

**SEMINOLE COUNTY GOVERNMENT
AGENDA MEMORANDUM**

SUBJECT: University of Central Florida and Seminole County License Agreement (for Phosphogypsum Research at the Osceola Road Landfill)

DEPARTMENT: Environmental Services **DIVISION:** Solid Waste Management

AUTHORIZED BY: *John Cirello* **CONTACT:** *David Gregory* **EXT.** 2022
John Cirello, PhD., P.E. David Gregory, Manager

Agenda Date <u>12-20-05</u>	Regular <input type="checkbox"/>	Consent <input checked="" type="checkbox"/>	Work Session <input type="checkbox"/>	Briefing <input type="checkbox"/>
	Public Hearing – 1:30 <input type="checkbox"/>		Public Hearing – 7:00 <input type="checkbox"/>	

MOTION/RECOMMENDATION:

Approve and authorize Chairman to sign University of Central Florida and Seminole County License Agreement.

BACKGROUND:

A University of Central Florida professor, Chih-Shin Shieh, Ph.D., contacted Solid Waste Management Division staff and asked if Seminole County would be willing to assist the University in a research project. Professor Shieh is researching the beneficial use of phosphogypsum as a landfill cover. Phosphate mining in Florida has produced large stockpiles of phosphogypsum material. Professor Shieh’s research has progressed beyond bench-top studies to a limited field-test. The Osceola Road Landfill was selected as a test location because it is a lined landfill close to UCF.

The research project entails the construction of two “mini” lined landfill cells within the lined area of the landfill as set forth in Exhibit A, the location map. Each cell will be approximately 60 ft (L) x 20 ft (W) x 10 ft (H). In the test cell, phosphogypsum will be used as landfill cover; in the control cell soil will be used as landfill cover. Both cells will be enclosed systems with geomembrane bottom liners and leachate collection and recirculation systems. Geomembrane top-caps will be installed on both cells. As waste degrades in the cells, each cell will be monitored for several characteristics, including the constituents in the landfill gas and leachate that is produced. A more detailed description of the research project is provided in Exhibit B of the attached agreement.

The University of Central Florida will perform the majority of work associated with this project through funding from sources including the Florida Institute of Phosphate Research. The Solid Waste Management Division will assist the project by providing an area on the landfill for cell construction and assist with cell excavation and waste placement. The research project is planned to last about five years. Any required

Reviewed by: <u>12-1-05</u>
Co Atty: <u><i>A. Dietrich</i></u>
DFS: <u>N/A</u>
Other: <u>N/A</u>
DCM: <u><i>SS</i></u>
CM: <u><i>SS</i></u>
File No: <u>CESS03</u>

Federal Environmental Protection Agency and/or Florida Department of Environmental Protection approvals will be obtained before construction.

Staff from the University of Central Florida's College of Engineering and Computer Science worked with staff from the County Attorney's Office, Risk Management Division, and Solid Waste Management Division to prepare the attached License Agreement.

Staff is supportive of the research project and looks forward to see if the research supports the beneficial reuse of the phosphogypsum byproduct as landfill cover material.

UNIVERSITY OF CENTRAL FLORIDA
AND
SEMINOLE COUNTY
LICENSE AGREEMENT

THIS LICENSE AGREEMENT is hereby made and entered into this ____ day of _____, 2005, by and between SEMINOLE COUNTY, a political subdivision of the State of Florida, whose address is 1101 E. First Street, Sanford, Florida 32771, (hereinafter referred to as the "LICENSOR"), and the UNIVERSITY OF CENTRAL FLORIDA, on behalf of its Board of Trustees, a public body corporate, whose address is 4000 Central Florida Boulevard, Orlando, Florida 32816, (hereinafter referred to as the "LICENSEE").

