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NAS CECIL FIELD
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FINAL GROUNDWATER AND SOIL INVESTIGATION TECHNICAL MEMORANDUM FOR OPERABLE UNIT 10 (OU 10) SITE 21 NAS CECIL FIELD FL

2/1/2013

TETRA TECH

TETRA TECH

PITT-02-13-012

February 8, 2013

Project 112G02267

NAVFAC SE
Attn: Mr. Art Sanford
4130 Faber Place Drive
North Charleston, South Carolina 29405

Reference: CLEAN Contract No. N62470-08-D-1001
Contract Task Order JM09

Subject: Final Groundwater and Soil Investigation Technical Memorandum for OU 10, Site 21
Naval Air Station Cecil Field
Jacksonville, Florida

Dear Mr. Sanford:

Enclosed please find one copy of the subject deliverable. Copies have been sent to the members of the NAS Cecil Field Partnering Team as noted below. The draft version was reviewed by EPA and FDEP with minor textual edits, and the comments have been incorporated as requested into the final version. FDEP also provided a comment that led to the resampling of the temporary wells at Site 21, and the results of that resampling event have been incorporated into this final document. A final approval letter is requested to verify receipt of this final document.

If you have any questions, please call me at 412-921-8163 or Megan Boerio 412-921-7271.

Sincerely,

Robert F. Simcik, P.E.
Task Order Manager

RFS/clm

Enclosure
cc: D. Vaughn-Wright, U.S. EPA (1 copy)
D. Grabka, FDEP (1 copy and CD)
S. Martin, NAVFAC Atlantic (electronic copy)
D. Criswell, NAVFAC SE (1 copy and CD)
J. Keener, Solutions-IES (electronic copy)
K. Wimble, Resolution Consultants (electronic copy)
F. McInturff, Resolution Consultants (electronic copy)
J. Trepanowski, Tetra Tech
S. Currie, Tetra Tech File JM09 (1 copy unbound)

Tetra Tech
661 Andersen Drive, Pittsburgh, PA 15220-2700
Tel 412.921.7090 Fax 412.921.4040 www.tetratech.com

Final
Groundwater and Soil Investigation Technical Memorandum

for

Operable Unit 10, Site 21

Naval Air Station Cecil Field
Jacksonville, Florida

Naval Facilities Engineering Command Southeast

Contract Number N62470-08-D-1001
Contract Task Order JM09

February 2013

091202/P

FINAL
GROUNDWATER AND SOIL INVESTIGATION
TECHNICAL MEMORANDUM
for
OPERABLE UNIT 10, SITE 21

NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA

COMPREHENSIVE LONG-TERM
ENVIRONMENTAL ACTION NAVY (CLEAN) CONTRACT

Submitted to:
Naval Facilities Engineering Command
4130 Faber Place Drive, Suite 202
North Charleston, South Carolina 29405

Submitted by:
Tetra Tech
234 Mall Boulevard, Suite 260
King of Prussia, Pennsylvania 19406-2954

CONTRACT NUMBER N62470-08-D-1001
CONTRACT TASK ORDER JM09

FEBRUARY 2013

PREPARED UNDER THE DIRECTION OF:

ROBERT F. SIMCIK, P.E.
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APPROVED FOR SUBMISSION BY:

JOHN J. TREPANOWSKI, P.E.
PROGRAM MANAGER
TETRA TECH
KING OF PRUSSIA, PENNSYLVANIA

CERTIFICATION OF TECHNICAL
DATA CONFORMITY

The Contractor, Tetra Tech, Inc., hereby certifies that, to the best of its knowledge and belief, the technical data delivered herewith under Contract No. N62470-08-D-1001 are complete and accurate and comply with all requirements of this contract.

DATE: February 8, 2013

COMPANY CERTIFICATION AUTHORIZATION NUMBER: 7988
Tetra Tech, Inc.
661 Andersen Drive
Pittsburgh, PA 15220-2700

NAME AND TITLE OF CERTIFYING OFFICIAL: Robert F. Simcik, P.E.
Task Order Manager

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ACRONYMS AND ABBREVIATIONS

µg/L	microgram per liter
BCT	BRAC Cleanup Team
bgs	Below ground surface
BRAC	Base Realignment and Closure
CLEAN	Comprehensive Long-Term Environmental Action Navy
COC	Chemical of concern
CTO	Contract Task Order
DPT	Direct-push technology
FDEP	Florida Department of Environmental Protection
FTMR	Field Task Modification Request
GCTL	Groundwater Cleanup Target Level
LTM	Long-term monitoring
LUC	Land Use Control
mg/kg	milligram per kilogram
NADC	Natural Attenuation Default Criterion
NAS	Naval Air Station
NAVFAC SE	Naval Facilities Engineering Command Southeast
NFA	No further action
OU	Operable Unit
ROD	Record of Decision
SCTL	Soil Cleanup Target Level
Tetra Tech	Tetra Tech, Inc.
U.S. EPA	United States Environmental Protection Agency

1.0 INTRODUCTION

This Groundwater and Soil Investigation Technical Memorandum presents a summary of the field activities performed at Operable Unit (OU) 10, Site 21 at the former Naval Air Station (NAS) Cecil Field, located in Jacksonville, Florida. This memorandum was prepared under Contract Task Order (CTO) JM09 as part of the Comprehensive Long-Term Environmental Action Navy (CLEAN) Contract No. N62470-08-D-1001 for the Naval Facilities Engineering Command Southeast (NAVFAC SE). Site 21 is approximately 1.5 acres in size and is currently used as the Golf Course Maintenance Area.

The following paragraphs provide background information about Site 21. Figure 1-1 provides the general location map, and Figure 1-2 shows the location of the Site 21 parcel.

Golf course maintenance operations currently conducted at Site 21 include: the storage and maintenance of golf course operations equipment; the cleaning and rinsing of chemical-dispensing equipment; and the preparation of chemical solutions. Chemicals in use at the site include: fungicides, nematocides, insecticides, and herbicides.

Multiple investigations at this site identified arsenic, TRPH, total chlordane, 4,4-DDT, and dieldrin in soil exceeding Florida Department of Environmental Protection (FDEP) Soil Cleanup Target Levels (SCTLs). Two interim removal actions were performed at the site in May 2001 and August 2002, when approximately 3,077 cubic yards of impacted soil were excavated and removed for disposal. The May 2001 soil removal action remediated the source area to meet industrial SCTLs, and the August 2002 soil removal action was conducted to meet residential SCTLs.

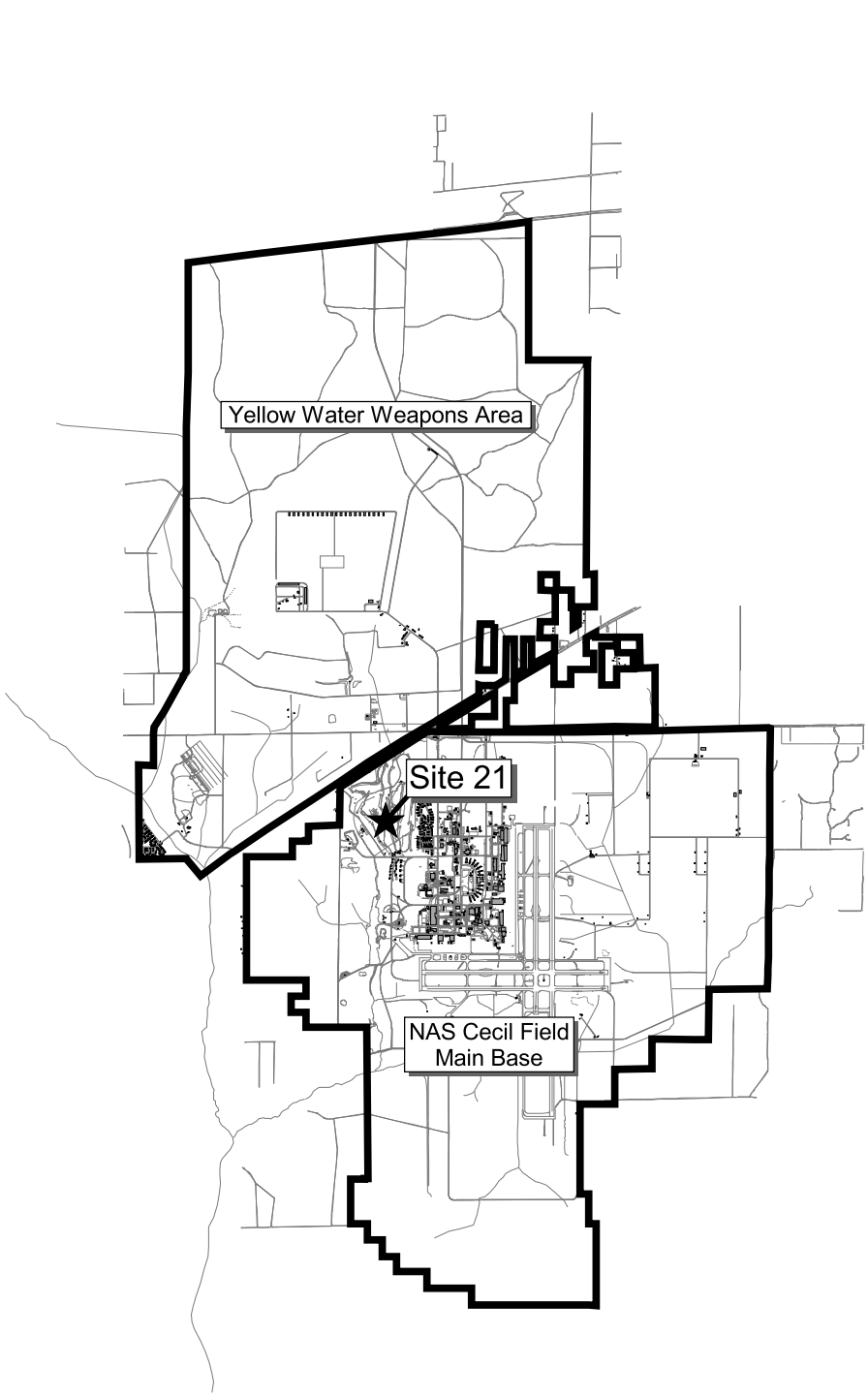
A remedial investigation was conducted at Site 21 which revealed a groundwater chlordane plume that exceeded the FDEP Groundwater Cleanup Target Level (GCTL) of 2 micrograms per liter (µg/L), limited to the shallow zone of the surficial aquifer (Tetra Tech Inc. [Tetra Tech], 2001). A concurrent feasibility study was completed which identified possible remedial actions for the site (Tetra Tech, 2003). The remedy selected in the Record of Decision (ROD) (Tetra Tech, 2005) identified Land Use Controls (LUCs), natural attenuation monitoring, and semi-annual groundwater monitoring as the appropriate remedy for Site 21. The LUC RD (Tetra Tech, 2006) identified industrial reuse for Site 21 and prohibits residential use of soil and any use of groundwater.

Long-term monitoring (LTM) of Site 21 began in July 2002 on a semi-annual basis. The Base Realignment and Closure (BRAC) Cleanup Team (BCT) made a decision in April 2004 to conduct the groundwater monitoring at Site 21 on an annual basis. Chlordane is currently the only chemical of concern (COC) identified at Site 21.

Currently, four monitoring wells are being sampled on an annual basis to monitor the groundwater COC concentrations; the results are compared to the FDEP GCTL and Natural Attenuation Default Criterion (NADC) for chlordane. Annual LTM results at Site 21 indicate that chlordane concentrations in well CEF-P21-05S continue to be greater than the FDEP GCTL, as shown in Figure 1-3. Concentrations of chlordane were greater than the GCTL in CEF-P21-01S for several years, but have decreased to less than the GCTL during the past four annual monitoring events. Chlordane concentrations in CEF-P21-05S have ranged from 10 µg/L to 78 µg/L between July 2004 and September 2011, and the concentrations have not indicated a steady decreasing trend. The BCT noted the continuing exceedances of the chlordane GCTL and discussed possible options to address the contamination and decrease the length of time required for the groundwater remediation and LTM plan to be completed.

Based on BCT discussions, soil and groundwater sampling was recommended to determine if there is a residual chlordane source present in the soils surrounding CEF-P21-05S, and to better delineate the contamination to verify that chlordane contamination is limited to the area of CEF-P21-05S. It was also decided that monitoring well CEF-P21-05S would be abandoned, and that a replacement well would be installed in its place to ensure that the continuing exceedances are not the result of a damaged well. The downgradient well at Site 21 (CEF-P21-09S) has been free of contamination throughout the history of the LTM program; however, the downgradient well is 55 feet from CEF-P21-05S. Therefore, in order to more specifically delineate the potential plume, the BCT also decided that at least one groundwater sample would be collected from within Building 398 between CEF-P21-05S and CEF-P21-09S.

This sampling plan was described in a Field Task Modification Request (FTMR) (Tetra Tech, Inc. [Tetra Tech], 2012) as an amendment to the Site 21 Sampling and Analysis Plan. The FTMR was prepared and submitted by Tetra Tech on April 11, 2012, and was approved by FDEP and the United States Environmental Protection Agency (U.S. EPA) on April 12, 2012. The field activities and analytical results associated with this effort are summarized in subsequent Sections 2.0 and 3.0. Conclusions and recommendations are included in Section 4.0.



DRAWN BY MJJ	DATE 24Aug12	GENERAL LOCATION MAP OPERABLE UNIT 10, SITE 21 GROUNDWATER AND SOIL INVESTIGATION TECHNICAL MEMORANDUM NAVAL AIR STATION CECIL FIELD JACKSONVILLE, FLORIDA	CONTRACT NUMBER 2267
CHECKED BY	DATE		APPROVED BY DATE
COST/SCHEDULE-AREA			APPROVED BY DATE
SCALE AS NOTED			DRAWING NO. FIGURE 1-1 / REV 0

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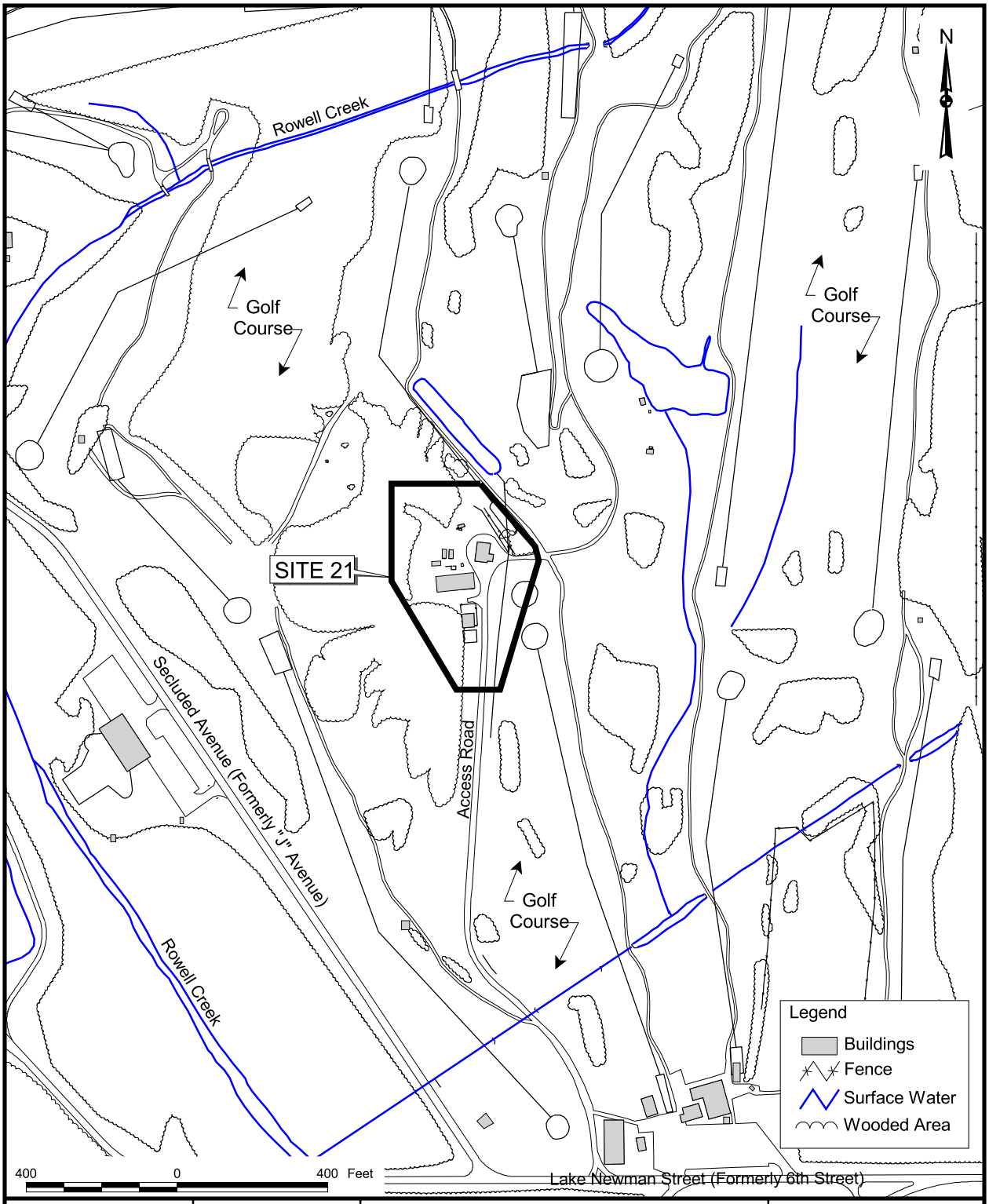

DRAWN BY MJJ	DATE 24Aug12	SITE VICINITY MAP OPERABLE UNIT 10, SITE 21 GROUNDWATER AND SOIL INVESTIGATION TECHNICAL MEMORANDUM NAVAL AIR STATION CECIL FIELD JACKSONVILLE, FLORIDA	CONTRACT NUMBER 2267
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COST/SCHEDULE-AREA			APPROVED BY DATE
SCALE AS NOTED			DRAWING NO. FIGURE 1-2 / REV 0

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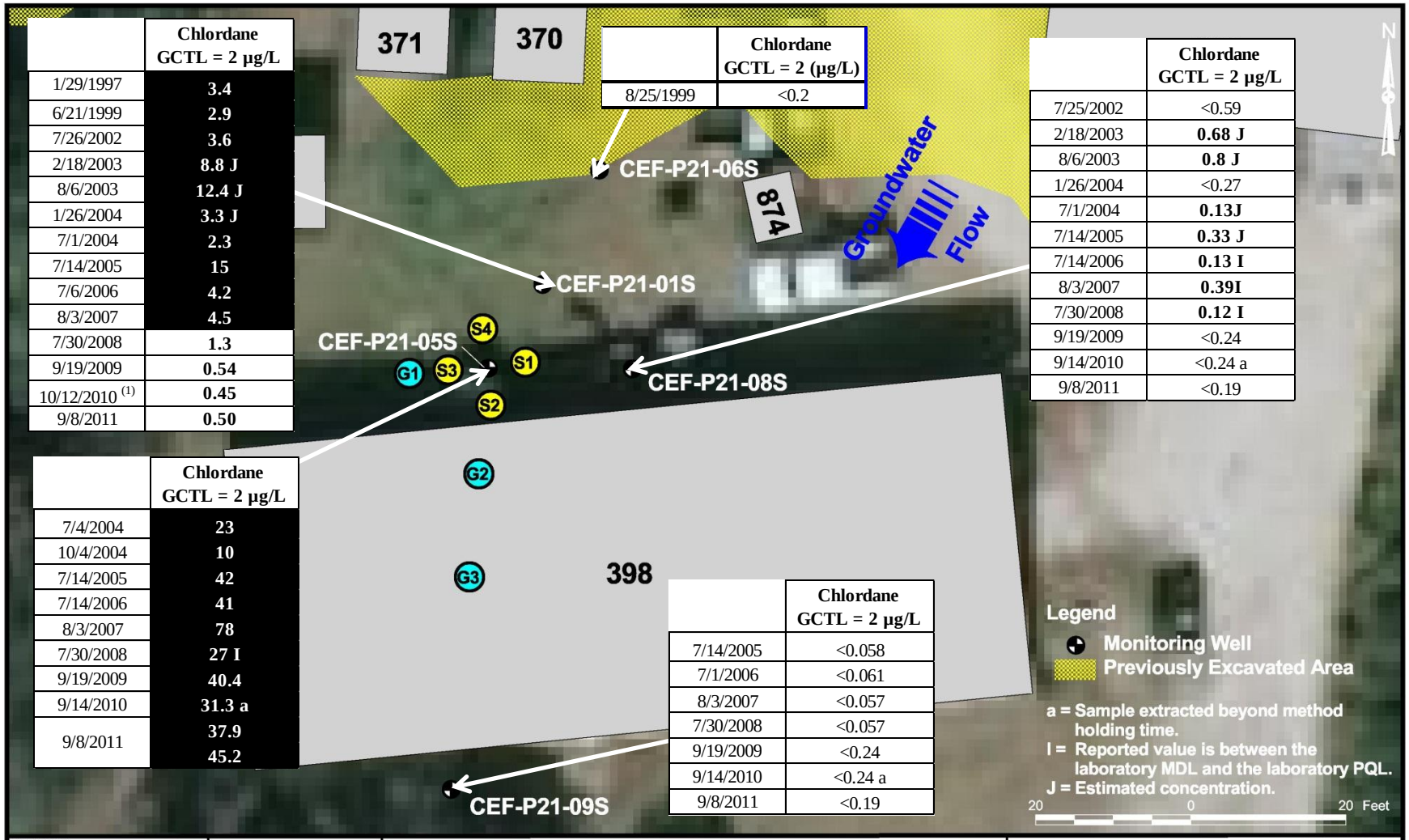

	Chlordane GCTL = 2 µg/L
1/29/1997	3.4
6/21/1999	2.9
7/26/2002	3.6
2/18/2003	8.8 J
8/6/2003	12.4 J
1/26/2004	3.3 J
7/1/2004	2.3
7/14/2005	15
7/6/2006	4.2
8/3/2007	4.5
7/30/2008	1.3
9/19/2009	0.54
10/12/2010 (1)	0.45
9/8/2011	0.50

	Chlordane GCTL = 2 (µg/L)
8/25/1999	<0.2

	Chlordane GCTL = 2 µg/L
7/25/2002	<0.59
2/18/2003	0.68 J
8/6/2003	0.8 J
1/26/2004	<0.27
7/1/2004	0.13J
7/14/2005	0.33 J
7/14/2006	0.13 I
8/3/2007	0.39I
7/30/2008	0.12 I
9/19/2009	<0.24
9/14/2010	<0.24 a
9/8/2011	<0.19

	Chlordane GCTL = 2 µg/L
7/4/2004	23
10/4/2004	10
7/14/2005	42
7/14/2006	41
8/3/2007	78
7/30/2008	27 I
9/19/2009	40.4
9/14/2010	31.3 a
9/8/2011	37.9 45.2

	Chlordane GCTL = 2 µg/L
7/14/2005	<0.058
7/1/2006	<0.061
8/3/2007	<0.057
7/30/2008	<0.057
9/19/2009	<0.24
9/14/2010	<0.24 a
9/8/2011	<0.19

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NAVFAC

SITE 21 LTM CONCENTRATIONS
OPERABLE UNIT 10, SITE 21
GROUNDWATER AND SOIL INVESTIGATION TECHNICAL MEMORANDUM
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA

CONTRACT NUMBER 2267	
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2.0 MONITORING ACTIVITIES AND METHODOLOGY

This section provides a description of work performed at Site 21 during the groundwater and soil investigation activities (April 16 through 17 and 24, 2012), including groundwater monitoring well and temporary well installation, well abandonment, soil sampling, and groundwater sampling. The field notes and forms completed for this effort are provided in Appendix A, and include a completion log for the replacement monitoring well, sampling collection log sheets, chains of custody, and field notes. Photographs of the activities are provided in Appendix B.

2.1 GROUNDWATER MONITORING WELL AND TEMPORARY WELL INSTALLATION

During the investigation at Site 21, one replacement groundwater monitoring well and three temporary groundwater monitoring wells were installed. The replacement monitoring well (CEF-P21-05SR) was installed directly next to existing well CEF-P21-05S, which may have possibly been damaged in the past. Well CEF-P21-05SR was installed by Direct-push technology (DPT) to a depth of 13 feet below ground surface (bgs) with a ten-foot slotted screen interval from 3 feet bgs to 13 feet bgs.

Three temporary groundwater monitoring wells were installed during investigation activities: CEF-P21-G1 was installed 10 feet west of CEF-P21-05S; CEF-P21-G3 was installed halfway between CEF-P21-05S and downgradient well CEF-P21-09S; and CEF-P21-G2 was installed halfway between CEF-P21-05S and temporary well CEF-P21-G3. All temporary wells were installed to a depth of 13 feet bgs, with a 10-foot slotted screen interval from 3 feet bgs to thirteen feet bgs. Well locations are shown on Figure 2-1.

2.2 WELL ABANDONMENT

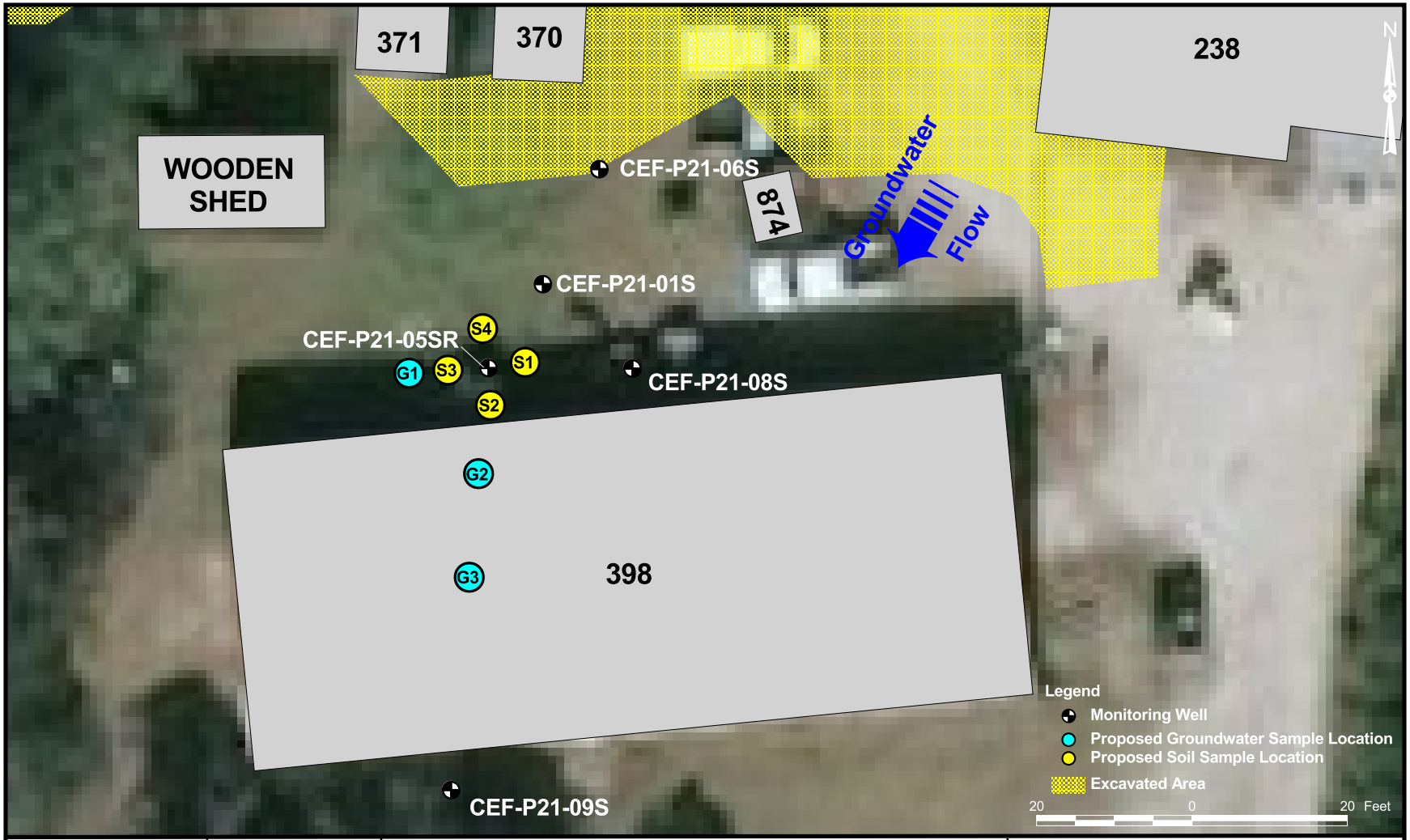
After the installation of replacement monitoring well CEF-P21-05SR, well CEF-P21-05S was abandoned by Tetra Tech. The well was abandoned in place and backfilled with cement/bentonite grout.

2.3 SOIL SAMPLING

Sampling activities at Site 21 included the collection of twelve soil samples. Samples were collected at four locations: 5 feet from well CEF-P21-05S in each cardinal direction. Samples were collected at three depths per location (surface, 5 feet bgs, and 10 feet bgs). The sample IDs were chosen to identify the sample location and depth in the sample ID, in the form of (Location Depth). For example, the sample ID for the sample collected at the first soil location (S1) at a depth of five feet bgs (05) has sample ID S105. Soil samples were analyzed for chlordane only. Samples were collected via DPT rig. The samples were placed on ice immediately upon collection and delivered via courier under chain of custody to Accutest Laboratories, Inc., in Orlando, Florida. Soil sampling locations are included on Figure 2-1.

2.4 GROUNDWATER SAMPLING

Sampling activities at Site 21 also included the collection of five groundwater samples. Samples were collected from well CEF-P21-05SR, from each of the three temporary groundwater monitoring wells, and a duplicate sample was collected for quality assurance purposes. Samples were analyzed for chlordane only. The samples were placed on ice immediately upon collection and delivered via courier under chain-of-custody to Accutest Laboratories, Inc., in Orlando, Florida. Groundwater sampling locations are included on Figure 2-1.



DRAWN BY MJJ	DATE 24Aug12	ADDITIONAL GROUNDWATER AND SOIL INVESTIGATION LOCATIONS OPERABLE UNIT 10, SITE 21 GROUNDWATER AND SOIL INVESTIGATION TECHNICAL MEMORANDUM NAVAL AIR STATION CECIL FIELD JACKSONVILLE, FLORIDA	CONTRACT NUMBER 2267
CHECKED BY	DATE		APPROVED BY DATE
COST/SCHEDULE-AREA			APPROVED BY DATE
SCALE AS NOTED			DRAWING NO. FIGURE 2-1 / REV 0

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3.0 ANALYTICAL RESULTS

Table 3-1 provides a summary of the analytical results for the groundwater samples collected at Site 21, and Table 3-2 provides a summary of the analytical results for the soil samples. The data validation report and laboratory analytical report are included in Appendix C. Positive results greater than the laboratory method detection limit are noted in bold text. Results qualified with a “U” indicate that that the compound was not detected. Results qualified with an “I” indicate that the reported value is between the laboratory method detection limit and the laboratory practical quantitation limit. The FDEP GCTL and Soil Cleanup Target Levels (SCTLs) used as screening criteria for the data, are included in Tables 3-1 and 3-2, respectively.

The results show that chlordane did not exceed the screening criteria in any soil or groundwater samples. Total chlordane in the replacement well CEF-P21-05SR was less than detection limits. In the temporary monitoring wells installed within Building 398, chlordane was not detected, indicating that the chlordane plume seems to be confined to the small area north of Building 398 surrounding CEF-P21-05S. Chlordane was detected in the temporary well to the west of CEF-P21-05S, CEF-P21-G1. The detection in CEF-P21-G1, 1.9 µg/L, was almost equal to the GCTL (2 µg/L) but significantly less than recent detections in CEF-P21-05S. There were low level detections of chlordane in all of the surface soil samples and in subsurface soil samples at location S3 (S305 and S310). The surface soil detections were 0.0134 milligrams per kilogram (mg/kg), 0.378 mg/kg, 0.243 mg/kg, and 0.14 mg/kg at locations S100, S200, S300, and S400, respectively. The chlordane concentration in the 5-foot-bgs depth sample S305 was 1.3 mg/kg, and the chlordane concentration in the 10-foot-bgs depth sample S310 was 0.102 mg/kg. All of the chlordane detections were less than the residential SCTL (2.8 mg/kg) and significantly less than both the industrial SCTL (14 mg/kg) and the leachability to groundwater criteria (9.6 mg/kg). The results of the soil and groundwater sample analysis are shown on Figure 3-1, along with LTM results from groundwater samples collected at permanent wells CEF-P21-01S, CEF-P21-05S, CEF-P21-08S, and CEF-P21-09S during past events. The LTM results are included for easy comparison to the most recently detected concentrations.

Based on comments made by FDEP on the draft version of this document, the temporary monitoring wells were resampled October 19 thorugh October 22, 2012. The results of the resampling event showed low level detections of chlordane in temporary wells CEF-P21-G2 and CEF-P21-G3, less than the GCTL (at 0.34 I µg/L and 0.33 I µg/L, respectively). There was, however, a slight eceedance at temporary well CEF-P21-G1, with a chlordane concentration of 3.3 µg/L.

TABLE 3-1

GROUNDWATER ANALYTICAL DATA, APRIL 2012
OPERABLE UNIT 10, SITE 21
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA

Well ID	Sampling Date	Screening Criteria[1] (µg/L)	Total Chlordane (µg/L)
CEF-P21-05SR	4/21/2012	2	0.19 U
CEF-P21-G1	4/17/2012	2	**1.9**
	10/19/2012		**3.3 [G]**
CEF-P21-G2	4/17/2012	2	0.19 U
	10/19/2012		**0.34 I**
CEF-P21-G3	4/17/2012	2	0.19 U
	10/19/2012		**0.33 I**

Bold text indicates positive results.
µg/L - micrograms per liter
U - not detected
[G] - indicates Groundwater Cleanup Target Level exceedance.
(1) Florida Department of Environmental Protection Groundwater Cleanup Target Level

TABLE 3-2

SOIL ANALYTICAL DATA, APRIL 2012
OPERABLE UNIT 10, SITE 21
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA

Sample ID (Sample Location and Depth)	Sampling Date	Screening Criteria (mg/kg)	Total Chlordane (mg/kg)
S100	4/16/2012	2.8(1) / 9.6(2)	**0.0134 I**
S105	4/16/2012	2.8(1) / 9.6(2)	0.0080 U
S110	4/16/2012	2.8(1) / 9.6(2)	0.0079 U
S200	4/16/2012	2.8(1) / 9.6(2)	**0.378**
S205	4/16/2012	2.8(1) / 9.6(2)	0.0081 U
S210	4/16/2012	2.8(1) / 9.6(2)	0.0079 U
S300	4/16/2012	2.8(1) / 9.6(2)	**0.243**
S305	4/16/2012	2.8(1) / 9.6(2)	**1.3**
S310	4/16/2012	2.8(1) / 9.6(2)	**0.102**
S400	4/16/2012	2.8(1) / 9.6(2)	**0.14**
S405	4/16/2012	2.8(1) / 9.6(2)	0.0081 U
S410	4/16/2012	2.8(1) / 9.6(2)	0.0086 U

Bold text indicates positive results.

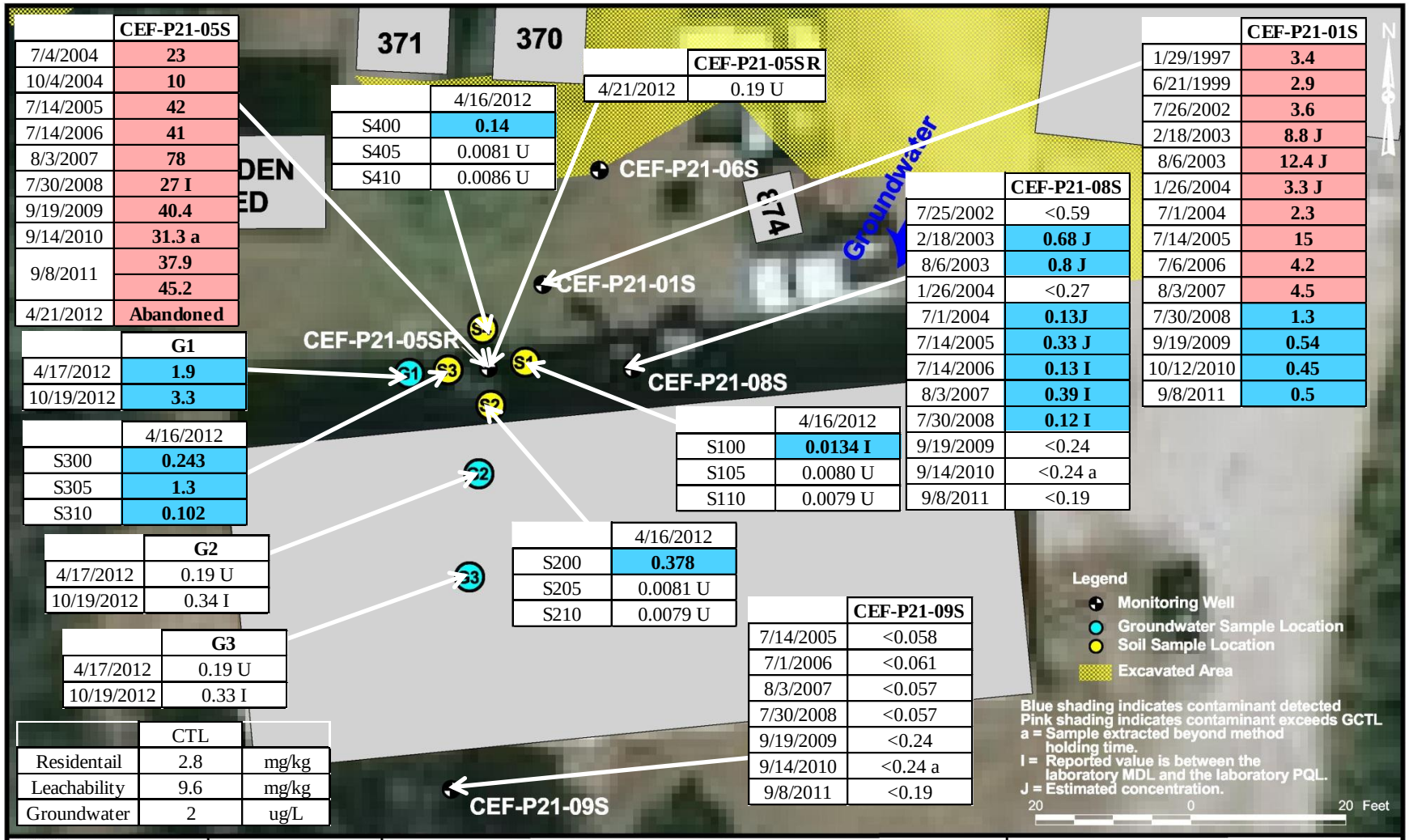
mg/kg - milligram per kilogram

I - between laboratory method detection limit and laboratory practical quantitation limit

U - not detected

(1) Florida Department of Environmental Protection Residential Soil Cleanup Target Level.

(2) Florida Department of Environmental Protection Leachability to Groundwater Soil Cleanup Target Level.



	CEF-P21-05S
7/4/2004	23
10/4/2004	10
7/14/2005	42
7/14/2006	41
8/3/2007	78
7/30/2008	27 I
9/19/2009	40.4
9/14/2010	31.3 a
9/8/2011	37.9
	45.2
4/21/2012	Abandoned

	4/16/2012
S400	0.14
S405	0.0081 U
S410	0.0086 U

	CEF-P21-05SR
4/21/2012	0.19 U

	CEF-P21-01S
1/29/1997	3.4
6/21/1999	2.9
7/26/2002	3.6
2/18/2003	8.8 J
8/6/2003	12.4 J
1/26/2004	3.3 J
7/1/2004	2.3
7/14/2005	15
7/6/2006	4.2
8/3/2007	4.5
7/30/2008	1.3
9/19/2009	0.54
10/12/2010	0.45
9/8/2011	0.5

	CEF-P21-08S
7/25/2002	<0.59
2/18/2003	0.68 J
8/6/2003	0.8 J
1/26/2004	<0.27
7/1/2004	0.13J
7/14/2005	0.33 J
7/14/2006	0.13 I
8/3/2007	0.39 I
7/30/2008	0.12 I
9/19/2009	<0.24
9/14/2010	<0.24 a
9/8/2011	<0.19

	G1
4/17/2012	1.9
10/19/2012	3.3

	4/16/2012
S300	0.243
S305	1.3
S310	0.102

	4/16/2012
S100	0.0134 I
S105	0.0080 U
S110	0.0079 U

	G2
4/17/2012	0.19 U
10/19/2012	0.34 I

	4/16/2012
S200	0.378
S205	0.0081 U
S210	0.0079 U

	G3
4/17/2012	0.19 U
10/19/2012	0.33 I

	CEF-P21-09S
7/14/2005	<0.058
7/1/2006	<0.061
8/3/2007	<0.057
7/30/2008	<0.057
9/19/2009	<0.24
9/14/2010	<0.24 a
9/8/2011	<0.19

	CTL	
Residentail	2.8	mg/kg
Leachability	9.6	mg/kg
Groundwater	2	ug/L

DRAWN BY	DATE
MJJ	24Aug12
CHECKED BY	DATE
COST/SCHEDULE-AREA	
SCALE	AS NOTED

NAVFAC

ADDITIONAL GROUNDWATER AND SOIL INVESTIGATION RESULTS
OPERABLE UNIT 10, SITE 21
GROUNDWATER AND SOIL INVESTIGATION TECHNICAL MEMORANDUM
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA

CONTRACT NUMBER	2267
APPROVED BY	DATE
APPROVED BY	DATE
DRAWING NO.	FIGURE 3-1
REV	0

Site-21_20111011 24Aug12 MJJ Layout09

4.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the analytical results of the groundwater and soil sampling performed at Site 21, including the additional resampling event conducted in October 2012, it is recommended that sampling frequency at this site be adjusted from annual to semi-annual. Therefore, the next event will be scheduled for March 2013.

The BCT recommended the sampling program be revised to use G2 as the downgradient well. The wells sampled will include CEF-P21-01S, CEF-P21-05SR, CEF-P21-08S, CEF-P21-G1, and CEF-P21-G2. A sample will be collected from the replacement well CEF-P21-05SR, along with sampling of the temporary wells CEF-P21-G1 and CEF-P21-G2. If all total chlordane concentrations in groundwater are less than the GCTL during the first and second semi-annual LTM events, the BCT will consider proposing no further action (NFA) and site closeout for Site 21 in accordance with the ROD.

REFERENCES

FDEP (Florida Department of Environmental Protection), 2005. Cleanup Target Levels, Chapter 62-777, F.A.C. April 2005.

Tetra Tech (Tetra Tech, Inc.), 2001. Remedial Investigation Report for Operable Unit 10, Site 21 – Golf Course Maintenance Area, Naval Air Station Cecil Field, Jacksonville, Florida. Prepared for the Southern Division, Naval Facilities Engineering Command. October 2001.

Tetra Tech, 2003. Feasibility Study Report for Operable Unit 10, Site 21, Golf Course Maintenance Area. Naval Air Station Cecil Field, Jacksonville, Florida. Prepared for the Southern Division, Naval Facilities Engineering Command. October.

Tetra Tech, 2005. Record of Decision, Operable Unit 10, Site 21, Golf Course Maintenance Area, Naval Air Station Cecil Field, Jacksonville, Florida. Prepared for the Southern Division, Naval Facilities Engineering Command. September 2005.

Tetra Tech, 2006. Land Use Control Remedial Design, Operable Unit 10, Site 21. Naval Air Station Cecil Field, Jacksonville, Florida. May.

Tetra Tech, 2012. Field Task Modification Request Form 04, Modification to the Sampling and Analysis Plan for Long-Term Monitoring at IR Sites 3, 5, 16, 17, 21, 57, and 58, March 2011, Naval Air Station Cecil Field, Jacksonville, Florida. April 2012.

APPENDIX A

FIELD NOTES AND FORMS

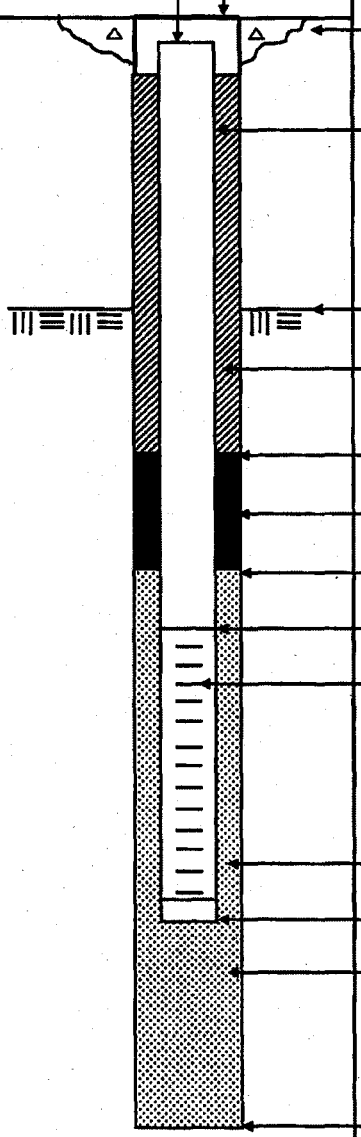
Tetra Tech NUS, Inc.

MONITORING WELL SHEET

WELL No.: CEF-P21-MW5 SR

PROJECT:		DRILLING Co.:	GWP	BORING No.:	MW-5 SR
PROJECT No.:		DRILLER:	Ray	DATE COMPLETED:	04/16/12
SITE:	Site 21	DRILLING METHOD:	DPT	NORTHING:	
GEOLOGIST:	D. Siefken	DEV. METHOD:	Peristaltic Pump	EASTING:	

Ground Elevation =
Datum:



Not to Scale

Elevation / Depth of Top of Riser: /

Elevation / Height of Top of Surface Casing: /

I.D. of Surface Casing: 8 in

Type of Surface Casing: steel

Type of Surface Seal: Type I and II Portland Cement

I.D. of Riser: 1.0 in

Type of Riser: Schedule 40 PVC

Borehole Diameter: 4.24 in

Elevation / Depth Top of Rock: NA/

Type of Backfill: 20/30 sand

Elevation / Depth of Seal: 2.0 ft /

Type of Seal: 30/65 sand

Elevation / Depth of Top of Filter Pack: 3.0 ft /

Elevation / Depth of Top of Screen: 3.0 ft /

Type of Screen: Schedule 40 PVC

Slot Size x Length: 0.10 in x 10 ft

I.D. of Screen: 1.0 in

Type of Filter Pack: 20/30 sand

Elevation / Depth of Bottom of Screen: 13 ft/

Elevation / Depth of Bottom of Filter Pack: 13.2 ft bls/

Type of Backfill Below Well:

Elevation / Total Depth of Borehole: 13.2 ft bls/

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: Site 21	SITE LOCATION: Cecil	
WELL NO: GI	SAMPLE ID: CEF-P21-GW-G1-20120417	DATE: 4/17/2012

PURGING DATA

WELL DIAMETER (inches): 1.0	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 3 feet to 13 feet	STATIC DEPTH TO WATER (feet): 12.61	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = 0.5 L gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (gallons/foot X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 11.5	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 14.8	PURGING INITIATED AT: 0935	PURGING ENDED AT: 0955	TOTAL VOLUME PURGED (gallons): 2.0

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
0935	0	0	100	12.61							
0940	0.5	0.5	100	13.76	6.06	22.24	0.160	2.17	200+	Lt brown	—
0945	0.5	1.0	100	14.24	6.07	22.14	0.159	2.21	200+	Lt. brown	
0950	0.5	1.5	100	14.76	6.08	21.79	0.160	2.14	200+	Lt brown	
0955	0.5	2.0	100	14.88	6.09	21.70	0.160	2.16	200+	Lt brown	
1000	SAMPLE TIME										
	Well has purged dry several times since 0955								95 NTU at sample time		

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Dave Siefken / T+	SAMPLER(S) SIGNATURE(S): [signature]	SAMPLING INITIATED AT: 1000	SAMPLING ENDED AT:
PUMP OR TUBING DEPTH IN WELL (feet): 14.99	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING (Y) N (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
1	2	AG	1000 ml	none	100 ml	6	8081A	PP	100

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: Site 21	SITE LOCATION: Cecil	
WELL NO: G2	SAMPLE ID: CEF-P21-GW-G2-20120417	DATE: 4/17/2012

PURGING DATA

WELL DIAMETER (inches): 1.0	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 3 feet to 13 feet	STATIC DEPTH TO WATER (feet): 12.62	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = 21 L ~~gallons~~

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (gallons/foot X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	PURGING INITIATED AT:	PURGING ENDED AT: 1362	TOTAL VOLUME PURGED (gallons):

TIME	VOLUME PURGED ~~(gallons)~~ L	CUMUL. VOLUME PURGED ~~(gallons)~~ L	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
0920	0	0	100	12.62							
0925	.5	.5	100	13.84	5.84	21.71	.107	1.67	58	Lt Brown	–
0929	Purge dry										
0935											
	Well purged dry several times to fill bottles.										

