Hazardous Waste Section

File Room Document Transmittal Sheet

Your Name:	Kathleen Z. Lawson
EPA ID:	NCD049773245
Facility Name:	Trex Properties
Document Group:	Closure (C)
Document Type:	Closure Report/Certification (CR)
Description:	Closure Certification Addendum 2.
Date of Doc:	6/17/2016
Author of Doc:	Trex Properties

File Room Use Only

NCD049773245

	Month	Day	Year
Date Recieved by File Room:			
Date Scanned:			

Scanner's Initials:

WithersRavenel
Our People. Your Success.

HAZARDOUS WASTE STORAGE AREA DECONTAMINATION CERTIFICATION ADDENDUM #2

TREX PROPERTIES LLC
FORMER DETREX FACILITY
3114 Cullman Avenue
Charlotte, Mecklenburg County, North Carolina
EPA ID # NCD 049 773 245
WR Project No.: 03130430.2

Prepared for:
David Craig
Trex Properties, LLC
1650 Des Peres Road, Suite 303
St. Louis, MO 63131

Prepared by:
WithersRavenel
115 Mackenan Drive
Cary, North Carolina 27511
North Carolina Firm License No. C-0832

June 15, 2016

TREX PROPERTIES LLC

ELT TREX PROPERTIES LLC
1650 DES PERES RD., STE 303
SAINT LOUIS, MO 63131
314-835-1515 P
314-835-1616 F

June 17, 2016

Ms. Kathy Lawson
NCDEQ, Division of Solid Waste Management
217 West Jones Street
Raleigh, NC 27603
VIA: email (Kathleen.lawson@ncdenr.gov) and USPS

RE: Closure Report - Second Addendum (June 15, 2016)
3114 Cullman Ave.
Charlotte, NC 28206
EPA ID # NCD 049 773 245

Dear Ms. Lawson:

Attached for your review is a closure report addendum generated by Withers and Ravenel on behalf of Trex Properties, LLC (Trex) for the decontamination work performed in Area 4 at 3114 Cullman Ave., Charlotte, NC.

Decontamination of the storage areas and permitted units occurred on four occasions, two in 2015 (October and December) and two in 2016 (February 3rd and June 8th). Pervious decontamination activities resulted in non-detect conditions for all constituents of concern with the exception of tetrachloroethylene (PCE) at a concentration of 1.1 parts per billion in Area 4. Decontamination efforts for the most recent event (June 8th) have resulted in ND (1.0 ppb) levels on the final rinsate and the associated duplicate sample. Trex is actively working on the disposal of the decontamination and rinsate water associated with Area 4 and fully expects to have the waste off-site prior to July 1, 2016.

Having met the permit obligation to decontaminate the permitted storage areas and equipment to ND conditions, Trex is requesting confirmation that it is no longer required to maintain pollution liability insurance as required under the permit. Trex is asking NCDEQ to provide confirmation on or before June 28th to permit notification to their carrier that the policy that is no longer needed.

If you have any questions regarding the second closure certification report addendum, please feel free to give me a call at 734.751.2270.

Best regards,

David Craig
Senior Project Manager

CC: File
R. Becker – EAG
T. Pike - CDCCO
B. Bellis – W&R

WithersRavenel
Our People. Your Success.

June 15, 2016

Mr. David Craig
Trex Properties, LLC
1650 Des Peres Road, Suite 303
St. Louis, MO 63131

Subject: Hazardous Waste Storage Area Decontamination Certification
3114 Cullman Avenue
Charlotte, North Carolina
EPA ID # NCD 049 773 245
WR Project #.: 03130430.2

Dear Mr. Craig:

WithersRavenel respectfully submits this Hazardous Waste Storage Area Decontamination Certification Report Addendum #2 regarding the former Detrex facility located at 3114 Cullman Avenue in Charlotte, North Carolina. The activities documented in the attached report were conducted in substantial conformance with the RCRA Part B Permit Closure Plan and the scope of work outlined in the Request for Proposals prepared by EnviroAnalytics Group, LLC (EAG) dated February 2015.

Should you have any comments or questions regarding this submittal, please do not hesitate to contact WithersRavenel at (910) 256-9277.

Sincerely,
WithersRavenel

Wesley Ross Perry, P.E.
Staff Engineer

Brian J. Bellis, P.G.
Project Manager

WithersRavenel
Our People. Your Success.

Table of Contents

Attachments

1. INTRODUCTION

On behalf of Trex Properties (EPA ID # NCD 049 773 245), the purpose of this document is certify the effectiveness of decontamination procedures for process equipment and licensed hazardous waste container storage areas at its 3114 Cullman Ave., Charlotte, North Carolina facility (Facility). The container storage areas covered under this certification, as referenced in the operating license, include: interior container storage and containment areas (**Area #1, Area #2, Area #3, Area #4,** and **Area #5**), an exterior container storage area comprised of two (2) tractor trailers (**Area #6 East** and **Area #6 West**), and the exterior tank farm area located inside a secondary containment along the northern side of the facility (**Outside Area**). In addition to the containment areas, a 1,000-gallon feed tank (**Feeder Tank**) located in containment Area #4 and the Luwa Solvex Sovent Recovery System (**LUWA**) located in containment Area #5 are also covered under this certification.

Decontamination procedures are specified in the State of North Carolina Division of Waste Management Hazardous Waste Management Permit for the subject facility and its attached Closure Plan. Specifically, Closure Plan sections I-1a: Closure of Tanks and/or Process Equipment, and I-1b: Closure of Container Storage Areas and Containment Buildings, specify the procedures to decontaminate the areas and the criteria to be used to verify that the areas are decontaminated.

