

Golder Associates Inc.

8933 Western Way, Suite 12
Jacksonville, FL USA 32256
Telephone (904) 363-3430
Fax (904) 363-3445

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VIA FEDERAL EXPRESS

February 5, 2001

993-3928.36

Nassau County Board of County Commissioners
P.O. Box 1010
3163 Bailey Road
Fernandina Beach, Florida 32035

Attention: Mr. Walter D. Gossett
County Coordinator

RE: COST PROPOSAL FOR
RELOCATION AND EVALUATION OF LEACHATE FORCE MAIN SYSTEM AND
EVALUATION OF FRENCH DRAIN/SLURRY WALL SYSTEM
WEST NASSAU LANDFILL
NASSAU COUNTY, FLORIDA

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Dear Mr. Gossett:

Golder Associates Inc. (Golder) is pleased to submit this cost proposal to the Nassau County Board of County Commissioners (Board) for professional services regarding the following at the West Nassau Class I Landfill in Nassau County, Florida:

- Provide construction-level drawings to relocate the leachate force main on the east side of the landfill;
- Perform a detailed evaluation of the existing french drain and slurry wall system around the closed portion of the landfill;
- Perform an evaluation of the existing leachate collection system with respect to the amount of leachate being pumped and its relationship to the french drain pumping; and
- Provide recommendations on how the County can more efficiently and effectively pump both systems while complying with the site's permit conditions.

The first item listed above was requested by Mr. Robert P. McIntyre, Solid Waste Director, so that the location of the force main is easier to locate, is more uniformly laid out, and is only crossing the surface water ditch at one location. Golder is in general agreement that this project would benefit the operations of the landfill and the County. Because the construction of an extension to the existing force main on the east side of the landfill is upcoming during the Phase IV Construction project and any relocation would involve the tie-in for the extension, the relocation drawings should be prepared as soon as possible. The schedule for the remainder of

APPROVED *Task 1 only*
Done back Task 2,3,4 on 2/24/01
DATE 2/14/01

the items is less critical. The above list will also be used as the division of tasks for this cost proposal and the corresponding scope of services, cost estimate, schedule, and terms and conditions are provided in the following sections.

SCOPE OF SERVICES

Task 001 – Relocation of Leachate Force Main

Golder will prepare construction-level drawings (two estimated) that show the removal and replacement of the existing leachate force main at the top of the east slope of Cells 4 and 5 on the east side of the landfill. The drawings will include tie-in details at the northern extent of the relocation as well as the location and extension of the force main associated with Cells 7, 9, 11, and 13 currently under construction. We would also recommend that the County purchase and install or have installed during this relocation effort isolation valves to separate the french drain and leachate force mains (currently there is no separation at all). This would include work on the force main on the west side of the landfill as well as the east side. The scope of services under Task 001 includes the construction quality assurance (CQA) inspection of the relocation and tie-in of the force main¹.

As stated above, the schedule for the preparation of these drawings should be coordinated with the currently contracted construction of Phase IV. Accordingly, this scope also includes assisting the County with review and negotiation with the contractor for a change order to relocate the existing force main and extend the force main currently in its contract.

Task 002 – Evaluation of the Existing French Drain and Slurry Wall System

In an effort to divide the old portion of the West Nassau Landfill and the newer, lined portion of the West Nassau Landfill to satisfy the FDEP, a slurry wall was installed between as well as around the landfills and a french drain system was installed around the closed portion of the landfill inside the slurry wall. In accordance with the site's permit, the County is required to remove (pump) groundwater from the area within the slurry wall (via the french drain) to maintain an inward gradient from the area outside the slurry wall to the area inside the slurry wall. An evaluation of the effectiveness of the french drain/slurry wall system with respect to the maintenance of an inward gradient was conducted as part of the recent permit renewal submittals to FDEP and, using the existing data from existing wells and piezometers, our evaluation indicated that the system may not be performing as designed or, at best, the data was inconclusive because of the locations of the monitoring points. Golder believes, to assure that the County is not violating its permit, an extensive evaluation of the operation of the french drain system is needed. Additionally, the permit requires that the amount of water removed from the french drain be measured monthly and submitted to the FDEP on a quarterly basis. Currently, the amount of water being pumped from the french drain is estimated based on the amount pumped from the leachate collection system and the volume in the storage tanks.

¹ This will allow for the possibility that the force main work is conducted after the completion of the cell construction. If it is conducted concurrently, this portion of the budgeted amount will not be invoiced.

