ALS Environmental
ALS Group USA, Corp
1317 South 13th Avenue
Kelso, WA 98626
T : +1 360 577 7222
F : +1 360 636 1068
www.alsglobal.com

April 17, 2019

Analytical Report for Service Request No: K1810270
Revised Service Request No: K1810270.02

Janet Knox
Pacific Groundwater Group
2377 Eastlake Ave., East
Suite 200
Seattle, WA 98102

RE: DTNA Swan Island Sediment / 2006-00115

Dear Janet,

Enclosed is the revised report for the sample(s) submitted to our laboratory October 19, 2018
For your reference, these analyses have been assigned our service request number **K1810270.**

The OC Pesticides were revised on 4/16/2019.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

We apologize for any inconvenience this may have created.

Please contact me if you have any questions. My extension is 3364. You may also contact me via email at howard.holmes@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Howard Holmes
Project Manager

REVISED
12:36 pm, Apr 17, 2019

ALS Environmental
ALS Group USA, Corp
1317 South 13th Avenue
Kelso, WA 98626
T : +1 360 577 7222
F : +1 360 636 1068
www.alsglobal.com

Table of Contents

Acronyms
Qualifiers
State Certifications, Accreditations, And Licenses
Case Narrative
Chain of Custody
Total Solids
Organochlorine Pesticides
Butyltins
Polynuclear Aromatic Hydrocarbons
Low Level Semivolatile Organic Compounds by GCMS

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated value.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.
H	The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

#	The control limit criteria is not applicable. See case narrative.
J	The result is an estimated value.
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
M	The duplicate injection precision was not met.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
S	The reported value was determined by the Method of Standard Additions (MSA).
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
+	The correlation coefficient for the MSA is less than 0.995.
Q	See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
A	A tentatively identified compound, a suspected aldol-condensation product.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
C	The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
D	The reported result is from a dilution.
E	The result is an estimated value.
J	The result is an estimated value.
N	The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
P	The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
Y	The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
Z	The chromatographic fingerprint does not resemble a petroleum product.

ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses

Agency	Web Site	Number
Alaska DEH	http://dec.alaska.gov/eh/lab/cs/csapproval.htm	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L16-58-R4
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	http://health.hawaii.gov/	-
ISO 17025	http://www.pjlabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/page/la-lab-accreditation	03016
Maine DHS	http://www.maine.gov/dhhs/	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/enforcement/oqa.html	WA005
New York - DOH	https://www.wadsworth.org/regulatory/elap	12060
North Carolina DEQ	https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/EnvironmentalLabCertification/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water-	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.
Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/anlayte is offered by that state.

Case Narrative

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

REVISED
12:36 pm, Apr 17, 2019

ALS Environmental

Client: Pacific Groundwater Group (PGG)
Project: DTNA Swan Island Sediment
Sample Matrix: Sediment

Service Request: K1810270
Date Received: 10/19/2018

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier level IV requested by the client.

Sample Receipt:

Forty three sediment samples were received for analysis at ALS Environmental on 10/19/2018. The samples were received in good condition and consistent with the accompanying chain of custody form. The samples were stored in a refrigerator at 4ºC upon receipt at the laboratory.

Semivolatiles by GC/MS:

Method 8270D, Polynuclear Aromatic Hydrocarbons 11/05/18: The results reported for the following compound in samples N1-0to30-101518 and T1-0to30-101518 may contain a slight bias: Acenaphthylene. The chromatogram indicated the presence of non-target background components. The matrix interference may have resulted in a slight high bias in the affected samples. The results were flagged with “X” to indicate the issue.

Method 8270D, Polynuclear Aromatic Hydrocarbons 11/05/18: The recoveries of all analytes in Matrix Spikes (MS/DMS) KWG1805597-1/2 were outside the control limits listed in the results summary. The limits are default values temporarily in use until sufficient data points are generated to calculate statistical control limits. Based on the method and historic data, the recoveries observed were in the range expected for this procedure. No further corrective action was taken.

Method ALS SOP, Organochlorine Pesticides by GC/MS/MS 11/26/2018: The following analyte was flagged as outside the control criterion for Continuing Calibration Verification (CCV) MS42\112618F003.D: 2,4'-DDT. In accordance with the EPA Method, 80% or more of the CCV analytes must have passed within 20% of the true value. The remaining analytes are allowed a 40% difference as per the ALS SOP. The CCV met these criteria. No further corrective action was required.

Semivoa GC:

No significant anomalies were noted with this analysis.

Approved by  Date 04/17/2019

Chain of Custody

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

CHAIN OF COUSTODY

SR# K1810270

1317 South 13th Ave., Kelso, WA 98626 | +1 360 577 7222 | +1 800 695 7222 | +1 360 636 1068 (fax)

PAGE 1 OF ____ COC# ____

PROJECT NAME	DTNA Swan Island Sediment
PROJECT NUMBER	2006-00115
PROJECT MANAGER	Janet Knox
COMPANY NAME	PGG
ADDRESS	2377 Eastlake Ave E
CITY/STATE/ZIP	Seattle WA 98102
E-MAIL ADDRESS	janet@pgwg.com
PHONE #	206 329 0141
FAX #	
SAMPLER'S SIGNATURE	[signature]

SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX	NUMBER OF CONTAINERS		Semivolatile Organics by GC/MS 625☐ 8270☐ 8270LL☒ SIM PAH☒	Volatile Organics 624☐ 8260☐	Hydrocarbons (*see below) Gas☐ 8021☐ Diesel☐ Oil☐ BTEX☐	Oil & Grease/TRPH 1664 HEM☐ 1664 SGT☐	PCBs Aroclors☐ Congeners☐	Pesticides/Herbicides 608☐ 8081☐ 8141☐ 8151☐ 1699M	Chlorophenolics - 8151M Tri☐ Tetra☐ PCP☐	Metals, Total or Dissolved (See List below)	Cyanide☐ Hex-Chrom☐	(circle) pH, Cond., Cl, SO4, PO4, F, NO2, NO3, BOD, TSS, TDS, Turb.	(circle) NH3-N, COD, TKN, TOC, DOC, NO2+NO3, T-Phos	TOX 9020☐ AOX 1650☐ 506☐	Alkalinity☐ CO3☐ HCO3☐	Dioxins/Furans 1613☐ 8290☐	Dissolved Gases RSK 175☐ Methane☐ Ethane☐ Ethene☐ CO2☐	tributyltin (ALS SOP)			REMARKS
N3-0to26-101518	10/15/18	846					X					X										X			Archive
P6-0to27-101518	↓	927																							Archive
K1-0to30-101518	↓	915																							Archive
L1-0to30-101518	↓	1010					X					X										X			✓
M1-0to30-101518	↓	1040																							Archive
N1-0to30-101518	↓	1140					X					X										X			✓
O1-0to30-101518	↓	1210																							Archive
Q1-0to30-101518	↓	1400																							Archive
S1-0to30-101518	↓	1445																							Archive
T1-0to30-101518	10/15/18	1535					X					X										X			✓

REPORT REQUIREMENTS

- ___ I. Routine Report: Method Blank, Surrogate, as required
- ___ II. Report Dup., MS, MSD as required
- ___ III. CLP Like Summary (no raw data)
- ___ IV. Data Validation Report
- ___ V. EDD

INVOICE INFORMATION

P.O. # ____

Bill To: ____

TURNAROUND REQUIREMENTS

___ 24 hr. ___ 48 hr.

___ 5 day

___ Standard (15 working days)

___ Provide FAX Results

Requested Report Date

Circle which metals are to be analyzed:

Total Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

***INDICATE STATE HYDROCARBON PROCEDURE: AK CA WI NORTHWEST OTHER: ____ (CIRCLE ONE)**

SPECIAL INSTRUCTIONS/COMMENTS:

☐ Sample Shipment contains USDA regulated soil samples (check box if applicable)

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature: [signature] Date/Time: 10/19/18 10:00	Signature: [signature] Date/Time: 10/19/18 1000	Signature: [signature] Date/Time: 10/19/18 1230	Signature: [signature] Date/Time: 10/19/18 1230
Printed Name: Matt Lyon Firm: Anchor QEA	Printed Name: B Bowman Firm: ALS	Printed Name: B Bowman Firm: ALS	Printed Name: B Bowman Firm: ALS

CHAIN OF CUSTODY

ALS

1317 South 13th Ave., Kelso, WA 98626 | +1 360 577 7222 | +1 800 695 7222 | +1 360 636 1068 (fax)

SR# K1810270

PAGE 2 OF ______ COC# ______

PROJECT NAME: DTNA Swan Island Sediment
PROJECT NUMBER: 2006-00115
PROJECT MANAGER: Janet Knox
COMPANY NAME: PGG
ADDRESS: 2377 Eastlake Ave E
CITY/STATE/ZIP: Seattle WA 98102
E-MAIL ADDRESS: janet@pgwg.com
PHONE #: 206 329 0141 FAX #:
SAMPLER'S SIGNATURE: [signature]

SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX	NUMBER OF CONTAINERS		Semivolatile Organics by GC/MS 625☐ 8270☐ 8270LL☒ SIM PAH☒	Volatile Organics 624☐ 8260☐	Hydrocarbons (*see below) Gas☐ Diesel☐ Oil☐ 8021☐ BTEX☐	Oil & Grease/TRPH 1664 HEM☐ 1664 SGT☐	PCBs Aroclors☐ Congeners☐	Pesticides/Herbicides 608☐ 8081☐ 8141☐ 8151☐ 1699M	Chlorophenolics - 8151M Tri☐ Tetra☐ PCP☐	Metals, Total or Dissolved (See List below)	Cyanide☐	Hex-Chrom☐	(circle) pH, Cond., Cl, SO4, PO4, F, NO2, NO3, BOD, TSS, TDS, Turb.	(circle) NH3-N, COD, TKN, TOC, DOC, NO2+NO3, T-Phos	TOX 9020☐ AOX 1650☐ 506☐	Alkalinity☐ CO3☐ HCO3☐	Dioxins/Furans 1613☐ 8290☐	Dissolved Gases RSK 175☐ Methane☐ Ethane☐ Ethene☐ CO2☐ Ethene☐	tributyltin (ALS SOP)			REMARKS
R1-06030-101518	10/15/18	1437		S	1		X					X											X			✓
P1-06030-101518	10/15/18	1350		S	1		X					X											X			✓
T3-06028-101618	10/16/18	1630		S	1		X					X											X			
T4-06027-101618	|	~~1630~~ 1549		S	1																					Archive
T7-06031-101618	|	1400		S	1		X					X											X			✓
T5-06026-101618	|	1513		S	1		X					X											X			✓
P3-06029-101618	|	1050		S	1		X					X											X			✓
R5-06025-101618	|	1209		S	1		X					X											X			✓
S14-06029-101618	|	1125		S	1		X					X											X			✓
P5-06026-101618	10/16/18	0916		S	1		X					X											X			✓

REPORT REQUIREMENTS

___ I. Routine Report: Method Blank, Surrogate, as required

___ II. Report Dup., MS, MSD as required

___ III. CLP Like Summary (no raw data)

___ IV. Data Validation Report

___ V. EDD

INVOICE INFORMATION

P.O. # ______

Bill To: ______

TURNAROUND REQUIREMENTS

___ 24 hr. ___ 48 hr.

___ 5 day

___ Standard (15 working days)

___ Provide FAX Results

______ Requested Report Date

Circle which metals are to be analyzed:

Total Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

***INDICATE STATE HYDROCARBON PROCEDURE: AK CA WI NORTHWEST OTHER: ______ (CIRCLE ONE)**

SPECIAL INSTRUCTIONS/COMMENTS:

☐ Sample Shipment contains USDA regulated soil samples (check box if applicable)

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature: [signature] Date/Time: 10/19/18 10:00	Signature: [signature] Date/Time: 10/19/18 1000	Signature: [signature] Date/Time: 10/19/18 1030	Signature: [signature] Date/Time: 10/19/18 1030
Printed Name: Matthew [illegible] Firm: [illegible]	Printed Name: Bowman Firm: ALV	Printed Name: Bowman Firm: ALV	Printed Name: Bowman Firm: ALV

CHAIN OF CUSTODY

SR# K1810270

1317 South 13th Ave., Kelso, WA 98626 | +1 360 577 7222 | +1 800 695 7222 | +1 360 636 1068 (fax)

PAGE ____ OF ____ COC# ____

PROJECT NAME: JTNA Swan Island Lagoon Sediment
PROJECT NUMBER: 2006-00115
PROJECT MANAGER: Janet Knox
COMPANY NAME: PGG
ADDRESS: 2377 Eastlake Ave E
CITY/STATE/ZIP: Seattle WA 98102
E-MAIL ADDRESS: Janet@Pgwg.com
PHONE #: 206-329-9141 FAX #:
SAMPLER'S SIGNATURE:

SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX	NUMBER OF CONTAINERS	Semivolatile Organics by GC/MS 625☐ 8270☐ SIM PAH☐	Volatile Organics 624☐ 8270LL☐ 8260☐ 8021☐ BTEX☐	Hydrocarbons (*see below) Gas☐ Diesel☐ Oil☐	Oil & Grease/TRPH 1664 HEM☐ 1664 SGT☐	PCBs Aroclors☐ Congeners☐	Pesticides/Herbicides 608☐ 8081☐ 8141☐ 8151☐	Chlorophenolics - 8151M Tri☐ Tetra☐ PCP☐	Metals, Total or Dissolved (See List below)	Cyanide☐ Hex-Chrom☐	(circle) pH, Cond., Cl, SO4, PO4, F, NO2, NO3, BOD, TSS, TDS, Turb.	(circle) NH3-N, COD, TKN, TOC, DOC, NO2+NO3, T-Phos	TOX 9020☐ AOX 1650☐ 506☐	Alkalinity ☐ CO3☐ HCO3☐	Dioxins/Furans 1613☐ 8290☐	Dissolved Gases RSK 175☐ CO2☐ Methane☐ Ethane☐ Ethene☐	tributyltin (ALS SOP)			REMARKS
T6-0to29-101618	10/16/18	1438		S	1																				Archive
R4-0to28-101618	"	1323		S	1																				Archive
P4-0to29-101618	"	1008		S	1																				Archive
R6-0to29-101618 MS MSD	"	1125		S	1																				~~Archive~~ Archive
R6-0to29-101618	10/16/18	1125		S	1																				Archive
S2-0to10-101718	10/17/18	1637		S	1																				Archive
T2-0to22-101718	"	1548		S	1																				Archive
M3-0to27-101718	"	1201																							Archive
K2-0to20-101718	"	1440																							archive
R3-0to33-101718	10/17/18	0928				X		X	X	X												X			✓

REPORT REQUIREMENTS

___ I. Routine Report: Method Blank, Surrogate, as required
___ II. Report Dup., MS, MSD as required
___ III. CLP Like Summary (no raw data)
___ IV. Data Validation Report
___ V. EDD

INVOICE INFORMATION

P.O. # ____
Bill To: ____

TURNAROUND REQUIREMENTS

____ 24 hr. ____ 48 hr.
____ 5 day
____ Standard (15 working days)
____ Provide FAX Results
____ Requested Report Date

Circle which metals are to be analyzed:

Total Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

*INDICATE STATE HYDROCARBON PROCEDURE: AK CA WI NORTHWEST OTHER: ____ (CIRCLE ONE)

SPECIAL INSTRUCTIONS/COMMENTS:

☐ Sample Shipment contains USDA regulated soil samples (check box if applicable)

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature:	Signature:	Signature:	Signature:
Date/Time: 10/19/18 10:00	Date/Time: 10/19/18 1000	Date/Time: 10/19/18 1030	Date/Time: 10/19/18 1030
Printed Name: Matt Lyon	Printed Name: B Bauman	Printed Name: B Bauman	Printed Name: B Bauman
Firm: Anchor QEA	Firm: AW	Firm: AW	Firm: AW

CHAIN OF CUSTODY

SR# K1810270

1317 South 13th Ave., Kelso, WA 98626 | +1 360 577 7222 | +1 800 695 7222 | +1 360 636 1068 (fax)

PAGE ____ OF ____ COC# ____

PROJECT NAME: DTNA Swan Island Lagoon Sediment
PROJECT NUMBER: 2006-00115
PROJECT MANAGER: Janet Knox
COMPANY NAME: PGG
ADDRESS: 2377 Eastlake Ave E
CITY/STATE/ZIP: Seattle, WA 98102
E-MAIL ADDRESS: Janet@Pgwg.com
PHONE #: 206-329-0141 FAX #:
SAMPLER'S SIGNATURE: [signature]

Analysis columns: NUMBER OF CONTAINERS; Semivolatile Organics by GC/MS 625☐ 8270☐ 8270LL☐ SIM PAH☐; Volatile Organics 624☐ 8260☐ 8021☐ BTEX☐; Hydrocarbons (*see below) Gas☐ Diesel☐ Oil☐; Oil & Grease/TRPH 1664 HEM☐ 1664 SGT☐; PCBs Aroclors☐ Congeners☐; Pesticides/Herbicides 608☐ 8081☐ 8141☐ 8151☐; Chlorophenolics - 8151M Tri☐ Tetra☐ PCP☐; Metals, Total or Dissolved (See List below); Cyanide☐ Hex-Chrom☐; (circle) pH, Cond., Cl, SO4, PO4, F, NO2, NO3, BOD, TSS, TDS, Turb.; (circle) NH3-N, COD, TKN, TOC, DOC, NO2+NO3, T-Phos; TOX 9020☐ AOX 1650☐; Alkalinity☐ CO3☐ HCO3☐; Dioxins/Furans 1613☐ 8290☐; Dissolved Gases RSK 175☐ Methane☐ Ethane☐ Ethene☐ CO2☐

SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX	NUMBER OF CONTAINERS	REMARKS
O3-06027-101718	10/17/18	1122		S	1	Archive
S3-06030-101718	10/17/18	1005		S	1	Archive
K3-06019-101718	10/17/18	1317		S	1	Archive
Q3-06026-101718	10/17/18	1048		S	1	Archive
I5-06032-101818	10/17/18	1617		S	1	Archive
Q2-06013-101818	10/18/18	0939		S	1	Archive
G5-06028-101818	10/18/18	1150		S	1	Archive
G4-06028-101818	|	1343		S	1	Archive
I6-06030-101818	|	1648		S	1	Archive
G7-06028-101818	10/18/18	1534		S	1	Archive

REPORT REQUIREMENTS

___ I. Routine Report: Method Blank, Surrogate, as required

___ II. Report Dup., MS, MSD as required

___ III. CLP Like Summary (no raw data)

___ IV. Data Validation Report

___ V. EDD

INVOICE INFORMATION

P.O. # ____

Bill To: ____

TURNAROUND REQUIREMENTS

___ 24 hr. ___ 48 hr.

___ 5 day

___ Standard (15 working days)

___ Provide FAX Results

Requested Report Date

Circle which metals are to be analyzed:

Total Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

***INDICATE STATE HYDROCARBON PROCEDURE: AK CA WI NORTHWEST OTHER: ____ (CIRCLE ONE)**

SPECIAL INSTRUCTIONS/COMMENTS:

☐ Sample Shipment contains USDA regulated soil samples (check box if applicable)

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature: [signature] Date/Time: 10/19/18 1000	Signature: [signature] Date/Time: 10/19/18 1000	Signature: [signature] Date/Time: 10/19/18 1030	Signature: [signature] Date/Time: 10/19/18 1030
Printed Name: Matthew Woxell Firm: Anchor EAV	Printed Name: B Bowman Firm: AW	Printed Name: B Bowman Firm: AW	Printed Name: B Bowman Firm: AW

CHAIN OF CUSTODY

SR# K1810270

1317 South 13th Ave., Kelso, WA 98626 | +1 360 577 7222 | +1 800 695 7222 | +1 360 636 1068 (fax)

PAGE _____ OF _____ COC# _____

PROJECT NAME	DTNA Swan Island Lagoon Sediment
PROJECT NUMBER	2006-00115
PROJECT MANAGER	Janet Kuck
COMPANY NAME	PGG
ADDRESS	2377 Eastlake Ave E
CITY/STATE/ZIP	Seattle WA 98102
E-MAIL ADDRESS	Janet@pgwg.com
PHONE #	206-329-0141
FAX #	
SAMPLER'S SIGNATURE	

SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX	NUMBER OF CONTAINERS	REMARKS
G3-06032-101818	10/18/18	1111		S	1	Archive
R2-06010-101818	10/18/18	0842		S	1	
I3-06030-101818	10/18/18	1035		S	1	
G6-06027-101818	10/18/18	1412		S	1	Archive

Semivolatile Organics by GC/MS 625☐ 8270☐ SIM PAH☐ 8270LL☐
Volatile Organics 624☐ 8260☐ 8021☐ BTEX☐
Hydrocarbons (*see below) Gas☐ Diesel☐ Oil☐
Oil & Grease/TRPH 1664 HEM☐ 1664 SGT☐
PCBs Aroclors☐ Congeners☐
Pesticides/Herbicides 608☐ 8081☐ 8141☐ 8151☐
Chlorophenolics - 8151M Tri☐ Tetra☐ PCP☐
Metals, Total or Dissolved (See List below)
Cyanide☐ Hex-Chrom☐
(circle) pH, Cond., Cl, SO_4, PO_4, F, NO_2, NO_3, BOD, TSS, TDS, Turb
(circle) NH_3-N, COD, TKN, TOC, DOC, NO_2+NO_3, T-Phos
TOX 9020☐ AOX 1650☐ 506☐
Alkalinity ☐ CO_3☐ HCO_3☐
Dioxins/Furans 1613☐ 8290☐
Dissolved Gases CO_2☐ RSK 175☐Methane☐Ethane☐Ethene☐

REPORT REQUIREMENTS

___ I. Routine Report: Method Blank, Surrogate, as required
___ II. Report Dup., MS, MSD as required
___ III. CLP Like Summary (no raw data)
___ IV. Data Validation Report
___ V. EDD

INVOICE INFORMATION

P.O. # _____
Bill To: _____

TURNAROUND REQUIREMENTS

___ 24 hr. ___ 48 hr.
___ 5 day
___ Standard (15 working days)
___ Provide FAX Results

Requested Report Date

Circle which metals are to be analyzed:

Total Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

*INDICATE STATE HYDROCARBON PROCEDURE: AK CA WI NORTHWEST OTHER: _____ (CIRCLE ONE)

SPECIAL INSTRUCTIONS/COMMENTS:

☐ Sample Shipment contains USDA regulated soil samples (check box if applicable)

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature	Signature	Signature	Signature
10/19/18 10:00	10/19/18 1000	10/19/18 1030	10/19/18 1030
Date/Time	Date/Time	Date/Time	Date/Time
Printed Name	Printed Name	Printed Name	Printed Name
Firm	Firm	Firm	Firm

PC HH

Cooler Receipt and Preservation Form

Client PGG Service Request K18 10270

Received: 10119118 Opened: 10119118 By: BR Unloaded: 10119118 By: BR

1. Samples were received via? *USPS* *Fed Ex* *UPS* *DHL* *PDX* (*Courier*) *Hand Delivered*
2. Samples were received in: (circle) (*Cooler*) *Box* *Envelope* *Other* _____ *NA*
3. Were custody seals on coolers? NA Y (N) If yes, how many and where? _____
   If present, were custody seals intact? Y (N) If present, were they signed and dated? Y (N)

Raw Cooler Temp	Corrected Cooler Temp	Raw Temp Blank	Corrected Temp Blank	Corr. Factor	Thermometer ID	Cooler/COC ID (NA)	Tracking Number (NA)	Filed
4.1	4.1	5.0	5.0	0.0	390			
5.7	5.8	6.0	6.1	+0.1	393			
5.7	5.6	5.9	5.8	+0.1	394			

4. Packing material: *Inserts* (*Baggies*) *Bubble Wrap* *Gel Packs* (*Wet Ice*) *Dry Ice* *Sleeves* _____
5. Were custody papers properly filled out (ink, signed, etc.)? NA (Y) N
6. Were samples received in good condition (temperature, unbroken)? *Indicate in the table below.* NA (Y) N
   If applicable, tissue samples were received: *Frozen* *Partially Thawed* *Thawed*
7. Were all sample labels complete (i.e analysis, preservation, etc.)? NA (Y) N
8. Did all sample labels and tags agree with custody papers? *Indicate major discrepancies in the table on page 2.* NA (Y) N
9. Were appropriate bottles/containers and volumes received for the tests indicated? NA (Y) N
10. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below* (NA) Y N
11. Were VOA vials received without headspace? *Indicate in the table below.* (NA) Y N
12. Was C12/Res negative? (NA) Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Out of Temp	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, & Resolutions: _____

7/25/16 *Page* ____ *of* ____

Total Solids

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Analytical Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/15/18 - 10/17/18
Sample Matrix:	Sediment	**Date Received:**	10/19/18
Analysis Method:	160.3 Modified	**Units:**	Percent
Prep Method:	None	**Basis:**	As Received

Solids, Total

Sample Name	Lab Code	Result	MRL	MDL	Dil.	Date Analyzed	Q
N3-0to26-101518	K1810270-001	**74.3**	-	-	1	11/02/18 17:15	
L1-0to30-101518	K1810270-004	**90.3**	-	-	1	10/26/18 18:21	
N1-0to30-101518	K1810270-006	**75.8**	-	-	1	10/26/18 18:21	
T1-0to30-101518	K1810270-010	**63.0**	-	-	1	10/26/18 18:21	
R1-0to30-101518	K1810270-011	**83.9**	-	-	1	10/26/18 18:21	
P1-0to30-101518	K1810270-012	**76.7**	-	-	1	10/26/18 18:21	
T3-0to28-101618	K1810270-013	**43.8**	-	-	1	10/26/18 18:21	
T7-0to31-101618	K1810270-015	**39.3**	-	-	1	10/26/18 18:21	
T5-0to26-101618	K1810270-016	**47.8**	-	-	1	10/26/18 18:21	
P3-0to29-101618	K1810270-017	**48.7**	-	-	1	10/26/18 18:21	
R5-0to25-101618	K1810270-018	**45.9**	-	-	1	10/26/18 18:21	
514-0to29-101618	K1810270-019	**40.5**	-	-	1	10/26/18 18:21	
P5-0to26-101618	K1810270-020	**35.2**	-	-	1	10/26/18 18:21	
R3-0to33-101718	K1810270-029	**36.1**	-	-	1	10/26/18 18:21	

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/15/18
Sample Matrix:	Sediment	**Date Received:**	10/19/18
		Date Analyzed:	10/26/18

Replicate Sample Summary
Inorganic Parameters

Sample Name:	L1-0to30-101518	**Units:**	Percent
Lab Code:	K1810270-004	**Basis:**	As Received

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample K1810270-004DUP Result	Average	RPD	RPD Limit
Solids, Total	160.3 Modified	-	90.3	90.2	90.3	<1	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Organochlorine Pesticides

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

REVISED
12:37 pm, Apr 17, 2019

Analytical Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/15/18 08:46
Sample Matrix:	Sediment	**Date Received:**	10/19/18 12:30
Sample Name:	N3-0to26-101518	**Units:**	ug/Kg
Lab Code:	K1810270-001	**Basis:**	Dry

Organochlorine Pesticides by GC/MS/MS

Analysis Method: ALS SOP
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4'-DDD	**0.18**	0.067	0.063	1	11/26/18 21:39	11/7/18	
2,4'-DDE	ND U	0.079	0.079	1	11/26/18 21:39	11/7/18	
2,4'-DDT	ND U	0.094	0.094	1	11/26/18 21:39	11/7/18	*
4,4'-DDD	**0.73**	0.067	0.035	1	11/26/18 21:39	11/7/18	
4,4'-DDE	**1.1**	0.070	0.070	1	11/26/18 21:39	11/7/18	
4,4'-DDT	**0.23**	0.067	0.047	1	11/26/18 21:39	11/7/18	
Aldrin	ND U	0.079	0.079	1	11/26/18 21:39	11/7/18	
alpha-Chlordane	**0.081 J**	0.13	0.062	1	11/26/18 21:39	11/7/18	
cis-Nonachlor	ND U	0.097	0.097	1	11/26/18 21:39	11/7/18	
Dieldrin	ND U	0.20	0.077	1	11/26/18 21:39	11/7/18	
gamma-BHC (Lindane)	ND U	0.067	0.031	1	11/26/18 21:39	11/7/18	
gamma-Chlordane	**0.11 J**	0.13	0.064	1	11/26/18 21:39	11/7/18	
Heptachlor	ND U	0.067	0.039	1	11/26/18 21:39	11/7/18	
Oxychlordane	ND U	0.20	0.13	1	11/26/18 21:39	11/7/18	
trans-Nonachlor	**0.093 J**	0.13	0.058	1	11/26/18 21:39	11/7/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
S_4,4'DDD-d4	76	5 - 120	11/26/18 21:39	
S_4,4'-DDT-d4	93	13 - 200	11/26/18 21:39	
S_Aldrin-13C12	53	10 - 143	11/26/18 21:39	
S_Endrin-13C12	75	20 - 157	11/26/18 21:39	
S_GBHCD6	61	5 - 124	11/26/18 21:39	
S_Heptachlor-13C10	86	10 - 177	11/26/18 21:39	
S_Heptachlrepox13C10	62	8 - 146	11/26/18 21:39	
S_Oxychlordane-13C10	60	5 - 144	11/26/18 21:39	

Analytical Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/15/18 10:10
Sample Matrix:	Sediment	**Date Received:**	10/19/18 12:30
Sample Name:	L1-0to30-101518	**Units:**	ug/Kg
Lab Code:	K1810270-004	**Basis:**	Dry

Organochlorine Pesticides by GC/MS/MS

Analysis Method: ALS SOP
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4'-DDD	**0.077**	0.063	0.063	1	11/07/18 15:52	10/29/18	
2,4'-DDE	ND U	0.079	0.079	1	11/07/18 15:52	10/29/18	
2,4'-DDT	**0.81**	0.094	0.094	1	11/07/18 15:52	10/29/18	
4,4'-DDD	**0.34**	0.055	0.035	1	11/07/18 15:52	10/29/18	
4,4'-DDE	**0.30**	0.070	0.070	1	11/07/18 15:52	10/29/18	
4,4'-DDT	**3.1**	0.055	0.047	1	11/07/18 15:52	10/29/18	
Aldrin	ND U	0.079	0.079	1	11/07/18 15:52	10/29/18	
alpha-Chlordane	**0.063 J**	0.11	0.062	1	11/07/18 15:52	10/29/18	
cis-Nonachlor	ND U	0.097	0.097	1	11/07/18 15:52	10/29/18	
Dieldrin	ND U	0.20	0.077	1	11/07/18 15:52	10/29/18	
gamma-BHC (Lindane)	ND U	0.055	0.031	1	11/07/18 15:52	10/29/18	
gamma-Chlordane	**0.090 J**	0.11	0.064	1	11/07/18 15:52	10/29/18	
Heptachlor	ND U	0.055	0.039	1	11/07/18 15:52	10/29/18	
Oxychlordane	ND U	0.20	0.13	1	11/07/18 15:52	10/29/18	
trans-Nonachlor	**0.11**	0.11	0.058	1	11/07/18 15:52	10/29/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
S_4,4'DDD-d4	68	5 - 120	11/07/18 15:52	
S_4,4'-DDT-d4	77	13 - 200	11/07/18 15:52	
S_Aldrin-13C12	54	10 - 143	11/07/18 15:52	
S_Endrin-13C12	77	20 - 157	11/07/18 15:52	
S_GBHCD6	50	5 - 124	11/07/18 15:52	
S_Heptachlor-13C10	58	10 - 177	11/07/18 15:52	
S_Heptachlrepox13C10	56	8 - 146	11/07/18 15:52	
S_Oxychlordane-13C10	55	5 - 144	11/07/18 15:52	

