GROUNDWATER TECHNOLOGY ®

Groundwater Technology, Inc.
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February 2, 1996

Mr. G. Keith West
General Motors Corporation
Argonaut "A" - 1004H
485 W. Milwaukee Avenue
Detroit, Michigan 48202

Subject: Proposed Work Plan Addendum #1 for
Further Site Assessment Sampling Activities
GMC TRUCK CENTER
8099 South Coliseum Way
Oakland, California

Dear Mr. West:

At your request, Groundwater Technology is submitting the following proposal to conduct additional sampling activities as an addendum to the *Work Plan for Further Site Assessment, GMC Truck Center, 8099 Coliseum Way, Oakland, California* dated January 26, 1995 for the above-referenced property. Groundwater Technology completed the analysis of soil and groundwater samples from seventeen (17) soil corings collected on March 23 and 24, 1995. This work was conducted in accordance with Section 3.2.1, Soil Coring, as specified in the January 26, 1995 work plan and was reported in a letter dated May 9, 1995. The purpose of the work completed during this phase was to collect data to assist in determining the horizontal and vertical impact of fugitive hydrocarbons at the site. The areas investigated included the areas around the underground storage tanks (USTs) formerly located on the south side of the main building, the oil/water separator located on the northeast side of the main building, and the garbage collection area at the far northwest corner of the property. This Addendum 1 to the approved work plan is provided to describe the proposed scope of work for the assessment tasks that were completed on June 26, 1995 to further define the extent of petroleum affected soil and groundwater.

Review of Previous Findings

The analytical results of the soil samples collected in March 1995 near the oil/water separator indicated the presence of benzene at 5.4 milligrams per kilogram (mg/kg), xylenes at 87 mg/kg, total petroleum hydrocarbons (TPH) as gasoline at 3,500 mg/kg and TPH as kerosene at 1,800 mg/kg. In addition, the soil sample collected from the groundwater interface from this coring was saturated with petroleum product. The remaining soil samples analyzed during this phase of the investigation did not contain constituents in concentrations above laboratory method detection limits.

The groundwater samples collected from corings near the former waste oil tank and the apparent downgradient direction from the former waste oil tank contained diesel ranging from less than the method detection limit to 500 micrograms per liter (ug/L) and dissolved concentrations of motor oil ranging from less than the method detection limit to 2,100 ug/L. The groundwater samples collected from the corings adjacent to the former gasoline and diesel USTs and in the apparent downgradient direction from the former gasoline and diesel USTs contained concentrations of diesel ranging from less than the method detection limit to 2,300 ug/L, and concentrations of motor oil from 480 to 7,600 ug/L. Free phase hydrocarbons (characterized by the laboratory as TPH as mineral spirits) were observed in the groundwater from the coring located to the west of the oil/water separator. TPH as motor oil was detected at a concentration of 4,000 ug/L in the groundwater from the coring located to the south of the oil/water separator. TPH as diesel was detected at a concentration of 260 ug/L in the groundwater from the coring located about 100 feet east of the oil/water separator. TPH as motor oil was detected in the groundwater sample from the coring located to the west of the garbage collection area at a concentration of 2,000 ug/L.

The findings presented in the May 9, 1995 letter report recommended the collection of nine additional sets soil and water samples from areas near the oil/water separator and down- and cross-gradient of the former waste oil, gasoline, and diesel USTs to further define the extent of petroleum affected soil and groundwater. The following scope of work outlines Groundwater Technology's proposed additional work to assist in further defining the extent of petroleum affected soil and groundwater at the site.

Proposed Scope of Work

Nine (9) soil cores will be installed using a Geoprobe subsurface sampling system equipped with 2-inch outer diameter dual rod probes. Prior to coring each hole, all tools will be steam cleaned to avoid cross contamination. The coring will be supervised by a Groundwater Technology staff geologist who will describe the soil types encountered according to the Unified Soil Classification System and will complete a log for each coring. The soil cores will be completed to a maximum depth of 16-feet below grade.

Soil samples will be collected with a 7/8-inch diameter inner rod with acetate liner. The samples will be collected at approximately 5-foot and 10-foot intervals. Each soil sample will be field screened for hydrocarbon vapors using a photoionization detector (PID). After field screening, select soil samples will immediately be transferred to clean brass liners, sealed with aluminum foil, capped with plastic end caps, secured with tape, labeled, logged on the chain of custody form, and placed on ice in preparation of shipment to a California certified laboratory for analysis.

Groundwater samples will be collected from each coring through the temporary installation of slotted PVC well screen. A clean stainless steel bailer will be used to retrieve the groundwater samples. The groundwater samples will be placed in new clean sample containers, labeled, logged on the chain of custody form, and placed on ice in preparation of shipment to a California certified laboratory for analysis.

Following the completion of the soil and groundwater sampling, the PVC well screens will be removed and the core holes will be backfilled with neat cement and finished with asphalt or concrete to the existing grade.

Soil and Groundwater Sample Analysis

Selected soil samples and one groundwater sample from each coring will be submitted for laboratory analysis of TPH as gasoline according to EPA Method 5030/8015; BTEX according to EPA Method 8020; and hydrocarbon screening for compounds ranging from diesel fuel through motor oil using a gas chromatograph (GC) and a flame ionization detector (FID). The GC/FID method samples are prepared using EPA Method 3550 and are analyzed according to protocols commonly referred to as modified EPA Method 8015.

