

Via Electronic Mail

Dr. Weiquan Dong, PE
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**SOIL EXCAVATION WORK PLAN, SMP-REQUIRED NOTIFICATIONS AND
CONTINGENCY PLAN
DIOXIN SOIL REMEDIATION AREA
NEVADA ENVIRONMENTAL RESPONSE TRUST SITE
HENDERSON, NEVADA**

Dear Dr. Dong:

January 7, 2019

On behalf of the Nevada Environmental Response Trust ("NERT" or the "Trust"), Ramboll US Corporation (Ramboll) is pleased to present this Soil Excavation Work Plan, SMP-Required Notifications, and Contingency Plan ("Work Plan") for the remediation of a dioxin-impacted area of soil at the NERT Site in Henderson, Nevada. The excavation program is scheduled for the first quarter of 2019. This document has been prepared in accordance with the Site Management Plan, Revision 4, dated March 22, 2018 ("SMP"; Ramboll 2018a) and approved by NDEP on March 29, 2018. The Trust has been advised of and approves this document. Approval of this document by the Nevada Division of Environmental Protection (NDEP) is required prior to initiating the work described herein.

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In addition to providing this Work Plan to conduct the soil remediation, this document addresses the following notifications and requirements of the SMP:

- Sections 4.2 and 4.3 require specific soil management actions for Excavation Control Area (ECA) soils that are to be excavated, including stockpiling, analytical requirements for disposal characterization, and confirmation sampling. The excavation includes a portion of ECA D3.
- Section 4.7 describes notifications and procedures to follow in the event of an emergency project related to an accidental spill or release.
- Section 5.3 requires notification to and approval from NDEP and the Trust for work to be performed within 50 feet of any on-site groundwater extraction and treatment system (GWETS) component or monitoring well.
- Section 5.7 requires submittal of a contingency plan to NDEP and the Trust for approval, describing actions to be taken in case of accidental release of untreated groundwater due to damage to any GWETS component.

BACKGROUND INFORMATION

During the preparation of the *Interim Report: Identification of COPCs and Decision Units for OU-1 Soils, Revision 1* (dated November 15, 2017, approved by NDEP on December 27, 2017) (Ramboll Environ 2017a), a spatial analysis was conducted which involved comparing Site chemicals of potential concern (COPCs) to Soil Screening Levels to identify potential areas of elevated chemical concentrations in soil. The spatial analysis using dioxin toxicity equivalent (TEQ) data compared to the site-specific dioxin TEQ action level (2,700 picograms per gram [pg/g], equivalent to 0.0027 milligrams per kilogram [mg/kg]), revealed an area with elevated dioxin TEQ concentrations near the southwest corner of the GW-11 pond at the NERT Site.

As part of the pre-confirmation sampling event in April 2010, one soil sample location (SSAK3-05) at 0 to 0.5 feet below ground surface (ft bgs) had a reported dioxin TEQ concentration of 11,330 pg/g, above the site-specific action level. In the next deeper sample at a depth of 1 to 2 ft bgs, the dioxin TEQ concentration (250 pg/g) was below the site-specific action level. This area was not identified for excavation in the 2010/2011 interim soil removal action (Northgate 2010). Imported clean fill material was subsequently added to the area, and based on soil remediation records, the adjusted depths of the samples are 2.5 to 3.0 ft bgs (dioxin TEQ above action level) and 3.5 to 4.5 ft bgs (dioxin TEQ below action level). The dioxin TEQ concentration at a depth of 3 to 3.5 ft bgs at this location was identified as a data gap to be addressed with pre-excavation soil sampling.

Other pre-confirmation sample locations to the west and northwest of SSAK3-05 (e.g., SSAK2-01 and SSAK3-03) indicated chemical concentrations in shallow soil were below site-specific screening criteria, such that these areas did not require excavation polygons to be designated.

As part of the Phase 1 Remedial Investigation (RI) in October 2014, soil samples were collected at three additional locations (RISB-50, -51, and -52) in this area to further delineate dioxin TEQ concentrations in soil. The reported dioxin TEQ concentrations at 0.5 ft bgs at each of these sample locations were above the site-specific action level. Dioxin TEQ concentrations in the next deeper samples at these locations (5.0 ft bgs) were below the site-specific action level. Dioxin TEQ concentrations at depths between 0.5 feet and 5 ft bgs were identified as a data gap to be addressed with pre-excavation soil sampling.

2018 PRE-EXCAVATION SOIL SAMPLING

As shown on Figure 1, the dioxin soil excavation area is bounded laterally by previously remediated Remediation Zone D (RZ-D) excavation polygons to the northeast (D-08A), southeast (D-11), and south (D-12); and by 2010 pre-confirmation soil sampling locations SSAK3-03 and SSAK2-01 to the west.

In September 2018, in accordance with the Pre-Excavation Soil Sampling Work Plan (Ramboll 2018b; approved by NDEP on August 24, 2018), a pre-excavation soil sampling investigation was conducted to delineate the vertical and lateral extent of excavation to address identified data gaps for removal of dioxin TEQ concentrations above the site-specific action level. Pre-excavation soil sampling was performed based on the requirements of the NDEP-approved Sampling and Analysis Plan, Revision 1 (SAP) for the Site. The SAP is comprised of the Field Sampling Plan ("FSP"; ENVIRON 2014a), the Health and Safety Plan ("HASP"; ENVIRON 2014b), and the Quality Assurance Project Plan ("QAPP"; Ramboll Environ 2017b). Samples were analyzed for Dioxins and Furans by Environmental Protection Agency (EPA) Method 8290.

To delineate the northwestern boundary of the excavation, three boreholes (DSPE-1, DSPE-2, DSPE-3; see Figure 1) were advanced. These locations were sampled using hand auger drilling methods and manual

sampling tools. Samples were collected at approximately one-foot intervals between 0.5 and 5.0 ft bgs. The 0.5 foot and 1.5 foot sample depths were analyzed for dioxin TEQ and remaining samples were placed on laboratory hold.

For vertical delineation of the excavation, four additional boreholes (DSPE-4 through DSPE-7; see Figure 1) were co-located with previous soil sampling locations (RISB-50 through -52, and SSAK5-03; respectively), which were surveyed and staked. The co-located boreholes were intended to address the identified dioxin TEQ data gaps in the previously collected shallow soil data, as described above. Samples were collected from DSPE-4 through DSPE-6 (co-located with RISB-50 through -52) at approximately 1-foot intervals from 1.5 to 4.5 ft bgs, with the 1.5 foot depth samples analyzed and remaining samples placed on laboratory hold. Samples were collected from DSPE-7 (co-located with SSAK5-03) at depths of 1.5 ft bgs and 3.5 ft bgs, and both samples were analyzed.

During the pre-excavation sampling event, soil samples intended for waste characterization and profiling of excavated soil were collected from DSPE-4 through DSPE-7 at depths of 0.0 ft and 1 ft bgs. The samples were intended to represent the central area of soil to be excavated and disposed from the site, in order to profile the excavated soil volume for acceptance at an off-site disposal facility. The waste characterization samples were analyzed for Toxicity Characteristic Leaching Procedure (TCLP) Resource Conservation and Recovery Act (RCRA) metals by EPA Methods 1311 (TCLP) and 6010B/7470A, total petroleum hydrocarbons (TPH) in the gasoline, diesel and motor oil ranges by EPA Method 8015B, volatile organic compounds (VOCs) by EPA Method 8260B, semivolatile organic compounds (SVOCs) by EPA Method 8270C, TCLP SVOCs, and organochlorine pesticides (OCPs) by EPA Method 8081A.

DIOXIN TEQ RESULTS

The results of pre-excavation sampling and analysis for dioxin TEQ are shown on Table 1, and laboratory analytical results are included as Attachment A. To ensure calculation consistency with other investigations, dioxin TEQs were calculated (or recalculated) using the results for dioxins/furans and the World Health Organization (WHO) toxicity equivalency factors (TEFs) scheme (Van den Berg M. et al. 2006). Non-detects were addressed using the Kaplan-Meier approach from the United States Environmental Protection Agency (USEPA) TEQ calculator.

At DSPE-1 and DSPE-2, detections of dioxin TEQ were well below the site-specific action level in the 0.5 ft and 1.5 ft depth samples. At DSPE-3, dioxin TEQ concentration of the sample from 1.5 ft bgs (12,000 pg/g) exceeded the site-specific action level and additional samples were removed from laboratory hold and analyzed. The 2 ft depth sample result (8,300 pg/g) exceeded the site-specific action level, and the 3 ft depth sample (2,400 pg/g) was marginally below the action level. The concentration of the 4 ft depth sample (3.6 pg/g) was well below the action level.

At DSPE-4 through DSPE-6, detections of dioxin TEQ in the 1.5 ft bgs samples (740 pg/g; 11 pg/g, and 44 pg/g, respectively) were below the site-specific action level. At DSPE-7, detections of dioxin TEQ at 1.5 feet (1.3 pg/g; within newer imported fill material) and 3 ft bgs (4.6 pg/g) were also below the site-specific action level.

WASTE PROFILING RESULTS

Table 2 provides a summary of soil sampling results for waste characterization and profiling, including the results of the current dioxin TEQ analyses and historical dioxin TEQ data. Laboratory analytical results are included as Attachment B.

In general, separate samples were collected for dioxin TEQ analysis and for waste profiling analyses. The results of waste profiling samples collected from DSPE-4 through DSPE-7 at depths of 0.0 and 1.0 ft bgs indicated that TCLP soluble concentrations of metals are below RCRA characteristic hazardous waste limits, and total concentrations of SVOCs, VOCs, and OCPs are also below RCRA characteristic waste limits (using the 20 times rule). The USEPA has concluded that an acceptable approach for evaluating toxicity is to compare the total concentration (in milligrams per kilogram) of TCLP constituents to a value that is 20 times the TCLP regulatory level (in milligrams per liter), reflecting the effective dilution that occurs during the test procedure when the waste sample is mixed with the extraction fluid. If the total concentrations are less than 20 times the TCLP regulatory thresholds, the material does not exhibit the toxicity characteristic and TCLP analysis is not required (USEPA 1994). The following points describe follow-on waste characterization analyses for individual samples:

- The 1.5 – 2.0 ft bgs sample from DSPE-3 had the highest detected dioxin TEQ concentration and was subsequently analyzed for RCRA metals and TCLP hexachlorobenzene, and the results of these analyses were below hazardous waste criteria. Sample volume limitations precluded a total SVOCs analysis or other waste characterization analyses on this sample.
- The 0.0 – 0.5 ft sample from DSPE-4 had a total hexachlorobenzene result above 20 times the RCRA characteristic hazardous waste limit. As such additional TCLP testing was completed and the TCLP result was below RCRA characteristic hazardous waste limits. The 1.5 – 2.0 ft bgs sample from DSPE-4 had a similar total hexachlorobenzene result, but a TCLP analysis was not run on the sample due to an expired hold time.

The current and historical analytical data will be submitted to disposal facilities for approval. If required by the selected disposal facility, additional samples may be collected prior to or during the excavation program, for chemical analysis in support of waste profiling and acceptance.

EXCAVATION SCOPE OF WORK

The dioxin soil excavation program is designed to address elevated dioxin TEQ concentrations identified during pre-excavation soil sampling and during prior soil sampling events. Consistent with previous soil removal activities conducted at the NERT site, the excavation boundary is based on Thiessen polygons generated during the prior soil remediation program, and on Thiessen polygons generated based on pre-excavation sampling results. Thiessen polygons were also generated to represent internal excavation boundaries defining excavation depth transitions. The excavation program will follow the requirements of the SMP as described herein, including SMP Attachment C (the NERT Hazardous Waste Management Plan [HWMP]) and SMP Appendix D (the Site Wide Dust Control Work Plan [SWDCP]).

The Thiessen polygons representing the proposed minimum excavation area and depths are shown on Figure 1. The combined area of the excavation polygons is approximately 0.4 acres. The excavation area may extend slightly beyond the horizontal polygon boundaries in order to create sloped sidewalls and ensure polygons are completely removed. The scope of the soil excavation program is summarized below.

- 1) **Surveying and Contractor Mobilization:** The excavation boundaries will be demarcated with survey stakes and the existing topography will be surveyed as needed for confirmation of excavation depth and surface restoration. The area to be excavated will be cleared for underground utilities using geophysical methods. Storm water best management practices (BMPs) will be set up at the site, and a Clark County Dust Control Operating Permit (DCOP) will be obtained by the excavation contractor. The excavation work will be conducted by Earth Resource Group Environmental Services (ERG) and will be overseen by Ramboll.
- 2) **Soil Excavation:** Excavation will be performed within the demarcated boundaries to depths as defined on Figure 1, ranging from 1.5 ft bgs to 4 ft bgs. Pending disposal facility review and approval of analytical data for waste profiling, the excavated soil is expected to be transported to Republic Services Apex Regional Landfill for disposal as non-hazardous waste. Up to approximately 2,400 tons of soil are expected to be generated, assuming a conversion factor of 1.6 tons per cubic yard (CY).
- 3) **ECA D3 Confirmation Sampling and Waste Characterization Soil Sampling:** For the portion of the excavation within ECA D3, the ECA soil will be stockpiled on plastic sheeting and composite samples will be collected for chemical analysis of all chemicals of concern associated with ECA D3, in accordance with SMP Section 4.3, for waste characterization. In addition, one bottom confirmation soil sample will be collected from the center of the ECA area and analyzed in accordance with SMP Section 4.2.4. The minimum required analyses for ECA D3 soil are listed in SMP Appendix A, Table A-1.
- 4) **Excavation Backfill and Compaction:** The excavation will be backfilled with a clean fill source in accordance with Section 3.5 of the SMP. Backfill materials will be compacted to at least 90% of maximum dry density. Compaction testing will be performed to confirm the compaction results.
- 5) **Site Restoration:** The excavation area will be restored based on previous surface topography and features, including a portion of the GW-11 access roadway.
- 6) **Completion Report:** A Soil Excavation Completion Report will be prepared and submitted to NDEP, including pre-excavation and confirmation sample data tables; figures showing excavation locations and depths; excavated soil volumes and disposal documentation; and a data validation summary report (DVSR) for pre-excavation and confirmation soil sample analytical data.

SMP-REQUIRED CONTINGENCY PLAN

Per Sections 5.3 and 5.7 of the SMP, this document serves as notification of work to be performed within 50 feet of on-site GWETS components or monitoring wells and a contingency plan to NDEP and the Trust regarding field activities that have the potential for release of untreated groundwater. The purpose of the contingency plan is to describe the action to be taken in case of accidental release of untreated groundwater while performing activities described herein.

Precautions

Ramboll and subcontractor personnel will implement the following precautions and procedures during implementation of the field activities:

- Daily health and safety "tailgate" meetings will be held prior to the start of field work. In addition to discussions of health and safety hazards and prevention, the names and mobile phone numbers for all

field staff and subcontractors will be confirmed. Clear lines of communication will be established each day to ensure a swift and coordinated response to a release.

- Envirogen Technologies, Inc. (ETI), the GWETS operator, will be advised of work that may impact their operations (i.e. work within 50 feet of any GWETS component or monitoring well). As shown on Figure 1, monitoring well MW-16 is located within 50 feet of the planned excavation activities.

Spill Response Procedures

- The primary response action for a release of untreated groundwater during field activities will be to shut down and contain any uncontrolled flow. Pumping, vacuum and containment equipment will be available as needed. However, no underground groundwater conveyance piping is known to exist within the excavation boundaries, and based on the shallow depth of planned excavation, groundwater is unlikely to be encountered.
- A spill response kit will be readily available during field activities and utilized in the event of a release of untreated groundwater.
- As described in the SMP, if a release of untreated groundwater occurs, Ramboll will immediately notify Steve Clough of the Trust at (702) 960-4309, who will then notify Weiquan Dong of NDEP at (702) 486-2850, extension 252. If any GWETS components are shut down due to damage from the release of groundwater, Ramboll will provide NDEP, the Trust and ETI with a written explanation for the shutdown.
- The release of untreated groundwater due to field activities will be reported to the NDEP 24-hour Spill Notification line, if required by NAC 445A.345 to 445A.348.

EMERGENCY PROJECTS

In the event of accidental spill or release that could qualify as an emergency project, Ramboll will prepare an Emergency Project notification for approval by the Trust and NDEP. Upon approval of the Emergency Project status by NDEP, a work plan for cleanup will be prepared and submitted in general accordance with Section 4.7 of the SMP.

REQUEST FOR APPROVAL

This document, including the Work Plan, notifications and contingency plan, provides information required by the SMP for implementation of the dioxin-impacted soil excavation program. Your approval of the Work Plan, notifications and contingency plan is requested and appreciated.

We would appreciate your prompt review of this document. Please contact Kimberly Kuwabara at (510) 420-2525 or kkuwabara@ramboll.com if you have any comments or questions concerning the Work Plan, notifications or contingency plan.

Sincerely,



Kimberly Kuwabara, MS
Senior Managing Consultant

CEM #2353, expires 3/20/2019



John M. Pekala, PG
Principal

CEM #2347, expires 9/20/2020

Ec: James Dotchin, NDEP-BISC
Nevada Environmental Response Trust
Tanya O'Neill, Foley & Lardner LLP
Wendy Prescott, ETI

TABLES

Table 1 – Pre-Excavation Soil Sampling Results for Dioxin TEQ
Table 2 – Summary of Analytical Data for Disposal Characterization

FIGURE

Figure 1 – Excavation Boundaries, Depths and Sample Locations

ATTACHMENTS

Attachment A – Laboratory Analytical Reports for Dioxin TEQ
Attachment B – Laboratory Analytical Reports for Disposal Characterization

REFERENCES

ENVIRON, 2014a. Field Sampling Plan, Revision 1; Nevada Environmental Response Trust Site; Henderson, Nevada. July 18. NDEP approved August 1, 2014.

ENVIRON, 2014b. Health and Safety Plan for Remedial Investigation and General Site Activities, Revision 1; Nevada Environmental Response Trust Site; Henderson, Nevada. July 18. NDEP approved August 1, 2014.

- Northgate, 2010. Errata to RZ-B and RZ-D Figures. Letter to Shannon Harbour of NDEP. November 29.
- Ramboll Environ, 2017a. Interim Report: Identification of COPCs and Decision Units for OU-1 Soils, Revision 1. November 15. NDEP approved December 27, 2017.
- Ramboll Environ, 2017b. Quality Assurance Project Plan, Revision 2; Nevada Environmental Response Trust Site; Henderson, Nevada. October 26. NDEP approved November 8, 2017.
- Ramboll, 2018a. Site Management Plan, Revision 4; Nevada Environmental Response Trust Site; Henderson, Nevada. March 22. NDEP approved March 29, 2018.
- Ramboll, 2018b. Work Plan, SMP-Required Notifications and Contingency Plan, Pre-Excavation Sampling for Dioxin Soil Remediation. August 21. NDEP approved August 24, 2018.
- United States Environmental Protection Agency (USEPA). 1994. Publication 540-R-94-005a. Use of Total Waste Analysis in Toxicity Characteristic Determinations. January 1.
- Van den Berg M. et al., 2006. The 2005 World Health Organization Reevaluation of Human and Mammalian Toxic Equivalency Factors for Dioxins and Dioxin-like Compounds. Toxicology. Science 92:223-241.

TABLES

Table 1: Pre-Excavation Soil Sampling Results for Dioxin TEQ
Dioxin Soil Excavation Area
Nevada Environmental Response Trust


Borehole ID	Purpose	Co-Location	Depth (ft bgs)							
			0.5-1.0	1-1.5	1.5-2	2-2.5	2.5-3	3-3.5	3.5-4	4-4.5
Pre-Excavation Sampling Locations										
DSPE-1	lateral and depth delineation	N/A	210	--	180	--	--	--	--	--
DSPE-2	lateral and depth delineation	N/A	78	--	49	--	--	--	--	--
DSPE-3	lateral and depth delineation	N/A	550	--	12,000	8,300	--	2,400	--	3.6
DSPE-4	delineate depth 0.5-5'	RISB-50	19,260	--	740	--	--	--	--	--
DSPE-5	delineate depth 0.5-5'	RISB-51	4,049	--	11	--	--	--	--	--
DSPE-6	delineate depth 0.5-5'	RISB-52	4,251	--	44	--	--	--	--	--
DSPE-7	delineate depth 2.5-3.5	SSAK3-05	--	--	1.3	--	11,330 <i>(original depth was 0' to 0.5'; adjusted depth is 2.5' to 3')</i>	4.6	250 <i>(original depth was 1' to 2'; adjusted depth is 3.5' to 4.5')</i>	--
Prior Locations for Lateral Control - Northwest of Excavation Area										
SSAK3-03	control location west of DSPE-2	N/A	--	--	--	0.52 <i>(original depth was 1' to 2'; sample assumed partially removed; adjusted depth defined as 2' to 2')</i>	--	--	--	--
SSAK2-01	control location west of DSPE-3	N/A	--	--	--	--	--	--	0.24 <i>(original depth was 1' to 2'; adjusted depth is 3.5' to 4.5')</i>	--

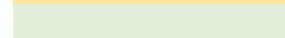
Notes:


Dioxin TEQ results¹ are presented in picograms per gram (pg/g)


Site-Specific Dioxin TEQ Criteria: 2,700 pg/g

Italics indicate prior sample data from older soil borings; see notes for depth adjustments

 Dioxin TEQ above site-specific criteria

 Dioxin TEQ below site-specific criteria

 Dioxin TEQ below site-specific criteria but will be excavated

 Based on soil excavation records, blue shading represents approximate depth of clean fill material placed during the 2011-2012 soil remediation. Prior sample depths have been adjusted in reference to the current ground surface, as noted on the table .

ft bgs = feet below ground surface

TEQ = Toxicity Equivalent

1: Dioxin TEQ calculated based on the World Health Organization (WHO) toxicity equivalency factors (TEFs) scheme (van den Berg et al. 2006). Nondetects were addressed using the Kaplan-Meier approach from USEPA's TEQ calculator.

Van den Berg M. et al. 2006. The 2005 World Health Organization Reevaluation of Human and Mammalian Toxic Equivalency Factors for Dioxins and Dioxin-like Compounds. Toxicology. Science 92:223-241.

**Table 2: Summary of Analytical Data for Disposal Characterization
Dioxin Soil Excavation Area
Nevada Environmental Response Trust**

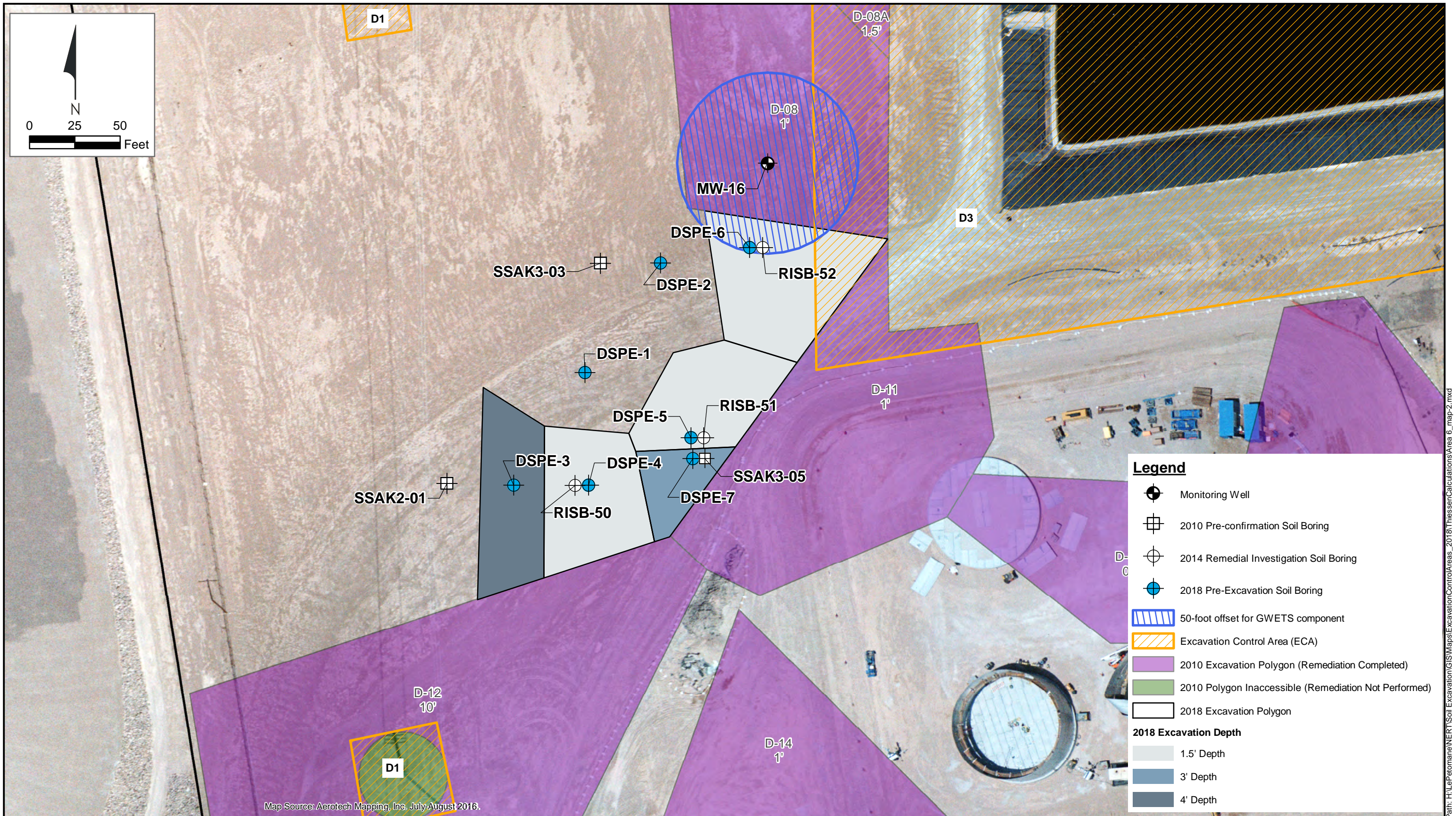
Borehole ID	Depth	Dioxin TEQ (pg/g)	TCLP RCRA 8 Metals (mg/L)								Petroleum Hydrocarbons (mg/kg)				VOCs (mg/kg)			SVOCs		Organochlorine Pesticides (mg/kg)				
			As	Ba	Cd	Cr	Pb	Se	Ag	Hg	TPH-G	TPH-D	TPH-MO	EFH (C10-C40)	Acetone	Methylene Chloride	1,2,4-Trimethylbenzene	HCB (mg/kg)	TCLP HCB (mg/L)	alpha-BHC	beta-BHC	2,4-DDE	4,4-DDE	4,4-DDT
DSPE-3	0.5-1.0	550	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	1-1.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	1.5-2	12,000	ND<1	1	ND<0.05	ND<0.1	0.016	ND<0.2	ND<0.1	ND<0.002	--	--	--	--	--	--	--	ND<0.05	--	--	--	--	--	
	2-2.5	8,300	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2.5-3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	3-3.5	2,400	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DSPE-4	0.0-0.5	--	ND<0.2	0.59	ND<0.1	ND<0.1	ND<0.1	ND<0.1	ND<0.2	ND<0.002	ND<0.41	8.9	4.6	13	0.017	0.011	ND<0.002	7.3	ND<0.05	0.0059	0.14	0.079	0.13	0.019
	0.5-1.0	19,260	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	1-1.5	--	ND<0.2	1	ND<0.1	ND<0.1	ND<0.1	ND<0.1	ND<0.2	ND<0.002	ND<0.43	22	6.8	29	ND<0.021	ND<0.011	ND<0.0021	11	--	0.0073	0.2	0.048	0.057	0.011
	1.5-2	740	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DSPE-5	0.0-0.5	--	ND<0.2	1	ND<0.1	ND<0.1	ND<0.1	ND<0.1	ND<0.2	ND<0.002	ND<0.4	ND<5.1	ND<5.1	3.7	ND<0.020	ND<0.01	ND<0.002	0.2	--	ND<0.0051	0.014	0.028	0.098	0.011
	0.5-1.0	4,049	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	1-1.5	--	ND<0.2	0.64	ND<0.1	0.02	ND<0.1	ND<0.1	ND<0.2	ND<0.002	ND<0.42	ND<5.3	ND<5.3	4.8	ND<0.021	ND<0.011	ND<0.0021	ND<0.35	--	ND<0.0053	ND<0.0053	ND<0.0053	0.0032	ND<0.0053
	1.5-2	11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DSPE-6	0.0-0.5	--	ND<0.2	1.7	ND<0.1	ND<0.1	ND<0.1	ND<0.1	ND<0.2	ND<0.002	ND<0.4	7	4.3	11	0.014	0.0078	0.0012	ND<0.34	--	ND<0.0051	0.055	0.067	0.096	0.023
	0.5-1.0	4,251	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	1-1.5	--	ND<0.2	0.96	ND<0.1	ND<0.1	ND<0.1	ND<0.1	ND<0.2	ND<0.002	ND<0.41	3.4	3.5	6.9	ND<0.021	ND<0.01	ND<0.0021	0.077	--	ND<0.0053	0.008	0.0059	0.008	0.014
	1.5-2	44	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DSPE-7	0.0-0.5	--	ND<0.2	2.2	ND<0.1	ND<0.1	ND<0.1	ND<0.1	ND<0.2	ND<0.002	ND<0.41	3.6	ND<5.1	7.5	ND<0.020	ND<0.01	ND<0.002	ND<0.34	--	ND<0.0051	0.0016	0.0019	0.002	ND<0.0051
	0.5-1.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	1-1.5	--	ND<0.2	2	ND<0.1	ND<0.1	ND<0.1	ND<0.1	ND<0.2	ND<0.002	ND<0.42	ND<5.3	ND<5.3	5	ND<0.021	ND<0.011	ND<0.0021	ND<0.35	--	ND<0.0053	ND<0.0053	ND<0.0053	ND<0.0053	ND<0.0053
	1.5-2	1.3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2-2.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2.5-3	11,330	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Title 22 Hazardous Waste Criteria			5	100	1	5	5	1	5	0.2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.13	n/a	n/a	n/a	n/a	n/a

Notes:
 Only detected compounds are shown on the table.
 Dioxin TEQ results in italics indicates co-located data from previous soil borings.
 Results are presented in milligrams per kilogram (mg/kg) except where indicated.
 mg/L = Milligrams per Liter
 pg/g = picograms per gram
 ND<## = Not Detected at or above laboratory reporting limit shown.
 BHC = hexachlorocyclohexane
 DDE = Dichlorodiphenyldichloroethylene
 DDT = Dichlorodiphenyltrichloroethane
 EFH = Extractable Fuel Hydrocarbons
 HCB = Hexachlorobenzene
 RCRA = Resource Conservation and Recovery Act
 SVOC = Semivolatile Organic Compound
 TCLP = Toxicity Characteristic Leaching Procedure
 TEQ = Toxicity Equivalent
 TPH-G, TPH-D, TPH-MO = Total Petroleum Hydrocarbons as Gasoline, Diesel, and Motor Oil
 VOC = Volatile Organic Compound

1: Dioxin TEQ calculated based on the World Health Organization (WHO) toxicity equivalency factors (TEFs) scheme (van den Berg et al. 2006). Nondetects were addressed using the Kaplan-Meier approach from USEPA's TEQ calculator.

Van den Berg M. et al. 2006. The 2005 World Health Organization Reevaluation of Human and Mammalian Toxic Equivalency Factors for Dioxins and Dioxin-like Compounds. Toxicology. Science 92:223-241.

FIGURE



Legend

- Monitoring Well
- 2010 Pre-confirmation Soil Boring
- 2014 Remedial Investigation Soil Boring
- 2018 Pre-Excavation Soil Boring
- 50-foot offset for GWETS component
- Excavation Control Area (ECA)
- 2010 Excavation Polygon (Remediation Completed)
- 2010 Polygon Inaccessible (Remediation Not Performed)
- 2018 Excavation Polygon

2018 Excavation Depth

- 1.5' Depth
- 3' Depth
- 4' Depth



Excavation Boundaries, Depths and Sample Locations
 Nevada Environmental Response Trust Site, Henderson, Nevada

Figure
1

Path: H:\LePetomane\NERT\Soil Excavation\GIS\Map\ExcavationControlAreas_2018\ThiessenCalculationsArea 6_map-2.mxd

**Soil Excavation Work Plan, SMP-Required Notifications and Contingency
Plan for Dioxin Soil Remediation Area**


**Nevada Environmental Response Trust Site
(Former Tronox LLC Site)
Henderson, Nevada**

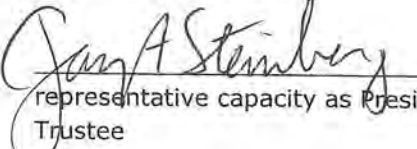
Nevada Environmental Response Trust (NERT) Representative Certification

I certify that this document and all attachments submitted to the Division were prepared at the request of, or under the direction or supervision of NERT. Based on my own involvement and/or my inquiry of the person or persons who manage the system(s) or those directly responsible for gathering the information or preparing the document, or the immediate supervisor of such person(s), the information submitted and provided herein is, to the best of my knowledge and belief, true, accurate, and complete in all material respects.

Office of the Nevada Environmental Response Trust

Le Petomane XXVII, Inc., not individually, but solely in its representative capacity as the Nevada Environmental Response Trust Trustee

not individually, but solely as 

Signature:  _____, not individually, but solely in his representative capacity as President of the Nevada Environmental Response Trust Trustee

Name: Jay A. Steinberg, not individually, but solely in his representative capacity as President of the Nevada Environmental Response Trust Trustee

Title: Solely as President and not individually

Company: Le Petomane XXVII, Inc., not individually, but solely in its representative capacity as the Nevada Environmental Response Trust Trustee

Date: 1/4/19

**Soil Excavation Work Plan, SMP-Required Notifications and Contingency
Plan for Dioxin Soil Remediation Area****Nevada Environmental Response Trust Site
(Former Tronox LLC Site)
Henderson, Nevada****Responsible Certified Environmental Manager (CEM) for this Project**

I hereby certify that I am responsible for the services described in this document and for the preparation of this document. The services described in this document have been provided in a manner consistent with the current standards of the profession and, to the best of my knowledge, comply with all applicable federal, state and local statutes, regulations and ordinances.



1/7/19

John M. Pekala, PG**Principal**

Certified Environmental Manager Ramboll
CEM Certificate Number: 2347
CEM Expiration Date: September 20, 2020

**ATTACHMENT A
LABORATORY ANALYTICAL REPORTS FOR DIOXIN TEQ**

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

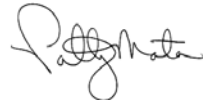
ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Sacramento
880 Riverside Parkway
West Sacramento, CA 95605
Tel: (916)373-5600

TestAmerica Job ID: 320-43353-1
Client Project/Site: NERT Dioxin Sampling

For:
Ramboll US Corporation
2200 Powell Street
Suite 700
Emeryville, California 94608

Attn: Craig Knox



Authorized for release by:
9/26/2018 4:01:11 PM

Patty Mata, Senior Project Manager
(949)261-1022
patty.mata@testamericainc.com

LINKS

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The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Definitions/Glossary

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 320-43353-1

Qualifiers

Dioxin

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
q	The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio. The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.
G	The reported quantitation limit has been raised due to an exhibited elevated noise or matrix interference
E	Result exceeded calibration range.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Case Narrative

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 320-43353-1

Job ID: 320-43353-1

Laboratory: TestAmerica Sacramento

Narrative

Job Narrative 320-43353-1

Comments

No additional comments.

Receipt

The samples were received on 9/20/2018 9:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 5.4° C and 5.7° C.

Dioxin

Method(s) 8290: The following samples exhibited elevated noise or matrix interferences for one or more analytes causing elevation of the detection limit (EDL): DSPE-3-1.5-20180919 (320-43353-16) and DSPE-4-1.5-20180919 (320-43353-19). The reporting limit (RL) for the affected analytes has been raised to be equal to the EDL, and a "G" qualifier applied.

Method(s) 8290: The concentration of 2,3,7,8-TCDF associated with the following sample exceeded the instrument calibration range: DSPE-3-1.5-20180919 (320-43353-16). This analyte has been qualified; however, the peak(s) did not saturate the instrument detector. Historical data indicate that for the isotope dilution method, dilution and re-analysis will not produce significantly different results from those reported above the calibration range.

Method(s) 8290: The following samples exhibited elevated noise or matrix interferences for one or more analytes causing elevation of the detection limit (EDL): DSPE-3-1.5-20180919 (320-43353-16). The reporting limit (RL) for the affected analytes has been raised to be equal to the EDL, and a "G" qualifier applied.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Dioxin Prep

Method(s) 8290: Due to the matrix, the initial volumes used for the following samples deviated from the standard procedure: DSPE-1-0.5-20180919 (320-43353-2), DSPE-1-1.5-20180919 (320-43353-4), DSPE-2-0.5-20180919 (320-43353-9), DSPE-2-1.5-20180919 (320-43353-10), DSPE-3-0.5-20180919 (320-43353-14), DSPE-3-1.5-20180919 (320-43353-16), DSPE-4-1.5-20180919 (320-43353-19) and DSPE-5-1.5-20180919 (320-43353-23). The reporting limits (RLs) have been adjusted proportionately.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 320-43353-1

Client Sample ID: DSPE-1-0.5-20180919

Lab Sample ID: 320-43353-2

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	5.0	J	11	0.47	pg/g	1	☼	8290	Total/NA
1,2,3,7,8-PeCDD	15	J	53	1.5	pg/g	1	☼	8290	Total/NA
1,2,3,7,8-PeCDF	250	B	53	5.4	pg/g	1	☼	8290	Total/NA
2,3,4,7,8-PeCDF	130		53	5.4	pg/g	1	☼	8290	Total/NA
1,2,3,4,7,8-HxCDD	14	J B	53	0.49	pg/g	1	☼	8290	Total/NA
1,2,3,6,7,8-HxCDD	28	J	53	0.47	pg/g	1	☼	8290	Total/NA
1,2,3,7,8,9-HxCDD	27	J	53	0.44	pg/g	1	☼	8290	Total/NA
1,2,3,4,7,8-HxCDF	510		53	15	pg/g	1	☼	8290	Total/NA
1,2,3,6,7,8-HxCDF	380	B	53	14	pg/g	1	☼	8290	Total/NA
2,3,4,6,7,8-HxCDF	74	B	53	14	pg/g	1	☼	8290	Total/NA
1,2,3,7,8,9-HxCDF	62	B	53	15	pg/g	1	☼	8290	Total/NA
1,2,3,4,6,7,8-HpCDD	94	B	53	0.55	pg/g	1	☼	8290	Total/NA
1,2,3,4,6,7,8-HpCDF	1500	B	53	6.7	pg/g	1	☼	8290	Total/NA
1,2,3,4,7,8,9-HpCDF	580	B	53	8.0	pg/g	1	☼	8290	Total/NA
OCDD	110	B	110	0.42	pg/g	1	☼	8290	Total/NA
OCDF	4100	B	110	2.3	pg/g	1	☼	8290	Total/NA
Total TCDD	120	q	11	0.47	pg/g	1	☼	8290	Total/NA
Total TCDF	1500	B	11	3.4	pg/g	1	☼	8290	Total/NA
Total PeCDD	150	q	53	1.5	pg/g	1	☼	8290	Total/NA
Total PeCDF	2000	B	53	5.4	pg/g	1	☼	8290	Total/NA
Total HxCDD	190	B	53	0.47	pg/g	1	☼	8290	Total/NA
Total HxCDF	2500	B	53	15	pg/g	1	☼	8290	Total/NA
Total HpCDD	140	B	53	0.55	pg/g	1	☼	8290	Total/NA
Total HpCDF	3000	B	53	7.3	pg/g	1	☼	8290	Total/NA
2,3,7,8-TCDF - RA	120	B	11	4.0	pg/g	1	☼	8290	Total/NA

Client Sample ID: DSPE-1-1.5-20180919

Lab Sample ID: 320-43353-4

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	4.1	J q	11	0.59	pg/g	1	☼	8290	Total/NA
1,2,3,7,8-PeCDD	17	J	53	1.3	pg/g	1	☼	8290	Total/NA
1,2,3,7,8-PeCDF	200	B	53	4.4	pg/g	1	☼	8290	Total/NA
2,3,4,7,8-PeCDF	100		53	4.4	pg/g	1	☼	8290	Total/NA
1,2,3,4,7,8-HxCDD	12	J B	53	0.55	pg/g	1	☼	8290	Total/NA
1,2,3,6,7,8-HxCDD	36	J q	53	0.53	pg/g	1	☼	8290	Total/NA
1,2,3,7,8,9-HxCDD	28	J	53	0.50	pg/g	1	☼	8290	Total/NA
1,2,3,4,7,8-HxCDF	420		53	13	pg/g	1	☼	8290	Total/NA
1,2,3,6,7,8-HxCDF	320	B	53	12	pg/g	1	☼	8290	Total/NA
2,3,4,6,7,8-HxCDF	62	B	53	12	pg/g	1	☼	8290	Total/NA
1,2,3,7,8,9-HxCDF	52	J B	53	13	pg/g	1	☼	8290	Total/NA
1,2,3,4,6,7,8-HpCDD	76	B	53	0.49	pg/g	1	☼	8290	Total/NA
1,2,3,4,6,7,8-HpCDF	1200	B	53	5.6	pg/g	1	☼	8290	Total/NA
1,2,3,4,7,8,9-HpCDF	440	B	53	6.6	pg/g	1	☼	8290	Total/NA
OCDD	86	J B	110	0.39	pg/g	1	☼	8290	Total/NA
OCDF	2900	B	110	1.9	pg/g	1	☼	8290	Total/NA
Total TCDD	81	q	11	0.59	pg/g	1	☼	8290	Total/NA
Total TCDF	1100	q B	11	3.2	pg/g	1	☼	8290	Total/NA
Total PeCDD	120	q	53	1.3	pg/g	1	☼	8290	Total/NA
Total PeCDF	1500	B	53	4.4	pg/g	1	☼	8290	Total/NA
Total HxCDD	230	q B	53	0.53	pg/g	1	☼	8290	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Sacramento

Detection Summary

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 320-43353-1

Client Sample ID: DSPE-1-1.5-20180919 (Continued)

Lab Sample ID: 320-43353-4

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
Total HxCDF	2000	q B	53	12	pg/g	1	☼	8290	Total/NA
Total HpCDD	120	B	53	0.49	pg/g	1	☼	8290	Total/NA
Total HpCDF	2300	B	53	6.1	pg/g	1	☼	8290	Total/NA
2,3,7,8-TCDF - RA	100	B	11	3.5	pg/g	1	☼	8290	Total/NA

Client Sample ID: DSPE-2-0.5-20180919

Lab Sample ID: 320-43353-9

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	2.0	J q	10	0.29	pg/g	1	☼	8290	Total/NA
1,2,3,7,8-PeCDD	5.7	J	51	0.68	pg/g	1	☼	8290	Total/NA
1,2,3,7,8-PeCDF	90	B	51	2.7	pg/g	1	☼	8290	Total/NA
2,3,4,7,8-PeCDF	42	J	51	2.7	pg/g	1	☼	8290	Total/NA
1,2,3,4,7,8-HxCDD	5.7	J B	51	0.32	pg/g	1	☼	8290	Total/NA
1,2,3,6,7,8-HxCDD	15	J	51	0.31	pg/g	1	☼	8290	Total/NA
1,2,3,7,8,9-HxCDD	13	J	51	0.29	pg/g	1	☼	8290	Total/NA
1,2,3,4,7,8-HxCDF	180		51	5.8	pg/g	1	☼	8290	Total/NA
1,2,3,6,7,8-HxCDF	140	B	51	5.6	pg/g	1	☼	8290	Total/NA
2,3,4,6,7,8-HxCDF	28	J B	51	5.7	pg/g	1	☼	8290	Total/NA
1,2,3,7,8,9-HxCDF	27	J B	51	6.0	pg/g	1	☼	8290	Total/NA
1,2,3,4,6,7,8-HpCDD	36	J B	51	0.30	pg/g	1	☼	8290	Total/NA
1,2,3,4,6,7,8-HpCDF	610	B	51	2.9	pg/g	1	☼	8290	Total/NA
1,2,3,4,7,8,9-HpCDF	220	B	51	3.4	pg/g	1	☼	8290	Total/NA
OCDD	43	J B	100	0.25	pg/g	1	☼	8290	Total/NA
OCDF	1600	B	100	1.1	pg/g	1	☼	8290	Total/NA
Total TCDD	38	q	10	0.29	pg/g	1	☼	8290	Total/NA
Total TCDF	520	B	10	1.6	pg/g	1	☼	8290	Total/NA
Total PeCDD	48	J q	51	0.68	pg/g	1	☼	8290	Total/NA
Total PeCDF	650	q B	51	2.7	pg/g	1	☼	8290	Total/NA
Total HxCDD	100	B	51	0.30	pg/g	1	☼	8290	Total/NA
Total HxCDF	930	B	51	5.8	pg/g	1	☼	8290	Total/NA
Total HpCDD	55	B	51	0.30	pg/g	1	☼	8290	Total/NA
Total HpCDF	1200	B	51	3.2	pg/g	1	☼	8290	Total/NA
2,3,7,8-TCDF - RA	48	B	10	2.1	pg/g	1	☼	8290	Total/NA

Client Sample ID: DSPE-2-1.5-20180919

Lab Sample ID: 320-43353-10

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	0.69	J	10	0.36	pg/g	1	☼	8290	Total/NA
1,2,3,7,8-PeCDD	3.2	J q	52	0.51	pg/g	1	☼	8290	Total/NA
1,2,3,7,8-PeCDF	60	B	52	1.9	pg/g	1	☼	8290	Total/NA
2,3,4,7,8-PeCDF	29	J	52	1.9	pg/g	1	☼	8290	Total/NA
1,2,3,4,7,8-HxCDD	4.0	J B	52	0.22	pg/g	1	☼	8290	Total/NA
1,2,3,6,7,8-HxCDD	6.4	J	52	0.21	pg/g	1	☼	8290	Total/NA
1,2,3,7,8,9-HxCDD	6.2	J	52	0.20	pg/g	1	☼	8290	Total/NA
1,2,3,4,7,8-HxCDF	110		52	4.1	pg/g	1	☼	8290	Total/NA
1,2,3,6,7,8-HxCDF	87	B	52	4.0	pg/g	1	☼	8290	Total/NA
2,3,4,6,7,8-HxCDF	18	J B	52	4.0	pg/g	1	☼	8290	Total/NA
1,2,3,7,8,9-HxCDF	23	J B	52	4.2	pg/g	1	☼	8290	Total/NA
1,2,3,4,6,7,8-HpCDD	23	J B	52	0.25	pg/g	1	☼	8290	Total/NA
1,2,3,4,6,7,8-HpCDF	390	B	52	1.9	pg/g	1	☼	8290	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Sacramento

Detection Summary

Client: Ramboll US Corporation
 Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 320-43353-1

Client Sample ID: DSPE-2-1.5-20180919 (Continued)

Lab Sample ID: 320-43353-10

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
1,2,3,4,7,8,9-HpCDF	140	B	52	2.3	pg/g	1	☼	8290	Total/NA
OCDD	37	J B	100	0.23	pg/g	1	☼	8290	Total/NA
OCDF	1000	B	100	0.74	pg/g	1	☼	8290	Total/NA
Total TCDD	24	q	10	0.36	pg/g	1	☼	8290	Total/NA
Total TCDF	370	B	10	0.90	pg/g	1	☼	8290	Total/NA
Total PeCDD	35	J q	52	0.51	pg/g	1	☼	8290	Total/NA
Total PeCDF	470	B	52	1.9	pg/g	1	☼	8290	Total/NA
Total HxCDD	44	J B	52	0.21	pg/g	1	☼	8290	Total/NA
Total HxCDF	600	q B	52	4.1	pg/g	1	☼	8290	Total/NA
Total HpCDD	36	J B	52	0.25	pg/g	1	☼	8290	Total/NA
Total HpCDF	750	B	52	2.1	pg/g	1	☼	8290	Total/NA
2,3,7,8-TCDF - RA	34	B	10	1.7	pg/g	1	☼	8290	Total/NA

Client Sample ID: DSPE-3-0.5-20180919

Lab Sample ID: 320-43353-14

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	11		9.9	0.60	pg/g	1	☼	8290	Total/NA
1,2,3,7,8-PeCDD	34	J	49	3.5	pg/g	1	☼	8290	Total/NA
1,2,3,7,8-PeCDF	680	B	49	14	pg/g	1	☼	8290	Total/NA
2,3,4,7,8-PeCDF	340		49	14	pg/g	1	☼	8290	Total/NA
1,2,3,4,7,8-HxCDD	29	J B	49	0.87	pg/g	1	☼	8290	Total/NA
1,2,3,6,7,8-HxCDD	61		49	0.83	pg/g	1	☼	8290	Total/NA
1,2,3,7,8,9-HxCDD	52		49	0.78	pg/g	1	☼	8290	Total/NA
1,2,3,4,7,8-HxCDF	1300		49	37	pg/g	1	☼	8290	Total/NA
1,2,3,6,7,8-HxCDF	1100	B	49	36	pg/g	1	☼	8290	Total/NA
2,3,4,6,7,8-HxCDF	200	B	49	37	pg/g	1	☼	8290	Total/NA
1,2,3,7,8,9-HxCDF	170	B	49	38	pg/g	1	☼	8290	Total/NA
1,2,3,4,6,7,8-HpCDD	240	B	49	1.1	pg/g	1	☼	8290	Total/NA
1,2,3,4,6,7,8-HpCDF	4300	B	49	17	pg/g	1	☼	8290	Total/NA
1,2,3,4,7,8,9-HpCDF	1700	B	49	20	pg/g	1	☼	8290	Total/NA
OCDD	270	B	99	0.53	pg/g	1	☼	8290	Total/NA
OCDF	11000	B	99	4.9	pg/g	1	☼	8290	Total/NA
Total TCDD	270	q	9.9	0.60	pg/g	1	☼	8290	Total/NA
Total TCDF	3900	B	9.9	7.5	pg/g	1	☼	8290	Total/NA
Total PeCDD	350	q	49	3.5	pg/g	1	☼	8290	Total/NA
Total PeCDF	5300	B	49	14	pg/g	1	☼	8290	Total/NA
Total HxCDD	430	B	49	0.83	pg/g	1	☼	8290	Total/NA
Total HxCDF	7000	B	49	37	pg/g	1	☼	8290	Total/NA
Total HpCDD	370	B	49	1.1	pg/g	1	☼	8290	Total/NA
Total HpCDF	8500	B	49	18	pg/g	1	☼	8290	Total/NA
2,3,7,8-TCDF - RA	310	B	9.9	5.4	pg/g	1	☼	8290	Total/NA

Client Sample ID: DSPE-3-1.5-20180919

Lab Sample ID: 320-43353-16

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	240		11	6.0	pg/g	1	☼	8290	Total/NA
1,2,3,7,8-PeCDD	890	G	68	68	pg/g	1	☼	8290	Total/NA
1,2,3,7,8-PeCDF	14000	G B	280	280	pg/g	1	☼	8290	Total/NA
2,3,4,7,8-PeCDF	7100	G	280	280	pg/g	1	☼	8290	Total/NA
1,2,3,4,7,8-HxCDD	730	B	54	14	pg/g	1	☼	8290	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Sacramento

Detection Summary

Client: Ramboll US Corporation
 Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 320-43353-1

Client Sample ID: DSPE-3-1.5-20180919 (Continued)

Lab Sample ID: 320-43353-16

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
1,2,3,6,7,8-HxCDD	1500		54	13	pg/g	1	☼	8290	Total/NA
1,2,3,7,8,9-HxCDD	1400		54	12	pg/g	1	☼	8290	Total/NA
1,2,3,6,7,8-HxCDF	21000	G B	700	700	pg/g	1	☼	8290	Total/NA
2,3,4,6,7,8-HxCDF	4100	G B	710	710	pg/g	1	☼	8290	Total/NA
1,2,3,7,8,9-HxCDF	3700	G B	740	740	pg/g	1	☼	8290	Total/NA
1,2,3,4,6,7,8-HpCDD	5300	B	54	16	pg/g	1	☼	8290	Total/NA
Total TCDD	6600	q	11	6.0	pg/g	1	☼	8290	Total/NA
Total TCDF	77000	G B	180	180	pg/g	1	☼	8290	Total/NA
Total PeCDD	8300	G	68	68	pg/g	1	☼	8290	Total/NA
Total PeCDF	100000	G B	280	280	pg/g	1	☼	8290	Total/NA
Total HxCDD	11000	B	54	13	pg/g	1	☼	8290	Total/NA
Total HxCDF	140000	G B	720	720	pg/g	1	☼	8290	Total/NA
Total HpCDD	8000	B	54	16	pg/g	1	☼	8290	Total/NA
1,2,3,4,7,8-HxCDF - DL	30000	G	800	800	pg/g	10	☼	8290	Total/NA
1,2,3,4,6,7,8-HpCDF - DL	87000	B	540	320	pg/g	10	☼	8290	Total/NA
1,2,3,4,7,8,9-HpCDF - DL	34000	B	540	380	pg/g	10	☼	8290	Total/NA
OCDD - DL	6200	B	1100	12	pg/g	10	☼	8290	Total/NA
OCDF - DL	250000	B	1100	100	pg/g	10	☼	8290	Total/NA
Total HpCDF - DL	170000	B	540	350	pg/g	10	☼	8290	Total/NA
2,3,7,8-TCDF - RA	7400	E G B	59	59	pg/g	1	☼	8290	Total/NA

Client Sample ID: DSPE-4-1.5-20180919

Lab Sample ID: 320-43353-19

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	16		10	0.85	pg/g	1	☼	8290	Total/NA
1,2,3,7,8-PeCDD	50	J	52	4.0	pg/g	1	☼	8290	Total/NA
1,2,3,7,8-PeCDF	890	B	52	17	pg/g	1	☼	8290	Total/NA
2,3,4,7,8-PeCDF	460		52	17	pg/g	1	☼	8290	Total/NA
1,2,3,4,7,8-HxCDD	42	J B	52	1.1	pg/g	1	☼	8290	Total/NA
1,2,3,6,7,8-HxCDD	89		52	1.0	pg/g	1	☼	8290	Total/NA
1,2,3,7,8,9-HxCDD	75		52	0.96	pg/g	1	☼	8290	Total/NA
1,2,3,4,7,8-HxCDF	1700		52	45	pg/g	1	☼	8290	Total/NA
1,2,3,6,7,8-HxCDF	1400	B	52	44	pg/g	1	☼	8290	Total/NA
2,3,4,6,7,8-HxCDF	270	B	52	44	pg/g	1	☼	8290	Total/NA
1,2,3,7,8,9-HxCDF	230	B	52	46	pg/g	1	☼	8290	Total/NA
1,2,3,4,6,7,8-HpCDD	330	B	52	1.3	pg/g	1	☼	8290	Total/NA
1,2,3,4,6,7,8-HpCDF	5600	B	52	20	pg/g	1	☼	8290	Total/NA
1,2,3,4,7,8,9-HpCDF	2200	B	52	24	pg/g	1	☼	8290	Total/NA
OCDD	380	B	100	0.56	pg/g	1	☼	8290	Total/NA
OCDF	16000	B	100	5.3	pg/g	1	☼	8290	Total/NA
Total TCDD	410	q	10	0.85	pg/g	1	☼	8290	Total/NA
Total TCDF	5600	G B	15	15	pg/g	1	☼	8290	Total/NA
Total PeCDD	490	q	52	4.0	pg/g	1	☼	8290	Total/NA
Total PeCDF	6800	q B	52	17	pg/g	1	☼	8290	Total/NA
Total HxCDD	640	q B	52	1.0	pg/g	1	☼	8290	Total/NA
Total HxCDF	9000	B	52	45	pg/g	1	☼	8290	Total/NA
Total HpCDD	510	B	52	1.3	pg/g	1	☼	8290	Total/NA
Total HpCDF	11000	B	52	22	pg/g	1	☼	8290	Total/NA
2,3,7,8-TCDF - RA	450	B	10	6.5	pg/g	1	☼	8290	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Sacramento

Detection Summary

Client: Ramboll US Corporation
 Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 320-43353-1

Client Sample ID: DSPE-5-1.5-20180919

Lab Sample ID: 320-43353-23

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	0.71	J q	11	0.26	pg/g	1	☼	8290	Total/NA
1,2,3,7,8-PeCDD	1.2	J	54	0.29	pg/g	1	☼	8290	Total/NA
1,2,3,7,8-PeCDF	12	J B	54	0.57	pg/g	1	☼	8290	Total/NA
2,3,4,7,8-PeCDF	5.6	J	54	0.57	pg/g	1	☼	8290	Total/NA
1,2,3,4,7,8-HxCDD	2.2	J B	54	0.26	pg/g	1	☼	8290	Total/NA
1,2,3,6,7,8-HxCDD	2.2	J	54	0.25	pg/g	1	☼	8290	Total/NA
1,2,3,7,8,9-HxCDD	1.7	J	54	0.23	pg/g	1	☼	8290	Total/NA
1,2,3,4,7,8-HxCDF	24	J	54	1.1	pg/g	1	☼	8290	Total/NA
1,2,3,6,7,8-HxCDF	14	J B	54	1.1	pg/g	1	☼	8290	Total/NA
2,3,4,6,7,8-HxCDF	2.4	J q B	54	1.1	pg/g	1	☼	8290	Total/NA
1,2,3,7,8,9-HxCDF	8.1	J B	54	1.1	pg/g	1	☼	8290	Total/NA
1,2,3,4,6,7,8-HpCDD	5.9	J B	54	0.20	pg/g	1	☼	8290	Total/NA
1,2,3,4,6,7,8-HpCDF	56	B	54	0.53	pg/g	1	☼	8290	Total/NA
1,2,3,4,7,8,9-HpCDF	24	J B	54	0.63	pg/g	1	☼	8290	Total/NA
OCDD	14	J B	110	0.22	pg/g	1	☼	8290	Total/NA
OCDF	150	B	110	0.37	pg/g	1	☼	8290	Total/NA
Total TCDD	4.8	J q	11	0.26	pg/g	1	☼	8290	Total/NA
Total TCDF	60	q B	11	0.38	pg/g	1	☼	8290	Total/NA
Total PeCDD	7.8	J q	54	0.29	pg/g	1	☼	8290	Total/NA
Total PeCDF	73	q B	54	0.57	pg/g	1	☼	8290	Total/NA
Total HxCDD	15	J q B	54	0.25	pg/g	1	☼	8290	Total/NA
Total HxCDF	87	q B	54	1.1	pg/g	1	☼	8290	Total/NA
Total HpCDD	10	J B	54	0.20	pg/g	1	☼	8290	Total/NA
Total HpCDF	110	B	54	0.58	pg/g	1	☼	8290	Total/NA
2,3,7,8-TCDF - RA	7.7	J B	11	1.6	pg/g	1	☼	8290	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Sacramento

Client Sample Results

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 320-43353-1

Client Sample ID: DSPE-1-0.5-20180919

Lab Sample ID: 320-43353-2

Date Collected: 09/19/18 08:40

Matrix: Solid

Date Received: 09/20/18 09:30

Percent Solids: 94.8

Method: 8290 - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	5.0	J	11	0.47	pg/g	☼	09/20/18 16:22	09/22/18 19:13	1
1,2,3,7,8-PeCDD	15	J	53	1.5	pg/g	☼	09/20/18 16:22	09/22/18 19:13	1
1,2,3,7,8-PeCDF	250	B	53	5.4	pg/g	☼	09/20/18 16:22	09/22/18 19:13	1
2,3,4,7,8-PeCDF	130		53	5.4	pg/g	☼	09/20/18 16:22	09/22/18 19:13	1
1,2,3,4,7,8-HxCDD	14	J B	53	0.49	pg/g	☼	09/20/18 16:22	09/22/18 19:13	1
1,2,3,6,7,8-HxCDD	28	J	53	0.47	pg/g	☼	09/20/18 16:22	09/22/18 19:13	1
1,2,3,7,8,9-HxCDD	27	J	53	0.44	pg/g	☼	09/20/18 16:22	09/22/18 19:13	1
1,2,3,4,7,8-HxCDF	510		53	15	pg/g	☼	09/20/18 16:22	09/22/18 19:13	1
1,2,3,6,7,8-HxCDF	380	B	53	14	pg/g	☼	09/20/18 16:22	09/22/18 19:13	1
2,3,4,6,7,8-HxCDF	74	B	53	14	pg/g	☼	09/20/18 16:22	09/22/18 19:13	1
1,2,3,7,8,9-HxCDF	62	B	53	15	pg/g	☼	09/20/18 16:22	09/22/18 19:13	1
1,2,3,4,6,7,8-HpCDD	94	B	53	0.55	pg/g	☼	09/20/18 16:22	09/22/18 19:13	1
1,2,3,4,6,7,8-HpCDF	1500	B	53	6.7	pg/g	☼	09/20/18 16:22	09/22/18 19:13	1
1,2,3,4,7,8,9-HpCDF	580	B	53	8.0	pg/g	☼	09/20/18 16:22	09/22/18 19:13	1
OCDD	110	B	110	0.42	pg/g	☼	09/20/18 16:22	09/22/18 19:13	1
OCDF	4100	B	110	2.3	pg/g	☼	09/20/18 16:22	09/22/18 19:13	1
Total TCDD	120	q	11	0.47	pg/g	☼	09/20/18 16:22	09/22/18 19:13	1
Total TCDF	1500	B	11	3.4	pg/g	☼	09/20/18 16:22	09/22/18 19:13	1
Total PeCDD	150	q	53	1.5	pg/g	☼	09/20/18 16:22	09/22/18 19:13	1
Total PeCDF	2000	B	53	5.4	pg/g	☼	09/20/18 16:22	09/22/18 19:13	1
Total HxCDD	190	B	53	0.47	pg/g	☼	09/20/18 16:22	09/22/18 19:13	1
Total HxCDF	2500	B	53	15	pg/g	☼	09/20/18 16:22	09/22/18 19:13	1
Total HpCDD	140	B	53	0.55	pg/g	☼	09/20/18 16:22	09/22/18 19:13	1
Total HpCDF	3000	B	53	7.3	pg/g	☼	09/20/18 16:22	09/22/18 19:13	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	76		40 - 135	09/20/18 16:22	09/22/18 19:13	1
13C-2,3,7,8-TCDF	68		40 - 135	09/20/18 16:22	09/22/18 19:13	1
13C-1,2,3,7,8-PeCDD	72		40 - 135	09/20/18 16:22	09/22/18 19:13	1
13C-1,2,3,7,8-PeCDF	69		40 - 135	09/20/18 16:22	09/22/18 19:13	1
13C-1,2,3,6,7,8-HxCDD	80		40 - 135	09/20/18 16:22	09/22/18 19:13	1
13C-1,2,3,4,7,8-HxCDF	79		40 - 135	09/20/18 16:22	09/22/18 19:13	1
13C-1,2,3,4,6,7,8-HpCDD	92		40 - 135	09/20/18 16:22	09/22/18 19:13	1
13C-1,2,3,4,6,7,8-HpCDF	83		40 - 135	09/20/18 16:22	09/22/18 19:13	1
13C-OCDD	81		40 - 135	09/20/18 16:22	09/22/18 19:13	1

Method: 8290 - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	120	B	11	4.0	pg/g	☼	09/20/18 16:22	09/25/18 10:14	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDF	71		40 - 135	09/20/18 16:22	09/25/18 10:14	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	5.2		0.1	0.1	%			09/24/18 10:27	1

Client Sample Results

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 320-43353-1

Client Sample ID: DSPE-1-1.5-20180919

Lab Sample ID: 320-43353-4

Date Collected: 09/19/18 08:55

Matrix: Solid

Date Received: 09/20/18 09:30

Percent Solids: 95.1

Method: 8290 - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	4.1	J q	11	0.59	pg/g	☼	09/20/18 16:22	09/22/18 20:45	1
1,2,3,7,8-PeCDD	17	J	53	1.3	pg/g	☼	09/20/18 16:22	09/22/18 20:45	1
1,2,3,7,8-PeCDF	200	B	53	4.4	pg/g	☼	09/20/18 16:22	09/22/18 20:45	1
2,3,4,7,8-PeCDF	100		53	4.4	pg/g	☼	09/20/18 16:22	09/22/18 20:45	1
1,2,3,4,7,8-HxCDD	12	J B	53	0.55	pg/g	☼	09/20/18 16:22	09/22/18 20:45	1
1,2,3,6,7,8-HxCDD	36	J q	53	0.53	pg/g	☼	09/20/18 16:22	09/22/18 20:45	1
1,2,3,7,8,9-HxCDD	28	J	53	0.50	pg/g	☼	09/20/18 16:22	09/22/18 20:45	1
1,2,3,4,7,8-HxCDF	420		53	13	pg/g	☼	09/20/18 16:22	09/22/18 20:45	1
1,2,3,6,7,8-HxCDF	320	B	53	12	pg/g	☼	09/20/18 16:22	09/22/18 20:45	1
2,3,4,6,7,8-HxCDF	62	B	53	12	pg/g	☼	09/20/18 16:22	09/22/18 20:45	1
1,2,3,7,8,9-HxCDF	52	J B	53	13	pg/g	☼	09/20/18 16:22	09/22/18 20:45	1
1,2,3,4,6,7,8-HpCDD	76	B	53	0.49	pg/g	☼	09/20/18 16:22	09/22/18 20:45	1
1,2,3,4,6,7,8-HpCDF	1200	B	53	5.6	pg/g	☼	09/20/18 16:22	09/22/18 20:45	1
1,2,3,4,7,8,9-HpCDF	440	B	53	6.6	pg/g	☼	09/20/18 16:22	09/22/18 20:45	1
OCDD	86	J B	110	0.39	pg/g	☼	09/20/18 16:22	09/22/18 20:45	1
OCDF	2900	B	110	1.9	pg/g	☼	09/20/18 16:22	09/22/18 20:45	1
Total TCDD	81	q	11	0.59	pg/g	☼	09/20/18 16:22	09/22/18 20:45	1
Total TCDF	1100	q B	11	3.2	pg/g	☼	09/20/18 16:22	09/22/18 20:45	1
Total PeCDD	120	q	53	1.3	pg/g	☼	09/20/18 16:22	09/22/18 20:45	1
Total PeCDF	1500	B	53	4.4	pg/g	☼	09/20/18 16:22	09/22/18 20:45	1
Total HxCDD	230	q B	53	0.53	pg/g	☼	09/20/18 16:22	09/22/18 20:45	1
Total HxCDF	2000	q B	53	12	pg/g	☼	09/20/18 16:22	09/22/18 20:45	1
Total HpCDD	120	B	53	0.49	pg/g	☼	09/20/18 16:22	09/22/18 20:45	1
Total HpCDF	2300	B	53	6.1	pg/g	☼	09/20/18 16:22	09/22/18 20:45	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	69		40 - 135	09/20/18 16:22	09/22/18 20:45	1
13C-2,3,7,8-TCDF	59		40 - 135	09/20/18 16:22	09/22/18 20:45	1
13C-1,2,3,7,8-PeCDD	63		40 - 135	09/20/18 16:22	09/22/18 20:45	1
13C-1,2,3,7,8-PeCDF	60		40 - 135	09/20/18 16:22	09/22/18 20:45	1
13C-1,2,3,6,7,8-HxCDD	72		40 - 135	09/20/18 16:22	09/22/18 20:45	1
13C-1,2,3,4,7,8-HxCDF	68		40 - 135	09/20/18 16:22	09/22/18 20:45	1
13C-1,2,3,4,6,7,8-HpCDD	80		40 - 135	09/20/18 16:22	09/22/18 20:45	1
13C-1,2,3,4,6,7,8-HpCDF	71		40 - 135	09/20/18 16:22	09/22/18 20:45	1
13C-OCDD	69		40 - 135	09/20/18 16:22	09/22/18 20:45	1

Method: 8290 - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	100	B	11	3.5	pg/g	☼	09/20/18 16:22	09/25/18 11:30	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDF	60		40 - 135	09/20/18 16:22	09/25/18 11:30	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	4.9		0.1	0.1	%			09/24/18 10:27	1

Client Sample Results

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 320-43353-1

Client Sample ID: DSPE-2-0.5-20180919

Lab Sample ID: 320-43353-9

Date Collected: 09/19/18 10:27

Matrix: Solid

Date Received: 09/20/18 09:30

Percent Solids: 93.1

Method: 8290 - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	2.0	J q	10	0.29	pg/g	☼	09/20/18 16:22	09/22/18 21:31	1
1,2,3,7,8-PeCDD	5.7	J	51	0.68	pg/g	☼	09/20/18 16:22	09/22/18 21:31	1
1,2,3,7,8-PeCDF	90	B	51	2.7	pg/g	☼	09/20/18 16:22	09/22/18 21:31	1
2,3,4,7,8-PeCDF	42	J	51	2.7	pg/g	☼	09/20/18 16:22	09/22/18 21:31	1
1,2,3,4,7,8-HxCDD	5.7	J B	51	0.32	pg/g	☼	09/20/18 16:22	09/22/18 21:31	1
1,2,3,6,7,8-HxCDD	15	J	51	0.31	pg/g	☼	09/20/18 16:22	09/22/18 21:31	1
1,2,3,7,8,9-HxCDD	13	J	51	0.29	pg/g	☼	09/20/18 16:22	09/22/18 21:31	1
1,2,3,4,7,8-HxCDF	180		51	5.8	pg/g	☼	09/20/18 16:22	09/22/18 21:31	1
1,2,3,6,7,8-HxCDF	140	B	51	5.6	pg/g	☼	09/20/18 16:22	09/22/18 21:31	1
2,3,4,6,7,8-HxCDF	28	J B	51	5.7	pg/g	☼	09/20/18 16:22	09/22/18 21:31	1
1,2,3,7,8,9-HxCDF	27	J B	51	6.0	pg/g	☼	09/20/18 16:22	09/22/18 21:31	1
1,2,3,4,6,7,8-HpCDD	36	J B	51	0.30	pg/g	☼	09/20/18 16:22	09/22/18 21:31	1
1,2,3,4,6,7,8-HpCDF	610	B	51	2.9	pg/g	☼	09/20/18 16:22	09/22/18 21:31	1
1,2,3,4,7,8,9-HpCDF	220	B	51	3.4	pg/g	☼	09/20/18 16:22	09/22/18 21:31	1
OCDD	43	J B	100	0.25	pg/g	☼	09/20/18 16:22	09/22/18 21:31	1
OCDF	1600	B	100	1.1	pg/g	☼	09/20/18 16:22	09/22/18 21:31	1
Total TCDD	38	q	10	0.29	pg/g	☼	09/20/18 16:22	09/22/18 21:31	1
Total TCDF	520	B	10	1.6	pg/g	☼	09/20/18 16:22	09/22/18 21:31	1
Total PeCDD	48	J q	51	0.68	pg/g	☼	09/20/18 16:22	09/22/18 21:31	1
Total PeCDF	650	q B	51	2.7	pg/g	☼	09/20/18 16:22	09/22/18 21:31	1
Total HxCDD	100	B	51	0.30	pg/g	☼	09/20/18 16:22	09/22/18 21:31	1
Total HxCDF	930	B	51	5.8	pg/g	☼	09/20/18 16:22	09/22/18 21:31	1
Total HpCDD	55	B	51	0.30	pg/g	☼	09/20/18 16:22	09/22/18 21:31	1
Total HpCDF	1200	B	51	3.2	pg/g	☼	09/20/18 16:22	09/22/18 21:31	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	79		40 - 135	09/20/18 16:22	09/22/18 21:31	1
13C-2,3,7,8-TCDF	67		40 - 135	09/20/18 16:22	09/22/18 21:31	1
13C-1,2,3,7,8-PeCDD	74		40 - 135	09/20/18 16:22	09/22/18 21:31	1
13C-1,2,3,7,8-PeCDF	69		40 - 135	09/20/18 16:22	09/22/18 21:31	1
13C-1,2,3,6,7,8-HxCDD	77		40 - 135	09/20/18 16:22	09/22/18 21:31	1
13C-1,2,3,4,7,8-HxCDF	79		40 - 135	09/20/18 16:22	09/22/18 21:31	1
13C-1,2,3,4,6,7,8-HpCDD	89		40 - 135	09/20/18 16:22	09/22/18 21:31	1
13C-1,2,3,4,6,7,8-HpCDF	80		40 - 135	09/20/18 16:22	09/22/18 21:31	1
13C-OCDD	77		40 - 135	09/20/18 16:22	09/22/18 21:31	1

Method: 8290 - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	48	B	10	2.1	pg/g	☼	09/20/18 16:22	09/25/18 12:08	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDF	73		40 - 135	09/20/18 16:22	09/25/18 12:08	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	6.9		0.1	0.1	%			09/24/18 10:27	1

Client Sample Results

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 320-43353-1

Client Sample ID: DSPE-2-1.5-20180919

Lab Sample ID: 320-43353-10

Date Collected: 09/19/18 10:36

Matrix: Solid

Date Received: 09/20/18 09:30

Percent Solids: 93.0

Method: 8290 - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	0.69	J	10	0.36	pg/g	☼	09/20/18 16:22	09/22/18 22:17	1
1,2,3,7,8-PeCDD	3.2	J q	52	0.51	pg/g	☼	09/20/18 16:22	09/22/18 22:17	1
1,2,3,7,8-PeCDF	60	B	52	1.9	pg/g	☼	09/20/18 16:22	09/22/18 22:17	1
2,3,4,7,8-PeCDF	29	J	52	1.9	pg/g	☼	09/20/18 16:22	09/22/18 22:17	1
1,2,3,4,7,8-HxCDD	4.0	J B	52	0.22	pg/g	☼	09/20/18 16:22	09/22/18 22:17	1
1,2,3,6,7,8-HxCDD	6.4	J	52	0.21	pg/g	☼	09/20/18 16:22	09/22/18 22:17	1
1,2,3,7,8,9-HxCDD	6.2	J	52	0.20	pg/g	☼	09/20/18 16:22	09/22/18 22:17	1
1,2,3,4,7,8-HxCDF	110		52	4.1	pg/g	☼	09/20/18 16:22	09/22/18 22:17	1
1,2,3,6,7,8-HxCDF	87	B	52	4.0	pg/g	☼	09/20/18 16:22	09/22/18 22:17	1
2,3,4,6,7,8-HxCDF	18	J B	52	4.0	pg/g	☼	09/20/18 16:22	09/22/18 22:17	1
1,2,3,7,8,9-HxCDF	23	J B	52	4.2	pg/g	☼	09/20/18 16:22	09/22/18 22:17	1
1,2,3,4,6,7,8-HpCDD	23	J B	52	0.25	pg/g	☼	09/20/18 16:22	09/22/18 22:17	1
1,2,3,4,6,7,8-HpCDF	390	B	52	1.9	pg/g	☼	09/20/18 16:22	09/22/18 22:17	1
1,2,3,4,7,8,9-HpCDF	140	B	52	2.3	pg/g	☼	09/20/18 16:22	09/22/18 22:17	1
OCDD	37	J B	100	0.23	pg/g	☼	09/20/18 16:22	09/22/18 22:17	1
OCDF	1000	B	100	0.74	pg/g	☼	09/20/18 16:22	09/22/18 22:17	1
Total TCDD	24	q	10	0.36	pg/g	☼	09/20/18 16:22	09/22/18 22:17	1
Total TCDF	370	B	10	0.90	pg/g	☼	09/20/18 16:22	09/22/18 22:17	1
Total PeCDD	35	J q	52	0.51	pg/g	☼	09/20/18 16:22	09/22/18 22:17	1
Total PeCDF	470	B	52	1.9	pg/g	☼	09/20/18 16:22	09/22/18 22:17	1
Total HxCDD	44	J B	52	0.21	pg/g	☼	09/20/18 16:22	09/22/18 22:17	1
Total HxCDF	600	q B	52	4.1	pg/g	☼	09/20/18 16:22	09/22/18 22:17	1
Total HpCDD	36	J B	52	0.25	pg/g	☼	09/20/18 16:22	09/22/18 22:17	1
Total HpCDF	750	B	52	2.1	pg/g	☼	09/20/18 16:22	09/22/18 22:17	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	72		40 - 135	09/20/18 16:22	09/22/18 22:17	1
13C-2,3,7,8-TCDF	63		40 - 135	09/20/18 16:22	09/22/18 22:17	1
13C-1,2,3,7,8-PeCDD	67		40 - 135	09/20/18 16:22	09/22/18 22:17	1
13C-1,2,3,7,8-PeCDF	63		40 - 135	09/20/18 16:22	09/22/18 22:17	1
13C-1,2,3,6,7,8-HxCDD	73		40 - 135	09/20/18 16:22	09/22/18 22:17	1
13C-1,2,3,4,7,8-HxCDF	70		40 - 135	09/20/18 16:22	09/22/18 22:17	1
13C-1,2,3,4,6,7,8-HpCDD	80		40 - 135	09/20/18 16:22	09/22/18 22:17	1
13C-1,2,3,4,6,7,8-HpCDF	73		40 - 135	09/20/18 16:22	09/22/18 22:17	1
13C-OCDD	70		40 - 135	09/20/18 16:22	09/22/18 22:17	1

Method: 8290 - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	34	B	10	1.7	pg/g	☼	09/20/18 16:22	09/25/18 12:46	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDF	66		40 - 135	09/20/18 16:22	09/25/18 12:46	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	7.0		0.1	0.1	%			09/24/18 10:27	1

Client Sample Results

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 320-43353-1

Client Sample ID: DSPE-3-0.5-20180919

Lab Sample ID: 320-43353-14

Date Collected: 09/19/18 11:23

Matrix: Solid

Date Received: 09/20/18 09:30

Percent Solids: 94.5

Method: 8290 - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	11		9.9	0.60	pg/g	☼	09/20/18 16:22	09/22/18 23:03	1
1,2,3,7,8-PeCDD	34	J	49	3.5	pg/g	☼	09/20/18 16:22	09/22/18 23:03	1
1,2,3,7,8-PeCDF	680	B	49	14	pg/g	☼	09/20/18 16:22	09/22/18 23:03	1
2,3,4,7,8-PeCDF	340		49	14	pg/g	☼	09/20/18 16:22	09/22/18 23:03	1
1,2,3,4,7,8-HxCDD	29	J B	49	0.87	pg/g	☼	09/20/18 16:22	09/22/18 23:03	1
1,2,3,6,7,8-HxCDD	61		49	0.83	pg/g	☼	09/20/18 16:22	09/22/18 23:03	1
1,2,3,7,8,9-HxCDD	52		49	0.78	pg/g	☼	09/20/18 16:22	09/22/18 23:03	1
1,2,3,4,7,8-HxCDF	1300		49	37	pg/g	☼	09/20/18 16:22	09/22/18 23:03	1
1,2,3,6,7,8-HxCDF	1100	B	49	36	pg/g	☼	09/20/18 16:22	09/22/18 23:03	1
2,3,4,6,7,8-HxCDF	200	B	49	37	pg/g	☼	09/20/18 16:22	09/22/18 23:03	1
1,2,3,7,8,9-HxCDF	170	B	49	38	pg/g	☼	09/20/18 16:22	09/22/18 23:03	1
1,2,3,4,6,7,8-HpCDD	240	B	49	1.1	pg/g	☼	09/20/18 16:22	09/22/18 23:03	1
1,2,3,4,6,7,8-HpCDF	4300	B	49	17	pg/g	☼	09/20/18 16:22	09/22/18 23:03	1
1,2,3,4,7,8,9-HpCDF	1700	B	49	20	pg/g	☼	09/20/18 16:22	09/22/18 23:03	1
OCDD	270	B	99	0.53	pg/g	☼	09/20/18 16:22	09/22/18 23:03	1
OCDF	11000	B	99	4.9	pg/g	☼	09/20/18 16:22	09/22/18 23:03	1
Total TCDD	270	q	9.9	0.60	pg/g	☼	09/20/18 16:22	09/22/18 23:03	1
Total TCDF	3900	B	9.9	7.5	pg/g	☼	09/20/18 16:22	09/22/18 23:03	1
Total PeCDD	350	q	49	3.5	pg/g	☼	09/20/18 16:22	09/22/18 23:03	1
Total PeCDF	5300	B	49	14	pg/g	☼	09/20/18 16:22	09/22/18 23:03	1
Total HxCDD	430	B	49	0.83	pg/g	☼	09/20/18 16:22	09/22/18 23:03	1
Total HxCDF	7000	B	49	37	pg/g	☼	09/20/18 16:22	09/22/18 23:03	1
Total HpCDD	370	B	49	1.1	pg/g	☼	09/20/18 16:22	09/22/18 23:03	1
Total HpCDF	8500	B	49	18	pg/g	☼	09/20/18 16:22	09/22/18 23:03	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	70		40 - 135	09/20/18 16:22	09/22/18 23:03	1
13C-2,3,7,8-TCDF	61		40 - 135	09/20/18 16:22	09/22/18 23:03	1
13C-1,2,3,7,8-PeCDD	66		40 - 135	09/20/18 16:22	09/22/18 23:03	1
13C-1,2,3,7,8-PeCDF	61		40 - 135	09/20/18 16:22	09/22/18 23:03	1
13C-1,2,3,6,7,8-HxCDD	70		40 - 135	09/20/18 16:22	09/22/18 23:03	1
13C-1,2,3,4,7,8-HxCDF	69		40 - 135	09/20/18 16:22	09/22/18 23:03	1
13C-1,2,3,4,6,7,8-HpCDD	80		40 - 135	09/20/18 16:22	09/22/18 23:03	1
13C-1,2,3,4,6,7,8-HpCDF	72		40 - 135	09/20/18 16:22	09/22/18 23:03	1
13C-OCDD	71		40 - 135	09/20/18 16:22	09/22/18 23:03	1

Method: 8290 - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	310	B	9.9	5.4	pg/g	☼	09/20/18 16:22	09/25/18 13:24	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDF	67		40 - 135	09/20/18 16:22	09/25/18 13:24	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	5.5		0.1	0.1	%			09/24/18 10:27	1

Client Sample Results

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 320-43353-1

Client Sample ID: DSPE-3-1.5-20180919

Lab Sample ID: 320-43353-16

Date Collected: 09/19/18 11:40

Matrix: Solid

Date Received: 09/20/18 09:30

Percent Solids: 92.7

Method: 8290 - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	240		11	6.0	pg/g	☼	09/20/18 16:22	09/23/18 09:31	1
1,2,3,7,8-PeCDD	890	G	68	68	pg/g	☼	09/20/18 16:22	09/23/18 09:31	1
1,2,3,7,8-PeCDF	14000	G B	280	280	pg/g	☼	09/20/18 16:22	09/23/18 09:31	1
2,3,4,7,8-PeCDF	7100	G	280	280	pg/g	☼	09/20/18 16:22	09/23/18 09:31	1
1,2,3,4,7,8-HxCDD	730	B	54	14	pg/g	☼	09/20/18 16:22	09/23/18 09:31	1
1,2,3,6,7,8-HxCDD	1500		54	13	pg/g	☼	09/20/18 16:22	09/23/18 09:31	1
1,2,3,7,8,9-HxCDD	1400		54	12	pg/g	☼	09/20/18 16:22	09/23/18 09:31	1
1,2,3,6,7,8-HxCDF	21000	G B	700	700	pg/g	☼	09/20/18 16:22	09/23/18 09:31	1
2,3,4,6,7,8-HxCDF	4100	G B	710	710	pg/g	☼	09/20/18 16:22	09/23/18 09:31	1
1,2,3,7,8,9-HxCDF	3700	G B	740	740	pg/g	☼	09/20/18 16:22	09/23/18 09:31	1
1,2,3,4,6,7,8-HpCDD	5300	B	54	16	pg/g	☼	09/20/18 16:22	09/23/18 09:31	1
Total TCDD	6600	q	11	6.0	pg/g	☼	09/20/18 16:22	09/23/18 09:31	1
Total TCDF	77000	G B	180	180	pg/g	☼	09/20/18 16:22	09/23/18 09:31	1
Total PeCDD	8300	G	68	68	pg/g	☼	09/20/18 16:22	09/23/18 09:31	1
Total PeCDF	100000	G B	280	280	pg/g	☼	09/20/18 16:22	09/23/18 09:31	1
Total HxCDD	11000	B	54	13	pg/g	☼	09/20/18 16:22	09/23/18 09:31	1
Total HxCDF	140000	G B	720	720	pg/g	☼	09/20/18 16:22	09/23/18 09:31	1
Total HpCDD	8000	B	54	16	pg/g	☼	09/20/18 16:22	09/23/18 09:31	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	70		40 - 135				09/20/18 16:22	09/23/18 09:31	1
13C-2,3,7,8-TCDF	63		40 - 135				09/20/18 16:22	09/23/18 09:31	1
13C-1,2,3,7,8-PeCDD	65		40 - 135				09/20/18 16:22	09/23/18 09:31	1
13C-1,2,3,7,8-PeCDF	63		40 - 135				09/20/18 16:22	09/23/18 09:31	1
13C-1,2,3,6,7,8-HxCDD	67		40 - 135				09/20/18 16:22	09/23/18 09:31	1
13C-1,2,3,4,7,8-HxCDF	69		40 - 135				09/20/18 16:22	09/23/18 09:31	1
13C-1,2,3,4,6,7,8-HpCDD	86		40 - 135				09/20/18 16:22	09/23/18 09:31	1

Method: 8290 - Dioxins and Furans (HRGC/HRMS) - DL

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,7,8-HxCDF	30000	G	800	800	pg/g	☼	09/20/18 16:22	09/24/18 22:09	10
1,2,3,4,6,7,8-HpCDF	87000	B	540	320	pg/g	☼	09/20/18 16:22	09/24/18 22:09	10
1,2,3,4,7,8,9-HpCDF	34000	B	540	380	pg/g	☼	09/20/18 16:22	09/24/18 22:09	10
OCDD	6200	B	1100	12	pg/g	☼	09/20/18 16:22	09/24/18 22:09	10
OCDF	250000	B	1100	100	pg/g	☼	09/20/18 16:22	09/24/18 22:09	10
Total HpCDF	170000	B	540	350	pg/g	☼	09/20/18 16:22	09/24/18 22:09	10
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-1,2,3,4,7,8-HxCDF	70		40 - 135				09/20/18 16:22	09/24/18 22:09	10
13C-1,2,3,4,6,7,8-HpCDF	71		40 - 135				09/20/18 16:22	09/24/18 22:09	10
13C-OCDD	68		40 - 135				09/20/18 16:22	09/24/18 22:09	10

Method: 8290 - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	7400	E G B	59	59	pg/g	☼	09/20/18 16:22	09/25/18 15:17	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDF	68		40 - 135				09/20/18 16:22	09/25/18 15:17	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	7.3		0.1	0.1	%			09/24/18 10:27	1

TestAmerica Sacramento

Client Sample Results

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 320-43353-1

Client Sample ID: DSPE-4-1.5-20180919

Lab Sample ID: 320-43353-19

Date Collected: 09/19/18 14:45

Matrix: Solid

Date Received: 09/20/18 09:30

Percent Solids: 96.1

Method: 8290 - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	16		10	0.85	pg/g	☼	09/20/18 16:22	09/23/18 07:13	1
1,2,3,7,8-PeCDD	50	J	52	4.0	pg/g	☼	09/20/18 16:22	09/23/18 07:13	1
1,2,3,7,8-PeCDF	890	B	52	17	pg/g	☼	09/20/18 16:22	09/23/18 07:13	1
2,3,4,7,8-PeCDF	460		52	17	pg/g	☼	09/20/18 16:22	09/23/18 07:13	1
1,2,3,4,7,8-HxCDD	42	J B	52	1.1	pg/g	☼	09/20/18 16:22	09/23/18 07:13	1
1,2,3,6,7,8-HxCDD	89		52	1.0	pg/g	☼	09/20/18 16:22	09/23/18 07:13	1
1,2,3,7,8,9-HxCDD	75		52	0.96	pg/g	☼	09/20/18 16:22	09/23/18 07:13	1
1,2,3,4,7,8-HxCDF	1700		52	45	pg/g	☼	09/20/18 16:22	09/23/18 07:13	1
1,2,3,6,7,8-HxCDF	1400	B	52	44	pg/g	☼	09/20/18 16:22	09/23/18 07:13	1
2,3,4,6,7,8-HxCDF	270	B	52	44	pg/g	☼	09/20/18 16:22	09/23/18 07:13	1
1,2,3,7,8,9-HxCDF	230	B	52	46	pg/g	☼	09/20/18 16:22	09/23/18 07:13	1
1,2,3,4,6,7,8-HpCDD	330	B	52	1.3	pg/g	☼	09/20/18 16:22	09/23/18 07:13	1
1,2,3,4,6,7,8-HpCDF	5600	B	52	20	pg/g	☼	09/20/18 16:22	09/23/18 07:13	1
1,2,3,4,7,8,9-HpCDF	2200	B	52	24	pg/g	☼	09/20/18 16:22	09/23/18 07:13	1
OCDD	380	B	100	0.56	pg/g	☼	09/20/18 16:22	09/23/18 07:13	1
OCDF	16000	B	100	5.3	pg/g	☼	09/20/18 16:22	09/23/18 07:13	1
Total TCDD	410	q	10	0.85	pg/g	☼	09/20/18 16:22	09/23/18 07:13	1
Total TCDF	5600	G B	15	15	pg/g	☼	09/20/18 16:22	09/23/18 07:13	1
Total PeCDD	490	q	52	4.0	pg/g	☼	09/20/18 16:22	09/23/18 07:13	1
Total PeCDF	6800	q B	52	17	pg/g	☼	09/20/18 16:22	09/23/18 07:13	1
Total HxCDD	640	q B	52	1.0	pg/g	☼	09/20/18 16:22	09/23/18 07:13	1
Total HxCDF	9000	B	52	45	pg/g	☼	09/20/18 16:22	09/23/18 07:13	1
Total HpCDD	510	B	52	1.3	pg/g	☼	09/20/18 16:22	09/23/18 07:13	1
Total HpCDF	11000	B	52	22	pg/g	☼	09/20/18 16:22	09/23/18 07:13	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	72		40 - 135	09/20/18 16:22	09/23/18 07:13	1
13C-2,3,7,8-TCDF	64		40 - 135	09/20/18 16:22	09/23/18 07:13	1
13C-1,2,3,7,8-PeCDD	65		40 - 135	09/20/18 16:22	09/23/18 07:13	1
13C-1,2,3,7,8-PeCDF	61		40 - 135	09/20/18 16:22	09/23/18 07:13	1
13C-1,2,3,6,7,8-HxCDD	70		40 - 135	09/20/18 16:22	09/23/18 07:13	1
13C-1,2,3,4,7,8-HxCDF	71		40 - 135	09/20/18 16:22	09/23/18 07:13	1
13C-1,2,3,4,6,7,8-HpCDD	86		40 - 135	09/20/18 16:22	09/23/18 07:13	1
13C-1,2,3,4,6,7,8-HpCDF	77		40 - 135	09/20/18 16:22	09/23/18 07:13	1
13C-OCDD	78		40 - 135	09/20/18 16:22	09/23/18 07:13	1

Method: 8290 - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	450	B	10	6.5	pg/g	☼	09/20/18 16:22	09/25/18 14:01	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDF	68		40 - 135	09/20/18 16:22	09/25/18 14:01	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	3.9		0.1	0.1	%			09/24/18 10:27	1

Client Sample Results

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 320-43353-1

Client Sample ID: DSPE-5-1.5-20180919

Lab Sample ID: 320-43353-23

Date Collected: 09/19/18 15:30

Matrix: Solid

Date Received: 09/20/18 09:30

Percent Solids: 93.4

Method: 8290 - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	0.71	J q	11	0.26	pg/g	☼	09/20/18 16:22	09/23/18 07:59	1
1,2,3,7,8-PeCDD	1.2	J	54	0.29	pg/g	☼	09/20/18 16:22	09/23/18 07:59	1
1,2,3,7,8-PeCDF	12	J B	54	0.57	pg/g	☼	09/20/18 16:22	09/23/18 07:59	1
2,3,4,7,8-PeCDF	5.6	J	54	0.57	pg/g	☼	09/20/18 16:22	09/23/18 07:59	1
1,2,3,4,7,8-HxCDD	2.2	J B	54	0.26	pg/g	☼	09/20/18 16:22	09/23/18 07:59	1
1,2,3,6,7,8-HxCDD	2.2	J	54	0.25	pg/g	☼	09/20/18 16:22	09/23/18 07:59	1
1,2,3,7,8,9-HxCDD	1.7	J	54	0.23	pg/g	☼	09/20/18 16:22	09/23/18 07:59	1
1,2,3,4,7,8-HxCDF	24	J	54	1.1	pg/g	☼	09/20/18 16:22	09/23/18 07:59	1
1,2,3,6,7,8-HxCDF	14	J B	54	1.1	pg/g	☼	09/20/18 16:22	09/23/18 07:59	1
2,3,4,6,7,8-HxCDF	2.4	J q B	54	1.1	pg/g	☼	09/20/18 16:22	09/23/18 07:59	1
1,2,3,7,8,9-HxCDF	8.1	J B	54	1.1	pg/g	☼	09/20/18 16:22	09/23/18 07:59	1
1,2,3,4,6,7,8-HpCDD	5.9	J B	54	0.20	pg/g	☼	09/20/18 16:22	09/23/18 07:59	1
1,2,3,4,6,7,8-HpCDF	56	B	54	0.53	pg/g	☼	09/20/18 16:22	09/23/18 07:59	1
1,2,3,4,7,8,9-HpCDF	24	J B	54	0.63	pg/g	☼	09/20/18 16:22	09/23/18 07:59	1
OCDD	14	J B	110	0.22	pg/g	☼	09/20/18 16:22	09/23/18 07:59	1
OCDF	150	B	110	0.37	pg/g	☼	09/20/18 16:22	09/23/18 07:59	1
Total TCDD	4.8	J q	11	0.26	pg/g	☼	09/20/18 16:22	09/23/18 07:59	1
Total TCDF	60	q B	11	0.38	pg/g	☼	09/20/18 16:22	09/23/18 07:59	1
Total PeCDD	7.8	J q	54	0.29	pg/g	☼	09/20/18 16:22	09/23/18 07:59	1
Total PeCDF	73	q B	54	0.57	pg/g	☼	09/20/18 16:22	09/23/18 07:59	1
Total HxCDD	15	J q B	54	0.25	pg/g	☼	09/20/18 16:22	09/23/18 07:59	1
Total HxCDF	87	q B	54	1.1	pg/g	☼	09/20/18 16:22	09/23/18 07:59	1
Total HpCDD	10	J B	54	0.20	pg/g	☼	09/20/18 16:22	09/23/18 07:59	1
Total HpCDF	110	B	54	0.58	pg/g	☼	09/20/18 16:22	09/23/18 07:59	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	71		40 - 135	09/20/18 16:22	09/23/18 07:59	1
13C-2,3,7,8-TCDF	63		40 - 135	09/20/18 16:22	09/23/18 07:59	1
13C-1,2,3,7,8-PeCDD	66		40 - 135	09/20/18 16:22	09/23/18 07:59	1
13C-1,2,3,7,8-PeCDF	61		40 - 135	09/20/18 16:22	09/23/18 07:59	1
13C-1,2,3,6,7,8-HxCDD	67		40 - 135	09/20/18 16:22	09/23/18 07:59	1
13C-1,2,3,4,7,8-HxCDF	67		40 - 135	09/20/18 16:22	09/23/18 07:59	1
13C-1,2,3,4,6,7,8-HpCDD	81		40 - 135	09/20/18 16:22	09/23/18 07:59	1
13C-1,2,3,4,6,7,8-HpCDF	71		40 - 135	09/20/18 16:22	09/23/18 07:59	1
13C-OCDD	69		40 - 135	09/20/18 16:22	09/23/18 07:59	1

Method: 8290 - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	7.7	J B	11	1.6	pg/g	☼	09/20/18 16:22	09/25/18 09:36	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDF	62		40 - 135	09/20/18 16:22	09/25/18 09:36	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	6.6		0.1	0.1	%			09/24/18 10:27	1

Toxicity Summary

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 320-43353-1

Client Sample ID: DSPE-1-0.5-20180919

Lab Sample ID: 320-43353-2

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005		Method
						TEF	TEQ	
2,3,7,8-TCDD	5.0	J	11	0.47	pg/g	1	5.0	8290
1,2,3,7,8-PeCDD	15	J	53	1.5	pg/g	1	15	8290
1,2,3,7,8-PeCDF	250	B	53	5.4	pg/g	0.03	7.5	8290
2,3,4,7,8-PeCDF	130		53	5.4	pg/g	0.3	39	8290
1,2,3,4,7,8-HxCDD	14	J B	53	0.49	pg/g	0.1	1.4	8290
1,2,3,6,7,8-HxCDD	28	J	53	0.47	pg/g	0.1	2.8	8290
1,2,3,7,8,9-HxCDD	27	J	53	0.44	pg/g	0.1	2.7	8290
1,2,3,4,7,8-HxCDF	510		53	15	pg/g	0.1	51	8290
1,2,3,6,7,8-HxCDF	380	B	53	14	pg/g	0.1	38	8290
2,3,4,6,7,8-HxCDF	74	B	53	14	pg/g	0.1	7.4	8290
1,2,3,7,8,9-HxCDF	62	B	53	15	pg/g	0.1	6.2	8290
1,2,3,4,6,7,8-HpCDD	94	B	53	0.55	pg/g	0.01	0.94	8290
1,2,3,4,6,7,8-HpCDF	1500	B	53	6.7	pg/g	0.01	15	8290
1,2,3,4,7,8,9-HpCDF	580	B	53	8.0	pg/g	0.01	5.8	8290
OCDD	110	B	110	0.42	pg/g	0.0003	0.033	8290
OCDF	4100	B	110	2.3	pg/g	0.0003	1.2	8290
2,3,7,8-TCDF - RA	120	B	11	4.0	pg/g	0.1	12	8290

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005		Method
						TEF	TEQ	
Total Dioxin/Furan TEQ					pg/g		210	TEQ

Client Sample ID: DSPE-1-1.5-20180919

Lab Sample ID: 320-43353-4

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005		Method
						TEF	TEQ	
2,3,7,8-TCDD	4.1	J q	11	0.59	pg/g	1	4.1	8290
1,2,3,7,8-PeCDD	17	J	53	1.3	pg/g	1	17	8290
1,2,3,7,8-PeCDF	200	B	53	4.4	pg/g	0.03	6.0	8290
2,3,4,7,8-PeCDF	100		53	4.4	pg/g	0.3	30	8290
1,2,3,4,7,8-HxCDD	12	J B	53	0.55	pg/g	0.1	1.2	8290
1,2,3,6,7,8-HxCDD	36	J q	53	0.53	pg/g	0.1	3.6	8290
1,2,3,7,8,9-HxCDD	28	J	53	0.50	pg/g	0.1	2.8	8290
1,2,3,4,7,8-HxCDF	420		53	13	pg/g	0.1	42	8290
1,2,3,6,7,8-HxCDF	320	B	53	12	pg/g	0.1	32	8290
2,3,4,6,7,8-HxCDF	62	B	53	12	pg/g	0.1	6.2	8290
1,2,3,7,8,9-HxCDF	52	J B	53	13	pg/g	0.1	5.2	8290
1,2,3,4,6,7,8-HpCDD	76	B	53	0.49	pg/g	0.01	0.76	8290
1,2,3,4,6,7,8-HpCDF	1200	B	53	5.6	pg/g	0.01	12	8290
1,2,3,4,7,8,9-HpCDF	440	B	53	6.6	pg/g	0.01	4.4	8290
OCDD	86	J B	110	0.39	pg/g	0.0003	0.026	8290
OCDF	2900	B	110	1.9	pg/g	0.0003	0.87	8290

TEF Reference:

WHO 2005 = World Health Organization (WHO) 2005 TEF, Dioxins, Furans and PCB Congeners

Note: The analytes PCB-156 and PCB-157 coelute as a single peak.

TestAmerica Sacramento

Toxicity Summary

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 320-43353-1

Client Sample ID: DSPE-1-1.5-20180919 (Continued)

Lab Sample ID: 320-43353-4

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005		Method
						TEF	TEQ	
2,3,7,8-TCDF - RA	100	B	11	3.5	pg/g	0.1	10	8290
						WHO 2005 ND = 1/2 EDL		
Total Dioxin/Furan TEQ			NONE	NONE	pg/g		180	TEQ

Client Sample ID: DSPE-2-0.5-20180919

Lab Sample ID: 320-43353-9

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005		Method
						TEF	TEQ	
2,3,7,8-TCDD	2.0	J q	10	0.29	pg/g	1	2.0	8290
1,2,3,7,8-PeCDD	5.7	J	51	0.68	pg/g	1	5.7	8290
1,2,3,7,8-PeCDF	90	B	51	2.7	pg/g	0.03	2.7	8290
2,3,4,7,8-PeCDF	42	J	51	2.7	pg/g	0.3	13	8290
1,2,3,4,7,8-HxCDD	5.7	J B	51	0.32	pg/g	0.1	0.57	8290
1,2,3,6,7,8-HxCDD	15	J	51	0.31	pg/g	0.1	1.5	8290
1,2,3,7,8,9-HxCDD	13	J	51	0.29	pg/g	0.1	1.3	8290
1,2,3,4,7,8-HxCDF	180		51	5.8	pg/g	0.1	18	8290
1,2,3,6,7,8-HxCDF	140	B	51	5.6	pg/g	0.1	14	8290
2,3,4,6,7,8-HxCDF	28	J B	51	5.7	pg/g	0.1	2.8	8290
1,2,3,7,8,9-HxCDF	27	J B	51	6.0	pg/g	0.1	2.7	8290
1,2,3,4,6,7,8-HpCDD	36	J B	51	0.30	pg/g	0.01	0.36	8290
1,2,3,4,6,7,8-HpCDF	610	B	51	2.9	pg/g	0.01	6.1	8290
1,2,3,4,7,8,9-HpCDF	220	B	51	3.4	pg/g	0.01	2.2	8290
OCDD	43	J B	100	0.25	pg/g	0.0003	0.013	8290
OCDF	1600	B	100	1.1	pg/g	0.0003	0.48	8290
2,3,7,8-TCDF - RA	48	B	10	2.1	pg/g	0.1	4.8	8290
						WHO 2005 ND = 1/2 EDL		
Total Dioxin/Furan TEQ			NONE	NONE	pg/g		78	TEQ

Client Sample ID: DSPE-2-1.5-20180919

Lab Sample ID: 320-43353-10

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005		Method
						TEF	TEQ	
2,3,7,8-TCDD	0.69	J	10	0.36	pg/g	1	0.69	8290
1,2,3,7,8-PeCDD	3.2	J q	52	0.51	pg/g	1	3.2	8290
1,2,3,7,8-PeCDF	60	B	52	1.9	pg/g	0.03	1.8	8290
2,3,4,7,8-PeCDF	29	J	52	1.9	pg/g	0.3	8.7	8290
1,2,3,4,7,8-HxCDD	4.0	J B	52	0.22	pg/g	0.1	0.40	8290

TEF Reference:

WHO 2005 = World Health Organization (WHO) 2005 TEF, Dioxins, Furans and PCB Congeners

Note: The analytes PCB-156 and PCB-157 coelute as a single peak.

TestAmerica Sacramento

Toxicity Summary

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 320-43353-1

Client Sample ID: DSPE-2-1.5-20180919 (Continued)

Lab Sample ID: 320-43353-10

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005		Method
						TEF	TEQ	
1,2,3,6,7,8-HxCDD	6.4	J	52	0.21	pg/g	0.1	0.64	8290
1,2,3,7,8,9-HxCDD	6.2	J	52	0.20	pg/g	0.1	0.62	8290
1,2,3,4,7,8-HxCDF	110		52	4.1	pg/g	0.1	11	8290
1,2,3,6,7,8-HxCDF	87	B	52	4.0	pg/g	0.1	8.7	8290
2,3,4,6,7,8-HxCDF	18	J B	52	4.0	pg/g	0.1	1.8	8290
1,2,3,7,8,9-HxCDF	23	J B	52	4.2	pg/g	0.1	2.3	8290
1,2,3,4,6,7,8-HpCDD	23	J B	52	0.25	pg/g	0.01	0.23	8290
1,2,3,4,6,7,8-HpCDF	390	B	52	1.9	pg/g	0.01	3.9	8290
1,2,3,4,7,8,9-HpCDF	140	B	52	2.3	pg/g	0.01	1.4	8290
OCDD	37	J B	100	0.23	pg/g	0.0003	0.011	8290
OCDF	1000	B	100	0.74	pg/g	0.0003	0.30	8290
2,3,7,8-TCDF - RA	34	B	10	1.7	pg/g	0.1	3.4	8290

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005		Method
						TEF	TEQ	
Total Dioxin/Furan TEQ					pg/g		49	TEQ

Client Sample ID: DSPE-3-0.5-20180919

Lab Sample ID: 320-43353-14

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005		Method
						TEF	TEQ	
2,3,7,8-TCDD	11		9.9	0.60	pg/g	1	11	8290
1,2,3,7,8-PeCDD	34	J	49	3.5	pg/g	1	34	8290
1,2,3,7,8-PeCDF	680	B	49	14	pg/g	0.03	20	8290
2,3,4,7,8-PeCDF	340		49	14	pg/g	0.3	100	8290
1,2,3,4,7,8-HxCDD	29	J B	49	0.87	pg/g	0.1	2.9	8290
1,2,3,6,7,8-HxCDD	61		49	0.83	pg/g	0.1	6.1	8290
1,2,3,7,8,9-HxCDD	52		49	0.78	pg/g	0.1	5.2	8290
1,2,3,4,7,8-HxCDF	1300		49	37	pg/g	0.1	130	8290
1,2,3,6,7,8-HxCDF	1100	B	49	36	pg/g	0.1	110	8290
2,3,4,6,7,8-HxCDF	200	B	49	37	pg/g	0.1	20	8290
1,2,3,7,8,9-HxCDF	170	B	49	38	pg/g	0.1	17	8290
1,2,3,4,6,7,8-HpCDD	240	B	49	1.1	pg/g	0.01	2.4	8290
1,2,3,4,6,7,8-HpCDF	4300	B	49	17	pg/g	0.01	43	8290
1,2,3,4,7,8,9-HpCDF	1700	B	49	20	pg/g	0.01	17	8290
OCDD	270	B	99	0.53	pg/g	0.0003	0.081	8290
OCDF	11000	B	99	4.9	pg/g	0.0003	3.3	8290
2,3,7,8-TCDF - RA	310	B	9.9	5.4	pg/g	0.1	31	8290

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005		Method
						TEF	TEQ	
Total Dioxin/Furan TEQ					pg/g		550	TEQ

TEF Reference:

WHO 2005 = World Health Organization (WHO) 2005 TEF, Dioxins, Furans and PCB Congeners

Note: The analytes PCB-156 and PCB-157 coelute as a single peak.

