PUBLIC NOTICE OF INTENT TO ISSUE AIR PERMIT

Florida Department of Environmental Protection
Division of Air Resource Management, Bureau of Air Regulation
DEP File No. 1110138-001-AC
Geoplasma-St. Lucie, LLC Plasma Gasification Project
Waste-to-Energy (WTE) Facility
St. Lucie County

Applicant: The applicant for this project is Geoplasma-St. Lucie, LLC. The applicant's authorized representative and mailing address are: Dr. Hilburn O. Hillestad, 171 17th Street NW, Suite 1550, Atlanta, Georgia 30363.

Facility Location: The proposed Geoplasma-St. Lucie, LLC WTE Facility will be located in St. Lucie County on a parcel of land approximately 9 acres in size within the boundary of the existing St. Lucie County Sanitary Landfill. The landfill is located off of Glades Cut-Off Road south of the crossing of Interstate 95 and the Florida Turnpike and approximately 8 miles southwest of the City of Fort Pierce.

Project: This WTE project involves the construction of a gross 24 megawatt (MW) plasma arc gasification WTE facility and ancillary equipment. The plasma arc gasification system will process municipal solid waste (MSW), tires with steel belts and other permitted feedstocks to produce a synthetic gas (syngas) consisting primarily of carbon monoxide (CO) and hydrogen (H_2) as the fuel components. The syngas will be combusted in a multi-stage thermal oxidizer followed by a heat recovery steam generator (HRSG) to generate high pressure, high temperature steam to drive a steam turbine-generator (STG) providing electrical energy to the grid.

This is the first large scale project utilizing plasma arc technology to gasify MSW to generate electrical power in the United States. The facility will gasify up to 686 tons per day of MSW, tires with steel belts and other permitted feedstocks. Per 403.061(18), Florida Statues (F.S.), the Department has the power and the duty to encourage and conduct studies, investigations, and research relating to pollution and its causes, effects, prevention, abatement, and control.

The project consists of the following major equipment components: feedstock receiving and sorting systems; material handling systems; plasma arc gasifier; emergency flare system; multi-stage thermal oxidizer; HRSG; high efficiency STG; auxiliary boiler; emergency diesel generator; and diesel fire engine water pump.

The project will result in emissions increases of: 46.3 tons per year (TPY) of CO; 50 TPY of nitrogen oxides (NO_X); 38 TPY of particulate matter (PM); 37.6 TPY of PM with a mean diameter of 10 micrometers (µm) or less (PM_{10}); 17.5 TPY of sulfur dioxide (SO_2); 34.1 TPY of volatile organic compounds (VOC); negligible amounts of lead (Pb) and mercury (Hg); and 18.9 TPY of hydrogen chloride (HCl) a hazardous air pollutant (HAP). Because the potential emissions are below the major source thresholds, a review for the Prevention of Significant Deterioration (PSD) and a best available control technology (BACT) determination were not required. Emissions of an individual HAP (HCl) exceeds 10 TPY, but a case-by-case maximum achievable control technology (MACT) determination was not required because the plasma arc gasifier and multi-stage thermal oxidizer associated with the project are subject to the New Source Performance Standards (NSPS), 40 Code of Federal Regulations (CFR), Part 60, Subpart Eb – Standards of Performance for Large Municipal Waste Combustors of Section 129 under the clean air act (CAA).

To meet the requirements of Subpart Eb and to insure that emissions are less than the major source threshold for PSD and that compliance is achieved with other applicable NSPS and other permitted emission limits, the Department requires installation and operation of the following air pollution control equipment and practices at the facility: an electrostatic precipitator and a fabric filter (PM and PM_{10}); good combustion practices (CO and VOC); selective catalytic reduction (NO_X, mercury (Hg) and dioxin/furan); powdered activated carbon injection (Hg and other metal HAP); and flue gas desulfurization (SO_2, sulfuric acid mist

(SAM) and acid gas HAP such as HCl). In addition, reasonable precautions as defined by a best management practices (BMP) plan will be required to control fugitive dust and other emissions associated with MSW, tires and other material receiving, storage, sorting and processing.

The Department will require that continuous emissions monitoring systems (CEMS) be installed for NO_X, SO_2, CO and Hg emissions and that a continuous opacity monitoring system (COMS) be installed for visible emissions (VE). Emissions from the auxiliary boiler, the emergency generator and the fire engine water pump will be controlled by: use of clean fuels; good combustion; and, design and compliance with applicable NSPS.

