

TASK ORDER 2-09
PCU 06-091

PASCO COUNTY
SE-WWTP HYPOCHLORITE SPILL CONTAMINATION ASSESSMENT

Pursuant to the Agreement between the parties dated July 27, 2004 Hartman & Associates, Inc. (Consultant) and Pasco County Utility Services (County) agree to incorporate by reference and be governed by all provisions of said Agreement as part of this Task Order authorization. This Task Order includes:

- A. Project Description
- B. Scope of Services
- C. Schedule
- D. Compensation

A. Project Description

The Consultant understands that the County desires to retain the Consultant to perform Site Assessment activities in accordance with the requirements of FDEP Rule 62-780 FAC and the FDEP guidance letters dated May 2, 2007 and April 6, 2009. The work will include soil borings and sampling, installation of monitoring wells, aquifer testing, laboratory testing of soil and groundwater contaminants, report preparation, and meeting with the County and FDEP to present the results of the Site Assessment.

Previous efforts toward assessment of this site by other contractors were not completed as provided by FDEP Rule 62-780.600 FAC, and resulted in two extensive requests for additional assessment activities from the Southwest District Office of the FDEP. So that we may best respond to the FDEP comments, we propose to have all critical assessment activities (e.g., soil borings and contamination delineation) and interpretations performed by a Florida licensed Professional Geologist (PG) and other non-critical activities performed by an experienced hydrogeologist under the direction of a PG.

B. Scope of Services

Barring the unlikely circumstance that the contaminant has migrated off-site, the proposed primary scope of work and the contingent work are designed to ensure compliance with the Site Assessment requirements of FDEP Rule 62-780 FAC.

1. Site Inspection and Mapping – The Consultant will work with the County to identify, mark, and map underground utilities within the proposed work area and other features. The Consultant will map:
 - a. Features pertinent to the Site Assessment including drainage features, land cover, property boundaries, supply wells, and potential off-site sources of contamination (FDEP Rule 62-780.600(8)(a)3 FAC).
 - b. Individual discharge locations (FDEP Rule 62-780.600(8)(a)5 FAC).
 - c. Topography (from most recent USGS topographic map (FDEP Rule 62-780.600(8)(a)2 FAC)

- d. An inventory of all private water wells within ¼-mile of the site, and of all public water supply wells within ½-mile of the site. The Consultant will also determine whether the site is within the regulated wellhead protection zone of any public supply wells. (FDEP Rule 62-780.600(3)(h) FAC)

The County will map underground utilities within the work area (FDEP Rule 62-780.600(8)(a)3 FAC) and provide a marked work area and drawing showing utility locations and depths.

2. Soil Borings and Monitoring Well Installation: – The Consultant will conduct 2 days of soil borings using direct push technology (DPT) to confirm source removal at the spill location, to delineate the extent of soil contamination, and to determine the likely extent of groundwater contamination, and to describe geologic and hydrogeologic characteristics that may influence contaminant migration. The Consultant will also design and oversee the installation of monitoring wells to delineate the vertical and lateral extent of groundwater contamination (FDEP Rule 62-780.600(3)(b) FAC and (FDEP Rule 62-780.600(3)(g)2 FAC). The Consultant will establish the extent and severity of groundwater contamination by installing wells both within and beyond the contaminant plume. As currently budgeted, five (5) pre-packed wells will delineate lateral extent of contamination, and one double-cased vertical extent well will confirm the limit of vertical contamination.

3. Soil Sampling and Laboratory Analyses: – The Consultant will collect soil samples for analysis of selected contaminants as specified by the FDEP. Soil analytes shall include sodium, chloride, pH, trihalomethanes, and haloacetic acids. If a method has not been approved by the FDEP for analysis of haloacetic acid in soils, the samples will be analyzed for haloacetic acid leaching potential using the ACOE leaching method (FDEP Rule 62-780.600(5)(c) FAC). Drilling cuttings (so called “investigation derived wastes”, or IDW) that are suspected to be contaminated will be stored on-site in labeled FDOT approved drums and will be disposed of in an approved manner and with appropriate documentation. (FDEP Rule 62-780.600(5)(l) FAC and FDEP Rule 62-780.600(8)(a)22 FAC) We estimate 10 or fewer drums of IDW will be generated during the Site Assessment.

4. Aquifer Testing: – The Consultant will conduct “slug” tests on three monitoring wells in the affected aquifer to determine aquifer properties. This task will include slug testing, analysis of test data, measurement of groundwater levels in each affected aquifer, and calculation of groundwater flow and contaminant transport velocities. (FDEP Rules 62-780.600(3)(a)5 FAC, 62-780.600(3)(g) FAC, 62-780.600(5)(q) FAC, and 62-780.600(8)(a)12 FAC)

5. Groundwater Sampling and Laboratory Analyses: – The Consultant will sample the existing and newly installed monitoring wells for analysis of selected contaminants as specified by the FDEP. Groundwater analytes shall include trihalomethanes, haloacetic acids, sodium, chloride, mercury, chromium, and pH. (FDEP Rule 62-780.600(3)(b)22 FAC) Laboratory analyses will be performed on the 5 existing wells, 6 new wells, and one equipment blank.