TestAmerica Sacramento

Toxicity Summary

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 320-43353-1

Client Sample ID: DSPE-3-1.5-20180919

Lab Sample ID: 320-43353-16

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005		Method
						TEF	TEQ	
2,3,7,8-TCDD	240		11	6.0	pg/g	1	240	8290
1,2,3,7,8-PeCDD	890	G	68	68	pg/g	1	890	8290
1,2,3,7,8-PeCDF	14000	G B	280	280	pg/g	0.03	420	8290
2,3,4,7,8-PeCDF	7100	G	280	280	pg/g	0.3	2100	8290
1,2,3,4,7,8-HxCDD	730	B	54	14	pg/g	0.1	73	8290
1,2,3,6,7,8-HxCDD	1500		54	13	pg/g	0.1	150	8290
1,2,3,7,8,9-HxCDD	1400		54	12	pg/g	0.1	140	8290
1,2,3,6,7,8-HxCDF	21000	G B	700	700	pg/g	0.1	2100	8290
2,3,4,6,7,8-HxCDF	4100	G B	710	710	pg/g	0.1	410	8290
1,2,3,7,8,9-HxCDF	3700	G B	740	740	pg/g	0.1	370	8290
1,2,3,4,6,7,8-HpCDD	5300	B	54	16	pg/g	0.01	53	8290
1,2,3,4,7,8-HxCDF - DL	30000	G	800	800	pg/g	0.1	3000	8290
1,2,3,4,6,7,8-HpCDF - DL	87000	B	540	320	pg/g	0.01	870	8290
1,2,3,4,7,8,9-HpCDF - DL	34000	B	540	380	pg/g	0.01	340	8290
OCDD - DL	6200	B	1100	12	pg/g	0.0003	1.9	8290
OCDF - DL	250000	B	1100	100	pg/g	0.0003	75	8290
2,3,7,8-TCDF - RA	7400	E G B	59	59	pg/g	0.1	740	8290

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005		Method
						TEF	TEQ	
Total Dioxin/Furan TEQ					pg/g		12000	TEQ

Client Sample ID: DSPE-4-1.5-20180919

Lab Sample ID: 320-43353-19

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005		Method
						TEF	TEQ	
2,3,7,8-TCDD	16		10	0.85	pg/g	1	16	8290
1,2,3,7,8-PeCDD	50	J	52	4.0	pg/g	1	50	8290
1,2,3,7,8-PeCDF	890	B	52	17	pg/g	0.03	27	8290
2,3,4,7,8-PeCDF	460		52	17	pg/g	0.3	140	8290
1,2,3,4,7,8-HxCDD	42	J B	52	1.1	pg/g	0.1	4.2	8290
1,2,3,6,7,8-HxCDD	89		52	1.0	pg/g	0.1	8.9	8290
1,2,3,7,8,9-HxCDD	75		52	0.96	pg/g	0.1	7.5	8290
1,2,3,4,7,8-HxCDF	1700		52	45	pg/g	0.1	170	8290
1,2,3,6,7,8-HxCDF	1400	B	52	44	pg/g	0.1	140	8290
2,3,4,6,7,8-HxCDF	270	B	52	44	pg/g	0.1	27	8290
1,2,3,7,8,9-HxCDF	230	B	52	46	pg/g	0.1	23	8290
1,2,3,4,6,7,8-HpCDD	330	B	52	1.3	pg/g	0.01	3.3	8290
1,2,3,4,6,7,8-HpCDF	5600	B	52	20	pg/g	0.01	56	8290
1,2,3,4,7,8,9-HpCDF	2200	B	52	24	pg/g	0.01	22	8290
OCDD	380	B	100	0.56	pg/g	0.0003	0.11	8290
OCDF	16000	B	100	5.3	pg/g	0.0003	4.8	8290

TEF Reference:

WHO 2005 = World Health Organization (WHO) 2005 TEF, Dioxins, Furans and PCB Congeners

Note: The analytes PCB-156 and PCB-157 coelute as a single peak.

TestAmerica Sacramento

Toxicity Summary

Client: Ramboll US Corporation
 Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 320-43353-1

Client Sample ID: DSPE-4-1.5-20180919 (Continued)

Lab Sample ID: 320-43353-19

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005		Method
						TEF	TEQ	
2,3,7,8-TCDF - RA	450	B	10	6.5	pg/g	0.1	45	8290
						WHO 2005 ND = 1/2 EDL		
Analyte	Result	Qualifier	NONE	NONE	Unit	TEF	TEQ	Method
Total Dioxin/Furan TEQ					pg/g		740	TEQ

Client Sample ID: DSPE-5-1.5-20180919

Lab Sample ID: 320-43353-23

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005		Method
						TEF	TEQ	
2,3,7,8-TCDD	0.71	J q	11	0.26	pg/g	1	0.71	8290
1,2,3,7,8-PeCDD	1.2	J	54	0.29	pg/g	1	1.2	8290
1,2,3,7,8-PeCDF	12	J B	54	0.57	pg/g	0.03	0.36	8290
2,3,4,7,8-PeCDF	5.6	J	54	0.57	pg/g	0.3	1.7	8290
1,2,3,4,7,8-HxCDD	2.2	J B	54	0.26	pg/g	0.1	0.22	8290
1,2,3,6,7,8-HxCDD	2.2	J	54	0.25	pg/g	0.1	0.22	8290
1,2,3,7,8,9-HxCDD	1.7	J	54	0.23	pg/g	0.1	0.17	8290
1,2,3,4,7,8-HxCDF	24	J	54	1.1	pg/g	0.1	2.4	8290
1,2,3,6,7,8-HxCDF	14	J B	54	1.1	pg/g	0.1	1.4	8290
2,3,4,6,7,8-HxCDF	2.4	J q B	54	1.1	pg/g	0.1	0.24	8290
1,2,3,7,8,9-HxCDF	8.1	J B	54	1.1	pg/g	0.1	0.81	8290
1,2,3,4,6,7,8-HpCDD	5.9	J B	54	0.20	pg/g	0.01	0.059	8290
1,2,3,4,6,7,8-HpCDF	56	B	54	0.53	pg/g	0.01	0.56	8290
1,2,3,4,7,8,9-HpCDF	24	J B	54	0.63	pg/g	0.01	0.24	8290
OCDD	14	J B	110	0.22	pg/g	0.0003	0.0042	8290
OCDF	150	B	110	0.37	pg/g	0.0003	0.045	8290
2,3,7,8-TCDF - RA	7.7	J B	11	1.6	pg/g	0.1	0.77	8290
						WHO 2005 ND = 1/2 EDL		
Analyte	Result	Qualifier	NONE	NONE	Unit	TEF	TEQ	Method
Total Dioxin/Furan TEQ					pg/g		11	TEQ

TEF Reference:

WHO 2005 = World Health Organization (WHO) 2005 TEF, Dioxins, Furans and PCB Congeners

Note: The analytes PCB-156 and PCB-157 coelute as a single peak.

TestAmerica Sacramento

Isotope Dilution Summary

Client: Ramboll US Corporation
 Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 320-43353-1

Method: 8290 - Dioxins and Furans (HRGC/HRMS)

Matrix: Solid

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	Percent Isotope Dilution Recovery (Acceptance Limits)							
		TCDD (40-135)	TCDF (40-135)	PeCDD (40-135)	PeCDF (40-135)	HxDD (40-135)	HxCDF (40-135)	HpCDD (40-135)	HpCDF (40-135)
320-43353-2	DSPE-1-0.5-20180919	76	68	72	69	80	79	92	83
320-43353-2 - RA	DSPE-1-0.5-20180919		71						
320-43353-4	DSPE-1-1.5-20180919	69	59	63	60	72	68	80	71
320-43353-4 - RA	DSPE-1-1.5-20180919		60						
320-43353-9	DSPE-2-0.5-20180919	79	67	74	69	77	79	89	80
320-43353-9 - RA	DSPE-2-0.5-20180919		73						
320-43353-10	DSPE-2-1.5-20180919	72	63	67	63	73	70	80	73
320-43353-10 - RA	DSPE-2-1.5-20180919		66						
320-43353-14	DSPE-3-0.5-20180919	70	61	66	61	70	69	80	72
320-43353-14 - RA	DSPE-3-0.5-20180919		67						
320-43353-16	DSPE-3-1.5-20180919	70	63	65	63	67	69	86	
320-43353-16 - DL	DSPE-3-1.5-20180919						70		71
320-43353-16 - RA	DSPE-3-1.5-20180919		68						
320-43353-19	DSPE-4-1.5-20180919	72	64	65	61	70	71	86	77
320-43353-19 - RA	DSPE-4-1.5-20180919		68						
320-43353-23	DSPE-5-1.5-20180919	71	63	66	61	67	67	81	71
320-43353-23 - RA	DSPE-5-1.5-20180919		62						
LCS 320-246867/2-A	Lab Control Sample	74	64	72	68	76	71	87	75
LCSD 320-246867/3-A	Lab Control Sample Dup	76	66	76	66	79	67	86	77
MB 320-246867/1-A	Method Blank	74	66	71	67	73	69	76	72

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	Percent Isotope Dilution Recovery (Acceptance Limits)							
		OCDD (40-135)							
320-43353-2	DSPE-1-0.5-20180919	81							
320-43353-2 - RA	DSPE-1-0.5-20180919								
320-43353-4	DSPE-1-1.5-20180919	69							
320-43353-4 - RA	DSPE-1-1.5-20180919								
320-43353-9	DSPE-2-0.5-20180919	77							
320-43353-9 - RA	DSPE-2-0.5-20180919								
320-43353-10	DSPE-2-1.5-20180919	70							
320-43353-10 - RA	DSPE-2-1.5-20180919								
320-43353-14	DSPE-3-0.5-20180919	71							
320-43353-14 - RA	DSPE-3-0.5-20180919								
320-43353-16	DSPE-3-1.5-20180919								
320-43353-16 - DL	DSPE-3-1.5-20180919	68							
320-43353-16 - RA	DSPE-3-1.5-20180919								
320-43353-19	DSPE-4-1.5-20180919	78							
320-43353-19 - RA	DSPE-4-1.5-20180919								
320-43353-23	DSPE-5-1.5-20180919	69							
320-43353-23 - RA	DSPE-5-1.5-20180919								
LCS 320-246867/2-A	Lab Control Sample	74							
LCSD 320-246867/3-A	Lab Control Sample Dup	74							
MB 320-246867/1-A	Method Blank	58							

Surrogate Legend

- TCDD = 13C-2,3,7,8-TCDD
- TCDF = 13C-2,3,7,8-TCDF
- PeCDD = 13C-1,2,3,7,8-PeCDD
- PeCDF = 13C-1,2,3,7,8-PeCDF

Isotope Dilution Summary

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 320-43353-1

HxCDD = 13C-1,2,3,6,7,8-HxCDD
HxCDF = 13C-1,2,3,4,7,8-HxCDF
HpCDD = 13C-1,2,3,4,6,7,8-HpCDD
HpCDF = 13C-1,2,3,4,6,7,8-HpCDF
OCDD = 13C-OCDD

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16

QC Sample Results

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 320-43353-1

Method: 8290 - Dioxins and Furans (HRGC/HRMS)

Lab Sample ID: MB 320-246867/1-A
Matrix: Solid
Analysis Batch: 247162

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 246867

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		1.0	0.045	pg/g		09/20/18 16:22	09/22/18 16:55	1
2,3,7,8-TCDF	0.148	J	1.0	0.025	pg/g		09/20/18 16:22	09/22/18 16:55	1
1,2,3,7,8-PeCDD	ND		5.0	0.033	pg/g		09/20/18 16:22	09/22/18 16:55	1
1,2,3,7,8-PeCDF	0.131	J	5.0	0.028	pg/g		09/20/18 16:22	09/22/18 16:55	1
2,3,4,7,8-PeCDF	ND		5.0	0.029	pg/g		09/20/18 16:22	09/22/18 16:55	1
1,2,3,4,7,8-HxCDD	0.122	J q	5.0	0.017	pg/g		09/20/18 16:22	09/22/18 16:55	1
1,2,3,6,7,8-HxCDD	ND		5.0	0.016	pg/g		09/20/18 16:22	09/22/18 16:55	1
1,2,3,7,8,9-HxCDD	ND		5.0	0.015	pg/g		09/20/18 16:22	09/22/18 16:55	1
1,2,3,4,7,8-HxCDF	ND		5.0	0.047	pg/g		09/20/18 16:22	09/22/18 16:55	1
1,2,3,6,7,8-HxCDF	0.0746	J q	5.0	0.046	pg/g		09/20/18 16:22	09/22/18 16:55	1
2,3,4,6,7,8-HxCDF	0.0536	J q	5.0	0.047	pg/g		09/20/18 16:22	09/22/18 16:55	1
1,2,3,7,8,9-HxCDF	0.618	J	5.0	0.048	pg/g		09/20/18 16:22	09/22/18 16:55	1
1,2,3,4,6,7,8-HpCDD	0.163	J	5.0	0.017	pg/g		09/20/18 16:22	09/22/18 16:55	1
1,2,3,4,6,7,8-HpCDF	0.136	J	5.0	0.016	pg/g		09/20/18 16:22	09/22/18 16:55	1
1,2,3,4,7,8,9-HpCDF	0.357	J	5.0	0.019	pg/g		09/20/18 16:22	09/22/18 16:55	1
OCDD	0.884	J	10	0.030	pg/g		09/20/18 16:22	09/22/18 16:55	1
OCDF	0.343	J	10	0.073	pg/g		09/20/18 16:22	09/22/18 16:55	1
Total TCDD	ND		1.0	0.045	pg/g		09/20/18 16:22	09/22/18 16:55	1
Total TCDF	0.223	J q	1.0	0.025	pg/g		09/20/18 16:22	09/22/18 16:55	1
Total PeCDD	ND		5.0	0.033	pg/g		09/20/18 16:22	09/22/18 16:55	1
Total PeCDF	0.200	J q	5.0	0.028	pg/g		09/20/18 16:22	09/22/18 16:55	1
Total HxCDD	0.122	J q	5.0	0.016	pg/g		09/20/18 16:22	09/22/18 16:55	1
Total HxCDF	0.907	J q	5.0	0.047	pg/g		09/20/18 16:22	09/22/18 16:55	1
Total HpCDD	0.341	J	5.0	0.017	pg/g		09/20/18 16:22	09/22/18 16:55	1
Total HpCDF	0.555	J q	5.0	0.017	pg/g		09/20/18 16:22	09/22/18 16:55	1

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	74		40 - 135	09/20/18 16:22	09/22/18 16:55	1
13C-2,3,7,8-TCDF	66		40 - 135	09/20/18 16:22	09/22/18 16:55	1
13C-1,2,3,7,8-PeCDD	71		40 - 135	09/20/18 16:22	09/22/18 16:55	1
13C-1,2,3,7,8-PeCDF	67		40 - 135	09/20/18 16:22	09/22/18 16:55	1
13C-1,2,3,6,7,8-HxCDD	73		40 - 135	09/20/18 16:22	09/22/18 16:55	1
13C-1,2,3,4,7,8-HxCDF	69		40 - 135	09/20/18 16:22	09/22/18 16:55	1
13C-1,2,3,4,6,7,8-HpCDD	76		40 - 135	09/20/18 16:22	09/22/18 16:55	1
13C-1,2,3,4,6,7,8-HpCDF	72		40 - 135	09/20/18 16:22	09/22/18 16:55	1
13C-OCDD	58		40 - 135	09/20/18 16:22	09/22/18 16:55	1

Lab Sample ID: LCS 320-246867/2-A
Matrix: Solid
Analysis Batch: 247162

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 246867

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
2,3,7,8-TCDD	20.0	18.8		pg/g		94	60 - 138
2,3,7,8-TCDF	20.0	21.9		pg/g		110	56 - 158
1,2,3,7,8-PeCDD	100	103		pg/g		103	70 - 122
1,2,3,7,8-PeCDF	100	109		pg/g		109	69 - 134
2,3,4,7,8-PeCDF	100	100		pg/g		100	70 - 131
1,2,3,4,7,8-HxCDD	100	104		pg/g		104	60 - 138

TestAmerica Sacramento

QC Sample Results

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 320-43353-1

Method: 8290 - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCS 320-246867/2-A
Matrix: Solid
Analysis Batch: 247162

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 246867

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
1,2,3,6,7,8-HxCDD	100	110		pg/g		110	68 - 136
1,2,3,7,8,9-HxCDD	100	106		pg/g		106	68 - 138
1,2,3,4,7,8-HxCDF	100	109		pg/g		109	74 - 128
1,2,3,6,7,8-HxCDF	100	120		pg/g		120	67 - 140
2,3,4,6,7,8-HxCDF	100	110		pg/g		110	71 - 137
1,2,3,7,8,9-HxCDF	100	114		pg/g		114	72 - 134
1,2,3,4,6,7,8-HpCDD	100	98.7		pg/g		99	71 - 128
1,2,3,4,6,7,8-HpCDF	100	108		pg/g		108	71 - 134
1,2,3,4,7,8,9-HpCDF	100	115		pg/g		115	68 - 129
OCDD	200	203		pg/g		101	70 - 128
OCDF	200	225		pg/g		113	63 - 141

Isotope Dilution	LCS LCS		Limits
	%Recovery	Qualifier	
13C-2,3,7,8-TCDD	74		40 - 135
13C-2,3,7,8-TCDF	64		40 - 135
13C-1,2,3,7,8-PeCDD	72		40 - 135
13C-1,2,3,7,8-PeCDF	68		40 - 135
13C-1,2,3,6,7,8-HxCDD	76		40 - 135
13C-1,2,3,4,7,8-HxCDF	71		40 - 135
13C-1,2,3,4,6,7,8-HpCDD	87		40 - 135
13C-1,2,3,4,6,7,8-HpCDF	75		40 - 135
13C-OCDD	74		40 - 135

Lab Sample ID: LCSD 320-246867/3-A
Matrix: Solid
Analysis Batch: 247162

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 246867

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
2,3,7,8-TCDD	20.0	18.3		pg/g		91	60 - 138	3	20
2,3,7,8-TCDF	20.0	21.9		pg/g		110	56 - 158	0	20
1,2,3,7,8-PeCDD	100	102		pg/g		102	70 - 122	1	20
1,2,3,7,8-PeCDF	100	109		pg/g		109	69 - 134	0	20
2,3,4,7,8-PeCDF	100	109		pg/g		109	70 - 131	8	20
1,2,3,4,7,8-HxCDD	100	99.1		pg/g		99	60 - 138	5	20
1,2,3,6,7,8-HxCDD	100	108		pg/g		108	68 - 136	2	20
1,2,3,7,8,9-HxCDD	100	103		pg/g		103	68 - 138	3	20
1,2,3,4,7,8-HxCDF	100	107		pg/g		107	74 - 128	2	20
1,2,3,6,7,8-HxCDF	100	126		pg/g		126	67 - 140	5	20
2,3,4,6,7,8-HxCDF	100	121		pg/g		121	71 - 137	9	20
1,2,3,7,8,9-HxCDF	100	121		pg/g		121	72 - 134	6	20
1,2,3,4,6,7,8-HpCDD	100	99.6		pg/g		100	71 - 128	1	20
1,2,3,4,6,7,8-HpCDF	100	106		pg/g		106	71 - 134	1	20
1,2,3,4,7,8,9-HpCDF	100	111		pg/g		111	68 - 129	3	20
OCDD	200	203		pg/g		101	70 - 128	0	20
OCDF	200	228		pg/g		114	63 - 141	1	20

Isotope Dilution	LCSD LCSD		Limits
	%Recovery	Qualifier	
13C-2,3,7,8-TCDD	76		40 - 135

TestAmerica Sacramento

QC Sample Results

Client: Ramboll US Corporation
 Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 320-43353-1

Method: 8290 - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCSD 320-246867/3-A
 Matrix: Solid
 Analysis Batch: 247162

Client Sample ID: Lab Control Sample Dup
 Prep Type: Total/NA
 Prep Batch: 246867

Isotope Dilution	LCSD		Limits
	%Recovery	Qualifier	
13C-2,3,7,8-TCDF	66		40 - 135
13C-1,2,3,7,8-PeCDD	76		40 - 135
13C-1,2,3,7,8-PeCDF	66		40 - 135
13C-1,2,3,6,7,8-HxCDD	79		40 - 135
13C-1,2,3,4,7,8-HxCDF	67		40 - 135
13C-1,2,3,4,6,7,8-HpCDD	86		40 - 135
13C-1,2,3,4,6,7,8-HpCDF	77		40 - 135
13C-OCDD	74		40 - 135

Method: D 2216 - Percent Moisture

Lab Sample ID: 320-43353-2 DU
 Matrix: Solid
 Analysis Batch: 247421

Client Sample ID: DSPE-1-0.5-20180919
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU	DU	Unit	D	RPD	RPD
			Result	Qualifier				Limit
Percent Moisture	5.2		5.1		%		3	20

QC Association Summary

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 320-43353-1

Specialty Organics

Prep Batch: 246867

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-43353-2	DSPE-1-0.5-20180919	Total/NA	Solid	8290	
320-43353-2 - RA	DSPE-1-0.5-20180919	Total/NA	Solid	8290	
320-43353-4	DSPE-1-1.5-20180919	Total/NA	Solid	8290	
320-43353-4 - RA	DSPE-1-1.5-20180919	Total/NA	Solid	8290	
320-43353-9	DSPE-2-0.5-20180919	Total/NA	Solid	8290	
320-43353-9 - RA	DSPE-2-0.5-20180919	Total/NA	Solid	8290	
320-43353-10	DSPE-2-1.5-20180919	Total/NA	Solid	8290	
320-43353-10 - RA	DSPE-2-1.5-20180919	Total/NA	Solid	8290	
320-43353-14	DSPE-3-0.5-20180919	Total/NA	Solid	8290	
320-43353-14 - RA	DSPE-3-0.5-20180919	Total/NA	Solid	8290	
320-43353-16	DSPE-3-1.5-20180919	Total/NA	Solid	8290	
320-43353-16 - DL	DSPE-3-1.5-20180919	Total/NA	Solid	8290	
320-43353-16 - RA	DSPE-3-1.5-20180919	Total/NA	Solid	8290	
320-43353-19	DSPE-4-1.5-20180919	Total/NA	Solid	8290	
320-43353-19 - RA	DSPE-4-1.5-20180919	Total/NA	Solid	8290	
320-43353-23	DSPE-5-1.5-20180919	Total/NA	Solid	8290	
320-43353-23 - RA	DSPE-5-1.5-20180919	Total/NA	Solid	8290	
MB 320-246867/1-A	Method Blank	Total/NA	Solid	8290	
LCS 320-246867/2-A	Lab Control Sample	Total/NA	Solid	8290	
LCSD 320-246867/3-A	Lab Control Sample Dup	Total/NA	Solid	8290	

Analysis Batch: 247162

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-43353-2	DSPE-1-0.5-20180919	Total/NA	Solid	8290	246867
320-43353-4	DSPE-1-1.5-20180919	Total/NA	Solid	8290	246867
320-43353-9	DSPE-2-0.5-20180919	Total/NA	Solid	8290	246867
320-43353-10	DSPE-2-1.5-20180919	Total/NA	Solid	8290	246867
320-43353-14	DSPE-3-0.5-20180919	Total/NA	Solid	8290	246867
MB 320-246867/1-A	Method Blank	Total/NA	Solid	8290	246867
LCS 320-246867/2-A	Lab Control Sample	Total/NA	Solid	8290	246867
LCSD 320-246867/3-A	Lab Control Sample Dup	Total/NA	Solid	8290	246867

Analysis Batch: 247483

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-43353-16	DSPE-3-1.5-20180919	Total/NA	Solid	8290	246867
320-43353-19	DSPE-4-1.5-20180919	Total/NA	Solid	8290	246867
320-43353-23	DSPE-5-1.5-20180919	Total/NA	Solid	8290	246867

Analysis Batch: 247588

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-43353-16 - DL	DSPE-3-1.5-20180919	Total/NA	Solid	8290	246867

Analysis Batch: 247643

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-43353-2 - RA	DSPE-1-0.5-20180919	Total/NA	Solid	8290	246867
320-43353-4 - RA	DSPE-1-1.5-20180919	Total/NA	Solid	8290	246867
320-43353-9 - RA	DSPE-2-0.5-20180919	Total/NA	Solid	8290	246867
320-43353-10 - RA	DSPE-2-1.5-20180919	Total/NA	Solid	8290	246867
320-43353-14 - RA	DSPE-3-0.5-20180919	Total/NA	Solid	8290	246867
320-43353-16 - RA	DSPE-3-1.5-20180919	Total/NA	Solid	8290	246867
320-43353-19 - RA	DSPE-4-1.5-20180919	Total/NA	Solid	8290	246867

TestAmerica Sacramento

QC Association Summary

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 320-43353-1

Specialty Organics (Continued)

Analysis Batch: 247643 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-43353-23 - RA	DSPE-5-1.5-20180919	Total/NA	Solid	8290	246867

General Chemistry

Analysis Batch: 247421

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-43353-2	DSPE-1-0.5-20180919	Total/NA	Solid	D 2216	
320-43353-4	DSPE-1-1.5-20180919	Total/NA	Solid	D 2216	
320-43353-9	DSPE-2-0.5-20180919	Total/NA	Solid	D 2216	
320-43353-10	DSPE-2-1.5-20180919	Total/NA	Solid	D 2216	
320-43353-14	DSPE-3-0.5-20180919	Total/NA	Solid	D 2216	
320-43353-16	DSPE-3-1.5-20180919	Total/NA	Solid	D 2216	
320-43353-19	DSPE-4-1.5-20180919	Total/NA	Solid	D 2216	
320-43353-23	DSPE-5-1.5-20180919	Total/NA	Solid	D 2216	
320-43353-2 DU	DSPE-1-0.5-20180919	Total/NA	Solid	D 2216	

Lab Chronicle

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 320-43353-1

Client Sample ID: DSPE-1-0.5-20180919

Lab Sample ID: 320-43353-2

Date Collected: 09/19/18 08:40

Matrix: Solid

Date Received: 09/20/18 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			247421	09/24/18 10:27	DPM	TAL SAC

Client Sample ID: DSPE-1-0.5-20180919

Lab Sample ID: 320-43353-2

Date Collected: 09/19/18 08:40

Matrix: Solid

Date Received: 09/20/18 09:30

Percent Solids: 94.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			1.00 g	20 uL	246867	09/20/18 16:22	SR1	TAL SAC
Total/NA	Analysis	8290		1			247162	09/22/18 19:13	AS	TAL SAC
Total/NA	Prep	8290	RA		1.00 g	20 uL	246867	09/20/18 16:22	SR1	TAL SAC
Total/NA	Analysis	8290	RA	1			247643	09/25/18 10:14	ALM	TAL SAC

Client Sample ID: DSPE-1-1.5-20180919

Lab Sample ID: 320-43353-4

Date Collected: 09/19/18 08:55

Matrix: Solid

Date Received: 09/20/18 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			247421	09/24/18 10:27	DPM	TAL SAC

Client Sample ID: DSPE-1-1.5-20180919

Lab Sample ID: 320-43353-4

Date Collected: 09/19/18 08:55

Matrix: Solid

Date Received: 09/20/18 09:30

Percent Solids: 95.1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			1.00 g	20 uL	246867	09/20/18 16:22	SR1	TAL SAC
Total/NA	Analysis	8290		1			247162	09/22/18 20:45	AS	TAL SAC
Total/NA	Prep	8290	RA		1.00 g	20 uL	246867	09/20/18 16:22	SR1	TAL SAC
Total/NA	Analysis	8290	RA	1			247643	09/25/18 11:30	ALM	TAL SAC

Client Sample ID: DSPE-2-0.5-20180919

Lab Sample ID: 320-43353-9

Date Collected: 09/19/18 10:27

Matrix: Solid

Date Received: 09/20/18 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			247421	09/24/18 10:27	DPM	TAL SAC

Client Sample ID: DSPE-2-0.5-20180919

Lab Sample ID: 320-43353-9

Date Collected: 09/19/18 10:27

Matrix: Solid

Date Received: 09/20/18 09:30

Percent Solids: 93.1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			1.05 g	20 uL	246867	09/20/18 16:22	SR1	TAL SAC

TestAmerica Sacramento

Lab Chronicle

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 320-43353-1

Client Sample ID: DSPE-2-0.5-20180919

Lab Sample ID: 320-43353-9

Date Collected: 09/19/18 10:27

Matrix: Solid

Date Received: 09/20/18 09:30

Percent Solids: 93.1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8290		1			247162	09/22/18 21:31	AS	TAL SAC
Total/NA	Prep	8290	RA		1.05 g	20 uL	246867	09/20/18 16:22	SR1	TAL SAC
Total/NA	Analysis	8290	RA	1			247643	09/25/18 12:08	ALM	TAL SAC

Client Sample ID: DSPE-2-1.5-20180919

Lab Sample ID: 320-43353-10

Date Collected: 09/19/18 10:36

Matrix: Solid

Date Received: 09/20/18 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			247421	09/24/18 10:27	DPM	TAL SAC

Client Sample ID: DSPE-2-1.5-20180919

Lab Sample ID: 320-43353-10

Date Collected: 09/19/18 10:36

Matrix: Solid

Date Received: 09/20/18 09:30

Percent Solids: 93.0

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			1.04 g	20 uL	246867	09/20/18 16:22	SR1	TAL SAC
Total/NA	Analysis	8290		1			247162	09/22/18 22:17	AS	TAL SAC
Total/NA	Prep	8290	RA		1.04 g	20 uL	246867	09/20/18 16:22	SR1	TAL SAC
Total/NA	Analysis	8290	RA	1			247643	09/25/18 12:46	ALM	TAL SAC

Client Sample ID: DSPE-3-0.5-20180919

Lab Sample ID: 320-43353-14

Date Collected: 09/19/18 11:23

Matrix: Solid

Date Received: 09/20/18 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			247421	09/24/18 10:27	DPM	TAL SAC

Client Sample ID: DSPE-3-0.5-20180919

Lab Sample ID: 320-43353-14

Date Collected: 09/19/18 11:23

Matrix: Solid

Date Received: 09/20/18 09:30

Percent Solids: 94.5

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			1.07 g	20 uL	246867	09/20/18 16:22	SR1	TAL SAC
Total/NA	Analysis	8290		1			247162	09/22/18 23:03	AS	TAL SAC
Total/NA	Prep	8290	RA		1.07 g	20 uL	246867	09/20/18 16:22	SR1	TAL SAC
Total/NA	Analysis	8290	RA	1			247643	09/25/18 13:24	ALM	TAL SAC

TestAmerica Sacramento

Lab Chronicle

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 320-43353-1

Client Sample ID: DSPE-3-1.5-20180919

Lab Sample ID: 320-43353-16

Date Collected: 09/19/18 11:40

Matrix: Solid

Date Received: 09/20/18 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			247421	09/24/18 10:27	DPM	TAL SAC

Client Sample ID: DSPE-3-1.5-20180919

Lab Sample ID: 320-43353-16

Date Collected: 09/19/18 11:40

Matrix: Solid

Date Received: 09/20/18 09:30

Percent Solids: 92.7

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			1.00 g	20 uL	246867	09/20/18 16:22	SR1	TAL SAC
Total/NA	Analysis	8290		1			247483	09/23/18 09:31	AS	TAL SAC
Total/NA	Prep	8290	DL		1.00 g	20 uL	246867	09/20/18 16:22	SR1	TAL SAC
Total/NA	Analysis	8290	DL	10			247588	09/24/18 22:09	AS	TAL SAC
Total/NA	Prep	8290	RA		1.00 g	20 uL	246867	09/20/18 16:22	SR1	TAL SAC
Total/NA	Analysis	8290	RA	1			247643	09/25/18 15:17	ALM	TAL SAC

Client Sample ID: DSPE-4-1.5-20180919

Lab Sample ID: 320-43353-19

Date Collected: 09/19/18 14:45

Matrix: Solid

Date Received: 09/20/18 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			247421	09/24/18 10:27	DPM	TAL SAC

Client Sample ID: DSPE-4-1.5-20180919

Lab Sample ID: 320-43353-19

Date Collected: 09/19/18 14:45

Matrix: Solid

Date Received: 09/20/18 09:30

Percent Solids: 96.1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			1.01 g	20 uL	246867	09/20/18 16:22	SR1	TAL SAC
Total/NA	Analysis	8290		1			247483	09/23/18 07:13	AS	TAL SAC
Total/NA	Prep	8290	RA		1.01 g	20 uL	246867	09/20/18 16:22	SR1	TAL SAC
Total/NA	Analysis	8290	RA	1			247643	09/25/18 14:01	ALM	TAL SAC

Client Sample ID: DSPE-5-1.5-20180919

Lab Sample ID: 320-43353-23

Date Collected: 09/19/18 15:30

Matrix: Solid

Date Received: 09/20/18 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			247421	09/24/18 10:27	DPM	TAL SAC

TestAmerica Sacramento

Lab Chronicle

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 320-43353-1

Client Sample ID: DSPE-5-1.5-20180919

Lab Sample ID: 320-43353-23

Date Collected: 09/19/18 15:30

Matrix: Solid

Date Received: 09/20/18 09:30

Percent Solids: 93.4

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			1.00 g	20 uL	246867	09/20/18 16:22	SR1	TAL SAC
Total/NA	Analysis	8290		1			247483	09/23/18 07:59	AS	TAL SAC
Total/NA	Prep	8290	RA		1.00 g	20 uL	246867	09/20/18 16:22	SR1	TAL SAC
Total/NA	Analysis	8290	RA	1			247643	09/25/18 09:36	ALM	TAL SAC

Laboratory References:

TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

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Accreditation/Certification Summary

Client: Ramboll US Corporation
 Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 320-43353-1

Laboratory: TestAmerica Sacramento

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska (UST)	State Program	10	17-020	01-20-21
ANAB	DoD ELAP		L2468	01-20-21
Arizona	State Program	9	AZ0708	08-11-19
Arkansas DEQ	State Program	6	88-0691	06-17-19
California	State Program	9	2897	01-31-19
Colorado	State Program	8	CA00044	08-31-19
Connecticut	State Program	1	PH-0691	06-30-19
Florida	NELAP	4	E87570	06-30-19
Georgia	State Program	4	N/A	01-28-19
Hawaii	State Program	9	N/A	01-29-19
Illinois	NELAP	5	200060	03-17-19
Kansas	NELAP	7	E-10375	10-31-18
Louisiana	NELAP	6	30612	06-30-19
Maine	State Program	1	CA0004	04-14-20
Michigan	State Program	5	9947	01-31-20
Nevada	State Program	9	CA00044	07-31-19
New Hampshire	NELAP	1	2997	04-18-19
New Jersey	NELAP	2	CA005	06-30-19
New York	NELAP	2	11666	03-31-19
Oregon	NELAP	10	4040	01-29-19
Pennsylvania	NELAP	3	68-01272	03-31-19
Texas	NELAP	6	T104704399	05-31-19
US Fish & Wildlife	Federal		LE148388-0	07-31-19
USDA	Federal		P330-18-00239	01-17-21
USEPA UCMR	Federal	1	CA00044	11-06-18
Utah	NELAP	8	CA00044	02-28-19
Vermont	State Program	1	VT-4040	04-30-19
Virginia	NELAP	3	460278	03-14-19
Washington	State Program	10	C581	05-05-19
West Virginia (DW)	State Program	3	9930C	12-31-18
Wyoming	State Program	8	8TMS-L	01-28-19

Laboratory: TestAmerica Irvine

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska	State Program	10	CA01531	06-30-19
Arizona	State Program	9	AZ0671	10-14-18 *
California	LA Cty Sanitation Districts	9	10256	06-30-19
California	State Program	9	CA ELAP 2706	06-30-19
Guam	State Program	9	Cert. No. 17-003R	01-23-19
Hawaii	State Program	9	N/A	01-29-19
Kansas	NELAP	7	E-10420	07-31-19
Nevada	State Program	9	CA015312018-1	07-31-19
New Mexico	State Program	6	N/A	01-29-19
Oregon	NELAP	10	4028	01-29-19
US Fish & Wildlife	Federal		058448	07-31-19
USDA	Federal		P330-15-00184	07-09-21
Washington	State Program	10	C900	09-03-18 *

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Method Summary

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 320-43353-1

Method	Method Description	Protocol	Laboratory
8290	Dioxins and Furans (HRGC/HRMS)	SW846	TAL SAC
TEQ	Total TEQ Calculation	TAL SOP	TAL SAC
D 2216	Percent Moisture	ASTM	TAL SAC
8290	Soxhlet Extraction of Dioxins and Furans	SW846	TAL SAC

Protocol References:

ASTM = ASTM International

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Sample Summary

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 320-43353-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
320-43353-2	DSPE-1-0.5-20180919	Solid	09/19/18 08:40	09/20/18 09:30
320-43353-4	DSPE-1-1.5-20180919	Solid	09/19/18 08:55	09/20/18 09:30
320-43353-9	DSPE-2-0.5-20180919	Solid	09/19/18 10:27	09/20/18 09:30
320-43353-10	DSPE-2-1.5-20180919	Solid	09/19/18 10:36	09/20/18 09:30
320-43353-14	DSPE-3-0.5-20180919	Solid	09/19/18 11:23	09/20/18 09:30
320-43353-16	DSPE-3-1.5-20180919	Solid	09/19/18 11:40	09/20/18 09:30
320-43353-19	DSPE-4-1.5-20180919	Solid	09/19/18 14:45	09/20/18 09:30
320-43353-23	DSPE-5-1.5-20180919	Solid	09/19/18 15:30	09/20/18 09:30

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TestAmerica Irvine Sacramento
 17461 Berian Ave Suite 100
 Irvine, CA 92614
 Phone: 949.261.1022 Fax:

Chain of Custody Record

138873

TestAmerica
 THE LEADER IN ENVIRONMENTAL TESTING
 TestAmerica Laboratories, Inc.
 TAL-8210 (07/13)

Regulatory Program: DW NPDES RCRA Other:

Client Contact: **Ramboll**
 Company Name: **Ramboll**
 Address: **2200 Powell St, Suite 700**
 City/State/Zip: **Emeryville, CA, 94608**
 Phone: **510-655-7400**
 Fax: **510-655-7400**
 Project Name: **Dioxin Pre-excavation Soil Sampling**
 Site: **MERT**
 PO # **169000641-012**

Project Manager: **Don Clark**
 Tel/Fax: **510-299-7036**
 Analysis Turnaround Time: CALENDAR DAYS WORKING DAYS
 TAT if different from Below: **5 days**
 2 weeks
 1 week
 2 days
 1 day

Site Contact: **Brandon Keenan** Date: **09/19/2018**
 Lab Contact: **Patty Matry** Carrier: **1** of **5** COCs
 Sampler: **BK**
 For Lab Use Only:
 Walk-in Client:
 Lab Sampling:
 Job / SDG No.:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Sample Specific Notes:	
						Filtered Sample (Y/N)	Perform MS/MSD (Y/N)
DSPE-1-FB-20180919	09/19	0800	GC	SO	1	X	
DSPE-1-0.5-20180919	"	0840	GC	SO	11	X	
DSPE-100-0.5-20180919	"	0840	GC	SO	11	X	
DSPE-1-1.5-20180919	"	0855	GC	SO	11	X	
DSPE-1-2.0-20180919	"	0912	GC	SO	11	X	
DSPE-1-3.0-20180919	"	0934	GC	SO	11	X	
DSPE-1-4.0-20180919	"	0950	GC	SO	11	X	
DSPE-1-EB-20180919	"	0855	GC	SO	11	X	
DSPE-2-0.5-20180919	"	1027	GC	SO	11	X	
DSPE-2-1.5-20180919	"	1036	GC	SO	11	X	
DSPE-2-2.0-20180919	"	1043	GC	SO	11	X	
DSPE-2-3.0-20180919	"	1049	GC	SO	11	X	



Preservation Used: 1= Ice, 2= HCl, 3= H2SO4, 4= HNO3, 5= NaOH, 6= Other

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return to Client Disposal by Lab Archive for _____ Months

Special Instructions/QC Requirements & Comments:

Custody Seal No.: **18.9**

Relinquished by: **B.K.P.** Date/Time: **09/19/18**
 Relinquished by: **JAM** Date/Time: **9/18/18 13:00**
 Relinquished by: **JAM** Date/Time: **9/20-18 0930**

Received by: **JAM** Date/Time: **9/19/18 1620**
 Received by: **Felix** Date/Time: **9-19-18 1620**
 Received in Laboratory by: **JAM** Date/Time: **9-20-18 0930**

Company: **Ramboll**
 Company: **TALUS**
 Company: **TALUS**

Therm ID No.: **517**
 Cooler Temp. (°C): **5.4**
 Obs'd: **5.7**
 Corrd: **5.2**



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 17461 Merian Ave
 Suite 100
 Irvine, CA 92614
 Phone: 949.261.1022 Fax:

Sacramento

Chain of Custody Record

138875

TestAmerica
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 TestAmerica Laboratories, Inc.
 TAL-8210 (0713)

Regulatory Program: DW NPDES RCRA Other:

Client Contact
 Company Name: Ramboll
 Address: 2200 Powell St Suite 700
 City/State/Zip: Fremontville, CA, 94568
 Phone: 510-655-7400
 Fax:
 Project Name: Diarrin Sampling
 Site: NERT
 PO #: 1694006941-012

Project Manager: Dan Clark
 Tell Fax: 910-289-7036
 Analysis Turnaround Time
 CALENDAR DAYS WORKING DAYS
 TAT: if different from Below Delays
 2 weeks
 1 week
 2 days
 1 day

Site Contact: Brendan Keegan Date: 09/19/18
 Lab Contact: Patty Mata Carrier:
 COC No.: 4 of 3 COCs

Sampler:
 For Lab Use Only:
 Walk-in Client:
 Lab Sampling:
 Job / SDG No.:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	Hold	Sample Specific Notes:
DSPE-2-4.0-20180919	9/19	1100	G	SO	1			X	
DSPE-3-0.5-20180919	"	1123	"	"	"			X	
DSPE-3-0.5-20180919	"	1123	"	"	"			X	
DSPE-3-1.5-20180919	"	1140	"	"	"			X	
DSPE-3-2.0-20180919	"	1146	"	"	"			X	
DSPE-3-3.0-20180919	"	1202	"	"	"			X	
DSPE-4-0.5-20180919	"	1445	"	"	"			X	
DSPE-4-2.0-20180919	"	1450	"	"	"			X	
DSPE-4-3.0-20180919	"	1455	"	"	"			X	
DSPE-4-4.0-20180919	"	1500	"	"	"			X	
DSPE-5-1.5-20180919	"	1536	"	"	"			X	
DSPE-5-2.0-20180919	"	1534	"	"	"			X	

Preservation Used: 1= Ice, 2= HCl, 3= H2SO4, 4=HNO3, 5=NaOH, 6= Other
 Possible Hazard Identification: Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.
 Non-Hazard Flammable Skin Irritant Poison B Unknown Return to Client Disposal by Lab Archive for _____ Months

Special Instructions/QC Requirements & Comments:
 Custody Seal No.:
 Relinquished by: B. K... Date/Time: 9/19/18 1620
 Relinquished by: V. H... Date/Time: 9/19/18 1730
 Relinquished by:
 Company: Ramboll Date/Time: 9/19/18 1620
 Company: TALUS Date/Time: 9-20-18 0930
 Company: TALUS Date/Time: 9-20-18 0930
 Received by: V. H...
 Received by: Fedy
 Received in Laboratory by: Jan D. ...
 Cooler Temp. (°C): Obs'd: 07°C Therm ID No.: ALC2-22
 S42 S.40C



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 Phone: 949.261.1022 Fax:

Chain of Custody Record

138874

TestAmerica
 THE LEADER IN ENVIRONMENTAL TESTING
 TestAmerica Laboratories, Inc.
 TAL-8210 (07/13)

Regulatory Program: DW NPDES RCRA Other:

Company Name: Ramboll Client Contact
 Address: 2900 Powell St, Suite 200
 City/State/Zip: Emeryville, CA, 94605
 Phone: 510-655-7400
 Fax:
 Project Name: Dioxin Sampling
 Site: NERI
 PO #: 169006941-013

Project Manager: Dan Clark
 Tell/Fax: 510-299-7036
 Analysis Turnaround Time
 CALENDAR DAYS WORKING DAYS
 TAT if different from Below 5 DAYS
 2 weeks
 1 week
 2 days
 1 day

Site Contact: Regina K...
 Lab Contact: Patricia Mata
 Date: 09/19/18
 Carrier:
 For Lab Use Only:
 Walk-in Client:
 Lab Sampling:
 Job / SDG No.:

COC No: 1
3 of 3 COCs
 Sampler:
 Sample Specific Notes:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	Hold	Other
DSPE-5-3.0-20180919	09/19/18	1540	G	SO	1			X	
DSPE-5-4.0-20180919	09/19/18	1557	G	"	1			X	
DSPE-3-4.0-20180919	"	1340	G	"	1			X	

Preservation Used: 1= Ice, 2= HCl, 3= H2SO4, 4=HNO3, 5=NaOH, 6= Other

Possible Hazard Identification: Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.
 Non-Hazard Flammable Skin Irritant Poison B Unknown

Special Instructions/QC Requirements & Comments:
 Return to Client Disposal by Lab Archive for _____ Months

Custody Seal No.:
 Relinquished by: B. K... Date/Time: 9/19/18 1620
 Relinquished by: DAN Date/Time: 9-19-18 1730
 Relinquished by: 18.9 TALUS JAM Date/Time: 9-20-18 0930

Company: Ramboll Date/Time: 9-19-18 1620
 Company: TALUS Date/Time: 9-19-18 1620
 Company: TA-9AC Date/Time: 9-20-18 0930

Cooler Temp. (°C): Obs'd: 5.7°C Cor'd: 5.7°C Therm ID No.: HL-210
 Cooler Temp. (°C): 5.4°C Cor'd: 5.4°C



Login Sample Receipt Checklist

Client: Ramboll US Corporation

Job Number: 320-43353-1

Login Number: 43353

List Source: TestAmerica Sacramento

List Number: 1

Creator: Turpen, Troy

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	967454, 967456
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

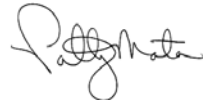
ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Sacramento
880 Riverside Parkway
West Sacramento, CA 95605
Tel: (916)373-5600

TestAmerica Job ID: 320-43353-2
Client Project/Site: NERT Dioxin Sampling

For:
Ramboll US Corporation
2200 Powell Street
Suite 700
Emeryville, California 94608

Attn: Craig Knox



Authorized for release by:
10/2/2018 3:51:00 PM

Patty Mata, Senior Project Manager
(949)261-1022
patty.mata@testamericainc.com

LINKS

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The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Definitions/Glossary

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 320-43353-2

Qualifiers

Dioxin

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
q	The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio. The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.
G	The reported quantitation limit has been raised due to an exhibited elevated noise or matrix interference
E	Result exceeded calibration range.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Case Narrative

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 320-43353-2

Job ID: 320-43353-2

Laboratory: TestAmerica Sacramento

Narrative

Job Narrative 320-43353-2

Comments

Only the standard TAT results are included in this report.

Receipt

The samples were received on 9/20/2018 9:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 5.4° C and 5.7° C.

Dioxin

Method(s) 8290: The following sample exhibited elevated noise or matrix interferences for one or more analytes causing elevation of the detection limit (EDL): DSPE-300-0.5-20180919 (320-43353-15). The reporting limit (RL) for the affected analytes has been raised to be equal to the EDL, and a "G" qualifier applied.

Method(s) 8290: The concentration of 2,3,7,8-TCDF associated with the following sample exceeded the instrument calibration range: DSPE-300-0.5-20180919 (320-43353-15). This analyte has been qualified; however, the peak(s) did not saturate the instrument detector. Historical data indicate that for the isotope dilution method, dilution and re-analysis will not produce significantly different results from those reported above the calibration range.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Dioxin Prep

Method(s) 8290: Due to the matrix, the initial volumes used for the following samples deviated from the standard procedure: DSPE-100-0.5-20180919 (320-43353-3) and DSPE-300-0.5-20180919 (320-43353-15). The reporting limits (RLs) have been adjusted proportionately. The samples are associated with preparation batch 320-246867.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 320-43353-2

Client Sample ID: DSPE-1-FB-20180919

Lab Sample ID: 320-43353-1

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDF	0.16	J q B	9.6	0.10	pg/L	1		8290	Total/NA
1,2,3,4,7,8-HxCDD	1.6	J B	48	0.15	pg/L	1		8290	Total/NA
1,2,3,7,8,9-HxCDD	0.32	J q	48	0.14	pg/L	1		8290	Total/NA
1,2,3,4,7,8-HxCDF	0.43	J q B	48	0.21	pg/L	1		8290	Total/NA
1,2,3,6,7,8-HxCDF	0.54	J q B	48	0.21	pg/L	1		8290	Total/NA
1,2,3,7,8,9-HxCDF	3.2	J q B	48	0.22	pg/L	1		8290	Total/NA
1,2,3,4,6,7,8-HpCDD	2.1	J q B	48	0.47	pg/L	1		8290	Total/NA
1,2,3,4,6,7,8-HpCDF	3.6	J B	48	0.22	pg/L	1		8290	Total/NA
1,2,3,4,7,8,9-HpCDF	2.9	J B	48	0.26	pg/L	1		8290	Total/NA
OCDD	72	J B	96	0.43	pg/L	1		8290	Total/NA
OCDF	2.2	J B	96	0.26	pg/L	1		8290	Total/NA
Total TCDF	0.16	J q B	9.6	0.10	pg/L	1		8290	Total/NA
Total HxCDD	2.0	J q B	48	0.14	pg/L	1		8290	Total/NA
Total HxCDF	6.7	J q B	48	0.21	pg/L	1		8290	Total/NA
Total HpCDD	5.2	J q B	48	0.47	pg/L	1		8290	Total/NA
Total HpCDF	6.5	J B	48	0.24	pg/L	1		8290	Total/NA

Client Sample ID: DSPE-100-0.5-20180919

Lab Sample ID: 320-43353-3

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	4.5	J	11	0.44	pg/g	1	*	8290	Total/NA
1,2,3,7,8-PeCDD	14	J	53	1.2	pg/g	1	*	8290	Total/NA
1,2,3,7,8-PeCDF	200	B	53	4.0	pg/g	1	*	8290	Total/NA
2,3,4,7,8-PeCDF	96		53	4.1	pg/g	1	*	8290	Total/NA
1,2,3,4,7,8-HxCDD	12	J B	53	0.70	pg/g	1	*	8290	Total/NA
1,2,3,6,7,8-HxCDD	53		53	0.66	pg/g	1	*	8290	Total/NA
1,2,3,7,8,9-HxCDD	37	J	53	0.62	pg/g	1	*	8290	Total/NA
1,2,3,4,7,8-HxCDF	380		53	12	pg/g	1	*	8290	Total/NA
1,2,3,6,7,8-HxCDF	300	B	53	12	pg/g	1	*	8290	Total/NA
2,3,4,6,7,8-HxCDF	55	B	53	12	pg/g	1	*	8290	Total/NA
1,2,3,7,8,9-HxCDF	51	J B	53	12	pg/g	1	*	8290	Total/NA
1,2,3,4,6,7,8-HpCDD	79	B	53	0.52	pg/g	1	*	8290	Total/NA
1,2,3,4,6,7,8-HpCDF	1200	B	53	5.2	pg/g	1	*	8290	Total/NA
1,2,3,4,7,8,9-HpCDF	450	B	53	6.2	pg/g	1	*	8290	Total/NA
OCDD	94	J B	110	0.37	pg/g	1	*	8290	Total/NA
OCDF	3300	B	110	2.0	pg/g	1	*	8290	Total/NA
Total TCDD	93	q	11	0.44	pg/g	1	*	8290	Total/NA
Total TCDF	1200	B	11	2.4	pg/g	1	*	8290	Total/NA
Total PeCDD	120	q	53	1.2	pg/g	1	*	8290	Total/NA
Total PeCDF	1500	B	53	4.1	pg/g	1	*	8290	Total/NA
Total HxCDD	350	B	53	0.66	pg/g	1	*	8290	Total/NA
Total HxCDF	2000	B	53	12	pg/g	1	*	8290	Total/NA
Total HpCDD	120	B	53	0.52	pg/g	1	*	8290	Total/NA
Total HpCDF	2400	B	53	5.7	pg/g	1	*	8290	Total/NA
2,3,7,8-TCDF - RA	100	B	11	3.4	pg/g	1	*	8290	Total/NA

Client Sample ID: DSPE-1-EB-20180919

Lab Sample ID: 320-43353-8

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDF	0.79	J B	9.6	0.10	pg/L	1		8290	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Sacramento

Detection Summary

Client: Ramboll US Corporation
 Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 320-43353-2

Client Sample ID: DSPE-1-EB-20180919 (Continued)

Lab Sample ID: 320-43353-8

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
1,2,3,7,8-PeCDF	0.96	J B	48	0.18	pg/L	1		8290	Total/NA
1,2,3,4,7,8-HxCDD	1.4	J q B	48	0.15	pg/L	1		8290	Total/NA
1,2,3,4,7,8-HxCDF	0.68	J B	48	0.18	pg/L	1		8290	Total/NA
1,2,3,6,7,8-HxCDF	0.49	J B	48	0.18	pg/L	1		8290	Total/NA
1,2,3,7,8,9-HxCDF	3.3	J q B	48	0.19	pg/L	1		8290	Total/NA
1,2,3,4,6,7,8-HpCDD	0.70	J q B	48	0.37	pg/L	1		8290	Total/NA
1,2,3,4,6,7,8-HpCDF	1.5	J B	48	0.20	pg/L	1		8290	Total/NA
1,2,3,4,7,8,9-HpCDF	3.1	J B	48	0.23	pg/L	1		8290	Total/NA
OCDD	18	J B	96	0.35	pg/L	1		8290	Total/NA
OCDF	2.2	J B	96	0.24	pg/L	1		8290	Total/NA
Total TCDF	1.8	J B	9.6	0.10	pg/L	1		8290	Total/NA
Total PeCDF	1.5	J q B	48	0.18	pg/L	1		8290	Total/NA
Total HxCDD	1.4	J q B	48	0.14	pg/L	1		8290	Total/NA
Total HxCDF	7.6	J q B	48	0.18	pg/L	1		8290	Total/NA
Total HpCDD	2.4	J q B	48	0.37	pg/L	1		8290	Total/NA
Total HpCDF	5.5	J B	48	0.21	pg/L	1		8290	Total/NA

Client Sample ID: DSPE-300-0.5-20180919

Lab Sample ID: 320-43353-15

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	160		11	5.8	pg/g	1	*	8290	Total/NA
1,2,3,7,8-PeCDD	600		54	47	pg/g	1	*	8290	Total/NA
1,2,3,7,8-PeCDF	9700	G B	190	190	pg/g	1	*	8290	Total/NA
2,3,4,7,8-PeCDF	4900	G	190	190	pg/g	1	*	8290	Total/NA
1,2,3,4,7,8-HxCDD	490	B	54	9.5	pg/g	1	*	8290	Total/NA
1,2,3,6,7,8-HxCDD	1100		54	9.1	pg/g	1	*	8290	Total/NA
1,2,3,7,8,9-HxCDD	950		54	8.5	pg/g	1	*	8290	Total/NA
1,2,3,4,7,8-HxCDF	20000	G	480	480	pg/g	1	*	8290	Total/NA
1,2,3,6,7,8-HxCDF	14000	G B	460	460	pg/g	1	*	8290	Total/NA
2,3,4,6,7,8-HxCDF	2900	G B	470	470	pg/g	1	*	8290	Total/NA
1,2,3,7,8,9-HxCDF	2600	G B	490	490	pg/g	1	*	8290	Total/NA
1,2,3,4,6,7,8-HpCDD	3900	B	54	13	pg/g	1	*	8290	Total/NA
Total TCDD	4600	q	11	5.8	pg/g	1	*	8290	Total/NA
Total TCDF	55000	G B	100	100	pg/g	1	*	8290	Total/NA
Total PeCDD	5700		54	47	pg/g	1	*	8290	Total/NA
Total PeCDF	70000	G B	190	190	pg/g	1	*	8290	Total/NA
Total HxCDD	7400	B	54	9.0	pg/g	1	*	8290	Total/NA
Total HxCDF	93000	G B	480	480	pg/g	1	*	8290	Total/NA
Total HpCDD	5900	B	54	13	pg/g	1	*	8290	Total/NA
1,2,3,4,6,7,8-HpCDF - DL	64000	B	540	240	pg/g	10	*	8290	Total/NA
1,2,3,4,7,8,9-HpCDF - DL	25000	B	540	280	pg/g	10	*	8290	Total/NA
OCDD - DL	4700	B	1100	13	pg/g	10	*	8290	Total/NA
OCDF - DL	180000	B	1100	91	pg/g	10	*	8290	Total/NA
Total HpCDF - DL	130000	B	540	260	pg/g	10	*	8290	Total/NA
2,3,7,8-TCDF - RA	5100	E G B	53	53	pg/g	1	*	8290	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Sacramento

Client Sample Results

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 320-43353-2

Client Sample ID: DSPE-1-FB-20180919

Lab Sample ID: 320-43353-1

Date Collected: 09/19/18 08:00

Matrix: Water

Date Received: 09/20/18 09:30

Method: 8290 - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		9.6	0.28	pg/L		09/21/18 11:16	09/29/18 14:54	1
2,3,7,8-TCDF	0.16	J q B	9.6	0.10	pg/L		09/21/18 11:16	09/29/18 14:54	1
1,2,3,7,8-PeCDD	ND		48	0.21	pg/L		09/21/18 11:16	09/29/18 14:54	1
1,2,3,7,8-PeCDF	ND		48	0.17	pg/L		09/21/18 11:16	09/29/18 14:54	1
2,3,4,7,8-PeCDF	ND		48	0.17	pg/L		09/21/18 11:16	09/29/18 14:54	1
1,2,3,4,7,8-HxCDD	1.6	J B	48	0.15	pg/L		09/21/18 11:16	09/29/18 14:54	1
1,2,3,6,7,8-HxCDD	ND		48	0.15	pg/L		09/21/18 11:16	09/29/18 14:54	1
1,2,3,7,8,9-HxCDD	0.32	J q	48	0.14	pg/L		09/21/18 11:16	09/29/18 14:54	1
1,2,3,4,7,8-HxCDF	0.43	J q B	48	0.21	pg/L		09/21/18 11:16	09/29/18 14:54	1
1,2,3,6,7,8-HxCDF	0.54	J q B	48	0.21	pg/L		09/21/18 11:16	09/29/18 14:54	1
2,3,4,6,7,8-HxCDF	ND		48	0.21	pg/L		09/21/18 11:16	09/29/18 14:54	1
1,2,3,7,8,9-HxCDF	3.2	J q B	48	0.22	pg/L		09/21/18 11:16	09/29/18 14:54	1
1,2,3,4,6,7,8-HpCDD	2.1	J q B	48	0.47	pg/L		09/21/18 11:16	09/29/18 14:54	1
1,2,3,4,6,7,8-HpCDF	3.6	J B	48	0.22	pg/L		09/21/18 11:16	09/29/18 14:54	1
1,2,3,4,7,8,9-HpCDF	2.9	J B	48	0.26	pg/L		09/21/18 11:16	09/29/18 14:54	1
OCDD	72	J B	96	0.43	pg/L		09/21/18 11:16	09/29/18 14:54	1
OCDF	2.2	J B	96	0.26	pg/L		09/21/18 11:16	09/29/18 14:54	1
Total TCDD	ND		9.6	0.28	pg/L		09/21/18 11:16	09/29/18 14:54	1
Total TCDF	0.16	J q B	9.6	0.10	pg/L		09/21/18 11:16	09/29/18 14:54	1
Total PeCDD	ND		48	0.21	pg/L		09/21/18 11:16	09/29/18 14:54	1
Total PeCDF	ND		48	0.17	pg/L		09/21/18 11:16	09/29/18 14:54	1
Total HxCDD	2.0	J q B	48	0.14	pg/L		09/21/18 11:16	09/29/18 14:54	1
Total HxCDF	6.7	J q B	48	0.21	pg/L		09/21/18 11:16	09/29/18 14:54	1
Total HpCDD	5.2	J q B	48	0.47	pg/L		09/21/18 11:16	09/29/18 14:54	1
Total HpCDF	6.5	J B	48	0.24	pg/L		09/21/18 11:16	09/29/18 14:54	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	82		40 - 135				09/21/18 11:16	09/29/18 14:54	1
13C-2,3,7,8-TCDF	78		40 - 135				09/21/18 11:16	09/29/18 14:54	1
13C-1,2,3,7,8-PeCDD	78		40 - 135				09/21/18 11:16	09/29/18 14:54	1
13C-1,2,3,7,8-PeCDF	76		40 - 135				09/21/18 11:16	09/29/18 14:54	1
13C-1,2,3,6,7,8-HxCDD	84		40 - 135				09/21/18 11:16	09/29/18 14:54	1
13C-1,2,3,4,7,8-HxCDF	86		40 - 135				09/21/18 11:16	09/29/18 14:54	1
13C-1,2,3,4,6,7,8-HpCDD	93		40 - 135				09/21/18 11:16	09/29/18 14:54	1
13C-1,2,3,4,6,7,8-HpCDF	85		40 - 135				09/21/18 11:16	09/29/18 14:54	1
13C-OCDD	81		40 - 135				09/21/18 11:16	09/29/18 14:54	1

Client Sample ID: DSPE-100-0.5-20180919

Lab Sample ID: 320-43353-3

Date Collected: 09/19/18 08:40

Matrix: Solid

Date Received: 09/20/18 09:30

Percent Solids: 94.7

Method: 8290 - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	4.5	J	11	0.44	pg/g	☼	09/20/18 16:22	09/22/18 19:59	1
1,2,3,7,8-PeCDD	14	J	53	1.2	pg/g	☼	09/20/18 16:22	09/22/18 19:59	1
1,2,3,7,8-PeCDF	200	B	53	4.0	pg/g	☼	09/20/18 16:22	09/22/18 19:59	1
2,3,4,7,8-PeCDF	96		53	4.1	pg/g	☼	09/20/18 16:22	09/22/18 19:59	1
1,2,3,4,7,8-HxCDD	12	J B	53	0.70	pg/g	☼	09/20/18 16:22	09/22/18 19:59	1
1,2,3,6,7,8-HxCDD	53		53	0.66	pg/g	☼	09/20/18 16:22	09/22/18 19:59	1
1,2,3,7,8,9-HxCDD	37	J	53	0.62	pg/g	☼	09/20/18 16:22	09/22/18 19:59	1

TestAmerica Sacramento

Client Sample Results

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 320-43353-2

Client Sample ID: DSPE-100-0.5-20180919

Lab Sample ID: 320-43353-3

Date Collected: 09/19/18 08:40

Matrix: Solid

Date Received: 09/20/18 09:30

Percent Solids: 94.7

Method: 8290 - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,7,8-HxCDF	380		53	12	pg/g	☼	09/20/18 16:22	09/22/18 19:59	1
1,2,3,6,7,8-HxCDF	300	B	53	12	pg/g	☼	09/20/18 16:22	09/22/18 19:59	1
2,3,4,6,7,8-HxCDF	55	B	53	12	pg/g	☼	09/20/18 16:22	09/22/18 19:59	1
1,2,3,7,8,9-HxCDF	51	J B	53	12	pg/g	☼	09/20/18 16:22	09/22/18 19:59	1
1,2,3,4,6,7,8-HpCDD	79	B	53	0.52	pg/g	☼	09/20/18 16:22	09/22/18 19:59	1
1,2,3,4,6,7,8-HpCDF	1200	B	53	5.2	pg/g	☼	09/20/18 16:22	09/22/18 19:59	1
1,2,3,4,7,8,9-HpCDF	450	B	53	6.2	pg/g	☼	09/20/18 16:22	09/22/18 19:59	1
OCDD	94	J B	110	0.37	pg/g	☼	09/20/18 16:22	09/22/18 19:59	1
OCDF	3300	B	110	2.0	pg/g	☼	09/20/18 16:22	09/22/18 19:59	1
Total TCDD	93	q	11	0.44	pg/g	☼	09/20/18 16:22	09/22/18 19:59	1
Total TCDF	1200	B	11	2.4	pg/g	☼	09/20/18 16:22	09/22/18 19:59	1
Total PeCDD	120	q	53	1.2	pg/g	☼	09/20/18 16:22	09/22/18 19:59	1
Total PeCDF	1500	B	53	4.1	pg/g	☼	09/20/18 16:22	09/22/18 19:59	1
Total HxCDD	350	B	53	0.66	pg/g	☼	09/20/18 16:22	09/22/18 19:59	1
Total HxCDF	2000	B	53	12	pg/g	☼	09/20/18 16:22	09/22/18 19:59	1
Total HpCDD	120	B	53	0.52	pg/g	☼	09/20/18 16:22	09/22/18 19:59	1
Total HpCDF	2400	B	53	5.7	pg/g	☼	09/20/18 16:22	09/22/18 19:59	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	76		40 - 135	09/20/18 16:22	09/22/18 19:59	1
13C-2,3,7,8-TCDF	68		40 - 135	09/20/18 16:22	09/22/18 19:59	1
13C-1,2,3,7,8-PeCDD	70		40 - 135	09/20/18 16:22	09/22/18 19:59	1
13C-1,2,3,7,8-PeCDF	65		40 - 135	09/20/18 16:22	09/22/18 19:59	1
13C-1,2,3,6,7,8-HxCDD	78		40 - 135	09/20/18 16:22	09/22/18 19:59	1
13C-1,2,3,4,7,8-HxCDF	78		40 - 135	09/20/18 16:22	09/22/18 19:59	1
13C-1,2,3,4,6,7,8-HpCDD	90		40 - 135	09/20/18 16:22	09/22/18 19:59	1
13C-1,2,3,4,6,7,8-HpCDF	82		40 - 135	09/20/18 16:22	09/22/18 19:59	1
13C-OCDD	78		40 - 135	09/20/18 16:22	09/22/18 19:59	1

Method: 8290 - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	100	B	11	3.4	pg/g	☼	09/20/18 16:22	09/25/18 10:52	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDF	71		40 - 135	09/20/18 16:22	09/25/18 10:52	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	5.3		0.1	0.1	%			09/24/18 10:27	1

Client Sample ID: DSPE-1-EB-20180919

Lab Sample ID: 320-43353-8

Date Collected: 09/19/18 08:55

Matrix: Water

Date Received: 09/20/18 09:30

Method: 8290 - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		9.6	0.25	pg/L		09/21/18 11:16	09/29/18 15:40	1
2,3,7,8-TCDF	0.79	J B	9.6	0.10	pg/L		09/21/18 11:16	09/29/18 15:40	1
1,2,3,7,8-PeCDD	ND		48	0.19	pg/L		09/21/18 11:16	09/29/18 15:40	1
1,2,3,7,8-PeCDF	0.96	J B	48	0.18	pg/L		09/21/18 11:16	09/29/18 15:40	1
2,3,4,7,8-PeCDF	ND		48	0.18	pg/L		09/21/18 11:16	09/29/18 15:40	1
1,2,3,4,7,8-HxCDD	1.4	J q B	48	0.15	pg/L		09/21/18 11:16	09/29/18 15:40	1

TestAmerica Sacramento

Client Sample Results

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 320-43353-2

Client Sample ID: DSPE-1-EB-20180919

Lab Sample ID: 320-43353-8

Date Collected: 09/19/18 08:55

Matrix: Water

Date Received: 09/20/18 09:30

Method: 8290 - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,6,7,8-HxCDD	ND		48	0.14	pg/L		09/21/18 11:16	09/29/18 15:40	1
1,2,3,7,8,9-HxCDD	ND		48	0.13	pg/L		09/21/18 11:16	09/29/18 15:40	1
1,2,3,4,7,8-HxCDF	0.68	J B	48	0.18	pg/L		09/21/18 11:16	09/29/18 15:40	1
1,2,3,6,7,8-HxCDF	0.49	J B	48	0.18	pg/L		09/21/18 11:16	09/29/18 15:40	1
2,3,4,6,7,8-HxCDF	ND		48	0.18	pg/L		09/21/18 11:16	09/29/18 15:40	1
1,2,3,7,8,9-HxCDF	3.3	J q B	48	0.19	pg/L		09/21/18 11:16	09/29/18 15:40	1
1,2,3,4,6,7,8-HpCDD	0.70	J q B	48	0.37	pg/L		09/21/18 11:16	09/29/18 15:40	1
1,2,3,4,6,7,8-HpCDF	1.5	J B	48	0.20	pg/L		09/21/18 11:16	09/29/18 15:40	1
1,2,3,4,7,8,9-HpCDF	3.1	J B	48	0.23	pg/L		09/21/18 11:16	09/29/18 15:40	1
OCDD	18	J B	96	0.35	pg/L		09/21/18 11:16	09/29/18 15:40	1
OCDF	2.2	J B	96	0.24	pg/L		09/21/18 11:16	09/29/18 15:40	1
Total TCDD	ND		9.6	0.25	pg/L		09/21/18 11:16	09/29/18 15:40	1
Total TCDF	1.8	J B	9.6	0.10	pg/L		09/21/18 11:16	09/29/18 15:40	1
Total PeCDD	ND		48	0.19	pg/L		09/21/18 11:16	09/29/18 15:40	1
Total PeCDF	1.5	J q B	48	0.18	pg/L		09/21/18 11:16	09/29/18 15:40	1
Total HxCDD	1.4	J q B	48	0.14	pg/L		09/21/18 11:16	09/29/18 15:40	1
Total HxCDF	7.6	J q B	48	0.18	pg/L		09/21/18 11:16	09/29/18 15:40	1
Total HpCDD	2.4	J q B	48	0.37	pg/L		09/21/18 11:16	09/29/18 15:40	1
Total HpCDF	5.5	J B	48	0.21	pg/L		09/21/18 11:16	09/29/18 15:40	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	90		40 - 135				09/21/18 11:16	09/29/18 15:40	1
13C-2,3,7,8-TCDF	83		40 - 135				09/21/18 11:16	09/29/18 15:40	1
13C-1,2,3,7,8-PeCDD	83		40 - 135				09/21/18 11:16	09/29/18 15:40	1
13C-1,2,3,7,8-PeCDF	83		40 - 135				09/21/18 11:16	09/29/18 15:40	1
13C-1,2,3,6,7,8-HxCDD	91		40 - 135				09/21/18 11:16	09/29/18 15:40	1
13C-1,2,3,4,7,8-HxCDF	89		40 - 135				09/21/18 11:16	09/29/18 15:40	1
13C-1,2,3,4,6,7,8-HpCDD	100		40 - 135				09/21/18 11:16	09/29/18 15:40	1
13C-1,2,3,4,6,7,8-HpCDF	93		40 - 135				09/21/18 11:16	09/29/18 15:40	1
13C-OCDD	88		40 - 135				09/21/18 11:16	09/29/18 15:40	1

Client Sample ID: DSPE-300-0.5-20180919

Lab Sample ID: 320-43353-15

Date Collected: 09/19/18 11:23

Matrix: Solid

Date Received: 09/20/18 09:30

Percent Solids: 93.6

Method: 8290 - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	160		11	5.8	pg/g	☼	09/20/18 16:22	09/23/18 08:45	1
1,2,3,7,8-PeCDD	600		54	47	pg/g	☼	09/20/18 16:22	09/23/18 08:45	1
1,2,3,7,8-PeCDF	9700	G B	190	190	pg/g	☼	09/20/18 16:22	09/23/18 08:45	1
2,3,4,7,8-PeCDF	4900	G	190	190	pg/g	☼	09/20/18 16:22	09/23/18 08:45	1
1,2,3,4,7,8-HxCDD	490	B	54	9.5	pg/g	☼	09/20/18 16:22	09/23/18 08:45	1
1,2,3,6,7,8-HxCDD	1100		54	9.1	pg/g	☼	09/20/18 16:22	09/23/18 08:45	1
1,2,3,7,8,9-HxCDD	950		54	8.5	pg/g	☼	09/20/18 16:22	09/23/18 08:45	1
1,2,3,4,7,8-HxCDF	20000	G	480	480	pg/g	☼	09/20/18 16:22	09/23/18 08:45	1
1,2,3,6,7,8-HxCDF	14000	G B	460	460	pg/g	☼	09/20/18 16:22	09/23/18 08:45	1
2,3,4,6,7,8-HxCDF	2900	G B	470	470	pg/g	☼	09/20/18 16:22	09/23/18 08:45	1
1,2,3,7,8,9-HxCDF	2600	G B	490	490	pg/g	☼	09/20/18 16:22	09/23/18 08:45	1
1,2,3,4,6,7,8-HpCDD	3900	B	54	13	pg/g	☼	09/20/18 16:22	09/23/18 08:45	1
Total TCDD	4600	q	11	5.8	pg/g	☼	09/20/18 16:22	09/23/18 08:45	1

TestAmerica Sacramento

Client Sample Results

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 320-43353-2

Client Sample ID: DSPE-300-0.5-20180919

Lab Sample ID: 320-43353-15

Date Collected: 09/19/18 11:23

Matrix: Solid

Date Received: 09/20/18 09:30

Percent Solids: 93.6

Method: 8290 - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TCDF	55000	G B	100	100	pg/g	☼	09/20/18 16:22	09/23/18 08:45	1
Total PeCDD	5700		54	47	pg/g	☼	09/20/18 16:22	09/23/18 08:45	1
Total PeCDF	70000	G B	190	190	pg/g	☼	09/20/18 16:22	09/23/18 08:45	1
Total HxCDD	7400	B	54	9.0	pg/g	☼	09/20/18 16:22	09/23/18 08:45	1
Total HxCDF	93000	G B	480	480	pg/g	☼	09/20/18 16:22	09/23/18 08:45	1
Total HpCDD	5900	B	54	13	pg/g	☼	09/20/18 16:22	09/23/18 08:45	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	72		40 - 135				09/20/18 16:22	09/23/18 08:45	1
13C-2,3,7,8-TCDF	65		40 - 135				09/20/18 16:22	09/23/18 08:45	1
13C-1,2,3,7,8-PeCDD	66		40 - 135				09/20/18 16:22	09/23/18 08:45	1
13C-1,2,3,7,8-PeCDF	63		40 - 135				09/20/18 16:22	09/23/18 08:45	1
13C-1,2,3,6,7,8-HxCDD	70		40 - 135				09/20/18 16:22	09/23/18 08:45	1
13C-1,2,3,4,7,8-HxCDF	72		40 - 135				09/20/18 16:22	09/23/18 08:45	1
13C-1,2,3,4,6,7,8-HpCDD	89		40 - 135				09/20/18 16:22	09/23/18 08:45	1

Method: 8290 - Dioxins and Furans (HRGC/HRMS) - DL

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,6,7,8-HpCDF	64000	B	540	240	pg/g	☼	09/20/18 16:22	09/24/18 21:23	10
1,2,3,4,7,8,9-HpCDF	25000	B	540	280	pg/g	☼	09/20/18 16:22	09/24/18 21:23	10
OCDD	4700	B	1100	13	pg/g	☼	09/20/18 16:22	09/24/18 21:23	10
OCDF	180000	B	1100	91	pg/g	☼	09/20/18 16:22	09/24/18 21:23	10
Total HpCDF	130000	B	540	260	pg/g	☼	09/20/18 16:22	09/24/18 21:23	10
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-1,2,3,4,6,7,8-HpCDF	74		40 - 135				09/20/18 16:22	09/24/18 21:23	10
13C-OCDD	71		40 - 135				09/20/18 16:22	09/24/18 21:23	10

Method: 8290 - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	5100	E G B	53	53	pg/g	☼	09/20/18 16:22	09/25/18 14:39	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDF	67		40 - 135				09/20/18 16:22	09/25/18 14:39	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	6.4		0.1	0.1	%			09/24/18 10:27	1

Toxicity Summary

Client: Ramboll US Corporation
 Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 320-43353-2

Client Sample ID: DSPE-1-FB-20180919

Lab Sample ID: 320-43353-1

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005		Method
						TEF	TEQ	
2,3,7,8-TCDD	ND		9.6	0.28	pg/L	1	0.14	8290
2,3,7,8-TCDF	0.16	J q B	9.6	0.10	pg/L	0.1	0.016	8290
1,2,3,7,8-PeCDD	ND		48	0.21	pg/L	1	0.11	8290
1,2,3,7,8-PeCDF	ND		48	0.17	pg/L	0.03	0.0026	8290
2,3,4,7,8-PeCDF	ND		48	0.17	pg/L	0.3	0.026	8290
1,2,3,4,7,8-HxCDD	1.6	J B	48	0.15	pg/L	0.1	0.16	8290
1,2,3,6,7,8-HxCDD	ND		48	0.15	pg/L	0.1	0.0075	8290
1,2,3,7,8,9-HxCDD	0.32	J q	48	0.14	pg/L	0.1	0.032	8290
1,2,3,4,7,8-HxCDF	0.43	J q B	48	0.21	pg/L	0.1	0.043	8290
1,2,3,6,7,8-HxCDF	0.54	J q B	48	0.21	pg/L	0.1	0.054	8290
2,3,4,6,7,8-HxCDF	ND		48	0.21	pg/L	0.1	0.011	8290
1,2,3,7,8,9-HxCDF	3.2	J q B	48	0.22	pg/L	0.1	0.32	8290
1,2,3,4,6,7,8-HpCDD	2.1	J q B	48	0.47	pg/L	0.01	0.021	8290
1,2,3,4,6,7,8-HpCDF	3.6	J B	48	0.22	pg/L	0.01	0.036	8290
1,2,3,4,7,8,9-HpCDF	2.9	J B	48	0.26	pg/L	0.01	0.029	8290
OCDD	72	J B	96	0.43	pg/L	0.0003	0.022	8290
OCDF	2.2	J B	96	0.26	pg/L	0.0003	0.00066	8290

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005		Method
						TEF	TEQ	
Total Dioxin/Furan TEQ					pg/L		1.0	TEQ

Client Sample ID: DSPE-100-0.5-20180919

Lab Sample ID: 320-43353-3

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005		Method
						TEF	TEQ	
2,3,7,8-TCDD	4.5	J	11	0.44	pg/g	1	4.5	8290
1,2,3,7,8-PeCDD	14	J	53	1.2	pg/g	1	14	8290
1,2,3,7,8-PeCDF	200	B	53	4.0	pg/g	0.03	6.0	8290
2,3,4,7,8-PeCDF	96		53	4.1	pg/g	0.3	29	8290
1,2,3,4,7,8-HxCDD	12	J B	53	0.70	pg/g	0.1	1.2	8290
1,2,3,6,7,8-HxCDD	53		53	0.66	pg/g	0.1	5.3	8290
1,2,3,7,8,9-HxCDD	37	J	53	0.62	pg/g	0.1	3.7	8290
1,2,3,4,7,8-HxCDF	380		53	12	pg/g	0.1	38	8290
1,2,3,6,7,8-HxCDF	300	B	53	12	pg/g	0.1	30	8290
2,3,4,6,7,8-HxCDF	55	B	53	12	pg/g	0.1	5.5	8290
1,2,3,7,8,9-HxCDF	51	J B	53	12	pg/g	0.1	5.1	8290
1,2,3,4,6,7,8-HpCDD	79	B	53	0.52	pg/g	0.01	0.79	8290
1,2,3,4,6,7,8-HpCDF	1200	B	53	5.2	pg/g	0.01	12	8290
1,2,3,4,7,8,9-HpCDF	450	B	53	6.2	pg/g	0.01	4.5	8290
OCDD	94	J B	110	0.37	pg/g	0.0003	0.028	8290
OCDF	3300	B	110	2.0	pg/g	0.0003	0.99	8290

TEF Reference:

WHO 2005 = World Health Organization (WHO) 2005 TEF, Dioxins, Furans and PCB Congeners

Note: The analytes PCB-156 and PCB-157 coelute as a single peak.

TestAmerica Sacramento

Toxicity Summary

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 320-43353-2

Client Sample ID: DSPE-100-0.5-20180919 (Continued)

Lab Sample ID: 320-43353-3

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005		Method
						TEF	TEQ	
2,3,7,8-TCDF - RA	100	B	11	3.4	pg/g	0.1	10	8290
						WHO 2005 ND = 1/2 EDL		
Analyte	Result	Qualifier	NONE	NONE	Unit	TEF	TEQ	Method
Total Dioxin/Furan TEQ					pg/g		170	TEQ

Client Sample ID: DSPE-1-EB-20180919

Lab Sample ID: 320-43353-8

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005		Method
						TEF	TEQ	
2,3,7,8-TCDD	ND		9.6	0.25	pg/L	1	0.13	8290
2,3,7,8-TCDF	0.79	J B	9.6	0.10	pg/L	0.1	0.079	8290
1,2,3,7,8-PeCDD	ND		48	0.19	pg/L	1	0.095	8290
1,2,3,7,8-PeCDF	0.96	J B	48	0.18	pg/L	0.03	0.029	8290
2,3,4,7,8-PeCDF	ND		48	0.18	pg/L	0.3	0.027	8290
1,2,3,4,7,8-HxCDD	1.4	J q B	48	0.15	pg/L	0.1	0.14	8290
1,2,3,6,7,8-HxCDD	ND		48	0.14	pg/L	0.1	0.0070	8290
1,2,3,7,8,9-HxCDD	ND		48	0.13	pg/L	0.1	0.0065	8290
1,2,3,4,7,8-HxCDF	0.68	J B	48	0.18	pg/L	0.1	0.068	8290
1,2,3,6,7,8-HxCDF	0.49	J B	48	0.18	pg/L	0.1	0.049	8290
2,3,4,6,7,8-HxCDF	ND		48	0.18	pg/L	0.1	0.0090	8290
1,2,3,7,8,9-HxCDF	3.3	J q B	48	0.19	pg/L	0.1	0.33	8290
1,2,3,4,6,7,8-HpCDD	0.70	J q B	48	0.37	pg/L	0.01	0.0070	8290
1,2,3,4,6,7,8-HpCDF	1.5	J B	48	0.20	pg/L	0.01	0.015	8290
1,2,3,4,7,8,9-HpCDF	3.1	J B	48	0.23	pg/L	0.01	0.031	8290
OCDD	18	J B	96	0.35	pg/L	0.0003	0.0054	8290
OCDF	2.2	J B	96	0.24	pg/L	0.0003	0.00066	8290
						WHO 2005 ND = 1/2 EDL		
Analyte	Result	Qualifier	NONE	NONE	Unit	TEF	TEQ	Method
Total Dioxin/Furan TEQ					pg/L		1.0	TEQ

Client Sample ID: DSPE-300-0.5-20180919

Lab Sample ID: 320-43353-15

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005		Method
						TEF	TEQ	
2,3,7,8-TCDD	160		11	5.8	pg/g	1	160	8290
1,2,3,7,8-PeCDD	600		54	47	pg/g	1	600	8290
1,2,3,7,8-PeCDF	9700	G B	190	190	pg/g	0.03	290	8290
2,3,4,7,8-PeCDF	4900	G	190	190	pg/g	0.3	1500	8290
1,2,3,4,7,8-HxCDD	490	B	54	9.5	pg/g	0.1	49	8290

TEF Reference:

WHO 2005 = World Health Organization (WHO) 2005 TEF, Dioxins, Furans and PCB Congeners

Note: The analytes PCB-156 and PCB-157 coelute as a single peak.

TestAmerica Sacramento

Toxicity Summary

Client: Ramboll US Corporation
 Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 320-43353-2

Client Sample ID: DSPE-300-0.5-20180919 (Continued)

Lab Sample ID: 320-43353-15

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005		Method
						TEF	TEQ	
1,2,3,6,7,8-HxCDD	1100		54	9.1	pg/g	0.1	110	8290
1,2,3,7,8,9-HxCDD	950		54	8.5	pg/g	0.1	95	8290
1,2,3,4,7,8-HxCDF	20000	G	480	480	pg/g	0.1	2000	8290
1,2,3,6,7,8-HxCDF	14000	G B	460	460	pg/g	0.1	1400	8290
2,3,4,6,7,8-HxCDF	2900	G B	470	470	pg/g	0.1	290	8290
1,2,3,7,8,9-HxCDF	2600	G B	490	490	pg/g	0.1	260	8290
1,2,3,4,6,7,8-HpCDD	3900	B	54	13	pg/g	0.01	39	8290
1,2,3,4,6,7,8-HpCDF - DL	64000	B	540	240	pg/g	0.01	640	8290
1,2,3,4,7,8,9-HpCDF - DL	25000	B	540	280	pg/g	0.01	250	8290
OCDD - DL	4700	B	1100	13	pg/g	0.0003	1.4	8290
OCDF - DL	180000	B	1100	91	pg/g	0.0003	54	8290
2,3,7,8-TCDF - RA	5100	E G B	53	53	pg/g	0.1	510	8290

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005		Method
						TEF	TEQ	
Total Dioxin/Furan TEQ					pg/g		8200	TEQ

TEF Reference:

WHO 2005 = World Health Organization (WHO) 2005 TEF, Dioxins, Furans and PCB Congeners

Note: The analytes PCB-156 and PCB-157 coelute as a single peak.

TestAmerica Sacramento

Isotope Dilution Summary

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 320-43353-2

Method: 8290 - Dioxins and Furans (HRGC/HRMS)

Matrix: Solid

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	TCDD (40-135)	TCDF (40-135)	PeCDD (40-135)	PeCDF (40-135)	HxDD (40-135)	HxCDF (40-135)	HpCDD (40-135)	HpCDF (40-135)
320-43353-3	DSPE-100-0.5-20180919	76	68	70	65	78	78	90	82
320-43353-3 - RA	DSPE-100-0.5-20180919		71						
320-43353-15	DSPE-300-0.5-20180919	72	65	66	63	70	72	89	
320-43353-15 - DL	DSPE-300-0.5-20180919								74
320-43353-15 - RA	DSPE-300-0.5-20180919		67						
LCS 320-246867/2-A	Lab Control Sample	74	64	72	68	76	71	87	75
LCSD 320-246867/3-A	Lab Control Sample Dup	76	66	76	66	79	67	86	77
MB 320-246867/1-A	Method Blank	74	66	71	67	73	69	76	72

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	OCDD (40-135)
320-43353-3	DSPE-100-0.5-20180919	78
320-43353-3 - RA	DSPE-100-0.5-20180919	
320-43353-15	DSPE-300-0.5-20180919	
320-43353-15 - DL	DSPE-300-0.5-20180919	71
320-43353-15 - RA	DSPE-300-0.5-20180919	
LCS 320-246867/2-A	Lab Control Sample	74
LCSD 320-246867/3-A	Lab Control Sample Dup	74
MB 320-246867/1-A	Method Blank	58

Surrogate Legend

- TCDD = 13C-2,3,7,8-TCDD
- TCDF = 13C-2,3,7,8-TCDF
- PeCDD = 13C-1,2,3,7,8-PeCDD
- PeCDF = 13C-1,2,3,7,8-PeCDF
- HxDD = 13C-1,2,3,6,7,8-HxCDD
- HxCDF = 13C-1,2,3,4,7,8-HxCDF
- HpCDD = 13C-1,2,3,4,6,7,8-HpCDD
- HpCDF = 13C-1,2,3,4,6,7,8-HpCDF
- OCDD = 13C-OCDD

Method: 8290 - Dioxins and Furans (HRGC/HRMS)

Matrix: Water

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	TCDD (40-135)	TCDF (40-135)	PeCDD (40-135)	PeCDF (40-135)	HxDD (40-135)	HxCDF (40-135)	HpCDD (40-135)	HpCDF (40-135)
320-43353-1	DSPE-1-FB-20180919	82	78	78	76	84	86	93	85
320-43353-8	DSPE-1-EB-20180919	90	83	83	83	91	89	100	93
LCS 320-247020/2-A	Lab Control Sample	82	78	77	75	82	81	88	81
LCSD 320-247020/3-A	Lab Control Sample Dup	91	86	84	82	89	89	94	87
MB 320-247020/1-A	Method Blank	84	79	78	76	84	82	89	84

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	OCDD (40-135)
320-43353-1	DSPE-1-FB-20180919	81
320-43353-8	DSPE-1-EB-20180919	88
LCS 320-247020/2-A	Lab Control Sample	76
LCSD 320-247020/3-A	Lab Control Sample Dup	82

TestAmerica Sacramento

Isotope Dilution Summary

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 320-43353-2

Method: 8290 - Dioxins and Furans (HRGC/HRMS) (Continued)

Matrix: Water

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	OCDD (40-135)
MB 320-247020/1-A	Method Blank	78

Surrogate Legend

TCDD = 13C-2,3,7,8-TCDD
TCDF = 13C-2,3,7,8-TCDF
PeCDD = 13C-1,2,3,7,8-PeCDD
PeCDF = 13C-1,2,3,7,8-PeCDF
HxCDD = 13C-1,2,3,6,7,8-HxCDD
HxCDF = 13C-1,2,3,4,7,8-HxCDF
HpCDD = 13C-1,2,3,4,6,7,8-HpCDD
HpCDF = 13C-1,2,3,4,6,7,8-HpCDF
OCDD = 13C-OCDD

QC Sample Results

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 320-43353-2

Method: 8290 - Dioxins and Furans (HRGC/HRMS)

Lab Sample ID: MB 320-246867/1-A

Matrix: Solid

Analysis Batch: 247162

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 246867

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		1.0	0.045	pg/g		09/20/18 16:22	09/22/18 16:55	1
2,3,7,8-TCDF	0.148	J	1.0	0.025	pg/g		09/20/18 16:22	09/22/18 16:55	1
1,2,3,7,8-PeCDD	ND		5.0	0.033	pg/g		09/20/18 16:22	09/22/18 16:55	1
1,2,3,7,8-PeCDF	0.131	J	5.0	0.028	pg/g		09/20/18 16:22	09/22/18 16:55	1
2,3,4,7,8-PeCDF	ND		5.0	0.029	pg/g		09/20/18 16:22	09/22/18 16:55	1
1,2,3,4,7,8-HxCDD	0.122	J q	5.0	0.017	pg/g		09/20/18 16:22	09/22/18 16:55	1
1,2,3,6,7,8-HxCDD	ND		5.0	0.016	pg/g		09/20/18 16:22	09/22/18 16:55	1
1,2,3,7,8,9-HxCDD	ND		5.0	0.015	pg/g		09/20/18 16:22	09/22/18 16:55	1
1,2,3,4,7,8-HxCDF	ND		5.0	0.047	pg/g		09/20/18 16:22	09/22/18 16:55	1
1,2,3,6,7,8-HxCDF	0.0746	J q	5.0	0.046	pg/g		09/20/18 16:22	09/22/18 16:55	1
2,3,4,6,7,8-HxCDF	0.0536	J q	5.0	0.047	pg/g		09/20/18 16:22	09/22/18 16:55	1
1,2,3,7,8,9-HxCDF	0.618	J	5.0	0.048	pg/g		09/20/18 16:22	09/22/18 16:55	1
1,2,3,4,6,7,8-HpCDD	0.163	J	5.0	0.017	pg/g		09/20/18 16:22	09/22/18 16:55	1
1,2,3,4,6,7,8-HpCDF	0.136	J	5.0	0.016	pg/g		09/20/18 16:22	09/22/18 16:55	1
1,2,3,4,7,8,9-HpCDF	0.357	J	5.0	0.019	pg/g		09/20/18 16:22	09/22/18 16:55	1
OCDD	0.884	J	10	0.030	pg/g		09/20/18 16:22	09/22/18 16:55	1
OCDF	0.343	J	10	0.073	pg/g		09/20/18 16:22	09/22/18 16:55	1
Total TCDD	ND		1.0	0.045	pg/g		09/20/18 16:22	09/22/18 16:55	1
Total TCDF	0.223	J q	1.0	0.025	pg/g		09/20/18 16:22	09/22/18 16:55	1
Total PeCDD	ND		5.0	0.033	pg/g		09/20/18 16:22	09/22/18 16:55	1
Total PeCDF	0.200	J q	5.0	0.028	pg/g		09/20/18 16:22	09/22/18 16:55	1
Total HxCDD	0.122	J q	5.0	0.016	pg/g		09/20/18 16:22	09/22/18 16:55	1
Total HxCDF	0.907	J q	5.0	0.047	pg/g		09/20/18 16:22	09/22/18 16:55	1
Total HpCDD	0.341	J	5.0	0.017	pg/g		09/20/18 16:22	09/22/18 16:55	1
Total HpCDF	0.555	J q	5.0	0.017	pg/g		09/20/18 16:22	09/22/18 16:55	1

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	74		40 - 135	09/20/18 16:22	09/22/18 16:55	1
13C-2,3,7,8-TCDF	66		40 - 135	09/20/18 16:22	09/22/18 16:55	1
13C-1,2,3,7,8-PeCDD	71		40 - 135	09/20/18 16:22	09/22/18 16:55	1
13C-1,2,3,7,8-PeCDF	67		40 - 135	09/20/18 16:22	09/22/18 16:55	1
13C-1,2,3,6,7,8-HxCDD	73		40 - 135	09/20/18 16:22	09/22/18 16:55	1
13C-1,2,3,4,7,8-HxCDF	69		40 - 135	09/20/18 16:22	09/22/18 16:55	1
13C-1,2,3,4,6,7,8-HpCDD	76		40 - 135	09/20/18 16:22	09/22/18 16:55	1
13C-1,2,3,4,6,7,8-HpCDF	72		40 - 135	09/20/18 16:22	09/22/18 16:55	1
13C-OCDD	58		40 - 135	09/20/18 16:22	09/22/18 16:55	1

Lab Sample ID: LCS 320-246867/2-A

Matrix: Solid

Analysis Batch: 247162

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 246867

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
2,3,7,8-TCDD	20.0	18.8		pg/g		94	60 - 138
2,3,7,8-TCDF	20.0	21.9		pg/g		110	56 - 158
1,2,3,7,8-PeCDD	100	103		pg/g		103	70 - 122
1,2,3,7,8-PeCDF	100	109		pg/g		109	69 - 134
2,3,4,7,8-PeCDF	100	100		pg/g		100	70 - 131
1,2,3,4,7,8-HxCDD	100	104		pg/g		104	60 - 138

TestAmerica Sacramento

QC Sample Results

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 320-43353-2

Method: 8290 - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCS 320-246867/2-A
Matrix: Solid
Analysis Batch: 247162

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 246867

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
1,2,3,6,7,8-HxCDD	100	110		pg/g		110	68 - 136
1,2,3,7,8,9-HxCDD	100	106		pg/g		106	68 - 138
1,2,3,4,7,8-HxCDF	100	109		pg/g		109	74 - 128
1,2,3,6,7,8-HxCDF	100	120		pg/g		120	67 - 140
2,3,4,6,7,8-HxCDF	100	110		pg/g		110	71 - 137
1,2,3,7,8,9-HxCDF	100	114		pg/g		114	72 - 134
1,2,3,4,6,7,8-HpCDD	100	98.7		pg/g		99	71 - 128
1,2,3,4,6,7,8-HpCDF	100	108		pg/g		108	71 - 134
1,2,3,4,7,8,9-HpCDF	100	115		pg/g		115	68 - 129
OCDD	200	203		pg/g		101	70 - 128
OCDF	200	225		pg/g		113	63 - 141

Isotope Dilution	LCS LCS		Limits
	%Recovery	Qualifier	
13C-2,3,7,8-TCDD	74		40 - 135
13C-2,3,7,8-TCDF	64		40 - 135
13C-1,2,3,7,8-PeCDD	72		40 - 135
13C-1,2,3,7,8-PeCDF	68		40 - 135
13C-1,2,3,6,7,8-HxCDD	76		40 - 135
13C-1,2,3,4,7,8-HxCDF	71		40 - 135
13C-1,2,3,4,6,7,8-HpCDD	87		40 - 135
13C-1,2,3,4,6,7,8-HpCDF	75		40 - 135
13C-OCDD	74		40 - 135

Lab Sample ID: LCSD 320-246867/3-A
Matrix: Solid
Analysis Batch: 247162

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 246867

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
2,3,7,8-TCDD	20.0	18.3		pg/g		91	60 - 138	3	20
2,3,7,8-TCDF	20.0	21.9		pg/g		110	56 - 158	0	20
1,2,3,7,8-PeCDD	100	102		pg/g		102	70 - 122	1	20
1,2,3,7,8-PeCDF	100	109		pg/g		109	69 - 134	0	20
2,3,4,7,8-PeCDF	100	109		pg/g		109	70 - 131	8	20
1,2,3,4,7,8-HxCDD	100	99.1		pg/g		99	60 - 138	5	20
1,2,3,6,7,8-HxCDD	100	108		pg/g		108	68 - 136	2	20
1,2,3,7,8,9-HxCDD	100	103		pg/g		103	68 - 138	3	20
1,2,3,4,7,8-HxCDF	100	107		pg/g		107	74 - 128	2	20
1,2,3,6,7,8-HxCDF	100	126		pg/g		126	67 - 140	5	20
2,3,4,6,7,8-HxCDF	100	121		pg/g		121	71 - 137	9	20
1,2,3,7,8,9-HxCDF	100	121		pg/g		121	72 - 134	6	20
1,2,3,4,6,7,8-HpCDD	100	99.6		pg/g		100	71 - 128	1	20
1,2,3,4,6,7,8-HpCDF	100	106		pg/g		106	71 - 134	1	20
1,2,3,4,7,8,9-HpCDF	100	111		pg/g		111	68 - 129	3	20
OCDD	200	203		pg/g		101	70 - 128	0	20
OCDF	200	228		pg/g		114	63 - 141	1	20

Isotope Dilution	LCSD LCSD		Limits
	%Recovery	Qualifier	
13C-2,3,7,8-TCDD	76		40 - 135

TestAmerica Sacramento

QC Sample Results

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 320-43353-2

Method: 8290 - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCSD 320-246867/3-A
Matrix: Solid
Analysis Batch: 247162

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 246867

<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>LCSD Qualifier</i>	<i>Limits</i>
13C-2,3,7,8-TCDF	66		40 - 135
13C-1,2,3,7,8-PeCDD	76		40 - 135
13C-1,2,3,7,8-PeCDF	66		40 - 135
13C-1,2,3,6,7,8-HxCDD	79		40 - 135
13C-1,2,3,4,7,8-HxCDF	67		40 - 135
13C-1,2,3,4,6,7,8-HpCDD	86		40 - 135
13C-1,2,3,4,6,7,8-HpCDF	77		40 - 135
13C-OCDD	74		40 - 135

Lab Sample ID: MB 320-247020/1-A
Matrix: Water
Analysis Batch: 248645

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 247020

<i>Analyte</i>	<i>MB Result</i>	<i>MB Qualifier</i>	<i>RL</i>	<i>EDL</i>	<i>Unit</i>	<i>D</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
2,3,7,8-TCDD	ND		10	0.29	pg/L		09/21/18 11:16	09/29/18 20:00	1
2,3,7,8-TCDF	0.426	J	10	0.13	pg/L		09/21/18 11:16	09/29/18 20:00	1
1,2,3,7,8-PeCDD	ND		50	0.21	pg/L		09/21/18 11:16	09/29/18 20:00	1
1,2,3,7,8-PeCDF	0.804	J	50	0.18	pg/L		09/21/18 11:16	09/29/18 20:00	1
2,3,4,7,8-PeCDF	ND		50	0.18	pg/L		09/21/18 11:16	09/29/18 20:00	1
1,2,3,4,7,8-HxCDD	0.946	J q	50	0.15	pg/L		09/21/18 11:16	09/29/18 20:00	1
1,2,3,6,7,8-HxCDD	0.251	J q	50	0.14	pg/L		09/21/18 11:16	09/29/18 20:00	1
1,2,3,7,8,9-HxCDD	ND		50	0.13	pg/L		09/21/18 11:16	09/29/18 20:00	1
1,2,3,4,7,8-HxCDF	0.469	J	50	0.17	pg/L		09/21/18 11:16	09/29/18 20:00	1
1,2,3,6,7,8-HxCDF	0.488	J	50	0.16	pg/L		09/21/18 11:16	09/29/18 20:00	1
2,3,4,6,7,8-HxCDF	ND		50	0.16	pg/L		09/21/18 11:16	09/29/18 20:00	1
1,2,3,7,8,9-HxCDF	4.45	J	50	0.17	pg/L		09/21/18 11:16	09/29/18 20:00	1
1,2,3,4,6,7,8-HpCDD	0.985	J	50	0.18	pg/L		09/21/18 11:16	09/29/18 20:00	1
1,2,3,4,6,7,8-HpCDF	0.654	J	50	0.18	pg/L		09/21/18 11:16	09/29/18 20:00	1
1,2,3,4,7,8,9-HpCDF	3.05	J q	50	0.21	pg/L		09/21/18 11:16	09/29/18 20:00	1
OCDD	8.23	J	100	0.25	pg/L		09/21/18 11:16	09/29/18 20:00	1
OCDF	1.55	J q	100	0.32	pg/L		09/21/18 11:16	09/29/18 20:00	1
Total TCDD	ND		10	0.29	pg/L		09/21/18 11:16	09/29/18 20:00	1
Total TCDF	0.426	J	10	0.13	pg/L		09/21/18 11:16	09/29/18 20:00	1
Total PeCDD	ND		50	0.21	pg/L		09/21/18 11:16	09/29/18 20:00	1
Total PeCDF	0.804	J	50	0.18	pg/L		09/21/18 11:16	09/29/18 20:00	1
Total HxCDD	1.20	J q	50	0.14	pg/L		09/21/18 11:16	09/29/18 20:00	1
Total HxCDF	7.71	J	50	0.17	pg/L		09/21/18 11:16	09/29/18 20:00	1
Total HpCDD	2.28	J	50	0.18	pg/L		09/21/18 11:16	09/29/18 20:00	1
Total HpCDF	4.35	J q	50	0.20	pg/L		09/21/18 11:16	09/29/18 20:00	1

<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>MB Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C-2,3,7,8-TCDD	84		40 - 135	09/21/18 11:16	09/29/18 20:00	1
13C-2,3,7,8-TCDF	79		40 - 135	09/21/18 11:16	09/29/18 20:00	1
13C-1,2,3,7,8-PeCDD	78		40 - 135	09/21/18 11:16	09/29/18 20:00	1
13C-1,2,3,7,8-PeCDF	76		40 - 135	09/21/18 11:16	09/29/18 20:00	1
13C-1,2,3,6,7,8-HxCDD	84		40 - 135	09/21/18 11:16	09/29/18 20:00	1
13C-1,2,3,4,7,8-HxCDF	82		40 - 135	09/21/18 11:16	09/29/18 20:00	1
13C-1,2,3,4,6,7,8-HpCDD	89		40 - 135	09/21/18 11:16	09/29/18 20:00	1

TestAmerica Sacramento

QC Sample Results

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 320-43353-2

Method: 8290 - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: MB 320-247020/1-A
Matrix: Water
Analysis Batch: 248645

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 247020

Isotope Dilution	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
¹³ C-1,2,3,4,6,7,8-HpCDF	84		40 - 135	09/21/18 11:16	09/29/18 20:00	1
¹³ C-OCDD	78		40 - 135	09/21/18 11:16	09/29/18 20:00	1

Lab Sample ID: LCS 320-247020/2-A
Matrix: Water
Analysis Batch: 248645

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 247020

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits	%Rec.
2,3,7,8-TCDF	200	229		pg/L		115	67 - 135	
1,2,3,7,8-PeCDD	1000	1130		pg/L		113	71 - 135	
1,2,3,7,8-PeCDF	1000	1160		pg/L		116	70 - 133	
2,3,4,7,8-PeCDF	1000	1160		pg/L		116	69 - 135	
1,2,3,4,7,8-HxCDD	1000	1120		pg/L		112	67 - 130	
1,2,3,6,7,8-HxCDD	1000	1170		pg/L		117	61 - 144	
1,2,3,7,8,9-HxCDD	1000	1160		pg/L		116	61 - 140	
1,2,3,4,7,8-HxCDF	1000	1170		pg/L		117	69 - 140	
1,2,3,6,7,8-HxCDF	1000	1250		pg/L		125	62 - 155	
2,3,4,6,7,8-HxCDF	1000	1270		pg/L		127	70 - 146	
1,2,3,7,8,9-HxCDF	1000	1150		pg/L		115	71 - 142	
1,2,3,4,6,7,8-HpCDD	1000	1070		pg/L		107	71 - 134	
1,2,3,4,6,7,8-HpCDF	1000	1130		pg/L		113	68 - 137	
1,2,3,4,7,8,9-HpCDF	1000	1160		pg/L		116	74 - 134	
OCDD	2000	2100		pg/L		105	72 - 134	
OCDF	2000	2380		pg/L		119	65 - 143	

Isotope Dilution	LCS LCS		Limits
	%Recovery	Qualifier	
¹³ C-2,3,7,8-TCDD	82		40 - 135
¹³ C-2,3,7,8-TCDF	78		40 - 135
¹³ C-1,2,3,7,8-PeCDD	77		40 - 135
¹³ C-1,2,3,7,8-PeCDF	75		40 - 135
¹³ C-1,2,3,6,7,8-HxCDD	82		40 - 135
¹³ C-1,2,3,4,7,8-HxCDF	81		40 - 135
¹³ C-1,2,3,4,6,7,8-HpCDD	88		40 - 135
¹³ C-1,2,3,4,6,7,8-HpCDF	81		40 - 135
¹³ C-OCDD	76		40 - 135

Lab Sample ID: LCSD 320-247020/3-A
Matrix: Water
Analysis Batch: 248645

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 247020

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
2,3,7,8-TCDF	200	225		pg/L		112	67 - 135	2	20
1,2,3,7,8-PeCDD	1000	1110		pg/L		111	71 - 135	2	20
1,2,3,7,8-PeCDF	1000	1150		pg/L		115	70 - 133	1	20
2,3,4,7,8-PeCDF	1000	1120		pg/L		112	69 - 135	3	20
1,2,3,4,7,8-HxCDD	1000	1120		pg/L		112	67 - 130	1	20
1,2,3,6,7,8-HxCDD	1000	1160		pg/L		116	61 - 144	1	20

TestAmerica Sacramento

QC Sample Results

Client: Ramboll US Corporation
 Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 320-43353-2

Method: 8290 - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCSD 320-247020/3-A
Matrix: Water
Analysis Batch: 248645

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 247020

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2,3,7,8,9-HxCDD	1000	1150		pg/L		115	61 - 140	1	20
1,2,3,4,7,8-HxCDF	1000	1150		pg/L		115	69 - 140	2	20
1,2,3,6,7,8-HxCDF	1000	1210		pg/L		121	62 - 155	3	20
2,3,4,6,7,8-HxCDF	1000	1210		pg/L		121	70 - 146	5	20
1,2,3,7,8,9-HxCDF	1000	1130		pg/L		113	71 - 142	1	20
1,2,3,4,6,7,8-HpCDD	1000	1070		pg/L		107	71 - 134	0	20
1,2,3,4,6,7,8-HpCDF	1000	1140		pg/L		114	68 - 137	1	20
1,2,3,4,7,8,9-HpCDF	1000	1170		pg/L		117	74 - 134	1	20
OCDD	2000	2130		pg/L		106	72 - 134	1	20
OCDF	2000	2420		pg/L		121	65 - 143	2	20

Isotope Dilution	LCSD		Limits
	%Recovery	Qualifier	
13C-2,3,7,8-TCDD	91		40 - 135
13C-2,3,7,8-TCDF	86		40 - 135
13C-1,2,3,7,8-PeCDD	84		40 - 135
13C-1,2,3,7,8-PeCDF	82		40 - 135
13C-1,2,3,6,7,8-HxCDD	89		40 - 135
13C-1,2,3,4,7,8-HxCDF	89		40 - 135
13C-1,2,3,4,6,7,8-HpCDD	94		40 - 135
13C-1,2,3,4,6,7,8-HpCDF	87		40 - 135
13C-OCDD	82		40 - 135

Method: D 2216 - Percent Moisture

Lab Sample ID: 320-43353-A-2 DU
Matrix: Solid
Analysis Batch: 247421

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Percent Moisture	5.2		5.1		%		3	20

QC Association Summary

Client: Ramboll US Corporation
 Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 320-43353-2

Specialty Organics

Prep Batch: 246867

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-43353-3	DSPE-100-0.5-20180919	Total/NA	Solid	8290	
320-43353-3 - RA	DSPE-100-0.5-20180919	Total/NA	Solid	8290	
320-43353-15 - DL	DSPE-300-0.5-20180919	Total/NA	Solid	8290	
320-43353-15	DSPE-300-0.5-20180919	Total/NA	Solid	8290	
320-43353-15 - RA	DSPE-300-0.5-20180919	Total/NA	Solid	8290	
MB 320-246867/1-A	Method Blank	Total/NA	Solid	8290	
LCS 320-246867/2-A	Lab Control Sample	Total/NA	Solid	8290	
LCS 320-246867/3-A	Lab Control Sample Dup	Total/NA	Solid	8290	

Prep Batch: 247020

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-43353-1	DSPE-1-FB-20180919	Total/NA	Water	8290	
320-43353-8	DSPE-1-EB-20180919	Total/NA	Water	8290	
MB 320-247020/1-A	Method Blank	Total/NA	Water	8290	
LCS 320-247020/2-A	Lab Control Sample	Total/NA	Water	8290	
LCS 320-247020/3-A	Lab Control Sample Dup	Total/NA	Water	8290	

Analysis Batch: 247162

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-43353-3	DSPE-100-0.5-20180919	Total/NA	Solid	8290	246867
MB 320-246867/1-A	Method Blank	Total/NA	Solid	8290	246867
LCS 320-246867/2-A	Lab Control Sample	Total/NA	Solid	8290	246867
LCS 320-246867/3-A	Lab Control Sample Dup	Total/NA	Solid	8290	246867

Analysis Batch: 247483

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-43353-15	DSPE-300-0.5-20180919	Total/NA	Solid	8290	246867

Analysis Batch: 247588

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-43353-15 - DL	DSPE-300-0.5-20180919	Total/NA	Solid	8290	246867

Analysis Batch: 247643

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-43353-3 - RA	DSPE-100-0.5-20180919	Total/NA	Solid	8290	246867
320-43353-15 - RA	DSPE-300-0.5-20180919	Total/NA	Solid	8290	246867

Analysis Batch: 248644

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-43353-1	DSPE-1-FB-20180919	Total/NA	Water	8290	247020
320-43353-8	DSPE-1-EB-20180919	Total/NA	Water	8290	247020

Analysis Batch: 248645

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 320-247020/1-A	Method Blank	Total/NA	Water	8290	247020
LCS 320-247020/2-A	Lab Control Sample	Total/NA	Water	8290	247020
LCS 320-247020/3-A	Lab Control Sample Dup	Total/NA	Water	8290	247020

TestAmerica Sacramento

QC Association Summary

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 320-43353-2

General Chemistry

Analysis Batch: 247421

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-43353-3	DSPE-100-0.5-20180919	Total/NA	Solid	D 2216	
320-43353-15	DSPE-300-0.5-20180919	Total/NA	Solid	D 2216	
320-43353-A-2 DU	Duplicate	Total/NA	Solid	D 2216	

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16

Lab Chronicle

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 320-43353-2

Client Sample ID: DSPE-1-FB-20180919

Lab Sample ID: 320-43353-1

Date Collected: 09/19/18 08:00

Matrix: Water

Date Received: 09/20/18 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			1046.8 mL	20 uL	247020	09/21/18 11:16	A1A	TAL SAC
Total/NA	Analysis	8290		1			248644	09/29/18 14:54	ALM	TAL SAC

Client Sample ID: DSPE-100-0.5-20180919

Lab Sample ID: 320-43353-3

Date Collected: 09/19/18 08:40

Matrix: Solid

Date Received: 09/20/18 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			247421	09/24/18 10:27	DPM	TAL SAC

Client Sample ID: DSPE-100-0.5-20180919

Lab Sample ID: 320-43353-3

Date Collected: 09/19/18 08:40

Matrix: Solid

Date Received: 09/20/18 09:30

Percent Solids: 94.7

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			1.00 g	20 uL	246867	09/20/18 16:22	SR1	TAL SAC
Total/NA	Analysis	8290		1			247162	09/22/18 19:59	AS	TAL SAC
Total/NA	Prep	8290	RA		1.00 g	20 uL	246867	09/20/18 16:22	SR1	TAL SAC
Total/NA	Analysis	8290	RA	1			247643	09/25/18 10:52	ALM	TAL SAC

Client Sample ID: DSPE-1-EB-20180919

Lab Sample ID: 320-43353-8

Date Collected: 09/19/18 08:55

Matrix: Water

Date Received: 09/20/18 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			1044.9 mL	20 uL	247020	09/21/18 11:16	A1A	TAL SAC
Total/NA	Analysis	8290		1			248644	09/29/18 15:40	ALM	TAL SAC

Client Sample ID: DSPE-300-0.5-20180919

Lab Sample ID: 320-43353-15

Date Collected: 09/19/18 11:23

Matrix: Solid

Date Received: 09/20/18 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			247421	09/24/18 10:27	DPM	TAL SAC

Client Sample ID: DSPE-300-0.5-20180919

Lab Sample ID: 320-43353-15

Date Collected: 09/19/18 11:23

Matrix: Solid

Date Received: 09/20/18 09:30

Percent Solids: 93.6

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			0.98 g	20 uL	246867	09/20/18 16:22	SR1	TAL SAC
Total/NA	Analysis	8290		1			247483	09/23/18 08:45	AS	TAL SAC

TestAmerica Sacramento

Lab Chronicle

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 320-43353-2

Client Sample ID: DSPE-300-0.5-20180919

Lab Sample ID: 320-43353-15

Date Collected: 09/19/18 11:23

Matrix: Solid

Date Received: 09/20/18 09:30

Percent Solids: 93.6

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290	DL		0.98 g	20 uL	246867	09/20/18 16:22	SR1	TAL SAC
Total/NA	Analysis	8290	DL	10			247588	09/24/18 21:23	AS	TAL SAC
Total/NA	Prep	8290	RA		0.98 g	20 uL	246867	09/20/18 16:22	SR1	TAL SAC
Total/NA	Analysis	8290	RA	1			247643	09/25/18 14:39	ALM	TAL SAC

Laboratory References:

TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

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Accreditation/Certification Summary

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 320-43353-2

Laboratory: TestAmerica Sacramento

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska (UST)	State Program	10	17-020	01-20-21
ANAB	DoD ELAP		L2468	01-20-21
Arizona	State Program	9	AZ0708	08-11-19
Arkansas DEQ	State Program	6	88-0691	06-17-19
California	State Program	9	2897	01-31-19
Colorado	State Program	8	CA00044	08-31-19
Connecticut	State Program	1	PH-0691	06-30-19
Florida	NELAP	4	E87570	06-30-19
Georgia	State Program	4	N/A	01-28-19
Hawaii	State Program	9	N/A	01-29-19
Illinois	NELAP	5	200060	03-17-19
Kansas	NELAP	7	E-10375	10-31-18
Louisiana	NELAP	6	30612	06-30-19
Maine	State Program	1	CA0004	04-14-20
Michigan	State Program	5	9947	01-31-20
Nevada	State Program	9	CA00044	07-31-19
New Hampshire	NELAP	1	2997	04-18-19
New Jersey	NELAP	2	CA005	06-30-19
New York	NELAP	2	11666	03-31-19
Oregon	NELAP	10	4040	01-29-19
Pennsylvania	NELAP	3	68-01272	03-31-19
Texas	NELAP	6	T104704399	05-31-19
US Fish & Wildlife	Federal		LE148388-0	07-31-19
USDA	Federal		P330-18-00239	01-17-21
USEPA UCMR	Federal	1	CA00044	11-06-18
Utah	NELAP	8	CA00044	02-28-19
Vermont	State Program	1	VT-4040	04-30-19
Virginia	NELAP	3	460278	03-14-19
Washington	State Program	10	C581	05-05-19
West Virginia (DW)	State Program	3	9930C	12-31-18
Wyoming	State Program	8	8TMS-L	01-28-19

Laboratory: TestAmerica Irvine

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska	State Program	10	CA01531	06-30-19
Arizona	State Program	9	AZ0671	10-14-18 *
California	LA Cty Sanitation Districts	9	10256	06-30-19
California	State Program	9	CA ELAP 2706	06-30-19
Guam	State Program	9	Cert. No. 17-003R	01-23-19
Hawaii	State Program	9	N/A	01-29-19
Kansas	NELAP	7	E-10420	07-31-19
Nevada	State Program	9	CA015312018-1	07-31-19
New Mexico	State Program	6	N/A	01-29-19
Oregon	NELAP	10	4028	01-29-19
US Fish & Wildlife	Federal		058448	07-31-19
USDA	Federal		P330-15-00184	07-09-21
Washington	State Program	10	C900	09-03-18 *

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

TestAmerica Sacramento

Method Summary

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 320-43353-2

Method	Method Description	Protocol	Laboratory
8290	Dioxins and Furans (HRGC/HRMS)	SW846	TAL SAC
TEQ	Total TEQ Calculation	TAL SOP	TAL SAC
D 2216	Percent Moisture	ASTM	TAL SAC
8290	Separatory Funnel (Liquid-Liquid) Extraction of Dioxins and Furans	SW846	TAL SAC
8290	Soxhlet Extraction of Dioxins and Furans	SW846	TAL SAC

Protocol References:

ASTM = ASTM International

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600



Sample Summary

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 320-43353-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
320-43353-1	DSPE-1-FB-20180919	Water	09/19/18 08:00	09/20/18 09:30
320-43353-3	DSPE-100-0.5-20180919	Solid	09/19/18 08:40	09/20/18 09:30
320-43353-8	DSPE-1-EB-20180919	Water	09/19/18 08:55	09/20/18 09:30
320-43353-15	DSPE-300-0.5-20180919	Solid	09/19/18 11:23	09/20/18 09:30

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TestAmerica Irvine Sacramento
 17461 Berian Ave Suite 100
 Irvine, CA 92614
 Phone: 949.261.1022 Fax:

Chain of Custody Record

138873

TestAmerica
 THE LEADER IN ENVIRONMENTAL TESTING
 TestAmerica Laboratories, Inc.
 TAL-8210 (07/13)

Regulatory Program: DW NPDES RCRA Other:

Client Contact: **Ramboll**
 Company Name: **Ramboll**
 Address: **2200 Powell St, Suite 700**
 City/State/Zip: **Emeryville, CA, 94608**
 Phone: **510-655-7400**
 Fax: **510-655-7400**
 Project Name: **Dioxin Pre-excavation Soil Sampling**
 Site: **MERT**
 PO # **169000641-012**

Project Manager: **Don Clark**
 Tel/Fax: **510-299-7036**
 Analysis Turnaround Time: CALENDAR DAYS WORKING DAYS
 TAT if different from Below: **5 days**
 2 weeks
 1 week
 2 days
 1 day

Site Contact: **Brandon Keenan** Date: **09/19/2018**
 Lab Contact: **Patty Matry** Carrier: **1** of **5** COCs
 Sampler: **BK**
 For Lab Use Only:
 Walk-in Client:
 Lab Sampling:
 Job / SDG No.:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Sample Specific Notes:	
						Filtered Sample (Y/N)	Perform MS/MSD (Y/N)
DSPE-1-FB-20180919	09/19	0800	GC	SO	1	X	
DSPE-1-0.5-20180919	"	0840	GC	SO	11	X	
DSPE-100-0.5-20180919	"	0840	GC	SO	11	X	
DSPE-1-1.5-20180919	"	0855	GC	SO	11	X	
DSPE-1-2.0-20180919	"	0912	GC	SO	11	X	
DSPE-1-3.0-20180919	"	0934	GC	SO	11	X	
DSPE-1-4.0-20180919	"	0950	GC	SO	11	X	
DSPE-1-EB-20180919	"	0855	GC	SO	11	X	
DSPE-2-0.5-20180919	"	1027	GC	SO	11	X	
DSPE-2-1.5-20180919	"	1036	GC	SO	11	X	
DSPE-2-2.0-20180919	"	1043	GC	SO	11	X	
DSPE-2-3.0-20180919	"	1049	GC	SO	11	X	



Preservation Used: 1= Ice, 2= HCl, 3= H2SO4, 4= HNO3, 5= NaOH, 6= Other

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return to Client Disposal by Lab Archive for _____ Months

Special Instructions/QC Requirements & Comments:

Custody Seal No.: **18.9**

Relinquished by: **B.K.P.** Date/Time: **09/19/18**
 Relinquished by: **JAM** Date/Time: **9/18/18 13:00**
 Relinquished by: **JAM** Date/Time: **9-20-18 0930**

Received by: **JAM** Date/Time: **9-19-18 1620**
 Received by: **Felix** Date/Time: **9-20-18 0930**

Company: **Ramboll**
 Company: **TALUS**
 Company: **TALUS**

Therm ID No.: **517**
 Cooler Temp. (°C): **5.4**
 Obs'd: **5.7**
 Corrd: **5.2**



TestAmerica Irvine
 17461 Merian Ave
 Suite 100
 Irvine, CA 92614
 Phone: 949.261.1022 Fax:

Sacramento

Chain of Custody Record

138875

TestAmerica
 THE LEADER IN ENVIRONMENTAL TESTING
 TestAmerica Laboratories, Inc.
 TAL-8210 (0713)

Regulatory Program: DW NPDES RCRA Other:

Client Contact
 Company Name: Ramboll
 Address: 2200 Powell St Suite 700
 City/State/Zip: Fremontville, CA, 94608
 Phone: 510-655-7400
 Fax:
 Project Name: Dioxin Sampling
 Site: NERT
 PO #: 1690006941-012

Project Manager: Dan Clark
 Tell Fax: 910-289-7036
 Analysis Turnaround Time
 CALENDAR DAYS WORKING DAYS
 TAT: if different from Below Delays
 2 weeks
 1 week
 2 days
 1 day

Site Contact: Brendan Keegan Date: 09/19/18
 Lab Contact: Patty Mata Carrier:
 COC No.: 4 of 3 COCs

Sampler:
 For Lab Use Only:
 Walk-in Client:
 Lab Sampling:
 Job / SDG No.:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	Sample Specific Notes:
DSPE-2-4.0-20180919	9/19	1100	G	SO	1			
DSPE-3-0.5-20180919	"	1123	"	"	"			
DSPE-3-0.5-20180919	"	1123	"	"	"			
DSPE-3-1.5-20180919	"	1140	"	"	"			
DSPE-3-2.0-20180919	"	1146	"	"	"			
DSPE-3-3.0-20180919	"	1202	"	"	"			
DSPE-4-0.5-20180919	"	1445	"	"	"			
DSPE-4-2.0-20180919	"	1450	"	"	"			
DSPE-4-3.0-20180919	"	1455	"	"	"			
DSPE-4-4.0-20180919	"	1500	"	"	"			
DSPE-5-1.5-20180919	"	1536	"	"	"			
DSPE-5-2.0-20180919	"	1534	"	"	"			

Preservation Used: 1= Ice, 2= HCl, 3= H2SO4, 4=HNO3, 5=NaOH, 6= Other
 Possible Hazard Identification: Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.
 Non-Hazard Flammable Skin Irritant Poison B Unknown
 Return to Client Disposal by Lab Archive for _____ Months

Special Instructions/QC Requirements & Comments:
 Custody Seal No.:
 Relinquished by: B. K... Date/Time: 9/19/18 1620
 Relinquished by: V. H... Date/Time: 9/19/18 1730
 Relinquished by: TALUS Date/Time: 9-20-18 0930

Received by: V. H... Date/Time: 9-19-18 1620
 Received by: Fedy Date/Time: 9-20-18 0930
 Received in Laboratory by: Jan D. ...