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Dave Stephen / Tt	SAMPLER(S) SIGNATURE(S): [signature]	SAMPLING INITIATED AT: 0935	SAMPLING ENDED AT:
PUMP OR TUBING DEPTH IN WELL (feet): 14.99	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING (Y) N (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
1	2	AG	1000 ml	none	100 ml		8081A	PP	100

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)
pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

Revision Date: February 1, 2004

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: Site 21	SITE LOCATION: Cecil	
WELL NO: G3	SAMPLE ID: CEF-P21-GW-G3-20120417	DATE: 4/17/2012

PURGING DATA

WELL DIAMETER (inches): 1.0	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 3 feet to 13 feet	STATIC DEPTH TO WATER (feet): 10.36	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X L gallons/foot = <1 L L gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (gallons/foot X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 9.3	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	PURGING INITIATED AT:	PURGING ENDED AT:	TOTAL VOLUME PURGED (gallons):

TIME	VOLUME PURGED (gallons)(L)	CUMUL. VOLUME PURGED (gallons)(L)	PURGE RATE (gpm)(L)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
0830	0	0	100 ml	10.36							
0840	2	2	100	11.49	5.65	20.60	0.111	1.22	14.86	Clear	—
0845	.5	2.5	100	11.62	5.62	20.61	0.110	1.17	14.85	Clear	—
0850	.5	3.0	100	11.64	5.61	20.60	0.112	1.19	14.85	Clear	—
0855	SAMPLE										

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: David Siefken / T+	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 0855	SAMPLING ENDED AT: 0915
PUMP OR TUBING DEPTH IN WELL (feet): 12.5	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING (Y) N (replaced)	DUPLICATE: (Y) (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
1	2	AG	1000 ml	none	100 ml		8081A	PP	100

REMARKS: (Y) Dup - GW - 01 – Depth to H_2O measured from stick up.

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)
pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

Revision Date: February 12, 2009 Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: Site 21	SITE LOCATION: Cecil Field
WELL NO: MW05SR	SAMPLE ID: CEF-P21-GW-MW05SR-20120428 DATE: 4/28/2012

PURGING DATA

WELL DIAMETER (inches): 1"	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 3 feet to 13 feet	STATIC DEPTH TO WATER (feet): 6.76	PURGE PUMP TYPE OR BAILER: Peristaltic Pump

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X liters/foot = 0.94 liters

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= liters + (liters/foot X feet) + liters = liters

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 8	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 12	PURGING INITIATED AT: 1100	PURGING ENDED AT: 1556	TOTAL VOLUME PURGED (liters): 29.6

TIME	VOLUME PURGED (liters)	CUMUL. VOLUME PURGED (liters)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
1100	—	—	100	6.76	—						—
1550	29	29	100	11.21	5.97	21.93	0.146	0.79	19.8	cloudy	—
1553	0.3	29.3	100	11.21	5.96	21.90	0.145	0.83	19.6	cloudy	-
1556	0.3	29.6	100	11.21	5.96	21.88	0.145	0.82	19.6	cloudy	-
1600	Sample time										

WELL CAPACITY (Liters Per Foot): 0.75" = 0.0757; 1" = 0.151; 1.25" = 0.227; 2" = 0.605; 3" = 0.37; 4" = 1.40; 5" = 3.861; 6" = 5.564; 12" = 22.25
TUBING INSIDE DIA. CAPACITY (Ltr./Ft.): 1/8" = 0.00227; 3/16" = 0.00529; 1/4" = 0.00984; 5/16" = 0.0151; 3/8" = 0.0227; 1/2" = 0.0378; 5/8" = 0.0605

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Jeff Krone/TtNUS	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1600	SAMPLING ENDED AT: 1640
PUMP OR TUBING DEPTH IN WELL (feet): 12	TUBING MATERIAL CODE: Teflon/Poly (circle one)	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N) (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
~~PP~~	~~3~~	~~CG~~	~~40 ML~~	~~HCL~~	~~NONE~~	~~<2~~	~~VOCs (BTEX + MTBE) 8260B~~	~~RFPP~~	
1	2	AG	1000ml	none			8081A	PP	<100

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Site 21
Project No.: 112G02267

[x] Surface Soil (SS)
[] Subsurface Soil (SU)
[] Sediment (SD)
[] Other:
[] QA Sample Type:

Sample ID No.: CEF-P21-SS-S100-20120416
Sample Location: SS1 - surface
Sampled By:
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date: 4/16/2012	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1040	0-6 inches	Dk gray	Organic fine Sand, Dry
Method: grab			
Monitor Reading (ppm 0			

COMPOSITE SAMPLE DATA:

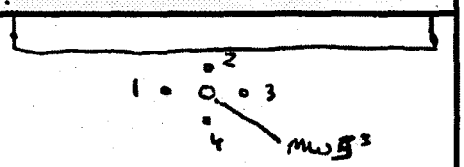
Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	LAB
8081A	4 oz	yes	Accutest

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): [illegible]

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Site 21
Project No.: 112G02267

[x] Surface Soil (SS)
[] Subsurface Soil (SU)
[] Sediment (SD)
[] Other:
[] QA Sample Type:

Sample ID No.: CEF-P21-SS-S200-20120416
Sample Location: SS2 - surface
Sampled By:
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

		Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date:	4/16/2012	0-6 inches	Dk gray	organics + fine sands, Dry
Time:	1045			
Method:	grab			
Monitor Reading (ppm	0			

COMPOSITE SAMPLE DATA:

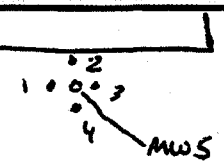
Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	LAB
8081A	4 oz	yes	Accutest

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): RL

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Site 21
Project No.: 112G02267

[x] Surface Soil (SS)
[] Subsurface Soil (SU)
[] Sediment (SD)
[] Other:
[] QA Sample Type:

Sample ID No.: CEF-P21-SS-S300-20120416
Sample Location: SS3 - surface
Sampled By:
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 4/16/2012	0-6 inches	Dk gray	Organics + fine Sands, Dry
Time: 1050			
Method: grab			
Monitor Reading (ppm 0			

COMPOSITE SAMPLE DATA:

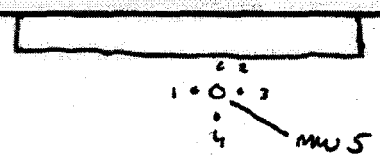
Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	LAB
8081A	4 oz	yes	Accutest

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): RLL

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Site 21
Project No.: 112G02267

[x] Surface Soil (SS)
[] Subsurface Soil (SU)
[] Sediment (SD)
[] Other:
[] QA Sample Type:

Sample ID No.: CEF-P21-SS-S400-20120416
Sample Location: SS4 - surface
Sampled By:
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

		Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date:	4/16/2012			
Time:	1055	0-6 inches	Dk gray	organics + Fine Sand, Dry
Method:	grab			
Monitor Reading (ppm	0			

COMPOSITE SAMPLE DATA:

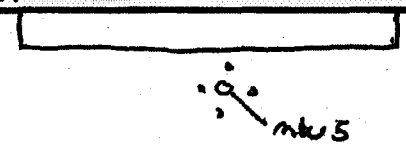
Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	LAB
8081A	4 oz	yes	Accutest

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): RLL

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Site 21
Project No.: 112G02267

[] Surface Soil (SS)
[x] Subsurface Soil (SU)
[] Sediment (SD)
[] Other:
[] QA Sample Type:

Sample ID No.: CEF-P21-SS-S105-20120416
Sample Location: SS1
Sampled By:
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

		Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date:	4/16/2012			
Time:	1305	5 ft bls	Brown	Very silty Fine Sand, dry
Method:	grab			
Monitor Reading (ppm	0			

COMPOSITE SAMPLE DATA:

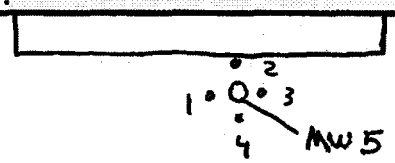
Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	LAB
8081A	4 oz	yes	Accutest

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Site 21
Project No.: 112G02267

[] Surface Soil (SS)
[x] Subsurface Soil (SU)
[] Sediment (SD)
[] Other:
[] QA Sample Type:

Sample ID No.: CEF-P21-SS-S205-20120416
Sample Location: SS 2
Sampled By:
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

		Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date:	4/16/2012	5 ft bls	Lt brown	very silty Fine Sands, damp
Time:	1320			
Method:	grab			
Monitor Reading (ppm	0			

COMPOSITE SAMPLE DATA:

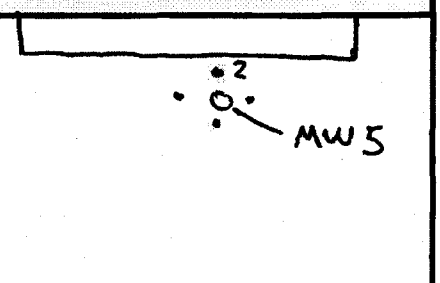
Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	LAB
8081A	4 oz	yes	Accutest

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Site 21
Project No.: 112G02267

[] Surface Soil (SS)
[x] Subsurface Soil (SU)
[] Sediment (SD)
[] Other:
[] QA Sample Type:

Sample ID No.: CEF-P21-SS-S305-20120416
Sample Location: SS 3
Sampled By:
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 4/16/2012	5 ft bls	Brown	Very Silty Fine sands, Damp
Time: 1335			
Method: grab			
Monitor Reading (ppm 0			

COMPOSITE SAMPLE DATA:

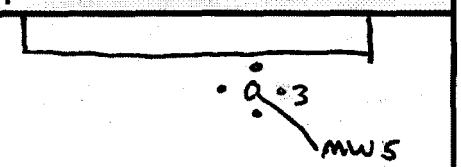
Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	LAB
8081A	4 oz	yes	Accutest

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): RL

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Site 21
Project No.: 112G02267

[] Surface Soil (SS)
[x] Subsurface Soil (SU)
[] Sediment (SD)
[] Other:
[] QA Sample Type:

Sample ID No.: CEF-P21-SS-S405-20120416
Sample Location: SS 4
Sampled By:
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

		Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date:	4/16/2012			
Time:	1350	5 ft bls	Brown	Very fine silty fine sand; Dry
Method:	grab			
Monitor Reading (ppm	0			

COMPOSITE SAMPLE DATA:

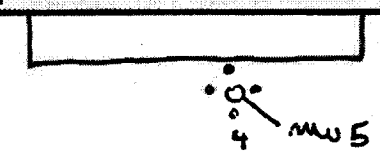
Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	LAB
8081A	4 oz	yes	Accutest

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:
MS/MSD
Duplicate ID No.: CEF-P21-SS DUP01

Signature(s):

DUP

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Site 21
Project No.: 112G02267

[] Surface Soil (SS)
[x] Subsurface Soil (SU)
[] Sediment (SD)
[] Other:
[] QA Sample Type:

Sample ID No.: CEF-P21-SS-S110-20120416
Sample Location: SS 1
Sampled By:
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

		Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date:	4/16/2012			
Time:	1310	10 ft bls	Lt Brown	Very Silty Fine Sand, Wet
Method:	grab			
Monitor Reading (ppm	0			

COMPOSITE SAMPLE DATA:

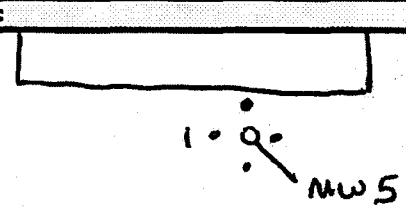
Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	LAB
8081A	4 oz	yes	Accutest

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Site 21
Project No.: 112G02267

[] Surface Soil (SS)
[x] Subsurface Soil (SU)
[] Sediment (SD)
[] Other:
[] QA Sample Type:

Sample ID No.: CEF-P21-SS-S210-20120416
Sample Location: SS 2
Sampled By:
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

		Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date:	4/16/2012	10 ft bls	Lt Brown	Very Fine Silty Sands, wet
Time:	1325			
Method:	grab			
Monitor Reading (ppm	0			

COMPOSITE SAMPLE DATA:

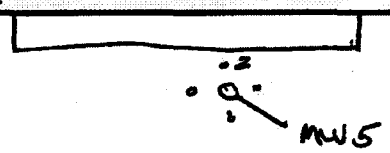
Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	LAB
8081A	4 oz	yes	Accutest

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Site 21
Project No.: 112G02267

[] Surface Soil (SS)
[x] Subsurface Soil (SU)
[] Sediment (SD)
[] Other:
[] QA Sample Type:

Sample ID No.: CEF-P21-SS-S310-20120416
Sample Location: SS 3
Sampled By:
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

		Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date:	4/16/2012	10 ft bls	Lt. Brown	Very Silty fine Sand, Wet
Time:	1340			
Method:	grab			
Monitor Reading (ppm	0			

COMPOSITE SAMPLE DATA:

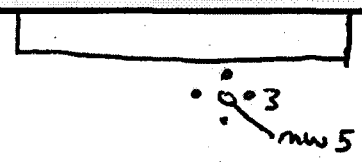
Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	LAB
8081A	4 oz	yes	Accutest

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): tel ll

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Site 21
Project No.: 112G02267

[] Surface Soil (SS)
[x] Subsurface Soil (SU)
[] Sediment (SD)
[] Other:
[] QA Sample Type:

Sample ID No.: CEF-P21-SS-S410-20120416
Sample Location: SS 4
Sampled By:
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

		Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date:	4/16/2012	10 ft bls	Lt Brown	Very Silty fine sand. Wet
Time:	1355			
Method:	grab			
Monitor Reading (ppm	0			

COMPOSITE SAMPLE DATA:

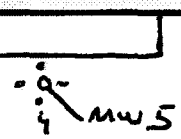
Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	LAB
8081A	4 oz	yes	Accutest

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

TETRA TECH NUS, INC. | **CHAIN OF CUSTODY** | **NUMBER** 2230 | **PAGE** ___ **OF** ___

PROJECT NO: 112G02267	**FACILITY:** Cecil	**PROJECT MANAGER** Rob Smith	**PHONE NUMBER** 912 921 8163
LABORATORY NAME AND CONTACT: Accutest / Heather Wanda			
SAMPLERS (SIGNATURE)	**FIELD OPERATIONS LEADER** Dave Stephen	**PHONE NUMBER** 912 921 8163	**ADDRESS** 4405 Vineland RD C-15
	CARRIER/WAYBILL NUMBER Pick up		**CITY, STATE** Orlando, FL

STANDARD TAT ☐
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G
PRESERVATIVE USED: –

DATE YEAR	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	TYPE OF ANALYSIS: 8081A Chlordane								COMMENTS
4/16	1040	CEF-P21-SS-S100-20120416		0	6"	SO	G	1	X								Cool to 4°C
4/16	1045	CEF-P21-SS-S200-20120416		0	6"	SO	G	1	X								
4/16	1050	CEF-P21-SS-S300-20120416		0	6"	SO	G	1	X								
4/16	1055	CEF-P21-SS-S400-20120416		0	6"	SO	G	1	X								
4/16	1305	CEF-P21-SS-S105-20120416			5'	SO	G	1	X								
4/16	1310	CEF-P21-SS-S110-20120416			10'	SO	G	1	X								
4/16	1320	CEF-P21-SS-S205-20120416			5'	SO	G	1	X								
4/16	1325	CEF-P21-SS-S210-20120416			10'	SO	G	1	X								
4/16	1335	CEF-P21-SS-S305-20120416			5'	SO	G	1	X								
4/16	1340	CEF-P21-SS-S310-20120416			10'	SO	G	1	X								
4/16	1350	CEF-P21-SS-S405-20120416			5'	SO	G	1	X								
4/16	1355	CEF-P21-SS-S410-20120416			10'	SO	G	1	X								
4/16	0000	CEF-P21-DUP01-20120416			–	SO	G	1	X								

1. RELINQUISHED BY	DATE 4-17-12	TIME 1115	1. RECEIVED BY	DATE 04/17/12	TIME 1150
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TINUS-001

TETRA TECH NUS, INC. CHAIN OF CUSTODY | NUMBER 2231 | PAGE ___ OF ___

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G02267	Site 21 / Cecil	Rob Smith	904-334-7260	Accutest / Heather Wooley
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER: Dave Sutlen	PHONE NUMBER: 904-334-7260	ADDRESS: 4405 Vineland Rd - C-15
		CARRIER/WAYBILL NUMBER: Pick up		CITY, STATE: Orlando FL

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G
PRESERVATIVE USED: —

DATE YEAR 2012	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	TYPE OF ANALYSIS: 8081 Chlordane								COMMENTS
4/17	0855	CEF-P21-GW-G3-20120417				GW		2	X								Cool to 4°C
4/17	0935	CEF-P21-GW-G2-20120417				GW		2	X								
4/17	1000	CEF-P21-GW-G1-20120417				GW		2	X								
4/17	0855	CEF-P21-GW-DUP01				GW		2	X								

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY: Dave	4.17.12	1400	1. RECEIVED BY:	04/17/12	1450
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TtNUS-001

TETRA TECH NUS, INC. | CHAIN OF CUSTODY | NUMBER 2343 | PAGE 1 OF 1

PROJECT NO: 112602267	FACILITY: NAS Cecil Field Site 21	PROJECT MANAGER: Rob Simcik	PHONE NUMBER: 410 481 8163	LABORATORY NAME AND CONTACT: Accutest / Heather Wandrey
SAMPLERS (SIGNATURE): JSK		FIELD OPERATIONS LEADER: Dave Siefken	PHONE NUMBER: 904 636 6125	ADDRESS: 4405 Vineland Road Suite C-15
		CARRIER/WAYBILL NUMBER: Accutest Courier		CITY, STATE: Orlando, Fl 32811

STANDARD TAT ☐
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☒ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G
PRESERVATIVE USED: —

DATE YEAR 2012	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	TYPE OF ANALYSIS: ⊗ 8081A Chlordane								COMMENTS
4/20	1600	CEF-P21-GW-MW05SR-20120420				GW	G	2	X								Cool to 4°C
																	⊗ Select Analysis

1. RELINQUISHED BY: JSK	DATE: 4-25-12	TIME: 1500	1. RECEIVED BY:	DATE	TIME
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TtNUS-001

Site 21 - DPT, Cecil 4-16-12

Personnel : Dave Siefken
Driller : GWP ← Raymond
Kevin
PPE : Level "D"
Weather : Clear 80°F
LAB : Accutest

0930 meet drillers at Golf Course. Mob to site

0936 Begin H&S.

1010 Discuss contaminants, where to receive aid, -
I have marked the TW & Soil Sample locations & instructed drillers to begin on TWs & MW
SCOPE
Install : (3) TW - 10 ft Screen 3-13
(1) MW "
(1) Abandon SS
(1) Install SSR
(4) Collect Soil Sample(s) at land surface 5 ft & 10 ft

Wearing proper ppe.
Drills do Not have pre pack wells but will install wells using 3" rods.

1011 Begin to hand auger

1023 Clear begin to push to 13'

1036 1st TW 3 installed 3-13' in center of bldg. in line w/ SS (G3)

1040 Clearing #2

1045 Clear Begin push for Second TW.
Depth to H2O in MW 1s = ~8.63 ft bls

1110 2nd TW set, DFF to decon. Rods

1120 Rods decon using liquinox & H2O look good now to G-1, out side near MW 5s
M.

1129 Begin push for G1. No a lot of hard pan in this area. Iron sands but not hard pan.

1137 At 13' bls for G1. Well set & looks good
1st gray silts in well.

Site 21 SOIL & GW DPT 4-16-12

Soil Samples

ID	Depth	Descriptions		Time
SS01	Surface	Dk grey organic fine sands		1040
SS02				1045
SS03				1050
SS04				1055
SS01	5'	Brown very silty fine sands	Dry	1305
SS01	10'	Lt Brown Very silty fine Sands	~~Damp~~ Wet	1310
SS02	5'	Lt. Brown Very silty fine Sands	Damp	1320
SS02	10'	" "	Wet	1325
SS03	5'	Brown very silty fine Sands	Damp	1335
SS03	10'	Lt. Brown Very Silty fine Sands	Wet	1340
SS04 ⊗	5'	Brown very silty fine Sands	Dry	1350
SS04	10'	Lt brown Silty fine Sands	Wet	1355
SS04	Dup 0105' interval ⊗			0000

1415 - Developing T-wells G3 is clear but G2 & G1 is turbid. Wells don't purge much volume. Have removed ~ 3 gal from G2 & G1. Turbidity has decreased but is still 300+ NTUs

1435 Turbidity slowly decreasing. Don't pump enough liquids before it goes dry to reduce NTUs very much.

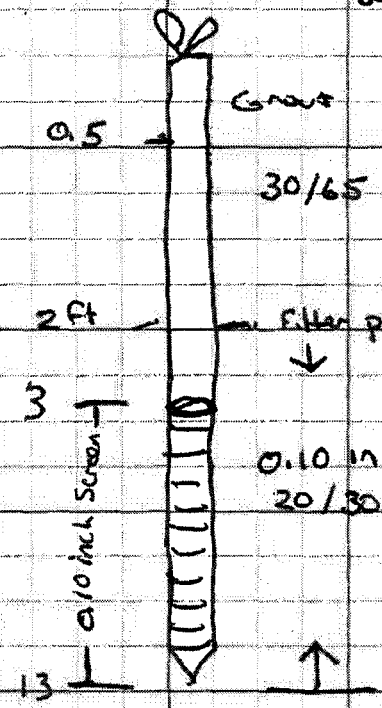
1738 Have been purging wells dry letting recharge & purge dry again and again. G-3 is clear & 5 SR is clearing. G1 & G2 still turbid.
Leave site.

TO

Site 21 DPT Soil & GW Samples 4-16-21

1246 Cleared utilities for 5 SR. Clear begin push for 13 ft well. All persons wearing proper ppe.

Well 5 SR



ALSO
8" Steel manhole
2'x2' Concrete Pad.

1250 Hand augering soil sample locations prior to macro core

Site 21 DPT TW GW Samples 4-17-12

Personnel : Dave Siefken
PPE Level "D"
Weather Clear 83°F
Obj : Collect GW Samples 8081A Chlordane
LAB : Accutest

0801 On site cal YSI + La Motte
0838 Begin purge of wells
Collecting GW samples per FDEP SOPs. Have ice ready for samples in cooler

GW Sample LOG

ID	Time
G1	0855
G2	0935
G3	1000
Dup 01	→ = G1

.00 All wells have purged dry during reading collection or when filling sample bottles. Grade water in nearby well is ~ 8.1 ft bls. Wells if left static have ~ 5 ft of H_2O. Soil lithology is very silty in area of TW's & MWs

COC # 2231
1104 Called Accutest for pick up time.
1146 Purging MW 5 SR. Turbidity has decreased between 38 & 95 NTU's. The turbidity depends on the volume of H_2O in well. The more the H_2O ↓ turbidity. Purged G2 dry have one last bottle to fill. Waiting for well to recharge.

NAS Cecil Field GW Sampling at Site 21 & 46 20 Apr 12

Personnel: Jeff Krone
Truck: 2006 F-250
PPE: Level D
Objective: Groundwater Sampling at Site 21 and 46
Weather: 85° Partly Cloudy

0930 Departed office for Cecil Field
1015 On site, began purge and equipment calibration
1045 Began purge for well 046-325
1050 Well purged dry, recorded YSI readings and began sampling
~~1300~~ 1500 Finished purging both wells, unable to obtain samples. Transferred IDW to drums and departed Cecil Field

NAS Cecil Field Site 1+2 Sampling / Sites 21+46 Purging 4/23/12

Personnel: P. Johnson, J. Krone
Truck: 2006 F250
Obj: Site 1+2 sediment Sampling (18) + Purge GW wells installed @ Sites 21+46
PPE: Level "D"

0800 Depart Office for NAS Cecil Field
0945 Arrive NAS CF + low flow purge start 5SR Site 21; depart to Site 46
0950 Start low flow purge 3/2 S Site 46; purged dry 5min; stop purge; Depart to Site 21
1020 Continue low flow purge 5 SR Site 21; Turbidity reading 325 ntu (bottom screen) 433 ntu (top of screen)
1030 Depart Site 21 for Site 1+2

1105 Arrived at Site 1+2, began calibration of instruments
1140 Completed calibration, commenced surface water and sediment sampling event. See table below for details.

Site ID	Sample ID	Sample time	Depth	Analyses
RR17	CEF-01-RR17-SW-18 *	1155	0-6"	cyanide, SW 846
RR17	CEF-01-RR17-SD-18 *	1155	0-6"	1,2,3,4,5
RR08	CEF-01-RR08-SW-08 * *	1310	0-6"	cyanide, SW 846
RR08	CEF-01-RR08-SD-08 * *	1310	0-6"	1,2,3,4,5
RR10	CEF-01-RR10-SW-18	1330	0-6"	cyanide, SW 846
RR10	CEF-01-RR10-SD-18	1330	0-6"	1,2,3,4,5

* Indicates Duplicate Sample DUP 01
** Indicates MS/MSD Sample
Analysis Key 1= Select Inorganics 2= cyanide (EPA 335.2)
3= Select VOCs (Acetone) low 4= Select VOCs (med)
5= TS for VOA sediment 6= PAH/metals 7= Pesticides

~~1530~~ Completed Sampling event, packed Samples and equipment
~~1345~~ Depart Site 1+2 for Site 21; 5SR turbidity 56.7 after
1545 ±6 gal purge
1800 Arrived at office after relinquishing Samples to Katahdin Labs Via FEDEX Airbill 873915874020

LSK

NAS Cecil Field Site 46 Groundwater Sampling 24 Apr 12

Personnel: Jeff Krone
Truck: 2006 F-250
PPE: Level D
Objective: GW Sampling at Site 46 and 21
Weather: Sunny, breezy, 75°

0915 Departed for Cecil Field
0940 Arrived at Site 46, began purge for well 32$ and instrument calibration
0948 Well purged dry, allowed to recharge.
0955 Began sampling of well after collecting after calibration
1100 departed Site for Site 21
1103 Arrived at Site 21, began purge of well 05$R turbidity 155 NTU.
1110 Departed site to allow well to purge, proceeded to Site 46
1500 Completed sample at Site 46, packed samples on ice for transport
1515 Met Accutest Courier at Tower, Relinquished samples to Henry.
1550 Returned to Site 21, Well 05$R turbidity below 20 NTU, began measuring and recording parameters
1600 Sample time for Well 05$R.
1640 Completed sampling, transferred IDW to drum and departed Cecil Field.

25 Apr 12
1500 Samples relinquished to Accutest Courier

Tetra Tech NUS, Inc.

DOCUMENTATION OF FIELD CALIBRATION

PROJECT NAME : [redacted] Site 21

SITE NAME: 21

PROJECT No.: 112802267

INSTRUMENT NAME/MODEL:

MANUFACTURER:

SERIAL NUMBER:

Date of Calibration	Instrument Name and Model	Instrument I.D. Number	Person Performing Calibration	Instrument Settings		Instrument Readings		Calibration Standard (Lot No.)	Remarks and Comments
				Pre-calibration	Post-calibration	Pre-calibration	Post-calibration		
4-17-12	YSI 556	06H 2823	DS	4.2	pH 4				
				7.1	pH7				
				1.536	Cond1.409				
				101	DO % 100				
				239	ORP 240				
4-17-12	La Motte 2020		DS	1.01	1				
				10.2	10				
4-16-12	PID 2020	17242	DS	120	100				Lot# Cal-248-100-7
4/20/12	452	06H2883	JK	4.08	4.00	pH 4			
				9.93	10.00	pH 10			
				1.327	1.413	cond 1.413			
				236.7	240	ORP 240			
				67.1	100	D.O			
				7.03					
4/20/12	Lamotte	11325		10.0	10.00	10.0			
				1.64	1.0	1.0			
4/20/12	457	06H2888	JK	4.00	4.00	pH 4			
				10.02	10.00	pH 10			
				1.426	1.413	cond 1.413			
				106	99.7	D.O			
				246	240.0	ORP 240			
4/20/12	Lamotte	11325		10.8	10.0	10 NTU			
				0.93	1.0	1 NTU			

TETRA TECH NUS, INC. | **CHAIN OF CUSTODY** | **NUMBER** 2258 | **PAGE** 1 **OF** 1

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G02267	Site 21	Rob Sincik	412 921 8163	Accutest / Heather
SAMPLERS (SIGNATURE)		**FIELD OPERATIONS LEADER**	**PHONE NUMBER**	**ADDRESS**
		Dave Siefker	904 334 7260	4405 Vineland Rd, C-15
		CARRIER/WAYBILL NUMBER		**CITY, STATE**
		Fed Ex 8427 1834 4599		Orlando, FL

STANDARD TAT ☐
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☒ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G

PRESERVATIVE USED: –

TYPE OF ANALYSIS: Select 8081 Chlordane

DATE YEAR 2012	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAP (G) COMP (C)	No. OF CONTAINERS	Select 8081 Chlordane								COMMENTS
10/19	1505	CEF.P21.GW.G3.101912				GW		2	X								Cool to 4°C
10/19	1650	CEF.P21.GW.G1.101912				GW		2	X								
10/22	1230	CEF.P21 GW.G2.102212				GW		2	X								Select 8081 Chlordane

7 DAY TAT

1. RELINQUISHED BY	DATE	TIME	1. RECEIVED BY	DATE	TIME
	10.22.12	1600			
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TINUS-001

US NAVY Site 21 Cecil 10-19-12

1320 On site
1330 Begin to start pumps in wells
1345 Wells turbid probably will take a while
begin calibration

1505 Well PZ-3 has cleared the other 2 wells
still turbid > 20 NTU - Well PZ 1 ~ 40
PZ 2 100+ NTU

SAMPLE ID
CEF. P21 GW GX . DATE
Wells in building have been cut flush with
land surface. (G2 & G3). G1 out side
has a 1.4 ft stick up above land surface.
1650 Sample G1 turbidity 15 NTU
1730 CAN'T get turbidity below 35 for G2
Will have to come back Monday
- SAMPLES on ice in cooler
- All samples collected per FDEP SOPs
- SAMPLE To be Stored in refrigerator (Sample)
at Tetra Tech office.

1733 OFF Site - To office

G1 SAMPLED - ~~1505~~ 1650
G3 SAMPLED 1505

1805 SAMPLES IN T+ refrigerator, Secure

Site 21 10.22.12

Personel : Dave Siefken
PPE : Level "D"
Weather : Clear 79°F
Obj : Collect GW for Chlordane (8081)
LAB : Accutest

0850 On site Set pump up to start purging
0900 Begin purge of G2. This well was turbid friday
Calibrate YSI - See data Sheet
1020 Well Still turbid
1045 Turbidity 33 NTU
1210 Turbidity 17 NTU
1230 SAMPLE G2
1255 All Samples on ice

COC # 22588

Ship fed Ex 8427 1834 4599

1330 Leave Site. Samples on ice -
1600 release Samples to fed Ex based for Accutest
See GW sample sheet for more details about purgey

DEP-SOP-001/01
FS 2200 Groundwater Sampling
Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: Site 21		SITE LOCATION: Cecil	
WELL NO: G3	SAMPLE ID: CEF-P21-GW-G3-101912		DATE: 10.19.12

PURGING DATA

WELL DIAMETER (inches): 1.0	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 3 feet to 13 feet	STATIC DEPTH TO WATER (feet): 3.35	PURGE PUMP TYPE OR BAILER: peristaltic

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (13.2 feet – 3.35 feet) X gallons/foot = 2.4 ~~gallons~~ 2

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (gallons/foot X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 10	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 10	PURGING INITIATED AT: 1345	PURGING ENDED AT: 1500	TOTAL VOLUME PURGED (gallons): 15

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µmhos/cm or µS/cm)	DISSOLVED OXYGEN (circle mg/L or % saturation)	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
1345	0	0	200								
1445	12	12	200	6.54	6.16	24.50	0.683	1.52	9.64	Clear	—
1450	1	13	200	6.54	6.15	24.53	0.681	1.35	8.89	Clear	—
1455	1	14	200	6.54	6.15	24.50	0.679	1.34	8.81	Clear	—
1500	1	15	200	6.54	6.15	24.48	0.676	1.33	7.64	Clear	—
1505	SAMPLE										

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Dan Siefker / T+	SAMPLER(S) SIGNATURES: [signature]	SAMPLING INITIATED AT: 1505	SAMPLING ENDED AT: 1525
PUMP OR TUBING DEPTH IN WELL (feet): 10	SAMPLE PUMP FLOW RATE (mL per minute): 200	TUBING MATERIAL CODE: PE	
FIELD DECONTAMINATION: Y (N)	FIELD-FILTERED: Y (N) Filtration Equipment Type: ____ FILTER SIZE: ____ µm	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH		
1	2	AG	1L	—	12	—	8081	PP

REMARKS: Well Flush w/ Ground

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING/PURGING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); VT = Vacuum Trap; O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)
pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

DEP-SOP-001/01
FS 2200 Groundwater Sampling
Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: Site 21		SITE LOCATION: Cecil	
WELL NO: G2	SAMPLE ID: CEF-P21-GW-G2-102212		DATE: 10-22-12

PURGING DATA

WELL DIAMETER (inches): 1.0	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 3 feet to 13 feet	STATIC DEPTH TO WATER (feet): 2.98	PURGE PUMP TYPE OR BAILER: peristaltic

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (13 feet – 2.98 feet) X gallons/foot = 2.4 L gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (gallons/foot X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 10	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 11.00	PURGING INITIATED AT: 0900	PURGING ENDED AT: 1225	TOTAL VOLUME PURGED (gallons) (L) 40

TIME	VOLUME PURGED (gallons) (L)	CUMUL. VOLUME PURGED (gallons) (L)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µmhos/cm or µS/cm)	DISSOLVED OXYGEN (circle mg/L or % saturation)	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
0900	0	0	200	2.98							
1215	38	38	200	11.24	7.19	23.43	281	2.92	17.77	Clear	—
1220	~~3~~ 1	39	200	11.24	7.19	23.44	281	2.92		Clear	—
1225	1	40	200	11.24	7.19	23.44	281	2.94		Clear	
1230	SAMPLE										

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: David Siefken / T+	SAMPLER(S) SIGNATURES: [illegible]	SAMPLING INITIATED AT: 1230	SAMPLING ENDED AT: 1250
PUMP OR TUBING DEPTH IN WELL (feet): 11.00	SAMPLE PUMP FLOW RATE (mL per minute): 200	TUBING MATERIAL CODE: PE	
FIELD DECONTAMINATION: Y (N)	FIELD-FILTERED: Y (N) FILTER SIZE: ____ µm Filtration Equipment Type:	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH		
1	2	AG	1 (L)	—	1 (L)	—	8081	PP

REMARKS: Well Flush w/ Ground

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING/PURGING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); VT = Vacuum Trap; O = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)
pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

DEP-SOP-001/01
FS 2200 Groundwater Sampling
Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: Site 21		SITE LOCATION: Cecil	
WELL NO: ~~G3~~ DS G1	SAMPLE ID: CEF-P21-GW-G1-101912		DATE: 10-19-12

PURGING DATA

WELL DIAMETER (inches): 1.0	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 3 feet to 15 feet	STATIC DEPTH TO WATER (feet): 4.32	PURGE PUMP TYPE OR BAILER: peristaltic

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (15.15 feet – 4.32 feet) X gallons/foot = 2.4 gallons 2

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (gallons/foot X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 11.0	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 11.0	PURGING INITIATED AT: 1530	PURGING ENDED AT: 1645	TOTAL VOLUME PURGED (gallons): 26

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µmhos/cm or µS/cm)	DISSOLVED OXYGEN (circle mg/L or % saturation)	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
1530	0	0	200	4.32							
1630	24	24	200	10.86	6.46	24.15	0.202	2.66	15.5	clear	—
1635	1	25	200	10.86	6.46	24.16	0.202	2.60	15.3	clear	—
1640	1	26	200	10.86	6.46	24.13	0.202	2.61	15.3	clear	—
1650	SAMPLE										

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: David Siefken / T+	SAMPLER(S) SIGNATURES: [signature]	SAMPLING INITIATED AT: 1650	SAMPLING ENDED AT: 1710
PUMP OR TUBING DEPTH IN WELL (feet): 11.0	SAMPLE PUMP FLOW RATE (mL per minute): 200	TUBING MATERIAL CODE: PE	
FIELD DECONTAMINATION: Y (N)	FIELD-FILTERED: Y (N) FILTER SIZE: ____ µm Filtration Equipment Type: ____	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH		
1	2	AG	1L	—	1L	—	8081	PP

REMARKS: Depth to water includes stick up. TOC = 1.4 ft above ground level.

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING/PURGING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); VT = Vacuum Trap; O = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

3.45

Tetra Tech NUS, Inc.

EQUIPMENT CALIBRATION LOG

PROJECT NAME : Cecil

SITE NAME: Site 21

PROJECT No.: 112g02267

INSTRUMENT NAME/MODEL:

MANUFACTURER:

SERIAL NUMBER:

Date of Calibration	Instrument I.D. Number	Person Performing Calibration	Instrument Settings		Instrument Readings		Calibration Standard (Lot No.)	Remarks and Comments
			Pre-calibration	Post-calibration	Pre-calibration	Post-calibration		
10-22-12	105100498	DS	pH	4		4.02	9373	exp 12 12
			pH	7		7.01	2101037	exp 12-12
		YSI	cond	1.412		1410	2109132	Aug 13
			DO%	100		111		
		HF Scientific	1000			1008	20416	Apr 2014
			10			9.99	00922	Apr 2014
			0.2			0.02	20401	Apr 2014

Tetra Tech NUS, Inc.

EQUIPMENT CALIBRATION LOG

PROJECT NAME : Cecil

SITE NAME: Site 21

PROJECT No.: 112G02267

INSTRUMENT NAME/MODEL:

MANUFACTURER:

SERIAL NUMBER:

Date of Calibration	Instrument I.D. Number	Person Performing Calibration	Instrument Settings		Instrument Readings		Calibration Standard (Lot No.)	Remarks and Comments
			Pre-calibration	Post-calibration	Pre-calibration	Post-calibration		
10.19.12	105100988	Dave S.		4		3.99	2109132	exp Aug 2013
				7		6.87	2101037	exp Dec 2012
				1.412		1.421	9373	exp Dec 2012
				100				
				1000		988	20416	
				10		9.21	00922	exp 2014
				0.2		0.11	20401	exp 2014
								exp 2014

APPENDIX B

SITE PHOTOS

Photo 1 – View of Building 398 (Quonset Hut) looking South

Photo 2 – View of Building 874, looking West

Photo 3 – View showing palm tree and distance between Building 398 and Building 874, looking West

Photo 4 – View of the floor and supports inside Building 398 (Quonset hut)

Photo 5 – Palm tree removed to allow for abandonment of CEF-P21-05S
and installation of CEF-P21-05SR

Photo 6 – View of newly installed well CEF-P21-05SR (left) and purging of
temporary well CEF-P21-G1 (right)

Photo 7 – Purging of temporary well CEF-P21-G1

Photo 8 – Soil sample collected at S110 (location S1 at depth 10 feet bgs)

Photo 9 – Soil sample collected at S205 (location S2 at depth 5 feet bgs)

Photo 10 – Soil sample collected at S310 (location S3 and depth 10 feet bgs)

APPENDIX C

LABORATORY ANALYTICAL REPORT

Tetra Tech **INTERNAL CORRESPONDENCE**

TO:	**R. SIMCIK**	**DATE:**	**MAY 14, 2012**
FROM:	**EDWARD SEDLMYER**	**COPIES:**	**DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION - CHLORDANE**
CTO JM09, NAS CECIL FIELD
SDG F92199

SAMPLES: 13/Soil/CHLORDANE

CEF-P21-DUP01-20120416	CEF-P21-SS-S100-20120416
CEF-P21-SS-S105-20120416	CEF-P21-SS-S110-20120416
CEF-P21-SS-S200-20120416	CEF-P21-SS-S205-20120416
CEF-P21-SS-S210-20120416	CEF-P21-SS-S300-20120416
CEF-P21-SS-S305-20120416	CEF-P21-SS-S310-20120416
CEF-P21-SS-S400-20120416	CEF-P21-SS-S405-20120416
CEF-P21-SS-S410-20120416	

4/Aqueous/CHLORDANE

CEF-P21-GW-DUP01	CEF-P21-GW-G1-20120417
CEF-P21-GW-G2-20120417	CEF-P21-GW-G3-20120417

OVERVIEW

The sample set for CTO JM09, NAS Cecil Field, SDG F92199 consists of thirteen (13) soil and four (4) aqueous environmental samples. The following field duplicate pairs were included in this SDG: CEF-P21-SS-S405-20120416/CEF-P21-DUP01-20120416 and CEF-P21-GW-G3-20120417/CEF-P21-GW-DUP01.

All samples were analyzed for chlordane.

The samples were collected by Tetra Tech on April 16 and 17, 2012 and analyzed by Accutest Laboratories. All analyses were conducted in accordance with SW-846 Method 8081B analysis and reporting protocols. The data contained in this SDG were validated with regard to the following parameters:

* • Data Completeness
* • Holding Times
* • Initial/Continuing Calibrations
* • Laboratory Method Blank Results
* • Detection Limits

The symbol (*) indicates that quality control criteria were met for this parameter. Problems affecting data quality are discussed below; documentation supporting these findings is presented in Appendix C. Qualified Analytical results are presented in Appendix A. Results as reported by the laboratory are presented in Appendix B.

The text of this report is formatted to address only gross non-compliances resulting in the rejection of data and the elimination of false positives.

Chlordane

The following samples required dilutions due to concentrations for chlordane greater than the linear calibration range of the instrument:

Sample ID	Compound	Dilution Factor
CEF-P21-SS-S200-20120416	Chlordane	4
CEF-P21-SS-S300-20120416	Chlordane	4
CEF-P21-SS-S305-20120416	Chlordane	10
CEF-P21-SS-S400-20120416	Chlordane	5

Additional Comments

Positive results less than the reporting limit (RL) were qualified as estimated, J, due to uncertainty near the detection limit.

EXECUTIVE SUMMARY

Laboratory Performance Issues: None.

Other Factors Affecting Data Quality: Positive results less than the reporting limit (RL) were qualified as estimated, J, due to uncertainty near the detection limit.

The data for these analyses were reviewed with reference to the EPA Functional Guidelines for Organic Data Validation, October 1999, National Functional Guidelines for Inorganic Review, October 2004, and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories" (April 2009). The text of this report has been formulated to address only those problem areas affecting data quality.

Tetra Tech
Edward Sedlmyer
Chemist/Data Validator

TetraTech

Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:

Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

APPENDIX A

QUALIFIED ANALYTICAL RESULTS

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = RPD between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is less than sample activity
Z1 = Tentatively Identified Compound considered presumptively present
Z2 = Tentatively Identified Compound column bleed

PROJ_NO: 02267	NSAMPLE	CEF-P21-GW-DUP01			CEF-P21-GW-G1-20120417			CEF-P21-GW-G2-20120417			CEF-P21-GW-G3-20120417		
SDG: F92199	LAB_ID	F92199-17			F92199-16			F92199-15			F92199-14		
FRACTION: PEST/PCB	SAMP_DATE	4/17/2012			4/17/2012			4/17/2012			4/17/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF	CEF-P21-GW-G3-20120417											
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
CHLORDANE		0.19	U		1.9			0.19	U		0.19	U	

PROJ_NO: 02267	NSAMPLE	CEF-P21-DUP01-20120416			CEF-P21-SS-S100-20120416			CEF-P21-SS-S105-20120416			CEF-P21-SS-S110-20120416		
SDG: F92199	LAB_ID	F92199-13			F92199-1			F92199-5			F92199-6		
FRACTION: PEST/PCB	SAMP_DATE	4/16/2012			4/16/2012			4/16/2012			4/16/2012		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	83.9			92.6			83.0			85.3		
	DUP_OF	CEF-P21-SS-S405-20120416											
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
CHLORDANE		7.8	U		13.4	J	P	8	U		7.9	U	

PROJ_NO: 02267	NSAMPLE	CEF-P21-SS-S200-20120416			CEF-P21-SS-S205-20120416			CEF-P21-SS-S210-20120416			CEF-P21-SS-S300-20120416		
SDG: F92199	LAB_ID	F92199-2			F92199-7			F92199-8			F92199-3		
FRACTION: PEST/PCB	SAMP_DATE	4/16/2012			4/16/2012			4/16/2012			4/16/2012		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	87.7			82.7			83.3			95.6		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
CHLORDANE		378			8.1	U		7.9	U		243		

PROJ_NO: 02267	NSAMPLE	CEF-P21-SS-S305-20120416			CEF-P21-SS-S310-20120416			CEF-P21-SS-S400-20120416			CEF-P21-SS-S405-20120416		
SDG: F92199	LAB_ID	F92199-9			F92199-10			F92199-4			F92199-11		
FRACTION: PEST/PCB	SAMP_DATE	4/16/2012			4/16/2012			4/16/2012			4/16/2012		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	83.7			80.3			91.0			80.5		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
CHLORDANE		1300			102			140			8.1	U	

PROJ_NO: 02267	NSAMPLE	CEF-P21-SS-S410-20120416		
SDG: F92199	LAB_ID	F92199-12		
FRACTION: PEST/PCB	SAMP_DATE	4/16/2012		
MEDIA: SOIL	QC_TYPE	NM		
	UNITS	UG/KG		
	PCT_SOLIDS	76.5		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
CHLORDANE		8.6	U	

APPENDIX B

RESULTS AS REPORTED BY THE LABORATORY

Accutest Laboratories

Report of Analysis

Client Sample ID:	CEF-P21-DUP01-20120416		
Lab Sample ID:	F92199-13	**Date Sampled:**	04/16/12
Matrix:	SO - Soil	**Date Received:**	04/18/12
Method:	SW846 8081B SW846 3550C	**Percent Solids:**	83.9
Project:	NAS Cecil Field-Site 21		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TT33904.D	1	04/28/12	EM	04/26/12	OP41557	GTT1113
Run #2							

	Initial Weight	Final Volume
Run #1	30.5 g	10.0 ml
Run #2		

CAS No.	Compound	Result	PQL	MDL	Units	Q
12789-03-6	Chlordane	7.8 U	20	7.8	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	101%		46-122%
2051-24-3	Decachlorobiphenyl	105%		50-133%

U = Not detected MDL - Method Detection Limit
PQL = Practical Quantitation Limit
L = Indicates value exceeds calibration range

I = Result > = MDL but < PQL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	CEF-P21-SS-S100-20120416		
Lab Sample ID:	F92199-1	**Date Sampled:**	04/16/12
Matrix:	SO - Soil	**Date Received:**	04/18/12
Method:	SW846 8081B SW846 3550C	**Percent Solids:**	92.6
Project:	NAS Cecil Field-Site 21		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	KK47335.D	1	04/30/12	EM	04/26/12	OP41557	GKK1631
Run #2							

	Initial Weight	Final Volume
Run #1	29.9 g	10.0 ml
Run #2		

CAS No.	Compound	Result	PQL	MDL	Units	Q
12789-03-6	Chlordane	13.4	18	7.2	ug/kg	I

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	97%		46-122%
2051-24-3	Decachlorobiphenyl	99%		50-133%

(a) All hits confirmed by dual column analysis.