2. DECONTAMINATION PROCEDURES

2.1. ADDITIONAL DECONTAMINATION ACTIVITIES

Due to the presence of trace concentrations of contaminants of concern (COCs) identified in analytical results for final rinsate samples obtained during the December 2015 and February 2016 decontamination activities, WR returned to the subject site on June 8, 2016 to perform additional decontamination and sampling activities. WR personnel re-washed Area #4 using hot water from the onsite tap. All wash and rinsate water was contained within Area #4 and collected using a shop-vac. Following completion of the additional decontamination and sampling activities, all wash and rinsate water collected using the shop-vac (~15 gallons) was placed into an onsite 55-gallon satellite hazardous waste storage drum staged inside containment Area #5 to await disposal. As of the date of this report, the drum is still located within Area #5. Field notes and photographs that document these activities are provided in **Attachment 1**.

2.2. SAMPLING PROCEDURES

Following the final rinsing of Area #4, potable water was discharged onto the containment area and allowed to flow across the area where WR personnel collected the rinsate sample and a duplicate sample using new nitrile gloves and a peristaltic pump with new polyethylene tubing and silicone. These samples were pumped directly from the containment area into laboratory-supplied containers. WR personnel also collected a sample of the potable water utilized for decontamination purposes. The "Tap Water" sample was collected directly from the faucet to which the hose used to convey water to Area #4 was attached.

In addition to the above samples, WR also collected one Field Blank sample. The Field Blank sample was collected inside the Facility at a location adjacent Area #4 by pumping laboratory provided organic-free de-ionized water utilizing a peristaltic pump with new polyethylene tubing and silicone directly into laboratory supplied containers. The purpose of this Field Blank sample was to determine if any identified COCs are a result of the tubing used during collection of the sample, or from the dissolution of COCs present in background concentrations in the ambient air of the Facility.

All sample bottles were placed into coolers with ice and were transported by WR to Pace Analytical Services laboratory in Huntersville NC, who took custody of the samples within two hours of collection.

3. SUMMARY OF ANALYSES

Rinsate samples collected during the additional June 2016 decontamination activities were analyzed for the following methods dependent on which constituents were detected in the February 2016 laboratory analytical results:

- Area #4: EPA 8260 (PCE only)
- Duplicate of Area #4: EPA 8260 (PCE only)
- Tap Water: EPA 8260 (PCE only)
- Field Blank: EPA 8260 (PCE only)
- Trip Blank: EPA 8260 (PCE only)

3.1. RESULTS

Table 1 (**Attachment 2**) presents a summary of the COCs detected in the samples of rinsate water collected from each of the containment areas and sampled process equipment/tanks referenced in Section 1. Laboratory reports for the June 2016 sampling event are provided in **Attachment 3**. The results are compared to applicable 15A NCAC 02L Groundwater Quality Standards (2L Standards) as indicated in section I-1a of the Closure Plan with the exception of DPA results, which have no listed 2L Standard and therefore are compared to the Montana Department of Environmental Quality Groundwater Quality Standards per the NCDEQ Hazardous Waste Section.

3.2. AREA #4

Detectable concentrations of PCE were not identified in the final rinsate water and duplicate samples collected from Area #4 on June 8, 2016.

3.3. TAP WATER SAMPLE

A trace concentration of PCE (0.66 ug/L) was detected in the Tap Water sample. This concentration is below the 2L Standard of 0.70 ug/L. Please note that the reported concentration is considered an estimated value as it is below the laboratory reporting limit but above the method detection limit.

3.4. FIELD BLANK

Detectable concentrations of PCE were not identified in the field prepared blank collected on June 8, 2016.

3.5. TRIP BLANK

WR personnel submitted a laboratory prepared and supplied trip blank sample with the cooler submitted to the lab containing samples. Detectable concentrations of PCE were not identified in the Trip Blank sample submitted on June 8, 2016.

4. CONCLUSION

The hazardous waste storage areas remain vacant with the exception of the above mentioned drum. The sweepings and liquids associated with the decontamination activities will be disposed of as hazardous waste. As of the date of this report, the satellite drum containing this waste is still located within Storage Area #5. The drum is properly sealed and in good condition. A representative of Trex is currently working on profiling the drum for appropriate disposal. A copy of the manifest for the disposal of the satellite storage drum will be provided as soon it is available.

Based on the analytical results included in this report and our previous reports of decontamination activities, the containment area and process equipment/tank decontamination activities completed between October 2015 and June 2016 have successfully cleaned the areas and equipment to the applicable criteria. From this standpoint, it is our opinion that no further action regarding additional contamination of the facility should be required.

5. CERTIFICATION STATEMENT

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision according to a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Owner / Operator Signature

6/15/16
Date

Professional Engineer Signature

6/17/16
Date

Wesley Ross Perry, PE

WithersRavenel
Our People. Your Success.

ATTACHMENT 1

FIELD NOTES AND PHOTOGRAPHIC RECORD

June 8, 2016 Trex BAB

- Leave Wilmington 8[00] hrs
- Arrive on-Site 11[10] hrs
- Unload supplies and bring into 3114 Cullman
  - Shop Vac & extension cords
  - 100 ft hose & faucet fitting
  - Peristaltic Pump & tubing
  - Bottles & Cooler etc
- 1130 hrs Dry vacuum Area #4
- 12[00] hrs Finish dry vacuum see photo of clean dry Area #4. Connect new garden hose to sink in south bathroom hot water faucet & pressure spray area #4 (See photos)

12[30] Finish pressure spray of area. Assemble peristaltic pump & label bottles for sample collection

12[40] Collect Sample of tap water from sink.