Company: Ramboll
 Company: TALUS
 Company: TALUS

Therm ID No.: ALC292
 Cooler Temp. (°C): 072
 Cor'd: 072
 S42 5.40C

TALUS 18.9 TAM



Login Sample Receipt Checklist

Client: Ramboll US Corporation

Job Number: 320-43353-2

Login Number: 43353

List Source: TestAmerica Sacramento

List Number: 1

Creator: Turpen, Troy

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	967454, 967456
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

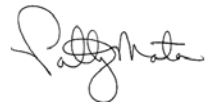
ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Sacramento
880 Riverside Parkway
West Sacramento, CA 95605
Tel: (916)373-5600

TestAmerica Job ID: 320-43353-3
Client Project/Site: NERT Dioxin Sampling

For:
Ramboll US Corporation
2200 Powell Street
Suite 700
Emeryville, California 94608

Attn: Craig Knox



Authorized for release by:
10/2/2018 10:20:14 AM

Patty Mata, Senior Project Manager
(949)261-1022
patty.mata@testamericainc.com

LINKS

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www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Definitions/Glossary

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 320-43353-3

Qualifiers

Dioxin

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
E	Result exceeded calibration range.
G	The reported quantitation limit has been raised due to an exhibited elevated noise or matrix interference
q	The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio. The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Case Narrative

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 320-43353-3

Job ID: 320-43353-3

Laboratory: TestAmerica Sacramento

Narrative

Job Narrative 320-43353-3

Comments

The following sample was removed from hold and requested for analysis per client's 9/27/18 email request: DSPE-3-2.0-20180919 (320-43353-17).

Receipt

The samples were received on 9/20/2018 9:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 5.4° C and 5.7° C.

Dioxin

Method(s) 8290: The concentrations of selected analytes associated with the following sample exceeded the instrument calibration range: DSPE-3-2.0-20180919 (320-43353-17). The analytes have been qualified; however, the peaks did not saturate the instrument detector. Historical data indicate that for the isotope dilution method, dilution and re-analysis will not produce significantly different results from those reported above the calibration range.

Method(s) 8290: The following sample exhibited elevated noise or matrix interferences for 2,3,7,8-TCDF causing elevation of the detection limit (EDL): DSPE-3-2.0-20180919 (320-43353-17). The reporting limit (RL) for the affected analyte has been raised to be equal to the EDL, and a "G" qualifier applied.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Dioxin Prep

Method(s) 8290: Due to the matrix, the initial volume used for the following sample deviated from the standard procedure: DSPE-3-2.0-20180919 (320-43353-17). The reporting limits (RLs) have been adjusted proportionately. Sample associated with preparation batch 320-248208.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: Ramboll US Corporation
 Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 320-43353-3

Client Sample ID: DSPE-3-2.0-20180919

Lab Sample ID: 320-43353-17

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	160		11	5.4	pg/g	1	☼	8290	Total/NA
1,2,3,7,8-PeCDD	590	B	53	48	pg/g	1	☼	8290	Total/NA
1,2,3,7,8-PeCDF	9700	G B	310	310	pg/g	1	☼	8290	Total/NA
2,3,4,7,8-PeCDF	4500	G	310	310	pg/g	1	☼	8290	Total/NA
1,2,3,4,7,8-HxCDD	510	B	53	8.9	pg/g	1	☼	8290	Total/NA
1,2,3,6,7,8-HxCDD	1100	B	53	8.5	pg/g	1	☼	8290	Total/NA
1,2,3,7,8,9-HxCDD	960	B	53	8.0	pg/g	1	☼	8290	Total/NA
1,2,3,4,7,8-HxCDF	21000	G B	130	130	pg/g	1	☼	8290	Total/NA
1,2,3,6,7,8-HxCDF	15000	G B	130	130	pg/g	1	☼	8290	Total/NA
2,3,4,6,7,8-HxCDF	3300	G B	130	130	pg/g	1	☼	8290	Total/NA
1,2,3,7,8,9-HxCDF	3000	G B	140	140	pg/g	1	☼	8290	Total/NA
1,2,3,4,6,7,8-HpCDD	3700	B	53	12	pg/g	1	☼	8290	Total/NA
1,2,3,4,6,7,8-HpCDF	55000	G E B	200	200	pg/g	1	☼	8290	Total/NA
1,2,3,4,7,8,9-HpCDF	24000	G E B	240	240	pg/g	1	☼	8290	Total/NA
OCDD	4000	B	110	2.1	pg/g	1	☼	8290	Total/NA
OCDF	170000	E B	110	51	pg/g	1	☼	8290	Total/NA
Total TCDD	4100		11	5.4	pg/g	1	☼	8290	Total/NA
Total TCDF	44000	G q B	63	63	pg/g	1	☼	8290	Total/NA
Total PeCDD	5600	B	53	48	pg/g	1	☼	8290	Total/NA
Total PeCDF	60000	G q B	310	310	pg/g	1	☼	8290	Total/NA
Total HxCDD	7300	B	53	8.5	pg/g	1	☼	8290	Total/NA
Total HxCDF	96000	G B	130	130	pg/g	1	☼	8290	Total/NA
Total HpCDD	5700	B	53	12	pg/g	1	☼	8290	Total/NA
Total HpCDF	110000	G B	220	220	pg/g	1	☼	8290	Total/NA
2,3,7,8-TCDF - RA	4600	E B G	39	39	pg/g	1	☼	8290	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Sacramento

Client Sample Results

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 320-43353-3

Client Sample ID: DSPE-3-2.0-20180919

Lab Sample ID: 320-43353-17

Date Collected: 09/19/18 11:46

Matrix: Solid

Date Received: 09/20/18 09:30

Percent Solids: 92.4

Method: 8290 - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	160		11	5.4	pg/g	☼	09/27/18 14:30	09/28/18 18:15	1
1,2,3,7,8-PeCDD	590	B	53	48	pg/g	☼	09/27/18 14:30	09/28/18 18:15	1
1,2,3,7,8-PeCDF	9700	G B	310	310	pg/g	☼	09/27/18 14:30	09/28/18 18:15	1
2,3,4,7,8-PeCDF	4500	G	310	310	pg/g	☼	09/27/18 14:30	09/28/18 18:15	1
1,2,3,4,7,8-HxCDD	510	B	53	8.9	pg/g	☼	09/27/18 14:30	09/28/18 18:15	1
1,2,3,6,7,8-HxCDD	1100	B	53	8.5	pg/g	☼	09/27/18 14:30	09/28/18 18:15	1
1,2,3,7,8,9-HxCDD	960	B	53	8.0	pg/g	☼	09/27/18 14:30	09/28/18 18:15	1
1,2,3,4,7,8-HxCDF	21000	G B	130	130	pg/g	☼	09/27/18 14:30	09/28/18 18:15	1
1,2,3,6,7,8-HxCDF	15000	G B	130	130	pg/g	☼	09/27/18 14:30	09/28/18 18:15	1
2,3,4,6,7,8-HxCDF	3300	G B	130	130	pg/g	☼	09/27/18 14:30	09/28/18 18:15	1
1,2,3,7,8,9-HxCDF	3000	G B	140	140	pg/g	☼	09/27/18 14:30	09/28/18 18:15	1
1,2,3,4,6,7,8-HpCDD	3700	B	53	12	pg/g	☼	09/27/18 14:30	09/28/18 18:15	1
1,2,3,4,6,7,8-HpCDF	55000	G E B	200	200	pg/g	☼	09/27/18 14:30	09/28/18 18:15	1
1,2,3,4,7,8,9-HpCDF	24000	G E B	240	240	pg/g	☼	09/27/18 14:30	09/28/18 18:15	1
OCDD	4000	B	110	2.1	pg/g	☼	09/27/18 14:30	09/28/18 18:15	1
OCDF	170000	E B	110	51	pg/g	☼	09/27/18 14:30	09/28/18 18:15	1
Total TCDD	4100		11	5.4	pg/g	☼	09/27/18 14:30	09/28/18 18:15	1
Total TCDF	44000	G q B	63	63	pg/g	☼	09/27/18 14:30	09/28/18 18:15	1
Total PeCDD	5600	B	53	48	pg/g	☼	09/27/18 14:30	09/28/18 18:15	1
Total PeCDF	60000	G q B	310	310	pg/g	☼	09/27/18 14:30	09/28/18 18:15	1
Total HxCDD	7300	B	53	8.5	pg/g	☼	09/27/18 14:30	09/28/18 18:15	1
Total HxCDF	96000	G B	130	130	pg/g	☼	09/27/18 14:30	09/28/18 18:15	1
Total HpCDD	5700	B	53	12	pg/g	☼	09/27/18 14:30	09/28/18 18:15	1
Total HpCDF	110000	G B	220	220	pg/g	☼	09/27/18 14:30	09/28/18 18:15	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	69		40 - 135	09/27/18 14:30	09/28/18 18:15	1
13C-2,3,7,8-TCDF	70		40 - 135	09/27/18 14:30	09/28/18 18:15	1
13C-1,2,3,7,8-PeCDD	50		40 - 135	09/27/18 14:30	09/28/18 18:15	1
13C-1,2,3,7,8-PeCDF	59		40 - 135	09/27/18 14:30	09/28/18 18:15	1
13C-1,2,3,6,7,8-HxCDD	64		40 - 135	09/27/18 14:30	09/28/18 18:15	1
13C-1,2,3,4,7,8-HxCDF	65		40 - 135	09/27/18 14:30	09/28/18 18:15	1
13C-1,2,3,4,6,7,8-HpCDD	78		40 - 135	09/27/18 14:30	09/28/18 18:15	1
13C-1,2,3,4,6,7,8-HpCDF	70		40 - 135	09/27/18 14:30	09/28/18 18:15	1
13C-OCDD	67		40 - 135	09/27/18 14:30	09/28/18 18:15	1

Method: 8290 - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	4600	E B G	39	39	pg/g	☼	09/27/18 14:30	09/29/18 01:04	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDF	78		40 - 135	09/27/18 14:30	09/29/18 01:04	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	7.6		0.1	0.1	%			09/28/18 10:45	1

Toxicity Summary

Client: Ramboll US Corporation
 Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 320-43353-3

Client Sample ID: DSPE-3-2.0-20180919

Lab Sample ID: 320-43353-17

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005		Method
						TEF	TEQ	
2,3,7,8-TCDD	160		11	5.4	pg/g	1	160	8290
1,2,3,7,8-PeCDD	590	B	53	48	pg/g	1	590	8290
1,2,3,7,8-PeCDF	9700	G B	310	310	pg/g	0.03	290	8290
2,3,4,7,8-PeCDF	4500	G	310	310	pg/g	0.3	1400	8290
1,2,3,4,7,8-HxCDD	510	B	53	8.9	pg/g	0.1	51	8290
1,2,3,6,7,8-HxCDD	1100	B	53	8.5	pg/g	0.1	110	8290
1,2,3,7,8,9-HxCDD	960	B	53	8.0	pg/g	0.1	96	8290
1,2,3,4,7,8-HxCDF	21000	G B	130	130	pg/g	0.1	2100	8290
1,2,3,6,7,8-HxCDF	15000	G B	130	130	pg/g	0.1	1500	8290
2,3,4,6,7,8-HxCDF	3300	G B	130	130	pg/g	0.1	330	8290
1,2,3,7,8,9-HxCDF	3000	G B	140	140	pg/g	0.1	300	8290
1,2,3,4,6,7,8-HpCDD	3700	B	53	12	pg/g	0.01	37	8290
1,2,3,4,6,7,8-HpCDF	55000	G E B	200	200	pg/g	0.01	550	8290
1,2,3,4,7,8,9-HpCDF	24000	G E B	240	240	pg/g	0.01	240	8290
OCDD	4000	B	110	2.1	pg/g	0.0003	1.2	8290
OCDF	170000	E B	110	51	pg/g	0.0003	51	8290
2,3,7,8-TCDF - RA	4600	E B G	39	39	pg/g	0.1	460	8290

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005		Method
						TEF	TEQ	
Total Dioxin/Furan TEQ					pg/g		8300	TEQ

TEF Reference:

WHO 2005 = World Health Organization (WHO) 2005 TEF, Dioxins, Furans and PCB Congeners

Note: The analytes PCB-156 and PCB-157 coelute as a single peak.

TestAmerica Sacramento

Isotope Dilution Summary

Client: Ramboll US Corporation
 Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 320-43353-3

Method: 8290 - Dioxins and Furans (HRGC/HRMS)

Matrix: Solid

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	TCDD (40-135)	TCDF (40-135)	PeCDD (40-135)	PeCDF (40-135)	HxDD (40-135)	HxCDF (40-135)	HpCDD (40-135)	HpCDF (40-135)
320-43353-17	DSPE-3-2.0-20180919	69	70	50	59	64	65	78	70
320-43353-17 - RA	DSPE-3-2.0-20180919		78						
LCS 320-248208/2-A	Lab Control Sample	64	60	54	56	62	58	78	70
LCSD 320-248208/3-A	Lab Control Sample Dup	64	60	49	54	62	59	78	69
MB 320-248208/1-A	Method Blank	70	66	50	58	68	64	86	75

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	OCDD (40-135)
320-43353-17	DSPE-3-2.0-20180919	67
320-43353-17 - RA	DSPE-3-2.0-20180919	
LCS 320-248208/2-A	Lab Control Sample	70
LCSD 320-248208/3-A	Lab Control Sample Dup	70
MB 320-248208/1-A	Method Blank	77

Surrogate Legend

- TCDD = 13C-2,3,7,8-TCDD
- TCDF = 13C-2,3,7,8-TCDF
- PeCDD = 13C-1,2,3,7,8-PeCDD
- PeCDF = 13C-1,2,3,7,8-PeCDF
- HxDD = 13C-1,2,3,6,7,8-HxCDD
- HxCDF = 13C-1,2,3,4,7,8-HxCDF
- HpCDD = 13C-1,2,3,4,6,7,8-HpCDD
- HpCDF = 13C-1,2,3,4,6,7,8-HpCDF
- OCDD = 13C-OCDD

QC Sample Results

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 320-43353-3

Method: 8290 - Dioxins and Furans (HRGC/HRMS)

Lab Sample ID: MB 320-248208/1-A
Matrix: Solid
Analysis Batch: 248233

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 248208

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		1.0	0.016	pg/g		09/27/18 14:30	09/28/18 17:29	1
2,3,7,8-TCDF	0.0861	J	1.0	0.0073	pg/g		09/27/18 14:30	09/28/18 17:29	1
1,2,3,7,8-PeCDD	0.0399	J	5.0	0.017	pg/g		09/27/18 14:30	09/28/18 17:29	1
1,2,3,7,8-PeCDF	0.142	J	5.0	0.015	pg/g		09/27/18 14:30	09/28/18 17:29	1
2,3,4,7,8-PeCDF	ND		5.0	0.015	pg/g		09/27/18 14:30	09/28/18 17:29	1
1,2,3,4,7,8-HxCDD	0.135	J q	5.0	0.013	pg/g		09/27/18 14:30	09/28/18 17:29	1
1,2,3,6,7,8-HxCDD	0.0709	J q	5.0	0.012	pg/g		09/27/18 14:30	09/28/18 17:29	1
1,2,3,7,8,9-HxCDD	0.0634	J q	5.0	0.012	pg/g		09/27/18 14:30	09/28/18 17:29	1
1,2,3,4,7,8-HxCDF	0.0964	J q	5.0	0.018	pg/g		09/27/18 14:30	09/28/18 17:29	1
1,2,3,6,7,8-HxCDF	0.0764	J q	5.0	0.018	pg/g		09/27/18 14:30	09/28/18 17:29	1
2,3,4,6,7,8-HxCDF	0.0563	J q	5.0	0.018	pg/g		09/27/18 14:30	09/28/18 17:29	1
1,2,3,7,8,9-HxCDF	0.987	J	5.0	0.019	pg/g		09/27/18 14:30	09/28/18 17:29	1
1,2,3,4,6,7,8-HpCDD	0.512	J	5.0	0.017	pg/g		09/27/18 14:30	09/28/18 17:29	1
1,2,3,4,6,7,8-HpCDF	0.205	J	5.0	0.020	pg/g		09/27/18 14:30	09/28/18 17:29	1
1,2,3,4,7,8,9-HpCDF	0.616	J	5.0	0.024	pg/g		09/27/18 14:30	09/28/18 17:29	1
OCDD	11.4		10	0.027	pg/g		09/27/18 14:30	09/28/18 17:29	1
OCDF	0.990	J	10	0.019	pg/g		09/27/18 14:30	09/28/18 17:29	1
Total TCDD	ND		1.0	0.016	pg/g		09/27/18 14:30	09/28/18 17:29	1
Total TCDF	0.126	J q	1.0	0.0073	pg/g		09/27/18 14:30	09/28/18 17:29	1
Total PeCDD	0.0399	J	5.0	0.017	pg/g		09/27/18 14:30	09/28/18 17:29	1
Total PeCDF	0.220	J q	5.0	0.015	pg/g		09/27/18 14:30	09/28/18 17:29	1
Total HxCDD	0.297	J q	5.0	0.012	pg/g		09/27/18 14:30	09/28/18 17:29	1
Total HxCDF	1.40	J q	5.0	0.018	pg/g		09/27/18 14:30	09/28/18 17:29	1
Total HpCDD	0.806	J	5.0	0.017	pg/g		09/27/18 14:30	09/28/18 17:29	1
Total HpCDF	1.04	J	5.0	0.022	pg/g		09/27/18 14:30	09/28/18 17:29	1

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	70		40 - 135	09/27/18 14:30	09/28/18 17:29	1
13C-2,3,7,8-TCDF	66		40 - 135	09/27/18 14:30	09/28/18 17:29	1
13C-1,2,3,7,8-PeCDD	50		40 - 135	09/27/18 14:30	09/28/18 17:29	1
13C-1,2,3,7,8-PeCDF	58		40 - 135	09/27/18 14:30	09/28/18 17:29	1
13C-1,2,3,6,7,8-HxCDD	68		40 - 135	09/27/18 14:30	09/28/18 17:29	1
13C-1,2,3,4,7,8-HxCDF	64		40 - 135	09/27/18 14:30	09/28/18 17:29	1
13C-1,2,3,4,6,7,8-HpCDD	86		40 - 135	09/27/18 14:30	09/28/18 17:29	1
13C-1,2,3,4,6,7,8-HpCDF	75		40 - 135	09/27/18 14:30	09/28/18 17:29	1
13C-OCDD	77		40 - 135	09/27/18 14:30	09/28/18 17:29	1

Lab Sample ID: LCS 320-248208/2-A
Matrix: Solid
Analysis Batch: 248233

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 248208

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
2,3,7,8-TCDD	20.0	18.8		pg/g		94	60 - 138
2,3,7,8-TCDF	20.0	21.6		pg/g		108	56 - 158
1,2,3,7,8-PeCDD	100	106		pg/g		106	70 - 122
1,2,3,7,8-PeCDF	100	107		pg/g		107	69 - 134
2,3,4,7,8-PeCDF	100	102		pg/g		102	70 - 131
1,2,3,4,7,8-HxCDD	100	103		pg/g		103	60 - 138

TestAmerica Sacramento

QC Sample Results

Client: Ramboll US Corporation
 Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 320-43353-3

Method: 8290 - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCS 320-248208/2-A
Matrix: Solid
Analysis Batch: 248233

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 248208

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
1,2,3,6,7,8-HxCDD	100	108		pg/g		108	68 - 136
1,2,3,7,8,9-HxCDD	100	113		pg/g		113	68 - 138
1,2,3,4,7,8-HxCDF	100	112		pg/g		112	74 - 128
1,2,3,6,7,8-HxCDF	100	120		pg/g		120	67 - 140
2,3,4,6,7,8-HxCDF	100	125		pg/g		125	71 - 137
1,2,3,7,8,9-HxCDF	100	133		pg/g		133	72 - 134
1,2,3,4,6,7,8-HpCDD	100	101		pg/g		101	71 - 128
1,2,3,4,6,7,8-HpCDF	100	107		pg/g		107	71 - 134
1,2,3,4,7,8,9-HpCDF	100	114		pg/g		114	68 - 129
OCDD	200	204		pg/g		102	70 - 128
OCDF	200	230		pg/g		115	63 - 141

Isotope Dilution	LCS LCS		Limits
	%Recovery	Qualifier	
13C-2,3,7,8-TCDD	64		40 - 135
13C-2,3,7,8-TCDF	60		40 - 135
13C-1,2,3,7,8-PeCDD	54		40 - 135
13C-1,2,3,7,8-PeCDF	56		40 - 135
13C-1,2,3,6,7,8-HxCDD	62		40 - 135
13C-1,2,3,4,7,8-HxCDF	58		40 - 135
13C-1,2,3,4,6,7,8-HpCDD	78		40 - 135
13C-1,2,3,4,6,7,8-HpCDF	70		40 - 135
13C-OCDD	70		40 - 135

Lab Sample ID: LCSD 320-248208/3-A
Matrix: Solid
Analysis Batch: 248233

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 248208

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
2,3,7,8-TCDD	20.0	18.6		pg/g		93	60 - 138	1	20
2,3,7,8-TCDF	20.0	21.8		pg/g		109	56 - 158	1	20
1,2,3,7,8-PeCDD	100	107		pg/g		107	70 - 122	1	20
1,2,3,7,8-PeCDF	100	110		pg/g		110	69 - 134	2	20
2,3,4,7,8-PeCDF	100	100		pg/g		100	70 - 131	1	20
1,2,3,4,7,8-HxCDD	100	105		pg/g		105	60 - 138	2	20
1,2,3,6,7,8-HxCDD	100	109		pg/g		109	68 - 136	1	20
1,2,3,7,8,9-HxCDD	100	114		pg/g		114	68 - 138	1	20
1,2,3,4,7,8-HxCDF	100	113		pg/g		113	74 - 128	1	20
1,2,3,6,7,8-HxCDF	100	118		pg/g		118	67 - 140	2	20
2,3,4,6,7,8-HxCDF	100	124		pg/g		124	71 - 137	1	20
1,2,3,7,8,9-HxCDF	100	127		pg/g		127	72 - 134	5	20
1,2,3,4,6,7,8-HpCDD	100	101		pg/g		101	71 - 128	0	20
1,2,3,4,6,7,8-HpCDF	100	108		pg/g		108	71 - 134	2	20
1,2,3,4,7,8,9-HpCDF	100	116		pg/g		116	68 - 129	2	20
OCDD	200	205		pg/g		103	70 - 128	1	20
OCDF	200	229		pg/g		115	63 - 141	0	20

Isotope Dilution	LCSD LCSD		Limits
	%Recovery	Qualifier	
13C-2,3,7,8-TCDD	64		40 - 135

TestAmerica Sacramento

QC Sample Results

Client: Ramboll US Corporation
 Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 320-43353-3

Method: 8290 - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCSD 320-248208/3-A
Matrix: Solid
Analysis Batch: 248233

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 248208

<i>Isotope Dilution</i>	<i>LCSD %Recovery</i>	<i>LCSD Qualifier</i>	<i>Limits</i>
13C-2,3,7,8-TCDF	60		40 - 135
13C-1,2,3,7,8-PeCDD	49		40 - 135
13C-1,2,3,7,8-PeCDF	54		40 - 135
13C-1,2,3,6,7,8-HxCDD	62		40 - 135
13C-1,2,3,4,7,8-HxCDF	59		40 - 135
13C-1,2,3,4,6,7,8-HpCDD	78		40 - 135
13C-1,2,3,4,6,7,8-HpCDF	69		40 - 135
13C-OCDD	70		40 - 135

Method: D 2216 - Percent Moisture

Lab Sample ID: 320-43353-17 DU
Matrix: Solid
Analysis Batch: 248387

Client Sample ID: DSPE-3-2.0-20180919
Prep Type: Total/NA

<i>Analyte</i>	<i>Sample Result</i>	<i>Sample Qualifier</i>	<i>DU Result</i>	<i>DU Qualifier</i>	<i>Unit</i>	<i>D</i>	<i>RPD</i>	<i>RPD Limit</i>
Percent Moisture	7.6		7.9		%	-	3	20



QC Association Summary

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 320-43353-3

Specialty Organics

Prep Batch: 248208

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-43353-17	DSPE-3-2.0-20180919	Total/NA	Solid	8290	
320-43353-17 - RA	DSPE-3-2.0-20180919	Total/NA	Solid	8290	
MB 320-248208/1-A	Method Blank	Total/NA	Solid	8290	
LCS 320-248208/2-A	Lab Control Sample	Total/NA	Solid	8290	
LCSD 320-248208/3-A	Lab Control Sample Dup	Total/NA	Solid	8290	

Analysis Batch: 248233

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-43353-17	DSPE-3-2.0-20180919	Total/NA	Solid	8290	248208
MB 320-248208/1-A	Method Blank	Total/NA	Solid	8290	248208
LCS 320-248208/2-A	Lab Control Sample	Total/NA	Solid	8290	248208
LCSD 320-248208/3-A	Lab Control Sample Dup	Total/NA	Solid	8290	248208

Analysis Batch: 248649

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-43353-17 - RA	DSPE-3-2.0-20180919	Total/NA	Solid	8290	248208

General Chemistry

Analysis Batch: 248387

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-43353-17	DSPE-3-2.0-20180919	Total/NA	Solid	D 2216	
320-43353-17 DU	DSPE-3-2.0-20180919	Total/NA	Solid	D 2216	

Lab Chronicle

Client: Ramboll US Corporation
 Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 320-43353-3

Client Sample ID: DSPE-3-2.0-20180919

Lab Sample ID: 320-43353-17

Date Collected: 09/19/18 11:46

Matrix: Solid

Date Received: 09/20/18 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			248387	09/28/18 10:45	DPM	TAL SAC

Client Sample ID: DSPE-3-2.0-20180919

Lab Sample ID: 320-43353-17

Date Collected: 09/19/18 11:46

Matrix: Solid

Date Received: 09/20/18 09:30

Percent Solids: 92.4

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			1.03 g	20 uL	248208	09/27/18 14:30	SR1	TAL SAC
Total/NA	Analysis	8290		1			248233	09/28/18 18:15	ALM	TAL SAC
Total/NA	Prep	8290	RA		1.03 g	20 uL	248208	09/27/18 14:30	SR1	TAL SAC
Total/NA	Analysis	8290	RA	1			248649	09/29/18 01:04	AS	TAL SAC

Laboratory References:

TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Accreditation/Certification Summary

Client: Ramboll US Corporation
 Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 320-43353-3

Laboratory: TestAmerica Sacramento

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska (UST)	State Program	10	17-020	01-20-21
ANAB	DoD ELAP		L2468	01-20-21
Arizona	State Program	9	AZ0708	08-11-19
Arkansas DEQ	State Program	6	88-0691	06-17-19
California	State Program	9	2897	01-31-19
Colorado	State Program	8	CA00044	08-31-19
Connecticut	State Program	1	PH-0691	06-30-19
Florida	NELAP	4	E87570	06-30-19
Georgia	State Program	4	N/A	01-28-19
Hawaii	State Program	9	N/A	01-29-19
Illinois	NELAP	5	200060	03-17-19
Kansas	NELAP	7	E-10375	10-31-18
Louisiana	NELAP	6	30612	06-30-19
Maine	State Program	1	CA0004	04-14-20
Michigan	State Program	5	9947	01-31-20
Nevada	State Program	9	CA00044	07-31-19
New Hampshire	NELAP	1	2997	04-18-19
New Jersey	NELAP	2	CA005	06-30-19
New York	NELAP	2	11666	03-31-19
Oregon	NELAP	10	4040	01-29-19
Pennsylvania	NELAP	3	68-01272	03-31-19
Texas	NELAP	6	T104704399	05-31-19
US Fish & Wildlife	Federal		LE148388-0	07-31-19
USDA	Federal		P330-18-00239	01-17-21
USEPA UCMR	Federal	1	CA00044	11-06-18
Utah	NELAP	8	CA00044	02-28-19
Vermont	State Program	1	VT-4040	04-30-19
Virginia	NELAP	3	460278	03-14-19
Washington	State Program	10	C581	05-05-19
West Virginia (DW)	State Program	3	9930C	12-31-18
Wyoming	State Program	8	8TMS-L	01-28-19

Laboratory: TestAmerica Irvine

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska	State Program	10	CA01531	06-30-19
Arizona	State Program	9	AZ0671	10-14-18 *
California	LA Cty Sanitation Districts	9	10256	06-30-19
California	State Program	9	CA ELAP 2706	06-30-19
Guam	State Program	9	Cert. No. 17-003R	01-23-19
Hawaii	State Program	9	N/A	01-29-19
Kansas	NELAP	7	E-10420	07-31-19
Nevada	State Program	9	CA015312018-1	07-31-19
New Mexico	State Program	6	N/A	01-29-19
Oregon	NELAP	10	4028	01-29-19
US Fish & Wildlife	Federal		058448	07-31-19
USDA	Federal		P330-15-00184	07-09-21
Washington	State Program	10	C900	09-03-18 *

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

TestAmerica Sacramento

Method Summary

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 320-43353-3

Method	Method Description	Protocol	Laboratory
8290	Dioxins and Furans (HRGC/HRMS)	SW846	TAL SAC
TEQ	Total TEQ Calculation	TAL SOP	TAL SAC
D 2216	Percent Moisture	ASTM	TAL SAC
8290	Soxhlet Extraction of Dioxins and Furans	SW846	TAL SAC

Protocol References:

ASTM = ASTM International

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Sample Summary

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 320-43353-3

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
320-43353-17	DSPE-3-2.0-20180919	Solid	09/19/18 11:46	09/20/18 09:30

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16

TestAmerica Irvine Sacramento
 17461 Berian Ave Suite 100
 Irvine, CA 92614
 Phone: 949.261.1022 Fax:

Chain of Custody Record

138873

TestAmerica
 THE LEADER IN ENVIRONMENTAL TESTING
 TestAmerica Laboratories, Inc.
 TAL-8210 (07/13)

Regulatory Program: DW NPDES RCRA Other:

Client Contact: **Ramboll**
 Company Name: **Ramboll**
 Address: **2200 Powell St, Suite 700**
 City/State/Zip: **Emeryville, CA, 94608**
 Phone: **510-655-7400**
 Fax: **510-655-7400**
 Project Name: **Dioxin Pre-excavation Soil Sampling**
 Site: **MERT**
 PO # **169000641-012**

Project Manager: **Don Clark**
 Tel/Fax: **510-299-7036**
 Analysis Turnaround Time: CALENDAR DAYS WORKING DAYS
 TAT if different from Below: **5 days**
 2 weeks
 1 week
 2 days
 1 day

Site Contact: **Brandon Keenan** Date: **09/19/2018**
 Lab Contact: **Patty Matry** Carrier: **1** of **5** COCs
 Sampler: **BK**
 For Lab Use Only:
 Walk-in Client:
 Lab Sampling:
 Job / SDG No.:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Sample Specific Notes:	
						Filtered Sample (Y/N)	Perform MS/MSD (Y/N)
DSPE-1-FB-20180919	09/19	0800	GC	SO	1	X	
DSPE-1-0.5-20180919	"	0840	GC	SO	11	X	
DSPE-100-0.5-20180919	"	0840	GC	SO	11	X	
DSPE-1-1.5-20180919	"	0855	GC	SO	11	X	
DSPE-1-2.0-20180919	"	0912	GC	SO	11	X	
DSPE-1-3.0-20180919	"	0934	GC	SO	11	X	
DSPE-1-4.0-20180919	"	0950	GC	SO	11	X	
DSPE-1-EB-20180919	"	0855	GC	SO	11	X	
DSPE-2-0.5-20180919	"	1027	GC	SO	11	X	
DSPE-2-1.5-20180919	"	1036	GC	SO	11	X	
DSPE-2-2.0-20180919	"	1043	GC	SO	11	X	
DSPE-2-3.0-20180919	"	1049	GC	SO	11	X	



Preservation Used: 1= Ice, 2= HCl, 3= H2SO4, 4= HNO3, 5= NaOH, 6= Other

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return to Client Disposal by Lab Archive for _____ Months

Special Instructions/QC Requirements & Comments:

Custody Seal No.: **18.9**

Relinquished by: **B.K.P.** Date/Time: **09/19/18 1630**
 Company: **Ramboll**

Relinquished by: **JAM** Date/Time: **9/18/18 1300**
 Company: **TALUS**

Relinquished by: **Steph** Date/Time: **9-20-18 0930**
 Company: **TALUS**

Received by: **JAM** Date/Time: **9-19-18 1620**
 Company: **TALUS**

Received by: **Felix** Date/Time: **9-20-18 0930**
 Company: **TALUS**

Therm ID No.: **517**
 Cooler Temp. (°C): **5.4**
 Corrd: **5.2**



TestAmerica Irvine
 17461 Merian Ave
 Suite 100
 Irvine, CA 92614
 Phone: 949.261.1022 Fax:

Sacramento

Chain of Custody Record

138875

TestAmerica
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 TestAmerica Laboratories, Inc.
 TAL-8210 (0713)

Regulatory Program: DW NPDES RCRA Other:

Client Contact
 Company Name: Ramboll
 Address: 2200 Powell St Suite 700
 City/State/Zip: Fremontville, CA, 94568
 Phone: 510-655-7400
 Fax:
 Project Name: Dioxin Sampling
 Site: NEPT
 PO #: 1690006941-012

Project Manager: Dan Clark
 Tell Fax: 910-289-7036
 Analysis Turnaround Time
 CALENDAR DAYS WORKING DAYS
 TAT: if different from Below Delays
 2 weeks
 1 week
 2 days
 1 day

Site Contact: Brendan Keegan Date: 09/19/18
 Lab Contact: Patty Mata Carrier:
 COC No.: 4 of 3 COCs

Sampler:
 For Lab Use Only:
 Walk-in Client:
 Lab Sampling:
 Job / SDG No.:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	Hold	Sample Specific Notes:
DSPE-2-4.0-20180919	9/19	1100	G	SO	1			X	
DSPE-3-0.5-20180919	"	1123	"	"	"			X	
DSPE-3-0.5-20180919	"	1123	"	"	"			X	
DSPE-3-1.5-20180919	"	1140	"	"	"			X	
DSPE-3-2.0-20180919	"	1146	"	"	"			X	
DSPE-3-3.0-20180919	"	1202	"	"	"			X	
DSPE-4-0.5-20180919	"	1445	"	"	"			X	
DSPE-4-2.0-20180919	"	1450	"	"	"			X	
DSPE-4-3.0-20180919	"	1455	"	"	"			X	
DSPE-4-4.0-20180919	"	1500	"	"	"			X	
DSPE-5-1.5-20180919	"	1536	"	"	"			X	
DSPE-5-2.0-20180919	"	1534	"	"	"			X	

Preservation Used: 1= Ice, 2= HCl, 3= H2SO4, 4=HNO3, 5=NaOH, 6= Other
 Possible Hazard Identification: Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.
 Non-Hazard Flammable Skin Irritant Poison B Unknown
 Return to Client Disposal by Lab Archive for _____ Months

Special Instructions/QC Requirements & Comments:
 Custody Seal No.:
 Relinquished by: B. K... Date/Time: 9/19/18 1620
 Relinquished by: V. H... Date/Time: 9/19/18 1730
 Relinquished by:
 Company: Ramboll
 Company: TALUS
 Company:
 Received by: V. H...
 Received by: Fedy
 Received in Laboratory by: July A. ...
 Date/Time: 9-19-18 1620
 Date/Time: 9-20-18 0930
 Cooler Temp. (°C): Obs'd: 07°C Therm ID No.: ALC2-22
 S42 5.40C

TALUS 18.9 VAM



Regulatory Program: DW NPDES RCRA Other:

Client Contact
Company Name: **Ramboll**
Address: **2900 Powell St, Suite 200**
City/State/Zip: **Emeryville, CA, 94605**
Phone: **510-655-7400**
Fax:

Project Name: **Dioxin Sampling**
Site: **NERI**
PO #: **169006941-013**

Project Manager: **Dan Clark**
Tell/Fax: **510-299-7036**
Analysis Turnaround Time
 CALENDAR DAYS WORKING DAYS
TAT if different from Below **5 DAYS**
 2 weeks
 1 week
 2 days
 1 day

Site Contact: **Reginald K... ..** Date: **09/19/2018**
Lab Contact: **Patricia Mata** Carrier:

COC No.: **1**
3 of 3 COCs

Sampler:
For Lab Use Only:
Walk-in Client:
Lab Sampling:
Job / SDG No.:

Sample Specific Notes:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	Hold	Dioxin
DSPE-5-3.0-20180919	09/19/18	1540	G	SO	1				X
DSPE-5-4.0-20180919	09/19/18	1557	G	"	1				X
DSPE-3-4.0-20180919	"	1340	G	"	1				X

Preservation Used: 1= Ice, 2= HCl, 3= H2SO4, 4= HNO3, 5= NaOH, 6= Other

Possible Hazard Identification: Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.
 Non-Hazard Flammable Skin Irritant Poison B Unknown

Special Instructions/QC Requirements & Comments:

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return to Client Disposal by Lab Archive for _____ Months

Cooler Temp. (°C): Obs'd: **5.7°C** Cor'd: **5.7°C** Therm ID No.: **HL-210**
5.4°C 5.4°C

Relinquished by: **B. K...** Date/Time: **9/19/18 1620**
Relinquished by: **DAN** Date/Time: **9-19-18 1730**
Relinquished by: **DAN** Date/Time: **9-20-18 0930**

Company: **Ramboll** Date/Time: **9/19/18 1620**
Company: **TALUS** Date/Time: **9-19-18 1620**
Company: **TALUS** Date/Time: **9-20-18 0930**

Received by: **SAAM**
Received by: **Felix**
Received in Laboratory by: **Aug 21, Apr**

Custody Seal No.:
18.9 TALUS JAN



Mata, Patty

From: Dan Clark <dclark@ramboll.com>
Sent: Thursday, September 27, 2018 10:07 AM
To: Mata, Patty
Subject: RE: Signed work order for NERT Henderson bottle order and courier information

-External Email-

OK, thank you.

Please release the following samples for dioxin analysis on a 1-week rush TAT:

- DSPE-3-2.0-20180919 (this is on the first set of samples)
- DSPE-7-3.0-20180920 (this is on the second set of samples)

Please let me know if there are any questions.

Thanks,
Dan

Dan Clark
Senior Consultant 2

D +1 (510) 4202563
M +1 (510) 2997036
dclark@ramboll.com

From: Mata, Patty <Patty.Mata@testamericainc.com>
Sent: Thursday, September 27, 2018 9:58 AM
To: Dan Clark <dclark@ramboll.com>
Subject: RE: Signed work order for NERT Henderson bottle order and courier information

Dan,

The next set of 2 samples are due tomorrow (received on 9/21/18 at the lab) and they are still being analyzed. They should be done tomorrow, but I'm not expecting results today.

Regards,
PATTY MATA
Project Manager

Test America
THE LEADER IN ENVIRONMENTAL TESTING

17461 Derian Ave, Suite #100
Irvine, CA 92614
TEL 949-261-1022 | FAX 949-260-3297
DIRECT 949-260-3213

www.testamericainc.com

Login Sample Receipt Checklist

Client: Ramboll US Corporation

Job Number: 320-43353-3

Login Number: 43353

List Source: TestAmerica Sacramento

List Number: 1

Creator: Turpen, Troy

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	967454, 967456
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

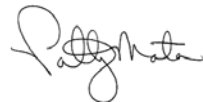
ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Sacramento
880 Riverside Parkway
West Sacramento, CA 95605
Tel: (916)373-5600

TestAmerica Job ID: 320-43353-4
Client Project/Site: NERT Dioxin Sampling

For:
Ramboll US Corporation
2200 Powell Street
Suite 700
Emeryville, California 94608

Attn: Craig Knox



Authorized for release by:
10/5/2018 8:28:34 AM

Patty Mata, Senior Project Manager
(949)261-1022
patty.mata@testamericainc.com

LINKS

Review your project
results through
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www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

- 1
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Definitions/Glossary

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 320-43353-4

Qualifiers

Dioxin

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
G	The reported quantitation limit has been raised due to an exhibited elevated noise or matrix interference
E	Result exceeded calibration range.
q	The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio. The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Case Narrative

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 320-43353-4

Job ID: 320-43353-4

Laboratory: TestAmerica Sacramento

Narrative

Job Narrative 320-43353-4

Comments

The following samples were removed from hold and requested for analysis per client's 10/2/18 email request: DSPE-3-3.0-20180919 (320-43353-18) and DSPE-3-4.0-20180919 (320-43353-27).

Receipt

The samples were received on 9/20/2018 9:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 5.4° C and 5.7° C.

Dioxin

Method(s) 8290: The concentration of one or more analytes associated with the following sample exceeded the instrument calibration range: DSPE-3-3.0-20180919 (320-43353-18). These analytes have been qualified; however, the peaks did not saturate the instrument detector. Historical data indicate that for the isotope dilution method, dilution and re-analysis will not produce significantly different results from those reported above the calibration range.

Method(s) 8290: The following samples exhibited elevated noise or matrix interferences for one or more analytes causing elevation of the detection limit (EDL): DSPE-3-3.0-20180919 (320-43353-18). The reporting limit (RL) for the affected analytes has been raised to be equal to the EDL, and a "G" qualifier applied.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Dioxin Prep

Method(s) 8290: Due to the matrix, the initial volumes used for the following samples deviated from the standard procedure: DSPE-3-3.0-20180919 (320-43353-18) and DSPE-3-4.0-20180919 (320-43353-27). The reporting limits (RLs) have been adjusted proportionately. Samples are associated with preparation batch 320-249133.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 320-43353-4

Client Sample ID: DSPE-3-3.0-20180919

Lab Sample ID: 320-43353-18

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	47		9.4	1.4	pg/g	1	☼	8290	Total/NA
1,2,3,7,8-PeCDD	160		47	14	pg/g	1	☼	8290	Total/NA
1,2,3,7,8-PeCDF	2800	G	99	99	pg/g	1	☼	8290	Total/NA
2,3,4,7,8-PeCDF	1400	G	99	99	pg/g	1	☼	8290	Total/NA
1,2,3,4,7,8-HxCDD	140	B	47	2.7	pg/g	1	☼	8290	Total/NA
1,2,3,6,7,8-HxCDD	280		47	2.5	pg/g	1	☼	8290	Total/NA
1,2,3,7,8,9-HxCDD	280	B	47	2.4	pg/g	1	☼	8290	Total/NA
1,2,3,4,7,8-HxCDF	6700	G B	48	48	pg/g	1	☼	8290	Total/NA
1,2,3,6,7,8-HxCDF	4000	B	47	45	pg/g	1	☼	8290	Total/NA
2,3,4,6,7,8-HxCDF	860	B	47	47	pg/g	1	☼	8290	Total/NA
1,2,3,7,8,9-HxCDF	780	G B	57	57	pg/g	1	☼	8290	Total/NA
1,2,3,4,6,7,8-HpCDD	1100	B	47	4.3	pg/g	1	☼	8290	Total/NA
1,2,3,4,6,7,8-HpCDF	16000	G B	63	63	pg/g	1	☼	8290	Total/NA
1,2,3,4,7,8,9-HpCDF	6500	G B	75	75	pg/g	1	☼	8290	Total/NA
OCDD	1200	B	94	1.1	pg/g	1	☼	8290	Total/NA
OCDF	42000	E B	94	16	pg/g	1	☼	8290	Total/NA
Total TCDD	1200		9.4	1.4	pg/g	1	☼	8290	Total/NA
Total TCDF	13000	G B	19	19	pg/g	1	☼	8290	Total/NA
Total PeCDD	1500	q	47	14	pg/g	1	☼	8290	Total/NA
Total PeCDF	18000	G q B	99	99	pg/g	1	☼	8290	Total/NA
Total HxCDD	2100	B	47	2.5	pg/g	1	☼	8290	Total/NA
Total HxCDF	28000	G B	49	49	pg/g	1	☼	8290	Total/NA
Total HpCDD	1700	B	47	4.3	pg/g	1	☼	8290	Total/NA
Total HpCDF	33000	G B	69	69	pg/g	1	☼	8290	Total/NA
2,3,7,8-TCDF - RA	1200	G B	10	10	pg/g	1	☼	8290	Total/NA

Client Sample ID: DSPE-3-4.0-20180919

Lab Sample ID: 320-43353-27

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDF	2.4	J B	9.6	0.23	pg/g	1	☼	8290	Total/NA
1,2,3,7,8-PeCDF	3.6	J	48	0.83	pg/g	1	☼	8290	Total/NA
1,2,3,4,7,8-HxCDD	1.6	J B q	48	0.27	pg/g	1	☼	8290	Total/NA
1,2,3,6,7,8-HxCDD	0.69	J q	48	0.25	pg/g	1	☼	8290	Total/NA
1,2,3,7,8,9-HxCDD	1.3	J B q	48	0.24	pg/g	1	☼	8290	Total/NA
1,2,3,4,7,8-HxCDF	4.6	J B q	48	0.96	pg/g	1	☼	8290	Total/NA
1,2,3,6,7,8-HxCDF	3.8	J B q	48	0.88	pg/g	1	☼	8290	Total/NA
2,3,4,6,7,8-HxCDF	1.2	J B q	48	0.92	pg/g	1	☼	8290	Total/NA
1,2,3,7,8,9-HxCDF	13	J B	48	1.1	pg/g	1	☼	8290	Total/NA
1,2,3,4,6,7,8-HpCDD	1.7	J B	48	0.33	pg/g	1	☼	8290	Total/NA
1,2,3,4,6,7,8-HpCDF	13	J B	48	0.41	pg/g	1	☼	8290	Total/NA
1,2,3,4,7,8,9-HpCDF	14	J B	48	0.49	pg/g	1	☼	8290	Total/NA
OCDD	6.8	J B	96	0.24	pg/g	1	☼	8290	Total/NA
OCDF	35	J B	96	0.44	pg/g	1	☼	8290	Total/NA
Total TCDF	8.9	J B q	9.6	0.23	pg/g	1	☼	8290	Total/NA
Total PeCDF	7.9	J B q	48	0.83	pg/g	1	☼	8290	Total/NA
Total HxCDD	3.6	J B q	48	0.25	pg/g	1	☼	8290	Total/NA
Total HxCDF	28	J B q	48	0.97	pg/g	1	☼	8290	Total/NA
Total HpCDD	3.0	J B	48	0.33	pg/g	1	☼	8290	Total/NA
Total HpCDF	37	J B	48	0.45	pg/g	1	☼	8290	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Sacramento

Client Sample Results

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 320-43353-4

Client Sample ID: DSPE-3-3.0-20180919

Lab Sample ID: 320-43353-18

Date Collected: 09/19/18 12:02

Matrix: Solid

Date Received: 09/20/18 09:30

Percent Solids: 95.0

Method: 8290 - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	47		9.4	1.4	pg/g	☼	10/02/18 13:59	10/03/18 23:09	1
1,2,3,7,8-PeCDD	160		47	14	pg/g	☼	10/02/18 13:59	10/03/18 23:09	1
1,2,3,7,8-PeCDF	2800	G	99	99	pg/g	☼	10/02/18 13:59	10/03/18 23:09	1
2,3,4,7,8-PeCDF	1400	G	99	99	pg/g	☼	10/02/18 13:59	10/03/18 23:09	1
1,2,3,4,7,8-HxCDD	140	B	47	2.7	pg/g	☼	10/02/18 13:59	10/03/18 23:09	1
1,2,3,6,7,8-HxCDD	280		47	2.5	pg/g	☼	10/02/18 13:59	10/03/18 23:09	1
1,2,3,7,8,9-HxCDD	280	B	47	2.4	pg/g	☼	10/02/18 13:59	10/03/18 23:09	1
1,2,3,4,7,8-HxCDF	6700	G B	48	48	pg/g	☼	10/02/18 13:59	10/03/18 23:09	1
1,2,3,6,7,8-HxCDF	4000	B	47	45	pg/g	☼	10/02/18 13:59	10/03/18 23:09	1
2,3,4,6,7,8-HxCDF	860	B	47	47	pg/g	☼	10/02/18 13:59	10/03/18 23:09	1
1,2,3,7,8,9-HxCDF	780	G B	57	57	pg/g	☼	10/02/18 13:59	10/03/18 23:09	1
1,2,3,4,6,7,8-HpCDD	1100	B	47	4.3	pg/g	☼	10/02/18 13:59	10/03/18 23:09	1
1,2,3,4,6,7,8-HpCDF	16000	G B	63	63	pg/g	☼	10/02/18 13:59	10/03/18 23:09	1
1,2,3,4,7,8,9-HpCDF	6500	G B	75	75	pg/g	☼	10/02/18 13:59	10/03/18 23:09	1
OCDD	1200	B	94	1.1	pg/g	☼	10/02/18 13:59	10/03/18 23:09	1
OCDF	42000	E B	94	16	pg/g	☼	10/02/18 13:59	10/03/18 23:09	1
Total TCDD	1200		9.4	1.4	pg/g	☼	10/02/18 13:59	10/03/18 23:09	1
Total TCDF	13000	G B	19	19	pg/g	☼	10/02/18 13:59	10/03/18 23:09	1
Total PeCDD	1500	q	47	14	pg/g	☼	10/02/18 13:59	10/03/18 23:09	1
Total PeCDF	18000	G q B	99	99	pg/g	☼	10/02/18 13:59	10/03/18 23:09	1
Total HxCDD	2100	B	47	2.5	pg/g	☼	10/02/18 13:59	10/03/18 23:09	1
Total HxCDF	28000	G B	49	49	pg/g	☼	10/02/18 13:59	10/03/18 23:09	1
Total HpCDD	1700	B	47	4.3	pg/g	☼	10/02/18 13:59	10/03/18 23:09	1
Total HpCDF	33000	G B	69	69	pg/g	☼	10/02/18 13:59	10/03/18 23:09	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	81		40 - 135	10/02/18 13:59	10/03/18 23:09	1
13C-2,3,7,8-TCDF	81		40 - 135	10/02/18 13:59	10/03/18 23:09	1
13C-1,2,3,7,8-PeCDD	80		40 - 135	10/02/18 13:59	10/03/18 23:09	1
13C-1,2,3,7,8-PeCDF	84		40 - 135	10/02/18 13:59	10/03/18 23:09	1
13C-1,2,3,6,7,8-HxCDD	82		40 - 135	10/02/18 13:59	10/03/18 23:09	1
13C-1,2,3,4,7,8-HxCDF	84		40 - 135	10/02/18 13:59	10/03/18 23:09	1
13C-1,2,3,4,6,7,8-HpCDD	86		40 - 135	10/02/18 13:59	10/03/18 23:09	1
13C-1,2,3,4,6,7,8-HpCDF	80		40 - 135	10/02/18 13:59	10/03/18 23:09	1
13C-OCDD	86		40 - 135	10/02/18 13:59	10/03/18 23:09	1

Method: 8290 - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	1200	G B	10	10	pg/g	☼	10/02/18 13:59	10/04/18 17:23	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDF	85		40 - 135	10/02/18 13:59	10/04/18 17:23	1

Client Sample ID: DSPE-3-4.0-20180919

Lab Sample ID: 320-43353-27

Date Collected: 09/19/18 12:40

Matrix: Solid

Date Received: 09/20/18 09:30

Percent Solids: 94.1

Method: 8290 - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		9.6	0.30	pg/g	☼	10/02/18 13:59	10/03/18 23:55	1
2,3,7,8-TCDF	2.4	J B	9.6	0.23	pg/g	☼	10/02/18 13:59	10/03/18 23:55	1

TestAmerica Sacramento

Client Sample Results

Client: Ramboll US Corporation
 Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 320-43353-4

Client Sample ID: DSPE-3-4.0-20180919

Lab Sample ID: 320-43353-27

Date Collected: 09/19/18 12:40

Matrix: Solid

Date Received: 09/20/18 09:30

Percent Solids: 94.1

Method: 8290 - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,7,8-PeCDD	ND		48	0.33	pg/g	☼	10/02/18 13:59	10/03/18 23:55	1
1,2,3,7,8-PeCDF	3.6	J	48	0.83	pg/g	☼	10/02/18 13:59	10/03/18 23:55	1
2,3,4,7,8-PeCDF	ND		48	0.83	pg/g	☼	10/02/18 13:59	10/03/18 23:55	1
1,2,3,4,7,8-HxCDD	1.6	J B q	48	0.27	pg/g	☼	10/02/18 13:59	10/03/18 23:55	1
1,2,3,6,7,8-HxCDD	0.69	J q	48	0.25	pg/g	☼	10/02/18 13:59	10/03/18 23:55	1
1,2,3,7,8,9-HxCDD	1.3	J B q	48	0.24	pg/g	☼	10/02/18 13:59	10/03/18 23:55	1
1,2,3,4,7,8-HxCDF	4.6	J B q	48	0.96	pg/g	☼	10/02/18 13:59	10/03/18 23:55	1
1,2,3,6,7,8-HxCDF	3.8	J B q	48	0.88	pg/g	☼	10/02/18 13:59	10/03/18 23:55	1
2,3,4,6,7,8-HxCDF	1.2	J B q	48	0.92	pg/g	☼	10/02/18 13:59	10/03/18 23:55	1
1,2,3,7,8,9-HxCDF	13	J B	48	1.1	pg/g	☼	10/02/18 13:59	10/03/18 23:55	1
1,2,3,4,6,7,8-HpCDD	1.7	J B	48	0.33	pg/g	☼	10/02/18 13:59	10/03/18 23:55	1
1,2,3,4,6,7,8-HpCDF	13	J B	48	0.41	pg/g	☼	10/02/18 13:59	10/03/18 23:55	1
1,2,3,4,7,8,9-HpCDF	14	J B	48	0.49	pg/g	☼	10/02/18 13:59	10/03/18 23:55	1
OCDD	6.8	J B	96	0.24	pg/g	☼	10/02/18 13:59	10/03/18 23:55	1
OCDF	35	J B	96	0.44	pg/g	☼	10/02/18 13:59	10/03/18 23:55	1
Total TCDD	ND		9.6	0.30	pg/g	☼	10/02/18 13:59	10/03/18 23:55	1
Total TCDF	8.9	J B q	9.6	0.23	pg/g	☼	10/02/18 13:59	10/03/18 23:55	1
Total PeCDD	ND		48	0.33	pg/g	☼	10/02/18 13:59	10/03/18 23:55	1
Total PeCDF	7.9	J B q	48	0.83	pg/g	☼	10/02/18 13:59	10/03/18 23:55	1
Total HxCDD	3.6	J B q	48	0.25	pg/g	☼	10/02/18 13:59	10/03/18 23:55	1
Total HxCDF	28	J B q	48	0.97	pg/g	☼	10/02/18 13:59	10/03/18 23:55	1
Total HpCDD	3.0	J B	48	0.33	pg/g	☼	10/02/18 13:59	10/03/18 23:55	1
Total HpCDF	37	J B	48	0.45	pg/g	☼	10/02/18 13:59	10/03/18 23:55	1
<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C-2,3,7,8-TCDD	81		40 - 135				10/02/18 13:59	10/03/18 23:55	1
13C-2,3,7,8-TCDF	80		40 - 135				10/02/18 13:59	10/03/18 23:55	1
13C-1,2,3,7,8-PeCDD	85		40 - 135				10/02/18 13:59	10/03/18 23:55	1
13C-1,2,3,7,8-PeCDF	83		40 - 135				10/02/18 13:59	10/03/18 23:55	1
13C-1,2,3,6,7,8-HxCDD	84		40 - 135				10/02/18 13:59	10/03/18 23:55	1
13C-1,2,3,4,7,8-HxCDF	82		40 - 135				10/02/18 13:59	10/03/18 23:55	1
13C-1,2,3,4,6,7,8-HpCDD	86		40 - 135				10/02/18 13:59	10/03/18 23:55	1
13C-1,2,3,4,6,7,8-HpCDF	83		40 - 135				10/02/18 13:59	10/03/18 23:55	1
13C-OCDD	85		40 - 135				10/02/18 13:59	10/03/18 23:55	1

Toxicity Summary

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 320-43353-4

Client Sample ID: DSPE-3-3.0-20180919

Lab Sample ID: 320-43353-18

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005		Method
						TEF	TEQ	
2,3,7,8-TCDD	47		9.4	1.4	pg/g	1	47	8290
1,2,3,7,8-PeCDD	160		47	14	pg/g	1	160	8290
1,2,3,7,8-PeCDF	2800	G	99	99	pg/g	0.03	84	8290
2,3,4,7,8-PeCDF	1400	G	99	99	pg/g	0.3	420	8290
1,2,3,4,7,8-HxCDD	140	B	47	2.7	pg/g	0.1	14	8290
1,2,3,6,7,8-HxCDD	280		47	2.5	pg/g	0.1	28	8290
1,2,3,7,8,9-HxCDD	280	B	47	2.4	pg/g	0.1	28	8290
1,2,3,4,7,8-HxCDF	6700	G B	48	48	pg/g	0.1	670	8290
1,2,3,6,7,8-HxCDF	4000	B	47	45	pg/g	0.1	400	8290
2,3,4,6,7,8-HxCDF	860	B	47	47	pg/g	0.1	86	8290
1,2,3,7,8,9-HxCDF	780	G B	57	57	pg/g	0.1	78	8290
1,2,3,4,6,7,8-HpCDD	1100	B	47	4.3	pg/g	0.01	11	8290
1,2,3,4,6,7,8-HpCDF	16000	G B	63	63	pg/g	0.01	160	8290
1,2,3,4,7,8,9-HpCDF	6500	G B	75	75	pg/g	0.01	65	8290
OCDD	1200	B	94	1.1	pg/g	0.0003	0.36	8290
OCDF	42000	E B	94	16	pg/g	0.0003	13	8290
2,3,7,8-TCDF - RA	1200	G B	10	10	pg/g	0.1	120	8290

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005		Method
						TEF	TEQ	
Total Dioxin/Furan TEQ					pg/g		2400	TEQ

Client Sample ID: DSPE-3-4.0-20180919

Lab Sample ID: 320-43353-27

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005		Method
						TEF	TEQ	
2,3,7,8-TCDD	ND		9.6	0.30	pg/g	1	0.15	8290
2,3,7,8-TCDF	2.4	J B	9.6	0.23	pg/g	0.1	0.24	8290
1,2,3,7,8-PeCDD	ND		48	0.33	pg/g	1	0.17	8290
1,2,3,7,8-PeCDF	3.6	J	48	0.83	pg/g	0.03	0.11	8290
2,3,4,7,8-PeCDF	ND		48	0.83	pg/g	0.3	0.12	8290
1,2,3,4,7,8-HxCDD	1.6	J B q	48	0.27	pg/g	0.1	0.16	8290
1,2,3,6,7,8-HxCDD	0.69	J q	48	0.25	pg/g	0.1	0.069	8290
1,2,3,7,8,9-HxCDD	1.3	J B q	48	0.24	pg/g	0.1	0.13	8290
1,2,3,4,7,8-HxCDF	4.6	J B q	48	0.96	pg/g	0.1	0.46	8290
1,2,3,6,7,8-HxCDF	3.8	J B q	48	0.88	pg/g	0.1	0.38	8290
2,3,4,6,7,8-HxCDF	1.2	J B q	48	0.92	pg/g	0.1	0.12	8290
1,2,3,7,8,9-HxCDF	13	J B	48	1.1	pg/g	0.1	1.3	8290
1,2,3,4,6,7,8-HpCDD	1.7	J B	48	0.33	pg/g	0.01	0.017	8290
1,2,3,4,6,7,8-HpCDF	13	J B	48	0.41	pg/g	0.01	0.13	8290
1,2,3,4,7,8,9-HpCDF	14	J B	48	0.49	pg/g	0.01	0.14	8290
OCDD	6.8	J B	96	0.24	pg/g	0.0003	0.0020	8290

TEF Reference:

WHO 2005 = World Health Organization (WHO) 2005 TEF, Dioxins, Furans and PCB Congeners

Note: The analytes PCB-156 and PCB-157 coelute as a single peak.

TestAmerica Sacramento

Toxicity Summary

Client: Ramboll US Corporation
 Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 320-43353-4

Client Sample ID: DSPE-3-4.0-20180919 (Continued)

Lab Sample ID: 320-43353-27

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005		Method
						TEF	TEQ	
OCDF	35	J B	96	0.44	pg/g	0.0003	0.011	8290
Total Dioxin/Furan TEQ			NONE	NONE	pg/g		3.7	TEQ

TEF Reference:

WHO 2005 = World Health Organization (WHO) 2005 TEF, Dioxins, Furans and PCB Congeners

Note: The analytes PCB-156 and PCB-157 coelute as a single peak.

TestAmerica Sacramento



Isotope Dilution Summary

Client: Ramboll US Corporation
 Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 320-43353-4

Method: 8290 - Dioxins and Furans (HRGC/HRMS)

Matrix: Solid

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	TCDD (40-135)	TCDF (40-135)	PeCDD (40-135)	PeCDF (40-135)	HxDD (40-135)	HxCDF (40-135)	HpCDD (40-135)	HpCDF (40-135)
320-43353-18	DSPE-3-3.0-20180919	81	81	80	84	82	84	86	80
320-43353-18 - RA	DSPE-3-3.0-20180919		85						
320-43353-27	DSPE-3-4.0-20180919	81	80	85	83	84	82	86	83
LCS 320-249133/2-A	Lab Control Sample	76	76	78	78	82	76	81	80
LCSD 320-249133/3-A	Lab Control Sample Dup	70	68	71	69	71	69	70	71
MB 320-249133/1-A	Method Blank	80	78	81	80	88	79	85	83

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	OCDD (40-135)
320-43353-18	DSPE-3-3.0-20180919	86
320-43353-18 - RA	DSPE-3-3.0-20180919	
320-43353-27	DSPE-3-4.0-20180919	85
LCS 320-249133/2-A	Lab Control Sample	80
LCSD 320-249133/3-A	Lab Control Sample Dup	70
MB 320-249133/1-A	Method Blank	83

Surrogate Legend

- TCDD = 13C-2,3,7,8-TCDD
- TCDF = 13C-2,3,7,8-TCDF
- PeCDD = 13C-1,2,3,7,8-PeCDD
- PeCDF = 13C-1,2,3,7,8-PeCDF
- HxDD = 13C-1,2,3,6,7,8-HxCDD
- HxCDF = 13C-1,2,3,4,7,8-HxCDF
- HpCDD = 13C-1,2,3,4,6,7,8-HpCDD
- HpCDF = 13C-1,2,3,4,6,7,8-HpCDF
- OCDD = 13C-OCDD

QC Sample Results

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 320-43353-4

Method: 8290 - Dioxins and Furans (HRGC/HRMS)

Lab Sample ID: MB 320-249133/1-A
Matrix: Solid
Analysis Batch: 249497

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 249133

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		1.0	0.069	pg/g		10/02/18 13:59	10/03/18 20:05	1
2,3,7,8-TCDF	0.0790	J q	1.0	0.027	pg/g		10/02/18 13:59	10/03/18 20:05	1
1,2,3,7,8-PeCDD	ND		5.0	0.050	pg/g		10/02/18 13:59	10/03/18 20:05	1
1,2,3,7,8-PeCDF	ND		5.0	0.048	pg/g		10/02/18 13:59	10/03/18 20:05	1
2,3,4,7,8-PeCDF	ND		5.0	0.048	pg/g		10/02/18 13:59	10/03/18 20:05	1
1,2,3,4,7,8-HxCDD	0.110	J q	5.0	0.030	pg/g		10/02/18 13:59	10/03/18 20:05	1
1,2,3,6,7,8-HxCDD	ND		5.0	0.028	pg/g		10/02/18 13:59	10/03/18 20:05	1
1,2,3,7,8,9-HxCDD	0.201	J	5.0	0.027	pg/g		10/02/18 13:59	10/03/18 20:05	1
1,2,3,4,7,8-HxCDF	0.0994	J	5.0	0.058	pg/g		10/02/18 13:59	10/03/18 20:05	1
1,2,3,6,7,8-HxCDF	0.0677	J q	5.0	0.054	pg/g		10/02/18 13:59	10/03/18 20:05	1
2,3,4,6,7,8-HxCDF	0.0577	J	5.0	0.056	pg/g		10/02/18 13:59	10/03/18 20:05	1
1,2,3,7,8,9-HxCDF	1.30	J	5.0	0.069	pg/g		10/02/18 13:59	10/03/18 20:05	1
1,2,3,4,6,7,8-HpCDD	0.356	J	5.0	0.042	pg/g		10/02/18 13:59	10/03/18 20:05	1
1,2,3,4,6,7,8-HpCDF	0.462	J	5.0	0.058	pg/g		10/02/18 13:59	10/03/18 20:05	1
1,2,3,4,7,8,9-HpCDF	1.06	J	5.0	0.070	pg/g		10/02/18 13:59	10/03/18 20:05	1
OCDD	0.816	J	10	0.039	pg/g		10/02/18 13:59	10/03/18 20:05	1
OCDF	0.823	J	10	0.066	pg/g		10/02/18 13:59	10/03/18 20:05	1
Total TCDD	ND		1.0	0.069	pg/g		10/02/18 13:59	10/03/18 20:05	1
Total TCDF	0.0790	J q	1.0	0.027	pg/g		10/02/18 13:59	10/03/18 20:05	1
Total PeCDD	ND		5.0	0.050	pg/g		10/02/18 13:59	10/03/18 20:05	1
Total PeCDF	0.141	J q	5.0	0.048	pg/g		10/02/18 13:59	10/03/18 20:05	1
Total HxCDD	0.311	J q	5.0	0.028	pg/g		10/02/18 13:59	10/03/18 20:05	1
Total HxCDF	1.85	J q	5.0	0.059	pg/g		10/02/18 13:59	10/03/18 20:05	1
Total HpCDD	0.668	J	5.0	0.042	pg/g		10/02/18 13:59	10/03/18 20:05	1
Total HpCDF	1.52	J	5.0	0.064	pg/g		10/02/18 13:59	10/03/18 20:05	1

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	80		40 - 135	10/02/18 13:59	10/03/18 20:05	1
13C-2,3,7,8-TCDF	78		40 - 135	10/02/18 13:59	10/03/18 20:05	1
13C-1,2,3,7,8-PeCDD	81		40 - 135	10/02/18 13:59	10/03/18 20:05	1
13C-1,2,3,7,8-PeCDF	80		40 - 135	10/02/18 13:59	10/03/18 20:05	1
13C-1,2,3,6,7,8-HxCDD	88		40 - 135	10/02/18 13:59	10/03/18 20:05	1
13C-1,2,3,4,7,8-HxCDF	79		40 - 135	10/02/18 13:59	10/03/18 20:05	1
13C-1,2,3,4,6,7,8-HpCDD	85		40 - 135	10/02/18 13:59	10/03/18 20:05	1
13C-1,2,3,4,6,7,8-HpCDF	83		40 - 135	10/02/18 13:59	10/03/18 20:05	1
13C-OCDD	83		40 - 135	10/02/18 13:59	10/03/18 20:05	1

Lab Sample ID: LCS 320-249133/2-A
Matrix: Solid
Analysis Batch: 249497

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 249133

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
2,3,7,8-TCDD	20.0	20.9		pg/g		104	60 - 138
2,3,7,8-TCDF	20.0	21.1		pg/g		106	56 - 158
1,2,3,7,8-PeCDD	100	109		pg/g		109	70 - 122
1,2,3,7,8-PeCDF	100	110		pg/g		110	69 - 134
2,3,4,7,8-PeCDF	100	110		pg/g		110	70 - 131
1,2,3,4,7,8-HxCDD	100	102		pg/g		102	60 - 138

TestAmerica Sacramento

QC Sample Results

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 320-43353-4

Method: 8290 - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCS 320-249133/2-A
Matrix: Solid
Analysis Batch: 249497

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 249133

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,3,6,7,8-HxCDD	100	109		pg/g		109	68 - 136
1,2,3,7,8,9-HxCDD	100	106		pg/g		106	68 - 138
1,2,3,4,7,8-HxCDF	100	110		pg/g		110	74 - 128
1,2,3,6,7,8-HxCDF	100	113		pg/g		113	67 - 140
2,3,4,6,7,8-HxCDF	100	111		pg/g		111	71 - 137
1,2,3,7,8,9-HxCDF	100	112		pg/g		112	72 - 134
1,2,3,4,6,7,8-HpCDD	100	110		pg/g		110	71 - 128
1,2,3,4,6,7,8-HpCDF	100	109		pg/g		109	71 - 134
1,2,3,4,7,8,9-HpCDF	100	110		pg/g		110	68 - 129
OCDD	200	218		pg/g		109	70 - 128
OCDF	200	220		pg/g		110	63 - 141

Isotope Dilution	LCS LCS		Limits
	%Recovery	Qualifier	
13C-2,3,7,8-TCDD	76		40 - 135
13C-2,3,7,8-TCDF	76		40 - 135
13C-1,2,3,7,8-PeCDD	78		40 - 135
13C-1,2,3,7,8-PeCDF	78		40 - 135
13C-1,2,3,6,7,8-HxCDD	82		40 - 135
13C-1,2,3,4,7,8-HxCDF	76		40 - 135
13C-1,2,3,4,6,7,8-HpCDD	81		40 - 135
13C-1,2,3,4,6,7,8-HpCDF	80		40 - 135
13C-OCDD	80		40 - 135

Lab Sample ID: LCSD 320-249133/3-A
Matrix: Solid
Analysis Batch: 249497

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 249133

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
2,3,7,8-TCDD	20.0	19.6		pg/g		98	60 - 138	6	20
2,3,7,8-TCDF	20.0	20.5		pg/g		102	56 - 158	3	20
1,2,3,7,8-PeCDD	100	105		pg/g		105	70 - 122	3	20
1,2,3,7,8-PeCDF	100	107		pg/g		107	69 - 134	3	20
2,3,4,7,8-PeCDF	100	108		pg/g		108	70 - 131	1	20
1,2,3,4,7,8-HxCDD	100	106		pg/g		106	60 - 138	4	20
1,2,3,6,7,8-HxCDD	100	108		pg/g		108	68 - 136	1	20
1,2,3,7,8,9-HxCDD	100	108		pg/g		108	68 - 138	2	20
1,2,3,4,7,8-HxCDF	100	108		pg/g		108	74 - 128	2	20
1,2,3,6,7,8-HxCDF	100	108		pg/g		108	67 - 140	5	20
2,3,4,6,7,8-HxCDF	100	108		pg/g		108	71 - 137	3	20
1,2,3,7,8,9-HxCDF	100	109		pg/g		109	72 - 134	3	20
1,2,3,4,6,7,8-HpCDD	100	106		pg/g		106	71 - 128	4	20
1,2,3,4,6,7,8-HpCDF	100	108		pg/g		108	71 - 134	1	20
1,2,3,4,7,8,9-HpCDF	100	106		pg/g		106	68 - 129	4	20
OCDD	200	212		pg/g		106	70 - 128	3	20
OCDF	200	214		pg/g		107	63 - 141	3	20

Isotope Dilution	LCSD LCSD		Limits
	%Recovery	Qualifier	
13C-2,3,7,8-TCDD	70		40 - 135

TestAmerica Sacramento

QC Sample Results

Client: Ramboll US Corporation
 Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 320-43353-4

Method: 8290 - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCSD 320-249133/3-A

Matrix: Solid

Analysis Batch: 249497

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 249133

<i>Isotope Dilution</i>	<i>LCSD</i>		<i>Limits</i>
	<i>%Recovery</i>	<i>Qualifier</i>	
13C-2,3,7,8-TCDF	68		40 - 135
13C-1,2,3,7,8-PeCDD	71		40 - 135
13C-1,2,3,7,8-PeCDF	69		40 - 135
13C-1,2,3,6,7,8-HxCDD	71		40 - 135
13C-1,2,3,4,7,8-HxCDF	69		40 - 135
13C-1,2,3,4,6,7,8-HpCDD	70		40 - 135
13C-1,2,3,4,6,7,8-HpCDF	71		40 - 135
13C-OCDD	70		40 - 135

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QC Association Summary

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 320-43353-4

Specialty Organics

Prep Batch: 249133

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-43353-18	DSPE-3-3.0-20180919	Total/NA	Solid	8290	
320-43353-18 - RA	DSPE-3-3.0-20180919	Total/NA	Solid	8290	
320-43353-27	DSPE-3-4.0-20180919	Total/NA	Solid	8290	
MB 320-249133/1-A	Method Blank	Total/NA	Solid	8290	
LCS 320-249133/2-A	Lab Control Sample	Total/NA	Solid	8290	
LCSD 320-249133/3-A	Lab Control Sample Dup	Total/NA	Solid	8290	

Analysis Batch: 249497

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-43353-18	DSPE-3-3.0-20180919	Total/NA	Solid	8290	249133
320-43353-27	DSPE-3-4.0-20180919	Total/NA	Solid	8290	249133
MB 320-249133/1-A	Method Blank	Total/NA	Solid	8290	249133
LCS 320-249133/2-A	Lab Control Sample	Total/NA	Solid	8290	249133
LCSD 320-249133/3-A	Lab Control Sample Dup	Total/NA	Solid	8290	249133

Analysis Batch: 249822

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-43353-18 - RA	DSPE-3-3.0-20180919	Total/NA	Solid	8290	249133

Lab Chronicle

Client: Ramboll US Corporation
 Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 320-43353-4

Client Sample ID: DSPE-3-3.0-20180919

Lab Sample ID: 320-43353-18

Date Collected: 09/19/18 12:02

Matrix: Solid

Date Received: 09/20/18 09:30

Percent Solids: 95.0

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			1.12 g	20 uL	249133	10/02/18 13:59	SR1	TAL SAC
Total/NA	Analysis	8290		1			249497	10/03/18 23:09	AS	TAL SAC
Total/NA	Prep	8290	RA		1.12 g	20 uL	249133	10/02/18 13:59	SR1	TAL SAC
Total/NA	Analysis	8290	RA	1			249822	10/04/18 17:23	ALM	TAL SAC

Client Sample ID: DSPE-3-4.0-20180919

Lab Sample ID: 320-43353-27

Date Collected: 09/19/18 12:40

Matrix: Solid

Date Received: 09/20/18 09:30

Percent Solids: 94.1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			1.11 g	20 uL	249133	10/02/18 13:59	SR1	TAL SAC
Total/NA	Analysis	8290		1			249497	10/03/18 23:55	AS	TAL SAC

Laboratory References:

TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Accreditation/Certification Summary

Client: Ramboll US Corporation
 Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 320-43353-4

Laboratory: TestAmerica Sacramento

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska (UST)	State Program	10	17-020	01-20-21
ANAB	DoD ELAP		L2468	01-20-21
Arizona	State Program	9	AZ0708	08-11-19
Arkansas DEQ	State Program	6	88-0691	06-17-19
California	State Program	9	2897	01-31-19
Colorado	State Program	8	CA00044	08-31-19
Connecticut	State Program	1	PH-0691	06-30-19
Florida	NELAP	4	E87570	06-30-19
Georgia	State Program	4	N/A	01-28-19
Hawaii	State Program	9	N/A	01-29-19
Illinois	NELAP	5	200060	03-17-19
Kansas	NELAP	7	E-10375	10-31-18
Louisiana	NELAP	6	30612	06-30-19
Maine	State Program	1	CA0004	04-14-20
Michigan	State Program	5	9947	01-31-20
Nevada	State Program	9	CA00044	07-31-19
New Hampshire	NELAP	1	2997	04-18-19
New Jersey	NELAP	2	CA005	06-30-19
New York	NELAP	2	11666	03-31-19
Oregon	NELAP	10	4040	01-29-19
Pennsylvania	NELAP	3	68-01272	03-31-19
Texas	NELAP	6	T104704399	05-31-19
US Fish & Wildlife	Federal		LE148388-0	07-31-19
USDA	Federal		P330-18-00239	01-17-21
USEPA UCMR	Federal	1	CA00044	11-06-18
Utah	NELAP	8	CA00044	02-28-19
Vermont	State Program	1	VT-4040	04-30-19
Virginia	NELAP	3	460278	03-14-19
Washington	State Program	10	C581	05-05-19
West Virginia (DW)	State Program	3	9930C	12-31-18
Wyoming	State Program	8	8TMS-L	01-28-19

Laboratory: TestAmerica Irvine

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska	State Program	10	CA01531	06-30-19
Arizona	State Program	9	AZ0671	10-14-18 *
California	LA Cty Sanitation Districts	9	10256	06-30-19
California	State Program	9	CA ELAP 2706	06-30-19
Guam	State Program	9	Cert. No. 17-003R	01-23-19
Hawaii	State Program	9	N/A	01-29-19
Kansas	NELAP	7	E-10420	07-31-19
Nevada	State Program	9	CA015312018-1	07-31-19
New Mexico	State Program	6	N/A	01-29-19
Oregon	NELAP	10	4028	01-29-19
US Fish & Wildlife	Federal		058448	07-31-19
USDA	Federal		P330-15-00184	07-09-21
Washington	State Program	10	C900	09-03-18 *

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

TestAmerica Sacramento

Method Summary

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 320-43353-4

Method	Method Description	Protocol	Laboratory
8290	Dioxins and Furans (HRGC/HRMS)	SW846	TAL SAC
TEQ	Total TEQ Calculation	TAL SOP	TAL SAC
8290	Soxhlet Extraction of Dioxins and Furans	SW846	TAL SAC

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.
TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600



Sample Summary

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 320-43353-4

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
320-43353-18	DSPE-3-3.0-20180919	Solid	09/19/18 12:02	09/20/18 09:30
320-43353-27	DSPE-3-4.0-20180919	Solid	09/19/18 12:40	09/20/18 09:30

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Mata, Patty

From: Dan Clark <dclark@ramboll.com>
Sent: Tuesday, October 02, 2018 11:10 AM
To: Mata, Patty
Subject: RE: TestAmerica EDD and report files from 320-43353-3 NERT Dioxin Sampling

-External Email-

Patty, to avoid another potential delay, please also analyze DSPE-3-4.0-20180919 for dioxins on a 5-day/ASAP turnaround.

Can you please let me know if it will be possible/likely to see results by Thursday or Friday of this week?

Thanks,
Dan

Dan Clark
Senior Consultant 2

D +1 (510) 4202563
M +1 (510) 2997036
dclark@ramboll.com

From: Dan Clark
Sent: Tuesday, October 02, 2018 10:35 AM
To: patty.mata@testamericainc.com
Subject: RE: TestAmerica EDD and report files from 320-43353-3 NERT Dioxin Sampling

Thanks Patty. Please take DSPE-3-3.0-20180919 off hold and analyze for dioxins on a 1 week TAT (ASAP). It would be best if we can see results this week, by Thursday COB if possible.

Dan

Dan Clark
Senior Consultant 2

D +1 (510) 4202563
M +1 (510) 2997036
dclark@ramboll.com

From: Mata, Patty <patty.mata@testamericainc.com>
Sent: Tuesday, October 02, 2018 10:25 AM
To: Dan Clark <dclark@ramboll.com>
Subject: TestAmerica EDD and report files from 320-43353-3 NERT Dioxin Sampling

Hello,

Attached please find the EDD and report files for job 320-43353-3; NERT Dioxin Sampling

TestAmerica Irvine Sacramento
 17461 Berian Ave Suite 100
 Irvine, CA 92614
 Phone: 949.261.1022 Fax:

Chain of Custody Record

138873

TestAmerica
 THE LEADER IN ENVIRONMENTAL TESTING
 TestAmerica Laboratories, Inc.
 TAL-8210 (07/13)

Regulatory Program: DW NPDES RCRA Other:

Client Contact: **Ramboll**
 Project Manager: **Don Clark**
 Tel/Fax: **510-299-7036**
 Analysis Turnaround Time: CALENDAR DAYS WORKING DAYS
 TAT if different from Below: **5 days**
 2 weeks 1 week 2 days 1 day
 Project Name: **Dioxin Pre-excitation Soil Sampling**
 Site: **MERT**
 PO # **169000641-012**

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Sample Specific Notes:	
						Filtered Sample (Y/N)	Perform MS/MSD (Y/N)
DSPE-1-FB-20180919	09/19	0800	GC	SO	1	X	
DSPE-1-0.5-20180919	"	0840	GC	SO	11	X	
DSPE-100-0.5-20180919	"	0840	GC	SO	11	X	
DSPE-1-1.5-20180919	"	0855	GC	SO	11	X	
DSPE-1-2.0-20180919	"	0912	GC	SO	11	X	
DSPE-1-3.0-20180919	"	0934	GC	SO	11	X	
DSPE-1-4.0-20180919	"	0950	GC	SO	11	X	
DSPE-1-EB-20180919	"	0855	GC	SO	11	X	
DSPE-2-0.5-20180919	"	1027	GC	SO	11	X	
DSPE-2-1.5-20180919	"	1036	GC	SO	11	X	
DSPE-2-2.0-20180919	"	1043	GC	SO	11	X	
DSPE-2-3.0-20180919	"	1049	GC	SO	11	X	



Preservation Used: 1= Ice, 2= HCl, 3= H2SO4, 4= HNO3, 5= NaOH, 6= Other
 Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return to Client Disposal by Lab Archive for _____ Months

Special Instructions/QC Requirements & Comments:
 Custody Seal No.:
 Relinquished by: **B.K.P.** Date/Time: **09/19/08 1630**
 Relinquished by: **JAM** Date/Time: **9/18/08 1730**
 Relinquished by: **JAM** Date/Time: **9/18/08 1730**
 Received by: **JAM** Date/Time: **9/19/08 1620**
 Received by: **JAM** Date/Time: **9/19/08 1620**
 Received in Laboratory by: **JAM** Date/Time: **9-20-18 0930**

TALVS 18.9 VAW



TestAmerica Irvine
 17461 Merian Ave
 Suite 100
 Irvine, CA 92614
 Phone: 949.261.1022 Fax:

Sacramento

Chain of Custody Record

138875

TestAmerica
 THE LEADER IN ENVIRONMENTAL TESTING
 TestAmerica Laboratories, Inc.
 TAL-8210 (0713)

Regulatory Program: DW NPDES RCRA Other:

Client Contact
 Company Name: Ramboll
 Address: 2200 Powell St Suite 700
 City/State/Zip: Fremontville, CA, 94568
 Phone: 510-655-7400
 Fax:
 Project Name: Diarrin Sampling
 Site: NEPT
 PO #: 1694006941-012

Project Manager: Dan Clark
 Tell Fax: 910-289-7036
 Analysis Turnaround Time
 CALENDAR DAYS WORKING DAYS
 TAT: if different from Below Delays
 2 weeks
 1 week
 2 days
 1 day

Site Contact: Brendan Keegan Date: 09/19/18
 Lab Contact: Patty Mata Carrier:
 COC No.: 4 of 3 COCs

Sampler:
 For Lab Use Only:
 Walk-in Client:
 Lab Sampling:
 Job / SDG No.:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Sample Specific Notes:	
						Filtered Sample (Y/N)	Perform MS / MSD (Y/N)
DSPE-2-4.0-20180919	9/19	1100	G	SO	1	X	Hold
DSPE-3-0.5-20180919	"	1123	"	"	"	X	
DSPE-3-0.5-20180919	"	1123	"	"	"	X	
DSPE-3-1.5-20180919	"	1140	"	"	"	X	
DSPE-3-2.0-20180919	"	1146	"	"	"	X	
DSPE-3-3.0-20180919	"	1202	"	"	"	X	
DSPE-4-0.5-20180919	"	1445	"	"	"	X	
DSPE-4-2.0-20180919	"	1450	"	"	"	X	
DSPE-4-3.0-20180919	"	1455	"	"	"	X	
DSPE-4-4.0-20180919	"	1500	"	"	"	X	
DSPE-5-1.5-20180919	"	1536	"	"	"	X	
DSPE-5-2.0-20180919	"	1534	"	"	"	X	

Preservation Used: 1= Ice, 2= HCl, 3= H2SO4, 4=HNO3, 5=NaOH, 6= Other
 Possible Hazard Identification: Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.
 Non-Hazard Flammable Skin Irritant Poison B Unknown
 Return to Client Disposal by Lab Archive for _____ Months

Special Instructions/QC Requirements & Comments:
 Custody Seal No.:
 Relinquished by: B. K... Date/Time: 9/19/18 1620
 Relinquished by: V. H... Date/Time: 9/19/18 1730
 Relinquished by:
 Company: Ramboll
 Company: TALUS
 Company:
 Received by: V. H...
 Received by: Fedy
 Received in Laboratory by: Jan D. ...
 Date/Time: 9-19-18 1620
 Date/Time: 9-20-18 0930
 Cooler Temp. (°C): Obs'd: 07°C Therm ID No.: ALC2-92
 S42 5.40C

TALUS 18.9 VAM



Regulatory Program: DW NPDES RCRA Other:

Company Name: Ramboll		Client Contact	
Address: 2900 Powell St, Suite 200		Project Name: Dioxin Sampling	
City/State/Zip: Emeryville, CA, 94605		Site: UGRT	
Phone: 510-655-7400		PO # 169006941-013	
Fax:		Project Manager: Dan Clark	
Analysis Turnaround Time		Tel/Fax: 510-299-7036	
<input checked="" type="checkbox"/> CALENDAR DAYS <input type="checkbox"/> WORKING DAYS		Site Contact: Rebecca Keegan	
TAT if different from Below 5 DAYS		Lab Contact: Patricia Mata	
<input type="checkbox"/> 2 weeks	<input type="checkbox"/> 1 week	Date: 09/19/2018	
<input type="checkbox"/> 2 days	<input type="checkbox"/> 1 day	Carrier:	

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS/MSD (Y/N)	Dioxin TED	HOLD	Sample Specific Notes:	
										COCs	Other
DSPE-5-3.0-20180919	09/19/18	1540	G	SO	1			X	X		
DSPE-5-4.0-20180919	09/19/18	1557	G	"	11			X	X		
DSPE-3-4.0-20180919	"	1340	G	"	11			X	X		

Preservation Used: 1= Ice, 2= HCl, 3= H2SO4, 4= HNO3, 5= NaOH, 6= Other

Possible Hazard Identification: Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

Non-Hazard Flammable Skin Irritant Poison B Unknown

Special Instructions/QC Requirements & Comments:

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

Return to Client Disposal by Lab Archive for _____ Months

Relinquished by:	Company:	Date/Time:	Relinquished by:	Company:	Date/Time:	Relinquished by:	Company:	Date/Time:
B. K. [Signature]	Ramboll	9/19/18 1620	[Signature]	TALUS	9-19-18 1620	[Signature]	TA-98C	9-20-18 0930
[Signature]	TALUS	9-19-18 1730	[Signature]	TALUS	9-19-18 1620	[Signature]	TA-98C	9-20-18 0930

Cooler Temp. (°C): Obs'd: **5.7°C** Cor'd: **5.7°C** Therm ID No.: **AL-21e**

5.4°C 5.4°C

18.9 TALUS JAMM

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

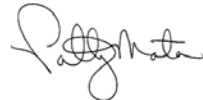
ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Sacramento
880 Riverside Parkway
West Sacramento, CA 95605
Tel: (916)373-5600

TestAmerica Job ID: 320-43477-1
Client Project/Site: NERT Dioxin Soil Sampling

For:
Ramboll US Corporation
2200 Powell Street
Suite 700
Emeryville, California 94608

Attn: Craig Knox



Authorized for release by:
9/28/2018 4:15:34 PM

Patty Mata, Senior Project Manager
(949)261-1022
patty.mata@testamericainc.com

LINKS

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www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Definitions/Glossary

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Soil Sampling

TestAmerica Job ID: 320-43477-1

Qualifiers

Dioxin

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
q	The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio. The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Case Narrative

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Soil Sampling

TestAmerica Job ID: 320-43477-1

Job ID: 320-43477-1

Laboratory: TestAmerica Sacramento

Narrative

Job Narrative
320-43477-1

Comments

No additional comments.

Receipt

The samples were received on 9/21/2018 9:20 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.3° C.

