LAW
ENGINEERING AND ENVIRONMENTAL SERVICES

PROPOSAL FOR A LIMITED CONTAMINATION ASSESSMENT

NASSAU COUNTY DETENTION CENTER
50 BOBBY MOORE CIRCLE
YULEE, FLORIDA

LAW ENGINEERING PROPOSAL NO. 94-4209E

LAW
ENGINEERING AND ENVIRONMENTAL SERVICES

November 8, 1993

Board of County Commissioners
c/o T. J. Greeson
Ex-Officio Clerk
Nassau County Courthouse
416 Centre Street, Room 9
Fernandina Beach, Florida 32034

Subject: **Proposal for a Limited Contamination Assessment**
Nassau County Detention Center
50 Bobby Moore Circle
Yulee, Florida
FDEP Facility No. 458841517
LAW Proposal No. 94-4209E

Dear Gentlemen:

Law Engineering, Inc. (LAW) is pleased to submit this proposal to conduct a limited contamination assessment in the vicinity of the former 10,000 gallon diesel underground storage tank (UST) at the subject site located at 50 Bobby More Circle in Yulee, Florida. This proposal was requested by Mr. Jack J. D'Amato, Jr., P.E., Vice President, PGMS Corporation and includes our understanding of the project information and requirements as well as our proposed scope and schedule of activities and our estimated fee for performing these services.

PROJECT INFORMATION

A 4000 gallon gasoline underground storage tank (UST) was removed by Scott Peterson Construction Company from the subject property in February 1992. The tank closure was monitored by GWL/EMCON Southeast, Inc. and a tank closure report dated July 1992 was prepared and submitted to the FDEP. LAW conducted the Contamination Assessment (CA) at the Nassau County Detention Center and prepared the Contamination Assessment Report (CAR) for the Center in August 1993 under LAW Project No. 444-06900.01. The CAR was reviewed by the Florida Department of Environmental Protection (FDEP) and additional information was requested in their letter dated October 12, 1993.

On December 17, 1993, LAW faxed Ms. Michelle Dean, FDEP, Tallahassee information regarding the proposed location of additional monitoring wells and proposed an alternate plan to determine the hydrocarbons in the soil. This request was forwarded by Ms. Dean to Mr. Brian Kelley at the FDEP in Jacksonville. In Mr. Kelley's letter dated February 10, 1994, the exact locations of the wells and proposed alternate plan were not endorsed, however, further investigation on the soils in the vicinity of the retention ponds and the groundwater were requested. Clarification on a 10,000 gallon gasoline UST located at the property was also requested.

The requested information in the letters dated October 12, 1993 and February 10, 1994 were provided in the Report of Additional Environmental Services (LAW Project No. 444-06900.03) dated July 25, 1994. LAW had requested in that report that a No Further Action (NFA) be granted for the 4000 gallon UST area and that the 10,000 gallon storage tank be treated as a separate issue.

The 10,000 gallon diesel tank located at the subject property was removed by Treadwell, Inc. under LAW Project No. 444-06900.04 and a copy of the 10,000 gallon tank closure report was included in the Report of Additional Environmental Services. During the 10,000 gallon underground storage tank closure soil contamination was not observed around, under and above the tank. However, groundwater contamination was detected in a groundwater sample collected from underneath the tank. A Discharge Notification Form was submitted to the FDEP on July 3, 1994.

After review of the Report for Additional Environmental Services the FDEP stated in their letter dated September 6, 1994 that a assessment of the 10,000 gallon diesel tank area should be completed prior to placing the site on No Further Action (NFA). The 10,000 gallon tank could not be treated as a separate issue since NFA is granted for entire site.

During conversations between Mr. Srinivas Kuchibotla of LAW and Ms. Michelle Dean, FDEP, Tallahassee on November 3, 1994, she suggested that a limited groundwater contamination assessment would suffice for the 10,000 gallon tank area, since, soil contamination was not detected in the vicinity of the 10,000 gallon tank during the tank closure. However, she recommended that the soils at each well location be screened during monitoring well installation. The remainder of this proposal includes our scope of services and our fee schedule for performing the limited contamination assessment.

SCOPE OF SERVICES

LAW will perform a limited contamination assessment in the vicinity of the 10,000 gallon underground storage tank (UST). This assessment will involve installation of monitoring wells, groundwater sample collection and laboratory analysis, and screening of the soils at each well locations during installation.

Task 1: Groundwater Monitoring Well Installation

Based on our preliminary evaluation of the site-specific characteristics, it is our present opinion that five Type II monitoring wells would be appropriate. Two Type II wells, one deep and one shallow will be installed at the location of the former 10,000 gallon UST. One shallow Type II well will be installed upgradient of the former 10,000 gallon UST area. Two shallow Type II wells will be installed downgradient of the former 10,000 gallon UST area. The downgradient direction will be determined based on groundwater elevations obtained for the assessment performed for the 4000 gallon gasoline UST. For the purposes of this proposal, we have assumed that four shallow Type II flush-mount wells will be installed to a depth of approximately 15 feet and the deep Type II flush-mount well will be installed to a depth of 40 feet.