12[50] Collect Field blank Sample using organic-free DI water provided by Lab.

6/8/16 TREX BAB

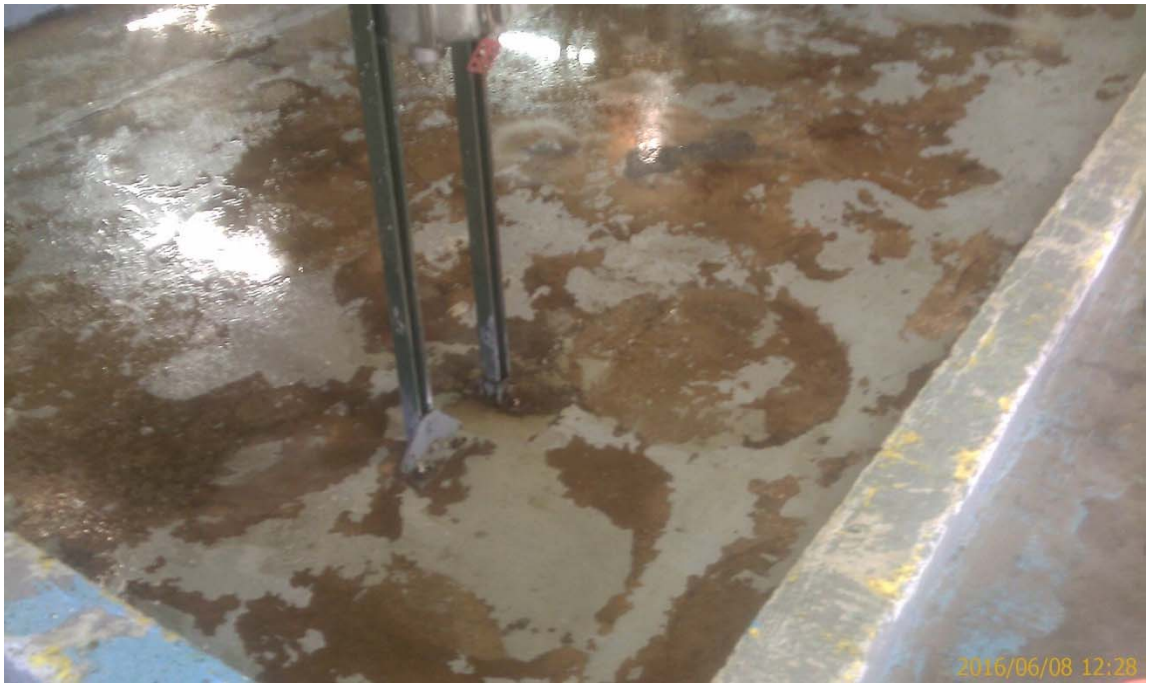
- 1300 Collect Sample TREX AREA #4 from SE Corner of Containment (See photo)
- 13[10] Collect Sample TREX Dup (Same location as TREX AREA #4
- 1315 Pack samples on ice Begin to vacuum up water from area #4.
- 1350 Finish vacuuming rinse water & place ~15gal in Satellite Drum in Bldg. (See photos)
- Pack up equipment, close building, fill out COC, head to Pace Lab, in Huntersville NC.
- 1445 Arrive @ Pace Lab transfer custody of samples to lab
- Return to Cary
- 1730 hrs arrive in Cary

E.O.D.

Figure 1

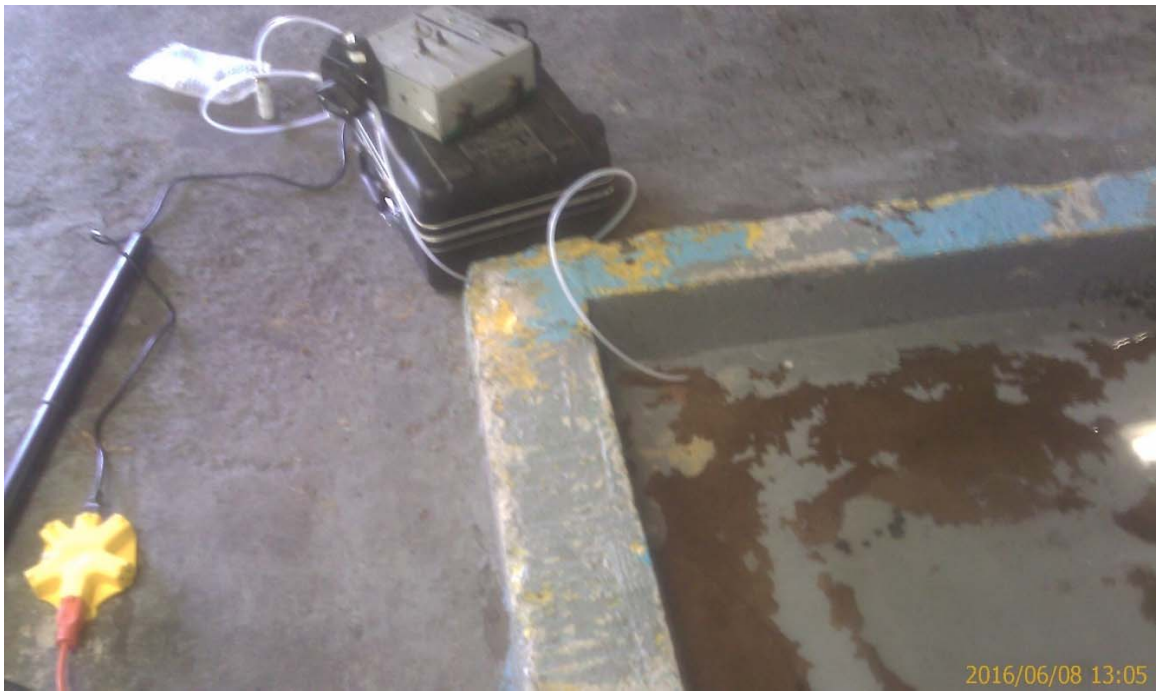
Description: Northwest looking view of Area #4 following dry vacuuming.