W I T N E S S E T H:

WHEREAS, LICENSOR is the fee simple owner of certain real property, hereinafter referred to as "LICENSE AREA", located in Seminole County, Florida, as more particularly identified in Exhibit "A", attached hereto and by reference made a part hereof; and

WHEREAS, LICENSEE desires to utilize LICENSOR's property for the purpose of monitoring and observing the effect of phosphogypsum as landfill cover material to enhance biodegradation and increase landfill capacity by constructing, installing, operating and maintaining two (2) test cell sites and other scientific equipment upon the LICENSE AREA as described in the project proposal identified in Exhibit "B", attached hereto and by reference made a part hereof; and

WHEREAS, LICENSOR desires to receive the research results and other scientific information developed from the test cell sites and thus, is desirous of granting to LICENSEE a license to accomplish the aforementioned purpose,

NOW THEREFORE, for and in consideration of the terms, conditions, and mutual covenants hereinafter contained, LICENSOR and LICENSEE, both intending to be legally bound, hereby agree as follows:

1. LICENSOR hereby grants LICENSEE, its agents, representatives and employees the right, privilege and license to utilize the LICENSE AREA to locate, construct, install, operate, inspect, alter, improve, maintain, repair and remove two (2) test cell sites and other specific equipment necessary for research and scientific purposes on, upon and across said LICENSE AREA; and attain ingress and egress to and upon said LICENSE AREA for the purpose of exercising the rights, privileges and license granted herein.

2. The license is granted for a term of five (5) years from the date first written above and, at the sole option of the LICENSOR, may continue in full force and effect thereafter until terminated by LICENSOR or LICENSEE upon sixty (60) days written notice to the other party.

3. LICENSOR retains the right to use the LICENSE AREA in any manner not inconsistent with the rights herein granted to LICENSEE.

4. In consideration for the privilege herein granted, the LICENSEE shall not claim any damages from the LICENSOR in connection with or on account of any injuries or damages arising in or on the LICENSE AREA while used by the LICENSEE and its agents, representatives and employees. The LICENSEE shall maintain a program of insurance covering its liabilities as prescribed in Section 768.28, Florida Statutes, and Section 12 hereunder, and to the extent permitted by Florida law, including Section 768.28, Florida Statutes,

shall be responsible for the negligent or wrongful acts and omissions of its officers, employees, representatives and agents in the event that such acts or omissions result in injury to persons or damage to property. The LICENSOR does not warrant or represent that the LICENSE AREA is safe or suitable for the purpose for which the LICENSEE is permitted to use it, and the LICENSEE assumes all risks in its use.

5. (a) Each party to this Agreement is responsible for all personal injury and property damage attributable to the negligent acts or omissions arising out of this Agreement of that party and the officers, employees and agents thereof.

(b) The parties further agree that nothing contained herein shall be construed or interpreted as denying to any party any remedy or defense available to such parties under the laws of the State of Florida, nor as a waiver of sovereign immunity of the LICENSOR and the LICENSEE beyond the waiver provided for in *Section 768.28, Florida Statutes*.

(c) The waiver of a provision herein by either party shall not constitute the further waive of said provision or the waiver of any other provision.

6. Prior to initial use of the LICENSE AREA by LICENSEE, LICENSEE shall give LICENSOR at least forty-eight (48) hours notification. LICENSEE agrees that any and all work performed in the LICENSE AREA and in association with the purpose of the License Agreement shall be accomplished in a good, safe and workmanlike manner and in accordance with applicable Federal, State and local statutes, rules, regulations and ordinances.

7. Upon termination of this License Agreement, or revocation by the LICENSOR, LICENSEE shall, at LICENSEE's sole cost and expense, remove all equipment, accessories and materials owned by LICENSEE from the LICENSE AREA and restore said LICENSE AREA to as good a condition as it was before LICENSEE entered upon it and otherwise comply with all applicable Federal, State and local statutes, rules, regulations and ordinances.

8. LICENSEE shall not allow the public to access, utilize or go upon the LICENSE AREA. LICENSEE acknowledges that its officers, employees, representatives and agents performing services and functions pursuant to this Agreement are not employees of LICENSOR.