Analytical Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/15/18 11:40
Sample Matrix:	Sediment	**Date Received:**	10/19/18 12:30
Sample Name:	N1-0to30-101518	**Units:**	ug/Kg
Lab Code:	K1810270-006	**Basis:**	Dry

Organochlorine Pesticides by GC/MS/MS

Analysis Method: ALS SOP
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4'-DDD	ND U	0.065	0.063	1	11/07/18 16:09	10/29/18	
2,4'-DDE	ND U	0.079	0.079	1	11/07/18 16:09	10/29/18	
2,4'-DDT	ND U	0.094	0.094	1	11/07/18 16:09	10/29/18	
4,4'-DDD	ND U	0.065	0.035	1	11/07/18 16:09	10/29/18	
4,4'-DDE	ND U	0.070	0.070	1	11/07/18 16:09	10/29/18	
4,4'-DDT	ND U	0.065	0.047	1	11/07/18 16:09	10/29/18	
Aldrin	ND U	0.079	0.079	1	11/07/18 16:09	10/29/18	
alpha-Chlordane	ND U	0.13	0.062	1	11/07/18 16:09	10/29/18	
cis-Nonachlor	ND U	0.097	0.097	1	11/07/18 16:09	10/29/18	
Dieldrin	ND U	0.20	0.077	1	11/07/18 16:09	10/29/18	
gamma-BHC (Lindane)	ND U	0.065	0.031	1	11/07/18 16:09	10/29/18	
gamma-Chlordane	ND U	0.13	0.064	1	11/07/18 16:09	10/29/18	
Heptachlor	ND U	0.065	0.039	1	11/07/18 16:09	10/29/18	
Oxychlordane	ND U	0.20	0.13	1	11/07/18 16:09	10/29/18	
trans-Nonachlor	ND U	0.13	0.058	1	11/07/18 16:09	10/29/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
S_4,4'DDD-d4	71	5 - 120	11/07/18 16:09	
S_4,4'-DDT-d4	71	13 - 200	11/07/18 16:09	
S_Aldrin-13C12	46	10 - 143	11/07/18 16:09	
S_Endrin-13C12	66	20 - 157	11/07/18 16:09	
S_GBHCD6	40	5 - 124	11/07/18 16:09	
S_Heptachlor-13C10	53	10 - 177	11/07/18 16:09	
S_Heptachlrepox13C10	48	8 - 146	11/07/18 16:09	
S_Oxychlordane-13C10	48	5 - 144	11/07/18 16:09	

Analytical Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/15/18 15:35
Sample Matrix:	Sediment	**Date Received:**	10/19/18 12:30
Sample Name:	T1-0to30-101518	**Units:**	ug/Kg
Lab Code:	K1810270-010	**Basis:**	Dry

Organochlorine Pesticides by GC/MS/MS

Analysis Method: ALS SOP
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4'-DDD	ND U	0.079	0.063	1	11/07/18 16:50	10/29/18	
2,4'-DDE	ND U	0.079	0.079	1	11/07/18 16:50	10/29/18	
2,4'-DDT	ND U	0.094	0.094	1	11/07/18 16:50	10/29/18	
4,4'-DDD	**0.13**	0.079	0.035	1	11/07/18 16:50	10/29/18	
4,4'-DDE	ND U	0.079	0.070	1	11/07/18 16:50	10/29/18	
4,4'-DDT	ND U	0.079	0.047	1	11/07/18 16:50	10/29/18	
Aldrin	ND U	0.079	0.079	1	11/07/18 16:50	10/29/18	
alpha-Chlordane	ND U	0.16	0.062	1	11/07/18 16:50	10/29/18	
cis-Nonachlor	ND U	0.097	0.097	1	11/07/18 16:50	10/29/18	
Dieldrin	ND U	0.20	0.077	1	11/07/18 16:50	10/29/18	
gamma-BHC (Lindane)	ND U	0.079	0.031	1	11/07/18 16:50	10/29/18	
gamma-Chlordane	ND U	0.16	0.064	1	11/07/18 16:50	10/29/18	
Heptachlor	ND U	0.079	0.039	1	11/07/18 16:50	10/29/18	
Oxychlordane	ND U	0.20	0.13	1	11/07/18 16:50	10/29/18	
trans-Nonachlor	ND U	0.16	0.058	1	11/07/18 16:50	10/29/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
S_4,4'DDD-d4	73	5 - 120	11/07/18 16:50	
S_4,4'-DDT-d4	74	13 - 200	11/07/18 16:50	
S_Aldrin-13C12	48	10 - 143	11/07/18 16:50	
S_Endrin-13C12	72	20 - 157	11/07/18 16:50	
S_GBHCD6	45	5 - 124	11/07/18 16:50	
S_Heptachlor-13C10	55	10 - 177	11/07/18 16:50	
S_Heptachlrepox13C10	54	8 - 146	11/07/18 16:50	
S_Oxychlordane-13C10	53	5 - 144	11/07/18 16:50	

Analytical Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/15/18 14:37
Sample Matrix:	Sediment	**Date Received:**	10/19/18 12:30
Sample Name:	R1-0to30-101518	**Units:**	ug/Kg
Lab Code:	K1810270-011	**Basis:**	Dry

Organochlorine Pesticides by GC/MS/MS

Analysis Method: ALS SOP
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4'-DDD	**0.078**	0.063	0.063	1	11/07/18 17:08	10/29/18	
2,4'-DDE	ND U	0.079	0.079	1	11/07/18 17:08	10/29/18	
2,4'-DDT	ND U	0.094	0.094	1	11/07/18 17:08	10/29/18	
4,4'-DDD	**0.36**	0.059	0.035	1	11/07/18 17:08	10/29/18	
4,4'-DDE	**0.090**	0.070	0.070	1	11/07/18 17:08	10/29/18	
4,4'-DDT	ND U	0.059	0.047	1	11/07/18 17:08	10/29/18	
Aldrin	ND U	0.079	0.079	1	11/07/18 17:08	10/29/18	
alpha-Chlordane	ND U	0.12	0.062	1	11/07/18 17:08	10/29/18	
cis-Nonachlor	ND U	0.097	0.097	1	11/07/18 17:08	10/29/18	
Dieldrin	ND U	0.20	0.077	1	11/07/18 17:08	10/29/18	
gamma-BHC (Lindane)	ND U	0.059	0.031	1	11/07/18 17:08	10/29/18	
gamma-Chlordane	ND U	0.12	0.064	1	11/07/18 17:08	10/29/18	
Heptachlor	ND U	0.059	0.039	1	11/07/18 17:08	10/29/18	
Oxychlordane	ND U	0.20	0.13	1	11/07/18 17:08	10/29/18	
trans-Nonachlor	ND U	0.12	0.058	1	11/07/18 17:08	10/29/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
S_4,4'DDD-d4	75	5 - 120	11/07/18 17:08	
S_4,4'-DDT-d4	75	13 - 200	11/07/18 17:08	
S_Aldrin-13C12	50	10 - 143	11/07/18 17:08	
S_Endrin-13C12	73	20 - 157	11/07/18 17:08	
S_GBHCD6	49	5 - 124	11/07/18 17:08	
S_Heptachlor-13C10	54	10 - 177	11/07/18 17:08	
S_Heptachlrepox13C10	53	8 - 146	11/07/18 17:08	
S_Oxychlordane-13C10	51	5 - 144	11/07/18 17:08	

Analytical Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/15/18 13:50
Sample Matrix:	Sediment	**Date Received:**	10/19/18 12:30
Sample Name:	P1-0to30-101518	**Units:**	ug/Kg
Lab Code:	K1810270-012	**Basis:**	Dry

Organochlorine Pesticides by GC/MS/MS

Analysis Method: ALS SOP
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4'-DDD	**0.12**	0.064	0.063	1	11/07/18 17:26	10/29/18	
2,4'-DDE	ND U	0.079	0.079	1	11/07/18 17:26	10/29/18	
2,4'-DDT	**0.23**	0.094	0.094	1	11/07/18 17:26	10/29/18	
4,4'-DDD	**0.49**	0.064	0.035	1	11/07/18 17:26	10/29/18	
4,4'-DDE	**0.21**	0.070	0.070	1	11/07/18 17:26	10/29/18	
4,4'-DDT	**0.68**	0.064	0.047	1	11/07/18 17:26	10/29/18	
Aldrin	ND U	0.079	0.079	1	11/07/18 17:26	10/29/18	
alpha-Chlordane	ND U	0.13	0.062	1	11/07/18 17:26	10/29/18	
cis-Nonachlor	ND U	0.097	0.097	1	11/07/18 17:26	10/29/18	
Dieldrin	ND U	0.20	0.077	1	11/07/18 17:26	10/29/18	
gamma-BHC (Lindane)	ND U	0.064	0.031	1	11/07/18 17:26	10/29/18	
gamma-Chlordane	ND U	0.13	0.064	1	11/07/18 17:26	10/29/18	
Heptachlor	ND U	0.064	0.039	1	11/07/18 17:26	10/29/18	
Oxychlordane	ND U	0.20	0.13	1	11/07/18 17:26	10/29/18	
trans-Nonachlor	ND U	0.13	0.058	1	11/07/18 17:26	10/29/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
S_4,4'DDD-d4	60	5 - 120	11/07/18 17:26	
S_4,4'-DDT-d4	61	13 - 200	11/07/18 17:26	
S_Aldrin-13C12	52	10 - 143	11/07/18 17:26	
S_Endrin-13C12	70	20 - 157	11/07/18 17:26	
S_GBHCD6	54	5 - 124	11/07/18 17:26	
S_Heptachlor-13C10	63	10 - 177	11/07/18 17:26	
S_Heptachlrepox13C10	55	8 - 146	11/07/18 17:26	
S_Oxychlordane-13C10	56	5 - 144	11/07/18 17:26	

Analytical Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/16/18 16:30
Sample Matrix:	Sediment	**Date Received:**	10/19/18 12:30
Sample Name:	T3-0to28-101618	**Units:**	ug/Kg
Lab Code:	K1810270-013	**Basis:**	Dry

Organochlorine Pesticides by GC/MS/MS

Analysis Method: ALS SOP
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4'-DDD	ND U	0.11	0.072	1	11/07/18 17:43	10/29/18	
2,4'-DDE	**0.11 J**	0.11	0.090	1	11/07/18 17:43	10/29/18	
2,4'-DDT	ND U	0.11	0.11	1	11/07/18 17:43	10/29/18	
4,4'-DDD	**1.3**	0.11	0.040	1	11/07/18 17:43	10/29/18	
4,4'-DDE	**2.3**	0.11	0.079	1	11/07/18 17:43	10/29/18	
4,4'-DDT	ND U	0.11	0.054	1	11/07/18 17:43	10/29/18	
Aldrin	ND U	0.11	0.090	1	11/07/18 17:43	10/29/18	
alpha-Chlordane	**0.15 J**	0.23	0.070	1	11/07/18 17:43	10/29/18	
cis-Nonachlor	ND U	0.11	0.11	1	11/07/18 17:43	10/29/18	
Dieldrin	ND U	0.23	0.087	1	11/07/18 17:43	10/29/18	
gamma-BHC (Lindane)	ND U	0.11	0.035	1	11/07/18 17:43	10/29/18	
gamma-Chlordane	**0.21 J**	0.23	0.073	1	11/07/18 17:43	10/29/18	
Heptachlor	ND U	0.11	0.045	1	11/07/18 17:43	10/29/18	
Oxychlordane	ND U	0.23	0.15	1	11/07/18 17:43	10/29/18	
trans-Nonachlor	**0.19 J**	0.23	0.066	1	11/07/18 17:43	10/29/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
S_4,4'DDD-d4	80	5 - 120	11/07/18 17:43	
S_4,4'-DDT-d4	87	13 - 200	11/07/18 17:43	
S_Aldrin-13C12	57	10 - 143	11/07/18 17:43	
S_Endrin-13C12	82	20 - 157	11/07/18 17:43	
S_GBHCD6	53	5 - 124	11/07/18 17:43	
S_Heptachlor-13C10	66	10 - 177	11/07/18 17:43	
S_Heptachlrepox13C10	60	8 - 146	11/07/18 17:43	
S_Oxychlordane-13C10	57	5 - 144	11/07/18 17:43	

Analytical Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/16/18 14:00
Sample Matrix:	Sediment	**Date Received:**	10/19/18 12:30
Sample Name:	T7-0to31-101618	**Units:**	ug/Kg
Lab Code:	K1810270-015	**Basis:**	Dry

Organochlorine Pesticides by GC/MS/MS

Analysis Method: ALS SOP
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4'-DDD	ND U	0.13	0.080	1	11/07/18 18:01	10/29/18	
2,4'-DDE	**0.21**	0.13	0.11	1	11/07/18 18:01	10/29/18	
2,4'-DDT	ND U	0.13	0.12	1	11/07/18 18:01	10/29/18	
4,4'-DDD	**1.6**	0.13	0.045	1	11/07/18 18:01	10/29/18	
4,4'-DDE	**2.7**	0.13	0.089	1	11/07/18 18:01	10/29/18	
4,4'-DDT	ND U	0.13	0.060	1	11/07/18 18:01	10/29/18	
Aldrin	ND U	0.13	0.11	1	11/07/18 18:01	10/29/18	
alpha-Chlordane	**0.14 J**	0.25	0.079	1	11/07/18 18:01	10/29/18	
cis-Nonachlor	ND U	0.13	0.13	1	11/07/18 18:01	10/29/18	
Dieldrin	ND U	0.25	0.098	1	11/07/18 18:01	10/29/18	
gamma-BHC (Lindane)	ND U	0.13	0.040	1	11/07/18 18:01	10/29/18	
gamma-Chlordane	**0.21 J**	0.25	0.082	1	11/07/18 18:01	10/29/18	
Heptachlor	ND U	0.13	0.050	1	11/07/18 18:01	10/29/18	
Oxychlordane	ND U	0.25	0.17	1	11/07/18 18:01	10/29/18	
trans-Nonachlor	**0.18 J**	0.25	0.074	1	11/07/18 18:01	10/29/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
S_4,4'DDD-d4	77	5 - 120	11/07/18 18:01	
S_4,4'-DDT-d4	71	13 - 200	11/07/18 18:01	
S_Aldrin-13C12	56	10 - 143	11/07/18 18:01	
S_Endrin-13C12	77	20 - 157	11/07/18 18:01	
S_GBHCD6	52	5 - 124	11/07/18 18:01	
S_Heptachlor-13C10	72	10 - 177	11/07/18 18:01	
S_Heptachlrepox13C10	62	8 - 146	11/07/18 18:01	
S_Oxychlordane-13C10	58	5 - 144	11/07/18 18:01	

Analytical Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/16/18 15:13
Sample Matrix:	Sediment	**Date Received:**	10/19/18 12:30
Sample Name:	T5-0to26-101618	**Units:**	ug/Kg
Lab Code:	K1810270-016	**Basis:**	Dry

Organochlorine Pesticides by GC/MS/MS

Analysis Method: ALS SOP
Prep Method: EPA 3541

Analyte Name	Result		MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4'-DDD	ND	U	0.10	0.066	1	11/07/18 18:19	10/29/18	
2,4'-DDE	**0.25**		0.10	0.082	1	11/07/18 18:19	10/29/18	
2,4'-DDT	ND	U	0.10	0.098	1	11/07/18 18:19	10/29/18	
4,4'-DDD	**2.4**		0.10	0.037	1	11/07/18 18:19	10/29/18	
4,4'-DDE	**3.6**		0.10	0.073	1	11/07/18 18:19	10/29/18	
4,4'-DDT	ND	U	0.10	0.049	1	11/07/18 18:19	10/29/18	
Aldrin	ND	U	0.10	0.082	1	11/07/18 18:19	10/29/18	
alpha-Chlordane	**0.19**	**J**	0.21	0.065	1	11/07/18 18:19	10/29/18	
cis-Nonachlor	**0.13**		0.11	0.11	1	11/07/18 18:19	10/29/18	
Dieldrin	**0.098**	**J**	0.21	0.080	1	11/07/18 18:19	10/29/18	
gamma-BHC (Lindane)	**0.065**	**J**	0.10	0.033	1	11/07/18 18:19	10/29/18	
gamma-Chlordane	**0.35**		0.21	0.067	1	11/07/18 18:19	10/29/18	
Heptachlor	ND	U	0.10	0.041	1	11/07/18 18:19	10/29/18	
Oxychlordane	ND	U	0.21	0.14	1	11/07/18 18:19	10/29/18	
trans-Nonachlor	**0.22**		0.21	0.061	1	11/07/18 18:19	10/29/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
S_4,4'DDD-d4	62	5 - 120	11/07/18 18:19	
S_4,4'-DDT-d4	60	13 - 200	11/07/18 18:19	
S_Aldrin-13C12	50	10 - 143	11/07/18 18:19	
S_Endrin-13C12	64	20 - 157	11/07/18 18:19	
S_GBHCD6	47	5 - 124	11/07/18 18:19	
S_Heptachlor-13C10	61	10 - 177	11/07/18 18:19	
S_Heptachlrepox13C10	50	8 - 146	11/07/18 18:19	
S_Oxychlordane-13C10	47	5 - 144	11/07/18 18:19	

Analytical Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/16/18 10:50
Sample Matrix:	Sediment	**Date Received:**	10/19/18 12:30
Sample Name:	P3-0to29-101618	**Units:**	ug/Kg
Lab Code:	K1810270-017	**Basis:**	Dry

Organochlorine Pesticides by GC/MS/MS

Analysis Method: ALS SOP
Prep Method: EPA 3541

Analyte Name	Result		MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4'-DDD	ND	U	0.10	0.064	1	11/07/18 18:36	10/29/18	
2,4'-DDE	**0.12**		0.10	0.081	1	11/07/18 18:36	10/29/18	
2,4'-DDT	ND	U	0.10	0.096	1	11/07/18 18:36	10/29/18	
4,4'-DDD	**1.4**		0.10	0.036	1	11/07/18 18:36	10/29/18	
4,4'-DDE	**2.3**		0.10	0.072	1	11/07/18 18:36	10/29/18	
4,4'-DDT	ND	U	0.10	0.048	1	11/07/18 18:36	10/29/18	
Aldrin	ND	U	0.10	0.081	1	11/07/18 18:36	10/29/18	
alpha-Chlordane	**0.14**	**J**	0.20	0.063	1	11/07/18 18:36	10/29/18	
cis-Nonachlor	ND	U	0.10	0.099	1	11/07/18 18:36	10/29/18	
Dieldrin	ND	U	0.20	0.079	1	11/07/18 18:36	10/29/18	
gamma-BHC (Lindane)	ND	U	0.10	0.032	1	11/07/18 18:36	10/29/18	
gamma-Chlordane	**0.19**	**J**	0.20	0.065	1	11/07/18 18:36	10/29/18	
Heptachlor	ND	U	0.10	0.040	1	11/07/18 18:36	10/29/18	
Oxychlordane	ND	U	0.20	0.14	1	11/07/18 18:36	10/29/18	
trans-Nonachlor	**0.18**	**J**	0.20	0.059	1	11/07/18 18:36	10/29/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
S_4,4'DDD-d4	62	5 - 120	11/07/18 18:36	
S_4,4'-DDT-d4	62	13 - 200	11/07/18 18:36	
S_Aldrin-13C12	49	10 - 143	11/07/18 18:36	
S_Endrin-13C12	67	20 - 157	11/07/18 18:36	
S_GBHCD6	50	5 - 124	11/07/18 18:36	
S_Heptachlor-13C10	62	10 - 177	11/07/18 18:36	
S_Heptachlrepox13C10	51	8 - 146	11/07/18 18:36	
S_Oxychlordane-13C10	50	5 - 144	11/07/18 18:36	

Analytical Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/16/18 12:09
Sample Matrix:	Sediment	**Date Received:**	10/19/18 12:30
Sample Name:	R5-0to25-101618	**Units:**	ug/Kg
Lab Code:	K1810270-018	**Basis:**	Dry

Organochlorine Pesticides by GC/MS/MS

Analysis Method: ALS SOP
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4'-DDD	ND U	0.11	0.068	1	11/07/18 18:54	10/29/18	
2,4'-DDE	**0.19**	0.11	0.085	1	11/07/18 18:54	10/29/18	
2,4'-DDT	ND U	0.11	0.11	1	11/07/18 18:54	10/29/18	
4,4'-DDD	**1.8**	0.11	0.038	1	11/07/18 18:54	10/29/18	
4,4'-DDE	**3.4**	0.11	0.076	1	11/07/18 18:54	10/29/18	
4,4'-DDT	**0.73**	0.11	0.051	1	11/07/18 18:54	10/29/18	
Aldrin	ND U	0.11	0.085	1	11/07/18 18:54	10/29/18	
alpha-Chlordane	**0.17 J**	0.21	0.067	1	11/07/18 18:54	10/29/18	
cis-Nonachlor	ND U	0.11	0.11	1	11/07/18 18:54	10/29/18	
Dieldrin	**0.084 J**	0.21	0.083	1	11/07/18 18:54	10/29/18	
gamma-BHC (Lindane)	ND U	0.11	0.034	1	11/07/18 18:54	10/29/18	
gamma-Chlordane	**0.29**	0.21	0.069	1	11/07/18 18:54	10/29/18	
Heptachlor	ND U	0.11	0.042	1	11/07/18 18:54	10/29/18	
Oxychlordane	ND U	0.21	0.14	1	11/07/18 18:54	10/29/18	
trans-Nonachlor	**0.20 J**	0.21	0.063	1	11/07/18 18:54	10/29/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
S_4,4'DDD-d4	34	5 - 120	11/07/18 18:54	
S_4,4'-DDT-d4	34	13 - 200	11/07/18 18:54	
S_Aldrin-13C12	30	10 - 143	11/07/18 18:54	
S_Endrin-13C12	37	20 - 157	11/07/18 18:54	
S_GBHCD6	33	5 - 124	11/07/18 18:54	
S_Heptachlor-13C10	40	10 - 177	11/07/18 18:54	
S_Heptachlrepox13C10	33	8 - 146	11/07/18 18:54	
S_Oxychlordane-13C10	30	5 - 144	11/07/18 18:54	

Analytical Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/16/18 11:25
Sample Matrix:	Sediment	**Date Received:**	10/19/18 12:30
Sample Name:	514-0to29-101618	**Units:**	ug/Kg
Lab Code:	K1810270-019	**Basis:**	Dry

Organochlorine Pesticides by GC/MS/MS

Analysis Method: ALS SOP
Prep Method: EPA 3541

Analyte Name	Result		MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4'-DDD	ND	U	0.12	0.078	1	11/07/18 19:11	10/29/18	
2,4'-DDE	**0.16**		0.12	0.098	1	11/07/18 19:11	10/29/18	
2,4'-DDT	ND	U	0.12	0.12	1	11/07/18 19:11	10/29/18	
4,4'-DDD	**1.6**		0.12	0.044	1	11/07/18 19:11	10/29/18	
4,4'-DDE	**2.8**		0.12	0.087	1	11/07/18 19:11	10/29/18	
4,4'-DDT	**0.50**		0.12	0.058	1	11/07/18 19:11	10/29/18	
Aldrin	ND	U	0.12	0.098	1	11/07/18 19:11	10/29/18	
alpha-Chlordane	**0.16**	**J**	0.25	0.077	1	11/07/18 19:11	10/29/18	
cis-Nonachlor	ND	U	0.12	0.12	1	11/07/18 19:11	10/29/18	
Dieldrin	ND	U	0.25	0.095	1	11/07/18 19:11	10/29/18	
gamma-BHC (Lindane)	ND	U	0.12	0.039	1	11/07/18 19:11	10/29/18	
gamma-Chlordane	**0.24**	**J**	0.25	0.079	1	11/07/18 19:11	10/29/18	
Heptachlor	ND	U	0.12	0.049	1	11/07/18 19:11	10/29/18	
Oxychlordane	ND	U	0.25	0.17	1	11/07/18 19:11	10/29/18	
trans-Nonachlor	**0.19**	**J**	0.25	0.072	1	11/07/18 19:11	10/29/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
S_4,4'DDD-d4	69	5 - 120	11/07/18 19:11	
S_4,4'-DDT-d4	69	13 - 200	11/07/18 19:11	
S_Aldrin-13C12	54	10 - 143	11/07/18 19:11	
S_Endrin-13C12	75	20 - 157	11/07/18 19:11	
S_GBHCD6	52	5 - 124	11/07/18 19:11	
S_Heptachlor-13C10	69	10 - 177	11/07/18 19:11	
S_Heptachlrepox13C10	56	8 - 146	11/07/18 19:11	
S_Oxychlordane-13C10	52	5 - 144	11/07/18 19:11	

Analytical Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/16/18 09:16
Sample Matrix:	Sediment	**Date Received:**	10/19/18 12:30
Sample Name:	P5-0to26-101618	**Units:**	ug/Kg
Lab Code:	K1810270-020	**Basis:**	Dry

Organochlorine Pesticides by GC/MS/MS

Analysis Method: ALS SOP
Prep Method: EPA 3541

Analyte Name	Result		MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4'-DDD	ND	U	0.14	0.089	1	11/07/18 19:29	10/29/18	
2,4'-DDE	**0.19**		0.14	0.12	1	11/07/18 19:29	10/29/18	
2,4'-DDT	ND	U	0.14	0.14	1	11/07/18 19:29	10/29/18	
4,4'-DDD	**1.7**		0.14	0.050	1	11/07/18 19:29	10/29/18	
4,4'-DDE	**3.3**		0.14	0.099	1	11/07/18 19:29	10/29/18	
4,4'-DDT	ND	U	0.14	0.066	1	11/07/18 19:29	10/29/18	
Aldrin	ND	U	0.14	0.12	1	11/07/18 19:29	10/29/18	
alpha-Chlordane	**0.20**	**J**	0.28	0.087	1	11/07/18 19:29	10/29/18	
cis-Nonachlor	ND	U	0.14	0.14	1	11/07/18 19:29	10/29/18	
Dieldrin	ND	U	0.28	0.11	1	11/07/18 19:29	10/29/18	
gamma-BHC (Lindane)	ND	U	0.14	0.044	1	11/07/18 19:29	10/29/18	
gamma-Chlordane	**0.32**		0.28	0.090	1	11/07/18 19:29	10/29/18	
Heptachlor	ND	U	0.14	0.055	1	11/07/18 19:29	10/29/18	
Oxychlordane	ND	U	0.28	0.19	1	11/07/18 19:29	10/29/18	
trans-Nonachlor	**0.24**	**J**	0.28	0.082	1	11/07/18 19:29	10/29/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
S_4,4'DDD-d4	84	5 - 120	11/07/18 19:29	
S_4,4'-DDT-d4	94	13 - 200	11/07/18 19:29	
S_Aldrin-13C12	65	10 - 143	11/07/18 19:29	
S_Endrin-13C12	82	20 - 157	11/07/18 19:29	
S_GBHCD6	63	5 - 124	11/07/18 19:29	
S_Heptachlor-13C10	75	10 - 177	11/07/18 19:29	
S_Heptachlrepox13C10	63	8 - 146	11/07/18 19:29	
S_Oxychlordane-13C10	59	5 - 144	11/07/18 19:29	

Analytical Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/17/18 09:28
Sample Matrix:	Sediment	**Date Received:**	10/19/18 12:30
Sample Name:	R3-0to33-101718	**Units:**	ug/Kg
Lab Code:	K1810270-029	**Basis:**	Dry

Organochlorine Pesticides by GC/MS/MS

Analysis Method: ALS SOP
Prep Method: EPA 3541

Analyte Name	Result		MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4'-DDD	ND	U	0.14	0.086	1	11/07/18 19:47	10/29/18	
2,4'-DDE	**0.18**		0.14	0.11	1	11/07/18 19:47	10/29/18	
2,4'-DDT	ND	U	0.14	0.13	1	11/07/18 19:47	10/29/18	
4,4'-DDD	**1.9**		0.14	0.048	1	11/07/18 19:47	10/29/18	
4,4'-DDE	**2.4**		0.14	0.096	1	11/07/18 19:47	10/29/18	
4,4'-DDT	ND	U	0.14	0.064	1	11/07/18 19:47	10/29/18	
Aldrin	ND	U	0.14	0.11	1	11/07/18 19:47	10/29/18	
alpha-Chlordane	**0.14**	**J**	0.27	0.085	1	11/07/18 19:47	10/29/18	
cis-Nonachlor	ND	U	0.14	0.14	1	11/07/18 19:47	10/29/18	
Dieldrin	ND	U	0.27	0.11	1	11/07/18 19:47	10/29/18	
gamma-BHC (Lindane)	ND	U	0.14	0.043	1	11/07/18 19:47	10/29/18	
gamma-Chlordane	**0.24**	**J**	0.27	0.088	1	11/07/18 19:47	10/29/18	
Heptachlor	ND	U	0.14	0.054	1	11/07/18 19:47	10/29/18	
Oxychlordane	ND	U	0.27	0.18	1	11/07/18 19:47	10/29/18	
trans-Nonachlor	**0.17**	**J**	0.27	0.079	1	11/07/18 19:47	10/29/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
S_4,4'DDD-d4	72	5 - 120	11/07/18 19:47	
S_4,4'-DDT-d4	69	13 - 200	11/07/18 19:47	
S_Aldrin-13C12	49	10 - 143	11/07/18 19:47	
S_Endrin-13C12	71	20 - 157	11/07/18 19:47	
S_GBHCD6	50	5 - 124	11/07/18 19:47	
S_Heptachlor-13C10	62	10 - 177	11/07/18 19:47	
S_Heptachlrepox13C10	50	8 - 146	11/07/18 19:47	
S_Oxychlordane-13C10	50	5 - 144	11/07/18 19:47	

Analytical Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	NA
Sample Matrix:	Sediment	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/Kg
Lab Code:	KQ1815624-04	**Basis:**	Dry