Figure 2



Description: View of southeast corner of Area #4 following hot water rinse.

Figure 3



Description: Peristaltic pump set up for collection of rinsate sample from southeast corner of Area #4.

Figure 4

Description: View of northern end of Area #4 following wet vacuuming of rinsate water.

Figure 5

Description: Satellite hazardous waste accumulation drum location within adjacent area #5.

Figure 6

Description: Rinse water and floor sweepings within satellite accumulation drum in Area #5.

WithersRavenel
Our People. Your Success.

ATTACHMENT 2

TABLE 1: SUMMARY OF ANALTYICAL RESULTS

TABLE 1
SUMMARY OF ANALYTICAL RESULTS

Trex Properties, LLC
3114 Cullman Ave.
Charlotte, Mecklenburg County, North Carolina

Analytical Method		EPA 5030/8015	EPA 8015 Modified	EPA 6010			EPA 8081				EPA 8260							EPA 8270		EPA 9040	EPA 8015 DAI
Sample ID	Date Collected	Gas Range Organics (C6-C10)	Diesel Range Organics (C10-C28)	Barium	Chromium	Lead	4,4'-DDD	Endrin aldehyde	Heptachlor epoxide	Methoxychlor	1,1,1-Trichloroethane	1,1-Dichloroethene	Chloroform	Methylene Chloride	Tetrachloroethene	Toluene	Trichloroethene	Di-n-butylphthalate	bis(2-Ethylhexyl)phthalate	pH	Dipropylamine (DPA)
		N/A	N/A	7440-39-3	7440-47-3	7439-92-1	72-54-8	7421-93-4	1024-57-3	72-43-5	71-55-6	75-35-4	67-66-3	75-09-2	127-18-4	108-88-3	79-01-6	84-74-2	117-81-7	N/A	142-84-7
NC 2L Standard		**400**	**700**	**700**	**10**	**15**	**0.1**	**2**	**0.004**	**40**	**200**	**7**	**70**	**5**	**0.7**	**600**	**3**	**NL**	**3**	**6.5 - 8.5**	**0.05***
Area #1	**10/15/2015**	<80	<500	**17**	<5.0	<5.0	<0.050	<0.050	<0.050	**0.88**	<1.0	<1.0	**4.8**	<5.0	**2.9**	<1.0	<1.0	<10.0	<6.0	**7.9**	<136
	12/18/2015	---	---	---	---	---	---	---	---	---	<1.0	<1.0	**7.7**	<5.0	<1.0	<1.0	<1.0	---	---	---	---
Area #2	**10/15/2015**	**360**	<500	**11.8**	<5.0	<5.0	<0.050	<0.050	<0.050	**0.78**	**73.3**	**1.4**	**6.3**	<5.0	**54**	**2.1**	**343**	<10.0	<6.0	**8**	<136
	12/17/2015	---	---	---	---	---	---	---	---	---	<1.0	<1.0	**12.6**	<5.0	<1.0	<1.0	<1.0	---	---	---	---
Area #3	**10/15/2015**	<80	<500	**10.7**	<5.0	<5.0	<0.050	<0.050	<0.050	<0.15	<0.50	<0.50	**6.9**	<2.5	<0.50	<0.50	<0.50	<10.0	<6.0	**8.5**	---
	12/16/2015	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	<136
Area #4	**10/16/2015**	<80	<500	**11.7**	<5.0	<5.0	<0.050	<0.050	<0.050	**0.83**	<1.0	<1.0	**5**	<5.0	**8.1**	<1.0	**13.4**	<10.0	<6.0	**8**	<136
	12/17/2015	---	---	---	---	---	---	---	---	---	<1.0	<1.0	**6.4**	<5.0	**2.1**	<1.0	**1.6**	---	---	---	---
	2/3/2016	---	---	---	---	---	---	---	---	---	---	---	**18.4**	---	**1.1**	---	<0.47	---	---	---	---
	6/8/2016	---	---	---	---	---	---	---	---	---	---	---	---	---	<0.46	---	---	---	---	---	---
DUP (Area #4)	**6/8/2016**	---	---	---	---	---	---	---	---	---	---	---	---	---	<0.46	---	---	---	---	---	---
Area #5	**10/16/2015**	<80	**760**	**29.3**	**15.9**	**6.5**	**0.06**	<0.050	<0.050	**2.2**	<1.0	<1.0	**3.4**	<5.0	<1.0	<1.0	<1.0	<10.0	**14.4**	**7.9**	<136
	12/17/2015	---	<500	---	<5.0	---	---	---	---	---	---	---	---	---	---	---	---	**47.7**	<6.0	---	---
	2/3/2016	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	<1.1	---	---	---
DUP-2 (Area #5)	**12/18/2015**	---	<500	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Area #6 East	**10/14/2015**	<80	<500	**13.8**	<5.0	<5.0	<0.050	<0.050	**0.081**	<0.15	<0.50	<0.50	**24.6**	<2.5	<0.50	**0.5**	<0.50	<10.0	**10.7**	**7.6**	---
	12/16/2015	---	---	---	---	---	<0.050	<0.050	<0.050	<0.15	<5.0	<5.0	**10.3**	<5.0	<5.0	<5.0	<5.0	**118**	<6.0	---	<136
	2/3/2016	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	<1.1	---	---	---
DUP-1 (Area #6 East)	**12/16/2015**	---	---	---	---	---	<0.050	<0.050	<0.050	<0.15	---	---	---	---	---	---	---	**131**	<6.0	---	<136
Area #6 West	**10/14/2015**	<80	<500	**10.4**	<5.0	<5.0	<0.050	**0.23**	**0.13**	<0.15	<0.50	<0.50	**7.8**	<2.5	<0.50	<0.50	<0.50	<10.0	<6.0	**8.4**	---
	12/16/2015	---	---	---	---	---	<0.050	<0.050	<0.050	<0.15	---	---	---	---	---	---	---	---	---	---	<136
Feeder Tank	**10/14/2015**	<80	<500	**15.8**	<5.0	<5.0	<0.050	<0.050	<0.050	<0.15	<0.50	<0.50	**7**	<2.5	<0.50	<0.50	<0.50	<10.0	<6.0	**8.4**	---
	12/16/2015	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	<136
LUWA	**10/15/2015**	<80	<500	**18.6**	**20.9**	<5.0	<0.050	<0.050	<0.050	<0.15	<0.50	<0.50	**8**	<2.5	<0.50	<0.50	<0.50	<10.0	<6.0	**8.1**	---
	12/16/2015	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	<136
Outside Area	**12/18/2015**	---	---	---	<5.0	---	---	---	---	---	<1.0	<1.0	**13.7**	<5.0	<1.0	<1.0	<1.0	---	---	---	---
DUP-3 (Outside Area)	**12/18/2015**	---	---	---	<5.0	---	---	---	---	---	<1.0	<1.0	**13.4**	<5.0	<1.0	<1.0	<1.0	---	---	---	---
Tap Water	**2/3/2016**	---	---	---	---	---	---	---	---	---	<0.48	<0.56	**23.6**	<0.97	<0.46	<0.26	<0.47	---	---	---	---
	6/8/2016	---	---	---	---	---	---	---	---	---	---	---	---	---	**0.66J**	---	---	---	---	---	---
Dup-1 (Tap Water)	**2/3/2016**	---	---	---	---	---	---	---	---	---	<0.48	<0.56	**23.4**	<0.97	<0.46	<0.26	<0.47	---	---	---	---

