



## CARLSON ENVIRONMENTAL CONSULTANTS, PC

LANDFILL GAS AND SOLID WASTE SPECIALISTS

October 16, 2018

Mr. Brian Durden  
Florida Department of Environmental Protection  
Northeast District Office  
8800 Baymeadows Way West, Suite 100  
Jacksonville, FL 32256-7590

RE: Trail Ridge Landfill - WACS ID 33628  
Additional Surface Water Sample Results

Dear Mr. Durden:

In accordance with our meeting on June 26, 2018, Trail Ridge Landfill, Inc. (TRL) personnel collected additional grab samples at select locations along the western boundary of the Trail Ridge property where run-on occurs from the adjacent Chemours property. The purpose of the sampling was to further investigate potential off-site sources of metals and turbidity in accordance with the July 6, 2018 Alternate Source Demonstration (ASD) submitted to the Department. Samples were collected after rainfall when water was flowing onto the Trail Ridge property. Samples were not collected after every rain event but only those events when personnel were available and rainfall was sufficiently heavy to generate run-on.

This letter transmits a summary of all available data for surface water samples collected in these locations from May through August. Table 1 is a compilation of the data along with applicable Class III water quality standards including monthly precipitation. The data shows that the lead concentrations in Chemours run-on exceed Class III water quality standards and are consistent with the conclusions of the ASD. Figure 1 is a map showing the locations where samples were collected. Appendix I contains photographs of the run-on sample locations at various times. When construction and repairs are sufficiently completed by the City's contractor, TRL intends to collect samples at the outlets of the two stormwater ditches surrounding the expansion area as well.

If you have any questions regarding this data, please contact either me at 321-704-4162 or Eric Parker at 904-289-9100.

Sincerely,

Jim Christiansen  
Project Director  
Carlson Environmental Consultants, PC

cc: Seth Ramaley, P.G., Waste Management  
Eric Parker, Waste Management In. of Florida  
Eric Fuller, City of Jacksonville  
Peter Walls, P.E., P.G., CEC

Table 1  
Surface Sample Results at Property Boundary

## Trail Ridge Landfill

## Surface Water ASD Chemours Run On Sampling Results

Date	Sample Location	Sample Location on Map	Turbidity (NTU)	Turbidity Standard (NTU above background)	TSS (mg/L)	Hardness (mg/L)	Total Lead (ug/L)	Dissolved Lead (ug/L)	Calculated Lead Class III WQS (ug/L)	Total Iron (ug/L)	Dissolved Iron (ug/L)	Iron Class III WQS (ug/L)	Comments
5/24/2018	Run On (Chemours) Borrow Pit Road Crossing	C		29			ND		NC			1000	Low turbidity per visual observation
5/25/2018	West Fence (Chemours Run On)	B		29			20		NC			1000	High flow high turbidity per visual
	West Fence (Chemours Run On)	B		29			42		NC	5,300		1000	High flow high turbidity per visual
	Blow Out (Chemours Run On)	A		29			7.3		NC			1000	Moderate flow moderate turbidity per visual observation
	Blow Out (Chemours Run On)	A		29			19		NC	2,200		1000	Moderate flow moderate turbidity
	Blow Out (Chemours Run On)	A		29			390		NC	37,000		1000	Very High flow very high turbidity
May Precipitation = 7.75 inches													
7/31/2018	Blow Out (Chemours Run On)	A	150	29	240		5.2	ND	NC	3,600	570	1000	Hardness analysis not requested.
	West Fence (Chemours Run On)	B	130	29	12		2.5	2.4	NC	2,000	2000	1000	Ditch samples not collected due to construction.
	Run On (Chemours) South	C	9	29	300		1.6	ND	NC	850	300	1000	
	Inner Ditch Pond 3	D		169.0					NC			1000	
	Outer Ditch Pond 4	E		29.0					NC				
July Precipitation = 8.60 inches													
8/24/2018	Blow Out (Chemours Run On)	A	380	29	510	10	4.6		0.54	1,300		1000	Dissolved samples not analyzed.
	West Fence (Chemours Run On)	B	100	29	120	9.7	8.6		0.54	4,700		1000	Hardness values <25 mg/L. Ditch samples not collected due to construction.
	Run On (Chemours) South Slew Pit Road	C	40	29	15	12	2.9		0.54	1,100		1000	
	Inner Ditch Pond 3	D		269.0					NC			1000	
	Outer Ditch Pond 4	E		269.0					NC			1000	
8/30/2018	Blow Out (Chemours Run On)	A	400	29	630	3.6	4.7	2.8	0.54	1,800	970	1000	Hardness values <25 mg/L. Ditch samples not collected due to construction.
	West Fence (Chemours Run On)	B	120	29	390	10	8.4	2.8	0.54	3,400	2000	1000	
	Run On (Chemours) South Slew Pit Road	C	20	29	5.5	21	1.6 l	1.6 l	0.54	520	460	1000	
	Inner Ditch Pond 3	D		289.0					NC			1000	
	Outer Ditch Pond 4	E		289.0					NC			1000	
August Precipitation = 6.60 inches													

No data is available for background upstream or internal to Chemours. Turbidity standard at Chemours property boundary considered 29 NTU.

Turbidity standard at Pond 3 and 4 inlets considered 29 NTU plus the average of the turbidity (if measured) at the West Fence and Blow Out run-on sample locations.

NC Not calculated because no corresponding hardness value

ND Not detected above MDL

Not Sampled

Exceeds WQS

Likely exceeds WQS but no corresponding hardness value to calculate Class III Pb standard

Figure 1  
Sample Location Map



**Figure 1**  
Additional ASD Sampling Locations

Legend



Appendix I  
Photos of Run-On at Time of Sampling





Blow Out Area 5/22/2018



Blow Out Area 5/24/2018



Blow Out Area 6/15/2018



Blow Out Area 8/31/2018





West Fence Area 5/28/2018



West Fence Area 8/24/18



South Slew Pit Road Area 8/24/2018