Dioxin

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Dioxin Prep

Method(s) 8290: Due to the matrix, the initial volumes used for the following samples deviated from the standard procedure: DSPE-6-1.5-20180920 (320-43477-1) and DSPE-7-1.5-20180920 (320-43477-5). The reporting limits (RLs) have been adjusted proportionately. Samples are associated with preparation batch 320-247944.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: Ramboll US Corporation
 Project/Site: NERT Dioxin Soil Sampling

TestAmerica Job ID: 320-43477-1

Client Sample ID: DSPE-6-1.5-20180920

Lab Sample ID: 320-43477-1

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	1.0	J q	10	0.33	pg/g	1	☼	8290	Total/NA
1,2,3,7,8-PeCDD	3.9	J	50	0.58	pg/g	1	☼	8290	Total/NA
1,2,3,7,8-PeCDF	48	J	50	2.0	pg/g	1	☼	8290	Total/NA
2,3,4,7,8-PeCDF	24	J	50	2.0	pg/g	1	☼	8290	Total/NA
1,2,3,4,7,8-HxCDD	4.0	J B	50	0.25	pg/g	1	☼	8290	Total/NA
1,2,3,6,7,8-HxCDD	6.4	J B	50	0.24	pg/g	1	☼	8290	Total/NA
1,2,3,7,8,9-HxCDD	6.3	J B	50	0.23	pg/g	1	☼	8290	Total/NA
1,2,3,4,7,8-HxCDF	110		50	1.5	pg/g	1	☼	8290	Total/NA
1,2,3,6,7,8-HxCDF	76		50	1.4	pg/g	1	☼	8290	Total/NA
2,3,4,6,7,8-HxCDF	16	J	50	1.4	pg/g	1	☼	8290	Total/NA
1,2,3,7,8,9-HxCDF	14	J B	50	1.5	pg/g	1	☼	8290	Total/NA
1,2,3,4,6,7,8-HpCDD	24	J B	50	0.34	pg/g	1	☼	8290	Total/NA
1,2,3,4,6,7,8-HpCDF	310	B	50	1.7	pg/g	1	☼	8290	Total/NA
1,2,3,4,7,8,9-HpCDF	110	B	50	2.1	pg/g	1	☼	8290	Total/NA
OCDD	72	J B	100	0.26	pg/g	1	☼	8290	Total/NA
OCDF	830	B	100	0.67	pg/g	1	☼	8290	Total/NA
Total TCDD	27	q	10	0.33	pg/g	1	☼	8290	Total/NA
Total TCDF	310	B	10	0.81	pg/g	1	☼	8290	Total/NA
Total PeCDD	36	J q	50	0.58	pg/g	1	☼	8290	Total/NA
Total PeCDF	380		50	2.0	pg/g	1	☼	8290	Total/NA
Total HxCDD	44	J q B	50	0.24	pg/g	1	☼	8290	Total/NA
Total HxCDF	530	B	50	1.5	pg/g	1	☼	8290	Total/NA
Total HpCDD	37	J B	50	0.34	pg/g	1	☼	8290	Total/NA
Total HpCDF	590	B	50	1.9	pg/g	1	☼	8290	Total/NA
2,3,7,8-TCDF - RA	25	B	10	1.3	pg/g	1	☼	8290	Total/NA

Client Sample ID: DSPE-7-1.5-20180920

Lab Sample ID: 320-43477-5

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDF	0.78	J B	10	0.11	pg/g	1	☼	8290	Total/NA
1,2,3,7,8-PeCDD	0.26	J	52	0.20	pg/g	1	☼	8290	Total/NA
1,2,3,7,8-PeCDF	1.0	J	52	0.23	pg/g	1	☼	8290	Total/NA
1,2,3,4,7,8-HxCDD	1.4	J B	52	0.14	pg/g	1	☼	8290	Total/NA
1,2,3,6,7,8-HxCDD	0.50	J q B	52	0.13	pg/g	1	☼	8290	Total/NA
1,2,3,7,8,9-HxCDD	0.36	J B	52	0.12	pg/g	1	☼	8290	Total/NA
1,2,3,4,7,8-HxCDF	0.61	J q	52	0.17	pg/g	1	☼	8290	Total/NA
1,2,3,6,7,8-HxCDF	0.38	J q	52	0.17	pg/g	1	☼	8290	Total/NA
2,3,4,6,7,8-HxCDF	0.19	J q	52	0.17	pg/g	1	☼	8290	Total/NA
1,2,3,7,8,9-HxCDF	4.3	J B	52	0.18	pg/g	1	☼	8290	Total/NA
1,2,3,4,6,7,8-HpCDD	0.94	J q B	52	0.13	pg/g	1	☼	8290	Total/NA
1,2,3,4,6,7,8-HpCDF	0.91	J B	52	0.14	pg/g	1	☼	8290	Total/NA
1,2,3,4,7,8,9-HpCDF	3.1	J B	52	0.16	pg/g	1	☼	8290	Total/NA
OCDD	17	J B	100	0.21	pg/g	1	☼	8290	Total/NA
OCDF	3.1	J B	100	0.25	pg/g	1	☼	8290	Total/NA
Total TCDF	1.4	J q B	10	0.11	pg/g	1	☼	8290	Total/NA
Total PeCDD	0.26	J	52	0.20	pg/g	1	☼	8290	Total/NA
Total PeCDF	1.0	J	52	0.23	pg/g	1	☼	8290	Total/NA
Total HxCDD	2.3	J q B	52	0.13	pg/g	1	☼	8290	Total/NA
Total HxCDF	8.3	J q B	52	0.17	pg/g	1	☼	8290	Total/NA
Total HpCDD	2.2	J q B	52	0.13	pg/g	1	☼	8290	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Sacramento

Detection Summary

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Soil Sampling

TestAmerica Job ID: 320-43477-1

Client Sample ID: DSPE-7-1.5-20180920 (Continued)

Lab Sample ID: 320-43477-5

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
Total HpCDF	5.0	J B	52	0.15	pg/g	1	☼	8290	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Sacramento

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Client Sample Results

Client: Ramboll US Corporation
 Project/Site: NERT Dioxin Soil Sampling

TestAmerica Job ID: 320-43477-1

Client Sample ID: DSPE-6-1.5-20180920

Lab Sample ID: 320-43477-1

Date Collected: 09/20/18 07:54

Matrix: Solid

Date Received: 09/21/18 09:20

Percent Solids: 96.0

Method: 8290 - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	1.0	J q	10	0.33	pg/g	☼	09/26/18 13:49	09/27/18 17:42	1
1,2,3,7,8-PeCDD	3.9	J	50	0.58	pg/g	☼	09/26/18 13:49	09/27/18 17:42	1
1,2,3,7,8-PeCDF	48	J	50	2.0	pg/g	☼	09/26/18 13:49	09/27/18 17:42	1
2,3,4,7,8-PeCDF	24	J	50	2.0	pg/g	☼	09/26/18 13:49	09/27/18 17:42	1
1,2,3,4,7,8-HxCDD	4.0	J B	50	0.25	pg/g	☼	09/26/18 13:49	09/27/18 17:42	1
1,2,3,6,7,8-HxCDD	6.4	J B	50	0.24	pg/g	☼	09/26/18 13:49	09/27/18 17:42	1
1,2,3,7,8,9-HxCDD	6.3	J B	50	0.23	pg/g	☼	09/26/18 13:49	09/27/18 17:42	1
1,2,3,4,7,8-HxCDF	110		50	1.5	pg/g	☼	09/26/18 13:49	09/27/18 17:42	1
1,2,3,6,7,8-HxCDF	76		50	1.4	pg/g	☼	09/26/18 13:49	09/27/18 17:42	1
2,3,4,6,7,8-HxCDF	16	J	50	1.4	pg/g	☼	09/26/18 13:49	09/27/18 17:42	1
1,2,3,7,8,9-HxCDF	14	J B	50	1.5	pg/g	☼	09/26/18 13:49	09/27/18 17:42	1
1,2,3,4,6,7,8-HpCDD	24	J B	50	0.34	pg/g	☼	09/26/18 13:49	09/27/18 17:42	1
1,2,3,4,6,7,8-HpCDF	310	B	50	1.7	pg/g	☼	09/26/18 13:49	09/27/18 17:42	1
1,2,3,4,7,8,9-HpCDF	110	B	50	2.1	pg/g	☼	09/26/18 13:49	09/27/18 17:42	1
OCDD	72	J B	100	0.26	pg/g	☼	09/26/18 13:49	09/27/18 17:42	1
OCDF	830	B	100	0.67	pg/g	☼	09/26/18 13:49	09/27/18 17:42	1
Total TCDD	27	q	10	0.33	pg/g	☼	09/26/18 13:49	09/27/18 17:42	1
Total TCDF	310	B	10	0.81	pg/g	☼	09/26/18 13:49	09/27/18 17:42	1
Total PeCDD	36	J q	50	0.58	pg/g	☼	09/26/18 13:49	09/27/18 17:42	1
Total PeCDF	380		50	2.0	pg/g	☼	09/26/18 13:49	09/27/18 17:42	1
Total HxCDD	44	J q B	50	0.24	pg/g	☼	09/26/18 13:49	09/27/18 17:42	1
Total HxCDF	530	B	50	1.5	pg/g	☼	09/26/18 13:49	09/27/18 17:42	1
Total HpCDD	37	J B	50	0.34	pg/g	☼	09/26/18 13:49	09/27/18 17:42	1
Total HpCDF	590	B	50	1.9	pg/g	☼	09/26/18 13:49	09/27/18 17:42	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	81		40 - 135	09/26/18 13:49	09/27/18 17:42	1
13C-2,3,7,8-TCDF	75		40 - 135	09/26/18 13:49	09/27/18 17:42	1
13C-1,2,3,7,8-PeCDD	72		40 - 135	09/26/18 13:49	09/27/18 17:42	1
13C-1,2,3,7,8-PeCDF	72		40 - 135	09/26/18 13:49	09/27/18 17:42	1
13C-1,2,3,6,7,8-HxCDD	85		40 - 135	09/26/18 13:49	09/27/18 17:42	1
13C-1,2,3,4,7,8-HxCDF	83		40 - 135	09/26/18 13:49	09/27/18 17:42	1
13C-1,2,3,4,6,7,8-HpCDD	93		40 - 135	09/26/18 13:49	09/27/18 17:42	1
13C-1,2,3,4,6,7,8-HpCDF	84		40 - 135	09/26/18 13:49	09/27/18 17:42	1
13C-OCDD	81		40 - 135	09/26/18 13:49	09/27/18 17:42	1

Method: 8290 - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	25	B	10	1.3	pg/g	☼	09/26/18 13:49	09/27/18 19:39	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDF	86		40 - 135	09/26/18 13:49	09/27/18 19:39	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	4.0		0.1	0.1	%			09/26/18 13:31	1

Client Sample Results

Client: Ramboll US Corporation
 Project/Site: NERT Dioxin Soil Sampling

TestAmerica Job ID: 320-43477-1

Client Sample ID: DSPE-7-1.5-20180920

Lab Sample ID: 320-43477-5

Date Collected: 09/20/18 08:46

Matrix: Solid

Date Received: 09/21/18 09:20

Percent Solids: 93.7

Method: 8290 - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		10	0.26	pg/g	☼	09/26/18 13:49	09/27/18 18:28	1
2,3,7,8-TCDF	0.78	J B	10	0.11	pg/g	☼	09/26/18 13:49	09/27/18 18:28	1
1,2,3,7,8-PeCDD	0.26	J	52	0.20	pg/g	☼	09/26/18 13:49	09/27/18 18:28	1
1,2,3,7,8-PeCDF	1.0	J	52	0.23	pg/g	☼	09/26/18 13:49	09/27/18 18:28	1
2,3,4,7,8-PeCDF	ND		52	0.23	pg/g	☼	09/26/18 13:49	09/27/18 18:28	1
1,2,3,4,7,8-HxCDD	1.4	J B	52	0.14	pg/g	☼	09/26/18 13:49	09/27/18 18:28	1
1,2,3,6,7,8-HxCDD	0.50	J q B	52	0.13	pg/g	☼	09/26/18 13:49	09/27/18 18:28	1
1,2,3,7,8,9-HxCDD	0.36	J B	52	0.12	pg/g	☼	09/26/18 13:49	09/27/18 18:28	1
1,2,3,4,7,8-HxCDF	0.61	J q	52	0.17	pg/g	☼	09/26/18 13:49	09/27/18 18:28	1
1,2,3,6,7,8-HxCDF	0.38	J q	52	0.17	pg/g	☼	09/26/18 13:49	09/27/18 18:28	1
2,3,4,6,7,8-HxCDF	0.19	J q	52	0.17	pg/g	☼	09/26/18 13:49	09/27/18 18:28	1
1,2,3,7,8,9-HxCDF	4.3	J B	52	0.18	pg/g	☼	09/26/18 13:49	09/27/18 18:28	1
1,2,3,4,6,7,8-HpCDD	0.94	J q B	52	0.13	pg/g	☼	09/26/18 13:49	09/27/18 18:28	1
1,2,3,4,6,7,8-HpCDF	0.91	J B	52	0.14	pg/g	☼	09/26/18 13:49	09/27/18 18:28	1
1,2,3,4,7,8,9-HpCDF	3.1	J B	52	0.16	pg/g	☼	09/26/18 13:49	09/27/18 18:28	1
OCDD	17	J B	100	0.21	pg/g	☼	09/26/18 13:49	09/27/18 18:28	1
OCDF	3.1	J B	100	0.25	pg/g	☼	09/26/18 13:49	09/27/18 18:28	1
Total TCDD	ND		10	0.26	pg/g	☼	09/26/18 13:49	09/27/18 18:28	1
Total TCDF	1.4	J q B	10	0.11	pg/g	☼	09/26/18 13:49	09/27/18 18:28	1
Total PeCDD	0.26	J	52	0.20	pg/g	☼	09/26/18 13:49	09/27/18 18:28	1
Total PeCDF	1.0	J	52	0.23	pg/g	☼	09/26/18 13:49	09/27/18 18:28	1
Total HxCDD	2.3	J q B	52	0.13	pg/g	☼	09/26/18 13:49	09/27/18 18:28	1
Total HxCDF	8.3	J q B	52	0.17	pg/g	☼	09/26/18 13:49	09/27/18 18:28	1
Total HpCDD	2.2	J q B	52	0.13	pg/g	☼	09/26/18 13:49	09/27/18 18:28	1
Total HpCDF	5.0	J B	52	0.15	pg/g	☼	09/26/18 13:49	09/27/18 18:28	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	83		40 - 135				09/26/18 13:49	09/27/18 18:28	1
13C-2,3,7,8-TCDF	78		40 - 135				09/26/18 13:49	09/27/18 18:28	1
13C-1,2,3,7,8-PeCDD	73		40 - 135				09/26/18 13:49	09/27/18 18:28	1
13C-1,2,3,7,8-PeCDF	73		40 - 135				09/26/18 13:49	09/27/18 18:28	1
13C-1,2,3,6,7,8-HxCDD	83		40 - 135				09/26/18 13:49	09/27/18 18:28	1
13C-1,2,3,4,7,8-HxCDF	82		40 - 135				09/26/18 13:49	09/27/18 18:28	1
13C-1,2,3,4,6,7,8-HpCDD	94		40 - 135				09/26/18 13:49	09/27/18 18:28	1
13C-1,2,3,4,6,7,8-HpCDF	86		40 - 135				09/26/18 13:49	09/27/18 18:28	1
13C-OCDD	82		40 - 135				09/26/18 13:49	09/27/18 18:28	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	6.3		0.1	0.1	%			09/26/18 13:31	1

Toxicity Summary

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Soil Sampling

TestAmerica Job ID: 320-43477-1

Client Sample ID: DSPE-6-1.5-20180920

Lab Sample ID: 320-43477-1

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005		Method
						TEF	TEQ	
2,3,7,8-TCDD	1.0	J q	10	0.33	pg/g	1	1.0	8290
1,2,3,7,8-PeCDD	3.9	J	50	0.58	pg/g	1	3.9	8290
1,2,3,7,8-PeCDF	48	J	50	2.0	pg/g	0.03	1.4	8290
2,3,4,7,8-PeCDF	24	J	50	2.0	pg/g	0.3	7.2	8290
1,2,3,4,7,8-HxCDD	4.0	J B	50	0.25	pg/g	0.1	0.40	8290
1,2,3,6,7,8-HxCDD	6.4	J B	50	0.24	pg/g	0.1	0.64	8290
1,2,3,7,8,9-HxCDD	6.3	J B	50	0.23	pg/g	0.1	0.63	8290
1,2,3,4,7,8-HxCDF	110		50	1.5	pg/g	0.1	11	8290
1,2,3,6,7,8-HxCDF	76		50	1.4	pg/g	0.1	7.6	8290
2,3,4,6,7,8-HxCDF	16	J	50	1.4	pg/g	0.1	1.6	8290
1,2,3,7,8,9-HxCDF	14	J B	50	1.5	pg/g	0.1	1.4	8290
1,2,3,4,6,7,8-HpCDD	24	J B	50	0.34	pg/g	0.01	0.24	8290
1,2,3,4,6,7,8-HpCDF	310	B	50	1.7	pg/g	0.01	3.1	8290
1,2,3,4,7,8,9-HpCDF	110	B	50	2.1	pg/g	0.01	1.1	8290
OCDD	72	J B	100	0.26	pg/g	0.0003	0.022	8290
OCDF	830	B	100	0.67	pg/g	0.0003	0.25	8290
2,3,7,8-TCDF - RA	25	B	10	1.3	pg/g	0.1	2.5	8290

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005		Method
						TEF	TEQ	
Total Dioxin/Furan TEQ					pg/g		44	TEQ

Client Sample ID: DSPE-7-1.5-20180920

Lab Sample ID: 320-43477-5

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005		Method
						TEF	TEQ	
2,3,7,8-TCDD	ND		10	0.26	pg/g	1	0.13	8290
2,3,7,8-TCDF	0.78	J B	10	0.11	pg/g	0.1	0.078	8290
1,2,3,7,8-PeCDD	0.26	J	52	0.20	pg/g	1	0.26	8290
1,2,3,7,8-PeCDF	1.0	J	52	0.23	pg/g	0.03	0.030	8290
2,3,4,7,8-PeCDF	ND		52	0.23	pg/g	0.3	0.035	8290
1,2,3,4,7,8-HxCDD	1.4	J B	52	0.14	pg/g	0.1	0.14	8290
1,2,3,6,7,8-HxCDD	0.50	J q B	52	0.13	pg/g	0.1	0.050	8290
1,2,3,7,8,9-HxCDD	0.36	J B	52	0.12	pg/g	0.1	0.036	8290
1,2,3,4,7,8-HxCDF	0.61	J q	52	0.17	pg/g	0.1	0.061	8290
1,2,3,6,7,8-HxCDF	0.38	J q	52	0.17	pg/g	0.1	0.038	8290
2,3,4,6,7,8-HxCDF	0.19	J q	52	0.17	pg/g	0.1	0.019	8290
1,2,3,7,8,9-HxCDF	4.3	J B	52	0.18	pg/g	0.1	0.43	8290
1,2,3,4,6,7,8-HpCDD	0.94	J q B	52	0.13	pg/g	0.01	0.0094	8290
1,2,3,4,6,7,8-HpCDF	0.91	J B	52	0.14	pg/g	0.01	0.0091	8290
1,2,3,4,7,8,9-HpCDF	3.1	J B	52	0.16	pg/g	0.01	0.031	8290
OCDD	17	J B	100	0.21	pg/g	0.0003	0.0051	8290

TEF Reference:

WHO 2005 = World Health Organization (WHO) 2005 TEF, Dioxins, Furans and PCB Congeners

Note: The analytes PCB-156 and PCB-157 coelute as a single peak.

TestAmerica Sacramento

Toxicity Summary

Client: Ramboll US Corporation
 Project/Site: NERT Dioxin Soil Sampling

TestAmerica Job ID: 320-43477-1

Client Sample ID: DSPE-7-1.5-20180920 (Continued)

Lab Sample ID: 320-43477-5

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005		Method
						TEF	TEQ	
OCDF	3.1	J B	100	0.25	pg/g	0.0003	0.00093	8290
Total Dioxin/Furan TEQ			NONE	NONE	pg/g		1.4	TEQ

TEF Reference:

WHO 2005 = World Health Organization (WHO) 2005 TEF, Dioxins, Furans and PCB Congeners

Note: The analytes PCB-156 and PCB-157 coelute as a single peak.

TestAmerica Sacramento



Isotope Dilution Summary

Client: Ramboll US Corporation
 Project/Site: NERT Dioxin Soil Sampling

TestAmerica Job ID: 320-43477-1

Method: 8290 - Dioxins and Furans (HRGC/HRMS)

Matrix: Solid

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	TCDD (40-135)	TCDF (40-135)	PeCDD (40-135)	PeCDF (40-135)	HxDD (40-135)	HxCDF (40-135)	HpCDD (40-135)	HpCDF (40-135)
320-43477-1	DSPE-6-1.5-20180920	81	75	72	72	85	83	93	84
320-43477-1 - RA	DSPE-6-1.5-20180920		86						
320-43477-5	DSPE-7-1.5-20180920	83	78	73	73	83	82	94	86
LCS 320-247944/2-A	Lab Control Sample	75	72	74	77	78	75	92	84
LCSD 320-247944/3-A	Lab Control Sample Dup	81	76	75	75	81	80	93	85
MB 320-247944/1-A	Method Blank	74	69	70	68	73	75	83	77

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	OCDD (40-135)
320-43477-1	DSPE-6-1.5-20180920	81
320-43477-1 - RA	DSPE-6-1.5-20180920	
320-43477-5	DSPE-7-1.5-20180920	82
LCS 320-247944/2-A	Lab Control Sample	96
LCSD 320-247944/3-A	Lab Control Sample Dup	83
MB 320-247944/1-A	Method Blank	73

Surrogate Legend

- TCDD = 13C-2,3,7,8-TCDD
- TCDF = 13C-2,3,7,8-TCDF
- PeCDD = 13C-1,2,3,7,8-PeCDD
- PeCDF = 13C-1,2,3,7,8-PeCDF
- HxDD = 13C-1,2,3,6,7,8-HxCDD
- HxCDF = 13C-1,2,3,4,7,8-HxCDF
- HpCDD = 13C-1,2,3,4,6,7,8-HpCDD
- HpCDF = 13C-1,2,3,4,6,7,8-HpCDF
- OCDD = 13C-OCDD

QC Sample Results

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Soil Sampling

TestAmerica Job ID: 320-43477-1

Method: 8290 - Dioxins and Furans (HRGC/HRMS)

Lab Sample ID: MB 320-247944/1-A

Matrix: Solid

Analysis Batch: 248229

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 247944

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		1.0	0.035	pg/g		09/26/18 13:49	09/27/18 15:24	1
2,3,7,8-TCDF	0.0718	J q	1.0	0.016	pg/g		09/26/18 13:49	09/27/18 15:24	1
1,2,3,7,8-PeCDD	ND		5.0	0.028	pg/g		09/26/18 13:49	09/27/18 15:24	1
1,2,3,7,8-PeCDF	ND		5.0	0.025	pg/g		09/26/18 13:49	09/27/18 15:24	1
2,3,4,7,8-PeCDF	ND		5.0	0.025	pg/g		09/26/18 13:49	09/27/18 15:24	1
1,2,3,4,7,8-HxCDD	0.129	J	5.0	0.016	pg/g		09/26/18 13:49	09/27/18 15:24	1
1,2,3,6,7,8-HxCDD	0.0332	J q	5.0	0.015	pg/g		09/26/18 13:49	09/27/18 15:24	1
1,2,3,7,8,9-HxCDD	0.0300	J	5.0	0.014	pg/g		09/26/18 13:49	09/27/18 15:24	1
1,2,3,4,7,8-HxCDF	ND		5.0	0.033	pg/g		09/26/18 13:49	09/27/18 15:24	1
1,2,3,6,7,8-HxCDF	ND		5.0	0.032	pg/g		09/26/18 13:49	09/27/18 15:24	1
2,3,4,6,7,8-HxCDF	ND		5.0	0.033	pg/g		09/26/18 13:49	09/27/18 15:24	1
1,2,3,7,8,9-HxCDF	0.421	J	5.0	0.034	pg/g		09/26/18 13:49	09/27/18 15:24	1
1,2,3,4,6,7,8-HpCDD	0.324	J	5.0	0.021	pg/g		09/26/18 13:49	09/27/18 15:24	1
1,2,3,4,6,7,8-HpCDF	0.103	J	5.0	0.020	pg/g		09/26/18 13:49	09/27/18 15:24	1
1,2,3,4,7,8,9-HpCDF	0.315	J	5.0	0.023	pg/g		09/26/18 13:49	09/27/18 15:24	1
OCDD	9.69	J	10	0.033	pg/g		09/26/18 13:49	09/27/18 15:24	1
OCDF	0.681	J	10	0.034	pg/g		09/26/18 13:49	09/27/18 15:24	1
Total TCDD	ND		1.0	0.035	pg/g		09/26/18 13:49	09/27/18 15:24	1
Total TCDF	0.115	J q	1.0	0.016	pg/g		09/26/18 13:49	09/27/18 15:24	1
Total PeCDD	ND		5.0	0.028	pg/g		09/26/18 13:49	09/27/18 15:24	1
Total PeCDF	ND		5.0	0.025	pg/g		09/26/18 13:49	09/27/18 15:24	1
Total HxCDD	0.192	J q	5.0	0.015	pg/g		09/26/18 13:49	09/27/18 15:24	1
Total HxCDF	0.650	J q	5.0	0.033	pg/g		09/26/18 13:49	09/27/18 15:24	1
Total HpCDD	0.559	J	5.0	0.021	pg/g		09/26/18 13:49	09/27/18 15:24	1
Total HpCDF	0.540	J	5.0	0.021	pg/g		09/26/18 13:49	09/27/18 15:24	1

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	74		40 - 135	09/26/18 13:49	09/27/18 15:24	1
13C-2,3,7,8-TCDF	69		40 - 135	09/26/18 13:49	09/27/18 15:24	1
13C-1,2,3,7,8-PeCDD	70		40 - 135	09/26/18 13:49	09/27/18 15:24	1
13C-1,2,3,7,8-PeCDF	68		40 - 135	09/26/18 13:49	09/27/18 15:24	1
13C-1,2,3,6,7,8-HxCDD	73		40 - 135	09/26/18 13:49	09/27/18 15:24	1
13C-1,2,3,4,7,8-HxCDF	75		40 - 135	09/26/18 13:49	09/27/18 15:24	1
13C-1,2,3,4,6,7,8-HpCDD	83		40 - 135	09/26/18 13:49	09/27/18 15:24	1
13C-1,2,3,4,6,7,8-HpCDF	77		40 - 135	09/26/18 13:49	09/27/18 15:24	1
13C-OCDD	73		40 - 135	09/26/18 13:49	09/27/18 15:24	1

Lab Sample ID: LCS 320-247944/2-A

Matrix: Solid

Analysis Batch: 248396

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 247944

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
2,3,7,8-TCDD	20.0	20.8		pg/g		104	60 - 138
2,3,7,8-TCDF	20.0	20.8		pg/g		104	56 - 158
1,2,3,7,8-PeCDD	100	105		pg/g		105	70 - 122
1,2,3,7,8-PeCDF	100	104		pg/g		104	69 - 134
2,3,4,7,8-PeCDF	100	92.9		pg/g		93	70 - 131
1,2,3,4,7,8-HxCDD	100	100		pg/g		100	60 - 138

TestAmerica Sacramento

QC Sample Results

Client: Ramboll US Corporation
 Project/Site: NERT Dioxin Soil Sampling

TestAmerica Job ID: 320-43477-1

Method: 8290 - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCS 320-247944/2-A
Matrix: Solid
Analysis Batch: 248396

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 247944

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
1,2,3,6,7,8-HxCDD	100	105		pg/g		105	68 - 136
1,2,3,7,8,9-HxCDD	100	104		pg/g		104	68 - 138
1,2,3,4,7,8-HxCDF	100	107		pg/g		107	74 - 128
1,2,3,6,7,8-HxCDF	100	113		pg/g		113	67 - 140
2,3,4,6,7,8-HxCDF	100	112		pg/g		112	71 - 137
1,2,3,7,8,9-HxCDF	100	114		pg/g		114	72 - 134
1,2,3,4,6,7,8-HpCDD	100	101		pg/g		101	71 - 128
1,2,3,4,6,7,8-HpCDF	100	102		pg/g		102	71 - 134
1,2,3,4,7,8,9-HpCDF	100	114		pg/g		114	68 - 129
OCDD	200	200		pg/g		100	70 - 128
OCDF	200	203		pg/g		101	63 - 141

Isotope Dilution	LCS LCS		Limits
	%Recovery	Qualifier	
13C-2,3,7,8-TCDD	75		40 - 135
13C-2,3,7,8-TCDF	72		40 - 135
13C-1,2,3,7,8-PeCDD	74		40 - 135
13C-1,2,3,7,8-PeCDF	77		40 - 135
13C-1,2,3,6,7,8-HxCDD	78		40 - 135
13C-1,2,3,4,7,8-HxCDF	75		40 - 135
13C-1,2,3,4,6,7,8-HpCDD	92		40 - 135
13C-1,2,3,4,6,7,8-HpCDF	84		40 - 135
13C-OCDD	96		40 - 135

Lab Sample ID: LCSD 320-247944/3-A
Matrix: Solid
Analysis Batch: 248229

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 247944

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
2,3,7,8-TCDD	20.0	18.5		pg/g		92	60 - 138	12	20
2,3,7,8-TCDF	20.0	21.0		pg/g		105	56 - 158	1	20
1,2,3,7,8-PeCDD	100	102		pg/g		102	70 - 122	3	20
1,2,3,7,8-PeCDF	100	104		pg/g		104	69 - 134	1	20
2,3,4,7,8-PeCDF	100	101		pg/g		101	70 - 131	8	20
1,2,3,4,7,8-HxCDD	100	103		pg/g		103	60 - 138	3	20
1,2,3,6,7,8-HxCDD	100	105		pg/g		105	68 - 136	0	20
1,2,3,7,8,9-HxCDD	100	107		pg/g		107	68 - 138	3	20
1,2,3,4,7,8-HxCDF	100	108		pg/g		108	74 - 128	1	20
1,2,3,6,7,8-HxCDF	100	113		pg/g		113	67 - 140	0	20
2,3,4,6,7,8-HxCDF	100	114		pg/g		114	71 - 137	2	20
1,2,3,7,8,9-HxCDF	100	108		pg/g		108	72 - 134	5	20
1,2,3,4,6,7,8-HpCDD	100	98.0		pg/g		98	71 - 128	3	20
1,2,3,4,6,7,8-HpCDF	100	104		pg/g		104	71 - 134	2	20
1,2,3,4,7,8,9-HpCDF	100	108		pg/g		108	68 - 129	5	20
OCDD	200	198		pg/g		99	70 - 128	1	20
OCDF	200	224		pg/g		112	63 - 141	10	20

Isotope Dilution	LCSD LCSD		Limits
	%Recovery	Qualifier	
13C-2,3,7,8-TCDD	81		40 - 135

TestAmerica Sacramento

QC Sample Results

Client: Ramboll US Corporation
 Project/Site: NERT Dioxin Soil Sampling

TestAmerica Job ID: 320-43477-1

Method: 8290 - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCSD 320-247944/3-A
 Matrix: Solid
 Analysis Batch: 248229

Client Sample ID: Lab Control Sample Dup
 Prep Type: Total/NA
 Prep Batch: 247944

Isotope Dilution	LCSD		Limits
	%Recovery	Qualifier	
13C-2,3,7,8-TCDF	76		40 - 135
13C-1,2,3,7,8-PeCDD	75		40 - 135
13C-1,2,3,7,8-PeCDF	75		40 - 135
13C-1,2,3,6,7,8-HxCDD	81		40 - 135
13C-1,2,3,4,7,8-HxCDF	80		40 - 135
13C-1,2,3,4,6,7,8-HpCDD	93		40 - 135
13C-1,2,3,4,6,7,8-HpCDF	85		40 - 135
13C-OCDD	83		40 - 135

Method: D 2216 - Percent Moisture

Lab Sample ID: 320-43477-1 DU
 Matrix: Solid
 Analysis Batch: 247911

Client Sample ID: DSPE-6-1.5-20180920
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU	DU	Unit	D	RPD	RPD
			Result	Qualifier				Limit
Percent Moisture	4.0		4.5		%		13	20

QC Association Summary

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Soil Sampling

TestAmerica Job ID: 320-43477-1

Specialty Organics

Prep Batch: 247944

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-43477-1	DSPE-6-1.5-20180920	Total/NA	Solid	8290	
320-43477-1 - RA	DSPE-6-1.5-20180920	Total/NA	Solid	8290	
320-43477-5	DSPE-7-1.5-20180920	Total/NA	Solid	8290	
MB 320-247944/1-A	Method Blank	Total/NA	Solid	8290	
LCS 320-247944/2-A	Lab Control Sample	Total/NA	Solid	8290	
LCSD 320-247944/3-A	Lab Control Sample Dup	Total/NA	Solid	8290	

Analysis Batch: 248229

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-43477-1	DSPE-6-1.5-20180920	Total/NA	Solid	8290	247944
320-43477-5	DSPE-7-1.5-20180920	Total/NA	Solid	8290	247944
MB 320-247944/1-A	Method Blank	Total/NA	Solid	8290	247944
LCSD 320-247944/3-A	Lab Control Sample Dup	Total/NA	Solid	8290	247944

Analysis Batch: 248311

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-43477-1 - RA	DSPE-6-1.5-20180920	Total/NA	Solid	8290	247944

Analysis Batch: 248396

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 320-247944/2-A	Lab Control Sample	Total/NA	Solid	8290	247944

General Chemistry

Analysis Batch: 247911

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-43477-1	DSPE-6-1.5-20180920	Total/NA	Solid	D 2216	
320-43477-5	DSPE-7-1.5-20180920	Total/NA	Solid	D 2216	
320-43477-1 DU	DSPE-6-1.5-20180920	Total/NA	Solid	D 2216	

Lab Chronicle

Client: Ramboll US Corporation
 Project/Site: NERT Dioxin Soil Sampling

TestAmerica Job ID: 320-43477-1

Client Sample ID: DSPE-6-1.5-20180920

Lab Sample ID: 320-43477-1

Date Collected: 09/20/18 07:54

Matrix: Solid

Date Received: 09/21/18 09:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			247911	09/26/18 13:31	DPM	TAL SAC

Client Sample ID: DSPE-6-1.5-20180920

Lab Sample ID: 320-43477-1

Date Collected: 09/20/18 07:54

Matrix: Solid

Date Received: 09/21/18 09:20

Percent Solids: 96.0

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			1.04 g	20 uL	247944	09/26/18 13:49	SR1	TAL SAC
Total/NA	Analysis	8290		1			248229	09/27/18 17:42	ALM	TAL SAC
Total/NA	Prep	8290	RA		1.04 g	20 uL	247944	09/26/18 13:49	SR1	TAL SAC
Total/NA	Analysis	8290	RA	1			248311	09/27/18 19:39	ALM	TAL SAC

Client Sample ID: DSPE-7-1.5-20180920

Lab Sample ID: 320-43477-5

Date Collected: 09/20/18 08:46

Matrix: Solid

Date Received: 09/21/18 09:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			247911	09/26/18 13:31	DPM	TAL SAC

Client Sample ID: DSPE-7-1.5-20180920

Lab Sample ID: 320-43477-5

Date Collected: 09/20/18 08:46

Matrix: Solid

Date Received: 09/21/18 09:20

Percent Solids: 93.7

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			1.03 g	20 uL	247944	09/26/18 13:49	SR1	TAL SAC
Total/NA	Analysis	8290		1			248229	09/27/18 18:28	ALM	TAL SAC

Laboratory References:

TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Accreditation/Certification Summary

Client: Ramboll US Corporation
 Project/Site: NERT Dioxin Soil Sampling

TestAmerica Job ID: 320-43477-1

Laboratory: TestAmerica Sacramento

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska (UST)	State Program	10	17-020	01-20-21
ANAB	DoD ELAP		L2468	01-20-21
Arizona	State Program	9	AZ0708	08-11-19
Arkansas DEQ	State Program	6	88-0691	06-17-19
California	State Program	9	2897	01-31-19
Colorado	State Program	8	CA00044	08-31-19
Connecticut	State Program	1	PH-0691	06-30-19
Florida	NELAP	4	E87570	06-30-19
Georgia	State Program	4	N/A	01-28-19
Hawaii	State Program	9	N/A	01-29-19
Illinois	NELAP	5	200060	03-17-19
Kansas	NELAP	7	E-10375	10-31-18
Louisiana	NELAP	6	30612	06-30-19
Maine	State Program	1	CA0004	04-14-20
Michigan	State Program	5	9947	01-31-20
Nevada	State Program	9	CA00044	07-31-19
New Hampshire	NELAP	1	2997	04-18-19
New Jersey	NELAP	2	CA005	06-30-19
New York	NELAP	2	11666	03-31-19
Oregon	NELAP	10	4040	01-29-19
Pennsylvania	NELAP	3	68-01272	03-31-19
Texas	NELAP	6	T104704399	05-31-19
US Fish & Wildlife	Federal		LE148388-0	07-31-19
USDA	Federal		P330-18-00239	01-17-21
USEPA UCMR	Federal	1	CA00044	11-06-18
Utah	NELAP	8	CA00044	02-28-19
Vermont	State Program	1	VT-4040	04-30-19
Virginia	NELAP	3	460278	03-14-19
Washington	State Program	10	C581	05-05-19
West Virginia (DW)	State Program	3	9930C	12-31-18
Wyoming	State Program	8	8TMS-L	01-28-19

Laboratory: TestAmerica Irvine

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska	State Program	10	CA01531	06-30-19
Arizona	State Program	9	AZ0671	10-14-18 *
California	LA Cty Sanitation Districts	9	10256	06-30-19
California	State Program	9	CA ELAP 2706	06-30-19
Guam	State Program	9	Cert. No. 17-003R	01-23-19
Hawaii	State Program	9	N/A	01-29-19
Kansas	NELAP	7	E-10420	07-31-19
Nevada	State Program	9	CA015312018-1	07-31-19
New Mexico	State Program	6	N/A	01-29-19
Oregon	NELAP	10	4028	01-29-19
US Fish & Wildlife	Federal		058448	07-31-19
USDA	Federal		P330-15-00184	07-09-21
Washington	State Program	10	C900	09-03-18 *

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

TestAmerica Sacramento

Method Summary

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Soil Sampling

TestAmerica Job ID: 320-43477-1

Method	Method Description	Protocol	Laboratory
8290	Dioxins and Furans (HRGC/HRMS)	SW846	TAL SAC
TEQ	Total TEQ Calculation	TAL SOP	TAL SAC
D 2216	Percent Moisture	ASTM	TAL SAC
8290	Soxhlet Extraction of Dioxins and Furans	SW846	TAL SAC

Protocol References:

ASTM = ASTM International

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600



Sample Summary

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Soil Sampling

TestAmerica Job ID: 320-43477-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
320-43477-1	DSPE-6-1.5-20180920	Solid	09/20/18 07:54	09/21/18 09:20
320-43477-5	DSPE-7-1.5-20180920	Solid	09/20/18 08:46	09/21/18 09:20

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TestAmerica Irvine
17461 Meridian Ave
Suite 100
Irvine, CA 92614
Phone: 949.261.1022 Fax:

Regulatory Program: DW NPDES RCRA Other:

Client Contact
Company Name: Ramboll
Address: 2900 Powell St, Suite 700
City/State/Zip: Emeryville, CA, 94608
Phone: 510-655-7400
Fax:
Project Name: NERT - Diesel Soil Sampling
Site: NERT
PO # 1090006941 - 012

Project Manager: Dan Clark
Tel/Fax: 510-249-7036
Analysis Turnaround Time
 CALENDAR DAYS WORKING DAYS
TAT If different from Below
 2 weeks
 1 week
 2 days
 1 day

Site Contact: Brendon Keegan Date: 09/20/2018
Lab Contact: Patty Mata Carrier:
Sampler: Brendon Keegan
For Lab Use Only:
Walk-in Client:
Lab Sampling:
Job / SDG No.:

COC No: 4 of 2 COCs

Sample Identification	Sample Date	Sample Time	Sample Type (C-Comp, G-Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	Sample Specific Notes:
DSPE-6-1.5-20180920	9/20	0754	G	SO	2	X	X	
DSPE-6-2.0-20180920	"	0757	"	"	"	X	X	
DSPE-6-3.0-20180920	"	0809	"	"	"	X	X	
DSPE-6-4.0-20180920	"	0819	"	"	"	X	X	
DSPE-7-1.5-20180920	"	0846	"	"	"	X	X	
DSPE-7-2.0-20180920	"	0852	"	"	"	X	X	
DSPE-7-3.0-20180920	"	0907	"	"	"	X	X	
DSPE-7-4.0-20180920	"	0913	"	"	"	X	X	

Barcode: 320-43477 Chain of Custody

Preservation Used: 1= Ice, 2= HCl, 3= H2SO4, 4= HNO3, 5= NaOH, 6= Other

Possible Hazard Identification: Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.
 Non-Hazard Flammable Skin Irritant Poison B Unknown

Special Instructions/QC Requirements & Comments: Don't Hold DSPE-7-1.5-20180920

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return to Client Disposal by Lab Archive for _____ Months

Custody Seal No.:
Relinquished by: B.K.F. Date/Time: 9/20/18 1045
Relinquished by: DMM Date/Time: 9-20-18 1400
Relinquished by: TALVS H.9 Date/Time: 9/21/18 920

Company: Ramboll
Company: TALVS
Company: TALVS
Company: TALVS

Received by: DMM
Received by: F.S.X.
Received in Laboratory by: [Signature]

Company: TALVS
Company: TALVS
Company: TALVS

Received by: [Signature]
Received by: [Signature]
Received in Laboratory by: [Signature]

Company: TALVS
Company: TALVS
Company: TALVS

Date/Time: 9-20-18 1045
Date/Time: 9-20-18 1400
Date/Time: 9/21/18 920



Login Sample Receipt Checklist

Client: Ramboll US Corporation

Job Number: 320-43477-1

Login Number: 43477

List Source: TestAmerica Sacramento

List Number: 1

Creator: Turpen, Troy

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	258962
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

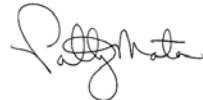
ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Sacramento
880 Riverside Parkway
West Sacramento, CA 95605
Tel: (916)373-5600

TestAmerica Job ID: 320-43477-2
Client Project/Site: NERT Dioxin Soil Sampling

For:
Ramboll US Corporation
2200 Powell Street
Suite 700
Emeryville, California 94608

Attn: Craig Knox



Authorized for release by:
10/2/2018 10:22:43 AM

Patty Mata, Senior Project Manager
(949)261-1022
patty.mata@testamericainc.com

LINKS

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results through
TotalAccess

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www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Definitions/Glossary

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Soil Sampling

TestAmerica Job ID: 320-43477-2

Qualifiers

Dioxin

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
q	The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio. The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Case Narrative

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Soil Sampling

TestAmerica Job ID: 320-43477-2

Job ID: 320-43477-2

Laboratory: TestAmerica Sacramento

Narrative

Job Narrative 320-43477-2

Comments

The following sample was removed from hold and requested for analysis per client's 9/27/18 email request: DSPE-7-3.0-20180920 (320-43477-7).

Receipt

The samples were received on 9/21/2018 9:20 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.3° C.

Dioxin

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Dioxin Prep

Method(s) 8290: Due to the matrix, the initial volume used for the following sample deviated from the standard procedure: DSPE-7-3.0-20180920 (320-43477-7). The reporting limits (RLs) have been adjusted proportionately. Sample associated with preparation batch 320-248208.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: Ramboll US Corporation
 Project/Site: NERT Dioxin Soil Sampling

TestAmerica Job ID: 320-43477-2

Client Sample ID: DSPE-7-3.0-20180920

Lab Sample ID: 320-43477-7

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	2.8	J	10	0.22	pg/g	1	☼	8290	Total/NA
2,3,7,8-TCDF	2.2	J B	10	0.30	pg/g	1	☼	8290	Total/NA
1,2,3,7,8,9-HxCDF	8.7	J q B	51	1.6	pg/g	1	☼	8290	Total/NA
1,2,3,4,6,7,8-HpCDD	4.6	J B	51	0.34	pg/g	1	☼	8290	Total/NA
1,2,3,4,6,7,8-HpCDF	8.7	J B	51	0.71	pg/g	1	☼	8290	Total/NA
1,2,3,4,7,8,9-HpCDF	11	J B	51	0.85	pg/g	1	☼	8290	Total/NA
OCDD	110	B	100	0.44	pg/g	1	☼	8290	Total/NA
OCDF	33	J B	100	0.47	pg/g	1	☼	8290	Total/NA
Total TCDD	2.8	J	10	0.22	pg/g	1	☼	8290	Total/NA
Total TCDF	5.4	J q B	10	0.30	pg/g	1	☼	8290	Total/NA
Total HxCDD	1.7	J q B	51	1.1	pg/g	1	☼	8290	Total/NA
Total HxCDF	8.7	J q B	51	1.6	pg/g	1	☼	8290	Total/NA
Total HpCDD	8.3	J B	51	0.34	pg/g	1	☼	8290	Total/NA
Total HpCDF	31	J q B	51	0.78	pg/g	1	☼	8290	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Sacramento



Client Sample Results

Client: Ramboll US Corporation
 Project/Site: NERT Dioxin Soil Sampling

TestAmerica Job ID: 320-43477-2

Client Sample ID: DSPE-7-3.0-20180920

Lab Sample ID: 320-43477-7

Date Collected: 09/20/18 09:07

Matrix: Solid

Date Received: 09/21/18 09:20

Percent Solids: 93.3

Method: 8290 - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	2.8	J	10	0.22	pg/g	☼	09/27/18 14:30	09/28/18 19:01	1
2,3,7,8-TCDF	2.2	J B	10	0.30	pg/g	☼	09/27/18 14:30	09/28/18 19:01	1
1,2,3,7,8-PeCDD	ND		51	0.49	pg/g	☼	09/27/18 14:30	09/28/18 19:01	1
1,2,3,7,8-PeCDF	ND		51	1.5	pg/g	☼	09/27/18 14:30	09/28/18 19:01	1
2,3,4,7,8-PeCDF	ND		51	1.5	pg/g	☼	09/27/18 14:30	09/28/18 19:01	1
1,2,3,4,7,8-HxCDD	ND		51	1.5	pg/g	☼	09/27/18 14:30	09/28/18 19:01	1
1,2,3,6,7,8-HxCDD	ND		51	1.3	pg/g	☼	09/27/18 14:30	09/28/18 19:01	1
1,2,3,7,8,9-HxCDD	ND		51	0.38	pg/g	☼	09/27/18 14:30	09/28/18 19:01	1
1,2,3,4,7,8-HxCDF	ND		51	1.6	pg/g	☼	09/27/18 14:30	09/28/18 19:01	1
1,2,3,6,7,8-HxCDF	ND		51	1.5	pg/g	☼	09/27/18 14:30	09/28/18 19:01	1
2,3,4,6,7,8-HxCDF	ND		51	1.5	pg/g	☼	09/27/18 14:30	09/28/18 19:01	1
1,2,3,7,8,9-HxCDF	8.7	J q B	51	1.6	pg/g	☼	09/27/18 14:30	09/28/18 19:01	1
1,2,3,4,6,7,8-HpCDD	4.6	J B	51	0.34	pg/g	☼	09/27/18 14:30	09/28/18 19:01	1
1,2,3,4,6,7,8-HpCDF	8.7	J B	51	0.71	pg/g	☼	09/27/18 14:30	09/28/18 19:01	1
1,2,3,4,7,8,9-HpCDF	11	J B	51	0.85	pg/g	☼	09/27/18 14:30	09/28/18 19:01	1
OCDD	110	B	100	0.44	pg/g	☼	09/27/18 14:30	09/28/18 19:01	1
OCDF	33	J B	100	0.47	pg/g	☼	09/27/18 14:30	09/28/18 19:01	1
Total TCDD	2.8	J	10	0.22	pg/g	☼	09/27/18 14:30	09/28/18 19:01	1
Total TCDF	5.4	J q B	10	0.30	pg/g	☼	09/27/18 14:30	09/28/18 19:01	1
Total PeCDD	ND		51	0.49	pg/g	☼	09/27/18 14:30	09/28/18 19:01	1
Total PeCDF	ND		51	1.5	pg/g	☼	09/27/18 14:30	09/28/18 19:01	1
Total HxCDD	1.7	J q B	51	1.1	pg/g	☼	09/27/18 14:30	09/28/18 19:01	1
Total HxCDF	8.7	J q B	51	1.6	pg/g	☼	09/27/18 14:30	09/28/18 19:01	1
Total HpCDD	8.3	J B	51	0.34	pg/g	☼	09/27/18 14:30	09/28/18 19:01	1
Total HpCDF	31	J q B	51	0.78	pg/g	☼	09/27/18 14:30	09/28/18 19:01	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	67		40 - 135	09/27/18 14:30	09/28/18 19:01	1
13C-2,3,7,8-TCDF	66		40 - 135	09/27/18 14:30	09/28/18 19:01	1
13C-1,2,3,7,8-PeCDD	46		40 - 135	09/27/18 14:30	09/28/18 19:01	1
13C-1,2,3,7,8-PeCDF	56		40 - 135	09/27/18 14:30	09/28/18 19:01	1
13C-1,2,3,6,7,8-HxCDD	64		40 - 135	09/27/18 14:30	09/28/18 19:01	1
13C-1,2,3,4,7,8-HxCDF	61		40 - 135	09/27/18 14:30	09/28/18 19:01	1
13C-1,2,3,4,6,7,8-HpCDD	80		40 - 135	09/27/18 14:30	09/28/18 19:01	1
13C-1,2,3,4,6,7,8-HpCDF	69		40 - 135	09/27/18 14:30	09/28/18 19:01	1
13C-OCDD	69		40 - 135	09/27/18 14:30	09/28/18 19:01	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	6.7		0.1	0.1	%	-		09/28/18 10:45	1

Toxicity Summary

Client: Ramboll US Corporation
 Project/Site: NERT Dioxin Soil Sampling

TestAmerica Job ID: 320-43477-2

Client Sample ID: DSPE-7-3.0-20180920

Lab Sample ID: 320-43477-7

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005		Method
						TEF	TEQ	
2,3,7,8-TCDD	2.8	J	10	0.22	pg/g	1	2.8	8290
2,3,7,8-TCDF	2.2	J B	10	0.30	pg/g	0.1	0.22	8290
1,2,3,7,8-PeCDD	ND		51	0.49	pg/g	1	0.25	8290
1,2,3,7,8-PeCDF	ND		51	1.5	pg/g	0.03	0.023	8290
2,3,4,7,8-PeCDF	ND		51	1.5	pg/g	0.3	0.23	8290
1,2,3,4,7,8-HxCDD	ND		51	1.5	pg/g	0.1	0.075	8290
1,2,3,6,7,8-HxCDD	ND		51	1.3	pg/g	0.1	0.065	8290
1,2,3,7,8,9-HxCDD	ND		51	0.38	pg/g	0.1	0.019	8290
1,2,3,4,7,8-HxCDF	ND		51	1.6	pg/g	0.1	0.080	8290
1,2,3,6,7,8-HxCDF	ND		51	1.5	pg/g	0.1	0.075	8290
2,3,4,6,7,8-HxCDF	ND		51	1.5	pg/g	0.1	0.075	8290
1,2,3,7,8,9-HxCDF	8.7	J q B	51	1.6	pg/g	0.1	0.87	8290
1,2,3,4,6,7,8-HpCDD	4.6	J B	51	0.34	pg/g	0.01	0.046	8290
1,2,3,4,6,7,8-HpCDF	8.7	J B	51	0.71	pg/g	0.01	0.087	8290
1,2,3,4,7,8,9-HpCDF	11	J B	51	0.85	pg/g	0.01	0.11	8290
OCDD	110	B	100	0.44	pg/g	0.0003	0.033	8290
OCDF	33	J B	100	0.47	pg/g	0.0003	0.0099	8290

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005		Method
						TEF	TEQ	
Total Dioxin/Furan TEQ					pg/g		5.1	TEQ

TEF Reference:

WHO 2005 = World Health Organization (WHO) 2005 TEF, Dioxins, Furans and PCB Congeners

Note: The analytes PCB-156 and PCB-157 coelute as a single peak.

TestAmerica Sacramento

Isotope Dilution Summary

Client: Ramboll US Corporation
 Project/Site: NERT Dioxin Soil Sampling

TestAmerica Job ID: 320-43477-2

Method: 8290 - Dioxins and Furans (HRGC/HRMS)

Matrix: Solid

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	TCDD (40-135)	TCDF (40-135)	PeCDD (40-135)	PeCDF (40-135)	HxDD (40-135)	HxCDF (40-135)	HpCDD (40-135)	HpCDF (40-135)
320-43477-7	DSPE-7-3.0-20180920	67	66	46	56	64	61	80	69
LCS 320-248208/2-A	Lab Control Sample	64	60	54	56	62	58	78	70
LCSD 320-248208/3-A	Lab Control Sample Dup	64	60	49	54	62	59	78	69
MB 320-248208/1-A	Method Blank	70	66	50	58	68	64	86	75

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	OCDD (40-135)
320-43477-7	DSPE-7-3.0-20180920	69
LCS 320-248208/2-A	Lab Control Sample	70
LCSD 320-248208/3-A	Lab Control Sample Dup	70
MB 320-248208/1-A	Method Blank	77

Surrogate Legend

- TCDD = 13C-2,3,7,8-TCDD
- TCDF = 13C-2,3,7,8-TCDF
- PeCDD = 13C-1,2,3,7,8-PeCDD
- PeCDF = 13C-1,2,3,7,8-PeCDF
- HxDD = 13C-1,2,3,6,7,8-HxCDD
- HxCDF = 13C-1,2,3,4,7,8-HxCDF
- HpCDD = 13C-1,2,3,4,6,7,8-HpCDD
- HpCDF = 13C-1,2,3,4,6,7,8-HpCDF
- OCDD = 13C-OCDD

QC Sample Results

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Soil Sampling

TestAmerica Job ID: 320-43477-2

Method: 8290 - Dioxins and Furans (HRGC/HRMS)

Lab Sample ID: MB 320-248208/1-A
Matrix: Solid
Analysis Batch: 248233

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 248208

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		1.0	0.016	pg/g		09/27/18 14:30	09/28/18 17:29	1
2,3,7,8-TCDF	0.0861	J	1.0	0.0073	pg/g		09/27/18 14:30	09/28/18 17:29	1
1,2,3,7,8-PeCDD	0.0399	J	5.0	0.017	pg/g		09/27/18 14:30	09/28/18 17:29	1
1,2,3,7,8-PeCDF	0.142	J	5.0	0.015	pg/g		09/27/18 14:30	09/28/18 17:29	1
2,3,4,7,8-PeCDF	ND		5.0	0.015	pg/g		09/27/18 14:30	09/28/18 17:29	1
1,2,3,4,7,8-HxCDD	0.135	J q	5.0	0.013	pg/g		09/27/18 14:30	09/28/18 17:29	1
1,2,3,6,7,8-HxCDD	0.0709	J q	5.0	0.012	pg/g		09/27/18 14:30	09/28/18 17:29	1
1,2,3,7,8,9-HxCDD	0.0634	J q	5.0	0.012	pg/g		09/27/18 14:30	09/28/18 17:29	1
1,2,3,4,7,8-HxCDF	0.0964	J q	5.0	0.018	pg/g		09/27/18 14:30	09/28/18 17:29	1
1,2,3,6,7,8-HxCDF	0.0764	J q	5.0	0.018	pg/g		09/27/18 14:30	09/28/18 17:29	1
2,3,4,6,7,8-HxCDF	0.0563	J q	5.0	0.018	pg/g		09/27/18 14:30	09/28/18 17:29	1
1,2,3,7,8,9-HxCDF	0.987	J	5.0	0.019	pg/g		09/27/18 14:30	09/28/18 17:29	1
1,2,3,4,6,7,8-HpCDD	0.512	J	5.0	0.017	pg/g		09/27/18 14:30	09/28/18 17:29	1
1,2,3,4,6,7,8-HpCDF	0.205	J	5.0	0.020	pg/g		09/27/18 14:30	09/28/18 17:29	1
1,2,3,4,7,8,9-HpCDF	0.616	J	5.0	0.024	pg/g		09/27/18 14:30	09/28/18 17:29	1
OCDD	11.4		10	0.027	pg/g		09/27/18 14:30	09/28/18 17:29	1
OCDF	0.990	J	10	0.019	pg/g		09/27/18 14:30	09/28/18 17:29	1
Total TCDD	ND		1.0	0.016	pg/g		09/27/18 14:30	09/28/18 17:29	1
Total TCDF	0.126	J q	1.0	0.0073	pg/g		09/27/18 14:30	09/28/18 17:29	1
Total PeCDD	0.0399	J	5.0	0.017	pg/g		09/27/18 14:30	09/28/18 17:29	1
Total PeCDF	0.220	J q	5.0	0.015	pg/g		09/27/18 14:30	09/28/18 17:29	1
Total HxCDD	0.297	J q	5.0	0.012	pg/g		09/27/18 14:30	09/28/18 17:29	1
Total HxCDF	1.40	J q	5.0	0.018	pg/g		09/27/18 14:30	09/28/18 17:29	1
Total HpCDD	0.806	J	5.0	0.017	pg/g		09/27/18 14:30	09/28/18 17:29	1
Total HpCDF	1.04	J	5.0	0.022	pg/g		09/27/18 14:30	09/28/18 17:29	1

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	70		40 - 135	09/27/18 14:30	09/28/18 17:29	1
13C-2,3,7,8-TCDF	66		40 - 135	09/27/18 14:30	09/28/18 17:29	1
13C-1,2,3,7,8-PeCDD	50		40 - 135	09/27/18 14:30	09/28/18 17:29	1
13C-1,2,3,7,8-PeCDF	58		40 - 135	09/27/18 14:30	09/28/18 17:29	1
13C-1,2,3,6,7,8-HxCDD	68		40 - 135	09/27/18 14:30	09/28/18 17:29	1
13C-1,2,3,4,7,8-HxCDF	64		40 - 135	09/27/18 14:30	09/28/18 17:29	1
13C-1,2,3,4,6,7,8-HpCDD	86		40 - 135	09/27/18 14:30	09/28/18 17:29	1
13C-1,2,3,4,6,7,8-HpCDF	75		40 - 135	09/27/18 14:30	09/28/18 17:29	1
13C-OCDD	77		40 - 135	09/27/18 14:30	09/28/18 17:29	1

Lab Sample ID: LCS 320-248208/2-A
Matrix: Solid
Analysis Batch: 248233

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 248208

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
2,3,7,8-TCDD	20.0	18.8		pg/g		94	60 - 138
2,3,7,8-TCDF	20.0	21.6		pg/g		108	56 - 158
1,2,3,7,8-PeCDD	100	106		pg/g		106	70 - 122
1,2,3,7,8-PeCDF	100	107		pg/g		107	69 - 134
2,3,4,7,8-PeCDF	100	102		pg/g		102	70 - 131
1,2,3,4,7,8-HxCDD	100	103		pg/g		103	60 - 138

TestAmerica Sacramento

QC Sample Results

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Soil Sampling

TestAmerica Job ID: 320-43477-2

Method: 8290 - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCS 320-248208/2-A
Matrix: Solid
Analysis Batch: 248233

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 248208

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
1,2,3,6,7,8-HxCDD	100	108		pg/g		108	68 - 136
1,2,3,7,8,9-HxCDD	100	113		pg/g		113	68 - 138
1,2,3,4,7,8-HxCDF	100	112		pg/g		112	74 - 128
1,2,3,6,7,8-HxCDF	100	120		pg/g		120	67 - 140
2,3,4,6,7,8-HxCDF	100	125		pg/g		125	71 - 137
1,2,3,7,8,9-HxCDF	100	133		pg/g		133	72 - 134
1,2,3,4,6,7,8-HpCDD	100	101		pg/g		101	71 - 128
1,2,3,4,6,7,8-HpCDF	100	107		pg/g		107	71 - 134
1,2,3,4,7,8,9-HpCDF	100	114		pg/g		114	68 - 129
OCDD	200	204		pg/g		102	70 - 128
OCDF	200	230		pg/g		115	63 - 141

Isotope Dilution	LCS LCS		Limits
	%Recovery	Qualifier	
13C-2,3,7,8-TCDD	64		40 - 135
13C-2,3,7,8-TCDF	60		40 - 135
13C-1,2,3,7,8-PeCDD	54		40 - 135
13C-1,2,3,7,8-PeCDF	56		40 - 135
13C-1,2,3,6,7,8-HxCDD	62		40 - 135
13C-1,2,3,4,7,8-HxCDF	58		40 - 135
13C-1,2,3,4,6,7,8-HpCDD	78		40 - 135
13C-1,2,3,4,6,7,8-HpCDF	70		40 - 135
13C-OCDD	70		40 - 135

Lab Sample ID: LCSD 320-248208/3-A
Matrix: Solid
Analysis Batch: 248233

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 248208

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
2,3,7,8-TCDD	20.0	18.6		pg/g		93	60 - 138	1	20
2,3,7,8-TCDF	20.0	21.8		pg/g		109	56 - 158	1	20
1,2,3,7,8-PeCDD	100	107		pg/g		107	70 - 122	1	20
1,2,3,7,8-PeCDF	100	110		pg/g		110	69 - 134	2	20
2,3,4,7,8-PeCDF	100	100		pg/g		100	70 - 131	1	20
1,2,3,4,7,8-HxCDD	100	105		pg/g		105	60 - 138	2	20
1,2,3,6,7,8-HxCDD	100	109		pg/g		109	68 - 136	1	20
1,2,3,7,8,9-HxCDD	100	114		pg/g		114	68 - 138	1	20
1,2,3,4,7,8-HxCDF	100	113		pg/g		113	74 - 128	1	20
1,2,3,6,7,8-HxCDF	100	118		pg/g		118	67 - 140	2	20
2,3,4,6,7,8-HxCDF	100	124		pg/g		124	71 - 137	1	20
1,2,3,7,8,9-HxCDF	100	127		pg/g		127	72 - 134	5	20
1,2,3,4,6,7,8-HpCDD	100	101		pg/g		101	71 - 128	0	20
1,2,3,4,6,7,8-HpCDF	100	108		pg/g		108	71 - 134	2	20
1,2,3,4,7,8,9-HpCDF	100	116		pg/g		116	68 - 129	2	20
OCDD	200	205		pg/g		103	70 - 128	1	20
OCDF	200	229		pg/g		115	63 - 141	0	20

Isotope Dilution	LCSD LCSD		Limits
	%Recovery	Qualifier	
13C-2,3,7,8-TCDD	64		40 - 135

TestAmerica Sacramento

QC Sample Results

Client: Ramboll US Corporation
 Project/Site: NERT Dioxin Soil Sampling

TestAmerica Job ID: 320-43477-2

Method: 8290 - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCSD 320-248208/3-A
 Matrix: Solid
 Analysis Batch: 248233

Client Sample ID: Lab Control Sample Dup
 Prep Type: Total/NA
 Prep Batch: 248208

<i>Isotope Dilution</i>	<i>LCSD %Recovery</i>	<i>LCSD Qualifier</i>	<i>Limits</i>
13C-2,3,7,8-TCDF	60		40 - 135
13C-1,2,3,7,8-PeCDD	49		40 - 135
13C-1,2,3,7,8-PeCDF	54		40 - 135
13C-1,2,3,6,7,8-HxCDD	62		40 - 135
13C-1,2,3,4,7,8-HxCDF	59		40 - 135
13C-1,2,3,4,6,7,8-HpCDD	78		40 - 135
13C-1,2,3,4,6,7,8-HpCDF	69		40 - 135
13C-OCDD	70		40 - 135

Method: D 2216 - Percent Moisture

Lab Sample ID: 320-43353-A-17 DU
 Matrix: Solid
 Analysis Batch: 248387

Client Sample ID: Duplicate
 Prep Type: Total/NA

<i>Analyte</i>	<i>Sample Result</i>	<i>Sample Qualifier</i>	<i>DU Result</i>	<i>DU Qualifier</i>	<i>Unit</i>	<i>D</i>	<i>RPD</i>	<i>RPD Limit</i>
Percent Moisture	7.6		7.9		%		3	20



QC Association Summary

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Soil Sampling

TestAmerica Job ID: 320-43477-2

Specialty Organics

Prep Batch: 248208

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-43477-7	DSPE-7-3.0-20180920	Total/NA	Solid	8290	
MB 320-248208/1-A	Method Blank	Total/NA	Solid	8290	
LCS 320-248208/2-A	Lab Control Sample	Total/NA	Solid	8290	
LCSD 320-248208/3-A	Lab Control Sample Dup	Total/NA	Solid	8290	

Analysis Batch: 248233

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-43477-7	DSPE-7-3.0-20180920	Total/NA	Solid	8290	248208
MB 320-248208/1-A	Method Blank	Total/NA	Solid	8290	248208
LCS 320-248208/2-A	Lab Control Sample	Total/NA	Solid	8290	248208
LCSD 320-248208/3-A	Lab Control Sample Dup	Total/NA	Solid	8290	248208

General Chemistry

Analysis Batch: 248387

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-43477-7	DSPE-7-3.0-20180920	Total/NA	Solid	D 2216	
320-43353-A-17 DU	Duplicate	Total/NA	Solid	D 2216	

Lab Chronicle

Client: Ramboll US Corporation
 Project/Site: NERT Dioxin Soil Sampling

TestAmerica Job ID: 320-43477-2

Client Sample ID: DSPE-7-3.0-20180920

Lab Sample ID: 320-43477-7

Date Collected: 09/20/18 09:07

Matrix: Solid

Date Received: 09/21/18 09:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			248387	09/28/18 10:45	DPM	TAL SAC

Client Sample ID: DSPE-7-3.0-20180920

Lab Sample ID: 320-43477-7

Date Collected: 09/20/18 09:07

Matrix: Solid

Date Received: 09/21/18 09:20

Percent Solids: 93.3

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			1.05 g	20 uL	248208	09/27/18 14:30	SR1	TAL SAC
Total/NA	Analysis	8290		1			248233	09/28/18 19:01	ALM	TAL SAC

Laboratory References:

TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600



Accreditation/Certification Summary

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Soil Sampling

TestAmerica Job ID: 320-43477-2

Laboratory: TestAmerica Sacramento

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska (UST)	State Program	10	17-020	01-20-21
ANAB	DoD ELAP		L2468	01-20-21
Arizona	State Program	9	AZ0708	08-11-19
Arkansas DEQ	State Program	6	88-0691	06-17-19
California	State Program	9	2897	01-31-19
Colorado	State Program	8	CA00044	08-31-19
Connecticut	State Program	1	PH-0691	06-30-19
Florida	NELAP	4	E87570	06-30-19
Georgia	State Program	4	N/A	01-28-19
Hawaii	State Program	9	N/A	01-29-19
Illinois	NELAP	5	200060	03-17-19
Kansas	NELAP	7	E-10375	10-31-18
Louisiana	NELAP	6	30612	06-30-19
Maine	State Program	1	CA0004	04-14-20
Michigan	State Program	5	9947	01-31-20
Nevada	State Program	9	CA00044	07-31-19
New Hampshire	NELAP	1	2997	04-18-19
New Jersey	NELAP	2	CA005	06-30-19
New York	NELAP	2	11666	03-31-19
Oregon	NELAP	10	4040	01-29-19
Pennsylvania	NELAP	3	68-01272	03-31-19
Texas	NELAP	6	T104704399	05-31-19
US Fish & Wildlife	Federal		LE148388-0	07-31-19
USDA	Federal		P330-18-00239	01-17-21
USEPA UCMR	Federal	1	CA00044	11-06-18
Utah	NELAP	8	CA00044	02-28-19
Vermont	State Program	1	VT-4040	04-30-19
Virginia	NELAP	3	460278	03-14-19
Washington	State Program	10	C581	05-05-19
West Virginia (DW)	State Program	3	9930C	12-31-18
Wyoming	State Program	8	8TMS-L	01-28-19

Laboratory: TestAmerica Irvine

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska	State Program	10	CA01531	06-30-19
Arizona	State Program	9	AZ0671	10-14-18 *
California	LA Cty Sanitation Districts	9	10256	06-30-19
California	State Program	9	CA ELAP 2706	06-30-19
Guam	State Program	9	Cert. No. 17-003R	01-23-19
Hawaii	State Program	9	N/A	01-29-19
Kansas	NELAP	7	E-10420	07-31-19
Nevada	State Program	9	CA015312018-1	07-31-19
New Mexico	State Program	6	N/A	01-29-19
Oregon	NELAP	10	4028	01-29-19
US Fish & Wildlife	Federal		058448	07-31-19
USDA	Federal		P330-15-00184	07-09-21
Washington	State Program	10	C900	09-03-18 *

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

TestAmerica Sacramento

Method Summary

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Soil Sampling

TestAmerica Job ID: 320-43477-2

Method	Method Description	Protocol	Laboratory
8290	Dioxins and Furans (HRGC/HRMS)	SW846	TAL SAC
TEQ	Total TEQ Calculation	TAL SOP	TAL SAC
D 2216	Percent Moisture	ASTM	TAL SAC
8290	Soxhlet Extraction of Dioxins and Furans	SW846	TAL SAC

Protocol References:

ASTM = ASTM International

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600



Sample Summary

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Soil Sampling


TestAmerica Job ID: 320-43477-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
320-43477-7	DSPE-7-3.0-20180920	Solid	09/20/18 09:07	09/21/18 09:20

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16

TestAmerica Irvine
17461 Merian Ave
Suite 100
Irvine, CA 92614
Phone: 949.261.1022 Fax:

Regulatory Program: DW NPDES RCRA Other:

Client Contact		Project Manager: <i>Pho Clark</i>		Site Contact: <i>Brendan Keegan</i>		COC No: <i>4</i> of <i>2</i> COCs	
Company Name: <i>Ramboll</i>		Tel/Fax: <i>510-249-7036</i>		Lab Contact: <i>Patty Mata</i>		Carrier: <i>09/20/2018</i>	
Address: <i>2300 Powell St Suite 700</i>		Analysis Turnaround Time		Sampler: <i>Brendan Keegan</i>		For Lab Use Only:	
City/State/Zip: <i>Emeryville CA, 94608</i>		<input checked="" type="checkbox"/> CALENDAR DAYS <input type="checkbox"/> WORKING DAYS		Walk-in Client:		Lab Sampling:	
Phone: <i>510-6551-7400</i>		TAT If different from Below <i>5 days</i>		Job / SDG No.:		Sample Specific Notes:	
Fax:		2 weeks					
Project Name: <i>NERT - Diesel Soil Sampling</i>		1 week					
Site: <i>NERT</i>		2 days					
PO # <i>1090006941 - 012</i>		1 day					
Sample Identification	Sample Date	Sample Time	Sample Type (C-Comp, G-Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)
<i>DSPE-6-1.5-20180920</i>	<i>9/20</i>	<i>0754</i>	<i>G</i>	<i>SO</i>	<i>2</i>	<i>X</i>	<i>X</i>
<i>DSPE-6-2.0-20180920</i>	<i>"</i>	<i>0757</i>	<i>"</i>	<i>"</i>	<i>"</i>	<i>X</i>	<i>X</i>
<i>DSPE-6-3.0-20180920</i>	<i>"</i>	<i>0809</i>	<i>"</i>	<i>"</i>	<i>"</i>	<i>X</i>	<i>X</i>
<i>DSPE-6-4.0-20180920</i>	<i>"</i>	<i>0819</i>	<i>"</i>	<i>"</i>	<i>"</i>	<i>X</i>	<i>X</i>
<i>DSPE-7-1.5-20180920</i>	<i>"</i>	<i>0846</i>	<i>"</i>	<i>"</i>	<i>"</i>	<i>X</i>	<i>X</i>
<i>DSPE-7-2.0-20180920</i>	<i>"</i>	<i>0852</i>	<i>"</i>	<i>"</i>	<i>"</i>	<i>X</i>	<i>X</i>
<i>DSPE-7-3.0-20180920</i>	<i>"</i>	<i>0907</i>	<i>"</i>	<i>"</i>	<i>"</i>	<i>X</i>	<i>X</i>
<i>DSPE-7-4.0-20180920</i>	<i>"</i>	<i>0913</i>	<i>"</i>	<i>"</i>	<i>"</i>	<i>X</i>	<i>X</i>
 320-43477 Chain of Custody							
Preservation Used: 1= Ice, 2= HCl, 3= H2SO4, 4= HNO3, 5= NaOH, 6= Other Possible Hazard Identification: Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample. <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown							
Special Instructions/QC Requirements & Comments: <i>Don't Hold DSPE-7-1.5-20180920</i>							
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Cooler Temp. (°C): Obs'd: _____		Therm ID No.: _____		Date/Time: <i>9-20-18 1045</i>	
Relinquished by: <i>B.K.F.</i>		Company: <i>Ramboll</i>		Received by: <i>DAM</i>		Company: <i>THLVS</i>	
Relinquished by: <i>DAM</i>		Company: <i>THLVS</i>		Received by: <i>Felix</i>		Company: <i>THLVS</i>	
Relinquished by: <i>THLVS H.9</i>		Company: <i>THLVS</i>		Received in Laboratory by: <i>Pho Clark</i>		Company: <i>THLVS</i>	



Mata, Patty

From: Dan Clark <dclark@ramboll.com>
Sent: Thursday, September 27, 2018 10:07 AM
To: Mata, Patty
Subject: RE: Signed work order for NERT Henderson bottle order and courier information

-External Email-

OK, thank you.

Please release the following samples for dioxin analysis on a 1-week rush TAT:

- DSPE-3-2.0-20180919 (this is on the first set of samples)
- DSPE-7-3.0-20180920 (this is on the second set of samples)

Please let me know if there are any questions.

Thanks,
Dan

Dan Clark
Senior Consultant 2

D +1 (510) 4202563
M +1 (510) 2997036
dclark@ramboll.com

From: Mata, Patty <Patty.Mata@testamericainc.com>
Sent: Thursday, September 27, 2018 9:58 AM
To: Dan Clark <dclark@ramboll.com>
Subject: RE: Signed work order for NERT Henderson bottle order and courier information

Dan,

The next set of 2 samples are due tomorrow (received on 9/21/18 at the lab) and they are still being analyzed. They should be done tomorrow, but I'm not expecting results today.

Regards,
PATTY MATA
Project Manager

Test America
THE LEADER IN ENVIRONMENTAL TESTING

17461 Derian Ave, Suite #100
Irvine, CA 92614
TEL 949-261-1022 | FAX 949-260-3297
DIRECT 949-260-3213

www.testamericainc.com

Login Sample Receipt Checklist

Client: Ramboll US Corporation

Job Number: 320-43477-2

Login Number: 43477

List Source: TestAmerica Sacramento

List Number: 1

Creator: Turpen, Troy

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	258962
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



**ATTACHMENT B
LABORATORY ANALYTICAL REPORTS FOR DISPOSAL CHARACTERIZATION**

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Irvine

17461 Derian Ave

Suite 100

Irvine, CA 92614-5817

Tel: (949)261-1022

TestAmerica Job ID: 440-220519-1

Client Project/Site: NERT Dioxin Sampling

For:

Ramboll US Corporation

2200 Powell Street

Suite 700

Emeryville, California 94608

Attn: Mr. Dan Clark



Authorized for release by:

10/3/2018 3:32:43 PM

Patty Mata, Senior Project Manager

(949)261-1022

patty.mata@testamericainc.com

LINKS

Review your project
results through

TotalAccess

Have a Question?



Visit us at:

www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Sample Summary

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 440-220519-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
440-220519-1	DSPE-4-0.0-20180919	Solid	09/19/18 14:15	09/20/18 09:45
440-220519-2	DSPE-4-1.0-20190919	Solid	09/19/18 14:30	09/20/18 09:45
440-220519-3	DSPE-5-0.0-20180919	Solid	09/19/18 15:15	09/20/18 09:45
440-220519-4	DSPE-5-1.0-20180919	Solid	09/19/18 15:23	09/20/18 09:45

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Case Narrative

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 440-220519-1

Job ID: 440-220519-1

Laboratory: TestAmerica Irvine

Narrative

Job Narrative 440-220519-1

Comments

No additional comments.

Receipt

The samples were received on 9/20/2018 9:45 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 4.9° C.

GC/MS VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

GC/MS Semi VOA

Method(s) 8270C: The percent recovery of Benzidine in the laboratory control sample (LCS) for preparation batch 440-500904 and analytical batch 440-500988 was below the acceptance limits. Per the EPA method, this compound is subject to oxidative loss during sample preparation and as a consequence yields erratic recoveries.

Method(s) 8270C: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 440-500904 and analytical batch 440-500988 were outside control limits. Sample matrix interference is suspected.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC VOA

Method(s) 8260B: Please note that Methylene chloride and Acetone are common laboratory solvents and low level detections of these compounds in samples may be due to laboratory exposure.

No additional analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

GC Semi VOA

Method(s) 8015B: Hydrocarbon results were partly due to individual peaks in quantitation range for the following samples: DSPE-4-0.0-20180919 (440-220519-1) and DSPE-4-1.0-20190919 (440-220519-2). The sample chromatograms did not display the standard DRO or ORO patterns.

Method(s) 8081A: The continuing calibration verification (CCV) associated with batch 440-501443 recovered above the upper control limit for Methoxychlor. The samples associated with this CCV were non-detects for the affected analyte; therefore, the data have been reported.

Method(s) 8081A: Surrogate recoveries for the following samples were outside control limits: DSPE-4-0.0-20180919 (440-220519-1), DSPE-4-1.0-20190919 (440-220519-2) and DSPE-5-0.0-20180919 (440-220519-3). Evidence of matrix interference is present; therefore, re-extraction and re-analysis was not performed.

Method(s) 8081A: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for selected analytes in preparation batch 440-501153 and analytical batch 440-501443 were outside control limits. Sample matrix interference is suspected because the associated laboratory control sample (LCS) recoveries were within acceptance limits.

Method(s) 8081A: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for selected analytes in preparation batch 440-502340 and analytical batch 440-502496 were outside control limits. Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals

Method(s) 7470A: The calibration plot for data package for analytical batch 440-500999 can not be provided due to instrument software limitations. The calibration plot must be printed out immediately after the calibration has been analyzed; it cannot be regenerated once a second calibration is analyzed. However, the concentration and instrument responses for the ICAL points are listed in the raw data

Case Narrative

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 440-220519-1

Job ID: 440-220519-1 (Continued)

Laboratory: TestAmerica Irvine (Continued)

provided and results reported are based on these data. The following sample is associated: DSPE-4-0.0-20180919 (440-220519-1).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

VOA Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

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Client Sample Results

Client: Ramboll US Corporation
 Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 440-220519-1

Client Sample ID: DSPE-4-0.0-20180919

Lab Sample ID: 440-220519-1

Date Collected: 09/19/18 14:15

Matrix: Solid

Date Received: 09/20/18 09:45

Percent Solids: 98.7

Method: 8260B/5030B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	0.017	J	0.020	0.0081	mg/Kg	☼		09/26/18 14:47	1
Benzene	ND		0.0010	0.00050	mg/Kg	☼		09/26/18 14:47	1
Bromobenzene	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 14:47	1
Bromochloromethane	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 14:47	1
Bromodichloromethane	ND		0.0010	0.00050	mg/Kg	☼		09/26/18 14:47	1
Bromoform	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 14:47	1
Bromomethane	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 14:47	1
2-Butanone (MEK)	ND		0.010	0.0050	mg/Kg	☼		09/26/18 14:47	1
Carbon tetrachloride	ND		0.0020	0.00050	mg/Kg	☼		09/26/18 14:47	1
Chlorobenzene	ND		0.0010	0.00050	mg/Kg	☼		09/26/18 14:47	1
Chloroethane	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 14:47	1
Chloroform	ND		0.0010	0.00050	mg/Kg	☼		09/26/18 14:47	1
Chloromethane	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 14:47	1
2-Chlorotoluene	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 14:47	1
4-Chlorotoluene	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 14:47	1
cis-1,2-Dichloroethene	ND		0.0010	0.00050	mg/Kg	☼		09/26/18 14:47	1
cis-1,3-Dichloropropene	ND		0.0010	0.00050	mg/Kg	☼		09/26/18 14:47	1
Dibromochloromethane	ND		0.0010	0.00050	mg/Kg	☼		09/26/18 14:47	1
1,2-Dibromo-3-Chloropropane	ND		0.0050	0.0020	mg/Kg	☼		09/26/18 14:47	1
1,2-Dibromoethane (EDB)	ND		0.0010	0.00050	mg/Kg	☼		09/26/18 14:47	1
Dibromomethane	ND		0.0010	0.00050	mg/Kg	☼		09/26/18 14:47	1
1,2-Dichlorobenzene	ND		0.0010	0.00050	mg/Kg	☼		09/26/18 14:47	1
1,3-Dichlorobenzene	ND		0.0010	0.00050	mg/Kg	☼		09/26/18 14:47	1
1,4-Dichlorobenzene	ND		0.0010	0.00050	mg/Kg	☼		09/26/18 14:47	1
Dichlorodifluoromethane	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 14:47	1
1,1-Dichloroethane	ND		0.0010	0.00050	mg/Kg	☼		09/26/18 14:47	1
1,2-Dichloroethane	ND		0.0010	0.00050	mg/Kg	☼		09/26/18 14:47	1
1,1-Dichloroethene	ND		0.0020	0.00050	mg/Kg	☼		09/26/18 14:47	1
1,2-Dichloropropane	ND		0.0010	0.00050	mg/Kg	☼		09/26/18 14:47	1
1,3-Dichloropropane	ND		0.0010	0.00050	mg/Kg	☼		09/26/18 14:47	1
2,2-Dichloropropane	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 14:47	1
1,1-Dichloropropene	ND		0.0010	0.00050	mg/Kg	☼		09/26/18 14:47	1
Ethylbenzene	ND		0.0010	0.00050	mg/Kg	☼		09/26/18 14:47	1
Ethyl-t-butyl ether (ETBE)	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 14:47	1
Hexachlorobutadiene	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 14:47	1
2-Hexanone	ND		0.010	0.0050	mg/Kg	☼		09/26/18 14:47	1
Isopropylbenzene	ND		0.0010	0.00050	mg/Kg	☼		09/26/18 14:47	1
Isopropyl Ether (DIPE)	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 14:47	1
4-Methyl-2-pentanone (MIBK)	ND		0.0050	0.0025	mg/Kg	☼		09/26/18 14:47	1
Methyl-t-Butyl Ether (MTBE)	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 14:47	1
m,p-Xylene	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 14:47	1
Naphthalene	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 14:47	1
n-Butylbenzene	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 14:47	1
N-Propylbenzene	ND		0.0010	0.00050	mg/Kg	☼		09/26/18 14:47	1
o-Xylene	ND		0.0010	0.00050	mg/Kg	☼		09/26/18 14:47	1
p-Isopropyltoluene	ND		0.0010	0.00050	mg/Kg	☼		09/26/18 14:47	1
sec-Butylbenzene	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 14:47	1
Styrene	ND		0.0010	0.00050	mg/Kg	☼		09/26/18 14:47	1
Tert-amyl-methyl ether (TAME)	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 14:47	1

TestAmerica Irvine

Client Sample Results

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 440-220519-1

Client Sample ID: DSPE-4-0.0-20180919

Lab Sample ID: 440-220519-1

Date Collected: 09/19/18 14:15

Matrix: Solid

Date Received: 09/20/18 09:45

Percent Solids: 98.7

Method: 8260B/5030B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
tert-Butyl alcohol (TBA)	ND		0.050	0.010	mg/Kg	☼		09/26/18 14:47	1
tert-Butylbenzene	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 14:47	1
1,1,1,2-Tetrachloroethane	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 14:47	1
1,1,2,2-Tetrachloroethane	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 14:47	1
Tetrachloroethene	ND		0.0010	0.00050	mg/Kg	☼		09/26/18 14:47	1
Toluene	ND		0.0010	0.00050	mg/Kg	☼		09/26/18 14:47	1
trans-1,2-Dichloroethene	ND		0.0010	0.00050	mg/Kg	☼		09/26/18 14:47	1
trans-1,3-Dichloropropene	ND		0.0010	0.00050	mg/Kg	☼		09/26/18 14:47	1
1,2,3-Trichlorobenzene	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 14:47	1
1,2,4-Trichlorobenzene	ND		0.0050	0.0010	mg/Kg	☼		09/26/18 14:47	1
1,1,1-Trichloroethane	ND		0.0010	0.00050	mg/Kg	☼		09/26/18 14:47	1
1,1,2-Trichloroethane	ND		0.0010	0.00050	mg/Kg	☼		09/26/18 14:47	1
Trichloroethene	ND		0.0010	0.00050	mg/Kg	☼		09/26/18 14:47	1
Trichlorofluoromethane	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 14:47	1
1,2,3-Trichloropropane	ND		0.010	0.0010	mg/Kg	☼		09/26/18 14:47	1
1,2,4-Trimethylbenzene	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 14:47	1
1,3,5-Trimethylbenzene	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 14:47	1
Vinyl chloride	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 14:47	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	93		79 - 120		09/26/18 14:47	1
Dibromofluoromethane (Surr)	98		60 - 120		09/26/18 14:47	1
Toluene-d8 (Surr)	95		79 - 123		09/26/18 14:47	1

Method: 8260B/5030B - Volatile Organic Compounds (GC/MS) - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methylene Chloride	0.011		0.010	0.0050	mg/Kg	☼		09/27/18 17:25	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	92		79 - 120		09/27/18 17:25	1
Dibromofluoromethane (Surr)	102		60 - 120		09/27/18 17:25	1
Toluene-d8 (Surr)	91		79 - 123		09/27/18 17:25	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.35	0.18	mg/Kg	☼	09/25/18 07:04	09/25/18 15:37	1
Acenaphthylene	ND		0.33	0.071	mg/Kg	☼	09/25/18 07:04	09/25/18 15:37	1
Aniline	ND		1.0	0.14	mg/Kg	☼	09/25/18 07:04	09/25/18 15:37	1
Anthracene	ND		0.33	0.081	mg/Kg	☼	09/25/18 07:04	09/25/18 15:37	1
Benzidine	ND	F1 *	2.1	0.17	mg/Kg	☼	09/25/18 07:04	09/25/18 15:37	1
Benzo[a]anthracene	ND		0.33	0.071	mg/Kg	☼	09/25/18 07:04	09/25/18 15:37	1
Benzo[a]pyrene	ND		0.33	0.068	mg/Kg	☼	09/25/18 07:04	09/25/18 15:37	1
Benzo[b]fluoranthene	ND		0.33	0.071	mg/Kg	☼	09/25/18 07:04	09/25/18 15:37	1
Benzo[g,h,i]perylene	ND		0.33	0.11	mg/Kg	☼	09/25/18 07:04	09/25/18 15:37	1
Benzoic acid	ND	F1	0.96	0.48	mg/Kg	☼	09/25/18 07:04	09/25/18 15:37	1
Benzo[k]fluoranthene	ND		0.33	0.071	mg/Kg	☼	09/25/18 07:04	09/25/18 15:37	1
Benzyl alcohol	ND		3.4	0.42	mg/Kg	☼	09/25/18 07:04	09/25/18 15:37	1
Bis(2-chloroethoxy)methane	ND		0.33	0.13	mg/Kg	☼	09/25/18 07:04	09/25/18 15:37	1
Bis(2-chloroethyl)ether	ND		0.33	0.071	mg/Kg	☼	09/25/18 07:04	09/25/18 15:37	1
Bis(2-ethylhexyl) phthalate	ND		0.33	0.091	mg/Kg	☼	09/25/18 07:04	09/25/18 15:37	1

TestAmerica Irvine

Client Sample Results

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 440-220519-1

Client Sample ID: DSPE-4-0.0-20180919

Lab Sample ID: 440-220519-1

Date Collected: 09/19/18 14:15

Matrix: Solid

Date Received: 09/20/18 09:45

Percent Solids: 98.7

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Bromophenyl phenyl ether	ND		0.33	0.076	mg/Kg	☼	09/25/18 07:04	09/25/18 15:37	1
Butyl benzyl phthalate	ND		0.33	0.081	mg/Kg	☼	09/25/18 07:04	09/25/18 15:37	1
4-Chloroaniline	ND		1.0	0.15	mg/Kg	☼	09/25/18 07:04	09/25/18 15:37	1
4-Chloro-3-methylphenol	ND		0.40	0.20	mg/Kg	☼	09/25/18 07:04	09/25/18 15:37	1
2-Chloronaphthalene	ND		0.33	0.068	mg/Kg	☼	09/25/18 07:04	09/25/18 15:37	1
2-Chlorophenol	ND		0.33	0.071	mg/Kg	☼	09/25/18 07:04	09/25/18 15:37	1
4-Chlorophenyl phenyl ether	ND		1.1	0.20	mg/Kg	☼	09/25/18 07:04	09/25/18 15:37	1
Chrysene	ND		0.33	0.076	mg/Kg	☼	09/25/18 07:04	09/25/18 15:37	1
Dibenz(a,h)anthracene	ND		0.43	0.10	mg/Kg	☼	09/25/18 07:04	09/25/18 15:37	1
Dibenzofuran	ND		0.33	0.14	mg/Kg	☼	09/25/18 07:04	09/25/18 15:37	1
3,3'-Dichlorobenzidine	ND		0.84	0.15	mg/Kg	☼	09/25/18 07:04	09/25/18 15:37	1
2,4-Dichlorophenol	ND		0.33	0.068	mg/Kg	☼	09/25/18 07:04	09/25/18 15:37	1
Diethyl phthalate	ND		0.33	0.096	mg/Kg	☼	09/25/18 07:04	09/25/18 15:37	1
2,4-Dimethylphenol	ND		0.33	0.13	mg/Kg	☼	09/25/18 07:04	09/25/18 15:37	1
Dimethyl phthalate	ND		0.33	0.068	mg/Kg	☼	09/25/18 07:04	09/25/18 15:37	1
Di-n-butyl phthalate	ND		0.33	0.091	mg/Kg	☼	09/25/18 07:04	09/25/18 15:37	1
2,4-Dinitrophenol	ND		2.0	1.0	mg/Kg	☼	09/25/18 07:04	09/25/18 15:37	1
2,4-Dinitrotoluene	ND		0.33	0.081	mg/Kg	☼	09/25/18 07:04	09/25/18 15:37	1
2,6-Dinitrotoluene	ND		0.33	0.096	mg/Kg	☼	09/25/18 07:04	09/25/18 15:37	1
Di-n-octyl phthalate	ND		0.33	0.091	mg/Kg	☼	09/25/18 07:04	09/25/18 15:37	1
Fluoranthene	ND		0.33	0.16	mg/Kg	☼	09/25/18 07:04	09/25/18 15:37	1
Fluorene	ND		0.33	0.071	mg/Kg	☼	09/25/18 07:04	09/25/18 15:37	1
Hexachlorobenzene	7.3	F1	0.33	0.071	mg/Kg	☼	09/25/18 07:04	09/25/18 15:37	1
Hexachlorocyclopentadiene	ND		0.84	0.31	mg/Kg	☼	09/25/18 07:04	09/25/18 15:37	1
Hexachloroethane	ND		0.33	0.071	mg/Kg	☼	09/25/18 07:04	09/25/18 15:37	1
Indeno[1,2,3-cd]pyrene	ND		0.33	0.13	mg/Kg	☼	09/25/18 07:04	09/25/18 15:37	1
Isophorone	ND		0.33	0.068	mg/Kg	☼	09/25/18 07:04	09/25/18 15:37	1
1-Methylnaphthalene	ND		0.35	0.15	mg/Kg	☼	09/25/18 07:04	09/25/18 15:37	1
2-Methylnaphthalene	ND		0.33	0.071	mg/Kg	☼	09/25/18 07:04	09/25/18 15:37	1
2-Methylphenol	ND		0.33	0.081	mg/Kg	☼	09/25/18 07:04	09/25/18 15:37	1
3-Methylphenol + 4-Methylphenol	ND		0.33	0.13	mg/Kg	☼	09/25/18 07:04	09/25/18 15:37	1
Naphthalene	ND		0.33	0.068	mg/Kg	☼	09/25/18 07:04	09/25/18 15:37	1
2-Nitroaniline	ND		0.33	0.17	mg/Kg	☼	09/25/18 07:04	09/25/18 15:37	1
3-Nitroaniline	ND		0.33	0.13	mg/Kg	☼	09/25/18 07:04	09/25/18 15:37	1
4-Nitroaniline	ND		0.84	0.13	mg/Kg	☼	09/25/18 07:04	09/25/18 15:37	1
Nitrobenzene	ND		0.33	0.071	mg/Kg	☼	09/25/18 07:04	09/25/18 15:37	1
2-Nitrophenol	ND		0.33	0.13	mg/Kg	☼	09/25/18 07:04	09/25/18 15:37	1
4-Nitrophenol	ND		2.9	0.51	mg/Kg	☼	09/25/18 07:04	09/25/18 15:37	1
N-Nitrosodi-n-propylamine	ND		0.25	0.071	mg/Kg	☼	09/25/18 07:04	09/25/18 15:37	1
N-Nitrosodiphenylamine	ND		0.76	0.16	mg/Kg	☼	09/25/18 07:04	09/25/18 15:37	1
Pentachlorophenol	ND		0.84	0.34	mg/Kg	☼	09/25/18 07:04	09/25/18 15:37	1
Phenanthrene	ND		0.33	0.15	mg/Kg	☼	09/25/18 07:04	09/25/18 15:37	1
Phenol	ND		0.33	0.091	mg/Kg	☼	09/25/18 07:04	09/25/18 15:37	1
Pyrene	ND		0.33	0.14	mg/Kg	☼	09/25/18 07:04	09/25/18 15:37	1
Pyridine	ND		0.34	0.15	mg/Kg	☼	09/25/18 07:04	09/25/18 15:37	1
2,4,5-Trichlorophenol	ND		0.51	0.27	mg/Kg	☼	09/25/18 07:04	09/25/18 15:37	1
2,4,6-Trichlorophenol	ND		0.56	0.16	mg/Kg	☼	09/25/18 07:04	09/25/18 15:37	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	78		42 - 113	09/25/18 07:04	09/25/18 15:37	1

TestAmerica Irvine

Client Sample Results

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 440-220519-1

Client Sample ID: DSPE-4-0.0-20180919

Lab Sample ID: 440-220519-1

Date Collected: 09/19/18 14:15

Matrix: Solid

Date Received: 09/20/18 09:45

Percent Solids: 98.7

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol (Surr)	69		18 - 138	09/25/18 07:04	09/25/18 15:37	1
Nitrobenzene-d5 (Surr)	71		39 - 104	09/25/18 07:04	09/25/18 15:37	1
Phenol-d6 (Surr)	67		37 - 125	09/25/18 07:04	09/25/18 15:37	1
Terphenyl-d14 (Surr)	90		43 - 125	09/25/18 07:04	09/25/18 15:37	1
2,4,6-Tribromophenol (Surr)	59		10 - 147	09/25/18 07:04	09/25/18 15:37	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Octachlorostyrene	ND		3.3	2.3	mg/Kg	☼	09/25/18 07:04	09/26/18 15:01	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	76		42 - 113	09/25/18 07:04	09/26/18 15:01	1
2-Fluorophenol (Surr)	64		18 - 138	09/25/18 07:04	09/26/18 15:01	1
Nitrobenzene-d5 (Surr)	67		39 - 104	09/25/18 07:04	09/26/18 15:01	1
Phenol-d6 (Surr)	64		37 - 125	09/25/18 07:04	09/26/18 15:01	1
Terphenyl-d14 (Surr)	90		43 - 125	09/25/18 07:04	09/26/18 15:01	1
2,4,6-Tribromophenol (Surr)	76		10 - 147	09/25/18 07:04	09/26/18 15:01	1

Method: 8015B - Gasoline Range Organics - (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
GRO (C6-C10)	ND		410	150	ug/Kg	☼		09/27/18 17:16	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	77		65 - 140		09/27/18 17:16	1

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	8.9		5.0	2.5	mg/Kg	☼	09/21/18 07:14	09/21/18 22:51	1
Oil Range Organics (C29-C40)	4.6	J	5.0	2.5	mg/Kg	☼	09/21/18 07:14	09/21/18 22:51	1
EFH (C10-C40)	13		5.0	2.5	mg/Kg	☼	09/21/18 07:14	09/21/18 22:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
n-Octacosane	70		40 - 140	09/21/18 07:14	09/21/18 22:51	1

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		0.0051	0.0015	mg/Kg	☼	09/26/18 07:24	09/27/18 16:54	1
alpha-BHC	0.0059		0.0051	0.0015	mg/Kg	☼	09/26/18 07:24	09/27/18 16:54	1
cis-Chlordane	ND		0.0051	0.0020	mg/Kg	☼	09/26/18 07:24	09/27/18 16:54	1
4,4'-DDD	ND		0.0051	0.0015	mg/Kg	☼	09/26/18 07:24	09/27/18 16:54	1
4,4'-DDT	0.019	p	0.0051	0.0015	mg/Kg	☼	09/26/18 07:24	09/27/18 16:54	1
delta-BHC	ND		0.010	0.0015	mg/Kg	☼	09/26/18 07:24	09/27/18 16:54	1
Dieldrin	ND		0.0051	0.0015	mg/Kg	☼	09/26/18 07:24	09/27/18 16:54	1
Endosulfan I	ND		0.0051	0.0015	mg/Kg	☼	09/26/18 07:24	09/27/18 16:54	1
Endosulfan II	ND		0.0051	0.0015	mg/Kg	☼	09/26/18 07:24	09/27/18 16:54	1
Endosulfan sulfate	ND		0.010	0.0020	mg/Kg	☼	09/26/18 07:24	09/27/18 16:54	1
Endrin	ND		0.0051	0.0015	mg/Kg	☼	09/26/18 07:24	09/27/18 16:54	1
Endrin aldehyde	ND		0.0051	0.0015	mg/Kg	☼	09/26/18 07:24	09/27/18 16:54	1
Endrin ketone	ND		0.0051	0.0020	mg/Kg	☼	09/26/18 07:24	09/27/18 16:54	1
gamma-BHC (Lindane)	ND		0.0051	0.0015	mg/Kg	☼	09/26/18 07:24	09/27/18 16:54	1
trans-Chlordane	ND		0.0051	0.0015	mg/Kg	☼	09/26/18 07:24	09/27/18 16:54	1

TestAmerica Irvine

Client Sample Results

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 440-220519-1

Client Sample ID: DSPE-4-0.0-20180919

Lab Sample ID: 440-220519-1

Date Collected: 09/19/18 14:15

Matrix: Solid

Date Received: 09/20/18 09:45

Percent Solids: 98.7

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Heptachlor	ND		0.0051	0.0020	mg/Kg	☼	09/26/18 07:24	09/27/18 16:54	1
Heptachlor epoxide	ND		0.0051	0.0020	mg/Kg	☼	09/26/18 07:24	09/27/18 16:54	1
Methoxychlor	ND		0.0051	0.0015	mg/Kg	☼	09/26/18 07:24	09/27/18 16:54	1
Toxaphene	ND		0.20	0.051	mg/Kg	☼	09/26/18 07:24	09/27/18 16:54	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	2750	X	45 - 120				09/26/18 07:24	09/27/18 16:54	1
Tetrachloro-m-xylene	127	X	35 - 115				09/26/18 07:24	09/27/18 16:54	1

Method: 8081A - Organochlorine Pesticides (GC) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
beta-BHC	0.14		0.025	0.0076	mg/Kg	☼	09/26/18 07:24	10/01/18 21:44	5
2,4'-DDE	0.079		0.025	0.0076	mg/Kg	☼	09/26/18 07:24	10/01/18 21:44	5
4,4'-DDE	0.13		0.025	0.0076	mg/Kg	☼	09/26/18 07:24	10/01/18 21:44	5
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	4736	X	45 - 120				09/26/18 07:24	10/01/18 21:44	5
Tetrachloro-m-xylene	115		35 - 115				09/26/18 07:24	10/01/18 21:44	5

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.20	0.070	mg/L		09/24/18 18:16	09/25/18 15:36	1
Barium	0.59		0.20	0.060	mg/L		09/24/18 18:16	09/25/18 15:36	1
Cadmium	ND		0.10	0.020	mg/L		09/24/18 18:16	09/25/18 15:36	1
Chromium	ND		0.10	0.020	mg/L		09/24/18 18:16	09/25/18 15:36	1
Lead	ND		0.10	0.040	mg/L		09/24/18 18:16	09/25/18 15:36	1
Selenium	ND		0.10	0.080	mg/L		09/24/18 18:16	09/25/18 15:36	1
Silver	ND		0.20	0.060	mg/L		09/24/18 18:16	09/25/18 15:36	1

Method: 7470A - Mercury (CVAA) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.0020	0.0010	mg/L		09/24/18 13:30	09/25/18 09:40	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	1.3		0.1	0.1	%			09/20/18 17:46	1

Client Sample ID: DSPE-4-1.0-20190919

Lab Sample ID: 440-220519-2

Date Collected: 09/19/18 14:30

Matrix: Solid

Date Received: 09/20/18 09:45

Percent Solids: 94.4

Method: 8260B/5030B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		0.021	0.0085	mg/Kg	☼		09/26/18 15:14	1
Benzene	ND		0.0011	0.00053	mg/Kg	☼		09/26/18 15:14	1
Bromobenzene	ND		0.0021	0.0011	mg/Kg	☼		09/26/18 15:14	1
Bromochloromethane	ND		0.0021	0.0011	mg/Kg	☼		09/26/18 15:14	1
Bromodichloromethane	ND		0.0011	0.00053	mg/Kg	☼		09/26/18 15:14	1
Bromoform	ND		0.0021	0.0011	mg/Kg	☼		09/26/18 15:14	1
Bromomethane	ND		0.0021	0.0011	mg/Kg	☼		09/26/18 15:14	1
2-Butanone (MEK)	ND		0.011	0.0053	mg/Kg	☼		09/26/18 15:14	1

TestAmerica Irvine

Client Sample Results

Client: Ramboll US Corporation
 Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 440-220519-1

Client Sample ID: DSPE-4-1.0-20190919

Lab Sample ID: 440-220519-2

Date Collected: 09/19/18 14:30

Matrix: Solid

Date Received: 09/20/18 09:45

Percent Solids: 94.4

Method: 8260B/5030B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	ND		0.0021	0.00053	mg/Kg	☼		09/26/18 15:14	1
Chlorobenzene	ND		0.0011	0.00053	mg/Kg	☼		09/26/18 15:14	1
Chloroethane	ND		0.0021	0.0011	mg/Kg	☼		09/26/18 15:14	1
Chloroform	ND		0.0011	0.00053	mg/Kg	☼		09/26/18 15:14	1
Chloromethane	ND		0.0021	0.0011	mg/Kg	☼		09/26/18 15:14	1
2-Chlorotoluene	ND		0.0021	0.0011	mg/Kg	☼		09/26/18 15:14	1
4-Chlorotoluene	ND		0.0021	0.0011	mg/Kg	☼		09/26/18 15:14	1
cis-1,2-Dichloroethene	ND		0.0011	0.00053	mg/Kg	☼		09/26/18 15:14	1
cis-1,3-Dichloropropene	ND		0.0011	0.00053	mg/Kg	☼		09/26/18 15:14	1
Dibromochloromethane	ND		0.0011	0.00053	mg/Kg	☼		09/26/18 15:14	1
1,2-Dibromo-3-Chloropropane	ND		0.0053	0.0021	mg/Kg	☼		09/26/18 15:14	1
1,2-Dibromoethane (EDB)	ND		0.0011	0.00053	mg/Kg	☼		09/26/18 15:14	1
Dibromomethane	ND		0.0011	0.00053	mg/Kg	☼		09/26/18 15:14	1
1,2-Dichlorobenzene	ND		0.0011	0.00053	mg/Kg	☼		09/26/18 15:14	1
1,3-Dichlorobenzene	ND		0.0011	0.00053	mg/Kg	☼		09/26/18 15:14	1
1,4-Dichlorobenzene	ND		0.0011	0.00053	mg/Kg	☼		09/26/18 15:14	1
Dichlorodifluoromethane	ND		0.0021	0.0011	mg/Kg	☼		09/26/18 15:14	1
1,1-Dichloroethane	ND		0.0011	0.00053	mg/Kg	☼		09/26/18 15:14	1
1,2-Dichloroethane	ND		0.0011	0.00053	mg/Kg	☼		09/26/18 15:14	1
1,1-Dichloroethene	ND		0.0021	0.00053	mg/Kg	☼		09/26/18 15:14	1
1,2-Dichloropropane	ND		0.0011	0.00053	mg/Kg	☼		09/26/18 15:14	1
1,3-Dichloropropane	ND		0.0011	0.00053	mg/Kg	☼		09/26/18 15:14	1
2,2-Dichloropropane	ND		0.0021	0.0011	mg/Kg	☼		09/26/18 15:14	1
1,1-Dichloropropene	ND		0.0011	0.00053	mg/Kg	☼		09/26/18 15:14	1
Ethylbenzene	ND		0.0011	0.00053	mg/Kg	☼		09/26/18 15:14	1
Ethyl-t-butyl ether (ETBE)	ND		0.0021	0.0011	mg/Kg	☼		09/26/18 15:14	1
Hexachlorobutadiene	ND		0.0021	0.0011	mg/Kg	☼		09/26/18 15:14	1
2-Hexanone	ND		0.011	0.0053	mg/Kg	☼		09/26/18 15:14	1
Isopropylbenzene	ND		0.0011	0.00053	mg/Kg	☼		09/26/18 15:14	1
Isopropyl Ether (DIPE)	ND		0.0021	0.0011	mg/Kg	☼		09/26/18 15:14	1
Methylene Chloride	ND		0.011	0.0053	mg/Kg	☼		09/26/18 15:14	1
4-Methyl-2-pentanone (MIBK)	ND		0.0053	0.0026	mg/Kg	☼		09/26/18 15:14	1
Methyl-t-Butyl Ether (MTBE)	ND		0.0021	0.0011	mg/Kg	☼		09/26/18 15:14	1
m,p-Xylene	ND		0.0021	0.0011	mg/Kg	☼		09/26/18 15:14	1
Naphthalene	ND		0.0021	0.0011	mg/Kg	☼		09/26/18 15:14	1
n-Butylbenzene	ND		0.0021	0.0011	mg/Kg	☼		09/26/18 15:14	1
N-Propylbenzene	ND		0.0011	0.00053	mg/Kg	☼		09/26/18 15:14	1
o-Xylene	ND		0.0011	0.00053	mg/Kg	☼		09/26/18 15:14	1
p-Isopropyltoluene	ND		0.0011	0.00053	mg/Kg	☼		09/26/18 15:14	1
sec-Butylbenzene	ND		0.0021	0.0011	mg/Kg	☼		09/26/18 15:14	1
Styrene	ND		0.0011	0.00053	mg/Kg	☼		09/26/18 15:14	1
Tert-amyl-methyl ether (TAME)	ND		0.0021	0.0011	mg/Kg	☼		09/26/18 15:14	1
tert-Butyl alcohol (TBA)	ND		0.053	0.011	mg/Kg	☼		09/26/18 15:14	1
tert-Butylbenzene	ND		0.0021	0.0011	mg/Kg	☼		09/26/18 15:14	1
1,1,1,2-Tetrachloroethane	ND		0.0021	0.0011	mg/Kg	☼		09/26/18 15:14	1
1,1,2,2-Tetrachloroethane	ND		0.0021	0.0011	mg/Kg	☼		09/26/18 15:14	1
Tetrachloroethene	ND		0.0011	0.00053	mg/Kg	☼		09/26/18 15:14	1
Toluene	ND		0.0011	0.00053	mg/Kg	☼		09/26/18 15:14	1
trans-1,2-Dichloroethene	ND		0.0011	0.00053	mg/Kg	☼		09/26/18 15:14	1