9. LICENSEE shall provide to LICENSOR a copy of all interim reports, the final report and any and all data collected as a result of LICENSEE's test cell project and associated monitoring activities in the LICENSE AREA.

10. The license herein granted is subject to revocation by the LICENSOR if the LICENSE AREA is not utilized for the purposes outlined in this License Agreement or if there is a change in ownership of the LICENSE AREA.

11. LICENSEE, at its sole cost and expense, shall be responsible for insuring any and all equipment, accessories and materials owned by LICENSEE in the LICENSE AREA and for maintenance of the LICENSE AREA during the period set forth hereunder.

12. INSURANCE.

(a) General. The LICENSEE shall at the LICENSEE's own cost, procure the insurance required under this Section.

(1) The LICENSEE shall furnish to the LICENSOR, in accordance and in full compliance with this Agreement's requirements, a Certificate of Insurance signed by an authorized representative of the insurer evidencing the insurance required by this Section (General Liability, Workers' Compensation/Employer's Liability, and Auto Liability). LICENSEE agrees that the COUNTY shall be given not less than thirty (30) days written notice prior to the cancellation or restriction of coverage. Until such time as the insurance is no longer required to be maintained by the LICENSEE, the LICENSEE shall provide the COUNTY with a renewal or replacement Certificate of Insurance not less than thirty (30) days before expiration or replacement of the insurance for which a previous certificate has been provided.

(2) LICENSEE shall main the insurance policy coverage, issued under the Florida Casualty Insurance Risk Management Trust Fund, as follows:

Fleet Automobile Liability - \$100,000/person, \$200,000/occurrence for general liability, and \$10,000 each person/occurrence for personal injury;

General Liability-\$100,000/person, \$200,000/occurrence;

State Employees' Workers' Compensation in accordance with and in the amount required by State law and Employer's Liability - \$100,0000/person, \$200,000/occurrence.

(3) In addition to providing the Certificate of Insurance, if required by the COUNTY, the LICENSEE shall, within thirty (30) days after receipt of the request, provide the COUNTY with a copy of each of

the policies of insurance providing the coverage required by this Section.

(4) Neither approval by the COUNTY or failure to disapprove the insurance furnished by LICENSEE shall relieve the LICENSEE of the LICENSEE's full responsibility for performance of any obligation including LICENSEE's liability in accordance with Florida law.

(b) Insurance Company Requirements. Insurance companies providing the insurance under this Agreement must meet the following requirements:

(1) Companies issuing policies other than Workers' Compensation must be authorized to conduct business in the State of Florida and prove same by maintaining Certificates of Authority issued to the companies by the Department of Insurance of the State of Florida. Policies for Workers' Compensation may be issued by companies authorized as a group self-insurer by Section 440.57, Florida Statutes.

(2) In addition, such companies other than those authorized by Section 440.57, Florida Statutes, shall have and maintain a Best's Rating of "A" or better and a Financial Size Category of "VII" or better according to A.M. Best Company.

(3) If, during the period which an insurance company is providing the insurance coverage required by this Agreement, an insurance company shall: 1) lose its Certificate of Authority, 2) no longer comply with Section 440.57, Florida Statutes, or 3) fail to maintain the requisite Best's Rating and Financial Size Category, the LICENSEE shall, as soon as the LICENSEE has knowledge of any such circumstance, immediately notify the COUNTY and immediately replace the

insurance coverage provided by the insurance company with a different insurance company meeting the requirements of this Agreement.

(c) Specifications. Without limiting any of the other obligations or liability of the LICENSEE, the LICENSEE shall, at the LICENSEE's sole expense, procure, maintain and keep in force amounts and types of insurance conforming to the minimum requirements set forth in this Section. Except as otherwise specified in the Agreement, the insurance shall become effective prior to the commencement of work by the LICENSEE and shall be maintained in force until the Agreement completion date. The amounts and types of insurance shall conform to the following minimum requirements.

(1) Workers' Compensation/Employer's Liability.