The scope of work for this task includes the installation and monitoring of piezometers located inside and outside the slurry wall that are directly across the wall from one another. This will allow Golder to make a direct comparison of water levels (the existing piezometers are not all directly across the wall from the wells). For a total of seven locations for direct comparison and using as many of the existing wells and/or piezometers as possible, seven piezometers are proposed for installation. Golder will subcontract a drilling contractor to install the piezometers at the appropriate depths and oversee the installations and development. We would then recommend that the pumps for the french drain be turned off for a day (or more if necessary) to assure that the new piezometers equilibrate with the natural conditions. We would also recommend that valves and flow meters be installed on the existing pump system at each pump, and that a staff gauge or similar measuring device be installed in the north detention pond and in the perimeter ditch at each of the piezometer/well pair that will be measured for water levels. We have assumed that the County will purchase and install or have these items installed and surveyed.

After the piezometers are installed and equilibrated and the other devices as described above are installed, monitoring of the system will be conducted. Initially, Golder proposes to be on site for one to two days to develop a monitoring procedure that, after instruction from Golder, we have assumed will then be followed by the County. It will likely include tracking on a daily basis, at a minimum, the following: when each pump is running or not, flow meter measurements, staff gauge measurements, and water level measurements. It is also assumed that the other data that is collected at the site related to the leachate system, such as rainfall amounts, leachate collection volumes, leachate tank levels, etc., will be made available to Golder at our request. It is anticipated that the monitoring of the french drain/slurry wall system will need to be continued for at least one month, depending on the data received.

Once sufficient data is collected, the data will be evaluated with respect to the performance of the french drain pumping system. The evaluation will include the adequacy of the pumping operations as well as the pumps to perform such that the site maintains an inward gradient in accordance with the site's permit.

Task 003 – Evaluation of the Leachate Collection and Storage System

Because the water removed from the french drain system is pumped into the leachate storage tanks on site, the french drain system and the leachate collection and storage system for the site are interconnected. Therefore, an evaluation of the leachate collection and storage system, including the potential impact of the new leachate collection point for Cells 7, 9, 11, and 13, will be conducted. This scope of services will include obtaining data on the pumping schedule and volumes for the existing two sumps installed at the site, evaluating its relationship (if any) to the pumping schedule and volumes for the french drain system, and evaluating the system as a whole (including pumps used, schedule employed, schedule for emptying the storage tanks, etc.). We would recommend that the County purchase and install or have installed floats in the existing leachate upslope riser pipes to determine the water level in the pipes and to assist in evaluating if the County is maintaining the less than one foot of head in the leachate collection system required by the site's permit. It is assumed that the County will arrange for the installation of this equipment or, if desired and if the timing is appropriate, a request for the

Phase IV contractor (R.B. Baker) to perform this work as an extra could be made by the County.

Once data is compiled, an evaluation will be made of the adequacy and efficiency of the existing system. This evaluation will include what affect the interconnection of the french drain system and the operations of the leachate collection sumps has on the overall system operation.

Task 004 - Recommendations

Golder will provide recommendations for operating procedures for the french drain pumping system that should be carried out by the County to maintain the inward gradient. Golder will also recommend improvements or changes, if necessary, to be made to the leachate collection and storage system to maximize the efficiency of the system as well as ensuring that the site's permit requirements are met. Golder will involve S2Li in review of the evaluations and recommendations under this task.

SCHEDULE

As discussed previously, the effort under Task 001 is required to be completed within the next few weeks so that the contractor can obtain the necessary materials and schedule the additional work, prepare for and obtain approval of a change order to the existing contract, and the work can be completed without an additional mobilization and with reinstalling newly installed force main. Golder can prepare the drawings within one week of approval by the Board, assuming all as-built information on the existing force main is provided by the County prior to the approval, and/or a detailed survey of the force main location is conducted prior to the approval.

The work under Tasks 002 through 004 can be started within three weeks (pending subcontractor availability) of approval from the Board. The duration of the work for these tasks will vary depending on the County obtaining and installing (and then collecting data from) the recommended appurtenances for the french drain system and the leachate collection sumps. We have estimated that these tasks could take as long as 6 months to complete, simply based on collecting a sufficient amount of data, evaluation of that data, refining information by collecting additional data, and then providing recommendations for improving the system. Additionally, this work is being conducted as requested by the County and not under regulatory requirements.

COST ESTIMATE

Golder's cost estimate to complete the work under Task 001, based on the scope of services as outlined above, is \$4,300. As indicated earlier, this estimate includes the assumption that the installation of the force main is conducted after the completion of the Phase IV cell construction and that additional effort will be needed to provide CQA during the installation. If that work does not extend past the Phase IV cell construction, the effort will be included in the existing CQA budget and not be charged to this budget. This also assumes that the County purchases and installs or has installed the isolation valves for the french drain force main.