The wells will be constructed of 2-inch I.D., Schedule 40 PVC. The lower ten-feet of each well shall have a screened section with 0.010-inch wide slotted openings. The wells will be installed by hollow stem auger or mud rotary drilling. A 20/30 gradation of silica sand will be used as a filter pack and will occupy the space between the outside of the well screen and the inside of the 10-inch diameter borehole annulus. This filter sand will fill the borehole annulus to a level approximately one foot above the screened interval. The remaining annular space will be filled with approximately one foot of bentonite clay pellets and cement-grouted to the surface. Two feet of the screened interval will be above the groundwater table.

Drilling equipment in contact with the soil and groundwater will be steam-cleaned prior to the commencement of drilling and construction of each monitoring well. Upon completion of each well, the wells will be developed by surface pumping until the discharge water becomes relatively clear. The drill cuttings and development water will be drummed at the subject property. LAW could provide a proposal for disposal of the drummed materials (if the groundwater samples to be collected under Task 2 are contaminated) under a separate scope of services. LAW has included in the proposal, costs for ten drums for drumming the drill cuttings and development water only.

It is our understanding that Nassau County or the Detention Center personnel will provide access for the drilling equipment, where necessary. As requested by Ms. Dean, LAW will screen the soils above the groundwater table at the location of each monitoring well during the well installation. The soil screening will be performed using a Organic Vapor Analyzer (OVA). Additional soil screening will not be performed at the subject property

Task 2: Groundwater Sampling and Laboratory Analysis

Following installation and development of the groundwater monitoring wells, five groundwater samples will be collected from the five wells for analyses by the Mixed Product Analytical Group of parameters listed in F.A.C. Rule 62-770.600 (8) (b), FAC. The groundwater samples will be analyzed for Total Volatile Organic Aromatics by EPA Method 602, Volatile Organic Halocarbons by EPA Method 601, Polyaromatic Hydrocarbons by EPA Method 610, Total Recoverable Petroleum Hydrocarbons (TRPH) by EPA Method 418.1 and Lead by EPA Method 7421. The cost estimate is based on a standard three week laboratory turnaround.

Groundwater field sampling activities will be performed in general accordance with LAW's State approved Quality Assurance Project Plan. Laboratory analyses will be performed in general accordance with Law Environmental National Laboratories Comprehensive Quality Assurance Plan. Field activities will be performed in general accordance with the Health and Safety Plan prepared for the Contamination Assessment conducted under LAW Project No. 444-06900.01.

Groundwater samples will be obtained using disposable teflon bailers. Prior to obtaining the groundwater samples for laboratory analysis, three to five well volumes of groundwater will be removed from each well. Groundwater samples will be placed in appropriate containers supplied by the testing laboratory. The samples will then be packed in ice and shipped by over-night courier to Law Environmental National Laboratories in Pensacola, Florida.

Task 3: Project Management, Consultation and Report Preparation

Throughout the project, Law Engineering will act as a technical resource and to the extent requested assist with regulatory compliance. The cost for project management and consultation allows time for phone conversations with the FDEP and Nassau County, one post submittal meeting with Nassau County personnel or the FDEP, but no addendums.

Upon completion of our field activities and receipt of the laboratory results, a written report of our findings will be prepared for submittal to Nassau County. The Report will include the following information:

a) Drilling procedures and soil conditions encountered during well installation
b) Monitoring well locations
c) Groundwater sample collection and laboratory analysis protocol
d) Soil screening and groundwater analysis results
e) Opinions and Recommendations

ESTIMATED FEES

Task 1: Groundwater Monitoring Well Installation $5800.00

Task 2: Groundwater Sampling and Laboratory Analysis $3250.00

Task 3: Project Management, consultation and Report Preparation $1850.00

TOTAL ESTIMATED FEES $10,900.00

The costs are based on our contract fee rates. We will monitor the study so as to reduce the scope from that noted above where warranted. To keep you informed of services performed, an invoice for completed services will be issued every four weeks. Invoices are due upon receipt. We will not exceed an amount of **$10,900.00** for these additional services without written authorization from your office.

SCHEDULE

We understand that it is necessary to complete this study as soon as possible. Based on our present schedule and laboratory turnaround time requirements a written report of our findings will be submitted in approximately eight weeks from the date of authorization. If this schedule does not meet your project deadlines, please notify our office so that a mutually agreeable schedule can be arranged to meet your requirements.

AUTHORIZATION

It is our understanding that these additional environmental services will be authorized by an extension to our existing contract with the Nassau County Board of Commissioners. Accordingly, we have included the necessary notations below.

If you have any further questions on the matter, please contact us at your convenience.

Sincerely,

LAW ENGINEERING, INC.

Srinivas Kuchibotla, E.I.
Project Environmental Engineer

Eric R. Silvers, P.G.
Principal Geologist

SK/JAH:ph

Distribution: Nassau County Engineering Office (2)

FOR NASSAU COUNTY USE ONLY:

Approved this 31 day of JAN., 1995 by the Board of County Commissioners, Nassau County, Florida.

ATTEST:

T. J. Greeson, Ex-Officio Clerk

BOARD OF COUNTY COMMISSIONERS

JIMMY L HIGGINBOTHAM

Approved as to form:

Michael S. Mullin
County Attorney