FLORIDA DEPARTMENT OF HEALTH

Rick Scott
Governor

February 18, 2011

Mr. Damann Anderson
Hazen and Sawyer
10002 Princess Palm Avenue
Registry One Building, Suite 200
Tampa, Florida 33619

Dear Mr. Anderson:

This letter authorizes you to proceed with the following tasks in accordance with the current executed contract CORCL for Florida Onsite Sewage Nitrogen Reduction Strategies Study.

Two product evaluations (four samples) are included in the current budget allocation for Task A.16; the third (two samples) will be funded at the same rate from the owner's change allowance for Task A.

The intent of this authorization is for you to provide information as required by 64E-6.0151(2), Florida Administrative Code to show compliance with the Department's product composition rule for the following three products anticipated to be used in onsite systems that will discharge effluent to groundwater through a drainfield:

- lignocellulosic material (described as Southern Pine)

- sulfur material

- clinoptilolite

For 64E-6.0151(c) F.A.C., the following tests shall be performed to assess the use of the product as proposed. We are following your recommendation on the evaluated surface loading rates, while maintaining the concern that these tests may not be sufficient to address use of the products in in-situ beds and/or moderately limited soils with longer nominal contact times.

Sample #	Effluent Source	Products	Surface Loading Rate (gal/ft2 d)	VOC analysis	Bioassay
1	Septic tank	Control		X	
2	Unsat CL4	Clinoptilolite	3.0	X	X
3	Denit LS1	Lignocellulosic	10.0	X	X
4	Denit SU1	Sulfur	10.0	X	X
5	InSitu 1	Ligno+sulfur	0.8	X	X
6	InSitu 3	Clin.+lingo+sulfur	1.2	x	X

Bureau of Onsite Sewage Programs
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For analytical methods the same approach developed in your previous Additives Testing will be employed, which is Method EPA 8260 for most analytes, and an alternative analyses with lower detection limits than EPA 8260 for the few cases needed to satisfy the Sonia Cruz list (attached).

If you have questions, please contact me at (850) 245-4070 x2708 or by email at Elke_Ursin@doh.state.fl.us.