Golder's cost estimate to complete the work under Tasks 002 - 004, based on the scope of services as described above, is \$64,750. This includes performing a detailed and thorough evaluation of the french drain and leachate collection and storage systems, and making recommendations that will ensure that the County is operating in accordance with its permit as well as improve the system efficiency and effectiveness. This assumes that the items discussed above, including staff gauges and floats for leachate pipes, are purchased and installed by the County and that a surveyor contracted by the County surveys these items along with the piezometers installed by Golder. If desired, Golder can subcontract a surveyor to perform this work at an additional cost.

Golder proposes to perform this work on a cost reimbursable not-to-exceed basis in accordance with agreed upon labor and unit rates. The County will only be billed actual hours and expenses incurred on the project for work within the agreed scope of work. Direct expenses will be marked-up 10 percent for administrative purposes, and the drilling subcontractor will be marked up 5 percent. Our teaming partner and subconsultant, S2Li, will not be marked up as per our agreement with the County. Photocopies, computer and AutoCAD time will be billed at agreed upon unit rates. Travel and communications costs will not be billed to Nassau County as stated in our August 1998 proposal. The cost estimate will not be exceeded without prior authorization from Nassau County.

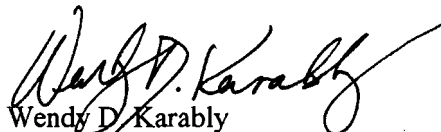
TERMS AND CONDITIONS

This work will be performed under the Agreement for Consulting Services between Golder and the County, dated February 22, 1999.

Golder appreciates this opportunity to provide our services to Nassau County. If you have any questions regarding this cost proposal, please do not hesitate to call.

Very truly yours,

GOLDER ASSOCIATES INC.



Wendy D. Karably
Senior Project Manager/Associate

cc: Bob McIntyre - Solid Waste Director
Omar Smith - S2Li

FN: G:/PROJECTS/993-3928/PROPOSAL/2001PROP/LEACHFDEVAL.DOC

university site in Ft. Lauderdale to review a 2000 telephony system.

Mr. D'Amato cautioned the Board to consider topography issues and utilities as they relate to future growth, and to consider the potential consequences should the Director of Planning find a "substantial deviation" from the approved site plan.

Following a brief recess, the meeting reconvened at 10:30 a.m. to discuss landfill issues. Mr. Gossett reported property negotiations will continue with Mr. Bordeaux when he visits in March. In addition, if the County is successful with the Bourdeaux purchase, Golder Associates will make a presentation to the Board in March on the critical points of proceeding with expansion of the landfill utilizing the Bordeaux property. He then distributed a cost proposal prepared by Golder Associates to address ground water contamination. Following some discussion, it was moved by Commissioner Deonas, seconded by Commissioner Vanzant and unanimously carried to authorize the Scope of Work as outlined in the cost proposal from Golder Associates dated February 8, 2001 for services related to permitting, construction, and operation and maintenance of landfill gas extraction system for phase 1, a perimeter system for the West Nassau Landfill, Tasks 1

through 5 (preliminary estimate \$449,505). Next, Mr. Gossett reviewed a cost proposal from Golder Associates for relocating and evaluating a leachate force main system and evaluating a French drain/slurry wall system for the landfill. It was moved by Commissioner Howard, seconded by Commissioner Vanzant and unanimously carried to authorize the Scope of Work for Task 1 only, as outlined in the cost proposal from Golder Associates dated February 5, 2001 to provide construction level drawings to relocate the leachate force main on the east side of the landfill, estimated at \$4300; and bring back for consideration on February 26, 2001 Task 2, 3 and 4.

Next, the Board reviewed Staff's recommendation to award the Sadler Road bid to Vallencourt Construction Company, Inc., based on the requirements of the base bid, Part B- Alternate 1 Roundabout, Part C- Bicycle Restriping and Pavement Resurfacing, and Part D - Wastewater Collection System Improvements. Mr. D'Amato noted the remaining Alternate items would be at the discretion of the City of Fernandina Beach, and mitigation issues dealing with wetlands were not addressed in the bid process. While Mr. Gossett reviewed the bid calculations, Mr. D'Amato provided an update to the Board on other road projects.

Golden

Agenda Request For: April 11, 2001

Department: Solid Waste

Fund: Solid Waste Capital Improvements

Action requested and recommendation:

Request authorization of Tasks 2, 3, & 4 for Cost Proposal for Relocation and Evaluation of Leachate Force Main System and Evaluation of French Drain/Slurry Wall System at West Nassau Landfill.

Funding Source: 70366599-599977

Financial/Economic Impact to Future Years Budgeting Process or Effect on Citizens:

For compliance with appropriate State and Federal laws to avoid possible future consent order.

Is this action consistent with the Nassau County Comprehensive Land Use Plan?

N/A

Reviewed by:

Legal

Finance

Coordinator – Dictated but not proof read by Walt Gossett

APPROVED

DATE 4/10/01

*+ authorized transfer from
Capital Improvement Reserve to appropriate
line item. ct*