Organochlorine Pesticides by GC/MS/MS

Analysis Method: ALS SOP
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4'-DDD	ND U	0.063	0.063	1	11/07/18 14:41	10/29/18	
2,4'-DDE	ND U	0.079	0.079	1	11/07/18 14:41	10/29/18	
2,4'-DDT	ND U	0.094	0.094	1	11/07/18 14:41	10/29/18	
4,4'-DDD	ND U	0.049	0.035	1	11/07/18 14:41	10/29/18	
4,4'-DDE	ND U	0.070	0.070	1	11/07/18 14:41	10/29/18	
4,4'-DDT	ND U	0.049	0.047	1	11/07/18 14:41	10/29/18	
Aldrin	ND U	0.079	0.079	1	11/07/18 14:41	10/29/18	
alpha-Chlordane	ND U	0.098	0.062	1	11/07/18 14:41	10/29/18	
cis-Nonachlor	ND U	0.097	0.097	1	11/07/18 14:41	10/29/18	
Dieldrin	ND U	0.20	0.077	1	11/07/18 14:41	10/29/18	
gamma-BHC (Lindane)	ND U	0.049	0.031	1	11/07/18 14:41	10/29/18	
gamma-Chlordane	ND U	0.098	0.064	1	11/07/18 14:41	10/29/18	
Heptachlor	ND U	0.049	0.039	1	11/07/18 14:41	10/29/18	
Oxychlordane	ND U	0.20	0.13	1	11/07/18 14:41	10/29/18	
trans-Nonachlor	ND U	0.098	0.058	1	11/07/18 14:41	10/29/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
S_4,4'DDD-d4	83	5 - 120	11/07/18 14:41	
S_4,4'-DDT-d4	74	13 - 200	11/07/18 14:41	
S_Aldrin-13C12	66	10 - 143	11/07/18 14:41	
S_Endrin-13C12	86	20 - 157	11/07/18 14:41	
S_GBHCD6	63	5 - 124	11/07/18 14:41	
S_Heptachlor-13C10	69	10 - 177	11/07/18 14:41	
S_Heptachlrepox13C10	66	8 - 146	11/07/18 14:41	
S_Oxychlordane-13C10	68	5 - 144	11/07/18 14:41	

Analytical Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	NA
Sample Matrix:	Sediment	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/Kg
Lab Code:	KQ1816244-04	**Basis:**	Dry

Organochlorine Pesticides by GC/MS/MS

Analysis Method: ALS SOP
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4'-DDD	ND U	0.063	0.063	1	11/26/18 20:29	11/7/18	
2,4'-DDE	ND U	0.079	0.079	1	11/26/18 20:29	11/7/18	
2,4'-DDT	ND U	0.094	0.094	1	11/26/18 20:29	11/7/18	
4,4'-DDD	ND U	0.050	0.035	1	11/26/18 20:29	11/7/18	
4,4'-DDE	ND U	0.070	0.070	1	11/26/18 20:29	11/7/18	
4,4'-DDT	ND U	0.050	0.047	1	11/26/18 20:29	11/7/18	
Aldrin	ND U	0.079	0.079	1	11/26/18 20:29	11/7/18	
alpha-Chlordane	ND U	0.099	0.062	1	11/26/18 20:29	11/7/18	
cis-Nonachlor	ND U	0.097	0.097	1	11/26/18 20:29	11/7/18	
Dieldrin	ND U	0.20	0.077	1	11/26/18 20:29	11/7/18	
gamma-BHC (Lindane)	ND U	0.050	0.031	1	11/26/18 20:29	11/7/18	
gamma-Chlordane	ND U	0.099	0.064	1	11/26/18 20:29	11/7/18	
Heptachlor	ND U	0.050	0.039	1	11/26/18 20:29	11/7/18	
Oxychlordane	ND U	0.20	0.13	1	11/26/18 20:29	11/7/18	
trans-Nonachlor	ND U	0.099	0.058	1	11/26/18 20:29	11/7/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
S_4,4'DDD-d4	88	5 - 120	11/26/18 20:29	
S_4,4'-DDT-d4	107	13 - 200	11/26/18 20:29	
S_Aldrin-13C12	61	10 - 143	11/26/18 20:29	
S_Endrin-13C12	86	20 - 157	11/26/18 20:29	
S_GBHCD6	65	5 - 124	11/26/18 20:29	
S_Heptachlor-13C10	86	10 - 177	11/26/18 20:29	
S_Heptachlrepox13C10	70	8 - 146	11/26/18 20:29	
S_Oxychlordane-13C10	69	5 - 144	11/26/18 20:29	

Client: Pacific Groundwater Group (PGG) **Service Request:** K1810270
Project: DTNA Swan Island Sediment/2006-00115
Sample Matrix: Sediment

SURROGATE RECOVERY SUMMARY
Organochlorine Pesticides by GC/MS/MS

Analysis Method: ALS SOP
Extraction Method: EPA 3541

Sample Name	Lab Code	S_4,4'DDD-d4 5-120	S_4,4'-DDT-d4 13-200	S_Aldrin-13C12 10-143
N3-0to26-101518	K1810270-001	76	93	53
L1-0to30-101518	K1810270-004	68	77	54
N1-0to30-101518	K1810270-006	71	71	46
T1-0to30-101518	K1810270-010	73	74	48
R1-0to30-101518	K1810270-011	75	75	50
P1-0to30-101518	K1810270-012	60	61	52
T3-0to28-101618	K1810270-013	80	87	57
T7-0to31-101618	K1810270-015	77	71	56
T5-0to26-101618	K1810270-016	62	60	50
P3-0to29-101618	K1810270-017	62	62	49
R5-0to25-101618	K1810270-018	34	34	30
514-0to29-101618	K1810270-019	69	69	54
P5-0to26-101618	K1810270-020	84	94	65
R3-0to33-101718	K1810270-029	72	69	49
Method Blank	KQ1815624-04	83	74	66
Method Blank	KQ1816244-04	88	107	61
Lab Control Sample	KQ1815624-03	71	76	59
Lab Control Sample	KQ1816244-03	89	102	67
N1-0to30-101518	KQ1815624-01	78	73	63
N1-0to30-101518	KQ1815624-02	67	60	48

Client: Pacific Groundwater Group (PGG) **Service Request:** K1810270
Project: DTNA Swan Island Sediment/2006-00115
Sample Matrix: Sediment

SURROGATE RECOVERY SUMMARY
Organochlorine Pesticides by GC/MS/MS

Analysis Method: ALS SOP
Extraction Method: EPA 3541

Sample Name	Lab Code	S_Endrin-13C12 20-157	S_GBHCD6 5-124	S_Heptachlor-13C10 10-177
N3-0to26-101518	K1810270-001	75	61	86
L1-0to30-101518	K1810270-004	77	50	58
N1-0to30-101518	K1810270-006	66	40	53
T1-0to30-101518	K1810270-010	72	45	55
R1-0to30-101518	K1810270-011	73	49	54
P1-0to30-101518	K1810270-012	70	54	63
T3-0to28-101618	K1810270-013	82	53	66
T7-0to31-101618	K1810270-015	77	52	72
T5-0to26-101618	K1810270-016	64	47	61
P3-0to29-101618	K1810270-017	67	50	62
R5-0to25-101618	K1810270-018	37	33	40
514-0to29-101618	K1810270-019	75	52	69
P5-0to26-101618	K1810270-020	82	63	75
R3-0to33-101718	K1810270-029	71	50	62
Method Blank	KQ1815624-04	86	63	69
Method Blank	KQ1816244-04	86	65	86
Lab Control Sample	KQ1815624-03	66	59	64
Lab Control Sample	KQ1816244-03	92	75	91
N1-0to30-101518	KQ1815624-01	79	56	66
N1-0to30-101518	KQ1815624-02	65	45	52

Client: Pacific Groundwater Group (PGG) **Service Request:** K1810270
Project: DTNA Swan Island Sediment/2006-00115
Sample Matrix: Sediment

SURROGATE RECOVERY SUMMARY
Organochlorine Pesticides by GC/MS/MS

Analysis Method: ALS SOP
Extraction Method: EPA 3541

Sample Name	Lab Code	S_Heptachlrepox13C10 8-146	S_Oxychlordane-13C10 5-144
N3-0to26-101518	K1810270-001	62	60
L1-0to30-101518	K1810270-004	56	55
N1-0to30-101518	K1810270-006	48	48
T1-0to30-101518	K1810270-010	54	53
R1-0to30-101518	K1810270-011	53	51
P1-0to30-101518	K1810270-012	55	56
T3-0to28-101618	K1810270-013	60	57
T7-0to31-101618	K1810270-015	62	58
T5-0to26-101618	K1810270-016	50	47
P3-0to29-101618	K1810270-017	51	50
R5-0to25-101618	K1810270-018	33	30
514-0to29-101618	K1810270-019	56	52
P5-0to26-101618	K1810270-020	63	59
R3-0to33-101718	K1810270-029	50	50
Method Blank	KQ1815624-04	66	68
Method Blank	KQ1816244-04	70	69
Lab Control Sample	KQ1815624-03	62	60
Lab Control Sample	KQ1816244-03	76	72
N1-0to30-101518	KQ1815624-01	60	59
N1-0to30-101518	KQ1815624-02	49	48

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Pacific Groundwater Group (PGG) **Service Request:**K1810270
Project: DTNA Swan Island Sediment/2006-00115 **Date Analyzed:**11/07/18 13:23

Internal Standard Area and RT SUMMARY
Organochlorine Pesticides by GC/MS/MS

File ID: Y:\MS42\data\110718\110718F002.D **Lab Code:**KQ1816317-01
Instrument ID: K-MS-42 **Analysis Lot:**614289
Analysis Method: ALS SOP **Signal ID:**1

		Pyrene-d10	
		Area	**RT**
	Result ==>	41,734,619	9.725
	Upper Limit ==>	83,469,237	10.23
	Lower Limit ==>	20,867,309	9.23
Associated Analyses			
Method Blank	KQ1815624-04	32483782.84	9.739
N1-0to30-101518MS	KQ1815624-01	36857555.16	9.719
N1-0to30-101518DMS	KQ1815624-02	45655542.64	9.718
L1-0to30-101518	K1810270-004	48192201.37	9.712
N1-0to30-101518	K1810270-006	50344448.91	9.725
T1-0to30-101518	K1810270-010	49228948.69	9.732
R1-0to30-101518	K1810270-011	46717233.25	9.719
P1-0to30-101518	K1810270-012	44614314.37	9.719
T3-0to28-101618	K1810270-013	53276617.46	9.719
T7-0to31-101618	K1810270-015	51200386.53	9.732
T5-0to26-101618	K1810270-016	49370237.62	9.725
P3-0to29-101618	K1810270-017	47285141.82	9.725
R5-0to25-101618	K1810270-018	81539582.05	9.727
514-0to29-101618	K1810270-019	47450273.8	9.725
P5-0to26-101618	K1810270-020	46269783.49	9.725
R3-0to33-101718	K1810270-029	51354701.27	9.725

Client: Pacific Groundwater Group (PGG) **Service Request:** K1810270
Project: DTNA Swan Island Sediment/2006-00115 **Date Analyzed:** 11/21/18 12:19

Internal Standard Area and RT SUMMARY
Organochlorine Pesticides by GC/MS/MS

File ID: Y:\MS42\data\112118\112118F001.D **Lab Code:** KQ1817797-02
Instrument ID: K-MS-42 **Analysis Lot:** 617359
Analysis Method: ALS SOP **Signal ID:** 1

		Pyrene-d10	
		Area	**RT**
	Result ==>	7,265,537	9.764
	Upper Limit ==>	14,531,074	10.26
	Lower Limit ==>	3,632,768	9.26
Associated Analyses			
Lab Control Sample	KQ1815624-03	7186837.776	9.749

Client: Pacific Groundwater Group (PGG) **Service Request:** K1810270
Project: DTNA Swan Island Sediment/2006-00115 **Date Analyzed:** 11/26/18 11:48

Internal Standard Area and RT SUMMARY
Organochlorine Pesticides by GC/MS/MS

File ID: J:\MS42\Data\112618\112618F003.D **Lab Code:** KQ1817669-01
Instrument ID: K-MS-42 **Analysis Lot:** 617367
Analysis Method: ALS SOP **Signal ID:** 1

		Pyrene-d10	
		Area	**RT**
	Result ==>	7,371,425	9.764
	Upper Limit ==>	14,742,849	10.26
	Lower Limit ==>	3,685,712	9.26
Associated Analyses			
Method Blank	KQ1816244-04	10437348.58	9.752
Lab Control Sample	KQ1816244-03	8282225.553	9.750
N3-0to26-101518	K1810270-001	9587360.824	9.763

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/15/18
Sample Matrix:	Sediment	**Date Received:**	10/19/18
		Date Analyzed:	11/7/18
		Date Extracted:	10/29/18

Duplicate Matrix Spike Summary
Organochlorine Pesticides by GC/MS/MS

Sample Name:	N1-0to30-101518	**Units:**	ug/Kg
Lab Code:	K1810270-006	**Basis:**	Dry
Analysis Method:	ALS SOP		
Prep Method:	EPA 3541		

		Matrix Spike KQ1815624-01			**Duplicate Matrix Spike** KQ1815624-02					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
2,4'-DDD	ND U	1.26	1.30	96	1.13	1.31	86	32-169	11	40
2,4'-DDE	ND U	1.30	1.30	100	1.19	1.31	91	43-155	9	40
2,4'-DDT	ND U	1.49	1.30	114	1.24	1.31	95	55-161	18	40
4,4'-DDD	ND U	1.41	1.30	108	1.21	1.31	92	10-190	15	40
4,4'-DDE	ND U	1.13	1.30	86	1.14	1.31	87	35-162	1	40
4,4'-DDT	ND U	1.31	1.30	100	1.33	1.31	101	24-183	1	40
Aldrin	ND U	1.37	1.30	105	1.32	1.31	100	52-151	4	40
alpha-Chlordane	ND U	1.55	1.30	119	1.43	1.31	109	31-156	8	40
cis-Nonachlor	ND U	1.39	1.30	107	1.33	1.31	101	27-144	5	40
Dieldrin	ND U	1.15	1.30	88	1.05	1.31	80	28-150	9	40
gamma-BHC (Lindane)	ND U	1.36	1.30	104	1.26	1.31	96	64-135	8	40
gamma-Chlordane	ND U	1.53	1.30	118	1.40	1.31	107	31-158	9	40
Heptachlor	ND U	1.44	1.30	110	1.44	1.31	110	76-117	<1	40
Oxychlordane	ND U	1.39	1.30	107	1.32	1.31	101	53-144	5	40
trans-Nonachlor	ND U	1.42	1.30	109	1.29	1.31	98	35-153	9	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Analyzed:**	11/21/18
Sample Matrix:	Sediment	**Date Extracted:**	10/29/18

Lab Control Sample Summary
Organochlorine Pesticides by GC/MS/MS

Analysis Method:	ALS SOP	**Units:**	ug/Kg
Prep Method:	EPA 3541	**Basis:**	Dry
		Analysis Lot:	617359

Lab Control Sample
KQ1815624-03

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
2,4'-DDD	1.89	2.00	95	73-122
2,4'-DDE	1.83	2.00	92	54-145
2,4'-DDT	1.82	2.00	91	77-118
4,4'-DDD	2.14	2.00	107	74-117
4,4'-DDE	1.62	2.00	81	66-132
4,4'-DDT	1.95	2.00	97	78-116
Aldrin	2.14	2.00	107	74-122
alpha-Chlordane	2.11	2.00	106	74-130
cis-Nonachlor	2.22	2.00	111	69-134
Dieldrin	1.91	2.00	96	62-131
gamma-BHC (Lindane)	1.99	2.00	99	79-116
gamma-Chlordane	2.15	2.00	108	76-128
Heptachlor	2.11	2.00	106	81-114
Oxychlordane	2.07	2.00	103	59-141
trans-Nonachlor	2.06	2.00	103	76-124

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Analyzed:**	11/26/18
Sample Matrix:	Sediment	**Date Extracted:**	11/07/18

Lab Control Sample Summary
Organochlorine Pesticides by GC/MS/MS

Analysis Method:	ALS SOP	**Units:**	ug/Kg
Prep Method:	EPA 3541	**Basis:**	Dry
		Analysis Lot:	617367

Lab Control Sample
KQ1816244-03

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
2,4'-DDD	1.91	2.00	95	73-122
2,4'-DDE	1.76	2.00	88	54-145
2,4'-DDT	1.72	2.00	86	77-118
4,4'-DDD	2.21	2.00	111	74-117
4,4'-DDE	1.53	2.00	76	66-132
4,4'-DDT	1.97	2.00	99	78-116
Aldrin	2.11	2.00	106	74-122
alpha-Chlordane	2.23	2.00	111	74-130
cis-Nonachlor	2.15	2.00	107	69-134
Dieldrin	1.56	2.00	78	62-131
gamma-BHC (Lindane)	2.00	2.00	100	79-116
gamma-Chlordane	2.12	2.00	106	76-128
Heptachlor	2.09	2.00	105	81-114
Oxychlordane	2.04	2.00	102	59-141
trans-Nonachlor	1.65	2.00	83	76-124

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Analyzed:**	11/07/18 14:41
Sample Matrix:	Sediment	**Date Extracted:**	10/29/18

Method Blank Summary
Organochlorine Pesticides by GC/MS/MS

Sample Name:	Method Blank	**Instrument ID:**	K-MS-42
Lab Code:	KQ1815624-04	**File ID:**	Y:\MS42\data\110718\110718F003.D
Analysis Method:	ALS SOP	**Analysis Lot:**	614289,617359
Prep Method:	EPA 3541	**Extraction Lot:**	325137

This Method Blank applies to the following analyses.

Sample Name	Lab Code	File ID	Date Analyzed
N1-0to30-101518MS	KQ1815624-01	Y:\MS42\data\110718\110718F005.D	11/07/18 15:16
N1-0to30-101518DMS	KQ1815624-02	Y:\MS42\data\110718\110718F006.D	11/07/18 15:34
L1-0to30-101518	K1810270-004	Y:\MS42\data\110718\110718F007.D	11/07/18 15:52
N1-0to30-101518	K1810270-006	Y:\MS42\data\110718\110718F008.D	11/07/18 16:09
T1-0to30-101518	K1810270-010	Y:\MS42\data\110718\110718F009.D	11/07/18 16:50
R1-0to30-101518	K1810270-011	Y:\MS42\data\110718\110718F010.D	11/07/18 17:08
P1-0to30-101518	K1810270-012	Y:\MS42\data\110718\110718F011.D	11/07/18 17:26
T3-0to28-101618	K1810270-013	Y:\MS42\data\110718\110718F012.D	11/07/18 17:43
T7-0to31-101618	K1810270-015	Y:\MS42\data\110718\110718F013.D	11/07/18 18:01
T5-0to26-101618	K1810270-016	Y:\MS42\data\110718\110718F014.D	11/07/18 18:19
P3-0to29-101618	K1810270-017	Y:\MS42\data\110718\110718F015.D	11/07/18 18:36
R5-0to25-101618	K1810270-018	Y:\MS42\data\110718\110718F016.D	11/07/18 18:54
514-0to29-101618	K1810270-019	Y:\MS42\data\110718\110718F017.D	11/07/18 19:11
P5-0to26-101618	K1810270-020	Y:\MS42\data\110718\110718F018.D	11/07/18 19:29
R3-0to33-101718	K1810270-029	Y:\MS42\data\110718\110718F019.D	11/07/18 19:47
Lab Control Sample	KQ1815624-03	Y:\MS42\data\112118\112118F005.D	11/21/18 13:33

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Analyzed:**	11/26/18 20:29
Sample Matrix:	Sediment	**Date Extracted:**	11/07/18

Method Blank Summary
Organochlorine Pesticides by GC/MS/MS

Sample Name:	Method Blank	**Instrument ID:**	K-MS-42
Lab Code:	KQ1816244-04	**File ID:**	J:\MS42\Data\112618\112618F031.D
Analysis Method:	ALS SOP	**Analysis Lot:**	617367
Prep Method:	EPA 3541	**Extraction Lot:**	325840

This Method Blank applies to the following analyses.

Sample Name	Lab Code	File ID	Date Analyzed
Lab Control Sample	KQ1816244-03	J:\MS42\Data\112618\112618F032.D	11/26/18 20:46
N3-0to26-101518	K1810270-001	J:\MS42\Data\112618\112618F035.D	11/26/18 21:39

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Analyzed:**	11/21/18 13:33
Sample Matrix:	Sediment	**Date Extracted:**	10/29/18

Lab Control Sample Summary
Organochlorine Pesticides by GC/MS/MS

Sample Name:	Lab Control Sample	**Instrument ID:**	K-MS-42
Lab Code:	KQ1815624-03	**File ID:**	Y:\MS42\data\112118\112118F005.D
Analysis Method:	ALS SOP	**Analysis Lot:**	614289,617359
Prep Method:	EPA 3541	**Extraction Lot:**	325137

This Lab Control Sample applies to the following analyses.

Sample Name	Lab Code	File ID	Date Analyzed
Method Blank	KQ1815624-04	Y:\MS42\data\110718\110718F003.D	11/07/18 14:41
N1-0to30-101518MS	KQ1815624-01	Y:\MS42\data\110718\110718F005.D	11/07/18 15:16
N1-0to30-101518DMS	KQ1815624-02	Y:\MS42\data\110718\110718F006.D	11/07/18 15:34
L1-0to30-101518	K1810270-004	Y:\MS42\data\110718\110718F007.D	11/07/18 15:52
N1-0to30-101518	K1810270-006	Y:\MS42\data\110718\110718F008.D	11/07/18 16:09
T1-0to30-101518	K1810270-010	Y:\MS42\data\110718\110718F009.D	11/07/18 16:50
R1-0to30-101518	K1810270-011	Y:\MS42\data\110718\110718F010.D	11/07/18 17:08
P1-0to30-101518	K1810270-012	Y:\MS42\data\110718\110718F011.D	11/07/18 17:26
T3-0to28-101618	K1810270-013	Y:\MS42\data\110718\110718F012.D	11/07/18 17:43
T7-0to31-101618	K1810270-015	Y:\MS42\data\110718\110718F013.D	11/07/18 18:01
T5-0to26-101618	K1810270-016	Y:\MS42\data\110718\110718F014.D	11/07/18 18:19
P3-0to29-101618	K1810270-017	Y:\MS42\data\110718\110718F015.D	11/07/18 18:36
R5-0to25-101618	K1810270-018	Y:\MS42\data\110718\110718F016.D	11/07/18 18:54
514-0to29-101618	K1810270-019	Y:\MS42\data\110718\110718F017.D	11/07/18 19:11
P5-0to26-101618	K1810270-020	Y:\MS42\data\110718\110718F018.D	11/07/18 19:29
R3-0to33-101718	K1810270-029	Y:\MS42\data\110718\110718F019.D	11/07/18 19:47

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Analyzed:**	11/26/18 20:46
Sample Matrix:	Sediment	**Date Extracted:**	11/07/18

Lab Control Sample Summary
Organochlorine Pesticides by GC/MS/MS

Sample Name:	Lab Control Sample	**Instrument ID:**	K-MS-42
Lab Code:	KQ1816244-03	**File ID:**	J:\MS42\Data\112618\112618F032.D
Analysis Method:	ALS SOP	**Analysis Lot:**	617367
Prep Method:	EPA 3541	**Extraction Lot:**	325840

This Lab Control Sample applies to the following analyses.

Sample Name	Lab Code	File ID	Date Analyzed
Method Blank	KQ1816244-04	J:\MS42\Data\112618\112618F031.D	11/26/18 20:29
N3-0to26-101518	K1810270-001	J:\MS42\Data\112618\112618F035.D	11/26/18 21:39

Client: Pacific Groundwater Group (PGG) **Service Request:**K1810270
Project: DTNA Swan Island Sediment/2006-00115 **Date Analyzed:**11/07/18 13:23

Tune Summary
Organochlorine Pesticides by GC/MS/MS

File ID: Y:\MS42\data\110718\110718F002.D **Analytical Method:** ALS SOP
Instrument ID: K-MS-42 **Analysis Lot:** 614289

Sample Name	Lab Code	File ID:	Date Analyzed:	Q
Continuing Calibration Verification	KQ1816317-01	Y:\MS42\data\110718\110718F002.D	11/07/18 13:23	
Method Blank	KQ1815624-04	Y:\MS42\data\110718\110718F003.D	11/07/18 14:41	
N1-0to30-101518	KQ1815624-01	Y:\MS42\data\110718\110718F005.D	11/07/18 15:16	
N1-0to30-101518	KQ1815624-02	Y:\MS42\data\110718\110718F006.D	11/07/18 15:34	
L1-0to30-101518	K1810270-004	Y:\MS42\data\110718\110718F007.D	11/07/18 15:52	
N1-0to30-101518	K1810270-006	Y:\MS42\data\110718\110718F008.D	11/07/18 16:09	
T1-0to30-101518	K1810270-010	Y:\MS42\data\110718\110718F009.D	11/07/18 16:50	
R1-0to30-101518	K1810270-011	Y:\MS42\data\110718\110718F010.D	11/07/18 17:08	
P1-0to30-101518	K1810270-012	Y:\MS42\data\110718\110718F011.D	11/07/18 17:26	
T3-0to28-101618	K1810270-013	Y:\MS42\data\110718\110718F012.D	11/07/18 17:43	
T7-0to31-101618	K1810270-015	Y:\MS42\data\110718\110718F013.D	11/07/18 18:01	
T5-0to26-101618	K1810270-016	Y:\MS42\data\110718\110718F014.D	11/07/18 18:19	
P3-0to29-101618	K1810270-017	Y:\MS42\data\110718\110718F015.D	11/07/18 18:36	
R5-0to25-101618	K1810270-018	Y:\MS42\data\110718\110718F016.D	11/07/18 18:54	
514-0to29-101618	K1810270-019	Y:\MS42\data\110718\110718F017.D	11/07/18 19:11	
P5-0to26-101618	K1810270-020	Y:\MS42\data\110718\110718F018.D	11/07/18 19:29	
R3-0to33-101718	K1810270-029	Y:\MS42\data\110718\110718F019.D	11/07/18 19:47	

Client: Pacific Groundwater Group (PGG) **Service Request:**K1810270
Project: DTNA Swan Island Sediment/2006-00115 **Date Analyzed:**11/21/18 12:19

Tune Summary
Organochlorine Pesticides by GC/MS/MS

File ID: Y:\MS42\data\112118\112118F001.D **Analytical Method:** ALS SOP
Instrument ID: K-MS-42 **Analysis Lot:** 617359

Sample Name	Lab Code	File ID:	Date Analyzed:	Q
Continuing Calibration Verification	KQ1817797-02	Y:\MS42\data\112118\112118F001.D	11/21/18 12:19	
Lab Control Sample	KQ1815624-03	Y:\MS42\data\112118\112118F005.D	11/21/18 13:33	

Client: Pacific Groundwater Group (PGG) **Service Request:**K1810270
Project: DTNA Swan Island Sediment/2006-00115 **Date Analyzed:**11/26/18 11:48

Tune Summary
Organochlorine Pesticides by GC/MS/MS

File ID: J:\MS42\Data\112618\112618F003.D **Analytical Method:** ALS SOP
Instrument ID: K-MS-42 **Analysis Lot:** 617367

Sample Name	Lab Code	File ID:	Date Analyzed:	Q
Continuing Calibration Verification	KQ1817669-01	J:\MS42\Data\112618\112618F003.D	11/26/18 11:48	
Method Blank	KQ1816244-04	J:\MS42\Data\112618\112618F031.D	11/26/18 20:29	
Lab Control Sample	KQ1816244-03	J:\MS42\Data\112618\112618F032.D	11/26/18 20:46	
N3-0to26-101518	K1810270-001	J:\MS42\Data\112618\112618F035.D	11/26/18 21:39	

Client: Pacific Groundwater Group (PGG) **Service Request:** K1810270
Project: DTNA Swan Island Sediment **Calibration Date:** 11/16/2018

Initial Calibration Summary
Organochlorine Pesticides by GC/MS/MS

Calibration ID: KC1900105 **Signal ID:** 1
Instrument ID: K-MS-42

#	Lab Code	Sample Name	File Location	Acquisition Date
01	KC1900105-01	OC PEST ICAL 0.5ng/mL SVM59-48A	Y:\MS42\data\111618\111618F007.D	11/16/2018 13:04
02	KC1900105-02	OC PEST ICAL 1ng/mL SVM59-48B	Y:\MS42\data\111618\111618F008.D	11/16/2018 13:22
03	KC1900105-03	OC PEST ICAL 2ng/mL SVM59-48C	Y:\MS42\data\111618\111618F009.D	11/16/2018 13:40
04	KC1900105-04	OC PEST ICAL5ng/mL SVM59-48D	Y:\MS42\data\111618\111618F010.D	11/16/2018 13:57
05	KC1900105-05	OC PEST ICAL 10ng/mL SVM59-48E	Y:\MS42\data\111618\111618F011.D	11/16/2018 14:15
06	KC1900105-06	OC PEST ICAL 20ng/mL SVM59-48F	Y:\MS42\data\111618\111618F012.D	11/16/2018 14:32
07	KC1900105-07	OC PEST ICAL 40ng/mL SVM59-48G	Y:\MS42\data\111618\111618F013.D	11/16/2018 14:50
08	KC1900105-08	OC PEST ICAL 60ng/mL SVM59-48H	Y:\MS42\data\111618\111618F014.D	11/16/2018 15:08
09	KC1900105-09	OC PEST ICAL 80ng/mL SVM59-48I	Y:\MS42\data\111618\111618F015.D	11/16/2018 15:25
10	KC1900105-10	OC PEST ICAL 100ng/mL SVM59-48J	Y:\MS42\data\111618\111618F016.D	11/16/2018 15:43

Analyte

2,4'-DDD

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.5	1.261	02	1	1.224	03	2	1.178	04	5	1.079
05	10	0.9427	06	20	1.017	07	40	1.047	08	60	1.03
09	80	1.021	10	100	0.9601						

2,4'-DDE

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.5	1.112	02	1	1.066	03	2	0.9964	04	5	0.9684
05	10	0.9857	06	20	0.9682	07	40	0.8315	08	60	0.868
09	80	0.8943	10	100	0.8158						

2,4'-DDT

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.5	2.569	02	1	2.415	03	2	2.223	04	5	2.091
05	10	2.002	06	20	2.313	07	40	2.153	08	60	2.109
09	80	2.217	10	100	2.327						

4,4'-DDD

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.5	1.962	02	1	1.748	03	2	1.715	04	5	1.582
05	10	1.611	06	20	1.612	07	40	1.491	08	60	1.499
09	80	1.442	10	100	1.485						

4,4'-DDE

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.5	1.062	02	1	1.011	03	2	0.9602	04	5	0.8859
05	10	0.7818	06	20	0.8616	07	40	0.8292	08	60	0.8033
09	80	0.8039	10	100	0.7151						

Client: Pacific Groundwater Group (PGG) **Service Request:** K1810270
Project: DTNA Swan Island Sediment **Calibration Date:** 11/16/2018

Initial Calibration Summary
Organochlorine Pesticides by GC/MS/MS

Calibration ID: KC1900105 **Signal ID:** 1
Instrument ID: K-MS-42

Analyte

4,4'-DDT

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.5	1.262	02	1	1.153	03	2	1.199	04	5	1.117
05	10	1.136	06	20	1.174	07	40	1.085	08	60	1.118
09	80	1.161	10	100	1.165						

Aldrin

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.5	4.305	02	1	2.563	03	2	1.61	04	5	0.9942
05	10	0.8166	06	20	0.7263	07	40	0.632	08	60	0.6534
09	80	0.6433	10	100	0.6223						