U = Not detected MDL - Method Detection Limit
PQL = Practical Quantitation Limit
L = Indicates value exceeds calibration range
I = Result > = MDL but < PQL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	CEF-P21-SS-S105-20120416		
Lab Sample ID:	F92199-5	**Date Sampled:**	04/16/12
Matrix:	SO - Soil	**Date Received:**	04/18/12
Method:	SW846 8081B SW846 3550C	**Percent Solids:**	83.0
Project:	NAS Cecil Field-Site 21		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	KK47339.D	1	04/30/12	EM	04/26/12	OP41557	GKK1631
Run #2							

	Initial Weight	Final Volume
Run #1	30.1 g	10.0 ml
Run #2		

CAS No.	Compound	Result	PQL	MDL	Units	Q
12789-03-6	Chlordane	8.0 U	20	8.0	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	93%		46-122%
2051-24-3	Decachlorobiphenyl	96%		50-133%

U = Not detected MDL - Method Detection Limit
PQL = Practical Quantitation Limit
L = Indicates value exceeds calibration range

I = Result > = MDL but < PQL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	CEF-P21-SS-S110-20120416		
Lab Sample ID:	F92199-6	**Date Sampled:**	04/16/12
Matrix:	SO - Soil	**Date Received:**	04/18/12
Method:	SW846 8081B SW846 3550C	**Percent Solids:**	85.3
Project:	NAS Cecil Field-Site 21		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TT33895.D	1	04/28/12	EM	04/26/12	OP41557	GTT1113
Run #2							

	Initial Weight	Final Volume
Run #1	29.5 g	10.0 ml
Run #2		

CAS No.	Compound	Result	PQL	MDL	Units	Q
12789-03-6	Chlordane	7.9 U	20	7.9	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	92%		46-122%
2051-24-3	Decachlorobiphenyl	94%		50-133%

U = Not detected MDL - Method Detection Limit
PQL = Practical Quantitation Limit
L = Indicates value exceeds calibration range

I = Result > = MDL but < PQL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	CEF-P21-SS-S200-20120416		
Lab Sample ID:	F92199-2	**Date Sampled:**	04/16/12
Matrix:	SO - Soil	**Date Received:**	04/18/12
Method:	SW846 8081B SW846 3550C	**Percent Solids:**	87.7
Project:	NAS Cecil Field-Site 21		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	KK47401.D	4	05/02/12	EM	04/26/12	OP41557	GKK1633
Run #2							

	Initial Weight	Final Volume
Run #1	29.8 g	10.0 ml
Run #2		

CAS No.	Compound	Result	PQL	MDL	Units	Q
12789-03-6	Chlordane	378	77	31	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	95%		46-122%
2051-24-3	Decachlorobiphenyl	98%		50-133%

(a) All hits confirmed by dual column analysis.

U = Not detected MDL - Method Detection Limit
PQL = Practical Quantitation Limit
L = Indicates value exceeds calibration range
I = Result > = MDL but < PQL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	CEF-P21-SS-S205-20120416		
Lab Sample ID:	F92199-7	**Date Sampled:**	04/16/12
Matrix:	SO - Soil	**Date Received:**	04/18/12
Method:	SW846 8081B SW846 3550C	**Percent Solids:**	82.7
Project:	NAS Cecil Field-Site 21		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TT33896.D	1	04/28/12	EM	04/26/12	OP41557	GTT1113
Run #2							

	Initial Weight	Final Volume
Run #1	29.8 g	10.0 ml
Run #2		

CAS No.	Compound	Result	PQL	MDL	Units	Q
12789-03-6	Chlordane	8.1 U	20	8.1	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	98%		46-122%
2051-24-3	Decachlorobiphenyl	100%		50-133%

U = Not detected MDL - Method Detection Limit
PQL = Practical Quantitation Limit
L = Indicates value exceeds calibration range

I = Result > = MDL but < PQL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	CEF-P21-SS-S210-20120416		
Lab Sample ID:	F92199-8	**Date Sampled:**	04/16/12
Matrix:	SO - Soil	**Date Received:**	04/18/12
Method:	SW846 8081B SW846 3550C	**Percent Solids:**	83.3
Project:	NAS Cecil Field-Site 21		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TT33897.D	1	04/28/12	EM	04/26/12	OP41557	GTT1113
Run #2							

	Initial Weight	Final Volume
Run #1	30.3 g	10.0 ml
Run #2		

CAS No.	Compound	Result	PQL	MDL	Units	Q
12789-03-6	Chlordane	7.9 U	20	7.9	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	94%		46-122%
2051-24-3	Decachlorobiphenyl	95%		50-133%

U = Not detected MDL - Method Detection Limit
PQL = Practical Quantitation Limit
L = Indicates value exceeds calibration range

I = Result > = MDL but < PQL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	CEF-P21-SS-S300-20120416		
Lab Sample ID:	F92199-3	**Date Sampled:**	04/16/12
Matrix:	SO - Soil	**Date Received:**	04/18/12
Method:	SW846 8081B SW846 3550C	**Percent Solids:**	95.6
Project:	NAS Cecil Field-Site 21		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	KK47402.D	4	05/02/12	EM	04/26/12	OP41557	GKK1633
Run #2							

	Initial Weight	Final Volume
Run #1	29.7 g	10.0 ml
Run #2		

CAS No.	Compound	Result	PQL	MDL	Units	Q
12789-03-6	Chlordane	243	70	28	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	100%		46-122%
2051-24-3	Decachlorobiphenyl	103%		50-133%

(a) All hits confirmed by dual column analysis.

U = Not detected MDL - Method Detection Limit
PQL = Practical Quantitation Limit
L = Indicates value exceeds calibration range

I = Result > = MDL but < PQL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	CEF-P21-SS-S305-20120416		
Lab Sample ID:	F92199-9	**Date Sampled:**	04/16/12
Matrix:	SO - Soil	**Date Received:**	04/18/12
Method:	SW846 8081B SW846 3550C	**Percent Solids:**	83.7
Project:	NAS Cecil Field-Site 21		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	KK47300.D	10	04/28/12	EM	04/26/12	OP41557	GKK1629
Run #2							

	Initial Weight	Final Volume
Run #1	30.0 g	10.0 ml
Run #2		

CAS No.	Compound	Result	PQL	MDL	Units	Q
12789-03-6	Chlordane	1300	200	80	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	0% [b]		46-122%
2051-24-3	Decachlorobiphenyl	0% [b]		50-133%

(a) All hits confirmed by dual column analysis.
(b) Outside control limits due to dilution.

U = Not detected MDL - Method Detection Limit
PQL = Practical Quantitation Limit
L = Indicates value exceeds calibration range
I = Result > = MDL but < PQL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	CEF-P21-SS-S310-20120416		
Lab Sample ID:	F92199-10	**Date Sampled:**	04/16/12
Matrix:	SO - Soil	**Date Received:**	04/18/12
Method:	SW846 8081B SW846 3550C	**Percent Solids:**	80.3
Project:	NAS Cecil Field-Site 21		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	KK47340.D	1	04/30/12	EM	04/26/12	OP41557	GKK1631
Run #2							

	Initial Weight	Final Volume
Run #1	30.0 g	10.0 ml
Run #2		

CAS No.	Compound	Result	PQL	MDL	Units	Q
12789-03-6	Chlordane	102	21	8.3	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	96%		46-122%
2051-24-3	Decachlorobiphenyl	104%		50-133%

(a) All hits confirmed by dual column analysis.

U = Not detected MDL - Method Detection Limit
PQL = Practical Quantitation Limit
L = Indicates value exceeds calibration range
I = Result > = MDL but < PQL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	CEF-P21-SS-S400-20120416		
Lab Sample ID:	F92199-4	**Date Sampled:**	04/16/12
Matrix:	SO - Soil	**Date Received:**	04/18/12
Method:	SW846 8081B SW846 3550C	**Percent Solids:**	91.0
Project:	NAS Cecil Field-Site 21		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	KK47403.D	5	05/02/12	EM	04/26/12	OP41557	GKK1633
Run #2							

	Initial Weight	Final Volume
Run #1	30.5 g	10.0 ml
Run #2		

CAS No.	Compound	Result	PQL	MDL	Units	Q
12789-03-6	Chlordane	140	90	36	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	97%		46-122%
2051-24-3	Decachlorobiphenyl	103%		50-133%

(a) All hits confirmed by dual column analysis.

U = Not detected MDL - Method Detection Limit
PQL = Practical Quantitation Limit
L = Indicates value exceeds calibration range
I = Result > = MDL but < PQL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	CEF-P21-SS-S405-20120416		
Lab Sample ID:	F92199-11	**Date Sampled:**	04/16/12
Matrix:	SO - Soil	**Date Received:**	04/18/12
Method:	SW846 8081B SW846 3550C	**Percent Solids:**	80.5
Project:	NAS Cecil Field-Site 21		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TT33902.D	1	04/28/12	EM	04/26/12	OP41557	GTT1113
Run #2							

	Initial Weight	Final Volume
Run #1	30.5 g	10.0 ml
Run #2		

CAS No.	Compound	Result	PQL	MDL	Units	Q
12789-03-6	Chlordane	8.1 U	20	8.1	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	101%		46-122%
2051-24-3	Decachlorobiphenyl	104%		50-133%

U = Not detected MDL - Method Detection Limit
PQL = Practical Quantitation Limit
L = Indicates value exceeds calibration range

I = Result > = MDL but < PQL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	CEF-P21-SS-S410-20120416		
Lab Sample ID:	F92199-12	**Date Sampled:**	04/16/12
Matrix:	SO - Soil	**Date Received:**	04/18/12
Method:	SW846 8081B SW846 3550C	**Percent Solids:**	76.5
Project:	NAS Cecil Field-Site 21		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TT33903.D	1	04/28/12	EM	04/26/12	OP41557	GTT1113
Run #2							

	Initial Weight	Final Volume
Run #1	30.4 g	10.0 ml
Run #2		

CAS No.	Compound	Result	PQL	MDL	Units	Q
12789-03-6	Chlordane	8.6 U	21	8.6	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	100%		46-122%
2051-24-3	Decachlorobiphenyl	105%		50-133%

U = Not detected MDL - Method Detection Limit
PQL = Practical Quantitation Limit
L = Indicates value exceeds calibration range

I = Result > = MDL but < PQL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	CEF-P21-GW-DUP01		
Lab Sample ID:	F92199-17	**Date Sampled:**	04/17/12
Matrix:	AQ - Ground Water	**Date Received:**	04/18/12
Method:	SW846 8081B SW846 3510C	**Percent Solids:**	n/a
Project:	NAS Cecil Field-Site 21		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TT33809.D	1	04/25/12	EM	04/24/12	OP41519	GTT1111
Run #2							

	Initial Volume	Final Volume
Run #1	1040 ml	10.0 ml
Run #2		

CAS No.	Compound	Result	PQL	MDL	Units	Q
12789-03-6	Chlordane	0.19 U	0.48	0.19	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	94%		42-127%
2051-24-3	Decachlorobiphenyl	80%		27-127%

U = Not detected MDL - Method Detection Limit
PQL = Practical Quantitation Limit
L = Indicates value exceeds calibration range

I = Result > = MDL but < PQL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	CEF-P21-GW-G1-20120417		
Lab Sample ID:	F92199-16	**Date Sampled:**	04/17/12
Matrix:	AQ - Ground Water	**Date Received:**	04/18/12
Method:	SW846 8081B SW846 3510C	**Percent Solids:**	n/a
Project:	NAS Cecil Field-Site 21		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	TT33806.D	1	04/25/12	EM	04/24/12	OP41519	GTT1111
Run #2							

	Initial Volume	Final Volume
Run #1	1050 ml	10.0 ml
Run #2		

CAS No.	Compound	Result	PQL	MDL	Units	Q
12789-03-6	Chlordane	1.9	0.48	0.19	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	104%		42-127%
2051-24-3	Decachlorobiphenyl	52%		27-127%

(a) All hits confirmed by dual column analysis.

U = Not detected MDL - Method Detection Limit
PQL = Practical Quantitation Limit
L = Indicates value exceeds calibration range
I = Result > = MDL but < PQL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	CEF-P21-GW-G2-20120417		
Lab Sample ID:	F92199-15	**Date Sampled:**	04/17/12
Matrix:	AQ - Ground Water	**Date Received:**	04/18/12
Method:	SW846 8081B SW846 3510C	**Percent Solids:**	n/a
Project:	NAS Cecil Field-Site 21		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TT33805.D	1	04/25/12	EM	04/24/12	OP41519	GTT1111
Run #2							

	Initial Volume	Final Volume
Run #1	1050 ml	10.0 ml
Run #2		

CAS No.	Compound	Result	PQL	MDL	Units	Q
12789-03-6	Chlordane	0.19 U	0.48	0.19	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	96%		42-127%
2051-24-3	Decachlorobiphenyl	60%		27-127%

U = Not detected MDL - Method Detection Limit
PQL = Practical Quantitation Limit
L = Indicates value exceeds calibration range

I = Result > = MDL but < PQL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	CEF-P21-GW-G3-20120417		
Lab Sample ID:	F92199-14	**Date Sampled:**	04/17/12
Matrix:	AQ - Ground Water	**Date Received:**	04/18/12
Method:	SW846 8081B SW846 3510C	**Percent Solids:**	n/a
Project:	NAS Cecil Field-Site 21		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TT33802.D	1	04/25/12	EM	04/24/12	OP41519	GTT1111
Run #2							

	Initial Volume	Final Volume
Run #1	1040 ml	10.0 ml
Run #2		

CAS No.	Compound	Result	PQL	MDL	Units	Q
12789-03-6	Chlordane	0.19 U	0.48	0.19	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	95%		42-127%
2051-24-3	Decachlorobiphenyl	74%		27-127%

U = Not detected MDL - Method Detection Limit
PQL = Practical Quantitation Limit
L = Indicates value exceeds calibration range

I = Result > = MDL but < PQL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

APPENDIX C

SUPPORT DOCUMENTATION

HOLDTIME

SDG F92199

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
PEST	UG/KG	CEF-P21-SS-S310-20120	F92199-10	NM	4/16/2012	4/26/2012	4/30/2012	10	4	14
PEST	UG/KG	CEF-P21-SS-S100-20120	F92199-1	NM	4/16/2012	4/26/2012	4/30/2012	10	4	14
PEST	UG/KG	CEF-P21-SS-S105-20120	F92199-5	NM	4/16/2012	4/26/2012	4/30/2012	10	4	14
PEST	UG/KG	CEF-P21-SS-S110-20120	F92199-6	NM	4/16/2012	4/26/2012	4/28/2012	10	2	12
PEST	UG/KG	CEF-P21-SS-S200-20120	F92199-2	NM	4/16/2012	4/26/2012	5/2/2012	10	6	16
PEST	UG/KG	CEF-P21-SS-S205-20120	F92199-7	NM	4/16/2012	4/26/2012	4/28/2012	10	2	12
PEST	UG/KG	CEF-P21-SS-S210-20120	F92199-8	NM	4/16/2012	4/26/2012	4/28/2012	10	2	12
PEST	UG/KG	CEF-P21-DUP01-2012041	F92199-13	NM	4/16/2012	4/26/2012	4/28/2012	10	2	12
PEST	UG/KG	CEF-P21-SS-S305-20120	F92199-9	NM	4/16/2012	4/26/2012	4/28/2012	10	2	12
PEST	UG/KG	CEF-P21-SS-S400-20120	F92199-4	NM	4/16/2012	4/26/2012	5/2/2012	10	6	16
PEST	UG/KG	CEF-P21-SS-S405-20120	F92199-11	NM	4/16/2012	4/26/2012	4/28/2012	10	2	12
PEST	UG/KG	CEF-P21-SS-S410-20120	F92199-12	NM	4/16/2012	4/26/2012	4/28/2012	10	2	12
PEST	UG/KG	CEF-P21-SS-S300-20120	F92199-3	NM	4/16/2012	4/26/2012	5/2/2012	10	6	16
PEST	UG/L	CEF-P21-GW-G3-2012041	F92199-14	NM	4/17/2012	4/24/2012	4/25/2012	7	1	8
PEST	UG/L	CEF-P21-GW-DUP01	F92199-17	NM	4/17/2012	4/24/2012	4/25/2012	7	1	8

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
PEST	UG/L	CEF-P21-GW-G1-2012041	F92199-16	NM	4/17/2012	4/24/2012	4/25/2012	7	1	8
PEST	UG/L	CEF-P21-GW-G2-2012041	F92199-15	NM	4/17/2012	4/24/2012	4/25/2012	7	1	8

Southeast
ACCUTEST
LABORATORIES

05/03/12

Technical Report for

Tetra Tech NUS

NAS Cecil Field-Site 21

N0039 CTO 78 WR#N0039-WR417

Accutest Job Number: F92199

Sampling Dates: 04/16/12 - 04/17/12

Report to:

Tetra-Tech,Inc.
661 Andersen Drive
Foster Plaza 7
Pittsburgh, PA 15220

ATTN: Tobrena Skeen

Total number of pages in report: **362**

ACCREDITED IN ACCORDANCE WITH nelac

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Harry Behzadi, Ph.D.
Laboratory Director

Client Service contact: Heather Wandrey 407-425-6700

Certifications: FL (E83510), LA (03051), KS (E-10327), IA (366), IL (200063), NC (573), NJ (FL002), SC (96038001) DoD ELAP (L-A-B L2229), CA (04226CA), TX (T104704404), AK, AR, GA, KY, MA, NV, OK, UT, VA, WA, WI

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Test results relate only to samples analyzed.

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Sample Summary

Tetra Tech NUS

Job No: F92199

NAS Cecil Field-Site 21
Project No: N0039 CTO 78 WR#N0039-WR417

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
F92199-1	04/16/12	10:40 RB	04/18/12	SO	Soil	CEF-P21-SS-S100-20120416
F92199-2	04/16/12	10:45 RB	04/18/12	SO	Soil	CEF-P21-SS-S200-20120416
F92199-3	04/16/12	10:50 RB	04/18/12	SO	Soil	CEF-P21-SS-S300-20120416
F92199-4	04/16/12	10:55 RB	04/18/12	SO	Soil	CEF-P21-SS-S400-20120416
F92199-5	04/16/12	13:05 RB	04/18/12	SO	Soil	CEF-P21-SS-S105-20120416
F92199-6	04/16/12	13:10 RB	04/18/12	SO	Soil	CEF-P21-SS-S110-20120416
F92199-7	04/16/12	13:20 RB	04/18/12	SO	Soil	CEF-P21-SS-S205-20120416
F92199-8	04/16/12	13:25 RB	04/18/12	SO	Soil	CEF-P21-SS-S210-20120416
F92199-9	04/16/12	13:35 RB	04/18/12	SO	Soil	CEF-P21-SS-S305-20120416
F92199-10	04/16/12	13:40 RB	04/18/12	SO	Soil	CEF-P21-SS-S310-20120416
F92199-11	04/16/12	13:50 RB	04/18/12	SO	Soil	CEF-P21-SS-S405-20120416
F92199-12	04/16/12	13:55 RB	04/18/12	SO	Soil	CEF-P21-SS-S410-20120416
F92199-13	04/16/12	00:00 RB	04/18/12	SO	Soil	CEF-P21-DUP01-20120416

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

Sample Summary
(continued)

Tetra Tech NUS

Job No: F92199

NAS Cecil Field-Site 21
Project No: N0039 CTO 78 WR#N0039-WR417

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
F92199-14	04/17/12	08:55 RB	04/18/12	AQ	Ground Water	CEF-P21-GW-G3-20120417
F92199-15	04/17/12	09:35 RB	04/18/12	AQ	Ground Water	CEF-P21-GW-G2-20120417
F92199-16	04/17/12	10:00 RB	04/18/12	AQ	Ground Water	CEF-P21-GW-G1-20120417
F92199-17	04/17/12	08:55 RB	04/18/12	AQ	Ground Water	CEF-P21-GW-DUP01

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: Tetra Tech NUS **Job No:** F92199

Site: NAS Cecil Field-Site 21 **Report Date** 5/2/2012 3:27:33 PM

17 Sample(s) were collected on 04/16/2012 and 04/17/2012 and were received at Accutest SE on 04/18/2012 properly preserved, at 2.8 Deg. C and intact. These Samples received an Accutest job number of F92199. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

Extractables by GC By Method SW846 8081B

Matrix: AQ **Batch ID:** OP41519

All samples were extracted within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) F92199-14MS, F92199-14MSD were used as the QC samples indicated.

Chlordane not routinely spiked for this method. Since only Chlordane is being reported, the BS, MS, and MSD will not show any recoveries. Sample(s) F92199-9 has surrogates outside control limits. Probable cause is due to matrix interference. F92199-16: All hits confirmed by dual column analysis.

Matrix: AQ **Batch ID:** OP41519

All samples were extracted within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) F92437-3MS, F92437-3MSD were used as the QC samples indicated.

Chlordane not routinely spiked for this method. Since only Chlordane is being reported, the BS, MS, and MSD will not show any recoveries.

Sample(s) F92199-9 has surrogates outside control limits. Probable cause is due to matrix interference.

F92199-1: All hits confirmed by dual column analysis.

F92199-2: All hits confirmed by dual column analysis.

F92199-3: All hits confirmed by dual column analysis.

F92199-4: All hits confirmed by dual column analysis.

F92199-9: All hits confirmed by dual column analysis.

F92199-9 for Tetrachloro-m-xylene: Outside control limits due to dilution.

F92199-9 for Decachlorobiphenyl: Outside control limits due to dilution.

F92199-10: All hits confirmed by dual column analysis.

Wet Chemistry By Method SM19 2540G

Matrix: SO **Batch ID:** GN49481

Sample(s) F92199-1DUP was used as the QC sample for Solids, Percent.

Accutest Laboratories Southeast (ALSE) certifies that this report meets the project requirements for analytical data produced for the samples as received at ALSE and as stated on the COC. ALSE certifies that the data meets the Data Quality Objectives for precision, accuracy and completeness as specified in the ALSE Quality Manual except as noted above. This report is to be used in its entirety. ALSE is not responsible for any assumptions of data quality if partial data packages are used.

Narrative prepared by:

Date: May 2, 2012

Kim Benham, Client Services (signature on file)

TETRA TECH NUS, INC. CHAIN OF CUSTODY NUMBER № 2230 F92199 PAGE ___ OF ___

PROJECT NO: 112S02267	FACILITY: Cecil	PROJECT MANAGER: Rob Smith	PHONE NUMBER: 412 921 8163	LABORATORY NAME AND CONTACT: Accutest / Heather Wardy
SAMPLERS (SIGNATURE): [signature]		FIELD OPERATIONS LEADER: Dave Sretthen	PHONE NUMBER: 412 921 8163	ADDRESS: 4405 Vineland RD C-15
		CARRIER/WAYBILL NUMBER: Pick up		CITY, STATE: Orlando, FL

STANDARD TAT (X)
RUSH TAT ☐ ☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G
PRESERVATIVE USED: —

	DATE YEAR	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	TYPE OF ANALYSIS: 8081A Chlordane	COMMENTS
1	4/16	1040	CEF-P21-SS-5100-20120416		0	6"	SO	G	1	X	Cool to
2	4/16	1045	CEF-P21-SS-5200-20120416		0	6"	SO	G	1	X	4°C
3	4/16	1050	CEF-P21-SS-5300-20120416		0	6"	SO	G	1	X	
4	4/16	1055	CEF-P21-SS-5400-20120416		0	6"	SO	G	1	X	
5	4/16	1305	CEF-P21-SS-5105-20120416			5'	SO	G	1	X	
6	4/16	1310	CEF-P21-SS-5110-20120416			10'	SO	G	1	X	
7	4/16	1320	CEF-P21-SS-5205-20120416			5'	SO	G	1	X	
8	4/16	1325	CEF-P21-SS-5210-20120416			10	SO	G	1	X	
9	4/16	1335	CEF-P21-SS-5305-20120416			5'	SO	G	1	X	
10	4/16	1340	CEF-P21-SS-5310-20120416			10'	SO	G	1	X	
11	4/16	1350	CEF-P21-SS-5405-20120416			5'	SO	G	1	X	
12	4/16	1355	CEF-P21-SS-5410-20120416			10'	SO	G	1	X	
13	4/16	0000	CEF-P21-DUP01-20120416			—	SO	G	1	X	

1. RELINQUISHED BY: [signature]	DATE: 4-17-12	TIME: 1250	1. RECEIVED BY: [signature]	DATE: 4/17/12	TIME: 1750
2. RELINQUISHED BY: [signature]	DATE: 4/17/12	TIME: 1705	2. RECEIVED BY: Carrier (Alex)	DATE: 4-18-12	TIME: 08:00
3. RELINQUISHED BY:	DATE:	TIME:	3. RECEIVED BY:	DATE:	TIME:

COMMENTS: 2.8

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

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FORM NO. TINUS-001

4.1 4

F92199: Chain of Custody
Page 1 of 3

TETRA TECH NUS, INC. CHAIN OF CUSTODY NUMBER № 2231 F92199 PAGE ___ OF ___

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G02267	Site 21 / Cail	Rob Sinnik	904-734-7260	Accutest / Heather Woodly
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER: Dave Sutton	PHONE NUMBER: 904-334-7260	ADDRESS: 4405 Vineland Rd - C-15
		CARRIER/WAYBILL NUMBER: Pick up		CITY, STATE: Orlando FL

STANDARD TAT ☒
RUSH TAT ☐ ☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G
PRESERVATIVE USED: —

	DATE YEAR 2012	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	TYPE OF ANALYSIS 8081 Chlordane								COMMENTS
14	4/17	0855	CEF-P21-GW-G3-20120417				GW		2	X								Cool to 4°C
15	4/17	0935	CEF-P21-GW-G2-20120417				GW		2	X								
16	4/17	1000	CEF-P21-GW-G1-20120417				GW		2	X								
17	4/17	0855	CEF-P21-GW-DUP01				GW		2	X								

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY	4.17.12	1450	1. RECEIVED BY	04/17/12	1450
2. RELINQUISHED BY	04/17/12	1700	2. RECEIVED BY (Lorne Alse)	4-18-12	08:50
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS 2.8

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY) 4/02R
FORM NO. TtNUS-001

4.1 4

F92199: Chain of Custody
Page 2 of 3

ACCUTEST LABORATORIES SAMPLE RECEIPT CONFIRMATION

ACCUTEST'S JOB NUMBER: F92199 CLIENT: TETRA TECH PROJECT: 112G022G7

DATE/TIME RECEIVED: 4-18-12 08:00 (MM/DD/YY 24:00) NIMBER OF COOLERS RECEIVED: 1

METHOD OF DELIVERY: FEDEX UPS (ACCUTEST COURIER) GREYHOUND DELIVERY OTHER

AIRBILL NUMBERS:

COOLER INFORMATION

- [ ] CUSTODY SEAL NOT PRESENT OR NOT INTACT
- [ ] CHAIN OF CUSTODY NOT RECEIVED (COC)
- [ ] ANALYSIS REQUESTED IS UNCLEAR OR MISSING
- [ ] SAMPLE DATES OR TIMES UNCLEAR OR MISSING
- [ ] TEMPERATURE CRITERIA NOT MET
- [ ] WET ICE PRESENT

TRIP BLANK INFORMATION

- [ ] TRIP BLANK PROVIDED
- [x] TRIP BLANK NOT PROVIDED
- [x] TRIP BLANK NOT ON COC
- [ ] TRIP BLANK INTACT
- [ ] TRIP BLANK NOT INTACT
- [ ] RECEIVED WATER TRIP BLANK
- [ ] RECEIVED SOIL TRIP BLANK

MISC. INFORMATION

NUMBER OF ENCORES ? 25-GRAM_____ 5-GRAM_____

NUMBER OF 5035 FIELD KITS ? _____

NUMBER OF LAB FILTERED METALS ? _____

TEMPERATURE INFORMATION

- [ ] IR THERM ID 1 CORR. FACTOR -0.2
- [ ] OBSERVED TEMPS: 3.0
- [ ] CORRECTED TEMPS: 2.8

SAMPLE INFORMATION

- [ ] SAMPLE LABELS PRESENT ON ALL BOTTLES
- [ ] INCORRECT NUMBER OF CONTAINERS USED
- [ ] SAMPLE RECEIVED IMPROPERLY PRESERVED
- [ ] INSUFFICIENT VOLUME FOR ANALYSIS
- [ ] DATES/TIMES ON COC DO NOT MATCH SAMPLE LABEL
- [ ] ID'S ON COC DO NOT MATCH LABEL
- [ ] VOC VIALS HAVE HEADSPACE (MACRO BUBBLES)
- [ ] BOTTLES RECEIVED BUT ANALYSIS NOT REQUESTED
- [ ] NO BOTTLES RECEIVED FOR ANALYSIS REQUESTED
- [ ] UNCLEAR FILTERING OR COMPOSITING INSTRUCTIONS
- [ ] SAMPLE CONTAINER(S) RECEIVED BROKEN
- [ ] % SOLIDS JAR NOT RECEIVED
- [ ] 5035 FIELD KIT FROZEN WITHIN 48 HOUR'S
- [ ] RESIDUAL CHLORINE PRESENT

(APPICABLE TO EPA 600 SERIES OR NORTH CAROLINA ORGANICS)

SUMMARY OF COMMENTS:

TECHNICIAN SIGNATURE/DATE 4-18-12 REVIEWER SIGNATURE/DATE 04/18/12

NF 12/10 receipt confirmation 122910.xls

4.1 4

F92199: Chain of Custody
Page 3 of 3

Method Blank Summary

Job Number: F92199
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-Site 21

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP41519-MB	TT33798.D	1	04/25/12	EM	04/24/12	OP41519	GTT1111

The QC reported here applies to the following samples: **Method:** SW846 8081B

F92199-14, F92199-15, F92199-16, F92199-17

CAS No.	Compound	Result	RL	MDL	Units	Q
12789-03-6	Chlordane	ND	0.50	0.20	ug/l	

CAS No.	Surrogate Recoveries		Limits
877-09-8	Tetrachloro-m-xylene	101%	42-127%
2051-24-3	Decachlorobiphenyl	105%	27-127%

Method Blank Summary

Job Number: F92199
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-Site 21

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP41557-MB	TT33889.D	1	04/27/12	EM	04/26/12	OP41557	GTT1113

The QC reported here applies to the following samples: **Method:** SW846 8081B

F92199-1, F92199-2, F92199-3, F92199-4, F92199-5, F92199-6, F92199-7, F92199-8, F92199-9, F92199-10, F92199-11, F92199-12, F92199-13

CAS No.	Compound	Result	RL	MDL	Units	Q
12789-03-6	Chlordane	ND	17	6.6	ug/kg	

CAS No.	Surrogate Recoveries		Limits
877-09-8	Tetrachloro-m-xylene	98%	46-122%
2051-24-3	Decachlorobiphenyl	99%	50-133%

Method Blank Summary

Job Number: F92199
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-Site 21

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP41557-MB	KK47299.D	1	04/28/12	EM	04/26/12	OP41557	GKK1629

The QC reported here applies to the following samples: **Method:** SW846 8081B

F92199-1, F92199-2, F92199-3, F92199-4, F92199-5, F92199-6, F92199-7, F92199-8, F92199-9, F92199-10, F92199-11, F92199-12, F92199-13

CAS No.	Compound	Result	RL	MDL	Units	Q
12789-03-6	Chlordane	ND	17	6.7	ug/kg	

CAS No.	Surrogate Recoveries		Limits
877-09-8	Tetrachloro-m-xylene	96%	46-122%
2051-24-3	Decachlorobiphenyl	104%	50-133%

Method Blank Summary

Job Number: F92199
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-Site 21

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP41557-MB	KK47334.D	1	04/30/12	EM	04/26/12	OP41557	GKK1631

The QC reported here applies to the following samples: **Method:** SW846 8081B

F92199-1, F92199-2, F92199-3, F92199-4, F92199-5, F92199-6, F92199-7, F92199-8, F92199-9, F92199-10, F92199-11, F92199-12, F92199-13

CAS No.	Compound	Result	RL	MDL	Units	Q
12789-03-6	Chlordane	ND	17	6.7	ug/kg	

CAS No.	Surrogate Recoveries		Limits
877-09-8	Tetrachloro-m-xylene	96%	46-122%
2051-24-3	Decachlorobiphenyl	101%	50-133%

Initial Calibration Summary

Job Number: F92199
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-Site 21

Sample: GKK1626-ICC1626
Lab FileID: KK47189.D

Response Factor Report ECD 5

Method : C:\MSDCHEM\1\METHODS\8081B.M (Chemstation Integrator)
Title : Pesticides by 8081B
Last Update : Wed Apr 25 11:17:38 2012
Response via : Initial Calibration

Calibration Files
5 =KK47186.D 10 =KK47187.D 20 =KK47188.D 40 =KK47189.D
60 =KK47190.D 80 =KK47191.D c200=KK47192.D t500=KK47193.D

Compound	5	10	20	40	60	80	c200	t500	Avg	%RSD
1) Tetrachloro-	2.600	2.711	2.754	2.784	2.655	2.739			2.707 E4	2.52
2) alpha-BHC	3.518	3.853	3.957	4.065	3.908	3.930			3.872 E4	4.83
3) gamma-BHC (L	3.111	3.294	3.333	3.458	3.411	3.400			3.335 E4	3.72
4) beta-BHC	1.398	1.425	1.391	1.442	1.420	1.452			1.421 E4	1.67
5) delta-BHC	2.289	2.514	2.575	2.677	2.646	2.739			2.573 E4	6.21
6) Heptachlor	2.810	2.936	3.053	3.038	2.979	2.903			2.953 E4	3.07
7) Aldrin	2.553	2.772	2.729	2.816	2.734	2.696			2.717 E4	3.32
8) Heptachlor E	2.556	2.557	2.463	2.595	2.448	2.494			2.519 E4	2.33
9) gamma-Chlord	2.208	2.413	2.400	2.489	2.420	2.445			2.396 E4	4.05
10) alpha-Chlord	2.215	2.359	2.352	2.406	2.318	2.365			2.336 E4	2.81
11) Endosulfan	1.986	2.167	2.213	2.253	2.174	2.180			2.162 E4	4.25
12) 4,4'-DDE	2.099	2.236	2.171	2.305	2.289	2.329			2.238 E4	3.96
13) Dieldrin	2.136	2.326	2.339	2.433	2.361	2.372			2.328 E4	4.34
14) Endrin	1.696	1.853	1.856	1.922	1.879	1.884			1.848 E4	4.26
15) 4,4'-DDD	0.909	1.304	1.414	1.590	1.449	1.466			1.355 E4	17.48
---- Linear regression ---- Coefficient = 0.9968										
Response Ratio = -13852.63461 + 14976.27132 *A										
16) Endosulfan I	1.786	1.984	1.944	2.010	1.987	1.938			1.942 E4	4.17
17) Endrin Aldeh	1.535	1.600	1.578	1.605	1.572	1.575			1.577 E4	1.57
18) 4,4'-DDT	1.339	1.475	1.489	1.593	1.625	1.690			1.535 E4	8.21
19) Endosulfan S	1.519	1.645	1.615	1.691	1.674	1.622			1.628 E4	3.74
20) Methoxychlor	8.257	8.478	8.242	8.717	8.522	8.648			8.477 E3	2.32
21) Endrin Keton	1.810	1.912	1.887	1.888	1.809	1.855			1.860 E4	2.31
22) Chlordane-A							1.162		1.162 E3	0.00
23) Chlordane-B							1.580		1.580 E3	0.00
24) Chlordane-C							7.614		7.614 E2	0.00
25) Chlordane-D							3.421		3.421 E3	0.00
26) Chlordane-E							3.287		3.287 E3	0.00
27) Chlordane-F							7.414		7.414 E2	0.00
28) Toxaphene								2.548	2.548 E5	0.00
29) Decachlorobi	1.337	1.343	1.265	1.205	1.188	1.206			1.257 E4	5.48

Signal #2

1) Tetrachloro-	3.579	3.802	3.822	3.846	3.757	3.760			3.761 E4	2.54
2) alpha-BHC	4.850	5.391	5.398	5.582	5.381	5.450			5.342 E4	4.73
3) gamma-BHC (L	4.303	4.632	4.730	4.872	4.671	4.754			4.660 E4	4.15
4) beta-BHC	2.017	2.086	2.034	2.116	2.006	2.092			2.059 E4	2.19
5) delta-BHC	3.246	3.632	3.664	3.913	3.915	3.987			3.726 E4	7.42
6) Heptachlor	3.619	3.856	3.928	3.939	3.713	3.774			3.805 E4	3.32
7) Aldrin	3.245	3.647	3.688	3.715	3.550	3.592			3.573 E4	4.80
8) Heptachlor E	3.068	3.295	3.356	3.440	3.220	3.194			3.262 E4	4.01
9) gamma-Chlord	2.980	3.264	3.292	3.404	3.303	3.329			3.262 E4	4.48
10) alpha-Chlord	2.701	2.982	3.036	3.219	3.083	3.069			3.015 E4	5.73
11) Endosulfan	2.669	2.894	2.899	2.983	2.867	2.856			2.861 E4	3.64
12) 4,4'-DDE	1.815	2.477	2.751	3.047	2.763	2.730			2.597 E4	16.32

Initial Calibration Summary

Job Number: F92199
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-Site 21

Sample: GKK1626-ICC1626
Lab FileID: KK47189.D

---- Linear regression ---- Coefficient = 0.9954
Response Ratio = -11138.08196 + 27984.86333 *A

13)	Dieldrin	2.825	3.135	3.127	3.267	3.129	3.171			3.109 E4	4.79
14)	Endrin	2.360	2.394	2.377	2.442	2.384	2.396			2.393 E4	1.16
15)	4,4'-DDD	2.392	2.658	2.612	2.708	2.676	2.689			2.622 E4	4.49
16)	Endosulfan I	2.443	2.622	2.586	2.666	2.594	2.634			2.591 E4	3.02
17)	Endrin Aldeh	2.023	2.167	2.120	2.190	2.148	2.107			2.126 E4	2.75
18)	4,4'-DDT	1.763	1.967	2.036	2.186	2.232	2.272			2.076 E4	9.31
19)	Endosulfan S	2.126	2.214	2.168	2.299	2.254	2.298			2.226 E4	3.17
20)	Methoxychlor	1.117	1.153	1.125	1.163	1.166	1.188			1.152 E4	2.31
21)	Endrin Keton	2.773	2.694	2.501	2.470	2.444	2.501			2.564 E4	5.28
22)	Chlordane-A							1.577		1.577 E3	0.00
23)	Chlordane-B							2.003		2.003 E3	0.00
24)	Chlordane-C							1.204		1.204 E3	0.00
25)	Chlordane-D							4.217		4.217 E3	0.00
26)	Chlordane-E							3.402		3.402 E3	0.00
27)	Chlordane-F							1.030		1.030 E3	0.00
28)	Toxaphene								3.979	3.979 E5	0.00
29)	Decachlorobi	1.647	1.655	1.589	1.633	1.608	1.636			1.628 E4	1.53

(#) = Out of Range ### Number of calibration levels exceeded format ###

8081B.M Wed Apr 25 13:31:23 2012

5.8.1

5

Initial Calibration Verification

Job Number: F92199
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-Site 21

Sample: GKK1626-ICV1626
Lab FileID: KK47194.D

Evaluate Continuing Calibration Report

Signal #1 : C:\MSDCHEM\1\DATA\042512\KK47194.D\ECD1A.CH Vial: 12
Signal #2 : C:\MSDCHEM\1\DATA\042512\KK47194.D\ECD2B.CH
Acq On : 25 Apr 2012 10:56 am Operator: evitam
Sample : icv1626-40 Inst : ECD 5
Misc : op41460,gkk1626 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\MSDCHEM\1\METHODS\8081B.M (Chemstation Integrator)
Title : Pesticides by 8081B
Last Update : Wed Apr 25 11:17:38 2012
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.20min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	S	Tetrachloro-m-xylene		----------NA----------				
2		alpha-BHC	40.000	40.537	-1.3	97	0.00	5.30- 5.50
3		gamma-BHC (Lindane)	40.000	40.798	-2.0	98	0.00	5.63- 5.83
4		beta-BHC	40.000	39.125	2.2	96	0.00	5.85- 6.05
5		delta-BHC	40.000	36.712	8.2	88	0.00	6.09- 6.29
6		Heptachlor	40.000	39.471	1.3	96	0.00	6.22- 6.42
7		Aldrin	40.000	41.588	-4.0	100	0.00	6.57- 6.77
8		Heptachlor Epoxide	40.000	39.563	1.1	96	0.00	7.03- 7.23
9		gamma-Chlordane	40.000	40.945	-2.4	99	0.00	7.32- 7.52
10		alpha-Chlordane	40.000	41.460	-3.7	101	0.00	7.40- 7.60
11		Endosulfan I	40.000	40.410	-1.0	97	0.00	7.45- 7.65
12		4,4'-DDE	40.000	39.651	0.9	96	0.00	7.63- 7.83
13		Dieldrin	40.000	41.289	-3.2	99	0.00	7.76- 7.96
14		Endrin	40.000	47.495	-18.7	114	0.00	8.01- 8.21
15		4,4'-DDD	40.000	44.710	-11.8	103	0.00	8.22- 8.42
16		Endosulfan II	40.000	40.884	-2.2	99	0.00	8.28- 8.48
17		Endrin Aldehyde	40.000	39.360	1.6	97	0.00	8.43- 8.63
18		4,4'-DDT	40.000	42.249	-5.6	102	0.00	8.58- 8.78
19		Endosulfan Sulfate	40.000	38.923	2.7	94	0.00	8.71- 8.91
20		Methoxychlor	40.000	39.456	1.4	96	0.00	9.18- 9.38
21		Endrin Ketone	40.000	40.670	-1.7	100	0.00	9.26- 9.46
22	L1	Chlordane-A		----------NA----------				
23	L1	Chlordane-B		----------NA----------				
24	L1	Chlordane-C		----------NA----------				
25	L1	Chlordane-D		----------NA----------				
26	L1	Chlordane-E		----------NA----------				
27	L1	Chlordane-F		----------NA----------				
28	H	Toxaphene		----------NA----------				
29	S	Decachlorobiphenyl		----------NA----------				

***** Signal #2 *****

1	S	Tetrachloro-m-xylene		----------NA----------				
2		alpha-BHC	40.000	40.988	-2.5	98	0.00	5.86- 6.06
3		gamma-BHC (Lindane)	40.000	40.753	-1.9	97	0.00	6.25- 6.45
4		beta-BHC	40.000	40.369	-0.9	98	0.00	6.58- 6.78
5		delta-BHC	40.000	37.599	6.0	90	0.00	6.87- 7.07
6		Heptachlor	40.000	41.188	-3.0	99	0.00	6.66- 6.86
7		Aldrin	40.000	41.579	-3.9	100	0.00	7.00- 7.20
8		Heptachlor Epoxide	40.000	41.194	-3.0	98	0.00	7.60- 7.80
9		gamma-Chlordane	40.000	40.445	-1.1	97	0.00	7.90- 8.10

Initial Calibration Verification

Job Number: F92199
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-Site 21

Sample: GKK1626-ICV1626
Lab FileID: KK47194.D

10		alpha-Chlordane	40.000	42.593	-6.5	100	0.00	7.98- 8.18
11		Endosulfan I	40.000	41.454	-3.6	99	0.00	8.05- 8.25
12		4,4'-DDE	40.000	44.067	-10.2	100	0.00	8.18- 8.38
13		Dieldrin	40.000	42.206	-5.5	100	0.00	8.38- 8.58
14		Endrin	40.000	46.374	-15.9	114	0.00	8.73- 8.93
15		4,4'-DDD	40.000	41.536	-3.8	101	0.00	8.87- 9.07
16		Endosulfan II	40.000	40.038	-0.1	97	0.00	9.08- 9.28
17		Endrin Aldehyde	40.000	40.974	-2.4	99	0.00	9.30- 9.50
18		4,4'-DDT	40.000	43.696	-9.2	104	0.00	9.19- 9.39
19		Endosulfan Sulfate	40.000	39.438	1.4	95	0.00	9.58- 9.78
20		Methoxychlor	40.000	41.019	-2.5	102	0.00	9.90-10.10
21		Endrin Ketone	40.000	39.890	0.3	103	0.00	10.24-10.44
22	L1	Chlordane-A		----------NA----------				
23	L1	Chlordane-B		----------NA----------				
24	L1	Chlordane-C		----------NA----------				
25	L1	Chlordane-D		----------NA----------				
26	L1	Chlordane-E		----------NA----------				
27	L1	Chlordane-F		----------NA----------				
28	H	Toxaphene		----------NA----------				
29	S	Decachlorobiphenyl		----------NA----------				

(#) = Out of Range SPCC's out = 0 CCC's out = 0
KK47189.D 8081B.M Wed Apr 25 11:21:11 2012

5.8.2

5

Continuing Calibration Summary

Job Number: F92199
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-Site 21

Sample: GKK1629-CC1626
Lab FileID: KK47293.D

Evaluate Continuing Calibration Report

Signal #1 : C:\MSDCHEM\1\DATA\042812\KK47293.D\ECD1A.CH Vial: 3
Signal #2 : C:\MSDCHEM\1\DATA\042812\KK47293.D\ECD2B.CH
Acq On : 28 Apr 2012 10:56 am Operator: evitam
Sample : CC1626-20 Inst : ECD 5
Misc : op41460,gkk1629 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\MSDCHEM\1\METHODS\8081B.M (Chemstation Integrator)
Title : Pesticides by 8081B
Last Update : Fri Apr 27 10:56:31 2012
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.20min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	S	Tetrachloro-m-xylene	20.000	21.810	-9.0	107	0.00	4.84- 5.04
2		alpha-BHC	20.000	22.075	-10.4	108	0.00	5.30- 5.50
3		gamma-BHC (Lindane)	20.000	22.389	-11.9	112	0.00	5.63- 5.83
4		beta-BHC	20.000	22.024	-10.1	112	0.00	5.85- 6.05
5		delta-BHC	20.000	23.317	-16.6	117	0.00	6.09- 6.29
6		Heptachlor	20.000	21.753	-8.8	105	0.00	6.22- 6.42
7		Aldrin	20.000	22.134	-10.7	110	0.00	6.57- 6.77
8		Heptachlor Epoxide	20.000	21.606	-8.0	110	0.00	7.03- 7.23
9		gamma-Chlordane	20.000	23.355	-16.8	117	0.00	7.32- 7.52
10		alpha-Chlordane	20.000	22.947	-14.7	114	0.00	7.40- 7.60
11		Endosulfan I	20.000	21.850	-9.3	107	0.00	7.45- 7.65
12		4,4'-DDE	20.000	22.452	-12.3	116	0.00	7.63- 7.83
13		Dieldrin	20.000	21.685	-8.4	108	0.00	7.76- 7.96
14		Endrin	20.000	20.638	-3.2	103	0.00	8.01- 8.21
15		4,4'-DDD	20.000	22.156	-10.8	112	0.00	8.22- 8.42
16		Endosulfan II	20.000	22.531	-12.7	113	0.00	8.28- 8.48
17		Endrin Aldehyde	20.000	22.813	-14.1	114	0.00	8.43- 8.63
18		4,4'-DDT	20.000	23.442	-17.2	121	0.00	8.58- 8.78
19		Endosulfan Sulfate	20.000	22.641	-13.2	114	0.00	8.71- 8.91
20		Methoxychlor	20.000	22.229	-11.1	114	0.00	9.18- 9.38
21		Endrin Ketone	20.000	23.633	-18.2	116	0.00	9.26- 9.46
22	L1	Chlordane-A		----------NA----------				
23	L1	Chlordane-B		----------NA----------				
24	L1	Chlordane-C		----------NA----------				
25	L1	Chlordane-D		----------NA----------				
26	L1	Chlordane-E		----------NA----------				
27	L1	Chlordane-F		----------NA----------				
28	H	Toxaphene		----------NA----------				
29	S	Decachlorobiphenyl	20.000	21.927	-9.6	109	0.00	10.91-11.11

***** Signal #2 *****

1	S	Tetrachloro-m-xylene	20.000	21.309	-6.5	105	0.00	5.25- 5.45
2		alpha-BHC	20.000	21.516	-7.6	106	0.00	5.86- 6.06
3		gamma-BHC (Lindane)	20.000	22.217	-11.1	109	0.00	6.25- 6.45
4		beta-BHC	20.000	21.892	-9.5	111	0.00	6.58- 6.78
5		delta-BHC	20.000	23.080	-15.4	117	0.00	6.87- 7.07
6		Heptachlor	20.000	21.593	-8.0	105	0.00	6.66- 6.86
7		Aldrin	20.000	22.263	-11.3	108	0.00	7.00- 7.20
8		Heptachlor Epoxide	20.000	22.050	-10.3	107	0.00	7.60- 7.80
9		gamma-Chlordane	20.000	21.574	-7.9	107	0.00	7.90- 8.10

