

Board of County Commissioners

Agenda Request

Date of Meeting: May 3, 2010

Date Submitted: April 16, 2010

To: Honorable Chairman and Members of the Board

From: Benjamin H. Pingree, County Administrator
Cleve Fleming, Public Works Director

Subject: Request Board Approval of Task Order No. 14 to Jones Edmunds
to Conduct a Risk Assessment at the Lower Bridge Landfill

Statement of Issue:

This agenda item requests Board approval of Task Order No. 14 to Jones Edmunds to conduct a Risk Assessment in accordance with Chapter 62-780.650 FAC, at the Lower Bridge Landfill.

Background:

The Risk Assessment is required by FDEP correspondence dated March 1, 2010 in response to elevated levels of Iron, Arsenic, and Ammonia observed in the on-site groundwater monitoring wells along the east boundary of the landfill (Attachment #1).

Jones Edmunds has been assisting Wakulla County with contamination assessment activities at the Lower Bridge Landfill since 2001. The contamination assessment was required by FDEP in response to elevated levels of Iron, Arsenic, and Ammonia along the eastern boundary of the landfill. Additionally, during the March 1, 2010 Board Meeting, the Board approved Jones Edmunds to conduct evaluation monitoring along with the permit required compliance monitoring at the landfill in response to the observed contamination. A brief summary of the contamination assessment activities conducted to date is provided below:

- April 2001—Submittal of Contamination Assessment Plan (CAP) to FDEP which outlined specific tasks to delineate the contaminant plume and character.
- January 2005—Submittal of the Contamination Assessment Report (CAR) which delineated the plume and included the installation of additional assessment wells.
- October 2006—FDEP approved the CAR and requested submittal of a Remedial Action Plan (RAP) to address cleanup of the contamination.
- December 2008—Submittal of the Remedial Action Plan which outlined a remediation system—passive oxidation trench and additional landfill gas venting—to reduce the concentrations of Iron, Arsenic, and Ammonia migrating in the groundwater.

- February 2009—Wakulla County—represented by ESG Operations, Inc.—and Jones Edmunds meet with FDEP to discuss the proposed RAP.
- July 2009—Submittal of RAP Responses to FDEP Request for Additional Information which further detailed the remedial strategy and proposed conducting a risk assessment as a remedial option.
- March 2010—FDEP correspondence requiring Wakulla County conduct a risk assessment along the eastern boundary of the Lower Bridge Landfill.

Task Order No. 14 is to allow Jones Edmunds to prepare the Risk Assessment required by FDEP. The Risk Assessment will evaluate the toxicity of the contaminants and evaluate different exposure pathways. The Risk Assessment is divided into four components: Exposure Assessment, Toxicity Assessment, Risk Characterization, and Reporting. The specific work items included under Task Order No. 14 are listed as follows:

Exposure Assessment

- Jones Edmunds will conduct an exposure assessment as outlined in Rule 62-780.650(a) FAC. The exposure assessment will identify the pathways that human and environmental receptors may be exposed to the observed constituents at the landfill. For the exposure assessment Jones Edmunds will perform the following:
 - Identify potential and actual exposure pathways.
 - Identify potential and actual human and environmental receptors.
 - Using a fate and transport groundwater model, determine expected concentrations of contaminants to which human or environmental receptors might be exposed.
 - Determine exposure factors, including exposure duration and frequency.
 - Estimate contaminant doses that may be received by actual and potential receptors.
- An initial evaluation of exposure pathways identified groundwater migration across the east boundary of the landfill as the main exposure pathway for the contamination. Part of the exposure assessment will be to sample the private well on the property directly east of the landfill. Jones Edmunds will sample the well for Iron, Arsenic, and Ammonia. Staff will provide the results to the County along with recommendations on how to proceed if there is any exceedance of State groundwater protection standards. Funds for the collection of one groundwater sample, including analytical lab costs, are included in this proposal.

Toxicity Assessment

- Jones Edmunds will prepare a toxicity assessment as outlined in Rule 62-780.650(b) FAC. The toxicity assessment will determine human health and environmental criteria for the landfill considering acute and chronic health effects associated with varying exposure duration.

- Jones Edmunds will use published individual toxicity assessments for the contaminants observed at the landfill. The appropriate toxicity assessments will be evaluated and relevant data will be included as applicable to the exposure pathways identified in the exposure assessment.

Risk Characterization

- Jones Edmunds will prepare a Risk Characterization as outlined in Rule 62-780.650(c) FAC. The risk characterization will evaluate the cumulative risks to human and environmental receptors from the contaminants observed at the landfill using the information collected in the exposure and toxicity assessments. The risk characterization will include:
 - Health and safety risks to humans.
 - Health and safety risks to non-human species and ecosystems.
 - The derivation and justification of appropriate alternative groundwater clean-up target levels (CTLs) for the constituents observed at the landfill.

Reporting

- Jones Edmunds will prepare a Risk Assessment Report (RAR) for submittal to FDEP. The RAR will include the Exposure and Toxicity Assessments and the Risk Characterization along with conclusions and recommendations for the landfill remediation. The RAR will be signed and sealed by a Professional Geologist. The RAR will include one of the following recommendations:
 - No Further Action—Based on the evaluated risks and levels of contamination observed at the landfill, no further remediation is warranted at the landfill.
 - No Further Action with Institutional Controls—Based on the evaluated risks and established alternative CTLs no further remediation is warranted at the landfill except establishment of institutional controls such as a restrictive covenant on the property deed prohibiting the installation of potable wells.
 - Monitored Natural Attenuation—The constituents of concern are at low concentrations and will degrade naturally in the environment before they can reach any receptors.
 - Active Remediation—Prepare a Remedial Action Plan to clean up the contamination.

Analysis:

The County is required by FDEP to complete the Risk Assessment at the Lower Bridge Landfill. Jones Edmunds has been conducting the contamination assessment at the Lower Bridge Landfill since 2001 and has the expertise to continue this work.

Staff is recommending approval of this task order with a total cost of \$33,382.00. A detailed scope of work to be performed by Jones Edmunds as well as a cost summary for this task order is attached for your review (Attachment #2). Task Order 14 will be funded out of the Long Term Care and Monitoring Financial Assurance Escrow Account

for Lower Bridge Landfill. Currently, the County has in excess of \$480,000 in this account which is set aside strictly for the long term care and closure of the landfill.

Options:

1. Approve Task Order No.14 to Jones Edmunds to Conduct a Risk Assessment at the Lower Bridge Landfill.
2. Do Not Approve Task Order No.14 to Jones Edmunds.
3. Board Direction.

Recommendation:

Option #1

Attachments:

1. FDEP Correspondence, Dated 3-01-2010.
2. JEA Task Order #14, Detailed Scope of Services and Cost Summary.