Notes:

1.) All results provided in ug/L (micrograms per liter) or parts per billion
2.) Compounds analyzed for by laboratory but not listed were not detected above laboratory detection limits. See the laboratory report included in the Appendix for a full list of constituents.
3.) NC 2L Standard - North Carolina Groundwater Quality Standard as per NC Administrative Code 15A NCAC 02L
4.) * = Dipropylamine results are compared to the Montana Numeric Water Quality Standards as no standard is currently listed under the 2L Standards.
5.) "J" Qualifier = Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

NL	= Not Listed
---	= Compound Not Analyzed for by Laboratory.
Result	= Result Exceeds Laboratory Detection Limits
Result	= Result Exceeds 2L Standard

TABLE 1
SUMMARY OF ANALYTICAL RESULTS

Trex Properties, LLC
3114 Cullman Ave.
Charlotte, Mecklenburg County, North Carolina

Analytical Method		EPA 5030/8015	EPA 8015 Modified	EPA 6010			EPA 8081				EPA 8260							EPA 8270		EPA 9040	EPA 8015 DAI
Sample ID	Date Collected	Gas Range Organics (C6-C10)	Diesel Range Organics (C10-C28)	Barium	Chromium	Lead	4,4'-DDD	Endrin aldehyde	Heptachlor epoxide	Methoxychlor	1,1,1-Trichloroethane	1,1-Dichloroethene	Chloroform	Methylene Chloride	Tetrachloroethene	Toluene	Trichloroethene	Di-n-butylphthalate	bis(2-Ethylhexyl)phthalate	pH	Dipropylamine (DPA)
		N/A	N/A	7440-39-3	7440-47-3	7439-92-1	72-54-8	7421-93-4	1024-57-3	72-43-5	71-55-6	75-35-4	67-66-3	75-09-2	127-18-4	108-88-3	79-01-6	84-74-2	117-81-7	N/A	142-84-7
NC 2L Standard		**400**	**700**	**700**	**10**	**15**	**0.1**	**2**	**0.004**	**40**	**200**	**7**	**70**	**5**	**0.7**	**600**	**3**	**NL**	**3**	**6.5 - 8.5**	**0.05***
Field Blank-1	**10/14/2015**	<80	<500	**6.2**	<5.0	<5.0	<0.050	<0.050	<0.050	<0.15	<0.50	<0.50	<0.50	<2.5	<0.50	<0.50	<0.50	<10.0	<6.0	**5.8**	<136
Field Blank-2	**10/15/2015**	<80	<500	<5.0	<5.0	<5.0	<0.050	<0.050	<0.050	<0.15	<0.50	<0.50	<0.50	<2.5	<0.50	<0.50	<0.50	<10.0	<6.0	**5.6**	---
Field Blank-1	**12/16/2015**	---	---	---	---	---	<0.050	<0.050	<0.050	<0.15	---	---	---	---	---	---	---	<10.0	<6.0	---	---
Field Blank-2	**12/18/2015**	---	<500	---	<5.0	---	---	---	---	---	---	<5.0	<5.0	<5.0	<5.0	---	---	<10.0	<6.0	---	---
Field Blank-1	**2/3/2016**	---	---	---	---	---	---	---	---	---	---	---	<0.14	---	<0.46	---	<0.47	<1.1	---	---	---
Field Blank	**6/8/2016**	---	---	---	---	---	---	---	---	---	---	---	---	---	<0.46	---	---	---	---	---	---
Trip Blank-1	**10/15/2015**	---	---	---	---	---	---	---	---	---	<0.50	<0.50	<0.50	<2.5	<0.50	<0.50	<0.50	---	---	---	---
Trip Blank-1	**10/16/2015**	---	---	---	---	---	---	---	---	---	<1.0	<1.0	<1.0	<5.0	<1.0	<1.0	<1.0	---	---	---	---
Trip Blank-2	**10/15/2015**	---	---	---	---	---	---	---	---	---	<0.50	<0.50	<0.50	<2.5	<0.50	<0.50	<0.50	---	---	---	---
Trip Blank-2	**10/16/2015**	---	---	---	---	---	---	---	---	---	<1.0	<1.0	<1.0	<5.0	<1.0	<1.0	<1.0	---	---	---	---
Trip Blank-3	**10/15/2015**	---	---	---	---	---	---	---	---	---	<0.50	<0.50	<0.50	<2.5	<0.50	<0.50	<0.50	---	---	---	---
Trip Blank-3	**10/16/2015**	---	---	---	---	---	---	---	---	---	<1.0	<1.0	<1.0	<5.0	<1.0	<1.0	<1.0	---	---	---	---