Dieldrin

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.5	1.619	02	1	1.579	03	2	1.599	04	5	1.513
05	10	1.404	06	20	1.488	07	40	1.434	08	60	1.533
09	80	1.582	10	100	1.503						

Heptachlor

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.5	1.394	02	1	1.262	03	2	1.253	04	5	1.114
05	10	1.096	06	20	1.124	07	40	1.092	08	60	1.097
09	80	1.103	10	100	1.057						

Oxychlordane

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.5	3.238	02	1	2.791	03	2	2.867	04	5	2.599
05	10	2.71	06	20	2.603	07	40	2.523	08	60	2.543
09	80	2.605	10	100	2.563						

S_4,4'-DDT-d4

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5	1.492	02	5	1.453	03	5	1.504	04	5	1.524
05	5	1.622	06	5	1.576	07	5	1.658	08	5	1.721
09	5	1.688	10	5	1.631						

S_4,4'DDD-d4

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5	3.157	02	5	3.283	03	5	3.287	04	5	3.32
05	5	3.165	06	5	3.478	07	5	3.703	08	5	3.817
09	5	4.136	10	5	4.17						

S_Aldrin-13C12

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	20	0.5193	02	20	0.5077	03	20	0.4804	04	20	0.5141
05	20	0.5112	06	20	0.5702	07	20	0.5257	08	20	0.5312
09	20	0.5958	10	20	0.5126						

Client: Pacific Groundwater Group (PGG) **Service Request:** K1810270
Project: DTNA Swan Island Sediment **Calibration Date:** 11/16/2018

Initial Calibration Summary
Organochlorine Pesticides by GC/MS/MS

Calibration ID: KC1900105 **Signal ID:** 1
Instrument ID: K-MS-42

Analyte

S_Endrin-13C12

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	20	0.177	02	20	0.183	03	20	0.1731	04	20	0.176
05	20	0.1718	06	20	0.1917	07	20	0.1865	08	20	0.1858
09	20	0.1969	10	20	0.1858						

S_GBHCD6

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	20	1.328	02	20	1.305	03	20	1.255	04	20	1.351
05	20	1.443	06	20	1.563	07	20	1.356	08	20	1.409
09	20	1.596	10	20	1.343						

S_Heptachlor-13C10

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	20	0.543	02	20	0.5492	03	20	0.5195	04	20	0.5578
05	20	0.591	06	20	0.6313	07	20	0.5827	08	20	0.5948
09	20	0.6094	10	20	0.5895						

S_Heptachlrepox13C10

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	20	0.168	02	20	0.1782	03	20	0.1684	04	20	0.1782
05	20	0.1798	06	20	0.2042	07	20	0.1783	08	20	0.1871
09	20	0.2101	10	20	0.1857						

S_Oxychlordane-13C10

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	20	0.3485	02	20	0.363	03	20	0.3367	04	20	0.363
05	20	0.3664	06	20	0.413	07	20	0.3629	08	20	0.3782
09	20	0.4199	10	20	0.3833						

alpha-Chlordane

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.5	2.866	02	1	2.479	03	2	2.573	04	5	2.305
05	10	2.332	06	20	2.321	07	40	2.261	08	60	2.338
09	80	2.314	10	100	2.286						

cis-Nonachlor

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.5	0.6615	02	1	0.5948	03	2	0.6225	04	5	0.5659
05	10	0.5567	06	20	0.5674	07	40	0.5856	08	60	0.5834
09	80	0.5695	10	100	0.5621						

gamma-BHC (Lindane)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.5	2.362	02	1	2.223	03	2	2.138	04	5	2.023
05	10	2.017	06	20	2.066	07	40	1.951	08	60	2.021
09	80	2.032	10	100	2.087						

Client: Pacific Groundwater Group (PGG) **Service Request:** K1810270
Project: DTNA Swan Island Sediment **Calibration Date:** 11/16/2018

Initial Calibration Summary
Organochlorine Pesticides by GC/MS/MS

Calibration ID: KC1900105 **Signal ID:** 1
Instrument ID: K-MS-42

Analyte

gamma-Chlordane

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.5	1.111	02	1	0.9846	03	2	1.046	04	5	0.9322
05	10	0.9264	06	20	0.9043	07	40	0.9128	08	60	0.9219
09	80	0.9581	10	100	0.9388						

trans-Nonachlor

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.5	1.73	02	1	1.64	03	2	1.592	04	5	1.404
05	10	1.556	06	20	1.449	07	40	1.55	08	60	1.461
09	80	1.584	10	100	1.529						

Client: Pacific Groundwater Group (PGG) **Service Request:** K1810270
Project: DTNA Swan Island Sediment **Calibration Date:** 11/16/2018

Initial Calibration Summary
Organochlorine Pesticides by GC/MS/MS

Calibration ID: KC1900105 **Signal ID:** 1
Instrument ID: K-MS-42

		Calibration Evaluation				Calibration Evaluation	
Analyte Name	Compound Type	Fit Type	Eval	Eval Result	Control Criteria	Average RRF	Minimum RRF
2,4'-DDD	TRG	Average RF	% RSD	10.1	≤20	1.076	0.01
2,4'-DDE	TRG	Average RF	% RSD	10.3	≤20	0.9506	0.01
2,4'-DDT	TRG	Average RF	% RSD	7.5	≤20	2.242	0.01
4,4'-DDD	TRG	Average RF	% RSD	9.8	≤20	1.615	0.01
4,4'-DDE	TRG	Average RF	% RSD	12.5	≤20	0.8714	0.01
4,4'-DDT	TRG	Average RF	% RSD	4.3	≤20	1.157	0.01
Aldrin	TRG	Quadratic	COD	0.9993	≥	1.357	0.01
Dieldrin	TRG	Average RF	% RSD	4.7	≤20	1.526	0.01
Heptachlor	TRG	Average RF	% RSD	9.3	≤20	1.159	0.01
Oxychlordane	TRG	Average RF	% RSD	8.1	≤20	2.704	0.01
S_4,4'-DDT-d4	SURR	Average RF	% RSD	5.7	≤	1.587	0.01
S_4,4'DDD-d4	SURR	Average RF	% RSD	10.8	≤	3.552	0.01
S_Aldrin-13C12	SURR	Average RF	% RSD	6.3	≤	0.5268	0.01
S_Endrin-13C12	SURR	Average RF	% RSD	4.5	≤	0.1828	0.01
S_GBHCD6	SURR	Average RF	% RSD	7.9	≤	1.395	0.01
S_Heptachlor-13C10	SURR	Average RF	% RSD	5.9	≤	0.5768	0.01
S_Heptachlrepox13C10	SURR	Average RF	% RSD	7.5	≤	0.1838	0.01
S_Oxychlordane-13C10	SURR	Average RF	% RSD	7.0	≤	0.3735	0.01
alpha-Chlordane	TRG	Average RF	% RSD	7.8	≤20	2.408	0.01
cis-Nonachlor	TRG	Average RF	% RSD	5.6	≤20	0.5869	0.01
gamma-BHC (Lindane)	TRG	Average RF	% RSD	5.8	≤20	2.092	0.01
gamma-Chlordane	TRG	Average RF	% RSD	6.9	≤20	0.9637	0.01
trans-Nonachlor	TRG	Average RF	% RSD	6.2	≤20	1.549	0.01

Client: Pacific Groundwater Group (PGG) **Service Request:** K1810270
Project: DTNA Swan Island Sediment **Calibration Date:** 11/6/2018

Initial Calibration Summary
Organochlorine Pesticides by GC/MS/MS

Calibration ID: KC1900099 **Signal ID:** 1
Instrument ID: K-MS-42

#	Lab Code	Sample Name	File Location	Acquisition Date
01	KC1900099-01	OC PEST ICAL 0.5ng/mL SVM59-48A	Y:\MS42\data\110618\110618F012.D	11/06/2018 17:23
02	KC1900099-02	OC PEST ICAL 1ng/mL SVM59-48B	Y:\MS42\data\110618\110618F013.D	11/06/2018 17:40
03	KC1900099-03	OC PEST ICAL 2ng/mL SVM59-48C	Y:\MS42\data\110618\110618F014.D	11/06/2018 17:58
04	KC1900099-04	OC PEST ICAL5ng/mL SVM59-48D	Y:\MS42\data\110618\110618F015.D	11/06/2018 18:15
05	KC1900099-05	OC PEST ICAL 10ng/mL SVM59-48E	Y:\MS42\data\110618\110618F016.D	11/06/2018 18:33
06	KC1900099-06	OC PEST ICAL 20ng/mL SVM59-48F	Y:\MS42\data\110618\110618F017.D	11/06/2018 18:51
07	KC1900099-07	OC PEST ICAL 40ng/mL SVM59-48G	Y:\MS42\data\110618\110618F018.D	11/06/2018 19:08
08	KC1900099-08	OC PEST ICAL 60ng/mL SVM59-48H	Y:\MS42\data\110618\110618F019.D	11/06/2018 19:26
09	KC1900099-09	OC PEST ICAL 80ng/mL SVM59-48I	Y:\MS42\data\110618\110618F020.D	11/06/2018 19:44
10	KC1900099-10	OC PEST ICAL 100ng/mL SVM59-48J	Y:\MS42\data\110618\110618F021.D	11/06/2018 20:01

Analyte

2,4'-DDD

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.5	1.252	02	1	1.181	03	2	1.198	04	5	1.085
05	10	0.9599	06	20	0.8947	07	40	0.9002	08	60	1.127
09	80	1.001	10	100	0.9482						

2,4'-DDE

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.5	0.9802	02	1	0.8092	03	2	0.8185	04	5	0.7787
05	10	0.8799	06	20	0.8045	07	40	0.807	08	60	0.8129
09	80	0.7312	10	100	0.6882						

2,4'-DDT

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.5	2.488	02	1	2.051	03	2	1.933	04	5	1.83
05	10	2.009	06	20	2.074	07	40	2.201	08	60	2.008
09	80	1.84	10	100	1.915						

4,4'-DDD

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.5	1.848	02	1	1.732	03	2	1.721	04	5	1.604
05	10	1.508	06	20	1.484	07	40	1.418	08	60	1.578
09	80	1.503	10	100	1.473						

4,4'-DDE

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.5	0.861	02	1	0.8026	03	2	0.783	04	5	0.7288
05	10	0.6869	06	20	0.6637	07	40	0.6344	08	60	0.7903
09	80	0.7061	10	100	0.6413						

Client: Pacific Groundwater Group (PGG) **Service Request:** K1810270
Project: DTNA Swan Island Sediment **Calibration Date:** 11/6/2018

Initial Calibration Summary
Organochlorine Pesticides by GC/MS/MS

Calibration ID: KC1900099 **Signal ID:** 1
Instrument ID: K-MS-42

Analyte

4,4'-DDT

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.5	1.136	02	1	1.19	03	2	1.133	04	5	1.114
05	10	1.07	06	20	1.021	07	40	1.113	08	60	1.065
09	80	1.076	10	100	1.117						

Aldrin

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.5	4.077	02	1	2.192	03	2	1.589	04	5	0.9482
05	10	0.8013	06	20	0.7412	07	40	0.6799	08	60	0.6189
09	80	0.6066	10	100	0.6072						

Dieldrin

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.5	1.733	02	1	1.373	03	2	1.439	04	5	1.247
05	10	1.284	06	20	1.348	07	40	1.244	08	60	1.472
09	80	1.491	10	100	1.479						

Heptachlor

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.5	1.303	02	1	1.16	03	2	1.119	04	5	1.057
05	10	1.104	06	20	1.124	07	40	1.096	08	60	1.07
09	80	1.072	10	100	1.065						

Oxychlordane

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.5	3.284	02	1	2.976	03	2	2.863	04	5	2.693
05	10	2.7	06	20	2.736	07	40	2.548	08	60	2.673
09	80	2.807	10	100	2.519						

S_4,4'-DDT-d4

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5	1.985	02	5	2.148	03	5	2.451	04	5	2.304
05	5	2.318	06	5	2.312	07	5	2.214	08	5	2.329
09	5	2.624	10	5	2.558						

S_4,4'DDD-d4

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5	3.638	02	5	3.954	03	5	3.957	04	5	3.9
05	5	3.799	06	5	3.909	07	5	4.012	08	5	4.111
09	5	4.701	10	5	4.762						

S_Aldrin-13C12

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	20	0.5291	02	20	0.4875	03	20	0.4578	04	20	0.4638
05	20	0.5536	06	20	0.5074	07	20	0.5531	08	20	0.5727
09	20	0.5662	10	20	0.5358						

Client: Pacific Groundwater Group (PGG) **Service Request:** K1810270
Project: DTNA Swan Island Sediment **Calibration Date:** 11/6/2018

Initial Calibration Summary
Organochlorine Pesticides by GC/MS/MS

Calibration ID: KC1900099 **Signal ID:** 1
Instrument ID: K-MS-42

Analyte

S_Endrin-13C12

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	20	0.187	02	20	0.1956	03	20	0.1886	04	20	0.1975
05	20	0.1924	06	20	0.1903	07	20	0.2061	08	20	0.201
09	20	0.2109	10	20	0.2044						

S_GBHCD6

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	20	1.473	02	20	1.284	03	20	1.303	04	20	1.252
05	20	1.67	06	20	1.425	07	20	1.729	08	20	1.525
09	20	1.557	10	20	1.412						

S_Heptachlor-13C10

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	20	0.6995	02	20	0.6937	03	20	0.7068	04	20	0.696
05	20	0.7781	06	20	0.776	07	20	0.78	08	20	0.7609
09	20	0.77	10	20	0.7044						

S_Heptachlrepox13C10

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	20	0.1895	02	20	0.1812	03	20	0.1769	04	20	0.1724
05	20	0.1905	06	20	0.1882	07	20	0.2122	08	20	0.194
09	20	0.2079	10	20	0.1889						

S_Oxychlordane-13C10

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	20	0.3895	02	20	0.3361	03	20	0.3702	04	20	0.3718
05	20	0.4287	06	20	0.3925	07	20	0.4523	08	20	0.4371
09	20	0.4172	10	20	0.4224						

alpha-Chlordane

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.5	2.373	02	1	2.371	03	2	2.274	04	5	2.15
05	10	2.234	06	20	2.254	07	40	2.029	08	60	2.178
09	80	2.302	10	100	2.162						

cis-Nonachlor

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.5	0.5997	02	1	0.6293	03	2	0.5825	04	5	0.5663
05	10	0.542	06	20	0.6008	07	40	0.5321	08	60	0.5851
09	80	0.6213	10	100	0.5971						

gamma-BHC (Lindane)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.5	2.273	02	1	2.225	03	2	2.392	04	5	2.257
05	10	2.059	06	20	2.36	07	40	2.026	08	60	2.198
09	80	2.253	10	100	2.223						

Client: Pacific Groundwater Group (PGG) **Service Request:** K1810270
Project: DTNA Swan Island Sediment **Calibration Date:** 11/6/2018

Initial Calibration Summary
Organochlorine Pesticides by GC/MS/MS

Calibration ID: KC1900099 **Signal ID:** 1
Instrument ID: K-MS-42

Analyte

gamma-Chlordane

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.5	0.9604	02	1	0.9971	03	2	0.9052	04	5	0.8828
05	10	0.9	06	20	0.887	07	40	0.8667	08	60	0.9044
09	80	0.975	10	100	0.9154						

trans-Nonachlor

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.5	1.545	02	1	1.591	03	2	1.466	04	5	1.33
05	10	1.557	06	20	1.608	07	40	1.514	08	60	1.518
09	80	1.609	10	100	1.464						

Client: Pacific Groundwater Group (PGG) **Service Request:** K1810270
Project: DTNA Swan Island Sediment **Calibration Date:** 11/6/2018

Initial Calibration Summary
Organochlorine Pesticides by GC/MS/MS

Calibration ID: KC1900099 **Signal ID:** 1
Instrument ID: K-MS-42

		Calibration Evaluation				Calibration Evaluation	
Analyte Name	Compound Type	Fit Type	Eval	Eval Result	Control Criteria	Average RRF	Minimum RRF
2,4'-DDD	TRG	Average RF	% RSD	12.4	≤20	1.055	0.01
2,4'-DDE	TRG	Average RF	% RSD	9.7	≤20	0.811	0.01
2,4'-DDT	TRG	Average RF	% RSD	9.6	≤20	2.035	0.01
4,4'-DDD	TRG	Average RF	% RSD	8.7	≤20	1.587	0.01
4,4'-DDE	TRG	Average RF	% RSD	10.5	≤20	0.7298	0.01
4,4'-DDT	TRG	Average RF	% RSD	4.3	≤20	1.104	0.01
Aldrin	TRG	Quadratic	COD	0.9991	≥	1.286	0.01
Dieldrin	TRG	Average RF	% RSD	10.4	≤20	1.411	0.01
Heptachlor	TRG	Average RF	% RSD	6.5	≤20	1.117	0.01
Oxychlordane	TRG	Average RF	% RSD	8.0	≤20	2.78	0.01
S_4,4'-DDT-d4	SURR	Average RF	% RSD	8.1	≤	2.324	0.01
S_4,4'DDD-d4	SURR	Average RF	% RSD	9.0	≤	4.074	0.01
S_Aldrin-13C12	SURR	Average RF	% RSD	8.0	≤	0.5227	0.01
S_Endrin-13C12	SURR	Average RF	% RSD	4.1	≤	0.1974	0.01
S_GBHCD6	SURR	Average RF	% RSD	11.0	≤	1.463	0.01
S_Heptachlor-13C10	SURR	Average RF	% RSD	5.3	≤	0.7365	0.01
S_Heptachlrepox13C10	SURR	Average RF	% RSD	6.5	≤	0.1902	0.01
S_Oxychlordane-13C10	SURR	Average RF	% RSD	8.9	≤	0.4018	0.01
alpha-Chlordane	TRG	Average RF	% RSD	4.8	≤20	2.233	0.01
cis-Nonachlor	TRG	Average RF	% RSD	5.4	≤20	0.5856	0.01
gamma-BHC (Lindane)	TRG	Average RF	% RSD	5.1	≤20	2.227	0.01
gamma-Chlordane	TRG	Average RF	% RSD	4.7	≤20	0.9194	0.01
trans-Nonachlor	TRG	Average RF	% RSD	5.6	≤20	1.52	0.01

Client: Pacific Groundwater Group (PGG) **Service Request:** K1810270
Project: DTNA Swan Island Sediment **Calibration Date:** 11/16/2018

Initial Calibration Verification Summary
Organochlorine Pesticides by GC/MS/MS

Calibration ID: KC1900105 **Signal ID:** 1
Instrument ID: K-MS-42

#	Lab Code	Sample Name	File Location	Acquisition Date
11	KC1900105-11	OC PEST ICV 20ng/mL SVM59-48K	Y:\MS42\data\111618\111618F018.D	11/16/2018 16:18

Analyte Name	Expected	Result	Average RF	SSV RF	% D	Criteria	Curve Fit
2,4'-DDD	20.0	20.6	1.076E0	1.11E0	3.16	±25	Average RF
2,4'-DDE	20.0	20.5	9.506E-1	9.742E-1	2.48	±25	Average RF
2,4'-DDT	20.0	17.8	2.242E0	2.0E0	-10.783	±25	Average RF
4,4'-DDD	20.0	20.1	1.615E0	1.62E0	0.320	±25	Average RF
4,4'-DDE	20.0	20.7	8.714E-1	9.034E-1	3.68	±25	Average RF
4,4'-DDT	20.0	19.1	1.157E0	1.104E0	-4.551	±25	Average RF
Aldrin	20.0	19.4	1.357E0	6.941E-1	-2.945	±25	Quadratic
alpha-Chlordane	20.0	18.6	2.408E0	2.243E0	-6.832	±25	Average RF
cis-Nonachlor	20.0	16.9	5.869E-1	4.95E-1	-15.672	±25	Average RF
Dieldrin	20.0	19.2	1.526E0	1.462E0	-4.168	±25	Average RF
gamma-BHC (Lindane)	20.0	19.3	2.092E0	2.019E0	-3.491	±25	Average RF
gamma-Chlordane	20.0	19.0	9.637E-1	9.15E-1	-5.056	±25	Average RF
Heptachlor	20.0	19.1	1.159E0	1.106E0	-4.610	±25	Average RF
Oxychlordane	20.0	19.6	2.704E0	2.65E0	-1.998	±25	Average RF
trans-Nonachlor	20.0	17.7	1.549E0	1.367E0	-11.742	±25	Average RF

Analyte Name	Expected	Result	Average RF	SSV RF	Rec.	Criteria	Curve Fit
S_4,4'DDD-d4	5.00	4.73	3.552E0	3.363E0	94.6	50-200	Average RF
S_4,4'-DDT-d4	5.00	4.71	1.587E0	1.494E0	94.2	50-200	Average RF
S_Aldrin-13C12	20.0	19.7	5.268E-1	5.179E-1	98.5	50-200	Average RF
S_Endrin-13C12	20.0	19.4	1.828E-1	1.772E-1	97.0	50-200	Average RF
S_GBHCD6	20.0	20.0	1.395E0	1.391E0	100	50-200	Average RF
S_Heptachlor-13C10	20.0	19.2	5.768E-1	5.534E-1	96.0	50-200	Average RF
S_Heptachlrepox13C10	20.0	20.6	1.838E-1	1.894E-1	103	50-200	Average RF
S_Oxychlordane-13C10	20.0	20.8	3.735E-1	3.892E-1	104	50-200	Average RF

Client: Pacific Groundwater Group (PGG) **Service Request:** K1810270
Project: DTNA Swan Island Sediment **Calibration Date:** 11/6/2018

Initial Calibration Verification Summary
Organochlorine Pesticides by GC/MS/MS

Calibration ID: KC1900099 **Signal ID:** 1
Instrument ID: K-MS-42

#	Lab Code	Sample Name	File Location	Acquisition Date
11	KC1900099-11	OC PEST ICV 20ng/mL SVM59-48K	Y:\MS42\data\110618\110618F022.D	11/06/2018 20:19

Analyte Name	Expected	Result	Average RF	SSV RF	% D	Criteria	Curve Fit
2,4'-DDD	20.0	21.4	1.055E0	1.13E0	7.14	±25	Average RF
2,4'-DDE	20.0	20.6	8.11E-1	8.357E-1	3.04	±25	Average RF
2,4'-DDT	20.0	16.7	2.035E0	1.699E0	-16.493	±25	Average RF
4,4'-DDD	20.0	19.5	1.587E0	1.546E0	-2.568	±25	Average RF
4,4'-DDE	20.0	22.4	7.298E-1	8.169E-1	11.93	±25	Average RF
4,4'-DDT	20.0	20.3	1.104E0	1.118E0	1.28	±25	Average RF
Aldrin	20.0	18.7	1.286E0	6.784E-1	-6.621	±25	Quadratic
alpha-Chlordane	20.0	21.0	2.233E0	2.34E0	4.80	±25	Average RF
cis-Nonachlor	20.0	19.9	5.856E-1	5.831E-1	-0.424	±25	Average RF
Dieldrin	20.0	19.5	1.411E0	1.379E0	-2.269	±25	Average RF
gamma-BHC (Lindane)	20.0	19.1	2.227E0	2.123E0	-4.650	±25	Average RF
gamma-Chlordane	20.0	20.2	9.194E-1	9.291E-1	1.05	±25	Average RF
Heptachlor	20.0	20.4	1.117E0	1.141E0	2.17	±25	Average RF
Oxychlordane	20.0	21.2	2.78E0	2.942E0	5.82	±25	Average RF
trans-Nonachlor	20.0	20.0	1.52E0	1.518E0	-0.124	±25	Average RF

Analyte Name	Expected	Result	Average RF	SSV RF	Rec.	Criteria	Curve Fit
S_4,4'DDD-d4	5.00	4.86	4.074E0	3.959E0	97.2	50-200	Average RF
S_4,4'-DDT-d4	5.00	5.07	2.324E0	2.356E0	101	50-200	Average RF
S_Aldrin-13C12	20.0	18.5	5.227E-1	4.844E-1	92.5	50-200	Average RF
S_Endrin-13C12	20.0	19.2	1.974E-1	1.897E-1	96.0	50-200	Average RF
S_GBHCD6	20.0	18.3	1.463E0	1.339E0	91.5	50-200	Average RF
S_Heptachlor-13C10	20.0	17.8	7.365E-1	6.57E-1	89.0	50-200	Average RF
S_Heptachlrepox13C10	20.0	19.4	1.902E-1	1.846E-1	97.0	50-200	Average RF
S_Oxychlordane-13C10	20.0	18.7	4.018E-1	3.766E-1	93.5	50-200	Average RF

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Analyzed:**	11/07/18 13:23

Continuing Calibration Verification (CCV) Summary
Organochlorine Pesticides by GC/MS/MS

Analysis Method:	ALS SOP	**Calibration Date:**	11/6/2018
File ID:	Y:\MS42\data\110718\110718F002.D	**Calibration ID:**	KC1900099
Signal ID:	1	**Analysis Lot:**	614289
		Units:	ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
2,4'-DDD	20.0	16.4	1.0547	0.8665	-17.8	NA	±25	Average RF
2,4'-DDE	20.0	17.6	0.811	0.712	-12.2	NA	±25	Average RF
2,4'-DDT	20.0	23.3	2.0349	2.3707	16.5	NA	±25	Average RF
4,4'-DDD	20.0	19.9	1.5869	1.5807	-0.4	NA	±25	Average RF
4,4'-DDE	20.0	15.8	0.7298	0.5753	-21.2	NA	±25	Average RF
4,4'-DDT	20.0	18.2	1.1035	1.0065	-8.8	NA	±25	Average RF
Aldrin	20.0	19.9	1.2861	0.7164	NA	-0.5	±25	Quadratic
alpha-Chlordane	20.0	19.6	2.2326	2.1831	-2.2	NA	±25	Average RF
cis-Nonachlor	20.0	17.7	0.5856	0.5175	-11.6	NA	±25	Average RF
Dieldrin	20.0	16.8	1.4111	1.1834	-16.1	NA	±25	Average RF
gamma-BHC (Lindane)	20.0	18.8	2.2266	2.0914	-6.1	NA	±25	Average RF
gamma-Chlordane	20.0	20.3	0.9194	0.9328	1.5	NA	±25	Average RF
Heptachlor	20.0	20.0	1.1169	1.1173	0.0	NA	±25	Average RF
Oxychlordane	20.0	19.5	2.7799	2.7122	-2.4	NA	±25	Average RF
trans-Nonachlor	20.0	19.6	1.5201	1.488	-2.1	NA	±25	Average RF

Analyte Name	Expected	Result	Average RF	CCV RF	Rec.	% Drift	Criteria	Curve Fit
S_4,4'DDD-d4	5.00	5.44	4.0744	4.4362	109	NA	50-200	Average RF
S_4,4'-DDT-d4	5.00	4.65	2.3243	2.1603	92.9	NA	50-200	Average RF
S_Aldrin-13C12	20.0	17.1	0.5227	0.4473	85.6	NA	50-200	Average RF
S_Endrin-13C12	20.0	20.3	0.1974	0.2008	102	NA	50-200	Average RF
S_GBHCD6	20.0	16.4	1.4629	1.2025	82.2	NA	50-200	Average RF
S_Heptachlor-13C10	20.0	18.2	0.7365	0.6696	90.9	NA	50-200	Average RF
S_Heptachlrepox13C10	20.0	16.9	0.1902	0.1606	84.5	NA	50-200	Average RF
S_Oxychlordane-13C10	20.0	17.3	0.4018	0.3478	86.6	NA	50-200	Average RF

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Analyzed:**	11/26/18 11:48

Continuing Calibration Verification (CCV) Summary
Organochlorine Pesticides by GC/MS/MS

Analysis Method:	ALS SOP	**Calibration Date:**	11/16/2018
File ID:	J:\MS42\Data\112618\112618F003.D	**Calibration ID:**	KC1900105
Signal ID:	1	**Analysis Lot:**	617367
		Units:	ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
2,4'-DDD	20.0	16.5	1.0759	0.8879	-17.5	NA	±25	Average RF
2,4'-DDE	20.0	19.0	0.9506	0.9044	-4.9	NA	±25	Average RF
2,4'-DDT	20.0	14.0	2.242	1.5668	-30.1*	NA	±25	Average RF
4,4'-DDD	20.0	19.0	1.6147	1.5314	-5.2	NA	±25	Average RF
4,4'-DDE	20.0	16.1	0.8714	0.7	-19.7	NA	±25	Average RF
4,4'-DDT	20.0	18.2	1.157	1.0522	-9.1	NA	±25	Average RF
Aldrin	20.0	19.7	1.3566	0.7042	NA	-1.3	±25	Quadratic
alpha-Chlordane	20.0	18.0	2.4076	2.1668	-10.0	NA	±25	Average RF
cis-Nonachlor	20.0	17.4	0.5869	0.5096	-13.2	NA	±25	Average RF
Dieldrin	20.0	16.8	1.5255	1.2783	-16.2	NA	±25	Average RF
gamma-BHC (Lindane)	20.0	18.3	2.092	1.9159	-8.4	NA	±25	Average RF
gamma-Chlordane	20.0	18.6	0.9637	0.8945	-7.2	NA	±25	Average RF
Heptachlor	20.0	19.0	1.1592	1.1041	-4.8	NA	±25	Average RF
Oxychlordane	20.0	18.7	2.7041	2.5231	-6.7	NA	±25	Average RF
trans-Nonachlor	20.0	16.0	1.5494	1.2428	-19.8	NA	±25	Average RF

Analyte Name	Expected	Result	Average RF	CCV RF	Rec.	% Drift	Criteria	Curve Fit
S_4,4'DDD-d4	5.00	5.12	3.5517	3.6338	102	NA	50-200	Average RF
S_4,4'-DDT-d4	5.00	5.60	1.5869	1.7761	112	NA	50-200	Average RF
S_Aldrin-13C12	20.0	22.0	0.5268	0.58	110	NA	50-200	Average RF
S_Endrin-13C12	20.0	22.2	0.1828	0.2026	111	NA	50-200	Average RF
S_GBHCD6	20.0	23.7	1.3949	1.6496	118	NA	50-200	Average RF
S_Heptachlor-13C10	20.0	24.3	0.5768	0.6999	121	NA	50-200	Average RF
S_Heptachlrepox13C10	20.0	22.3	0.1838	0.2046	111	NA	50-200	Average RF
S_Oxychlordane-13C10	20.0	22.1	0.3735	0.4129	111	NA	50-200	Average RF

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Analyzed:**	11/21/18 12:19

Continuing Calibration Verification (CCV) Summary
Organochlorine Pesticides by GC/MS/MS

