



August 11, 2009

Jaclyne Drummond  
Compliance Hydrogeologist  
NC Department of Environment and Natural Resources  
Division of Waste Management – Solid Waste Section  
1646 Mail Service Center  
Raleigh, NC 27699-1646

**RE: Dunn-Erwin Landfill Phased Assessment Plan  
SWS Permit No. 47-07T  
Harnett County, NC**

Ms. Drummond,

On behalf of Harnett County, C. T. Clayton, Sr., PE., Inc. is pleased to present this phased assessment plan as required in compliance order dated July 28, 2009 regarding the Dunn-Erwin Landfill Facility Transfer Station leachate storage tank spill.

### **Introduction**

On January 15, 2009 it was observed by the inspection party that a recent overflow had occurred at the leachate storage tanks. The tanks had become full and had overflowed out the manhole lid and down the sloped stone truck road via a small stormwater ditch. The report described the affected area as:

“The leachate impacted the soil surrounding the concrete pad that is located above the tank and approximately 50 feet of soil that is adjacent to the gravel driveway that slopes away from the transfer station area.”

The landfill operations officer took a backhoe and scraped off the top layer of soils which had come in contact with the leachate and disposed of the soils.

### **Proposed Action Plan**

Due to the clayey soils found throughout the landfill facility, CTC does not feel that any potential contamination would have infiltrated below 2-feet in depth.

CTC proposes to perform 8 soil tests within 4 locations (one test a 12” and one at 24” for each location). A soils test will be performed up-gradient of the spill for background testing. The

**P. O. Box 578  
Coats, NC 27521**  
Phone: 910-897-7070  
Fax: 910-897-6767

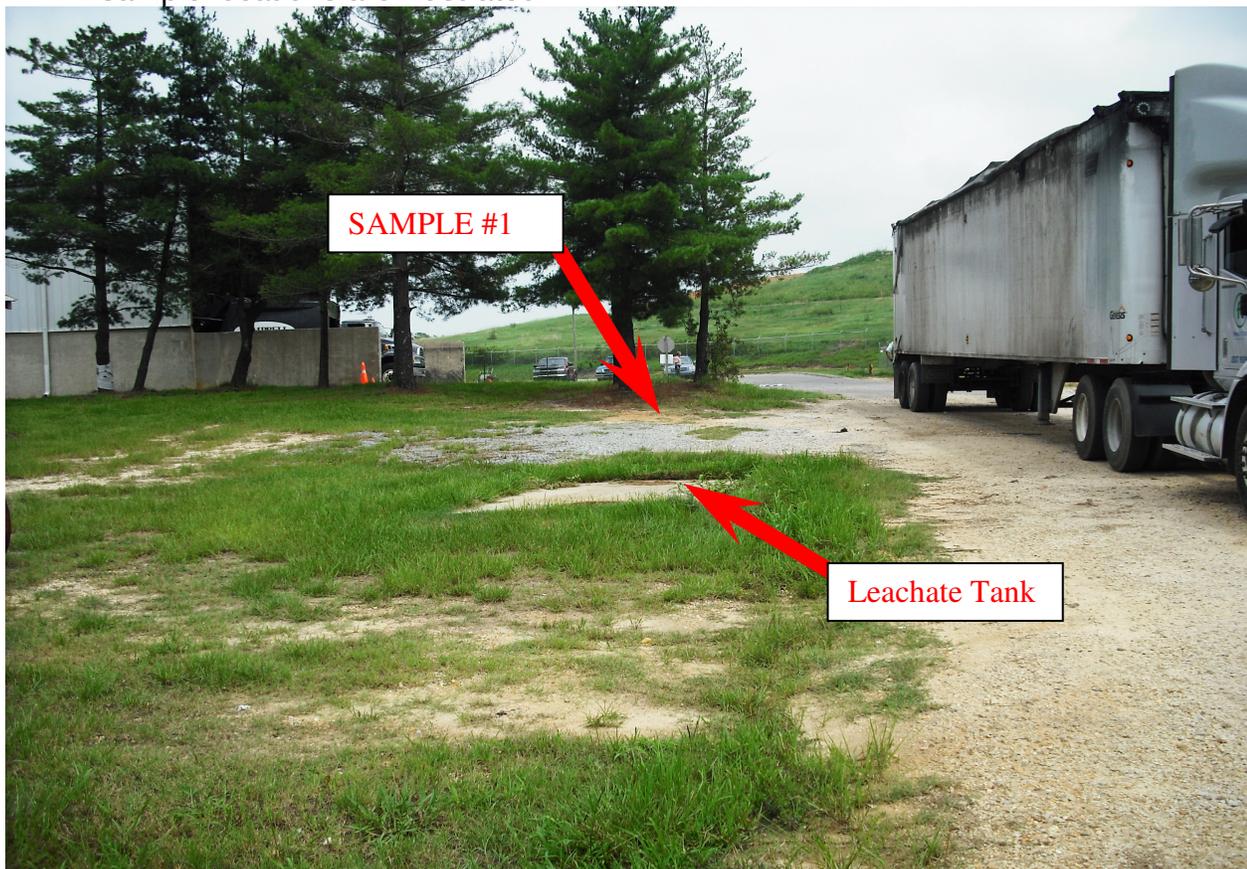
*Offices located in Coats and New Bern, North Carolina  
[www.ctclayton.com](http://www.ctclayton.com)*