Continuing Calibration Summary

Job Number: F92199
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-Site 21

Sample: GKK1629-CC1626
Lab FileID: KK47293.D

10		alpha-Chlordane	20.000	22.124	-10.6	110	0.00	7.98- 8.18
11		Endosulfan I	20.000	21.847	-9.2	108	0.00	8.05- 8.25
12		4,4'-DDE	20.000	22.533	-12.7	113	0.00	8.18- 8.38
13		Dieldrin	20.000	21.722	-8.6	108	0.00	8.38- 8.58
14		Endrin	20.000	20.119	-0.6	101	0.00	8.73- 8.93
15		4,4'-DDD	20.000	21.335	-6.7	107	0.00	8.87- 9.07
16		Endosulfan II	20.000	21.620	-8.1	108	0.00	9.08- 9.28
17		Endrin Aldehyde	20.000	22.477	-12.4	113	0.00	9.30- 9.50
18		4,4'-DDT	20.000	23.479	-17.4	120	0.00	9.19- 9.39
19		Endosulfan Sulfate	20.000	21.677	-8.4	111	0.00	9.58- 9.78
20		Methoxychlor	20.000	22.635	-13.2	116	0.00	9.90-10.10
21		Endrin Ketone	20.000	21.476	-7.4	110	0.00	10.24-10.44
22	L1	Chlordane-A		----------NA----------				
23	L1	Chlordane-B		----------NA----------				
24	L1	Chlordane-C		----------NA----------				
25	L1	Chlordane-D		----------NA----------				
26	L1	Chlordane-E		----------NA----------				
27	L1	Chlordane-F		----------NA----------				
28	H	Toxaphene		----------NA----------				
29	S	Decachlorobiphenyl	20.000	20.808	-4.0	107	0.00	11.58-11.78

(#) = Out of Range SPCC's out = 0 CCC's out = 0
KK47188.D 8081B.M Mon Apr 30 11:33:23 2012

5.8.3

5

Continuing Calibration Summary

Job Number: F92199
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-Site 21

Sample: GKK1629-CC1626
Lab FileID: KK47294.D

Evaluate Continuing Calibration Report

Signal #1 : C:\MSDCHEM\1\DATA\042812\KK47294.D\ECD1A.CH Vial: 4
Signal #2 : C:\MSDCHEM\1\DATA\042812\KK47294.D\ECD2B.CH
Acq On : 28 Apr 2012 11:13 am Operator: evitam
Sample : CC1626-200,(CHLO) Inst : ECD 5
Misc : op41460,gkk1629 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\MSDCHEM\1\METHODS\8081B.M (Chemstation Integrator)
Title : Pesticides by 8081B
Last Update : Fri Apr 27 10:56:31 2012
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.20min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	S	Tetrachloro-m-xylene	-1.000	26.198	0.0	105	0.00	4.84- 5.04
2		alpha-BHC		----------NA----------				
3		gamma-BHC (Lindane)		----------NA----------				
4		beta-BHC		----------NA----------				
5		delta-BHC		----------NA----------				
6		Heptachlor		----------NA----------				
7		Aldrin		----------NA----------				
8		Heptachlor Epoxide		----------NA----------				
9		gamma-Chlordane		----------NA----------				
10		alpha-Chlordane		----------NA----------				
11		Endosulfan I		----------NA----------				
12		4,4'-DDE		----------NA----------				
13		Dieldrin		----------NA----------				
14		Endrin		----------NA----------				
15		4,4'-DDD		----------NA----------				
16		Endosulfan II		----------NA----------				
17		Endrin Aldehyde		----------NA----------				
18		4,4'-DDT		----------NA----------				
19		Endosulfan Sulfate		----------NA----------				
20		Methoxychlor		----------NA----------				
21		Endrin Ketone		----------NA----------				
22	L1	Chlordane-A	200.000	208.070	-4.0	104	-0.01	6.01- 6.21
23	L1	Chlordane-B	200.000	209.428	-4.7	105	-0.01	6.23- 6.43
24	L1	Chlordane-C	200.000	206.716	-3.4	103	-0.02	6.56- 6.76
25	L1	Chlordane-D	200.000	199.542	0.2	100	-0.02	7.33- 7.53
26	L1	Chlordane-E	200.000	200.476	-0.2	100	-0.01	7.41- 7.61
27	L1	Chlordane-F	200.000	206.651	-3.3	103	-0.02	8.36- 8.56
28	H	Toxaphene		----------NA----------				
29	S	Decachlorobiphenyl	-1.000	26.222	0.0	101	0.00	10.91-11.11

***** Signal #2 *****

1	S	Tetrachloro-m-xylene	-1.000	28.525	0.0	103	0.00	5.25- 5.45
2		alpha-BHC		----------NA----------				
3		gamma-BHC (Lindane)		----------NA----------				
4		beta-BHC		----------NA----------				
5		delta-BHC		----------NA----------				
6		Heptachlor		----------NA----------				
7		Aldrin		----------NA----------				
8		Heptachlor Epoxide		----------NA----------				
9		gamma-Chlordane		----------NA----------				

Continuing Calibration Summary

Job Number: F92199
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-Site 21

Sample: GKK1629-CC1626
Lab FileID: KK47294.D

10		alpha-Chlordane		----------NA----------				
11		Endosulfan I		----------NA----------				
12		4,4'-DDE		----------NA----------				
13		Dieldrin		----------NA----------				
14		Endrin		----------NA----------				
15		4,4'-DDD		----------NA----------				
16		Endosulfan II		----------NA----------				
17		Endrin Aldehyde		----------NA----------				
18		4,4'-DDT		----------NA----------				
19		Endosulfan Sulfate		----------NA----------				
20		Methoxychlor		----------NA----------				
21		Endrin Ketone		----------NA----------				
22	L1	Chlordane-A	200.000	203.585	-1.8	102	0.00	6.46- 6.66
23	L1	Chlordane-B	200.000	205.719	-2.9	103	0.00	6.66- 6.86
24	L1	Chlordane-C	200.000	187.350	6.3	94	0.00	7.13- 7.33
25	L1	Chlordane-D	200.000	200.330	-0.2	100	-0.01	7.90- 8.10
26	L1	Chlordane-E	200.000	200.670	-0.3	100	-0.01	7.98- 8.18
27	L1	Chlordane-F	200.000	210.407	-5.2	105	-0.01	9.10- 9.30
28	H	Toxaphene		----------NA----------				
29	S	Decachlorobiphenyl	-1.000	25.732	0.0	95	0.00	11.58-11.78

(#) = Out of Range SPCC's out = 0 CCC's out = 0
KK47192.D 8081B.M Mon Apr 30 13:08:03 2012

5.8.4

5

Continuing Calibration Summary

Job Number: F92199
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-Site 21

Sample: GKK1629-CC1626
Lab FileID: KK47295.D

Evaluate Continuing Calibration Report

Signal #1 : C:\MSDCHEM\1\DATA\042812\KK47295.D\ECD1A.CH Vial: 5
Signal #2 : C:\MSDCHEM\1\DATA\042812\KK47295.D\ECD2B.CH
Acq On : 28 Apr 2012 11:56 am Operator: evitam
Sample : CC1626-500,(TOX) Inst : ECD 5
Misc : op41460,gkk1629 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\MSDCHEM\1\METHODS\8081B.M (Chemstation Integrator)
Title : Pesticides by 8081B
Last Update : Fri Apr 27 10:56:31 2012
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.20min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	S	Tetrachloro-m-xylene	-1.000	51.594	0.0	105	0.00	4.84- 5.04
2		alpha-BHC		----------NA----------				
3		gamma-BHC (Lindane)		----------NA----------				
4		beta-BHC		----------NA----------				
5		delta-BHC		----------NA----------				
6		Heptachlor		----------NA----------				
7		Aldrin		----------NA----------				
8		Heptachlor Epoxide		----------NA----------				
9		gamma-Chlordane		----------NA----------				
10		alpha-Chlordane		----------NA----------				
11		Endosulfan I		----------NA----------				
12		4,4'-DDE		----------NA----------				
13		Dieldrin		----------NA----------				
14		Endrin		----------NA----------				
15		4,4'-DDD		----------NA----------				
16		Endosulfan II		----------NA----------				
17		Endrin Aldehyde		----------NA----------				
18		4,4'-DDT		----------NA----------				
19		Endosulfan Sulfate		----------NA----------				
20		Methoxychlor		----------NA----------				
21		Endrin Ketone		----------NA----------				
22	L1	Chlordane-A		----------NA----------				
23	L1	Chlordane-B		----------NA----------				
24	L1	Chlordane-C		----------NA----------				
25	L1	Chlordane-D		----------NA----------				
26	L1	Chlordane-E		----------NA----------				
27	L1	Chlordane-F		----------NA----------				
28	H	Toxaphene	500.000	515.128	-3.0	103	0.00	5.88-10.41
29	S	Decachlorobiphenyl	-1.000	52.436	0.0	104	0.00	10.91-11.11

***** Signal #2 *****

1	S	Tetrachloro-m-xylene	-1.000	51.694	0.0	103	0.00	5.25- 5.45
2		alpha-BHC		----------NA----------				
3		gamma-BHC (Lindane)		----------NA----------				
4		beta-BHC		----------NA----------				
5		delta-BHC		----------NA----------				
6		Heptachlor		----------NA----------				
7		Aldrin		----------NA----------				
8		Heptachlor Epoxide		----------NA----------				
9		gamma-Chlordane		----------NA----------				

Continuing Calibration Summary

Job Number: F92199
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-Site 21

Sample: GKK1629-CC1626
Lab FileID: KK47295.D

10		alpha-Chlordane		----------NA----------				
11		Endosulfan I		----------NA----------				
12		4,4'-DDE		----------NA----------				
13		Dieldrin		----------NA----------				
14		Endrin		----------NA----------				
15		4,4'-DDD		----------NA----------				
16		Endosulfan II		----------NA----------				
17		Endrin Aldehyde		----------NA----------				
18		4,4'-DDT		----------NA----------				
19		Endosulfan Sulfate		----------NA----------				
20		Methoxychlor		----------NA----------				
21		Endrin Ketone		----------NA----------				
22	L1	Chlordane-A		----------NA----------				
23	L1	Chlordane-B		----------NA----------				
24	L1	Chlordane-C		----------NA----------				
25	L1	Chlordane-D		----------NA----------				
26	L1	Chlordane-E		----------NA----------				
27	L1	Chlordane-F		----------NA----------				
28	H	Toxaphene	500.000	500.574	-0.1	100	-0.62#	6.19-11.18
29	S	Decachlorobiphenyl	-1.000	51.967	0.0	103	0.00	11.58-11.78

(#) = Out of Range SPCC's out = 0 CCC's out = 0
KK47193.D 8081B.M Mon Apr 30 11:33:56 2012

5.8.5

5

Continuing Calibration Summary

Job Number: F92199
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-Site 21

Sample: GKK1629-CC1626
Lab FileID: KK47298.D

Evaluate Continuing Calibration Report

Signal #1 : C:\MSDCHEM\1\DATA\042812\KK47298.D\ECD1A.CH Vial: 8
Signal #2 : C:\MSDCHEM\1\DATA\042812\KK47298.D\ECD2B.CH
Acq On : 4-28-2012 01:04:51 PM Operator: evitam
Sample : cc1626-40 Inst : ECD 5
Misc : op41560,gkk1629,1040,,,10,5,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\MSDCHEM\1\METHODS\8081B.M (Chemstation Integrator)
Title : Pesticides by 8081B
Last Update : Fri Apr 27 10:56:31 2012
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.20min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	S	Tetrachloro-m-xylene	40.000	42.907	-7.3	104	0.00	4.84- 5.04
2		alpha-BHC	40.000	44.229	-10.6	105	0.00	5.30- 5.50
3		gamma-BHC (Lindane)	40.000	44.550	-11.4	107	0.00	5.63- 5.83
4		beta-BHC	40.000	42.717	-6.8	105	0.00	5.85- 6.05
5		delta-BHC	40.000	46.270	-15.7	111	0.00	6.09- 6.29
6		Heptachlor	40.000	42.174	-5.4	102	0.00	6.22- 6.42
7		Aldrin	40.000	42.562	-6.4	103	0.00	6.57- 6.77
8		Heptachlor Epoxide	40.000	42.286	-5.7	103	0.00	7.03- 7.23
9		gamma-Chlordane	40.000	43.717	-9.3	105	0.00	7.32- 7.52
10		alpha-Chlordane	40.000	42.730	-6.8	104	0.00	7.40- 7.60
11		Endosulfan I	40.000	43.409	-8.5	104	0.00	7.45- 7.65
12		4,4'-DDE	40.000	42.169	-5.4	102	0.00	7.63- 7.83
13		Dieldrin	40.000	44.096	-10.2	105	0.00	7.76- 7.96
14		Endrin	40.000	40.994	-2.5	99	0.00	8.01- 8.21
15		4,4'-DDD	40.000	52.889	-32.2#	122	0.00	8.22- 8.42
16		Endosulfan II	40.000	44.143	-10.4	107	0.00	8.28- 8.48
17		Endrin Aldehyde	40.000	45.701	-14.3	112	0.00	8.43- 8.63
18		4,4'-DDT	40.000	45.825	-14.6	110	0.00	8.58- 8.78
19		Endosulfan Sulfate	40.000	46.145	-15.4	111	0.00	8.71- 8.91
20		Methoxychlor	40.000	42.311	-5.8	103	0.00	9.18- 9.38
21		Endrin Ketone	40.000	47.115	-17.8	116	0.00	9.26- 9.46
22	L1	Chlordane-A		----------NA----------				
23	L1	Chlordane-B		----------NA----------				
24	L1	Chlordane-C		----------NA----------				
25	L1	Chlordane-D		----------NA----------				
26	L1	Chlordane-E		----------NA----------				
27	L1	Chlordane-F		----------NA----------				
28	H	Toxaphene		----------NA----------				
29	S	Decachlorobiphenyl	40.000	41.242	-3.1	108	0.00	10.91-11.11

***** Signal #2 *****

1	S	Tetrachloro-m-xylene	40.000	41.900	-4.7	102	0.00	5.25- 5.45
2		alpha-BHC	40.000	43.265	-8.2	104	0.00	5.86- 6.06
3		gamma-BHC (Lindane)	40.000	42.975	-7.4	103	0.00	6.25- 6.45
4		beta-BHC	40.000	42.004	-5.0	102	0.00	6.58- 6.78
5		delta-BHC	40.000	45.465	-13.7	108	0.00	6.87- 7.07
6		Heptachlor	40.000	40.845	-2.1	99	0.00	6.66- 6.86
7		Aldrin	40.000	43.447	-8.6	104	0.00	7.00- 7.20
8		Heptachlor Epoxide	40.000	42.201	-5.5	100	0.00	7.60- 7.80
9		gamma-Chlordane	40.000	42.794	-7.0	103	0.00	7.90- 8.10

Continuing Calibration Summary

Job Number: F92199
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-Site 21

Sample: GKK1629-CC1626
Lab FileID: KK47298.D

10		alpha-Chlordane	40.000	44.144	-10.4	103	0.00	7.98- 8.18
11		Endosulfan I	40.000	42.859	-7.1	103	0.00	8.05- 8.25
12		4,4'-DDE	40.000	49.697	-24.2#	113	0.00	8.18- 8.38
13		Dieldrin	40.000	43.468	-8.7	103	0.00	8.38- 8.58
14		Endrin	40.000	39.401	1.5	96	0.00	8.73- 8.93
15		4,4'-DDD	40.000	42.786	-7.0	104	0.00	8.87- 9.07
16		Endosulfan II	40.000	44.323	-10.8	108	0.00	9.08- 9.28
17		Endrin Aldehyde	40.000	45.434	-13.6	110	0.00	9.30- 9.50
18		4,4'-DDT	40.000	47.265	-18.2	112	0.00	9.19- 9.39
19		Endosulfan Sulfate	40.000	43.878	-9.7	106	0.00	9.58- 9.78
20		Methoxychlor	40.000	42.560	-6.4	105	0.00	9.90-10.10
21		Endrin Ketone	40.000	45.118	-12.8	117	0.00	10.24-10.44
22	L1	Chlordane-A		----------NA----------				
23	L1	Chlordane-B		----------NA----------				
24	L1	Chlordane-C		----------NA----------				
25	L1	Chlordane-D		----------NA----------				
26	L1	Chlordane-E		----------NA----------				
27	L1	Chlordane-F		----------NA----------				
28	H	Toxaphene		----------NA----------				
29	S	Decachlorobiphenyl	40.000	41.026	-2.6	102	0.00	11.58-11.78

(#) = Out of Range SPCC's out = 0 CCC's out = 0
KK47189.D 8081B.M Mon Apr 30 14:41:01 2012

5.8.6

5

Continuing Calibration Summary

Job Number: F92199
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-Site 21

Sample: GKK1629-ECC1626
Lab FileID: KK47308.D

Evaluate Continuing Calibration Report

Signal #1 : C:\MSDCHEM\1\DATA\042812\KK47308.D\ECD1A.CH Vial: 18
Signal #2 : C:\MSDCHEM\1\DATA\042812\KK47308.D\ECD2B.CH
Acq On : 4-28-2012 04:06:33 PM Operator: evitam
Sample : ecc1626-40 Inst : ECD 5
Misc : op41557,gkk1629,30.1,,,10,,solid Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\MSDCHEM\1\METHODS\8081B.M (Chemstation Integrator)
Title : Pesticides by 8081B
Last Update : Fri Apr 27 10:56:31 2012
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.20min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	S	Tetrachloro-m-xylene	40.000	43.987	-10.0	107	0.00	4.84- 5.04
2		alpha-BHC	40.000	44.534	-11.3	106	0.00	5.30- 5.50
3		gamma-BHC (Lindane)	40.000	44.980	-12.4	108	0.00	5.63- 5.83
4		beta-BHC	40.000	43.266	-8.2	107	0.00	5.85- 6.05
5		delta-BHC	40.000	48.025	-20.1#	115	0.00	6.09- 6.29
6		Heptachlor	40.000	42.721	-6.8	104	0.00	6.22- 6.42
7		Aldrin	40.000	43.300	-8.2	104	0.00	6.57- 6.77
8		Heptachlor Epoxide	40.000	41.456	-3.6	101	0.00	7.03- 7.23
9		gamma-Chlordane	40.000	44.469	-11.2	107	0.00	7.32- 7.52
10		alpha-Chlordane	40.000	41.685	-4.2	101	0.00	7.40- 7.60
11		Endosulfan I	40.000	43.484	-8.7	104	0.00	7.45- 7.65
12		4,4'-DDE	40.000	41.968	-4.9	102	0.00	7.63- 7.83
13		Dieldrin	40.000	43.485	-8.7	104	0.00	7.76- 7.96
14		Endrin	40.000	41.264	-3.2	99	0.00	8.01- 8.21
15		4,4'-DDD	40.000	59.859	-49.6#	139	0.00	8.22- 8.42
16		Endosulfan II	40.000	43.756	-9.4	106	0.00	8.28- 8.48
17		Endrin Aldehyde	40.000	44.040	-10.1	108	0.00	8.43- 8.63
18		4,4'-DDT	40.000	34.774	13.1	84	0.00	8.58- 8.78
19		Endosulfan Sulfate	40.000	45.043	-12.6	108	0.00	8.71- 8.91
20		Methoxychlor	40.000	36.617	8.5	89	0.00	9.18- 9.38
21		Endrin Ketone	40.000	47.472	-18.7	117	0.00	9.26- 9.46
22	L1	Chlordane-A		----------NA----------				
23	L1	Chlordane-B		----------NA----------				
24	L1	Chlordane-C		----------NA----------				
25	L1	Chlordane-D		----------NA----------				
26	L1	Chlordane-E		----------NA----------				
27	L1	Chlordane-F		----------NA----------				
28	H	Toxaphene		----------NA----------				
29	S	Decachlorobiphenyl	40.000	42.159	-5.4	110	0.00	10.91-11.11

***** Signal #2 *****

1	S	Tetrachloro-m-xylene	40.000	42.968	-7.4	105	0.00	5.25- 5.45
2		alpha-BHC	40.000	43.931	-9.8	105	0.00	5.86- 6.06
3		gamma-BHC (Lindane)	40.000	42.423	-6.1	101	0.00	6.25- 6.45
4		beta-BHC	40.000	41.199	-3.0	100	0.00	6.58- 6.78
5		delta-BHC	40.000	45.483	-13.7	108	0.00	6.87- 7.07
6		Heptachlor	40.000	42.386	-6.0	102	0.00	6.66- 6.86
7		Aldrin	40.000	41.941	-4.9	101	0.00	7.00- 7.20
8		Heptachlor Epoxide	40.000	41.678	-4.2	99	0.00	7.60- 7.80
9		gamma-Chlordane	40.000	40.112	-0.3	96	0.00	7.90- 8.10

Continuing Calibration Summary

Job Number: F92199
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-Site 21

Sample: GKK1629-ECC1626
Lab FileID: KK47308.D

10		alpha-Chlordane	40.000	40.511	-1.3	95	0.00	7.98- 8.18
11		Endosulfan I	40.000	38.615	3.5	93	0.00	8.05- 8.25
12		4,4'-DDE	40.000	45.919	-14.8	105	0.00	8.18- 8.38
13		Dieldrin	40.000	37.982	5.0	90	0.00	8.38- 8.58
14		Endrin	40.000	37.995	5.0	93	0.00	8.73- 8.93
15		4,4'-DDD	40.000	46.211	-15.5	112	0.00	8.87- 9.07
16		Endosulfan II	40.000	39.918	0.2	97	0.00	9.08- 9.28
17		Endrin Aldehyde	40.000	42.368	-5.9	103	0.00	9.30- 9.50
18		4,4'-DDT	40.000	32.811	18.0	78	0.00	9.19- 9.39
19		Endosulfan Sulfate	40.000	43.014	-7.5	104	0.00	9.58- 9.78
20		Methoxychlor	40.000	33.577	16.1	83	0.00	9.90-10.10
21		Endrin Ketone	40.000	41.405	-3.5	107	0.00	10.24-10.44
22	L1	Chlordane-A		----------NA----------				
23	L1	Chlordane-B		----------NA----------				
24	L1	Chlordane-C		----------NA----------				
25	L1	Chlordane-D		----------NA----------				
26	L1	Chlordane-E		----------NA----------				
27	L1	Chlordane-F		----------NA----------				
28	H	Toxaphene		----------NA----------				
29	S	Decachlorobiphenyl	40.000	40.777	-1.9	102	0.00	11.58-11.78

(#) = Out of Range SPCC's out = 0 CCC's out = 0
KK47189.D 8081B.M Mon Apr 30 11:33:04 2012

5.8.7

5

Initial Calibration Summary

Job Number: F92199
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-Site 21

Sample: GKK1631-ICC1631
Lab FileID: KK47327.D

Response Factor Report ECD 5

Method : C:\MSDCHEM\1\METHODS\8081B.M (Chemstation Integrator)
Title : Pesticides by 8081B
Last Update : Tue May 01 08:17:28 2012
Response via : Initial Calibration

Calibration Files
5 =KK47324.D 10 =KK47325.D 20 =KK47326.D 40 =KK47327.D
60 =KK47328.D 80 =KK47329.D c200=KK47330.D t500=KK47331.D

Compound	5	10	20	40	60	80	c200	t500	Avg	%RSD
1) Tetrachloro-	2.555	2.716	2.902	2.708	2.806	2.643			2.721 E4	4.47
2) alpha-BHC	3.617	3.990	4.322	3.933	4.026	3.856			3.958 E4	5.82
3) gamma-BHC (L	3.144	3.380	3.666	3.408	3.452	3.398			3.408 E4	4.89
4) beta-BHC	1.449	1.463	1.549	1.405	1.513	1.458			1.473 E4	3.46
5) delta-BHC	2.782	2.963	3.243	2.992	3.097	2.958			3.006 E4	5.13
6) Heptachlor	2.696	2.920	3.118	2.888	3.009	2.860			2.915 E4	4.90
7) Aldrin	2.320	2.583	2.835	2.621	2.759	2.648			2.628 E4	6.76
8) Heptachlor E	2.232	2.356	2.581	2.306	2.435	2.367			2.380 E4	5.02
9) gamma-Chlord	2.080	2.204	2.458	2.328	2.434	2.346			2.308 E4	6.21
10) alpha-Chlord	2.001	2.155	2.339	2.168	2.312	2.209			2.197 E4	5.56
11) Endosulfan	1.871	2.063	2.164	2.069	2.169	2.082			2.070 E4	5.23
12) 4,4'-DDE	2.018	2.120	2.363	2.214	2.293	2.231			2.206 E4	5.58
13) Dieldrin	2.047	2.240	2.399	2.293	2.366	2.281			2.271 E4	5.48
14) Endrin	1.660	1.771	1.912	1.778	1.877	1.849			1.808 E4	5.04
15) 4,4'-DDD	1.671	1.719	1.930	1.715	1.871	1.847			1.792 E4	5.82
16) Endosulfan I	1.828	1.897	2.044	1.918	2.022	1.949			1.943 E4	4.14
17) Endrin Aldeh	1.503	1.518	1.658	1.504	1.624	1.575			1.564 E4	4.24
18) 4,4'-DDT	1.508	1.516	1.700	1.612	1.736	1.759			1.639 E4	6.71
19) Endosulfan S	1.610	1.623	1.803	1.690	1.777	1.691			1.699 E4	4.61
20) Methoxychlor	8.797	8.477	8.916	8.435	8.868	8.490			8.664 E3	2.53
21) Endrin Keton	1.834	1.924	2.094	1.961	2.025	1.992			1.972 E4	4.51
22) Chlordane-A							1.189		1.189 E3	0.00
23) Chlordane-B							1.659		1.659 E3	0.00
24) Chlordane-C							7.703		7.703 E2	0.00
25) Chlordane-D							3.494		3.494 E3	0.00
26) Chlordane-E							3.306		3.306 E3	0.00
27) Chlordane-F							7.774		7.774 E2	0.00
28) Toxaphene								2.380	2.380 E5	0.00
29) Decachlorobi	1.252	1.235	1.245	1.152	1.188	1.147			1.203 E4	3.94

Signal #2

1) Tetrachloro-	3.479	3.707	3.951	3.687	3.757	3.654			3.706 E4	4.13
2) alpha-BHC	4.671	5.144	5.613	5.219	5.466	5.279			5.232 E4	6.20
3) gamma-BHC (L	4.150	4.452	4.827	4.445	4.768	4.605			4.541 E4	5.46
4) beta-BHC	1.848	1.895	2.047	1.927	2.012	1.978			1.951 E4	3.82
5) delta-BHC	3.605	3.881	4.261	4.011	4.301	4.188			4.041 E4	6.59
6) Heptachlor	3.307	3.584	4.015	3.621	3.826	3.688			3.673 E4	6.50
7) Aldrin	2.955	3.224	3.583	3.322	3.569	3.437			3.348 E4	7.10
8) Heptachlor E	2.774	2.968	3.235	2.991	3.199	3.020			3.031 E4	5.56
9) gamma-Chlord	2.659	2.865	3.127	2.974	3.174	3.168			2.994 E4	6.83
10) alpha-Chlord	2.605	2.764	3.024	2.860	3.022	2.908			2.864 E4	5.62
11) Endosulfan	2.236	2.441	2.740	2.588	2.748	2.713			2.578 E4	7.93
12) 4,4'-DDE	2.537	2.755	3.170	2.874	3.109	3.066			2.919 E4	8.32
13) Dieldrin	2.537	2.722	3.007	2.877	3.021	2.934			2.850 E4	6.59
14) Endrin	1.960	2.028	2.227	2.165	2.283	2.208			2.145 E4	5.82
15) 4,4'-DDD	2.139	2.295	2.573	2.353	2.607	2.519			2.414 E4	7.56

Initial Calibration Summary

Job Number: F92199
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-Site 21

Sample: GKK1631-ICC1631
Lab FileID: KK47327.D

16)	Endosulfan I	2.129	2.267	2.520	2.359	2.509	2.490			2.379	E4	6.63
17)	Endrin Aldeh	1.828	1.918	2.080	1.952	2.120	2.007			1.984	E4	5.42
18)	4,4'-DDT	1.734	1.895	2.132	2.094	2.269	2.249			2.062	E4	10.15
19)	Endosulfan S	1.977	2.101	2.228	2.108	2.259	2.156			2.138	E4	4.74
20)	Methoxychlor	1.087	1.081	1.167	1.071	1.162	1.123			1.115	E4	3.76
21)	Endrin Keton	2.162	2.284	2.511	2.312	2.550	2.408			2.371	E4	6.19
22)	Chlordane-A							1.591		1.591	E3	0.00
23)	Chlordane-B							2.054		2.054	E3	0.00
24)	Chlordane-C							1.134		1.134	E3	0.00
25)	Chlordane-D							4.129		4.129	E3	0.00
26)	Chlordane-E							3.332		3.332	E3	0.00
27)	Chlordane-F							1.030		1.030	E3	0.00
28)	Toxaphene								3.568	3.568	E5	0.00
29)	Decachlorobi	2.725	1.842	1.606	1.382	1.455	1.411			1.737	E4	29.54

---- Linear regr., Force(0,0) ---- Coefficient = 0.9977
Response Ratio = 0.00000 + 14326.71899 *A

(#) = Out of Range ### Number of calibration levels exceeded format ###

8081B.M Tue May 01 10:00:17 2012

5.8.8

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Initial Calibration Verification

Job Number: F92199
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-Site 21

Sample: GKK1631-ICV1631
Lab FileID: KK47332.D

Evaluate Continuing Calibration Report

Signal #1 : C:\MSDCHEM\1\DATA\043012B\KK47332.D\ECD1A.CH Vial: 10
Signal #2 : C:\MSDCHEM\1\DATA\043012B\KK47332.D\ECD2B.CH
Acq On : 4-30-2012 06:34:33 PM Operator: evitam
Sample : icv1631-40 Inst : ECD 5
Misc : op41460,gkk1631 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\MSDCHEM\1\METHODS\8081B.M (Chemstation Integrator)
Title : Pesticides by 8081B
Last Update : Tue May 01 08:17:28 2012
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.20min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	S	Tetrachloro-m-xylene		----------NA----------				
2		alpha-BHC	40.000	40.872	-2.2	103	0.00	5.30- 5.50
3		gamma-BHC (Lindane)	40.000	41.257	-3.1	103	0.00	5.63- 5.83
4		beta-BHC	40.000	40.640	-1.6	107	0.00	5.85- 6.05
5		delta-BHC	40.000	35.776	10.6	90	0.00	6.09- 6.29
6		Heptachlor	40.000	41.845	-4.6	106	0.00	6.22- 6.42
7		Aldrin	40.000	44.176	-10.4	111	0.00	6.56- 6.76
8		Heptachlor Epoxide	40.000	42.042	-5.1	108	0.00	7.03- 7.23
9		gamma-Chlordane	40.000	42.515	-6.3	105	0.00	7.31- 7.51
10		alpha-Chlordane	40.000	43.555	-8.9	110	0.00	7.40- 7.60
11		Endosulfan I	40.000	41.955	-4.9	105	0.00	7.44- 7.64
12		4,4'-DDE	40.000	40.806	-2.0	102	0.00	7.63- 7.83
13		Dieldrin	40.000	42.262	-5.7	105	0.00	7.75- 7.95
14		Endrin	40.000	47.174	-17.9	120	0.00	8.01- 8.21
15		4,4'-DDD	40.000	42.473	-6.2	111	0.00	8.22- 8.42
16		Endosulfan II	40.000	41.518	-3.8	105	0.00	8.27- 8.47
17		Endrin Aldehyde	40.000	41.510	-3.8	108	0.00	8.42- 8.62
18		4,4'-DDT	40.000	41.569	-3.9	106	0.00	8.58- 8.78
19		Endosulfan Sulfate	40.000	39.738	0.7	100	0.00	8.70- 8.90
20		Methoxychlor	40.000	39.003	2.5	100	0.00	9.18- 9.38
21		Endrin Ketone	40.000	42.870	-7.2	108	0.00	9.25- 9.45
22	L1	Chlordane-A		----------NA----------				
23	L1	Chlordane-B		----------NA----------				
24	L1	Chlordane-C		----------NA----------				
25	L1	Chlordane-D		----------NA----------				
26	L1	Chlordane-E		----------NA----------				
27	L1	Chlordane-F		----------NA----------				
28	H	Toxaphene		----------NA----------				
29	S	Decachlorobiphenyl		----------NA----------				

***** Signal #2 *****

1	S	Tetrachloro-m-xylene		----------NA----------				
2		alpha-BHC	40.000	42.454	-6.1	106	0.00	5.86- 6.06
3		gamma-BHC (Lindane)	40.000	42.621	-6.6	109	0.00	6.25- 6.45
4		beta-BHC	40.000	43.710	-9.3	111	0.00	6.58- 6.78
5		delta-BHC	40.000	37.596	6.0	95	0.00	6.86- 7.06
6		Heptachlor	40.000	42.754	-6.9	108	0.00	6.66- 6.86
7		Aldrin	40.000	44.688	-11.7	113	0.00	7.00- 7.20
8		Heptachlor Epoxide	40.000	42.901	-7.3	109	0.00	7.59- 7.79
9		gamma-Chlordane	40.000	43.146	-7.9	109	0.00	7.89- 8.09

Initial Calibration Verification

Job Number: F92199
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-Site 21

Sample: GKK1631-ICV1631
Lab FileID: KK47332.D

10		alpha-Chlordane	40.000	44.906	-12.3	112	0.00	7.97- 8.17
11		Endosulfan I	40.000	44.921	-12.3	112	0.00	8.05- 8.25
12		4,4'-DDE	40.000	44.108	-10.3	112	0.00	8.18- 8.38
13		Dieldrin	40.000	45.343	-13.4	112	0.00	8.37- 8.57
14		Endrin	40.000	47.833	-19.6	118	0.00	8.72- 8.92
15		4,4'-DDD	40.000	44.638	-11.6	115	0.00	8.86- 9.06
16		Endosulfan II	40.000	43.941	-9.9	111	0.00	9.08- 9.28
17		Endrin Aldehyde	40.000	41.848	-4.6	106	0.00	9.30- 9.50
18		4,4'-DDT	40.000	44.603	-11.5	110	0.00	9.18- 9.38
19		Endosulfan Sulfate	40.000	40.570	-1.4	103	0.00	9.57- 9.77
20		Methoxychlor	40.000	41.467	-3.7	108	0.00	9.89-10.09
21		Endrin Ketone	40.000	43.344	-8.4	111	0.00	10.23-10.43
22	L1	Chlordane-A		----------NA----------				
23	L1	Chlordane-B		----------NA----------				
24	L1	Chlordane-C		----------NA----------				
25	L1	Chlordane-D		----------NA----------				
26	L1	Chlordane-E		----------NA----------				
27	L1	Chlordane-F		----------NA----------				
28	H	Toxaphene		----------NA----------				

			Amount	Calc.	%Drift
29	S	Decachlorobiphenyl		----------NA----------	

(#) = Out of Range SPCC's out = 0 CCC's out = 0
KK47327.D 8081B.M Tue May 01 09:59:05 2012

5.8.9

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Continuing Calibration Summary

Job Number: F92199
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-Site 21

Sample: GKK1631-CC1631
Lab FileID: KK47341.D

Evaluate Continuing Calibration Report

Signal #1 : C:\MSDCHEM\1\DATA\043012B\KK47341.D\ECD1A.CH Vial: 19
Signal #2 : C:\MSDCHEM\1\DATA\043012B\KK47341.D\ECD2B.CH
Acq On : 4-30-2012 09:18:00 PM Operator: evitam
Sample : cc1631-40 Inst : ECD 5
Misc : op41557,gkk1631,30.1,,,10,,soil Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\MSDCHEM\1\METHODS\8081B.M (Chemstation Integrator)
Title : Pesticides by 8081B
Last Update : Tue May 01 08:17:28 2012
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.20min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	S	Tetrachloro-m-xylene	40.000	40.096	-0.2	101	0.00	4.84- 5.04
2		alpha-BHC	40.000	39.582	1.0	100	0.00	5.30- 5.50
3		gamma-BHC (Lindane)	40.000	39.703	0.7	99	0.00	5.63- 5.83
4		beta-BHC	40.000	38.299	4.3	100	0.00	5.85- 6.05
5		delta-BHC	40.000	39.380	1.5	99	0.00	6.09- 6.29
6		Heptachlor	40.000	39.001	2.5	98	0.00	6.22- 6.42
7		Aldrin	40.000	42.035	-5.1	105	0.00	6.56- 6.76
8		Heptachlor Epoxide	40.000	40.348	-0.9	104	0.00	7.03- 7.23
9		gamma-Chlordane	40.000	41.965	-4.9	104	0.00	7.31- 7.51
10		alpha-Chlordane	40.000	42.187	-5.5	107	0.00	7.40- 7.60
11		Endosulfan I	40.000	41.352	-3.4	103	0.00	7.44- 7.64
12		4,4'-DDE	40.000	40.549	-1.4	101	0.00	7.63- 7.83
13		Dieldrin	40.000	41.061	-2.7	102	0.00	7.75- 7.95
14		Endrin	40.000	41.339	-3.3	105	0.00	8.01- 8.21
15		4,4'-DDD	40.000	43.312	-8.3	113	0.00	8.22- 8.42
16		Endosulfan II	40.000	42.119	-5.3	107	0.00	8.27- 8.47
17		Endrin Aldehyde	40.000	40.898	-2.2	106	0.00	8.42- 8.62
18		4,4'-DDT	40.000	29.813	25.5#	76	0.00	8.58- 8.78
19		Endosulfan Sulfate	40.000	41.259	-3.1	104	0.00	8.70- 8.90
20		Methoxychlor	40.000	33.117	17.2	85	0.00	9.18- 9.38
21		Endrin Ketone	40.000	40.004	-0.0	101	0.00	9.25- 9.45
22	L1	Chlordane-A		----------NA----------				
23	L1	Chlordane-B		----------NA----------				
24	L1	Chlordane-C		----------NA----------				
25	L1	Chlordane-D		----------NA----------				
26	L1	Chlordane-E		----------NA----------				
27	L1	Chlordane-F		----------NA----------				
28	H	Toxaphene		----------NA----------				
29	S	Decachlorobiphenyl	40.000	38.920	2.7	102	0.00	10.91-11.11

***** Signal #2 *****

1	S	Tetrachloro-m-xylene	40.000	39.716	0.7	100	0.00	5.25- 5.45
2		alpha-BHC	40.000	41.294	-3.2	103	0.00	5.86- 6.06
3		gamma-BHC (Lindane)	40.000	40.501	-1.3	103	0.00	6.25- 6.45
4		beta-BHC	40.000	41.858	-4.6	106	0.00	6.58- 6.78
5		delta-BHC	40.000	41.275	-3.2	104	0.00	6.86- 7.06
6		Heptachlor	40.000	41.614	-4.0	106	0.00	6.66- 6.86
7		Aldrin	40.000	42.825	-7.1	108	0.00	7.00- 7.20
8		Heptachlor Epoxide	40.000	42.584	-6.5	108	0.00	7.59- 7.79
9		gamma-Chlordane	40.000	42.431	-6.1	107	0.00	7.89- 8.09

Continuing Calibration Summary

Job Number: F92199
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-Site 21

Sample: GKK1631-CC1631
Lab FileID: KK47341.D

10		alpha-Chlordane	40.000	41.279	-3.2	103	0.00	7.97- 8.17
11		Endosulfan I	40.000	43.214	-8.0	108	0.00	8.05- 8.25
12		4,4'-DDE	40.000	41.249	-3.1	105	0.00	8.18- 8.38
13		Dieldrin	40.000	42.184	-5.5	104	0.00	8.37- 8.57
14		Endrin	40.000	44.301	-10.8	110	0.00	8.72- 8.92
15		4,4'-DDD	40.000	47.889	-19.7	123	0.00	8.86- 9.06
16		Endosulfan II	40.000	42.793	-7.0	108	0.00	9.08- 9.28
17		Endrin Aldehyde	40.000	43.265	-8.2	110	0.00	9.30- 9.50
18		4,4'-DDT	40.000	31.485	21.3#	78	0.00	9.18- 9.38
19		Endosulfan Sulfate	40.000	42.909	-7.3	109	0.00	9.57- 9.77
20		Methoxychlor	40.000	33.718	15.7	88	0.00	9.89-10.09
21		Endrin Ketone	40.000	42.211	-5.5	108	0.00	10.23-10.43
22	L1	Chlordane-A		----------NA----------				
23	L1	Chlordane-B		----------NA----------				
24	L1	Chlordane-C		----------NA----------				
25	L1	Chlordane-D		----------NA----------				
26	L1	Chlordane-E		----------NA----------				
27	L1	Chlordane-F		----------NA----------				
28	H	Toxaphene		----------NA----------				
		----------	Amount	Calc.	%Drift		----------	
29	S	Decachlorobiphenyl	40.000	41.130	-2.8	107	0.00	11.58-11.78

(#) = Out of Range SPCC's out = 0 CCC's out = 0
KK47327.D 8081B.M Tue May 01 09:59:06 2012

5.8.10

5

Continuing Calibration Summary

Job Number: F92199
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-Site 21

Sample: GKK1633-CC1631
Lab FileID: KK47398.D

Evaluate Continuing Calibration Report

Signal #1 : C:\MSDCHEM\1\DATA\050212\KK47398.D\ECD1A.CH Vial: 3
Signal #2 : C:\MSDCHEM\1\DATA\050212\KK47398.D\ECD2B.CH
Acq On : 02 May 2012 10:10 am Operator: evitam
Sample : cc1631-20 Inst : ECD 5
Misc : op41460,gkk1633 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\MSDCHEM\1\METHODS\8081B.M (Chemstation Integrator)
Title : Pesticides by 8081B
Last Update : Tue May 01 08:17:28 2012
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.20min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	S	Tetrachloro-m-xylene	20.000	22.646	-13.2	106	0.00	4.84- 5.04
2		alpha-BHC	20.000	22.581	-12.9	103	0.00	5.30- 5.50
3		gamma-BHC (Lindane)	20.000	22.941	-14.7	107	0.00	5.63- 5.83
4		beta-BHC	20.000	21.090	-5.4	100	0.00	5.85- 6.05
5		delta-BHC	20.000	21.622	-8.1	100	0.00	6.09- 6.29
6		Heptachlor	20.000	21.427	-7.1	100	0.00	6.22- 6.42
7		Aldrin	20.000	21.645	-8.2	100	0.00	6.56- 6.76
8		Heptachlor Epoxide	20.000	21.116	-5.6	97	0.00	7.03- 7.23
9		gamma-Chlordane	20.000	20.394	-2.0	96	0.00	7.31- 7.51
10		alpha-Chlordane	20.000	20.714	-3.6	97	0.00	7.40- 7.60
11		Endosulfan I	20.000	20.557	-2.8	98	0.00	7.44- 7.64
12		4,4'-DDE	20.000	21.499	-7.5	100	0.00	7.63- 7.83
13		Dieldrin	20.000	20.871	-4.4	99	0.00	7.75- 7.95
14		Endrin	20.000	20.663	-3.3	98	0.00	8.01- 8.21
15		4,4'-DDD	20.000	21.881	-9.4	102	0.00	8.22- 8.42
16		Endosulfan II	20.000	21.039	-5.2	100	0.00	8.27- 8.47
17		Endrin Aldehyde	20.000	20.964	-4.8	99	0.00	8.42- 8.62
18		4,4'-DDT	20.000	20.876	-4.4	101	0.00	8.58- 8.78
19		Endosulfan Sulfate	20.000	21.208	-6.0	100	0.00	8.70- 8.90
20		Methoxychlor	20.000	21.073	-5.4	102	0.00	9.18- 9.38
21		Endrin Ketone	20.000	21.963	-9.8	103	0.00	9.25- 9.45
22	L1	Chlordane-A		----------NA----------				
23	L1	Chlordane-B		----------NA----------				
24	L1	Chlordane-C		----------NA----------				
25	L1	Chlordane-D		----------NA----------				
26	L1	Chlordane-E		----------NA----------				
27	L1	Chlordane-F		----------NA----------				
28	H	Toxaphene		----------NA----------				
29	S	Decachlorobiphenyl	20.000	21.584	-7.9	104	0.00	10.91-11.11

***** Signal #2 *****

1	S	Tetrachloro-m-xylene	20.000	22.131	-10.7	104	-0.01	5.25- 5.45
2		alpha-BHC	20.000	22.079	-10.4	103	0.00	5.86- 6.06
3		gamma-BHC (Lindane)	20.000	21.808	-9.0	103	0.00	6.25- 6.45
4		beta-BHC	20.000	20.986	-4.9	100	0.00	6.58- 6.78
5		delta-BHC	20.000	20.806	-4.0	99	0.00	6.86- 7.06
6		Heptachlor	20.000	21.357	-6.8	98	0.00	6.66- 6.86
7		Aldrin	20.000	20.890	-4.5	98	-0.01	7.00- 7.20
8		Heptachlor Epoxide	20.000	20.425	-2.1	96	0.00	7.59- 7.79
9		gamma-Chlordane	20.000	20.361	-1.8	97	-0.01	7.89- 8.09

Continuing Calibration Summary

Job Number: F92199
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-Site 21

Sample: GKK1633-CC1631
Lab FileID: KK47398.D

10		alpha-Chlordane	20.000	20.835	-4.2	99	-0.01	7.97- 8.17
11		Endosulfan I	20.000	19.330	3.4	91	-0.01	8.05- 8.25
12		4,4'-DDE	20.000	20.390	-2.0	94	0.00	8.18- 8.38
13		Dieldrin	20.000	20.161	-0.8	96	0.00	8.37- 8.57
14		Endrin	20.000	21.054	-5.3	101	-0.01	8.72- 8.92
15		4,4'-DDD	20.000	20.401	-2.0	96	0.00	8.86- 9.06
16		Endosulfan II	20.000	20.298	-1.5	96	0.00	9.08- 9.28
17		Endrin Aldehyde	20.000	20.368	-1.8	97	0.00	9.30- 9.50
18		4,4'-DDT	20.000	20.560	-2.8	99	0.00	9.18- 9.38
19		Endosulfan Sulfate	20.000	20.714	-3.6	99	0.00	9.57- 9.77
20		Methoxychlor	20.000	20.579	-2.9	98	0.00	9.89-10.09
21		Endrin Ketone	20.000	21.920	-9.6	103	0.00	10.23-10.43
22	L1	Chlordane-A		----------NA----------				
23	L1	Chlordane-B		----------NA----------				
24	L1	Chlordane-C		----------NA----------				
25	L1	Chlordane-D		----------NA----------				
26	L1	Chlordane-E		----------NA----------				
27	L1	Chlordane-F		----------NA----------				
28	H	Toxaphene		----------NA----------				
		----------	Amount	Calc.	%Drift		----------	
29	S	Decachlorobiphenyl	20.000	20.366	-1.8	91	0.00	11.58-11.78

(#) = Out of Range SPCC's out = 0 CCC's out = 0
KK47326.D 8081B.M Wed May 02 10:53:58 2012

5.8.11

5

Continuing Calibration Summary

Job Number: F92199
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-Site 21

Sample: GKK1633-CC1631
Lab FileID: KK47399.D

Evaluate Continuing Calibration Report

Signal #1 : C:\MSDCHEM\1\DATA\050212\KK47399.D\ECD1A.CH Vial: 4
Signal #2 : C:\MSDCHEM\1\DATA\050212\KK47399.D\ECD2B.CH
Acq On : 02 May 2012 10:28 am Operator: evitam
Sample : cc1631-200 Inst : ECD 5
Misc : op41460,gkk1633 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\MSDCHEM\1\METHODS\8081B.M (Chemstation Integrator)
Title : Pesticides by 8081B
Last Update : Tue May 01 08:17:28 2012
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.20min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	S	Tetrachloro-m-xylene	-1.000	28.545	0.0	107	0.00	4.84- 5.04
2		alpha-BHC		----------NA----------				
3		gamma-BHC (Lindane)		----------NA----------				
4		beta-BHC		----------NA----------				
5		delta-BHC		----------NA----------				
6		Heptachlor		----------NA----------				
7		Aldrin		----------NA----------				
8		Heptachlor Epoxide		----------NA----------				
9		gamma-Chlordane		----------NA----------				
10		alpha-Chlordane		----------NA----------				
11		Endosulfan I		----------NA----------				
12		4,4'-DDE		----------NA----------				
13		Dieldrin		----------NA----------				
14		Endrin		----------NA----------				
15		4,4'-DDD		----------NA----------				
16		Endosulfan II		----------NA----------				
17		Endrin Aldehyde		----------NA----------				
18		4,4'-DDT		----------NA----------				
19		Endosulfan Sulfate		----------NA----------				
20		Methoxychlor		----------NA----------				
21		Endrin Ketone		----------NA----------				
22	L1	Chlordane-A	200.000	204.301	-2.2	102	-0.02	6.01- 6.21
23	L1	Chlordane-B	200.000	199.027	0.5	100	-0.02	6.23- 6.43
24	L1	Chlordane-C	200.000	195.278	2.4	98	-0.02	6.56- 6.76
25	L1	Chlordane-D	200.000	192.156	3.9	96	-0.02	7.33- 7.53
26	L1	Chlordane-E	200.000	192.587	3.7	96	-0.02	7.41- 7.61
27	L1	Chlordane-F	200.000	193.543	3.2	97	-0.02	8.36- 8.56
28	H	Toxaphene		----------NA----------				
29	S	Decachlorobiphenyl	-1.000	27.036	0.0	104	0.00	10.91-11.11