Analysis Method:	ALS SOP	**Calibration Date:**	11/16/2018
File ID:	Y:\MS42\data\112118\112118F001.D	**Calibration ID:**	KC1900105
Signal ID:	1	**Analysis Lot:**	617359
		Units:	ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
2,4'-DDD	20.0	16.8	1.0759	0.9061	-15.8	NA	±25	Average RF
2,4'-DDE	20.0	18.3	0.9506	0.8703	-8.4	NA	±25	Average RF
2,4'-DDT	20.0	13.2	2.242	1.4801	-34.0*	NA	±25	Average RF
4,4'-DDD	20.0	19.4	1.6147	1.5682	-2.9	NA	±25	Average RF
4,4'-DDE	20.0	16.1	0.8714	0.7029	-19.3	NA	±25	Average RF
4,4'-DDT	20.0	17.9	1.157	1.038	-10.3	NA	±25	Average RF
Aldrin	20.0	19.8	1.3566	0.7054	NA	-1.1	±25	Quadratic
alpha-Chlordane	20.0	18.2	2.4076	2.1901	-9.0	NA	±25	Average RF
cis-Nonachlor	20.0	18.4	0.5869	0.5404	-7.9	NA	±25	Average RF
Dieldrin	20.0	19.9	1.5255	1.5197	-0.4	NA	±25	Average RF
gamma-BHC (Lindane)	20.0	17.8	2.092	1.8615	-11.0	NA	±25	Average RF
gamma-Chlordane	20.0	18.8	0.9637	0.9076	-5.8	NA	±25	Average RF
Heptachlor	20.0	18.9	1.1592	1.0952	-5.5	NA	±25	Average RF
Oxychlordane	20.0	19.1	2.7041	2.5853	-4.4	NA	±25	Average RF
trans-Nonachlor	20.0	16.3	1.5494	1.2618	-18.6	NA	±25	Average RF

Analyte Name	Expected	Result	Average RF	CCV RF	Rec.	% Drift	Criteria	Curve Fit
S_4,4'DDD-d4	5.00	5.03	3.5517	3.5721	101	NA	50-200	Average RF
S_4,4'-DDT-d4	5.00	5.40	1.5869	1.7126	108	NA	50-200	Average RF
S_Aldrin-13C12	20.0	20.8	0.5268	0.5488	104	NA	50-200	Average RF
S_Endrin-13C12	20.0	19.0	0.1828	0.1737	95.1	NA	50-200	Average RF
S_GBHCD6	20.0	20.9	1.3949	1.46	105	NA	50-200	Average RF
S_Heptachlor-13C10	20.0	23.3	0.5768	0.6732	117	NA	50-200	Average RF
S_Heptachlrepox13C10	20.0	21.2	0.1838	0.1951	106	NA	50-200	Average RF
S_Oxychlordane-13C10	20.0	20.9	0.3735	0.3909	105	NA	50-200	Average RF

Client: Pacific Groundwater Group (PGG) **Service Request:**K1810270
Project: DTNA Swan Island Sediment/2006-00115

Analysis Run Log
Organochlorine Pesticides by GC/MS/MS

Analysis Method: ALS SOP **Analysis Lot:**614289
Instrument ID:K-MS-42

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
Y:\MS42\data\110718\110718F002.D	Continuing Calibration Verification	KQ1816317-01	11/7/2018	13:23	
Y:\MS42\data\110718\110718F003.D	Method Blank	KQ1815624-04	11/7/2018	14:41	
Y:\MS42\data\110718\110718F005.D	N1-0to30-101518 MS	KQ1815624-01	11/7/2018	15:16	
Y:\MS42\data\110718\110718F006.D	N1-0to30-101518 DMS	KQ1815624-02	11/7/2018	15:34	
Y:\MS42\data\110718\110718F007.D	L1-0to30-101518	K1810270-004	11/7/2018	15:52	
Y:\MS42\data\110718\110718F008.D	N1-0to30-101518	K1810270-006	11/7/2018	16:09	
Y:\MS42\data\110718\110718F009.D	T1-0to30-101518	K1810270-010	11/7/2018	16:50	
Y:\MS42\data\110718\110718F010.D	R1-0to30-101518	K1810270-011	11/7/2018	17:08	
Y:\MS42\data\110718\110718F011.D	P1-0to30-101518	K1810270-012	11/7/2018	17:26	
Y:\MS42\data\110718\110718F012.D	T3-0to28-101618	K1810270-013	11/7/2018	17:43	
Y:\MS42\data\110718\110718F013.D	T7-0to31-101618	K1810270-015	11/7/2018	18:01	
Y:\MS42\data\110718\110718F014.D	T5-0to26-101618	K1810270-016	11/7/2018	18:19	
Y:\MS42\data\110718\110718F015.D	P3-0to29-101618	K1810270-017	11/7/2018	18:36	
Y:\MS42\data\110718\110718F016.D	R5-0to25-101618	K1810270-018	11/7/2018	18:54	
Y:\MS42\data\110718\110718F017.D	514-0to29-101618	K1810270-019	11/7/2018	19:11	
Y:\MS42\data\110718\110718F018.D	P5-0to26-101618	K1810270-020	11/7/2018	19:29	
Y:\MS42\data\110718\110718F019.D	R3-0to33-101718	K1810270-029	11/7/2018	19:47	

Client: Pacific Groundwater Group (PGG) **Service Request:**K1810270
Project: DTNA Swan Island Sediment/2006-00115

Analysis Run Log
Organochlorine Pesticides by GC/MS/MS

Analysis Method: ALS SOP **Analysis Lot:**617359
Instrument ID:K-MS-42

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
Y:\MS42\data\112118\112118F001.D	Continuing Calibration Verification	KQ1817797-02	11/21/2018	12:19	
Y:\MS42\data\112118\112118F001.D	ZZZZZZZ	ZZZZZZZ	11/21/2018	12:19	
Y:\MS42\data\112118\112118F002.D	ZZZZZZZ	ZZZZZZZ	11/21/2018	12:40	
Y:\MS42\data\112118\112118F003.D	ZZZZZZZ	ZZZZZZZ	11/21/2018	12:58	
Y:\MS42\data\112118\112118F004.D	ZZZZZZZ	ZZZZZZZ	11/21/2018	13:15	
Y:\MS42\data\112118\112118F005.D	Lab Control Sample	KQ1815624-03	11/21/2018	13:33	
Y:\MS42\data\112118\112118F006.D	ZZZZZZZ	ZZZZZZZ	11/21/2018	13:51	
Y:\MS42\data\112118\112118F007.D	ZZZZZZZ	ZZZZZZZ	11/21/2018	14:08	
Y:\MS42\data\112118\112118F008.D	ZZZZZZZ	ZZZZZZZ	11/21/2018	14:26	
Y:\MS42\data\112118\112118F009.D	ZZZZZZZ	ZZZZZZZ	11/21/2018	14:44	
Y:\MS42\data\112118\112118F010.D	ZZZZZZZ	ZZZZZZZ	11/21/2018	15:01	
Y:\MS42\data\112118\112118F011.D	ZZZZZZZ	ZZZZZZZ	11/21/2018	15:19	
Y:\MS42\data\112118\112118F012.D	ZZZZZZZ	ZZZZZZZ	11/21/2018	15:36	
Y:\MS42\data\112118\112118F013.D	ZZZZZZZ	ZZZZZZZ	11/21/2018	15:54	
Y:\MS42\data\112118\112118F014.D	ZZZZZZZ	ZZZZZZZ	11/21/2018	16:12	
Y:\MS42\data\112118\112118F015.D	ZZZZZZZ	ZZZZZZZ	11/21/2018	16:29	
Y:\MS42\data\112118\112118F016.D	ZZZZZZZ	ZZZZZZZ	11/21/2018	16:47	
Y:\MS42\data\112118\112118F017.D	ZZZZZZZ	ZZZZZZZ	11/21/2018	17:05	
Y:\MS42\data\112118\112118F018.D	ZZZZZZZ	ZZZZZZZ	11/21/2018	17:22	
Y:\MS42\data\112118\112118F019.D	ZZZZZZZ	ZZZZZZZ	11/21/2018	17:40	
Y:\MS42\data\112118\112118F020.D	ZZZZZZZ	ZZZZZZZ	11/21/2018	17:57	
Y:\MS42\data\112118\112118F021.D	ZZZZZZZ	ZZZZZZZ	11/21/2018	18:15	
Y:\MS42\data\112118\112118F022.D	ZZZZZZZ	ZZZZZZZ	11/21/2018	18:33	
Y:\MS42\data\112118\112118F023.D	ZZZZZZZ	ZZZZZZZ	11/21/2018	18:50	
Y:\MS42\data\112118\112118F024.D	ZZZZZZZ	ZZZZZZZ	11/21/2018	19:08	
Y:\MS42\data\112118\112118F025.D	ZZZZZZZ	ZZZZZZZ	11/21/2018	19:26	
Y:\MS42\data\112118\112118F026.D	ZZZZZZZ	ZZZZZZZ	11/21/2018	19:43	
Y:\MS42\data\112118\112118F027.D	ZZZZZZZ	ZZZZZZZ	11/21/2018	20:01	
Y:\MS42\data\112118\112118F028.D	ZZZZZZZ	ZZZZZZZ	11/21/2018	20:18	
Y:\MS42\data\112118\112118F029.D	ZZZZZZZ	ZZZZZZZ	11/21/2018	20:36	
Y:\MS42\data\112118\112118F030.D	ZZZZZZZ	ZZZZZZZ	11/21/2018	20:54	

Client: Pacific Groundwater Group (PGG) **Service Request:**K1810270
Project: DTNA Swan Island Sediment/2006-00115

Analysis Run Log
Organochlorine Pesticides by GC/MS/MS

Analysis Method: ALS SOP **Analysis Lot:**617367
Instrument ID:K-MS-42

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
J:\MS42\Data\112618\112618F003.D	Continuing Calibration Verification	KQ1817669-01	11/26/2018	11:48	
J:\MS42\Data\112618\112618F003.D	ZZZZZZZ	ZZZZZZZ	11/26/2018	11:48	
J:\MS42\Data\112618\112618F004.D	ZZZZZZZ	ZZZZZZZ	11/26/2018	12:33	
J:\MS42\Data\112618\112618F005.D	ZZZZZZZ	ZZZZZZZ	11/26/2018	12:51	
J:\MS42\Data\112618\112618F006.D	ZZZZZZZ	ZZZZZZZ	11/26/2018	13:08	
J:\MS42\Data\112618\112618F007.D	ZZZZZZZ	ZZZZZZZ	11/26/2018	13:26	
J:\MS42\Data\112618\112618F008.D	ZZZZZZZ	ZZZZZZZ	11/26/2018	13:44	
J:\MS42\Data\112618\112618F009.D	ZZZZZZZ	ZZZZZZZ	11/26/2018	14:01	
J:\MS42\Data\112618\112618F010.D	ZZZZZZZ	ZZZZZZZ	11/26/2018	14:19	
J:\MS42\Data\112618\112618F011.D	ZZZZZZZ	ZZZZZZZ	11/26/2018	14:36	
J:\MS42\Data\112618\112618F012.D	ZZZZZZZ	ZZZZZZZ	11/26/2018	14:54	
J:\MS42\Data\112618\112618F013.D	ZZZZZZZ	ZZZZZZZ	11/26/2018	15:12	
J:\MS42\Data\112618\112618F014.D	ZZZZZZZ	ZZZZZZZ	11/26/2018	15:29	
J:\MS42\Data\112618\112618F015.D	ZZZZZZZ	ZZZZZZZ	11/26/2018	15:47	
J:\MS42\Data\112618\112618F016.D	ZZZZZZZ	ZZZZZZZ	11/26/2018	16:05	
J:\MS42\Data\112618\112618F017.D	ZZZZZZZ	ZZZZZZZ	11/26/2018	16:22	
J:\MS42\Data\112618\112618F018.D	ZZZZZZZ	ZZZZZZZ	11/26/2018	16:40	
J:\MS42\Data\112618\112618F019.D	ZZZZZZZ	ZZZZZZZ	11/26/2018	16:57	
J:\MS42\Data\112618\112618F020.D	ZZZZZZZ	ZZZZZZZ	11/26/2018	17:15	
J:\MS42\Data\112618\112618F021.D	ZZZZZZZ	ZZZZZZZ	11/26/2018	17:33	
J:\MS42\Data\112618\112618F022.D	ZZZZZZZ	ZZZZZZZ	11/26/2018	17:50	
J:\MS42\Data\112618\112618F023.D	ZZZZZZZ	ZZZZZZZ	11/26/2018	18:08	
J:\MS42\Data\112618\112618F024.D	ZZZZZZZ	ZZZZZZZ	11/26/2018	18:25	
J:\MS42\Data\112618\112618F025.D	ZZZZZZZ	ZZZZZZZ	11/26/2018	18:43	
J:\MS42\Data\112618\112618F026.D	ZZZZZZZ	ZZZZZZZ	11/26/2018	19:01	
J:\MS42\Data\112618\112618F027.D	ZZZZZZZ	ZZZZZZZ	11/26/2018	19:18	
J:\MS42\Data\112618\112618F028.D	ZZZZZZZ	ZZZZZZZ	11/26/2018	19:36	
J:\MS42\Data\112618\112618F029.D	ZZZZZZZ	ZZZZZZZ	11/26/2018	19:54	
J:\MS42\Data\112618\112618F030.D	ZZZZZZZ	ZZZZZZZ	11/26/2018	20:11	
J:\MS42\Data\112618\112618F031.D	Method Blank	KQ1816244-04	11/26/2018	20:29	
J:\MS42\Data\112618\112618F032.D	Lab Control Sample	KQ1816244-03	11/26/2018	20:46	
J:\MS42\Data\112618\112618F033.D	ZZZZZZZ	ZZZZZZZ	11/26/2018	21:04	
J:\MS42\Data\112618\112618F034.D	ZZZZZZZ	ZZZZZZZ	11/26/2018	21:22	
J:\MS42\Data\112618\112618F035.D	N3-0to26-101518	K1810270-001	11/26/2018	21:39	
J:\MS42\Data\112618\112618F036.D	ZZZZZZZ	ZZZZZZZ	11/26/2018	21:57	
J:\MS42\Data\112618\112618F037.D	ZZZZZZZ	ZZZZZZZ	11/26/2018	22:15	
J:\MS42\Data\112618\112618F039.D	ZZZZZZZ	ZZZZZZZ	11/26/2018	22:50	
J:\MS42\Data\112618\112618F039.D	ZZZZZZZ	ZZZZZZZ	11/26/2018	22:50	

Prep Summary Report

Client: Pacific Groundwater Group (PGG) **Service Request:**K1810270
Project: DTNA Swan Island Sediment/2006-00115
Sample Matrix: Sediment

Organochlorine Pesticides by GC/MS/MS

Prep Method: EPA 3541 **Extraction Lot:** 325840
Analytical Method: ALS SOP **Extraction Date:** 11/07/18 11:10

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Amount	Percent Solids
N3-0to26-101518	K1810270-001	10/15/18	10/19/18	20.166 g	1 mL	74.3
Lab Control Sample	KQ1816244-03LCS	NA	NA	10 g	1 mL	
Method Blank	KQ1816244-04MB	NA	NA	20.1660 g	1 mL	

Prep Summary Report

Client: Pacific Groundwater Group (PGG) **Service Request:**K1810270
Project: DTNA Swan Island Sediment/2006-00115
Sample Matrix: Sediment

Organochlorine Pesticides by GC/MS/MS

Prep Method: EPA 3541 **Extraction Lot:** 325137
Analytical Method: ALS SOP **Extraction Date:** 10/29/18 16:09

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Amount	Percent Solids
L1-0to30-101518	K1810270-004	10/15/18	10/19/18	20.126 g	1 mL	90.3
N1-0to30-101518	K1810270-006	10/15/18	10/19/18	20.439 g	1 mL	75.8
T1-0to30-101518	K1810270-010	10/15/18	10/19/18	20.217 g	1 mL	63.0
R1-0to30-101518	K1810270-011	10/15/18	10/19/18	20.344 g	1 mL	83.9
P1-0to30-101518	K1810270-012	10/15/18	10/19/18	20.315 g	1 mL	76.7
T3-0to28-101618	K1810270-013	10/16/18	10/19/18	20.236 g	1 mL	43.8
T7-0to31-101618	K1810270-015	10/16/18	10/19/18	20.101 g	1 mL	39.3
T5-0to26-101618	K1810270-016	10/16/18	10/19/18	20.157 g	1 mL	47.8
P3-0to29-101618	K1810270-017	10/16/18	10/19/18	20.225 g	1 mL	48.7
R5-0to25-101618	K1810270-018	10/16/18	10/19/18	20.273 g	1 mL	45.9
514-0to29-101618	K1810270-019	10/16/18	10/19/18	20.041 g	1 mL	40.5
P5-0to26-101618	K1810270-020	10/16/18	10/19/18	20.276 g	1 mL	35.2
R3-0to33-101718	K1810270-029	10/17/18	10/19/18	20.353 g	1 mL	36.1
Matrix Spike	KQ1815624-01MS	10/15/18	10/19/18	20.243 g	1 mL	75.8
Duplicate Matrix Spike	KQ1815624-02DMS	10/15/18	10/19/18	20.097 g	1 mL	75.8
Lab Control Sample	KQ1815624-03LCS	NA	NA	10 g	1 mL	
Method Blank	KQ1815624-04MB	NA	NA	20.4390 g	1 mL	

Butyltins

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Analytical Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/15/18 08:46
Sample Matrix:	Sediment	**Date Received:**	10/19/18 12:30
Sample Name:	N3-0to26-101518	**Units:**	ug/Kg
Lab Code:	K1810270-001	**Basis:**	Dry

Butyltins

Analysis Method: ALS SOP
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Tri-n-butyltin Cation	**53**	1.3	0.58	1	12/02/18 12:28	11/19/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Tri-n-propyltin	60	10 - 120	12/02/18 12:28	

Analytical Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/15/18 10:10
Sample Matrix:	Sediment	**Date Received:**	10/19/18 12:30
Sample Name:	L1-0to30-101518	**Units:**	ug/Kg
Lab Code:	K1810270-004	**Basis:**	Dry

Butyltins

Analysis Method: ALS SOP
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Tri-n-butyltin Cation	**6.5**	1.1	0.48	1	11/23/18 17:20	10/29/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Tri-n-propyltin	71	10 - 120	11/23/18 17:20	

Analytical Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/15/18 11:40
Sample Matrix:	Sediment	**Date Received:**	10/19/18 12:30
Sample Name:	N1-0to30-101518	**Units:**	ug/Kg
Lab Code:	K1810270-006	**Basis:**	Dry

Butyltins

Analysis Method: ALS SOP
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Tri-n-butyltin Cation	**0.64 JP**	1.3	0.57	1	11/22/18 17:44	10/29/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Tri-n-propyltin	65	10 - 120	11/22/18 17:44	

Analytical Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/15/18 15:35
Sample Matrix:	Sediment	**Date Received:**	10/19/18 12:30
Sample Name:	T1-0to30-101518	**Units:**	ug/Kg
Lab Code:	K1810270-010	**Basis:**	Dry

Butyltins

Analysis Method: ALS SOP
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Tri-n-butyltin Cation	ND U	1.6	0.68	1	11/22/18 18:02	10/29/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Tri-n-propyltin	62	10 - 120	11/22/18 18:02	

Analytical Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/15/18 14:37
Sample Matrix:	Sediment	**Date Received:**	10/19/18 12:30
Sample Name:	R1-0to30-101518	**Units:**	ug/Kg
Lab Code:	K1810270-011	**Basis:**	Dry

Butyltins

Analysis Method: ALS SOP
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Tri-n-butyltin Cation	**0.82 J**	1.2	0.51	1	11/23/18 17:39	10/29/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Tri-n-propyltin	58	10 - 120	11/23/18 17:39	

Analytical Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/15/18 13:50
Sample Matrix:	Sediment	**Date Received:**	10/19/18 12:30
Sample Name:	P1-0to30-101518	**Units:**	ug/Kg
Lab Code:	K1810270-012	**Basis:**	Dry

Butyltins

Analysis Method: ALS SOP
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Tri-n-butyltin Cation	**4.3**	1.3	0.56	1	11/23/18 17:57	10/29/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Tri-n-propyltin	59	10 - 120	11/23/18 17:57	

Analytical Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/16/18 16:30
Sample Matrix:	Sediment	**Date Received:**	10/19/18 12:30
Sample Name:	T3-0to28-101618	**Units:**	ug/Kg
Lab Code:	K1810270-013	**Basis:**	Dry

Butyltins

Analysis Method: ALS SOP
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Tri-n-butyltin Cation	**100**	2.3	0.98	1	11/23/18 18:16	10/29/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Tri-n-propyltin	64	10 - 120	11/23/18 18:16	

Analytical Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/16/18 14:00
Sample Matrix:	Sediment	**Date Received:**	10/19/18 12:30
Sample Name:	T7-0to31-101618	**Units:**	ug/Kg
Lab Code:	K1810270-015	**Basis:**	Dry

Butyltins

Analysis Method: ALS SOP
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Tri-n-butyltin Cation	**170**	2.5	1.1	1	11/23/18 18:35	10/29/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Tri-n-propyltin	77	10 - 120	11/23/18 18:35	

Analytical Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/16/18 15:13
Sample Matrix:	Sediment	**Date Received:**	10/19/18 12:30
Sample Name:	T5-0to26-101618	**Units:**	ug/Kg
Lab Code:	K1810270-016	**Basis:**	Dry

Butyltins

Analysis Method: ALS SOP
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Tri-n-butyltin Cation	**450**	21	8.9	10	11/23/18 18:53	10/29/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Tri-n-propyltin	82	10 - 120	11/23/18 18:53	

Analytical Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/16/18 10:50
Sample Matrix:	Sediment	**Date Received:**	10/19/18 12:30
Sample Name:	P3-0to29-101618	**Units:**	ug/Kg
Lab Code:	K1810270-017	**Basis:**	Dry

Butyltins

Analysis Method: ALS SOP
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Tri-n-butyltin Cation	**100**	2.0	0.88	1	11/23/18 19:11	10/29/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Tri-n-propyltin	78	10 - 120	11/23/18 19:11	

Analytical Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/16/18 12:09
Sample Matrix:	Sediment	**Date Received:**	10/19/18 12:30
Sample Name:	R5-0to25-101618	**Units:**	ug/Kg
Lab Code:	K1810270-018	**Basis:**	Dry

Butyltins

Analysis Method: ALS SOP
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Tri-n-butyltin Cation	**700**	22	9.3	10	11/23/18 19:30	10/29/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Tri-n-propyltin	66	10 - 120	11/23/18 19:30	

Analytical Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/16/18 11:25
Sample Matrix:	Sediment	**Date Received:**	10/19/18 12:30
Sample Name:	514-0to29-101618	**Units:**	ug/Kg
Lab Code:	K1810270-019	**Basis:**	Dry

Butyltins

Analysis Method: ALS SOP
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Tri-n-butyltin Cation	**180**	2.4	1.1	1	11/22/18 21:06	10/29/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Tri-n-propyltin	64	10 - 120	11/22/18 21:06	

Analytical Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/16/18 09:16
Sample Matrix:	Sediment	**Date Received:**	10/19/18 12:30
Sample Name:	P5-0to26-101618	**Units:**	ug/Kg
Lab Code:	K1810270-020	**Basis:**	Dry

Butyltins

Analysis Method: ALS SOP
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Tri-n-butyltin Cation	**580**	28	12	10	11/23/18 20:26	10/29/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Tri-n-propyltin	64	10 - 120	11/23/18 20:26	

Analytical Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/17/18 09:28
Sample Matrix:	Sediment	**Date Received:**	10/19/18 12:30
Sample Name:	R3-0to33-101718	**Units:**	ug/Kg
Lab Code:	K1810270-029	**Basis:**	Dry

Butyltins

Analysis Method: ALS SOP
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Tri-n-butyltin Cation	**450**	27	12	10	11/23/18 20:44	10/29/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Tri-n-propyltin	73	10 - 120	11/23/18 20:44	

Analytical Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	NA
Sample Matrix:	Sediment	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/Kg
Lab Code:	KQ1815623-04	**Basis:**	Dry

Butyltins

Analysis Method: ALS SOP
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Tri-n-butyltin Cation	ND U	0.98	0.43	1	11/22/18 22:57	10/29/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Tri-n-propyltin	54	10 - 120	11/22/18 22:57	

Analytical Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	NA
Sample Matrix:	Sediment	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/Kg
Lab Code:	KQ1816241-04	**Basis:**	Dry

Butyltins

Analysis Method: ALS SOP
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Tri-n-butyltin Cation	ND U	0.98	0.43	1	12/01/18 17:34	11/19/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Tri-n-propyltin	76	10 - 120	12/01/18 17:34	

Confirmation Results

Client: Pacific Groundwater Group (PGG)
Project: DTNA Swan Island Sediment/2006-00115
SRM Matrix: Sediment

Service Request: K1810270
Date Collected: 10/15/18 08:46
Date Received: 10/19/18

Sample Name: N3-0to26-101518
Lab Code: K1810270-001

Units: ug/Kg
Basis: Dry
Percent Solids: 74.3

Butyltins

Analytical Method: ALS SOP
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Tri-n-butyltin Cation	0.58	53	53	<1		1	12/02/18 12:28

Confirmation Results

Client: Pacific Groundwater Group (PGG)
Project: DTNA Swan Island Sediment/2006-00115
SRM Matrix: Sediment

Service Request: K1810270
Date Collected: 10/15/18 10:10
Date Received: 10/19/18

Sample Name: L1-0to30-101518
Lab Code: K1810270-004

Units: ug/Kg
Basis: Dry
Percent Solids: 90.3

Butyltins

Analytical Method: ALS SOP
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Tri-n-butyltin Cation	0.48	6.5	6.5	<1		1	11/23/18 17:20

Confirmation Results

Client: Pacific Groundwater Group (PGG)
Project: DTNA Swan Island Sediment/2006-00115
SRM Matrix: Sediment

Service Request: K1810270
Date Collected: 10/15/18 11:40
Date Received: 10/19/18

Sample Name: N1-0to30-101518
Lab Code: K1810270-006

Units: ug/Kg
Basis: Dry
Percent Solids: 75.8

Butyltins

Analytical Method: ALS SOP
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Tri-n-butyltin Cation	0.57	0.64	0.57	12	JP	1	11/22/18 17:44

Confirmation Results

Client: Pacific Groundwater Group (PGG)
Project: DTNA Swan Island Sediment/2006-00115
SRM Matrix: Sediment

Service Request: K1810270
Date Collected: 10/15/18 14:37
Date Received: 10/19/18

Sample Name: R1-0to30-101518
Lab Code: K1810270-011

Units: ug/Kg
Basis: Dry
Percent Solids: 83.9

Butyltins

Analytical Method: ALS SOP
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Tri-n-butyltin Cation	0.51	0.82	1.1	29	J	1	11/23/18 17:39

Confirmation Results

Client: Pacific Groundwater Group (PGG)
Project: DTNA Swan Island Sediment/2006-00115
SRM Matrix: Sediment

Service Request: K1810270
Date Collected: 10/15/18 13:50
Date Received: 10/19/18

Sample Name: P1-0to30-101518
Lab Code: K1810270-012

Units: ug/Kg
Basis: Dry
Percent Solids: 76.7

Butyltins

Analytical Method: ALS SOP
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Tri-n-butyltin Cation	0.56	4.3	4.4	2		1	11/23/18 17:57

Confirmation Results

Client: Pacific Groundwater Group (PGG)
Project: DTNA Swan Island Sediment/2006-00115
SRM Matrix: Sediment

Service Request: K1810270
Date Collected: 10/16/18 16:30
Date Received: 10/19/18

Sample Name: T3-0to28-101618
Lab Code: K1810270-013

Units: ug/Kg
Basis: Dry
Percent Solids: 43.8

Butyltins

Analytical Method: ALS SOP
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Tri-n-butyltin Cation	0.98	100	110	10		1	11/23/18 18:16

Confirmation Results

Client: Pacific Groundwater Group (PGG)
Project: DTNA Swan Island Sediment/2006-00115
SRM Matrix: Sediment

Service Request: K1810270
Date Collected: 10/16/18 14:00
Date Received: 10/19/18

Sample Name: T7-0to31-101618
Lab Code: K1810270-015

Units: ug/Kg
Basis: Dry
Percent Solids: 39.3

Butyltins

Analytical Method: ALS SOP
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Tri-n-butyltin Cation	1.1	170	180	6		1	11/23/18 18:35

Confirmation Results

Client: Pacific Groundwater Group (PGG)
Project: DTNA Swan Island Sediment/2006-00115
SRM Matrix: Sediment

Service Request: K1810270
Date Collected: 10/16/18 15:13
Date Received: 10/19/18

Sample Name: T5-0to26-101618
Lab Code: K1810270-016

Units: ug/Kg
Basis: Dry
Percent Solids: 47.8

Butyltins

Analytical Method: ALS SOP
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Tri-n-butyltin Cation	8.9	450	450	<1		10	11/23/18 18:53

Confirmation Results

Client: Pacific Groundwater Group (PGG)
Project: DTNA Swan Island Sediment/2006-00115
SRM Matrix: Sediment

Service Request: K1810270
Date Collected: 10/16/18 10:50
Date Received: 10/19/18

Sample Name: P3-0to29-101618
Lab Code: K1810270-017

Units: ug/Kg
Basis: Dry
Percent Solids: 48.7

Butyltins

Analytical Method: ALS SOP
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Tri-n-butyltin Cation	0.88	100	110	10		1	11/23/18 19:11

Confirmation Results

Client: Pacific Groundwater Group (PGG)
Project: DTNA Swan Island Sediment/2006-00115
SRM Matrix: Sediment

Service Request: K1810270
Date Collected: 10/16/18 12:09
Date Received: 10/19/18

Sample Name: R5-0to25-101618
Lab Code: K1810270-018

Units: ug/Kg
Basis: Dry
Percent Solids: 45.9

Butyltins

Analytical Method: ALS SOP
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Tri-n-butyltin Cation	9.3	700	710	1		10	11/23/18 19:30

Confirmation Results

Client: Pacific Groundwater Group (PGG)
Project: DTNA Swan Island Sediment/2006-00115
SRM Matrix: Sediment

Service Request: K1810270
Date Collected: 10/16/18 11:25
Date Received: 10/19/18

Sample Name: 514-0to29-101618
Lab Code: K1810270-019

Units: ug/Kg
Basis: Dry
Percent Solids: 40.5

Butyltins

Analytical Method: ALS SOP
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Tri-n-butyltin Cation	1.1	180	190	5		1	11/22/18 21:06

Confirmation Results

Client: Pacific Groundwater Group (PGG)
Project: DTNA Swan Island Sediment/2006-00115
SRM Matrix: Sediment

Service Request: K1810270
Date Collected: 10/16/18 09:16
Date Received: 10/19/18

Sample Name: P5-0to26-101618
Lab Code: K1810270-020

Units: ug/Kg
Basis: Dry
Percent Solids: 35.2

Butyltins

Analytical Method: ALS SOP
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Tri-n-butyltin Cation	12	580	590	2		10	11/23/18 20:26

Confirmation Results

Client: Pacific Groundwater Group (PGG)
Project: DTNA Swan Island Sediment/2006-00115
SRM Matrix: Sediment