6. Site Assessment Report Addendum: – The Consultant will prepare a Site Assessment Report Addendum (referred to as a “SARA”) describing all testing methods and results. The SARA will conform to the requirements of FDEP Rule 62-780.600(8) FAC and will include:

- a. Summary of historical on-site operations
- b. Descriptions of all assessment activities and results
- c. Tables summarizing all well construction details, groundwater levels, groundwater laboratory results, and soil laboratory results
- d. Maps depicting on-site and local features, on-site underground utilities, sampling locations (wells and soil borings), groundwater elevations, groundwater flow directions, soil contaminant iso-concentration contours, and groundwater iso-concentration contours
- e. Geologic cross-sections identifying aquifers and confining beds
- f. Site assessment recommendations, i.e. remediation, monitoring, or no further action.

Surveying: – The County will survey location and top-of-casing elevations for all existing and new monitoring wells and piezometers. Elevations will be referenced to NGVD 1929 or NAVD 1988. (FDEP Rule 62-780.600(5)(j) FAC)

7. Project Coordination: – The Consultant will coordinate the on-site work by the Consultant and subcontractors with WWTP activities, will provide regular status reports to the County, and will meet with County and FDEP staff to present and discuss the results of the Site Assessment.

8. Possible Additional Work Allowance: – The scope of work for Tasks 1 through 7 is intended to fully delineate and document site conditions with respect to sodium hypochlorite contamination. Nevertheless, the work involves assessment of unknown conditions below land surface of a dense contaminant that has had nearly four years in which to spread. In addition, the presence of deep structures within the WWTP and shallow impermeable units creates numerous possible contaminant migration pathways. It may not be possible to completely delineate all lobes of the contaminant plume, or to anticipate unknown contaminant migration pathways. Therefore, we provide a budget allowance to continue Site Assessment activities beyond the primary scope included in Tasks 1 thru 7.

The Possible Additional Work Allowance budgets for the Consultant to perform additional DPT soil borings, pre-packed monitoring well installation, vertical extent monitoring well installation, groundwater and soil sampling, IDW disposal, report preparation, meetings, and project coordination. We have included one day of DPT soil borings, as many as four pre-packed monitoring wells, as many as two vertical extent wells, laboratory analysis of six or fewer groundwater samples and 8 or fewer soil samples for the same suite of analytes as used in the Site Assessment.

Task 8 of this Task Order is provided in the event that additional monitor wells/soil borings will be needed, in which case, the need for and locations of additional monitor wells/soil borings will be determined during a meeting with Pasco County project representatives to review the results of the work completed under tasks 1 thru 7 of this Task Order. No supplemental wells or soil borings will be installed until the work is authorized in writing by Pasco County's project representative. This work will not be performed if the water quality and/or soils analyses resulting from the initial tasks do not indicate a need for additional monitor wells/soil borings to complete delineation of the ground water/soil contaminant plume. The use of funds for the

supplemental wells/soil borings shall be authorized at the discretion of the Assistant County Administrator for Utility Services.

C. Schedule

Tasks 1 through 7 above will be completed within in ninety (90) days from the notice to proceed except for delays beyond the reasonable control of Consultant. A final report will be provided to FDEP by the due date of November 9, 2009; if the due date can not be met, a due date extension will be timely submitted. If needed, Task 8 will be completed within forty-five (45) days from the notice to proceed for that Task, except for delays beyond the reasonable control of the Consultant.

D. Compensation

The total lump sum cost of Tasks 1 through 7 will be FORTY FOUR THOUSAND ONE HUNDRED AND THIRTY FOUR DOLLARS (\$44,134.00) and the total allowance sum for Task 8 will be THIRTY THOUSAND DOLLARS (\$30,000.00). In total, the lump sum project cost will be SEVENTY FOUR THOUSAND ONE HUNDRED AND THIRTY FOUR DOLLARS (\$74,134.00), including all Consultant labor and expenses, payable on the basis of the percent of project completed.

Acceptance

Except as herein amended, changed, or modified, all other terms, conditions, and obligations of the Agreement dated July 27, 2004, shall remain in full force and effect.

By signature, this Task Order is accepted and the Consultant is authorized to proceed at the direction of the County's Representative in accordance with the Scope of Services.

CONSULTANT
HARTMAN & ASSOCIATES, INC.

PASCO COUNTY BOARD OF COUNTY
COMMISSIONERS

By:  _____

By: _____

Title: VICE PRESIDENT

Jack Mariano, Chairman

Date: 7-22-09

Attest By: _____

Paula S. O'Neil,
Pasco County Clerk & Comptroller

Dated this ____ day of _____, 2009