

CITRUS COUNTY

4009C00086

DEPARTMENT OF TECHNICAL SERVICE

1300 South Lecanto Highway • P.O. Box 440  
Lecanto, Florida 34460-0440  
(904) 746-2694 • FAX (904) 746-3368

Reply To:

39859 5009-187229

February 5, 1993

Utilities Division

Mr. Robert J. Butera, P.E.  
Solid Waste Manager  
Division of Waste Management  
Department of Environmental Regulation  
3804 Coconut Palm Drive  
Tampa, FL 33619-8318

**SUBJECT: LANDFILL LEACHATE TREATMENT FACILITY FLOWS & PERFORMANCE**

Dear Mr. Butera:

As per our conversation on 1/29/93, I am submitting the following data and report as you requested.

- ATTACHMENT 1 Data Table (5 pgs) of monthly analyses of Primary & Secondary Drinking Water Standards & EPA Priority Pollutants. Data is in chronological order with parameters that exceeded MCL's hi-lited. These analyses were performed by Savannah Labs.
- ATTACHMENT 2 Data Table (2 pgs) of additional parameters analyzed weekly with parameters that exceeded MCL's hi-lited. These analyses were performed by KNL Labs.
- ATTACHMENT 3 A report on daily & monthly plant flows from 11/92 thru 1/93, including the entire period in which 60,000 gpd were processed.

A review of the data indicates that the facility was not necessarily negatively impacted by the increased hydraulic load of 60,000 gpd versus 30,000 gpd, as those parameters which were exceeded during 60,000 gpd operation were also exceeded during 30,000 gpd operation, with the one exception of turbidity levels being slightly higher.

While we await your interpretation of the data, there are two criteria I would specifically like to address.

Nitrates - data shows that the plant was able to nitrify both during 60,000 gpd and 30,000 gpd operations. Hydraulic loading times necessitated many process time changes which effected the plants ability to fully denitrify.

Mr. Butera, P.E.  
February 5, 1993  
Page -2-

**SUBJECT: LANDFILL LEACHATE TREATMENT FACILITY FLOWS  
AND PERFORMANCE**

High No3 levels prior to the 60,000 gal/day operations are still not fully understood. While process adjustments were partially responsible, changes in leachate influent characteristics and equipment failures also contributed to problems.

While staff attempted adjustments to both aeration and anoxic process times, we were not able to get a handle on No3 levels.

We will be continuing to perform more process monitoring, and will be reviewing our data and operations with staff from Zimpro. As attested by lab analysis performed between 1/92 and 6/92 the facility is capable of both nitrification and denitrification.

Currently we are returning the facility back to the operational modes and process times that achieved our best quality effluent with regards to Nitrates.

Fecal Coliforms - From the outset the leachate treatment plant had no facilities for disinfection. Disinfection was initially achieved by broadcasting HTH into the equalization basin where effluent was discharged to from each reactor.

In March, a liquid CL2 feed was set up at the point where effluent is discharged into the equalization basin and finally in October ejection of liquid CL2 solution into the discharge piping of the equalization basin pumps was instituted.

Changes in these modes of operations were occurring during sampling periods and probably account for some of the positive counts on the effluent.

There were also discrepancies between results submitted by Savannah and KNL Labs that indicate there were sampling or handling problems.

Finally, there is the problem with fecal matter from birds in the areas which may have contaminated effluent being held in filter bed basin after chlorination, but prior to discharge to the perc ponds where samples are taken.

I am convinced that an adequate solution of CL2 is being fed and that adequate mixing and DT exist to produce Fecal Coliform results that are non-detectable. We are continuing to work on possible reasons for and corrective action that could be taken to achieve this goal.

Mr. Butera, P.E.  
February 5, 1993  
Page -3-

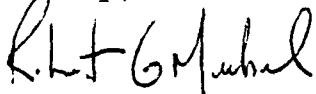
**SUBJECT: LANDFILL LEACHATE TREATMENT FACILITY FLOWS  
AND PERFORMANCE**

In conclusion we will continue to perform effluent analysis on all parameters as required by permit, but would request relief from performing Primary and Secondary drinking H2O and EPA Priority Pollutants analysis except for those parameters you specifically require monitoring of.

If you have any future questions or require any further data, please contact me at 904-746-2694.

I am looking forward to discussing plant operations and performance with you in the next few weeks.

Sincerely,



Robert G. Merkel  
Operations Supervisor

RGM:ckn

cc: James W. Pinkerton, P.E., County Engineer  
Ralph Hedgecoth, Director of Utilities  
Mike Moore, Acting Dir., Solid Waste Management Div.  
Rick Robinson, Operator

Attachments