TestAmerica Irvine

Client Sample Results

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 440-220519-1

Client Sample ID: DSPE-4-1.0-20190919

Lab Sample ID: 440-220519-2

Date Collected: 09/19/18 14:30

Matrix: Solid

Date Received: 09/20/18 09:45

Percent Solids: 94.4

Method: 8260B/5030B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,3-Dichloropropene	ND		0.0011	0.00053	mg/Kg	☼		09/26/18 15:14	1
1,2,3-Trichlorobenzene	ND		0.0021	0.0011	mg/Kg	☼		09/26/18 15:14	1
1,2,4-Trichlorobenzene	ND		0.0053	0.0011	mg/Kg	☼		09/26/18 15:14	1
1,1,1-Trichloroethane	ND		0.0011	0.00053	mg/Kg	☼		09/26/18 15:14	1
1,1,2-Trichloroethane	ND		0.0011	0.00053	mg/Kg	☼		09/26/18 15:14	1
Trichloroethene	ND		0.0011	0.00053	mg/Kg	☼		09/26/18 15:14	1
Trichlorofluoromethane	ND		0.0021	0.0011	mg/Kg	☼		09/26/18 15:14	1
1,2,3-Trichloropropane	ND		0.011	0.0011	mg/Kg	☼		09/26/18 15:14	1
1,2,4-Trimethylbenzene	ND		0.0021	0.0011	mg/Kg	☼		09/26/18 15:14	1
1,3,5-Trimethylbenzene	ND		0.0021	0.0011	mg/Kg	☼		09/26/18 15:14	1
Vinyl chloride	ND		0.0021	0.0011	mg/Kg	☼		09/26/18 15:14	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	93		79 - 120					09/26/18 15:14	1
Dibromofluoromethane (Surr)	104		60 - 120					09/26/18 15:14	1
Toluene-d8 (Surr)	98		79 - 123					09/26/18 15:14	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.37	0.18	mg/Kg	☼	09/25/18 07:04	09/26/18 15:26	1
Acenaphthylene	ND		0.35	0.074	mg/Kg	☼	09/25/18 07:04	09/26/18 15:26	1
Aniline	ND		1.1	0.15	mg/Kg	☼	09/25/18 07:04	09/26/18 15:26	1
Anthracene	ND		0.35	0.085	mg/Kg	☼	09/25/18 07:04	09/26/18 15:26	1
Benzidine	ND *		2.2	0.18	mg/Kg	☼	09/25/18 07:04	09/26/18 15:26	1
Benzo[a]anthracene	ND		0.35	0.074	mg/Kg	☼	09/25/18 07:04	09/26/18 15:26	1
Benzo[a]pyrene	ND		0.35	0.071	mg/Kg	☼	09/25/18 07:04	09/26/18 15:26	1
Benzo[b]fluoranthene	ND		0.35	0.074	mg/Kg	☼	09/25/18 07:04	09/26/18 15:26	1
Benzo[g,h,i]perylene	ND		0.35	0.12	mg/Kg	☼	09/25/18 07:04	09/26/18 15:26	1
Benzoic acid	ND		1.0	0.50	mg/Kg	☼	09/25/18 07:04	09/26/18 15:26	1
Benzo[k]fluoranthene	ND		0.35	0.074	mg/Kg	☼	09/25/18 07:04	09/26/18 15:26	1
Benzyl alcohol	ND		3.6	0.43	mg/Kg	☼	09/25/18 07:04	09/26/18 15:26	1
Bis(2-chloroethoxy)methane	ND		0.35	0.14	mg/Kg	☼	09/25/18 07:04	09/26/18 15:26	1
Bis(2-chloroethyl)ether	ND		0.35	0.074	mg/Kg	☼	09/25/18 07:04	09/26/18 15:26	1
Bis(2-ethylhexyl) phthalate	ND		0.35	0.095	mg/Kg	☼	09/25/18 07:04	09/26/18 15:26	1
4-Bromophenyl phenyl ether	ND		0.35	0.079	mg/Kg	☼	09/25/18 07:04	09/26/18 15:26	1
Butyl benzyl phthalate	ND		0.35	0.085	mg/Kg	☼	09/25/18 07:04	09/26/18 15:26	1
4-Chloroaniline	ND		1.1	0.16	mg/Kg	☼	09/25/18 07:04	09/26/18 15:26	1
4-Chloro-3-methylphenol	ND		0.42	0.21	mg/Kg	☼	09/25/18 07:04	09/26/18 15:26	1
2-Chloronaphthalene	ND		0.35	0.071	mg/Kg	☼	09/25/18 07:04	09/26/18 15:26	1
2-Chlorophenol	ND		0.35	0.074	mg/Kg	☼	09/25/18 07:04	09/26/18 15:26	1
4-Chlorophenyl phenyl ether	ND		1.2	0.21	mg/Kg	☼	09/25/18 07:04	09/26/18 15:26	1
Chrysene	ND		0.35	0.079	mg/Kg	☼	09/25/18 07:04	09/26/18 15:26	1
Dibenz(a,h)anthracene	ND		0.44	0.11	mg/Kg	☼	09/25/18 07:04	09/26/18 15:26	1
Dibenzofuran	ND		0.35	0.15	mg/Kg	☼	09/25/18 07:04	09/26/18 15:26	1
3,3'-Dichlorobenzidine	ND		0.88	0.16	mg/Kg	☼	09/25/18 07:04	09/26/18 15:26	1
2,4-Dichlorophenol	ND		0.35	0.071	mg/Kg	☼	09/25/18 07:04	09/26/18 15:26	1
Diethyl phthalate	ND		0.35	0.10	mg/Kg	☼	09/25/18 07:04	09/26/18 15:26	1
2,4-Dimethylphenol	ND		0.35	0.14	mg/Kg	☼	09/25/18 07:04	09/26/18 15:26	1
Dimethyl phthalate	ND		0.35	0.071	mg/Kg	☼	09/25/18 07:04	09/26/18 15:26	1
Di-n-butyl phthalate	ND		0.35	0.095	mg/Kg	☼	09/25/18 07:04	09/26/18 15:26	1

TestAmerica Irvine

Client Sample Results

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 440-220519-1

Client Sample ID: DSPE-4-1.0-20190919

Lab Sample ID: 440-220519-2

Date Collected: 09/19/18 14:30

Matrix: Solid

Date Received: 09/20/18 09:45

Percent Solids: 94.4

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-Dinitrophenol	ND		2.1	1.1	mg/Kg	☼	09/25/18 07:04	09/26/18 15:26	1
2,4-Dinitrotoluene	ND		0.35	0.085	mg/Kg	☼	09/25/18 07:04	09/26/18 15:26	1
2,6-Dinitrotoluene	ND		0.35	0.10	mg/Kg	☼	09/25/18 07:04	09/26/18 15:26	1
Di-n-octyl phthalate	ND		0.35	0.095	mg/Kg	☼	09/25/18 07:04	09/26/18 15:26	1
Fluoranthene	ND		0.35	0.17	mg/Kg	☼	09/25/18 07:04	09/26/18 15:26	1
Fluorene	ND		0.35	0.074	mg/Kg	☼	09/25/18 07:04	09/26/18 15:26	1
Hexachlorocyclopentadiene	ND		0.88	0.33	mg/Kg	☼	09/25/18 07:04	09/26/18 15:26	1
Hexachloroethane	ND		0.35	0.074	mg/Kg	☼	09/25/18 07:04	09/26/18 15:26	1
Indeno[1,2,3-cd]pyrene	ND		0.35	0.14	mg/Kg	☼	09/25/18 07:04	09/26/18 15:26	1
Isophorone	ND		0.35	0.071	mg/Kg	☼	09/25/18 07:04	09/26/18 15:26	1
1-Methylnaphthalene	ND		0.37	0.16	mg/Kg	☼	09/25/18 07:04	09/26/18 15:26	1
2-Methylnaphthalene	ND		0.35	0.074	mg/Kg	☼	09/25/18 07:04	09/26/18 15:26	1
2-Methylphenol	ND		0.35	0.085	mg/Kg	☼	09/25/18 07:04	09/26/18 15:26	1
3-Methylphenol + 4-Methylphenol	ND		0.35	0.14	mg/Kg	☼	09/25/18 07:04	09/26/18 15:26	1
Naphthalene	ND		0.35	0.071	mg/Kg	☼	09/25/18 07:04	09/26/18 15:26	1
2-Nitroaniline	ND		0.35	0.18	mg/Kg	☼	09/25/18 07:04	09/26/18 15:26	1
3-Nitroaniline	ND		0.35	0.14	mg/Kg	☼	09/25/18 07:04	09/26/18 15:26	1
4-Nitroaniline	ND		0.88	0.14	mg/Kg	☼	09/25/18 07:04	09/26/18 15:26	1
Nitrobenzene	ND		0.35	0.074	mg/Kg	☼	09/25/18 07:04	09/26/18 15:26	1
2-Nitrophenol	ND		0.35	0.14	mg/Kg	☼	09/25/18 07:04	09/26/18 15:26	1
4-Nitrophenol	ND		3.1	0.53	mg/Kg	☼	09/25/18 07:04	09/26/18 15:26	1
N-Nitrosodi-n-propylamine	ND		0.26	0.074	mg/Kg	☼	09/25/18 07:04	09/26/18 15:26	1
N-Nitrosodiphenylamine	ND		0.79	0.17	mg/Kg	☼	09/25/18 07:04	09/26/18 15:26	1
Octachlorostyrene	ND		3.5	2.4	mg/Kg	☼	09/25/18 07:04	09/26/18 15:26	1
Pentachlorophenol	ND		0.88	0.36	mg/Kg	☼	09/25/18 07:04	09/26/18 15:26	1
Phenanthrene	ND		0.35	0.16	mg/Kg	☼	09/25/18 07:04	09/26/18 15:26	1
Phenol	ND		0.35	0.095	mg/Kg	☼	09/25/18 07:04	09/26/18 15:26	1
Pyrene	ND		0.35	0.14	mg/Kg	☼	09/25/18 07:04	09/26/18 15:26	1
Pyridine	ND		0.36	0.16	mg/Kg	☼	09/25/18 07:04	09/26/18 15:26	1
2,4,5-Trichlorophenol	ND		0.53	0.28	mg/Kg	☼	09/25/18 07:04	09/26/18 15:26	1
2,4,6-Trichlorophenol	ND		0.58	0.17	mg/Kg	☼	09/25/18 07:04	09/26/18 15:26	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	72		42 - 113	09/25/18 07:04	09/26/18 15:26	1
2-Fluorophenol (Surr)	58		18 - 138	09/25/18 07:04	09/26/18 15:26	1
Nitrobenzene-d5 (Surr)	63		39 - 104	09/25/18 07:04	09/26/18 15:26	1
Phenol-d6 (Surr)	61		37 - 125	09/25/18 07:04	09/26/18 15:26	1
Terphenyl-d14 (Surr)	81		43 - 125	09/25/18 07:04	09/26/18 15:26	1
2,4,6-Tribromophenol (Surr)	73		10 - 147	09/25/18 07:04	09/26/18 15:26	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexachlorobenzene	11		1.7	0.37	mg/Kg	☼	09/25/18 07:04	09/27/18 17:31	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	78		42 - 113	09/25/18 07:04	09/27/18 17:31	5
2-Fluorophenol (Surr)	63		18 - 138	09/25/18 07:04	09/27/18 17:31	5
Nitrobenzene-d5 (Surr)	77		39 - 104	09/25/18 07:04	09/27/18 17:31	5
Phenol-d6 (Surr)	63		37 - 125	09/25/18 07:04	09/27/18 17:31	5
Terphenyl-d14 (Surr)	85		43 - 125	09/25/18 07:04	09/27/18 17:31	5

TestAmerica Irvine

Client Sample Results

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 440-220519-1

Client Sample ID: DSPE-4-1.0-20190919

Lab Sample ID: 440-220519-2

Date Collected: 09/19/18 14:30

Matrix: Solid

Date Received: 09/20/18 09:45

Percent Solids: 94.4

Method: 8270C - Semivolatile Organic Compounds (GC/MS) - DL (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	77		10 - 147	09/25/18 07:04	09/27/18 17:31	5

Method: 8015B - Gasoline Range Organics - (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
GRO (C6-C10)	ND		430	160	ug/Kg	☼		09/27/18 17:43	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	77		65 - 140		09/27/18 17:43	1

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	22		5.3	2.6	mg/Kg	☼	09/21/18 07:14	09/21/18 23:11	1
Oil Range Organics (C29-C40)	6.8		5.3	2.6	mg/Kg	☼	09/21/18 07:14	09/21/18 23:11	1
EFH (C10-C40)	29		5.3	2.6	mg/Kg	☼	09/21/18 07:14	09/21/18 23:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
n-Octacosane	60		40 - 140	09/21/18 07:14	09/21/18 23:11	1

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		0.0053	0.0016	mg/Kg	☼	09/26/18 07:24	09/27/18 17:21	1
alpha-BHC	0.0073		0.0053	0.0016	mg/Kg	☼	09/26/18 07:24	09/27/18 17:21	1
cis-Chlordane	ND		0.0053	0.0021	mg/Kg	☼	09/26/18 07:24	09/27/18 17:21	1
4,4'-DDD	ND		0.0053	0.0016	mg/Kg	☼	09/26/18 07:24	09/27/18 17:21	1
2,4'-DDE	0.048		0.0053	0.0016	mg/Kg	☼	09/26/18 07:24	09/27/18 17:21	1
4,4'-DDE	0.057		0.0053	0.0016	mg/Kg	☼	09/26/18 07:24	09/27/18 17:21	1
4,4'-DDT	0.011	p	0.0053	0.0016	mg/Kg	☼	09/26/18 07:24	09/27/18 17:21	1
delta-BHC	ND		0.011	0.0016	mg/Kg	☼	09/26/18 07:24	09/27/18 17:21	1
Dieldrin	ND		0.0053	0.0016	mg/Kg	☼	09/26/18 07:24	09/27/18 17:21	1
Endosulfan I	ND		0.0053	0.0016	mg/Kg	☼	09/26/18 07:24	09/27/18 17:21	1
Endosulfan II	ND		0.0053	0.0016	mg/Kg	☼	09/26/18 07:24	09/27/18 17:21	1
Endosulfan sulfate	ND		0.011	0.0021	mg/Kg	☼	09/26/18 07:24	09/27/18 17:21	1
Endrin	ND		0.0053	0.0016	mg/Kg	☼	09/26/18 07:24	09/27/18 17:21	1
Endrin aldehyde	ND		0.0053	0.0016	mg/Kg	☼	09/26/18 07:24	09/27/18 17:21	1
Endrin ketone	ND		0.0053	0.0021	mg/Kg	☼	09/26/18 07:24	09/27/18 17:21	1
gamma-BHC (Lindane)	ND		0.0053	0.0016	mg/Kg	☼	09/26/18 07:24	09/27/18 17:21	1
trans-Chlordane	ND		0.0053	0.0016	mg/Kg	☼	09/26/18 07:24	09/27/18 17:21	1
Heptachlor	ND		0.0053	0.0021	mg/Kg	☼	09/26/18 07:24	09/27/18 17:21	1
Heptachlor epoxide	ND		0.0053	0.0021	mg/Kg	☼	09/26/18 07:24	09/27/18 17:21	1
Methoxychlor	ND		0.0053	0.0016	mg/Kg	☼	09/26/18 07:24	09/27/18 17:21	1
Toxaphene	ND		0.21	0.053	mg/Kg	☼	09/26/18 07:24	09/27/18 17:21	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	2605	X	45 - 120	09/26/18 07:24	09/27/18 17:21	1
Tetrachloro-m-xylene	121	X	35 - 115	09/26/18 07:24	09/27/18 17:21	1

Method: 8081A - Organochlorine Pesticides (GC) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
beta-BHC	0.20		0.026	0.0079	mg/Kg	☼	09/26/18 07:24	10/01/18 22:11	5

TestAmerica Irvine

Client Sample Results

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 440-220519-1

Client Sample ID: DSPE-4-1.0-20190919

Lab Sample ID: 440-220519-2

Date Collected: 09/19/18 14:30

Matrix: Solid

Date Received: 09/20/18 09:45

Percent Solids: 94.4

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	5942	X	45 - 120	09/26/18 07:24	10/01/18 22:11	5
Tetrachloro-m-xylene	114		35 - 115	09/26/18 07:24	10/01/18 22:11	5

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.20	0.070	mg/L		09/24/18 18:16	09/25/18 15:48	1
Barium	1.0		0.20	0.060	mg/L		09/24/18 18:16	09/25/18 15:48	1
Cadmium	ND		0.10	0.020	mg/L		09/24/18 18:16	09/25/18 15:48	1
Chromium	ND		0.10	0.020	mg/L		09/24/18 18:16	09/25/18 15:48	1
Lead	ND		0.10	0.040	mg/L		09/24/18 18:16	09/25/18 15:48	1
Selenium	ND		0.10	0.080	mg/L		09/24/18 18:16	09/25/18 15:48	1
Silver	ND		0.20	0.060	mg/L		09/24/18 18:16	09/25/18 15:48	1

Method: 7470A - Mercury (CVAA) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.0020	0.0010	mg/L		09/24/18 13:30	09/24/18 23:04	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	5.6		0.1	0.1	%			09/20/18 17:46	1

Client Sample ID: DSPE-5-0.0-20180919

Lab Sample ID: 440-220519-3

Date Collected: 09/19/18 15:15

Matrix: Solid

Date Received: 09/20/18 09:45

Percent Solids: 97.9

Method: 8260B/5030B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		0.020	0.0081	mg/Kg	☼		09/26/18 15:41	1
Benzene	ND		0.0010	0.00051	mg/Kg	☼		09/26/18 15:41	1
Bromobenzene	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 15:41	1
Bromochloromethane	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 15:41	1
Bromodichloromethane	ND		0.0010	0.00051	mg/Kg	☼		09/26/18 15:41	1
Bromoform	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 15:41	1
Bromomethane	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 15:41	1
2-Butanone (MEK)	ND		0.010	0.0051	mg/Kg	☼		09/26/18 15:41	1
Carbon tetrachloride	ND		0.0020	0.00051	mg/Kg	☼		09/26/18 15:41	1
Chlorobenzene	ND		0.0010	0.00051	mg/Kg	☼		09/26/18 15:41	1
Chloroethane	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 15:41	1
Chloroform	ND		0.0010	0.00051	mg/Kg	☼		09/26/18 15:41	1
Chloromethane	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 15:41	1
2-Chlorotoluene	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 15:41	1
4-Chlorotoluene	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 15:41	1
cis-1,2-Dichloroethene	ND		0.0010	0.00051	mg/Kg	☼		09/26/18 15:41	1
cis-1,3-Dichloropropene	ND		0.0010	0.00051	mg/Kg	☼		09/26/18 15:41	1
Dibromochloromethane	ND		0.0010	0.00051	mg/Kg	☼		09/26/18 15:41	1
1,2-Dibromo-3-Chloropropane	ND		0.0051	0.0020	mg/Kg	☼		09/26/18 15:41	1
1,2-Dibromoethane (EDB)	ND		0.0010	0.00051	mg/Kg	☼		09/26/18 15:41	1
Dibromomethane	ND		0.0010	0.00051	mg/Kg	☼		09/26/18 15:41	1
1,2-Dichlorobenzene	ND		0.0010	0.00051	mg/Kg	☼		09/26/18 15:41	1
1,3-Dichlorobenzene	ND		0.0010	0.00051	mg/Kg	☼		09/26/18 15:41	1
1,4-Dichlorobenzene	ND		0.0010	0.00051	mg/Kg	☼		09/26/18 15:41	1

TestAmerica Irvine

Client Sample Results

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 440-220519-1

Client Sample ID: DSPE-5-0.0-20180919

Lab Sample ID: 440-220519-3

Date Collected: 09/19/18 15:15

Matrix: Solid

Date Received: 09/20/18 09:45

Percent Solids: 97.9

Method: 8260B/5030B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 15:41	1
1,1-Dichloroethane	ND		0.0010	0.00051	mg/Kg	☼		09/26/18 15:41	1
1,2-Dichloroethane	ND		0.0010	0.00051	mg/Kg	☼		09/26/18 15:41	1
1,1-Dichloroethene	ND		0.0020	0.00051	mg/Kg	☼		09/26/18 15:41	1
1,2-Dichloropropane	ND		0.0010	0.00051	mg/Kg	☼		09/26/18 15:41	1
1,3-Dichloropropane	ND		0.0010	0.00051	mg/Kg	☼		09/26/18 15:41	1
2,2-Dichloropropane	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 15:41	1
1,1-Dichloropropene	ND		0.0010	0.00051	mg/Kg	☼		09/26/18 15:41	1
Ethylbenzene	ND		0.0010	0.00051	mg/Kg	☼		09/26/18 15:41	1
Ethyl-t-butyl ether (ETBE)	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 15:41	1
Hexachlorobutadiene	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 15:41	1
2-Hexanone	ND		0.010	0.0051	mg/Kg	☼		09/26/18 15:41	1
Isopropylbenzene	ND		0.0010	0.00051	mg/Kg	☼		09/26/18 15:41	1
Isopropyl Ether (DIPE)	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 15:41	1
Methylene Chloride	ND		0.010	0.0051	mg/Kg	☼		09/26/18 15:41	1
4-Methyl-2-pentanone (MIBK)	ND		0.0051	0.0025	mg/Kg	☼		09/26/18 15:41	1
Methyl-t-Butyl Ether (MTBE)	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 15:41	1
m,p-Xylene	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 15:41	1
Naphthalene	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 15:41	1
n-Butylbenzene	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 15:41	1
N-Propylbenzene	ND		0.0010	0.00051	mg/Kg	☼		09/26/18 15:41	1
o-Xylene	ND		0.0010	0.00051	mg/Kg	☼		09/26/18 15:41	1
p-Isopropyltoluene	ND		0.0010	0.00051	mg/Kg	☼		09/26/18 15:41	1
sec-Butylbenzene	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 15:41	1
Styrene	ND		0.0010	0.00051	mg/Kg	☼		09/26/18 15:41	1
Tert-amyl-methyl ether (TAME)	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 15:41	1
tert-Butyl alcohol (TBA)	ND		0.051	0.010	mg/Kg	☼		09/26/18 15:41	1
tert-Butylbenzene	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 15:41	1
1,1,1,2-Tetrachloroethane	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 15:41	1
1,1,2,2-Tetrachloroethane	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 15:41	1
Tetrachloroethene	ND		0.0010	0.00051	mg/Kg	☼		09/26/18 15:41	1
Toluene	ND		0.0010	0.00051	mg/Kg	☼		09/26/18 15:41	1
trans-1,2-Dichloroethene	ND		0.0010	0.00051	mg/Kg	☼		09/26/18 15:41	1
trans-1,3-Dichloropropene	ND		0.0010	0.00051	mg/Kg	☼		09/26/18 15:41	1
1,2,3-Trichlorobenzene	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 15:41	1
1,2,4-Trichlorobenzene	ND		0.0051	0.0010	mg/Kg	☼		09/26/18 15:41	1
1,1,1-Trichloroethane	ND		0.0010	0.00051	mg/Kg	☼		09/26/18 15:41	1
1,1,2-Trichloroethane	ND		0.0010	0.00051	mg/Kg	☼		09/26/18 15:41	1
Trichloroethene	ND		0.0010	0.00051	mg/Kg	☼		09/26/18 15:41	1
Trichlorofluoromethane	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 15:41	1
1,2,3-Trichloropropane	ND		0.010	0.0010	mg/Kg	☼		09/26/18 15:41	1
1,2,4-Trimethylbenzene	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 15:41	1
1,3,5-Trimethylbenzene	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 15:41	1
Vinyl chloride	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 15:41	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	91		79 - 120		09/26/18 15:41	1
Dibromofluoromethane (Surr)	86		60 - 120		09/26/18 15:41	1
Toluene-d8 (Surr)	91		79 - 123		09/26/18 15:41	1

TestAmerica Irvine

Client Sample Results

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 440-220519-1

Client Sample ID: DSPE-5-0.0-20180919

Lab Sample ID: 440-220519-3

Date Collected: 09/19/18 15:15

Matrix: Solid

Date Received: 09/20/18 09:45

Percent Solids: 97.9

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.36	0.18	mg/Kg	☼	09/25/18 07:04	09/26/18 15:51	1
Acenaphthylene	ND		0.34	0.071	mg/Kg	☼	09/25/18 07:04	09/26/18 15:51	1
Aniline	ND		1.0	0.14	mg/Kg	☼	09/25/18 07:04	09/26/18 15:51	1
Anthracene	ND		0.34	0.081	mg/Kg	☼	09/25/18 07:04	09/26/18 15:51	1
Benzidine	ND	*	2.1	0.17	mg/Kg	☼	09/25/18 07:04	09/26/18 15:51	1
Benzo[a]anthracene	ND		0.34	0.071	mg/Kg	☼	09/25/18 07:04	09/26/18 15:51	1
Benzo[a]pyrene	ND		0.34	0.068	mg/Kg	☼	09/25/18 07:04	09/26/18 15:51	1
Benzo[b]fluoranthene	ND		0.34	0.071	mg/Kg	☼	09/25/18 07:04	09/26/18 15:51	1
Benzo[g,h,i]perylene	ND		0.34	0.11	mg/Kg	☼	09/25/18 07:04	09/26/18 15:51	1
Benzoic acid	ND		0.97	0.48	mg/Kg	☼	09/25/18 07:04	09/26/18 15:51	1
Benzo[k]fluoranthene	ND		0.34	0.071	mg/Kg	☼	09/25/18 07:04	09/26/18 15:51	1
Benzyl alcohol	ND		3.5	0.42	mg/Kg	☼	09/25/18 07:04	09/26/18 15:51	1
Bis(2-chloroethoxy)methane	ND		0.34	0.14	mg/Kg	☼	09/25/18 07:04	09/26/18 15:51	1
Bis(2-chloroethyl)ether	ND		0.34	0.071	mg/Kg	☼	09/25/18 07:04	09/26/18 15:51	1
Bis(2-ethylhexyl) phthalate	ND		0.34	0.091	mg/Kg	☼	09/25/18 07:04	09/26/18 15:51	1
4-Bromophenyl phenyl ether	ND		0.34	0.076	mg/Kg	☼	09/25/18 07:04	09/26/18 15:51	1
Butyl benzyl phthalate	ND		0.34	0.081	mg/Kg	☼	09/25/18 07:04	09/26/18 15:51	1
4-Chloroaniline	ND		1.0	0.15	mg/Kg	☼	09/25/18 07:04	09/26/18 15:51	1
4-Chloro-3-methylphenol	ND		0.41	0.20	mg/Kg	☼	09/25/18 07:04	09/26/18 15:51	1
2-Chloronaphthalene	ND		0.34	0.068	mg/Kg	☼	09/25/18 07:04	09/26/18 15:51	1
2-Chlorophenol	ND		0.34	0.071	mg/Kg	☼	09/25/18 07:04	09/26/18 15:51	1
4-Chlorophenyl phenyl ether	ND		1.1	0.20	mg/Kg	☼	09/25/18 07:04	09/26/18 15:51	1
Chrysene	ND		0.34	0.076	mg/Kg	☼	09/25/18 07:04	09/26/18 15:51	1
Dibenz(a,h)anthracene	ND		0.43	0.10	mg/Kg	☼	09/25/18 07:04	09/26/18 15:51	1
Dibenzofuran	ND		0.34	0.14	mg/Kg	☼	09/25/18 07:04	09/26/18 15:51	1
3,3'-Dichlorobenzidine	ND		0.84	0.15	mg/Kg	☼	09/25/18 07:04	09/26/18 15:51	1
2,4-Dichlorophenol	ND		0.34	0.068	mg/Kg	☼	09/25/18 07:04	09/26/18 15:51	1
Diethyl phthalate	ND		0.34	0.097	mg/Kg	☼	09/25/18 07:04	09/26/18 15:51	1
2,4-Dimethylphenol	ND		0.34	0.13	mg/Kg	☼	09/25/18 07:04	09/26/18 15:51	1
Dimethyl phthalate	ND		0.34	0.068	mg/Kg	☼	09/25/18 07:04	09/26/18 15:51	1
Di-n-butyl phthalate	ND		0.34	0.091	mg/Kg	☼	09/25/18 07:04	09/26/18 15:51	1
2,4-Dinitrophenol	ND		2.0	1.0	mg/Kg	☼	09/25/18 07:04	09/26/18 15:51	1
2,4-Dinitrotoluene	ND		0.34	0.081	mg/Kg	☼	09/25/18 07:04	09/26/18 15:51	1
2,6-Dinitrotoluene	ND		0.34	0.097	mg/Kg	☼	09/25/18 07:04	09/26/18 15:51	1
Di-n-octyl phthalate	ND		0.34	0.091	mg/Kg	☼	09/25/18 07:04	09/26/18 15:51	1
Fluoranthene	ND		0.34	0.16	mg/Kg	☼	09/25/18 07:04	09/26/18 15:51	1
Fluorene	ND		0.34	0.071	mg/Kg	☼	09/25/18 07:04	09/26/18 15:51	1
Hexachlorobenzene	0.20	J	0.34	0.071	mg/Kg	☼	09/25/18 07:04	09/26/18 15:51	1
Hexachlorocyclopentadiene	ND		0.84	0.31	mg/Kg	☼	09/25/18 07:04	09/26/18 15:51	1
Hexachloroethane	ND		0.34	0.071	mg/Kg	☼	09/25/18 07:04	09/26/18 15:51	1
Indeno[1,2,3-cd]pyrene	ND		0.34	0.13	mg/Kg	☼	09/25/18 07:04	09/26/18 15:51	1
Isophorone	ND		0.34	0.068	mg/Kg	☼	09/25/18 07:04	09/26/18 15:51	1
1-Methylnaphthalene	ND		0.36	0.15	mg/Kg	☼	09/25/18 07:04	09/26/18 15:51	1
2-Methylnaphthalene	ND		0.34	0.071	mg/Kg	☼	09/25/18 07:04	09/26/18 15:51	1
2-Methylphenol	ND		0.34	0.081	mg/Kg	☼	09/25/18 07:04	09/26/18 15:51	1
3-Methylphenol + 4-Methylphenol	ND		0.34	0.14	mg/Kg	☼	09/25/18 07:04	09/26/18 15:51	1
Naphthalene	ND		0.34	0.068	mg/Kg	☼	09/25/18 07:04	09/26/18 15:51	1
2-Nitroaniline	ND		0.34	0.17	mg/Kg	☼	09/25/18 07:04	09/26/18 15:51	1
3-Nitroaniline	ND		0.34	0.14	mg/Kg	☼	09/25/18 07:04	09/26/18 15:51	1

TestAmerica Irvine

Client Sample Results

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 440-220519-1

Client Sample ID: DSPE-5-0.0-20180919

Lab Sample ID: 440-220519-3

Date Collected: 09/19/18 15:15

Matrix: Solid

Date Received: 09/20/18 09:45

Percent Solids: 97.9

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitroaniline	ND		0.84	0.14	mg/Kg	☼	09/25/18 07:04	09/26/18 15:51	1
Nitrobenzene	ND		0.34	0.071	mg/Kg	☼	09/25/18 07:04	09/26/18 15:51	1
2-Nitrophenol	ND		0.34	0.14	mg/Kg	☼	09/25/18 07:04	09/26/18 15:51	1
4-Nitrophenol	ND		2.9	0.51	mg/Kg	☼	09/25/18 07:04	09/26/18 15:51	1
N-Nitrosodi-n-propylamine	ND		0.25	0.071	mg/Kg	☼	09/25/18 07:04	09/26/18 15:51	1
N-Nitrosodiphenylamine	ND		0.76	0.16	mg/Kg	☼	09/25/18 07:04	09/26/18 15:51	1
Octachlorostyrene	ND		3.4	2.3	mg/Kg	☼	09/25/18 07:04	09/26/18 15:51	1
Pentachlorophenol	ND		0.84	0.35	mg/Kg	☼	09/25/18 07:04	09/26/18 15:51	1
Phenanthrene	ND		0.34	0.15	mg/Kg	☼	09/25/18 07:04	09/26/18 15:51	1
Phenol	ND		0.34	0.091	mg/Kg	☼	09/25/18 07:04	09/26/18 15:51	1
Pyrene	ND		0.34	0.14	mg/Kg	☼	09/25/18 07:04	09/26/18 15:51	1
Pyridine	ND		0.35	0.15	mg/Kg	☼	09/25/18 07:04	09/26/18 15:51	1
2,4,5-Trichlorophenol	ND		0.51	0.27	mg/Kg	☼	09/25/18 07:04	09/26/18 15:51	1
2,4,6-Trichlorophenol	ND		0.56	0.16	mg/Kg	☼	09/25/18 07:04	09/26/18 15:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	73		42 - 113	09/25/18 07:04	09/26/18 15:51	1
2-Fluorophenol (Surr)	65		18 - 138	09/25/18 07:04	09/26/18 15:51	1
Nitrobenzene-d5 (Surr)	65		39 - 104	09/25/18 07:04	09/26/18 15:51	1
Phenol-d6 (Surr)	61		37 - 125	09/25/18 07:04	09/26/18 15:51	1
Terphenyl-d14 (Surr)	87		43 - 125	09/25/18 07:04	09/26/18 15:51	1
2,4,6-Tribromophenol (Surr)	70		10 - 147	09/25/18 07:04	09/26/18 15:51	1

Method: 8015B - Gasoline Range Organics - (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
GRO (C6-C10)	ND		400	150	ug/Kg	☼		09/27/18 18:09	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		65 - 140		09/27/18 18:09	1

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		5.1	2.6	mg/Kg	☼	09/21/18 07:14	09/22/18 01:35	1
Oil Range Organics (C29-C40)	ND		5.1	2.6	mg/Kg	☼	09/21/18 07:14	09/22/18 01:35	1
EFH (C10-C40)	3.7	J	5.1	2.6	mg/Kg	☼	09/21/18 07:14	09/22/18 01:35	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
n-Octacosane	66		40 - 140	09/21/18 07:14	09/22/18 01:35	1

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		0.0051	0.0015	mg/Kg	☼	09/26/18 07:24	09/27/18 15:59	1
alpha-BHC	ND		0.0051	0.0015	mg/Kg	☼	09/26/18 07:24	09/27/18 15:59	1
cis-Chlordane	ND		0.0051	0.0020	mg/Kg	☼	09/26/18 07:24	09/27/18 15:59	1
beta-BHC	0.014		0.0051	0.0015	mg/Kg	☼	09/26/18 07:24	09/27/18 15:59	1
4,4'-DDD	ND		0.0051	0.0015	mg/Kg	☼	09/26/18 07:24	09/27/18 15:59	1
2,4'-DDE	0.028		0.0051	0.0015	mg/Kg	☼	09/26/18 07:24	09/27/18 15:59	1
4,4'-DDT	0.011		0.0051	0.0015	mg/Kg	☼	09/26/18 07:24	09/27/18 15:59	1
delta-BHC	ND		0.010	0.0015	mg/Kg	☼	09/26/18 07:24	09/27/18 15:59	1
Dieldrin	ND		0.0051	0.0015	mg/Kg	☼	09/26/18 07:24	09/27/18 15:59	1
Endosulfan I	ND		0.0051	0.0015	mg/Kg	☼	09/26/18 07:24	09/27/18 15:59	1

TestAmerica Irvine

Client Sample Results

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 440-220519-1

Client Sample ID: DSPE-5-0.0-20180919

Lab Sample ID: 440-220519-3

Date Collected: 09/19/18 15:15

Matrix: Solid

Date Received: 09/20/18 09:45

Percent Solids: 97.9

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Endosulfan II	ND		0.0051	0.0015	mg/Kg	☼	09/26/18 07:24	09/27/18 15:59	1
Endosulfan sulfate	ND		0.010	0.0020	mg/Kg	☼	09/26/18 07:24	09/27/18 15:59	1
Endrin	ND		0.0051	0.0015	mg/Kg	☼	09/26/18 07:24	09/27/18 15:59	1
Endrin aldehyde	ND		0.0051	0.0015	mg/Kg	☼	09/26/18 07:24	09/27/18 15:59	1
Endrin ketone	ND		0.0051	0.0020	mg/Kg	☼	09/26/18 07:24	09/27/18 15:59	1
gamma-BHC (Lindane)	ND		0.0051	0.0015	mg/Kg	☼	09/26/18 07:24	09/27/18 15:59	1
trans-Chlordane	ND		0.0051	0.0015	mg/Kg	☼	09/26/18 07:24	09/27/18 15:59	1
Heptachlor	ND		0.0051	0.0020	mg/Kg	☼	09/26/18 07:24	09/27/18 15:59	1
Heptachlor epoxide	ND		0.0051	0.0020	mg/Kg	☼	09/26/18 07:24	09/27/18 15:59	1
Methoxychlor	ND		0.0051	0.0015	mg/Kg	☼	09/26/18 07:24	09/27/18 15:59	1
Toxaphene	ND		0.20	0.051	mg/Kg	☼	09/26/18 07:24	09/27/18 15:59	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	197	X	45 - 120				09/26/18 07:24	09/27/18 15:59	1
Tetrachloro-m-xylene	63		35 - 115				09/26/18 07:24	09/27/18 15:59	1

Method: 8081A - Organochlorine Pesticides (GC) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDE	0.098		0.026	0.0077	mg/Kg	☼	09/26/18 07:24	10/01/18 22:39	5
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	203	X	45 - 120				09/26/18 07:24	10/01/18 22:39	5
Tetrachloro-m-xylene	59		35 - 115				09/26/18 07:24	10/01/18 22:39	5

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.20	0.070	mg/L		09/24/18 18:16	09/25/18 15:51	1
Barium	1.0		0.20	0.060	mg/L		09/24/18 18:16	09/25/18 15:51	1
Cadmium	ND		0.10	0.020	mg/L		09/24/18 18:16	09/25/18 15:51	1
Chromium	ND		0.10	0.020	mg/L		09/24/18 18:16	09/25/18 15:51	1
Lead	ND		0.10	0.040	mg/L		09/24/18 18:16	09/25/18 15:51	1
Selenium	ND		0.10	0.080	mg/L		09/24/18 18:16	09/25/18 15:51	1
Silver	ND		0.20	0.060	mg/L		09/24/18 18:16	09/25/18 15:51	1

Method: 7470A - Mercury (CVAA) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.0020	0.0010	mg/L		09/24/18 13:30	09/24/18 23:06	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	2.1		0.1	0.1	%			09/20/18 17:46	1

Client Sample ID: DSPE-5-1.0-20180919

Lab Sample ID: 440-220519-4

Date Collected: 09/19/18 15:23

Matrix: Solid

Date Received: 09/20/18 09:45

Percent Solids: 94.4

Method: 8260B/5030B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		0.021	0.0084	mg/Kg	☼		09/26/18 16:08	1
Benzene	ND		0.0011	0.00053	mg/Kg	☼		09/26/18 16:08	1
Bromobenzene	ND		0.0021	0.0011	mg/Kg	☼		09/26/18 16:08	1

TestAmerica Irvine

Client Sample Results

Client: Ramboll US Corporation
 Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 440-220519-1

Client Sample ID: DSPE-5-1.0-20180919

Lab Sample ID: 440-220519-4

Date Collected: 09/19/18 15:23

Matrix: Solid

Date Received: 09/20/18 09:45

Percent Solids: 94.4

Method: 8260B/5030B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromochloromethane	ND		0.0021	0.0011	mg/Kg	☼		09/26/18 16:08	1
Bromodichloromethane	ND		0.0011	0.00053	mg/Kg	☼		09/26/18 16:08	1
Bromoform	ND		0.0021	0.0011	mg/Kg	☼		09/26/18 16:08	1
Bromomethane	ND		0.0021	0.0011	mg/Kg	☼		09/26/18 16:08	1
2-Butanone (MEK)	ND		0.011	0.0053	mg/Kg	☼		09/26/18 16:08	1
Carbon tetrachloride	ND		0.0021	0.00053	mg/Kg	☼		09/26/18 16:08	1
Chlorobenzene	ND		0.0011	0.00053	mg/Kg	☼		09/26/18 16:08	1
Chloroethane	ND		0.0021	0.0011	mg/Kg	☼		09/26/18 16:08	1
Chloroform	ND		0.0011	0.00053	mg/Kg	☼		09/26/18 16:08	1
Chloromethane	ND		0.0021	0.0011	mg/Kg	☼		09/26/18 16:08	1
2-Chlorotoluene	ND		0.0021	0.0011	mg/Kg	☼		09/26/18 16:08	1
4-Chlorotoluene	ND		0.0021	0.0011	mg/Kg	☼		09/26/18 16:08	1
cis-1,2-Dichloroethene	ND		0.0011	0.00053	mg/Kg	☼		09/26/18 16:08	1
cis-1,3-Dichloropropene	ND		0.0011	0.00053	mg/Kg	☼		09/26/18 16:08	1
Dibromochloromethane	ND		0.0011	0.00053	mg/Kg	☼		09/26/18 16:08	1
1,2-Dibromo-3-Chloropropane	ND		0.0053	0.0021	mg/Kg	☼		09/26/18 16:08	1
1,2-Dibromoethane (EDB)	ND		0.0011	0.00053	mg/Kg	☼		09/26/18 16:08	1
Dibromomethane	ND		0.0011	0.00053	mg/Kg	☼		09/26/18 16:08	1
1,2-Dichlorobenzene	ND		0.0011	0.00053	mg/Kg	☼		09/26/18 16:08	1
1,3-Dichlorobenzene	ND		0.0011	0.00053	mg/Kg	☼		09/26/18 16:08	1
1,4-Dichlorobenzene	ND		0.0011	0.00053	mg/Kg	☼		09/26/18 16:08	1
Dichlorodifluoromethane	ND		0.0021	0.0011	mg/Kg	☼		09/26/18 16:08	1
1,1-Dichloroethane	ND		0.0011	0.00053	mg/Kg	☼		09/26/18 16:08	1
1,2-Dichloroethane	ND		0.0011	0.00053	mg/Kg	☼		09/26/18 16:08	1
1,1-Dichloroethene	ND		0.0021	0.00053	mg/Kg	☼		09/26/18 16:08	1
1,2-Dichloropropane	ND		0.0011	0.00053	mg/Kg	☼		09/26/18 16:08	1
1,3-Dichloropropane	ND		0.0011	0.00053	mg/Kg	☼		09/26/18 16:08	1
2,2-Dichloropropane	ND		0.0021	0.0011	mg/Kg	☼		09/26/18 16:08	1
1,1-Dichloropropene	ND		0.0011	0.00053	mg/Kg	☼		09/26/18 16:08	1
Ethylbenzene	ND		0.0011	0.00053	mg/Kg	☼		09/26/18 16:08	1
Ethyl-t-butyl ether (ETBE)	ND		0.0021	0.0011	mg/Kg	☼		09/26/18 16:08	1
Hexachlorobutadiene	ND		0.0021	0.0011	mg/Kg	☼		09/26/18 16:08	1
2-Hexanone	ND		0.011	0.0053	mg/Kg	☼		09/26/18 16:08	1
Isopropylbenzene	ND		0.0011	0.00053	mg/Kg	☼		09/26/18 16:08	1
Isopropyl Ether (DIPE)	ND		0.0021	0.0011	mg/Kg	☼		09/26/18 16:08	1
Methylene Chloride	ND		0.011	0.0053	mg/Kg	☼		09/26/18 16:08	1
4-Methyl-2-pentanone (MIBK)	ND		0.0053	0.0026	mg/Kg	☼		09/26/18 16:08	1
Methyl-t-Butyl Ether (MTBE)	ND		0.0021	0.0011	mg/Kg	☼		09/26/18 16:08	1
m,p-Xylene	ND		0.0021	0.0011	mg/Kg	☼		09/26/18 16:08	1
Naphthalene	ND		0.0021	0.0011	mg/Kg	☼		09/26/18 16:08	1
n-Butylbenzene	ND		0.0021	0.0011	mg/Kg	☼		09/26/18 16:08	1
N-Propylbenzene	ND		0.0011	0.00053	mg/Kg	☼		09/26/18 16:08	1
o-Xylene	ND		0.0011	0.00053	mg/Kg	☼		09/26/18 16:08	1
p-Isopropyltoluene	ND		0.0011	0.00053	mg/Kg	☼		09/26/18 16:08	1
sec-Butylbenzene	ND		0.0021	0.0011	mg/Kg	☼		09/26/18 16:08	1
Styrene	ND		0.0011	0.00053	mg/Kg	☼		09/26/18 16:08	1
Tert-amyl-methyl ether (TAME)	ND		0.0021	0.0011	mg/Kg	☼		09/26/18 16:08	1
tert-Butyl alcohol (TBA)	ND		0.053	0.011	mg/Kg	☼		09/26/18 16:08	1
tert-Butylbenzene	ND		0.0021	0.0011	mg/Kg	☼		09/26/18 16:08	1

TestAmerica Irvine

Client Sample Results

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 440-220519-1

Client Sample ID: DSPE-5-1.0-20180919

Lab Sample ID: 440-220519-4

Date Collected: 09/19/18 15:23

Matrix: Solid

Date Received: 09/20/18 09:45

Percent Solids: 94.4

Method: 8260B/5030B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.0021	0.0011	mg/Kg	☼		09/26/18 16:08	1
1,1,2,2-Tetrachloroethane	ND		0.0021	0.0011	mg/Kg	☼		09/26/18 16:08	1
Tetrachloroethene	ND		0.0011	0.00053	mg/Kg	☼		09/26/18 16:08	1
Toluene	ND		0.0011	0.00053	mg/Kg	☼		09/26/18 16:08	1
trans-1,2-Dichloroethene	ND		0.0011	0.00053	mg/Kg	☼		09/26/18 16:08	1
trans-1,3-Dichloropropene	ND		0.0011	0.00053	mg/Kg	☼		09/26/18 16:08	1
1,2,3-Trichlorobenzene	ND		0.0021	0.0011	mg/Kg	☼		09/26/18 16:08	1
1,2,4-Trichlorobenzene	ND		0.0053	0.0011	mg/Kg	☼		09/26/18 16:08	1
1,1,1-Trichloroethane	ND		0.0011	0.00053	mg/Kg	☼		09/26/18 16:08	1
1,1,2-Trichloroethane	ND		0.0011	0.00053	mg/Kg	☼		09/26/18 16:08	1
Trichloroethene	ND		0.0011	0.00053	mg/Kg	☼		09/26/18 16:08	1
Trichlorofluoromethane	ND		0.0021	0.0011	mg/Kg	☼		09/26/18 16:08	1
1,2,3-Trichloropropane	ND		0.011	0.0011	mg/Kg	☼		09/26/18 16:08	1
1,2,4-Trimethylbenzene	ND		0.0021	0.0011	mg/Kg	☼		09/26/18 16:08	1
1,3,5-Trimethylbenzene	ND		0.0021	0.0011	mg/Kg	☼		09/26/18 16:08	1
Vinyl chloride	ND		0.0021	0.0011	mg/Kg	☼		09/26/18 16:08	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	85		79 - 120					09/26/18 16:08	1
Dibromofluoromethane (Surr)	91		60 - 120					09/26/18 16:08	1
Toluene-d8 (Surr)	93		79 - 123					09/26/18 16:08	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.37	0.19	mg/Kg	☼	09/25/18 07:04	09/26/18 16:17	1
Acenaphthylene	ND		0.35	0.074	mg/Kg	☼	09/25/18 07:04	09/26/18 16:17	1
Aniline	ND		1.1	0.15	mg/Kg	☼	09/25/18 07:04	09/26/18 16:17	1
Anthracene	ND		0.35	0.085	mg/Kg	☼	09/25/18 07:04	09/26/18 16:17	1
Benzidine	ND	*	2.2	0.18	mg/Kg	☼	09/25/18 07:04	09/26/18 16:17	1
Benzo[a]anthracene	ND		0.35	0.074	mg/Kg	☼	09/25/18 07:04	09/26/18 16:17	1
Benzo[a]pyrene	ND		0.35	0.071	mg/Kg	☼	09/25/18 07:04	09/26/18 16:17	1
Benzo[b]fluoranthene	ND		0.35	0.074	mg/Kg	☼	09/25/18 07:04	09/26/18 16:17	1
Benzo[g,h,i]perylene	ND		0.35	0.12	mg/Kg	☼	09/25/18 07:04	09/26/18 16:17	1
Benzoic acid	ND		1.0	0.50	mg/Kg	☼	09/25/18 07:04	09/26/18 16:17	1
Benzo[k]fluoranthene	ND		0.35	0.074	mg/Kg	☼	09/25/18 07:04	09/26/18 16:17	1
Benzyl alcohol	ND		3.6	0.43	mg/Kg	☼	09/25/18 07:04	09/26/18 16:17	1
Bis(2-chloroethoxy)methane	ND		0.35	0.14	mg/Kg	☼	09/25/18 07:04	09/26/18 16:17	1
Bis(2-chloroethyl)ether	ND		0.35	0.074	mg/Kg	☼	09/25/18 07:04	09/26/18 16:17	1
Bis(2-ethylhexyl) phthalate	ND		0.35	0.095	mg/Kg	☼	09/25/18 07:04	09/26/18 16:17	1
4-Bromophenyl phenyl ether	ND		0.35	0.079	mg/Kg	☼	09/25/18 07:04	09/26/18 16:17	1
Butyl benzyl phthalate	ND		0.35	0.085	mg/Kg	☼	09/25/18 07:04	09/26/18 16:17	1
4-Chloroaniline	ND		1.1	0.16	mg/Kg	☼	09/25/18 07:04	09/26/18 16:17	1
4-Chloro-3-methylphenol	ND		0.42	0.21	mg/Kg	☼	09/25/18 07:04	09/26/18 16:17	1
2-Chloronaphthalene	ND		0.35	0.071	mg/Kg	☼	09/25/18 07:04	09/26/18 16:17	1
2-Chlorophenol	ND		0.35	0.074	mg/Kg	☼	09/25/18 07:04	09/26/18 16:17	1
4-Chlorophenyl phenyl ether	ND		1.2	0.21	mg/Kg	☼	09/25/18 07:04	09/26/18 16:17	1
Chrysene	ND		0.35	0.079	mg/Kg	☼	09/25/18 07:04	09/26/18 16:17	1
Dibenz(a,h)anthracene	ND		0.44	0.11	mg/Kg	☼	09/25/18 07:04	09/26/18 16:17	1
Dibenzofuran	ND		0.35	0.15	mg/Kg	☼	09/25/18 07:04	09/26/18 16:17	1
3,3'-Dichlorobenzidine	ND		0.88	0.16	mg/Kg	☼	09/25/18 07:04	09/26/18 16:17	1

TestAmerica Irvine

Client Sample Results

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 440-220519-1

Client Sample ID: DSPE-5-1.0-20180919

Lab Sample ID: 440-220519-4

Date Collected: 09/19/18 15:23

Matrix: Solid

Date Received: 09/20/18 09:45

Percent Solids: 94.4

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenol	ND		0.35	0.071	mg/Kg	☼	09/25/18 07:04	09/26/18 16:17	1
Diethyl phthalate	ND		0.35	0.10	mg/Kg	☼	09/25/18 07:04	09/26/18 16:17	1
2,4-Dimethylphenol	ND		0.35	0.14	mg/Kg	☼	09/25/18 07:04	09/26/18 16:17	1
Dimethyl phthalate	ND		0.35	0.071	mg/Kg	☼	09/25/18 07:04	09/26/18 16:17	1
Di-n-butyl phthalate	ND		0.35	0.095	mg/Kg	☼	09/25/18 07:04	09/26/18 16:17	1
2,4-Dinitrophenol	ND		2.1	1.1	mg/Kg	☼	09/25/18 07:04	09/26/18 16:17	1
2,4-Dinitrotoluene	ND		0.35	0.085	mg/Kg	☼	09/25/18 07:04	09/26/18 16:17	1
2,6-Dinitrotoluene	ND		0.35	0.10	mg/Kg	☼	09/25/18 07:04	09/26/18 16:17	1
Di-n-octyl phthalate	ND		0.35	0.095	mg/Kg	☼	09/25/18 07:04	09/26/18 16:17	1
Fluoranthene	ND		0.35	0.17	mg/Kg	☼	09/25/18 07:04	09/26/18 16:17	1
Fluorene	ND		0.35	0.074	mg/Kg	☼	09/25/18 07:04	09/26/18 16:17	1
Hexachlorobenzene	ND		0.35	0.074	mg/Kg	☼	09/25/18 07:04	09/26/18 16:17	1
Hexachlorocyclopentadiene	ND		0.88	0.33	mg/Kg	☼	09/25/18 07:04	09/26/18 16:17	1
Hexachloroethane	ND		0.35	0.074	mg/Kg	☼	09/25/18 07:04	09/26/18 16:17	1
Indeno[1,2,3-cd]pyrene	ND		0.35	0.14	mg/Kg	☼	09/25/18 07:04	09/26/18 16:17	1
Isophorone	ND		0.35	0.071	mg/Kg	☼	09/25/18 07:04	09/26/18 16:17	1
1-Methylnaphthalene	ND		0.37	0.16	mg/Kg	☼	09/25/18 07:04	09/26/18 16:17	1
2-Methylnaphthalene	ND		0.35	0.074	mg/Kg	☼	09/25/18 07:04	09/26/18 16:17	1
2-Methylphenol	ND		0.35	0.085	mg/Kg	☼	09/25/18 07:04	09/26/18 16:17	1
3-Methylphenol + 4-Methylphenol	ND		0.35	0.14	mg/Kg	☼	09/25/18 07:04	09/26/18 16:17	1
Naphthalene	ND		0.35	0.071	mg/Kg	☼	09/25/18 07:04	09/26/18 16:17	1
2-Nitroaniline	ND		0.35	0.18	mg/Kg	☼	09/25/18 07:04	09/26/18 16:17	1
3-Nitroaniline	ND		0.35	0.14	mg/Kg	☼	09/25/18 07:04	09/26/18 16:17	1
4-Nitroaniline	ND		0.88	0.14	mg/Kg	☼	09/25/18 07:04	09/26/18 16:17	1
Nitrobenzene	ND		0.35	0.074	mg/Kg	☼	09/25/18 07:04	09/26/18 16:17	1
2-Nitrophenol	ND		0.35	0.14	mg/Kg	☼	09/25/18 07:04	09/26/18 16:17	1
4-Nitrophenol	ND		3.1	0.53	mg/Kg	☼	09/25/18 07:04	09/26/18 16:17	1
N-Nitrosodi-n-propylamine	ND		0.26	0.074	mg/Kg	☼	09/25/18 07:04	09/26/18 16:17	1
N-Nitrosodiphenylamine	ND		0.79	0.17	mg/Kg	☼	09/25/18 07:04	09/26/18 16:17	1
Octachlorostyrene	ND		3.5	2.4	mg/Kg	☼	09/25/18 07:04	09/26/18 16:17	1
Pentachlorophenol	ND		0.88	0.36	mg/Kg	☼	09/25/18 07:04	09/26/18 16:17	1
Phenanthrene	ND		0.35	0.16	mg/Kg	☼	09/25/18 07:04	09/26/18 16:17	1
Phenol	ND		0.35	0.095	mg/Kg	☼	09/25/18 07:04	09/26/18 16:17	1
Pyrene	ND		0.35	0.14	mg/Kg	☼	09/25/18 07:04	09/26/18 16:17	1
Pyridine	ND		0.36	0.16	mg/Kg	☼	09/25/18 07:04	09/26/18 16:17	1
2,4,5-Trichlorophenol	ND		0.53	0.28	mg/Kg	☼	09/25/18 07:04	09/26/18 16:17	1
2,4,6-Trichlorophenol	ND		0.58	0.17	mg/Kg	☼	09/25/18 07:04	09/26/18 16:17	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	69		42 - 113	09/25/18 07:04	09/26/18 16:17	1
2-Fluorophenol (Surr)	59		18 - 138	09/25/18 07:04	09/26/18 16:17	1
Nitrobenzene-d5 (Surr)	62		39 - 104	09/25/18 07:04	09/26/18 16:17	1
Phenol-d6 (Surr)	56		37 - 125	09/25/18 07:04	09/26/18 16:17	1
Terphenyl-d14 (Surr)	78		43 - 125	09/25/18 07:04	09/26/18 16:17	1
2,4,6-Tribromophenol (Surr)	63		10 - 147	09/25/18 07:04	09/26/18 16:17	1

Method: 8015B - Gasoline Range Organics - (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
GRO (C6-C10)	ND		420	160	ug/Kg	☼		09/27/18 18:36	1

TestAmerica Irvine

Client Sample Results

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 440-220519-1

Client Sample ID: DSPE-5-1.0-20180919

Lab Sample ID: 440-220519-4

Date Collected: 09/19/18 15:23

Matrix: Solid

Date Received: 09/20/18 09:45

Percent Solids: 94.4

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	92		65 - 140		09/27/18 18:36	1

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		5.3	2.6	mg/Kg	☼	09/21/18 07:14	09/22/18 02:36	1
Oil Range Organics (C29-C40)	ND		5.3	2.6	mg/Kg	☼	09/21/18 07:14	09/22/18 02:36	1
EFH (C10-C40)	4.8	J	5.3	2.6	mg/Kg	☼	09/21/18 07:14	09/22/18 02:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
n-Octacosane	85		40 - 140	09/21/18 07:14	09/22/18 02:36	1

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		0.0053	0.0016	mg/Kg	☼	10/02/18 06:30	10/02/18 18:36	1
alpha-BHC	ND		0.0053	0.0016	mg/Kg	☼	10/02/18 06:30	10/02/18 18:36	1
cis-Chlordane	ND		0.0053	0.0021	mg/Kg	☼	10/02/18 06:30	10/02/18 18:36	1
beta-BHC	ND		0.0053	0.0016	mg/Kg	☼	10/02/18 06:30	10/02/18 18:36	1
4,4'-DDD	ND		0.0053	0.0016	mg/Kg	☼	10/02/18 06:30	10/02/18 18:36	1
2,4'-DDE	ND		0.0053	0.0016	mg/Kg	☼	10/02/18 06:30	10/02/18 18:36	1
4,4'-DDE	0.0032	J F1	0.0053	0.0016	mg/Kg	☼	10/02/18 06:30	10/02/18 18:36	1
4,4'-DDT	ND		0.0053	0.0016	mg/Kg	☼	10/02/18 06:30	10/02/18 18:36	1
delta-BHC	ND		0.011	0.0016	mg/Kg	☼	10/02/18 06:30	10/02/18 18:36	1
Dieldrin	ND		0.0053	0.0016	mg/Kg	☼	10/02/18 06:30	10/02/18 18:36	1
Endosulfan I	ND		0.0053	0.0016	mg/Kg	☼	10/02/18 06:30	10/02/18 18:36	1
Endosulfan II	ND		0.0053	0.0016	mg/Kg	☼	10/02/18 06:30	10/02/18 18:36	1
Endosulfan sulfate	ND		0.011	0.0021	mg/Kg	☼	10/02/18 06:30	10/02/18 18:36	1
Endrin	ND		0.0053	0.0016	mg/Kg	☼	10/02/18 06:30	10/02/18 18:36	1
Endrin aldehyde	ND		0.0053	0.0016	mg/Kg	☼	10/02/18 06:30	10/02/18 18:36	1
Endrin ketone	ND		0.0053	0.0021	mg/Kg	☼	10/02/18 06:30	10/02/18 18:36	1
gamma-BHC (Lindane)	ND		0.0053	0.0016	mg/Kg	☼	10/02/18 06:30	10/02/18 18:36	1
trans-Chlordane	ND		0.0053	0.0016	mg/Kg	☼	10/02/18 06:30	10/02/18 18:36	1
Heptachlor	ND		0.0053	0.0021	mg/Kg	☼	10/02/18 06:30	10/02/18 18:36	1
Heptachlor epoxide	ND		0.0053	0.0021	mg/Kg	☼	10/02/18 06:30	10/02/18 18:36	1
Methoxychlor	ND		0.0053	0.0016	mg/Kg	☼	10/02/18 06:30	10/02/18 18:36	1
Toxaphene	ND		0.21	0.053	mg/Kg	☼	10/02/18 06:30	10/02/18 18:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	92		45 - 120	10/02/18 06:30	10/02/18 18:36	1
Tetrachloro-m-xylene	78		35 - 115	10/02/18 06:30	10/02/18 18:36	1

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.20	0.070	mg/L		09/24/18 18:16	09/25/18 15:58	1
Barium	0.64		0.20	0.060	mg/L		09/24/18 18:16	09/25/18 15:58	1
Cadmium	ND		0.10	0.020	mg/L		09/24/18 18:16	09/25/18 15:58	1
Chromium	0.020	J	0.10	0.020	mg/L		09/24/18 18:16	09/25/18 15:58	1
Lead	ND		0.10	0.040	mg/L		09/24/18 18:16	09/25/18 15:58	1
Selenium	ND		0.10	0.080	mg/L		09/24/18 18:16	09/25/18 15:58	1
Silver	ND		0.20	0.060	mg/L		09/24/18 18:16	09/25/18 15:58	1

TestAmerica Irvine

Client Sample Results

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 440-220519-1

Client Sample ID: DSPE-5-1.0-20180919

Lab Sample ID: 440-220519-4

Date Collected: 09/19/18 15:23

Matrix: Solid

Date Received: 09/20/18 09:45

Percent Solids: 94.4

Method: 7470A - Mercury (CVAA) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.0020	0.0010	mg/L		09/24/18 13:30	09/24/18 23:08	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	5.6		0.1	0.1	%			09/20/18 17:46	1

Method Summary

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 440-220519-1

Method	Method Description	Protocol	Laboratory
8260B/5030B	Volatile Organic Compounds (GC/MS)	SW846	TAL IRV
8270C	Semivolatile Organic Compounds (GC/MS)	SW846	TAL IRV
8015B	Gasoline Range Organics - (GC)	SW846	TAL IRV
8015B	Diesel Range Organics (DRO) (GC)	SW846	TAL IRV
8081A	Organochlorine Pesticides (GC)	SW846	TAL IRV
6010B	Metals (ICP)	SW846	TAL IRV
7470A	Mercury (CVAA)	SW846	TAL IRV
Moisture	Percent Moisture	EPA	TAL IRV
1311	TCLP Extraction	SW846	TAL IRV
3010A	Preparation, Total Metals	SW846	TAL IRV
3546	Microwave Extraction	SW846	TAL IRV
5030B	Purge and Trap	SW846	TAL IRV
7470A	Preparation, Mercury	SW846	TAL IRV

Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL IRV = TestAmerica Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

Lab Chronicle

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 440-220519-1

Client Sample ID: DSPE-4-0.0-20180919

Lab Sample ID: 440-220519-1

Date Collected: 09/19/18 14:15

Matrix: Solid

Date Received: 09/20/18 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			99.96 g	2000 mL	500563	09/22/18 14:48	CDH	TAL IRV
TCLP	Prep	3010A			5 mL	50 mL	500849	09/24/18 18:16	CDH	TAL IRV
TCLP	Analysis	6010B		1			501067	09/25/18 15:36	P1R	TAL IRV
TCLP	Leach	1311			99.96 g	2000 mL	500563	09/22/18 14:48	CDH	TAL IRV
TCLP	Prep	7470A			2 mL	20 mL	500773	09/24/18 13:30	DB	TAL IRV
TCLP	Analysis	7470A		1			500999	09/25/18 09:40	DB	TAL IRV
Total/NA	Analysis	Moisture		1			500252	09/20/18 17:46	KM	TAL IRV

Client Sample ID: DSPE-4-0.0-20180919

Lab Sample ID: 440-220519-1

Date Collected: 09/19/18 14:15

Matrix: Solid

Date Received: 09/20/18 09:45

Percent Solids: 98.7

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/5030B		1	5.02 g	10 mL	501141	09/26/18 14:47	AYL	TAL IRV
Total/NA	Analysis	8260B/5030B	RA	1	5.02 g	10 mL	501419	09/27/18 17:25	HR	TAL IRV
Total/NA	Prep	3546			20.01 g	1 mL	500904	09/25/18 07:04	FTD	TAL IRV
Total/NA	Analysis	8270C		1			500988	09/25/18 15:37	L1B	TAL IRV
Total/NA	Prep	3546	RA		20.01 g	1 mL	500904	09/25/18 07:04	FTD	TAL IRV
Total/NA	Analysis	8270C	RA	1			501240	09/26/18 15:01	L1B	TAL IRV
Total/NA	Analysis	8015B		1	4.98 g	10 mL	501450	09/27/18 17:16	YCL	TAL IRV
Total/NA	Prep	3546			15.09 g	1 mL	500329	09/21/18 07:14	FTD	TAL IRV
Total/NA	Analysis	8015B		1			500376	09/21/18 22:51	LMB	TAL IRV
Total/NA	Prep	3546			15.04 g	2 mL	501153	09/26/18 07:24	L1A	TAL IRV
Total/NA	Analysis	8081A		1			501443	09/27/18 16:54	IVA	TAL IRV
Total/NA	Prep	3546	DL		15.04 g	2 mL	501153	09/26/18 07:24	L1A	TAL IRV
Total/NA	Analysis	8081A	DL	5			502186	10/01/18 21:44	D1D	TAL IRV

Client Sample ID: DSPE-4-1.0-20190919

Lab Sample ID: 440-220519-2

Date Collected: 09/19/18 14:30

Matrix: Solid

Date Received: 09/20/18 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			99.92 g	2000 mL	500563	09/22/18 14:48	CDH	TAL IRV
TCLP	Prep	3010A			5 mL	50 mL	500849	09/24/18 18:16	CDH	TAL IRV
TCLP	Analysis	6010B		1			501067	09/25/18 15:48	P1R	TAL IRV
TCLP	Leach	1311			99.92 g	2000 mL	500563	09/22/18 14:48	CDH	TAL IRV
TCLP	Prep	7470A			2 mL	20 mL	500773	09/24/18 13:30	DB	TAL IRV
TCLP	Analysis	7470A		1			501004	09/24/18 23:04	DB	TAL IRV
Total/NA	Analysis	Moisture		1			500252	09/20/18 17:46	KM	TAL IRV

Lab Chronicle

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 440-220519-1

Client Sample ID: DSPE-4-1.0-20190919

Lab Sample ID: 440-220519-2

Date Collected: 09/19/18 14:30

Matrix: Solid

Date Received: 09/20/18 09:45

Percent Solids: 94.4

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/5030B		1	5 g	10 mL	501141	09/26/18 15:14	AYL	TAL IRV
Total/NA	Prep	3546			20.05 g	1 mL	500904	09/25/18 07:04	FTD	TAL IRV
Total/NA	Analysis	8270C		1			501240	09/26/18 15:26	L1B	TAL IRV
Total/NA	Prep	3546	DL		20.05 g	1 mL	500904	09/25/18 07:04	FTD	TAL IRV
Total/NA	Analysis	8270C	DL	5			501446	09/27/18 17:31	L1B	TAL IRV
Total/NA	Analysis	8015B		1	4.98 g	10 mL	501450	09/27/18 17:43	YCL	TAL IRV
Total/NA	Prep	3546			15.02 g	1 mL	500329	09/21/18 07:14	FTD	TAL IRV
Total/NA	Analysis	8015B		1			500376	09/21/18 23:11	LMB	TAL IRV
Total/NA	Prep	3546			15.09 g	2 mL	501153	09/26/18 07:24	L1A	TAL IRV
Total/NA	Analysis	8081A		1			501443	09/27/18 17:21	IVA	TAL IRV
Total/NA	Prep	3546	DL		15.09 g	2 mL	501153	09/26/18 07:24	L1A	TAL IRV
Total/NA	Analysis	8081A	DL	5			502186	10/01/18 22:11	D1D	TAL IRV

Client Sample ID: DSPE-5-0.0-20180919

Lab Sample ID: 440-220519-3

Date Collected: 09/19/18 15:15

Matrix: Solid

Date Received: 09/20/18 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			99.98 g	2000 mL	500563	09/22/18 14:48	CDH	TAL IRV
TCLP	Prep	3010A			5 mL	50 mL	500849	09/24/18 18:16	CDH	TAL IRV
TCLP	Analysis	6010B		1			501067	09/25/18 15:51	P1R	TAL IRV
TCLP	Leach	1311			99.98 g	2000 mL	500563	09/22/18 14:48	CDH	TAL IRV
TCLP	Prep	7470A			2 mL	20 mL	500773	09/24/18 13:30	DB	TAL IRV
TCLP	Analysis	7470A		1			501004	09/24/18 23:06	DB	TAL IRV
Total/NA	Analysis	Moisture		1			500252	09/20/18 17:46	KM	TAL IRV

Client Sample ID: DSPE-5-0.0-20180919

Lab Sample ID: 440-220519-3

Date Collected: 09/19/18 15:15

Matrix: Solid

Date Received: 09/20/18 09:45

Percent Solids: 97.9

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/5030B		1	5.02 g	10 mL	501141	09/26/18 15:41	AYL	TAL IRV
Total/NA	Prep	3546			20.11 g	1 mL	500904	09/25/18 07:04	FTD	TAL IRV
Total/NA	Analysis	8270C		1			501240	09/26/18 15:51	L1B	TAL IRV
Total/NA	Analysis	8015B		1	5.11 g	10 mL	501450	09/27/18 18:09	YCL	TAL IRV
Total/NA	Prep	3546			15.01 g	1 mL	500329	09/21/18 07:14	FTD	TAL IRV
Total/NA	Analysis	8015B		1			500376	09/22/18 01:35	LMB	TAL IRV
Total/NA	Prep	3546			15.01 g	2 mL	501153	09/26/18 07:24	L1A	TAL IRV
Total/NA	Analysis	8081A		1			501443	09/27/18 15:59	IVA	TAL IRV
Total/NA	Prep	3546	DL		15.01 g	2 mL	501153	09/26/18 07:24	L1A	TAL IRV
Total/NA	Analysis	8081A	DL	5			502186	10/01/18 22:39	D1D	TAL IRV

TestAmerica Irvine

Lab Chronicle

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 440-220519-1

Client Sample ID: DSPE-5-1.0-20180919

Lab Sample ID: 440-220519-4

Date Collected: 09/19/18 15:23

Matrix: Solid

Date Received: 09/20/18 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			99.98 g	2000 mL	500563	09/22/18 14:48	CDH	TAL IRV
TCLP	Prep	3010A			5 mL	50 mL	500849	09/24/18 18:16	CDH	TAL IRV
TCLP	Analysis	6010B		1			501067	09/25/18 15:58	P1R	TAL IRV
TCLP	Leach	1311			99.98 g	2000 mL	500563	09/22/18 14:48	CDH	TAL IRV
TCLP	Prep	7470A			2 mL	20 mL	500773	09/24/18 13:30	DB	TAL IRV
TCLP	Analysis	7470A		1			501004	09/24/18 23:08	DB	TAL IRV
Total/NA	Analysis	Moisture		1			500252	09/20/18 17:46	KM	TAL IRV

Client Sample ID: DSPE-5-1.0-20180919

Lab Sample ID: 440-220519-4

Date Collected: 09/19/18 15:23

Matrix: Solid

Date Received: 09/20/18 09:45

Percent Solids: 94.4

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/5030B		1	5.03 g	10 mL	501141	09/26/18 16:08	AYL	TAL IRV
Total/NA	Prep	3546			20.02 g	1 mL	500904	09/25/18 07:04	FTD	TAL IRV
Total/NA	Analysis	8270C		1			501240	09/26/18 16:17	L1B	TAL IRV
Total/NA	Analysis	8015B		1	5.02 g	10 mL	501450	09/27/18 18:36	YCL	TAL IRV
Total/NA	Prep	3546			15.09 g	1 mL	500329	09/21/18 07:14	FTD	TAL IRV
Total/NA	Analysis	8015B		1			500376	09/22/18 02:36	LMB	TAL IRV
Total/NA	Prep	3546			15.00 g	2 mL	502340	10/02/18 06:30	L1A	TAL IRV
Total/NA	Analysis	8081A		1			502496	10/02/18 18:36	D1D	TAL IRV

Laboratory References:

TAL IRV = TestAmerica Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

QC Sample Results

Client: Ramboll US Corporation
 Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 440-220519-1

Method: 8260B/5030B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 440-501141/4
Matrix: Solid
Analysis Batch: 501141

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		0.020	0.0080	mg/Kg			09/26/18 08:18	1
Benzene	ND		0.0010	0.00050	mg/Kg			09/26/18 08:18	1
Bromobenzene	ND		0.0020	0.0010	mg/Kg			09/26/18 08:18	1
Bromochloromethane	ND		0.0020	0.0010	mg/Kg			09/26/18 08:18	1
Bromodichloromethane	ND		0.0010	0.00050	mg/Kg			09/26/18 08:18	1
Bromoform	ND		0.0020	0.0010	mg/Kg			09/26/18 08:18	1
Bromomethane	ND		0.0020	0.0010	mg/Kg			09/26/18 08:18	1
2-Butanone (MEK)	ND		0.010	0.0050	mg/Kg			09/26/18 08:18	1
Carbon tetrachloride	ND		0.0020	0.00050	mg/Kg			09/26/18 08:18	1
Chlorobenzene	ND		0.0010	0.00050	mg/Kg			09/26/18 08:18	1
Chloroethane	ND		0.0020	0.0010	mg/Kg			09/26/18 08:18	1
Chloroform	ND		0.0010	0.00050	mg/Kg			09/26/18 08:18	1
Chloromethane	ND		0.0020	0.0010	mg/Kg			09/26/18 08:18	1
2-Chlorotoluene	ND		0.0020	0.0010	mg/Kg			09/26/18 08:18	1
4-Chlorotoluene	ND		0.0020	0.0010	mg/Kg			09/26/18 08:18	1
cis-1,2-Dichloroethene	ND		0.0010	0.00050	mg/Kg			09/26/18 08:18	1
cis-1,3-Dichloropropene	ND		0.0010	0.00050	mg/Kg			09/26/18 08:18	1
Dibromochloromethane	ND		0.0010	0.00050	mg/Kg			09/26/18 08:18	1
1,2-Dibromo-3-Chloropropane	ND		0.0050	0.0020	mg/Kg			09/26/18 08:18	1
1,2-Dibromoethane (EDB)	ND		0.0010	0.00050	mg/Kg			09/26/18 08:18	1
Dibromomethane	ND		0.0010	0.00050	mg/Kg			09/26/18 08:18	1
1,2-Dichlorobenzene	ND		0.0010	0.00050	mg/Kg			09/26/18 08:18	1
1,3-Dichlorobenzene	ND		0.0010	0.00050	mg/Kg			09/26/18 08:18	1
1,4-Dichlorobenzene	ND		0.0010	0.00050	mg/Kg			09/26/18 08:18	1
Dichlorodifluoromethane	ND		0.0020	0.0010	mg/Kg			09/26/18 08:18	1
1,1-Dichloroethane	ND		0.0010	0.00050	mg/Kg			09/26/18 08:18	1
1,2-Dichloroethane	ND		0.0010	0.00050	mg/Kg			09/26/18 08:18	1
1,1-Dichloroethene	ND		0.0020	0.00050	mg/Kg			09/26/18 08:18	1
1,2-Dichloropropane	ND		0.0010	0.00050	mg/Kg			09/26/18 08:18	1
1,3-Dichloropropane	ND		0.0010	0.00050	mg/Kg			09/26/18 08:18	1
2,2-Dichloropropane	ND		0.0020	0.0010	mg/Kg			09/26/18 08:18	1
1,1-Dichloropropene	ND		0.0010	0.00050	mg/Kg			09/26/18 08:18	1
Ethylbenzene	ND		0.0010	0.00050	mg/Kg			09/26/18 08:18	1
Ethyl-t-butyl ether (ETBE)	ND		0.0020	0.0010	mg/Kg			09/26/18 08:18	1
Hexachlorobutadiene	ND		0.0020	0.0010	mg/Kg			09/26/18 08:18	1
2-Hexanone	ND		0.010	0.0050	mg/Kg			09/26/18 08:18	1
Isopropylbenzene	ND		0.0010	0.00050	mg/Kg			09/26/18 08:18	1
Isopropyl Ether (DIPE)	ND		0.0020	0.0010	mg/Kg			09/26/18 08:18	1
Methylene Chloride	ND		0.010	0.0050	mg/Kg			09/26/18 08:18	1
4-Methyl-2-pentanone (MIBK)	ND		0.0050	0.0025	mg/Kg			09/26/18 08:18	1
Methyl-t-Butyl Ether (MTBE)	ND		0.0020	0.0010	mg/Kg			09/26/18 08:18	1
m,p-Xylene	ND		0.0020	0.0010	mg/Kg			09/26/18 08:18	1
Naphthalene	ND		0.0020	0.0010	mg/Kg			09/26/18 08:18	1
n-Butylbenzene	ND		0.0020	0.0010	mg/Kg			09/26/18 08:18	1
N-Propylbenzene	ND		0.0010	0.00050	mg/Kg			09/26/18 08:18	1
o-Xylene	ND		0.0010	0.00050	mg/Kg			09/26/18 08:18	1
p-Isopropyltoluene	ND		0.0010	0.00050	mg/Kg			09/26/18 08:18	1
sec-Butylbenzene	ND		0.0020	0.0010	mg/Kg			09/26/18 08:18	1

TestAmerica Irvine

QC Sample Results

Client: Ramboll US Corporation
 Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 440-220519-1

Method: 8260B/5030B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 440-501141/4
Matrix: Solid
Analysis Batch: 501141

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Styrene	ND		0.0010	0.00050	mg/Kg			09/26/18 08:18	1
Tert-amyl-methyl ether (TAME)	ND		0.0020	0.0010	mg/Kg			09/26/18 08:18	1
tert-Butyl alcohol (TBA)	ND		0.050	0.010	mg/Kg			09/26/18 08:18	1
tert-Butylbenzene	ND		0.0020	0.0010	mg/Kg			09/26/18 08:18	1
1,1,1,2-Tetrachloroethane	ND		0.0020	0.0010	mg/Kg			09/26/18 08:18	1
1,1,2,2-Tetrachloroethane	ND		0.0020	0.0010	mg/Kg			09/26/18 08:18	1
Tetrachloroethene	ND		0.0010	0.00050	mg/Kg			09/26/18 08:18	1
Toluene	ND		0.0010	0.00050	mg/Kg			09/26/18 08:18	1
trans-1,2-Dichloroethene	ND		0.0010	0.00050	mg/Kg			09/26/18 08:18	1
trans-1,3-Dichloropropene	ND		0.0010	0.00050	mg/Kg			09/26/18 08:18	1
1,2,3-Trichlorobenzene	ND		0.0020	0.0010	mg/Kg			09/26/18 08:18	1
1,2,4-Trichlorobenzene	ND		0.0050	0.0010	mg/Kg			09/26/18 08:18	1
1,1,1-Trichloroethane	ND		0.0010	0.00050	mg/Kg			09/26/18 08:18	1
1,1,2-Trichloroethane	ND		0.0010	0.00050	mg/Kg			09/26/18 08:18	1
Trichloroethene	ND		0.0010	0.00050	mg/Kg			09/26/18 08:18	1
Trichlorofluoromethane	ND		0.0020	0.0010	mg/Kg			09/26/18 08:18	1
1,2,3-Trichloropropane	ND		0.010	0.0010	mg/Kg			09/26/18 08:18	1
1,2,4-Trimethylbenzene	ND		0.0020	0.0010	mg/Kg			09/26/18 08:18	1
1,3,5-Trimethylbenzene	ND		0.0020	0.0010	mg/Kg			09/26/18 08:18	1
Vinyl chloride	ND		0.0020	0.0010	mg/Kg			09/26/18 08:18	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	93		79 - 120		09/26/18 08:18	1
Dibromofluoromethane (Surr)	103		60 - 120		09/26/18 08:18	1
Toluene-d8 (Surr)	94		79 - 123		09/26/18 08:18	1

Lab Sample ID: LCS 440-501141/5
Matrix: Solid
Analysis Batch: 501141

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	0.0500	0.0554		mg/Kg		111	25 - 145
Benzene	0.0500	0.0478		mg/Kg		96	65 - 120
Bromobenzene	0.0500	0.0511		mg/Kg		102	75 - 120
Bromochloromethane	0.0500	0.0501		mg/Kg		100	70 - 135
Bromodichloromethane	0.0500	0.0518		mg/Kg		104	70 - 135
Bromoform	0.0500	0.0485		mg/Kg		97	55 - 135
Bromomethane	0.0500	0.0407		mg/Kg		81	60 - 145
2-Butanone (MEK)	0.0500	0.0488		mg/Kg		98	40 - 145
Carbon tetrachloride	0.0500	0.0508		mg/Kg		102	65 - 140
Chlorobenzene	0.0500	0.0508		mg/Kg		102	75 - 120
Chloroethane	0.0500	0.0376		mg/Kg		75	60 - 140
Chloroform	0.0500	0.0492		mg/Kg		98	70 - 130
Chloromethane	0.0500	0.0346		mg/Kg		69	45 - 145
2-Chlorotoluene	0.0500	0.0484		mg/Kg		97	70 - 125
4-Chlorotoluene	0.0500	0.0497		mg/Kg		99	75 - 125
cis-1,2-Dichloroethene	0.0500	0.0477		mg/Kg		95	70 - 125
cis-1,3-Dichloropropene	0.0500	0.0523		mg/Kg		105	75 - 125

TestAmerica Irvine

QC Sample Results

Client: Ramboll US Corporation
 Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 440-220519-1

Method: 8260B/5030B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 440-501141/5

Matrix: Solid

Analysis Batch: 501141

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Dibromochloromethane	0.0500	0.0570		mg/Kg		114	65 - 140
1,2-Dibromo-3-Chloropropane	0.0500	0.0452		mg/Kg		90	50 - 135
1,2-Dibromoethane (EDB)	0.0500	0.0480		mg/Kg		96	70 - 130
Dibromomethane	0.0500	0.0499		mg/Kg		100	70 - 130
1,2-Dichlorobenzene	0.0500	0.0490		mg/Kg		98	75 - 120
1,3-Dichlorobenzene	0.0500	0.0496		mg/Kg		99	75 - 125
1,4-Dichlorobenzene	0.0500	0.0526		mg/Kg		105	75 - 120
Dichlorodifluoromethane	0.0500	0.0314		mg/Kg		63	35 - 160
1,1-Dichloroethane	0.0500	0.0449		mg/Kg		90	70 - 130
1,2-Dichloroethane	0.0500	0.0464		mg/Kg		93	60 - 140
1,1-Dichloroethene	0.0500	0.0483		mg/Kg		97	70 - 125
1,2-Dichloropropane	0.0500	0.0485		mg/Kg		97	70 - 130
1,3-Dichloropropane	0.0500	0.0498		mg/Kg		100	70 - 125
2,2-Dichloropropane	0.0500	0.0482		mg/Kg		96	60 - 145
1,1-Dichloropropene	0.0500	0.0445		mg/Kg		89	70 - 130
Ethylbenzene	0.0500	0.0473		mg/Kg		95	70 - 125
Ethyl-t-butyl ether (ETBE)	0.0500	0.0413		mg/Kg		83	60 - 140
Hexachlorobutadiene	0.0500	0.0504		mg/Kg		101	60 - 135
2-Hexanone	0.0500	0.0475		mg/Kg		95	40 - 150
Isopropylbenzene	0.0500	0.0471		mg/Kg		94	75 - 130
Isopropyl Ether (DIPE)	0.0500	0.0441		mg/Kg		88	60 - 140
Methylene Chloride	0.0500	0.0481		mg/Kg		96	55 - 135
4-Methyl-2-pentanone (MIBK)	0.0500	0.0433		mg/Kg		87	40 - 145
Methyl-t-Butyl Ether (MTBE)	0.0500	0.0451		mg/Kg		90	60 - 140
m,p-Xylene	0.0500	0.0474		mg/Kg		95	70 - 125
Naphthalene	0.0500	0.0516		mg/Kg		103	55 - 135
n-Butylbenzene	0.0500	0.0465		mg/Kg		93	70 - 130
N-Propylbenzene	0.0500	0.0475		mg/Kg		95	70 - 130
o-Xylene	0.0500	0.0485		mg/Kg		97	70 - 125
p-Isopropyltoluene	0.0500	0.0501		mg/Kg		100	75 - 125
sec-Butylbenzene	0.0500	0.0469		mg/Kg		94	70 - 125
Styrene	0.0500	0.0478		mg/Kg		96	75 - 130
Tert-amyl-methyl ether (TAME)	0.0500	0.0494		mg/Kg		99	60 - 145
tert-Butyl alcohol (TBA)	0.500	0.518		mg/Kg		104	70 - 135
tert-Butylbenzene	0.0500	0.0493		mg/Kg		99	70 - 125
1,1,1,2-Tetrachloroethane	0.0500	0.0482		mg/Kg		96	70 - 130
1,1,2,2-Tetrachloroethane	0.0500	0.0492		mg/Kg		98	55 - 140
Tetrachloroethene	0.0500	0.0479		mg/Kg		96	70 - 125
Toluene	0.0500	0.0471		mg/Kg		94	70 - 125
trans-1,2-Dichloroethene	0.0500	0.0432		mg/Kg		86	70 - 125
trans-1,3-Dichloropropene	0.0500	0.0488		mg/Kg		98	70 - 135
1,2,3-Trichlorobenzene	0.0500	0.0522		mg/Kg		104	60 - 130
1,2,4-Trichlorobenzene	0.0500	0.0536		mg/Kg		107	70 - 135
1,1,1-Trichloroethane	0.0500	0.0484		mg/Kg		97	65 - 135
1,1,2-Trichloroethane	0.0500	0.0533		mg/Kg		107	65 - 135
Trichloroethene	0.0500	0.0516		mg/Kg		103	70 - 125
Trichlorofluoromethane	0.0500	0.0435		mg/Kg		87	60 - 145
1,2,3-Trichloropropane	0.0500	0.0524		mg/Kg		105	60 - 135

TestAmerica Irvine

QC Sample Results

Client: Ramboll US Corporation
 Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 440-220519-1

Method: 8260B/5030B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 440-501141/5
Matrix: Solid
Analysis Batch: 501141

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,4-Trimethylbenzene	0.0500	0.0478		mg/Kg		96	70 - 125
1,3,5-Trimethylbenzene	0.0500	0.0472		mg/Kg		94	70 - 125
Vinyl chloride	0.0500	0.0347		mg/Kg		69	55 - 135

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	91		79 - 120
Dibromofluoromethane (Surr)	97		60 - 120
Toluene-d8 (Surr)	91		79 - 123

Lab Sample ID: 440-220073-A-10 MS
Matrix: Solid
Analysis Batch: 501141

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	ND		0.0499	0.0417		mg/Kg		84	20 - 145
Benzene	ND		0.0499	0.0479		mg/Kg		96	65 - 130
Bromobenzene	ND		0.0499	0.0510		mg/Kg		102	65 - 140
Bromochloromethane	ND		0.0499	0.0539		mg/Kg		108	65 - 145
Bromodichloromethane	ND		0.0499	0.0482		mg/Kg		97	65 - 145
Bromoform	ND		0.0499	0.0492		mg/Kg		99	50 - 145
Bromomethane	ND		0.0499	0.0483		mg/Kg		97	60 - 155
2-Butanone (MEK)	ND		0.0499	0.0500		mg/Kg		100	25 - 170
Carbon tetrachloride	ND		0.0499	0.0544		mg/Kg		109	60 - 145
Chlorobenzene	ND		0.0499	0.0502		mg/Kg		101	70 - 130
Chloroethane	ND		0.0499	0.0404		mg/Kg		81	60 - 150
Chloroform	ND		0.0499	0.0474		mg/Kg		95	65 - 135
Chloromethane	ND		0.0499	0.0413		mg/Kg		83	40 - 145
2-Chlorotoluene	ND		0.0499	0.0486		mg/Kg		97	60 - 135
4-Chlorotoluene	ND		0.0499	0.0462		mg/Kg		93	65 - 135
cis-1,2-Dichloroethene	ND		0.0499	0.0494		mg/Kg		99	65 - 135
cis-1,3-Dichloropropene	ND		0.0499	0.0508		mg/Kg		102	70 - 135
Dibromochloromethane	ND		0.0499	0.0565		mg/Kg		113	60 - 145
1,2-Dibromo-3-Chloropropane	ND		0.0499	0.0504		mg/Kg		101	40 - 150
1,2-Dibromoethane (EDB)	ND		0.0499	0.0505		mg/Kg		101	65 - 140
Dibromomethane	ND		0.0499	0.0494		mg/Kg		99	65 - 140
1,2-Dichlorobenzene	ND		0.0499	0.0473		mg/Kg		95	70 - 130
1,3-Dichlorobenzene	ND		0.0499	0.0462		mg/Kg		93	70 - 130
1,4-Dichlorobenzene	ND		0.0499	0.0505		mg/Kg		101	70 - 130
Dichlorodifluoromethane	ND		0.0499	0.0368		mg/Kg		74	30 - 160
1,1-Dichloroethane	ND		0.0499	0.0471		mg/Kg		94	65 - 135
1,2-Dichloroethane	ND		0.0499	0.0460		mg/Kg		92	60 - 150
1,1-Dichloroethene	ND		0.0499	0.0497		mg/Kg		100	65 - 135
1,2-Dichloropropane	ND		0.0499	0.0473		mg/Kg		95	65 - 130
1,3-Dichloropropane	ND		0.0499	0.0523		mg/Kg		105	65 - 140
2,2-Dichloropropane	ND		0.0499	0.0533		mg/Kg		107	65 - 150
1,1-Dichloropropene	ND		0.0499	0.0478		mg/Kg		96	65 - 135
Ethylbenzene	ND		0.0499	0.0454		mg/Kg		91	70 - 135
Ethyl-t-butyl ether (ETBE)	ND		0.0499	0.0396		mg/Kg		79	60 - 145

TestAmerica Irvine

QC Sample Results

Client: Ramboll US Corporation
 Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 440-220519-1

Method: 8260B/5030B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 440-220073-A-10 MS
Matrix: Solid
Analysis Batch: 501141

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Hexachlorobutadiene	ND		0.0499	0.0377		mg/Kg		76	50 - 145
2-Hexanone	ND		0.0499	0.0437		mg/Kg		88	35 - 160
Isopropylbenzene	ND		0.0499	0.0453		mg/Kg		91	70 - 145
Isopropyl Ether (DIPE)	ND		0.0499	0.0444		mg/Kg		89	60 - 150
Methylene Chloride	ND		0.0499	0.0524		mg/Kg		105	55 - 145
4-Methyl-2-pentanone (MIBK)	ND		0.0499	0.0432		mg/Kg		87	40 - 155
Methyl-t-Butyl Ether (MTBE)	ND		0.0499	0.0468		mg/Kg		94	55 - 155
m,p-Xylene	ND		0.0499	0.0462		mg/Kg		93	70 - 130
Naphthalene	ND		0.0499	0.0486		mg/Kg		97	40 - 150
n-Butylbenzene	ND		0.0499	0.0413		mg/Kg		83	55 - 145
N-Propylbenzene	ND		0.0499	0.0440		mg/Kg		88	65 - 140
o-Xylene	ND		0.0499	0.0494		mg/Kg		99	65 - 130
p-Isopropyltoluene	ND		0.0499	0.0446		mg/Kg		89	60 - 140
sec-Butylbenzene	ND		0.0499	0.0442		mg/Kg		89	60 - 135
Styrene	ND		0.0499	0.0456		mg/Kg		91	70 - 140
Tert-amyl-methyl ether (TAME)	ND		0.0499	0.0479		mg/Kg		96	60 - 150
tert-Butyl alcohol (TBA)	ND		0.499	0.512		mg/Kg		103	65 - 145
tert-Butylbenzene	ND		0.0499	0.0444		mg/Kg		89	60 - 140
1,1,1,2-Tetrachloroethane	ND		0.0499	0.0470		mg/Kg		94	65 - 145
1,1,2,2-Tetrachloroethane	ND		0.0499	0.0486		mg/Kg		97	40 - 160
Tetrachloroethene	0.0019		0.0499	0.0495		mg/Kg		95	65 - 135
Toluene	ND		0.0499	0.0473		mg/Kg		95	70 - 130
trans-1,2-Dichloroethene	ND		0.0499	0.0465		mg/Kg		93	70 - 135
trans-1,3-Dichloropropene	ND		0.0499	0.0498		mg/Kg		100	60 - 145
1,2,3-Trichlorobenzene	ND		0.0499	0.0466		mg/Kg		93	45 - 145
1,2,4-Trichlorobenzene	ND		0.0499	0.0463		mg/Kg		93	50 - 140
1,1,1-Trichloroethane	ND		0.0499	0.0508		mg/Kg		102	65 - 145
1,1,2-Trichloroethane	ND		0.0499	0.0535		mg/Kg		107	65 - 140
Trichloroethene	ND		0.0499	0.0522		mg/Kg		105	65 - 140
Trichlorofluoromethane	ND		0.0499	0.0455		mg/Kg		91	55 - 155
1,2,3-Trichloropropane	ND		0.0499	0.0563		mg/Kg		113	50 - 150
1,2,4-Trimethylbenzene	ND		0.0499	0.0443		mg/Kg		89	65 - 140
1,3,5-Trimethylbenzene	ND		0.0499	0.0446		mg/Kg		89	65 - 135
Vinyl chloride	ND		0.0499	0.0438		mg/Kg		88	55 - 140

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	89		79 - 120
Dibromofluoromethane (Surr)	101		60 - 120
Toluene-d8 (Surr)	92		79 - 123

Lab Sample ID: 440-220073-A-10 MSD
Matrix: Solid
Analysis Batch: 501141

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	ND		0.0498	0.0337		mg/Kg		68	20 - 145	21	40
Benzene	ND		0.0498	0.0453		mg/Kg		91	65 - 130	6	20
Bromobenzene	ND		0.0498	0.0487		mg/Kg		98	65 - 140	5	25

TestAmerica Irvine

QC Sample Results

Client: Ramboll US Corporation
 Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 440-220519-1

Method: 8260B/5030B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 440-220073-A-10 MSD

Client Sample ID: Matrix Spike Duplicate

Matrix: Solid

Prep Type: Total/NA

Analysis Batch: 501141

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	RPD
	Result	Qualifier	Added	Result	Qualifier				Limits		
Bromochloromethane	ND		0.0498	0.0446		mg/Kg		90	65 - 145	19	25
Bromodichloromethane	ND		0.0498	0.0454		mg/Kg		91	65 - 145	6	20
Bromoform	ND		0.0498	0.0445		mg/Kg		89	50 - 145	10	30
Bromomethane	ND		0.0498	0.0442		mg/Kg		89	60 - 155	9	25
2-Butanone (MEK)	ND		0.0498	0.0410		mg/Kg		82	25 - 170	20	40
Carbon tetrachloride	ND		0.0498	0.0494		mg/Kg		99	60 - 145	10	25
Chlorobenzene	ND		0.0498	0.0482		mg/Kg		97	70 - 130	4	25
Chloroethane	ND		0.0498	0.0363		mg/Kg		73	60 - 150	11	25
Chloroform	ND		0.0498	0.0444		mg/Kg		89	65 - 135	6	20
Chloromethane	ND		0.0498	0.0366		mg/Kg		73	40 - 145	12	25
2-Chlorotoluene	ND		0.0498	0.0460		mg/Kg		92	60 - 135	5	25
4-Chlorotoluene	ND		0.0498	0.0451		mg/Kg		91	65 - 135	2	25
cis-1,2-Dichloroethene	ND		0.0498	0.0447		mg/Kg		90	65 - 135	10	25
cis-1,3-Dichloropropene	ND		0.0498	0.0508		mg/Kg		102	70 - 135	0	25
Dibromochloromethane	ND		0.0498	0.0506		mg/Kg		102	60 - 145	11	25
1,2-Dibromo-3-Chloropropane	ND		0.0498	0.0400		mg/Kg		80	40 - 150	23	30
1,2-Dibromoethane (EDB)	ND		0.0498	0.0455		mg/Kg		91	65 - 140	10	25
Dibromomethane	ND		0.0498	0.0428		mg/Kg		86	65 - 140	14	25
1,2-Dichlorobenzene	ND		0.0498	0.0434		mg/Kg		87	70 - 130	9	25
1,3-Dichlorobenzene	ND		0.0498	0.0460		mg/Kg		92	70 - 130	0	25
1,4-Dichlorobenzene	ND		0.0498	0.0489		mg/Kg		98	70 - 130	3	25
Dichlorodifluoromethane	ND		0.0498	0.0330		mg/Kg		66	30 - 160	11	35
1,1-Dichloroethane	ND		0.0498	0.0426		mg/Kg		86	65 - 135	10	25
1,2-Dichloroethane	ND		0.0498	0.0408		mg/Kg		82	60 - 150	12	25
1,1-Dichloroethene	ND		0.0498	0.0433		mg/Kg		87	65 - 135	14	25
1,2-Dichloropropane	ND		0.0498	0.0431		mg/Kg		87	65 - 130	9	20
1,3-Dichloropropane	ND		0.0498	0.0473		mg/Kg		95	65 - 140	10	25
2,2-Dichloropropane	ND		0.0498	0.0497		mg/Kg		100	65 - 150	7	25
1,1-Dichloropropene	ND		0.0498	0.0455		mg/Kg		91	65 - 135	5	20
Ethylbenzene	ND		0.0498	0.0435		mg/Kg		87	70 - 135	4	25
Ethyl-t-butyl ether (ETBE)	ND		0.0498	0.0371		mg/Kg		74	60 - 145	7	30
Hexachlorobutadiene	ND		0.0498	0.0362		mg/Kg		73	50 - 145	4	35
2-Hexanone	ND		0.0498	0.0351		mg/Kg		70	35 - 160	22	40
Isopropylbenzene	ND		0.0498	0.0447		mg/Kg		90	70 - 145	1	25
Isopropyl Ether (DIPE)	ND		0.0498	0.0390		mg/Kg		78	60 - 150	13	25
Methylene Chloride	ND		0.0498	0.0459		mg/Kg		92	55 - 145	13	25
4-Methyl-2-pentanone (MIBK)	ND		0.0498	0.0378		mg/Kg		76	40 - 155	13	40
Methyl-t-Butyl Ether (MTBE)	ND		0.0498	0.0405		mg/Kg		81	55 - 155	14	35
m,p-Xylene	ND		0.0498	0.0450		mg/Kg		90	70 - 130	3	25
Naphthalene	ND		0.0498	0.0437		mg/Kg		88	40 - 150	11	40
n-Butylbenzene	ND		0.0498	0.0400		mg/Kg		80	55 - 145	3	30
N-Propylbenzene	ND		0.0498	0.0431		mg/Kg		87	65 - 140	2	25
o-Xylene	ND		0.0498	0.0456		mg/Kg		92	65 - 130	8	25
p-Isopropyltoluene	ND		0.0498	0.0445		mg/Kg		89	60 - 140	0	25
sec-Butylbenzene	ND		0.0498	0.0425		mg/Kg		85	60 - 135	4	25
Styrene	ND		0.0498	0.0438		mg/Kg		88	70 - 140	4	25
Tert-amyl-methyl ether (TAME)	ND		0.0498	0.0445		mg/Kg		89	60 - 150	7	25
tert-Butyl alcohol (TBA)	ND		0.498	0.476		mg/Kg		96	65 - 145	7	30

TestAmerica Irvine

QC Sample Results

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 440-220519-1

Method: 8260B/5030B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 440-220073-A-10 MSD

Matrix: Solid

Analysis Batch: 501141

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
tert-Butylbenzene	ND		0.0498	0.0449		mg/Kg		90	60 - 140	1	25
1,1,1,2-Tetrachloroethane	ND		0.0498	0.0465		mg/Kg		93	65 - 145	1	20
1,1,2,2-Tetrachloroethane	ND		0.0498	0.0461		mg/Kg		93	40 - 160	5	30
Tetrachloroethene	0.0019		0.0498	0.0480		mg/Kg		93	65 - 135	3	25
Toluene	ND		0.0498	0.0464		mg/Kg		93	70 - 130	2	20
trans-1,2-Dichloroethene	ND		0.0498	0.0437		mg/Kg		88	70 - 135	6	25
trans-1,3-Dichloropropene	ND		0.0498	0.0465		mg/Kg		93	60 - 145	7	25
1,2,3-Trichlorobenzene	ND		0.0498	0.0430		mg/Kg		86	45 - 145	8	30
1,2,4-Trichlorobenzene	ND		0.0498	0.0447		mg/Kg		90	50 - 140	3	30
1,1,1-Trichloroethane	ND		0.0498	0.0445		mg/Kg		89	65 - 145	13	20
1,1,2-Trichloroethane	ND		0.0498	0.0491		mg/Kg		99	65 - 140	9	30
Trichloroethene	ND		0.0498	0.0477		mg/Kg		96	65 - 140	9	25
Trichlorofluoromethane	ND		0.0498	0.0418		mg/Kg		84	55 - 155	8	25
1,2,3-Trichloropropane	ND		0.0498	0.0461		mg/Kg		93	50 - 150	20	30
1,2,4-Trimethylbenzene	ND		0.0498	0.0442		mg/Kg		89	65 - 140	0	25
1,3,5-Trimethylbenzene	ND		0.0498	0.0434		mg/Kg		87	65 - 135	3	25
Vinyl chloride	ND		0.0498	0.0386		mg/Kg		78	55 - 140	12	30

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	97		79 - 120
Dibromofluoromethane (Surr)	96		60 - 120
Toluene-d8 (Surr)	93		79 - 123

Lab Sample ID: MB 440-501419/4

Matrix: Solid

Analysis Batch: 501419

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methylene Chloride	ND		0.010	0.0050	mg/Kg			09/27/18 08:14	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	90		79 - 120		09/27/18 08:14	1
Dibromofluoromethane (Surr)	99		60 - 120		09/27/18 08:14	1
Toluene-d8 (Surr)	93		79 - 123		09/27/18 08:14	1

Lab Sample ID: LCS 440-501419/5

Matrix: Solid

Analysis Batch: 501419

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methylene Chloride	0.0500	0.0506		mg/Kg		101	55 - 135

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	90		79 - 120
Dibromofluoromethane (Surr)	100		60 - 120
Toluene-d8 (Surr)	88		79 - 123

TestAmerica Irvine

QC Sample Results

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 440-220519-1

Method: 8260B/5030B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 440-220559-A-1 MS

Matrix: Solid
Analysis Batch: 501419

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Methylene Chloride	ND		0.0499	0.0477		mg/Kg		96	55 - 145
Surrogate	%Recovery	MS Qualifier	MS Limits						
4-Bromofluorobenzene (Surr)	101		79 - 120						
Dibromofluoromethane (Surr)	89		60 - 120						
Toluene-d8 (Surr)	94		79 - 123						

Lab Sample ID: 440-220559-A-1 MSD

Matrix: Solid
Analysis Batch: 501419

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Methylene Chloride	ND		0.0499	0.0502		mg/Kg		101	55 - 145	5	25
Surrogate	%Recovery	MSD Qualifier	MSD Limits								
4-Bromofluorobenzene (Surr)	94		79 - 120								
Dibromofluoromethane (Surr)	95		60 - 120								
Toluene-d8 (Surr)	92		79 - 123								

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 440-500904/1-A

Matrix: Solid
Analysis Batch: 500988

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 500904

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.35	0.18	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
Acenaphthylene	ND		0.33	0.070	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
Aniline	ND		1.0	0.14	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
Anthracene	ND		0.33	0.080	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
Benzidine	ND		2.1	0.17	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
Benzo[a]anthracene	ND		0.33	0.070	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
Benzo[a]pyrene	ND		0.33	0.067	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
Benzo[b]fluoranthene	ND		0.33	0.070	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
Benzo[g,h,i]perylene	ND		0.33	0.11	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
Benzoic acid	ND		0.95	0.48	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
Benzo[k]fluoranthene	ND		0.33	0.070	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
Benzyl alcohol	ND		3.4	0.41	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
Bis(2-chloroethoxy)methane	ND		0.33	0.13	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
Bis(2-chloroethyl)ether	ND		0.33	0.070	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
Bis(2-ethylhexyl) phthalate	ND		0.33	0.090	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
4-Bromophenyl phenyl ether	ND		0.33	0.075	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
Butyl benzyl phthalate	ND		0.33	0.080	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
4-Chloroaniline	ND		1.0	0.15	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
4-Chloro-3-methylphenol	ND		0.40	0.20	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
2-Chloronaphthalene	ND		0.33	0.067	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
2-Chlorophenol	ND		0.33	0.070	mg/Kg		09/25/18 07:04	09/25/18 14:46	1

TestAmerica Irvine

QC Sample Results

Client: Ramboll US Corporation
 Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 440-220519-1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 440-500904/1-A
Matrix: Solid
Analysis Batch: 500988

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 500904

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
4-Chlorophenyl phenyl ether	ND		1.1	0.20	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
Chrysene	ND		0.33	0.075	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
Dibenz(a,h)anthracene	ND		0.42	0.10	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
Dibenzofuran	ND		0.33	0.14	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
3,3'-Dichlorobenzidine	ND		0.83	0.15	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
2,4-Dichlorophenol	ND		0.33	0.067	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
Diethyl phthalate	ND		0.33	0.095	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
2,4-Dimethylphenol	ND		0.33	0.13	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
Dimethyl phthalate	ND		0.33	0.067	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
Di-n-butyl phthalate	ND		0.33	0.090	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
2,4-Dinitrophenol	ND		2.0	1.0	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
2,4-Dinitrotoluene	ND		0.33	0.080	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
2,6-Dinitrotoluene	ND		0.33	0.095	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
Di-n-octyl phthalate	ND		0.33	0.090	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
Fluoranthene	ND		0.33	0.16	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
Fluorene	ND		0.33	0.070	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
Hexachlorobenzene	ND		0.33	0.070	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
Hexachlorocyclopentadiene	ND		0.83	0.31	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
Hexachloroethane	ND		0.33	0.070	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
Indeno[1,2,3-cd]pyrene	ND		0.33	0.13	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
Isophorone	ND		0.33	0.067	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
1-Methylnaphthalene	ND		0.35	0.15	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
2-Methylnaphthalene	ND		0.33	0.070	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
2-Methylphenol	ND		0.33	0.080	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
3-Methylphenol + 4-Methylphenol	ND		0.33	0.13	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
Naphthalene	ND		0.33	0.067	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
2-Nitroaniline	ND		0.33	0.17	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
3-Nitroaniline	ND		0.33	0.13	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
4-Nitroaniline	ND		0.83	0.13	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
Nitrobenzene	ND		0.33	0.070	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
2-Nitrophenol	ND		0.33	0.13	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
4-Nitrophenol	ND		2.9	0.50	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
N-Nitrosodi-n-propylamine	ND		0.25	0.070	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
N-Nitrosodiphenylamine	ND		0.75	0.16	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
Octachlorostyrene	ND		3.3	2.3	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
Pentachlorophenol	ND		0.83	0.34	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
Phenanthrene	ND		0.33	0.15	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
Phenol	ND		0.33	0.090	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
Pyrene	ND		0.33	0.14	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
Pyridine	ND		0.34	0.15	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
2,4,5-Trichlorophenol	ND		0.50	0.27	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
2,4,6-Trichlorophenol	ND		0.55	0.16	mg/Kg		09/25/18 07:04	09/25/18 14:46	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
2-Fluorobiphenyl	83		42 - 113	09/25/18 07:04	09/25/18 14:46	1
2-Fluorophenol (Surr)	73		18 - 138	09/25/18 07:04	09/25/18 14:46	1
Nitrobenzene-d5 (Surr)	79		39 - 104	09/25/18 07:04	09/25/18 14:46	1
Phenol-d6 (Surr)	70		37 - 125	09/25/18 07:04	09/25/18 14:46	1

TestAmerica Irvine

QC Sample Results

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 440-220519-1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 440-500904/1-A
Matrix: Solid
Analysis Batch: 500988

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 500904

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
Terphenyl-d14 (Surr)	89		43 - 125	09/25/18 07:04	09/25/18 14:46	1
2,4,6-Tribromophenol (Surr)	57		10 - 147	09/25/18 07:04	09/25/18 14:46	1

Lab Sample ID: MB 440-500904/1-A
Matrix: Solid
Analysis Batch: 501240

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 500904

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Octachlorostyrene	ND		3.3	2.3	mg/Kg		09/25/18 07:04	09/26/18 12:55	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
2-Fluorobiphenyl	81		42 - 113	09/25/18 07:04	09/26/18 12:55	1
2-Fluorophenol (Surr)	68		18 - 138	09/25/18 07:04	09/26/18 12:55	1
Nitrobenzene-d5 (Surr)	73		39 - 104	09/25/18 07:04	09/26/18 12:55	1
Phenol-d6 (Surr)	66		37 - 125	09/25/18 07:04	09/26/18 12:55	1
Terphenyl-d14 (Surr)	91		43 - 125	09/25/18 07:04	09/26/18 12:55	1
2,4,6-Tribromophenol (Surr)	70		10 - 147	09/25/18 07:04	09/26/18 12:55	1

Lab Sample ID: LCS 440-500904/2-A
Matrix: Solid
Analysis Batch: 500988

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 500904

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Acenaphthene	2.50	1.93		mg/Kg		77	40 - 118
Acenaphthylene	2.50	2.07		mg/Kg		83	47 - 125
Aniline	2.50	1.42		mg/Kg		57	23 - 105
Anthracene	2.50	2.05		mg/Kg		82	51 - 122
Benzidine	2.50	ND	*	mg/Kg		0	5 - 61
Benzo[a]anthracene	2.50	1.98		mg/Kg		79	50 - 123
Benzo[a]pyrene	2.50	2.19		mg/Kg		88	52 - 125
Benzo[b]fluoranthene	2.50	2.14		mg/Kg		86	52 - 125
Benzo[g,h,i]perylene	2.50	2.12		mg/Kg		85	38 - 149
Benzoic acid	2.50	1.34		mg/Kg		54	28 - 120
Benzo[k]fluoranthene	2.50	2.29		mg/Kg		91	50 - 132
Benzyl alcohol	2.50	1.45	J	mg/Kg		58	20 - 133
Bis(2-chloroethoxy)methane	2.50	1.95		mg/Kg		78	39 - 119
Bis(2-chloroethyl)ether	2.50	1.76		mg/Kg		70	32 - 114
Bis(2-ethylhexyl) phthalate	2.50	2.03		mg/Kg		81	49 - 127
4-Bromophenyl phenyl ether	2.50	2.07		mg/Kg		83	52 - 126
Butyl benzyl phthalate	2.50	2.07		mg/Kg		83	48 - 130
4-Chloroaniline	2.50	1.52		mg/Kg		61	25 - 130
4-Chloro-3-methylphenol	2.50	1.93		mg/Kg		77	45 - 128
2-Chloronaphthalene	2.50	2.08		mg/Kg		83	43 - 120
2-Chlorophenol	2.50	1.76		mg/Kg		70	43 - 125
4-Chlorophenyl phenyl ether	2.50	2.06		mg/Kg		83	46 - 121
Chrysene	2.50	2.14		mg/Kg		86	51 - 127
Dibenz(a,h)anthracene	2.50	2.02		mg/Kg		81	45 - 136
Dibenzofuran	2.50	2.02		mg/Kg		81	47 - 120