Trip Blank-4	**10/15/2015**	---	---	---	---	---	---	---	---	---	<0.50	<0.50	<0.50	<2.5	<0.50	<0.50	<0.50	---	---	---	---
Trip Blank-4	**10/16/2015**	---	---	---	---	---	---	---	---	---	<1.0	<1.0	<1.0	<5.0	<1.0	<1.0	<1.0	---	---	---	---
Trip Blank-5	**10/15/2015**	---	---	---	---	---	---	---	---	---	<0.50	<0.50	<0.50	<2.5	<0.50	<0.50	<0.50	---	---	---	---
Trip Blank-6	**10/15/2015**	---	---	---	---	---	---	---	---	---	<0.50	<0.50	<0.50	<2.5	<0.50	<0.50	<0.50	---	---	---	---
Trip Blank-7	**10/15/2015**	---	---	---	---	---	---	---	---	---	<0.50	<0.50	<0.50	<2.5	<0.50	<0.50	<0.50	---	---	---	---
Trip Blank-1	**12/16/2015**	---	---	---	---	---	---	---	---	---	<1.0	<1.0	<1.0	<5.0	<1.0	<1.0	<1.0	---	---	---	---
Trip Blank-2	**12/18/2015**	---	---	---	---	---	---	---	---	---	<1.0	<1.0	<1.0	<5.0	<1.0	<1.0	<1.0	---	---	---	---
Trip Blank-1	**2/3/2016**	---	---	---	---	---	---	---	---	---	<0.48	<0.56	<0.14	<0.97	<0.46	<0.26	<0.47	---	---	---	---
Trip Blank	**6/8/2016**	---	---	---	---	---	---	---	---	---	---	---	---	---	<0.46	---	---	---	---	---	---

Notes:

1.) All results provided in ug/L (micrograms per liter) or parts per billion

2.) Compounds analyzed for by laboratory but not listed were not detected above laboratory detection limits. See the laboratory report included in the Appendix for a full list of constituents.

3.) NC 2L Standard - North Carolina Groundwater Quality Standard as per NC Administrative Code 15A NCAC 02L

4.) * = Dipropylamine results are compared to the Montana Numeric Water Quality Standards as no standard is currently listed under the 2L Standards.

5.) "J" Qualifier = Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

NL	= Not Listed
---	= Compound Not Analyzed for by Laboratory.
Result	= Result Exceeds Laboratory Detection Limits
Result	= Result Exceeds 2L Standard

WithersRavenel
Our People. Your Success.

ATTACHMENT 3

LABORATORY ANALYTICAL REPORT

Pace Analytical Services, Inc.
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

June 14, 2016

David Craig
EnviroAnalytics Group
1650 Des Peres Road
Suite 303
Saint Louis, MO 63131

RE: Project: NC GROUNDWATER
Pace Project No.: 92300643

Dear David Craig:
Enclosed are the analytical results for sample(s) received by the laboratory on June 08, 2016. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Analyses were performed at the Pace Analytical Services location indicated on the sample analyte page for analysis unless otherwise footnoted.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Taylor Ezell
taylor.ezell@pacelabs.com
Project Manager

Enclosures

Pace Analytical Services, Inc.
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

CERTIFICATIONS

Project: NC GROUNDWATER
Pace Project No.: 92300643

Charlotte Certification IDs

9800 Kincey Ave. Ste 100, Huntersville, NC 28078
North Carolina Drinking Water Certification #: 37706
North Carolina Field Services Certification #: 5342
North Carolina Wastewater Certification #: 12
South Carolina Certification #: 99006001
Florida/NELAP Certification #: E87627
Kentucky UST Certification #: 84
Virginia/VELAP Certification #: 460221