Reporting

A brief letter report of the findings of the laboratory analysis will be submitted to General Motors at the completion of this phase of the project. The report will include information regarding the sample locations, sampling procedures, laboratory analysis results, and deviations from this proposed scope of work. The findings of this phase of the project will be incorporated with the previous assessment information into the final assessment report.

If you have any questions regarding this addendum to the original work plan, please feel free to contact me at (913) 599-0262 or Chester Covert at (216) 349-0004.

Sincerely,
Groundwater Technology, Inc.

Michael R. Sieczkowski, CHMM
Project Manager

Kenneth P. Johnson, R.G.
Project Hydrogeologist

Attachments:
Proposed Coring Location Map

c: B. Ferguson
C. Covert

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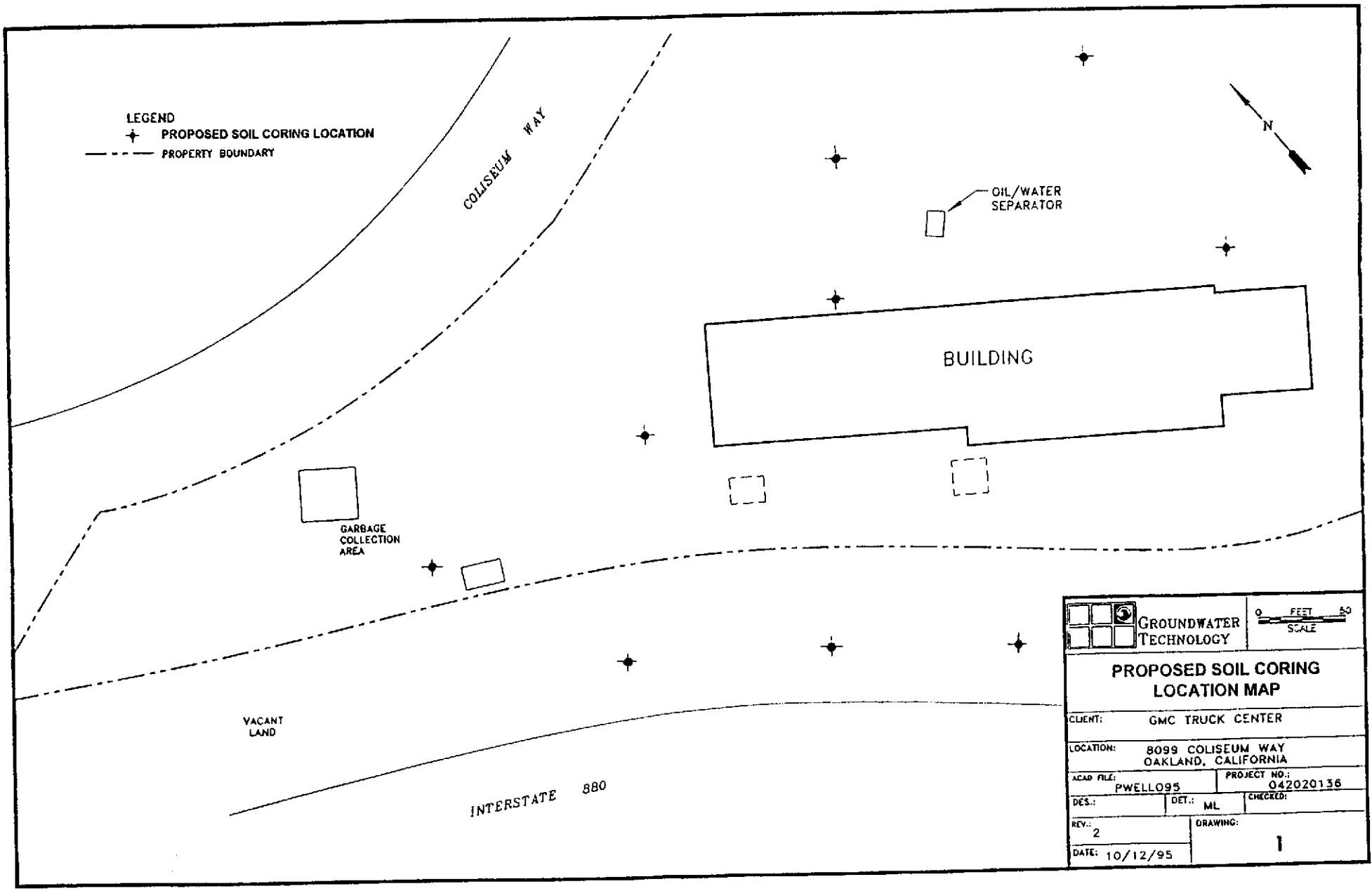
LEGEND
PROPOSED SOIL CORING LOCATION
PROPERTY BOUNDARY
COLISEUM WAY
OIL/WATER SEPARATOR
N
BUILDING
GARBAGE COLLECTION AREA
VACANT LAND
INTERSTATE 880
GROUNDWATER TECHNOLOGY
0 FEET 50
SCALE
PROPOSED SOIL CORING LOCATION MAP
CLIENT: GMC TRUCK CENTER
LOCATION: 8099 COLISEUM WAY OAKLAND, CALIFORNIA
ACAD FILE: PWELL095
PROJECT NO.: 042020136
DES.:
DET.: ML
CHECKED:
REV.: 2
DRAWING: 1
DATE: 10/12/95