***** Signal #2 *****

1	S	Tetrachloro-m-xylene	-1.000	29.794	0.0	103	0.00	5.25- 5.45
2		alpha-BHC		----------NA----------				
3		gamma-BHC (Lindane)		----------NA----------				
4		beta-BHC		----------NA----------				
5		delta-BHC		----------NA----------				
6		Heptachlor		----------NA----------				
7		Aldrin		----------NA----------				
8		Heptachlor Epoxide		----------NA----------				
9		gamma-Chlordane		----------NA----------				

5.8.12 5

Continuing Calibration Summary

Job Number: F92199
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-Site 21

Sample: GKK1633-CC1631
Lab FileID: KK47399.D

10		alpha-Chlordane			----------NA----------			
11		Endosulfan I			----------NA----------			
12		4,4'-DDE			----------NA----------			
13		Dieldrin			----------NA----------			
14		Endrin			----------NA----------			
15		4,4'-DDD			----------NA----------			
16		Endosulfan II			----------NA----------			
17		Endrin Aldehyde			----------NA----------			
18		4,4'-DDT			----------NA----------			
19		Endosulfan Sulfate			----------NA----------			
20		Methoxychlor			----------NA----------			
21		Endrin Ketone			----------NA----------			
22	L1	Chlordane-A	200.000	187.422	6.3	94	-0.02	6.46- 6.66
23	L1	Chlordane-B	200.000	188.505	5.7	94	-0.02	6.66- 6.86
24	L1	Chlordane-C	200.000	185.230	7.4	93	-0.02	7.13- 7.33
25	L1	Chlordane-D	200.000	187.650	6.2	94	-0.02	7.90- 8.10
26	L1	Chlordane-E	200.000	186.729	6.6	93	-0.02	7.98- 8.18
27	L1	Chlordane-F	200.000	179.221	10.4	90	-0.02	9.10- 9.30
28	H	Toxaphene			----------NA----------			

			Amount	Calc.	%Drift			
29	S	Decachlorobiphenyl	-1.000	25.837	0.0	94	0.00	11.58-11.78

(#) = Out of Range SPCC's out = 0 CCC's out = 0
KK47330.D 8081B.M Wed May 02 10:54:12 2012

5.8.12

5

Continuing Calibration Summary

Job Number: F92199
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-Site 21

Sample: GKK1633-CC1631
Lab FileID: KK47400.D

Evaluate Continuing Calibration Report

Signal #1 : C:\MSDCHEM\1\DATA\050212\KK47400.D\ECD1A.CH Vial: 5
Signal #2 : C:\MSDCHEM\1\DATA\050212\KK47400.D\ECD2B.CH
Acq On : 02 May 2012 10:46 am Operator: evitam
Sample : cc1631-500 Inst : ECD 5
Misc : op41460,gkk1633 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\MSDCHEM\1\METHODS\8081B.M (Chemstation Integrator)
Title : Pesticides by 8081B
Last Update : Tue May 01 08:17:28 2012
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.20min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	S	Tetrachloro-m-xylene	-1.000	51.929	0.0	104	0.00	4.84- 5.04
2		alpha-BHC		----------NA----------				
3		gamma-BHC (Lindane)		----------NA----------				
4		beta-BHC		----------NA----------				
5		delta-BHC		----------NA----------				
6		Heptachlor		----------NA----------				
7		Aldrin		----------NA----------				
8		Heptachlor Epoxide		----------NA----------				
9		gamma-Chlordane		----------NA----------				
10		alpha-Chlordane		----------NA----------				
11		Endosulfan I		----------NA----------				
12		4,4'-DDE		----------NA----------				
13		Dieldrin		----------NA----------				
14		Endrin		----------NA----------				
15		4,4'-DDD		----------NA----------				
16		Endosulfan II		----------NA----------				
17		Endrin Aldehyde		----------NA----------				
18		4,4'-DDT		----------NA----------				
19		Endosulfan Sulfate		----------NA----------				
20		Methoxychlor		----------NA----------				
21		Endrin Ketone		----------NA----------				
22	L1	Chlordane-A		----------NA----------				
23	L1	Chlordane-B		----------NA----------				
24	L1	Chlordane-C		----------NA----------				
25	L1	Chlordane-D		----------NA----------				
26	L1	Chlordane-E		----------NA----------				
27	L1	Chlordane-F		----------NA----------				
28	H	Toxaphene	500.000	476.341	4.7	95	0.62#	5.88-10.41
29	S	Decachlorobiphenyl	-1.000	48.599	0.0	95	0.00	10.91-11.11

***** Signal #2 *****

1	S	Tetrachloro-m-xylene	-1.000	51.187	0.0	102	0.00	5.25- 5.45
2		alpha-BHC		----------NA----------				
3		gamma-BHC (Lindane)		----------NA----------				
4		beta-BHC		----------NA----------				
5		delta-BHC		----------NA----------				
6		Heptachlor		----------NA----------				
7		Aldrin		----------NA----------				
8		Heptachlor Epoxide		----------NA----------				
9		gamma-Chlordane		----------NA----------				

5.8.13 5

Continuing Calibration Summary

Job Number: F92199
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-Site 21

Sample: GKK1633-CC1631
Lab FileID: KK47400.D

10		alpha-Chlordane		----------NA----------				
11		Endsulfan I		----------NA----------				
12		4,4'-DDE		----------NA----------				
13		Dieldrin		----------NA----------				
14		Endrin		----------NA----------				
15		4,4'-DDD		----------NA----------				
16		Endosulfan II		----------NA----------				
17		Endrin Aldehyde		----------NA----------				
18		4,4'-DDT		----------NA----------				
19		Endosulfan Sulfate		----------NA----------				
20		Methoxychlor		----------NA----------				
21		Endrin Ketone		----------NA----------				
22	L1	Chlordane-A		----------NA----------				
23	L1	Chlordane-B		----------NA----------				
24	L1	Chlordane-C		----------NA----------				
25	L1	Chlordane-D		----------NA----------				
26	L1	Chlordane-E		----------NA----------				
27	L1	Chlordane-F		----------NA----------				
28	H	Toxaphene	500.000	449.810	10.0	90	-0.62#	6.19-11.18
		----------	Amount	Calc.	%Drift		----------	
29	S	Decachlorobiphenyl	-1.000	47.951	0.0	95	0.00	11.58-11.78

(#) = Out of Range SPCC's out = 0 CCC's out = 0
KK47331.D 8081B.M Wed May 02 11:27:53 2012

5.8.13

5

Continuing Calibration Summary

Job Number: F92199
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-Site 21

Sample: GKK1633-CC1631
Lab FileID: KK47404.D

Evaluate Continuing Calibration Report

Signal #1 : C:\MSDCHEM\1\DATA\050212\KK47404.D\ECD1A.CH Vial: 9
Signal #2 : C:\MSDCHEM\1\DATA\050212\KK47404.D\ECD2B.CH
Acq On : 02 May 2012 11:59 am Operator: evitam
Sample : cc1631-40 Inst : ECD 5
Misc : op41557,gkk1633,30.5,,,10,2,soil Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\MSDCHEM\1\METHODS\8081B.M (Chemstation Integrator)
Title : Pesticides by 8081B
Last Update : Tue May 01 08:17:28 2012
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.20min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	S	Tetrachloro-m-xylene	40.000	41.373	-3.4	104	0.00	4.84- 5.04
2		alpha-BHC	40.000	41.239	-3.1	104	0.00	5.30- 5.50
3		gamma-BHC (Lindane)	40.000	41.351	-3.4	103	0.00	5.63- 5.83
4		beta-BHC	40.000	39.254	1.9	103	0.00	5.85- 6.05
5		delta-BHC	40.000	39.773	0.6	100	0.00	6.09- 6.29
6		Heptachlor	40.000	41.250	-3.1	104	0.00	6.22- 6.42
7		Aldrin	40.000	40.978	-2.4	103	0.00	6.56- 6.76
8		Heptachlor Epoxide	40.000	40.607	-1.5	105	0.00	7.03- 7.23
9		gamma-Chlordane	40.000	40.895	-2.2	101	0.00	7.31- 7.51
10		alpha-Chlordane	40.000	40.593	-1.5	103	0.00	7.40- 7.60
11		Endosulfan I	40.000	40.502	-1.3	101	0.00	7.44- 7.64
12		4,4'-DDE	40.000	39.123	2.2	97	0.00	7.63- 7.83
13		Dieldrin	40.000	41.127	-2.8	102	0.00	7.75- 7.95
14		Endrin	40.000	39.594	1.0	101	0.00	8.01- 8.21
15		4,4'-DDD	40.000	39.802	0.5	104	0.00	8.22- 8.42
16		Endosulfan II	40.000	38.243	4.4	97	0.00	8.27- 8.47
17		Endrin Aldehyde	40.000	38.986	2.5	101	0.00	8.42- 8.62
18		4,4'-DDT	40.000	37.511	6.2	95	0.00	8.58- 8.78
19		Endosulfan Sulfate	40.000	38.650	3.4	97	0.00	8.70- 8.90
20		Methoxychlor	40.000	36.689	8.3	94	0.00	9.18- 9.38
21		Endrin Ketone	40.000	38.854	2.9	98	0.00	9.25- 9.45
22	L1	Chlordane-A		----------NA----------				
23	L1	Chlordane-B		----------NA----------				
24	L1	Chlordane-C		----------NA----------				
25	L1	Chlordane-D		----------NA----------				
26	L1	Chlordane-E		----------NA----------				
27	L1	Chlordane-F		----------NA----------				
28	H	Toxaphene		----------NA----------				
29	S	Decachlorobiphenyl	40.000	37.600	6.0	98	0.00	10.91-11.11

***** Signal #2 *****

1	S	Tetrachloro-m-xylene	40.000	41.202	-3.0	104	0.00	5.25- 5.45
2		alpha-BHC	40.000	41.500	-3.8	104	0.00	5.86- 6.06
3		gamma-BHC (Lindane)	40.000	41.259	-3.1	105	0.00	6.25- 6.45
4		beta-BHC	40.000	40.746	-1.9	103	0.00	6.58- 6.78
5		delta-BHC	40.000	40.481	-1.2	102	0.00	6.86- 7.06
6		Heptachlor	40.000	41.429	-3.6	105	0.00	6.66- 6.86
7		Aldrin	40.000	41.836	-4.6	105	0.00	7.00- 7.20
8		Heptachlor Epoxide	40.000	40.362	-0.9	102	0.00	7.59- 7.79
9		gamma-Chlordane	40.000	40.225	-0.6	101	0.00	7.89- 8.09

Continuing Calibration Summary

Job Number: F92199
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-Site 21

Sample: GKK1633-CC1631
Lab FileID: KK47404.D

10		alpha-Chlordane	40.000	40.363	-0.9	101	0.00	7.97- 8.17
11		Endosulfan I	40.000	38.785	3.0	97	0.00	8.05- 8.25
12		4,4'-DDE	40.000	38.624	3.4	98	0.00	8.18- 8.38
13		Dieldrin	40.000	39.751	0.6	98	0.00	8.37- 8.57
14		Endrin	40.000	40.293	-0.7	100	0.00	8.72- 8.92
15		4,4'-DDD	40.000	39.970	0.1	103	0.00	8.86- 9.06
16		Endosulfan II	40.000	38.191	4.5	96	0.00	9.08- 9.28
17		Endrin Aldehyde	40.000	38.145	4.6	97	0.00	9.30- 9.50
18		4,4'-DDT	40.000	37.483	6.3	92	0.00	9.18- 9.38
19		Endosulfan Sulfate	40.000	39.368	1.6	100	0.00	9.57- 9.77
20		Methoxychlor	40.000	37.137	7.2	97	0.00	9.89-10.09
21		Endrin Ketone	40.000	40.531	-1.3	104	0.00	10.23-10.43
22	L1	Chlordane-A		----------NA----------				
23	L1	Chlordane-B		----------NA----------				
24	L1	Chlordane-C		----------NA----------				
25	L1	Chlordane-D		----------NA----------				
26	L1	Chlordane-E		----------NA----------				
27	L1	Chlordane-F		----------NA----------				
28	H	Toxaphene		----------NA----------				
		----------	Amount	Calc.	%Drift	----------		
29	S	Decachlorobiphenyl	40.000	38.489	3.8	100	0.00	11.58-11.78

(#) = Out of Range SPCC's out = 0 CCC's out = 0
KK47327.D 8081B.M Wed May 02 12:22:05 2012

5.8.14

5

Initial Calibration Summary

Job Number: F92199
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-Site 21

Sample: GTT1111-ICC1111
Lab FileID: TT33793.D

Response Factor Report ECD 6

Method : C:\MSDCHEM\2\METHODS\8081B.M (Chemstation Integrator)
Title : Pesticides by 8081B
Last Update : Wed Apr 25 14:06:32 2012
Response via : Initial Calibration

Calibration Files
5 =TT33790.D 10 =TT33791.D 20 =TT33792.D 40 =TT33793.D
60 =TT33794.D 80 =TT33795.D c200=TT33787.D t500=TT33788.D

Compound	5	10	20	40	60	80	c200	t500	Avg	%RSD
1) Tetrachloro-	2.292	2.266	2.202	2.271	2.235	2.250			2.253 E5	1.40
2) alpha-BHC	3.047	3.218	3.119	3.279	3.285	3.421			3.228 E5	4.11
3) gamma-BHC (L	2.615	2.693	2.656	2.700	2.723	2.790			2.696 E5	2.22
4) beta-BHC	1.213	1.198	1.147	1.189	1.187	1.162			1.183 E5	2.03
5) delta-BHC	1.653	1.714	1.643	1.757	1.806	1.820			1.732 E5	4.35
6) Heptachlor	1.853	1.925	1.905	1.912	1.947	1.960			1.917 E5	1.97
7) Aldrin	1.995	2.049	2.019	2.036	2.061	1.997			2.026 E5	1.35
8) Heptachlor E	1.836	1.833	1.849	1.844	1.838	1.773			1.829 E5	1.52
9) gamma-Chlord	1.634	1.738	1.737	1.791	1.791	1.772			1.744 E5	3.38
10) alpha-Chlord	1.458	1.536	1.548	1.616	1.633	1.598			1.565 E5	4.13
11) Endosulfan	1.541	1.635	1.607	1.599	1.653	1.624			1.610 E5	2.42
12) 4,4'-DDE	1.658	1.812	1.771	1.809	1.833	1.789			1.778 E5	3.52
13) Dieldrin	1.450	1.617	1.626	1.703	1.706	1.776			1.646 E5	6.85
14) Endrin	1.377	1.474	1.421	1.436	1.472	1.476			1.443 E5	2.73
15) 4,4'-DDD	1.636	1.659	1.604	1.656	1.662	1.592			1.635 E5	1.84
16) Endosulfan I	1.514	1.647	1.607	1.581	1.637	1.569			1.593 E5	3.09
17) Endrin Aldeh	1.265	1.292	1.291	1.302	1.306	1.272			1.288 E5	1.26
18) 4,4'-DDT	0.843	0.945	0.932	1.006	1.081	1.098			0.984 E5	9.85
19) Endosulfan S	1.034	1.117	1.152	1.219	1.250	1.226			1.166 E5	7.02
20) Methoxychlor	5.467	5.845	5.951	6.086	6.227	6.124			5.950 E4	4.57
21) Endrin Keton	1.477	1.624	1.536	1.595	1.591	1.604			1.571 E5	3.48
22) Chlordane-A							7.885		7.885 E3	0.00
23) Chlordane-B							9.234		9.234 E3	0.00
24) Chlordane-C							4.984		4.984 E3	0.00
25) Chlordane-D							2.068		2.068 E4	0.00
26) Chlordane-E							1.926		1.926 E4	0.00
27) Chlordane-F							4.635		4.635 E3	0.00
28) Toxaphene								1.508	1.508 E6	0.00
29) Decachlorobi	9.148	9.779	9.072	9.550	9.398	8.770			9.286 E4	3.90

Signal #2

1) Tetrachloro-	2.859	3.026	2.975	3.131	3.155	3.148			3.049 E5	3.87
2) alpha-BHC	4.023	4.321	4.377	4.642	4.681	4.772			4.469 E5	6.30
3) gamma-BHC (L	3.314	3.412	3.482	3.679	3.790	3.834			3.585 E5	5.93
4) beta-BHC	1.418	1.483	1.475	1.496	1.528	1.509			1.485 E5	2.55
5) delta-BHC	2.252	2.392	2.447	2.503	2.560	2.677			2.472 E5	5.89
6) Heptachlor	2.717	2.912	2.910	2.992	3.024	3.013			2.928 E5	3.92
7) Aldrin	2.634	2.836	2.870	2.921	2.953	2.951			2.861 E5	4.20
8) Heptachlor E	2.409	2.543	2.498	2.558	2.608	2.570			2.531 E5	2.75
9) gamma-Chlord	2.354	2.560	2.522	2.640	2.696	2.746			2.587 E5	5.45
10) alpha-Chlord	2.296	2.436	2.376	2.520	2.549	2.567			2.457 E5	4.36
11) Endosulfan	2.080	2.295	2.274	2.339	2.385	2.438			2.302 E5	5.38
12) 4,4'-DDE	2.165	2.397	2.445	2.587	2.592	2.664			2.475 E5	7.34
13) Dieldrin	2.340	2.581	2.535	2.638	2.681	2.653			2.571 E5	4.86
14) Endrin	1.850	1.965	1.936	1.986	2.036	2.052			1.971 E5	3.72
15) 4,4'-DDD	2.179	2.281	2.245	2.340	2.390	2.367			2.300 E5	3.49

Initial Calibration Summary

Job Number: F92199
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-Site 21

Sample: GTT1111-ICC1111
Lab FileID: TT33793.D

16)	Endosulfan I	2.008	2.198	2.181	2.291	2.356	2.367			2.234	E5	6.04
17)	Endrin Aldeh	1.835	1.997	1.959	2.084	2.117	2.105			2.016	E5	5.40
18)	4,4'-DDT	1.106	1.214	1.300	1.422	1.531	1.610			1.364	E5	14.10
19)	Endosulfan S	1.986	2.159	2.129	2.295	2.270	2.331			2.195	E5	5.88
20)	Methoxychlor	7.364	8.040	7.948	8.489	8.776	8.964			8.264	E4	7.19
21)	Endrin Keton	2.112	2.285	2.239	2.326	2.413	2.386			2.294	E5	4.77
22)	Chlordane-A							1.014		1.014	E4	0.00
23)	Chlordane-B							1.374		1.374	E4	0.00
24)	Chlordane-C							6.906		6.906	E3	0.00
25)	Chlordane-D							2.436		2.436	E4	0.00
26)	Chlordane-E							2.068		2.068	E4	0.00
27)	Chlordane-F							6.283		6.283	E3	0.00
28)	Toxaphene								2.217	2.217	E6	0.00
29)	Decachlorobi	1.463	1.491	1.448	1.544	1.616	1.576			1.523	E5	4.36

(#) = Out of Range ### Number of calibration levels exceeded format ###

8081B.M Thu Apr 26 10:45:26 2012

5.8.15

5

Initial Calibration Verification

Job Number: F92199
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-Site 21

Sample: GTT1111-ICV1111
Lab FileID: TT33796.D

Evaluate Continuing Calibration Report

Signal #1 : C:\MSDCHEM\2\DATA\042512\TT33796.D\ECD1A.CH Vial: 13
Signal #2 : C:\MSDCHEM\2\DATA\042512\TT33796.D\ECD2B.CH
Acq On : 25 Apr 2012 12:06 pm Operator: evitam
Sample : icv1111-40 Inst : ECD 6
Misc : op41463,gtt1111 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\MSDCHEM\2\METHODS\8081B.M (Chemstation Integrator)
Title : Pesticides by 8081B
Last Update : Wed Apr 25 14:06:32 2012
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	S	Tetrachloro-m-xylene		----------NA----------				
2		alpha-BHC	40.000	38.598	3.5	95	0.00	5.48- 5.68
3		gamma-BHC (Lindane)	40.000	39.469	1.3	99	0.00	5.83- 6.03
4		beta-BHC	40.000	39.277	1.8	98	0.00	6.06- 6.26
5		delta-BHC	40.000	34.763	13.1	86	0.00	6.31- 6.51
6		Heptachlor	40.000	39.305	1.7	98	0.00	6.44- 6.64
7		Aldrin	40.000	40.763	-1.9	101	0.00	6.80- 7.00
8		Heptachlor Epoxide	40.000	38.918	2.7	97	0.00	7.28- 7.48
9		gamma-Chlordane	40.000	39.848	0.4	97	0.00	7.57- 7.77
10		alpha-Chlordane	40.000	41.465	-3.7	100	0.00	7.65- 7.85
11		Endosulfan I	40.000	39.999	0.0	101	0.00	7.70- 7.90
12		4,4'-DDE	40.000	40.157	-0.4	99	0.00	7.88- 8.08
13		Dieldrin	40.000	42.820	-7.1	103	0.00	8.02- 8.22
14		Endrin	40.000	44.762	-11.9	112	0.00	8.28- 8.48
15		4,4'-DDD	40.000	39.288	1.8	97	0.00	8.49- 8.69
16		Endosulfan II	40.000	39.327	1.7	99	0.00	8.55- 8.75
17		Endrin Aldehyde	40.000	39.966	0.1	99	0.00	8.71- 8.91
18		4,4'-DDT	40.000	40.195	-0.5	98	0.00	8.86- 9.06
19		Endosulfan Sulfate	40.000	41.481	-3.7	99	0.00	8.99- 9.19
20		Methoxychlor	40.000	38.328	4.2	94	0.00	9.46- 9.66
21		Endrin Ketone	40.000	40.991	-2.5	101	0.00	9.56- 9.76
22	L1	Chlordane-A		----------NA----------				
23	L1	Chlordane-B		----------NA----------				
24	L1	Chlordane-C		----------NA----------				
25	L1	Chlordane-D		----------NA----------				
26	L1	Chlordane-E		----------NA----------				
27	L1	Chlordane-F		----------NA----------				
28	H	Toxaphene		----------NA----------				
29	S	Decachlorobiphenyl		----------NA----------				

***** Signal #2 *****

1	S	Tetrachloro-m-xylene		----------NA----------				
2		alpha-BHC	40.000	40.707	-1.8	98	0.00	5.40- 5.60
3		gamma-BHC (Lindane)	40.000	40.269	-0.7	98	0.00	5.78- 5.98
4		beta-BHC	40.000	40.097	-0.2	100	0.00	6.09- 6.29
5		delta-BHC	40.000	34.179	14.6	84	0.00	6.36- 6.56
6		Heptachlor	40.000	39.840	0.4	97	0.00	6.16- 6.36
7		Aldrin	40.000	39.873	0.3	98	0.00	6.48- 6.68
8		Heptachlor Epoxide	40.000	40.190	-0.5	99	0.00	7.06- 7.26
9		gamma-Chlordane	40.000	41.050	-2.6	101	0.00	7.35- 7.55

Initial Calibration Verification

Job Number: F92199
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-Site 21

Sample: GTT1111-ICV1111
Lab FileID: TT33796.D

10		alpha-Chlordane	40.000	42.266	-5.7	103	0.00	7.43- 7.63
11		Endosulfan I	40.000	40.340	-0.9	99	0.00	7.50- 7.70
12		4,4'-DDE	40.000	40.489	-1.2	97	0.00	7.64- 7.84
13		Dieldrin	40.000	41.698	-4.2	102	0.00	7.81- 8.01
14		Endrin	40.000	45.496	-13.7	113	0.00	8.15- 8.35
15		4,4'-DDD	40.000	40.704	-1.8	100	0.00	8.31- 8.51
16		Endosulfan II	40.000	40.951	-2.4	100	0.00	8.50- 8.70
17		Endrin Aldehyde	40.000	40.466	-1.2	98	0.00	8.72- 8.92
18		4,4'-DDT	40.000	41.666	-4.2	100	0.00	8.62- 8.82
19		Endosulfan Sulfate	40.000	38.266	4.3	92	0.00	8.99- 9.19
20		Methoxychlor	40.000	40.634	-1.6	99	0.00	9.33- 9.53
21		Endrin Ketone	40.000	41.795	-4.5	103	0.00	9.63- 9.83
22	L1	Chlordane-A		----------NA----------				
23	L1	Chlordane-B		----------NA----------				
24	L1	Chlordane-C		----------NA----------				
25	L1	Chlordane-D		----------NA----------				
26	L1	Chlordane-E		----------NA----------				
27	L1	Chlordane-F		----------NA----------				
28	H	Toxaphene		----------NA----------				
29	S	Decachlorobiphenyl		----------NA----------				

(#) = Out of Range SPCC's out = 0 CCC's out = 0
TT33793.D 8081B.M Thu Apr 26 10:45:07 2012

5.8.16

5

Continuing Calibration Summary

Job Number: F92199
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-Site 21

Sample: GTT1111-CC1111
Lab FileID: TT33807.D

Evaluate Continuing Calibration Report

Signal #1 : C:\MSDCHEM\2\DATA\042512\TT33807.D\ECD1A.CH Vial: 10
Signal #2 : C:\MSDCHEM\2\DATA\042512\TT33807.D\ECD2B.CH
Acq On : 4-25-2012 03:25:02 PM Operator: evitam
Sample : cc1111-40 Inst : ECD 6
Misc : op41519,gtt1111,1050,,,10,,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\MSDCHEM\2\METHODS\8081B.M (Chemstation Integrator)
Title : Pesticides by 8081B
Last Update : Wed Apr 25 14:06:32 2012
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	S	Tetrachloro-m-xylene	40.000	41.973	-4.9	104	0.00	5.01- 5.21
2		alpha-BHC	40.000	43.596	-9.0	107	0.00	5.48- 5.68
3		gamma-BHC (Lindane)	40.000	43.406	-8.5	108	0.00	5.83- 6.03
4		beta-BHC	40.000	41.834	-4.6	104	0.00	6.06- 6.26
5		delta-BHC	40.000	41.835	-4.6	103	0.00	6.31- 6.51
6		Heptachlor	40.000	44.531	-11.3	112	0.00	6.44- 6.64
7		Aldrin	40.000	44.389	-11.0	110	0.00	6.80- 7.00
8		Heptachlor Epoxide	40.000	45.022	-12.6	112	0.00	7.28- 7.48
9		gamma-Chlordane	40.000	45.704	-14.3	111	0.00	7.57- 7.77
10		alpha-Chlordane	40.000	47.177	-17.9	114	0.00	7.65- 7.85
11		Endosulfan I	40.000	45.020	-12.6	113	0.00	7.70- 7.90
12		4,4'-DDE	40.000	45.094	-12.7	111	0.00	7.88- 8.08
13		Dieldrin	40.000	47.921	-19.8	116	0.00	8.02- 8.22
14		Endrin	40.000	42.750	-6.9	107	0.00	8.28- 8.48
15		4,4'-DDD	40.000	44.087	-10.2	109	0.00	8.49- 8.69
16		Endosulfan II	40.000	45.897	-14.7	116	0.00	8.55- 8.75
17		Endrin Aldehyde	40.000	46.949	-17.4	116	0.00	8.71- 8.91
18		4,4'-DDT	40.000	44.870	-12.2	110	0.00	8.86- 9.06
19		Endosulfan Sulfate	40.000	47.784	-19.5	114	0.00	8.99- 9.19
20		Methoxychlor	40.000	42.523	-6.3	104	0.00	9.46- 9.66
21		Endrin Ketone	40.000	45.151	-12.9	111	0.00	9.56- 9.76
22	L1	Chlordane-A		----------NA----------				
23	L1	Chlordane-B		----------NA----------				
24	L1	Chlordane-C		----------NA----------				
25	L1	Chlordane-D		----------NA----------				
26	L1	Chlordane-E		----------NA----------				
27	L1	Chlordane-F		----------NA----------				
28	H	Toxaphene		----------NA----------				
29	S	Decachlorobiphenyl	40.000	43.771	-9.4	106	0.00	11.21-11.41

***** Signal #2 *****

1	S	Tetrachloro-m-xylene	40.000	42.292	-5.7	103	0.00	4.82- 5.02
2		alpha-BHC	40.000	43.924	-9.8	106	0.00	5.40- 5.60
3		gamma-BHC (Lindane)	40.000	45.634	-14.1	111	0.00	5.78- 5.98
4		beta-BHC	40.000	44.255	-10.6	110	0.00	6.09- 6.29
5		delta-BHC	40.000	38.951	2.6	96	0.00	6.36- 6.56
6		Heptachlor	40.000	44.290	-10.7	108	0.00	6.16- 6.36
7		Aldrin	40.000	44.185	-10.5	108	0.00	6.48- 6.68
8		Heptachlor Epoxide	40.000	45.341	-13.4	112	0.00	7.06- 7.26
9		gamma-Chlordane	40.000	45.410	-13.5	111	0.00	7.35- 7.55

5.8.17

5

Continuing Calibration Summary

Job Number: F92199
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-Site 21

Sample: GTT1111-CC1111
Lab FileID: TT33807.D

10		alpha-Chlordane	40.000	45.083	-12.7	110	0.00	7.43- 7.63
11		Endosulfan I	40.000	45.487	-13.7	112	0.00	7.50- 7.70
12		4,4'-DDE	40.000	44.404	-11.0	106	0.00	7.64- 7.84
13		Dieldrin	40.000	46.330	-15.8	113	0.00	7.81- 8.01
14		Endrin	40.000	43.293	-8.2	107	0.00	8.15- 8.35
15		4,4'-DDD	40.000	44.415	-11.0	109	0.00	8.31- 8.51
16		Endosulfan II	40.000	47.806	-19.5	117	0.00	8.50- 8.70
17		Endrin Aldehyde	40.000	47.525	-18.8	115	0.00	8.72- 8.92
18		4,4'-DDT	40.000	46.639	-16.6	112	0.00	8.62- 8.82
19		Endosulfan Sulfate	40.000	44.499	-11.2	106	0.00	8.99- 9.19
20		Methoxychlor	40.000	45.214	-13.0	110	0.00	9.33- 9.53
21		Endrin Ketone	40.000	47.842	-19.6	118	0.00	9.63- 9.83
22	L1	Chlordane-A		----------NA----------				
23	L1	Chlordane-B		----------NA----------				
24	L1	Chlordane-C		----------NA----------				
25	L1	Chlordane-D		----------NA----------				
26	L1	Chlordane-E		----------NA----------				
27	L1	Chlordane-F		----------NA----------				
28	H	Toxaphene		----------NA----------				
29	S	Decachlorobiphenyl	40.000	48.695	-21.7#	120	0.00	10.98-11.18

(#) = Out of Range SPCC's out = 0 CCC's out = 0
TT33793.D 8081B.M Thu Apr 26 10:45:08 2012

5.8.17

5

Continuing Calibration Summary

Job Number: F92199
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-Site 21

Sample: GTT1111-CC1111
Lab FileID: TT33819.D

Evaluate Continuing Calibration Report

Signal #1 : C:\MSDCHEM\2\DATA\042512\TT33819.D\ECD1A.CH Vial: 10
Signal #2 : C:\MSDCHEM\2\DATA\042512\TT33819.D\ECD2B.CH
Acq On : 4-25-2012 07:03:23 PM Operator: evitam
Sample : cc1111-40 Inst : ECD 6
Misc : op41519,gtt1111,1040,,,10,,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\MSDCHEM\2\METHODS\8081B.M (Chemstation Integrator)
Title : Pesticides by 8081B
Last Update : Wed Apr 25 14:06:32 2012
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	S	Tetrachloro-m-xylene	40.000	42.897	-7.2	106	0.00	5.01- 5.21
2		alpha-BHC	40.000	43.597	-9.0	107	0.00	5.48- 5.68
3		gamma-BHC (Lindane)	40.000	43.900	-9.7	110	0.00	5.83- 6.03
4		beta-BHC	40.000	42.206	-5.5	105	0.00	6.06- 6.26
5		delta-BHC	40.000	40.023	-0.1	99	0.00	6.31- 6.51
6		Heptachlor	40.000	45.340	-13.4	114	0.00	6.44- 6.64
7		Aldrin	40.000	45.504	-13.8	113	0.00	6.80- 7.00
8		Heptachlor Epoxide	40.000	45.550	-13.9	113	0.00	7.28- 7.48
9		gamma-Chlordane	40.000	48.095	-20.2#	117	0.00	7.57- 7.77
10		alpha-Chlordane	40.000	51.010	-27.5#	123	0.00	7.65- 7.85
11		Endosulfan I	40.000	46.806	-17.0	118	0.00	7.70- 7.90
12		4,4'-DDE	40.000	46.377	-15.9	114	0.00	7.88- 8.08
13		Dieldrin	40.000	51.588	-29.0#	125	0.00	8.02- 8.22
14		Endrin	40.000	42.172	-5.4	106	0.00	8.28- 8.48
15		4,4'-DDD	40.000	44.411	-11.0	110	0.00	8.49- 8.69
16		Endosulfan II	40.000	47.948	-19.9	121	0.00	8.55- 8.75
17		Endrin Aldehyde	40.000	50.747	-26.9#	126	0.00	8.71- 8.91
18		4,4'-DDT	40.000	47.006	-17.5	115	0.00	8.86- 9.06
19		Endosulfan Sulfate	40.000	50.716	-26.8#	121	0.00	8.99- 9.19
20		Methoxychlor	40.000	42.243	-5.6	103	0.00	9.46- 9.66
21		Endrin Ketone	40.000	47.856	-19.6	118	0.00	9.56- 9.76
22	L1	Chlordane-A		----------NA----------				
23	L1	Chlordane-B		----------NA----------				
24	L1	Chlordane-C		----------NA----------				
25	L1	Chlordane-D		----------NA----------				
26	L1	Chlordane-E		----------NA----------				
27	L1	Chlordane-F		----------NA----------				
28	H	Toxaphene		----------NA----------				
29	S	Decachlorobiphenyl	40.000	47.072	-17.7	114	0.00	11.21-11.41

***** Signal #2 *****

1	S	Tetrachloro-m-xylene	40.000	43.157	-7.9	105	0.00	4.82- 5.02
2		alpha-BHC	40.000	44.157	-10.4	106	0.00	5.40- 5.60
3		gamma-BHC (Lindane)	40.000	44.921	-12.3	109	0.00	5.78- 5.98
4		beta-BHC	40.000	44.601	-11.5	111	0.00	6.09- 6.29
5		delta-BHC	40.000	37.277	6.8	92	0.00	6.36- 6.56
6		Heptachlor	40.000	45.873	-14.7	112	0.00	6.16- 6.36
7		Aldrin	40.000	46.943	-17.4	115	0.00	6.48- 6.68
8		Heptachlor Epoxide	40.000	46.312	-15.8	115	0.00	7.06- 7.26
9		gamma-Chlordane	40.000	47.621	-19.1	117	0.00	7.35- 7.55

Continuing Calibration Summary

Job Number: F92199
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-Site 21

Sample: GTT1111-CC1111
Lab FileID: TT33819.D

10		alpha-Chlordane	40.000	47.039	-17.6	115	0.00	7.43- 7.63
11		Endosulfan I	40.000	47.843	-19.6	118	0.00	7.50- 7.70
12		4,4'-DDE	40.000	45.924	-14.8	110	0.00	7.64- 7.84
13		Dieldrin	40.000	46.828	-17.1	114	0.00	7.81- 8.01
14		Endrin	40.000	42.538	-6.3	106	0.00	8.15- 8.35
15		4,4'-DDD	40.000	45.703	-14.3	112	0.00	8.31- 8.51
16		Endosulfan II	40.000	48.266	-20.7#	118	0.00	8.50- 8.70
17		Endrin Aldehyde	40.000	50.028	-25.1#	121	0.00	8.72- 8.92
18		4,4'-DDT	40.000	47.134	-17.8	113	0.00	8.62- 8.82
19		Endosulfan Sulfate	40.000	44.902	-12.3	107	0.00	8.99- 9.19
20		Methoxychlor	40.000	45.586	-14.0	111	0.00	9.33- 9.53
21		Endrin Ketone	40.000	47.524	-18.8	117	0.00	9.63- 9.83
22	L1	Chlordane-A		----------NA----------				
23	L1	Chlordane-B		----------NA----------				
24	L1	Chlordane-C		----------NA----------				
25	L1	Chlordane-D		----------NA----------				
26	L1	Chlordane-E		----------NA----------				
27	L1	Chlordane-F		----------NA----------				
28	H	Toxaphene		----------NA----------				
29	S	Decachlorobiphenyl	40.000	51.565	-28.9#	127	0.00	10.98-11.18

(#) = Out of Range SPCC's out = 0 CCC's out = 0
TT33793.D 8081B.M Thu Apr 26 10:45:09 2012

5.8.18

5

Initial Calibration Summary

Job Number: F92199
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-Site 21

Sample: GTT1113-ICC1113
Lab FileID: TT33872.D

Response Factor Report ECD 6

Method : C:\MSDCHEM\2\METHODS\8081B.M (Chemstation Integrator)
Title : Pesticides by 8081B
Last Update : Mon Apr 30 08:41:25 2012
Response via : Initial Calibration

Calibration Files
5 =TT33869.D 10 =TT33870.D 20 =TT33871.D 40 =TT33872.D
60 =TT33873.D 80 =TT33874.D c200=TT33875.D t500=TT33876.D

Compound	5	10	20	40	60	80	c200	t500	Avg	%RSD
1) Tetrachloro-	2.344	2.692	2.818	2.706	2.703	2.702			2.661 E5	6.09
2) alpha-BHC	3.358	3.885	3.986	3.974	4.073	4.063			3.890 E5	6.92
3) gamma-BHC (L	2.602	3.273	3.446	3.387	3.413	3.493			3.269 E5	10.24
4) beta-BHC	1.167	1.485	1.457	1.425	1.452	1.427			1.402 E5	8.37
5) delta-BHC	1.622	2.277	2.387	2.326	2.449	2.445			2.251 E5	14.01
---- Linear regr., Force(0,0) ---- Coefficient = 0.9994										
Response Ratio = 0.00000 + 242554.75823 *A										
6) Heptachlor	1.992	2.304	2.366	2.389	2.426	2.346			2.304 E5	6.86
7) Aldrin	2.008	2.439	2.611	2.550	2.575	2.507			2.448 E5	9.15
8) Heptachlor E	1.428	2.225	2.259	2.207	2.263	2.258			2.106 E5	15.81
---- Linear regr., Force(0,0) ---- Coefficient = 0.9995										
Response Ratio = 0.00000 + 225057.17648 *A										
9) gamma-Chlord	1.691	2.025	2.106	2.101	2.126	2.147			2.033 E5	8.49
10) alpha-Chlord	1.576	1.781	1.850	1.804	1.904	1.929			1.807 E5	7.01
11) Endosulfan	1.585	1.875	1.936	1.983	1.930	1.945			1.876 E5	7.82
12) 4,4'-DDE	1.726	1.988	2.100	2.109	2.171	2.049			2.024 E5	7.83
13) Dieldrin	0.894	1.505	1.609	1.656	1.744	1.732			1.523 E5	21.03
---- Linear regr., Force(0,0) ---- Coefficient = 0.9996										
Response Ratio = 0.00000 + 171777.83082 *A										
14) Endrin	1.436	1.638	1.684	1.645	1.677	1.603			1.614 E5	5.68
15) 4,4'-DDD	1.520	1.750	1.747	1.825	1.787	1.773			1.734 E5	6.24
16) Endosulfan I	1.453	1.665	1.689	1.659	1.755	1.747			1.661 E5	6.61
17) Endrin Aldeh	1.146	1.334	1.330	1.396	1.346	1.340			1.315 E5	6.56
18) 4,4'-DDT	0.872	1.028	1.050	1.059	1.185	1.134			1.055 E5	10.18
19) Endosulfan S	0.800	1.301	1.325	1.339	1.359	1.336			1.243 E5	17.55
---- Linear regr., Force(0,0) ---- Coefficient = 0.9994										
Response Ratio = 0.00000 + 134150.64259 *A										
20) Methoxychlor	5.438	5.638	5.816	5.835	6.258	6.060			5.841 E4	5.00
21) Endrin Keton	1.373	1.512	1.515	1.580	1.560	1.571			1.518 E5	5.05
22) Chlordane-A							1.155		1.155 E4	0.00
23) Chlordane-B							1.226		1.226 E4	0.00
24) Chlordane-C							7.407		7.407 E3	0.00
25) Chlordane-D							3.041		3.041 E4	0.00
26) Chlordane-E							2.856		2.856 E4	0.00
27) Chlordane-F							5.991		5.991 E3	0.00
28) Toxaphene								2.410	2.410 E6	0.00
29) Decachlorobi	8.182	8.544	8.427	8.367	8.479	8.206			8.368 E4	1.75

Signal #2

1) Tetrachloro-	3.093	3.699	3.900	3.958	3.965	4.027			3.774 E5	9.33
2) alpha-BHC	4.238	5.342	5.768	5.832	6.114	6.072			5.561 E5	12.67
---- Linear regr., Force(0,0) ---- Coefficient = 0.9997										

Initial Calibration Summary

Job Number: F92199
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-Site 21

Sample: GTT1113-ICC1113
Lab FileID: TT33872.D

```
                Response Ratio = 0.00000 + 603306.91821 *A

 3) gamma-BHC (L 2.413 4.265 4.616 4.704 4.923 5.034            4.326 E5  22.53
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9995
                Response Ratio = 0.00000 + 493193.08246 *A

 4) beta-BHC     1.519 1.901 1.880 1.926 2.019 1.977            1.870 E5   9.59
 5) delta-BHC    2.751 3.524 3.722 3.702 3.983 4.056            3.623 E5  12.96
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9988
                Response Ratio = 0.00000 + 396918.33105 *A

 6) Heptachlor   2.764 3.605 3.855 3.787 3.917 3.896            3.637 E5  12.16
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9997
                Response Ratio = 0.00000 + 388167.39371 *A

 7) Aldrin       2.581 3.614 3.705 3.778 3.825 3.817            3.553 E5  13.59
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9999
                Response Ratio = 0.00000 + 380638.50739 *A

 8) Heptachlor E 1.991 3.123 3.245 3.263 3.339 3.202            3.027 E5  16.93
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9985
                Response Ratio = 0.00000 + 324869.17510 *A

 9) gamma-Chlord 2.261 2.984 3.208 3.227 3.377 3.406            3.077 E5  13.88
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9997
                Response Ratio = 0.00000 + 336122.44292 *A

10) alpha-Chlord 2.329 2.840 3.030 3.094 3.219 3.203            2.952 E5  11.35
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9998
                Response Ratio = 0.00000 + 318277.67651 *A

11) Endosulfan   1.139 2.444 2.565 2.570 2.749 2.754            2.370 E5  25.94
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9991
                Response Ratio = 0.00000 + 271626.44369 *A

12) 4,4'-DDE     1.838 2.654 2.879 2.958 3.020 3.036            2.731 E5  16.81
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9999
                Response Ratio = 0.00000 + 300994.26898 *A

13) Dieldrin     2.393 2.856 3.047 3.093 3.166 3.150            2.951 E5  10.01
14) Endrin       1.866 2.264 2.383 2.370 2.425 2.456            2.294 E5   9.57
15) 4,4'-DDD     2.142 2.504 2.618 2.704 2.749 2.703            2.570 E5   8.82
16) Endosulfan I 1.583 2.144 2.295 2.342 2.450 2.488            2.217 E5  15.05
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9996
                Response Ratio = 0.00000 + 244632.88453 *A

17) Endrin Aldeh 1.651 2.044 2.124 2.201 2.250 2.283            2.092 E5  11.13
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9999
                Response Ratio = 0.00000 + 225409.96697 *A

18) 4,4'-DDT     1.116 1.349 1.463 1.502 1.657 1.728            1.469 E5  15.00
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9971
                Response Ratio = 0.00000 + 166430.93152 *A

19) Endosulfan S 1.970 2.222 2.317 2.314 2.435 2.506            2.294 E5   8.17
20) Methoxychlor 7.900 8.274 8.283 8.381 8.722 9.062            8.437 E4   4.78
21) Endrin Keton 1.916 2.176 2.288 2.283 2.398 2.416            2.246 E5   8.19
22) Chlordane-A                                       1.469     1.469 E4   0.00
23) Chlordane-B                                       1.903     1.903 E4   0.00
24) Chlordane-C                                       1.038     1.038 E4   0.00
```

5.8.19

5

Initial Calibration Summary

Job Number: F92199
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-Site 21

Sample: GTT1113-ICC1113
Lab FileID: TT33872.D

```
25) Chlordane-D                                        3.633        3.633 E4   0.00
26) Chlordane-E                                        2.979        2.979 E4   0.00
27) Chlordane-F                                        8.186        8.186 E3   0.00
28) Toxaphene                                               3.702 3.702 E6   0.00
29) Decachlorobi 1.268 1.328 1.340 1.380 1.416 1.444          1.363 E5   4.69
---------------------------------------------------------------------------
(#) = Out of Range  ###  Number of calibration levels exceeded format  ###

          8081B.M          Mon Apr 30 09:33:33 2012
```

5.8.19

5

Initial Calibration Verification

Job Number: F92199
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-Site 21

Sample: GTT1113-ICV1113
Lab FileID: TT33877.D

Evaluate Continuing Calibration Report

Signal #1 : C:\MSDCHEM\2\DATA\042712\TT33877.D\ECD1A.CH Vial: 14
Signal #2 : C:\MSDCHEM\2\DATA\042712\TT33877.D\ECD2B.CH
Acq On : 4-27-2012 06:37:53 PM Operator: evitam
Sample : icv1113-40 Inst : ECD 6
Misc : op41463,gtt1113 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\MSDCHEM\2\METHODS\8081B.M (Chemstation Integrator)
Title : Pesticides by 8081B
Last Update : Mon Apr 30 08:41:25 2012
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	S	Tetrachloro-m-xylene		----------NA----------				
2		alpha-BHC	40.000	43.633	-9.1	107	0.00	5.48- 5.68
3		gamma-BHC (Lindane)	40.000	43.375	-8.4	105	0.00	5.83- 6.03
4		beta-BHC	40.000	44.636	-11.6	110	0.00	6.06- 6.26
		----------	Amount	Calc.	%Drift			
5		delta-BHC	40.000	36.278	9.3	95	0.00	6.30- 6.50
		----------	Amount	Calc.	%Drift			
6		Heptachlor	40.000	42.757	-6.9	103	0.00	6.43- 6.63
7		Aldrin	40.000	44.128	-10.3	106	0.00	6.79- 6.99
		----------	Amount	Calc.	%Drift			
8		Heptachlor Epoxide	40.000	41.315	-3.3	105	0.00	7.27- 7.47
		----------	Amount	Calc.	%Drift			
9		gamma-Chlordane	40.000	43.710	-9.3	106	0.00	7.56- 7.76
10		alpha-Chlordane	40.000	44.485	-11.2	111	0.00	7.65- 7.85
11		Endosulfan I	40.000	44.215	-10.5	105	0.00	7.70- 7.90
12		4,4'-DDE	40.000	44.285	-10.7	106	0.00	7.88- 8.08
		----------	Amount	Calc.	%Drift			
13		Dieldrin	40.000	43.802	-9.5	114	0.00	8.02- 8.22
		----------	Amount	Calc.	%Drift			
14		Endrin	40.000	49.534	-23.8#	122	0.00	8.28- 8.48
15		4,4'-DDD	40.000	43.806	-9.5	104	0.00	8.49- 8.69
16		Endosulfan II	40.000	43.085	-7.7	108	0.00	8.55- 8.75
17		Endrin Aldehyde	40.000	42.248	-5.6	100	0.00	8.71- 8.91
18		4,4'-DDT	40.000	44.516	-11.3	111	0.00	8.86- 9.06
		----------	Amount	Calc.	%Drift			
19		Endosulfan Sulfate	40.000	39.838	0.4	100	0.00	8.99- 9.19
		----------	Amount	Calc.	%Drift			
20		Methoxychlor	40.000	41.699	-4.2	104	0.00	9.46- 9.66
21		Endrin Ketone	40.000	42.518	-6.3	102	0.00	9.56- 9.76
22	L1	Chlordane-A		----------NA----------				
23	L1	Chlordane-B		----------NA----------				
24	L1	Chlordane-C		----------NA----------				
25	L1	Chlordane-D		----------NA----------				