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

SAMPLE SUMMARY

Project: NC GROUNDWATER
Pace Project No.: 92300643

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92300643001	**TREX TAP WATER**	Water	06/08/16 12:40	06/08/16 14:45
92300643002	**TREX FIELD BLANK**	Water	06/08/16 12:50	06/08/16 14:45
92300643003	**TREX AREA #4**	Water	06/08/16 13:00	06/08/16 14:45
92300643004	**TREX DUP**	Water	06/08/16 13:10	06/08/16 14:45
92300643005	**TRIP BLANK**	Water	06/08/16 00:00	06/08/16 14:45

Pace Analytical Services, Inc.
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

SAMPLE ANALYTE COUNT

Project: NC GROUNDWATER
Pace Project No.: 92300643

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92300643001	**TREX TAP WATER**	EPA 8260	CAH	4
92300643002	**TREX FIELD BLANK**	EPA 8260	CAH	4
92300643003	**TREX AREA #4**	EPA 8260	CAH	4
92300643004	**TREX DUP**	EPA 8260	CAH	4
92300643005	**TRIP BLANK**	EPA 8260	CAH	4

Pace Analytical Services, Inc.
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: NC GROUNDWATER
Pace Project No.: 92300643

Sample: TREX TAP WATER **Lab ID: 92300643001** Collected: 06/08/16 12:40 Received: 06/08/16 14:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
Tetrachloroethene	**0.66J**	ug/L	1.0	0.46	1		06/11/16 16:03	127-18-4	
Surrogates									
4-Bromofluorobenzene (S)	99	%	70-130		1		06/11/16 16:03	460-00-4	
1,2-Dichloroethane-d4 (S)	103	%	70-130		1		06/11/16 16:03	17060-07-0	
Toluene-d8 (S)	100	%	70-130		1		06/11/16 16:03	2037-26-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: NC GROUNDWATER
Pace Project No.: 92300643

Sample: TREX FIELD BLANK **Lab ID: 92300643002** Collected: 06/08/16 12:50 Received: 06/08/16 14:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
Tetrachloroethene	ND	ug/L	1.0	0.46	1		06/11/16 16:21	127-18-4	
Surrogates									
4-Bromofluorobenzene (S)	98	%	70-130		1		06/11/16 16:21	460-00-4	
1,2-Dichloroethane-d4 (S)	102	%	70-130		1		06/11/16 16:21	17060-07-0	
Toluene-d8 (S)	99	%	70-130		1		06/11/16 16:21	2037-26-5	

Pace Analytical Services, Inc.
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: NC GROUNDWATER
Pace Project No.: 92300643

Sample: TREX AREA #4 **Lab ID: 92300643003** Collected: 06/08/16 13:00 Received: 06/08/16 14:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
Tetrachloroethene	ND	ug/L	1.0	0.46	1		06/11/16 16:38	127-18-4	
Surrogates									
4-Bromofluorobenzene (S)	97	%	70-130		1		06/11/16 16:38	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	70-130		1		06/11/16 16:38	17060-07-0	
Toluene-d8 (S)	99	%	70-130		1		06/11/16 16:38	2037-26-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: NC GROUNDWATER
Pace Project No.: 92300643

Sample: TREX DUP **Lab ID: 92300643004** Collected: 06/08/16 13:10 Received: 06/08/16 14:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
Tetrachloroethene	ND	ug/L	1.0	0.46	1		06/11/16 16:55	127-18-4	
Surrogates									
4-Bromofluorobenzene (S)	96	%	70-130		1		06/11/16 16:55	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	70-130		1		06/11/16 16:55	17060-07-0	
Toluene-d8 (S)	96	%	70-130		1		06/11/16 16:55	2037-26-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: NC GROUNDWATER
Pace Project No.: 92300643

Sample: TRIP BLANK **Lab ID: 92300643005** Collected: 06/08/16 00:00 Received: 06/08/16 14:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
Tetrachloroethene	ND	ug/L	1.0	0.46	1		06/11/16 17:12	127-18-4	
Surrogates									
4-Bromofluorobenzene (S)	99	%	70-130		1		06/11/16 17:12	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	70-130		1		06/11/16 17:12	17060-07-0	
Toluene-d8 (S)	98	%	70-130		1		06/11/16 17:12	2037-26-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: NC GROUNDWATER
Pace Project No.: 92300643

QC Batch: MSV/37239 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV Low Level
Associated Lab Samples: 92300643001, 92300643002, 92300643003, 92300643004, 92300643005

METHOD BLANK: 1753898 Matrix: Water
Associated Lab Samples: 92300643001, 92300643002, 92300643003, 92300643004, 92300643005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Tetrachloroethene	ug/L	ND	1.0	0.46	06/11/16 15:12	
1,2-Dichloroethane-d4 (S)	%	98	70-130		06/11/16 15:12	
4-Bromofluorobenzene (S)	%	96	70-130		06/11/16 15:12	
Toluene-d8 (S)	%	98	70-130		06/11/16 15:12	

LABORATORY CONTROL SAMPLE: 1753899

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Tetrachloroethene	ug/L	50	50.2	100	70-130	
1,2-Dichloroethane-d4 (S)	%			101	70-130	
4-Bromofluorobenzene (S)	%			100	70-130	
Toluene-d8 (S)	%			97	70-130	

SAMPLE DUPLICATE: 1753901

Parameter	Units	92300651006 Result	Dup Result	RPD	Max RPD	Qualifiers
Tetrachloroethene	ug/L	ND	ND		30	
1,2-Dichloroethane-d4 (S)	%	98	100	2		
4-Bromofluorobenzene (S)	%	94	100	6		
Toluene-d8 (S)	%	100	100	0		