Sincerely,

Elke Ursin
Environmental Health Program Consultant

EU/ contract file

PARAMETER [EPA 8260]	CAS #	Guidance MCL	Classification
1,1,1,2-Tetrachloroethane	630-20-6	1 ug/L	Carcinogen
1,1,1-Trichloroethane	71-55-6	200 ug/L	Primary Standard
1,1,2,2-Tetrachloroethane	79-34-5	0.2 ug/L	Carcinogen
1,1,2-Trichloroethane	79-00-5	5 ug/L	Primary Standard
1,1-Dichloroethane	75-34-3	700 ug/L	Systemic Toxicant
1,1-Dichloroethene (Vinylidene Chloride)	75-35-4	7 ug/L	Primary Standard
1,1-Dichloropropene	563-58-6	1 ug/L	Carcinogen
1,2,3-Trichlorobenzene	87-61-6	70 ug/L	Primary Standard
1,2,3-Trichloropropane	96-18-4	42 ug/L	Systemic Toxicant
1,2,4-Trichlorobenzene	120-82-1	70 ug/L	Primary Standard
1,2,4-Trimethylbenzene	95-63-6	10 ug/L	Organoleptic
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	0.2 ug/L	Primary Standard
1,2-Dibromoethane (EDB,Ethylene dibromide)	106-93-4	0.02 ug/L	Primary Standard
1,2-Dichlorobenzene (o-Dichlorobenzene)	95-50-1	600 ug/L	Primary Standard
1,2-Dichloroethane (Ethylene dichloride)	107-06-2	3 ug/L	Primary Standard
1,2-Dichloropropane	78-87-5	5 ug/L	Primary Standard
1,3,5-Trimethylbenzene	108-67-8	10 ug/L	Organoleptic
1,3-Dichlorobenzene (m-Dichlorobenzene)	541-73-1	10 ug/L	Organoleptic
1,2-Dichloropropane	78-87-5	5 ug/L	Primary Standard
1,4-Dichlorobenzene (p-Dichlorobenzene)	106-46-7	75 ug/L	Primary Standard
2,2-Dichloropropane	594-20-7	5 ug/L	Primary Standard
2-Butanone (Methyl ethyl ketone) (MEK)	78-93-3	4200 ug/L	Systemic Toxicant
2-Chloroethyl Vinyl Ether	110-75-8	1 ug/L	Systemic Toxicant
o-Chlorotoluene	95-49-8	140 ug/L	Systemic Toxicant
Hexachlorobutadiene	87-68-3	15 ug/L	Carcinogenic
p-Chlorotoluene	106-43-4	140 ug/L	Systemic Toxicant
4-Isopropyltoluene (p-Cymene)	99-87-6	70 ug/L	Ornagoleptic
4-Methyl-2-pentanone (Methyl isobutyl ketone) [MIBK]	108-10-1	350 ug/L	Systemic Toxicant
Acetone	67-64-1	700 ug/L	Systemic Toxicant
Benzene	71-43-2	1 ug/L	Primary Standard
Bromobenzene	108-86-1		
Bromochloromethane	74-97-5	91 ug/L	Systemic Toxicant
Bromodichloromethane	75-27-4	0.6 ug/L	Carcinogen
Bromoform	75-25-2	4 ug/L	Carcinogen
Bromomethane (Methyl bromide)	74-83-9	9.8 ug/L	Systemic Toxicant
Carbon disulfide	75-15-0	700 ug/L	Systemic Toxicant
Carbon Tetrachloride (Tetrachloromethane)	56-23-5	3 ug/L	Primary Standard
Chlorobenzene	108-90-7	100 ug/L	Primary Standard
Chloroethane (Ethyl chloride)	75-00-3	12 ug/L	Carcinogen
Chloroform	67-66-3	70 ug/L	Carcinogen
Chloromethane (Methyl chloride)	74-87-3	2.7 ug/L	Carcinogen
cis-1,2-Dichloroethene	156-59-2	70 ug/L	Primary Standard
cis-1,3-Dichloropropene (DCP, Telone)	542-75-6	1 ug/L	Carcinogen
Dibromochloromethane	124-48-1	0.4 ug/L	Carcinogen
Dibromomethane	74-95-3		
Dichlorodifluoromethane (CFC 12)	75-71-8	1400 ug/L	Systemic Toxicant
Ethylbenzene	100-41-4	30 ug/L	Secondary Standard
Hexachlorobutadiene	87-68-3	0.5 ug/L	Carcinogen
Isopropylbenzene (Cumene)	98-82-8	0.8 ug/L	Organoleptic
m,p-Xylenes	1330-20-7	20 ug/L	Secondary Standard
Methylene Chloride (Dichloromethane)	75-09-2	5 ug/L	Primary Standard
Methyl-tert-Butyl-Ether (MTBE)	1634-04-4	20 ug/L	Organoleptic
Naphthalene	91-20-3	14 ug/L	Organoleptic
n-Butyl Benzene	104-51-8	280 ug/L	
n-Propyl Benzene	103-65-1	280 ug/L	
o-Xylene	95-47-6	20 ug/L	Secondary Standard
sec-Butylbenzene	135-98-8	280 ug/L	
Styrene (Vinyl benzene)	100-42-5	100 ug/L	Primary Standard
tert-Butylbenzene	98-06-6	280 ug/L	
Tetrachloroethene	127-18-4	3 ug/L	Primary Standard

Toluene	108-88-3	40 ug/L	Secondary Standard
trans-1,2-Dichloroethene	156-60-5	100 ug/L	Primary Standard
trans-1,3-Dichloropropene	542-75-6	0.4 ug/L	Carcinogen
Trichloroethene (TCE)	79-01-6	3 ug/L	Primary Standard
Trichlorofluoromethane (CFC 11)	75-69-4	2100 ug/L	Systemic Toxicant
Vinyl chloride	75-01-4	1 ug/L	Primary Standard
Xylenes (Total)	1330-20-07	20 ug/L	Secondary Standard