TestAmerica Irvine

QC Sample Results

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 440-220519-1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 440-500904/2-A
Matrix: Solid
Analysis Batch: 500988

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 500904

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
3,3'-Dichlorobenzidine	2.50	1.74		mg/Kg		69	28 - 114
2,4-Dichlorophenol	2.50	1.98		mg/Kg		79	49 - 127
Diethyl phthalate	2.50	2.01		mg/Kg		80	46 - 122
2,4-Dimethylphenol	2.50	1.97		mg/Kg		79	41 - 122
Dimethyl phthalate	2.50	2.01		mg/Kg		80	48 - 122
Di-n-butyl phthalate	2.50	2.04		mg/Kg		82	43 - 128
2,4-Dinitrophenol	5.00	3.30		mg/Kg		66	34 - 124
2,4-Dinitrotoluene	2.50	1.99		mg/Kg		80	46 - 126
2,6-Dinitrotoluene	2.50	2.01		mg/Kg		80	48 - 126
Di-n-octyl phthalate	2.50	1.96		mg/Kg		79	47 - 133
Fluoranthene	2.50	2.02		mg/Kg		81	44 - 123
Fluorene	2.50	2.02		mg/Kg		81	48 - 123
Hexachlorobenzene	2.50	2.09		mg/Kg		83	52 - 125
Hexachlorocyclopentadiene	2.50	2.02		mg/Kg		81	17 - 119
Hexachloroethane	2.50	1.65		mg/Kg		66	34 - 107
Indeno[1,2,3-cd]pyrene	2.50	1.95		mg/Kg		78	46 - 148
Isophorone	2.50	1.93		mg/Kg		77	38 - 119
2-Methylnaphthalene	2.50	1.93		mg/Kg		77	44 - 119
2-Methylphenol	2.50	1.71		mg/Kg		68	42 - 130
3-Methylphenol + 4-Methylphenol	2.50	1.73		mg/Kg		69	42 - 138
Naphthalene	2.50	1.92		mg/Kg		77	42 - 115
2-Nitroaniline	2.50	1.98		mg/Kg		79	40 - 131
3-Nitroaniline	2.50	1.72		mg/Kg		69	39 - 129
4-Nitroaniline	2.50	1.94		mg/Kg		77	40 - 126
Nitrobenzene	2.50	1.92		mg/Kg		77	38 - 116
2-Nitrophenol	2.50	1.97		mg/Kg		79	44 - 124
4-Nitrophenol	5.00	3.38		mg/Kg		68	35 - 130
N-Nitrosodi-n-propylamine	2.50	1.68		mg/Kg		67	31 - 124
N-Nitrosodiphenylamine	2.50	2.04		mg/Kg		82	48 - 130
Pentachlorophenol	5.00	3.67		mg/Kg		73	40 - 121
Phenanthrene	2.50	2.03		mg/Kg		81	51 - 122
Phenol	2.50	1.76		mg/Kg		70	42 - 133
Pyrene	2.50	2.17		mg/Kg		87	54 - 127
Pyridine	5.00	2.25		mg/Kg		45	21 - 76
2,4,5-Trichlorophenol	2.50	2.11		mg/Kg		84	51 - 125
2,4,6-Trichlorophenol	2.50	2.04		mg/Kg		82	48 - 126

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
2-Fluorobiphenyl	84		42 - 113
2-Fluorophenol (Surr)	72		18 - 138
Nitrobenzene-d5 (Surr)	77		39 - 104
Phenol-d6 (Surr)	72		37 - 125
Terphenyl-d14 (Surr)	84		43 - 125
2,4,6-Tribromophenol (Surr)	90		10 - 147

QC Sample Results

Client: Ramboll US Corporation
 Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 440-220519-1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 440-220519-1 MS

Matrix: Solid

Analysis Batch: 500988

Client Sample ID: DSPE-4-0.0-20180919

Prep Type: Total/NA

Prep Batch: 500904

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	Limits
	Result	Qualifier	Added	Result	Qualifier				
Acenaphthene	ND		2.53	1.85		mg/Kg	☼	73	45 - 120
Acenaphthylene	ND		2.53	1.98		mg/Kg	☼	78	45 - 120
Aniline	ND		2.53	1.11		mg/Kg	☼	44	25 - 120
Anthracene	ND		2.53	2.08		mg/Kg	☼	82	55 - 120
Benzidine	ND	F1 *	2.53	ND	F1	mg/Kg	☼	0	20 - 120
Benzo[a]anthracene	ND		2.53	2.03		mg/Kg	☼	80	50 - 120
Benzo[a]pyrene	ND		2.53	2.07		mg/Kg	☼	82	45 - 125
Benzo[b]fluoranthene	ND		2.53	2.06		mg/Kg	☼	82	45 - 125
Benzo[g,h,i]perylene	ND		2.53	2.11		mg/Kg	☼	83	25 - 130
Benzoic acid	ND	F1	2.53	ND	F1	mg/Kg	☼	0	20 - 120
Benzo[k]fluoranthene	ND		2.53	2.14		mg/Kg	☼	84	45 - 125
Benzyl alcohol	ND		2.53	1.31	J	mg/Kg	☼	52	20 - 120
Bis(2-chloroethoxy)methane	ND		2.53	1.73		mg/Kg	☼	68	45 - 120
Bis(2-chloroethyl)ether	ND		2.53	1.55		mg/Kg	☼	61	35 - 110
Bis(2-ethylhexyl) phthalate	ND		2.53	2.10		mg/Kg	☼	83	45 - 130
4-Bromophenyl phenyl ether	ND		2.53	2.03		mg/Kg	☼	80	45 - 120
Butyl benzyl phthalate	ND		2.53	2.15		mg/Kg	☼	85	45 - 125
4-Chloroaniline	ND		2.53	1.36		mg/Kg	☼	54	20 - 120
4-Chloro-3-methylphenol	ND		2.53	1.85		mg/Kg	☼	73	50 - 125
2-Chloronaphthalene	ND		2.53	1.96		mg/Kg	☼	77	45 - 120
2-Chlorophenol	ND		2.53	1.58		mg/Kg	☼	63	40 - 120
4-Chlorophenyl phenyl ether	ND		2.53	2.02		mg/Kg	☼	80	50 - 120
Chrysene	ND		2.53	2.13		mg/Kg	☼	84	55 - 120
Dibenz(a,h)anthracene	ND		2.53	2.00		mg/Kg	☼	79	25 - 135
Dibenzofuran	ND		2.53	1.96		mg/Kg	☼	78	50 - 120
3,3'-Dichlorobenzidine	ND		2.53	1.36		mg/Kg	☼	54	20 - 130
2,4-Dichlorophenol	ND		2.53	1.80		mg/Kg	☼	71	45 - 120
Diethyl phthalate	ND		2.53	2.03		mg/Kg	☼	80	50 - 125
2,4-Dimethylphenol	ND		2.53	1.70		mg/Kg	☼	67	30 - 120
Dimethyl phthalate	ND		2.53	2.00		mg/Kg	☼	79	45 - 125
Di-n-butyl phthalate	ND		2.53	2.16		mg/Kg	☼	85	50 - 125
2,4-Dinitrophenol	ND		5.06	2.03		mg/Kg	☼	40	20 - 120
2,4-Dinitrotoluene	ND		2.53	2.03		mg/Kg	☼	80	50 - 125
2,6-Dinitrotoluene	ND		2.53	2.04		mg/Kg	☼	81	50 - 125
Di-n-octyl phthalate	ND		2.53	2.11		mg/Kg	☼	84	50 - 135
Fluoranthene	ND		2.53	2.07		mg/Kg	☼	82	45 - 120
Fluorene	ND		2.53	2.01		mg/Kg	☼	79	50 - 120
Hexachlorobenzene	7.3	F1	2.53	9.09	E	mg/Kg	☼	72	50 - 120
Hexachlorocyclopentadiene	ND		2.53	1.82		mg/Kg	☼	72	20 - 125
Hexachloroethane	ND		2.53	1.48		mg/Kg	☼	59	35 - 120
Indeno[1,2,3-cd]pyrene	ND		2.53	1.99		mg/Kg	☼	79	20 - 130
Isophorone	ND		2.53	1.76		mg/Kg	☼	70	40 - 120
2-Methylnaphthalene	ND		2.53	1.75		mg/Kg	☼	69	40 - 120
2-Methylphenol	ND		2.53	1.56		mg/Kg	☼	62	40 - 120
3-Methylphenol + 4-Methylphenol	ND		2.53	1.59		mg/Kg	☼	63	50 - 120
Naphthalene	ND		2.53	1.71		mg/Kg	☼	68	40 - 120
2-Nitroaniline	ND		2.53	1.97		mg/Kg	☼	78	45 - 120
3-Nitroaniline	ND		2.53	1.79		mg/Kg	☼	71	30 - 120

TestAmerica Irvine

QC Sample Results

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 440-220519-1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 440-220519-1 MS

Matrix: Solid

Analysis Batch: 500988

Client Sample ID: DSPE-4-0.0-20180919

Prep Type: Total/NA

Prep Batch: 500904

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
4-Nitroaniline	ND		2.53	1.88		mg/Kg	☼	74	40 - 125
Nitrobenzene	ND		2.53	1.70		mg/Kg	☼	67	40 - 120
2-Nitrophenol	ND		2.53	1.69		mg/Kg	☼	67	40 - 120
4-Nitrophenol	ND		5.06	3.66		mg/Kg	☼	72	35 - 125
N-Nitrosodi-n-propylamine	ND		2.53	1.56		mg/Kg	☼	62	35 - 120
N-Nitrosodiphenylamine	ND		2.53	1.98		mg/Kg	☼	78	45 - 125
Pentachlorophenol	ND		5.06	3.36		mg/Kg	☼	66	30 - 120
Phenanthrene	ND		2.53	2.07		mg/Kg	☼	82	50 - 120
Phenol	ND		2.53	1.61		mg/Kg	☼	64	40 - 120
Pyrene	ND		2.53	2.19		mg/Kg	☼	87	40 - 125
Pyridine	ND		5.06	1.62		mg/Kg	☼	32	25 - 130
2,4,5-Trichlorophenol	ND		2.53	2.00		mg/Kg	☼	79	45 - 120
2,4,6-Trichlorophenol	ND		2.53	1.95		mg/Kg	☼	77	45 - 120

Surrogate	MS %Recovery	MS Qualifier	Limits
2-Fluorobiphenyl	76		42 - 113
2-Fluorophenol (Surr)	63		18 - 138
Nitrobenzene-d5 (Surr)	66		39 - 104
Phenol-d6 (Surr)	64		37 - 125
Terphenyl-d14 (Surr)	85		43 - 125
2,4,6-Tribromophenol (Surr)	85		10 - 147

Lab Sample ID: 440-220519-1 MSD

Matrix: Solid

Analysis Batch: 500988

Client Sample ID: DSPE-4-0.0-20180919

Prep Type: Total/NA

Prep Batch: 500904

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Acenaphthene	ND		2.53	1.77		mg/Kg	☼	70	45 - 120	4	25
Acenaphthylene	ND		2.53	1.89		mg/Kg	☼	75	45 - 120	5	20
Aniline	ND		2.53	1.18		mg/Kg	☼	47	25 - 120	6	30
Anthracene	ND		2.53	1.93		mg/Kg	☼	76	55 - 120	7	25
Benzidine	ND	F1 *	2.53	ND	F1	mg/Kg	☼	0	20 - 120	NC	30
Benzo[a]anthracene	ND		2.53	1.88		mg/Kg	☼	74	50 - 120	8	25
Benzo[a]pyrene	ND		2.53	1.92		mg/Kg	☼	76	45 - 125	7	25
Benzo[b]fluoranthene	ND		2.53	1.91		mg/Kg	☼	76	45 - 125	8	30
Benzo[g,h,i]perylene	ND		2.53	1.93		mg/Kg	☼	76	25 - 130	9	30
Benzoic acid	ND	F1	2.53	ND	F1	mg/Kg	☼	0	20 - 120	NC	30
Benzo[k]fluoranthene	ND		2.53	1.89		mg/Kg	☼	75	45 - 125	12	30
Benzyl alcohol	ND		2.53	1.23	J	mg/Kg	☼	49	20 - 120	6	30
Bis(2-chloroethoxy)methane	ND		2.53	1.70		mg/Kg	☼	67	45 - 120	2	25
Bis(2-chloroethyl)ether	ND		2.53	1.51		mg/Kg	☼	60	35 - 110	2	25
Bis(2-ethylhexyl) phthalate	ND		2.53	2.04		mg/Kg	☼	81	45 - 130	3	25
4-Bromophenyl phenyl ether	ND		2.53	1.93		mg/Kg	☼	76	45 - 120	5	20
Butyl benzyl phthalate	ND		2.53	2.06		mg/Kg	☼	82	45 - 125	4	25
4-Chloroaniline	ND		2.53	1.42		mg/Kg	☼	56	20 - 120	5	30
4-Chloro-3-methylphenol	ND		2.53	1.80		mg/Kg	☼	71	50 - 125	3	25
2-Chloronaphthalene	ND		2.53	1.87		mg/Kg	☼	74	45 - 120	5	20
2-Chlorophenol	ND		2.53	1.51		mg/Kg	☼	60	40 - 120	5	20

TestAmerica Irvine

QC Sample Results

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 440-220519-1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 440-220519-1 MSD

Matrix: Solid

Analysis Batch: 500988

Client Sample ID: DSPE-4-0.0-20180919

Prep Type: Total/NA

Prep Batch: 500904

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits		
4-Chlorophenyl phenyl ether	ND		2.53	1.89		mg/Kg	☼	75	50 - 120	7	25
Chrysene	ND		2.53	1.95		mg/Kg	☼	77	55 - 120	9	25
Dibenz(a,h)anthracene	ND		2.53	1.84		mg/Kg	☼	73	25 - 135	9	30
Dibenzofuran	ND		2.53	1.86		mg/Kg	☼	73	50 - 120	6	25
3,3'-Dichlorobenzidine	ND		2.53	1.32		mg/Kg	☼	52	20 - 130	3	25
2,4-Dichlorophenol	ND		2.53	1.74		mg/Kg	☼	69	45 - 120	4	25
Diethyl phthalate	ND		2.53	1.94		mg/Kg	☼	77	50 - 125	5	25
2,4-Dimethylphenol	ND		2.53	1.64		mg/Kg	☼	65	30 - 120	4	25
Dimethyl phthalate	ND		2.53	1.90		mg/Kg	☼	75	45 - 125	5	25
Di-n-butyl phthalate	ND		2.53	2.00		mg/Kg	☼	79	50 - 125	8	25
2,4-Dinitrophenol	ND		5.06	1.90	J	mg/Kg	☼	38	20 - 120	7	25
2,4-Dinitrotoluene	ND		2.53	1.90		mg/Kg	☼	75	50 - 125	7	25
2,6-Dinitrotoluene	ND		2.53	1.85		mg/Kg	☼	73	50 - 125	9	20
Di-n-octyl phthalate	ND		2.53	2.02		mg/Kg	☼	80	50 - 135	4	25
Fluoranthene	ND		2.53	1.92		mg/Kg	☼	76	45 - 120	7	25
Fluorene	ND		2.53	1.88		mg/Kg	☼	74	50 - 120	6	25
Hexachlorobenzene	7.3	F1	2.53	7.86	F1	mg/Kg	☼	23	50 - 120	14	25
Hexachlorocyclopentadiene	ND		2.53	1.74		mg/Kg	☼	69	20 - 125	5	30
Hexachloroethane	ND		2.53	1.44		mg/Kg	☼	57	35 - 120	3	30
Indeno[1,2,3-cd]pyrene	ND		2.53	1.82		mg/Kg	☼	72	20 - 130	9	30
Isophorone	ND		2.53	1.71		mg/Kg	☼	68	40 - 120	3	25
2-Methylnaphthalene	ND		2.53	1.67		mg/Kg	☼	66	40 - 120	5	20
2-Methylphenol	ND		2.53	1.55		mg/Kg	☼	61	40 - 120	1	25
3-Methylphenol + 4-Methylphenol	ND		2.53	1.56		mg/Kg	☼	62	50 - 120	2	25
Naphthalene	ND		2.53	1.66		mg/Kg	☼	66	40 - 120	3	25
2-Nitroaniline	ND		2.53	1.89		mg/Kg	☼	75	45 - 120	4	25
3-Nitroaniline	ND		2.53	1.68		mg/Kg	☼	66	30 - 120	6	25
4-Nitroaniline	ND		2.53	1.71		mg/Kg	☼	67	40 - 125	10	30
Nitrobenzene	ND		2.53	1.66		mg/Kg	☼	66	40 - 120	2	25
2-Nitrophenol	ND		2.53	1.65		mg/Kg	☼	65	40 - 120	2	25
4-Nitrophenol	ND		5.06	3.37		mg/Kg	☼	67	35 - 125	8	30
N-Nitrosodi-n-propylamine	ND		2.53	1.51		mg/Kg	☼	60	35 - 120	4	25
N-Nitrosodiphenylamine	ND		2.53	1.90		mg/Kg	☼	75	45 - 125	4	25
Pentachlorophenol	ND		5.06	3.06		mg/Kg	☼	60	30 - 120	9	25
Phenanthrene	ND		2.53	1.95		mg/Kg	☼	77	50 - 120	6	25
Phenol	ND		2.53	1.54		mg/Kg	☼	61	40 - 120	4	25
Pyrene	ND		2.53	2.05		mg/Kg	☼	81	40 - 125	7	30
Pyridine	ND		5.06	1.63		mg/Kg	☼	32	25 - 130	0	30
2,4,5-Trichlorophenol	ND		2.53	1.85		mg/Kg	☼	73	45 - 120	8	20
2,4,6-Trichlorophenol	ND		2.53	1.87		mg/Kg	☼	74	45 - 120	4	25

Surrogate	MSD %Recovery	MSD Qualifier	Limits
2-Fluorobiphenyl	73		42 - 113
2-Fluorophenol (Surr)	62		18 - 138
Nitrobenzene-d5 (Surr)	65		39 - 104
Phenol-d6 (Surr)	62		37 - 125
Terphenyl-d14 (Surr)	78		43 - 125
2,4,6-Tribromophenol (Surr)	81		10 - 147

TestAmerica Irvine

QC Sample Results

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 440-220519-1

Method: 8015B - Gasoline Range Organics - (GC)

Lab Sample ID: MB 440-501450/25
Matrix: Solid
Analysis Batch: 501450

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
GRO (C6-C10)	ND		400	150	ug/Kg			09/27/18 10:29	1
Surrogate	%Recovery	MB Qualifier	Limits			D	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	110		65 - 140					09/27/18 10:29	1

Lab Sample ID: LCS 440-501450/23
Matrix: Solid
Analysis Batch: 501450

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
GRO (C4-C12)	1600	1560		ug/Kg		98	70 - 135
Surrogate	LCS %Recovery	LCS Qualifier	Limits			D	%Rec. Limits
4-Bromofluorobenzene (Surr)	131		65 - 140				

Lab Sample ID: LCSD 440-501450/24
Matrix: Solid
Analysis Batch: 501450

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
GRO (C4-C12)	1600	1550		ug/Kg		97	70 - 135	1	20
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits			D	%Rec. Limits	RPD	RPD Limit
4-Bromofluorobenzene (Surr)	129		65 - 140						

Lab Sample ID: 440-220611-A-1 MS
Matrix: Solid
Analysis Batch: 501450

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
GRO (C4-C12)	ND		1610	1480		ug/Kg		92	60 - 140
Surrogate	MS %Recovery	MS Qualifier	Limits			D	%Rec	%Rec. Limits	
4-Bromofluorobenzene (Surr)	135		65 - 140						

Lab Sample ID: 440-220611-A-1 MSD
Matrix: Solid
Analysis Batch: 501450

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
GRO (C4-C12)	ND		1600	1540		ug/Kg		97	60 - 140	4	30
Surrogate	MSD %Recovery	MSD Qualifier	Limits			D	%Rec	%Rec. Limits	RPD	RPD Limit	
4-Bromofluorobenzene (Surr)	136		65 - 140								

TestAmerica Irvine

QC Sample Results

Client: Ramboll US Corporation
 Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 440-220519-1

Method: 8015B - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 440-500329/1-A
Matrix: Solid
Analysis Batch: 500376

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 500329

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		5.0	2.5	mg/Kg		09/21/18 07:14	09/21/18 20:06	1
Oil Range Organics (C29-C40)	ND		5.0	2.5	mg/Kg		09/21/18 07:14	09/21/18 20:06	1
EFH (C10-C40)	ND		5.0	2.5	mg/Kg		09/21/18 07:14	09/21/18 20:06	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>n</i> -Octacosane	76		40 - 140	09/21/18 07:14	09/21/18 20:06	1

Lab Sample ID: LCS 440-500329/2-A
Matrix: Solid
Analysis Batch: 500376

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 500329

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Diesel Range Organics [C10-C28]	66.7	47.2		mg/Kg		71	45 - 115

Surrogate	LCS %Recovery	LCS Qualifier	Limits
<i>n</i> -Octacosane	81		40 - 140

Lab Sample ID: 440-220546-I-7-A MS
Matrix: Solid
Analysis Batch: 500376

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 500329

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Diesel Range Organics [C10-C28]	ND		66.1	53.0		mg/Kg		80	40 - 120

Surrogate	MS %Recovery	MS Qualifier	Limits
<i>n</i> -Octacosane	86		40 - 140

Lab Sample ID: 440-220546-I-7-B MSD
Matrix: Solid
Analysis Batch: 500376

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 500329

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	RPD Limit
Diesel Range Organics [C10-C28]	ND		66.4	45.5		mg/Kg		68	40 - 120	15	30

Surrogate	MSD %Recovery	MSD Qualifier	Limits
<i>n</i> -Octacosane	73		40 - 140

QC Sample Results

Client: Ramboll US Corporation
 Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 440-220519-1

Method: 8081A - Organochlorine Pesticides (GC)

Lab Sample ID: MB 440-501153/1-A
Matrix: Solid
Analysis Batch: 501443

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 501153

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		0.0050	0.0015	mg/Kg		09/26/18 07:24	09/27/18 10:34	1
alpha-BHC	ND		0.0050	0.0015	mg/Kg		09/26/18 07:24	09/27/18 10:34	1
cis-Chlordane	ND		0.0050	0.0020	mg/Kg		09/26/18 07:24	09/27/18 10:34	1
beta-BHC	ND		0.0050	0.0015	mg/Kg		09/26/18 07:24	09/27/18 10:34	1
4,4'-DDD	ND		0.0050	0.0015	mg/Kg		09/26/18 07:24	09/27/18 10:34	1
2,4'-DDE	ND		0.0050	0.0015	mg/Kg		09/26/18 07:24	09/27/18 10:34	1
4,4'-DDE	ND		0.0050	0.0015	mg/Kg		09/26/18 07:24	09/27/18 10:34	1
4,4'-DDT	ND		0.0050	0.0015	mg/Kg		09/26/18 07:24	09/27/18 10:34	1
delta-BHC	ND		0.010	0.0015	mg/Kg		09/26/18 07:24	09/27/18 10:34	1
Dieldrin	ND		0.0050	0.0015	mg/Kg		09/26/18 07:24	09/27/18 10:34	1
Endosulfan I	ND		0.0050	0.0015	mg/Kg		09/26/18 07:24	09/27/18 10:34	1
Endosulfan II	ND		0.0050	0.0015	mg/Kg		09/26/18 07:24	09/27/18 10:34	1
Endosulfan sulfate	ND		0.010	0.0020	mg/Kg		09/26/18 07:24	09/27/18 10:34	1
Endrin	ND		0.0050	0.0015	mg/Kg		09/26/18 07:24	09/27/18 10:34	1
Endrin aldehyde	ND		0.0050	0.0015	mg/Kg		09/26/18 07:24	09/27/18 10:34	1
Endrin ketone	ND		0.0050	0.0020	mg/Kg		09/26/18 07:24	09/27/18 10:34	1
gamma-BHC (Lindane)	ND		0.0050	0.0015	mg/Kg		09/26/18 07:24	09/27/18 10:34	1
trans-Chlordane	ND		0.0050	0.0015	mg/Kg		09/26/18 07:24	09/27/18 10:34	1
Heptachlor	ND		0.0050	0.0020	mg/Kg		09/26/18 07:24	09/27/18 10:34	1
Heptachlor epoxide	ND		0.0050	0.0020	mg/Kg		09/26/18 07:24	09/27/18 10:34	1
Methoxychlor	ND		0.0050	0.0015	mg/Kg		09/26/18 07:24	09/27/18 10:34	1
Toxaphene	ND		0.20	0.050	mg/Kg		09/26/18 07:24	09/27/18 10:34	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	104		45 - 120	09/26/18 07:24	09/27/18 10:34	1
Tetrachloro-m-xylene	87		35 - 115	09/26/18 07:24	09/27/18 10:34	1

Lab Sample ID: LCS 440-501153/2-A
Matrix: Solid
Analysis Batch: 501443

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 501153

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Aldrin	0.0167	0.0134		mg/Kg		81	46 - 115
alpha-BHC	0.0167	0.0165		mg/Kg		99	38 - 115
cis-Chlordane	0.0167	0.0165		mg/Kg		99	56 - 115
beta-BHC	0.0167	0.0165		mg/Kg		99	46 - 115
4,4'-DDD	0.0167	0.0172		mg/Kg		103	59 - 118
2,4'-DDE	0.0167	0.0173		mg/Kg		104	10 - 150
4,4'-DDE	0.0167	0.0169		mg/Kg		101	55 - 115
4,4'-DDT	0.0167	0.0193		mg/Kg		116	51 - 131
delta-BHC	0.0167	0.0176		mg/Kg		106	52 - 115
Dieldrin	0.0167	0.0166		mg/Kg		100	57 - 115
Endosulfan I	0.0167	0.0167		mg/Kg		100	56 - 115
Endosulfan II	0.0167	0.0165		mg/Kg		99	49 - 117
Endosulfan sulfate	0.0167	0.0170		mg/Kg		102	54 - 115
Endrin	0.0167	0.0169		mg/Kg		101	56 - 120
Endrin aldehyde	0.0167	0.0156		mg/Kg		94	41 - 115
Endrin ketone	0.0167	0.0173		mg/Kg		104	54 - 119

TestAmerica Irvine

QC Sample Results

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 440-220519-1

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: LCS 440-501153/2-A
Matrix: Solid
Analysis Batch: 501443

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 501153

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
gamma-BHC (Lindane)	0.0167	0.0166		mg/Kg		100	49 - 115
trans-Chlordane	0.0167	0.0162		mg/Kg		97	32 - 143
Heptachlor	0.0167	0.0160		mg/Kg		96	52 - 115
Heptachlor epoxide	0.0167	0.0168		mg/Kg		101	38 - 128
Methoxychlor	0.0167	0.0202		mg/Kg		121	46 - 146

Surrogate	LCS %Recovery	LCS Qualifier	Limits
DCB Decachlorobiphenyl (Surr)	108		45 - 120
Tetrachloro-m-xylene	91		35 - 115

Lab Sample ID: 440-220771-A-1-A MS
Matrix: Solid
Analysis Batch: 501443

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 501153

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Aldrin	ND		0.0172	0.0132		mg/Kg	☼	77	40 - 115
alpha-BHC	ND		0.0172	0.0152		mg/Kg	☼	88	40 - 115
cis-Chlordane	ND		0.0172	0.0139		mg/Kg	☼	81	50 - 115
beta-BHC	0.0099	F1	0.0172	0.0338	F1	mg/Kg	☼	139	40 - 120
4,4'-DDD	ND		0.0172	0.0190		mg/Kg	☼	110	40 - 130
2,4'-DDE	ND		0.0172	0.0163		mg/Kg	☼	95	35 - 130
4,4'-DDE	0.0024	J	0.0172	0.0172		mg/Kg	☼	86	35 - 130
4,4'-DDT	ND		0.0172	0.0159		mg/Kg	☼	81	35 - 130
delta-BHC	ND		0.0172	0.0159		mg/Kg	☼	92	45 - 120
Dieldrin	ND		0.0172	0.0144		mg/Kg	☼	84	40 - 125
Endosulfan I	ND		0.0172	0.0144		mg/Kg	☼	84	40 - 120
Endosulfan II	ND		0.0172	0.0146		mg/Kg	☼	85	40 - 125
Endosulfan sulfate	ND		0.0172	0.0180		mg/Kg	☼	105	45 - 120
Endrin	ND		0.0172	0.0148		mg/Kg	☼	86	45 - 125
Endrin aldehyde	ND		0.0172	0.0128		mg/Kg	☼	74	30 - 120
Endrin ketone	ND		0.0172	0.0152		mg/Kg	☼	89	40 - 120
gamma-BHC (Lindane)	ND		0.0172	0.0153		mg/Kg	☼	89	40 - 120
trans-Chlordane	ND		0.0172	0.0143		mg/Kg	☼	83	50 - 115
Heptachlor	ND		0.0172	0.0148		mg/Kg	☼	86	40 - 115
Heptachlor epoxide	ND		0.0172	0.0148		mg/Kg	☼	86	45 - 115
Methoxychlor	ND		0.0172	0.0161		mg/Kg	☼	94	40 - 135

Surrogate	MS %Recovery	MS Qualifier	Limits
DCB Decachlorobiphenyl (Surr)	93		45 - 120
Tetrachloro-m-xylene	82		35 - 115

Lab Sample ID: 440-220771-A-1-B MSD
Matrix: Solid
Analysis Batch: 501443

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 501153

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Aldrin	ND		0.0172	0.0120		mg/Kg	☼	70	40 - 115	9	30
alpha-BHC	ND		0.0172	0.0140		mg/Kg	☼	81	40 - 115	8	30

TestAmerica Irvine

QC Sample Results

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 440-220519-1

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: 440-220771-A-1-B MSD

Matrix: Solid

Analysis Batch: 501443

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 501153

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier						
cis-Chlordane	ND		0.0172	0.0136		mg/Kg	☼	79	50 - 115	3	30
beta-BHC	0.0099	F1	0.0172	0.0258		mg/Kg	☼	92	40 - 120	27	30
4,4'-DDD	ND		0.0172	0.0165		mg/Kg	☼	96	40 - 130	11	30
2,4'-DDE	ND		0.0172	0.0155		mg/Kg	☼	90	35 - 130	5	30
4,4'-DDE	0.0024	J	0.0172	0.0162		mg/Kg	☼	80	35 - 130	6	30
4,4'-DDT	ND		0.0172	0.0151		mg/Kg	☼	76	35 - 130	5	30
delta-BHC	ND		0.0172	0.0152		mg/Kg	☼	88	45 - 120	4	30
Dieldrin	ND		0.0172	0.0139		mg/Kg	☼	81	40 - 125	3	30
Endosulfan I	ND		0.0172	0.0140		mg/Kg	☼	81	40 - 120	3	30
Endosulfan II	ND		0.0172	0.0140		mg/Kg	☼	81	40 - 125	4	30
Endosulfan sulfate	ND		0.0172	0.0143		mg/Kg	☼	83	45 - 120	2	30
Endrin	ND		0.0172	0.0141		mg/Kg	☼	82	45 - 125	5	30
Endrin aldehyde	ND		0.0172	0.0121		mg/Kg	☼	70	30 - 120	5	30
Endrin ketone	ND		0.0172	0.0152		mg/Kg	☼	88	40 - 120	0	30
gamma-BHC (Lindane)	ND		0.0172	0.0142		mg/Kg	☼	82	40 - 120	7	30
trans-Chlordane	ND		0.0172	0.0137		mg/Kg	☼	79	50 - 115	4	30
Heptachlor	ND		0.0172	0.0135		mg/Kg	☼	78	40 - 115	9	30
Heptachlor epoxide	ND		0.0172	0.0140		mg/Kg	☼	81	45 - 115	5	30
Methoxychlor	ND		0.0172	0.0162		mg/Kg	☼	94	40 - 135	1	30

Surrogate	MSD %Recovery	MSD Qualifier	Limits
DCB Decachlorobiphenyl (Surr)	86		45 - 120
Tetrachloro-m-xylene	72		35 - 115

Lab Sample ID: MB 440-502340/1-A

Matrix: Solid

Analysis Batch: 502496

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 502340

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Aldrin	ND		0.0050	0.0015	mg/Kg		10/02/18 06:30	10/02/18 16:48	1
alpha-BHC	ND		0.0050	0.0015	mg/Kg		10/02/18 06:30	10/02/18 16:48	1
cis-Chlordane	ND		0.0050	0.0020	mg/Kg		10/02/18 06:30	10/02/18 16:48	1
beta-BHC	ND		0.0050	0.0015	mg/Kg		10/02/18 06:30	10/02/18 16:48	1
4,4'-DDD	ND		0.0050	0.0015	mg/Kg		10/02/18 06:30	10/02/18 16:48	1
2,4'-DDE	ND		0.0050	0.0015	mg/Kg		10/02/18 06:30	10/02/18 16:48	1
4,4'-DDE	ND		0.0050	0.0015	mg/Kg		10/02/18 06:30	10/02/18 16:48	1
4,4'-DDT	ND		0.0050	0.0015	mg/Kg		10/02/18 06:30	10/02/18 16:48	1
delta-BHC	ND		0.010	0.0015	mg/Kg		10/02/18 06:30	10/02/18 16:48	1
Dieldrin	ND		0.0050	0.0015	mg/Kg		10/02/18 06:30	10/02/18 16:48	1
Endosulfan I	ND		0.0050	0.0015	mg/Kg		10/02/18 06:30	10/02/18 16:48	1
Endosulfan II	ND		0.0050	0.0015	mg/Kg		10/02/18 06:30	10/02/18 16:48	1
Endosulfan sulfate	ND		0.010	0.0020	mg/Kg		10/02/18 06:30	10/02/18 16:48	1
Endrin	ND		0.0050	0.0015	mg/Kg		10/02/18 06:30	10/02/18 16:48	1
Endrin aldehyde	ND		0.0050	0.0015	mg/Kg		10/02/18 06:30	10/02/18 16:48	1
Endrin ketone	ND		0.0050	0.0020	mg/Kg		10/02/18 06:30	10/02/18 16:48	1
gamma-BHC (Lindane)	ND		0.0050	0.0015	mg/Kg		10/02/18 06:30	10/02/18 16:48	1
trans-Chlordane	ND		0.0050	0.0015	mg/Kg		10/02/18 06:30	10/02/18 16:48	1
Heptachlor	ND		0.0050	0.0020	mg/Kg		10/02/18 06:30	10/02/18 16:48	1

TestAmerica Irvine

QC Sample Results

Client: Ramboll US Corporation
 Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 440-220519-1

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: MB 440-502340/1-A
Matrix: Solid
Analysis Batch: 502496

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 502340

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Heptachlor epoxide	ND		0.0050	0.0020	mg/Kg		10/02/18 06:30	10/02/18 16:48	1
Methoxychlor	ND		0.0050	0.0015	mg/Kg		10/02/18 06:30	10/02/18 16:48	1
Toxaphene	ND		0.20	0.050	mg/Kg		10/02/18 06:30	10/02/18 16:48	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	80		45 - 120	10/02/18 06:30	10/02/18 16:48	1
Tetrachloro-m-xylene	70		35 - 115	10/02/18 06:30	10/02/18 16:48	1

Lab Sample ID: LCS 440-502340/2-A
Matrix: Solid
Analysis Batch: 502496

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 502340

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Aldrin	0.0167	0.0136		mg/Kg		81	46 - 115
alpha-BHC	0.0167	0.0148		mg/Kg		89	38 - 115
cis-Chlordane	0.0167	0.0148		mg/Kg		89	56 - 115
beta-BHC	0.0167	0.0149		mg/Kg		89	46 - 115
4,4'-DDD	0.0167	0.0167		mg/Kg		100	59 - 118
2,4'-DDE	0.0167	0.0164		mg/Kg		98	10 - 150
4,4'-DDE	0.0167	0.0157		mg/Kg		94	55 - 115
4,4'-DDT	0.0167	0.0171		mg/Kg		102	51 - 131
delta-BHC	0.0167	0.0156		mg/Kg		93	52 - 115
Dieldrin	0.0167	0.0151		mg/Kg		90	57 - 115
Endosulfan I	0.0167	0.0152		mg/Kg		91	56 - 115
Endosulfan II	0.0167	0.0154		mg/Kg		92	49 - 117
Endosulfan sulfate	0.0167	0.0160		mg/Kg		96	54 - 115
Endrin	0.0167	0.0155		mg/Kg		93	56 - 120
Endrin aldehyde	0.0167	0.0147		mg/Kg		88	41 - 115
Endrin ketone	0.0167	0.0162		mg/Kg		97	54 - 119
gamma-BHC (Lindane)	0.0167	0.0151		mg/Kg		90	49 - 115
trans-Chlordane	0.0167	0.0149		mg/Kg		89	32 - 143
Heptachlor	0.0167	0.0147		mg/Kg		88	52 - 115
Heptachlor epoxide	0.0167	0.0153		mg/Kg		92	38 - 128
Methoxychlor	0.0167	0.0182		mg/Kg		109	46 - 146

Surrogate	LCS %Recovery	LCS Qualifier	Limits
DCB Decachlorobiphenyl (Surr)	100		45 - 120
Tetrachloro-m-xylene	86		35 - 115

Lab Sample ID: 440-220519-4 MS
Matrix: Solid
Analysis Batch: 502496

Client Sample ID: DSPE-5-1.0-20180919
Prep Type: Total/NA
Prep Batch: 502340

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Aldrin	ND		0.0176	0.0134		mg/Kg	☼	76	40 - 115
alpha-BHC	ND		0.0176	0.0154		mg/Kg	☼	87	40 - 115
cis-Chlordane	ND		0.0176	0.0144		mg/Kg	☼	82	50 - 115
beta-BHC	ND		0.0176	0.0165		mg/Kg	☼	94	40 - 120

TestAmerica Irvine

QC Sample Results

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 440-220519-1

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: 440-220519-4 MS

Matrix: Solid

Analysis Batch: 502496

Client Sample ID: DSPE-5-1.0-20180919

Prep Type: Total/NA

Prep Batch: 502340

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	Limits
	Result	Qualifier		Result	Qualifier				
4,4'-DDD	ND		0.0176	0.0169		mg/Kg	☼	96	40 - 130
2,4'-DDE	ND		0.0176	0.0199		mg/Kg	☼	113	35 - 130
4,4'-DDE	0.0032	J F1	0.0176	0.0380	F1	mg/Kg	☼	197	35 - 130
4,4'-DDT	ND		0.0176	0.0172		mg/Kg	☼	98	35 - 130
delta-BHC	ND		0.0176	0.0155		mg/Kg	☼	88	45 - 120
Dieldrin	ND		0.0176	0.0148		mg/Kg	☼	84	40 - 125
Endosulfan I	ND		0.0176	0.0151		mg/Kg	☼	86	40 - 120
Endosulfan II	ND		0.0176	0.0149		mg/Kg	☼	84	40 - 125
Endosulfan sulfate	ND		0.0176	0.0156		mg/Kg	☼	88	45 - 120
Endrin	ND		0.0176	0.0151		mg/Kg	☼	86	45 - 125
Endrin aldehyde	ND		0.0176	0.0136		mg/Kg	☼	77	30 - 120
Endrin ketone	ND		0.0176	0.0162		mg/Kg	☼	92	40 - 120
gamma-BHC (Lindane)	ND		0.0176	0.0147		mg/Kg	☼	83	40 - 120
trans-Chlordane	ND		0.0176	0.0151		mg/Kg	☼	86	50 - 115
Heptachlor	ND		0.0176	0.0146		mg/Kg	☼	83	40 - 115
Heptachlor epoxide	ND		0.0176	0.0150		mg/Kg	☼	85	45 - 115
Methoxychlor	ND		0.0176	0.0187		mg/Kg	☼	106	40 - 135

Surrogate	MS	MS	Limits
	%Recovery	Qualifier	
DCB Decachlorobiphenyl (Surr)	95		45 - 120
Tetrachloro-m-xylene	79		35 - 115

Lab Sample ID: 440-220519-4 MSD

Matrix: Solid

Analysis Batch: 502496

Client Sample ID: DSPE-5-1.0-20180919

Prep Type: Total/NA

Prep Batch: 502340

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	Limits	RPD	Limit
	Result	Qualifier		Result	Qualifier						
Aldrin	ND		0.0176	0.0136		mg/Kg	☼	77	40 - 115	2	30
alpha-BHC	ND		0.0176	0.0157		mg/Kg	☼	89	40 - 115	2	30
cis-Chlordane	ND		0.0176	0.0146		mg/Kg	☼	83	50 - 115	1	30
beta-BHC	ND		0.0176	0.0169		mg/Kg	☼	96	40 - 120	2	30
4,4'-DDD	ND		0.0176	0.0172		mg/Kg	☼	97	40 - 130	1	30
2,4'-DDE	ND		0.0176	0.0202		mg/Kg	☼	115	35 - 130	2	30
4,4'-DDE	0.0032	J F1	0.0176	0.0387	F1	mg/Kg	☼	201	35 - 130	2	30
4,4'-DDT	ND		0.0176	0.0176		mg/Kg	☼	100	35 - 130	3	30
delta-BHC	ND		0.0176	0.0157		mg/Kg	☼	89	45 - 120	2	30
Dieldrin	ND		0.0176	0.0150		mg/Kg	☼	85	40 - 125	2	30
Endosulfan I	ND		0.0176	0.0154		mg/Kg	☼	87	40 - 120	2	30
Endosulfan II	ND		0.0176	0.0151		mg/Kg	☼	86	40 - 125	2	30
Endosulfan sulfate	ND		0.0176	0.0158		mg/Kg	☼	90	45 - 120	1	30
Endrin	ND		0.0176	0.0153		mg/Kg	☼	87	45 - 125	1	30
Endrin aldehyde	ND		0.0176	0.0139		mg/Kg	☼	79	30 - 120	2	30
Endrin ketone	ND		0.0176	0.0164		mg/Kg	☼	93	40 - 120	1	30
gamma-BHC (Lindane)	ND		0.0176	0.0150		mg/Kg	☼	85	40 - 120	2	30
trans-Chlordane	ND		0.0176	0.0154		mg/Kg	☼	87	50 - 115	1	30
Heptachlor	ND		0.0176	0.0149		mg/Kg	☼	85	40 - 115	2	30
Heptachlor epoxide	ND		0.0176	0.0152		mg/Kg	☼	86	45 - 115	1	30
Methoxychlor	ND		0.0176	0.0188		mg/Kg	☼	107	40 - 135	1	30

TestAmerica Irvine

QC Sample Results

Client: Ramboll US Corporation
 Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 440-220519-1

Surrogate	MSD %Recovery	MSD Qualifier	Limits
DCB Decachlorobiphenyl (Surr)	96		45 - 120
Tetrachloro-m-xylene	81		35 - 115

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 440-500563/1-C
 Matrix: Solid
 Analysis Batch: 501067

Client Sample ID: Method Blank
 Prep Type: TCLP
 Prep Batch: 500849

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Arsenic	ND		0.20	0.070	mg/L		09/24/18 18:16	09/25/18 15:31	1
Barium	ND		0.20	0.060	mg/L		09/24/18 18:16	09/25/18 15:31	1
Cadmium	ND		0.10	0.020	mg/L		09/24/18 18:16	09/25/18 15:31	1
Chromium	ND		0.10	0.020	mg/L		09/24/18 18:16	09/25/18 15:31	1
Lead	ND		0.10	0.040	mg/L		09/24/18 18:16	09/25/18 15:31	1
Selenium	ND		0.10	0.080	mg/L		09/24/18 18:16	09/25/18 15:31	1
Silver	ND		0.20	0.060	mg/L		09/24/18 18:16	09/25/18 15:31	1

Lab Sample ID: LCS 440-500563/2-C
 Matrix: Solid
 Analysis Batch: 501067

Client Sample ID: Lab Control Sample
 Prep Type: TCLP
 Prep Batch: 500849

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Arsenic	2.00	1.88		mg/L		94	80 - 120
Barium	2.00	1.95		mg/L		98	80 - 120
Cadmium	2.00	1.94		mg/L		97	80 - 120
Chromium	2.00	1.99		mg/L		99	80 - 120
Lead	2.00	1.95		mg/L		97	80 - 120
Selenium	2.00	1.70		mg/L		85	80 - 120
Silver	1.00	0.974		mg/L		97	80 - 120

Lab Sample ID: 440-220519-1 MS
 Matrix: Solid
 Analysis Batch: 501067

Client Sample ID: DSPE-4-0.0-20180919
 Prep Type: TCLP
 Prep Batch: 500849

Analyte	Sample	Sample	Spike Added	MS	MS	Unit	D	%Rec	Limits
	Result	Qualifier		Result	Qualifier				
Arsenic	ND		2.00	1.91		mg/L		95	75 - 125
Barium	0.59		2.00	2.54		mg/L		98	75 - 125
Cadmium	ND		2.00	1.88		mg/L		94	75 - 125
Chromium	ND		2.00	1.97		mg/L		99	75 - 125
Lead	ND		2.00	1.91		mg/L		96	75 - 125
Selenium	ND		2.00	1.71		mg/L		86	75 - 125
Silver	ND		1.00	0.969		mg/L		97	75 - 125

Lab Sample ID: 440-220519-1 MSD
 Matrix: Solid
 Analysis Batch: 501067

Client Sample ID: DSPE-4-0.0-20180919
 Prep Type: TCLP
 Prep Batch: 500849

Analyte	Sample	Sample	Spike Added	MSD	MSD	Unit	D	%Rec	Limits	RPD	RPD Limit
	Result	Qualifier		Result	Qualifier						
Arsenic	ND		2.00	1.95		mg/L		98	75 - 125	2	20
Barium	0.59		2.00	2.51		mg/L		96	75 - 125	1	20
Cadmium	ND		2.00	1.89		mg/L		95	75 - 125	1	20
Chromium	ND		2.00	1.97		mg/L		99	75 - 125	0	20
Lead	ND		2.00	1.91		mg/L		95	75 - 125	0	20

TestAmerica Irvine

QC Sample Results

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 440-220519-1

Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: 440-220519-1 MSD
Matrix: Solid
Analysis Batch: 501067

Client Sample ID: DSPE-4-0.0-20180919
Prep Type: TCLP
Prep Batch: 500849

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD		Unit	D	%Rec	%Rec.		RPD	Limit
				Result	Qualifier				Limits	RPD		
Selenium	ND		2.00	1.72		mg/L		86	75 - 125	0		20
Silver	ND		1.00	0.973		mg/L		97	75 - 125	0		20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 440-500563/1-B
Matrix: Solid
Analysis Batch: 501004

Client Sample ID: Method Blank
Prep Type: TCLP
Prep Batch: 500773

Analyte	MB MB		RL	MDL		Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier		Result	Qualifier					
Mercury	ND		0.0020	0.0010		mg/L		09/24/18 13:30	09/24/18 22:49	1

Lab Sample ID: LCS 440-500563/2-B
Matrix: Solid
Analysis Batch: 501004

Client Sample ID: Lab Control Sample
Prep Type: TCLP
Prep Batch: 500773

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	%Rec.	
		Result	Qualifier				Limits	RPD
Mercury	0.0800	0.0812		mg/L		102	80 - 120	

Lab Sample ID: 440-220519-1 MS
Matrix: Solid
Analysis Batch: 501004

Client Sample ID: DSPE-4-0.0-20180919
Prep Type: TCLP
Prep Batch: 500773

Analyte	Sample Result	Sample Qualifier	Spike Added	MS MS		Unit	D	%Rec	%Rec.	
				Result	Qualifier				Limits	RPD
Mercury	ND		0.0800	0.0861		mg/L		108	70 - 130	

Lab Sample ID: 440-220519-1 MSD
Matrix: Solid
Analysis Batch: 501004

Client Sample ID: DSPE-4-0.0-20180919
Prep Type: TCLP
Prep Batch: 500773

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD MSD		Unit	D	%Rec	%Rec.		RPD	Limit
				Result	Qualifier				Limits	RPD		
Mercury	ND		0.0800	0.0819		mg/L		102	70 - 130	5		20

Method: Moisture - Percent Moisture

Lab Sample ID: 440-220519-1 DU
Matrix: Solid
Analysis Batch: 500252

Client Sample ID: DSPE-4-0.0-20180919
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU DU		Unit	D	RPD	RPD	
			Result	Qualifier				RPD	Limit
Percent Moisture	1.3		1.2		%		4		20

QC Association Summary

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 440-220519-1

GC/MS VOA

Analysis Batch: 501141

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-220519-1	DSPE-4-0.0-20180919	Total/NA	Solid	8260B/5030B	
440-220519-2	DSPE-4-1.0-20190919	Total/NA	Solid	8260B/5030B	
440-220519-3	DSPE-5-0.0-20180919	Total/NA	Solid	8260B/5030B	
440-220519-4	DSPE-5-1.0-20180919	Total/NA	Solid	8260B/5030B	
MB 440-501141/4	Method Blank	Total/NA	Solid	8260B/5030B	
LCS 440-501141/5	Lab Control Sample	Total/NA	Solid	8260B/5030B	
440-220073-A-10 MS	Matrix Spike	Total/NA	Solid	8260B/5030B	
440-220073-A-10 MSD	Matrix Spike Duplicate	Total/NA	Solid	8260B/5030B	

Analysis Batch: 501419

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-220519-1 - RA	DSPE-4-0.0-20180919	Total/NA	Solid	8260B/5030B	
MB 440-501419/4	Method Blank	Total/NA	Solid	8260B/5030B	
LCS 440-501419/5	Lab Control Sample	Total/NA	Solid	8260B/5030B	
440-220559-A-1 MS	Matrix Spike	Total/NA	Solid	8260B/5030B	
440-220559-A-1 MSD	Matrix Spike Duplicate	Total/NA	Solid	8260B/5030B	

GC/MS Semi VOA

Prep Batch: 500904

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-220519-1	DSPE-4-0.0-20180919	Total/NA	Solid	3546	
440-220519-1 - RA	DSPE-4-0.0-20180919	Total/NA	Solid	3546	
440-220519-2	DSPE-4-1.0-20190919	Total/NA	Solid	3546	
440-220519-2 - DL	DSPE-4-1.0-20190919	Total/NA	Solid	3546	
440-220519-3	DSPE-5-0.0-20180919	Total/NA	Solid	3546	
440-220519-4	DSPE-5-1.0-20180919	Total/NA	Solid	3546	
MB 440-500904/1-A	Method Blank	Total/NA	Solid	3546	
LCS 440-500904/2-A	Lab Control Sample	Total/NA	Solid	3546	
440-220519-1 MS	DSPE-4-0.0-20180919	Total/NA	Solid	3546	
440-220519-1 MSD	DSPE-4-0.0-20180919	Total/NA	Solid	3546	

Analysis Batch: 500988

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-220519-1	DSPE-4-0.0-20180919	Total/NA	Solid	8270C	500904
MB 440-500904/1-A	Method Blank	Total/NA	Solid	8270C	500904
LCS 440-500904/2-A	Lab Control Sample	Total/NA	Solid	8270C	500904
440-220519-1 MS	DSPE-4-0.0-20180919	Total/NA	Solid	8270C	500904
440-220519-1 MSD	DSPE-4-0.0-20180919	Total/NA	Solid	8270C	500904

Analysis Batch: 501240

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-220519-1 - RA	DSPE-4-0.0-20180919	Total/NA	Solid	8270C	500904
440-220519-2	DSPE-4-1.0-20190919	Total/NA	Solid	8270C	500904
440-220519-3	DSPE-5-0.0-20180919	Total/NA	Solid	8270C	500904
440-220519-4	DSPE-5-1.0-20180919	Total/NA	Solid	8270C	500904
MB 440-500904/1-A	Method Blank	Total/NA	Solid	8270C	500904

TestAmerica Irvine

QC Association Summary

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 440-220519-1

GC/MS Semi VOA (Continued)

Analysis Batch: 501446

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-220519-2 - DL	DSPE-4-1.0-20190919	Total/NA	Solid	8270C	500904

GC VOA

Analysis Batch: 501450

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-220519-1	DSPE-4-0.0-20180919	Total/NA	Solid	8015B	
440-220519-2	DSPE-4-1.0-20190919	Total/NA	Solid	8015B	
440-220519-3	DSPE-5-0.0-20180919	Total/NA	Solid	8015B	
440-220519-4	DSPE-5-1.0-20180919	Total/NA	Solid	8015B	
MB 440-501450/25	Method Blank	Total/NA	Solid	8015B	
LCS 440-501450/23	Lab Control Sample	Total/NA	Solid	8015B	
LCS 440-501450/24	Lab Control Sample Dup	Total/NA	Solid	8015B	
440-220611-A-1 MS	Matrix Spike	Total/NA	Solid	8015B	
440-220611-A-1 MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B	

GC Semi VOA

Prep Batch: 500329

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-220519-1	DSPE-4-0.0-20180919	Total/NA	Solid	3546	
440-220519-2	DSPE-4-1.0-20190919	Total/NA	Solid	3546	
440-220519-3	DSPE-5-0.0-20180919	Total/NA	Solid	3546	
440-220519-4	DSPE-5-1.0-20180919	Total/NA	Solid	3546	
MB 440-500329/1-A	Method Blank	Total/NA	Solid	3546	
LCS 440-500329/2-A	Lab Control Sample	Total/NA	Solid	3546	
440-220546-I-7-A MS	Matrix Spike	Total/NA	Solid	3546	
440-220546-I-7-B MSD	Matrix Spike Duplicate	Total/NA	Solid	3546	

Analysis Batch: 500376

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-220519-1	DSPE-4-0.0-20180919	Total/NA	Solid	8015B	500329
440-220519-2	DSPE-4-1.0-20190919	Total/NA	Solid	8015B	500329
440-220519-3	DSPE-5-0.0-20180919	Total/NA	Solid	8015B	500329
440-220519-4	DSPE-5-1.0-20180919	Total/NA	Solid	8015B	500329
MB 440-500329/1-A	Method Blank	Total/NA	Solid	8015B	500329
LCS 440-500329/2-A	Lab Control Sample	Total/NA	Solid	8015B	500329
440-220546-I-7-A MS	Matrix Spike	Total/NA	Solid	8015B	500329
440-220546-I-7-B MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B	500329

Prep Batch: 501153

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-220519-1	DSPE-4-0.0-20180919	Total/NA	Solid	3546	
440-220519-1 - DL	DSPE-4-0.0-20180919	Total/NA	Solid	3546	
440-220519-2	DSPE-4-1.0-20190919	Total/NA	Solid	3546	
440-220519-2 - DL	DSPE-4-1.0-20190919	Total/NA	Solid	3546	
440-220519-3	DSPE-5-0.0-20180919	Total/NA	Solid	3546	
440-220519-3 - DL	DSPE-5-0.0-20180919	Total/NA	Solid	3546	
MB 440-501153/1-A	Method Blank	Total/NA	Solid	3546	
LCS 440-501153/2-A	Lab Control Sample	Total/NA	Solid	3546	

TestAmerica Irvine

QC Association Summary

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 440-220519-1

GC Semi VOA (Continued)

Prep Batch: 501153 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-220771-A-1-A MS	Matrix Spike	Total/NA	Solid	3546	
440-220771-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	3546	

Analysis Batch: 501443

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-220519-1	DSPE-4-0.0-20180919	Total/NA	Solid	8081A	501153
440-220519-2	DSPE-4-1.0-20190919	Total/NA	Solid	8081A	501153
440-220519-3	DSPE-5-0.0-20180919	Total/NA	Solid	8081A	501153
MB 440-501153/1-A	Method Blank	Total/NA	Solid	8081A	501153
LCS 440-501153/2-A	Lab Control Sample	Total/NA	Solid	8081A	501153
440-220771-A-1-A MS	Matrix Spike	Total/NA	Solid	8081A	501153
440-220771-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	8081A	501153

Analysis Batch: 502186

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-220519-1 - DL	DSPE-4-0.0-20180919	Total/NA	Solid	8081A	501153
440-220519-2 - DL	DSPE-4-1.0-20190919	Total/NA	Solid	8081A	501153
440-220519-3 - DL	DSPE-5-0.0-20180919	Total/NA	Solid	8081A	501153

Prep Batch: 502340

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-220519-4	DSPE-5-1.0-20180919	Total/NA	Solid	3546	
MB 440-502340/1-A	Method Blank	Total/NA	Solid	3546	
LCS 440-502340/2-A	Lab Control Sample	Total/NA	Solid	3546	
440-220519-4 MS	DSPE-5-1.0-20180919	Total/NA	Solid	3546	
440-220519-4 MSD	DSPE-5-1.0-20180919	Total/NA	Solid	3546	

Analysis Batch: 502496

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-220519-4	DSPE-5-1.0-20180919	Total/NA	Solid	8081A	502340
MB 440-502340/1-A	Method Blank	Total/NA	Solid	8081A	502340
LCS 440-502340/2-A	Lab Control Sample	Total/NA	Solid	8081A	502340
440-220519-4 MS	DSPE-5-1.0-20180919	Total/NA	Solid	8081A	502340
440-220519-4 MSD	DSPE-5-1.0-20180919	Total/NA	Solid	8081A	502340

Metals

Leach Batch: 500563

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-220519-1	DSPE-4-0.0-20180919	TCLP	Solid	1311	
440-220519-2	DSPE-4-1.0-20190919	TCLP	Solid	1311	
440-220519-3	DSPE-5-0.0-20180919	TCLP	Solid	1311	
440-220519-4	DSPE-5-1.0-20180919	TCLP	Solid	1311	
MB 440-500563/1-B	Method Blank	TCLP	Solid	1311	
MB 440-500563/1-C	Method Blank	TCLP	Solid	1311	
LCS 440-500563/2-B	Lab Control Sample	TCLP	Solid	1311	
LCS 440-500563/2-C	Lab Control Sample	TCLP	Solid	1311	
440-220519-1 MS	DSPE-4-0.0-20180919	TCLP	Solid	1311	
440-220519-1 MSD	DSPE-4-0.0-20180919	TCLP	Solid	1311	

TestAmerica Irvine

QC Association Summary

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 440-220519-1

Metals (Continued)

Prep Batch: 500773

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-220519-1	DSPE-4-0.0-20180919	TCLP	Solid	7470A	500563
440-220519-2	DSPE-4-1.0-20190919	TCLP	Solid	7470A	500563
440-220519-3	DSPE-5-0.0-20180919	TCLP	Solid	7470A	500563
440-220519-4	DSPE-5-1.0-20180919	TCLP	Solid	7470A	500563
MB 440-500563/1-B	Method Blank	TCLP	Solid	7470A	500563
LCS 440-500563/2-B	Lab Control Sample	TCLP	Solid	7470A	500563
440-220519-1 MS	DSPE-4-0.0-20180919	TCLP	Solid	7470A	500563
440-220519-1 MSD	DSPE-4-0.0-20180919	TCLP	Solid	7470A	500563

Prep Batch: 500849

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-220519-1	DSPE-4-0.0-20180919	TCLP	Solid	3010A	500563
440-220519-2	DSPE-4-1.0-20190919	TCLP	Solid	3010A	500563
440-220519-3	DSPE-5-0.0-20180919	TCLP	Solid	3010A	500563
440-220519-4	DSPE-5-1.0-20180919	TCLP	Solid	3010A	500563
MB 440-500563/1-C	Method Blank	TCLP	Solid	3010A	500563
LCS 440-500563/2-C	Lab Control Sample	TCLP	Solid	3010A	500563
440-220519-1 MS	DSPE-4-0.0-20180919	TCLP	Solid	3010A	500563
440-220519-1 MSD	DSPE-4-0.0-20180919	TCLP	Solid	3010A	500563

Analysis Batch: 500999

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-220519-1	DSPE-4-0.0-20180919	TCLP	Solid	7470A	500773

Analysis Batch: 501004

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-220519-2	DSPE-4-1.0-20190919	TCLP	Solid	7470A	500773
440-220519-3	DSPE-5-0.0-20180919	TCLP	Solid	7470A	500773
440-220519-4	DSPE-5-1.0-20180919	TCLP	Solid	7470A	500773
MB 440-500563/1-B	Method Blank	TCLP	Solid	7470A	500773
LCS 440-500563/2-B	Lab Control Sample	TCLP	Solid	7470A	500773
440-220519-1 MS	DSPE-4-0.0-20180919	TCLP	Solid	7470A	500773
440-220519-1 MSD	DSPE-4-0.0-20180919	TCLP	Solid	7470A	500773

Analysis Batch: 501067

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-220519-1	DSPE-4-0.0-20180919	TCLP	Solid	6010B	500849
440-220519-2	DSPE-4-1.0-20190919	TCLP	Solid	6010B	500849
440-220519-3	DSPE-5-0.0-20180919	TCLP	Solid	6010B	500849
440-220519-4	DSPE-5-1.0-20180919	TCLP	Solid	6010B	500849
MB 440-500563/1-C	Method Blank	TCLP	Solid	6010B	500849
LCS 440-500563/2-C	Lab Control Sample	TCLP	Solid	6010B	500849
440-220519-1 MS	DSPE-4-0.0-20180919	TCLP	Solid	6010B	500849
440-220519-1 MSD	DSPE-4-0.0-20180919	TCLP	Solid	6010B	500849

General Chemistry

Analysis Batch: 500252

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-220519-1	DSPE-4-0.0-20180919	Total/NA	Solid	Moisture	

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QC Association Summary

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 440-220519-1

General Chemistry (Continued)

Analysis Batch: 500252 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-220519-2	DSPE-4-1.0-20190919	Total/NA	Solid	Moisture	
440-220519-3	DSPE-5-0.0-20180919	Total/NA	Solid	Moisture	
440-220519-4	DSPE-5-1.0-20180919	Total/NA	Solid	Moisture	
440-220519-1 DU	DSPE-4-0.0-20180919	Total/NA	Solid	Moisture	

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13

Definitions/Glossary

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 440-220519-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC/MS Semi VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
F1	MS and/or MSD Recovery is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
E	Result exceeded calibration range.

GC Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
p	The %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported.
X	Surrogate is outside control limits
F1	MS and/or MSD Recovery is outside acceptance limits.

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Accreditation/Certification Summary

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 440-220519-1

Laboratory: TestAmerica Irvine

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska	State Program	10	CA01531	06-30-19
Arizona	State Program	9	AZ0671	10-14-18 *
California	LA Cty Sanitation Districts	9	10256	06-30-19
California	State Program	9	CA ELAP 2706	06-30-19
Guam	State Program	9	Cert. No. 17-003R	01-23-19
Hawaii	State Program	9	N/A	01-29-19
Kansas	NELAP	7	E-10420	07-31-19
Nevada	State Program	9	CA015312018-1	07-31-19
New Mexico	State Program	6	N/A	01-29-19
Oregon	NELAP	10	4028	01-29-19
US Fish & Wildlife	Federal		058448	07-31-19
USDA	Federal		P330-15-00184	07-09-21
Washington	State Program	10	C900	09-03-18 *

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

TestAmerica Irvine

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Chain of Custody Record

138876

TestAmerica
 THE LEADER IN ENVIRONMENTAL TESTING
 TestAmerica Laboratories, Inc.
 TAL-8210 (0713)

Regulatory Program: DW NPDES RCRA Other:

Project Manager: **Dan Clark**
 Tel/Fax: **210-299-7036**

Client Contact
 Company Name: **Ramboll**
 Address: **2200 Powell St, Suite 700**
 City/State/Zip: **Emeryville, CA 94608**
 Phone: **510-655-7400**
 Fax:
 Project Name: **Divin Sampling**
 Site: **NERI**
 PO # **1690006941-012**

Site Contact: **Brendan K. Brown** Date: **09/19/2018**
 Lab Contact: **Billy Mata** Carrier:

Analysis Turnaround Time
 CALENDAR DAYS WORKING DAYS
 TAT if different from Below _____
 2 weeks
 1 week
 2 days
 1 day

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS/MSD (Y/N)	Site/MS/MSD (Y/N)	Analysis	Carrier	Date	COC No.	Sampler	For Lab Use Only: Walk-in Client: Lab Sampling	Job / SDG No.	Sample Specific Notes:
DSPE-4-0.0-20180919	9/19	1415	G	SO	2	X	X	ICLPERAS Metals	VOCs			1				
DSPE-4-1.0-20180919	"	1430	"	"	"	X	X	ICLPERAS Metals	SVOCS			1				
DSPE-5-0.0-20180919	"	1515	"	"	"	X	X	ICLPERAS Metals	Dioxins/Chlorides/Fresh			1				
DSPE-5-1.0-20180919	"	1523	"	"	"	X	X	ICLPERAS Metals	Turbidity/DO/Residual Chlorine			1				

440-220519 Chain of Custody

Barcode: 440-220519 Chain of Custody

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return to Client Disposal by Lab Archive for _____ Months

Preservation Used: 1= Ice, 2= HCl, 3= H2SO4, 4= HNO3, 5= NaOH, 6= Other

Possible Hazard Identification:
 Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.
 Non-Hazard Flammable Skin Irritant Poison B Unknown

Special Instructions/QC Requirements & Comments:
Different Work Order

Custody Seal No.: _____
 Relinquished by: **B. K.** Date/Time: **9/19/18 16:30**
 Relinquished by: **JAV** Date/Time: **9/19/18 17:30**
 Relinquished by: **FedEx** Date/Time: **9/20/18 04:45**

Company: **Ramboll** Date/Time: **9/19/18 16:20**
 Company: **TAHUS** Date/Time: **9/20/18 04:45**

Therm ID No: **88**

COOLING TEMP (C): Obs'd: **4.8** Corr'd: **4.9**

Received in Laboratory: **TA IRLV**



Login Sample Receipt Checklist

Client: Ramboll US Corporation

Job Number: 440-220519-1

Login Number: 220519

List Number: 1

Creator: Bonta, Lucia F

List Source: TestAmerica Irvine

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	Not Present
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Irvine

17461 Derian Ave

Suite 100

Irvine, CA 92614-5817

Tel: (949)261-1022

TestAmerica Job ID: 440-220623-1

Client Project/Site: NERT Dioxin Soil Sampling

For:

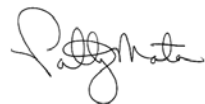
Ramboll US Corporation

2200 Powell Street

Suite 700

Emeryville, California 94608

Attn: Craig Knox



Authorized for release by:

9/28/2018 4:46:35 PM

Patty Mata, Senior Project Manager

(949)261-1022

patty.mata@testamericainc.com

LINKS

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results through

TotalAccess

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www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Sample Summary

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Soil Sampling

TestAmerica Job ID: 440-220623-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
440-220623-1	DSPE-6-0.0-20180920	Solid	09/20/18 07:36	09/21/18 09:30
440-220623-2	DSPE-6-1.0-20180920	Solid	09/20/18 07:48	09/21/18 09:30
440-220623-3	DSPE-7-0.0-20180920	Solid	09/20/18 08:35	09/21/18 09:30
440-220623-4	DSPE-7-1.0-20180920	Solid	09/20/18 08:40	09/21/18 09:30

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Case Narrative

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Soil Sampling

TestAmerica Job ID: 440-220623-1

Job ID: 440-220623-1

Laboratory: TestAmerica Irvine

Narrative

Job Narrative 440-220623-1

Comments

No additional comments.

Receipt

The samples were received on 9/21/2018 9:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.9° C.

GC/MS VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

GC/MS Semi VOA

Method(s) 8270C: The percent recovery of Benzidine in the laboratory control sample (LCS) for preparation batch 440-500904 and analytical batch 440-500988 was below the acceptance limits. Per the EPA method, this compound is subject to oxidative loss during sample preparation and as a consequence yields erratic recoveries.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC VOA

Method(s) 8015B: The continuing calibration verification (CCV) associated with batch 440-501158 recovered above the upper control limit for GRO (C4-C12). The samples associated with this CCV were non-detects for the affected analyte; therefore, the data have been reported. The following samples are impacted: DSPE-7-0.0-20180920 (440-220623-3), DSPE-7-1.0-20180920 (440-220623-4).

Method(s) 8015B: Surrogate recovery for the following batch QC sample was outside control limits: (440-220559-A-1 MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC Semi VOA

Method(s) 8015B: The method blank for preparation batch 440-500922 and analytical batch 440-501057 contained C10 - C40 above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and re-analysis of samples was not performed.

Method(s) 8081A: Surrogate recovery for the following samples was above control limits: DSPE-6-0.0-20180920 (440-220623-1) and DSPE-6-1.0-20180920 (440-220623-2). Evidence of matrix interference due to high target analytes is present for Decachlorobiphenyl surrogate; therefore, re-extraction and re-analysis was not performed. Second surrogate Tetrachloro-m-xylene recoveries were within limits, demonstrating that extraction process was in control.

Method(s) 8081A: The continuing calibration verification (CCV) associated with batch 440-501443 recovered above the upper control limit for Methoxychlor. The samples associated with this CCV were non-detects for the affected analyte; therefore, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

VOA Prep

Case Narrative

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Soil Sampling

TestAmerica Job ID: 440-220623-1

Job ID: 440-220623-1 (Continued)

Laboratory: TestAmerica Irvine (Continued)

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

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Client Sample Results

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Soil Sampling

TestAmerica Job ID: 440-220623-1

Client Sample ID: DSPE-6-0.0-20180920

Lab Sample ID: 440-220623-1

Date Collected: 09/20/18 07:36

Matrix: Solid

Date Received: 09/21/18 09:30

Percent Solids: 98.2

Method: 8260B/5030B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	0.014	J	0.020	0.0081	mg/Kg	☼		09/26/18 16:35	1
Benzene	ND		0.0010	0.00051	mg/Kg	☼		09/26/18 16:35	1
Bromobenzene	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 16:35	1
Bromochloromethane	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 16:35	1
Bromodichloromethane	ND		0.0010	0.00051	mg/Kg	☼		09/26/18 16:35	1
Bromoform	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 16:35	1
Bromomethane	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 16:35	1
2-Butanone (MEK)	ND		0.010	0.0051	mg/Kg	☼		09/26/18 16:35	1
Carbon tetrachloride	ND		0.0020	0.00051	mg/Kg	☼		09/26/18 16:35	1
Chlorobenzene	ND		0.0010	0.00051	mg/Kg	☼		09/26/18 16:35	1
Chloroethane	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 16:35	1
Chloroform	ND		0.0010	0.00051	mg/Kg	☼		09/26/18 16:35	1
Chloromethane	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 16:35	1
2-Chlorotoluene	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 16:35	1
4-Chlorotoluene	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 16:35	1
cis-1,2-Dichloroethene	ND		0.0010	0.00051	mg/Kg	☼		09/26/18 16:35	1
cis-1,3-Dichloropropene	ND		0.0010	0.00051	mg/Kg	☼		09/26/18 16:35	1
Dibromochloromethane	ND		0.0010	0.00051	mg/Kg	☼		09/26/18 16:35	1
1,2-Dibromo-3-Chloropropane	ND		0.0051	0.0020	mg/Kg	☼		09/26/18 16:35	1
1,2-Dibromoethane (EDB)	ND		0.0010	0.00051	mg/Kg	☼		09/26/18 16:35	1
Dibromomethane	ND		0.0010	0.00051	mg/Kg	☼		09/26/18 16:35	1
1,2-Dichlorobenzene	ND		0.0010	0.00051	mg/Kg	☼		09/26/18 16:35	1
1,3-Dichlorobenzene	ND		0.0010	0.00051	mg/Kg	☼		09/26/18 16:35	1
1,4-Dichlorobenzene	ND		0.0010	0.00051	mg/Kg	☼		09/26/18 16:35	1
Dichlorodifluoromethane	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 16:35	1
1,1-Dichloroethane	ND		0.0010	0.00051	mg/Kg	☼		09/26/18 16:35	1
1,2-Dichloroethane	ND		0.0010	0.00051	mg/Kg	☼		09/26/18 16:35	1
1,1-Dichloroethene	ND		0.0020	0.00051	mg/Kg	☼		09/26/18 16:35	1
1,2-Dichloropropane	ND		0.0010	0.00051	mg/Kg	☼		09/26/18 16:35	1
1,3-Dichloropropane	ND		0.0010	0.00051	mg/Kg	☼		09/26/18 16:35	1
2,2-Dichloropropane	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 16:35	1
1,1-Dichloropropene	ND		0.0010	0.00051	mg/Kg	☼		09/26/18 16:35	1
Ethylbenzene	ND		0.0010	0.00051	mg/Kg	☼		09/26/18 16:35	1
Ethyl-t-butyl ether (ETBE)	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 16:35	1
Hexachlorobutadiene	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 16:35	1
2-Hexanone	ND		0.010	0.0051	mg/Kg	☼		09/26/18 16:35	1
Isopropylbenzene	ND		0.0010	0.00051	mg/Kg	☼		09/26/18 16:35	1
Isopropyl Ether (DIPE)	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 16:35	1
Methylene Chloride	0.0078	J	0.010	0.0051	mg/Kg	☼		09/26/18 16:35	1
4-Methyl-2-pentanone (MIBK)	ND		0.0051	0.0025	mg/Kg	☼		09/26/18 16:35	1
Methyl-t-Butyl Ether (MTBE)	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 16:35	1
m,p-Xylene	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 16:35	1
Naphthalene	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 16:35	1
n-Butylbenzene	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 16:35	1
N-Propylbenzene	ND		0.0010	0.00051	mg/Kg	☼		09/26/18 16:35	1
o-Xylene	ND		0.0010	0.00051	mg/Kg	☼		09/26/18 16:35	1
p-Isopropyltoluene	ND		0.0010	0.00051	mg/Kg	☼		09/26/18 16:35	1
sec-Butylbenzene	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 16:35	1
Styrene	ND		0.0010	0.00051	mg/Kg	☼		09/26/18 16:35	1

TestAmerica Irvine

Client Sample Results

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Soil Sampling

TestAmerica Job ID: 440-220623-1

Client Sample ID: DSPE-6-0.0-20180920

Lab Sample ID: 440-220623-1

Date Collected: 09/20/18 07:36

Matrix: Solid

Date Received: 09/21/18 09:30

Percent Solids: 98.2

Method: 8260B/5030B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tert-amyl-methyl ether (TAME)	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 16:35	1
tert-Butyl alcohol (TBA)	ND		0.051	0.010	mg/Kg	☼		09/26/18 16:35	1
tert-Butylbenzene	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 16:35	1
1,1,1,2-Tetrachloroethane	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 16:35	1
1,1,2,2-Tetrachloroethane	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 16:35	1
Tetrachloroethene	ND		0.0010	0.00051	mg/Kg	☼		09/26/18 16:35	1
Toluene	ND		0.0010	0.00051	mg/Kg	☼		09/26/18 16:35	1
trans-1,2-Dichloroethene	ND		0.0010	0.00051	mg/Kg	☼		09/26/18 16:35	1
trans-1,3-Dichloropropene	ND		0.0010	0.00051	mg/Kg	☼		09/26/18 16:35	1
1,2,3-Trichlorobenzene	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 16:35	1
1,2,4-Trichlorobenzene	ND		0.0051	0.0010	mg/Kg	☼		09/26/18 16:35	1
1,1,1-Trichloroethane	ND		0.0010	0.00051	mg/Kg	☼		09/26/18 16:35	1
1,1,2-Trichloroethane	ND		0.0010	0.00051	mg/Kg	☼		09/26/18 16:35	1
Trichloroethene	ND		0.0010	0.00051	mg/Kg	☼		09/26/18 16:35	1
Trichlorofluoromethane	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 16:35	1
1,2,3-Trichloropropane	ND		0.010	0.0010	mg/Kg	☼		09/26/18 16:35	1
1,2,4-Trimethylbenzene	0.0012	J	0.0020	0.0010	mg/Kg	☼		09/26/18 16:35	1
1,3,5-Trimethylbenzene	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 16:35	1
Vinyl chloride	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 16:35	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		79 - 120		09/26/18 16:35	1
Dibromofluoromethane (Surr)	96		60 - 120		09/26/18 16:35	1
Toluene-d8 (Surr)	95		79 - 123		09/26/18 16:35	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.36	0.18	mg/Kg	☼	09/25/18 07:04	09/25/18 16:52	1
Acenaphthylene	ND		0.34	0.071	mg/Kg	☼	09/25/18 07:04	09/25/18 16:52	1
Aniline	ND		1.0	0.14	mg/Kg	☼	09/25/18 07:04	09/25/18 16:52	1
Anthracene	ND		0.34	0.081	mg/Kg	☼	09/25/18 07:04	09/25/18 16:52	1
Benzidine	ND	*	2.1	0.17	mg/Kg	☼	09/25/18 07:04	09/25/18 16:52	1
Benzo[a]anthracene	ND		0.34	0.071	mg/Kg	☼	09/25/18 07:04	09/25/18 16:52	1
Benzo[a]pyrene	ND		0.34	0.068	mg/Kg	☼	09/25/18 07:04	09/25/18 16:52	1
Benzo[b]fluoranthene	ND		0.34	0.071	mg/Kg	☼	09/25/18 07:04	09/25/18 16:52	1
Benzo[g,h,i]perylene	ND		0.34	0.11	mg/Kg	☼	09/25/18 07:04	09/25/18 16:52	1
Benzoic acid	ND		0.96	0.48	mg/Kg	☼	09/25/18 07:04	09/25/18 16:52	1
Benzo[k]fluoranthene	ND		0.34	0.071	mg/Kg	☼	09/25/18 07:04	09/25/18 16:52	1
Benzyl alcohol	ND		3.5	0.42	mg/Kg	☼	09/25/18 07:04	09/25/18 16:52	1
Bis(2-chloroethoxy)methane	ND		0.34	0.14	mg/Kg	☼	09/25/18 07:04	09/25/18 16:52	1
Bis(2-chloroethyl)ether	ND		0.34	0.071	mg/Kg	☼	09/25/18 07:04	09/25/18 16:52	1
Bis(2-ethylhexyl) phthalate	ND		0.34	0.091	mg/Kg	☼	09/25/18 07:04	09/25/18 16:52	1
4-Bromophenyl phenyl ether	ND		0.34	0.076	mg/Kg	☼	09/25/18 07:04	09/25/18 16:52	1
Butyl benzyl phthalate	ND		0.34	0.081	mg/Kg	☼	09/25/18 07:04	09/25/18 16:52	1
4-Chloroaniline	ND		1.0	0.15	mg/Kg	☼	09/25/18 07:04	09/25/18 16:52	1
4-Chloro-3-methylphenol	ND		0.41	0.20	mg/Kg	☼	09/25/18 07:04	09/25/18 16:52	1
2-Chloronaphthalene	ND		0.34	0.068	mg/Kg	☼	09/25/18 07:04	09/25/18 16:52	1
2-Chlorophenol	ND		0.34	0.071	mg/Kg	☼	09/25/18 07:04	09/25/18 16:52	1
4-Chlorophenyl phenyl ether	ND		1.1	0.20	mg/Kg	☼	09/25/18 07:04	09/25/18 16:52	1
Chrysene	ND		0.34	0.076	mg/Kg	☼	09/25/18 07:04	09/25/18 16:52	1

TestAmerica Irvine

Client Sample Results

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Soil Sampling

TestAmerica Job ID: 440-220623-1

Client Sample ID: DSPE-6-0.0-20180920

Lab Sample ID: 440-220623-1

Date Collected: 09/20/18 07:36

Matrix: Solid

Date Received: 09/21/18 09:30

Percent Solids: 98.2

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibenz(a,h)anthracene	ND		0.43	0.10	mg/Kg	☼	09/25/18 07:04	09/25/18 16:52	1
Dibenzofuran	ND		0.34	0.14	mg/Kg	☼	09/25/18 07:04	09/25/18 16:52	1
3,3'-Dichlorobenzidine	ND		0.84	0.15	mg/Kg	☼	09/25/18 07:04	09/25/18 16:52	1
2,4-Dichlorophenol	ND		0.34	0.068	mg/Kg	☼	09/25/18 07:04	09/25/18 16:52	1
Diethyl phthalate	ND		0.34	0.096	mg/Kg	☼	09/25/18 07:04	09/25/18 16:52	1
2,4-Dimethylphenol	ND		0.34	0.13	mg/Kg	☼	09/25/18 07:04	09/25/18 16:52	1
Dimethyl phthalate	ND		0.34	0.068	mg/Kg	☼	09/25/18 07:04	09/25/18 16:52	1
Di-n-butyl phthalate	ND		0.34	0.091	mg/Kg	☼	09/25/18 07:04	09/25/18 16:52	1
2,4-Dinitrophenol	ND		2.0	1.0	mg/Kg	☼	09/25/18 07:04	09/25/18 16:52	1
2,4-Dinitrotoluene	ND		0.34	0.081	mg/Kg	☼	09/25/18 07:04	09/25/18 16:52	1
2,6-Dinitrotoluene	ND		0.34	0.096	mg/Kg	☼	09/25/18 07:04	09/25/18 16:52	1
Di-n-octyl phthalate	ND		0.34	0.091	mg/Kg	☼	09/25/18 07:04	09/25/18 16:52	1
Fluoranthene	ND		0.34	0.16	mg/Kg	☼	09/25/18 07:04	09/25/18 16:52	1
Fluorene	ND		0.34	0.071	mg/Kg	☼	09/25/18 07:04	09/25/18 16:52	1
Hexachlorobenzene	ND		0.34	0.071	mg/Kg	☼	09/25/18 07:04	09/25/18 16:52	1
Hexachlorocyclopentadiene	ND		0.84	0.31	mg/Kg	☼	09/25/18 07:04	09/25/18 16:52	1
Hexachloroethane	ND		0.34	0.071	mg/Kg	☼	09/25/18 07:04	09/25/18 16:52	1
Indeno[1,2,3-cd]pyrene	ND		0.34	0.13	mg/Kg	☼	09/25/18 07:04	09/25/18 16:52	1
Isophorone	ND		0.34	0.068	mg/Kg	☼	09/25/18 07:04	09/25/18 16:52	1
1-Methylnaphthalene	ND		0.36	0.15	mg/Kg	☼	09/25/18 07:04	09/25/18 16:52	1
2-Methylnaphthalene	ND		0.34	0.071	mg/Kg	☼	09/25/18 07:04	09/25/18 16:52	1
2-Methylphenol	ND		0.34	0.081	mg/Kg	☼	09/25/18 07:04	09/25/18 16:52	1
3-Methylphenol + 4-Methylphenol	ND		0.34	0.14	mg/Kg	☼	09/25/18 07:04	09/25/18 16:52	1
Naphthalene	ND		0.34	0.068	mg/Kg	☼	09/25/18 07:04	09/25/18 16:52	1
2-Nitroaniline	ND		0.34	0.17	mg/Kg	☼	09/25/18 07:04	09/25/18 16:52	1
3-Nitroaniline	ND		0.34	0.14	mg/Kg	☼	09/25/18 07:04	09/25/18 16:52	1
4-Nitroaniline	ND		0.84	0.14	mg/Kg	☼	09/25/18 07:04	09/25/18 16:52	1
Nitrobenzene	ND		0.34	0.071	mg/Kg	☼	09/25/18 07:04	09/25/18 16:52	1
2-Nitrophenol	ND		0.34	0.14	mg/Kg	☼	09/25/18 07:04	09/25/18 16:52	1
4-Nitrophenol	ND		2.9	0.51	mg/Kg	☼	09/25/18 07:04	09/25/18 16:52	1
N-Nitrosodi-n-propylamine	ND		0.25	0.071	mg/Kg	☼	09/25/18 07:04	09/25/18 16:52	1
N-Nitrosodiphenylamine	ND		0.76	0.16	mg/Kg	☼	09/25/18 07:04	09/25/18 16:52	1
Pentachlorophenol	ND		0.84	0.35	mg/Kg	☼	09/25/18 07:04	09/25/18 16:52	1
Phenanthrene	ND		0.34	0.15	mg/Kg	☼	09/25/18 07:04	09/25/18 16:52	1
Phenol	ND		0.34	0.091	mg/Kg	☼	09/25/18 07:04	09/25/18 16:52	1
Pyrene	ND		0.34	0.14	mg/Kg	☼	09/25/18 07:04	09/25/18 16:52	1
Pyridine	ND		0.35	0.15	mg/Kg	☼	09/25/18 07:04	09/25/18 16:52	1
2,4,5-Trichlorophenol	ND		0.51	0.27	mg/Kg	☼	09/25/18 07:04	09/25/18 16:52	1
2,4,6-Trichlorophenol	ND		0.56	0.16	mg/Kg	☼	09/25/18 07:04	09/25/18 16:52	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	69		42 - 113				09/25/18 07:04	09/25/18 16:52	1
2-Fluorophenol (Surr)	61		18 - 138				09/25/18 07:04	09/25/18 16:52	1
Nitrobenzene-d5 (Surr)	63		39 - 104				09/25/18 07:04	09/25/18 16:52	1
Phenol-d6 (Surr)	59		37 - 125				09/25/18 07:04	09/25/18 16:52	1
Terphenyl-d14 (Surr)	78		43 - 125				09/25/18 07:04	09/25/18 16:52	1
2,4,6-Tribromophenol (Surr)	62		10 - 147				09/25/18 07:04	09/25/18 16:52	1

Client Sample Results

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Soil Sampling

TestAmerica Job ID: 440-220623-1

Client Sample ID: DSPE-6-0.0-20180920

Lab Sample ID: 440-220623-1

Date Collected: 09/20/18 07:36

Matrix: Solid

Date Received: 09/21/18 09:30

Percent Solids: 98.2

Method: 8270C - Semivolatile Organic Compounds (GC/MS) - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Octachlorostyrene	ND		3.4	2.3	mg/Kg	☼	09/25/18 07:04	09/26/18 13:20	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	66		42 - 113				09/25/18 07:04	09/26/18 13:20	1
2-Fluorophenol (Surr)	56		18 - 138				09/25/18 07:04	09/26/18 13:20	1
Nitrobenzene-d5 (Surr)	61		39 - 104				09/25/18 07:04	09/26/18 13:20	1
Phenol-d6 (Surr)	55		37 - 125				09/25/18 07:04	09/26/18 13:20	1
Terphenyl-d14 (Surr)	77		43 - 125				09/25/18 07:04	09/26/18 13:20	1
2,4,6-Tribromophenol (Surr)	65		10 - 147				09/25/18 07:04	09/26/18 13:20	1

Method: 8015B - Gasoline Range Organics - (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
GRO (C6-C10)	ND		400	150	ug/Kg	☼		09/27/18 15:11	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	116		65 - 140					09/27/18 15:11	1

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	7.0		5.1	2.5	mg/Kg	☼	09/25/18 08:04	09/26/18 01:34	1
Oil Range Organics (C29-C40)	4.3	J	5.1	2.5	mg/Kg	☼	09/25/18 08:04	09/26/18 01:34	1
EFH (C10-C40)	11	B	5.1	2.5	mg/Kg	☼	09/25/18 08:04	09/26/18 01:34	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
n-Octacosane	71		40 - 140				09/25/18 08:04	09/26/18 01:34	1

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		0.0051	0.0015	mg/Kg	☼	09/26/18 07:04	09/26/18 19:04	1
alpha-BHC	ND		0.0051	0.0015	mg/Kg	☼	09/26/18 07:04	09/26/18 19:04	1
cis-Chlordane	ND		0.0051	0.0020	mg/Kg	☼	09/26/18 07:04	09/26/18 19:04	1
beta-BHC	0.055		0.0051	0.0015	mg/Kg	☼	09/26/18 07:04	09/26/18 19:04	1
4,4'-DDD	ND		0.0051	0.0015	mg/Kg	☼	09/26/18 07:04	09/26/18 19:04	1
4,4'-DDT	0.023		0.0051	0.0015	mg/Kg	☼	09/26/18 07:04	09/26/18 19:04	1
delta-BHC	ND		0.010	0.0015	mg/Kg	☼	09/26/18 07:04	09/26/18 19:04	1
Dieldrin	ND		0.0051	0.0015	mg/Kg	☼	09/26/18 07:04	09/26/18 19:04	1
Endosulfan I	ND		0.0051	0.0015	mg/Kg	☼	09/26/18 07:04	09/26/18 19:04	1
Endosulfan II	ND		0.0051	0.0015	mg/Kg	☼	09/26/18 07:04	09/26/18 19:04	1
Endosulfan sulfate	ND		0.010	0.0020	mg/Kg	☼	09/26/18 07:04	09/26/18 19:04	1
Endrin	ND		0.0051	0.0015	mg/Kg	☼	09/26/18 07:04	09/26/18 19:04	1
Endrin aldehyde	ND		0.0051	0.0015	mg/Kg	☼	09/26/18 07:04	09/26/18 19:04	1
Endrin ketone	ND		0.0051	0.0020	mg/Kg	☼	09/26/18 07:04	09/26/18 19:04	1
gamma-BHC (Lindane)	ND		0.0051	0.0015	mg/Kg	☼	09/26/18 07:04	09/26/18 19:04	1
trans-Chlordane	ND		0.0051	0.0015	mg/Kg	☼	09/26/18 07:04	09/26/18 19:04	1
Heptachlor	ND		0.0051	0.0020	mg/Kg	☼	09/26/18 07:04	09/26/18 19:04	1
Heptachlor epoxide	ND		0.0051	0.0020	mg/Kg	☼	09/26/18 07:04	09/26/18 19:04	1
Methoxychlor	ND		0.0051	0.0015	mg/Kg	☼	09/26/18 07:04	09/26/18 19:04	1
Toxaphene	ND		0.20	0.051	mg/Kg	☼	09/26/18 07:04	09/26/18 19:04	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	943	X	45 - 120				09/26/18 07:04	09/26/18 19:04	1

TestAmerica Irvine

Client Sample Results

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Soil Sampling

TestAmerica Job ID: 440-220623-1

Client Sample ID: DSPE-6-0.0-20180920

Lab Sample ID: 440-220623-1

Date Collected: 09/20/18 07:36

Matrix: Solid

Date Received: 09/21/18 09:30

Percent Solids: 98.2

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	84		35 - 115	09/26/18 07:04	09/26/18 19:04	1

Method: 8081A - Organochlorine Pesticides (GC) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4'-DDE	0.067		0.025	0.0076	mg/Kg	☼	09/26/18 07:04	09/27/18 11:28	5
4,4'-DDE	0.096		0.025	0.0076	mg/Kg	☼	09/26/18 07:04	09/27/18 11:28	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	828	X	45 - 120	09/26/18 07:04	09/27/18 11:28	5
Tetrachloro-m-xylene	82		35 - 115	09/26/18 07:04	09/27/18 11:28	5

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.20	0.070	mg/L		09/27/18 22:08	09/28/18 12:25	1
Barium	1.7		0.20	0.060	mg/L		09/27/18 22:08	09/28/18 12:25	1
Cadmium	ND		0.10	0.020	mg/L		09/27/18 22:08	09/28/18 12:25	1
Chromium	ND		0.10	0.020	mg/L		09/27/18 22:08	09/28/18 12:25	1
Lead	ND		0.10	0.040	mg/L		09/27/18 22:08	09/28/18 12:25	1
Selenium	ND		0.10	0.080	mg/L		09/27/18 22:08	09/28/18 12:25	1
Silver	ND		0.20	0.060	mg/L		09/27/18 22:08	09/28/18 12:25	1

Method: 7470A - Mercury (CVAA) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.0020	0.0010	mg/L		09/24/18 13:27	09/25/18 03:57	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	1.8		0.1	0.1	%			09/21/18 17:48	1

Client Sample ID: DSPE-6-1.0-20180920

Lab Sample ID: 440-220623-2

Date Collected: 09/20/18 07:48

Matrix: Solid

Date Received: 09/21/18 09:30

Percent Solids: 95.2

Method: 8260B/5030B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		0.021	0.0083	mg/Kg	☼		09/26/18 17:01	1
Benzene	ND		0.0010	0.00052	mg/Kg	☼		09/26/18 17:01	1
Bromobenzene	ND		0.0021	0.0010	mg/Kg	☼		09/26/18 17:01	1
Bromochloromethane	ND		0.0021	0.0010	mg/Kg	☼		09/26/18 17:01	1
Bromodichloromethane	ND		0.0010	0.00052	mg/Kg	☼		09/26/18 17:01	1
Bromoform	ND		0.0021	0.0010	mg/Kg	☼		09/26/18 17:01	1
Bromomethane	ND		0.0021	0.0010	mg/Kg	☼		09/26/18 17:01	1
2-Butanone (MEK)	ND		0.010	0.0052	mg/Kg	☼		09/26/18 17:01	1
Carbon tetrachloride	ND		0.0021	0.00052	mg/Kg	☼		09/26/18 17:01	1
Chlorobenzene	ND		0.0010	0.00052	mg/Kg	☼		09/26/18 17:01	1
Chloroethane	ND		0.0021	0.0010	mg/Kg	☼		09/26/18 17:01	1
Chloroform	ND		0.0010	0.00052	mg/Kg	☼		09/26/18 17:01	1
Chloromethane	ND		0.0021	0.0010	mg/Kg	☼		09/26/18 17:01	1
2-Chlorotoluene	ND		0.0021	0.0010	mg/Kg	☼		09/26/18 17:01	1
4-Chlorotoluene	ND		0.0021	0.0010	mg/Kg	☼		09/26/18 17:01	1

TestAmerica Irvine

Client Sample Results

Client: Ramboll US Corporation
 Project/Site: NERT Dioxin Soil Sampling

TestAmerica Job ID: 440-220623-1

Client Sample ID: DSPE-6-1.0-20180920

Lab Sample ID: 440-220623-2

Date Collected: 09/20/18 07:48

Matrix: Solid

Date Received: 09/21/18 09:30

Percent Solids: 95.2

Method: 8260B/5030B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.0010	0.00052	mg/Kg	☼		09/26/18 17:01	1
cis-1,3-Dichloropropene	ND		0.0010	0.00052	mg/Kg	☼		09/26/18 17:01	1
Dibromochloromethane	ND		0.0010	0.00052	mg/Kg	☼		09/26/18 17:01	1
1,2-Dibromo-3-Chloropropane	ND		0.0052	0.0021	mg/Kg	☼		09/26/18 17:01	1
1,2-Dibromoethane (EDB)	ND		0.0010	0.00052	mg/Kg	☼		09/26/18 17:01	1
Dibromomethane	ND		0.0010	0.00052	mg/Kg	☼		09/26/18 17:01	1
1,2-Dichlorobenzene	ND		0.0010	0.00052	mg/Kg	☼		09/26/18 17:01	1
1,3-Dichlorobenzene	ND		0.0010	0.00052	mg/Kg	☼		09/26/18 17:01	1
1,4-Dichlorobenzene	ND		0.0010	0.00052	mg/Kg	☼		09/26/18 17:01	1
Dichlorodifluoromethane	ND		0.0021	0.0010	mg/Kg	☼		09/26/18 17:01	1
1,1-Dichloroethane	ND		0.0010	0.00052	mg/Kg	☼		09/26/18 17:01	1
1,2-Dichloroethane	ND		0.0010	0.00052	mg/Kg	☼		09/26/18 17:01	1
1,1-Dichloroethene	ND		0.0021	0.00052	mg/Kg	☼		09/26/18 17:01	1
1,2-Dichloropropane	ND		0.0010	0.00052	mg/Kg	☼		09/26/18 17:01	1
1,3-Dichloropropane	ND		0.0010	0.00052	mg/Kg	☼		09/26/18 17:01	1
2,2-Dichloropropane	ND		0.0021	0.0010	mg/Kg	☼		09/26/18 17:01	1
1,1-Dichloropropene	ND		0.0010	0.00052	mg/Kg	☼		09/26/18 17:01	1
Ethylbenzene	ND		0.0010	0.00052	mg/Kg	☼		09/26/18 17:01	1
Ethyl-t-butyl ether (ETBE)	ND		0.0021	0.0010	mg/Kg	☼		09/26/18 17:01	1
Hexachlorobutadiene	ND		0.0021	0.0010	mg/Kg	☼		09/26/18 17:01	1
2-Hexanone	ND		0.010	0.0052	mg/Kg	☼		09/26/18 17:01	1
Isopropylbenzene	ND		0.0010	0.00052	mg/Kg	☼		09/26/18 17:01	1
Isopropyl Ether (DIPE)	ND		0.0021	0.0010	mg/Kg	☼		09/26/18 17:01	1
Methylene Chloride	ND		0.010	0.0052	mg/Kg	☼		09/26/18 17:01	1
4-Methyl-2-pentanone (MIBK)	ND		0.0052	0.0026	mg/Kg	☼		09/26/18 17:01	1
Methyl-t-Butyl Ether (MTBE)	ND		0.0021	0.0010	mg/Kg	☼		09/26/18 17:01	1
m,p-Xylene	ND		0.0021	0.0010	mg/Kg	☼		09/26/18 17:01	1
Naphthalene	ND		0.0021	0.0010	mg/Kg	☼		09/26/18 17:01	1
n-Butylbenzene	ND		0.0021	0.0010	mg/Kg	☼		09/26/18 17:01	1
N-Propylbenzene	ND		0.0010	0.00052	mg/Kg	☼		09/26/18 17:01	1
o-Xylene	ND		0.0010	0.00052	mg/Kg	☼		09/26/18 17:01	1
p-Isopropyltoluene	ND		0.0010	0.00052	mg/Kg	☼		09/26/18 17:01	1
sec-Butylbenzene	ND		0.0021	0.0010	mg/Kg	☼		09/26/18 17:01	1
Styrene	ND		0.0010	0.00052	mg/Kg	☼		09/26/18 17:01	1
Tert-amyl-methyl ether (TAME)	ND		0.0021	0.0010	mg/Kg	☼		09/26/18 17:01	1
tert-Butyl alcohol (TBA)	ND		0.052	0.010	mg/Kg	☼		09/26/18 17:01	1
tert-Butylbenzene	ND		0.0021	0.0010	mg/Kg	☼		09/26/18 17:01	1
1,1,1,2-Tetrachloroethane	ND		0.0021	0.0010	mg/Kg	☼		09/26/18 17:01	1
1,1,2,2-Tetrachloroethane	ND		0.0021	0.0010	mg/Kg	☼		09/26/18 17:01	1
Tetrachloroethene	ND		0.0010	0.00052	mg/Kg	☼		09/26/18 17:01	1
Toluene	ND		0.0010	0.00052	mg/Kg	☼		09/26/18 17:01	1
trans-1,2-Dichloroethene	ND		0.0010	0.00052	mg/Kg	☼		09/26/18 17:01	1
trans-1,3-Dichloropropene	ND		0.0010	0.00052	mg/Kg	☼		09/26/18 17:01	1
1,2,3-Trichlorobenzene	ND		0.0021	0.0010	mg/Kg	☼		09/26/18 17:01	1
1,2,4-Trichlorobenzene	ND		0.0052	0.0010	mg/Kg	☼		09/26/18 17:01	1
1,1,1-Trichloroethane	ND		0.0010	0.00052	mg/Kg	☼		09/26/18 17:01	1
1,1,2-Trichloroethane	ND		0.0010	0.00052	mg/Kg	☼		09/26/18 17:01	1
Trichloroethene	ND		0.0010	0.00052	mg/Kg	☼		09/26/18 17:01	1
Trichlorofluoromethane	ND		0.0021	0.0010	mg/Kg	☼		09/26/18 17:01	1

TestAmerica Irvine

Client Sample Results

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Soil Sampling

TestAmerica Job ID: 440-220623-1

Client Sample ID: DSPE-6-1.0-20180920

Lab Sample ID: 440-220623-2

Date Collected: 09/20/18 07:48

Matrix: Solid

Date Received: 09/21/18 09:30

Percent Solids: 95.2

Method: 8260B/5030B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND		0.010	0.0010	mg/Kg	☼		09/26/18 17:01	1
1,2,4-Trimethylbenzene	ND		0.0021	0.0010	mg/Kg	☼		09/26/18 17:01	1
1,3,5-Trimethylbenzene	ND		0.0021	0.0010	mg/Kg	☼		09/26/18 17:01	1
Vinyl chloride	ND		0.0021	0.0010	mg/Kg	☼		09/26/18 17:01	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	93		79 - 120					09/26/18 17:01	1
Dibromofluoromethane (Surr)	91		60 - 120					09/26/18 17:01	1
Toluene-d8 (Surr)	95		79 - 123					09/26/18 17:01	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.37	0.18	mg/Kg	☼	09/25/18 07:04	09/25/18 17:18	1
Acenaphthylene	ND		0.35	0.073	mg/Kg	☼	09/25/18 07:04	09/25/18 17:18	1
Aniline	ND		1.0	0.15	mg/Kg	☼	09/25/18 07:04	09/25/18 17:18	1
Anthracene	ND		0.35	0.084	mg/Kg	☼	09/25/18 07:04	09/25/18 17:18	1
Benzidine	ND	*	2.2	0.18	mg/Kg	☼	09/25/18 07:04	09/25/18 17:18	1
Benzo[a]anthracene	ND		0.35	0.073	mg/Kg	☼	09/25/18 07:04	09/25/18 17:18	1
Benzo[a]pyrene	ND		0.35	0.070	mg/Kg	☼	09/25/18 07:04	09/25/18 17:18	1
Benzo[b]fluoranthene	ND		0.35	0.073	mg/Kg	☼	09/25/18 07:04	09/25/18 17:18	1
Benzo[g,h,i]perylene	ND		0.35	0.12	mg/Kg	☼	09/25/18 07:04	09/25/18 17:18	1
Benzoic acid	ND		1.0	0.50	mg/Kg	☼	09/25/18 07:04	09/25/18 17:18	1
Benzo[k]fluoranthene	ND		0.35	0.073	mg/Kg	☼	09/25/18 07:04	09/25/18 17:18	1
Benzyl alcohol	ND		3.6	0.43	mg/Kg	☼	09/25/18 07:04	09/25/18 17:18	1
Bis(2-chloroethoxy)methane	ND		0.35	0.14	mg/Kg	☼	09/25/18 07:04	09/25/18 17:18	1
Bis(2-chloroethyl)ether	ND		0.35	0.073	mg/Kg	☼	09/25/18 07:04	09/25/18 17:18	1
Bis(2-ethylhexyl) phthalate	ND		0.35	0.094	mg/Kg	☼	09/25/18 07:04	09/25/18 17:18	1
4-Bromophenyl phenyl ether	ND		0.35	0.079	mg/Kg	☼	09/25/18 07:04	09/25/18 17:18	1
Butyl benzyl phthalate	ND		0.35	0.084	mg/Kg	☼	09/25/18 07:04	09/25/18 17:18	1
4-Chloroaniline	ND		1.0	0.16	mg/Kg	☼	09/25/18 07:04	09/25/18 17:18	1
4-Chloro-3-methylphenol	ND		0.42	0.21	mg/Kg	☼	09/25/18 07:04	09/25/18 17:18	1
2-Chloronaphthalene	ND		0.35	0.070	mg/Kg	☼	09/25/18 07:04	09/25/18 17:18	1
2-Chlorophenol	ND		0.35	0.073	mg/Kg	☼	09/25/18 07:04	09/25/18 17:18	1
4-Chlorophenyl phenyl ether	ND		1.2	0.21	mg/Kg	☼	09/25/18 07:04	09/25/18 17:18	1
Chrysene	ND		0.35	0.079	mg/Kg	☼	09/25/18 07:04	09/25/18 17:18	1
Dibenz(a,h)anthracene	ND		0.44	0.10	mg/Kg	☼	09/25/18 07:04	09/25/18 17:18	1
Dibenzofuran	ND		0.35	0.15	mg/Kg	☼	09/25/18 07:04	09/25/18 17:18	1
3,3'-Dichlorobenzidine	ND		0.87	0.16	mg/Kg	☼	09/25/18 07:04	09/25/18 17:18	1
2,4-Dichlorophenol	ND		0.35	0.070	mg/Kg	☼	09/25/18 07:04	09/25/18 17:18	1
Diethyl phthalate	ND		0.35	0.10	mg/Kg	☼	09/25/18 07:04	09/25/18 17:18	1
2,4-Dimethylphenol	ND		0.35	0.14	mg/Kg	☼	09/25/18 07:04	09/25/18 17:18	1
Dimethyl phthalate	ND		0.35	0.070	mg/Kg	☼	09/25/18 07:04	09/25/18 17:18	1
Di-n-butyl phthalate	ND		0.35	0.094	mg/Kg	☼	09/25/18 07:04	09/25/18 17:18	1
2,4-Dinitrophenol	ND		2.1	1.0	mg/Kg	☼	09/25/18 07:04	09/25/18 17:18	1
2,4-Dinitrotoluene	ND		0.35	0.084	mg/Kg	☼	09/25/18 07:04	09/25/18 17:18	1
2,6-Dinitrotoluene	ND		0.35	0.10	mg/Kg	☼	09/25/18 07:04	09/25/18 17:18	1
Di-n-octyl phthalate	ND		0.35	0.094	mg/Kg	☼	09/25/18 07:04	09/25/18 17:18	1
Fluoranthene	ND		0.35	0.17	mg/Kg	☼	09/25/18 07:04	09/25/18 17:18	1
Fluorene	ND		0.35	0.073	mg/Kg	☼	09/25/18 07:04	09/25/18 17:18	1
Hexachlorobenzene	0.077	J	0.35	0.073	mg/Kg	☼	09/25/18 07:04	09/25/18 17:18	1