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALIFIERS

Project: NC GROUNDWATER
Pace Project No.: 92300643

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether, Styrene, and Vinyl chloride.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

Pace Analytical Services, Inc.
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: NC GROUNDWATER
Pace Project No.: 92300643

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92300643001	**TREX TAP WATER**	EPA 8260	MSV/37239		
92300643002	**TREX FIELD BLANK**	EPA 8260	MSV/37239		
92300643003	**TREX AREA #4**	EPA 8260	MSV/37239		
92300643004	**TREX DUP**	EPA 8260	MSV/37239		
92300643005	**TRIP BLANK**	EPA 8260	MSV/37239		

Pace Analytical®	Document Name: **Sample Condition Upon Receipt(SCUR)**	Document Revised:April 25, 2016 Page 1 of 2
	Document No.: **F-CHR-CS-003-rev.19**	Issuing Authority: Pace Huntersville Quality Office

Sample Condition Upon Receipt

Client Name: Withers & Ravenel

Project

WO# : 92300643

92300643

Courier: ☐ Commercial ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Pace ☐ Other:____

Custody Seal Present? ☐ Yes ☑ No **Seals Intact?** ☐ Yes ☐ No

Date/Initials Person Examining Contents:____

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other:____

Thermometer: T1505 **Type of Ice:** ☑ Wet ☐ Blue ☐ None ☑ Samples on ice, cooling process has begun

Correction Factor: 0.0°C **Cooler Temp Corrected (°C):** 5.8 **Biological Tissue Frozen?** ☐ Yes ☐ No ☑ N/A

Temp should be above freezing to 6°C

USDA Regulated Soil (☑ N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)? ☐ Yes ☑ No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☑ No

				Comments/Discrepancy:
Chain of Custody Present?	☑ Yes	☐ No	☐ N/A	1.
Samples Arrived within Hold Time?	☑ Yes	☐ No	☐ N/A	2.
Short Hold Time Analysis (<72 hr.)?	☐ Yes	☑ No	☐ N/A	3.
Rush Turn Around Time Requested?	☑ Yes	☐ No	☐ N/A	4.
Sufficient Volume?	☑ Yes	☐ No	☐ N/A	5.
Correct Containers Used?	☑ Yes	☐ No	☐ N/A	6.
-Pace Containers Used?	☑ Yes	☐ No	☐ N/A	
Containers Intact?	☑ Yes	☐ No	☐ N/A	7.
Samples Field Filtered?	☐ Yes	☐ No	☑ N/A	8. Note if sediment is visible in the dissolved container
Sample Labels Match COC?	☑ Yes	☐ No	☐ N/A	9.
-Includes Date/Time/ID/Analysis Matrix: VT				
All containers needing acid/base preservation have been checked?	☐ Yes	☐ No	☑ N/A	10. HNC3 pH<2
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO_3, H_2SO_4, HCl<2; NaOH >9 Sulfide, NaOH>12 Cyanide)	☐ Yes	☐ No	☑ N/A	HCl pH<2
Exceptions: VOA, Coliform, TOC, Oil and Grease,				H2SO4 pH<2
DRO/8015 (water) DOC,LLHg	☐ Yes	☐ No	☑ N/A	NaOH pH>12
				NaOH/ZnOAc pH>9
Samples checked for dechlorination?	☐ Yes	☐ No	☑ N/A	11.
Headspace in VOA Vials (>5-6mm)?	☐ Yes	☑ No	☐ N/A	12.
Trip Blank Present?	☑ Yes	☐ No	☐ N/A	13.
Trip Blank Custody Seals Present?	☐ Yes	☐ No	☐ N/A	
Pace Trip Blank Lot # (if purchased):____				

CLIENT NOTIFICATION/RESOLUTION **Field Data Required?** ☐ Yes ☐ No

Person Contacted:____ Date/Time:____

Comments/Sample Discrepancy:____

Project Manager SCURF Review: FV **Date:** 6/9

Project Manager SRF Review: FV **Date:** 6/9

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. Out of hold, incorrect preservative, out of temp, incorrect containers)

Pace Analytical

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page : 1 Of 1

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	Withers & Ravenel_Wilimington	Report To:	Brian Bellis	Attention:	DAVID CRAIG
Address:	1410 Commonwealth Drive	Copy To:		Company Name:	EMG
	Wilmington, NC 28403			Address:	
Email:	bbellis@withersravenel.com	Purchase Order #:		Pace Quote:	
Phone:	(910)256-9277 Fax	Project Name:	NC Groundwater	Pace Project Manager:	taylor.ezell@pacelabs.com,
Requested Due Date:	4DAY TAT 6/14/16	Project #:	030B0430.02	Pace Profile #:	6786-5

Regulatory Agency

State / Location: NC

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	PCE Only by 8260	Trip BLANK	DI Water	Residual Chlorine (Y/N)	92300643
1	TREX TAP WATER	W	G	6/8	1240								✓						✓				001
2	TREX FIELD BLANK	W	G	6/8	1250								✓						✓	✓			002
3	TREX AREA #4	N	G	6/8	1300								✓						✓				003
4	TREX DUP	W	G	6/8	1310								✓						✓	✓			004
5	TRIP BLANK																		✓				005
6																							
7																							
8																							
9																							
10																							
11																							
12																							

MATRIX CODE: Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Other OT; Tissue TS

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
4DAY TAT	Brian Bellis	6/8/16	1445	Tyrone Hawks pace HA	6/8/16	1445	5.8	Y	N	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER:

SIGNATURE of SAMPLER: DATE Signed:

TEMP in C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)