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Albert Barker

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HAMPTON AND NASA'S REFUSE FIRED STEAM PLANT

The City of Hampton was faced with a problem facing many of our municipalities today—it was beginning to run out of room in its sanitary landfill. The Langley Research Center was experiencing another problem common to all facilities in these times—it was paying rapidly increasing prices for oil and there seemed to be no end in sight to those increases. These two separate governmental units were able to get together and reach a mutual solution to their respective problems. NASA would burn Hampton's trash to generate steam for its own uses. Hampton would have less need for its landfill and NASA would be able to stop purchasing large quantities of oil for its steam plant. The City and the federal government entered into a Cooperative Agreement for the operation of a refuse fired steam plant.

The project began in 1971 with a NASA study on the feasibility of generating steam by burning refuse. An outside study on the economics of such a project was completed in 1974. A request for proposals went out in 1976. In 1978, a contract for the facility was awarded. The plant began operating in mid-1980.

The facility has the capacity to burn up to 200 tons of municipal refuse per day in two separate boilers, each burning half of the total. This capacity is enough to handle all of NASA's refuse and 70% of Hampton's refuse. The facility is designed to operate 24 hours per day and 7 days per week. All of this refuse will generate up to 55,000 pounds of steam per hour, which accounts for 80% of the steam demand of NASA's Langley Research Facility.

The funding of this project was split between Hampton and the federal government. Hampton paid 7 million dollars and the federal government almost 3.5 million dollars for the design and construction costs. Operating costs will be paid by charging tipping fees to NASA and the City for each truck that deposits refuse at the plant. The steam produced is then sold to NASA.

The savings in this arrangement are substantial for both parties. NASA estimates that the Research Center will reduce oil consumption by 2.4 million gallons per year. The estimated life of Hampton's landfill is expected to increase 3 or 4 times, adding 20 to 30 years to its life.

For a project of this type to succeed it is essential that there be a large market for the steam produced. The Langley Research Center was using steam at the time the facility was built and all its steam tunnels were in place. These two factors were extremely important in making the project economically feasible. The project managers believe that this facility can serve as a model for other medium-sized cities who may be searching for answers to their refuse disposal problems, if a market for the steam can be found.

A.B.