Service Request: K1810270
Date Collected: 10/17/18 09:28
Date Received: 10/19/18

Sample Name: R3-0to33-101718
Lab Code: K1810270-029

Units: ug/Kg
Basis: Dry
Percent Solids: 36.1

Butyltins

Analytical Method: ALS SOP
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Tri-n-butyltin Cation	12	450	470	4		10	11/23/18 20:44

Confirmation Results

Client: Pacific Groundwater Group (PGG)
Project: DTNA Swan Island Sediment/2006-00115
SRM Matrix: Sediment

Service Request: K1810270
Date Collected: 10/15/18 10:10
Date Received: 10/19/18

Sample Name: L1-0to30-101518
Lab Code: KQ1815623-01

Units: ug/Kg
Basis: Dry
Percent Solids: 90.3

Butyltins

Analytical Method: ALS SOP
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Tri-n-butyltin Cation	0.47	19.8	20.3	2		1	11/22/18 22:01

Confirmation Results

Client: Pacific Groundwater Group (PGG)
Project: DTNA Swan Island Sediment/2006-00115
SRM Matrix: Sediment

Service Request: K1810270
Date Collected: 10/15/18 10:10
Date Received: 10/19/18

Sample Name: L1-0to30-101518
Lab Code: KQ1815623-02

Units: ug/Kg
Basis: Dry
Percent Solids: 90.3

Butyltins

Analytical Method: ALS SOP
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Tri-n-butyltin Cation	0.48	18.8	19.7	5		1	11/22/18 22:20

Confirmation Results

Client: Pacific Groundwater Group (PGG)
Project: DTNA Swan Island Sediment/2006-00115
SRM Matrix: Sediment

Service Request: K1810270
Date Collected: NA
Date Received:

Sample Name: Lab Control Sample
Lab Code: KQ1815623-03

Units: ug/Kg
Basis: Dry

Butyltins

Analytical Method: ALS SOP
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Tri-n-butyltin Cation	0.43	17.4	17.6	1		1	11/22/18 22:38

Confirmation Results

Client: Pacific Groundwater Group (PGG)
Project: DTNA Swan Island Sediment/2006-00115
SRM Matrix: Sediment

Service Request: K1810270
Date Collected: 10/15/18 08:46
Date Received: 10/19/18

Sample Name: N3-0to26-101518
Lab Code: KQ1816241-01

Units: ug/Kg
Basis: Dry
Percent Solids: 74.3

Butyltins

Analytical Method: ALS SOP
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Tri-n-butyltin Cation	0.58	85.3	74.2	14		1	12/01/18 16:38

Confirmation Results

Client: Pacific Groundwater Group (PGG)
Project: DTNA Swan Island Sediment/2006-00115
SRM Matrix: Sediment

Service Request: K1810270
Date Collected: 10/15/18 08:46
Date Received: 10/19/18

Sample Name: N3-0to26-101518
Lab Code: KQ1816241-02

Units: ug/Kg
Basis: Dry
Percent Solids: 74.3

Butyltins

Analytical Method: ALS SOP
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Tri-n-butyltin Cation	0.58	63.9	60.9	5		1	12/01/18 16:57

Confirmation Results

Client: Pacific Groundwater Group (PGG)
Project: DTNA Swan Island Sediment/2006-00115
SRM Matrix: Sediment

Service Request: K1810270
Date Collected: NA
Date Received:

Sample Name: Lab Control Sample
Lab Code: KQ1816241-03

Units: ug/Kg
Basis: Dry

Butyltins

Analytical Method: ALS SOP
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Tri-n-butyltin Cation	0.43	15.6	15.0	4		1	12/01/18 17:16

Client: Pacific Groundwater Group (PGG) **Service Request:** K1810270
Project: DTNA Swan Island Sediment/2006-00115
Sample Matrix: Sediment

SURROGATE RECOVERY SUMMARY
Butyltins

Analysis Method: ALS SOP
Extraction Method: Method

Sample Name	Lab Code	Tri-n-propyltin 10-120
N3-0to26-101518	K1810270-001	60
L1-0to30-101518	K1810270-004	71
N1-0to30-101518	K1810270-006	65
T1-0to30-101518	K1810270-010	62
R1-0to30-101518	K1810270-011	58
P1-0to30-101518	K1810270-012	59
T3-0to28-101618	K1810270-013	64
T7-0to31-101618	K1810270-015	77
T5-0to26-101618	K1810270-016	82
P3-0to29-101618	K1810270-017	78
R5-0to25-101618	K1810270-018	66
514-0to29-101618	K1810270-019	64
P5-0to26-101618	K1810270-020	64
R3-0to33-101718	K1810270-029	73
Method Blank	KQ1815623-04	54
Method Blank	KQ1816241-04	76
Lab Control Sample	KQ1815623-03	68
Lab Control Sample	KQ1816241-03	69
L1-0to30-101518	KQ1815623-01	54
L1-0to30-101518	KQ1815623-02	60
N3-0to26-101518	KQ1816241-01	62
N3-0to26-101518	KQ1816241-02	53

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/15/18
Sample Matrix:	Sediment	**Date Received:**	10/19/18
		Date Analyzed:	11/22/18
		Date Extracted:	10/29/18

Duplicate Matrix Spike Summary
Butyltins

Sample Name:	L1-0to30-101518	**Units:**	ug/Kg
Lab Code:	K1810270-004	**Basis:**	Dry
Analysis Method:	ALS SOP		
Prep Method:	Method		

		Matrix Spike KQ1815623-01			Duplicate Matrix Spike KQ1815623-02					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Tri-n-butyltin Cation	6.5	19.8	24.3	55	18.8	24.4	50	10-115	5	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/15/18
Sample Matrix:	Sediment	**Date Received:**	10/19/18
		Date Analyzed:	12/1/18
		Date Extracted:	11/19/18

Duplicate Matrix Spike Summary
Butyltins

Sample Name:	N3-0to26-101518	**Units:**	ug/Kg
Lab Code:	K1810270-001	**Basis:**	Dry
Analysis Method:	ALS SOP		
Prep Method:	Method		

		Matrix Spike KQ1816241-01			**Duplicate Matrix Spike** KQ1816241-02					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Tri-n-butyltin Cation	53	85.3	29.8	109	63.9	30.0	37	10-115	29	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Analyzed:**	11/22/18
Sample Matrix:	Sediment	**Date Extracted:**	10/29/18

Lab Control Sample Summary
Butyltins

Analysis Method:	ALS SOP	**Units:**	ug/Kg
Prep Method:	Method	**Basis:**	Dry
		Analysis Lot:	616177

Lab Control Sample
KQ1815623-03

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
Tri-n-butyltin Cation	17.4	22.3	78	10-122

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Analyzed:**	12/01/18
Sample Matrix:	Sediment	**Date Extracted:**	11/19/18

Lab Control Sample Summary
Butyltins

Analysis Method:	ALS SOP	**Units:**	ug/Kg
Prep Method:	Method	**Basis:**	Dry
		Analysis Lot:	617147

Lab Control Sample
KQ1816241-03

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
Tri-n-butyltin Cation	15.6	22.3	70	10-122

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Analyzed:**	11/22/18 22:57
Sample Matrix:	Sediment	**Date Extracted:**	10/29/18

Method Blank Summary
Butyltins

Sample Name:	Method Blank	**Instrument ID:**	K-GC-26
Lab Code:	KQ1815623-04	**File ID:**	J:\GC26\DATA\112218\1122F023.D\
Analysis Method:	ALS SOP	**Analysis Lot:**	616177,616178
Prep Method:	Method	**Extraction Lot:**	325136

This Method Blank applies to the following analyses.

Sample Name	Lab Code	File ID	Date Analyzed
N1-0to30-101518	K1810270-006	J:\GC26\DATA\112218\1122F006.D\	11/22/18 17:44
T1-0to30-101518	K1810270-010	J:\GC26\DATA\112218\1122F007.D\	11/22/18 18:02
514-0to29-101618	K1810270-019	J:\GC26\DATA\112218\1122F017.D\	11/22/18 21:06
L1-0to30-101518MS	KQ1815623-01	J:\GC26\DATA\112218\1122F020.D\	11/22/18 22:01
L1-0to30-101518DMS	KQ1815623-02	J:\GC26\DATA\112218\1122F021.D\	11/22/18 22:20
Lab Control Sample	KQ1815623-03	J:\GC26\DATA\112218\1122F022.D\	11/22/18 22:38
L1-0to30-101518	K1810270-004	J:\GC26\DATA\112318\1123F005.D\	11/23/18 17:20
R1-0to30-101518	K1810270-011	J:\GC26\DATA\112318\1123F006.D\	11/23/18 17:39
P1-0to30-101518	K1810270-012	J:\GC26\DATA\112318\1123F007.D\	11/23/18 17:57
T3-0to28-101618	K1810270-013	J:\GC26\DATA\112318\1123F008.D\	11/23/18 18:16
T7-0to31-101618	K1810270-015	J:\GC26\DATA\112318\1123F009.D\	11/23/18 18:35
T5-0to26-101618	K1810270-016	J:\GC26\DATA\112318\1123F010.D\	11/23/18 18:53
P3-0to29-101618	K1810270-017	J:\GC26\DATA\112318\1123F011.D\	11/23/18 19:11
R5-0to25-101618	K1810270-018	J:\GC26\DATA\112318\1123F012.D\	11/23/18 19:30
P5-0to26-101618	K1810270-020	J:\GC26\DATA\112318\1123F015.D\	11/23/18 20:26
R3-0to33-101718	K1810270-029	J:\GC26\DATA\112318\1123F016.D\	11/23/18 20:44

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Analyzed:**	12/01/18 17:34
Sample Matrix:	Sediment	**Date Extracted:**	11/19/18

Method Blank Summary
Butyltins

Sample Name:	Method Blank	**Instrument ID:**	K-GC-26
Lab Code:	KQ1816241-04	**File ID:**	J:\GC26\DATA\120118\1201F023.D\
Analysis Method:	ALS SOP	**Analysis Lot:**	617147,617148
Prep Method:	Method	**Extraction Lot:**	325830

This Method Blank applies to the following analyses.

Sample Name	Lab Code	File ID	Date Analyzed
N3-0to26-101518MS	KQ1816241-01	J:\GC26\DATA\120118\1201F020.D\	12/01/18 16:38
N3-0to26-101518DMS	KQ1816241-02	J:\GC26\DATA\120118\1201F021.D\	12/01/18 16:57
Lab Control Sample	KQ1816241-03	J:\GC26\DATA\120118\1201F022.D\	12/01/18 17:16
N3-0to26-101518	K1810270-001	J:\GC26\DATA\120218\1202F007.D\	12/02/18 12:28

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Analyzed:**	11/22/18 22:38
Sample Matrix:	Sediment	**Date Extracted:**	10/29/18

Lab Control Sample Summary
Butyltins

Sample Name:	Lab Control Sample	**Instrument ID:**	K-GC-26
Lab Code:	KQ1815623-03	**File ID:**	J:\GC26\DATA\112218\1122F022.D\
Analysis Method:	ALS SOP	**Analysis Lot:**	616177,616178
Prep Method:	Method	**Extraction Lot:**	325136

This Lab Control Sample applies to the following analyses.

Sample Name	Lab Code	File ID	Date Analyzed
N1-0to30-101518	K1810270-006	J:\GC26\DATA\112218\1122F006.D\	11/22/18 17:44
T1-0to30-101518	K1810270-010	J:\GC26\DATA\112218\1122F007.D\	11/22/18 18:02
514-0to29-101618	K1810270-019	J:\GC26\DATA\112218\1122F017.D\	11/22/18 21:06
L1-0to30-101518MS	KQ1815623-01	J:\GC26\DATA\112218\1122F020.D\	11/22/18 22:01
L1-0to30-101518DMS	KQ1815623-02	J:\GC26\DATA\112218\1122F021.D\	11/22/18 22:20
Method Blank	KQ1815623-04	J:\GC26\DATA\112218\1122F023.D\	11/22/18 22:57
L1-0to30-101518	K1810270-004	J:\GC26\DATA\112318\1123F005.D\	11/23/18 17:20
R1-0to30-101518	K1810270-011	J:\GC26\DATA\112318\1123F006.D\	11/23/18 17:39
P1-0to30-101518	K1810270-012	J:\GC26\DATA\112318\1123F007.D\	11/23/18 17:57
T3-0to28-101618	K1810270-013	J:\GC26\DATA\112318\1123F008.D\	11/23/18 18:16
T7-0to31-101618	K1810270-015	J:\GC26\DATA\112318\1123F009.D\	11/23/18 18:35
T5-0to26-101618	K1810270-016	J:\GC26\DATA\112318\1123F010.D\	11/23/18 18:53
P3-0to29-101618	K1810270-017	J:\GC26\DATA\112318\1123F011.D\	11/23/18 19:11
R5-0to25-101618	K1810270-018	J:\GC26\DATA\112318\1123F012.D\	11/23/18 19:30
P5-0to26-101618	K1810270-020	J:\GC26\DATA\112318\1123F015.D\	11/23/18 20:26
R3-0to33-101718	K1810270-029	J:\GC26\DATA\112318\1123F016.D\	11/23/18 20:44

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Analyzed:**	12/01/18 17:16
Sample Matrix:	Sediment	**Date Extracted:**	11/19/18

Lab Control Sample Summary
Butyltins

Sample Name:	Lab Control Sample	**Instrument ID:**	K-GC-26
Lab Code:	KQ1816241-03	**File ID:**	J:\GC26\DATA\120118\1201F022.D\
Analysis Method:	ALS SOP	**Analysis Lot:**	617147,617148
Prep Method:	Method	**Extraction Lot:**	325830

This Lab Control Sample applies to the following analyses.

Sample Name	Lab Code	File ID	Date Analyzed
N3-0to26-101518MS	KQ1816241-01	J:\GC26\DATA\120118\1201F020.D\	12/01/18 16:38
N3-0to26-101518DMS	KQ1816241-02	J:\GC26\DATA\120118\1201F021.D\	12/01/18 16:57
Method Blank	KQ1816241-04	J:\GC26\DATA\120118\1201F023.D\	12/01/18 17:34
N3-0to26-101518	K1810270-001	J:\GC26\DATA\120218\1202F007.D\	12/02/18 12:28

Client: Pacific Groundwater Group (PGG) **Service Request:** K1810270
Project: DTNA Swan Island Sediment **Calibration Date:** 9/17/2018

Initial Calibration Summary
Butyltins

Calibration ID: KC1800436 **Signal ID:** RTX-1
Instrument ID: K-GC-26

#	Lab Code	Sample Name	File Location	Acquisition Date
01	KC1800436-01	OT5-010A @ 2PPB	J:\GC26\DATA\091718\0917F004.D	09/17/2018 14:55
02	KC1800436-02	OT5-010B @ 5PPB	J:\GC26\DATA\091718\0917F005.D	09/17/2018 15:13
03	KC1800436-03	OT5-010C @ 10PPB	J:\GC26\DATA\091718\0917F006.D	09/17/2018 15:32
04	KC1800436-04	OT5-010D @ 20PPB	J:\GC26\DATA\091718\0917F007.D	09/17/2018 15:50
05	KC1800436-05	OT5-010K@50 PPB	J:\GC26\DATA\091718\0917F008.D	09/17/2018 16:08
06	KC1800436-06	OT5-010E @ 200 PPB	J:\GC26\DATA\091718\0917F009.D	09/17/2018 16:27
07	KC1800436-07	OT5-010F @ 500 PPB	J:\GC26\DATA\091718\0917F010.D	09/17/2018 16:45

Analyte

Tri-n-butyltin Cation

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	1.782	7.605E4	02	4.455	7.24E4	03	8.910	6.65E4	04	17.820	6.585E4
05	44.550	6.93E4	06	178.200	6.9E4	07	445.500	6.747E4			

Tri-n-propyltin

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	2.000	6.839E4	02	5.000	5.283E4	03	10.000	4.594E4	04	20.000	5.002E4
05	50.000	5.595E4	06	200.000	5.459E4	07	500.000	5.511E4			

Client: Pacific Groundwater Group (PGG) **Service Request:** K1810270
Project: DTNA Swan Island Sediment **Calibration Date:** 9/17/2018

Initial Calibration Summary
Butyltins

Calibration ID: KC1800436 **Signal ID:** RTX-1
Instrument ID: K-GC-26

		Calibration Evaluation				Calibration Evaluation	
Analyte Name	Compound Type	Fit Type	Eval	Eval Result	Control Criteria	Average RRF	Minimum RRF
Tri-n-butyltin Cation	TRG	Average RF	% RSD	5.2	≤20	6.951E4	
Tri-n-propyltin	SURR	Average RF	% RSD	12.7	≤20	5.469E4	

Client: Pacific Groundwater Group (PGG) **Service Request:** K1810270
Project: DTNA Swan Island Sediment **Calibration Date:** 9/17/2018

Initial Calibration Summary
Butyltins

Calibration ID: KC1800436 **Signal ID:** RTX-35
Instrument ID: K-GC-26

#	Lab Code	Sample Name	File Location	Acquisition Date
01	KC1800436-01	OT5-010A @ 2PPB	J:\GC26\DATA\091718\0917F004.D	09/17/2018 14:55
02	KC1800436-02	OT5-010B @ 5PPB	J:\GC26\DATA\091718\0917F005.D	09/17/2018 15:13
03	KC1800436-03	OT5-010C @ 10PPB	J:\GC26\DATA\091718\0917F006.D	09/17/2018 15:32
04	KC1800436-04	OT5-010D @ 20PPB	J:\GC26\DATA\091718\0917F007.D	09/17/2018 15:50
05	KC1800436-05	OT5-010K@50 PPB	J:\GC26\DATA\091718\0917F008.D	09/17/2018 16:08
06	KC1800436-06	OT5-010E @ 200 PPB	J:\GC26\DATA\091718\0917F009.D	09/17/2018 16:27
07	KC1800436-07	OT5-010F @ 500 PPB	J:\GC26\DATA\091718\0917F010.D	09/17/2018 16:45

Analyte

Tri-n-butyltin Cation

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	1.782	1.246E5	02	4.455	9.429E4	03	8.910	1.125E5	04	17.820	9.717E4
05	44.550	1.058E5	06	178.200	9.935E4	07	445.500	9.552E4			

Tri-n-propyltin

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	2.000	7.47E4	02	5.000	7.544E4	03	10.000	7.709E4	04	20.000	7.852E4
05	50.000	8.615E4	06	200.000	7.943E4	07	500.000	7.633E4			

Client: Pacific Groundwater Group (PGG) **Service Request:** K1810270
Project: DTNA Swan Island Sediment **Calibration Date:** 9/17/2018

Initial Calibration Summary
Butyltins

Calibration ID: KC1800436 **Signal ID:** RTX-35
Instrument ID: K-GC-26

		Calibration Evaluation				Calibration Evaluation	
Analyte Name	Compound Type	Fit Type	Eval	Eval Result	Control Criteria	Average RRF	Minimum RRF
Tri-n-butyltin Cation	TRG	Average RF	% RSD	10.6	≤20	1.042E5	
Tri-n-propyltin	SURR	Average RF	% RSD	4.9	≤20	7.824E4	

Client: Pacific Groundwater Group (PGG) **Service Request:** K1810270
Project: DTNA Swan Island Sediment **Calibration Date:** 9/17/2018

Initial Calibration Verification Summary
Butyltins

Calibration ID: KC1800436 **Signal ID:** RTX-1
Instrument ID: K-GC-26

#	Lab Code	Sample Name	File Location	Acquisition Date
08	KC1800436-08	OT5-09P @ 50PPB ICV	J:\GC26\DATA\091718\0917F012.D	09/17/2018 17:22

Analyte Name	Expected	Result	Average RF	SSV RF	% D	Criteria	Curve Fit
Tri-n-butyltin Cation	44.6	52.9	6.951E4	8.251E4	18.71	±25	Average RF

Client: Pacific Groundwater Group (PGG) **Service Request:** K1810270
Project: DTNA Swan Island Sediment **Calibration Date:** 9/17/2018

Initial Calibration Verification Summary
Butyltins

Calibration ID: KC1800436 **Signal ID:** RTX-35
Instrument ID: K-GC-26

#	Lab Code	Sample Name	File Location	Acquisition Date
08	KC1800436-08	OT5-09P @ 50PPB ICV	J:\GC26\DATA\091718\0917F012.D	09/17/2018 17:22

Analyte Name	Expected	Result	Average RF	SSV RF	% D	Criteria	Curve Fit
Tri-n-butyltin Cation	44.6	50.1	1.042E5	1.172E5	12.50	±25	Average RF

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Analyzed:**	11/22/18 16:48

Continuing Calibration Verification (CCV) Summary
Butyltins

Analysis Method:	ALS SOP	**Calibration Date:**	9/17/2018
File ID:	J:\GC26\DATA\112218\1122F003.D\	**Calibration ID:**	KC1800436
Signal ID:	RTX-1	**Analysis Lot:**	616177
		Units:	ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
Tri-n-butyltin Cation	44.6	30.7	6.951E4	4.792E4	-31.1*	NA	±25	Average RF

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
Tri-n-propyltin	50.0	37.9	5.469E4	4.149E4	-24.1	NA	±25	Average RF

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Analyzed:**	11/22/18 16:48

Continuing Calibration Verification (CCV) Summary
Butyltins

Analysis Method:	ALS SOP	**Calibration Date:**	9/17/2018
File ID:	J:\GC26\DATA\112218\1122F003.D\	**Calibration ID:**	KC1800436
Signal ID:	RTX-35	**Analysis Lot:**	616177
		Units:	ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
Tri-n-butyltin Cation	44.6	36.8	1.042E5	8.615E4	-17.3	NA	±25	Average RF

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
Tri-n-propyltin	50.0	45.5	7.824E4	7.123E4	-9.0	NA	±25	Average RF

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Analyzed:**	11/22/18 20:29

Continuing Calibration Verification (CCV) Summary
Butyltins

Analysis Method:	ALS SOP	**Calibration Date:**	9/17/2018
File ID:	J:\GC26\DATA\112218\1122F015.D\	**Calibration ID:**	KC1800436
Signal ID:	RTX-1	**Analysis Lot:**	616177
		Units:	ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
Tri-n-butyltin Cation	44.6	34.0	6.951E4	5.3E4	-23.7	NA	±25	Average RF

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
Tri-n-propyltin	50.0	42.4	5.469E4	4.64E4	-15.2	NA	±25	Average RF

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Analyzed:**	11/22/18 20:29

Continuing Calibration Verification (CCV) Summary
Butyltins

Analysis Method:	ALS SOP	**Calibration Date:**	9/17/2018
File ID:	J:\GC26\DATA\112218\1122F015.D\	**Calibration ID:**	KC1800436
Signal ID:	RTX-35	**Analysis Lot:**	616177
		Units:	ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
Tri-n-butyltin Cation	44.6	36.3	1.042E5	8.48E4	-18.6	NA	±25	Average RF

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
Tri-n-propyltin	50.0	43.4	7.824E4	6.793E4	-13.2	NA	±25	Average RF

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Analyzed:**	11/22/18 23:16

Continuing Calibration Verification (CCV) Summary
Butyltins

Analysis Method:	ALS SOP	**Calibration Date:**	9/17/2018
File ID:	J:\GC26\DATA\112218\1122F024.D\	**Calibration ID:**	KC1800436
Signal ID:	RTX-1	**Analysis Lot:**	616177
		Units:	ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
Tri-n-butyltin Cation	44.6	36.5	6.951E4	5.699E4	-18.0	NA	±25	Average RF

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
Tri-n-propyltin	50.0	37.4	5.469E4	4.095E4	-25.1	NA	±25	Average RF

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Analyzed:**	11/22/18 23:16

Continuing Calibration Verification (CCV) Summary
Butyltins

Analysis Method:	ALS SOP	**Calibration Date:**	9/17/2018
File ID:	J:\GC26\DATA\112218\1122F024.D\	**Calibration ID:**	KC1800436
Signal ID:	RTX-35	**Analysis Lot:**	616177
		Units:	ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
Tri-n-butyltin Cation	44.6	38.8	1.042E5	9.073E4	-12.9	NA	±25	Average RF

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
Tri-n-propyltin	50.0	39.1	7.824E4	6.112E4	-21.9	NA	±25	Average RF

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Analyzed:**	11/23/18 16:42

Continuing Calibration Verification (CCV) Summary
Butyltins

Analysis Method:	ALS SOP	**Calibration Date:**	9/17/2018
File ID:	J:\GC26\DATA\112318\1123F003.D\	**Calibration ID:**	KC1800436
Signal ID:	RTX-1	**Analysis Lot:**	616178
		Units:	ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
Tri-n-butyltin Cation	44.6	40.0	6.951E4	6.237E4	-10.3	NA	±25	Average RF

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
Tri-n-propyltin	50.0	49.3	5.469E4	5.397E4	-1.3	NA	±25	Average RF

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Analyzed:**	11/23/18 16:42

Continuing Calibration Verification (CCV) Summary
Butyltins

Analysis Method:	ALS SOP	**Calibration Date:**	9/17/2018
File ID:	J:\GC26\DATA\112318\1123F003.D\	**Calibration ID:**	KC1800436
Signal ID:	RTX-35	**Analysis Lot:**	616178
		Units:	ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
Tri-n-butyltin Cation	44.6	42.0	1.042E5	9.822E4	-5.7	NA	±25	Average RF

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
Tri-n-propyltin	50.0	45.2	7.824E4	7.065E4	-9.7	NA	±25	Average RF

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Analyzed:**	11/23/18 19:48

Continuing Calibration Verification (CCV) Summary
Butyltins

Analysis Method:	ALS SOP	**Calibration Date:**	9/17/2018
File ID:	J:\GC26\DATA\112318\1123F013.D\	**Calibration ID:**	KC1800436
Signal ID:	RTX-35	**Analysis Lot:**	616178
		Units:	ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
Tri-n-butyltin Cation	44.6	40.0	1.042E5	9.357E4	-10.2	NA	±25	Average RF

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
Tri-n-propyltin	50.0	66.3	7.824E4	1.038E5	32.7*	NA	±25	Average RF

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Analyzed:**	11/23/18 19:48

Continuing Calibration Verification (CCV) Summary
Butyltins

Analysis Method:	ALS SOP	**Calibration Date:**	9/17/2018
File ID:	J:\GC26\DATA\112318\1123F013.D\	**Calibration ID:**	KC1800436
Signal ID:	RTX-1	**Analysis Lot:**	616178
		Units:	ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
Tri-n-butyltin Cation	44.6	40.7	6.951E4	6.351E4	-8.6	NA	±25	Average RF

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
Tri-n-propyltin	50.0	49.3	5.469E4	5.389E4	-1.5	NA	±25	Average RF

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Analyzed:**	11/23/18 21:40

Continuing Calibration Verification (CCV) Summary
Butyltins

Analysis Method:	ALS SOP	**Calibration Date:**	9/17/2018
File ID:	J:\GC26\DATA\112318\1123F019.D\	**Calibration ID:**	KC1800436
Signal ID:	RTX-35	**Analysis Lot:**	616178
		Units:	ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
Tri-n-butyltin Cation	44.6	37.6	1.042E5	8.796E4	-15.6	NA	±25	Average RF

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
Tri-n-propyltin	50.0	46.5	7.824E4	7.272E4	-7.1	NA	±25	Average RF

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Analyzed:**	11/23/18 21:40

Continuing Calibration Verification (CCV) Summary
Butyltins

Analysis Method:	ALS SOP	**Calibration Date:**	9/17/2018
File ID:	J:\GC26\DATA\112318\1123F019.D\	**Calibration ID:**	KC1800436
Signal ID:	RTX-1	**Analysis Lot:**	616178
		Units:	ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
Tri-n-butyltin Cation	44.6	42.0	6.951E4	6.549E4	-5.8	NA	±25	Average RF

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
Tri-n-propyltin	50.0	56.8	5.469E4	6.212E4	13.6	NA	±25	Average RF

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Analyzed:**	12/01/18 14:29

Continuing Calibration Verification (CCV) Summary
Butyltins

Analysis Method:	ALS SOP	**Calibration Date:**	9/17/2018
File ID:	J:\GC26\DATA\120118\1201F013.D\	**Calibration ID:**	KC1800436
Signal ID:	RTX-35	**Analysis Lot:**	617147
		Units:	ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
Tri-n-butyltin Cation	44.6	33.0	1.042E5	7.727E4	-25.8*	NA	±25	Average RF

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
Tri-n-propyltin	50.0	41.0	7.824E4	6.423E4	-17.9	NA	±25	Average RF

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Analyzed:**	12/01/18 14:29

Continuing Calibration Verification (CCV) Summary
Butyltins

Analysis Method:	ALS SOP	**Calibration Date:**	9/17/2018
File ID:	J:\GC26\DATA\120118\1201F013.D\	**Calibration ID:**	KC1800436
Signal ID:	RTX-1	**Analysis Lot:**	617147
		Units:	ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
Tri-n-butyltin Cation	44.6	34.6	6.951E4	5.397E4	-22.4	NA	±25	Average RF

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
Tri-n-propyltin	50.0	39.6	5.469E4	4.337E4	-20.7	NA	±25	Average RF

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Analyzed:**	12/01/18 17:53

Continuing Calibration Verification (CCV) Summary
Butyltins

Analysis Method:	ALS SOP	**Calibration Date:**	9/17/2018
File ID:	J:\GC26\DATA\120118\1201F024.D\	**Calibration ID:**	KC1800436
Signal ID:	RTX-1	**Analysis Lot:**	617147
		Units:	ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
Tri-n-butyltin Cation	44.6	35.1	6.951E4	5.482E4	-21.1	NA	±25	Average RF

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
Tri-n-propyltin	50.0	38.0	5.469E4	4.156E4	-24.0	NA	±25	Average RF

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Analyzed:**	12/01/18 17:53

Continuing Calibration Verification (CCV) Summary
Butyltins

Analysis Method:	ALS SOP	**Calibration Date:**	9/17/2018
File ID:	J:\GC26\DATA\120118\1201F024.D\	**Calibration ID:**	KC1800436
Signal ID:	RTX-35	**Analysis Lot:**	617147
		Units:	ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
Tri-n-butyltin Cation	44.6	35.7	1.042E5	8.348E4	-19.9	NA	±25	Average RF

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
Tri-n-propyltin	50.0	40.5	7.824E4	6.339E4	-19.0	NA	±25	Average RF

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Analyzed:**	12/02/18 11:09

Continuing Calibration Verification (CCV) Summary
Butyltins

Analysis Method:	ALS SOP	**Calibration Date:**	9/17/2018
File ID:	J:\GC26\DATA\120218\1202F003.D\	**Calibration ID:**	KC1800436
Signal ID:	RTX-1	**Analysis Lot:**	617148
		Units:	ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
Tri-n-butyltin Cation	44.6	36.3	6.951E4	5.668E4	-18.5	NA	±25	Average RF

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
Tri-n-propyltin	50.0	39.2	5.469E4	4.287E4	-21.6	NA	±25	Average RF