TestAmerica Irvine

Client Sample Results

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Soil Sampling

TestAmerica Job ID: 440-220623-1

Client Sample ID: DSPE-6-1.0-20180920

Lab Sample ID: 440-220623-2

Date Collected: 09/20/18 07:48

Matrix: Solid

Date Received: 09/21/18 09:30

Percent Solids: 95.2

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexachlorocyclopentadiene	ND		0.87	0.32	mg/Kg	☼	09/25/18 07:04	09/25/18 17:18	1
Hexachloroethane	ND		0.35	0.073	mg/Kg	☼	09/25/18 07:04	09/25/18 17:18	1
Indeno[1,2,3-cd]pyrene	ND		0.35	0.14	mg/Kg	☼	09/25/18 07:04	09/25/18 17:18	1
Isophorone	ND		0.35	0.070	mg/Kg	☼	09/25/18 07:04	09/25/18 17:18	1
1-Methylnaphthalene	ND		0.37	0.16	mg/Kg	☼	09/25/18 07:04	09/25/18 17:18	1
2-Methylnaphthalene	ND		0.35	0.073	mg/Kg	☼	09/25/18 07:04	09/25/18 17:18	1
2-Methylphenol	ND		0.35	0.084	mg/Kg	☼	09/25/18 07:04	09/25/18 17:18	1
3-Methylphenol + 4-Methylphenol	ND		0.35	0.14	mg/Kg	☼	09/25/18 07:04	09/25/18 17:18	1
Naphthalene	ND		0.35	0.070	mg/Kg	☼	09/25/18 07:04	09/25/18 17:18	1
2-Nitroaniline	ND		0.35	0.18	mg/Kg	☼	09/25/18 07:04	09/25/18 17:18	1
3-Nitroaniline	ND		0.35	0.14	mg/Kg	☼	09/25/18 07:04	09/25/18 17:18	1
4-Nitroaniline	ND		0.87	0.14	mg/Kg	☼	09/25/18 07:04	09/25/18 17:18	1
Nitrobenzene	ND		0.35	0.073	mg/Kg	☼	09/25/18 07:04	09/25/18 17:18	1
2-Nitrophenol	ND		0.35	0.14	mg/Kg	☼	09/25/18 07:04	09/25/18 17:18	1
4-Nitrophenol	ND		3.0	0.52	mg/Kg	☼	09/25/18 07:04	09/25/18 17:18	1
N-Nitrosodi-n-propylamine	ND		0.26	0.073	mg/Kg	☼	09/25/18 07:04	09/25/18 17:18	1
N-Nitrosodiphenylamine	ND		0.79	0.17	mg/Kg	☼	09/25/18 07:04	09/25/18 17:18	1
Pentachlorophenol	ND		0.87	0.36	mg/Kg	☼	09/25/18 07:04	09/25/18 17:18	1
Phenanthrene	ND		0.35	0.16	mg/Kg	☼	09/25/18 07:04	09/25/18 17:18	1
Phenol	ND		0.35	0.094	mg/Kg	☼	09/25/18 07:04	09/25/18 17:18	1
Pyrene	ND		0.35	0.14	mg/Kg	☼	09/25/18 07:04	09/25/18 17:18	1
Pyridine	ND		0.36	0.16	mg/Kg	☼	09/25/18 07:04	09/25/18 17:18	1
2,4,5-Trichlorophenol	ND		0.52	0.28	mg/Kg	☼	09/25/18 07:04	09/25/18 17:18	1
2,4,6-Trichlorophenol	ND		0.58	0.17	mg/Kg	☼	09/25/18 07:04	09/25/18 17:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	72		42 - 113	09/25/18 07:04	09/25/18 17:18	1
2-Fluorophenol (Surr)	63		18 - 138	09/25/18 07:04	09/25/18 17:18	1
Nitrobenzene-d5 (Surr)	64		39 - 104	09/25/18 07:04	09/25/18 17:18	1
Phenol-d6 (Surr)	59		37 - 125	09/25/18 07:04	09/25/18 17:18	1
Terphenyl-d14 (Surr)	78		43 - 125	09/25/18 07:04	09/25/18 17:18	1
2,4,6-Tribromophenol (Surr)	50		10 - 147	09/25/18 07:04	09/25/18 17:18	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Octachlorostyrene	ND		3.5	2.4	mg/Kg	☼	09/25/18 07:04	09/26/18 13:46	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	70		42 - 113	09/25/18 07:04	09/26/18 13:46	1
2-Fluorophenol (Surr)	59		18 - 138	09/25/18 07:04	09/26/18 13:46	1
Nitrobenzene-d5 (Surr)	61		39 - 104	09/25/18 07:04	09/26/18 13:46	1
Phenol-d6 (Surr)	54		37 - 125	09/25/18 07:04	09/26/18 13:46	1
Terphenyl-d14 (Surr)	81		43 - 125	09/25/18 07:04	09/26/18 13:46	1
2,4,6-Tribromophenol (Surr)	59		10 - 147	09/25/18 07:04	09/26/18 13:46	1

Method: 8015B - Gasoline Range Organics - (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
GRO (C6-C10)	ND		410	160	ug/Kg	☼		09/27/18 15:38	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	118		65 - 140		09/27/18 15:38	1

TestAmerica Irvine

Client Sample Results

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Soil Sampling

TestAmerica Job ID: 440-220623-1

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	3.4	J	5.2	2.6	mg/Kg	☼	09/25/18 08:04	09/26/18 03:23	1
Oil Range Organics (C29-C40)	3.5	J	5.2	2.6	mg/Kg	☼	09/25/18 08:04	09/26/18 03:23	1
EFH (C10-C40)	6.9	B	5.2	2.6	mg/Kg	☼	09/25/18 08:04	09/26/18 03:23	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
n-Octacosane	60		40 - 140	09/25/18 08:04	09/26/18 03:23	1

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		0.0053	0.0016	mg/Kg	☼	09/26/18 07:04	09/26/18 19:31	1
alpha-BHC	ND		0.0053	0.0016	mg/Kg	☼	09/26/18 07:04	09/26/18 19:31	1
cis-Chlordane	ND		0.0053	0.0021	mg/Kg	☼	09/26/18 07:04	09/26/18 19:31	1
beta-BHC	0.0080		0.0053	0.0016	mg/Kg	☼	09/26/18 07:04	09/26/18 19:31	1
4,4'-DDD	ND		0.0053	0.0016	mg/Kg	☼	09/26/18 07:04	09/26/18 19:31	1
2,4'-DDE	0.0059		0.0053	0.0016	mg/Kg	☼	09/26/18 07:04	09/26/18 19:31	1
4,4'-DDE	0.0080		0.0053	0.0016	mg/Kg	☼	09/26/18 07:04	09/26/18 19:31	1
4,4'-DDT	0.014		0.0053	0.0016	mg/Kg	☼	09/26/18 07:04	09/26/18 19:31	1
delta-BHC	ND		0.011	0.0016	mg/Kg	☼	09/26/18 07:04	09/26/18 19:31	1
Dieldrin	ND		0.0053	0.0016	mg/Kg	☼	09/26/18 07:04	09/26/18 19:31	1
Endosulfan I	ND		0.0053	0.0016	mg/Kg	☼	09/26/18 07:04	09/26/18 19:31	1
Endosulfan II	ND		0.0053	0.0016	mg/Kg	☼	09/26/18 07:04	09/26/18 19:31	1
Endosulfan sulfate	ND		0.011	0.0021	mg/Kg	☼	09/26/18 07:04	09/26/18 19:31	1
Endrin	ND		0.0053	0.0016	mg/Kg	☼	09/26/18 07:04	09/26/18 19:31	1
Endrin aldehyde	ND		0.0053	0.0016	mg/Kg	☼	09/26/18 07:04	09/26/18 19:31	1
Endrin ketone	ND		0.0053	0.0021	mg/Kg	☼	09/26/18 07:04	09/26/18 19:31	1
gamma-BHC (Lindane)	ND		0.0053	0.0016	mg/Kg	☼	09/26/18 07:04	09/26/18 19:31	1
trans-Chlordane	ND		0.0053	0.0016	mg/Kg	☼	09/26/18 07:04	09/26/18 19:31	1
Heptachlor	ND		0.0053	0.0021	mg/Kg	☼	09/26/18 07:04	09/26/18 19:31	1
Heptachlor epoxide	ND		0.0053	0.0021	mg/Kg	☼	09/26/18 07:04	09/26/18 19:31	1
Methoxychlor	ND		0.0053	0.0016	mg/Kg	☼	09/26/18 07:04	09/26/18 19:31	1
Toxaphene	ND		0.21	0.053	mg/Kg	☼	09/26/18 07:04	09/26/18 19:31	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	157	X	45 - 120	09/26/18 07:04	09/26/18 19:31	1
Tetrachloro-m-xylene	79		35 - 115	09/26/18 07:04	09/26/18 19:31	1

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.20	0.070	mg/L		09/27/18 22:08	09/28/18 12:05	1
Barium	0.96		0.20	0.060	mg/L		09/27/18 22:08	09/28/18 12:05	1
Cadmium	ND		0.10	0.020	mg/L		09/27/18 22:08	09/28/18 12:05	1
Chromium	ND		0.10	0.020	mg/L		09/27/18 22:08	09/28/18 12:05	1
Lead	ND		0.10	0.040	mg/L		09/27/18 22:08	09/28/18 12:05	1
Selenium	ND		0.10	0.080	mg/L		09/27/18 22:08	09/28/18 12:05	1
Silver	ND		0.20	0.060	mg/L		09/27/18 22:08	09/28/18 12:05	1

Method: 7470A - Mercury (CVAA) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.0020	0.0010	mg/L		09/24/18 13:27	09/25/18 03:59	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	4.8		0.1	0.1	%			09/21/18 17:48	1

TestAmerica Irvine

Client Sample Results

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Soil Sampling

TestAmerica Job ID: 440-220623-1

Client Sample ID: DSPE-7-0.0-20180920

Lab Sample ID: 440-220623-3

Date Collected: 09/20/18 08:35

Matrix: Solid

Date Received: 09/21/18 09:30

Percent Solids: 98.0

Method: 8260B/5030B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		0.020	0.0081	mg/Kg	☼		09/26/18 17:28	1
Benzene	ND		0.0010	0.00051	mg/Kg	☼		09/26/18 17:28	1
Bromobenzene	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 17:28	1
Bromochloromethane	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 17:28	1
Bromodichloromethane	ND		0.0010	0.00051	mg/Kg	☼		09/26/18 17:28	1
Bromoform	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 17:28	1
Bromomethane	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 17:28	1
2-Butanone (MEK)	ND		0.010	0.0051	mg/Kg	☼		09/26/18 17:28	1
Carbon tetrachloride	ND		0.0020	0.00051	mg/Kg	☼		09/26/18 17:28	1
Chlorobenzene	ND		0.0010	0.00051	mg/Kg	☼		09/26/18 17:28	1
Chloroethane	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 17:28	1
Chloroform	ND		0.0010	0.00051	mg/Kg	☼		09/26/18 17:28	1
Chloromethane	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 17:28	1
2-Chlorotoluene	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 17:28	1
4-Chlorotoluene	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 17:28	1
cis-1,2-Dichloroethene	ND		0.0010	0.00051	mg/Kg	☼		09/26/18 17:28	1
cis-1,3-Dichloropropene	ND		0.0010	0.00051	mg/Kg	☼		09/26/18 17:28	1
Dibromochloromethane	ND		0.0010	0.00051	mg/Kg	☼		09/26/18 17:28	1
1,2-Dibromo-3-Chloropropane	ND		0.0051	0.0020	mg/Kg	☼		09/26/18 17:28	1
1,2-Dibromoethane (EDB)	ND		0.0010	0.00051	mg/Kg	☼		09/26/18 17:28	1
Dibromomethane	ND		0.0010	0.00051	mg/Kg	☼		09/26/18 17:28	1
1,2-Dichlorobenzene	ND		0.0010	0.00051	mg/Kg	☼		09/26/18 17:28	1
1,3-Dichlorobenzene	ND		0.0010	0.00051	mg/Kg	☼		09/26/18 17:28	1
1,4-Dichlorobenzene	ND		0.0010	0.00051	mg/Kg	☼		09/26/18 17:28	1
Dichlorodifluoromethane	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 17:28	1
1,1-Dichloroethane	ND		0.0010	0.00051	mg/Kg	☼		09/26/18 17:28	1
1,2-Dichloroethane	ND		0.0010	0.00051	mg/Kg	☼		09/26/18 17:28	1
1,1-Dichloroethene	ND		0.0020	0.00051	mg/Kg	☼		09/26/18 17:28	1
1,2-Dichloropropane	ND		0.0010	0.00051	mg/Kg	☼		09/26/18 17:28	1
1,3-Dichloropropane	ND		0.0010	0.00051	mg/Kg	☼		09/26/18 17:28	1
2,2-Dichloropropane	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 17:28	1
1,1-Dichloropropene	ND		0.0010	0.00051	mg/Kg	☼		09/26/18 17:28	1
Ethylbenzene	ND		0.0010	0.00051	mg/Kg	☼		09/26/18 17:28	1
Ethyl-t-butyl ether (ETBE)	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 17:28	1
Hexachlorobutadiene	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 17:28	1
2-Hexanone	ND		0.010	0.0051	mg/Kg	☼		09/26/18 17:28	1
Isopropylbenzene	ND		0.0010	0.00051	mg/Kg	☼		09/26/18 17:28	1
Isopropyl Ether (DIPE)	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 17:28	1
Methylene Chloride	ND		0.010	0.0051	mg/Kg	☼		09/26/18 17:28	1
4-Methyl-2-pentanone (MIBK)	ND		0.0051	0.0025	mg/Kg	☼		09/26/18 17:28	1
Methyl-t-Butyl Ether (MTBE)	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 17:28	1
m,p-Xylene	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 17:28	1
Naphthalene	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 17:28	1
n-Butylbenzene	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 17:28	1
N-Propylbenzene	ND		0.0010	0.00051	mg/Kg	☼		09/26/18 17:28	1
o-Xylene	ND		0.0010	0.00051	mg/Kg	☼		09/26/18 17:28	1
p-Isopropyltoluene	ND		0.0010	0.00051	mg/Kg	☼		09/26/18 17:28	1
sec-Butylbenzene	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 17:28	1
Styrene	ND		0.0010	0.00051	mg/Kg	☼		09/26/18 17:28	1

TestAmerica Irvine

Client Sample Results

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Soil Sampling

TestAmerica Job ID: 440-220623-1

Client Sample ID: DSPE-7-0.0-20180920

Lab Sample ID: 440-220623-3

Date Collected: 09/20/18 08:35

Matrix: Solid

Date Received: 09/21/18 09:30

Percent Solids: 98.0

Method: 8260B/5030B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tert-amyl-methyl ether (TAME)	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 17:28	1
tert-Butyl alcohol (TBA)	ND		0.051	0.010	mg/Kg	☼		09/26/18 17:28	1
tert-Butylbenzene	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 17:28	1
1,1,1,2-Tetrachloroethane	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 17:28	1
1,1,2,2-Tetrachloroethane	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 17:28	1
Tetrachloroethene	ND		0.0010	0.00051	mg/Kg	☼		09/26/18 17:28	1
Toluene	ND		0.0010	0.00051	mg/Kg	☼		09/26/18 17:28	1
trans-1,2-Dichloroethene	ND		0.0010	0.00051	mg/Kg	☼		09/26/18 17:28	1
trans-1,3-Dichloropropene	ND		0.0010	0.00051	mg/Kg	☼		09/26/18 17:28	1
1,2,3-Trichlorobenzene	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 17:28	1
1,2,4-Trichlorobenzene	ND		0.0051	0.0010	mg/Kg	☼		09/26/18 17:28	1
1,1,1-Trichloroethane	ND		0.0010	0.00051	mg/Kg	☼		09/26/18 17:28	1
1,1,2-Trichloroethane	ND		0.0010	0.00051	mg/Kg	☼		09/26/18 17:28	1
Trichloroethene	ND		0.0010	0.00051	mg/Kg	☼		09/26/18 17:28	1
Trichlorofluoromethane	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 17:28	1
1,2,3-Trichloropropane	ND		0.010	0.0010	mg/Kg	☼		09/26/18 17:28	1
1,2,4-Trimethylbenzene	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 17:28	1
1,3,5-Trimethylbenzene	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 17:28	1
Vinyl chloride	ND		0.0020	0.0010	mg/Kg	☼		09/26/18 17:28	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		79 - 120		09/26/18 17:28	1
Dibromofluoromethane (Surr)	102		60 - 120		09/26/18 17:28	1
Toluene-d8 (Surr)	92		79 - 123		09/26/18 17:28	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.36	0.18	mg/Kg	☼	09/25/18 07:04	09/25/18 17:43	1
Acenaphthylene	ND		0.34	0.071	mg/Kg	☼	09/25/18 07:04	09/25/18 17:43	1
Aniline	ND		1.0	0.14	mg/Kg	☼	09/25/18 07:04	09/25/18 17:43	1
Anthracene	ND		0.34	0.082	mg/Kg	☼	09/25/18 07:04	09/25/18 17:43	1
Benzidine	ND	*	2.1	0.17	mg/Kg	☼	09/25/18 07:04	09/25/18 17:43	1
Benzo[a]anthracene	ND		0.34	0.071	mg/Kg	☼	09/25/18 07:04	09/25/18 17:43	1
Benzo[a]pyrene	ND		0.34	0.068	mg/Kg	☼	09/25/18 07:04	09/25/18 17:43	1
Benzo[b]fluoranthene	ND		0.34	0.071	mg/Kg	☼	09/25/18 07:04	09/25/18 17:43	1
Benzo[g,h,i]perylene	ND		0.34	0.11	mg/Kg	☼	09/25/18 07:04	09/25/18 17:43	1
Benzoic acid	ND		0.97	0.48	mg/Kg	☼	09/25/18 07:04	09/25/18 17:43	1
Benzo[k]fluoranthene	ND		0.34	0.071	mg/Kg	☼	09/25/18 07:04	09/25/18 17:43	1
Benzyl alcohol	ND		3.5	0.42	mg/Kg	☼	09/25/18 07:04	09/25/18 17:43	1
Bis(2-chloroethoxy)methane	ND		0.34	0.14	mg/Kg	☼	09/25/18 07:04	09/25/18 17:43	1
Bis(2-chloroethyl)ether	ND		0.34	0.071	mg/Kg	☼	09/25/18 07:04	09/25/18 17:43	1
Bis(2-ethylhexyl) phthalate	ND		0.34	0.092	mg/Kg	☼	09/25/18 07:04	09/25/18 17:43	1
4-Bromophenyl phenyl ether	ND		0.34	0.076	mg/Kg	☼	09/25/18 07:04	09/25/18 17:43	1
Butyl benzyl phthalate	ND		0.34	0.082	mg/Kg	☼	09/25/18 07:04	09/25/18 17:43	1
4-Chloroaniline	ND		1.0	0.15	mg/Kg	☼	09/25/18 07:04	09/25/18 17:43	1
4-Chloro-3-methylphenol	ND		0.41	0.20	mg/Kg	☼	09/25/18 07:04	09/25/18 17:43	1
2-Chloronaphthalene	ND		0.34	0.068	mg/Kg	☼	09/25/18 07:04	09/25/18 17:43	1
2-Chlorophenol	ND		0.34	0.071	mg/Kg	☼	09/25/18 07:04	09/25/18 17:43	1
4-Chlorophenyl phenyl ether	ND		1.1	0.20	mg/Kg	☼	09/25/18 07:04	09/25/18 17:43	1
Chrysene	ND		0.34	0.076	mg/Kg	☼	09/25/18 07:04	09/25/18 17:43	1

TestAmerica Irvine

Client Sample Results

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Soil Sampling

TestAmerica Job ID: 440-220623-1

Client Sample ID: DSPE-7-0.0-20180920

Lab Sample ID: 440-220623-3

Date Collected: 09/20/18 08:35

Matrix: Solid

Date Received: 09/21/18 09:30

Percent Solids: 98.0

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibenz(a,h)anthracene	ND		0.43	0.10	mg/Kg	☼	09/25/18 07:04	09/25/18 17:43	1
Dibenzofuran	ND		0.34	0.14	mg/Kg	☼	09/25/18 07:04	09/25/18 17:43	1
3,3'-Dichlorobenzidine	ND		0.85	0.15	mg/Kg	☼	09/25/18 07:04	09/25/18 17:43	1
2,4-Dichlorophenol	ND		0.34	0.068	mg/Kg	☼	09/25/18 07:04	09/25/18 17:43	1
Diethyl phthalate	ND		0.34	0.097	mg/Kg	☼	09/25/18 07:04	09/25/18 17:43	1
2,4-Dimethylphenol	ND		0.34	0.13	mg/Kg	☼	09/25/18 07:04	09/25/18 17:43	1
Dimethyl phthalate	ND		0.34	0.068	mg/Kg	☼	09/25/18 07:04	09/25/18 17:43	1
Di-n-butyl phthalate	ND		0.34	0.092	mg/Kg	☼	09/25/18 07:04	09/25/18 17:43	1
2,4-Dinitrophenol	ND		2.0	1.0	mg/Kg	☼	09/25/18 07:04	09/25/18 17:43	1
2,4-Dinitrotoluene	ND		0.34	0.082	mg/Kg	☼	09/25/18 07:04	09/25/18 17:43	1
2,6-Dinitrotoluene	ND		0.34	0.097	mg/Kg	☼	09/25/18 07:04	09/25/18 17:43	1
Di-n-octyl phthalate	ND		0.34	0.092	mg/Kg	☼	09/25/18 07:04	09/25/18 17:43	1
Fluoranthene	ND		0.34	0.16	mg/Kg	☼	09/25/18 07:04	09/25/18 17:43	1
Fluorene	ND		0.34	0.071	mg/Kg	☼	09/25/18 07:04	09/25/18 17:43	1
Hexachlorobenzene	ND		0.34	0.071	mg/Kg	☼	09/25/18 07:04	09/25/18 17:43	1
Hexachlorocyclopentadiene	ND		0.85	0.32	mg/Kg	☼	09/25/18 07:04	09/25/18 17:43	1
Hexachloroethane	ND		0.34	0.071	mg/Kg	☼	09/25/18 07:04	09/25/18 17:43	1
Indeno[1,2,3-cd]pyrene	ND		0.34	0.13	mg/Kg	☼	09/25/18 07:04	09/25/18 17:43	1
Isophorone	ND		0.34	0.068	mg/Kg	☼	09/25/18 07:04	09/25/18 17:43	1
1-Methylnaphthalene	ND		0.36	0.15	mg/Kg	☼	09/25/18 07:04	09/25/18 17:43	1
2-Methylnaphthalene	ND		0.34	0.071	mg/Kg	☼	09/25/18 07:04	09/25/18 17:43	1
2-Methylphenol	ND		0.34	0.082	mg/Kg	☼	09/25/18 07:04	09/25/18 17:43	1
3-Methylphenol + 4-Methylphenol	ND		0.34	0.14	mg/Kg	☼	09/25/18 07:04	09/25/18 17:43	1
Naphthalene	ND		0.34	0.068	mg/Kg	☼	09/25/18 07:04	09/25/18 17:43	1
2-Nitroaniline	ND		0.34	0.17	mg/Kg	☼	09/25/18 07:04	09/25/18 17:43	1
3-Nitroaniline	ND		0.34	0.14	mg/Kg	☼	09/25/18 07:04	09/25/18 17:43	1
4-Nitroaniline	ND		0.85	0.14	mg/Kg	☼	09/25/18 07:04	09/25/18 17:43	1
Nitrobenzene	ND		0.34	0.071	mg/Kg	☼	09/25/18 07:04	09/25/18 17:43	1
2-Nitrophenol	ND		0.34	0.14	mg/Kg	☼	09/25/18 07:04	09/25/18 17:43	1
4-Nitrophenol	ND		3.0	0.51	mg/Kg	☼	09/25/18 07:04	09/25/18 17:43	1
N-Nitrosodi-n-propylamine	ND		0.25	0.071	mg/Kg	☼	09/25/18 07:04	09/25/18 17:43	1
N-Nitrosodiphenylamine	ND		0.76	0.16	mg/Kg	☼	09/25/18 07:04	09/25/18 17:43	1
Pentachlorophenol	ND		0.85	0.35	mg/Kg	☼	09/25/18 07:04	09/25/18 17:43	1
Phenanthrene	ND		0.34	0.15	mg/Kg	☼	09/25/18 07:04	09/25/18 17:43	1
Phenol	ND		0.34	0.092	mg/Kg	☼	09/25/18 07:04	09/25/18 17:43	1
Pyrene	ND		0.34	0.14	mg/Kg	☼	09/25/18 07:04	09/25/18 17:43	1
Pyridine	ND		0.35	0.15	mg/Kg	☼	09/25/18 07:04	09/25/18 17:43	1
2,4,5-Trichlorophenol	ND		0.51	0.27	mg/Kg	☼	09/25/18 07:04	09/25/18 17:43	1
2,4,6-Trichlorophenol	ND		0.56	0.16	mg/Kg	☼	09/25/18 07:04	09/25/18 17:43	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	76		42 - 113	09/25/18 07:04	09/25/18 17:43	1
2-Fluorophenol (Surr)	67		18 - 138	09/25/18 07:04	09/25/18 17:43	1
Nitrobenzene-d5 (Surr)	71		39 - 104	09/25/18 07:04	09/25/18 17:43	1
Phenol-d6 (Surr)	63		37 - 125	09/25/18 07:04	09/25/18 17:43	1
Terphenyl-d14 (Surr)	85		43 - 125	09/25/18 07:04	09/25/18 17:43	1
2,4,6-Tribromophenol (Surr)	59		10 - 147	09/25/18 07:04	09/25/18 17:43	1

TestAmerica Irvine

Client Sample Results

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Soil Sampling

TestAmerica Job ID: 440-220623-1

Client Sample ID: DSPE-7-0.0-20180920

Lab Sample ID: 440-220623-3

Date Collected: 09/20/18 08:35

Matrix: Solid

Date Received: 09/21/18 09:30

Percent Solids: 98.0

Method: 8270C - Semivolatile Organic Compounds (GC/MS) - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Octachlorostyrene	ND		3.4	2.3	mg/Kg	☼	09/25/18 07:04	09/26/18 14:11	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	74		42 - 113				09/25/18 07:04	09/26/18 14:11	1
2-Fluorophenol (Surr)	60		18 - 138				09/25/18 07:04	09/26/18 14:11	1
Nitrobenzene-d5 (Surr)	66		39 - 104				09/25/18 07:04	09/26/18 14:11	1
Phenol-d6 (Surr)	60		37 - 125				09/25/18 07:04	09/26/18 14:11	1
Terphenyl-d14 (Surr)	82		43 - 125				09/25/18 07:04	09/26/18 14:11	1
2,4,6-Tribromophenol (Surr)	70		10 - 147				09/25/18 07:04	09/26/18 14:11	1

Method: 8015B - Gasoline Range Organics - (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
GRO (C6-C10)	ND		410	150	ug/Kg	☼		09/26/18 06:14	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	75		65 - 140					09/26/18 06:14	1

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	3.6	J	5.1	2.5	mg/Kg	☼	09/25/18 08:04	09/26/18 03:45	1
Oil Range Organics (C29-C40)	ND		5.1	2.5	mg/Kg	☼	09/25/18 08:04	09/26/18 03:45	1
EFH (C10-C40)	7.5	B	5.1	2.5	mg/Kg	☼	09/25/18 08:04	09/26/18 03:45	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
n-Octacosane	67		40 - 140				09/25/18 08:04	09/26/18 03:45	1

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		0.0051	0.0015	mg/Kg	☼	09/26/18 07:04	09/26/18 19:58	1
alpha-BHC	ND		0.0051	0.0015	mg/Kg	☼	09/26/18 07:04	09/26/18 19:58	1
cis-Chlordane	ND		0.0051	0.0020	mg/Kg	☼	09/26/18 07:04	09/26/18 19:58	1
beta-BHC	0.0016	J	0.0051	0.0015	mg/Kg	☼	09/26/18 07:04	09/26/18 19:58	1
4,4'-DDD	ND		0.0051	0.0015	mg/Kg	☼	09/26/18 07:04	09/26/18 19:58	1
2,4'-DDE	0.0019	J	0.0051	0.0015	mg/Kg	☼	09/26/18 07:04	09/26/18 19:58	1
4,4'-DDE	0.0020	J	0.0051	0.0015	mg/Kg	☼	09/26/18 07:04	09/26/18 19:58	1
4,4'-DDT	ND		0.0051	0.0015	mg/Kg	☼	09/26/18 07:04	09/26/18 19:58	1
delta-BHC	ND		0.010	0.0015	mg/Kg	☼	09/26/18 07:04	09/26/18 19:58	1
Dieldrin	ND		0.0051	0.0015	mg/Kg	☼	09/26/18 07:04	09/26/18 19:58	1
Endosulfan I	ND		0.0051	0.0015	mg/Kg	☼	09/26/18 07:04	09/26/18 19:58	1
Endosulfan II	ND		0.0051	0.0015	mg/Kg	☼	09/26/18 07:04	09/26/18 19:58	1
Endosulfan sulfate	ND		0.010	0.0020	mg/Kg	☼	09/26/18 07:04	09/26/18 19:58	1
Endrin	ND		0.0051	0.0015	mg/Kg	☼	09/26/18 07:04	09/26/18 19:58	1
Endrin aldehyde	ND		0.0051	0.0015	mg/Kg	☼	09/26/18 07:04	09/26/18 19:58	1
Endrin ketone	ND		0.0051	0.0020	mg/Kg	☼	09/26/18 07:04	09/26/18 19:58	1
gamma-BHC (Lindane)	ND		0.0051	0.0015	mg/Kg	☼	09/26/18 07:04	09/26/18 19:58	1
trans-Chlordane	ND		0.0051	0.0015	mg/Kg	☼	09/26/18 07:04	09/26/18 19:58	1
Heptachlor	ND		0.0051	0.0020	mg/Kg	☼	09/26/18 07:04	09/26/18 19:58	1
Heptachlor epoxide	ND		0.0051	0.0020	mg/Kg	☼	09/26/18 07:04	09/26/18 19:58	1
Methoxychlor	ND		0.0051	0.0015	mg/Kg	☼	09/26/18 07:04	09/26/18 19:58	1
Toxaphene	ND		0.20	0.051	mg/Kg	☼	09/26/18 07:04	09/26/18 19:58	1

TestAmerica Irvine

Client Sample Results

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Soil Sampling

TestAmerica Job ID: 440-220623-1

Client Sample ID: DSPE-7-0.0-20180920

Lab Sample ID: 440-220623-3

Date Collected: 09/20/18 08:35

Matrix: Solid

Date Received: 09/21/18 09:30

Percent Solids: 98.0

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	98		45 - 120	09/26/18 07:04	09/26/18 19:58	1
Tetrachloro-m-xylene	77		35 - 115	09/26/18 07:04	09/26/18 19:58	1

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.20	0.070	mg/L		09/27/18 22:08	09/28/18 12:27	1
Barium	2.2		0.20	0.060	mg/L		09/27/18 22:08	09/28/18 12:27	1
Cadmium	ND		0.10	0.020	mg/L		09/27/18 22:08	09/28/18 12:27	1
Chromium	ND		0.10	0.020	mg/L		09/27/18 22:08	09/28/18 12:27	1
Lead	ND		0.10	0.040	mg/L		09/27/18 22:08	09/28/18 12:27	1
Selenium	ND		0.10	0.080	mg/L		09/27/18 22:08	09/28/18 12:27	1
Silver	ND		0.20	0.060	mg/L		09/27/18 22:08	09/28/18 12:27	1

Method: 7470A - Mercury (CVAA) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.0020	0.0010	mg/L		09/24/18 13:27	09/25/18 04:01	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	2.0		0.1	0.1	%			09/21/18 17:48	1

Client Sample ID: DSPE-7-1.0-20180920

Lab Sample ID: 440-220623-4

Date Collected: 09/20/18 08:40

Matrix: Solid

Date Received: 09/21/18 09:30

Percent Solids: 94.0

Method: 8260B/5030B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		0.021	0.0085	mg/Kg	☼		09/26/18 17:55	1
Benzene	ND		0.0011	0.00053	mg/Kg	☼		09/26/18 17:55	1
Bromobenzene	ND		0.0021	0.0011	mg/Kg	☼		09/26/18 17:55	1
Bromochloromethane	ND		0.0021	0.0011	mg/Kg	☼		09/26/18 17:55	1
Bromodichloromethane	ND		0.0011	0.00053	mg/Kg	☼		09/26/18 17:55	1
Bromoform	ND		0.0021	0.0011	mg/Kg	☼		09/26/18 17:55	1
Bromomethane	ND		0.0021	0.0011	mg/Kg	☼		09/26/18 17:55	1
2-Butanone (MEK)	ND		0.011	0.0053	mg/Kg	☼		09/26/18 17:55	1
Carbon tetrachloride	ND		0.0021	0.00053	mg/Kg	☼		09/26/18 17:55	1
Chlorobenzene	ND		0.0011	0.00053	mg/Kg	☼		09/26/18 17:55	1
Chloroethane	ND		0.0021	0.0011	mg/Kg	☼		09/26/18 17:55	1
Chloroform	ND		0.0011	0.00053	mg/Kg	☼		09/26/18 17:55	1
Chloromethane	ND		0.0021	0.0011	mg/Kg	☼		09/26/18 17:55	1
2-Chlorotoluene	ND		0.0021	0.0011	mg/Kg	☼		09/26/18 17:55	1
4-Chlorotoluene	ND		0.0021	0.0011	mg/Kg	☼		09/26/18 17:55	1
cis-1,2-Dichloroethene	ND		0.0011	0.00053	mg/Kg	☼		09/26/18 17:55	1
cis-1,3-Dichloropropene	ND		0.0011	0.00053	mg/Kg	☼		09/26/18 17:55	1
Dibromochloromethane	ND		0.0011	0.00053	mg/Kg	☼		09/26/18 17:55	1
1,2-Dibromo-3-Chloropropane	ND		0.0053	0.0021	mg/Kg	☼		09/26/18 17:55	1
1,2-Dibromoethane (EDB)	ND		0.0011	0.00053	mg/Kg	☼		09/26/18 17:55	1
Dibromomethane	ND		0.0011	0.00053	mg/Kg	☼		09/26/18 17:55	1
1,2-Dichlorobenzene	ND		0.0011	0.00053	mg/Kg	☼		09/26/18 17:55	1
1,3-Dichlorobenzene	ND		0.0011	0.00053	mg/Kg	☼		09/26/18 17:55	1
1,4-Dichlorobenzene	ND		0.0011	0.00053	mg/Kg	☼		09/26/18 17:55	1

TestAmerica Irvine

Client Sample Results

Client: Ramboll US Corporation
 Project/Site: NERT Dioxin Soil Sampling

TestAmerica Job ID: 440-220623-1

Client Sample ID: DSPE-7-1.0-20180920

Lab Sample ID: 440-220623-4

Date Collected: 09/20/18 08:40

Matrix: Solid

Date Received: 09/21/18 09:30

Percent Solids: 94.0

Method: 8260B/5030B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		0.0021	0.0011	mg/Kg	☼		09/26/18 17:55	1
1,1-Dichloroethane	ND		0.0011	0.00053	mg/Kg	☼		09/26/18 17:55	1
1,2-Dichloroethane	ND		0.0011	0.00053	mg/Kg	☼		09/26/18 17:55	1
1,1-Dichloroethene	ND		0.0021	0.00053	mg/Kg	☼		09/26/18 17:55	1
1,2-Dichloropropane	ND		0.0011	0.00053	mg/Kg	☼		09/26/18 17:55	1
1,3-Dichloropropane	ND		0.0011	0.00053	mg/Kg	☼		09/26/18 17:55	1
2,2-Dichloropropane	ND		0.0021	0.0011	mg/Kg	☼		09/26/18 17:55	1
1,1-Dichloropropene	ND		0.0011	0.00053	mg/Kg	☼		09/26/18 17:55	1
Ethylbenzene	ND		0.0011	0.00053	mg/Kg	☼		09/26/18 17:55	1
Ethyl-t-butyl ether (ETBE)	ND		0.0021	0.0011	mg/Kg	☼		09/26/18 17:55	1
Hexachlorobutadiene	ND		0.0021	0.0011	mg/Kg	☼		09/26/18 17:55	1
2-Hexanone	ND		0.011	0.0053	mg/Kg	☼		09/26/18 17:55	1
Isopropylbenzene	ND		0.0011	0.00053	mg/Kg	☼		09/26/18 17:55	1
Isopropyl Ether (DIPE)	ND		0.0021	0.0011	mg/Kg	☼		09/26/18 17:55	1
Methylene Chloride	ND		0.011	0.0053	mg/Kg	☼		09/26/18 17:55	1
4-Methyl-2-pentanone (MIBK)	ND		0.0053	0.0027	mg/Kg	☼		09/26/18 17:55	1
Methyl-t-Butyl Ether (MTBE)	ND		0.0021	0.0011	mg/Kg	☼		09/26/18 17:55	1
m,p-Xylene	ND		0.0021	0.0011	mg/Kg	☼		09/26/18 17:55	1
Naphthalene	ND		0.0021	0.0011	mg/Kg	☼		09/26/18 17:55	1
n-Butylbenzene	ND		0.0021	0.0011	mg/Kg	☼		09/26/18 17:55	1
N-Propylbenzene	ND		0.0011	0.00053	mg/Kg	☼		09/26/18 17:55	1
o-Xylene	ND		0.0011	0.00053	mg/Kg	☼		09/26/18 17:55	1
p-Isopropyltoluene	ND		0.0011	0.00053	mg/Kg	☼		09/26/18 17:55	1
sec-Butylbenzene	ND		0.0021	0.0011	mg/Kg	☼		09/26/18 17:55	1
Styrene	ND		0.0011	0.00053	mg/Kg	☼		09/26/18 17:55	1
Tert-amyl-methyl ether (TAME)	ND		0.0021	0.0011	mg/Kg	☼		09/26/18 17:55	1
tert-Butyl alcohol (TBA)	ND		0.053	0.011	mg/Kg	☼		09/26/18 17:55	1
tert-Butylbenzene	ND		0.0021	0.0011	mg/Kg	☼		09/26/18 17:55	1
1,1,1,2-Tetrachloroethane	ND		0.0021	0.0011	mg/Kg	☼		09/26/18 17:55	1
1,1,2,2-Tetrachloroethane	ND		0.0021	0.0011	mg/Kg	☼		09/26/18 17:55	1
Tetrachloroethene	ND		0.0011	0.00053	mg/Kg	☼		09/26/18 17:55	1
Toluene	ND		0.0011	0.00053	mg/Kg	☼		09/26/18 17:55	1
trans-1,2-Dichloroethene	ND		0.0011	0.00053	mg/Kg	☼		09/26/18 17:55	1
trans-1,3-Dichloropropene	ND		0.0011	0.00053	mg/Kg	☼		09/26/18 17:55	1
1,2,3-Trichlorobenzene	ND		0.0021	0.0011	mg/Kg	☼		09/26/18 17:55	1
1,2,4-Trichlorobenzene	ND		0.0053	0.0011	mg/Kg	☼		09/26/18 17:55	1
1,1,1-Trichloroethane	ND		0.0011	0.00053	mg/Kg	☼		09/26/18 17:55	1
1,1,2-Trichloroethane	ND		0.0011	0.00053	mg/Kg	☼		09/26/18 17:55	1
Trichloroethene	ND		0.0011	0.00053	mg/Kg	☼		09/26/18 17:55	1
Trichlorofluoromethane	ND		0.0021	0.0011	mg/Kg	☼		09/26/18 17:55	1
1,2,3-Trichloropropane	ND		0.011	0.0011	mg/Kg	☼		09/26/18 17:55	1
1,2,4-Trimethylbenzene	ND		0.0021	0.0011	mg/Kg	☼		09/26/18 17:55	1
1,3,5-Trimethylbenzene	ND		0.0021	0.0011	mg/Kg	☼		09/26/18 17:55	1
Vinyl chloride	ND		0.0021	0.0011	mg/Kg	☼		09/26/18 17:55	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	85		79 - 120					09/26/18 17:55	1
Dibromofluoromethane (Surr)	95		60 - 120					09/26/18 17:55	1
Toluene-d8 (Surr)	95		79 - 123					09/26/18 17:55	1

TestAmerica Irvine

Client Sample Results

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Soil Sampling

TestAmerica Job ID: 440-220623-1

Client Sample ID: DSPE-7-1.0-20180920

Lab Sample ID: 440-220623-4

Date Collected: 09/20/18 08:40

Matrix: Solid

Date Received: 09/21/18 09:30

Percent Solids: 94.0

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.37	0.19	mg/Kg	☼	09/25/18 07:04	09/25/18 18:08	1
Acenaphthylene	ND		0.35	0.074	mg/Kg	☼	09/25/18 07:04	09/25/18 18:08	1
Aniline	ND		1.1	0.15	mg/Kg	☼	09/25/18 07:04	09/25/18 18:08	1
Anthracene	ND		0.35	0.085	mg/Kg	☼	09/25/18 07:04	09/25/18 18:08	1
Benzdine	ND	*	2.2	0.18	mg/Kg	☼	09/25/18 07:04	09/25/18 18:08	1
Benzo[a]anthracene	ND		0.35	0.074	mg/Kg	☼	09/25/18 07:04	09/25/18 18:08	1
Benzo[a]pyrene	ND		0.35	0.071	mg/Kg	☼	09/25/18 07:04	09/25/18 18:08	1
Benzo[b]fluoranthene	ND		0.35	0.074	mg/Kg	☼	09/25/18 07:04	09/25/18 18:08	1
Benzo[g,h,i]perylene	ND		0.35	0.12	mg/Kg	☼	09/25/18 07:04	09/25/18 18:08	1
Benzoic acid	ND		1.0	0.50	mg/Kg	☼	09/25/18 07:04	09/25/18 18:08	1
Benzo[k]fluoranthene	ND		0.35	0.074	mg/Kg	☼	09/25/18 07:04	09/25/18 18:08	1
Benzyl alcohol	ND		3.6	0.44	mg/Kg	☼	09/25/18 07:04	09/25/18 18:08	1
Bis(2-chloroethoxy)methane	ND		0.35	0.14	mg/Kg	☼	09/25/18 07:04	09/25/18 18:08	1
Bis(2-chloroethyl)ether	ND		0.35	0.074	mg/Kg	☼	09/25/18 07:04	09/25/18 18:08	1
Bis(2-ethylhexyl) phthalate	ND		0.35	0.096	mg/Kg	☼	09/25/18 07:04	09/25/18 18:08	1
4-Bromophenyl phenyl ether	ND		0.35	0.080	mg/Kg	☼	09/25/18 07:04	09/25/18 18:08	1
Butyl benzyl phthalate	ND		0.35	0.085	mg/Kg	☼	09/25/18 07:04	09/25/18 18:08	1
4-Chloroaniline	ND		1.1	0.16	mg/Kg	☼	09/25/18 07:04	09/25/18 18:08	1
4-Chloro-3-methylphenol	ND		0.42	0.21	mg/Kg	☼	09/25/18 07:04	09/25/18 18:08	1
2-Chloronaphthalene	ND		0.35	0.071	mg/Kg	☼	09/25/18 07:04	09/25/18 18:08	1
2-Chlorophenol	ND		0.35	0.074	mg/Kg	☼	09/25/18 07:04	09/25/18 18:08	1
4-Chlorophenyl phenyl ether	ND		1.2	0.21	mg/Kg	☼	09/25/18 07:04	09/25/18 18:08	1
Chrysene	ND		0.35	0.080	mg/Kg	☼	09/25/18 07:04	09/25/18 18:08	1
Dibenz(a,h)anthracene	ND		0.45	0.11	mg/Kg	☼	09/25/18 07:04	09/25/18 18:08	1
Dibenzofuran	ND		0.35	0.15	mg/Kg	☼	09/25/18 07:04	09/25/18 18:08	1
3,3'-Dichlorobenzidine	ND		0.88	0.16	mg/Kg	☼	09/25/18 07:04	09/25/18 18:08	1
2,4-Dichlorophenol	ND		0.35	0.071	mg/Kg	☼	09/25/18 07:04	09/25/18 18:08	1
Diethyl phthalate	ND		0.35	0.10	mg/Kg	☼	09/25/18 07:04	09/25/18 18:08	1
2,4-Dimethylphenol	ND		0.35	0.14	mg/Kg	☼	09/25/18 07:04	09/25/18 18:08	1
Dimethyl phthalate	ND		0.35	0.071	mg/Kg	☼	09/25/18 07:04	09/25/18 18:08	1
Di-n-butyl phthalate	ND		0.35	0.096	mg/Kg	☼	09/25/18 07:04	09/25/18 18:08	1
2,4-Dinitrophenol	ND		2.1	1.1	mg/Kg	☼	09/25/18 07:04	09/25/18 18:08	1
2,4-Dinitrotoluene	ND		0.35	0.085	mg/Kg	☼	09/25/18 07:04	09/25/18 18:08	1
2,6-Dinitrotoluene	ND		0.35	0.10	mg/Kg	☼	09/25/18 07:04	09/25/18 18:08	1
Di-n-octyl phthalate	ND		0.35	0.096	mg/Kg	☼	09/25/18 07:04	09/25/18 18:08	1
Fluoranthene	ND		0.35	0.17	mg/Kg	☼	09/25/18 07:04	09/25/18 18:08	1
Fluorene	ND		0.35	0.074	mg/Kg	☼	09/25/18 07:04	09/25/18 18:08	1
Hexachlorobenzene	ND		0.35	0.074	mg/Kg	☼	09/25/18 07:04	09/25/18 18:08	1
Hexachlorocyclopentadiene	ND		0.88	0.33	mg/Kg	☼	09/25/18 07:04	09/25/18 18:08	1
Hexachloroethane	ND		0.35	0.074	mg/Kg	☼	09/25/18 07:04	09/25/18 18:08	1
Indeno[1,2,3-cd]pyrene	ND		0.35	0.14	mg/Kg	☼	09/25/18 07:04	09/25/18 18:08	1
Isophorone	ND		0.35	0.071	mg/Kg	☼	09/25/18 07:04	09/25/18 18:08	1
1-Methylnaphthalene	ND		0.37	0.16	mg/Kg	☼	09/25/18 07:04	09/25/18 18:08	1
2-Methylnaphthalene	ND		0.35	0.074	mg/Kg	☼	09/25/18 07:04	09/25/18 18:08	1
2-Methylphenol	ND		0.35	0.085	mg/Kg	☼	09/25/18 07:04	09/25/18 18:08	1
3-Methylphenol + 4-Methylphenol	ND		0.35	0.14	mg/Kg	☼	09/25/18 07:04	09/25/18 18:08	1
Naphthalene	ND		0.35	0.071	mg/Kg	☼	09/25/18 07:04	09/25/18 18:08	1
2-Nitroaniline	ND		0.35	0.18	mg/Kg	☼	09/25/18 07:04	09/25/18 18:08	1
3-Nitroaniline	ND		0.35	0.14	mg/Kg	☼	09/25/18 07:04	09/25/18 18:08	1

TestAmerica Irvine

Client Sample Results

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Soil Sampling

TestAmerica Job ID: 440-220623-1

Client Sample ID: DSPE-7-1.0-20180920

Lab Sample ID: 440-220623-4

Date Collected: 09/20/18 08:40

Matrix: Solid

Date Received: 09/21/18 09:30

Percent Solids: 94.0

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitroaniline	ND		0.88	0.14	mg/Kg	☼	09/25/18 07:04	09/25/18 18:08	1
Nitrobenzene	ND		0.35	0.074	mg/Kg	☼	09/25/18 07:04	09/25/18 18:08	1
2-Nitrophenol	ND		0.35	0.14	mg/Kg	☼	09/25/18 07:04	09/25/18 18:08	1
4-Nitrophenol	ND		3.1	0.53	mg/Kg	☼	09/25/18 07:04	09/25/18 18:08	1
N-Nitrosodi-n-propylamine	ND		0.27	0.074	mg/Kg	☼	09/25/18 07:04	09/25/18 18:08	1
N-Nitrosodiphenylamine	ND		0.80	0.17	mg/Kg	☼	09/25/18 07:04	09/25/18 18:08	1
Pentachlorophenol	ND		0.88	0.36	mg/Kg	☼	09/25/18 07:04	09/25/18 18:08	1
Phenanthrene	ND		0.35	0.16	mg/Kg	☼	09/25/18 07:04	09/25/18 18:08	1
Phenol	ND		0.35	0.096	mg/Kg	☼	09/25/18 07:04	09/25/18 18:08	1
Pyrene	ND		0.35	0.14	mg/Kg	☼	09/25/18 07:04	09/25/18 18:08	1
Pyridine	ND		0.36	0.16	mg/Kg	☼	09/25/18 07:04	09/25/18 18:08	1
2,4,5-Trichlorophenol	ND		0.53	0.28	mg/Kg	☼	09/25/18 07:04	09/25/18 18:08	1
2,4,6-Trichlorophenol	ND		0.58	0.17	mg/Kg	☼	09/25/18 07:04	09/25/18 18:08	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	78		42 - 113	09/25/18 07:04	09/25/18 18:08	1
2-Fluorophenol (Surr)	68		18 - 138	09/25/18 07:04	09/25/18 18:08	1
Nitrobenzene-d5 (Surr)	69		39 - 104	09/25/18 07:04	09/25/18 18:08	1
Phenol-d6 (Surr)	66		37 - 125	09/25/18 07:04	09/25/18 18:08	1
Terphenyl-d14 (Surr)	87		43 - 125	09/25/18 07:04	09/25/18 18:08	1
2,4,6-Tribromophenol (Surr)	60		10 - 147	09/25/18 07:04	09/25/18 18:08	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Octachlorostyrene	ND		3.5	2.4	mg/Kg	☼	09/25/18 07:04	09/26/18 14:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	74		42 - 113	09/25/18 07:04	09/26/18 14:36	1
2-Fluorophenol (Surr)	65		18 - 138	09/25/18 07:04	09/26/18 14:36	1
Nitrobenzene-d5 (Surr)	68		39 - 104	09/25/18 07:04	09/26/18 14:36	1
Phenol-d6 (Surr)	62		37 - 125	09/25/18 07:04	09/26/18 14:36	1
Terphenyl-d14 (Surr)	85		43 - 125	09/25/18 07:04	09/26/18 14:36	1
2,4,6-Tribromophenol (Surr)	69		10 - 147	09/25/18 07:04	09/26/18 14:36	1

Method: 8015B - Gasoline Range Organics - (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
GRO (C6-C10)	ND		420	160	ug/Kg	☼		09/26/18 06:43	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	82		65 - 140		09/26/18 06:43	1

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		5.3	2.7	mg/Kg	☼	09/25/18 08:04	09/26/18 04:07	1
Oil Range Organics (C29-C40)	ND		5.3	2.7	mg/Kg	☼	09/25/18 08:04	09/26/18 04:07	1
EFH (C10-C40)	5.0	J B	5.3	2.7	mg/Kg	☼	09/25/18 08:04	09/26/18 04:07	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
n-Octacosane	57		40 - 140	09/25/18 08:04	09/26/18 04:07	1

TestAmerica Irvine

Client Sample Results

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Soil Sampling

TestAmerica Job ID: 440-220623-1

Client Sample ID: DSPE-7-1.0-20180920

Lab Sample ID: 440-220623-4

Date Collected: 09/20/18 08:40

Matrix: Solid

Date Received: 09/21/18 09:30

Percent Solids: 94.0

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		0.0053	0.0016	mg/Kg	☼	09/26/18 07:04	09/26/18 20:25	1
alpha-BHC	ND		0.0053	0.0016	mg/Kg	☼	09/26/18 07:04	09/26/18 20:25	1
cis-Chlordane	ND		0.0053	0.0021	mg/Kg	☼	09/26/18 07:04	09/26/18 20:25	1
beta-BHC	ND		0.0053	0.0016	mg/Kg	☼	09/26/18 07:04	09/26/18 20:25	1
4,4'-DDD	ND		0.0053	0.0016	mg/Kg	☼	09/26/18 07:04	09/26/18 20:25	1
2,4'-DDE	ND		0.0053	0.0016	mg/Kg	☼	09/26/18 07:04	09/26/18 20:25	1
4,4'-DDE	ND		0.0053	0.0016	mg/Kg	☼	09/26/18 07:04	09/26/18 20:25	1
4,4'-DDT	ND		0.0053	0.0016	mg/Kg	☼	09/26/18 07:04	09/26/18 20:25	1
delta-BHC	ND		0.011	0.0016	mg/Kg	☼	09/26/18 07:04	09/26/18 20:25	1
Dieldrin	ND		0.0053	0.0016	mg/Kg	☼	09/26/18 07:04	09/26/18 20:25	1
Endosulfan I	ND		0.0053	0.0016	mg/Kg	☼	09/26/18 07:04	09/26/18 20:25	1
Endosulfan II	ND		0.0053	0.0016	mg/Kg	☼	09/26/18 07:04	09/26/18 20:25	1
Endosulfan sulfate	ND		0.011	0.0021	mg/Kg	☼	09/26/18 07:04	09/26/18 20:25	1
Endrin	ND		0.0053	0.0016	mg/Kg	☼	09/26/18 07:04	09/26/18 20:25	1
Endrin aldehyde	ND		0.0053	0.0016	mg/Kg	☼	09/26/18 07:04	09/26/18 20:25	1
Endrin ketone	ND		0.0053	0.0021	mg/Kg	☼	09/26/18 07:04	09/26/18 20:25	1
gamma-BHC (Lindane)	ND		0.0053	0.0016	mg/Kg	☼	09/26/18 07:04	09/26/18 20:25	1
trans-Chlordane	ND		0.0053	0.0016	mg/Kg	☼	09/26/18 07:04	09/26/18 20:25	1
Heptachlor	ND		0.0053	0.0021	mg/Kg	☼	09/26/18 07:04	09/26/18 20:25	1
Heptachlor epoxide	ND		0.0053	0.0021	mg/Kg	☼	09/26/18 07:04	09/26/18 20:25	1
Methoxychlor	ND		0.0053	0.0016	mg/Kg	☼	09/26/18 07:04	09/26/18 20:25	1
Toxaphene	ND		0.21	0.053	mg/Kg	☼	09/26/18 07:04	09/26/18 20:25	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	83		45 - 120	09/26/18 07:04	09/26/18 20:25	1
Tetrachloro-m-xylene	77		35 - 115	09/26/18 07:04	09/26/18 20:25	1

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.20	0.070	mg/L		09/27/18 22:08	09/28/18 12:29	1
Barium	2.0		0.20	0.060	mg/L		09/27/18 22:08	09/28/18 12:29	1
Cadmium	ND		0.10	0.020	mg/L		09/27/18 22:08	09/28/18 12:29	1
Chromium	ND		0.10	0.020	mg/L		09/27/18 22:08	09/28/18 12:29	1
Lead	ND		0.10	0.040	mg/L		09/27/18 22:08	09/28/18 12:29	1
Selenium	ND		0.10	0.080	mg/L		09/27/18 22:08	09/28/18 12:29	1
Silver	ND		0.20	0.060	mg/L		09/27/18 22:08	09/28/18 12:29	1

Method: 7470A - Mercury (CVAA) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.0020	0.0010	mg/L		09/24/18 13:27	09/25/18 04:03	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	6.0		0.1	0.1	%			09/21/18 17:48	1

Method Summary

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Soil Sampling

TestAmerica Job ID: 440-220623-1

Method	Method Description	Protocol	Laboratory
8260B/5030B	Volatile Organic Compounds (GC/MS)	SW846	TAL IRV
8270C	Semivolatile Organic Compounds (GC/MS)	SW846	TAL IRV
8015B	Gasoline Range Organics - (GC)	SW846	TAL IRV
8015B	Diesel Range Organics (DRO) (GC)	SW846	TAL IRV
8081A	Organochlorine Pesticides (GC)	SW846	TAL IRV
6010B	Metals (ICP)	SW846	TAL IRV
7470A	Mercury (CVAA)	SW846	TAL IRV
Moisture	Percent Moisture	EPA	TAL IRV
1311	TCLP Extraction	SW846	TAL IRV
3010A	Preparation, Total Metals	SW846	TAL IRV
3546	Microwave Extraction	SW846	TAL IRV
5030B	Purge and Trap	SW846	TAL IRV
7470A	Preparation, Mercury	SW846	TAL IRV

Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL IRV = TestAmerica Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

Lab Chronicle

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Soil Sampling

TestAmerica Job ID: 440-220623-1

Client Sample ID: DSPE-6-0.0-20180920

Lab Sample ID: 440-220623-1

Date Collected: 09/20/18 07:36

Matrix: Solid

Date Received: 09/21/18 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			99.95 g	2000 mL	500561	09/22/18 14:34	CDH	TAL IRV
TCLP	Prep	3010A			5 mL	50 mL	501652	09/27/18 22:08	CDH	TAL IRV
TCLP	Analysis	6010B		1			501820	09/28/18 12:25	VS	TAL IRV
TCLP	Leach	1311			99.95 g	2000 mL	500561	09/22/18 14:34	CDH	TAL IRV
TCLP	Prep	7470A			2 mL	20 mL	500771	09/24/18 13:27	DB	TAL IRV
TCLP	Analysis	7470A		1			500923	09/25/18 03:57	DB	TAL IRV
Total/NA	Analysis	Moisture		1			500483	09/21/18 17:48	HTL	TAL IRV

Client Sample ID: DSPE-6-0.0-20180920

Lab Sample ID: 440-220623-1

Date Collected: 09/20/18 07:36

Matrix: Solid

Date Received: 09/21/18 09:30

Percent Solids: 98.2

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/5030B		1	5.02 g	10 mL	501141	09/26/18 16:35	AYL	TAL IRV
Total/NA	Prep	3546			20.05 g	1 mL	500904	09/25/18 07:04	FTD	TAL IRV
Total/NA	Analysis	8270C		1			500988	09/25/18 16:52	L1B	TAL IRV
Total/NA	Prep	3546	RA		20.05 g	1 mL	500904	09/25/18 07:04	FTD	TAL IRV
Total/NA	Analysis	8270C	RA	1			501240	09/26/18 13:20	L1B	TAL IRV
Total/NA	Analysis	8015B		1	5.04 g	10 mL	501450	09/27/18 15:11	YCL	TAL IRV
Total/NA	Prep	3546			15.03 g	1 mL	500922	09/25/18 08:04	FTD	TAL IRV
Total/NA	Analysis	8015B		1			501057	09/26/18 01:34	LMB	TAL IRV
Total/NA	Prep	3546			15.02 g	2 mL	501147	09/26/18 07:04	L1A	TAL IRV
Total/NA	Analysis	8081A		1			501167	09/26/18 19:04	D1D	TAL IRV
Total/NA	Prep	3546	DL		15.02 g	2 mL	501147	09/26/18 07:04	L1A	TAL IRV
Total/NA	Analysis	8081A	DL	5			501443	09/27/18 11:28	IVA	TAL IRV

Client Sample ID: DSPE-6-1.0-20180920

Lab Sample ID: 440-220623-2

Date Collected: 09/20/18 07:48

Matrix: Solid

Date Received: 09/21/18 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			99.98 g	2000 mL	500561	09/22/18 14:34	CDH	TAL IRV
TCLP	Prep	3010A			5 mL	50 mL	501652	09/27/18 22:08	CDH	TAL IRV
TCLP	Analysis	6010B		1			501820	09/28/18 12:05	VS	TAL IRV
TCLP	Leach	1311			99.98 g	2000 mL	500561	09/22/18 14:34	CDH	TAL IRV
TCLP	Prep	7470A			2 mL	20 mL	500771	09/24/18 13:27	DB	TAL IRV
TCLP	Analysis	7470A		1			500923	09/25/18 03:59	DB	TAL IRV
Total/NA	Analysis	Moisture		1			500483	09/21/18 17:48	HTL	TAL IRV

Lab Chronicle

Client: Ramboll US Corporation
 Project/Site: NERT Dioxin Soil Sampling

TestAmerica Job ID: 440-220623-1

Client Sample ID: DSPE-6-1.0-20180920

Lab Sample ID: 440-220623-2

Date Collected: 09/20/18 07:48

Matrix: Solid

Date Received: 09/21/18 09:30

Percent Solids: 95.2

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/5030B		1	5.04 g	10 mL	501141	09/26/18 17:01	AYL	TAL IRV
Total/NA	Prep	3546			20.04 g	1 mL	500904	09/25/18 07:04	FTD	TAL IRV
Total/NA	Analysis	8270C		1			500988	09/25/18 17:18	L1B	TAL IRV
Total/NA	Prep	3546	RA		20.04 g	1 mL	500904	09/25/18 07:04	FTD	TAL IRV
Total/NA	Analysis	8270C	RA	1			501240	09/26/18 13:46	L1B	TAL IRV
Total/NA	Analysis	8015B		1	5.07 g	10 mL	501450	09/27/18 15:38	YCL	TAL IRV
Total/NA	Prep	3546			15.01 g	1 mL	500922	09/25/18 08:04	FTD	TAL IRV
Total/NA	Analysis	8015B		1			501057	09/26/18 03:23	LMB	TAL IRV
Total/NA	Prep	3546			15.00 g	2 mL	501147	09/26/18 07:04	L1A	TAL IRV
Total/NA	Analysis	8081A		1			501167	09/26/18 19:31	D1D	TAL IRV

Client Sample ID: DSPE-7-0.0-20180920

Lab Sample ID: 440-220623-3

Date Collected: 09/20/18 08:35

Matrix: Solid

Date Received: 09/21/18 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			99.98 g	2000 mL	500561	09/22/18 14:34	CDH	TAL IRV
TCLP	Prep	3010A			5 mL	50 mL	501652	09/27/18 22:08	CDH	TAL IRV
TCLP	Analysis	6010B		1			501820	09/28/18 12:27	VS	TAL IRV
TCLP	Leach	1311			99.98 g	2000 mL	500561	09/22/18 14:34	CDH	TAL IRV
TCLP	Prep	7470A			2 mL	20 mL	500771	09/24/18 13:27	DB	TAL IRV
TCLP	Analysis	7470A		1			500923	09/25/18 04:01	DB	TAL IRV
Total/NA	Analysis	Moisture		1			500483	09/21/18 17:48	HTL	TAL IRV

Client Sample ID: DSPE-7-0.0-20180920

Lab Sample ID: 440-220623-3

Date Collected: 09/20/18 08:35

Matrix: Solid

Date Received: 09/21/18 09:30

Percent Solids: 98.0

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/5030B		1	5.02 g	10 mL	501141	09/26/18 17:28	AYL	TAL IRV
Total/NA	Prep	3546			20.03 g	1 mL	500904	09/25/18 07:04	FTD	TAL IRV
Total/NA	Analysis	8270C		1			500988	09/25/18 17:43	L1B	TAL IRV
Total/NA	Prep	3546	RA		20.03 g	1 mL	500904	09/25/18 07:04	FTD	TAL IRV
Total/NA	Analysis	8270C	RA	1			501240	09/26/18 14:11	L1B	TAL IRV
Total/NA	Analysis	8015B		1	4.99 g	10 mL	501158	09/26/18 06:14	YCL	TAL IRV
Total/NA	Prep	3546			15.08 g	1 mL	500922	09/25/18 08:04	FTD	TAL IRV
Total/NA	Analysis	8015B		1			501057	09/26/18 03:45	LMB	TAL IRV
Total/NA	Prep	3546			15.02 g	2 mL	501147	09/26/18 07:04	L1A	TAL IRV
Total/NA	Analysis	8081A		1			501167	09/26/18 19:58	D1D	TAL IRV

Lab Chronicle

Client: Ramboll US Corporation
 Project/Site: NERT Dioxin Soil Sampling

TestAmerica Job ID: 440-220623-1

Client Sample ID: DSPE-7-1.0-20180920

Lab Sample ID: 440-220623-4

Date Collected: 09/20/18 08:40

Matrix: Solid

Date Received: 09/21/18 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			99.95 g	2000 mL	500561	09/22/18 14:34	CDH	TAL IRV
TCLP	Prep	3010A			5 mL	50 mL	501652	09/27/18 22:08	CDH	TAL IRV
TCLP	Analysis	6010B		1			501820	09/28/18 12:29	VS	TAL IRV
TCLP	Leach	1311			99.95 g	2000 mL	500561	09/22/18 14:34	CDH	TAL IRV
TCLP	Prep	7470A			2 mL	20 mL	500771	09/24/18 13:27	DB	TAL IRV
TCLP	Analysis	7470A		1			500923	09/25/18 04:03	DB	TAL IRV
Total/NA	Analysis	Moisture		1			500483	09/21/18 17:48	HTL	TAL IRV

Client Sample ID: DSPE-7-1.0-20180920

Lab Sample ID: 440-220623-4

Date Collected: 09/20/18 08:40

Matrix: Solid

Date Received: 09/21/18 09:30

Percent Solids: 94.0

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/5030B		1	5 g	10 mL	501141	09/26/18 17:55	AYL	TAL IRV
Total/NA	Prep	3546			20.03 g	1 mL	500904	09/25/18 07:04	FTD	TAL IRV
Total/NA	Analysis	8270C		1	1 mL	1.0 mL	500988	09/25/18 18:08	L1B	TAL IRV
Total/NA	Prep	3546	RA		20.03 g	1 mL	500904	09/25/18 07:04	FTD	TAL IRV
Total/NA	Analysis	8270C	RA	1			501240	09/26/18 14:36	L1B	TAL IRV
Total/NA	Analysis	8015B		1	5.02 g	10 mL	501158	09/26/18 06:43	YCL	TAL IRV
Total/NA	Prep	3546			15.04 g	1 mL	500922	09/25/18 08:04	FTD	TAL IRV
Total/NA	Analysis	8015B		1			501057	09/26/18 04:07	LMB	TAL IRV
Total/NA	Prep	3546			15.10 g	2 mL	501147	09/26/18 07:04	L1A	TAL IRV
Total/NA	Analysis	8081A		1			501167	09/26/18 20:25	D1D	TAL IRV

Laboratory References:

TAL IRV = TestAmerica Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

QC Sample Results

Client: Ramboll US Corporation
 Project/Site: NERT Dioxin Soil Sampling

TestAmerica Job ID: 440-220623-1

Method: 8260B/5030B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 440-501141/4

Matrix: Solid

Analysis Batch: 501141

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		0.020	0.0080	mg/Kg			09/26/18 08:18	1
Benzene	ND		0.0010	0.00050	mg/Kg			09/26/18 08:18	1
Bromobenzene	ND		0.0020	0.0010	mg/Kg			09/26/18 08:18	1
Bromochloromethane	ND		0.0020	0.0010	mg/Kg			09/26/18 08:18	1
Bromodichloromethane	ND		0.0010	0.00050	mg/Kg			09/26/18 08:18	1
Bromoform	ND		0.0020	0.0010	mg/Kg			09/26/18 08:18	1
Bromomethane	ND		0.0020	0.0010	mg/Kg			09/26/18 08:18	1
2-Butanone (MEK)	ND		0.010	0.0050	mg/Kg			09/26/18 08:18	1
Carbon tetrachloride	ND		0.0020	0.00050	mg/Kg			09/26/18 08:18	1
Chlorobenzene	ND		0.0010	0.00050	mg/Kg			09/26/18 08:18	1
Chloroethane	ND		0.0020	0.0010	mg/Kg			09/26/18 08:18	1
Chloroform	ND		0.0010	0.00050	mg/Kg			09/26/18 08:18	1
Chloromethane	ND		0.0020	0.0010	mg/Kg			09/26/18 08:18	1
2-Chlorotoluene	ND		0.0020	0.0010	mg/Kg			09/26/18 08:18	1
4-Chlorotoluene	ND		0.0020	0.0010	mg/Kg			09/26/18 08:18	1
cis-1,2-Dichloroethene	ND		0.0010	0.00050	mg/Kg			09/26/18 08:18	1
cis-1,3-Dichloropropene	ND		0.0010	0.00050	mg/Kg			09/26/18 08:18	1
Dibromochloromethane	ND		0.0010	0.00050	mg/Kg			09/26/18 08:18	1
1,2-Dibromo-3-Chloropropane	ND		0.0050	0.0020	mg/Kg			09/26/18 08:18	1
1,2-Dibromoethane (EDB)	ND		0.0010	0.00050	mg/Kg			09/26/18 08:18	1
Dibromomethane	ND		0.0010	0.00050	mg/Kg			09/26/18 08:18	1
1,2-Dichlorobenzene	ND		0.0010	0.00050	mg/Kg			09/26/18 08:18	1
1,3-Dichlorobenzene	ND		0.0010	0.00050	mg/Kg			09/26/18 08:18	1
1,4-Dichlorobenzene	ND		0.0010	0.00050	mg/Kg			09/26/18 08:18	1
Dichlorodifluoromethane	ND		0.0020	0.0010	mg/Kg			09/26/18 08:18	1
1,1-Dichloroethane	ND		0.0010	0.00050	mg/Kg			09/26/18 08:18	1
1,2-Dichloroethane	ND		0.0010	0.00050	mg/Kg			09/26/18 08:18	1
1,1-Dichloroethene	ND		0.0020	0.00050	mg/Kg			09/26/18 08:18	1
1,2-Dichloropropane	ND		0.0010	0.00050	mg/Kg			09/26/18 08:18	1
1,3-Dichloropropane	ND		0.0010	0.00050	mg/Kg			09/26/18 08:18	1
2,2-Dichloropropane	ND		0.0020	0.0010	mg/Kg			09/26/18 08:18	1
1,1-Dichloropropene	ND		0.0010	0.00050	mg/Kg			09/26/18 08:18	1
Ethylbenzene	ND		0.0010	0.00050	mg/Kg			09/26/18 08:18	1
Ethyl-t-butyl ether (ETBE)	ND		0.0020	0.0010	mg/Kg			09/26/18 08:18	1
Hexachlorobutadiene	ND		0.0020	0.0010	mg/Kg			09/26/18 08:18	1
2-Hexanone	ND		0.010	0.0050	mg/Kg			09/26/18 08:18	1
Isopropylbenzene	ND		0.0010	0.00050	mg/Kg			09/26/18 08:18	1
Isopropyl Ether (DIPE)	ND		0.0020	0.0010	mg/Kg			09/26/18 08:18	1
Methylene Chloride	ND		0.010	0.0050	mg/Kg			09/26/18 08:18	1
4-Methyl-2-pentanone (MIBK)	ND		0.0050	0.0025	mg/Kg			09/26/18 08:18	1
Methyl-t-Butyl Ether (MTBE)	ND		0.0020	0.0010	mg/Kg			09/26/18 08:18	1
m,p-Xylene	ND		0.0020	0.0010	mg/Kg			09/26/18 08:18	1
Naphthalene	ND		0.0020	0.0010	mg/Kg			09/26/18 08:18	1
n-Butylbenzene	ND		0.0020	0.0010	mg/Kg			09/26/18 08:18	1
N-Propylbenzene	ND		0.0010	0.00050	mg/Kg			09/26/18 08:18	1
o-Xylene	ND		0.0010	0.00050	mg/Kg			09/26/18 08:18	1
p-Isopropyltoluene	ND		0.0010	0.00050	mg/Kg			09/26/18 08:18	1
sec-Butylbenzene	ND		0.0020	0.0010	mg/Kg			09/26/18 08:18	1

TestAmerica Irvine

QC Sample Results

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Soil Sampling

TestAmerica Job ID: 440-220623-1

Method: 8260B/5030B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 440-501141/4

Matrix: Solid

Analysis Batch: 501141

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Styrene	ND		0.0010	0.00050	mg/Kg			09/26/18 08:18	1
Tert-amyl-methyl ether (TAME)	ND		0.0020	0.0010	mg/Kg			09/26/18 08:18	1
tert-Butyl alcohol (TBA)	ND		0.050	0.010	mg/Kg			09/26/18 08:18	1
tert-Butylbenzene	ND		0.0020	0.0010	mg/Kg			09/26/18 08:18	1
1,1,1,2-Tetrachloroethane	ND		0.0020	0.0010	mg/Kg			09/26/18 08:18	1
1,1,2,2-Tetrachloroethane	ND		0.0020	0.0010	mg/Kg			09/26/18 08:18	1
Tetrachloroethene	ND		0.0010	0.00050	mg/Kg			09/26/18 08:18	1
Toluene	ND		0.0010	0.00050	mg/Kg			09/26/18 08:18	1
trans-1,2-Dichloroethene	ND		0.0010	0.00050	mg/Kg			09/26/18 08:18	1
trans-1,3-Dichloropropene	ND		0.0010	0.00050	mg/Kg			09/26/18 08:18	1
1,2,3-Trichlorobenzene	ND		0.0020	0.0010	mg/Kg			09/26/18 08:18	1
1,2,4-Trichlorobenzene	ND		0.0050	0.0010	mg/Kg			09/26/18 08:18	1
1,1,1-Trichloroethane	ND		0.0010	0.00050	mg/Kg			09/26/18 08:18	1
1,1,2-Trichloroethane	ND		0.0010	0.00050	mg/Kg			09/26/18 08:18	1
Trichloroethene	ND		0.0010	0.00050	mg/Kg			09/26/18 08:18	1
Trichlorofluoromethane	ND		0.0020	0.0010	mg/Kg			09/26/18 08:18	1
1,2,3-Trichloropropane	ND		0.010	0.0010	mg/Kg			09/26/18 08:18	1
1,2,4-Trimethylbenzene	ND		0.0020	0.0010	mg/Kg			09/26/18 08:18	1
1,3,5-Trimethylbenzene	ND		0.0020	0.0010	mg/Kg			09/26/18 08:18	1
Vinyl chloride	ND		0.0020	0.0010	mg/Kg			09/26/18 08:18	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	93		79 - 120		09/26/18 08:18	1
Dibromofluoromethane (Surr)	103		60 - 120		09/26/18 08:18	1
Toluene-d8 (Surr)	94		79 - 123		09/26/18 08:18	1

Lab Sample ID: LCS 440-501141/5

Matrix: Solid

Analysis Batch: 501141

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	0.0500	0.0554		mg/Kg		111	25 - 145
Benzene	0.0500	0.0478		mg/Kg		96	65 - 120
Bromobenzene	0.0500	0.0511		mg/Kg		102	75 - 120
Bromochloromethane	0.0500	0.0501		mg/Kg		100	70 - 135
Bromodichloromethane	0.0500	0.0518		mg/Kg		104	70 - 135
Bromoform	0.0500	0.0485		mg/Kg		97	55 - 135
Bromomethane	0.0500	0.0407		mg/Kg		81	60 - 145
2-Butanone (MEK)	0.0500	0.0488		mg/Kg		98	40 - 145
Carbon tetrachloride	0.0500	0.0508		mg/Kg		102	65 - 140
Chlorobenzene	0.0500	0.0508		mg/Kg		102	75 - 120
Chloroethane	0.0500	0.0376		mg/Kg		75	60 - 140
Chloroform	0.0500	0.0492		mg/Kg		98	70 - 130
Chloromethane	0.0500	0.0346		mg/Kg		69	45 - 145
2-Chlorotoluene	0.0500	0.0484		mg/Kg		97	70 - 125
4-Chlorotoluene	0.0500	0.0497		mg/Kg		99	75 - 125
cis-1,2-Dichloroethene	0.0500	0.0477		mg/Kg		95	70 - 125
cis-1,3-Dichloropropene	0.0500	0.0523		mg/Kg		105	75 - 125

TestAmerica Irvine

QC Sample Results

Client: Ramboll US Corporation
 Project/Site: NERT Dioxin Soil Sampling

TestAmerica Job ID: 440-220623-1

Method: 8260B/5030B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 440-501141/5

Matrix: Solid

Analysis Batch: 501141

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Dibromochloromethane	0.0500	0.0570		mg/Kg		114	65 - 140
1,2-Dibromo-3-Chloropropane	0.0500	0.0452		mg/Kg		90	50 - 135
1,2-Dibromoethane (EDB)	0.0500	0.0480		mg/Kg		96	70 - 130
Dibromomethane	0.0500	0.0499		mg/Kg		100	70 - 130
1,2-Dichlorobenzene	0.0500	0.0490		mg/Kg		98	75 - 120
1,3-Dichlorobenzene	0.0500	0.0496		mg/Kg		99	75 - 125
1,4-Dichlorobenzene	0.0500	0.0526		mg/Kg		105	75 - 120
Dichlorodifluoromethane	0.0500	0.0314		mg/Kg		63	35 - 160
1,1-Dichloroethane	0.0500	0.0449		mg/Kg		90	70 - 130
1,2-Dichloroethane	0.0500	0.0464		mg/Kg		93	60 - 140
1,1-Dichloroethene	0.0500	0.0483		mg/Kg		97	70 - 125
1,2-Dichloropropane	0.0500	0.0485		mg/Kg		97	70 - 130
1,3-Dichloropropane	0.0500	0.0498		mg/Kg		100	70 - 125
2,2-Dichloropropane	0.0500	0.0482		mg/Kg		96	60 - 145
1,1-Dichloropropene	0.0500	0.0445		mg/Kg		89	70 - 130
Ethylbenzene	0.0500	0.0473		mg/Kg		95	70 - 125
Ethyl-t-butyl ether (ETBE)	0.0500	0.0413		mg/Kg		83	60 - 140
Hexachlorobutadiene	0.0500	0.0504		mg/Kg		101	60 - 135
2-Hexanone	0.0500	0.0475		mg/Kg		95	40 - 150
Isopropylbenzene	0.0500	0.0471		mg/Kg		94	75 - 130
Isopropyl Ether (DIPE)	0.0500	0.0441		mg/Kg		88	60 - 140
Methylene Chloride	0.0500	0.0481		mg/Kg		96	55 - 135
4-Methyl-2-pentanone (MIBK)	0.0500	0.0433		mg/Kg		87	40 - 145
Methyl-t-Butyl Ether (MTBE)	0.0500	0.0451		mg/Kg		90	60 - 140
m,p-Xylene	0.0500	0.0474		mg/Kg		95	70 - 125
Naphthalene	0.0500	0.0516		mg/Kg		103	55 - 135
n-Butylbenzene	0.0500	0.0465		mg/Kg		93	70 - 130
N-Propylbenzene	0.0500	0.0475		mg/Kg		95	70 - 130
o-Xylene	0.0500	0.0485		mg/Kg		97	70 - 125
p-Isopropyltoluene	0.0500	0.0501		mg/Kg		100	75 - 125
sec-Butylbenzene	0.0500	0.0469		mg/Kg		94	70 - 125
Styrene	0.0500	0.0478		mg/Kg		96	75 - 130
Tert-amyl-methyl ether (TAME)	0.0500	0.0494		mg/Kg		99	60 - 145
tert-Butyl alcohol (TBA)	0.500	0.518		mg/Kg		104	70 - 135
tert-Butylbenzene	0.0500	0.0493		mg/Kg		99	70 - 125
1,1,1,2-Tetrachloroethane	0.0500	0.0482		mg/Kg		96	70 - 130
1,1,2,2-Tetrachloroethane	0.0500	0.0492		mg/Kg		98	55 - 140
Tetrachloroethene	0.0500	0.0479		mg/Kg		96	70 - 125
Toluene	0.0500	0.0471		mg/Kg		94	70 - 125
trans-1,2-Dichloroethene	0.0500	0.0432		mg/Kg		86	70 - 125
trans-1,3-Dichloropropene	0.0500	0.0488		mg/Kg		98	70 - 135
1,2,3-Trichlorobenzene	0.0500	0.0522		mg/Kg		104	60 - 130
1,2,4-Trichlorobenzene	0.0500	0.0536		mg/Kg		107	70 - 135
1,1,1-Trichloroethane	0.0500	0.0484		mg/Kg		97	65 - 135
1,1,2-Trichloroethane	0.0500	0.0533		mg/Kg		107	65 - 135
Trichloroethene	0.0500	0.0516		mg/Kg		103	70 - 125
Trichlorofluoromethane	0.0500	0.0435		mg/Kg		87	60 - 145
1,2,3-Trichloropropane	0.0500	0.0524		mg/Kg		105	60 - 135

TestAmerica Irvine

QC Sample Results

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Soil Sampling

TestAmerica Job ID: 440-220623-1

Method: 8260B/5030B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 440-501141/5

Matrix: Solid

Analysis Batch: 501141

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,4-Trimethylbenzene	0.0500	0.0478		mg/Kg		96	70 - 125
1,3,5-Trimethylbenzene	0.0500	0.0472		mg/Kg		94	70 - 125
Vinyl chloride	0.0500	0.0347		mg/Kg		69	55 - 135

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	91		79 - 120
Dibromofluoromethane (Surr)	97		60 - 120
Toluene-d8 (Surr)	91		79 - 123

Lab Sample ID: 440-220073-A-10 MS

Matrix: Solid

Analysis Batch: 501141

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	ND		0.0499	0.0417		mg/Kg		84	20 - 145
Benzene	ND		0.0499	0.0479		mg/Kg		96	65 - 130
Bromobenzene	ND		0.0499	0.0510		mg/Kg		102	65 - 140
Bromochloromethane	ND		0.0499	0.0539		mg/Kg		108	65 - 145
Bromodichloromethane	ND		0.0499	0.0482		mg/Kg		97	65 - 145
Bromoform	ND		0.0499	0.0492		mg/Kg		99	50 - 145
Bromomethane	ND		0.0499	0.0483		mg/Kg		97	60 - 155
2-Butanone (MEK)	ND		0.0499	0.0500		mg/Kg		100	25 - 170
Carbon tetrachloride	ND		0.0499	0.0544		mg/Kg		109	60 - 145
Chlorobenzene	ND		0.0499	0.0502		mg/Kg		101	70 - 130
Chloroethane	ND		0.0499	0.0404		mg/Kg		81	60 - 150
Chloroform	ND		0.0499	0.0474		mg/Kg		95	65 - 135
Chloromethane	ND		0.0499	0.0413		mg/Kg		83	40 - 145
2-Chlorotoluene	ND		0.0499	0.0486		mg/Kg		97	60 - 135
4-Chlorotoluene	ND		0.0499	0.0462		mg/Kg		93	65 - 135
cis-1,2-Dichloroethene	ND		0.0499	0.0494		mg/Kg		99	65 - 135
cis-1,3-Dichloropropene	ND		0.0499	0.0508		mg/Kg		102	70 - 135
Dibromochloromethane	ND		0.0499	0.0565		mg/Kg		113	60 - 145
1,2-Dibromo-3-Chloropropane	ND		0.0499	0.0504		mg/Kg		101	40 - 150
1,2-Dibromoethane (EDB)	ND		0.0499	0.0505		mg/Kg		101	65 - 140
Dibromomethane	ND		0.0499	0.0494		mg/Kg		99	65 - 140
1,2-Dichlorobenzene	ND		0.0499	0.0473		mg/Kg		95	70 - 130
1,3-Dichlorobenzene	ND		0.0499	0.0462		mg/Kg		93	70 - 130
1,4-Dichlorobenzene	ND		0.0499	0.0505		mg/Kg		101	70 - 130
Dichlorodifluoromethane	ND		0.0499	0.0368		mg/Kg		74	30 - 160
1,1-Dichloroethane	ND		0.0499	0.0471		mg/Kg		94	65 - 135
1,2-Dichloroethane	ND		0.0499	0.0460		mg/Kg		92	60 - 150
1,1-Dichloroethene	ND		0.0499	0.0497		mg/Kg		100	65 - 135
1,2-Dichloropropane	ND		0.0499	0.0473		mg/Kg		95	65 - 130
1,3-Dichloropropane	ND		0.0499	0.0523		mg/Kg		105	65 - 140
2,2-Dichloropropane	ND		0.0499	0.0533		mg/Kg		107	65 - 150
1,1-Dichloropropene	ND		0.0499	0.0478		mg/Kg		96	65 - 135
Ethylbenzene	ND		0.0499	0.0454		mg/Kg		91	70 - 135
Ethyl-t-butyl ether (ETBE)	ND		0.0499	0.0396		mg/Kg		79	60 - 145

TestAmerica Irvine

QC Sample Results

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Soil Sampling

TestAmerica Job ID: 440-220623-1

Method: 8260B/5030B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 440-220073-A-10 MS

Client Sample ID: Matrix Spike

Matrix: Solid

Prep Type: Total/NA

Analysis Batch: 501141

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec. Limits
	Result	Qualifier	Added	Result	Qualifier				
Hexachlorobutadiene	ND		0.0499	0.0377		mg/Kg		76	50 - 145
2-Hexanone	ND		0.0499	0.0437		mg/Kg		88	35 - 160
Isopropylbenzene	ND		0.0499	0.0453		mg/Kg		91	70 - 145
Isopropyl Ether (DIPE)	ND		0.0499	0.0444		mg/Kg		89	60 - 150
Methylene Chloride	ND		0.0499	0.0524		mg/Kg		105	55 - 145
4-Methyl-2-pentanone (MIBK)	ND		0.0499	0.0432		mg/Kg		87	40 - 155
Methyl-t-Butyl Ether (MTBE)	ND		0.0499	0.0468		mg/Kg		94	55 - 155
m,p-Xylene	ND		0.0499	0.0462		mg/Kg		93	70 - 130
Naphthalene	ND		0.0499	0.0486		mg/Kg		97	40 - 150
n-Butylbenzene	ND		0.0499	0.0413		mg/Kg		83	55 - 145
N-Propylbenzene	ND		0.0499	0.0440		mg/Kg		88	65 - 140
o-Xylene	ND		0.0499	0.0494		mg/Kg		99	65 - 130
p-Isopropyltoluene	ND		0.0499	0.0446		mg/Kg		89	60 - 140
sec-Butylbenzene	ND		0.0499	0.0442		mg/Kg		89	60 - 135
Styrene	ND		0.0499	0.0456		mg/Kg		91	70 - 140
Tert-amyl-methyl ether (TAME)	ND		0.0499	0.0479		mg/Kg		96	60 - 150
tert-Butyl alcohol (TBA)	ND		0.499	0.512		mg/Kg		103	65 - 145
tert-Butylbenzene	ND		0.0499	0.0444		mg/Kg		89	60 - 140
1,1,1,2-Tetrachloroethane	ND		0.0499	0.0470		mg/Kg		94	65 - 145
1,1,2,2-Tetrachloroethane	ND		0.0499	0.0486		mg/Kg		97	40 - 160
Tetrachloroethane	0.0019		0.0499	0.0495		mg/Kg		95	65 - 135
Toluene	ND		0.0499	0.0473		mg/Kg		95	70 - 130
trans-1,2-Dichloroethene	ND		0.0499	0.0465		mg/Kg		93	70 - 135
trans-1,3-Dichloropropene	ND		0.0499	0.0498		mg/Kg		100	60 - 145
1,2,3-Trichlorobenzene	ND		0.0499	0.0466		mg/Kg		93	45 - 145
1,2,4-Trichlorobenzene	ND		0.0499	0.0463		mg/Kg		93	50 - 140
1,1,1-Trichloroethane	ND		0.0499	0.0508		mg/Kg		102	65 - 145
1,1,2-Trichloroethane	ND		0.0499	0.0535		mg/Kg		107	65 - 140
Trichloroethene	ND		0.0499	0.0522		mg/Kg		105	65 - 140
Trichlorofluoromethane	ND		0.0499	0.0455		mg/Kg		91	55 - 155
1,2,3-Trichloropropane	ND		0.0499	0.0563		mg/Kg		113	50 - 150
1,2,4-Trimethylbenzene	ND		0.0499	0.0443		mg/Kg		89	65 - 140
1,3,5-Trimethylbenzene	ND		0.0499	0.0446		mg/Kg		89	65 - 135
Vinyl chloride	ND		0.0499	0.0438		mg/Kg		88	55 - 140

Surrogate	MS	MS	Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	89		79 - 120
Dibromofluoromethane (Surr)	101		60 - 120
Toluene-d8 (Surr)	92		79 - 123

Lab Sample ID: 440-220073-A-10 MSD

Client Sample ID: Matrix Spike Duplicate

Matrix: Solid

Prep Type: Total/NA

Analysis Batch: 501141

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
	Result	Qualifier	Added	Result	Qualifier						
Acetone	ND		0.0498	0.0337		mg/Kg		68	20 - 145	21	40
Benzene	ND		0.0498	0.0453		mg/Kg		91	65 - 130	6	20
Bromobenzene	ND		0.0498	0.0487		mg/Kg		98	65 - 140	5	25

TestAmerica Irvine

QC Sample Results

Client: Ramboll US Corporation
 Project/Site: NERT Dioxin Soil Sampling

TestAmerica Job ID: 440-220623-1

Method: 8260B/5030B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 440-220073-A-10 MSD

Matrix: Solid

Analysis Batch: 501141

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	RPD
	Result	Qualifier	Added	Result	Qualifier				Limits		Limit
Bromochloromethane	ND		0.0498	0.0446		mg/Kg		90	65 - 145	19	25
Bromodichloromethane	ND		0.0498	0.0454		mg/Kg		91	65 - 145	6	20
Bromoform	ND		0.0498	0.0445		mg/Kg		89	50 - 145	10	30
Bromomethane	ND		0.0498	0.0442		mg/Kg		89	60 - 155	9	25
2-Butanone (MEK)	ND		0.0498	0.0410		mg/Kg		82	25 - 170	20	40
Carbon tetrachloride	ND		0.0498	0.0494		mg/Kg		99	60 - 145	10	25
Chlorobenzene	ND		0.0498	0.0482		mg/Kg		97	70 - 130	4	25
Chloroethane	ND		0.0498	0.0363		mg/Kg		73	60 - 150	11	25
Chloroform	ND		0.0498	0.0444		mg/Kg		89	65 - 135	6	20
Chloromethane	ND		0.0498	0.0366		mg/Kg		73	40 - 145	12	25
2-Chlorotoluene	ND		0.0498	0.0460		mg/Kg		92	60 - 135	5	25
4-Chlorotoluene	ND		0.0498	0.0451		mg/Kg		91	65 - 135	2	25
cis-1,2-Dichloroethene	ND		0.0498	0.0447		mg/Kg		90	65 - 135	10	25
cis-1,3-Dichloropropene	ND		0.0498	0.0508		mg/Kg		102	70 - 135	0	25
Dibromochloromethane	ND		0.0498	0.0506		mg/Kg		102	60 - 145	11	25
1,2-Dibromo-3-Chloropropane	ND		0.0498	0.0400		mg/Kg		80	40 - 150	23	30
1,2-Dibromoethane (EDB)	ND		0.0498	0.0455		mg/Kg		91	65 - 140	10	25
Dibromomethane	ND		0.0498	0.0428		mg/Kg		86	65 - 140	14	25
1,2-Dichlorobenzene	ND		0.0498	0.0434		mg/Kg		87	70 - 130	9	25
1,3-Dichlorobenzene	ND		0.0498	0.0460		mg/Kg		92	70 - 130	0	25
1,4-Dichlorobenzene	ND		0.0498	0.0489		mg/Kg		98	70 - 130	3	25
Dichlorodifluoromethane	ND		0.0498	0.0330		mg/Kg		66	30 - 160	11	35
1,1-Dichloroethane	ND		0.0498	0.0426		mg/Kg		86	65 - 135	10	25
1,2-Dichloroethane	ND		0.0498	0.0408		mg/Kg		82	60 - 150	12	25
1,1-Dichloroethene	ND		0.0498	0.0433		mg/Kg		87	65 - 135	14	25
1,2-Dichloropropane	ND		0.0498	0.0431		mg/Kg		87	65 - 130	9	20
1,3-Dichloropropane	ND		0.0498	0.0473		mg/Kg		95	65 - 140	10	25
2,2-Dichloropropane	ND		0.0498	0.0497		mg/Kg		100	65 - 150	7	25
1,1-Dichloropropene	ND		0.0498	0.0455		mg/Kg		91	65 - 135	5	20
Ethylbenzene	ND		0.0498	0.0435		mg/Kg		87	70 - 135	4	25
Ethyl-t-butyl ether (ETBE)	ND		0.0498	0.0371		mg/Kg		74	60 - 145	7	30
Hexachlorobutadiene	ND		0.0498	0.0362		mg/Kg		73	50 - 145	4	35
2-Hexanone	ND		0.0498	0.0351		mg/Kg		70	35 - 160	22	40
Isopropylbenzene	ND		0.0498	0.0447		mg/Kg		90	70 - 145	1	25
Isopropyl Ether (DIPE)	ND		0.0498	0.0390		mg/Kg		78	60 - 150	13	25
Methylene Chloride	ND		0.0498	0.0459		mg/Kg		92	55 - 145	13	25
4-Methyl-2-pentanone (MIBK)	ND		0.0498	0.0378		mg/Kg		76	40 - 155	13	40
Methyl-t-Butyl Ether (MTBE)	ND		0.0498	0.0405		mg/Kg		81	55 - 155	14	35
m,p-Xylene	ND		0.0498	0.0450		mg/Kg		90	70 - 130	3	25
Naphthalene	ND		0.0498	0.0437		mg/Kg		88	40 - 150	11	40
n-Butylbenzene	ND		0.0498	0.0400		mg/Kg		80	55 - 145	3	30
N-Propylbenzene	ND		0.0498	0.0431		mg/Kg		87	65 - 140	2	25
o-Xylene	ND		0.0498	0.0456		mg/Kg		92	65 - 130	8	25
p-Isopropyltoluene	ND		0.0498	0.0445		mg/Kg		89	60 - 140	0	25
sec-Butylbenzene	ND		0.0498	0.0425		mg/Kg		85	60 - 135	4	25
Styrene	ND		0.0498	0.0438		mg/Kg		88	70 - 140	4	25
Tert-amyl-methyl ether (TAME)	ND		0.0498	0.0445		mg/Kg		89	60 - 150	7	25
tert-Butyl alcohol (TBA)	ND		0.498	0.476		mg/Kg		96	65 - 145	7	30

TestAmerica Irvine

QC Sample Results

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Soil Sampling

TestAmerica Job ID: 440-220623-1

Method: 8260B/5030B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 440-220073-A-10 MSD

Matrix: Solid

Analysis Batch: 501141

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	RPD
	Result	Qualifier	Added	Result	Qualifier				Limits		
tert-Butylbenzene	ND		0.0498	0.0449		mg/Kg		90	60 - 140	1	25
1,1,1,2-Tetrachloroethane	ND		0.0498	0.0465		mg/Kg		93	65 - 145	1	20
1,1,2,2-Tetrachloroethane	ND		0.0498	0.0461		mg/Kg		93	40 - 160	5	30
Tetrachloroethene	0.0019		0.0498	0.0480		mg/Kg		93	65 - 135	3	25
Toluene	ND		0.0498	0.0464		mg/Kg		93	70 - 130	2	20
trans-1,2-Dichloroethene	ND		0.0498	0.0437		mg/Kg		88	70 - 135	6	25
trans-1,3-Dichloropropene	ND		0.0498	0.0465		mg/Kg		93	60 - 145	7	25
1,2,3-Trichlorobenzene	ND		0.0498	0.0430		mg/Kg		86	45 - 145	8	30
1,2,4-Trichlorobenzene	ND		0.0498	0.0447		mg/Kg		90	50 - 140	3	30
1,1,1-Trichloroethane	ND		0.0498	0.0445		mg/Kg		89	65 - 145	13	20
1,1,2-Trichloroethane	ND		0.0498	0.0491		mg/Kg		99	65 - 140	9	30
Trichloroethene	ND		0.0498	0.0477		mg/Kg		96	65 - 140	9	25
Trichlorofluoromethane	ND		0.0498	0.0418		mg/Kg		84	55 - 155	8	25
1,2,3-Trichloropropane	ND		0.0498	0.0461		mg/Kg		93	50 - 150	20	30
1,2,4-Trimethylbenzene	ND		0.0498	0.0442		mg/Kg		89	65 - 140	0	25
1,3,5-Trimethylbenzene	ND		0.0498	0.0434		mg/Kg		87	65 - 135	3	25
Vinyl chloride	ND		0.0498	0.0386		mg/Kg		78	55 - 140	12	30

Surrogate	MSD	MSD	Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	97		79 - 120
Dibromofluoromethane (Surr)	96		60 - 120
Toluene-d8 (Surr)	93		79 - 123

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 440-500904/1-A

Matrix: Solid

Analysis Batch: 500988

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 500904

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Acenaphthene	ND		0.35	0.18	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
Acenaphthylene	ND		0.33	0.070	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
Aniline	ND		1.0	0.14	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
Anthracene	ND		0.33	0.080	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
Benzidine	ND		2.1	0.17	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
Benzo[a]anthracene	ND		0.33	0.070	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
Benzo[a]pyrene	ND		0.33	0.067	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
Benzo[b]fluoranthene	ND		0.33	0.070	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
Benzo[g,h,i]perylene	ND		0.33	0.11	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
Benzoic acid	ND		0.95	0.48	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
Benzo[k]fluoranthene	ND		0.33	0.070	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
Benzyl alcohol	ND		3.4	0.41	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
Bis(2-chloroethoxy)methane	ND		0.33	0.13	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
Bis(2-chloroethyl)ether	ND		0.33	0.070	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
Bis(2-ethylhexyl) phthalate	ND		0.33	0.090	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
4-Bromophenyl phenyl ether	ND		0.33	0.075	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
Butyl benzyl phthalate	ND		0.33	0.080	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
4-Chloroaniline	ND		1.0	0.15	mg/Kg		09/25/18 07:04	09/25/18 14:46	1

TestAmerica Irvine

QC Sample Results

Client: Ramboll US Corporation
 Project/Site: NERT Dioxin Soil Sampling

TestAmerica Job ID: 440-220623-1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 440-500904/1-A

Matrix: Solid

Analysis Batch: 500988

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 500904

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
4-Chloro-3-methylphenol	ND		0.40	0.20	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
2-Chloronaphthalene	ND		0.33	0.067	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
2-Chlorophenol	ND		0.33	0.070	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
4-Chlorophenyl phenyl ether	ND		1.1	0.20	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
Chrysene	ND		0.33	0.075	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
Dibenz(a,h)anthracene	ND		0.42	0.10	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
Dibenzofuran	ND		0.33	0.14	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
3,3'-Dichlorobenzidine	ND		0.83	0.15	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
2,4-Dichlorophenol	ND		0.33	0.067	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
Diethyl phthalate	ND		0.33	0.095	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
2,4-Dimethylphenol	ND		0.33	0.13	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
Dimethyl phthalate	ND		0.33	0.067	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
Di-n-butyl phthalate	ND		0.33	0.090	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
2,4-Dinitrophenol	ND		2.0	1.0	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
2,4-Dinitrotoluene	ND		0.33	0.080	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
2,6-Dinitrotoluene	ND		0.33	0.095	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
Di-n-octyl phthalate	ND		0.33	0.090	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
Fluoranthene	ND		0.33	0.16	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
Fluorene	ND		0.33	0.070	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
Hexachlorobenzene	ND		0.33	0.070	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
Hexachlorocyclopentadiene	ND		0.83	0.31	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
Hexachloroethane	ND		0.33	0.070	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
Indeno[1,2,3-cd]pyrene	ND		0.33	0.13	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
Isophorone	ND		0.33	0.067	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
1-Methylnaphthalene	ND		0.35	0.15	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
2-Methylnaphthalene	ND		0.33	0.070	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
2-Methylphenol	ND		0.33	0.080	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
3-Methylphenol + 4-Methylphenol	ND		0.33	0.13	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
Naphthalene	ND		0.33	0.067	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
2-Nitroaniline	ND		0.33	0.17	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
3-Nitroaniline	ND		0.33	0.13	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
4-Nitroaniline	ND		0.83	0.13	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
Nitrobenzene	ND		0.33	0.070	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
2-Nitrophenol	ND		0.33	0.13	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
4-Nitrophenol	ND		2.9	0.50	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
N-Nitrosodi-n-propylamine	ND		0.25	0.070	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
N-Nitrosodiphenylamine	ND		0.75	0.16	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
Octachlorostyrene	ND		3.3	2.3	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
Pentachlorophenol	ND		0.83	0.34	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
Phenanthrene	ND		0.33	0.15	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
Phenol	ND		0.33	0.090	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
Pyrene	ND		0.33	0.14	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
Pyridine	ND		0.34	0.15	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
2,4,5-Trichlorophenol	ND		0.50	0.27	mg/Kg		09/25/18 07:04	09/25/18 14:46	1
2,4,6-Trichlorophenol	ND		0.55	0.16	mg/Kg		09/25/18 07:04	09/25/18 14:46	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
2-Fluorobiphenyl	83		42 - 113	09/25/18 07:04	09/25/18 14:46	1

TestAmerica Irvine

QC Sample Results

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Soil Sampling

TestAmerica Job ID: 440-220623-1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 440-500904/1-A
Matrix: Solid
Analysis Batch: 500988

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 500904

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
2-Fluorophenol (Surr)	73		18 - 138	09/25/18 07:04	09/25/18 14:46	1
Nitrobenzene-d5 (Surr)	79		39 - 104	09/25/18 07:04	09/25/18 14:46	1
Phenol-d6 (Surr)	70		37 - 125	09/25/18 07:04	09/25/18 14:46	1
Terphenyl-d14 (Surr)	89		43 - 125	09/25/18 07:04	09/25/18 14:46	1
2,4,6-Tribromophenol (Surr)	57		10 - 147	09/25/18 07:04	09/25/18 14:46	1

Lab Sample ID: MB 440-500904/1-A
Matrix: Solid
Analysis Batch: 501240

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 500904

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Octachlorostyrene	ND		3.3	2.3	mg/Kg		09/25/18 07:04	09/26/18 12:55	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
2-Fluorobiphenyl	81		42 - 113	09/25/18 07:04	09/26/18 12:55	1
2-Fluorophenol (Surr)	68		18 - 138	09/25/18 07:04	09/26/18 12:55	1
Nitrobenzene-d5 (Surr)	73		39 - 104	09/25/18 07:04	09/26/18 12:55	1
Phenol-d6 (Surr)	66		37 - 125	09/25/18 07:04	09/26/18 12:55	1
Terphenyl-d14 (Surr)	91		43 - 125	09/25/18 07:04	09/26/18 12:55	1
2,4,6-Tribromophenol (Surr)	70		10 - 147	09/25/18 07:04	09/26/18 12:55	1

Lab Sample ID: LCS 440-500904/2-A
Matrix: Solid
Analysis Batch: 500988

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 500904

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.
							Limits
Acenaphthene	2.50	1.93		mg/Kg		77	40 - 118
Acenaphthylene	2.50	2.07		mg/Kg		83	47 - 125
Aniline	2.50	1.42		mg/Kg		57	23 - 105
Anthracene	2.50	2.05		mg/Kg		82	51 - 122
Benzidine	2.50	ND	*	mg/Kg		0	5 - 61
Benzo[a]anthracene	2.50	1.98		mg/Kg		79	50 - 123
Benzo[a]pyrene	2.50	2.19		mg/Kg		88	52 - 125
Benzo[b]fluoranthene	2.50	2.14		mg/Kg		86	52 - 125
Benzo[g,h,i]perylene	2.50	2.12		mg/Kg		85	38 - 149
Benzoic acid	2.50	1.34		mg/Kg		54	28 - 120
Benzo[k]fluoranthene	2.50	2.29		mg/Kg		91	50 - 132
Benzyl alcohol	2.50	1.45	J	mg/Kg		58	20 - 133
Bis(2-chloroethoxy)methane	2.50	1.95		mg/Kg		78	39 - 119
Bis(2-chloroethyl)ether	2.50	1.76		mg/Kg		70	32 - 114
Bis(2-ethylhexyl) phthalate	2.50	2.03		mg/Kg		81	49 - 127
4-Bromophenyl phenyl ether	2.50	2.07		mg/Kg		83	52 - 126
Butyl benzyl phthalate	2.50	2.07		mg/Kg		83	48 - 130
4-Chloroaniline	2.50	1.52		mg/Kg		61	25 - 130
4-Chloro-3-methylphenol	2.50	1.93		mg/Kg		77	45 - 128
2-Chloronaphthalene	2.50	2.08		mg/Kg		83	43 - 120
2-Chlorophenol	2.50	1.76		mg/Kg		70	43 - 125
4-Chlorophenyl phenyl ether	2.50	2.06		mg/Kg		83	46 - 121

TestAmerica Irvine

QC Sample Results

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Soil Sampling

TestAmerica Job ID: 440-220623-1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 440-500904/2-A

Matrix: Solid

Analysis Batch: 500988

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 500904

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chrysene	2.50	2.14		mg/Kg		86	51 - 127
Dibenz(a,h)anthracene	2.50	2.02		mg/Kg		81	45 - 136
Dibenzofuran	2.50	2.02		mg/Kg		81	47 - 120
3,3'-Dichlorobenzidine	2.50	1.74		mg/Kg		69	28 - 114
2,4-Dichlorophenol	2.50	1.98		mg/Kg		79	49 - 127
Diethyl phthalate	2.50	2.01		mg/Kg		80	46 - 122
2,4-Dimethylphenol	2.50	1.97		mg/Kg		79	41 - 122
Dimethyl phthalate	2.50	2.01		mg/Kg		80	48 - 122
Di-n-butyl phthalate	2.50	2.04		mg/Kg		82	43 - 128
2,4-Dinitrophenol	5.00	3.30		mg/Kg		66	34 - 124
2,4-Dinitrotoluene	2.50	1.99		mg/Kg		80	46 - 126
2,6-Dinitrotoluene	2.50	2.01		mg/Kg		80	48 - 126
Di-n-octyl phthalate	2.50	1.96		mg/Kg		79	47 - 133
Fluoranthene	2.50	2.02		mg/Kg		81	44 - 123
Fluorene	2.50	2.02		mg/Kg		81	48 - 123
Hexachlorobenzene	2.50	2.09		mg/Kg		83	52 - 125
Hexachlorocyclopentadiene	2.50	2.02		mg/Kg		81	17 - 119
Hexachloroethane	2.50	1.65		mg/Kg		66	34 - 107
Indeno[1,2,3-cd]pyrene	2.50	1.95		mg/Kg		78	46 - 148
Isophorone	2.50	1.93		mg/Kg		77	38 - 119
2-Methylnaphthalene	2.50	1.93		mg/Kg		77	44 - 119
2-Methylphenol	2.50	1.71		mg/Kg		68	42 - 130
3-Methylphenol + 4-Methylphenol	2.50	1.73		mg/Kg		69	42 - 138
Naphthalene	2.50	1.92		mg/Kg		77	42 - 115
2-Nitroaniline	2.50	1.98		mg/Kg		79	40 - 131
3-Nitroaniline	2.50	1.72		mg/Kg		69	39 - 129
4-Nitroaniline	2.50	1.94		mg/Kg		77	40 - 126
Nitrobenzene	2.50	1.92		mg/Kg		77	38 - 116
2-Nitrophenol	2.50	1.97		mg/Kg		79	44 - 124
4-Nitrophenol	5.00	3.38		mg/Kg		68	35 - 130
N-Nitrosodi-n-propylamine	2.50	1.68		mg/Kg		67	31 - 124
N-Nitrosodiphenylamine	2.50	2.04		mg/Kg		82	48 - 130
Pentachlorophenol	5.00	3.67		mg/Kg		73	40 - 121
Phenanthrene	2.50	2.03		mg/Kg		81	51 - 122
Phenol	2.50	1.76		mg/Kg		70	42 - 133
Pyrene	2.50	2.17		mg/Kg		87	54 - 127
Pyridine	5.00	2.25		mg/Kg		45	21 - 76
2,4,5-Trichlorophenol	2.50	2.11		mg/Kg		84	51 - 125
2,4,6-Trichlorophenol	2.50	2.04		mg/Kg		82	48 - 126

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
2-Fluorobiphenyl	84		42 - 113
2-Fluorophenol (Surr)	72		18 - 138
Nitrobenzene-d5 (Surr)	77		39 - 104
Phenol-d6 (Surr)	72		37 - 125
Terphenyl-d14 (Surr)	84		43 - 125
2,4,6-Tribromophenol (Surr)	90		10 - 147

TestAmerica Irvine

QC Sample Results

Client: Ramboll US Corporation
 Project/Site: NERT Dioxin Soil Sampling

TestAmerica Job ID: 440-220623-1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 440-220519-B-1-A MS

