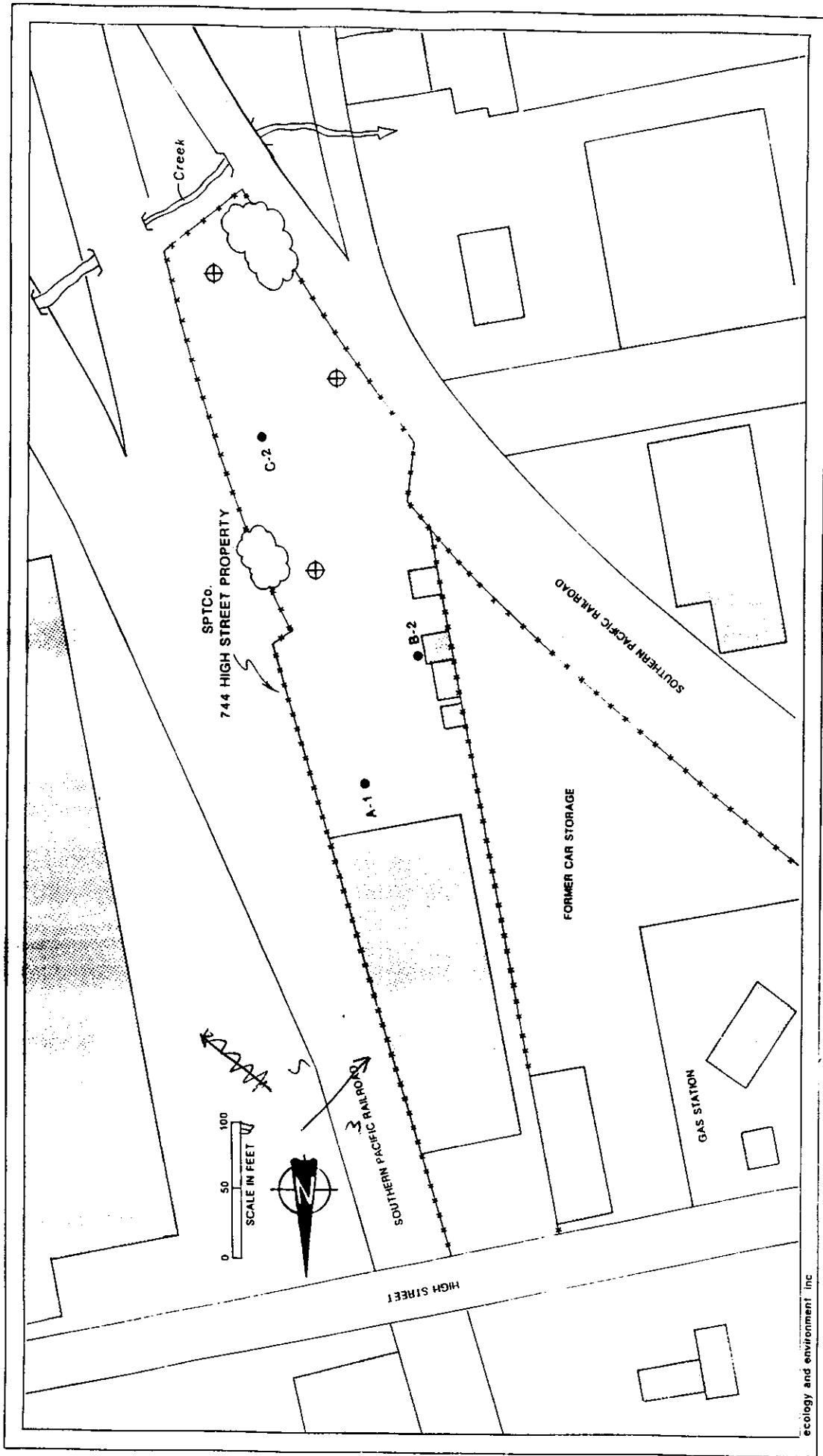
Boring C-2: In the near-surface individual soil sample from near boring C-2, levels of lead and TPH of possible environmental significance were detected. To further characterize the extent of these constituents in the vicinity of C-2, soil samples will be collected at four locations at a radius of 15 feet surrounding boring C-2. Soil samples will be collected from depths of 1.0 to 1.5 feet below any fill and from 3.0 to 3.5 feet below any fill. The deeper samples will be archived for possible future analysis if the shallower samples reveal concentrations of lead or TPH above the action level. ok



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Figure 1-2 PHASE II CHARACTERIZATION
PROPOSED SOIL SAMPLING LOCATIONS

- ⊕ TPH
- PCBs
- ⊙ LEAD, TPH
- △ LEAD, TPH, PCBs



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- ⊕ PROPOSED MONITOR WELL LOCATION
- EXISTING MONITOR WELL LOCATION

Figure 1-3 PHASE II CHARACTERIZATION GROUNDWATER MONITOR WELL LOCATIONS

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Groundwater: To further assess the extent of PCBs in groundwater in the vicinity of monitoring well C-2, three additional groundwater monitoring wells will be installed and a regional groundwater sampling event will be implemented. Groundwater samples will be analyzed for PCBs. The regional groundwater sampling will include twelve groundwater monitoring wells, including the three existing on-site wells and the three proposed on-site wells. A total of fourteen samples will be analyzed for PCBs by a screening procedure, similar to EPA Method 608. This is not an approved EPA methodology, however, it will provide a detection limit of 1 ppm in soils. This is a cost-effective procedure compared to performing EPA Method 8080. E & E will select two of the screened samples to analyze by EPA Method 8080 to confirm the results analyzed by the screening procedure. The total number of samples to be collected will include two quality assurance/quality control samples. The need for quarterly groundwater sampling and analysis for PCB will be determined following this additional characterization.

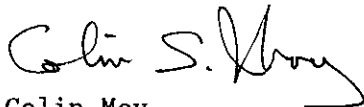
with 3
wells
"Regional"
6 wells
on-site
2 samples
For a QC
where Arin
is in 6.

Soil Remediation: Observations made in the field during E & E's initial environmental assessment activities revealed three localized areas in Areas A and B where surface soil was visibly stained with oil. Information available concerning the locations of PCC's samples suggests that they were probably collected from these oily areas; the TOG results also support this conclusion. These oily locations will be excavated and the soil removed. Assuming that the soil staining extends to a depth of depth of not more than 1.5 feet, the estimated volume of excavated material is 110 cubic yards. Following removal, sampling will be conducted to confirm that soil with a TPH content above 1,000 mg/kg has been removed. A grid layout will be used to collect grid samples, with a spacing between samples of 15 feet. A total of 12 confirmation samples will be collected for TPH analysis.

The characterization activities described above should provide the necessary data with which the need for, and extent of, additional remediation can be determined. SPTCo. looks forward to implementing this course of action. If you have any questions or comments, feel free to contact me.

Sincerely,

14 soil wells



Colin Moy
Project Manager

cc: J. Moe, SPTCo.

mbe/levi/l