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Analyzed:**	12/02/18 11:09

Continuing Calibration Verification (CCV) Summary
Butyltins

Analysis Method:	ALS SOP	**Calibration Date:**	9/17/2018
File ID:	J:\GC26\DATA\120218\1202F003.D\	**Calibration ID:**	KC1800436
Signal ID:	RTX-35	**Analysis Lot:**	617148
		Units:	ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
Tri-n-butyltin Cation	44.6	39.4	1.042E5	9.219E4	-11.5	NA	±25	Average RF

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
Tri-n-propyltin	50.0	44.3	7.824E4	6.933E4	-11.4	NA	±25	Average RF

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Analyzed:**	12/02/18 13:08

Continuing Calibration Verification (CCV) Summary
Butyltins

Analysis Method:	ALS SOP	**Calibration Date:**	9/17/2018
File ID:	J:\GC26\DATA\120218\1202F009.D\	**Calibration ID:**	KC1800436
Signal ID:	RTX-1	**Analysis Lot:**	617148
		Units:	ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
Tri-n-butyltin Cation	44.6	37.1	6.951E4	5.781E4	-16.8	NA	±25	Average RF

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
Tri-n-propyltin	50.0	40.5	5.469E4	4.429E4	-19.0	NA	±25	Average RF

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Analyzed:**	12/02/18 13:08

Continuing Calibration Verification (CCV) Summary
Butyltins

Analysis Method:	ALS SOP	**Calibration Date:**	9/17/2018
File ID:	J:\GC26\DATA\120218\1202F009.D\	**Calibration ID:**	KC1800436
Signal ID:	RTX-35	**Analysis Lot:**	617148
		Units:	ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
Tri-n-butyltin Cation	44.6	37.1	1.042E5	8.671E4	-16.8	NA	±25	Average RF

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
Tri-n-propyltin	50.0	41.8	7.824E4	6.548E4	-16.3	NA	±25	Average RF

Client: Pacific Groundwater Group (PGG) **Service Request:**K1810270
Project: DTNA Swan Island Sediment/2006-00115

Analysis Run Log
Butyltins

Analysis Method: ALS SOP **Analysis Lot:**616177
Instrument ID:K-GC-26

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
J:\GC26\DATA\112218\1122F003.D\	Continuing Calibration Verification	KQ1817164-01	11/22/2018	16:48:00	
J:\GC26\DATA\112218\1122F004.D\	ZZZZZZZ	ZZZZZZZ	11/22/2018	17:06:00	
J:\GC26\DATA\112218\1122F006.D\	N1-0to30-101518	K1810270-006	11/22/2018	17:44:00	
J:\GC26\DATA\112218\1122F007.D\	T1-0to30-101518	K1810270-010	11/22/2018	18:02:00	
J:\GC26\DATA\112218\1122F015.D\	Continuing Calibration Verification	KQ1817164-02	11/22/2018	20:29:00	
J:\GC26\DATA\112218\1122F016.D\	ZZZZZZZ	ZZZZZZZ	11/22/2018	20:48:00	
J:\GC26\DATA\112218\1122F017.D\	514-0to29-101618	K1810270-019	11/22/2018	21:06:00	
J:\GC26\DATA\112218\1122F020.D\	L1-0to30-101518 MS	KQ1815623-01	11/22/2018	22:01:00	
J:\GC26\DATA\112218\1122F021.D\	L1-0to30-101518 DMS	KQ1815623-02	11/22/2018	22:20:00	
J:\GC26\DATA\112218\1122F022.D\	Lab Control Sample	KQ1815623-03	11/22/2018	22:38:00	
J:\GC26\DATA\112218\1122F023.D\	Method Blank	KQ1815623-04	11/22/2018	22:57:00	
J:\GC26\DATA\112218\1122F024.D\	Continuing Calibration Verification	KQ1817164-03	11/22/2018	23:16:00	
J:\GC26\DATA\112218\1122F025.D\	ZZZZZZZ	ZZZZZZZ	11/22/2018	23:34:00	
J:\GC26\DATA\112218\1122F026.D\	ZZZZZZZ	ZZZZZZZ	11/22/2018	23:53:00	
J:\GC26\DATA\112218\1122F028.D\	ZZZZZZZ	ZZZZZZZ	11/23/2018	00:30:00	
J:\GC26\DATA\112218\1122F029.D\	ZZZZZZZ	ZZZZZZZ	11/23/2018	00:48:00	
J:\GC26\DATA\112218\1122F030.D\	ZZZZZZZ	ZZZZZZZ	11/23/2018	01:07:00	
J:\GC26\DATA\112218\1122F031.D\	ZZZZZZZ	ZZZZZZZ	11/23/2018	01:25:00	
J:\GC26\DATA\112218\1122F032.D\	ZZZZZZZ	ZZZZZZZ	11/23/2018	01:44:00	
J:\GC26\DATA\112218\1122F033.D\	ZZZZZZZ	ZZZZZZZ	11/23/2018	02:02:00	
J:\GC26\DATA\112218\1122F034.D\	ZZZZZZZ	ZZZZZZZ	11/23/2018	02:21:00	
J:\GC26\DATA\112218\1122F035.D\	ZZZZZZZ	ZZZZZZZ	11/23/2018	02:39:00	
J:\GC26\DATA\112218\1122F036.D\	ZZZZZZZ	ZZZZZZZ	11/23/2018	02:58:00	
J:\GC26\DATA\112218\1122F037.D\	ZZZZZZZ	ZZZZZZZ	11/23/2018	03:16:00	
J:\GC26\DATA\112218\1122F038.D\	ZZZZZZZ	ZZZZZZZ	11/23/2018	03:35:00	
J:\GC26\DATA\112218\1122F039.D\	ZZZZZZZ	ZZZZZZZ	11/23/2018	03:54:00	
J:\GC26\DATA\112218\1122F041.D\	ZZZZZZZ	ZZZZZZZ	11/23/2018	04:31:00	
J:\GC26\DATA\112218\1122F043.D\	ZZZZZZZ	ZZZZZZZ	11/23/2018	04:49:00	
J:\GC26\DATA\112218\1122F044.D\	ZZZZZZZ	ZZZZZZZ	11/23/2018	05:07:00	
J:\GC26\DATA\112218\1122F045.D\	ZZZZZZZ	ZZZZZZZ	11/23/2018	05:26:00	
J:\GC26\DATA\112218\1122F046.D\	ZZZZZZZ	ZZZZZZZ	11/23/2018	05:44:00	
J:\GC26\DATA\112218\1122F047.D\	ZZZZZZZ	ZZZZZZZ	11/23/2018	06:03:00	
J:\GC26\DATA\112218\1122F048.D\	ZZZZZZZ	ZZZZZZZ	11/23/2018	06:21:00	
J:\GC26\DATA\112218\1122F049.D\	ZZZZZZZ	ZZZZZZZ	11/23/2018	06:40:00	
J:\GC26\DATA\112218\1122F050.D\	ZZZZZZZ	ZZZZZZZ	11/23/2018	06:58:00	
J:\GC26\DATA\112218\1122F051.D\	ZZZZZZZ	ZZZZZZZ	11/23/2018	07:17:00	
J:\GC26\DATA\112218\1122F052.D\	ZZZZZZZ	ZZZZZZZ	11/23/2018	07:35:00	
J:\GC26\DATA\112218\1122F053.D\	ZZZZZZZ	ZZZZZZZ	11/23/2018	07:54:00	
J:\GC26\DATA\112218\1122F054.D\	ZZZZZZZ	ZZZZZZZ	11/23/2018	08:13:00	
J:\GC26\DATA\112218\1122F055.D\	ZZZZZZZ	ZZZZZZZ	11/23/2018	08:31:00	
J:\GC26\DATA\112218\1122F056.D\	ZZZZZZZ	ZZZZZZZ	11/23/2018	08:50:00	

Client: Pacific Groundwater Group (PGG) **Service Request:**K1810270
Project: DTNA Swan Island Sediment/2006-00115

Analysis Run Log
Butyltins

Analysis Method: ALS SOP **Analysis Lot:**616178
Instrument ID:K-GC-26

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
J:\GC26\DATA\112318\1123F003.D\	Continuing Calibration Verification	KQ1817165-01	11/23/2018	16:42:00	
J:\GC26\DATA\112318\1123F004.D\	ZZZZZZZ	ZZZZZZZ	11/23/2018	17:01:00	
J:\GC26\DATA\112318\1123F005.D\	L1-0to30-101518	K1810270-004	11/23/2018	17:20:00	
J:\GC26\DATA\112318\1123F006.D\	R1-0to30-101518	K1810270-011	11/23/2018	17:39:00	
J:\GC26\DATA\112318\1123F007.D\	P1-0to30-101518	K1810270-012	11/23/2018	17:57:00	
J:\GC26\DATA\112318\1123F008.D\	T3-0to28-101618	K1810270-013	11/23/2018	18:16:00	
J:\GC26\DATA\112318\1123F009.D\	T7-0to31-101618	K1810270-015	11/23/2018	18:35:00	
J:\GC26\DATA\112318\1123F010.D\	T5-0to26-101618	K1810270-016	11/23/2018	18:53:00	
J:\GC26\DATA\112318\1123F011.D\	P3-0to29-101618	K1810270-017	11/23/2018	19:11:00	
J:\GC26\DATA\112318\1123F012.D\	R5-0to25-101618	K1810270-018	11/23/2018	19:30:00	
J:\GC26\DATA\112318\1123F013.D\	Continuing Calibration Verification	KQ1817165-02	11/23/2018	19:48:00	
J:\GC26\DATA\112318\1123F014.D\	ZZZZZZZ	ZZZZZZZ	11/23/2018	20:07:00	
J:\GC26\DATA\112318\1123F015.D\	P5-0to26-101618	K1810270-020	11/23/2018	20:26:00	
J:\GC26\DATA\112318\1123F016.D\	R3-0to33-101718	K1810270-029	11/23/2018	20:44:00	
J:\GC26\DATA\112318\1123F019.D\	Continuing Calibration Verification	KQ1817165-03	11/23/2018	21:40:00	
J:\GC26\DATA\112318\1123F020.D\	ZZZZZZZ	ZZZZZZZ	11/23/2018	21:58:00	

Client: Pacific Groundwater Group (PGG) **Service Request:**K1810270
Project: DTNA Swan Island Sediment/2006-00115

Analysis Run Log
Butyltins

Analysis Method: **Analysis Lot:**617147
Instrument ID:K-GC-26

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
J:\GC26\DATA\120118\1201F003.D\	ZZZZZZZ	ZZZZZZZ	12/1/2018	11:23:00	
J:\GC26\DATA\120118\1201F004.D\	ZZZZZZZ	ZZZZZZZ	12/1/2018	11:41:00	
J:\GC26\DATA\120118\1201F006.D\	ZZZZZZZ	ZZZZZZZ	12/1/2018	12:18:00	
J:\GC26\DATA\120118\1201F007.D\	ZZZZZZZ	ZZZZZZZ	12/1/2018	12:37:00	
J:\GC26\DATA\120118\1201F009.D\	ZZZZZZZ	ZZZZZZZ	12/1/2018	13:14:00	
J:\GC26\DATA\120118\1201F010.D\	ZZZZZZZ	ZZZZZZZ	12/1/2018	13:33:00	
J:\GC26\DATA\120118\1201F011.D\	ZZZZZZZ	ZZZZZZZ	12/1/2018	13:51:00	
J:\GC26\DATA\120118\1201F012.D\	ZZZZZZZ	ZZZZZZZ	12/1/2018	14:10:00	
J:\GC26\DATA\120118\1201F013.D\	Continuing Calibration Verification	KQ1817582-02	12/1/2018	14:29:00	
J:\GC26\DATA\120118\1201F014.D\	ZZZZZZZ	ZZZZZZZ	12/1/2018	14:47:00	
J:\GC26\DATA\120118\1201F016.D\	ZZZZZZZ	ZZZZZZZ	12/1/2018	15:25:00	
J:\GC26\DATA\120118\1201F017.D\	ZZZZZZZ	ZZZZZZZ	12/1/2018	15:43:00	
J:\GC26\DATA\120118\1201F019.D\	ZZZZZZZ	ZZZZZZZ	12/1/2018	16:20:00	
J:\GC26\DATA\120118\1201F020.D\	N3-0to26-101518 MS	KQ1816241-01	12/1/2018	16:38:00	
J:\GC26\DATA\120118\1201F021.D\	N3-0to26-101518 DMS	KQ1816241-02	12/1/2018	16:57:00	
J:\GC26\DATA\120118\1201F022.D\	Lab Control Sample	KQ1816241-03	12/1/2018	17:16:00	
J:\GC26\DATA\120118\1201F023.D\	Method Blank	KQ1816241-04	12/1/2018	17:34:00	
J:\GC26\DATA\120118\1201F024.D\	Continuing Calibration Verification	KQ1817582-03	12/1/2018	17:53:00	
J:\GC26\DATA\120118\1201F025.D\	ZZZZZZZ	ZZZZZZZ	12/1/2018	18:12:00	
J:\GC26\DATA\120118\1201F027.D\	ZZZZZZZ	ZZZZZZZ	12/1/2018	18:50:00	
J:\GC26\DATA\120118\1201F028.D\	ZZZZZZZ	ZZZZZZZ	12/1/2018	19:09:00	
J:\GC26\DATA\120118\1201F029.D\	ZZZZZZZ	ZZZZZZZ	12/1/2018	19:28:00	
J:\GC26\DATA\120118\1201F030.D\	ZZZZZZZ	ZZZZZZZ	12/1/2018	19:47:00	
J:\GC26\DATA\120118\1201F031.D\	ZZZZZZZ	ZZZZZZZ	12/1/2018	20:06:00	
J:\GC26\DATA\120118\1201F032.D\	ZZZZZZZ	ZZZZZZZ	12/1/2018	20:25:00	
J:\GC26\DATA\120118\1201F033.D\	ZZZZZZZ	ZZZZZZZ	12/1/2018	20:44:00	
J:\GC26\DATA\120118\1201F034.D\	ZZZZZZZ	ZZZZZZZ	12/1/2018	21:03:00	
J:\GC26\DATA\120118\1201F035.D\	ZZZZZZZ	ZZZZZZZ	12/1/2018	21:23:00	
J:\GC26\DATA\120118\1201F036.D\	ZZZZZZZ	ZZZZZZZ	12/1/2018	21:42:00	
J:\GC26\DATA\120118\1201F037.D\	ZZZZZZZ	ZZZZZZZ	12/1/2018	22:01:00	
J:\GC26\DATA\120118\1201F038.D\	ZZZZZZZ	ZZZZZZZ	12/1/2018	22:20:00	
J:\GC26\DATA\120118\1201F039.D\	ZZZZZZZ	ZZZZZZZ	12/1/2018	22:40:00	
J:\GC26\DATA\120118\1201F040.D\	ZZZZZZZ	ZZZZZZZ	12/1/2018	22:59:00	
J:\GC26\DATA\120118\1201F041.D\	ZZZZZZZ	ZZZZZZZ	12/1/2018	23:19:00	

Client: Pacific Groundwater Group (PGG) **Service Request:**K1810270
Project: DTNA Swan Island Sediment/2006-00115

Analysis Run Log
Butyltins

Analysis Method: ALS SOP **Analysis Lot:**617148
Instrument ID:K-GC-26

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
J:\GC26\DATA\120218\1202F003.D\	Continuing Calibration Verification	KQ1817583-01	12/2/2018	11:09:00	
J:\GC26\DATA\120218\1202F004.D\	ZZZZZZZ	ZZZZZZZ	12/2/2018	11:29:00	
J:\GC26\DATA\120218\1202F005.D\	ZZZZZZZ	ZZZZZZZ	12/2/2018	11:48:00	
J:\GC26\DATA\120218\1202F006.D\	ZZZZZZZ	ZZZZZZZ	12/2/2018	12:08:00	
J:\GC26\DATA\120218\1202F007.D\	N3-0to26-101518	K1810270-001	12/2/2018	12:28:00	
J:\GC26\DATA\120218\1202F009.D\	Continuing Calibration Verification	KQ1817583-02	12/2/2018	13:08:00	
J:\GC26\DATA\120218\1202F010.D\	ZZZZZZZ	ZZZZZZZ	12/2/2018	13:28:00	

Prep Summary Report

Client: Pacific Groundwater Group (PGG) **Service Request:**K1810270
Project: DTNA Swan Island Sediment/2006-00115
Sample Matrix: Sediment

Butyltins

Prep Method: Method **Extraction Lot:** 325830
Analytical Method: ALS SOP **Extraction Date:** 11/19/18 18:38

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Amount	Percent Solids
N3-0to26-101518	K1810270-001	10/15/18	10/19/18	20.148 g	4 mL	74.3
Matrix Spike	KQ1816241-01MS	10/15/18	10/19/18	20.096 g	4 mL	74.3
Duplicate Matrix Spike	KQ1816241-02DMS	10/15/18	10/19/18	20.009 g	4 mL	74.3
Lab Control Sample	KQ1816241-03LCS	NA	NA	20.00 g	4 mL	
Method Blank	KQ1816241-04MB	NA	NA	20.3210 g	4 mL	

Prep Summary Report

Client: Pacific Groundwater Group (PGG) **Service Request:**K1810270
Project: DTNA Swan Island Sediment/2006-00115
Sample Matrix: Sediment

Butyltins

Prep Method: Method **Extraction Lot:** 325136
Analytical Method: ALS SOP **Extraction Date:** 10/29/18 19:51

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Amount	Percent Solids
L1-0to30-101518	K1810270-004	10/15/18	10/19/18	20.072 g	4 mL	90.3
N1-0to30-101518	K1810270-006	10/15/18	10/19/18	20.111 g	4 mL	75.8
T1-0to30-101518	K1810270-010	10/15/18	10/19/18	20.306 g	4 mL	63.0
R1-0to30-101518	K1810270-011	10/15/18	10/19/18	20.127 g	4 mL	83.9
P1-0to30-101518	K1810270-012	10/15/18	10/19/18	20.136 g	4 mL	76.7
T3-0to28-101618	K1810270-013	10/16/18	10/19/18	20.204 g	4 mL	43.8
T7-0to31-101618	K1810270-015	10/16/18	10/19/18	20.152 g	4 mL	39.3
T5-0to26-101618	K1810270-016	10/16/18	10/19/18	20.299 g	4 mL	47.8
P3-0to29-101618	K1810270-017	10/16/18	10/19/18	20.238 g	4 mL	48.7
R5-0to25-101618	K1810270-018	10/16/18	10/19/18	20.256 g	4 mL	45.9
514-0to29-101618	K1810270-019	10/16/18	10/19/18	20.388 g	4 mL	40.5
P5-0to26-101618	K1810270-020	10/16/18	10/19/18	20.451 g	4 mL	35.2
R3-0to33-101718	K1810270-029	10/17/18	10/19/18	20.249 g	4 mL	36.1
Matrix Spike	KQ1815623-01MS	10/15/18	10/19/18	20.322 g	4 mL	90.3
Duplicate Matrix Spike	KQ1815623-02DMS	10/15/18	10/19/18	20.208 g	4 mL	90.3
Lab Control Sample	KQ1815623-03LCS	NA	NA	20.00 g	4 mL	
Method Blank	KQ1815623-04MB	NA	NA	20.4510 g	4 mL	

Polynuclear Aromatic Hydrocarbons

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Client: Pacific Groundwater Group (PGG) **Service Request:** K1810270
Project: DTNA Swan Island Sediment/2006-00115

Cover Page - Organic Analysis Data Package
Polynuclear Aromatic Hydrocarbons

Sample Name	Lab Code	Date Collected	Date Received
N3-0to26-101518	K1810270-001	10/15/2018	10/19/2018
L1-0to30-101518	K1810270-004	10/15/2018	10/19/2018
N1-0to30-101518	K1810270-006	10/15/2018	10/19/2018
T1-0to30-101518	K1810270-010	10/15/2018	10/19/2018
R1-0to30-101518	K1810270-011	10/15/2018	10/19/2018
P1-0to30-101518	K1810270-012	10/15/2018	10/19/2018
T3-0to28-101618	K1810270-013	10/16/2018	10/19/2018
T7-0to31-101618	K1810270-015	10/16/2018	10/19/2018
T5-0to26-101618	K1810270-016	10/16/2018	10/19/2018
P3-0to29-101618	K1810270-017	10/16/2018	10/19/2018
R5-0to25-101618	K1810270-018	10/16/2018	10/19/2018
514-0to29-101618	K1810270-019	10/16/2018	10/19/2018
P5-0to26-101618	K1810270-020	10/16/2018	10/19/2018
R3-0to33-101718	K1810270-029	10/17/2018	10/19/2018
T1-0to30-101518MS	KWG1805597-1	10/15/2018	10/19/2018
T1-0to30-101518DMS	KWG1805597-2	10/15/2018	10/19/2018

Analytical Results

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/15/2018
Sample Matrix:	Sediment	**Date Received:**	10/19/2018

Polynuclear Aromatic Hydrocarbons

Sample Name:	N3-0to26-101518	**Units:**	ug/Kg
Lab Code:	K1810270-001	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270D SIM		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	**6.7**	D	3.4	0.45	5	11/07/18	11/14/18	KWG1805796	
2-Methylnaphthalene	**4.0**	D	3.4	0.24	5	11/07/18	11/14/18	KWG1805796	
Acenaphthylene	**7.0**	D	1.7	0.15	5	11/07/18	11/14/18	KWG1805796	
Acenaphthene	**8.9**	D	1.7	0.16	5	11/07/18	11/14/18	KWG1805796	
Dibenzofuran	**7.6**	D	1.7	0.11	5	11/07/18	11/14/18	KWG1805796	
Fluorene	**12**	D	1.7	0.20	5	11/07/18	11/14/18	KWG1805796	
Phenanthrene	**110**	D	1.7	0.17	5	11/07/18	11/14/18	KWG1805796	
Anthracene	**15**	D	1.7	0.13	5	11/07/18	11/14/18	KWG1805796	
Fluoranthene	**230**	D	1.7	0.16	5	11/07/18	11/14/18	KWG1805796	
Pyrene	**220**	D	1.7	0.16	5	11/07/18	11/14/18	KWG1805796	
Benz(a)anthracene	**81**	D	1.7	0.17	5	11/07/18	11/14/18	KWG1805796	
Chrysene	**140**	D	1.7	0.14	5	11/07/18	11/14/18	KWG1805796	
Benzo(b)fluoranthene†	**150**	D	1.7	0.29	5	11/07/18	11/14/18	KWG1805796	
Benzo(k)fluoranthene	**58**	D	1.7	0.23	5	11/07/18	11/14/18	KWG1805796	
Benzo(a)pyrene	**89**	D	1.7	0.18	5	11/07/18	11/14/18	KWG1805796	
Indeno(1,2,3-cd)pyrene	**69**	D	1.7	0.32	5	11/07/18	11/14/18	KWG1805796	
Dibenz(a,h)anthracene	**15**	D	1.7	0.29	5	11/07/18	11/14/18	KWG1805796	
Benzo(g,h,i)perylene	**70**	D	1.7	0.30	5	11/07/18	11/14/18	KWG1805796	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	72	26-102	11/14/18	Acceptable
Fluoranthene-d10	67	23-110	11/14/18	Acceptable
Terphenyl-d14	77	27-115	11/14/18	Acceptable

† Analyte Comments

Benzo(b)fluoranthene	This analyte cannot be separated from Benzo(j)fluoranthene.

Comments:

Analytical Results

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/15/2018
Sample Matrix:	Sediment	**Date Received:**	10/19/2018

Polynuclear Aromatic Hydrocarbons

Sample Name:	L1-0to30-101518	**Units:**	ug/Kg
Lab Code:	K1810270-004	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270D SIM		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	**0.65**	JD	2.2	0.36	4	10/29/18	11/07/18	KWG1805597	
2-Methylnaphthalene	**0.53**	JD	2.2	0.19	4	10/29/18	11/07/18	KWG1805597	
Acenaphthylene	**1.6**	D	1.1	0.12	4	10/29/18	11/07/18	KWG1805597	
Acenaphthene	**1.1**	D	1.1	0.13	4	10/29/18	11/07/18	KWG1805597	
Dibenzofuran	**0.48**	JD	1.1	0.088	4	10/29/18	11/07/18	KWG1805597	
Fluorene	**1.1**	JD	1.1	0.16	4	10/29/18	11/07/18	KWG1805597	
Phenanthrene	**15**	D	1.1	0.14	4	10/29/18	11/07/18	KWG1805597	
Anthracene	**2.8**	D	1.1	0.11	4	10/29/18	11/07/18	KWG1805597	
Fluoranthene	**20**	D	1.1	0.13	4	10/29/18	11/07/18	KWG1805597	
Pyrene	**21**	D	1.1	0.13	4	10/29/18	11/07/18	KWG1805597	
Benz(a)anthracene	**10**	D	1.1	0.14	4	10/29/18	11/07/18	KWG1805597	
Chrysene	**15**	D	1.1	0.11	4	10/29/18	11/07/18	KWG1805597	
Benzo(b)fluoranthene†	**18**	D	1.1	0.23	4	10/29/18	11/07/18	KWG1805597	
Benzo(k)fluoranthene	**5.8**	D	1.1	0.18	4	10/29/18	11/07/18	KWG1805597	
Benzo(a)pyrene	**13**	D	1.1	0.15	4	10/29/18	11/07/18	KWG1805597	
Indeno(1,2,3-cd)pyrene	**12**	D	1.1	0.26	4	10/29/18	11/07/18	KWG1805597	
Dibenz(a,h)anthracene	**3.2**	D	1.1	0.24	4	10/29/18	11/07/18	KWG1805597	
Benzo(g,h,i)perylene	**13**	D	1.1	0.24	4	10/29/18	11/07/18	KWG1805597	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	70	26-102	11/07/18	Acceptable
Fluoranthene-d10	72	23-110	11/07/18	Acceptable
Terphenyl-d14	80	27-115	11/07/18	Acceptable

† Analyte Comments

Benzo(b)fluoranthene	This analyte cannot be separated from Benzo(j)fluoranthene.

Comments:

Analytical Results

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/15/2018
Sample Matrix:	Sediment	**Date Received:**	10/19/2018

Polynuclear Aromatic Hydrocarbons

Sample Name:	N1-0to30-101518	**Units:**	ug/Kg
Lab Code:	K1810270-006	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270D SIM		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	**0.33**	J	0.66	0.089	1	10/29/18	11/05/18	KWG1805597	
2-Methylnaphthalene	**0.16**	J	0.66	0.047	1	10/29/18	11/05/18	KWG1805597	
Acenaphthylene	**0.35**	X	0.33	0.029	1	10/29/18	11/05/18	KWG1805597	
Acenaphthene	**0.12**	J	0.33	0.032	1	10/29/18	11/05/18	KWG1805597	
Dibenzofuran	**0.18**	J	0.33	0.022	1	10/29/18	11/05/18	KWG1805597	
Fluorene	**0.11**	J	0.33	0.039	1	10/29/18	11/05/18	KWG1805597	
Phenanthrene	**1.3**		0.33	0.033	1	10/29/18	11/05/18	KWG1805597	
Anthracene	**0.34**		0.33	0.026	1	10/29/18	11/05/18	KWG1805597	
Fluoranthene	**2.8**		0.33	0.032	1	10/29/18	11/05/18	KWG1805597	
Pyrene	**3.4**		0.33	0.032	1	10/29/18	11/05/18	KWG1805597	
Benz(a)anthracene	**1.4**		0.33	0.033	1	10/29/18	11/05/18	KWG1805597	
Chrysene	**2.1**		0.33	0.027	1	10/29/18	11/05/18	KWG1805597	
Benzo(b)fluoranthene†	**2.9**		0.33	0.057	1	10/29/18	11/05/18	KWG1805597	
Benzo(k)fluoranthene	**0.93**		0.33	0.045	1	10/29/18	11/05/18	KWG1805597	
Benzo(a)pyrene	**2.4**		0.33	0.036	1	10/29/18	11/05/18	KWG1805597	
Indeno(1,2,3-cd)pyrene	**2.4**		0.33	0.064	1	10/29/18	11/05/18	KWG1805597	
Dibenz(a,h)anthracene	**0.39**		0.33	0.058	1	10/29/18	11/05/18	KWG1805597	
Benzo(g,h,i)perylene	**2.6**		0.33	0.059	1	10/29/18	11/05/18	KWG1805597	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	62	26-102	11/05/18	Acceptable
Fluoranthene-d10	69	23-110	11/05/18	Acceptable
Terphenyl-d14	74	27-115	11/05/18	Acceptable

† Analyte Comments

Benzo(b)fluoranthene	This analyte cannot be separated from Benzo(j)fluoranthene.

Comments:

Analytical Results

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/15/2018
Sample Matrix:	Sediment	**Date Received:**	10/19/2018

Polynuclear Aromatic Hydrocarbons

Sample Name:	T1-0to30-101518	**Units:**	ug/Kg
Lab Code:	K1810270-010	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270D SIM		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	**0.18**	J	0.80	0.089	1	10/29/18	11/05/18	KWG1805597	
2-Methylnaphthalene	**0.088**	J	0.80	0.047	1	10/29/18	11/05/18	KWG1805597	
Acenaphthylene	**0.14**	JX	0.40	0.029	1	10/29/18	11/05/18	KWG1805597	
Acenaphthene	**0.052**	J	0.40	0.032	1	10/29/18	11/05/18	KWG1805597	
Dibenzofuran	**0.075**	J	0.40	0.022	1	10/29/18	11/05/18	KWG1805597	
Fluorene	**0.067**	J	0.40	0.039	1	10/29/18	11/05/18	KWG1805597	
Phenanthrene	**0.28**	J	0.40	0.033	1	10/29/18	11/05/18	KWG1805597	
Anthracene	**0.11**	J	0.40	0.026	1	10/29/18	11/05/18	KWG1805597	
Fluoranthene	**0.43**		0.40	0.032	1	10/29/18	11/05/18	KWG1805597	
Pyrene	**0.47**		0.40	0.032	1	10/29/18	11/05/18	KWG1805597	
Benz(a)anthracene	**0.33**	J	0.40	0.033	1	10/29/18	11/05/18	KWG1805597	
Chrysene	**0.56**		0.40	0.027	1	10/29/18	11/05/18	KWG1805597	
Benzo(b)fluoranthene†	**1.2**		0.40	0.057	1	10/29/18	11/05/18	KWG1805597	
Benzo(k)fluoranthene	**0.34**	J	0.40	0.045	1	10/29/18	11/05/18	KWG1805597	
Benzo(a)pyrene	**0.43**		0.40	0.036	1	10/29/18	11/05/18	KWG1805597	
Indeno(1,2,3-cd)pyrene	**0.70**		0.40	0.064	1	10/29/18	11/05/18	KWG1805597	
Dibenz(a,h)anthracene	**0.16**	J	0.40	0.058	1	10/29/18	11/05/18	KWG1805597	
Benzo(g,h,i)perylene	**0.64**		0.40	0.059	1	10/29/18	11/05/18	KWG1805597	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	62	26-102	11/05/18	Acceptable
Fluoranthene-d10	61	23-110	11/05/18	Acceptable
Terphenyl-d14	62	27-115	11/05/18	Acceptable

† Analyte Comments

Benzo(b)fluoranthene	This analyte cannot be separated from Benzo(j)fluoranthene.