remaining tests will be conducted directly beside the leachate storage tank, 25-feet down-gradient and 75-feet down-gradient.

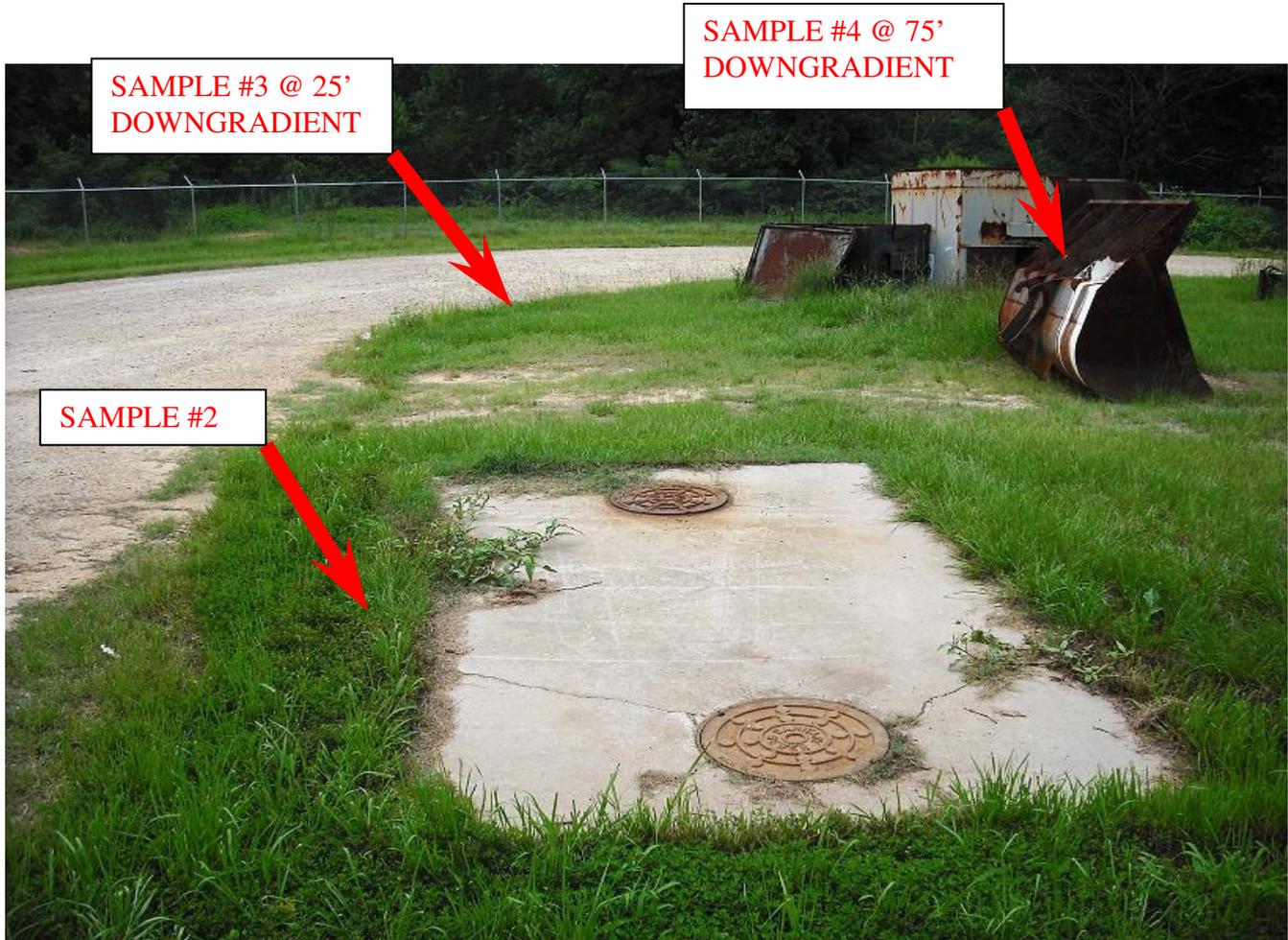
### Sampling Procedure

A backhoe will be utilized to excavate a test pit approximately 3-feet in depth. A technician wearing latex gloves will use a stainless steel tool to scrape the side wall of the pit at the 12" depth. The soil will be packed as tightly as possible into the sample container. The technician will detoxify the tool in a Liqui-Nox® solution and rinsed with de-ionized water prior to the next sample at 24" depth. The technician will use a clean pair of gloves for each sample. This procedure will be repeated for all samples.

The picture below shows the top of the tank looking up-gradient. The proposed sample locations are illustrated.



The picture below shows the top of the tank looking down-gradient. The proposed sample locations are illustrated.



## Sample Testing

The soil samples will be sent to Environment 1, Inc., of Greenville, NC for analysis of Appendix I Volatile Organics and Metals, Nitrate-Nitrite, Phosphorus, Percent Solids, and pH. Soil results will be compared to updated October 2008 soil standards -

<http://www.wastenotnc.org/soiltable.pdf>

When the results are returned we will share the information with the Solid Waste Section and discuss further actions at that time.

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## Conclusion

C. T. Clayton, Sr. PE, Inc. (CTC) proposes to proceed with the assessment plan in phases as follows:

- **Phase 1** - CTC will take the eight soils samples as described above and send to Environment 1, Inc. for analysis.
- **Phase 2** - CTC will forward results of soil samples taken and contact the Solid Waste Section to discuss the analytical results. Based upon the preliminary sampling results, additional soil and/or surface water sampling and/or installation of monitoring wells or temporary piezometers may be required since no monitoring wells are present down-gradient of the leachate release flow-path.
- **Phase 3** - If necessary, implement the agreed upon clean-up and disposal method or additional sampling and follow up with a report documenting the work as completed.

Should you have any questions or comments regarding this plan, please contact me at the telephone numbers on the previous page or by e-mail at [ryan@ctclayton.com](mailto:ryan@ctclayton.com).