Matrix: Solid

Analysis Batch: 500988

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 500904

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec. Limits
	Result	Qualifier	Added	Result	Qualifier				
Acenaphthene	ND		2.53	1.85		mg/Kg	☼	73	45 - 120
Acenaphthylene	ND		2.53	1.98		mg/Kg	☼	78	45 - 120
Aniline	ND		2.53	1.11		mg/Kg	☼	44	25 - 120
Anthracene	ND		2.53	2.08		mg/Kg	☼	82	55 - 120
Benzidine	ND	F1 *	2.53	ND	F1	mg/Kg	☼	0	20 - 120
Benzo[a]anthracene	ND		2.53	2.03		mg/Kg	☼	80	50 - 120
Benzo[a]pyrene	ND		2.53	2.07		mg/Kg	☼	82	45 - 125
Benzo[b]fluoranthene	ND		2.53	2.06		mg/Kg	☼	82	45 - 125
Benzo[g,h,i]perylene	ND		2.53	2.11		mg/Kg	☼	83	25 - 130
Benzoic acid	ND	F1	2.53	ND	F1	mg/Kg	☼	0	20 - 120
Benzo[k]fluoranthene	ND		2.53	2.14		mg/Kg	☼	84	45 - 125
Benzyl alcohol	ND		2.53	1.31	J	mg/Kg	☼	52	20 - 120
Bis(2-chloroethoxy)methane	ND		2.53	1.73		mg/Kg	☼	68	45 - 120
Bis(2-chloroethyl)ether	ND		2.53	1.55		mg/Kg	☼	61	35 - 110
Bis(2-ethylhexyl) phthalate	ND		2.53	2.10		mg/Kg	☼	83	45 - 130
4-Bromophenyl phenyl ether	ND		2.53	2.03		mg/Kg	☼	80	45 - 120
Butyl benzyl phthalate	ND		2.53	2.15		mg/Kg	☼	85	45 - 125
4-Chloroaniline	ND		2.53	1.36		mg/Kg	☼	54	20 - 120
4-Chloro-3-methylphenol	ND		2.53	1.85		mg/Kg	☼	73	50 - 125
2-Chloronaphthalene	ND		2.53	1.96		mg/Kg	☼	77	45 - 120
2-Chlorophenol	ND		2.53	1.58		mg/Kg	☼	63	40 - 120
4-Chlorophenyl phenyl ether	ND		2.53	2.02		mg/Kg	☼	80	50 - 120
Chrysene	ND		2.53	2.13		mg/Kg	☼	84	55 - 120
Dibenz(a,h)anthracene	ND		2.53	2.00		mg/Kg	☼	79	25 - 135
Dibenzofuran	ND		2.53	1.96		mg/Kg	☼	78	50 - 120
3,3'-Dichlorobenzidine	ND		2.53	1.36		mg/Kg	☼	54	20 - 130
2,4-Dichlorophenol	ND		2.53	1.80		mg/Kg	☼	71	45 - 120
Diethyl phthalate	ND		2.53	2.03		mg/Kg	☼	80	50 - 125
2,4-Dimethylphenol	ND		2.53	1.70		mg/Kg	☼	67	30 - 120
Dimethyl phthalate	ND		2.53	2.00		mg/Kg	☼	79	45 - 125
Di-n-butyl phthalate	ND		2.53	2.16		mg/Kg	☼	85	50 - 125
2,4-Dinitrophenol	ND		5.06	2.03		mg/Kg	☼	40	20 - 120
2,4-Dinitrotoluene	ND		2.53	2.03		mg/Kg	☼	80	50 - 125
2,6-Dinitrotoluene	ND		2.53	2.04		mg/Kg	☼	81	50 - 125
Di-n-octyl phthalate	ND		2.53	2.11		mg/Kg	☼	84	50 - 135
Fluoranthene	ND		2.53	2.07		mg/Kg	☼	82	45 - 120
Fluorene	ND		2.53	2.01		mg/Kg	☼	79	50 - 120
Hexachlorobenzene	7.3	F1	2.53	9.09	E	mg/Kg	☼	72	50 - 120
Hexachlorocyclopentadiene	ND		2.53	1.82		mg/Kg	☼	72	20 - 125
Hexachloroethane	ND		2.53	1.48		mg/Kg	☼	59	35 - 120
Indeno[1,2,3-cd]pyrene	ND		2.53	1.99		mg/Kg	☼	79	20 - 130
Isophorone	ND		2.53	1.76		mg/Kg	☼	70	40 - 120
2-Methylnaphthalene	ND		2.53	1.75		mg/Kg	☼	69	40 - 120
2-Methylphenol	ND		2.53	1.56		mg/Kg	☼	62	40 - 120
3-Methylphenol + 4-Methylphenol	ND		2.53	1.59		mg/Kg	☼	63	50 - 120
Naphthalene	ND		2.53	1.71		mg/Kg	☼	68	40 - 120
2-Nitroaniline	ND		2.53	1.97		mg/Kg	☼	78	45 - 120
3-Nitroaniline	ND		2.53	1.79		mg/Kg	☼	71	30 - 120

TestAmerica Irvine

QC Sample Results

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Soil Sampling

TestAmerica Job ID: 440-220623-1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 440-220519-B-1-A MS

Matrix: Solid

Analysis Batch: 500988

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 500904

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.	Limits
	Result	Qualifier	Added	Result	Qualifier					
4-Nitroaniline	ND		2.53	1.88		mg/Kg	*	74		40 - 125
Nitrobenzene	ND		2.53	1.70		mg/Kg	*	67		40 - 120
2-Nitrophenol	ND		2.53	1.69		mg/Kg	*	67		40 - 120
4-Nitrophenol	ND		5.06	3.66		mg/Kg	*	72		35 - 125
N-Nitrosodi-n-propylamine	ND		2.53	1.56		mg/Kg	*	62		35 - 120
N-Nitrosodiphenylamine	ND		2.53	1.98		mg/Kg	*	78		45 - 125
Pentachlorophenol	ND		5.06	3.36		mg/Kg	*	66		30 - 120
Phenanthrene	ND		2.53	2.07		mg/Kg	*	82		50 - 120
Phenol	ND		2.53	1.61		mg/Kg	*	64		40 - 120
Pyrene	ND		2.53	2.19		mg/Kg	*	87		40 - 125
Pyridine	ND		5.06	1.62		mg/Kg	*	32		25 - 130
2,4,5-Trichlorophenol	ND		2.53	2.00		mg/Kg	*	79		45 - 120
2,4,6-Trichlorophenol	ND		2.53	1.95		mg/Kg	*	77		45 - 120

Surrogate	MS %Recovery	MS Qualifier	MS Limits
2-Fluorobiphenyl	76		42 - 113
2-Fluorophenol (Surr)	63		18 - 138
Nitrobenzene-d5 (Surr)	66		39 - 104
Phenol-d6 (Surr)	64		37 - 125
Terphenyl-d14 (Surr)	85		43 - 125
2,4,6-Tribromophenol (Surr)	85		10 - 147

Lab Sample ID: 440-220519-B-1-B MSD

Matrix: Solid

Analysis Batch: 500988

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 500904

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	Limits	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier							
Acenaphthene	ND		2.53	1.77		mg/Kg	*	70		45 - 120	4	25
Acenaphthylene	ND		2.53	1.89		mg/Kg	*	75		45 - 120	5	20
Aniline	ND		2.53	1.18		mg/Kg	*	47		25 - 120	6	30
Anthracene	ND		2.53	1.93		mg/Kg	*	76		55 - 120	7	25
Benzidine	ND	F1 *	2.53	ND	F1	mg/Kg	*	0		20 - 120	NC	30
Benzo[a]anthracene	ND		2.53	1.88		mg/Kg	*	74		50 - 120	8	25
Benzo[a]pyrene	ND		2.53	1.92		mg/Kg	*	76		45 - 125	7	25
Benzo[b]fluoranthene	ND		2.53	1.91		mg/Kg	*	76		45 - 125	8	30
Benzo[g,h,i]perylene	ND		2.53	1.93		mg/Kg	*	76		25 - 130	9	30
Benzoic acid	ND	F1	2.53	ND	F1	mg/Kg	*	0		20 - 120	NC	30
Benzo[k]fluoranthene	ND		2.53	1.89		mg/Kg	*	75		45 - 125	12	30
Benzyl alcohol	ND		2.53	1.23	J	mg/Kg	*	49		20 - 120	6	30
Bis(2-chloroethoxy)methane	ND		2.53	1.70		mg/Kg	*	67		45 - 120	2	25
Bis(2-chloroethyl)ether	ND		2.53	1.51		mg/Kg	*	60		35 - 110	2	25
Bis(2-ethylhexyl) phthalate	ND		2.53	2.04		mg/Kg	*	81		45 - 130	3	25
4-Bromophenyl phenyl ether	ND		2.53	1.93		mg/Kg	*	76		45 - 120	5	20
Butyl benzyl phthalate	ND		2.53	2.06		mg/Kg	*	82		45 - 125	4	25
4-Chloroaniline	ND		2.53	1.42		mg/Kg	*	56		20 - 120	5	30
4-Chloro-3-methylphenol	ND		2.53	1.80		mg/Kg	*	71		50 - 125	3	25
2-Chloronaphthalene	ND		2.53	1.87		mg/Kg	*	74		45 - 120	5	20
2-Chlorophenol	ND		2.53	1.51		mg/Kg	*	60		40 - 120	5	20

TestAmerica Irvine

QC Sample Results

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Soil Sampling

TestAmerica Job ID: 440-220623-1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 440-220519-B-1-B MSD

Matrix: Solid

Analysis Batch: 500988

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 500904

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits		
4-Chlorophenyl phenyl ether	ND		2.53	1.89		mg/Kg	*	75	50 - 120	7	25
Chrysene	ND		2.53	1.95		mg/Kg	*	77	55 - 120	9	25
Dibenz(a,h)anthracene	ND		2.53	1.84		mg/Kg	*	73	25 - 135	9	30
Dibenzofuran	ND		2.53	1.86		mg/Kg	*	73	50 - 120	6	25
3,3'-Dichlorobenzidine	ND		2.53	1.32		mg/Kg	*	52	20 - 130	3	25
2,4-Dichlorophenol	ND		2.53	1.74		mg/Kg	*	69	45 - 120	4	25
Diethyl phthalate	ND		2.53	1.94		mg/Kg	*	77	50 - 125	5	25
2,4-Dimethylphenol	ND		2.53	1.64		mg/Kg	*	65	30 - 120	4	25
Dimethyl phthalate	ND		2.53	1.90		mg/Kg	*	75	45 - 125	5	25
Di-n-butyl phthalate	ND		2.53	2.00		mg/Kg	*	79	50 - 125	8	25
2,4-Dinitrophenol	ND		5.06	1.90	J	mg/Kg	*	38	20 - 120	7	25
2,4-Dinitrotoluene	ND		2.53	1.90		mg/Kg	*	75	50 - 125	7	25
2,6-Dinitrotoluene	ND		2.53	1.85		mg/Kg	*	73	50 - 125	9	20
Di-n-octyl phthalate	ND		2.53	2.02		mg/Kg	*	80	50 - 135	4	25
Fluoranthene	ND		2.53	1.92		mg/Kg	*	76	45 - 120	7	25
Fluorene	ND		2.53	1.88		mg/Kg	*	74	50 - 120	6	25
Hexachlorobenzene	7.3	F1	2.53	7.86	F1	mg/Kg	*	23	50 - 120	14	25
Hexachlorocyclopentadiene	ND		2.53	1.74		mg/Kg	*	69	20 - 125	5	30
Hexachloroethane	ND		2.53	1.44		mg/Kg	*	57	35 - 120	3	30
Indeno[1,2,3-cd]pyrene	ND		2.53	1.82		mg/Kg	*	72	20 - 130	9	30
Isophorone	ND		2.53	1.71		mg/Kg	*	68	40 - 120	3	25
2-Methylnaphthalene	ND		2.53	1.67		mg/Kg	*	66	40 - 120	5	20
2-Methylphenol	ND		2.53	1.55		mg/Kg	*	61	40 - 120	1	25
3-Methylphenol + 4-Methylphenol	ND		2.53	1.56		mg/Kg	*	62	50 - 120	2	25
Naphthalene	ND		2.53	1.66		mg/Kg	*	66	40 - 120	3	25
2-Nitroaniline	ND		2.53	1.89		mg/Kg	*	75	45 - 120	4	25
3-Nitroaniline	ND		2.53	1.68		mg/Kg	*	66	30 - 120	6	25
4-Nitroaniline	ND		2.53	1.71		mg/Kg	*	67	40 - 125	10	30
Nitrobenzene	ND		2.53	1.66		mg/Kg	*	66	40 - 120	2	25
2-Nitrophenol	ND		2.53	1.65		mg/Kg	*	65	40 - 120	2	25
4-Nitrophenol	ND		5.06	3.37		mg/Kg	*	67	35 - 125	8	30
N-Nitrosodi-n-propylamine	ND		2.53	1.51		mg/Kg	*	60	35 - 120	4	25
N-Nitrosodiphenylamine	ND		2.53	1.90		mg/Kg	*	75	45 - 125	4	25
Pentachlorophenol	ND		5.06	3.06		mg/Kg	*	60	30 - 120	9	25
Phenanthrene	ND		2.53	1.95		mg/Kg	*	77	50 - 120	6	25
Phenol	ND		2.53	1.54		mg/Kg	*	61	40 - 120	4	25
Pyrene	ND		2.53	2.05		mg/Kg	*	81	40 - 125	7	30
Pyridine	ND		5.06	1.63		mg/Kg	*	32	25 - 130	0	30
2,4,5-Trichlorophenol	ND		2.53	1.85		mg/Kg	*	73	45 - 120	8	20
2,4,6-Trichlorophenol	ND		2.53	1.87		mg/Kg	*	74	45 - 120	4	25

Surrogate	MSD	MSD	Limits
	%Recovery	Qualifier	
2-Fluorobiphenyl	73		42 - 113
2-Fluorophenol (Surr)	62		18 - 138
Nitrobenzene-d5 (Surr)	65		39 - 104
Phenol-d6 (Surr)	62		37 - 125
Terphenyl-d14 (Surr)	78		43 - 125
2,4,6-Tribromophenol (Surr)	81		10 - 147

TestAmerica Irvine

QC Sample Results

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Soil Sampling

TestAmerica Job ID: 440-220623-1

Method: 8015B - Gasoline Range Organics - (GC)

Lab Sample ID: MB 440-501158/36

Matrix: Solid

Analysis Batch: 501158

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
GRO (C6-C10)	ND		400	150	ug/Kg			09/26/18 01:56	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	82		65 - 140					09/26/18 01:56	1

Lab Sample ID: LCS 440-501158/33

Matrix: Solid

Analysis Batch: 501158

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
GRO (C4-C12)	1600	1730		ug/Kg		108	70 - 135
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
4-Bromofluorobenzene (Surr)	89		65 - 140				

Lab Sample ID: LCSD 440-501158/35

Matrix: Solid

Analysis Batch: 501158

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
GRO (C4-C12)	1600	1760		ug/Kg		110	70 - 135	2	20
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
4-Bromofluorobenzene (Surr)	83		65 - 140						

Lab Sample ID: 440-220559-A-1 MS

Matrix: Solid

Analysis Batch: 501158

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
GRO (C4-C12)	ND		1570	1330		ug/Kg		84	60 - 140
Surrogate	MS %Recovery	MS Qualifier	Limits						
4-Bromofluorobenzene (Surr)	72		65 - 140						

Lab Sample ID: 440-220559-A-1 MSD

Matrix: Solid

Analysis Batch: 501158

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
GRO (C4-C12)	ND		1600	1130		ug/Kg		71	60 - 140	16	30
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
4-Bromofluorobenzene (Surr)	49	X	65 - 140								

TestAmerica Irvine

QC Sample Results

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Soil Sampling

TestAmerica Job ID: 440-220623-1

Method: 8015B - Gasoline Range Organics - (GC) (Continued)

Lab Sample ID: MB 440-501450/25

Matrix: Solid

Analysis Batch: 501450

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
GRO (C6-C10)	ND		400	150	ug/Kg			09/27/18 10:29	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	110		65 - 140					09/27/18 10:29	1

Lab Sample ID: LCS 440-501450/23

Matrix: Solid

Analysis Batch: 501450

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
GRO (C4-C12)	1600	1560		ug/Kg		98	70 - 135
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
4-Bromofluorobenzene (Surr)	131		65 - 140				

Lab Sample ID: LCSD 440-501450/24

Matrix: Solid

Analysis Batch: 501450

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
GRO (C4-C12)	1600	1550		ug/Kg		97	70 - 135	1	20
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
4-Bromofluorobenzene (Surr)	129		65 - 140						

Lab Sample ID: 440-220611-A-1 MS

Matrix: Solid

Analysis Batch: 501450

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
GRO (C4-C12)	ND		1610	1480		ug/Kg		92	60 - 140
Surrogate	MS %Recovery	MS Qualifier	Limits						
4-Bromofluorobenzene (Surr)	135		65 - 140						

Lab Sample ID: 440-220611-A-1 MSD

Matrix: Solid

Analysis Batch: 501450

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
GRO (C4-C12)	ND		1600	1540		ug/Kg		97	60 - 140	4	30
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
4-Bromofluorobenzene (Surr)	136		65 - 140								

TestAmerica Irvine

QC Sample Results

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Soil Sampling

TestAmerica Job ID: 440-220623-1

Method: 8015B - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 440-500922/1-A

Matrix: Solid

Analysis Batch: 501057

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 500922

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		5.0	2.5	mg/Kg		09/25/18 08:04	09/26/18 00:51	1
Oil Range Organics (C29-C40)	ND		5.0	2.5	mg/Kg		09/25/18 08:04	09/26/18 00:51	1
EFH (C10-C40)	4.43	J	5.0	2.5	mg/Kg		09/25/18 08:04	09/26/18 00:51	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>n</i> -Octacosane	80		40 - 140	09/25/18 08:04	09/26/18 00:51	1

Lab Sample ID: LCS 440-500922/2-A

Matrix: Solid

Analysis Batch: 501057

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 500922

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Diesel Range Organics [C10-C28]	66.7	55.0		mg/Kg		82	45 - 115

Surrogate	LCS %Recovery	LCS Qualifier	Limits
<i>n</i> -Octacosane	78		40 - 140

Lab Sample ID: 440-220623-1 MS

Matrix: Solid

Analysis Batch: 501057

Client Sample ID: DSPE-6-0.0-20180920

Prep Type: Total/NA

Prep Batch: 500922

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Diesel Range Organics [C10-C28]	7.0		67.6	53.3		mg/Kg	☼	69	40 - 120

Surrogate	MS %Recovery	MS Qualifier	Limits
<i>n</i> -Octacosane	66		40 - 140

Lab Sample ID: 440-220623-1 MSD

Matrix: Solid

Analysis Batch: 501057

Client Sample ID: DSPE-6-0.0-20180920

Prep Type: Total/NA

Prep Batch: 500922

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics [C10-C28]	7.0		67.8	50.4		mg/Kg	☼	64	40 - 120	6	30

Surrogate	MSD %Recovery	MSD Qualifier	Limits
<i>n</i> -Octacosane	64		40 - 140

QC Sample Results

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Soil Sampling

TestAmerica Job ID: 440-220623-1

Method: 8081A - Organochlorine Pesticides (GC)

Lab Sample ID: MB 440-501147/1-A

Matrix: Solid

Analysis Batch: 501167

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 501147

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		0.0050	0.0015	mg/Kg		09/26/18 07:04	09/26/18 18:09	1
alpha-BHC	ND		0.0050	0.0015	mg/Kg		09/26/18 07:04	09/26/18 18:09	1
cis-Chlordane	ND		0.0050	0.0020	mg/Kg		09/26/18 07:04	09/26/18 18:09	1
beta-BHC	ND		0.0050	0.0015	mg/Kg		09/26/18 07:04	09/26/18 18:09	1
4,4'-DDD	ND		0.0050	0.0015	mg/Kg		09/26/18 07:04	09/26/18 18:09	1
2,4'-DDE	ND		0.0050	0.0015	mg/Kg		09/26/18 07:04	09/26/18 18:09	1
4,4'-DDE	ND		0.0050	0.0015	mg/Kg		09/26/18 07:04	09/26/18 18:09	1
4,4'-DDT	ND		0.0050	0.0015	mg/Kg		09/26/18 07:04	09/26/18 18:09	1
delta-BHC	ND		0.010	0.0015	mg/Kg		09/26/18 07:04	09/26/18 18:09	1
Dieldrin	ND		0.0050	0.0015	mg/Kg		09/26/18 07:04	09/26/18 18:09	1
Endosulfan I	ND		0.0050	0.0015	mg/Kg		09/26/18 07:04	09/26/18 18:09	1
Endosulfan II	ND		0.0050	0.0015	mg/Kg		09/26/18 07:04	09/26/18 18:09	1
Endosulfan sulfate	ND		0.010	0.0020	mg/Kg		09/26/18 07:04	09/26/18 18:09	1
Endrin	ND		0.0050	0.0015	mg/Kg		09/26/18 07:04	09/26/18 18:09	1
Endrin aldehyde	ND		0.0050	0.0015	mg/Kg		09/26/18 07:04	09/26/18 18:09	1
Endrin ketone	ND		0.0050	0.0020	mg/Kg		09/26/18 07:04	09/26/18 18:09	1
gamma-BHC (Lindane)	ND		0.0050	0.0015	mg/Kg		09/26/18 07:04	09/26/18 18:09	1
trans-Chlordane	ND		0.0050	0.0015	mg/Kg		09/26/18 07:04	09/26/18 18:09	1
Heptachlor	ND		0.0050	0.0020	mg/Kg		09/26/18 07:04	09/26/18 18:09	1
Heptachlor epoxide	ND		0.0050	0.0020	mg/Kg		09/26/18 07:04	09/26/18 18:09	1
Methoxychlor	ND		0.0050	0.0015	mg/Kg		09/26/18 07:04	09/26/18 18:09	1
Toxaphene	ND		0.20	0.050	mg/Kg		09/26/18 07:04	09/26/18 18:09	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	92		45 - 120	09/26/18 07:04	09/26/18 18:09	1
Tetrachloro-m-xylene	82		35 - 115	09/26/18 07:04	09/26/18 18:09	1

Lab Sample ID: LCS 440-501147/2-A

Matrix: Solid

Analysis Batch: 501167

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 501147

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aldrin	0.0167	0.0139		mg/Kg		84	46 - 115
alpha-BHC	0.0167	0.0160		mg/Kg		96	38 - 115
cis-Chlordane	0.0167	0.0153		mg/Kg		92	56 - 115
beta-BHC	0.0167	0.0157		mg/Kg		94	46 - 115
4,4'-DDD	0.0167	0.0164		mg/Kg		98	59 - 118
2,4'-DDE	0.0167	0.0160		mg/Kg		96	10 - 150
4,4'-DDE	0.0167	0.0155		mg/Kg		93	55 - 115
4,4'-DDT	0.0167	0.0181		mg/Kg		109	51 - 131
delta-BHC	0.0167	0.0165		mg/Kg		99	52 - 115
Dieldrin	0.0167	0.0155		mg/Kg		93	57 - 115
Endosulfan I	0.0167	0.0156		mg/Kg		94	56 - 115
Endosulfan II	0.0167	0.0154		mg/Kg		92	49 - 117
Endosulfan sulfate	0.0167	0.0165		mg/Kg		99	54 - 115
Endrin	0.0167	0.0165		mg/Kg		99	56 - 120
Endrin aldehyde	0.0167	0.0140		mg/Kg		84	41 - 115
Endrin ketone	0.0167	0.0162		mg/Kg		97	54 - 119

TestAmerica Irvine

QC Sample Results

Client: Ramboll US Corporation
 Project/Site: NERT Dioxin Soil Sampling

TestAmerica Job ID: 440-220623-1

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: LCS 440-501147/2-A

Matrix: Solid

Analysis Batch: 501167

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 501147

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
gamma-BHC (Lindane)	0.0167	0.0161		mg/Kg		97	49 - 115
trans-Chlordane	0.0167	0.0152		mg/Kg		91	32 - 143
Heptachlor	0.0167	0.0148		mg/Kg		89	52 - 115
Heptachlor epoxide	0.0167	0.0154		mg/Kg		93	38 - 128
Methoxychlor	0.0167	0.0207		mg/Kg		124	46 - 146

Surrogate	LCS %Recovery	LCS Qualifier	Limits
DCB Decachlorobiphenyl (Surr)	98		45 - 120
Tetrachloro-m-xylene	89		35 - 115

Lab Sample ID: 440-220827-A-11-A MS

Matrix: Solid

Analysis Batch: 501443

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 501147

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Aldrin	0.0056		0.0167	0.0208		mg/Kg		91	40 - 115
alpha-BHC	ND		0.0167	0.0136		mg/Kg		82	40 - 115
cis-Chlordane	0.11	E p	0.0167	0.130	E p 4	mg/Kg		129	50 - 115
beta-BHC	ND		0.0167	0.0130		mg/Kg		78	40 - 120
4,4'-DDD	ND		0.0167	0.0139		mg/Kg		83	40 - 130
2,4'-DDE	ND	F2	0.0167	0.0176		mg/Kg		106	35 - 130
4,4'-DDE	0.0022	J	0.0167	0.0153		mg/Kg		79	35 - 130
4,4'-DDT	0.0088		0.0167	0.0225		mg/Kg		82	35 - 130
delta-BHC	ND		0.0167	0.0135		mg/Kg		81	45 - 120
Dieldrin	0.50	E	0.0167	0.527	E 4	mg/Kg		173	40 - 125
Endosulfan I	ND		0.0167	0.0136		mg/Kg		81	40 - 120
Endosulfan II	ND		0.0167	0.0128		mg/Kg		77	40 - 125
Endosulfan sulfate	ND		0.0167	0.0134		mg/Kg		80	45 - 120
Endrin	ND		0.0167	0.0156		mg/Kg		94	45 - 125
Endrin aldehyde	ND		0.0167	0.0113		mg/Kg		68	30 - 120
Endrin ketone	ND		0.0167	0.0154		mg/Kg		92	40 - 120
gamma-BHC (Lindane)	ND		0.0167	0.0137		mg/Kg		82	40 - 120
trans-Chlordane	0.42	E	0.0167	0.436	E 4	mg/Kg		108	50 - 115
Heptachlor	0.0091		0.0167	0.0250		mg/Kg		95	40 - 115
Heptachlor epoxide	0.27	E	0.0167	0.266	E 4	mg/Kg		-12	45 - 115
Methoxychlor	ND		0.0167	0.0205		mg/Kg		123	40 - 135

Surrogate	MS %Recovery	MS Qualifier	Limits
DCB Decachlorobiphenyl (Surr)	82		45 - 120
Tetrachloro-m-xylene	76		35 - 115

Lab Sample ID: 440-220827-A-11-B MSD

Matrix: Solid

Analysis Batch: 501443

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 501147

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Aldrin	0.0056		0.0167	0.0194		mg/Kg		83	40 - 115	7	30
alpha-BHC	ND		0.0167	0.0107		mg/Kg		64	40 - 115	24	30

TestAmerica Irvine

QC Sample Results

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Soil Sampling

TestAmerica Job ID: 440-220623-1

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: 440-220827-A-11-B MSD

Matrix: Solid

Analysis Batch: 501443

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 501147

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits		
cis-Chlordane	0.11	E p	0.0167	0.111	E p 4	mg/Kg		10	50 - 115	16	30
beta-BHC	ND		0.0167	0.0101		mg/Kg		61	40 - 120	25	30
4,4'-DDD	ND		0.0167	0.0130		mg/Kg		78	40 - 130	7	30
2,4'-DDE	ND	F2	0.0167	0.0126	F2	mg/Kg		75	35 - 130	34	30
4,4'-DDE	0.0022	J	0.0167	0.0121		mg/Kg		59	35 - 130	24	30
4,4'-DDT	0.0088		0.0167	0.0181		mg/Kg		56	35 - 130	22	30
delta-BHC	ND		0.0167	0.0105		mg/Kg		63	45 - 120	25	30
Dieldrin	0.50	E	0.0167	0.493	E 4	mg/Kg		-33	40 - 125	7	30
Endosulfan I	ND		0.0167	0.0104		mg/Kg		62	40 - 120	27	30
Endosulfan II	ND		0.0167	0.0102		mg/Kg		61	40 - 125	22	30
Endosulfan sulfate	ND		0.0167	0.0102		mg/Kg		61	45 - 120	27	30
Endrin	ND		0.0167	0.0122		mg/Kg		73	45 - 125	25	30
Endrin aldehyde	ND		0.0167	0.00892		mg/Kg		54	30 - 120	23	30
Endrin ketone	ND		0.0167	0.0121		mg/Kg		72	40 - 120	24	30
gamma-BHC (Lindane)	ND		0.0167	0.0107		mg/Kg		65	40 - 120	24	30
trans-Chlordane	0.42	E	0.0167	0.410	E 4	mg/Kg		-51	50 - 115	6	30
Heptachlor	0.0091		0.0167	0.0232		mg/Kg		84	40 - 115	7	30
Heptachlor epoxide	0.27	E	0.0167	0.251	E 4	mg/Kg		-101	45 - 115	6	30
Methoxychlor	ND		0.0167	0.0156		mg/Kg		93	40 - 135	27	30
MSD MSD											
Surrogate	%Recovery	Qualifier	Limits								
DCB Decachlorobiphenyl (Surr)	61		45 - 120								
Tetrachloro-m-xylene	60		35 - 115								

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 440-500561/1-D

Matrix: Solid

Analysis Batch: 501820

Client Sample ID: Method Blank

Prep Type: TCLP

Prep Batch: 501652

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Arsenic	ND		0.20	0.070	mg/L		09/27/18 22:08	09/28/18 11:59	1
Barium	ND		0.20	0.060	mg/L		09/27/18 22:08	09/28/18 11:59	1
Cadmium	ND		0.10	0.020	mg/L		09/27/18 22:08	09/28/18 11:59	1
Chromium	0.0250	J	0.10	0.020	mg/L		09/27/18 22:08	09/28/18 11:59	1
Lead	ND		0.10	0.040	mg/L		09/27/18 22:08	09/28/18 11:59	1
Selenium	ND		0.10	0.080	mg/L		09/27/18 22:08	09/28/18 11:59	1
Silver	ND		0.20	0.060	mg/L		09/27/18 22:08	09/28/18 11:59	1

Lab Sample ID: LCS 440-500561/2-D

Matrix: Solid

Analysis Batch: 501820

Client Sample ID: Lab Control Sample

Prep Type: TCLP

Prep Batch: 501652

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.
							Limits
Arsenic	2.00	2.07		mg/L		104	80 - 120
Barium	2.00	2.06		mg/L		103	80 - 120
Cadmium	2.00	2.05		mg/L		103	80 - 120
Chromium	2.00	2.08		mg/L		104	80 - 120

TestAmerica Irvine

QC Sample Results

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Soil Sampling

TestAmerica Job ID: 440-220623-1

Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: LCS 440-500561/2-D
Matrix: Solid
Analysis Batch: 501820

Client Sample ID: Lab Control Sample
Prep Type: TCLP
Prep Batch: 501652

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	2.00	2.06		mg/L		103	80 - 120
Selenium	2.00	1.86		mg/L		93	80 - 120
Silver	1.00	1.03		mg/L		103	80 - 120

Lab Sample ID: 440-220623-2 MS
Matrix: Solid
Analysis Batch: 501820

Client Sample ID: DSPE-6-1.0-20180920
Prep Type: TCLP
Prep Batch: 501652

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	ND		2.00	2.05		mg/L		102	75 - 125
Barium	0.96		2.00	3.19		mg/L		111	75 - 125
Cadmium	ND		2.00	1.97		mg/L		98	75 - 125
Chromium	ND		2.00	2.04		mg/L		102	75 - 125
Lead	ND		2.00	2.01		mg/L		101	75 - 125
Selenium	ND		2.00	1.88		mg/L		94	75 - 125
Silver	ND		1.00	1.03		mg/L		103	75 - 125

Lab Sample ID: 440-220623-2 MSD
Matrix: Solid
Analysis Batch: 501820

Client Sample ID: DSPE-6-1.0-20180920
Prep Type: TCLP
Prep Batch: 501652

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	ND		2.00	2.05		mg/L		102	75 - 125	0	20
Barium	0.96		2.00	3.19		mg/L		111	75 - 125	0	20
Cadmium	ND		2.00	1.96		mg/L		98	75 - 125	1	20
Chromium	ND		2.00	2.01		mg/L		101	75 - 125	1	20
Lead	ND		2.00	1.99		mg/L		99	75 - 125	1	20
Selenium	ND		2.00	1.83		mg/L		91	75 - 125	3	20
Silver	ND		1.00	1.03		mg/L		103	75 - 125	1	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 440-500561/1-B
Matrix: Solid
Analysis Batch: 500923

Client Sample ID: Method Blank
Prep Type: TCLP
Prep Batch: 500771

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.0020	0.0010	mg/L		09/24/18 13:27	09/25/18 03:44	1

Lab Sample ID: LCS 440-500561/2-B
Matrix: Solid
Analysis Batch: 500923

Client Sample ID: Lab Control Sample
Prep Type: TCLP
Prep Batch: 500771

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.0800	0.0822		mg/L		103	80 - 120

TestAmerica Irvine

QC Sample Results

Client: Ramboll US Corporation
 Project/Site: NERT Dioxin Soil Sampling

TestAmerica Job ID: 440-220623-1

Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: 440-220632-A-1-C MS
 Matrix: Solid
 Analysis Batch: 500923

Client Sample ID: Matrix Spike
 Prep Type: TCLP
 Prep Batch: 500771

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.013		0.0800	0.0940		mg/L		102	70 - 130

Lab Sample ID: 440-220632-A-1-D MSD
 Matrix: Solid
 Analysis Batch: 500923

Client Sample ID: Matrix Spike Duplicate
 Prep Type: TCLP
 Prep Batch: 500771

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.013		0.0800	0.0924		mg/L		100	70 - 130	2	20

Method: Moisture - Percent Moisture

Lab Sample ID: 440-220569-A-7 DU
 Matrix: Solid
 Analysis Batch: 500483

Client Sample ID: Duplicate
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Percent Moisture	18.3		17.4		%		5	20

QC Association Summary

Client: Ramboll US Corporation
 Project/Site: NERT Dioxin Soil Sampling

TestAmerica Job ID: 440-220623-1

GC/MS VOA

Analysis Batch: 501141

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-220623-1	DSPE-6-0.0-20180920	Total/NA	Solid	8260B/5030B	
440-220623-2	DSPE-6-1.0-20180920	Total/NA	Solid	8260B/5030B	
440-220623-3	DSPE-7-0.0-20180920	Total/NA	Solid	8260B/5030B	
440-220623-4	DSPE-7-1.0-20180920	Total/NA	Solid	8260B/5030B	
MB 440-501141/4	Method Blank	Total/NA	Solid	8260B/5030B	
LCS 440-501141/5	Lab Control Sample	Total/NA	Solid	8260B/5030B	
440-220073-A-10 MS	Matrix Spike	Total/NA	Solid	8260B/5030B	
440-220073-A-10 MSD	Matrix Spike Duplicate	Total/NA	Solid	8260B/5030B	

GC/MS Semi VOA

Prep Batch: 500904

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-220623-1	DSPE-6-0.0-20180920	Total/NA	Solid	3546	
440-220623-1 - RA	DSPE-6-0.0-20180920	Total/NA	Solid	3546	
440-220623-2 - RA	DSPE-6-1.0-20180920	Total/NA	Solid	3546	
440-220623-2	DSPE-6-1.0-20180920	Total/NA	Solid	3546	
440-220623-3 - RA	DSPE-7-0.0-20180920	Total/NA	Solid	3546	
440-220623-3	DSPE-7-0.0-20180920	Total/NA	Solid	3546	
440-220623-4 - RA	DSPE-7-1.0-20180920	Total/NA	Solid	3546	
440-220623-4	DSPE-7-1.0-20180920	Total/NA	Solid	3546	
MB 440-500904/1-A	Method Blank	Total/NA	Solid	3546	
LCS 440-500904/2-A	Lab Control Sample	Total/NA	Solid	3546	
440-220519-B-1-A MS	Matrix Spike	Total/NA	Solid	3546	
440-220519-B-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	3546	

Analysis Batch: 500988

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-220623-1	DSPE-6-0.0-20180920	Total/NA	Solid	8270C	500904
440-220623-2	DSPE-6-1.0-20180920	Total/NA	Solid	8270C	500904
440-220623-3	DSPE-7-0.0-20180920	Total/NA	Solid	8270C	500904
440-220623-4	DSPE-7-1.0-20180920	Total/NA	Solid	8270C	500904
MB 440-500904/1-A	Method Blank	Total/NA	Solid	8270C	500904
LCS 440-500904/2-A	Lab Control Sample	Total/NA	Solid	8270C	500904
440-220519-B-1-A MS	Matrix Spike	Total/NA	Solid	8270C	500904
440-220519-B-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	8270C	500904

Analysis Batch: 501240

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-220623-1 - RA	DSPE-6-0.0-20180920	Total/NA	Solid	8270C	500904
440-220623-2 - RA	DSPE-6-1.0-20180920	Total/NA	Solid	8270C	500904
440-220623-3 - RA	DSPE-7-0.0-20180920	Total/NA	Solid	8270C	500904
440-220623-4 - RA	DSPE-7-1.0-20180920	Total/NA	Solid	8270C	500904
MB 440-500904/1-A	Method Blank	Total/NA	Solid	8270C	500904

GC VOA

Analysis Batch: 501158

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-220623-3	DSPE-7-0.0-20180920	Total/NA	Solid	8015B	

TestAmerica Irvine

QC Association Summary

Client: Ramboll US Corporation
 Project/Site: NERT Dioxin Soil Sampling

TestAmerica Job ID: 440-220623-1

GC VOA (Continued)

Analysis Batch: 501158 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-220623-4	DSPE-7-1.0-20180920	Total/NA	Solid	8015B	
MB 440-501158/36	Method Blank	Total/NA	Solid	8015B	
LCS 440-501158/33	Lab Control Sample	Total/NA	Solid	8015B	
LCS 440-501158/35	Lab Control Sample Dup	Total/NA	Solid	8015B	
440-220559-A-1 MS	Matrix Spike	Total/NA	Solid	8015B	
440-220559-A-1 MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B	

Analysis Batch: 501450

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-220623-1	DSPE-6-0.0-20180920	Total/NA	Solid	8015B	
440-220623-2	DSPE-6-1.0-20180920	Total/NA	Solid	8015B	
MB 440-501450/25	Method Blank	Total/NA	Solid	8015B	
LCS 440-501450/23	Lab Control Sample	Total/NA	Solid	8015B	
LCS 440-501450/24	Lab Control Sample Dup	Total/NA	Solid	8015B	
440-220611-A-1 MS	Matrix Spike	Total/NA	Solid	8015B	
440-220611-A-1 MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B	

GC Semi VOA

Prep Batch: 500922

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-220623-1	DSPE-6-0.0-20180920	Total/NA	Solid	3546	
440-220623-2	DSPE-6-1.0-20180920	Total/NA	Solid	3546	
440-220623-3	DSPE-7-0.0-20180920	Total/NA	Solid	3546	
440-220623-4	DSPE-7-1.0-20180920	Total/NA	Solid	3546	
MB 440-500922/1-A	Method Blank	Total/NA	Solid	3546	
LCS 440-500922/2-A	Lab Control Sample	Total/NA	Solid	3546	
440-220623-1 MS	DSPE-6-0.0-20180920	Total/NA	Solid	3546	
440-220623-1 MSD	DSPE-6-0.0-20180920	Total/NA	Solid	3546	

Analysis Batch: 501057

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-220623-1	DSPE-6-0.0-20180920	Total/NA	Solid	8015B	500922
440-220623-2	DSPE-6-1.0-20180920	Total/NA	Solid	8015B	500922
440-220623-3	DSPE-7-0.0-20180920	Total/NA	Solid	8015B	500922
440-220623-4	DSPE-7-1.0-20180920	Total/NA	Solid	8015B	500922
MB 440-500922/1-A	Method Blank	Total/NA	Solid	8015B	500922
LCS 440-500922/2-A	Lab Control Sample	Total/NA	Solid	8015B	500922
440-220623-1 MS	DSPE-6-0.0-20180920	Total/NA	Solid	8015B	500922
440-220623-1 MSD	DSPE-6-0.0-20180920	Total/NA	Solid	8015B	500922

Prep Batch: 501147

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-220623-1	DSPE-6-0.0-20180920	Total/NA	Solid	3546	
440-220623-1 - DL	DSPE-6-0.0-20180920	Total/NA	Solid	3546	
440-220623-2	DSPE-6-1.0-20180920	Total/NA	Solid	3546	
440-220623-3	DSPE-7-0.0-20180920	Total/NA	Solid	3546	
440-220623-4	DSPE-7-1.0-20180920	Total/NA	Solid	3546	
MB 440-501147/1-A	Method Blank	Total/NA	Solid	3546	
LCS 440-501147/2-A	Lab Control Sample	Total/NA	Solid	3546	

TestAmerica Irvine

QC Association Summary

Client: Ramboll US Corporation
 Project/Site: NERT Dioxin Soil Sampling

TestAmerica Job ID: 440-220623-1

GC Semi VOA (Continued)

Prep Batch: 501147 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-220827-A-11-A MS	Matrix Spike	Total/NA	Solid	3546	
440-220827-A-11-B MSD	Matrix Spike Duplicate	Total/NA	Solid	3546	

Analysis Batch: 501167

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-220623-1	DSPE-6-0.0-20180920	Total/NA	Solid	8081A	501147
440-220623-2	DSPE-6-1.0-20180920	Total/NA	Solid	8081A	501147
440-220623-3	DSPE-7-0.0-20180920	Total/NA	Solid	8081A	501147
440-220623-4	DSPE-7-1.0-20180920	Total/NA	Solid	8081A	501147
MB 440-501147/1-A	Method Blank	Total/NA	Solid	8081A	501147
LCS 440-501147/2-A	Lab Control Sample	Total/NA	Solid	8081A	501147

Analysis Batch: 501443

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-220623-1 - DL	DSPE-6-0.0-20180920	Total/NA	Solid	8081A	501147
440-220827-A-11-A MS	Matrix Spike	Total/NA	Solid	8081A	501147
440-220827-A-11-B MSD	Matrix Spike Duplicate	Total/NA	Solid	8081A	501147

Metals

Leach Batch: 500561

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-220623-1	DSPE-6-0.0-20180920	TCLP	Solid	1311	
440-220623-2	DSPE-6-1.0-20180920	TCLP	Solid	1311	
440-220623-3	DSPE-7-0.0-20180920	TCLP	Solid	1311	
440-220623-4	DSPE-7-1.0-20180920	TCLP	Solid	1311	
MB 440-500561/1-B	Method Blank	TCLP	Solid	1311	
MB 440-500561/1-D	Method Blank	TCLP	Solid	1311	
LCS 440-500561/2-B	Lab Control Sample	TCLP	Solid	1311	
LCS 440-500561/2-D	Lab Control Sample	TCLP	Solid	1311	
440-220623-2 MS	DSPE-6-1.0-20180920	TCLP	Solid	1311	
440-220623-2 MSD	DSPE-6-1.0-20180920	TCLP	Solid	1311	
440-220632-A-1-C MS	Matrix Spike	TCLP	Solid	1311	
440-220632-A-1-D MSD	Matrix Spike Duplicate	TCLP	Solid	1311	

Prep Batch: 500771

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-220623-1	DSPE-6-0.0-20180920	TCLP	Solid	7470A	500561
440-220623-2	DSPE-6-1.0-20180920	TCLP	Solid	7470A	500561
440-220623-3	DSPE-7-0.0-20180920	TCLP	Solid	7470A	500561
440-220623-4	DSPE-7-1.0-20180920	TCLP	Solid	7470A	500561
MB 440-500561/1-B	Method Blank	TCLP	Solid	7470A	500561
LCS 440-500561/2-B	Lab Control Sample	TCLP	Solid	7470A	500561
440-220632-A-1-C MS	Matrix Spike	TCLP	Solid	7470A	500561
440-220632-A-1-D MSD	Matrix Spike Duplicate	TCLP	Solid	7470A	500561

Analysis Batch: 500923

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-220623-1	DSPE-6-0.0-20180920	TCLP	Solid	7470A	500771
440-220623-2	DSPE-6-1.0-20180920	TCLP	Solid	7470A	500771

TestAmerica Irvine

QC Association Summary

Client: Ramboll US Corporation
 Project/Site: NERT Dioxin Soil Sampling

TestAmerica Job ID: 440-220623-1

Metals (Continued)

Analysis Batch: 500923 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-220623-3	DSPE-7-0.0-20180920	TCLP	Solid	7470A	500771
440-220623-4	DSPE-7-1.0-20180920	TCLP	Solid	7470A	500771
MB 440-500561/1-B	Method Blank	TCLP	Solid	7470A	500771
LCS 440-500561/2-B	Lab Control Sample	TCLP	Solid	7470A	500771
440-220632-A-1-C MS	Matrix Spike	TCLP	Solid	7470A	500771
440-220632-A-1-D MSD	Matrix Spike Duplicate	TCLP	Solid	7470A	500771

Prep Batch: 501652

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-220623-1	DSPE-6-0.0-20180920	TCLP	Solid	3010A	500561
440-220623-2	DSPE-6-1.0-20180920	TCLP	Solid	3010A	500561
440-220623-3	DSPE-7-0.0-20180920	TCLP	Solid	3010A	500561
440-220623-4	DSPE-7-1.0-20180920	TCLP	Solid	3010A	500561
MB 440-500561/1-D	Method Blank	TCLP	Solid	3010A	500561
LCS 440-500561/2-D	Lab Control Sample	TCLP	Solid	3010A	500561
440-220623-2 MS	DSPE-6-1.0-20180920	TCLP	Solid	3010A	500561
440-220623-2 MSD	DSPE-6-1.0-20180920	TCLP	Solid	3010A	500561

Analysis Batch: 501820

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-220623-1	DSPE-6-0.0-20180920	TCLP	Solid	6010B	501652
440-220623-2	DSPE-6-1.0-20180920	TCLP	Solid	6010B	501652
440-220623-3	DSPE-7-0.0-20180920	TCLP	Solid	6010B	501652
440-220623-4	DSPE-7-1.0-20180920	TCLP	Solid	6010B	501652
MB 440-500561/1-D	Method Blank	TCLP	Solid	6010B	501652
LCS 440-500561/2-D	Lab Control Sample	TCLP	Solid	6010B	501652
440-220623-2 MS	DSPE-6-1.0-20180920	TCLP	Solid	6010B	501652
440-220623-2 MSD	DSPE-6-1.0-20180920	TCLP	Solid	6010B	501652

General Chemistry

Analysis Batch: 500483

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-220623-1	DSPE-6-0.0-20180920	Total/NA	Solid	Moisture	
440-220623-2	DSPE-6-1.0-20180920	Total/NA	Solid	Moisture	
440-220623-3	DSPE-7-0.0-20180920	Total/NA	Solid	Moisture	
440-220623-4	DSPE-7-1.0-20180920	Total/NA	Solid	Moisture	
440-220569-A-7 MS	Matrix Spike	Total/NA	Solid	Moisture	
440-220569-A-7 MSD	Matrix Spike Duplicate	Total/NA	Solid	Moisture	
440-220569-A-7 DU	Duplicate	Total/NA	Solid	Moisture	

Definitions/Glossary

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Soil Sampling

TestAmerica Job ID: 440-220623-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC/MS Semi VOA

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
E	Result exceeded calibration range.
*	LCS or LCSD is outside acceptance limits.

GC VOA

Qualifier	Qualifier Description
X	Surrogate is outside control limits

GC Semi VOA

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
X	Surrogate is outside control limits
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
E	Result exceeded calibration range.
p	The %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported.
F2	MS/MSD RPD exceeds control limits

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)

Definitions/Glossary

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Soil Sampling

TestAmerica Job ID: 440-220623-1

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

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Accreditation/Certification Summary

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Soil Sampling

TestAmerica Job ID: 440-220623-1

Laboratory: TestAmerica Irvine

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska	State Program	10	CA01531	06-30-19
Arizona	State Program	9	AZ0671	10-14-18 *
California	LA Cty Sanitation Districts	9	10256	06-30-19
California	State Program	9	CA ELAP 2706	06-30-19
Guam	State Program	9	Cert. No. 17-003R	01-23-19
Hawaii	State Program	9	N/A	01-29-19
Kansas	NELAP	7	E-10420	07-31-19
Nevada	State Program	9	CA015312018-1	07-31-19
New Mexico	State Program	6	N/A	01-29-19
Oregon	NELAP	10	4028	01-29-19
US Fish & Wildlife	Federal		058448	07-31-19
USDA	Federal		P330-15-00184	07-09-21
Washington	State Program	10	C900	09-03-18 *

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

TestAmerica Irvine

Login Sample Receipt Checklist

Client: Ramboll US Corporation

Job Number: 440-220623-1

Login Number: 220623

List Number: 1

Creator: Bonta, Lucia F

List Source: TestAmerica Irvine

Question	Answer	Comment
Radioactivity wasn't checked or is <=/ background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	Not Present
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Irvine

17461 Derian Ave

Suite 100

Irvine, CA 92614-5817

Tel: (949)261-1022

TestAmerica Job ID: 440-220519-2

Client Project/Site: NERT Dioxin Sampling

For:

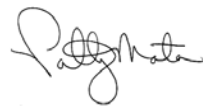
Ramboll US Corporation

2200 Powell Street

Suite 700

Emeryville, California 94608

Attn: Mr. Dan Clark



Authorized for release by:

10/15/2018 9:03:50 AM

Patty Mata, Senior Project Manager

(949)261-1022

patty.mata@testamericainc.com

LINKS

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The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Sample Summary

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 440-220519-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
440-220519-1	DSPE-4-0.0-20180919	Solid	09/19/18 14:15	09/20/18 09:45

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Case Narrative

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 440-220519-2

Job ID: 440-220519-2

Laboratory: TestAmerica Irvine

Narrative

**Job Narrative
440-220519-2**

Comments

Only the additional TCLP SVOC results, requested per client's 10/3/18 email, are included in this report.

Receipt

The samples were received on 9/20/2018 9:45 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 4.9° C.

GC/MS Semi VOA

Method(s) 8270C: The matrix spike (MS) recovery for Nitrobenzene in the following sample associated with leach batch 440-502802, preparation batch 440-504020 and analytical batch 440-504949 was outside control limits: (440-220519-B-1-F MS). The associated laboratory control sample (LCS) recovery met acceptance criteria.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.



Client Sample Results

Client: Ramboll US Corporation
 Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 440-220519-2

Client Sample ID: DSPE-4-0.0-20180919

Lab Sample ID: 440-220519-1

Date Collected: 09/19/18 14:15

Matrix: Solid

Date Received: 09/20/18 09:45

Method: 8270C - Semivolatile Organic Compounds (GC/MS) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylphenol	ND		0.050	0.015	mg/L		10/10/18 08:53	10/13/18 19:25	1
1,4-Dichlorobenzene	ND		0.050	0.013	mg/L		10/10/18 08:53	10/13/18 19:25	1
2,4-Dinitrotoluene	ND		0.050	0.018	mg/L		10/10/18 08:53	10/13/18 19:25	1
Hexachlorobenzene	ND		0.050	0.015	mg/L		10/10/18 08:53	10/13/18 19:25	1
Hexachlorobutadiene	ND		0.050	0.020	mg/L		10/10/18 08:53	10/13/18 19:25	1
Hexachloroethane	ND		0.050	0.018	mg/L		10/10/18 08:53	10/13/18 19:25	1
Nitrobenzene	ND	F1	0.20	0.015	mg/L		10/10/18 08:53	10/13/18 19:25	1
Pentachlorophenol	ND		0.20	0.018	mg/L		10/10/18 08:53	10/13/18 19:25	1
Pyridine	ND		0.050	0.013	mg/L		10/10/18 08:53	10/13/18 19:25	1
2,4,5-Trichlorophenol	ND		0.10	0.015	mg/L		10/10/18 08:53	10/13/18 19:25	1
2,4,6-Trichlorophenol	ND		0.10	0.023	mg/L		10/10/18 08:53	10/13/18 19:25	1
3-Methylphenol + 4-Methylphenol	ND		0.050	0.015	mg/L		10/10/18 08:53	10/13/18 19:25	1
Total Cresols	ND		0.025	0.013	mg/L		10/10/18 08:53	10/13/18 19:25	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	77		50 - 120	10/10/18 08:53	10/13/18 19:25	1
2-Fluorophenol (Surr)	63		30 - 120	10/10/18 08:53	10/13/18 19:25	1
Nitrobenzene-d5 (Surr)	69		45 - 120	10/10/18 08:53	10/13/18 19:25	1
Terphenyl-d14 (Surr)	80		10 - 150	10/10/18 08:53	10/13/18 19:25	1
2,4,6-Tribromophenol (Surr)	88		40 - 120	10/10/18 08:53	10/13/18 19:25	1
Phenol-d6 (Surr)	64		35 - 120	10/10/18 08:53	10/13/18 19:25	1

Method Summary

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 440-220519-2

Method	Method Description	Protocol	Laboratory
8270C	Semivolatile Organic Compounds (GC/MS)	SW846	TAL IRV
1311	TCLP Extraction	SW846	TAL IRV
3520C	Liquid-Liquid Extraction (Continuous)	SW846	TAL IRV

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL IRV = TestAmerica Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022



Lab Chronicle

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 440-220519-2

Client Sample ID: DSPE-4-0.0-20180919

Lab Sample ID: 440-220519-1

Date Collected: 09/19/18 14:15

Matrix: Solid

Date Received: 09/20/18 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			99.98 g	2000 mL	502802	10/03/18 18:56	CDH	TAL IRV
TCLP	Prep	3520C			200 mL	2.0 mL	504020	10/10/18 08:53	JAA	TAL IRV
TCLP	Analysis	8270C		1			504949	10/13/18 19:25	L1B	TAL IRV

Laboratory References:

TAL IRV = TestAmerica Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

QC Sample Results

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 440-220519-2

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 440-502802/1-B

Matrix: Solid

Analysis Batch: 504949

Client Sample ID: Method Blank

Prep Type: TCLP

Prep Batch: 504020

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylphenol	ND		0.050	0.015	mg/L		10/10/18 08:53	10/13/18 18:34	1
1,4-Dichlorobenzene	ND		0.050	0.013	mg/L		10/10/18 08:53	10/13/18 18:34	1
2,4-Dinitrotoluene	ND		0.050	0.018	mg/L		10/10/18 08:53	10/13/18 18:34	1
Hexachlorobenzene	ND		0.050	0.015	mg/L		10/10/18 08:53	10/13/18 18:34	1
Hexachlorobutadiene	ND		0.050	0.020	mg/L		10/10/18 08:53	10/13/18 18:34	1
Hexachloroethane	ND		0.050	0.018	mg/L		10/10/18 08:53	10/13/18 18:34	1
Nitrobenzene	ND		0.20	0.015	mg/L		10/10/18 08:53	10/13/18 18:34	1
Pentachlorophenol	ND		0.20	0.018	mg/L		10/10/18 08:53	10/13/18 18:34	1
Pyridine	ND		0.050	0.013	mg/L		10/10/18 08:53	10/13/18 18:34	1
2,4,5-Trichlorophenol	ND		0.10	0.015	mg/L		10/10/18 08:53	10/13/18 18:34	1
2,4,6-Trichlorophenol	ND		0.10	0.023	mg/L		10/10/18 08:53	10/13/18 18:34	1
3-Methylphenol + 4-Methylphenol	ND		0.050	0.015	mg/L		10/10/18 08:53	10/13/18 18:34	1
Total Cresols	ND		0.025	0.013	mg/L		10/10/18 08:53	10/13/18 18:34	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	77		50 - 120	10/10/18 08:53	10/13/18 18:34	1
2-Fluorophenol (Surr)	69		30 - 120	10/10/18 08:53	10/13/18 18:34	1
Nitrobenzene-d5 (Surr)	71		45 - 120	10/10/18 08:53	10/13/18 18:34	1
Terphenyl-d14 (Surr)	77		10 - 150	10/10/18 08:53	10/13/18 18:34	1
2,4,6-Tribromophenol (Surr)	89		40 - 120	10/10/18 08:53	10/13/18 18:34	1
Phenol-d6 (Surr)	71		35 - 120	10/10/18 08:53	10/13/18 18:34	1

Lab Sample ID: LCS 440-502802/2-B

Matrix: Solid

Analysis Batch: 504949

Client Sample ID: Lab Control Sample

Prep Type: TCLP

Prep Batch: 504020

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2-Methylphenol	0.500	0.310		mg/L		62	47 - 106
1,4-Dichlorobenzene	0.500	0.303		mg/L		61	10 - 96
2,4-Dinitrotoluene	0.500	0.392		mg/L		78	44 - 128
Hexachlorobenzene	0.500	0.383		mg/L		77	48 - 120
Hexachlorobutadiene	0.500	0.348		mg/L		70	21 - 95
Hexachloroethane	0.500	0.301		mg/L		60	10 - 97
Nitrobenzene	0.500	0.316		mg/L		63	42 - 112
Pentachlorophenol	1.00	0.736		mg/L		74	50 - 120
Pyridine	1.00	0.494		mg/L		49	27 - 110
2,4,5-Trichlorophenol	0.500	0.393		mg/L		79	44 - 116
2,4,6-Trichlorophenol	0.500	0.370		mg/L		74	48 - 107
3-Methylphenol + 4-Methylphenol	0.500	0.335		mg/L		67	47 - 109

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Fluorobiphenyl	79		50 - 120
2-Fluorophenol (Surr)	60		30 - 120
Nitrobenzene-d5 (Surr)	70		45 - 120
Terphenyl-d14 (Surr)	77		10 - 150
2,4,6-Tribromophenol (Surr)	90		40 - 120
Phenol-d6 (Surr)	65		35 - 120

TestAmerica Irvine

QC Sample Results

Client: Ramboll US Corporation
 Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 440-220519-2

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 440-220519-1 MS

Matrix: Solid

Analysis Batch: 504949

Client Sample ID: DSPE-4-0.0-20180919

Prep Type: TCLP

Prep Batch: 504020

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec. Limits
	Result	Qualifier	Added	Result	Qualifier				
2-Methylphenol	ND		0.500	0.265		mg/L		53	50 - 120
1,4-Dichlorobenzene	ND		0.500	0.240		mg/L		48	35 - 120
2,4-Dinitrotoluene	ND		0.500	0.359		mg/L		72	65 - 120
Hexachlorobenzene	ND		0.500	0.357		mg/L		71	60 - 120
Hexachlorobutadiene	ND		0.500	0.286		mg/L		57	40 - 120
Hexachloroethane	ND		0.500	0.235		mg/L		47	35 - 120
Nitrobenzene	ND	F1	0.500	0.262	F1	mg/L		52	55 - 120
Pentachlorophenol	ND		1.00	0.705		mg/L		71	24 - 121
Pyridine	ND		1.00	0.333		mg/L		33	30 - 120
2,4,5-Trichlorophenol	ND		0.500	0.363		mg/L		73	55 - 120
2,4,6-Trichlorophenol	ND		0.500	0.347		mg/L		69	55 - 120
3-Methylphenol + 4-Methylphenol	ND		0.500	0.278		mg/L		56	45 - 120

Surrogate	MS MS		Limits
	%Recovery	Qualifier	
2-Fluorobiphenyl	70		50 - 120
2-Fluorophenol (Surr)	51		30 - 120
Nitrobenzene-d5 (Surr)	58		45 - 120
Terphenyl-d14 (Surr)	75		10 - 150
2,4,6-Tribromophenol (Surr)	89		40 - 120
Phenol-d6 (Surr)	54		35 - 120

QC Association Summary

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 440-220519-2

GC/MS Semi VOA

Leach Batch: 502802

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-220519-1	DSPE-4-0.0-20180919	TCLP	Solid	1311	
MB 440-502802/1-B	Method Blank	TCLP	Solid	1311	
LCS 440-502802/2-B	Lab Control Sample	TCLP	Solid	1311	
440-220519-1 MS	DSPE-4-0.0-20180919	TCLP	Solid	1311	

Prep Batch: 504020

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-220519-1	DSPE-4-0.0-20180919	TCLP	Solid	3520C	502802
MB 440-502802/1-B	Method Blank	TCLP	Solid	3520C	502802
LCS 440-502802/2-B	Lab Control Sample	TCLP	Solid	3520C	502802
440-220519-1 MS	DSPE-4-0.0-20180919	TCLP	Solid	3520C	502802

Analysis Batch: 504949

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-220519-1	DSPE-4-0.0-20180919	TCLP	Solid	8270C	504020
MB 440-502802/1-B	Method Blank	TCLP	Solid	8270C	504020
LCS 440-502802/2-B	Lab Control Sample	TCLP	Solid	8270C	504020
440-220519-1 MS	DSPE-4-0.0-20180919	TCLP	Solid	8270C	504020

Definitions/Glossary

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 440-220519-2

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
□	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Accreditation/Certification Summary

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 440-220519-2

Laboratory: TestAmerica Irvine

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska	State Program	10	CA01531	06-30-19
Arizona	State Program	9	AZ0671	10-14-18 *
California	LA Cty Sanitation Districts	9	10256	06-30-19
California	State Program	9	CA ELAP 2706	06-30-19
Guam	State Program	9	Cert. No. 17-003R	01-23-19
Hawaii	State Program	9	N/A	01-29-19
Kansas	NELAP	7	E-10420	07-31-19
Nevada	State Program	9	CA015312018-1	07-31-19
New Mexico	State Program	6	N/A	01-29-19
Oregon	NELAP	10	4028	01-29-19
US Fish & Wildlife	Federal		058448	07-31-19
USDA	Federal		P330-15-00184	07-09-21
Washington	State Program	10	C900	09-03-18 *

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

TestAmerica Irvine

Mata, Patty

From: Dan Clark <dclark@ramboll.com>
Sent: Wednesday, October 03, 2018 4:23 PM
To: Mata, Patty
Subject: RE: TestAmerica report files from 440-220519-1 NERT Dioxin Sampling

-External Email-

Please run TCLP extraction on DSPE-4-0.0-20180919 and analyze for the SVOC hexachlorobenzene, standard TAT.

Thanks,
Dan

Dan Clark
Senior Consultant 2

D +1 (510) 4202563
M +1 (510) 2997036
dclark@ramboll.com

From: Mata, Patty <patty.mata@testamericainc.com>
Sent: Wednesday, October 03, 2018 3:41 PM
To: Dan Clark <dclark@ramboll.com>
Subject: TestAmerica report files from 440-220519-1 NERT Dioxin Sampling

Hello,

Attached please find the report files for job 440-220519-1; NERT Dioxin Sampling. Results are for the non-dioxin test suite.

Please feel free to contact me if you have any questions.

Thank you.

Please let us know if we met your expectations by rating the service you received from TestAmerica on this project by visiting our website at: [Project Feedback](#)

PATTY MATA
Project Manager

TestAmerica Irvine
THE LEADER IN ENVIRONMENTAL TESTING

Tel: 949.261.1022

Reference: [474118]
Attachments: 1

TestAmerica Irvine
 17461 Berian Ave
 Suite 100
 Irvine, CA 92614
 Phone: 949.261.1022 Fax:

Chain of Custody Record

138876

TestAmerica
 THE LEADER IN ENVIRONMENTAL TESTING
 TestAmerica Laboratories, Inc.
 TAL-8210 (0713)

Regulatory Program: DW NPDES RCRA Other:

Project Manager: Dan Clark Date: 09/19/2018
 Tel/Fax: 210-299-7036 Carrier:

Site Contact: Brendan K. Brown
 Lab Contact: Billy Mata

Analysis Turnaround Time: CALENDAR DAYS WORKING DAYS
 TAT if different from Below: _____
 2 weeks 1 week 2 days 1 day

Company Name: Ramboll
 Address: 2200 Powell St, Suite 700
 City/State/Zip: Emeryville, CA 94608
 Phone: 510-655-7400
 Fax: _____
 Project Name: Dioxin Sampling
 Site: NERI
 PO # 1690006941-012

Client Contact: _____
 COC No: 1 of 2 COCs
 Sampler: _____
 For Lab Use Only:
 Walk-in Client: _____
 Lab Sampling: _____
 Job / SDG No.: _____

Sample Identification

Sample ID	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS/MSD (Y/N)	Other
DSPE-4-0.0-20180919	9/19	1415	G	SO	2	X	X	ICP/PCRA Metals
DSPE-4-1.0-20180919	"	1430	"	"	"	X	X	VOCs
DSPE-5-0.0-20180919	"	1515	"	"	"	X	X	SVOCS
DSPE-5-1.0-20180919	"	1523	"	"	"	X	X	Dioxin Chlorides Resh
								TPH-COAS/Diesel
								Motor Oil Range

Sample Specific Notes: _____

Barcode: _____
 440-220519 Chain of Custody

Preservation Used: 1= Ice, 2= HCl, 3= H2SO4, 4= HNO3, 5= NaOH, 6= Other _____
 Possible Hazard Identification: _____
 Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.
 Non-Hazard Flammable Skin Irritant Poison B Unknown

Special Instructions/QC Requirements & Comments:
Different Work Order

Custody Seal No.: _____
 Relinquished by: B. K. [Signature] Date/Time: 9/19/18 16:30
 Relinquished by: JAV [Signature] Date/Time: 9/19/18 17:30
 Relinquished by: FedEx 40432015 Date/Time: _____
TAHUS 18.9 TAHUS JAM

Company: Ramboll Date/Time: 9/19/18 16:30
 Company: TAHUS Date/Time: 9-19-18 1620
 Company: TAHUS Date/Time: 9/20/18 0445

Therm ID No: 88
 Cooler Temp (°C): Obs'd: 4.8 Corr'd: 4.9
 Return to Client Disposal by Lab Archive for _____ Months

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)



Login Sample Receipt Checklist

Client: Ramboll US Corporation

Job Number: 440-220519-2

Login Number: 220519

List Number: 1

Creator: Bonta, Lucia F

List Source: TestAmerica Irvine

Question	Answer	Comment
Radioactivity wasn't checked or is <=/ background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	Not Present
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

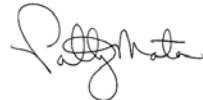
ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Sacramento
880 Riverside Parkway
West Sacramento, CA 95605
Tel: (916)373-5600

TestAmerica Job ID: 320-43353-5
Client Project/Site: NERT Dioxin Sampling

For:
Ramboll US Corporation
2200 Powell Street
Suite 700
Emeryville, California 94608

Attn: Craig Knox



Authorized for release by:
10/18/2018 3:40:28 PM

Patty Mata, Senior Project Manager
(949)261-1022
patty.mata@testamericainc.com

LINKS

Review your project
results through
TotalAccess

Have a Question?



Visit us at:
www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Definitions/Glossary

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 320-43353-5

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
H	Sample was prepped or analyzed beyond the specified holding time
X	Surrogate is outside control limits

Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Case Narrative

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 320-43353-5

Job ID: 320-43353-5

Laboratory: TestAmerica Sacramento

Narrative

Job Narrative 320-43353-5

Comments

Client requested TCLP metals and TCLP SVOC tests to be performed on sample DSPE-3-1.5-20180919 (320-43353-16) per client's 10/2/18 email. Only the additional test results are included in this report.

Receipt

The samples were received on 9/20/2018 9:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 5.4° C and 5.7° C.

GC/MS Semi VOA

Method(s) 8270C: Surrogate recovery for the following samples were outside the upper control limit: DSPE-3-1.5-20180919 (320-43353-16), (LB 320-250595/1-D), (LCS 320-251628/2-A), (LCSD 320-251628/3-A) and (MB 320-251628/1-A). The method blank (MB) and the leachate blank (LB) were non-detect for all target analytes. The target analyte recoveries for the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) were within control limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals

Method(s) 6010B: The leachate blank (LB) for preparation batch 320-250973 contained Barium greater than the method detection limit (MDL) but less than the reporting limit (RL). The associated sample was not re-analyzed because the LB detection was below the RL. The data have been qualified and reported.

Method(s) 6010B: The instrument blank (ICB) for analytical batch 320-252125 contained Lead greater than the reporting limit (RL), but was not re-analyzed because the sample result was non-detect (ND). The data have been qualified and reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep

Method(s) 3510C / 8270C-TCLP: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with leach batch 320-250595 and preparation batch 320-251628. The laboratory control sample (LCS) was performed in duplicate to provide precision data for the batch.

Method(s) 3510C / 8270C-TCLP: The following sample was prepared outside of 14-day TCLP preparation holding time due to the method being requested after the hold time had expired: DSPE-3-1.5-20180919 (320-43353-16).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 320-43353-5

Client Sample ID: DSPE-3-1.5-20180919

Lab Sample ID: 320-43353-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	1.0	J B	5.0	0.012	mg/L	1		6010B	TCLP
Lead	0.016	J	0.50	0.012	mg/L	1		6010B	TCLP

This Detection Summary does not include radiochemical test results.

TestAmerica Sacramento



Client Sample Results

Client: Ramboll US Corporation
 Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 320-43353-5

Client Sample ID: DSPE-3-1.5-20180919

Lab Sample ID: 320-43353-16

Date Collected: 09/19/18 11:40

Matrix: Solid

Date Received: 09/20/18 09:30

Method: 8270C - Semivolatile Organic Compounds (GC/MS) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND	H	50	7.0	ug/L		10/12/18 08:54	10/16/18 02:21	1
2,4-Dinitrotoluene	ND	H	50	10	ug/L		10/12/18 08:54	10/16/18 02:21	1
Hexachlorobenzene	ND	H	50	7.0	ug/L		10/12/18 08:54	10/16/18 02:21	1
Hexachlorobutadiene	ND	H	50	6.5	ug/L		10/12/18 08:54	10/16/18 02:21	1
Hexachloroethane	ND	H	50	7.0	ug/L		10/12/18 08:54	10/16/18 02:21	1
3-Methylphenol & 4-Methylphenol	ND	H	150	50	ug/L		10/12/18 08:54	10/16/18 02:21	1
2-Methylphenol	ND	H	50	4.7	ug/L		10/12/18 08:54	10/16/18 02:21	1
Total Cresols	ND	H	150	50	ug/L		10/12/18 08:54	10/16/18 02:21	1
Nitrobenzene	ND	H	50	8.0	ug/L		10/12/18 08:54	10/16/18 02:21	1
2,4,5-Trichlorophenol	ND	H	50	10	ug/L		10/12/18 08:54	10/16/18 02:21	1
2,4,6-Trichlorophenol	ND	H	50	10	ug/L		10/12/18 08:54	10/16/18 02:21	1
Pentachlorophenol	ND	H	250	10	ug/L		10/12/18 08:54	10/16/18 02:21	1
Pyridine	ND	H	100	4.0	ug/L		10/12/18 08:54	10/16/18 02:21	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	82		53 - 102	10/12/18 08:54	10/16/18 02:21	1
2-Fluorobiphenyl (Surr)	89		49 - 98	10/12/18 08:54	10/16/18 02:21	1
2-Fluorophenol (Surr)	69	X	24 - 68	10/12/18 08:54	10/16/18 02:21	1
Phenol-d5 (Surr)	49		10 - 50	10/12/18 08:54	10/16/18 02:21	1
Terphenyl-d14 (Surr)	95		76 - 121	10/12/18 08:54	10/16/18 02:21	1
2,4,6-Tribromophenol (Surr)	92		28 - 132	10/12/18 08:54	10/16/18 02:21	1

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		1.0	0.060	mg/L		10/10/18 07:00	10/13/18 17:14	1
Barium	1.0	J B	5.0	0.012	mg/L		10/10/18 07:00	10/13/18 17:14	1
Cadmium	ND		0.050	0.0025	mg/L		10/10/18 07:00	10/13/18 17:14	1
Chromium	ND		0.10	0.0060	mg/L		10/10/18 07:00	10/13/18 17:14	1
Lead	0.016	J	0.50	0.012	mg/L		10/10/18 07:00	10/13/18 17:14	1
Selenium	ND		0.20	0.065	mg/L		10/10/18 07:00	10/13/18 17:14	1
Silver	ND		0.10	0.0042	mg/L		10/10/18 07:00	10/13/18 17:14	1

Method: 7470A - Mercury (CVAA) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.0020	0.00030	mg/L		10/10/18 10:45	10/10/18 14:46	1

Surrogate Summary

Client: Ramboll US Corporation
 Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 320-43353-5

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		NBZ (53-102)	FBP (49-98)	2FP (24-68)	PHL (10-50)	TPHL (76-121)	TBP (28-132)
LCS 320-251628/2-A	Lab Control Sample	88	83	69 X	49	96	99
LCSD 320-251628/3-A	Lab Control Sample Dup	95	87	75 X	54 X	104	100
MB 320-251628/1-A	Method Blank	81	84	69 X	48	101	92

Surrogate Legend

NBZ = Nitrobenzene-d5 (Surr)
 FBP = 2-Fluorobiphenyl (Surr)
 2FP = 2-Fluorophenol (Surr)
 PHL = Phenol-d5 (Surr)
 TPHL = Terphenyl-d14 (Surr)
 TBP = 2,4,6-Tribromophenol (Surr)

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Matrix: Solid

Prep Type: TCLP

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		NBZ (53-102)	FBP (49-98)	2FP (24-68)	PHL (10-50)	TPHL (76-121)	TBP (28-132)
320-43353-16	DSPE-3-1.5-20180919	82	89	69 X	49	95	92
LB 320-250595/1-D	Method Blank	80	83	69 X	48	100	91

Surrogate Legend

NBZ = Nitrobenzene-d5 (Surr)
 FBP = 2-Fluorobiphenyl (Surr)
 2FP = 2-Fluorophenol (Surr)
 PHL = Phenol-d5 (Surr)
 TPHL = Terphenyl-d14 (Surr)
 TBP = 2,4,6-Tribromophenol (Surr)

QC Sample Results

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 320-43353-5

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 320-251628/1-A
Matrix: Solid
Analysis Batch: 252513

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 251628

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND		10	1.4	ug/L		10/12/18 08:54	10/16/18 00:02	1
2,4-Dinitrotoluene	ND		10	2.0	ug/L		10/12/18 08:54	10/16/18 00:02	1
Hexachlorobenzene	ND		10	1.4	ug/L		10/12/18 08:54	10/16/18 00:02	1
Hexachlorobutadiene	ND		10	1.3	ug/L		10/12/18 08:54	10/16/18 00:02	1
Hexachloroethane	ND		10	1.4	ug/L		10/12/18 08:54	10/16/18 00:02	1
3-Methylphenol & 4-Methylphenol	ND		30	10	ug/L		10/12/18 08:54	10/16/18 00:02	1
2-Methylphenol	ND		10	0.94	ug/L		10/12/18 08:54	10/16/18 00:02	1
Total Cresols	ND		30	10	ug/L		10/12/18 08:54	10/16/18 00:02	1
Nitrobenzene	ND		10	1.6	ug/L		10/12/18 08:54	10/16/18 00:02	1
2,4,5-Trichlorophenol	ND		10	2.0	ug/L		10/12/18 08:54	10/16/18 00:02	1
2,4,6-Trichlorophenol	ND		10	2.0	ug/L		10/12/18 08:54	10/16/18 00:02	1
Pentachlorophenol	ND		50	2.0	ug/L		10/12/18 08:54	10/16/18 00:02	1
Pyridine	ND		20	0.80	ug/L		10/12/18 08:54	10/16/18 00:02	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	81		53 - 102	10/12/18 08:54	10/16/18 00:02	1
2-Fluorobiphenyl (Surr)	84		49 - 98	10/12/18 08:54	10/16/18 00:02	1
2-Fluorophenol (Surr)	69	X	24 - 68	10/12/18 08:54	10/16/18 00:02	1
Phenol-d5 (Surr)	48		10 - 50	10/12/18 08:54	10/16/18 00:02	1
Terphenyl-d14 (Surr)	101		76 - 121	10/12/18 08:54	10/16/18 00:02	1
2,4,6-Tribromophenol (Surr)	92		28 - 132	10/12/18 08:54	10/16/18 00:02	1

Lab Sample ID: LCS 320-251628/2-A
Matrix: Solid
Analysis Batch: 252513

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 251628

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,4-Dichlorobenzene	100	73.0		ug/L		73	31 - 98
2,4-Dinitrotoluene	100	103		ug/L		103	63 - 132
Hexachlorobenzene	100	88.0		ug/L		88	60 - 118
Hexachlorobutadiene	100	67.9		ug/L		68	39 - 91
Hexachloroethane	100	72.4		ug/L		72	42 - 85
3-Methylphenol & 4-Methylphenol	100	80.1		ug/L		80	48 - 99
2-Methylphenol	100	81.4		ug/L		81	52 - 105
Nitrobenzene	100	83.5		ug/L		83	53 - 110
2,4,5-Trichlorophenol	100	93.3		ug/L		93	58 - 120
2,4,6-Trichlorophenol	100	92.4		ug/L		92	64 - 123
Pentachlorophenol	200	166		ug/L		83	53 - 136
Pyridine	200	119		ug/L		59	32 - 73

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Nitrobenzene-d5 (Surr)	88		53 - 102
2-Fluorobiphenyl (Surr)	83		49 - 98
2-Fluorophenol (Surr)	69	X	24 - 68
Phenol-d5 (Surr)	49		10 - 50
Terphenyl-d14 (Surr)	96		76 - 121
2,4,6-Tribromophenol (Surr)	99		28 - 132

TestAmerica Sacramento

QC Sample Results

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 320-43353-5

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 320-251628/3-A

Matrix: Solid

Analysis Batch: 252513

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 251628

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	RPD Limit
1,4-Dichlorobenzene	100	76.4		ug/L		76	31 - 98	5	30
2,4-Dinitrotoluene	100	105		ug/L		105	63 - 132	1	30
Hexachlorobenzene	100	92.9		ug/L		93	60 - 118	5	30
Hexachlorobutadiene	100	74.9		ug/L		75	39 - 91	10	30
Hexachloroethane	100	75.4		ug/L		75	42 - 85	4	30
3-Methylphenol & 4-Methylphenol	100	87.3		ug/L		87	48 - 99	9	30
2-Methylphenol	100	89.9		ug/L		90	52 - 105	10	30
Nitrobenzene	100	89.7		ug/L		90	53 - 110	7	30
2,4,5-Trichlorophenol	100	96.4		ug/L		96	58 - 120	3	30
2,4,6-Trichlorophenol	100	96.6		ug/L		97	64 - 123	5	30
Pentachlorophenol	200	167		ug/L		83	53 - 136	0	30
Pyridine	200	121		ug/L		60	32 - 73	1	30

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Nitrobenzene-d5 (Surr)	95		53 - 102
2-Fluorobiphenyl (Surr)	87		49 - 98
2-Fluorophenol (Surr)	75	X	24 - 68
Phenol-d5 (Surr)	54	X	10 - 50
Terphenyl-d14 (Surr)	104		76 - 121
2,4,6-Tribromophenol (Surr)	100		28 - 132

Lab Sample ID: LB 320-250595/1-D

Matrix: Solid

Analysis Batch: 252513

Client Sample ID: Method Blank

Prep Type: TCLP

Prep Batch: 251628

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND		50	7.0	ug/L		10/12/18 08:54	10/16/18 01:26	1
2,4-Dinitrotoluene	ND		50	10	ug/L		10/12/18 08:54	10/16/18 01:26	1
Hexachlorobenzene	ND		50	7.0	ug/L		10/12/18 08:54	10/16/18 01:26	1
Hexachlorobutadiene	ND		50	6.5	ug/L		10/12/18 08:54	10/16/18 01:26	1
Hexachloroethane	ND		50	7.0	ug/L		10/12/18 08:54	10/16/18 01:26	1
3-Methylphenol & 4-Methylphenol	ND		150	50	ug/L		10/12/18 08:54	10/16/18 01:26	1
2-Methylphenol	ND		50	4.7	ug/L		10/12/18 08:54	10/16/18 01:26	1
Total Cresols	ND		150	50	ug/L		10/12/18 08:54	10/16/18 01:26	1
Nitrobenzene	ND		50	8.0	ug/L		10/12/18 08:54	10/16/18 01:26	1
2,4,5-Trichlorophenol	ND		50	10	ug/L		10/12/18 08:54	10/16/18 01:26	1
2,4,6-Trichlorophenol	ND		50	10	ug/L		10/12/18 08:54	10/16/18 01:26	1
Pentachlorophenol	ND		250	10	ug/L		10/12/18 08:54	10/16/18 01:26	1
Pyridine	ND		100	4.0	ug/L		10/12/18 08:54	10/16/18 01:26	1

Surrogate	LB %Recovery	LB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	80		53 - 102	10/12/18 08:54	10/16/18 01:26	1
2-Fluorobiphenyl (Surr)	83		49 - 98	10/12/18 08:54	10/16/18 01:26	1
2-Fluorophenol (Surr)	69	X	24 - 68	10/12/18 08:54	10/16/18 01:26	1
Phenol-d5 (Surr)	48		10 - 50	10/12/18 08:54	10/16/18 01:26	1
Terphenyl-d14 (Surr)	100		76 - 121	10/12/18 08:54	10/16/18 01:26	1
2,4,6-Tribromophenol (Surr)	91		28 - 132	10/12/18 08:54	10/16/18 01:26	1

TestAmerica Sacramento

QC Sample Results

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 320-43353-5

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 320-250973/1-A
Matrix: Solid
Analysis Batch: 252125

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 250973

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.20	0.012	mg/L		10/10/18 07:00	10/13/18 15:53	1
Barium	ND		1.0	0.0024	mg/L		10/10/18 07:00	10/13/18 15:53	1
Cadmium	ND		0.010	0.00050	mg/L		10/10/18 07:00	10/13/18 15:53	1
Chromium	ND		0.020	0.0012	mg/L		10/10/18 07:00	10/13/18 15:53	1
Lead	ND		0.10	0.0024	mg/L		10/10/18 07:00	10/13/18 15:53	1
Selenium	ND		0.040	0.013	mg/L		10/10/18 07:00	10/13/18 15:53	1
Silver	ND		0.020	0.00084	mg/L		10/10/18 07:00	10/13/18 15:53	1

Lab Sample ID: LCS 320-250973/2-A
Matrix: Solid
Analysis Batch: 252125

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 250973

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Arsenic	2.00	1.95		mg/L		97	90 - 114
Barium	2.00	1.86		mg/L		93	90 - 112
Cadmium	0.0500	0.0465		mg/L		93	88 - 110
Chromium	0.200	0.181		mg/L		91	84 - 114
Lead	0.500	0.462		mg/L		92	86 - 111
Selenium	2.00	1.91		mg/L		96	89 - 110
Silver	0.0500	0.0459		mg/L		92	82 - 121

Lab Sample ID: LB 320-250595/1-B
Matrix: Solid
Analysis Batch: 252125

Client Sample ID: Method Blank
Prep Type: TCLP
Prep Batch: 250973

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		1.0	0.060	mg/L		10/10/18 07:00	10/13/18 16:01	1
Barium	0.426	J	5.0	0.012	mg/L		10/10/18 07:00	10/13/18 16:01	1
Cadmium	ND		0.050	0.0025	mg/L		10/10/18 07:00	10/13/18 16:01	1
Chromium	ND		0.10	0.0060	mg/L		10/10/18 07:00	10/13/18 16:01	1
Lead	ND		0.50	0.012	mg/L		10/10/18 07:00	10/13/18 16:01	1
Selenium	ND		0.20	0.065	mg/L		10/10/18 07:00	10/13/18 16:01	1
Silver	ND		0.10	0.0042	mg/L		10/10/18 07:00	10/13/18 16:01	1

Lab Sample ID: 440-221269-A-1-C MS
Matrix: Solid
Analysis Batch: 252125

Client Sample ID: Matrix Spike
Prep Type: TCLP
Prep Batch: 250973

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Arsenic	ND		10.0	10.5		mg/L		105	90 - 114
Barium	3.1	J B	10.0	13.2		mg/L		101	90 - 112
Cadmium	0.0032	J	0.250	0.241		mg/L		95	88 - 110
Chromium	ND		1.00	0.966		mg/L		97	84 - 114
Lead	0.028	J ^	2.50	2.36		mg/L		93	86 - 111
Selenium	ND		10.0	10.1		mg/L		101	89 - 110
Silver	ND		0.250	0.247		mg/L		99	82 - 121

TestAmerica Sacramento

QC Sample Results

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 320-43353-5

Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: 440-221269-A-1-D MSD

Matrix: Solid

Analysis Batch: 252125

Client Sample ID: Matrix Spike Duplicate

Prep Type: TCLP

Prep Batch: 250973

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD		Unit	D	%Rec	%Rec.		RPD	Limit
				Result	Qualifier				Limits	RPD		
Arsenic	ND		10.0	10.5		mg/L		105	90 - 114	1	20	
Barium	3.1	J B	10.0	13.0		mg/L		99	90 - 112	2	20	
Cadmium	0.0032	J	0.250	0.242		mg/L		96	88 - 110	1	20	
Chromium	ND		1.00	0.965		mg/L		96	84 - 114	0	20	
Lead	0.028	J ^	2.50	2.37		mg/L		94	86 - 111	0	20	
Selenium	ND		10.0	9.98		mg/L		100	89 - 110	1	20	
Silver	ND		0.250	0.244		mg/L		98	82 - 121	1	20	

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 320-251070/11-A

Matrix: Solid

Analysis Batch: 251300

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 251070

Analyte	MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Mercury	ND		0.0020	0.00030	mg/L		10/10/18 10:45	10/10/18 13:28	1

Lab Sample ID: LCS 320-251070/12-A

Matrix: Solid

Analysis Batch: 251300

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 251070

Analyte	Spike Added	LCS		Unit	D	%Rec	%Rec.	
		Result	Qualifier				Limits	RPD
Mercury	0.00500	0.00510		mg/L		102	76 - 117	

Lab Sample ID: LB 320-250595/1-C

Matrix: Solid

Analysis Batch: 251300

Client Sample ID: Method Blank

Prep Type: TCLP

Prep Batch: 251070

Analyte	LB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Mercury	ND		0.0020	0.00030	mg/L		10/10/18 10:45	10/10/18 13:31	1

Lab Sample ID: 320-43353-16 MS

Matrix: Solid

Analysis Batch: 251300

Client Sample ID: DSPE-3-1.5-20180919

Prep Type: TCLP

Prep Batch: 251070

Analyte	Sample Result	Sample Qualifier	Spike Added	MS		Unit	D	%Rec	%Rec.	
				Result	Qualifier				Limits	RPD
Mercury	ND		0.00500	0.00530		mg/L		106	76 - 117	

Lab Sample ID: 320-43353-16 MSD

Matrix: Solid

Analysis Batch: 251300

Client Sample ID: DSPE-3-1.5-20180919

Prep Type: TCLP

Prep Batch: 251070

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD		Unit	D	%Rec	%Rec.		RPD	Limit
				Result	Qualifier				Limits	RPD		
Mercury	ND		0.00500	0.00488		mg/L		98	76 - 117	8	19	

TestAmerica Sacramento

QC Association Summary

Client: Ramboll US Corporation
 Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 320-43353-5

GC/MS Semi VOA

Leach Batch: 250595

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-43353-16	DSPE-3-1.5-20180919	TCLP	Solid	1311	
LB 320-250595/1-D	Method Blank	TCLP	Solid	1311	

Prep Batch: 251628

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-43353-16	DSPE-3-1.5-20180919	TCLP	Solid	3510C	250595
LB 320-250595/1-D	Method Blank	TCLP	Solid	3510C	250595
MB 320-251628/1-A	Method Blank	Total/NA	Solid	3510C	
LCS 320-251628/2-A	Lab Control Sample	Total/NA	Solid	3510C	
LCSD 320-251628/3-A	Lab Control Sample Dup	Total/NA	Solid	3510C	

Analysis Batch: 252513

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-43353-16	DSPE-3-1.5-20180919	TCLP	Solid	8270C	251628
LB 320-250595/1-D	Method Blank	TCLP	Solid	8270C	251628
MB 320-251628/1-A	Method Blank	Total/NA	Solid	8270C	251628
LCS 320-251628/2-A	Lab Control Sample	Total/NA	Solid	8270C	251628
LCSD 320-251628/3-A	Lab Control Sample Dup	Total/NA	Solid	8270C	251628

Metals

Leach Batch: 250595

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-43353-16	DSPE-3-1.5-20180919	TCLP	Solid	1311	
LB 320-250595/1-B	Method Blank	TCLP	Solid	1311	
LB 320-250595/1-C	Method Blank	TCLP	Solid	1311	
320-43353-16 MS	DSPE-3-1.5-20180919	TCLP	Solid	1311	
320-43353-16 MSD	DSPE-3-1.5-20180919	TCLP	Solid	1311	
440-221269-A-1-C MS	Matrix Spike	TCLP	Solid	1311	
440-221269-A-1-D MSD	Matrix Spike Duplicate	TCLP	Solid	1311	

Prep Batch: 250973

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-43353-16	DSPE-3-1.5-20180919	TCLP	Solid	3010A	250595
LB 320-250595/1-B	Method Blank	TCLP	Solid	3010A	250595
MB 320-250973/1-A	Method Blank	Total/NA	Solid	3010A	
LCS 320-250973/2-A	Lab Control Sample	Total/NA	Solid	3010A	
440-221269-A-1-C MS	Matrix Spike	TCLP	Solid	3010A	250595
440-221269-A-1-D MSD	Matrix Spike Duplicate	TCLP	Solid	3010A	250595

Prep Batch: 251070

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-43353-16	DSPE-3-1.5-20180919	TCLP	Solid	7470A	250595
LB 320-250595/1-C	Method Blank	TCLP	Solid	7470A	250595
MB 320-251070/11-A	Method Blank	Total/NA	Solid	7470A	
LCS 320-251070/12-A	Lab Control Sample	Total/NA	Solid	7470A	
320-43353-16 MS	DSPE-3-1.5-20180919	TCLP	Solid	7470A	250595
320-43353-16 MSD	DSPE-3-1.5-20180919	TCLP	Solid	7470A	250595

TestAmerica Sacramento

QC Association Summary

Client: Ramboll US Corporation
 Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 320-43353-5

Metals (Continued)

Analysis Batch: 251300

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-43353-16	DSPE-3-1.5-20180919	TCLP	Solid	7470A	251070
LB 320-250595/1-C	Method Blank	TCLP	Solid	7470A	251070
MB 320-251070/11-A	Method Blank	Total/NA	Solid	7470A	251070
LCS 320-251070/12-A	Lab Control Sample	Total/NA	Solid	7470A	251070
320-43353-16 MS	DSPE-3-1.5-20180919	TCLP	Solid	7470A	251070
320-43353-16 MSD	DSPE-3-1.5-20180919	TCLP	Solid	7470A	251070

Analysis Batch: 252125

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-43353-16	DSPE-3-1.5-20180919	TCLP	Solid	6010B	250973
LB 320-250595/1-B	Method Blank	TCLP	Solid	6010B	250973
MB 320-250973/1-A	Method Blank	Total/NA	Solid	6010B	250973
LCS 320-250973/2-A	Lab Control Sample	Total/NA	Solid	6010B	250973
440-221269-A-1-C MS	Matrix Spike	TCLP	Solid	6010B	250973
440-221269-A-1-D MSD	Matrix Spike Duplicate	TCLP	Solid	6010B	250973



Lab Chronicle

Client: Ramboll US Corporation
 Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 320-43353-5

Client Sample ID: DSPE-3-1.5-20180919

Lab Sample ID: 320-43353-16

Date Collected: 09/19/18 11:40

Matrix: Solid

Date Received: 09/20/18 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			100.00 g	2000 mL	250595	10/08/18 17:00	DPM	TAL SAC
TCLP	Prep	3510C			200.45 mL	1.0 mL	251628	10/12/18 08:54	NGK	TAL SAC
TCLP	Analysis	8270C		1			252513	10/16/18 02:21	M1A	TAL SAC
TCLP	Leach	1311			100.00 g	2000 mL	250595	10/08/18 17:00	DPM	TAL SAC
TCLP	Prep	3010A			10 mL	50 mL	250973	10/10/18 07:00	NIM	TAL SAC
TCLP	Analysis	6010B		1			252125	10/13/18 17:14	LW1	TAL SAC
TCLP	Leach	1311			100.00 g	2000 mL	250595	10/08/18 17:00	DPM	TAL SAC
TCLP	Prep	7470A			6 mL	30 mL	251070	10/10/18 10:45	GSH	TAL SAC
TCLP	Analysis	7470A		1			251300	10/10/18 14:46	GSH	TAL SAC

Laboratory References:

TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600



Accreditation/Certification Summary

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 320-43353-5

Laboratory: TestAmerica Sacramento

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska (UST)	State Program	10	17-020	01-20-21
ANAB	DoD ELAP		L2468	01-20-21
Arizona	State Program	9	AZ0708	08-11-19
Arkansas DEQ	State Program	6	88-0691	06-17-19
California	State Program	9	2897	01-31-19
Colorado	State Program	8	CA00044	08-31-19
Connecticut	State Program	1	PH-0691	06-30-19
Florida	NELAP	4	E87570	06-30-19
Georgia	State Program	4	N/A	01-28-19
Hawaii	State Program	9	N/A	01-29-19
Illinois	NELAP	5	200060	03-17-19
Kansas	NELAP	7	E-10375	10-31-18 *
Louisiana	NELAP	6	30612	06-30-19
Maine	State Program	1	CA0004	04-14-20
Michigan	State Program	5	9947	01-31-20
Nevada	State Program	9	CA00044	07-31-19
New Hampshire	NELAP	1	2997	04-18-19
New Jersey	NELAP	2	CA005	06-30-19
New York	NELAP	2	11666	03-31-19
Oregon	NELAP	10	4040	01-29-19
Pennsylvania	NELAP	3	68-01272	03-31-19
Texas	NELAP	6	T104704399	05-31-19
US Fish & Wildlife	Federal		LE148388-0	07-31-19
USDA	Federal		P330-18-00239	01-17-21
USEPA UCMR	Federal	1	CA00044	12-31-20
Utah	NELAP	8	CA00044	02-28-19
Vermont	State Program	1	VT-4040	04-30-19
Virginia	NELAP	3	460278	03-14-19
Washington	State Program	10	C581	05-05-19
West Virginia (DW)	State Program	3	9930C	12-31-18
Wyoming	State Program	8	8TMS-L	01-28-19

Laboratory: TestAmerica Irvine

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska	State Program	10	CA01531	06-30-19
Arizona	State Program	9	AZ0671	10-14-18 *
California	LA Cty Sanitation Districts	9	10256	06-30-19
California	State Program	9	CA ELAP 2706	06-30-19
Guam	State Program	9	Cert. No. 17-003R	01-23-19
Hawaii	State Program	9	N/A	01-29-19
Kansas	NELAP	7	E-10420	07-31-19
Nevada	State Program	9	CA015312018-1	07-31-19
New Mexico	State Program	6	N/A	01-29-19
Oregon	NELAP	10	4028	01-29-19
US Fish & Wildlife	Federal		058448	07-31-19
USDA	Federal		P330-15-00184	07-09-21
Washington	State Program	10	C900	09-03-18 *

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

TestAmerica Sacramento

Method Summary

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 320-43353-5

Method	Method Description	Protocol	Laboratory
8270C	Semivolatile Organic Compounds (GC/MS)	SW846	TAL SAC
6010B	Metals (ICP)	SW846	TAL SAC
7470A	Mercury (CVAA)	SW846	TAL SAC
1311	TCLP Extraction	SW846	TAL SAC
3010A	Preparation, Total Metals	SW846	TAL SAC
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	TAL SAC
7470A	Preparation, Mercury	SW846	TAL SAC

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600



Sample Summary

Client: Ramboll US Corporation
Project/Site: NERT Dioxin Sampling

TestAmerica Job ID: 320-43353-5

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
320-43353-16	DSPE-3-1.5-20180919	Solid	09/19/18 11:40	09/20/18 09:30

1

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Mata, Patty

From: Dan Clark <dclark@ramboll.com>
Sent: Wednesday, October 03, 2018 6:52 PM
To: Mata, Patty
Subject: RE: question for 440-320-43353-4 NERT Dioxin Sampling

-External Email-

Please proceed with the extraction for TCLP SVOCs and RCRA8 metals, using less than 100g and noting in the report. Standard TAT.

Dan

From: Mata, Patty [Patty.Mata@testamericainc.com]
Sent: 03 October 2018 17:28
To: Dan Clark
Subject: RE: question for 440-320-43353-4 NERT Dioxin Sampling

Dan,

The TCLP method requires 100 grams to be extracted. We could extract less, but we would have to note this in the case narrative. The SVOC extraction hold time is 14 days and the metals TCLP extraction is 28 days (for Mercury).

PATTY MATA
Project Manager

Test America
THE LEADER IN ENVIRONMENTAL TESTING

17461 Derian Ave, Suite #100
Irvine, CA 92614
TEL 949-261-1022 | FAX 949-260-3297
DIRECT 949-260-3213

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Please let us know if we met your expectations by rating the service you received from TestAmerica on this project by visiting our website at: Project Feedback [https://secure-web.cisco.com/150rACufdzQ-bqZ6Pdy42K1dchT353DGp6fjHvqA1jluvAi26L06ZAyaXc_qXIXdmDabBodlx_pDYmaqXX8nuTecaXIIUCFPuZQ-ZGdQgNMk_wkz6LTZLA1WrXxQ6WxJKm6trCsEHGF5IplnWT_doWHrPMUbp0yGKSW8tBiULy7_pEhc5J3UGJFj9WaAY2wBS e5uL16U_voc8u7xdVrV3dEv6UIkh8NEVtq8k0Q0ANEcscGRSodKfQW4AK6Bt49LIRYyNkspmm665RUWHhMEJs-5Z7n1VnZ-FuCVh5r9DgrPhS0AVHPNAywFmdOXkMcMs0Sb8NqG-sMF41Y7J7U8HYS6LnwJvsDEU3sREBspDk/https%3A%2F%2Ffemea01.safelinks.protection.outlook.com%2F%3Furl%3Dht tps%253A%252F%252Fwww.surveymonkey.com%252Fs%252FTAProjectFeedback%26data%3D02%257C01%257Cdclark %2540ramboll.com%257C668154fcba24c82220a08d6299044d5%257Cc8823c91be814f89b0246c3dd789c106%257C1% 257C0%257C636742096941282026%26sdata%3DL0iWQKwAuWozSijxyZfCV%252BWg9XSzcx23yiONJ0V4RFA%253D%26 reserved%3D0>](https://secure-web.cisco.com/1gJOgVL2kRuQzfxeJnucohjncKsaCfGz5BDIRv7YndnC0S--tpdYoJ4Hv0OKBYHriiMG4tOa3T6sBx-Ybm_6KTD1ZF5sS6Luw4WE4IF-qVtTdaA70_OzObD6hQonx-bRSuy-n4aOINKw2Gz1rv9Uqg-go7pB2FFzJNTToZ-TcNFlqZfsK7WWj0dONrOe_fb6OmL6FtrN69rAwth-KboNhA72gJJ6K4h-jbN2u2nav1AnWTdyqHFWAgEWYDwOQ9N7-1Ld9YO9TtzmDnQsFzgzktsKerkg4ZKydw6sqExwrQIpnND-g5AQFwoLALDnxMik0S1iRzQE7bl650C5US7bxQ/https%3A%2F%2Fwww.surveymonkey.com%2Fs%2FTAProjectFeedback<https://secure-web.cisco.com/150rACufdzQ-bqZ6Pdy42K1dchT353DGp6fjHvqA1jluvAi26L06ZAyaXc_qXIXdmDabBodlx_pDYmaqXX8nuTecaXIIUCFPuZQ-ZGdQgNMk_wkz6LTZLA1WrXxQ6WxJKm6trCsEHGF5IplnWT_doWHrPMUbp0yGKSW8tBiULy7_pEhc5J3UGJFj9WaAY2wBS e5uL16U_voc8u7xdVrV3dEv6UIkh8NEVtq8k0Q0ANEcscGRSodKfQW4AK6Bt49LIRYyNkspmm665RUWHhMEJs-5Z7n1VnZ-FuCVh5r9DgrPhS0AVHPNAywFmdOXkMcMs0Sb8NqG-sMF41Y7J7U8HYS6LnwJvsDEU3sREBspDk/https%3A%2F%2Ffemea01.safelinks.protection.outlook.com%2F%3Furl%3Dht tps%253A%252F%252Fwww.surveymonkey.com%252Fs%252FTAProjectFeedback%26data%3D02%257C01%257Cdclark %2540ramboll.com%257C668154fcba24c82220a08d6299044d5%257Cc8823c91be814f89b0246c3dd789c106%257C1% 257C0%257C636742096941282026%26sdata%3DL0iWQKwAuWozSijxyZfCV%252BWg9XSzcx23yiONJ0V4RFA%253D%26 reserved%3D0>)

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From: Dan Clark [mailto:dclark@ramboll.com]
Sent: Wednesday, October 03, 2018 4:28 PM
To: Mata, Patty
Subject: question for 440-320-43353-4 NERT Dioxin Sampling

-External Email-

Hi Patty, got a question about DSPE-3-1.5-20180919, this is one of the samples intended just for dioxins. Would there be sufficient volume remaining in this sample for a TCLP extraction? A micro-extraction would be OK. We may want to run a TCLP SVOCs and TCLP RCRA8 metals if we have sufficient volume.

Thanks,

Dan

Dan Clark
Senior Consultant 2
Emeryville

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dclark@ramboll.com<mailto:dclark@ramboll.com>

Ramboll
2200 Powell Street
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TestAmerica Irvine Sacramento
 17461 Berian Ave Suite 100
 Irvine, CA 92614
 Phone: 949.261.1022 Fax:

Chain of Custody Record

138873

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 TestAmerica Laboratories, Inc.
 TAL-8210 (07/13)

Regulatory Program: DW NPDES RCRA Other:

Client Contact
 Company Name: **Ramboll**
 Address: **2200 Powell St, Suite 700**
 City/State/Zip: **Emeryville, CA, 94608**
 Phone: **510-655-7400**
 Fax:
 Project Name: **Dioxin Pre-excavation Soil Sampling**
 Site: **MERT**
 PO # **169000641-012**

Project Manager: **Don Clark**
 Tel/Fax: **510-299-7036**
 Analysis Turnaround Time
 CALENDAR DAYS WORKING DAYS
 TAT if different from Below **5 days**
 2 weeks
 1 week
 2 days
 1 day

Site Contact: **Brandon Keenan** Date: **09/19/2018**
 Lab Contact: **Patty Matry** Carrier:

COC No: **4** of **5** COCs
 Sampler: **BK**
 For Lab Use Only:
 Walk-in Client:
 Lab Sampling:
 Job / SDG No.:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Sample Specific Notes:	
						Filtered Sample (Y/N)	Perform MS/MSD (Y/N)
DSPE-1-FB-20180919	09/19	0800	GC	SO	1	X	
DSPE-1-0.5-20180919	"	0840	GC	SO	11	X	
DSPE-100-0.5-20180919	"	0840	GC	SO	11	X	
DSPE-1-1.5-20180919	"	0855	GC	SO	11	X	
DSPE-1-2.0-20180919	"	0912	GC	SO	11	X	
DSPE-1-3.0-20180919	"	0934	GC	"	11	X	
DSPE-1-4.0-20180919	"	0950	GC	"	11	X	
DSPE-1-EB-20180919	"	0855	GC	GC	11	X	
DSPE-2-0.5-20180919	"	1027	GC	"	11	X	
DSPE-2-1.5-20180919	"	1036	GC	"	11	X	
DSPE-2-2.0-20180919	"	1043	GC	"	11	X	
DSPE-2-3.0-20180919	"	1049	GC	"	11	X	



Preservation Used: 1= Ice, 2= HCl, 3= H2SO4, 4= HNO3, 5= NaOH, 6= Other

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return to Client Disposal by Lab Archive for _____ Months

Special Instructions/QC Requirements & Comments:

Custody Seal No.:
 Relinquished by: **B.K.P.** Date/Time: **09/19/18**
 Relinquished by: **JAM** Date/Time: **9/18/18 13:00**
 Relinquished by: **JAM** Date/Time: **9-20-18 0930**

Company: **Ramboll**
 Company: **TALUS**
 Company: **TALUS**

Received by: **JAM** Date/Time: **9-19-18 1620**
 Received by: **Felix**
 Received in Laboratory by: **JAM**

Therm ID No.: **517**
 Cooler Temp. (°C): Obs'd: **5.4** Cor'd: **5.2**
 Date/Time: **9-19-18 1620**
 Date/Time: **9-20-18 0930**

Comments: **TALUS 18.9 VAW**



TestAmerica Irvine
 17461 Merian Ave
 Suite 100
 Irvine, CA 92614
 Phone: 949.261.1022 Fax:

Sacramento

Chain of Custody Record

138875

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 TestAmerica Laboratories, Inc.
 TAL-8210 (0713)

Regulatory Program: DW NPDES RCRA Other:

Client Contact
 Company Name: Ramboll
 Address: 2200 Powell St Suite 700
 City/State/Zip: Fremontville, CA, 94508
 Phone: 510-655-7400
 Fax:
 Project Name: Dioxin Sampling
 Site: NEPT
 PO #: 1690006941-012

Project Manager: Dan Clark
 Tell Fax: 910-299-7036
 Analysis Turnaround Time
 CALENDAR DAYS WORKING DAYS
 TAT: if different from Below Delays
 2 weeks
 1 week
 2 days
 1 day

Site Contact: Brendan Keegan Date: 09/19/18
 Lab Contact: Patty Mata Carrier:
 COC No.: 4 of 3 COCs

Sampler:
 For Lab Use Only:
 Walk-in Client:
 Lab Sampling:
 Job / SDG No.:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)		Sample Specific Notes:
						Performs MS/MSD (Y/N)	Performs MS/MSD (Y/N)	
DSPE-2-4.0-20180919	9/19	1100	G	SO	1	X	X	
DSPE-3-0.5-20180919	"	1123	"	"	"	X	X	
DSPE-3-0.5-20180919	"	1123	"	"	"	X	X	
DSPE-3-1.5-20180919	"	1140	"	"	"	X	X	
DSPE-3-2.0-20180919	"	1146	"	"	"	X	X	
DSPE-3-3.0-20180919	"	1202	"	"	"	X	X	
DSPE-4-0.5-20180919	"	1445	"	"	"	X	X	
DSPE-4-2.0-20180919	"	1450	"	"	"	X	X	
DSPE-4-3.0-20180919	"	1455	"	"	"	X	X	
DSPE-4-4.0-20180919	"	1500	"	"	"	X	X	
DSPE-5-1.5-20180919	"	1536	"	"	"	X	X	
DSPE-5-2.0-20180919	"	1534	"	"	"	X	X	

Preservation Used: 1= Ice, 2= HCl, 3= H2SO4, 4= HNO3, 5= NaOH, 6= Other
 Possible Hazard Identification: Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.
 Non-Hazard Flammable Skin Irritant Poison B Unknown
 Return to Client Disposal by Lab Archive for _____ Months

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Cooler Temp. (°C): Obs'd: 54.2 Cor'd: 0.72 Therm ID No.: ALC2-22
 Received by: VAM Date/Time: 9-19-18 1620
 Received by: Fedy Date/Time: 9-19-18 1730
 Received in Laboratory by: Jay A. Jr Date/Time: 9-20-18 0930
 Company: TALUS
 Company: TALUS
 Company: TALUS

Custody Seal No.:
 Relinquished by: B. K...
 Relinquished by: VAM
 Relinquished by:

Special Instructions/QC Requirements & Comments:
TALUS 18.9 VAM



Login Sample Receipt Checklist

Client: Ramboll US Corporation

Job Number: 320-43353-5

Login Number: 43353

List Source: TestAmerica Sacramento

List Number: 1

Creator: Turpen, Troy

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	967454, 967456
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

