

# TASK ORDER

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Project: Preliminary Biosolids Dewatering Feasibility Study

Task Order No: 3

Issued To: Wessler Engineering.

**All work shall be performed in accordance with the Agreement between the Board of Public Works and Safety, City of West Lafayette, Indiana and Wessler Engineering executed August 2, 2010.**

## **I. Project Description**

Pilot testing of two biosolids dewatering units, a centrifuge and a rotary press, were conducted at the WWTP in July and August 2010 to determine the ability to dewater digested biosolids. Based on the results of these pilot tests, a cursory study will be performed to determine the feasibility of sludge dewatering/storage/land application compared to the current practice of liquid sludge storage/land application. This preliminary feasibility study is not intended to be an exhaustive or extensive study, but rather a cursory evaluation to determine if biosolids dewatering may appear to be a cost-effective alternative that is worthy of further, more comprehensive evaluation.

## **II. Scope of Services – Basic Services**

- A. Obtain copies of the pilot test reports for the centrifuge and rotary press.
- B. Evaluate three (3) alternatives for biosolids handling and disposal at the current 9.0 MGD WWTP capacity and at the future anticipated capacity of 12.0 MGD:
  1. Liquid hauling and land application (current practice) based on the current facilities in-place (does not include an evaluation of alternative liquid storage facilities, such as above ground tanks, to replace the existing storage lagoon)
  2. Centrifuge dewatering and land application
  3. Rotary press dewatering and land application.
- C. Owner to provide operational information necessary for the evaluation, including but not limited to digested sludge volume and characteristics, electrical power costs, polymer costs, liquid sludge hauling costs, and land application costs.
- D. Prepare preliminary cost opinions for capital improvements necessary for the two dewatering processes, including equipment, structures, buildings, piping, electrical, instrumentation, and related physical improvements.
- E. Prepare preliminary O&M cost opinions including estimated electrical/power requirements, polymer usage, labor requirements, maintenance, and biosolids hauling and disposal as they apply to the three alternatives.

- F. Provide a net-present value analysis over a projected 20-year period of the three alternatives based on the estimated capital costs and O&M costs.
- G. Based on the results of the net-present value analysis, provide a recommendation as to whether dewatering appears to be a feasible alternative worthy of further, more comprehensive evaluation.
- H. Summarize findings and submit to Owner in a letter report.
- I. Report will not include schematic layouts, sketches, conceptual design criteria, exhibits, design summaries, proposed site layout, flow diagrams, or anticipated project schedule.

**III. Probable Project Schedule**

Submit draft report for Owner review six (6) weeks from authorization. Submit final report two (2) weeks after receipt of Owner review comments.

**IV. Compensation**

Compensation for Basic Services as defined in Article II shall be based on a Lump Sum fee of \$5,000.00.

**V. Project Staff**

The anticipated Project Staff is listed below:

Principal Engineer	Martin Wessler, P.E.
Senior Project Manager	Gary Ruston, P.E.
Electrical/I&C Engineer	Wayne Moore, P.E.

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**Accepted By:**

M.D. WESSLER & ASSOCIATES, INC.  
d/b/a WESSLER ENGINEERING

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Martin A. Wessler, P.E.  
CEO

Attest: \_\_\_\_\_  
Gary L. Ruston, P.E.  
Senior Project Manager

Date: \_\_\_\_\_, 2010

**ADDRESS FOR GIVING NOTICE:**

Wessler Engineering  
6219 S. East Street  
Indianapolis, IN 46227

**Authorized By:**

BOARD OF PUBLIC WORKS & SAFETY  
CITY OF WEST LAFAYETTE, INDIANA

\_\_\_\_\_  
John R. Dennis, Mayor

\_\_\_\_\_  
Sana G. Booker, Member

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Bradley W. Marley, Member

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Jonathan C. Speaker, Member

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Elizabeth M. Stull, Member

Attest: \_\_\_\_\_  
Judith C. Rhodes IAMC/CMC/CPFA  
Clerk-Treasurer

Date: \_\_\_\_\_, 2010

**ADDRESS FOR GIVING NOTICE:**

City of West Lafayette  
609 West Navajo Street  
West Lafayette, Indiana 47906