(A) With regard to subcontractors of LICENSEE, if applicable, the subcontractor's insurance shall cover the subcontractor for liability which would be covered by the latest edition of the standard Workers' Compensation Policy, as filed for use in Florida by the National Council on Compensation Insurance, without restrictive endorsements. The LICENSEE shall be responsible for procuring proper proof of coverage from its subcontractors of every tier for liability which is a result of a Workers' Compensation injury to the subcontractor's employees. The minimum required limits to be provided by the LICENSEE and the LICENSEE's subcontractors, if applicable, are set forth in subsection 12(A)(2) above and subsection (c) below respectively. In addition to coverage for the Florida Workers' Compensation Act, where appropriate, coverage is to be included for the

United States Longshoremen and Harbor Workers' Compensation Act, Federal Employers' Liability Act and any other applicable federal or state law.

(B) With regard to subcontractors of LICENSEE, if applicable, subject to the restrictions of coverage found in the standard Workers' Compensation Policy, there shall be no maximum limit on the amount of coverage for liability imposed by the Florida Workers' Compensation Act, the United States Longshoremen's and Harbor Workers' Compensation Act, or any other coverage customarily insured under Part One of the standard Workers' Compensation Policy.

(C) The minimum amount of coverage under Part Two of the standard Workers' Compensation Policy shall be:

\$1,000,000.00	(Each Accident)
\$1,000,000.00	(Disease-Policy Limit)
\$1,000,000.00	(Disease-Each Employee)

(2) Commercial General Liability.

(A) With regard to subcontractors of LICENSEE, if applicable, the subcontractor's insurance shall cover the subcontractor for those sources of liability which would be covered by the latest edition of the standard Commercial General Liability Coverage Form (ISO Form CG 00 01), as filed for use in the State of Florida by the Insurance Services Office, without the attachment of restrictive endorsements other than the elimination of Coverage C, Medical Payment and the elimination of coverage for Fire Damage Legal Liability.

(B) The minimum limits to be maintained by subcontractors of the LICENSEE, if applicable, (inclusive of any amounts provided by an Umbrella or Excess policy) shall be as follows:

LIMITS

General Aggregate	\$Three (3) Times the Each Occurrence Limit
Personal & Advertising Injury Limit	\$1,000,000.00
Each Occurrence Limit	\$1,000,000.00

(3) Professional Liability Insurance. With regard to subcontractors of LICENSEE, if applicable, the subcontractors shall carry limits of not less than ONE MILLION AND NO/100 DOLLARS (\$1,000,000.00).

(4) Business Auto Liability.

(A) With regard to subcontractors of LICENSEE, if applicable, the subcontractor's insurance shall cover the subcontractor for those sources of liability which would be covered by Part IV of the latest edition of the standard Business Auto Policy (ISO Form CA 00 01), as filed for use in the State of Florida by the Insurance Services Office, without the attachment of restrictive endorsements. Coverage shall include owned, non-owned and hired autos.

(B) The minimum limits to be maintained by subcontractors of the LICENSEE, if applicable, (inclusive of any amounts provided by an Umbrella or Excess policy) shall be per accident combined single limit for bodily injury liability and property damage liability. If the coverage is subject to an aggregate, the LICENSEE's subcontractors, if applicable, shall maintain separate aggregate limits of coverage applicable to claims arising out of or in connection with the work under this Agreement. The separate aggregate limits to be maintained by the LICENSEE's subcontractors, if applicable, shall be a

minimum of three (3) times the per accident limit required and shall apply separately to each policy year or part thereof.

(C) The minimum amount of coverage under the Business Auto Policy shall be:

	<u>LIMITS</u>
Each Occurrence Bodily Injury and Property Damage Liability Combined	\$1,000,000.00

(d) Coverage. The insurance provided by LICENSEE pursuant to this Agreement shall apply on a primary basis and any other insurance or self-insurance maintained by the COUNTY or the COUNTY'S officials, officers, or employees shall be excess of and not contributing with the insurance provided by or on behalf of the LICENSEE.