5.8.20 5

Initial Calibration Verification

Job Number: F92199
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-Site 21

Sample: GTT1113-ICV1113
Lab FileID: TT33877.D

26	L1	Chlordane-E	----------NA----------						
27	L1	Chlordane-F	----------NA----------						
28	H	Toxaphene	----------NA----------						
29	S	Decachlorobiphenyl	----------NA----------						

***** Signal #2 *****

1	S	Tetrachloro-m-xylene	----------NA----------						
		----------	Amount	Calc.	%Drift	----------			
2		alpha-BHC	40.000	41.343	-3.4	107	0.00	5.40- 5.60	
3		gamma-BHC (Lindane)	40.000	40.981	-2.5	107	0.00	5.77- 5.97	
		----------	Amount	Calc.	%Drift	----------			
4		beta-BHC	40.000	44.185	-10.5	107	0.00	6.09- 6.29	
		----------	Amount	Calc.	%Drift	----------			
5		delta-BHC	40.000	35.404	11.5	95	0.00	6.36- 6.56	
6		Heptachlor	40.000	42.016	-5.0	108	0.00	6.16- 6.36	
7		Aldrin	40.000	42.961	-7.4	108	0.00	6.48- 6.68	
8		Heptachlor Epoxide	40.000	42.569	-6.4	106	0.00	7.06- 7.26	
9		gamma-Chlordane	40.000	42.303	-5.8	110	0.00	7.35- 7.55	
10		alpha-Chlordane	40.000	43.184	-8.0	111	0.00	7.42- 7.63	
11		Endosulfan I	40.000	43.509	-8.8	115	0.00	7.50- 7.70	
12		4,4'-DDE	40.000	41.946	-4.9	107	0.00	7.64- 7.84	
		----------	Amount	Calc.	%Drift	----------			
13		Dieldrin	40.000	47.690	-19.2	114	0.00	7.81- 8.01	
14		Endrin	40.000	52.494	-31.2#	127	0.00	8.14- 8.35	
15		4,4'-DDD	40.000	45.662	-14.2	109	0.00	8.31- 8.51	
		----------	Amount	Calc.	%Drift	----------			
16		Endosulfan II	40.000	43.221	-8.1	113	0.00	8.49- 8.69	
17		Endrin Aldehyde	40.000	40.587	-1.5	104	0.00	8.72- 8.92	
18		4,4'-DDT	40.000	39.489	1.3	109	0.00	8.62- 8.82	
		----------	Amount	Calc.	%Drift	----------			
19		Endosulfan Sulfate	40.000	43.306	-8.3	107	0.00	8.99- 9.19	
20		Methoxychlor	40.000	43.666	-9.2	110	0.00	9.33- 9.53	
21		Endrin Ketone	40.000	45.659	-14.1	112	0.00	9.63- 9.83	
22	L1	Chlordane-A	----------NA----------						
23	L1	Chlordane-B	----------NA----------						
24	L1	Chlordane-C	----------NA----------						
25	L1	Chlordane-D	----------NA----------						
26	L1	Chlordane-E	----------NA----------						
27	L1	Chlordane-F	----------NA----------						
28	H	Toxaphene	----------NA----------						
29	S	Decachlorobiphenyl	----------NA----------						

(#) = Out of Range SPCC's out = 0 CCC's out = 0
TT33872.D 8081B.M Mon Apr 30 09:32:23 2012

5.8.20

5

Continuing Calibration Summary

Job Number: F92199
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-Site 21

Sample: GTT1113-CC1113
Lab FileID: TT33887.D

Evaluate Continuing Calibration Report

Signal #1 : C:\MSDCHEM\2\DATA\042712\TT33887.D\ECD1A.CH Vial: 24
Signal #2 : C:\MSDCHEM\2\DATA\042712\TT33887.D\ECD2B.CH
Acq On : 4-27-2012 09:39:39 PM Operator: evitam
Sample : cc1113-40 Inst : ECD 6
Misc : op41574,gtt1113,30.2,,,10,,soil Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\MSDCHEM\2\METHODS\8081B.M (Chemstation Integrator)
Title : Pesticides by 8081B
Last Update : Mon Apr 30 08:41:25 2012
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	S	Tetrachloro-m-xylene	40.000	42.999	-7.5	106	0.00	5.01- 5.21
2		alpha-BHC	40.000	44.372	-10.9	109	0.00	5.48- 5.68
3		gamma-BHC (Lindane)	40.000	45.112	-12.8	109	0.00	5.83- 6.03
4		beta-BHC	40.000	46.289	-15.7	114	0.00	6.06- 6.26
		----------	Amount	Calc.	%Drift			
5		delta-BHC	40.000	41.539	-3.8	107	0.00	6.30- 6.50
		----------	Amount	Calc.	%Drift			
6		Heptachlor	40.000	43.901	-9.8	106	0.00	6.43- 6.63
7		Aldrin	40.000	46.366	-15.9	111	0.00	6.79- 6.99
		----------	Amount	Calc.	%Drift			
8		Heptachlor Epoxide	40.000	44.651	-11.6	113	0.00	7.27- 7.47
		----------	Amount	Calc.	%Drift			
9		gamma-Chlordane	40.000	47.349	-18.4	115	0.00	7.56- 7.76
10		alpha-Chlordane	40.000	50.172	-25.4#	126	0.00	7.65- 7.85
11		Endosulfan I	40.000	46.327	-15.8	110	0.00	7.70- 7.90
12		4,4'-DDE	40.000	47.064	-17.7	113	0.00	7.88- 8.08
		----------	Amount	Calc.	%Drift			
13		Dieldrin	40.000	53.189	-33.0#	138	0.00	8.02- 8.22
		----------	Amount	Calc.	%Drift			
14		Endrin	40.000	45.217	-13.0	115	0.00	8.28- 8.48
15		4,4'-DDD	40.000	50.859	-27.1#	121	0.00	8.49- 8.69
16		Endosulfan II	40.000	46.781	-17.0	117	0.00	8.55- 8.75
17		Endrin Aldehyde	40.000	47.687	-19.2	112	0.00	8.71- 8.91
18		4,4'-DDT	40.000	39.009	2.5	97	0.00	8.86- 9.06
		----------	Amount	Calc.	%Drift			
19		Endosulfan Sulfate	40.000	46.068	-15.2	115	0.00	8.99- 9.19
		----------	Amount	Calc.	%Drift			
20		Methoxychlor	40.000	39.500	1.3	99	0.00	9.46- 9.66
21		Endrin Ketone	40.000	42.944	-7.4	103	0.00	9.56- 9.76
22	L1	Chlordane-A		----------NA----------				
23	L1	Chlordane-B		----------NA----------				
24	L1	Chlordane-C		----------NA----------				
25	L1	Chlordane-D		----------NA----------				

Continuing Calibration Summary

Job Number: F92199
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-Site 21

Sample: GTT1113-CC1113
Lab FileID: TT33887.D

26	L1	Chlordane-E			----------NA----------				
27	L1	Chlordane-F			----------NA----------				
28	H	Toxaphene			----------NA----------				
29	S	Decachlorobiphenyl	40.000	40.681	-1.7	102	0.00	11.21-11.41	
*****		Signal #2 *****							
1	S	Tetrachloro-m-xylene	40.000	45.925	-14.8	109	0.00	4.82- 5.02	
		----------	Amount	Calc.	%Drift	----------			
2		alpha-BHC	40.000	44.839	-12.1	115	0.00	5.40- 5.60	
3		gamma-BHC (Lindane)	40.000	45.208	-13.0	117	0.00	5.77- 5.97	
		----------	Amount	Calc.	%Drift	----------			
4		beta-BHC	40.000	47.944	-19.9	116	0.00	6.09- 6.29	
		----------	Amount	Calc.	%Drift	----------			
5		delta-BHC	40.000	41.940	-4.8	111	0.00	6.36- 6.56	
6		Heptachlor	40.000	44.004	-10.0	112	0.00	6.16- 6.36	
7		Aldrin	40.000	45.839	-14.6	115	0.00	6.48- 6.68	
8		Heptachlor Epoxide	40.000	45.587	-14.0	113	0.00	7.06- 7.26	
9		gamma-Chlordane	40.000	46.762	-16.9	121	0.00	7.35- 7.55	
10		alpha-Chlordane	40.000	45.980	-14.9	118	0.00	7.42- 7.63	
11		Endosulfan I	40.000	50.028	-25.1#	131	0.00	7.50- 7.70	
12		4,4'-DDE	40.000	47.928	-19.8	121	0.00	7.64- 7.84	
		----------	Amount	Calc.	%Drift	----------			
13		Dieldrin	40.000	50.856	-27.1#	121	0.00	7.81- 8.01	
14		Endrin	40.000	48.204	-20.5#	122	0.00	8.14- 8.35	
15		4,4'-DDD	40.000	52.466	-31.2#	125	0.00	8.31- 8.51	
		----------	Amount	Calc.	%Drift	----------			
16		Endosulfan II	40.000	49.049	-22.6#	127	0.00	8.49- 8.69	
17		Endrin Aldehyde	40.000	45.429	-13.6	116	0.00	8.72- 8.92	
18		4,4'-DDT	40.000	38.714	3.2	104	0.00	8.62- 8.82	
		----------	Amount	Calc.	%Drift	----------			
19		Endosulfan Sulfate	40.000	47.533	-18.8	118	0.00	8.99- 9.19	
20		Methoxychlor	40.000	41.719	-4.3	105	0.00	9.33- 9.53	
21		Endrin Ketone	40.000	45.941	-14.9	113	0.00	9.63- 9.83	
22	L1	Chlordane-A			----------NA----------				
23	L1	Chlordane-B			----------NA----------				
24	L1	Chlordane-C			----------NA----------				
25	L1	Chlordane-D			----------NA----------				
26	L1	Chlordane-E			----------NA----------				
27	L1	Chlordane-F			----------NA----------				
28	H	Toxaphene			----------NA----------				
29	S	Decachlorobiphenyl	40.000	46.703	-16.8	115	0.00	10.98-11.18	

(#) = Out of Range SPCC's out = 0 CCC's out = 0
TT33872.D 8081B.M Mon Apr 30 09:32:24 2012

5.8.21

5

Continuing Calibration Summary

Job Number: F92199
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-Site 21

Sample: GTT1113-CC1113
Lab FileID: TT33898.D

Evaluate Continuing Calibration Report

Signal #1 : C:\MSDCHEM\2\DATA\042712\TT33898.D\ECD1A.CH Vial: 35
Signal #2 : C:\MSDCHEM\2\DATA\042712\TT33898.D\ECD2B.CH
Acq On : 28 Apr 2012 12:59 am Operator: evitam
Sample : cc1113-40 Inst : ECD 6
Misc : op41557,gtt1113,30.3,,,10,,soil Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\MSDCHEM\2\METHODS\8081B.M (Chemstation Integrator)
Title : Pesticides by 8081B
Last Update : Mon Apr 30 08:41:25 2012
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	S	Tetrachloro-m-xylene	40.000	47.567	-18.9	117	0.00	5.01- 5.21
2		alpha-BHC	40.000	49.216	-23.0#	120	0.00	5.48- 5.68
3		gamma-BHC (Lindane)	40.000	48.084	-20.2#	116	0.00	5.83- 6.03
4		beta-BHC	40.000	50.933	-27.3#	125	0.00	6.06- 6.26
		----------	Amount	Calc.	%Drift			
5		delta-BHC	40.000	46.802	-17.0	122	0.00	6.30- 6.50
		----------	Amount	Calc.	%Drift			
6		Heptachlor	40.000	44.010	-10.0	106	0.00	6.43- 6.63
7		Aldrin	40.000	50.428	-26.1#	121	0.00	6.79- 6.99
		----------	Amount	Calc.	%Drift			
8		Heptachlor Epoxide	40.000	49.448	-23.6#	126	0.00	7.27- 7.47
		----------	Amount	Calc.	%Drift			
9		gamma-Chlordane	40.000	52.968	-32.4#	128	0.00	7.56- 7.76
10		alpha-Chlordane	40.000	53.812	-34.5#	135	0.00	7.65- 7.85
11		Endosulfan I	40.000	50.735	-26.8#	120	0.00	7.70- 7.90
12		4,4'-DDE	40.000	51.200	-28.0#	123	0.00	7.88- 8.08
		----------	Amount	Calc.	%Drift			
13		Dieldrin	40.000	60.884	-52.2#	158	0.00	8.02- 8.22
		----------	Amount	Calc.	%Drift			
14		Endrin	40.000	49.628	-24.1#	122	0.00	8.28- 8.48
15		4,4'-DDD	40.000	58.813	-47.0#	140	0.00	8.49- 8.69
16		Endosulfan II	40.000	50.552	-26.4#	127	0.00	8.55- 8.75
17		Endrin Aldehyde	40.000	51.678	-29.2#	122	0.00	8.71- 8.91
18		4,4'-DDT	40.000	22.289	44.3#	55	0.00	8.86- 9.06
		----------	Amount	Calc.	%Drift			
19		Endosulfan Sulfate	40.000	49.095	-22.7#	123	0.00	8.99- 9.19
		----------	Amount	Calc.	%Drift			
20		Methoxychlor	40.000	28.162	29.6#	70	0.00	9.46- 9.66
21		Endrin Ketone	40.000	43.686	-9.2	105	0.00	9.56- 9.76
22	L1	Chlordane-A		----------NA----------				
23	L1	Chlordane-B		----------NA----------				
24	L1	Chlordane-C		----------NA----------				
25	L1	Chlordane-D		----------NA----------				

5.8.22 5

Continuing Calibration Summary

Job Number: F92199
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-Site 21

Sample: GTT1113-CC1113
Lab FileID: TT33898.D

26	L1	Chlordane-E			----------NA----------				
27	L1	Chlordane-F			----------NA----------				
28	H	Toxaphene			----------NA----------				
29	S	Decachlorobiphenyl	40.000	43.621	-9.1	109	0.00	11.21-11.41	
*****		Signal #2 *****							
1	S	Tetrachloro-m-xylene	40.000	46.675	-16.7	111	0.00	4.82- 5.02	
		----------	Amount	Calc.	%Drift		----------		
2		alpha-BHC	40.000	45.808	-14.5	118	0.00	5.40- 5.60	
3		gamma-BHC (Lindane)	40.000	45.989	-15.0	121	0.00	5.77- 5.97	
		----------	Amount	Calc.	%Drift		----------		
4		beta-BHC	40.000	50.967	-27.4#	124	0.00	6.09- 6.29	
		----------	Amount	Calc.	%Drift		----------		
5		delta-BHC	40.000	39.834	0.4	107	0.00	6.36- 6.56	
6		Heptachlor	40.000	42.432	-6.1	109	0.00	6.16- 6.36	
7		Aldrin	40.000	47.795	-19.5	120	0.00	6.48- 6.68	
8		Heptachlor Epoxide	40.000	49.495	-23.7#	123	0.00	7.06- 7.26	
9		gamma-Chlordane	40.000	49.714	-24.3#	129	0.00	7.35- 7.55	
10		alpha-Chlordane	40.000	47.127	-17.8	121	0.00	7.42- 7.63	
11		Endosulfan I	40.000	52.956	-32.4#	140	0.00	7.50- 7.70	
12		4,4'-DDE	40.000	49.462	-23.7#	126	0.00	7.64- 7.84	
		----------	Amount	Calc.	%Drift		----------		
13		Dieldrin	40.000	53.996	-35.0#	129	0.00	7.81- 8.01	
14		Endrin	40.000	50.826	-27.1#	123	0.00	8.14- 8.35	
15		4,4'-DDD	40.000	61.570	-53.9#	146	0.00	8.31- 8.51	
		----------	Amount	Calc.	%Drift		----------		
16		Endosulfan II	40.000	52.964	-32.4#	138	0.00	8.49- 8.69	
17		Endrin Aldehyde	40.000	49.657	-24.1#	127	0.00	8.72- 8.92	
18		4,4'-DDT	40.000	20.874	47.8#	58	0.00	8.62- 8.82	
		----------	Amount	Calc.	%Drift		----------		
19		Endosulfan Sulfate	40.000	48.433	-21.1#	120	0.00	8.99- 9.19	
20		Methoxychlor	40.000	29.729	25.7#	75	0.00	9.33- 9.53	
21		Endrin Ketone	40.000	45.915	-14.8	113	0.00	9.63- 9.83	
22	L1	Chlordane-A			----------NA----------				
23	L1	Chlordane-B			----------NA----------				
24	L1	Chlordane-C			----------NA----------				
25	L1	Chlordane-D			----------NA----------				
26	L1	Chlordane-E			----------NA----------				
27	L1	Chlordane-F			----------NA----------				
28	H	Toxaphene			----------NA----------				
29	S	Decachlorobiphenyl	40.000	51.301	-28.3#	127	0.00	10.98-11.18	

(#) = Out of Range SPCC's out = 0 CCC's out = 0
TT33872.D 8081B.M Mon Apr 30 09:32:25 2012

5.8.22

5

Continuing Calibration Summary

Job Number: F92199
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-Site 21

Sample: GTT1113-CC1113
Lab FileID: TT33910.D

Evaluate Continuing Calibration Report

Signal #1 : C:\MSDCHEM\2\DATA\042712\TT33910.D\ECD1A.CH Vial: 47
Signal #2 : C:\MSDCHEM\2\DATA\042712\TT33910.D\ECD2B.CH
Acq On : 4-28-2012 04:37:36 AM Operator: evitam
Sample : cc1113-40 Inst : ECD 6
Misc : op41557,gtt1113,29.9,,,10,,soil Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\MSDCHEM\2\METHODS\8081B.M (Chemstation Integrator)
Title : Pesticides by 8081B
Last Update : Mon Apr 30 08:41:25 2012
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 20% Max. Rel. Area : 150%

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1 S	Tetrachloro-m-xylene	40.000	51.492	-28.7#	127	0.00	5.01- 5.21
2	alpha-BHC	40.000	53.117	-32.8#	130	0.00	5.48- 5.68
3	gamma-BHC (Lindane)	40.000	52.477	-31.2#	127	0.00	5.83- 6.03
4	beta-BHC	40.000	54.267	-35.7#	134	0.00	6.06- 6.26
	----------	Amount	Calc.	%Drift	----------		
5	delta-BHC	40.000	53.041	-32.6#	138	0.00	6.30- 6.50
	----------	Amount	Calc.	%Drift	----------		
6	Heptachlor	40.000	50.994	-27.5#	123	0.00	6.43- 6.63
7	Aldrin	40.000	56.138	-40.3#	135	0.00	6.79- 6.99
	----------	Amount	Calc.	%Drift	----------		
8	Heptachlor Epoxide	40.000	54.718	-36.8#	139	0.00	7.27- 7.47
	----------	Amount	Calc.	%Drift	----------		
9	gamma-Chlordane	40.000	60.513	-51.3#	146	0.00	7.56- 7.76
10	alpha-Chlordane	40.000	61.518	-53.8#	154	0.00	7.65- 7.85
11	Endosulfan I	40.000	56.597	-41.5#	134	0.00	7.70- 7.90
12	4,4'-DDE	40.000	56.606	-41.5#	136	0.00	7.88- 8.08
	----------	Amount	Calc.	%Drift	----------		
13	Dieldrin	40.000	64.559	-61.4#	168	0.00	8.02- 8.22
	----------	Amount	Calc.	%Drift	----------		
14	Endrin	40.000	52.608	-31.5#	134	0.00	8.28- 8.48
15	4,4'-DDD	40.000	64.456	-61.1#	153	0.00	8.49- 8.69
16	Endosulfan II	40.000	56.527	-41.3#	142	0.00	8.55- 8.75
17	Endrin Aldehyde	40.000	58.913	-47.3#	139	0.00	8.71- 8.91
18	4,4'-DDT	40.000	27.438	31.4#	68	0.00	8.86- 9.06
	----------	Amount	Calc.	%Drift	----------		
19	Endosulfan Sulfate	40.000	55.849	-39.6#	140	0.00	8.99- 9.19
	----------	Amount	Calc.	%Drift	----------		
20	Methoxychlor	40.000	33.860	15.4	85	0.00	9.46- 9.66
21	Endrin Ketone	40.000	49.011	-22.5#	118	0.00	9.56- 9.76
22 L1	Chlordane-A		----------NA----------				
23 L1	Chlordane-B		----------NA----------				
24 L1	Chlordane-C		----------NA----------				
25 L1	Chlordane-D		----------NA----------				

5.8.23 5

Continuing Calibration Summary

Job Number: F92199
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-Site 21

Sample: GTT1113-CC1113
Lab FileID: TT33910.D

26	L1	Chlordane-E			----------NA----------				
27	L1	Chlordane-F			----------NA----------				
28	H	Toxaphene			----------NA----------				
29	S	Decachlorobiphenyl	40.000	51.576	-28.9#	129	0.00	11.21-11.41	
*****		Signal #2 *****							
1	S	Tetrachloro-m-xylene	40.000	51.350	-28.4#	122	0.00	4.82- 5.02	
		----------	Amount	Calc.	%Drift			----------	
2		alpha-BHC	40.000	49.671	-24.2#	128	0.00	5.40- 5.60	
3		gamma-BHC (Lindane)	40.000	50.890	-27.2#	133	0.00	5.77- 5.97	
		----------	Amount	Calc.	%Drift			----------	
4		beta-BHC	40.000	56.231	-40.6#	137	0.00	6.09- 6.29	
		----------	Amount	Calc.	%Drift			----------	
5		delta-BHC	40.000	44.209	-10.5	117	0.00	6.36- 6.56	
6		Heptachlor	40.000	47.359	-18.4	121	0.00	6.16- 6.36	
7		Aldrin	40.000	52.648	-31.6#	132	0.00	6.48- 6.68	
8		Heptachlor Epoxide	40.000	54.074	-35.2#	135	0.00	7.06- 7.26	
9		gamma-Chlordane	40.000	54.536	-36.3#	142	0.00	7.35- 7.55	
10		alpha-Chlordane	40.000	53.380	-33.5#	137	0.00	7.42- 7.63	
11		Endosulfan I	40.000	57.205	-43.0#	151	0.00	7.50- 7.70	
12		4,4'-DDE	40.000	55.997	-40.0#	142	0.00	7.64- 7.84	
		----------	Amount	Calc.	%Drift			----------	
13		Dieldrin	40.000	58.199	-45.5#	139	0.00	7.81- 8.01	
14		Endrin	40.000	52.493	-31.2#	134	0.00	8.14- 8.35	
15		4,4'-DDD	40.000	65.193	-63.0#	155	0.00	8.31- 8.51	
		----------	Amount	Calc.	%Drift			----------	
16		Endosulfan II	40.000	59.934	-49.8#	157	0.00	8.49- 8.69	
17		Endrin Aldehyde	40.000	55.043	-37.6#	141	0.00	8.72- 8.92	
18		4,4'-DDT	40.000	28.750	28.1#	75	0.00	8.62- 8.82	
		----------	Amount	Calc.	%Drift			----------	
19		Endosulfan Sulfate	40.000	53.560	-33.9#	133	0.00	8.99- 9.19	
20		Methoxychlor	40.000	35.708	10.7	90	0.00	9.33- 9.53	
21		Endrin Ketone	40.000	52.127	-30.3#	128	0.00	9.63- 9.83	
22	L1	Chlordane-A			----------NA----------				
23	L1	Chlordane-B			----------NA----------				
24	L1	Chlordane-C			----------NA----------				
25	L1	Chlordane-D			----------NA----------				
26	L1	Chlordane-E			----------NA----------				
27	L1	Chlordane-F			----------NA----------				
28	H	Toxaphene			----------NA----------				
29	S	Decachlorobiphenyl	40.000	58.845	-47.1#	145	0.00	10.98-11.18	

(#) = Out of Range SPCC's out = 0 CCC's out = 0
TT33872.D 8081B.M Mon Apr 30 09:32:26 2012

5.8.23

5

ACCUTEST LABORATORIES SE

DATE:	4/25/12
COLUMN TYPE:	Rtx1/Rtx2
AMOUNT INJECTED:	2 ul
INSTRUMENT:	ECD5-KK

GC ECD5-KK ANALYSIS LOG

METHODS:	8081 B
ACQ. METHOD:	ACQ-P81 B
PROC. METHOD:	8081
CALIB. DATE:	4/25/12
RUN BATCH:	GKK 1626

ANALYST:	EZ
HEXANE LOT #:	K3E27
SIGNAL 1 BACKGROUND:	162.3
SIGNAL 2 BACKGROUND:	239.4

DATA FILE	ALS #	SAMPLE ID	SAMPLE METHOD	OP BATCH	DF	MANUALLY INTEGRATED PEAKS RATIONALE, PEAK #	COMMENTS
KK 471182	1	ccv 54	8081 B	S4197	10		—
KK 83		↓		↓	10		—
KK 84		ddt		S4194	10		fail
KK 85		~~ICV1625-5~~ ddt		S4197	10		pass
KK 86		~~10~~ IC1625-5			5/1000		
KK 87		~~20~~ IC1625-10			10/1000		
KK 88		~~IC1625-40~~ IC1625-20			20/1000		
KK 89		~~IC1625-60~~ IC1625-40			40/1000		
KK 90		~~80~~ IC1625-60			60/1000		
KK 91		~~IC1625-100~~ IC1625-80			80/1000		
KK 92		~~SUCTOX~~ IC1625-100 (ppb)		S4184	25X		
KK 93		~~ICV~~ IC1625 SUCTOX		S4203	10X		
KK 94		ICV 1625-40		E7701	25X		pass
KK 95		cpl1308.65		cpl1308	1		—
KK 96		↓ mb			1		— RL to ddt/mrk
KK 97		F-922816-1A			2X	pdB	ND
KK 98		↓ -2A			↓	pdB	ND
KK 99		F 922816-1			10	pdB	add, ddE, ddt, Endo Sulf., EndoI, EndoII
KK 200	↓	-2			10	pdB	ddd, ddt, EndoI, EndoII
KK 201	20	-3		↓	20	pdB	ddt, Endosulf., EndoI, EndoII

Manual Integration Rationale SOP QA029: MP Missed Peak, OP Overlapping Peak, SP Split Peak, PDB Poorly Defined Baseline, BR Baseline Ripple, PII Poor Instrument Integration
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction

gcecd5_kk_log.xls NF rev. 08/09

Analyst's Signature: [signature]

ACCUTEST LABORATORIES SE

DATE:	4/25/12
COLUMN TYPE:	mr1 mr2
AMOUNT INJECTED:	2 ul
INSTRUMENT:	ECD5-KK

GC ECD5-KK ANALYSIS LOG

METHODS:	8081 B
ACQ. METHOD:	ACQ - P 8081 B
PROC. METHOD:	8081
CALIB. DATE:	4/25/12
RUN BATCH:	GKK 1626

ANALYST:	EH
HEXANE LOT #:	K34 E27
SIGNAL 1 BACKGROUND:	162.3
SIGNAL 2 BACKGROUND:	289.4

DATA FILE	ALS #	SAMPLE ID	SAMPLE METHOD	OP BATCH	DF	MANUALLY INTEGRATED PEAKS RATIONALE, PEAK #	COMMENTS
KK 47202	21	F922840-11	8081 B	OP41508	10	pdB	aldrin, ddt, endo I II RR forded
KK 47203		-5			1	pdB	ddE, ddt
KK 04		-6			10	pdB	dldrin, ddd, ddt, endo Sulf
KK 05		CC 1626-40		SU497	40/100		ddt/meth. Running endo I, II, meth.
KK 06		ccb			1		
KK 07		F922840-7		OP41508	10	pdB	ND RR forded
KK 08		-8			1	pdB	ND
KK 09		F922880-1			1	pdB	ND
KK 10		OP41508-ms			1	pdB	4/25/12 —
KK 11		msd			1	pdB	ND —
KK 12		F922208-2			1	pdB	RR for conf. only
KK 13		-3			1	pdB	ND
KK 14		-4			1	pdB	ND
KK 15		-5			1		endo I
KK 16		-6			1		ND
KK 17		CC 1626-40		SU497	40/100		pass
KK 18		ccb					—
KK 19		F922883-7		OP41508	20	pdB	~~alpha-BHC, ddt, endo~~ RR 25% for endo I
KK 20	31	ccc 1626-40		SU497	40/100		pass
KK				NI	A		

Manual Integration Rationale SOP QA029: MP Missed Peak, OP Overlapping Peak, SP Split Peak, PDB Poorly Defined Baseline, BR Baseline Ripple, PII Poor Instrument Integration
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

gcecd5_kk_log.xls NF rev. 08/09

Analyst's Signature: [signature]

ACCUTEST LABORATORIES SE

DATE	4/28/12
COLUMN TYPE	mv1/mv2
AMOUNT INJECTED	2 ul
INSTRUMENT	ECD5-KK

GC ECD5-KK ANALYSIS LOG

METHODS:	8081 B
ACQ. METHOD:	ACQ-8081B
PROC. METHOD:	8081
CALIB. DATE:	4/25/12
RUN BATCH:	GKK ~~1029~~ 1629

ANALYST:	GM
HEXANE LOT #:	K-36-E27
SIGNAL 1 BACKGROUND:	105.3
SIGNAL 2 BACKGROUND:	238.4

DATA FILE	ALS #	SAMPLE ID	SAMPLE METHOD	OP BATCH	DF	MANUALLY INTEGRATED PEAKS RATIONALE, PEAK #	COMMENTS
KK 41290	1	Cal std	8081 B	54197	10		—
KK 91		↓		↓	10		—
KK 92		cont		54194	10	pdB	pass
KK 93		CC16226-20		54197	20/100		pass
KK 94		--20 (chl)		54194	25x	pdB	pass
KK 95		↓ --20 (1x)		54203	100x		pass
KK 96		op41560 mb		op41560	1		—
KK 97		F92433 5/11/2012		↓	(5x)		R2 need more sulfuric acid
KK 98		CC1113-40		54197	20/100		pass
KK 99		op41551 mb		op41557			—
KK 300		F92199-9			10	pdB	chl
KK 01		F92433-2			1	pdB	R2 10x for chl, alpha chl & gamma chl, dieldrin, mirex, Heptachlor
KK 02		↓ -2			10	pdB	chl, gamma chl, alpha chl
KK 03		F97431-1			1		ND
KK 04		↓ -3			1		ND
KK 05		F92302-1			1	pdB	~~ND~~ Endosulfan I
KK 06		-2			1		Endo. Sulfate. ND
KK 07		-3			1	pdB	~~ND~~ Endo Sulfate, Endo I
KK 08	19	CC1476-00		54197	10/100		pass
KK							4/30/12

Manual Integration Rationale SOP QA029: MP Missed Peak, OP Overlapping Peak, SP Split Peak, PDB Poorly Defined Baseline, BR Baseline Ripple, PII Poor Instrument Integration
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

gcecd5_kk_log xls NF rev. 08/09

Analyst's Signature: [signature]

ACCUTEST LABORATORIES F92199

ACCUTEST LABORATORIES SE

DATE: 4/30/2012	
COLUMN TYPE: mxl/mx2	
AMOUNT INJECTED: 2	ul
INSTRUMENT: ECD5-KK	

GC ECD5-KK ANALYSIS LOG

METHODS:	8081 B
ACQ. METHOD:	ACQ - P21B
PROC. METHOD:	8081 B
CALIB. DATE:	4/30/12
RUN BATCH:	GKK 11031

ANALYST:	ERI
HEXANE LOT #:	K36627
SIGNAL 1 BACKGROUND:	168.5
SIGNAL 2 BACKGROUND:	255 V

DATA FILE	ALS #	SAMPLE ID	SAMPLE METHOD	OP BATCH	DF	MANUALLY INTEGRATED PEAKS RATIONALE, PEAK #	COMMENTS
KK 41321	1	ddt	8081 B	S4194	10		fail
KK 22		ddt			10		
KK 23		ddt			10		pass
KK 24		ic1631-5		S4197	5/1000	pdB	pass
KK 25		-10			10/1000	pdB	
KK 26		-20			20/1000		
KK 27		icc1631-40			40/1000		
KK 28		ic1631-60			60/1000		
KK 29		-80			80/1000		
KK 30		ic1631-200 (chl)		~~S42~~ S4184	20X		
KK 31		-500 (tox)		S4203	10X		
KK 32		icv1631-40		E4007	20X		
KK 33		op 41557-65		Op41557	1		—
KK 34		-mb					—
KK 35		f 92199-1				pdB	chl
KK 36		-2				pdB	
KK 37		-3				pdB	
KK 38		-4				pdB	
KK 39		-5					ND
KK 40	20	-10				pdB	chl

Manual Integration Rationale SOP QA029: MP Missed Peak, OP Overlapping Peak, SP Split Peak, PDB Poorly Defined Baseline, BR Baseline Ripple, PII Poor Instrument Integration
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

gcecd5_kk_log.xls NF rev. 08/09

Analyst's Signature: ERI

ACCUTEST LABORATORIES SE

DATE: 4/30/2012	
COLUMN TYPE: mr1	mr2
AMOUNT INJECTED: 2	ul
INSTRUMENT: ECD5-KK	

GC ECD5-KK ANALYSIS LOG

METHODS:	8081B
ACQ. METHOD:	ACQ-P81B
PROC. METHOD.	8081B
CALIB. DATE:	4/30/12
RUN BATCH: GKK	1631

ANALYST:	EM
HEXANE LOT #:	K36E27
SIGNAL 1 BACKGROUND:	168.5
SIGNAL 2 BACKGROUND:	235.4

DATA FILE	ALS #	SAMPLE ID	SAMPLE METHOD	OP BATCH	DF	MANUALLY INTEGRATED PEAKS RATIONALE, PEAK #	COMMENTS
KK 47 341	21	CC1631-40	8081B	S4197	40/1000	pdB	Running low dalt
KK 342		op41588-bs		op41588	1		—
KK 43		-mb					—
KK 44		F92498-1				pdB	~~deltaBHC~~ 2210x RE for dalt & ddd
KK 45		-2				pdB	ND dalt, BHC
KK 46		F92516-1				pdB	~~ddd, ddt, Endo I, Endo II~~ ND
KK 47		-2				pdB	ddd, ddt, Endo I, Endo II, alt.
KK 48		-3				pdB	ND ddd, ddt, Endo I, Endo II, m
KK 49		-4				pdB	ND
KK 50		F92519-1				pdB	ND
KK 51		op41588-ms					—
KK 52		CC1631-40		S4197	40/1000		Running low dalt/meth. Run 3 ddd
KK 53		ccb		K36E27	1		—
KK 54		op41588-msd		op41588			—
KK 55		F92517-2				pdB	dal, ddd, Endo I, ddt. RE for dalt & m
KK 56		-3				pdB	ddd, ddt,
KK 57		-4				pdB	ddd
KK 58		-5				pdB	ddd, ddt, Endo I, Endo II, ddE
KK 59		-6				pdB	ND
KK 60	40	Rec 1631-40		S4197	40/1000		Running low dalt/meth/Run 3 ddd

5/1/12 EM

Manual Integration Rationale SOP QA029: **MP** Missed Peak, **OP** Overlapping Peak, **SP** Split Peak, **PDB** Poorly Defined Baseline, **BR** Baseline Ripple, **PII** Poor Instrument Integration
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

gcecd5_kk_log.xls NF rev. 08/09

Analyst's Signature: EM

ACCUTEST LABORATORIES SE

DATE:	5/2/12
COLUMN TYPE:	mr1/mr2
AMOUNT INJECTED:	2 ul
INSTRUMENT:	ECD5-KK

GC ECD5-KK ANALYSIS LOG

METHODS:	8081 B
ACQ. METHOD:	ACQ-P81B
PROC. METHOD:	8081
CALIB. DATE:	4/30/12
RUN BATCH:	GKK 1633

ANALYST:	EM
HEXANE LOT #:	K36E27
SIGNAL 1 BACKGROUND:	158-0
SIGNAL 2 BACKGROUND:	188-6

DATA FILE	ALS #	SAMPLE ID	SAMPLE METHOD	OP BATCH	DF	MANUALLY INTEGRATED PEAKS RATIONALE, PEAK #	COMMENTS
KK 47394	1	cont std	8081B	S4197	10		
KK 95		↓		↓	10		
KK 96		cont std		↓	10		
KK 97		dctt		S4194	10		pass
KK 98		cc1631-2c		S4197	2/1000		↓
KK 99		↓ -2cw (chl)		S4184	25X		
KK 400		↓ -5cw (tox)		S4203	4/10X		↓
KK 01		F12KF1-2		op4135t	4	pdB	chl
KK 02		↓ -3		↓	4	pdB	chl
KK 03		↓ -4		↓	5	pdB	chl
KK 04		cc1631-40		S4197	40/1000		pass
KK							
KK							
KK							
KK							
KK							
KK							
KK							
KK							
KK							

Manual Integration Rationale SOP QA029: **MP** Missed Peak, **OP** Overlapping Peak, **SP** Split Peak, **PDB** Poorly Defined Baseline, **BR** Baseline Ripple, **PII** Poor Instrument Integration
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

gcecd5_kk_log.xls NF rev. 08/09

Analyst's Signature: [signature]

ACCUTEST LABORATORIES F921199

ACCUTEST LABORATORIES SE

DATE:	11/25/2012
COLUMN TYPE:	mr11 / mr2
AMOUNT INJECTED:	2 ul
INSTRUMENT:	ECD6-TT

GC ECD6-TT ANALYSIS LOG

METHODS:	8081 B
ACQ. METHOD:	ACQ-P 81 B
PROC. METHOD:	8081
CALIB. DATE:	11/25/2012
RUN BATCH:	GTT 1111

ANALYST:	EH
HEXANE LOT #:	K36F27
SIGNAL 1 BACKGROUND:	2389.6
SIGNAL 2 BACKGROUND:	24167.5

DATA FILE	ALS #	SAMPLE ID	SAMPLE METHOD	OP BATCH	DF	MANUALLY INTEGRATED PEAKS RATIONALE, PEAK #	COMMENTS
TT33783	1	Cond std	8081 B	S4197	10		
TT 84		↓		↓	10		
TT 85		dctl		S4194	10		
TT 86		cc 1109-20		S4197	20/1000		Fail RR a new curve
TT 87		ic 1111-200 (chl)		S4184	25X		—
TT 88		↓ -500 (tox)		S4203	10X		—
TT 89		cc 1109-50		S4197	20/1000		
TT 90		ic 1111-5			5/1000		pass
TT 91		-10			10/1000		
TT 92		↓ -20			20/1000		
TT 93		icc 1111 -40			40/1000		
TT 94		-60			60/1000		
TT 95		↓ -80			80/1000		
TT 96		icv 1111-40		E4604	25X		
TT 97		op41519-bs		Op41519	1		—
TT 98		↓ -mb			1		—
TT 99		F92133-4 cf			1	pdB	alpha BHC, gamma BHC
TT 100		↓ -12 cf			1	pdB	
TT 01	↓	F92175-3 cf			1	pdB	↓
TT ↓ 02	20	F92199-14	↓	↓	1		ND

Manual Integration Rationale SOP QA029: **MP** Missed Peak, **OP** Overlapping Peak, **SP** Split Peak, **PDB** Poorly Defined Baseline, **BR** Baseline Ripple, **PII** Poor Instrument Integration
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

gcecd6_tt_log.xls NF rev. 08/09

Analyst's Signature: EH

ACCUTEST LABORATORIES SE

DATE:	4/25/12
COLUMN TYPE:	mr1/mr2
AMOUNT INJECTED:	2 ul
INSTRUMENT:	ECD6-TT

GC ECD6-TT ANALYSIS LOG

METHODS:	8081 B
ACQ. METHOD:	ACQ -P 81B
PROC. METHOD:	8081
CALIB. DATE:	4/25/2012
RUN BATCH:	GTT 1111

ANALYST:	EM
HEXANE LOT #:	K306E24
SIGNAL 1 BACKGROUND:	2389.6
SIGNAL 2 BACKGROUND:	2467.5

DATA FILE	ALS #	SAMPLE ID	SAMPLE METHOD	OP BATCH	DF	MANUALLY INTEGRATED PEAKS RATIONALE, PEAK #	COMMENTS
TT 33803	21	op41519-ms	8081 B	op41519	1	pd B	
TT 04		-msd			1	pd B	
TT 05		F92199-15			1		ND
TT 06		-16			1		chl
TT 07		cc111140		S4197	40/100		pass
TT 08		ccb		K306E24	1		—
TT 09		F92199-17		op41519	1	pd B	ND
TT 10		F92213-2			1		ND
TT 11		-3			1		ND
TT 12		-4			1		ND
TT 13		-5			1	pd B	alpha BHC
TT 14		-6			1	pd B	ND
TT 15		-7			1		ND
TT 16		-8			1		ND
TT 17		F92274-2			1	pii	ND
TT 18		-3			1	pii	ND
TT 19		cc1111-40		S4194	40/100		Running high only ND samples affected
TT 20		ccb		K306E24	1		—
TT 21		F92274-4		op41519	1	pdB	ND
TT 22	40	-5			1		ND

Manual Integration Rationale SOP QA029: **MP** Missed Peak, **OP** Overlapping Peak, **SP** Split Peak, **PDB** Poorly Defined Baseline, **BR** Baseline Ripple, **PII** Poor Instrument Integration
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

gcecd6_tt_log.xls NF rev. 08/09

Analyst's Signature: EM

ACCUTEST LABORATORIES SE

DATE:	4/25/12
COLUMN TYPE:	mr1 / mr2
AMOUNT INJECTED:	2 ul
INSTRUMENT:	ECD6-TT

GC ECD6-TT ANALYSIS LOG

METHODS:	8081 B
ACQ. METHOD:	ACQ-8081 B
PROC. METHOD:	8081
CALIB. DATE:	4/25/12
RUN BATCH: GTT	1111

ANALYST:	GM
HEXANE LOT #:	K309221
SIGNAL 1 BACKGROUND:	2389.6
SIGNAL 2 BACKGROUND:	21167.5

DATA FILE	ALS #	SAMPLE ID	SAMPLE METHOD	OP BATCH	DF	MANUALLY INTEGRATED PEAKS RATIONALE, PEAK #	COMMENTS
TT 33823	41	F923282	8081B	op41519	1		ND
TT ↓ 24	42	ccc1111-40	↓	54197	40/100		Running Tonly ND Samples Reanal
TT							
TT							
TT							
TT							
TT							
TT							
TT							
TT							
TT							
TT							
TT							
TT							
TT							
TT							
TT							
TT							
TT							
TT							
TT							

N/A

End 4/26/12

Manual Integration Rationale SOP QA029: **MP** Missed Peak, **OP** Overlapping Peak, **SP** Split Peak, **PDB** Poorly Defined Baseline, **BR** Baseline Ripple, **PII** Poor Instrument Integration
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

gcecd6_tt_log.xls NF rev. 08/09

Analyst's Signature: _____

ACCUTEST LABORATORIES SE

DATE:	4/27/2012
COLUMN TYPE:	con / mr2
AMOUNT INJECTED:	2 ul
INSTRUMENT:	ECD6-TT

GC ECD6-TT ANALYSIS LOG

METHODS:	8081 B
ACQ. METHOD:	ACQ-PSIB
PROC. METHOD:	8081
CALIB. DATE:	4/27/12
RUN BATCH:	GTT 1113

ANALYST:	EXI
HEXANE LOT #:	[illegible]
SIGNAL 1 BACKGROUND:	2015 [illegible]
SIGNAL 2 BACKGROUND:	2240 [illegible]

DATA FILE	ALS #	SAMPLE ID	SAMPLE METHOD	OP BATCH	DF	MANUALLY INTEGRATED PEAKS RATIONALE, PEAK #	COMMENTS
TT 33 del	1	cond st	8081B	84199	10		—
TT 62		↓	↓	↓	10		
TT 63		ddt		S4194	10		fail
TT 64		↓			10		↓
TT 65		ddt		↓	10		pass
TT 66		cc 1112-20		S4194	20/1000		fail Rerun Good
TT 67		↓ -500 (ddt)			25X		↓
TT 68		cc 1112-20			20/1000		pass
TT 69		cc 1113-5			5/1000	pdB	
TT 70		↓ -10			10/1000	pdB	
TT 71		↓ -20			20/1000		
TT 72		cc 1115-40			40/1000		
TT 73		cc 1113-60			60/1000		
TT 74		↓ -80		↓	80/1000		
TT 75		cc 1113-500 (ddt)		S4194	25X		
TT 76		↓ -500 (tox)		S4200	10X		
TT 77		cc 1113-40		S4204	25X		✓ Rerun Exceeds
TT 78		[illegible]		[illegible]	1		—
TT 79	↓	↓ [illegible]		↓	1		
TT 80	20	F 93442-1	✓	↓	1	pdB	ND

Manual Integration Rationale SOP QA029: **MP** Missed Peak, **OP** Overlapping Peak, **SP** Split Peak, **PDB** Poorly Defined Baseline, **BR** Baseline Ripple, **PII** Poor Instrument Integration
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

gcecd6_tt_log.xls NF rev. 08/09

Analyst's Signature: [signature]

ACCUTEST LABORATORIES F92199

ACCUTEST LABORATORIES SE

DATE:	4/27/12
COLUMN TYPE:	mn1 / mn2
AMOUNT INJECTED:	2 ul
INSTRUMENT:	ECD6-TT

GC ECD6-TT ANALYSIS LOG

METHODS:	8081 B
ACQ. METHOD:	ACQ - 8081 B
PROC. METHOD:	8081
CALIB. DATE:	4/27/12
RUN BATCH:	GTT 1113

ANALYST:	EL
HEXANE LOT #:	K3G627
SIGNAL 1 BACKGROUND:	2015.8
SIGNAL 2 BACKGROUND:	2246.0

DATA FILE	ALS #	SAMPLE ID	SAMPLE METHOD	OP BATCH	DF	MANUALLY INTEGRATED PEAKS RATIONALE, PEAK #	COMMENTS
TT [illegible]	21	F 92442-2	8081 B	OP41544	1	pdb	ND
TT [illegible]		-3				pdb	ND
TT [illegible]		F 92495-1				pdb	ND
TT [illegible]		-2				pdb	ND
TT [illegible]		OP 41574-ms				pdb	
TT [illegible]		-msd				pdb	
TT [illegible]		CC 1113-40		S1167	4/100		Retention ↑ only ND standards Rpt
TT [illegible]		CC 41557 b5		OP 41557	1		
TT [illegible]		-mb					Hit for dcite, etc samples, ND
TT 70		F 92199-1				pdb	clov only
TT 71		-2				pdb	
TT 72		-3				pdb	
TT 73		-4				pdb	
TT 74		-5				pdb	
TT 75		-6					ND
TT 76		-7					ND
TT 77		-8					ND
TT 78		CC 1113-40		S1167	4/100		Runtimes ↑ only ND standards reprinted
TT 79		CCb		OP 41557	1		
TT 80	10	F 92199-9		OP 41557	1		RE ok

Manual Integration Rationale SOP QA029: **MP** Missed Peak, **OP** Overlapping Peak, **SP** Split Peak, **PDB** Poorly Defined Baseline, **BR** Baseline Ripple, **PII** Poor Instrument Integration
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

gcecd6_tt_log.xls NF rev. 08/09

Analyst's Signature: EL

ACCUTEST LABORATORIES SE

DATE:	4/27/12
COLUMN TYPE:	mx1 mx2
AMOUNT INJECTED:	ul
INSTRUMENT:	ECD6-TT

GC ECD6-TT ANALYSIS LOG

METHODS:	8081B
ACQ. METHOD:	ACQ 8810
PROC. METHOD:	8081
CALIB. DATE:	4/27/12
RUN BATCH:	GTT 1113

ANALYST:	GM
HEXANE LOT #:	K36827
SIGNAL 1 BACKGROUND:	30 15.8
SIGNAL 2 BACKGROUND:	2210.6

DATA FILE	ALS #	SAMPLE ID	SAMPLE METHOD	OP BATCH	DF	MANUALLY INTEGRATED PEAKS RATIONALE, PEAK #	COMMENTS
TT 53901	41	F92199-10	8081B	OP41557	1	pdB	chl only
TT 02		-11				pdB	ND
TT 03		-12				pdB	ND
TT 04		-13				pdB	ND
TT 05		F92413-2					RR 10X
TT 06		F92437-1					ND RR for ddt/meth
TT 07		-3					ND
TT 08		~~CC 1113-10~~		OP41557		pdB	—
TT 09		ccb		OP41557		pdB	—
TT 10		~~F92199-9~~ CC 1113-10		S41197	40/1000		Running Tri Running ↓ ddt/meth
TT 11		ccb ~~-10~~		K36827	1		—
TT 12		~~-11~~ F92382-1		OP41557	1		ND
TT 13		~~-11~~ F92382-2			1		ND
TT 14		F92382-3			1		ddt, End sulf., Endo I
TT 15	55	CCC 1113-10		S41197	40/1000		Running ↑ Tri Running ↓ ddt/met
TT							
TT							
TT							
TT							
TT							

N/A EL 4/30/12

Manual Integration Rationale SOP QA029: **MP** Missed Peak, **OP** Overlapping Peak, **SP** Split Peak, **PDB** Poorly Defined Baseline, **BR** Baseline Ripple, **PII** Poor Instrument Integration
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

gcecd6_tt_log.xls NF rev. 08/09

Analyst's Signature: EL

Tetra Tech **INTERNAL CORRESPONDENCE**

TO:	**R. SIMCIK**	**DATE:**	**NOVEMBER 29, 2012**
FROM:	**LEANNE GANSER**	**COPIES:**	**DV FILE**

SUBJECT: **ORGANIC LIMITED DATA VALIDATION – CHLORDANE**
CTO JM09, NAS CECIL FIELD
SAMPLE DELIVERY GROUP (SDG) – F98198

SAMPLES: 3/Aqueous/

CEF-P21-GW-G1-101912 CEF-P21-GW-G2-101912 CEF-P21-GW-G3-101912

Overview

The sample set for CTO JM09, NAS Cecil Field, SDG F98198, consists of three (3) aqueous environmental samples. No field duplicate pairs were included in this SDG.