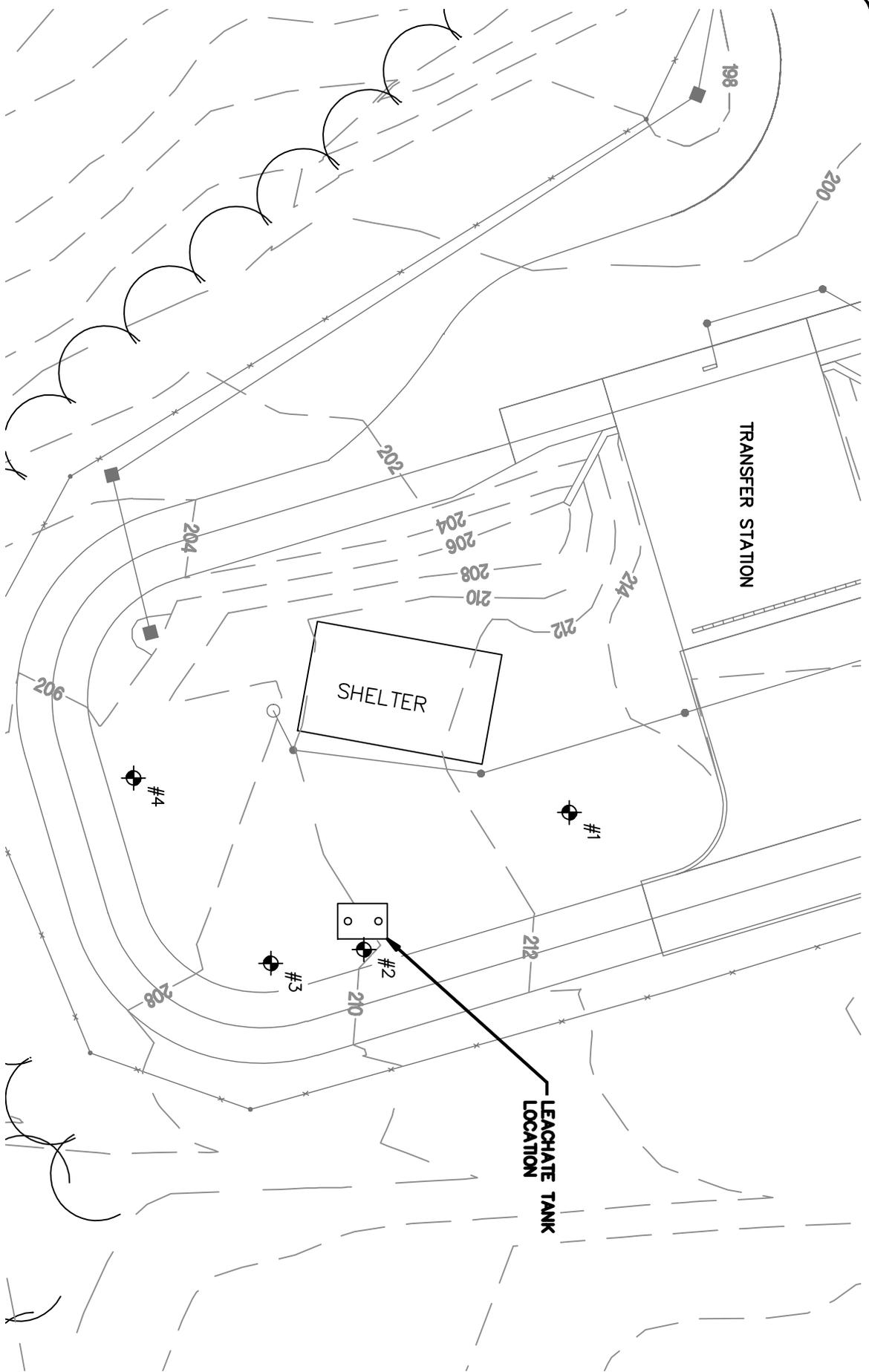
Sincerely,



Ryan Sadler

cc: C. T. Clayton, Sr., P. E.  
Ryan Sadler  
Jerry Blanchard

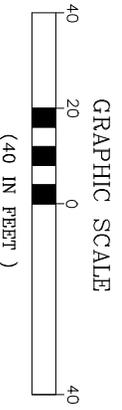
/attachment – Location Sketch



**LEGEND**

— 210 — EXISTING CONTOURS

⊙ #1 SOIL SAMPLE LOCATION



**Clayton, Sr., P.E., Inc.**  
 CIVIL & ENVIRONMENTAL ENGINEERING  
 POST OFFICE BOX 108  
 COUNTY NORTH CAROLINA STREET  
 MOBILE, 36688-0108 (Tampa) Email: [clayton@claytonpe.com](mailto:clayton@claytonpe.com)

**LEACHATE ASSESSMENT  
 PLAN**

**DUNN-ERWIN LANDFILL  
 HARNETT COUNTY, NC.**

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