(e) Occurrence Basis. With regard to subcontractors of LICENSEE, if applicable, the Workers' Compensation Policy and the Commercial General Liability required by this Agreement shall be provided on an occurrence rather than a claims-made basis. The Professional Liability insurance policy must either be on an occurrence basis, or, if a claims-made basis, the coverage must respond to all claims reported within three (3) years following the period for which coverage is required and which would have been covered had the coverage been on an occurrence basis.

(f) Obligations. Compliance with the foregoing insurance requirements shall not relieve the LICENSEE, its employees or agents of applicable liability from any obligation under a Section or any other portions of this Agreement.

Exhibit "B"

Application of Phosphogypsum in Landfills

Work Plan for the Proposed Field Study

A full-scale field study was proposed as the third phase of the project to demonstrate that findings from Phases I and II are reproducible in landfills under natural environment. Due to the slow degradation rate of the waste, the duration of Phase III study will be four years and efforts will lead to the development of a procedure that can be practically used in landfill operations. During the four-year period, studies in year one will involve the construction of two landfill cells followed immediately by monitoring the biodegradation by-products of the waste. Two experimental landfill cells will be constructed on top of the closed cells at the existing landfill site at the Seminole County's Osceola Road Landfill in Geneva, Florida. Studies in years two and three will be devoted to conducting field monitoring and compilation of analytical results in a computer database. Studies in year four will involve the completion of field monitoring, data reduction and interpretation, methodology assessment, and reporting. The outcome of the study will be a procedure that can be practically used for a landfill operation providing a partial solution for managing both phosphogypsum and MSW landfills in Florida.

Outline of the Field Study

- Test Cells: Two cells (control and experimental) will be constructed on top of the closed cells at the existing landfill site that meets Florida DEP's requirement on landfill liner design.
- Dimension of Cell: 60 ft (L) x 20 ft (W) x 10 ft (H)
- Liner of the Cell: Geomembrane liner will be used for both of the control and experimental cells.
- MSW: Typical municipal solid waste brought to the site will be used for both cells. Approximately 75 tons of MSW will be used for each cell.
- Phosphogypsum: Approximately 25 tons of phosphogypsum will be used for the experimental cell.
- Layers of the Cell: Three layers of each of the phosphogypsum and MSW will be placed within the cell. The thickness of phosphogypsum layer will be 2 in., while the thickness of MSW will be 2 ft. Cover material for the control cell will be typical soil/dirt, while for the experimental cell, phosphogypsum will be used as cover material.
- Final Cover: The final cover of the experimental cell will be a typical soil/dirt used for the control cell. However, a 2-in layer of phosphogypsum will be placed before the final cover is used. The completed cell will be capped entirely by a geomembrane liner.
- Field Monitoring: Leachate composition, gas formation, and cell settlement will be monitored. Leachate will be retained and re-circulated throughout the cell during the period of the study. Therefore, no storage of leachate will be

expected.

Monitoring Plan for the Field Study

Monitoring of the experimental and control landfill cells will be carried out immediately after the completion of cell construction. Biodegradation by-products, such as gas production and composition, leachate composition, and cell settlement will be monitored throughout the period of the study. Gases to be monitored include carbon dioxide, methane, hydrogen sulfide, and radon. Leachate components to be monitored include pH, dissolved sulfate ion (SO₄²⁻), radioactivity, and trace elements of environmental concerns, such as arsenic (As), silver (Ag), cadmium (Cd), chromium (Cr), lead (Pb), and selenium (Se).

Monitoring tasks will be carried out on day-to-day basis. Physical environment at the site will be visually inspected everyday to record any possible changes. Settlement reading on both cells will be recorded daily. Leachate and gaseous samples will be collected for analysis on weekly basis. However, sampling intervals for gas and leachate are subject to change according to daily site observation, data generation, and the progress of the project.

The routine monitoring data (groundwater, leachate, surface water) generated by the county, prior to and during the study, will be coordinated with the study's monitoring plan to form a database for later assessment.