All samples were analyzed for chlordane. The samples were collected by Tetra Tech on October 19 and 22, 2012 and analyzed by Accutest Laboratories. Samples were analyzed using SW846 method 8081B for chlordane.

These data were evaluated based on the following parameters:

* • Data Completeness
* • Holding Times
* • Initial and Continuing Calibration Verification Results
* • Blank Results
* • Detection Limits

* - All quality control criteria were met for this parameter.

Chlordane - Sample results were within quality control limits.

Notes

Positive results reported below the reporting limit (RL) but above the method detection limit (MDL) for the organic analyses were qualified as estimated (J).

Nondetected results were reported to the MDL.

Executive Summary

Laboratory Performance: None.

Other Factors Affecting Data Quality: None.

The data for these analyses were reviewed with reference to the "National Functional Guidelines for Organic Review", October 1999 and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories", April 2009. The text of this report has been formulated to address only those problem areas affecting data quality.

Tetra Tech
Leanne Ganser
Environmental Scientist

Tetra Tech
Joseph A. Samchuck
Quality Assurance Officer

Attachments:

1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as reported by the Laboratory
3. Appendix C - Support Documentation

APPENDIX A
QUALIFIED ANALYTICAL RESULTS

Data Validation Qualifier Codes:

VQL – Validation Qualifier
QLCD – Validation Qualifier Code

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS-GFAA MSA's r < 0.995 / ICP PDS Recovery Noncompliance
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >25% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient r < 0.995
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 02267	NSAMPLE	CEF-P21-GW-G1-101912			CEF-P21-GW-G2-101912			CEF-P21-GW-G3-101912		
SDG: F98198	LAB_ID	F98198-2			F98198-3			F98198-1		
FRACTION: PEST	SAMP_DATE	10/19/2012			10/22/2012			10/19/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
CHLORDANE		3.3			0.34	J	P	0.33	J	P

APPENDIX B
RESULTS AS REPORTED BY THE LABORATORY

Accutest Laboratories

Report of Analysis

Client Sample ID:	CEF-P21-GW-G1-101912		
Lab Sample ID:	F98198-2	Date Sampled:	10/19/12
Matrix:	AQ - Ground Water	Date Received:	10/23/12
Method:	SW846 8081B SW846 3510C	Percent Solids:	n/a
Project:	NAS Cecil Field-Site 21		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	KK51149.D	1	10/24/12	EM	10/24/12	OP44137	GKK1753
Run #2							

	Initial Volume	Final Volume
Run #1	1030 ml	10.0 ml
Run #2		

CAS No.	Compound	Result	PQL	MDL	Units	Q
12789-03-6	Chlordane	3.3	0.49	0.19	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	87%		42-127%
2051-24-3	Decachlorobiphenyl	65%		27-127%

(a) All hits confirmed by dual column analysis.

U = Not detected MDL - Method Detection Limit
PQL = Practical Quantitation Limit
L = Indicates value exceeds calibration range
I = Result > = MDL but < PQL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	CEF-P21-GW-G2-101912		
Lab Sample ID:	F98198-3	**Date Sampled:**	10/22/12
Matrix:	AQ - Ground Water	**Date Received:**	10/23/12
Method:	SW846 8081B SW846 3510C	**Percent Solids:**	n/a
Project:	NAS Cecil Field-Site 21		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	KK51159.D	1	10/24/12	EM	10/24/12	OP44137	GKK1753
Run #2							

	Initial Volume	Final Volume
Run #1	1050 ml	10.0 ml
Run #2		

CAS No.	Compound	Result	PQL	MDL	Units	Q
12789-03-6	Chlordane	0.34	0.48	0.19	ug/l	I

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	82%		42-127%
2051-24-3	Decachlorobiphenyl	60%		27-127%

(a) All hits confirmed by dual column analysis.

U = Not detected MDL - Method Detection Limit
PQL = Practical Quantitation Limit
L = Indicates value exceeds calibration range
I = Result > = MDL but < PQL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	CEF-P21-GW-G3-101912		
Lab Sample ID:	F98198-1	Date Sampled:	10/19/12
Matrix:	AQ - Ground Water	Date Received:	10/23/12
Method:	SW846 8081B SW846 3510C	Percent Solids:	n/a
Project:	NAS Cecil Field-Site 21		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	KK51148.D	1	10/24/12	EM	10/24/12	OP44137	GKK1753
Run #2							

	Initial Volume	Final Volume
Run #1	1040 ml	10.0 ml
Run #2		

CAS No.	Compound	Result	PQL	MDL	Units	Q
12789-03-6	Chlordane	0.33	0.48	0.19	ug/l	I

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	73%		42-127%
2051-24-3	Decachlorobiphenyl	67%		27-127%

(a) All hits confirmed by dual column analysis.

U = Not detected MDL - Method Detection Limit
PQL = Practical Quantitation Limit
L = Indicates value exceeds calibration range
I = Result > = MDL but < PQL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

APPENDIX C
SUPPORT DOCUMENTATION

HOLDTIME

SDG F98198

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
PEST	UG/L	CEF-P21-GW-G3-101912	F98198-1	NM	10/19/2012	10/24/2012	10/24/2012	5	0	5
PEST	UG/L	CEF-P21-GW-G2-101912	F98198-3	NM	10/22/2012	10/24/2012	10/24/2012	2	0	2
PEST	UG/L	CEF-P21-GW-G1-101912	F98198-2	NM	10/19/2012	10/24/2012	10/24/2012	5	0	5

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: Tetra Tech NUS **Job:** F98198

Site: NAS Cecil Field-Site 21 **Report Date:** 11/1/2012 1:10:56 PM

3 Sample(s) were collected on/between 10/19/2012 and 10/22/2012 and were received at Accutest SE on 10/23/2012 properly preserved, at 2.6 Deg. C and intact. These Samples received an Accutest job number of F98198. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

Extractables by GC By Method SW846 8081B

Matrix: AQ **Batch ID:** OP44137

All samples were extracted within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

F98198-1: All hits confirmed by dual column analysis.

F98198-2: All hits confirmed by dual column analysis.

F98198-3: All hits confirmed by dual column analysis.

Accutest Laboratories Southeast (ALSE) certifies that this report meets the project requirements for analytical data produced for the samples as received at ALSE and as stated on the COC. ALSE certifies that the data meets the Data Quality Objectives for precision, accuracy and completeness as specified in the ALSE Quality Manual except as noted above. This report is to be used in its entirety. ALSE is not responsible for any assumptions of data quality if partial data packages are used.

Narrative prepared by:

Date: November 1, 2012

Kim Benham, Client Services (signature on file)

TETRA TECH NUS, INC. CHAIN OF CUSTODY | NUMBER 2258 F98198 PAGE 1 OF 1

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112902267	Site 21	Rob Simcik	412 921 8163	Accutest / Heather
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER	PHONE NUMBER	ADDRESS
		Dave Snyder	904 334 7260	4405 Vineland Rd, C-15
		CARRIER/WAYBILL NUMBER		CITY, STATE
		Fed Ex 8427 1834 4579		Orlando, FL

STANDARD TAT ☐
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☒ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G
PRESERVATIVE USED: –

	DATE YEAR 2012	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	TYPE OF ANALYSIS: Select 8081 Chlordane								COMMENTS
1	10/19	1505	CEF.P21.GW.G3.101912				GW		2	X								Cool to 4°C
2	10/19	1650	CEF.P21.GW.G1.101912				GW		2	X								
3	10/22	1230	CEF.P21.GW.G2.102212				GW		2	X								Select 8081 Chlordane

7 DAY TAT

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY	10.22.12	1600	1. RECEIVED BY FX		
2. RELINQUISHED BY FX	10/23/12	9:30	2. RECEIVED BY	10/23/12	9:30
3. RELINQUISHED BY			3. RECEIVED BY		

COMMENTS 2.6c

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TtNUS-001

5.1 5

F98198: Chain of Custody
Page 1 of 2

ACCUTEST LABORATORIES SAMPLE RECEIPT CONFIRMATION

ACCUTEST'S JOB NUMBER: F98198 CLIENT: TETRA TECH INC PROJECT: 112502267

DATE/TIME RECEIVED: 10/23/12 9:30 (MM/DD/YY 24:00) NIMBER OF COOLERS RECEIVED: 1

METHOD OF DELIVERY: (FEDEX) UPS ACCUTEST COURIER GREYHOUND DELIVERY OTHER

AIRBILL NUMBERS: 8427 1834 4599

COOLER INFORMATION

- [ ] CUSTODY SEAL NOT PRESENT OR NOT INTACT
- [ ] CHAIN OF CUSTODY NOT RECEIVED (COC)
- [ ] ANALYSIS REQUESTED IS UNCLEAR OR MISSING
- [ ] SAMPLE DATES OR TIMES UNCLEAR OR MISSING
- [ ] TEMPERATURE CRITERIA NOT MET
- [ ] WET ICE PRESENT

TRIP BLANK INFORMATION

- [ ] TRIP BLANK PROVIDED
- [X] TRIP BLANK NOT PROVIDED
- [X] TRIP BLANK NOT ON COC
- [ ] TRIP BLANK INTACT
- [ ] TRIP BLANK NOT INTACT
- [ ] RECEIVED WATER TRIP BLANK
- [ ] RECEIVED SOIL TRIP BLANK

MISC. INFORMATION

NUMBER OF ENCORES ? 25-GRAM_____ 5-GRAM_____

NUMBER OF 5035 FIELD KITS ? _____

NUMBER OF LAB FILTERED METALS ? _____

TEMPERATURE INFORMATION

- [ ] IR THERM ID #3 CORR. FACTOR +0.4
- [ ] OBSERVED TEMPS: 2.2
- [ ] CORRECTED TEMPS: 2.6

SAMPLE INFORMATION

- [ ] SAMPLE LABELS PRESENT ON ALL BOTTLES
- [ ] INCORRECT NUMBER OF CONTAINERS USED
- [ ] SAMPLE RECEIVED IMPROPERLY PRESERVED
- [ ] INSUFFICIENT VOLUME FOR ANALYSIS
- [ ] DATES/TIMES ON COC DO NOT MATCH SAMPLE LABEL
- [ ] ID'S ON COC DO NOT MATCH LABEL
- [ ] VOC VIALS HAVE HEADSPACE (MACRO BUBBLES)
- [ ] BOTTLES RECEIVED BUT ANALYSIS NOT REQUESTED
- [ ] NO BOTTLES RECEIVED FOR ANALYSIS REQUESTED
- [ ] UNCLEAR FILTERING OR COMPOSITING INSTRUCTIONS
- [ ] SAMPLE CONTAINER(S) RECEIVED BROKEN
- [ ] % SOLIDS JAR NOT RECEIVED
- [ ] 5035 FIELD KIT FROZEN WITHIN 48 HOUR'S
- [ ] RESIDUAL CHLORINE PRESENT

(APPICABLE TO EPA 600 SERIES OR NORTH CAROLINA ORGANICS)

SUMMARY OF COMMENTS:

TECHNICIAN SIGNATURE/DATE 10/23/12 REVIEWER SIGNATURE/DATE 10-23-12

NF 12/10 receipt confirmation 122910.xls

5.1 5

F98198: Chain of Custody

Page 2 of 2

DDT/Endrin Breakdown Check

Job Number: F98198
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-Site 21

Sample:	GKK1752-DDT	Injection Date:	10/23/12
Lab File ID:	KK51110.D	Injection Time:	09:20
Instrument ID:	GCKK		

Compound	Response Signal 1	Response Signal 2
4,4'-DDD	21295	18819
4,4'-DDE	61914	54821
4,4'-DDT	1863141	1730394
DDT Breakdown [a]	4.3 %	4.1 %
Endrin aldehyde	15234	19023
Endrin ketone	26344	23463
Endrin	2050697	1833793
Endrin Breakdown [b]	2 %	2.3 %

(a) Calculated as: (DDD + DDE) / (DDD + DDE + DDT) x 100
(b) Calculated as: (Endrin Aldehyde + Endrin Ketone) / (Endrin Aldehyde + Endrin Ketone + Endrin) x 100

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
GKK1752-IC1752	KK51111.D	10/23/12	09:38	00:18	Initial cal 10
GKK1752-IC1752	KK51112.D	10/23/12	09:56	00:36	Initial cal 5
GKK1752-IC1752	KK51113.D	10/23/12	10:14	00:54	Initial cal 20
GKK1752-ICC1752	KK51114.D	10/23/12	10:32	01:12	Initial cal 40
GKK1752-IC1752	KK51115.D	10/23/12	10:50	01:30	Initial cal 60
GKK1752-IC1752	KK51116.D	10/23/12	11:09	01:49	Initial cal 80
GKK1752-IC1752	KK51117.D	10/23/12	11:27	02:07	Initial cal 200
GKK1752-IC1752	KK51118.D	10/23/12	11:45	02:25	Initial cal 500
GKK1752-ICV1752	KK51119.D	10/23/12	12:03	02:43	Initial cal verification 40
OP44067-MB	KK51120.D	10/23/12	12:21	03:01	Method Blank
ZZZZZZ	KK51121.D	10/23/12	12:40	03:20	(unrelated sample)
GKK1752-CC1752	KK51122.D	10/23/12	12:58	03:38	Continuing cal 40
OP44032-MB	KK51123.D	10/23/12	13:16	03:56	Method Blank
ZZZZZZ	KK51124.D	10/23/12	13:34	04:15	(unrelated sample)
GKK1752-CC1752	KK51125.D	10/23/12	13:52	04:33	Continuing cal 40
ZZZZZZ	KK51126.D	10/23/12	14:11	04:51	(unrelated sample)
ZZZZZZ	KK51127.D	10/23/12	14:29	05:09	(unrelated sample)
ZZZZZZ	KK51128.D	10/23/12	14:47	05:27	(unrelated sample)
ZZZZZZ	KK51129.D	10/23/12	15:05	05:46	(unrelated sample)
ZZZZZZ	KK51130.D	10/23/12	15:23	06:04	(unrelated sample)
ZZZZZZ	KK51131.D	10/23/12	15:41	06:22	(unrelated sample)
GKK1752-CC1752	KK51132.D	10/23/12	16:00	06:40	Continuing cal 40
ZZZZZZ	KK51134.D	10/23/12	16:36	07:17	(unrelated sample)
ZZZZZZ	KK51135.D	10/23/12	16:54	07:35	(unrelated sample)

DDT/Endrin Breakdown Check

Job Number: F98198
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-Site 21

Sample:	GKK1752-DDT	Injection Date:	10/23/12
Lab File ID:	KK51110.D	Injection Time:	09:20
Instrument ID:	GCKK		

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
ZZZZZZ	KK51136.D	10/23/12	17:13	07:53	(unrelated sample)
ZZZZZZ	KK51137.D	10/23/12	17:31	08:11	(unrelated sample)
GKK1752-ECC1752	KK51138.D	10/23/12	17:49	08:29	Ending cal 40

DDT/Endrin Breakdown Check

Job Number: F98198
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-Site 21

Sample:	GKK1753-DDT	Injection Date:	10/24/12
Lab File ID:	KK51142.D	Injection Time:	11:39
Instrument ID:	GCKK		

Compound	Response Signal 1	Response Signal 2
4,4'-DDD	18903	24711
4,4'-DDE	68205	72208
4,4'-DDT	1951603	1927793
DDT Breakdown [a]	4.3 %	4.8 %
Endrin aldehyde	16818	20579
Endrin ketone	31027	29605
Endrin	2116146	2040230
Endrin Breakdown [b]	2.2 %	2.4 %

(a) Calculated as: (DDD + DDE) / (DDD + DDE + DDT) x 100
(b) Calculated as: (Endrin Aldehyde + Endrin Ketone) / (Endrin Aldehyde + Endrin Ketone + Endrin) x 100

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
GKK1753-CC1752	KK51143.D	10/24/12	12:38	00:59	Continuing cal 20
GKK1753-CC1752	KK51144.D	10/24/12	12:56	01:17	Continuing cal 200
GKK1753-CC1752	KK51145.D	10/24/12	13:14	01:35	Continuing cal 500
OP44137-BS	KK51146.D	10/24/12	13:46	02:07	Blank Spike
OP44137-MB	KK51147.D	10/24/12	14:04	02:25	Method Blank
F98198-1	KK51148.D	10/24/12	14:22	02:43	CEF-P21-GW-G3-101912
F98198-2	KK51149.D	10/24/12	14:40	03:01	CEF-P21-GW-G1-101912
ZZZZZZ	KK51150.D	10/24/12	14:58	03:20	(unrelated sample)
ZZZZZZ	KK51151.D	10/24/12	15:16	03:38	(unrelated sample)
F98144-3	KK51152.D	10/24/12	15:34	03:55	(used for QC only; not part of job F98198)
OP44137-MS	KK51153.D	10/24/12	15:52	04:13	Matrix Spike
OP44137-MSD	KK51154.D	10/24/12	16:10	04:32	Matrix Spike Duplicate
ZZZZZZ	KK51155.D	10/24/12	16:28	04:50	(unrelated sample)
GKK1753-CC1752	KK51156.D	10/24/12	16:47	05:08	Continuing cal 40
ZZZZZZ	KK51158.D	10/24/12	17:23	05:45	(unrelated sample)
F98198-3	KK51159.D	10/24/12	17:41	06:03	CEF-P21-GW-G2-101912
GKK1753-ECC1752	KK51160.D	10/24/12	17:59	06:21	Ending cal 40

DDT/Endrin Breakdown Check

Job Number: F98198
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-Site 21

Sample:	GKK1754-DDT	Injection Date:	10/25/12
Lab File ID:	KK51163.D	Injection Time:	08:42
Instrument ID:	GCKK		

Compound	Response Signal 1	Response Signal 2
4,4'-DDD	40934	38415
4,4'-DDE	79984	93000
4,4'-DDT	1838853	1823594
DDT Breakdown [a]	6.2 %	6.7 %
Endrin aldehyde	81114	79589
Endrin ketone	77608	81362
Endrin	1901995	1901665
Endrin Breakdown [b]	7.7 %	7.8 %

(a) Calculated as: (DDD + DDE) / (DDD + DDE + DDT) x 100
(b) Calculated as: (Endrin Aldehyde + Endrin Ketone) / (Endrin Aldehyde + Endrin Ketone + Endrin) x 100

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
GKK1754-CC1752	KK51164.D	10/25/12	09:00	00:18	Continuing cal 20
GKK1754-CC1752	KK51165.D	10/25/12	09:18	00:36	Continuing cal 200
GKK1754-CC1752	KK51166.D	10/25/12	09:36	00:54	Continuing cal 500
OP44137-MB	KK51167.D	10/25/12	09:54	01:13	Method Blank
F98144-3	KK51168.D	10/25/12	10:12	01:30	(used for QC only; not part of job F98198)
GKK1754-ECC1752	KK51169.D	10/25/12	10:30	01:48	Ending cal 40

Initial Calibration Summary

Job Number: F98198
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-Site 21

Sample: GKK1752-ICC1752
Lab FileID: KK51114.D

Response Factor Report ECD 5

Method : C:\MSDCHEM\1\METHODS\8081B08.M (Chemstation Integrator)
Title : Pesticides by 8081B
Last Update : Tue Oct 23 12:30:07 2012
Response via : Initial Calibration

Calibration Files
5 =KK51112.D 10 =KK51111.D 20 =KK51113.D 40 =KK51114.D
60 =KK51115.D 80 =KK51116.D c200=KK51117.D t500=KK51118.D

Compound	5	10	20	40	60	80	c200	t500	Avg	%RSD
1) Tetrachloro-	6.806	7.025	7.237	7.401	7.076	6.773			7.053 E4	3.45
2) alpha-BHC	0.964	1.003	1.042	1.066	1.018	0.974			1.011 E5	3.90
3) gamma-BHC (L	8.480	8.797	9.116	9.350	8.947	8.638			8.888 E4	3.58
4) beta-BHC	3.717	3.642	3.887	3.967	3.879	3.754			3.808 E4	3.22
5) delta-BHC	8.035	8.203	8.767	8.791	8.553	8.284			8.439 E4	3.70
6) Heptachlor	7.407	7.568	7.848	7.913	7.422	7.043			7.533 E4	4.25
7) Aldrin	6.595	6.647	7.331	7.374	7.063	6.831			6.974 E4	4.83
8) Heptachlor E	6.238	5.976	6.398	6.318	6.305	6.053			6.215 E4	2.66
9) gamma-Chlord	5.400	5.326	5.876	6.213	5.979	5.979			5.796 E4	6.10
10) alpha-Chlord	4.359	4.540	5.372	5.863	5.867	5.824			5.304 E4	13.01
11) Endosulfan	5.067	5.032	5.462	5.489	5.314	5.091			5.242 E4	3.93
12) 4,4'-DDE	5.353	5.538	6.054	6.154	6.038	5.989			5.854 E4	5.58
13) Dieldrin	5.508	5.411	5.846	6.068	5.864	5.724			5.737 E4	4.25
14) Endrin	4.436	4.521	4.682	4.848	4.757	4.548			4.632 E4	3.38
15) 4,4'-DDD	4.257	4.214	4.595	4.726	4.420	4.375			4.431 E4	4.45
16) Endosulfan I	4.688	4.548	4.825	4.887	4.972	4.830			4.792 E4	3.16
17) Endrin Aldeh	3.324	3.232	3.732	3.793	3.724	3.653			3.576 E4	6.63
18) 4,4'-DDT	4.234	4.202	4.660	4.779	4.853	4.729			4.576 E4	6.22
19) Endosulfan S	3.793	3.791	3.984	4.158	4.049	3.879			3.942 E4	3.75
20) Methoxychlor	2.122	2.185	2.233	2.291	2.306	2.240			2.230 E4	3.06
21) Endrin Keton	4.444	4.546	4.783	4.915	4.970	4.881			4.756 E4	4.50
22) Chlordane-A							2.861		2.861 E3	0.00
23) Chlordane-B							3.683		3.683 E3	0.00
24) Chlordane-C							1.810		1.810 E3	0.00
25) Chlordane-D							8.033		8.033 E3	0.00
26) Chlordane-E							7.786		7.786 E3	0.00
27) Chlordane-F							1.752		1.752 E3	0.00
28) Toxaphene								5.941	5.941 E5	0.00
29) Decachlorobi	3.308	3.145	3.228	3.129	3.234	3.193			3.206 E4	2.05

Signal #2

1) Tetrachloro-	6.760	6.921	7.315	7.349	6.854	6.450			6.941 E4	4.94
2) alpha-BHC	8.944	9.090	9.704	9.855	9.291	8.750			9.273 E4	4.68
3) gamma-BHC (L	8.059	8.074	8.672	8.754	8.221	7.751			8.255 E4	4.69
4) beta-BHC	3.574	3.459	3.735	3.831	3.645	3.568			3.636 E4	3.64
5) delta-BHC	7.392	7.330	7.976	8.060	7.709	7.312			7.630 E4	4.38
6) Heptachlor	7.036	7.121	7.303	7.390	6.788	6.465			7.017 E4	4.89
7) Aldrin	6.276	6.403	6.733	6.821	6.318	6.161			6.452 E4	4.11
8) Heptachlor E	5.461	5.506	5.949	5.874	5.606	5.377			5.629 E4	4.12
9) gamma-Chlord	5.305	5.411	5.692	5.944	5.629	5.453			5.572 E4	4.15
10) alpha-Chlord	4.973	4.962	5.267	5.511	5.148	5.052			5.152 E4	4.08
11) Endosulfan	4.664	4.723	5.106	5.118	4.941	4.659			4.868 E4	4.41
12) 4,4'-DDE	5.211	5.186	5.571	5.750	5.692	5.364			5.462 E4	4.46
13) Dieldrin	5.105	4.999	5.413	5.493	5.374	5.217			5.267 E4	3.65
14) Endrin	3.971	4.017	4.315	4.299	4.217	4.048			4.144 E4	3.64
15) 4,4'-DDD	3.927	3.936	4.312	4.470	4.447	4.324			4.236 E4	5.76

Initial Calibration Summary

Job Number: F98198
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-Site 21

Sample: GKK1752-ICC1752
Lab FileID: KK51114.D

16)	Endosulfan I	4.041	4.059	4.366	4.351	4.263	4.158			4.206	E4	3.38
17)	Endrin Aldeh	3.153	3.173	3.246	3.320	3.248	3.177			3.220	E4	1.97
18)	4,4'-DDT	3.847	3.918	4.439	4.385	4.407	4.356			4.226	E4	6.34
19)	Endosulfan S	3.538	3.470	3.675	3.912	3.626	3.689			3.652	E4	4.18
20)	Methoxychlor	1.953	1.921	2.022	2.080	2.019	2.054			2.008	E4	3.01
21)	Endrin Keton	4.154	4.255	4.614	4.355	4.723	4.460			4.427	E4	4.87
22)	Chlordane-A							2.588		2.588	E3	0.00
23)	Chlordane-B							3.353		3.353	E3	0.00
24)	Chlordane-C							1.706		1.706	E3	0.00
25)	Chlordane-D							5.937		5.937	E3	0.00
26)	Chlordane-E							4.744		4.744	E3	0.00
27)	Chlordane-F							1.683		1.683	E3	0.00
28)	Toxaphene								5.517	5.517	E5	0.00
29)	Decachlorobi	2.968	2.892	2.898	2.881	2.795	2.860			2.882	E4	1.94

(#) = Out of Range ### Number of calibration levels exceeded format ###

8081B08.M Tue Oct 23 12:58:47 2012

6.8.1 6

Initial Calibration Verification

Job Number: F98198
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-Site 21

Sample: GKK1752-ICV1752
Lab FileID: KK51119.D

Evaluate Continuing Calibration Report

Signal #1 : C:\MSDCHEM\1\DATA\102312\KK51119.D\ECD1B.CH Vial: 10
Signal #2 : C:\MSDCHEM\1\DATA\102312\KK51119.D\ECD2A.CH
Acq On : 23 Oct 2012 12:03 pm Operator: evitam
Sample : ICV1752-40 Inst : ECD 5
Misc : op42008,gkk1752 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\MSDCHEM\1\METHODS\8081B08.M (Chemstation Integrator)
Title : Pesticides by 8081B
Last Update : Tue Oct 23 12:30:07 2012
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.20min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	S	Tetrachloro-m-xylene		----------NA----------				
2		alpha-BHC	40.000	44.493	-11.2	105	0.00	5.65- 5.85
3		gamma-BHC (Lindane)	40.000	43.314	-8.3	103	0.00	5.99- 6.19
4		beta-BHC	40.000	44.364	-10.9	106	0.00	6.20- 6.40
5		delta-BHC	40.000	42.668	-6.7	102	0.00	6.45- 6.65
6		Heptachlor	40.000	43.110	-7.8	103	0.00	6.61- 6.81
7		Aldrin	40.000	43.789	-9.5	104	0.00	6.97- 7.17
8		Heptachlor Epoxide	40.000	43.152	-7.9	106	0.00	7.44- 7.64
9		gamma-Chlordane	40.000	45.339	-13.3	106	0.00	7.73- 7.93
10		alpha-Chlordane	40.000	47.154	-17.9	107	0.00	7.82- 8.02
11		Endosulfan I	40.000	43.144	-7.9	103	0.00	7.87- 8.07
12		4,4'-DDE	40.000	43.396	-8.5	103	0.00	8.03- 8.23
13		Dieldrin	40.000	44.826	-12.1	106	0.00	8.18- 8.38
14		Endrin	40.000	46.831	-17.1	112	0.00	8.44- 8.64
15		4,4'-DDD	40.000	44.928	-12.3	105	0.00	8.63- 8.83
16		Endosulfan II	40.000	43.395	-8.5	106	0.00	8.70- 8.90
17		Endrin Aldehyde	40.000	46.863	-17.2	110	0.00	8.85- 9.05
18		4,4'-DDT	40.000	43.789	-9.5	105	0.00	9.00- 9.20
19		Endosulfan Sulfate	40.000	45.541	-13.9	108	0.00	9.13- 9.33
20		Methoxychlor	40.000	42.631	-6.6	104	0.00	9.59- 9.79
21		Endrin Ketone	40.000	40.561	-1.4	98	0.00	9.70- 9.90
22	L1	Chlordane-A		----------NA----------				
23	L1	Chlordane-B		----------NA----------				
24	L1	Chlordane-C		----------NA----------				
25	L1	Chlordane-D		----------NA----------				
26	L1	Chlordane-E		----------NA----------				
27	L1	Chlordane-F		----------NA----------				
28	H	Toxaphene		----------NA----------				
29	S	Decachlorobiphenyl		----------NA----------				

***** Signal #2 *****

1	S	Tetrachloro-m-xylene		----------NA----------				
2		alpha-BHC	40.000	44.521	-11.3	105	0.00	5.82- 6.02
3		gamma-BHC (Lindane)	40.000	42.207	-5.5	100	0.00	6.21- 6.41
4		beta-BHC	40.000	43.490	-8.7	103	0.00	6.54- 6.74
5		delta-BHC	40.000	42.641	-6.6	101	0.00	6.83- 7.03
6		Heptachlor	40.000	42.583	-6.5	101	0.00	6.62- 6.82
7		Aldrin	40.000	43.831	-9.6	104	0.00	6.97- 7.17
8		Heptachlor Epoxide	40.000	42.594	-6.5	102	0.00	7.57- 7.77
9		gamma-Chlordane	40.000	42.686	-6.7	100	0.00	7.86- 8.06

Initial Calibration □eri□ication

Job Number: F98198
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-Site 21

Sample: GKK1752-ICV1752
Lab FileID: KK51119.D

10		alpha-Chlordane	40.000	45.424	-13.6	106	0.00	7.95- 8.15
11		Endosulfan I	40.000	44.252	-10.6	105	0.00	8.02- 8.22
12		4,4'-DDE	40.000	44.823	-12.1	106	0.00	8.16- 8.36
13		Dieldrin	40.000	44.411	-11.0	106	0.00	8.35- 8.55
14		Endrin	40.000	46.785	-17.0	113	0.00	8.70- 8.90
15		4,4'-DDD	40.000	44.941	-12.4	106	0.00	8.85- 9.05
16		Endosulfan II	40.000	44.319	-10.8	107	0.00	9.05- 9.25
17		Endrin Aldehyde	40.000	44.499	-11.2	108	0.00	9.28- 9.48
18		4,4'-DDT	40.000	44.447	-11.1	107	0.00	9.17- 9.37
19		Endosulfan Sulfate	40.000	44.029	-10.1	103	0.00	9.55- 9.75
20		Methoxychlor	40.000	42.694	-6.7	103	0.00	9.89-10.09
21		Endrin Ketone	40.000	40.690	-1.7	103	0.00	10.22-10.42
22	L1	Chlordane-A		----------NA----------				
23	L1	Chlordane-B		----------NA----------				
24	L1	Chlordane-C		----------NA----------				
25	L1	Chlordane-D		----------NA----------				
26	L1	Chlordane-E		----------NA----------				
27	L1	Chlordane-F		----------NA----------				
28	H	Toxaphene		----------NA----------				
29	S	Decachlorobiphenyl		----------NA----------				

(#) = Out of Range SPCC's out = 0 CCC's out = 0
KK51114.D 8081B08.M Tue Oct 23 12:58:35 2012

6.8.2 6

Continuin□Calibration Summary

Job Number: F98198
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-Site 21

Sample: GKK1753-CC1752
Lab FileID: KK51143.D

Evaluate Continuing Calibration Report

Signal #1 : C:\MSDCHEM\1\DATA\102412\KK51143.D\ECD1B.CH Vial: 4
Signal #2 : C:\MSDCHEM\1\DATA\102412\KK51143.D\ECD2A.CH
Acq On : 24 Oct 2012 12:38 pm Operator: evitam
Sample : CC1752-20 Inst : ECD 5
Misc : op42008,gkk1753 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\MSDCHEM\1\METHODS\8081B08.M (Chemstation Integrator)
Title : Pesticides by 8081B
Last Update : Tue Oct 23 12:30:07 2012
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.20min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	S	Tetrachloro-m-xylene	20.000	19.382	3.1	94	0.00	5.18- 5.38
2		alpha-BHC	20.000	19.592	2.0	95	0.00	5.65- 5.85
3		gamma-BHC (Lindane)	20.000	19.536	2.3	95	0.00	5.99- 6.19
4		beta-BHC	20.000	19.031	4.8	93	0.00	6.20- 6.40
5		delta-BHC	20.000	18.817	5.9	91	0.00	6.45- 6.65
6		Heptachlor	20.000	19.707	1.5	95	0.00	6.61- 6.81
7		Aldrin	20.000	19.330	3.4	92	0.00	6.97- 7.17
8		Heptachlor Epoxide	20.000	19.109	4.5	93	0.00	7.44- 7.64
9		gamma-Chlordane	20.000	20.106	-0.5	99	0.00	7.73- 7.93
10		alpha-Chlordane	20.000	21.329	-6.6	105	0.00	7.82- 8.02
11		Endosulfan I	20.000	19.446	2.8	93	0.00	7.87- 8.07
12		4,4'-DDE	20.000	19.356	3.2	94	0.00	8.03- 8.23
13		Dieldrin	20.000	19.716	1.4	97	0.00	8.18- 8.38
14		Endrin	20.000	19.230	3.8	95	0.00	8.44- 8.64
15		4,4'-DDD	20.000	20.287	-1.4	98	0.00	8.63- 8.83
16		Endosulfan II	20.000	19.991	0.0	99	0.00	8.70- 8.90
17		Endrin Aldehyde	20.000	20.729	-3.6	99	0.00	8.85- 9.05
18		4,4'-DDT	20.000	11.149	44.3#	55	0.00	9.00- 9.20
19		Endosulfan Sulfate	20.000	19.795	1.0	98	0.00	9.13- 9.33
20		Methoxychlor	20.000	19.515	2.4	97	0.00	9.59- 9.79
21		Endrin Ketone	20.000	19.825	0.9	99	0.00	9.70- 9.90
22	L1	Chlordane-A		----------NA----------				
23	L1	Chlordane-B		----------NA----------				
24	L1	Chlordane-C		----------NA----------				
25	L1	Chlordane-D		----------NA----------				
26	L1	Chlordane-E		----------NA----------				
27	L1	Chlordane-F		----------NA----------				
28	H	Toxaphene		----------NA----------				
29	S	Decachlorobiphenyl	20.000	18.616	6.9	92	0.00	11.35-11.55

***** Signal #2 *****

1	S	Tetrachloro-m-xylene	20.000	21.563	-7.8	102	0.00	5.21- 5.41
2		alpha-BHC	20.000	20.689	-3.4	99	0.00	5.82- 6.02
3		gamma-BHC (Lindane)	20.000	21.223	-6.1	101	0.00	6.21- 6.41
4		beta-BHC	20.000	21.543	-7.7	105	0.00	6.54- 6.74
5		delta-BHC	20.000	21.959	-9.8	105	0.00	6.83- 7.03
6		Heptachlor	20.000	22.003	-10.0	106	0.00	6.62- 6.82
7		Aldrin	20.000	22.621	-13.1	108	0.00	6.97- 7.17
8		Heptachlor Epoxide	20.000	22.591	-13.0	107	0.00	7.57- 7.77
9		gamma-Chlordane	20.000	22.127	-10.6	108	0.00	7.86- 8.06

Continuin□Calibration Summary

Job Number: F98198
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-Site 21

Sample: GKK1753-CC1752
Lab FileID: KK51143.D

10		alpha-Chlordane	20.000	22.595	-13.0	111	0.00	7.95- 8.15
11		Endosulfan I	20.000	21.781	-8.9	104	0.00	8.02- 8.22
12		4,4'-DDE	20.000	22.416	-12.1	110	0.00	8.16- 8.36
13		Dieldrin	20.000	21.306	-6.5	104	0.00	8.35- 8.55
14		Endrin	20.000	20.850	-4.3	100	0.00	8.70- 8.90
15		4,4'-DDD	20.000	21.743	-8.7	107	0.00	8.85- 9.05
16		Endosulfan II	20.000	20.441	-2.2	98	0.00	9.05- 9.25
17		Endrin Aldehyde	20.000	22.319	-11.6	111	0.00	9.28- 9.48
18		4,4'-DDT	20.000	21.419	-7.1	102	0.00	9.17- 9.37
19		Endosulfan Sulfate	20.000	21.765	-8.8	108	0.00	9.55- 9.75
20		Methoxychlor	20.000	20.268	-1.3	101	0.00	9.89-10.09
21		Endrin Ketone	20.000	19.972	0.1	96	0.00	10.22-10.42
22	L1	Chlordane-A		----------NA----------				
23	L1	Chlordane-B		----------NA----------				
24	L1	Chlordane-C		----------NA----------				
25	L1	Chlordane-D		----------NA----------				
26	L1	Chlordane-E		----------NA----------				
27	L1	Chlordane-F		----------NA----------				
28	H	Toxaphene		----------NA----------				
29	S	Decachlorobiphenyl	20.000	20.364	-1.8	101	0.00	11.59-11.79

(#) = Out of Range SPCC's out = 0 CCC's out = 0
KK51113.D 8081B08.M Thu Oct 25 08:13:10 2012

6.8.3 6

Continuin□Calibration Summary

Job Number: F98198
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-Site 21

Sample: GKK1753-CC1752
Lab FileID: KK51144.D

Evaluate Continuing Calibration Report

Signal #1 : C:\MSDCHEM\1\DATA\102412\KK51144.D\ECD1B.CH Vial: 5
Signal #2 : C:\MSDCHEM\1\DATA\102412\KK51144.D\ECD2A.CH
Acq On : 24 Oct 2012 12:56 pm Operator: evitam
Sample : CC1752-200 Inst : ECD 5
Misc : op42008,gkk1753 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\MSDCHEM\1\METHODS\8081B08.M (Chemstation Integrator)
Title : Pesticides by 8081B
Last Update : Tue Oct 23 12:30:07 2012
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.20min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	S	Tetrachloro-m-xylene	-1.000	19.104	0.0	88	0.00	5.18- 5.38
2		alpha-BHC		----------NA----------				
3		gamma-BHC (Lindane)		----------NA----------				
4		beta-BHC		----------NA----------				
5		delta-BHC		----------NA----------				
6		Heptachlor		----------NA----------				
7		Aldrin		----------NA----------				
8		Heptachlor Epoxide		----------NA----------				
9		gamma-Chlordane		----------NA----------				
10		alpha-Chlordane		----------NA----------				
11		Endosulfan I		----------NA----------				
12		4,4'-DDE		----------NA----------				
13		Dieldrin		----------NA----------				
14		Endrin		----------NA----------				
15		4,4'-DDD		----------NA----------				
16		Endosulfan II		----------NA----------				
17		Endrin Aldehyde		----------NA----------				
18		4,4'-DDT		----------NA----------				
19		Endosulfan Sulfate		----------NA----------				
20		Methoxychlor		----------NA----------				
21		Endrin Ketone		----------NA----------				
22	L1	Chlordane-A	200.000	173.298	13.4	87	0.00	6.38- 6.58
23	L1	Chlordane-B	200.000	177.420	11.3	89	0.00	6.61- 6.81
24	L1	Chlordane-C	200.000	168.329	15.8	84	0.00	6.94- 7.14
25	L1	Chlordane-D	200.000	174.651	12.7	87	0.00	7.73- 7.93
26	L1	Chlordane-E	200.000	174.698	12.7	87	0.00	7.82- 8.02
27	L1	Chlordane-F	200.000	173.305	13.3	87	0.00	8.79- 8.99
28	H	Toxaphene		----------NA----------				
29	S	Decachlorobiphenyl	-1.000	18.676	0.0	86	0.00	11.35-11.55

***** Signal #2 *****

1	S	Tetrachloro-m-xylene	-1.000	23.129	0.0	98	0.00	5.21- 5.41
2		alpha-BHC		----------NA----------				
3		gamma-BHC (Lindane)		----------NA----------				
4		beta-BHC		----------NA----------				
5		delta-BHC		----------NA----------				
6		Heptachlor		----------NA----------				
7		Aldrin		----------NA----------				
8		Heptachlor Epoxide		----------NA----------				
9		gamma-Chlordane		----------NA----------				

Continuin□Calibration Summary

Job Number: F98198
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-Site 21

Sample: GKK1753-CC1752
Lab FileID: KK51144.D

10		alpha-Chlordane			----------NA----------			
11		Endosulfan I			----------NA----------			
12		4,4'-DDE			----------NA----------			
13		Dieldrin			----------NA----------			
14		Endrin			----------NA----------			
15		4,4'-DDD			----------NA----------			
16		Endosulfan II			----------NA----------			
17		Endrin Aldehyde			----------NA----------			
18		4,4'-DDT			----------NA----------			
19		Endosulfan Sulfate			----------NA----------			
20		Methoxychlor			----------NA----------			
21		Endrin Ketone			----------NA----------			
22	L1	Chlordane-A	200.000	202.096	-1.0	101	-0.02	6.43- 6.63
23	L1	Chlordane-B	200.000	194.595	2.7	97	-0.02	6.64- 6.84
24	L1	Chlordane-C	200.000	197.500	1.3	99	-0.02	7.11- 7.31
25	L1	Chlordane-D	200.000	201.233	-0.6	101	-0.02	7.88- 8.08
26	L1	Chlordane-E	200.000	216.227	-8.1	108	-0.02	7.96- 8.16
27	L1	Chlordane-F	200.000	189.581	5.2	95	-0.02	9.08- 9.28
28	H	Toxaphene			----------NA----------			
29	S	Decachlorobiphenyl	-1.000	20.827	0.0	95	0.00	11.59-11.79

(#) = Out of Range SPCC's out = 0 CCC's out = 0
KK51117.D 8081B08.M Thu Oct 25 08:13:25 2012

6.8.4 6

Continuin□Calibration Summary

Job Number: F98198
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-Site 21

Sample: GKK1753-CC1752
Lab FileID: KK51145.D

Evaluate Continuing Calibration Report

Signal #1 : C:\MSDCHEM\1\DATA\102412\KK51145.D\ECD1B.CH Vial: 6
Signal #2 : C:\MSDCHEM\1\DATA\102412\KK51145.D\ECD2A.CH
Acq On : 10-24-2012 01:14:13 PM Operator: evitam
Sample : CC1752-500 Inst : ECD 5
Misc : op42008,gkk1753 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\MSDCHEM\1\METHODS\8081B08.M (Chemstation Integrator)
Title : Pesticides by 8081B
Last Update : Tue Oct 23 12:30:07 2012
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.20min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	S	Tetrachloro-m-xylene	-1.000	43.072	0.0	91	0.00	5.18- 5.38
2		alpha-BHC		----------NA----------				
3		gamma-BHC (Lindane)		----------NA----------				
4		beta-BHC		----------NA----------				
5		delta-BHC		----------NA----------				
6		Heptachlor		----------NA----------				
7		Aldrin		----------NA----------				
8		Heptachlor Epoxide		----------NA----------				
9		gamma-Chlordane		----------NA----------				
10		alpha-Chlordane		----------NA----------				
11		Endosulfan I		----------NA----------				
12		4,4'-DDE		----------NA----------				
13		Dieldrin		----------NA----------				
14		Endrin		----------NA----------				
15		4,4'-DDD		----------NA----------				
16		Endosulfan II		----------NA----------				
17		Endrin Aldehyde		----------NA----------				
18		4,4'-DDT		----------NA----------				
19		Endosulfan Sulfate		----------NA----------				
20		Methoxychlor		----------NA----------				
21		Endrin Ketone		----------NA----------				
22	L1	Chlordane-A		----------NA----------				
23	L1	Chlordane-B		----------NA----------				
24	L1	Chlordane-C		----------NA----------				
25	L1	Chlordane-D		----------NA----------				
26	L1	Chlordane-E		----------NA----------				
27	L1	Chlordane-F		----------NA----------				
28	H	Toxaphene	500.000	414.264	17.1	83	-0.19	7.16-10.95
29	S	Decachlorobiphenyl	-1.000	42.771	0.0	89	0.00	11.35-11.55

***** Signal #2 *****

1	S	Tetrachloro-m-xylene	-1.000	47.482	0.0	99	0.00	5.21- 5.41
2		alpha-BHC		----------NA----------				
3		gamma-BHC (Lindane)		----------NA----------				
4		beta-BHC		----------NA----------				
5		delta-BHC		----------NA----------				
6		Heptachlor		----------NA----------				
7		Aldrin		----------NA----------				
8		Heptachlor Epoxide		----------NA----------				
9		gamma-Chlordane		----------NA----------				

Continuin□Calibration Summary

Job Number: F98198
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-Site 21

Sample: GKK1753-CC1752
Lab FileID: KK51145.D

10		alpha-Chlordane		----------NA----------				
11		Endosulfan I		----------NA----------				
12		4,4'-DDE		----------NA----------				
13		Dieldrin		----------NA----------				
14		Endrin		----------NA----------				
15		4,4'-DDD		----------NA----------				
16		Endosulfan II		----------NA----------				
17		Endrin Aldehyde		----------NA----------				
18		4,4'-DDT		----------NA----------				
19		Endosulfan Sulfate		----------NA----------				
20		Methoxychlor		----------NA----------				
21		Endrin Ketone		----------NA----------				
22	L1	Chlordane-A		----------NA----------				
23	L1	Chlordane-B		----------NA----------				
24	L1	Chlordane-C		----------NA----------				
25	L1	Chlordane-D		----------NA----------				
26	L1	Chlordane-E		----------NA----------				
27	L1	Chlordane-F		----------NA----------				
28	H	Toxaphene	500.000	454.536	9.1	91	0.19	7.00-10.73
29	S	Decachlorobiphenyl	-1.000	44.547	0.0	95	0.00	11.59-11.79

(#) = Out of Range SPCC's out = 0 CCC's out = 0
KK51118.D 8081B08.M Thu Oct 25 08:13:39 2012

6.8.5

Continuin□Calibration Summary

Job Number: F98198
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-Site 21

Sample: GKK1753-CC1752
Lab FileID: KK51156.D

Evaluate Continuing Calibration Report

Signal #1 : C:\MSDCHEM\1\DATA\102412\KK51156.D\ECD1B.CH Vial: 17
Signal #2 : C:\MSDCHEM\1\DATA\102412\KK51156.D\ECD2A.CH
Acq On : 10-24-2012 04:47:02 PM Operator: evitam
Sample : CC1752-40 Inst : ECD 5
Misc : op44137,gkk1753,1050,,,10,,WATER Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\MSDCHEM\1\METHODS\8081B08.M (Chemstation Integrator)
Title : Pesticides by 8081B
Last Update : Tue Oct 23 12:30:07 2012
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.20min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	S	Tetrachloro-m-xylene	40.000	36.817	8.0	88	0.00	5.18- 5.38
2		alpha-BHC	40.000	36.917	7.7	88	0.00	5.65- 5.85
3		gamma-BHC (Lindane)	40.000	36.794	8.0	87	0.00	5.99- 6.19
4		beta-BHC	40.000	35.936	10.2	86	0.00	6.20- 6.40
5		delta-BHC	40.000	35.186	12.0	84	0.00	6.45- 6.65
6		Heptachlor	40.000	36.571	8.6	87	0.00	6.61- 6.81
7		Aldrin	40.000	36.806	8.0	87	0.00	6.97- 7.17
8		Heptachlor Epoxide	40.000	35.721	10.7	88	0.00	7.44- 7.64
9		gamma-Chlordane	40.000	38.418	4.0	90	0.00	7.73- 7.93
10		alpha-Chlordane	40.000	40.006	-0.0	90	0.00	7.82- 8.02
11		Endosulfan I	40.000	36.992	7.5	88	0.00	7.87- 8.07
12		4,4'-DDE	40.000	35.763	10.6	85	0.00	8.03- 8.23
13		Dieldrin	40.000	37.139	7.2	88	0.00	8.18- 8.38
14		Endrin	40.000	32.853	17.9	78	0.00	8.44- 8.64
15		4,4'-DDD	40.000	36.832	7.9	86	0.00	8.63- 8.83
16		Endosulfan II	40.000	36.517	8.7	90	0.00	8.70- 8.90
17		Endrin Aldehyde	40.000	39.998	0.0	94	0.00	8.85- 9.05
18		4,4'-DDT	40.000	35.276	11.8	84	0.00	9.00- 9.20
19		Endosulfan Sulfate	40.000	38.521	3.7	91	0.00	9.13- 9.33
20		Methoxychlor	40.000	34.327	14.2	84	0.00	9.59- 9.79
21		Endrin Ketone	40.000	37.082	7.3	90	0.00	9.70- 9.90
22	L1	Chlordane-A		----------NA----------				
23	L1	Chlordane-B		----------NA----------				
24	L1	Chlordane-C		----------NA----------				
25	L1	Chlordane-D		----------NA----------				
26	L1	Chlordane-E		----------NA----------				
27	L1	Chlordane-F		----------NA----------				
28	H	Toxaphene		----------NA----------				
29	S	Decachlorobiphenyl	40.000	36.893	7.8	95	0.00	11.35-11.55