The Department reviewed an air quality analysis prepared by the applicant. The analysis demonstrated that ground-level concentrations of nitrogen dioxide (NO_2), PM_{10}, CO and SO_2 caused by the project, including background concentrations, will be much less than the respective National or Florida ambient air quality standards (AAQS).

Permitting Authority: Applications for air construction permits are subject to review in accordance with the provisions of Chapter 403, F.S. and Chapters 62-4, 62-210 and 62-212 of the Florida Administrative Code (F.A.C.). The proposed project is not exempt from air permitting requirements and an air permit is required to perform the proposed work. The Permitting Authority responsible for making a permit determination for this project is the Bureau of Air Regulation in the Department of Environmental Protection's Division of Air Resource Management. The Bureau of Air Regulation's physical address is: 111 South Magnolia Drive, Suite #4, Tallahassee, Florida. The Bureau of Air Regulation's mailing address is: 2600 Blair Stone Road, MS #5505, Tallahassee, Florida 32399-2400. The Bureau of Air Regulation's telephone number is 850/488-0114.

Project File: A complete project file is available for public inspection during the normal business hours of 8:00 a.m. to 5:00 p.m., Monday through Friday (except legal holidays), at the physical address indicated above for the Permitting Authority. The complete project file includes the Draft Permit, the Technical Evaluation and Preliminary Determination, the application and information submitted by the applicant (exclusive of confidential records under Section 403.111, F.S.). Interested persons may contact the Permitting Authority's project engineer for additional information at the address and phone number listed above. In addition, electronic copies of these documents are available on the following web site:

www.dep.state.fl.us/Air/emission/construction/geoplasma.htm

Notice of Intent to Issue Air Permit: The Permitting Authority gives notice of its intent to issue an air construction permit to the applicant for the project described above. The applicant has provided reasonable assurance that operation of the proposed equipment will not adversely impact air quality and that the project will comply with all appropriate provisions of Chapters 62-4, 62-204, 62-210, 62-212, 62-296 and 62-297, F.A.C. The Permitting Authority will issue a Final Permit in accordance with the conditions of the proposed Draft Permit unless a timely petition for an administrative hearing is filed under Sections 120.569 and 120.57, F.S. or unless public comment received in accordance with this notice results in a different decision or a significant change of terms or conditions.

Comments: The Permitting Authority will accept written comments concerning the proposed Draft Permit for a period of 14 days from the date of publication of this Public Notice. Written comments must be received by the Permitting Authority by close of business (5:00 p.m.) on or before the end of the 14-day period. If written comments received result in a significant change to the Draft Permit, the Permitting Authority shall revise the Draft Permit and require, if applicable, another Public Notice. All comments filed will be made available for public inspection.

Petitions: A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative hearing in accordance with Sections 120.569 and 120.57, F.S. The petition must contain the information set forth below and must be filed with (received by) the Department's Agency Clerk in the Office of General Counsel of the Department of Environmental Protection at 3900

Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida 32399-3000 (Telephone: 850/245-2241). Petitions filed by any persons other than those entitled to written notice under Section 120.60(3), F.S. must be filed within 14 days of publication of this Public Notice or receipt of a written notice, whichever occurs first. Under Section 120.60(3), F.S., however, any person who asked the Permitting Authority for notice of agency action may file a petition within 14 days of receipt of that notice, regardless of the date of publication. A petitioner shall mail a copy of the petition to the applicant at the address indicated above, at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57, F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention (in a proceeding initiated by another party) will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205, F.A.C.

A petition that disputes the material facts on which the Permitting Authority's action is based must contain the following information: (a) The name and address of each agency affected and each agency's file or identification number, if known; (b) The name, address and telephone number of the petitioner; the name address and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial rights will be affected by the agency determination; (c) A statement of when and how the petitioner received notice of the agency action or proposed decision; (d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate; (e) A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the agency's proposed action; (f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the agency's proposed action including an explanation of how the alleged facts relate to the specific rules or statutes; and, (g) A statement of the relief sought by the petitioner, stating precisely the action the petitioner wishes the agency to take with respect to the agency's proposed action. A petition that does not dispute the material facts upon which the Permitting Authority's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by Rule 28-106.301, F.A.C.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Permitting Authority's final action may be different from the position taken by it in this Public Notice of Intent to Issue Air Permit. Persons whose substantial interests will be affected by any such final decision of the Permitting Authority on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

Mediation: Mediation is not available for this proceeding.