OKALOOSA COUNTY SOLID WASTE PUBLIC WORKSHOP
MEETING MINUTES
September 10, 2009
Water & Sewer Administrative Building
Third Floor Small Conference Room
Fort Walton Beach, Florida

Jim Reece, Okaloosa County Recycling Coordinator, welcomed everyone to our fifth solid waste workshop. Introductions were made by participants. Jim introduced Mr. Ron Omley, Hurlburt Chief of Environmental Services, who is here to speak to us about the Hurlburt Field PlasmaArc Gasification project.

Transportable Plasma Waste to Energy System (TPWES)

Turning Waste into Useable Resources

Technology

- Environmentally Friendly Plasma system, which produces energy and useable resources
- Ability to recycle all waste produced at DoD facilities (except radioactive)

The So What

- Reduces footprint and saves money on disposal
- Reduces consumption and dependency on fuels and resources
- Produces marketable products, i.e. energy and aggregate
- Diverts/recycles 100% of the waste stream

Participants

- Sponsor (s): USAF
- Gov't Contributors: AFSOC
- Industry: PyroGenesis, Canada

Schedule

• Contract for Test article	2QFY08
• Safety Release	4QFY08
• Combined DT/OT	2QFY09
• Procurement Decision	4QFY09

POC: John Andreadakis, DSN 425-8926
PM: Ron Omley, DSN 579-2875

Funding ($M)

	FY08	FY09	Total
CTO	1.5M	2.0M	3.50M
Sponsor (Service)	.98M	2.02M	3.00M

Benefits

- RDTE Cost Avoidance: $15M
- O&S Cost Avoidance: $680K/yr at Hurlburt Field
- Procurement Cost Avoidance: N/A
- Fielding Reduction: 3 years
- Procurement Potential: 1 system at every DoD Facility

Ron was questioned if the system would emit odors and he stated all odors would be contained in the facility. No release of odors.

Pyrogenesis currently has systems on ocean liners and on naval ships. They have received a contract for the Atomic Carrier with a system that will be on one level of the ship unlike other units with a furnace requiring multiple decks to accommodate the unit. These units do not use flares they are designed to shred the material to dust and the dust is then gasified.

Mr. Weaver stated this is a wonderful thing as I was in the Navy and everything went overboard. This system does away with materials floating up on shore as has happened in Cancun. Also in the Pacific Ocean there is a giant raft of plastic debris.

Ron stated that Pyrogenesis manufactures and sells the plasma torches. Ron indicated that there are competing systems different from the one proposed for Hurlburt by Pyrogenesis that use a crucible with a ring of plasma arc torches such that if you have a leak then there is an opportunity for a steam bomb to occur causing an explosion. Therefore, he believes that there are inherent design flaws in other technologies that promote plasma arc gasification systems versus Pyrogenesis. Some systems in Japan use the Westinghouse torch and process 200 TPD. This technology has been utilized in the steel industry for over 100 years.

Garbage is energy and we are burying when we should be utilizing.

Mr. Weaver asked if Hurlburt Field has the waste stream to support the system. Hurlburt generates 8.3 TPD and with medical waste and HHW from Eglin we will have the required 10.5 TPD to operate. The medical waste will be received in containers (current process) and is placed directly into the autoclave. Medical waste does not go through the shredder.

This system will melt the inorganic and will gasify the organics. Ferrous metals will be separated prior to gasification and will be recycled. Household waste and other waste will be gasified at the same time and will become syngas. Never touch the waste and convert it to energy.

The system unit is color coded so it can be transported to another location and quickly reassembled. The desire is to be able to deploy the unit to assist our troops in areas where 100 TPD of water is burned and they are breathing the smoke. The facility will be enclosed to prevent bird hazards to the flight line. The tip floor is 2000 square feet and the system will operate 24/7. When asked about cost per ton Jim Reece stated this project will determine cost and validate the technology to American standards. Ron Omley stated this is promising technology that if it works as anticipated then the Air Force will purchase more units to utilize in areas where our troops are deployed. Once the design is proven then units could be produced off an assembly line as it is not rocket science just a new application for proven technology. The time frame for answers will be soon after start up which is scheduled for June 2010. We will know if the system meets the specs and find out what O&M costs will be. This system is viable for numerous uses for example to harvest and mine the closed Wright Landfill. Remediation costs would go away saving power, sampling and remediation costs of approximately $50,000.00 annually.

The St. Lucie project is in the permitting stage and the proposed 3,000 TPD facility has been scaled down to a 400 TPD system. This and other technology is the wave of the future, getting us away from landfills.

Danielle Slaterpryce stated that the success will be tied to the cost to the citizens. They can live with $16-$17 however double that and it would not be so wonderful. It will also be a business aspect if the aggregate is marketable. Ron stated that Pyrogenesis has contracted with a Canadian University to perform testing on the aggregate and have found the only detectable parameter is lead and it is 25 times lower than the limit. Danielle also pointed out that it would have to pass the ASTM standard prior

to use in road construction. Ron stated Hurlburt will run a TCLP on the product and Pyrogenesis will work toward testing of the aggregate to verify it will bond with asphalt.

Jim Reece stated that in order for this technology to be competitive with other technologies the sale of power is critical. Without this the technology could not be competitive.

Danielle said this system would not require separation of recyclables so sorting would go away. Ron stated that an issue of no market for recyclables instead of storing and waiting and hoping for a market the material could be used in the system to create power. Any material that has value will not be utilized in the system they will be removed and sold.

Danielle told the group that we are planning a regional solid waste management discussion to be held December 9th and 10th and we would be contacting the ISP to participate.

Can the Air Force import waste from the county or city to the new facility? The issue of liability makes the Air Force nervous. In Aberdeen all MSW was taken to an incinerator on base and an issue developed such as the disposal of ash and the concerns if the MSW stream was reduced. What would happen to the facility?

Richard stated that the county is in the catbird seat as we can watch the Air Force for results. This might enable us to phase out recycling and start raising trees. This company doesn't sell stock so possibly we could sell bonds to purchase this technology. This is a gold mine for Okaloosa County and Waste Management with utilizing this technology to end remediation costs at closed landfills in Okaloosa County. We need to think about one day a week collection until a decision on this process can be made. How do we continue until this technology can be validated?

Jim Reece stated we need to look at the merits of gasification. We cannot forget recycling. We have promoted the recycling of paper as we can say that for every ton of paper recycled we save x amount of water and energy over the production of paper from virgin material. We cannot forget recycling.

There were no further questions therefore Jim reminded participants that we will have this presentation again at our next meeting on November 12th in Crestview.

Meeting adjourned.