***** Signal #2 *****

1	S	Tetrachloro-m-xylene	40.000	43.781	-9.5	103	0.00	5.21- 5.41
2		alpha-BHC	40.000	43.668	-9.2	103	0.00	5.82- 6.02
3		gamma-BHC (Lindane)	40.000	42.438	-6.1	100	0.00	6.21- 6.41
4		beta-BHC	40.000	41.405	-3.5	98	0.00	6.54- 6.74
5		delta-BHC	40.000	42.216	-5.5	100	0.00	6.83- 7.03
6		Heptachlor	40.000	40.910	-2.3	97	0.00	6.62- 6.82
7		Aldrin	40.000	44.351	-10.9	105	0.00	6.97- 7.17
8		Heptachlor Epoxide	40.000	44.049	-10.1	106	0.00	7.57- 7.77
9		gamma-Chlordane	40.000	42.270	-5.7	99	0.00	7.86- 8.06

Continuin□Calibration Summary

Job Number: F98198
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-Site 21

Sample: GKK1753-CC1752
Lab FileID: KK51156.D

10		alpha-Chlordane	40.000	44.883	-12.2	105	0.00	7.95- 8.15
11		Endosulfan I	40.000	44.564	-11.4	106	0.00	8.02- 8.22
12		4,4'-DDE	40.000	43.756	-9.4	104	0.00	8.16- 8.36
13		Dieldrin	40.000	44.960	-12.4	108	0.00	8.35- 8.55
14		Endrin	40.000	40.831	-2.1	98	0.00	8.70- 8.90
15		4,4'-DDD	40.000	43.192	-8.0	102	0.00	8.85- 9.05
16		Endosulfan II	40.000	44.791	-12.0	108	0.00	9.05- 9.25
17		Endrin Aldehyde	40.000	45.537	-13.8	110	0.00	9.28- 9.48
18		4,4'-DDT	40.000	42.890	-7.2	103	0.00	9.17- 9.37
19		Endosulfan Sulfate	40.000	43.055	-7.6	100	0.00	9.55- 9.75
20		Methoxychlor	40.000	41.091	-2.7	99	0.00	9.89-10.09
21		Endrin Ketone	40.000	42.310	-5.8	108	0.00	10.22-10.42
22	L1	Chlordane-A		----------NA----------				
23	L1	Chlordane-B		----------NA----------				
24	L1	Chlordane-C		----------NA----------				
25	L1	Chlordane-D		----------NA----------				
26	L1	Chlordane-E		----------NA----------				
27	L1	Chlordane-F		----------NA----------				
28	H	Toxaphene		----------NA----------				
29	S	Decachlorobiphenyl	40.000	43.332	-8.3	108	0.00	11.59-11.79

(#) = Out of Range SPCC's out = 0 CCC's out = 0
KK51114.D 8081B08.M Thu Oct 25 08:12:52 2012

6.8.6

Continuin□Calibration Summary

Job Number: F98198
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-Site 21

Sample: GKK1753-ECC1752
Lab FileID: KK51160.D

Evaluate Continuing Calibration Report

Signal #1 : C:\MSDCHEM\1\DATA\102412\KK51160.D\ECD1B.CH Vial: 21
Signal #2 : C:\MSDCHEM\1\DATA\102412\KK51160.D\ECD2A.CH
Acq On : 10-24-2012 05:59:49 PM Operator: evitam
Sample : ECC1752-40 Inst : ECD 5
Misc : op44137,gkk1753,1050,,,10,,WATER Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\MSDCHEM\1\METHODS\8081B08.M (Chemstation Integrator)
Title : Pesticides by 8081B
Last Update : Tue Oct 23 12:30:07 2012
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.20min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	S	Tetrachloro-m-xylene	40.000	37.173	7.1	89	0.00	5.18- 5.38
2		alpha-BHC	40.000	37.029	7.4	88	0.00	5.65- 5.85
3		gamma-BHC (Lindane)	40.000	36.587	8.5	87	0.00	5.99- 6.19
4		beta-BHC	40.000	36.513	8.7	88	0.00	6.20- 6.40
5		delta-BHC	40.000	34.227	14.4	82	0.00	6.45- 6.65
6		Heptachlor	40.000	36.098	9.8	86	0.00	6.61- 6.81
7		Aldrin	40.000	35.939	10.2	85	0.00	6.97- 7.17
8		Heptachlor Epoxide	40.000	34.916	12.7	86	0.00	7.44- 7.64
9		gamma-Chlordane	40.000	37.015	7.5	86	0.00	7.73- 7.93
10		alpha-Chlordane	40.000	38.934	2.7	88	0.00	7.82- 8.02
11		Endosulfan I	40.000	36.076	9.8	86	0.00	7.87- 8.07
12		4,4'-DDE	40.000	34.082	14.8	81	0.00	8.03- 8.23
13		Dieldrin	40.000	35.309	11.7	83	0.00	8.18- 8.38
14		Endrin	40.000	31.731	20.7#	76	0.00	8.44- 8.64
15		4,4'-DDD	40.000	36.275	9.3	85	0.00	8.63- 8.83
16		Endosulfan II	40.000	34.924	12.7	86	0.00	8.70- 8.90
17		Endrin Aldehyde	40.000	39.559	1.1	93	0.00	8.85- 9.05
18		4,4'-DDT	40.000	34.065	14.8	82	0.00	9.00- 9.20
19		Endosulfan Sulfate	40.000	36.141	9.6	86	0.00	9.13- 9.33
20		Methoxychlor	40.000	33.244	16.9	81	0.00	9.59- 9.79
21		Endrin Ketone	40.000	36.136	9.7	87	0.00	9.70- 9.90
22	L1	Chlordane-A		----------NA----------				
23	L1	Chlordane-B		----------NA----------				
24	L1	Chlordane-C		----------NA----------				
25	L1	Chlordane-D		----------NA----------				
26	L1	Chlordane-E		----------NA----------				
27	L1	Chlordane-F		----------NA----------				
28	H	Toxaphene		----------NA----------				
29	S	Decachlorobiphenyl	40.000	37.670	5.8	97	0.00	11.35-11.55

***** Signal #2 *****

1	S	Tetrachloro-m-xylene	40.000	44.131	-10.3	104	0.00	5.21- 5.41
2		alpha-BHC	40.000	44.622	-11.6	105	0.00	5.82- 6.02
3		gamma-BHC (Lindane)	40.000	43.989	-10.0	104	0.00	6.21- 6.41
4		beta-BHC	40.000	44.285	-10.7	105	0.00	6.54- 6.74
5		delta-BHC	40.000	41.816	-4.5	99	0.00	6.83- 7.03
6		Heptachlor	40.000	43.328	-8.3	103	0.00	6.62- 6.82
7		Aldrin	40.000	44.850	-12.1	106	0.00	6.97- 7.17
8		Heptachlor Epoxide	40.000	43.759	-9.4	105	0.00	7.57- 7.77
9		gamma-Chlordane	40.000	42.925	-7.3	101	0.00	7.86- 8.06

Continuin□Calibration Summary

Job Number: F98198
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-Site 21

Sample: GKK1753-ECC1752
Lab FileID: KK51160.D

10		alpha-Chlordane	40.000	45.040	-12.6	105	0.00	7.95- 8.15
11		Endosulfan I	40.000	43.121	-7.8	103	0.00	8.02- 8.22
12		4,4'-DDE	40.000	42.373	-5.9	101	0.00	8.16- 8.36
13		Dieldrin	40.000	43.879	-9.7	105	0.00	8.35- 8.55
14		Endrin	40.000	39.726	0.7	96	0.00	8.70- 8.90
15		4,4'-DDD	40.000	43.435	-8.6	103	0.00	8.85- 9.05
16		Endosulfan II	40.000	43.577	-8.9	105	0.00	9.05- 9.25
17		Endrin Aldehyde	40.000	46.798	-17.0	113	0.00	9.28- 9.48
18		4,4'-DDT	40.000	42.135	-5.3	102	0.00	9.17- 9.37
19		Endosulfan Sulfate	40.000	43.869	-9.7	102	0.00	9.55- 9.75
20		Methoxychlor	40.000	41.550	-3.9	100	0.00	9.89-10.09
21		Endrin Ketone	40.000	42.856	-7.1	109	0.00	10.22-10.42
22	L1	Chlordane-A		----------NA----------				
23	L1	Chlordane-B		----------NA----------				
24	L1	Chlordane-C		----------NA----------				
25	L1	Chlordane-D		----------NA----------				
26	L1	Chlordane-E		----------NA----------				
27	L1	Chlordane-F		----------NA----------				
28	H	Toxaphene		----------NA----------				
29	S	Decachlorobiphenyl	40.000	44.842	-12.1	112	0.00	11.59-11.79

(#) = Out of Range SPCC's out = 0 CCC's out = 0
KK51114.D 8081B08.M Thu Oct 25 08:12:53 2012

6.8.7 6

Continuin□Calibration Summary

Job Number: F98198
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-Site 21

Sample: GKK1754-CC1752
Lab FileID: KK51164.D

Evaluate Continuing Calibration Report

Signal #1 : C:\MSDCHEM\1\DATA\102512\KK51164.D\ECD1B.CH Vial: 4
Signal #2 : C:\MSDCHEM\1\DATA\102512\KK51164.D\ECD2A.CH
Acq On : 10-25-2012 09:00:15 AM Operator: evitam
Sample : CC1752-20 Inst : ECD 5
Misc : op42008,gkk1754 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\MSDCHEM\1\METHODS\8081B08.M (Chemstation Integrator)
Title : Pesticides by 8081B
Last Update : Thu Oct 25 10:51:49 2012
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.20min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	S	Tetrachloro-m-xylene	20.000	19.416	2.9	95	0.00	5.18- 5.38
2		alpha-BHC	20.000	19.158	4.2	93	0.00	5.65- 5.85
3		gamma-BHC (Lindane)	20.000	19.104	4.5	93	0.00	5.99- 6.19
4		beta-BHC	20.000	18.573	7.1	91	0.00	6.20- 6.40
5		delta-BHC	20.000	17.538	12.3	84	0.00	6.45- 6.65
6		Heptachlor	20.000	18.398	8.0	88	0.00	6.61- 6.81
7		Aldrin	20.000	18.727	6.4	89	0.00	6.97- 7.17
8		Heptachlor Epoxide	20.000	18.796	6.0	91	0.00	7.44- 7.64
9		gamma-Chlordane	20.000	19.129	4.4	94	0.00	7.73- 7.93
10		alpha-Chlordane	20.000	20.854	-4.3	103	0.00	7.82- 8.02
11		Endosulfan I	20.000	19.475	2.6	93	0.00	7.87- 8.07
12		4,4'-DDE	20.000	18.336	8.3	89	0.00	8.03- 8.23
13		Dieldrin	20.000	18.984	5.1	93	0.00	8.18- 8.38
14		Endrin	20.000	16.854	15.7	83	0.00	8.44- 8.64
15		4,4'-DDD	20.000	18.614	6.9	90	0.00	8.63- 8.83
16		Endosulfan II	20.000	18.771	6.1	93	0.00	8.70- 8.90
17		Endrin Aldehyde	20.000	20.761	-3.8	99	0.00	8.85- 9.05
18		4,4'-DDT	20.000	18.197	9.0	89	0.00	9.00- 9.20
19		Endosulfan Sulfate	20.000	19.462	2.7	96	0.00	9.13- 9.33
20		Methoxychlor	20.000	18.359	8.2	92	0.00	9.59- 9.79
21		Endrin Ketone	20.000	19.125	4.4	95	0.00	9.70- 9.90
22	L1	Chlordane-A		----------NA----------				
23	L1	Chlordane-B		----------NA----------				
24	L1	Chlordane-C		----------NA----------				
25	L1	Chlordane-D		----------NA----------				
26	L1	Chlordane-E		----------NA----------				
27	L1	Chlordane-F		----------NA----------				
28	H	Toxaphene		----------NA----------				
29	S	Decachlorobiphenyl	20.000	19.734	1.3	98	0.00	11.35-11.55

***** Signal #2 *****

1	S	Tetrachloro-m-xylene	20.000	18.755	6.2	89	0.00	5.21- 5.41
2		alpha-BHC	20.000	19.745	1.3	94	0.00	5.82- 6.02
3		gamma-BHC (Lindane)	20.000	19.365	3.2	92	0.00	6.21- 6.41
4		beta-BHC	20.000	18.738	6.3	91	0.00	6.54- 6.74
5		delta-BHC	20.000	18.703	6.5	89	0.00	6.83- 7.03
6		Heptachlor	20.000	19.095	4.5	92	0.00	6.62- 6.82
7		Aldrin	20.000	19.871	0.6	95	0.00	6.97- 7.17
8		Heptachlor Epoxide	20.000	19.792	1.0	94	0.00	7.57- 7.77
9		gamma-Chlordane	20.000	20.904	-4.5	102	0.00	7.86- 8.06

Continuin□Calibration Summary

Job Number: F98198
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-Site 21

Sample: GKK1754-CC1752
Lab FileID: KK51164.D

10		alpha-Chlordane	20.000	20.473	-2.4	100	0.00	7.95- 8.15
11		Endosulfan I	20.000	20.079	-0.4	96	0.00	8.02- 8.22
12		4,4'-DDE	20.000	20.496	-2.5	100	0.00	8.16- 8.36
13		Dieldrin	20.000	20.036	-0.2	97	0.00	8.35- 8.55
14		Endrin	20.000	18.690	6.5	90	0.00	8.70- 8.90
15		4,4'-DDD	20.000	20.116	-0.6	99	0.00	8.85- 9.05
16		Endosulfan II	20.000	20.843	-4.2	100	0.00	9.05- 9.25
17		Endrin Aldehyde	20.000	21.331	-6.7	106	0.00	9.28- 9.48
18		4,4'-DDT	20.000	19.880	0.6	95	0.00	9.17- 9.37
19		Endosulfan Sulfate	20.000	19.949	0.3	99	0.00	9.55- 9.75
20		Methoxychlor	20.000	19.389	3.1	96	0.00	9.89-10.09
21		Endrin Ketone	20.000	20.683	-3.4	99	0.00	10.22-10.42
22	L1	Chlordane-A		----------NA----------				
23	L1	Chlordane-B		----------NA----------				
24	L1	Chlordane-C		----------NA----------				
25	L1	Chlordane-D		----------NA----------				
26	L1	Chlordane-E		----------NA----------				
27	L1	Chlordane-F		----------NA----------				
28	H	Toxaphene		----------NA----------				
29	S	Decachlorobiphenyl	20.000	21.419	-7.1	107	0.00	11.59-11.79

(#) = Out of Range SPCC's out = 0 CCC's out = 0
KK51113.D 8081B08.M Thu Oct 25 10:56:38 2012

6.8.8

Continuin□Calibration Summary

Job Number: F98198
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-Site 21

Sample: GKK1754-CC1752
Lab FileID: KK51165.D

Evaluate Continuing Calibration Report

Signal #1 : C:\MSDCHEM\1\DATA\102512\KK51165.D\ECD1B.CH Vial: 5
Signal #2 : C:\MSDCHEM\1\DATA\102512\KK51165.D\ECD2A.CH
Acq On : 10-25-2012 09:18:28 AM Operator: evitam
Sample : CC1752-200 Inst : ECD 5
Misc : op42008,gkk1754 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\MSDCHEM\1\METHODS\8081B08.M (Chemstation Integrator)
Title : Pesticides by 8081B
Last Update : Thu Oct 25 10:51:49 2012
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.20min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	S	Tetrachloro-m-xylene	-1.000	19.219	0.0	88	0.00	5.18- 5.38
2		alpha-BHC		----------NA----------				
3		gamma-BHC (Lindane)		----------NA----------				
4		beta-BHC		----------NA----------				
5		delta-BHC		----------NA----------				
6		Heptachlor		----------NA----------				
7		Aldrin		----------NA----------				
8		Heptachlor Epoxide		----------NA----------				
9		gamma-Chlordane		----------NA----------				
10		alpha-Chlordane		----------NA----------				
11		Endosulfan I		----------NA----------				
12		4,4'-DDE		----------NA----------				
13		Dieldrin		----------NA----------				
14		Endrin		----------NA----------				
15		4,4'-DDD		----------NA----------				
16		Endosulfan II		----------NA----------				
17		Endrin Aldehyde		----------NA----------				
18		4,4'-DDT		----------NA----------				
19		Endosulfan Sulfate		----------NA----------				
20		Methoxychlor		----------NA----------				
21		Endrin Ketone		----------NA----------				
22	L1	Chlordane-A	200.000	170.823	14.6	85	0.00	6.38- 6.58
23	L1	Chlordane-B	200.000	165.028	17.5	83	0.00	6.61- 6.81
24	L1	Chlordane-C	200.000	164.248	17.9	82	0.00	6.94- 7.14
25	L1	Chlordane-D	200.000	162.271	18.9	81	0.00	7.73- 7.93
26	L1	Chlordane-E	200.000	166.931	16.5	83	0.00	7.82- 8.02
27	L1	Chlordane-F	200.000	165.590	17.2	83	0.00	8.79- 8.99
28	H	Toxaphene		----------NA----------				
29	S	Decachlorobiphenyl	-1.000	19.732	0.0	91	0.00	11.35-11.55

***** Signal #2 *****

1	S	Tetrachloro-m-xylene	-1.000	20.112	0.0	85	0.00	5.21- 5.41
2		alpha-BHC		----------NA----------				
3		gamma-BHC (Lindane)		----------NA----------				
4		beta-BHC		----------NA----------				
5		delta-BHC		----------NA----------				
6		Heptachlor		----------NA----------				
7		Aldrin		----------NA----------				
8		Heptachlor Epoxide		----------NA----------				
9		gamma-Chlordane		----------NA----------				

Continuin□Calibration Summary

Job Number: F98198
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-Site 21

Sample: GKK1754-CC1752
Lab FileID: KK51165.D

10		alpha-Chlordane			----------NA----------			
11		Endosulfan I			----------NA----------			
12		4,4'-DDE			----------NA----------			
13		Dieldrin			----------NA----------			
14		Endrin			----------NA----------			
15		4,4'-DDD			----------NA----------			
16		Endosulfan II			----------NA----------			
17		Endrin Aldehyde			----------NA----------			
18		4,4'-DDT			----------NA----------			
19		Endosulfan Sulfate			----------NA----------			
20		Methoxychlor			----------NA----------			
21		Endrin Ketone			----------NA----------			
22	L1	Chlordane-A	200.000	174.532	12.7	87	-0.02	6.43- 6.63
23	L1	Chlordane-B	200.000	171.030	14.5	86	-0.02	6.64- 6.84
24	L1	Chlordane-C	200.000	174.704	12.6	87	-0.02	7.11- 7.31
25	L1	Chlordane-D	200.000	188.624	5.7	94	-0.02	7.88- 8.08
26	L1	Chlordane-E	200.000	194.425	2.8	97	-0.02	7.96- 8.16
27	L1	Chlordane-F	200.000	179.160	10.4	90	-0.02	9.08- 9.28
28	H	Toxaphene			----------NA----------			
29	S	Decachlorobiphenyl	-1.000	23.454	0.0	107	0.00	11.59-11.79

(#) = Out of Range SPCC's out = 0 CCC's out = 0
KK51117.D 8081B08.M Thu Oct 25 10:56:53 2012

6.8.9

Continuin□Calibration Summary

Job Number: F98198
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-Site 21

Sample: GKK1754-CC1752
Lab FileID: KK51166.D

Evaluate Continuing Calibration Report

Signal #1 : C:\MSDCHEM\1\DATA\102512\KK51166.D\ECD1B.CH Vial: 6
Signal #2 : C:\MSDCHEM\1\DATA\102512\KK51166.D\ECD2A.CH
Acq On : 10-25-2012 09:36:33 AM Operator: evitam
Sample : CC1752-500 Inst : ECD 5
Misc : op42008,gkk1754 Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\MSDCHEM\1\METHODS\8081B08.M (Chemstation Integrator)
Title : Pesticides by 8081B
Last Update : Thu Oct 25 10:51:49 2012
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.20min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	S	Tetrachloro-m-xylene	-1.000	43.137	0.0	91	0.00	5.18- 5.38
2		alpha-BHC		----------NA----------				
3		gamma-BHC (Lindane)		----------NA----------				
4		beta-BHC		----------NA----------				
5		delta-BHC		----------NA----------				
6		Heptachlor		----------NA----------				
7		Aldrin		----------NA----------				
8		Heptachlor Epoxide		----------NA----------				
9		gamma-Chlordane		----------NA----------				
10		alpha-Chlordane		----------NA----------				
11		Endosulfan I		----------NA----------				
12		4,4'-DDE		----------NA----------				
13		Dieldrin		----------NA----------				
14		Endrin		----------NA----------				
15		4,4'-DDD		----------NA----------				
16		Endosulfan II		----------NA----------				
17		Endrin Aldehyde		----------NA----------				
18		4,4'-DDT		----------NA----------				
19		Endosulfan Sulfate		----------NA----------				
20		Methoxychlor		----------NA----------				
21		Endrin Ketone		----------NA----------				
22	L1	Chlordane-A		----------NA----------				
23	L1	Chlordane-B		----------NA----------				
24	L1	Chlordane-C		----------NA----------				
25	L1	Chlordane-D		----------NA----------				
26	L1	Chlordane-E		----------NA----------				
27	L1	Chlordane-F		----------NA----------				
28	H	Toxaphene	500.000	459.462	8.1	92	0.00	6.82-10.97
29	S	Decachlorobiphenyl	-1.000	46.863	0.0	98	0.00	11.35-11.55

***** Signal #2 *****

1	S	Tetrachloro-m-xylene	-1.000	42.060	0.0	88	0.00	5.21- 5.41
2		alpha-BHC		----------NA----------				
3		gamma-BHC (Lindane)		----------NA----------				
4		beta-BHC		----------NA----------				
5		delta-BHC		----------NA----------				
6		Heptachlor		----------NA----------				
7		Aldrin		----------NA----------				
8		Heptachlor Epoxide		----------NA----------				
9		gamma-Chlordane		----------NA----------				

6.8.10 6

Continuin□Calibration Summary

Job Number: F98198
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-Site 21

Sample: GKK1754-CC1752
Lab FileID: KK51166.D

10		alpha-Chlordane			----------NA----------			
11		Endosulfan I			----------NA----------			
12		4,4'-DDE			----------NA----------			
13		Dieldrin			----------NA----------			
14		Endrin			----------NA----------			
15		4,4'-DDD			----------NA----------			
16		Endosulfan II			----------NA----------			
17		Endrin Aldehyde			----------NA----------			
18		4,4'-DDT			----------NA----------			
19		Endosulfan Sulfate			----------NA----------			
20		Methoxychlor			----------NA----------			
21		Endrin Ketone			----------NA----------			
22	L1	Chlordane-A			----------NA----------			
23	L1	Chlordane-B			----------NA----------			
24	L1	Chlordane-C			----------NA----------			
25	L1	Chlordane-D			----------NA----------			
26	L1	Chlordane-E			----------NA----------			
27	L1	Chlordane-F			----------NA----------			
28	H	Toxaphene	500.000	497.569	0.5	100	0.00	6.81-11.40
29	S	Decachlorobiphenyl	-1.000	52.344	0.0	112	0.00	11.59-11.79

(#) = Out of Range SPCC's out = 0 CCC's out = 0
KK51118.D 8081B08.M Thu Oct 25 10:57:05 2012

6.8.10 6

Continuin□Calibration Summary

Job Number: F98198
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-Site 21

Sample: GKK1754-ECC1752
Lab FileID: KK51169.D

Evaluate Continuing Calibration Report

Signal #1 : C:\MSDCHEM\1\DATA\102512\KK51169.D\ECD1B.CH Vial: 9
Signal #2 : C:\MSDCHEM\1\DATA\102512\KK51169.D\ECD2A.CH
Acq On : 25 Oct 2012 10:30 am Operator: evitam
Sample : ecc1752-40 Inst : ECD 5
Misc : op44137,gkk1754,1040,,,10,10,WATER Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\MSDCHEM\1\METHODS\8081B08.M (Chemstation Integrator)
Title : Pesticides by 8081B
Last Update : Thu Oct 25 10:51:49 2012
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.20min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	S	Tetrachloro-m-xylene	40.000	38.673	3.3	92	0.00	5.18- 5.38
2		alpha-BHC	40.000	38.988	2.5	92	0.00	5.65- 5.85
3		gamma-BHC (Lindane)	40.000	39.322	1.7	93	0.00	5.99- 6.19
4		beta-BHC	40.000	40.124	-0.3	96	0.00	6.20- 6.40
5		delta-BHC	40.000	40.181	-0.5	96	0.00	6.45- 6.65
6		Heptachlor	40.000	37.864	5.3	90	0.00	6.61- 6.81
7		Aldrin	40.000	40.250	-0.6	95	0.00	6.97- 7.17
8		Heptachlor Epoxide	40.000	41.822	-4.6	103	0.00	7.44- 7.64
9		gamma-Chlordane	40.000	41.318	-3.3	96	0.00	7.73- 7.93
10		alpha-Chlordane	40.000	47.993	-20.0	109	0.00	7.82- 8.02
11		Endosulfan I	40.000	42.281	-5.7	101	0.00	7.87- 8.07
12		4,4'-DDE	40.000	41.738	-4.3	99	0.00	8.03- 8.23
13		Dieldrin	40.000	42.454	-6.1	100	0.00	8.18- 8.38
14		Endrin	40.000	39.384	1.5	94	0.00	8.44- 8.64
15		4,4'-DDD	40.000	39.187	2.0	92	0.00	8.63- 8.83
16		Endosulfan II	40.000	41.412	-3.5	102	0.00	8.70- 8.90
17		Endrin Aldehyde	40.000	42.352	-5.9	100	0.00	8.85- 9.05
18		4,4'-DDT	40.000	42.442	-6.1	102	0.00	9.00- 9.20
19		Endosulfan Sulfate	40.000	43.215	-8.0	102	0.00	9.13- 9.33
20		Methoxychlor	40.000	42.243	-5.6	103	0.00	9.59- 9.79
21		Endrin Ketone	40.000	42.815	-7.0	104	0.00	9.70- 9.90
22	L1	Chlordane-A		----------NA----------				
23	L1	Chlordane-B		----------NA----------				
24	L1	Chlordane-C		----------NA----------				
25	L1	Chlordane-D		----------NA----------				
26	L1	Chlordane-E		----------NA----------				
27	L1	Chlordane-F		----------NA----------				
28	H	Toxaphene		----------NA----------				
29	S	Decachlorobiphenyl	40.000	39.695	0.8	102	0.00	11.35-11.55

***** Signal #2 *****

1	S	Tetrachloro-m-xylene	40.000	37.878	5.3	89	0.00	5.21- 5.41
2		alpha-BHC	40.000	39.482	1.3	93	0.00	5.82- 6.02
3		gamma-BHC (Lindane)	40.000	39.541	1.1	93	0.00	6.21- 6.41
4		beta-BHC	40.000	39.974	0.1	95	0.00	6.54- 6.74
5		delta-BHC	40.000	40.812	-2.0	97	0.00	6.83- 7.03
6		Heptachlor	40.000	39.769	0.6	94	0.00	6.62- 6.82
7		Aldrin	40.000	41.860	-4.6	99	0.00	6.97- 7.17
8		Heptachlor Epoxide	40.000	41.758	-4.4	100	0.00	7.57- 7.77
9		gamma-Chlordane	40.000	44.943	-12.4	105	0.00	7.86- 8.06

Continuin□Calibration Summary

Job Number: F98198
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-Site 21

Sample: GKK1754-ECC1752
Lab FileID: KK51169.D

10		alpha-Chlordane	40.000	41.983	-5.0	98	0.00	7.95- 8.15
11		Endosulfan I	40.000	43.689	-9.2	104	0.00	8.02- 8.22
12		4,4'-DDE	40.000	44.373	-10.9	105	0.00	8.16- 8.36
13		Dieldrin	40.000	45.170	-12.9	108	0.00	8.35- 8.55
14		Endrin	40.000	42.658	-6.6	103	0.00	8.70- 8.90
15		4,4'-DDD	40.000	46.062	-15.2	109	0.00	8.85- 9.05
16		Endosulfan II	40.000	43.805	-9.5	106	0.00	9.05- 9.25
17		Endrin Aldehyde	40.000	43.743	-9.4	106	0.00	9.28- 9.48
18		4,4'-DDT	40.000	44.318	-10.8	107	0.00	9.17- 9.37
19		Endosulfan Sulfate	40.000	43.838	-9.6	102	0.00	9.55- 9.75
20		Methoxychlor	40.000	43.578	-8.9	105	0.00	9.89-10.09
21		Endrin Ketone	40.000	48.781	-22.0#	124	0.00	10.22-10.42
22	L1	Chlordane-A		----------NA----------				
23	L1	Chlordane-B		----------NA----------				
24	L1	Chlordane-C		----------NA----------				
25	L1	Chlordane-D		----------NA----------				
26	L1	Chlordane-E		----------NA----------				
27	L1	Chlordane-F		----------NA----------				
28	H	Toxaphene		----------NA----------				
29	S	Decachlorobiphenyl	40.000	44.055	-10.1	110	0.00	11.59-11.79

(#) = Out of Range SPCC's out = 0 CCC's out = 0
KK51114.D 8081B08.M Thu Oct 25 10:56:23 2012

6.8.11 6

Method Blank Summary

Job Number: F98198
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-Site 21

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP44137-MB	KK51147.D	1	10/24/12	EM	10/24/12	OP44137	GKK1753

The QC reported here applies to the following samples: **Method:** SW846 8081B

F98198-1, F98198-2, F98198-3

CAS No.	Compound	Result	RL	MDL	Units	Q
12789-03-6	Chlordane	ND	0.50	0.20	ug/l	

CAS No.	Surrogate Recoveries		Limits
877-09-8	Tetrachloro-m-xylene	86%	42-127%
2051-24-3	Decachlorobiphenyl	89%	27-127%

Method Blank Summary

Job Number: F98198
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-Site 21

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP44137-MB	KK51167.D	1	10/25/12	EM	10/24/12	OP44137	GKK1754

The QC reported here applies to the following samples: Method: SW846 8081B

F98198-1, F98198-2, F98198-3

CAS No.	Compound	Result	RL	MDL	Units	Q
12789-03-6	Chlordane	ND	0.50	0.20	ug/l	

CAS No.	Surrogate Recoveries		Limits
877-09-8	Tetrachloro-m-xylene	83%	42-127%
2051-24-3	Decachlorobiphenyl	98%	27-127%

GC Identification Summary

Job Number: F98198
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-Site 21

Check Std:	GKK1753-CC1752	Injection Date:	10/24/12
Lab File ID:	KK51143.D	Injection Time:	12:38
Instrument ID:	GCKK	Method:	SW846 8081B

Sample ID:	F98198-1	Injection Date:	10/24/12
Lab File ID:	KK51148.D	Injection Time:	14:22
Client ID:	CEF-P21-GW-G3-101912		

Compound	Column	RT	StdRT	Conc	Q	Units	RPD Conc
Chlordane	1 [a]			0.33	I	ug/l	35.0
Chlordane	2			0.47	I	ug/l	
Chlordane-A	1	6.48	6.48 [b]	0.48		ug/l	
Chlordane-A	2	6.51	6.52 [b]	0.73		ug/l	
Chlordane-B	1	6.70	6.71 [b]	0.14	I	ug/l	
Chlordane-B	2	6.75	6.73 [b]	0.28	I	ug/l	
Chlordane-C	1	7.05	7.05 [b]	0.51		ug/l	
Chlordane-C	2	7.20	7.20 [b]	0.61		ug/l	
Chlordane-D	1	7.83	7.83 [b]	0.26	I	ug/l	
Chlordane-D	2	7.96	7.96 [b]	0.36	I	ug/l	
Chlordane-E	1	7.92	7.92 [b]	0.25	I	ug/l	
Chlordane-E	2	8.04	8.05 [b]	0.47	I	ug/l	
Chlordane-F	1	8.89	8.89 [b]	0.36	I	ug/l	
Chlordane-F	2	9.16	9.17 [b]	0.34	I	ug/l	

(a) Final result reported from this column.
(b) StdRT taken from init cal: GKK1752-IC1752 KK51117.D 10/23/12 11:27

GC Identification Summary

Job Number: F98198
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-Site 21

Check Std:	GKK1753-CC1752	Injection Date:	10/24/12
Lab File ID:	KK51143.D	Injection Time:	12:38
Instrument ID:	GCKK	Method:	SW846 8081B

Sample ID:	F98198-2	Injection Date:	10/24/12
Lab File ID:	KK51149.D	Injection Time:	14:40
Client ID:	CEF-P21-GW-G1-101912		

Compound	Column	RT	StdRT	Conc	Q	Units	RPD Conc
Chlordane	1 [a]			3.3		ug/l	19.2
Chlordane	2			4.0		ug/l	
Chlordane-C	1	7.05	7.05 [b]	6.0		ug/l	
Chlordane-C	2	7.20	7.20 [b]	6.9		ug/l	
Chlordane-D	1	7.83	7.83 [b]	3.4		ug/l	
Chlordane-D	2	7.99	7.96 [b]	3.3		ug/l	
Chlordane-E	1	7.92	7.92 [b]	3.1		ug/l	
Chlordane-E	2	8.04	8.05 [b]	5.1		ug/l	
Chlordane-F	1	8.89	8.89 [b]	0.79		ug/l	
Chlordane-F	2	9.16	9.17 [b]	0.81		ug/l	

(a) Final result reported from this column.
(b) StdRT taken from init cal: GKK1752-IC1752 KK51117.D 10/23/12 11:27

GC Identification Summary

Job Number: F98198
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-Site 21

Check Std:	GKK1753-CC1752	Injection Date:	10/24/12
Lab File ID:	KK51156.D	Injection Time:	16:47
Instrument ID:	GCKK	Method:	SW846 8081B

Sample ID:	F98198-3	Injection Date:	10/24/12
Lab File ID:	KK51159.D	Injection Time:	17:41
Client ID:	CEF-P21-GW-G2-101912		

Compound	Column	RT	StdRT	Conc	Q	Units	RPD Conc
Chlordane	1 [a]			0.34	I	ug/l	23.4
Chlordane	2			0.43	I	ug/l	
Chlordane-A	1	6.48	6.48 [b]	0.36	I	ug/l	
Chlordane-A	2	6.51	6.52 [b]	0.47	I	ug/l	
Chlordane-C	1	7.05	7.05 [b]	0.29	I	ug/l	
Chlordane-C	2	7.20	7.20 [b]	0.39	I	ug/l	
Chlordane-D	1	7.83	7.83 [b]	0.24	I	ug/l	
Chlordane-D	2	7.99	7.96 [b]	0.27	I	ug/l	
Chlordane-E	1	7.92	7.92 [b]	0.26	I	ug/l	
Chlordane-E	2	8.04	8.05 [b]	0.43	I	ug/l	
Chlordane-F	1	8.89	8.89 [b]	0.54		ug/l	
Chlordane-F	2	9.16	9.17 [b]	0.59		ug/l	

(a) Final result reported from this column.
(b) StdRT taken from init cal: GKK1752-IC1752 KK51117.D 10/23/12 11:27

ACCUTEST LABORATORIES SE

DATE:	[illegible]
COLUMN TYPE:	[illegible]
AMOUNT INJECTED:	2 ul
INSTRUMENT:	ECD5-KK

GC ECD5-KK ANALYSIS LOG

METHODS:	[illegible]
ACQ. METHOD:	[illegible]
PROC. METHOD:	[illegible]
CALIB. DATE:	[illegible]
RUN BATCH:	GKK 1752

ANALYST:	FEU
HEXANE LOT #:	000000 [illegible]
SIGNAL 1 BACKGROUND:	225
SIGNAL 2 BACKGROUND:	295

DATA FILE	ALS #	SAMPLE ID	SAMPLE METHOD	OP BATCH	DF	MANUALLY INTEGRATED PEAKS RATIONALE, PEAK #	COMMENTS
KK 01108	1	Check std	[illegible]	[illegible]	10		✓
KK 09		↓		↓	10		✓
KK 10		std		[illegible]	10	pdB	PASS
KK 11		[illegible]		[illegible]	[illegible]		[illegible] PASS
KK 12		↓ -5			[illegible]		
KK 13		↓ -10			[illegible]		
KK 14		[illegible]			[illegible]		
KK 15		[illegible]			[illegible]		
KK 16		[illegible]		↓	[illegible]		
KK 17		[illegible]		[illegible]	[illegible]	pdB	
KK 18		↓ [illegible]		[illegible]	10X	pdB	↓
KK 19		[illegible]		[illegible]	[illegible]		ICV PASS
KK 20		[illegible]		[illegible]	1		NO
KK 21		[illegible]		↓	1		NO
KK 22		[illegible]		[illegible]	[illegible]		[illegible]
KK 23		[illegible]		[illegible]	1X		NO
KK 24		[illegible]		↓			[illegible]
KK 25		[illegible]		[illegible]			PASS
KK 26	✓	[illegible]		[illegible]		pdB	[illegible]
KK ✓ 27	[illegible]	↓ -6	↓	↓	↓	pdB	[illegible]

Manual Integration Rationale SOP QA029: **MP** Missed Peak, **OP** Overlapping Peak, **SP** Split Peak, **PDB** Poorly Defined Baseline, **BR** Baseline Ripple, **PII** Poor Instrument Integration
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

gcecd5_kk_log.xls NF rev. 08/09

Analyst's Signature: [illegible]

ACCUTEST LABORATORIES F98198

ACCUTEST LABORATORIES SE

DATE:	10/23/12
COLUMN TYPE:	[illegible]
AMOUNT INJECTED:	2 ul
INSTRUMENT:	ECD5-KK

GC ECD5-KK ANALYSIS LOG

METHODS:	[illegible]
ACQ. METHOD:	ACE-PB15
PROC. METHOD:	8081
CALIB. DATE:	10/23/12
RUN BATCH:	GKK 17052

ANALYST:	[illegible]
HEXANE LOT #:	[illegible]
SIGNAL 1 BACKGROUND:	325
SIGNAL 2 BACKGROUND:	292

DATA FILE	ALS #	SAMPLE ID	SAMPLE METHOD	OP BATCH	DF	MANUALLY INTEGRATED PEAKS RATIONALE, PEAK #	COMMENTS
KK 51128	21	F97922-1	8081B	OP14632	1x	pk6	[illegible]
KK 29	22	-12				pk3	[illegible]
KK 30	23	-13				pk4	[illegible]
KK 31	24	-14				pk3	[illegible]
KK 32	25	CCV5ug		SP8556	1x/1x		PASS
KK 33	26	CCB		—	1x		ND
KK 34	27	F97889		OP14632		pk6	[illegible]
KK 35	28	-8				pk3	[illegible]
KK 36	29	-10				pk3	[illegible]
KK 37	30	-16				pk3	[illegible]
KK 38	31	CCV1.5ug		SP8556	1x/1x		[illegible]
KK							
KK							
KK							
KK							
KK						N/A 10/23/12	
KK							
KK							
KK							
KK							

Manual Integration Rationale SOP QA029: MP Missed Peak, OP Overlapping Peak, SP Split Peak, PDB Poorly Defined Baseline, BR Baseline Ripple, PII Poor Instrument Integration
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

gcecd5_kk_log.xls NF rev. 08/09

Analyst's Signature: [illegible]

ACCUTEST LABORATORIES SE

DATE: 10/24/12	
COLUMN TYPE: mn \ mn2	
AMOUNT INJECTED: 2	ul
INSTRUMENT: ECD5-KK	

GC ECD5-KK ANALYSIS LOG

METHODS: 8081 B	
ACQ. METHOD: ACQ-PB1B	
PROC. METHOD: 8081	
CALIB. DATE: 10/23/12	
RUN BATCH: GKK 1753	

ANALYST: EM	
HEXANE LOT #: 000000 3549	
SIGNAL 1 BACKGROUND: 296	
SIGNAL 2 BACKGROUND: 297	

DATA FILE	ALS #	SAMPLE ID	SAMPLE METHOD	OP BATCH	DF	MANUALLY INTEGRATED PEAKS RATIONALE, PEAK #	COMMENTS
KK 51139	1	Cond std	8081 B	S4358	10		✓
KK 40		↓			10		✓
KK 41		DDT		S4359	10		Fail
KK 42		DDT			10	pdB	PASS
KK 43		cc175-20		S4358	20/1000		ddt ↓ in first signal
KK 44		-200, chl		S4326	25X	pdB	PASS
KK 45		↓ -500, tox		S4318	10X	pdB	PASS
KK 46		Op44137-mb, EL 10/24/12		op44137	1X		✓
KK 47		↓ -mb					ND
KK 48		F98198-1				pdB	chlordane
KK 49		↓ -2				pdB	chlordane
KK 50		F98144-1					ND
KK 51		↓ -2					ND
KK 52		↓ -3				pdB	2,4 DDX for ddd, alpha BHC, beta BHC, delta BHC
KK 53		op44137-ms					✓
KK 54		↓ -msd					✓
KK 55		F98144-4		↓	↓		ddd
KK 56		cc1752-40		S4358	40/1000		PASS ✓
KK 57	↓	CCB		-	1X		
KK ↓ 58	20	F98144-5	↓	op44137	1X		ND

Manual Integration Rationale SOP QA029: MP Missed Peak, OP Overlapping Peak, SP Split Peak, PDB Poorly Defined Baseline, BR Baseline Ripple, PII Poor Instrument Integration
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gcecd5_kk_log.xls NF rev. 08/09

Analyst's Signature: E. Martinez

ACCUTEST LABORATORIES SE

DATE:	10/24/12
COLUMN TYPE:	mx1 \ mx2
AMOUNT INJECTED:	2 ul
INSTRUMENT:	ECD5-KK

GC ECD5-KK ANALYSIS LOG

METHODS:	8081 B
ACQ. METHOD:	ACQ-P81B
PROC. METHOD:	8081
CALIB. DATE:	10/23/12
RUN BATCH:	GKK 1753

ANALYST:	EM
HEXANE LOT #:	0000000 3549
SIGNAL 1 BACKGROUND:	296
SIGNAL 2 BACKGROUND:	297

DATA FILE	ALS #	SAMPLE ID	SAMPLE METHOD	OP BATCH	DF	MANUALLY INTEGRATED PEAKS RATIONALE, PEAK #	COMMENTS
KK 51159	21	F98198-3	8081B	op44137	1	pdb	chlordane
KK ↓ 40	22	ccc1752-40	↓	SU358	40/1000		find rt ↓ in first signal
KK							
KK							
KK							
KK							
KK							
KK							
KK							
KK							
KK							
KK							
KK							
KK							
KK							
KK							
KK							
KK							
KK							

N/A

10/24/12

Manual Integration Rationale SOP QA029: **MP** Missed Peak, **OP** Overlapping Peak, **SP** Split Peak, **PDB** Poorly Defined Baseline, **BR** Baseline Ripple, **PII** Poor Instrument Integration
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

gcecd5_kk_log.xls NF rev. 08/09

Analyst's Signature: Q. Martinez

ACCUTEST LABORATORIES SE

DATE:	10/25/12
COLUMN TYPE:	mr1/mr2
AMOUNT INJECTED:	2 ul
INSTRUMENT:	ECD5-KK

GC ECD5-KK ANALYSIS LOG

METHODS:	8081 B
ACQ. METHOD:	ACQ-PB1B
PROC. METHOD:	8081
CALIB. DATE:	10/23/12
RUN BATCH:	GKK 1754

ANALYST:	EM
HEXANE LOT #:	0000003549
SIGNAL 1 BACKGROUND:	267
SIGNAL 2 BACKGROUND:	231

DATA FILE	ALS #	SAMPLE ID	SAMPLE METHOD	OP BATCH	DF	MANUALLY INTEGRATED PEAKS RATIONALE, PEAK #	COMMENTS
KK 51/61	1	Cond std	8081B	S4368	10		—
KK 62		↓		↓	10		—
KK 63		ddt		S4359	10	pdB	PASS
KK 64		CC1752-20		S4358	20/1000		
KK 65		↓ -200,chl		S4326	25X		
KK 66		↓ -500,tox		S4318	10X	pdB	↓
KK 67		OP44137-MB		OP44137	1		ND
KK 68	↓	F98144-3		↓	10		Report ddd only
KK 69	9	CC1752-40	↓	S4358	40/1000	pdB	PASS
KK							
KK							
KK							
KK							
KK							
KK							
KK							
KK							
KK							
KK							

10/25/12

Manual Integration Rationale SOP QA029: **MP** Missed Peak, **OP** Overlapping Peak, **SP** Split Peak, **PDB** Poorly Defined Baseline, **BR** Baseline Ripple, **PI** Poor Instrument Integration
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

gcecd5_kk_log.xls NF rev. 08/09

Analyst's Signature: E. Martin

ACCUTEST LABORATORIES SE

LIQUID SAMPLE PREP REPORT

Date/Time Started: 10/24/12 10:00 {mm/dd/yy 24:00}

Date/Time Finished: 10/24/12 12:30 {mm/dd/yy 24:00}

Prep Method: 3510C 3580A or Method (circle)

Analytical Method: 8081

Batch#: OP 44137 Ext. By: KC, JR, AH Conc. By: AV Vialed By: AV

Sample ID	Bottle Number	Amount Extracted (ml)	Initial pH	Adjusted pH	Surrogate Amount	Spike Amount	Final Volume (ml)	Comments
OP44137 MB	X	1000	6	N/A	0.5ml		10 ml	
OP44137 BS	X	1000	↓	↓	↓	0.5ml	↓	
F98198-1	1	1040	↓	↓	↓	↓	↓	
-2	2	1030	↓	↓	↓	↓	↓	
F98144-1	2	1050	↓	↓	↓	↓	↓	
-2	2	1050	↓	↓	↓	↓	↓	
-3	4	1040	↓	↓	↓	↓	↓	
-4	2	1050	↓	↓	↓	↓	↓	
-5	2	800	↓	↓	↓	↓	↓	
F98198-3	1	1050	↓	↓	↓	↓	↓	
F98144-3 MS	1	520	6	N/A	0.5ml	0.5ml	10 ml	
-3 MSD	1	520	↓	↓	↓	↓	↓	
DUP								

AV 10/24/12

Comments:

Surr. ID: E4250A Conc: 1000 ppb Exp. Date: 04/10/13 Inj. By: [illegible] Ver. By: JC

Spk. ID: E4223B Conc: 1000 ppb Exp. Date: 04/01/13 Inj. By: [illegible] Ver. By: JC

Initial Bath Temp (Therm ID): PR

Observed Temp °C: 40.0 Corr. Temp °C: 40.0

Exchange Bath/N-Evap Temp (Therm ID): PR6

Observed Temp °C: 55.0 Corr. Temp °C: 55.0

CH2CL2 Lot # 012544 Hexane Lot # 00000844 Na2SO4 Lot# –

Acetonitrile Lot # – Methanol Lot # – Acetone Lot# –

Syringe Filter Lot# – Reagent # – Reagent # –

Copper Lot # 11 50 50 - AV If Sulfur Cleaning is performed in Extractions (3660B)

Relinquished By: [signature] Date: 10/24/12

Accepted By: [signature] Date: 10/24/12

NF rev. 09/14/12 extwater 091412.xls

7.8.1

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