Comments:

Analytical Results

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/15/2018
Sample Matrix:	Sediment	**Date Received:**	10/19/2018

Polynuclear Aromatic Hydrocarbons

Sample Name:	R1-0to30-101518	**Units:**	ug/Kg
Lab Code:	K1810270-011	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270D SIM		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	**5.4**	D	2.4	0.36	4	10/29/18	11/07/18	KWG1805597	
2-Methylnaphthalene	**3.5**	D	2.4	0.19	4	10/29/18	11/07/18	KWG1805597	
Acenaphthylene	**2.2**	D	1.2	0.12	4	10/29/18	11/07/18	KWG1805597	
Acenaphthene	**4.7**	D	1.2	0.13	4	10/29/18	11/07/18	KWG1805597	
Dibenzofuran	**5.6**	D	1.2	0.088	4	10/29/18	11/07/18	KWG1805597	
Fluorene	**8.0**	D	1.2	0.16	4	10/29/18	11/07/18	KWG1805597	
Phenanthrene	**67**	D	1.2	0.14	4	10/29/18	11/07/18	KWG1805597	
Anthracene	**16**	D	1.2	0.11	4	10/29/18	11/07/18	KWG1805597	
Fluoranthene	**82**	D	1.2	0.13	4	10/29/18	11/07/18	KWG1805597	
Pyrene	**78**	D	1.2	0.13	4	10/29/18	11/07/18	KWG1805597	
Benz(a)anthracene	**36**	D	1.2	0.14	4	10/29/18	11/07/18	KWG1805597	
Chrysene	**42**	D	1.2	0.11	4	10/29/18	11/07/18	KWG1805597	
Benzo(b)fluoranthene†	**41**	D	1.2	0.23	4	10/29/18	11/07/18	KWG1805597	
Benzo(k)fluoranthene	**16**	D	1.2	0.18	4	10/29/18	11/07/18	KWG1805597	
Benzo(a)pyrene	**32**	D	1.2	0.15	4	10/29/18	11/07/18	KWG1805597	
Indeno(1,2,3-cd)pyrene	**22**	D	1.2	0.26	4	10/29/18	11/07/18	KWG1805597	
Dibenz(a,h)anthracene	**6.0**	D	1.2	0.24	4	10/29/18	11/07/18	KWG1805597	
Benzo(g,h,i)perylene	**19**	D	1.2	0.24	4	10/29/18	11/07/18	KWG1805597	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	66	26-102	11/07/18	Acceptable
Fluoranthene-d10	69	23-110	11/07/18	Acceptable
Terphenyl-d14	73	27-115	11/07/18	Acceptable

† Analyte Comments

Benzo(b)fluoranthene	This analyte cannot be separated from Benzo(j)fluoranthene.

Comments:

Analytical Results

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/15/2018
Sample Matrix:	Sediment	**Date Received:**	10/19/2018

Polynuclear Aromatic Hydrocarbons

Sample Name:	P1-0to30-101518	**Units:**	ug/Kg
Lab Code:	K1810270-012	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270D SIM		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	**1.1**	JD	2.6	0.36	4	10/29/18	11/07/18	KWG1805597	
2-Methylnaphthalene	**0.59**	JD	2.6	0.19	4	10/29/18	11/07/18	KWG1805597	
Acenaphthylene	**2.3**	D	1.3	0.12	4	10/29/18	11/07/18	KWG1805597	
Acenaphthene	**3.9**	D	1.3	0.13	4	10/29/18	11/07/18	KWG1805597	
Dibenzofuran	**3.8**	D	1.3	0.088	4	10/29/18	11/07/18	KWG1805597	
Fluorene	**4.1**	D	1.3	0.16	4	10/29/18	11/07/18	KWG1805597	
Phenanthrene	**170**	D	1.3	0.14	4	10/29/18	11/07/18	KWG1805597	
Anthracene	**15**	D	1.3	0.11	4	10/29/18	11/07/18	KWG1805597	
Fluoranthene	**280**	D	1.3	0.13	4	10/29/18	11/07/18	KWG1805597	
Pyrene	**210**	D	1.3	0.13	4	10/29/18	11/07/18	KWG1805597	
Benz(a)anthracene	**110**	D	1.3	0.14	4	10/29/18	11/07/18	KWG1805597	
Chrysene	**160**	D	1.3	0.11	4	10/29/18	11/07/18	KWG1805597	
Benzo(b)fluoranthene†	**170**	D	1.3	0.23	4	10/29/18	11/07/18	KWG1805597	
Benzo(k)fluoranthene	**60**	D	1.3	0.18	4	10/29/18	11/07/18	KWG1805597	
Benzo(a)pyrene	**89**	D	1.3	0.15	4	10/29/18	11/07/18	KWG1805597	
Indeno(1,2,3-cd)pyrene	**76**	D	1.3	0.26	4	10/29/18	11/07/18	KWG1805597	
Dibenz(a,h)anthracene	**20**	D	1.3	0.24	4	10/29/18	11/07/18	KWG1805597	
Benzo(g,h,i)perylene	**63**	D	1.3	0.24	4	10/29/18	11/07/18	KWG1805597	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	65	26-102	11/07/18	Acceptable
Fluoranthene-d10	64	23-110	11/07/18	Acceptable
Terphenyl-d14	70	27-115	11/07/18	Acceptable

† Analyte Comments

Benzo(b)fluoranthene	This analyte cannot be separated from Benzo(j)fluoranthene.

Comments:

Analytical Results

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/16/2018
Sample Matrix:	Sediment	**Date Received:**	10/19/2018

Polynuclear Aromatic Hydrocarbons

Sample Name:	T3-0to28-101618	**Units:**	ug/Kg
Lab Code:	K1810270-013	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270D SIM		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	**17**	D	5.7	0.51	5	10/29/18	11/06/18	KWG1805597	
2-Methylnaphthalene	**8.5**	D	5.7	0.27	5	10/29/18	11/06/18	KWG1805597	
Acenaphthylene	**7.0**	D	2.9	0.17	5	10/29/18	11/06/18	KWG1805597	
Acenaphthene	**7.0**	D	2.9	0.19	5	10/29/18	11/06/18	KWG1805597	
Dibenzofuran	**5.1**	D	2.9	0.13	5	10/29/18	11/06/18	KWG1805597	
Fluorene	**9.3**	D	2.9	0.23	5	10/29/18	11/06/18	KWG1805597	
Phenanthrene	**70**	D	2.9	0.19	5	10/29/18	11/06/18	KWG1805597	
Anthracene	**15**	D	2.9	0.15	5	10/29/18	11/06/18	KWG1805597	
Fluoranthene	**160**	D	2.9	0.19	5	10/29/18	11/06/18	KWG1805597	
Pyrene	**150**	D	2.9	0.19	5	10/29/18	11/06/18	KWG1805597	
Benz(a)anthracene	**58**	D	2.9	0.19	5	10/29/18	11/06/18	KWG1805597	
Chrysene	**110**	D	2.9	0.16	5	10/29/18	11/06/18	KWG1805597	
Benzo(b)fluoranthene†	**120**	D	2.9	0.33	5	10/29/18	11/06/18	KWG1805597	
Benzo(k)fluoranthene	**43**	D	2.9	0.26	5	10/29/18	11/06/18	KWG1805597	
Benzo(a)pyrene	**71**	D	2.9	0.21	5	10/29/18	11/06/18	KWG1805597	
Indeno(1,2,3-cd)pyrene	**65**	D	2.9	0.37	5	10/29/18	11/06/18	KWG1805597	
Dibenz(a,h)anthracene	**15**	D	2.9	0.33	5	10/29/18	11/06/18	KWG1805597	
Benzo(g,h,i)perylene	**68**	D	2.9	0.34	5	10/29/18	11/06/18	KWG1805597	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	61	26-102	11/06/18	Acceptable
Fluoranthene-d10	63	23-110	11/06/18	Acceptable
Terphenyl-d14	65	27-115	11/06/18	Acceptable

† Analyte Comments

Benzo(b)fluoranthene	This analyte cannot be separated from Benzo(j)fluoranthene.

Comments:

Analytical Results

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/16/2018
Sample Matrix:	Sediment	**Date Received:**	10/19/2018

Polynuclear Aromatic Hydrocarbons

Sample Name:	T7-0to31-101618	**Units:**	ug/Kg
Lab Code:	K1810270-015	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270D SIM		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	**7.7**	D	6.4	0.57	5	10/29/18	11/06/18	KWG1805597	
2-Methylnaphthalene	**4.1**	JD	6.4	0.30	5	10/29/18	11/06/18	KWG1805597	
Acenaphthylene	**9.5**	D	3.2	0.19	5	10/29/18	11/06/18	KWG1805597	
Acenaphthene	**8.1**	D	3.2	0.21	5	10/29/18	11/06/18	KWG1805597	
Dibenzofuran	**6.4**	D	3.2	0.14	5	10/29/18	11/06/18	KWG1805597	
Fluorene	**12**	D	3.2	0.25	5	10/29/18	11/06/18	KWG1805597	
Phenanthrene	**98**	D	3.2	0.21	5	10/29/18	11/06/18	KWG1805597	
Anthracene	**22**	D	3.2	0.17	5	10/29/18	11/06/18	KWG1805597	
Fluoranthene	**260**	D	3.2	0.21	5	10/29/18	11/06/18	KWG1805597	
Pyrene	**220**	D	3.2	0.21	5	10/29/18	11/06/18	KWG1805597	
Benz(a)anthracene	**99**	D	3.2	0.21	5	10/29/18	11/06/18	KWG1805597	
Chrysene	**160**	D	3.2	0.18	5	10/29/18	11/06/18	KWG1805597	
Benzo(b)fluoranthene†	**170**	D	3.2	0.37	5	10/29/18	11/06/18	KWG1805597	
Benzo(k)fluoranthene	**61**	D	3.2	0.29	5	10/29/18	11/06/18	KWG1805597	
Benzo(a)pyrene	**110**	D	3.2	0.23	5	10/29/18	11/06/18	KWG1805597	
Indeno(1,2,3-cd)pyrene	**89**	D	3.2	0.41	5	10/29/18	11/06/18	KWG1805597	
Dibenz(a,h)anthracene	**21**	D	3.2	0.37	5	10/29/18	11/06/18	KWG1805597	
Benzo(g,h,i)perylene	**90**	D	3.2	0.38	5	10/29/18	11/06/18	KWG1805597	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	67	26-102	11/06/18	Acceptable
Fluoranthene-d10	69	23-110	11/06/18	Acceptable
Terphenyl-d14	72	27-115	11/06/18	Acceptable

† Analyte Comments

Benzo(b)fluoranthene	This analyte cannot be separated from Benzo(j)fluoranthene.

Comments:

Analytical Results

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/16/2018
Sample Matrix:	Sediment	**Date Received:**	10/19/2018

Polynuclear Aromatic Hydrocarbons

Sample Name:	T5-0to26-101618	**Units:**	ug/Kg
Lab Code:	K1810270-016	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270D SIM		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	**13**	D	5.2	0.47	5	10/29/18	11/06/18	KWG1805597	
2-Methylnaphthalene	**6.0**	D	5.2	0.25	5	10/29/18	11/06/18	KWG1805597	
Acenaphthylene	**9.8**	D	2.6	0.16	5	10/29/18	11/06/18	KWG1805597	
Acenaphthene	**8.7**	D	2.6	0.17	5	10/29/18	11/06/18	KWG1805597	
Dibenzofuran	**6.5**	D	2.6	0.12	5	10/29/18	11/06/18	KWG1805597	
Fluorene	**11**	D	2.6	0.21	5	10/29/18	11/06/18	KWG1805597	
Phenanthrene	**85**	D	2.6	0.18	5	10/29/18	11/06/18	KWG1805597	
Anthracene	**22**	D	2.6	0.14	5	10/29/18	11/06/18	KWG1805597	
Fluoranthene	**210**	D	2.6	0.17	5	10/29/18	11/06/18	KWG1805597	
Pyrene	**200**	D	2.6	0.17	5	10/29/18	11/06/18	KWG1805597	
Benz(a)anthracene	**81**	D	2.6	0.18	5	10/29/18	11/06/18	KWG1805597	
Chrysene	**140**	D	2.6	0.14	5	10/29/18	11/06/18	KWG1805597	
Benzo(b)fluoranthene†	**170**	D	2.6	0.30	5	10/29/18	11/06/18	KWG1805597	
Benzo(k)fluoranthene	**51**	D	2.6	0.24	5	10/29/18	11/06/18	KWG1805597	
Benzo(a)pyrene	**110**	D	2.6	0.19	5	10/29/18	11/06/18	KWG1805597	
Indeno(1,2,3-cd)pyrene	**96**	D	2.6	0.34	5	10/29/18	11/06/18	KWG1805597	
Dibenz(a,h)anthracene	**21**	D	2.6	0.31	5	10/29/18	11/06/18	KWG1805597	
Benzo(g,h,i)perylene	**100**	D	2.6	0.31	5	10/29/18	11/06/18	KWG1805597	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	64	26-102	11/06/18	Acceptable
Fluoranthene-d10	67	23-110	11/06/18	Acceptable
Terphenyl-d14	66	27-115	11/06/18	Acceptable

† Analyte Comments

Benzo(b)fluoranthene	This analyte cannot be separated from Benzo(j)fluoranthene.

Comments:

Analytical Results

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/16/2018
Sample Matrix:	Sediment	**Date Received:**	10/19/2018

Polynuclear Aromatic Hydrocarbons

Sample Name:	P3-0to29-101618	**Units:**	ug/Kg
Lab Code:	K1810270-017	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270D SIM		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	**9.9**	D	5.1	0.46	5	10/29/18	11/06/18	KWG1805597	
2-Methylnaphthalene	**4.7**	JD	5.1	0.24	5	10/29/18	11/06/18	KWG1805597	
Acenaphthylene	**8.1**	D	2.6	0.15	5	10/29/18	11/06/18	KWG1805597	
Acenaphthene	**13**	D	2.6	0.17	5	10/29/18	11/06/18	KWG1805597	
Dibenzofuran	**12**	D	2.6	0.12	5	10/29/18	11/06/18	KWG1805597	
Fluorene	**13**	D	2.6	0.20	5	10/29/18	11/06/18	KWG1805597	
Phenanthrene	**220**	D	2.6	0.17	5	10/29/18	11/06/18	KWG1805597	
Anthracene	**22**	D	2.6	0.14	5	10/29/18	11/06/18	KWG1805597	
Fluoranthene	**360**	D	2.6	0.17	5	10/29/18	11/06/18	KWG1805597	
Pyrene	**280**	D	2.6	0.17	5	10/29/18	11/06/18	KWG1805597	
Benz(a)anthracene	**110**	D	2.6	0.17	5	10/29/18	11/06/18	KWG1805597	
Chrysene	**190**	D	2.6	0.14	5	10/29/18	11/06/18	KWG1805597	
Benzo(b)fluoranthene†	**200**	D	2.6	0.30	5	10/29/18	11/06/18	KWG1805597	
Benzo(k)fluoranthene	**74**	D	2.6	0.23	5	10/29/18	11/06/18	KWG1805597	
Benzo(a)pyrene	**120**	D	2.6	0.19	5	10/29/18	11/06/18	KWG1805597	
Indeno(1,2,3-cd)pyrene	**110**	D	2.6	0.33	5	10/29/18	11/06/18	KWG1805597	
Dibenz(a,h)anthracene	**25**	D	2.6	0.30	5	10/29/18	11/06/18	KWG1805597	
Benzo(g,h,i)perylene	**100**	D	2.6	0.31	5	10/29/18	11/06/18	KWG1805597	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	65	26-102	11/06/18	Acceptable
Fluoranthene-d10	70	23-110	11/06/18	Acceptable
Terphenyl-d14	72	27-115	11/06/18	Acceptable

† Analyte Comments

Benzo(b)fluoranthene	This analyte cannot be separated from Benzo(j)fluoranthene.

Comments:

Analytical Results

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/16/2018
Sample Matrix:	Sediment	**Date Received:**	10/19/2018

Polynuclear Aromatic Hydrocarbons

Sample Name:	R5-0to25-101618	**Units:**	ug/Kg
Lab Code:	K1810270-018	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270D SIM		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	**12**	D	5.5	0.49	5	10/29/18	11/06/18	KWG1805597	
2-Methylnaphthalene	**5.9**	D	5.5	0.26	5	10/29/18	11/06/18	KWG1805597	
Acenaphthylene	**11**	D	2.8	0.16	5	10/29/18	11/06/18	KWG1805597	
Acenaphthene	**9.8**	D	2.8	0.18	5	10/29/18	11/06/18	KWG1805597	
Dibenzofuran	**7.4**	D	2.8	0.12	5	10/29/18	11/06/18	KWG1805597	
Fluorene	**13**	D	2.8	0.22	5	10/29/18	11/06/18	KWG1805597	
Phenanthrene	**110**	D	2.8	0.18	5	10/29/18	11/06/18	KWG1805597	
Anthracene	**29**	D	2.8	0.15	5	10/29/18	11/06/18	KWG1805597	
Fluoranthene	**260**	D	2.8	0.18	5	10/29/18	11/06/18	KWG1805597	
Pyrene	**240**	D	2.8	0.18	5	10/29/18	11/06/18	KWG1805597	
Benz(a)anthracene	**120**	D	2.8	0.18	5	10/29/18	11/06/18	KWG1805597	
Chrysene	**190**	D	2.8	0.15	5	10/29/18	11/06/18	KWG1805597	
Benzo(b)fluoranthene†	**210**	D	2.8	0.31	5	10/29/18	11/06/18	KWG1805597	
Benzo(k)fluoranthene	**76**	D	2.8	0.25	5	10/29/18	11/06/18	KWG1805597	
Benzo(a)pyrene	**140**	D	2.8	0.20	5	10/29/18	11/06/18	KWG1805597	
Indeno(1,2,3-cd)pyrene	**120**	D	2.8	0.35	5	10/29/18	11/06/18	KWG1805597	
Dibenz(a,h)anthracene	**27**	D	2.8	0.32	5	10/29/18	11/06/18	KWG1805597	
Benzo(g,h,i)perylene	**120**	D	2.8	0.32	5	10/29/18	11/06/18	KWG1805597	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	66	26-102	11/06/18	Acceptable
Fluoranthene-d10	74	23-110	11/06/18	Acceptable
Terphenyl-d14	73	27-115	11/06/18	Acceptable

† Analyte Comments

Benzo(b)fluoranthene	This analyte cannot be separated from Benzo(j)fluoranthene.

Comments:

Analytical Results

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/16/2018
Sample Matrix:	Sediment	**Date Received:**	10/19/2018

Polynuclear Aromatic Hydrocarbons

Sample Name:	514-0to29-101618	**Units:**	ug/Kg
Lab Code:	K1810270-019	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270D SIM		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	**8.3**	D	6.2	0.55	5	10/29/18	11/06/18	KWG1805597	
2-Methylnaphthalene	**4.7**	JD	6.2	0.29	5	10/29/18	11/06/18	KWG1805597	
Acenaphthylene	**9.6**	D	3.1	0.18	5	10/29/18	11/06/18	KWG1805597	
Acenaphthene	**6.8**	D	3.1	0.20	5	10/29/18	11/06/18	KWG1805597	
Dibenzofuran	**5.7**	D	3.1	0.14	5	10/29/18	11/06/18	KWG1805597	
Fluorene	**9.9**	D	3.1	0.24	5	10/29/18	11/06/18	KWG1805597	
Phenanthrene	**75**	D	3.1	0.21	5	10/29/18	11/06/18	KWG1805597	
Anthracene	**19**	D	3.1	0.16	5	10/29/18	11/06/18	KWG1805597	
Fluoranthene	**200**	D	3.1	0.20	5	10/29/18	11/06/18	KWG1805597	
Pyrene	**180**	D	3.1	0.20	5	10/29/18	11/06/18	KWG1805597	
Benz(a)anthracene	**80**	D	3.1	0.21	5	10/29/18	11/06/18	KWG1805597	
Chrysene	**130**	D	3.1	0.17	5	10/29/18	11/06/18	KWG1805597	
Benzo(b)fluoranthene†	**150**	D	3.1	0.36	5	10/29/18	11/06/18	KWG1805597	
Benzo(k)fluoranthene	**56**	D	3.1	0.28	5	10/29/18	11/06/18	KWG1805597	
Benzo(a)pyrene	**98**	D	3.1	0.23	5	10/29/18	11/06/18	KWG1805597	
Indeno(1,2,3-cd)pyrene	**85**	D	3.1	0.40	5	10/29/18	11/06/18	KWG1805597	
Dibenz(a,h)anthracene	**20**	D	3.1	0.36	5	10/29/18	11/06/18	KWG1805597	
Benzo(g,h,i)perylene	**88**	D	3.1	0.37	5	10/29/18	11/06/18	KWG1805597	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	64	26-102	11/06/18	Acceptable
Fluoranthene-d10	69	23-110	11/06/18	Acceptable
Terphenyl-d14	70	27-115	11/06/18	Acceptable

† Analyte Comments

Benzo(b)fluoranthene	This analyte cannot be separated from Benzo(j)fluoranthene.

Comments:

Analytical Results

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/16/2018
Sample Matrix:	Sediment	**Date Received:**	10/19/2018

Polynuclear Aromatic Hydrocarbons

Sample Name:	P5-0to26-101618	**Units:**	ug/Kg
Lab Code:	K1810270-020	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270D SIM		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	**5.0**		1.5	0.13	1	10/29/18	11/05/18	KWG1805597	
2-Methylnaphthalene	**2.7**		1.5	0.067	1	10/29/18	11/05/18	KWG1805597	
Acenaphthylene	**5.8**		0.71	0.041	1	10/29/18	11/05/18	KWG1805597	
Acenaphthene	**6.0**		0.71	0.046	1	10/29/18	11/05/18	KWG1805597	
Dibenzofuran	**3.5**		0.71	0.032	1	10/29/18	11/05/18	KWG1805597	
Fluorene	**6.0**		0.71	0.055	1	10/29/18	11/05/18	KWG1805597	
Phenanthrene	**68**		0.71	0.047	1	10/29/18	11/05/18	KWG1805597	
Anthracene	**15**		0.71	0.037	1	10/29/18	11/05/18	KWG1805597	
Fluoranthene	**140**		0.71	0.046	1	10/29/18	11/05/18	KWG1805597	
Pyrene	**130**		0.71	0.046	1	10/29/18	11/05/18	KWG1805597	
Benz(a)anthracene	**66**		0.71	0.047	1	10/29/18	11/05/18	KWG1805597	
Chrysene	**100**		0.71	0.039	1	10/29/18	11/05/18	KWG1805597	
Benzo(b)fluoranthene†	**110**		0.71	0.081	1	10/29/18	11/05/18	KWG1805597	
Benzo(k)fluoranthene	**42**		0.71	0.064	1	10/29/18	11/05/18	KWG1805597	
Benzo(a)pyrene	**79**		0.71	0.051	1	10/29/18	11/05/18	KWG1805597	
Indeno(1,2,3-cd)pyrene	**64**		0.71	0.091	1	10/29/18	11/05/18	KWG1805597	
Dibenz(a,h)anthracene	**15**		0.71	0.082	1	10/29/18	11/05/18	KWG1805597	
Benzo(g,h,i)perylene	**61**		0.71	0.084	1	10/29/18	11/05/18	KWG1805597	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	58	26-102	11/05/18	Acceptable
Fluoranthene-d10	61	23-110	11/05/18	Acceptable
Terphenyl-d14	65	27-115	11/05/18	Acceptable

† Analyte Comments

Benzo(b)fluoranthene	This analyte cannot be separated from Benzo(j)fluoranthene.

Comments:

Analytical Results

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/17/2018
Sample Matrix:	Sediment	**Date Received:**	10/19/2018

Polynuclear Aromatic Hydrocarbons

Sample Name:	R3-0to33-101718	**Units:**	ug/Kg
Lab Code:	K1810270-029	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270D SIM		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	**9.8**		1.4	0.13	1	10/29/18	11/05/18	KWG1805597	
2-Methylnaphthalene	**4.1**		1.4	0.065	1	10/29/18	11/05/18	KWG1805597	
Acenaphthylene	**11**		0.69	0.040	1	10/29/18	11/05/18	KWG1805597	
Acenaphthene	**8.4**		0.69	0.044	1	10/29/18	11/05/18	KWG1805597	
Dibenzofuran	**4.5**		0.69	0.031	1	10/29/18	11/05/18	KWG1805597	
Fluorene	**9.0**		0.69	0.054	1	10/29/18	11/05/18	KWG1805597	
Phenanthrene	**95**		0.69	0.046	1	10/29/18	11/05/18	KWG1805597	
Anthracene	**28**		0.69	0.036	1	10/29/18	11/05/18	KWG1805597	
Fluoranthene	**210**		0.69	0.044	1	10/29/18	11/05/18	KWG1805597	
Pyrene	**200**		0.69	0.044	1	10/29/18	11/05/18	KWG1805597	
Benz(a)anthracene	**110**		0.69	0.046	1	10/29/18	11/05/18	KWG1805597	
Chrysene	**140**		0.69	0.037	1	10/29/18	11/05/18	KWG1805597	
Benzo(b)fluoranthene†	**160**		0.69	0.078	1	10/29/18	11/05/18	KWG1805597	
Benzo(k)fluoranthene	**54**		0.69	0.062	1	10/29/18	11/05/18	KWG1805597	
Benzo(a)pyrene	**120**		0.69	0.050	1	10/29/18	11/05/18	KWG1805597	
Indeno(1,2,3-cd)pyrene	**90**		0.69	0.088	1	10/29/18	11/05/18	KWG1805597	
Dibenz(a,h)anthracene	**21**		0.69	0.080	1	10/29/18	11/05/18	KWG1805597	
Benzo(g,h,i)perylene	**85**		0.69	0.081	1	10/29/18	11/05/18	KWG1805597	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	66	26-102	11/05/18	Acceptable
Fluoranthene-d10	73	23-110	11/05/18	Acceptable
Terphenyl-d14	74	27-115	11/05/18	Acceptable

† Analyte Comments

Benzo(b)fluoranthene	This analyte cannot be separated from Benzo(j)fluoranthene.

Comments:

Analytical Results

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	NA
Sample Matrix:	Sediment	**Date Received:**	NA

Polynuclear Aromatic Hydrocarbons

Sample Name:	Method Blank	**Units:**	ug/Kg
Lab Code:	KWG1805597-4	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270D SIM		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	ND	U	0.50	0.089	1	10/29/18	11/05/18	KWG1805597	
2-Methylnaphthalene	ND	U	0.50	0.047	1	10/29/18	11/05/18	KWG1805597	
Acenaphthylene	ND	U	0.25	0.029	1	10/29/18	11/05/18	KWG1805597	
Acenaphthene	ND	U	0.25	0.032	1	10/29/18	11/05/18	KWG1805597	
Dibenzofuran	**0.034**	J	0.25	0.022	1	10/29/18	11/05/18	KWG1805597	
Fluorene	**0.039**	J	0.25	0.039	1	10/29/18	11/05/18	KWG1805597	
Phenanthrene	**0.066**	J	0.25	0.033	1	10/29/18	11/05/18	KWG1805597	
Anthracene	ND	U	0.25	0.026	1	10/29/18	11/05/18	KWG1805597	
Fluoranthene	ND	U	0.25	0.032	1	10/29/18	11/05/18	KWG1805597	
Pyrene	ND	U	0.25	0.032	1	10/29/18	11/05/18	KWG1805597	
Benz(a)anthracene	ND	U	0.25	0.033	1	10/29/18	11/05/18	KWG1805597	
Chrysene	ND	U	0.25	0.027	1	10/29/18	11/05/18	KWG1805597	
Benzo(b)fluoranthene†	ND	U	0.25	0.057	1	10/29/18	11/05/18	KWG1805597	
Benzo(k)fluoranthene	ND	U	0.25	0.045	1	10/29/18	11/05/18	KWG1805597	
Benzo(a)pyrene	ND	U	0.25	0.036	1	10/29/18	11/05/18	KWG1805597	
Indeno(1,2,3-cd)pyrene	ND	U	0.25	0.064	1	10/29/18	11/05/18	KWG1805597	
Dibenz(a,h)anthracene	ND	U	0.25	0.058	1	10/29/18	11/05/18	KWG1805597	
Benzo(g,h,i)perylene	ND	U	0.25	0.059	1	10/29/18	11/05/18	KWG1805597	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	66	26-102	11/05/18	Acceptable
Fluoranthene-d10	66	23-110	11/05/18	Acceptable
Terphenyl-d14	71	27-115	11/05/18	Acceptable

† Analyte Comments

Benzo(b)fluoranthene	This analyte cannot be separated from Benzo(j)fluoranthene.

Comments:

Analytical Results

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	NA
Sample Matrix:	Sediment	**Date Received:**	NA

Polynuclear Aromatic Hydrocarbons

Sample Name:	Method Blank	**Units:**	ug/Kg
Lab Code:	KWG1805796-6	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270D SIM		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	ND	U	0.50	0.089	1	11/07/18	11/14/18	KWG1805796	
2-Methylnaphthalene	ND	U	0.50	0.047	1	11/07/18	11/14/18	KWG1805796	
Acenaphthylene	ND	U	0.25	0.029	1	11/07/18	11/14/18	KWG1805796	
Acenaphthene	ND	U	0.25	0.032	1	11/07/18	11/14/18	KWG1805796	
Dibenzofuran	ND	U	0.25	0.022	1	11/07/18	11/14/18	KWG1805796	
Fluorene	ND	U	0.25	0.039	1	11/07/18	11/14/18	KWG1805796	
Phenanthrene	ND	U	0.25	0.033	1	11/07/18	11/14/18	KWG1805796	
Anthracene	ND	U	0.25	0.026	1	11/07/18	11/14/18	KWG1805796	
Fluoranthene	ND	U	0.25	0.032	1	11/07/18	11/14/18	KWG1805796	
Pyrene	ND	U	0.25	0.032	1	11/07/18	11/14/18	KWG1805796	
Benz(a)anthracene	**0.035**	J	0.25	0.033	1	11/07/18	11/14/18	KWG1805796	
Chrysene	ND	U	0.25	0.027	1	11/07/18	11/14/18	KWG1805796	
Benzo(b)fluoranthene†	ND	U	0.25	0.057	1	11/07/18	11/14/18	KWG1805796	
Benzo(k)fluoranthene	ND	U	0.25	0.045	1	11/07/18	11/14/18	KWG1805796	
Benzo(a)pyrene	ND	U	0.25	0.036	1	11/07/18	11/14/18	KWG1805796	
Indeno(1,2,3-cd)pyrene	ND	U	0.25	0.064	1	11/07/18	11/14/18	KWG1805796	
Dibenz(a,h)anthracene	ND	U	0.25	0.058	1	11/07/18	11/14/18	KWG1805796	
Benzo(g,h,i)perylene	ND	U	0.25	0.059	1	11/07/18	11/14/18	KWG1805796	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	72	26-102	11/14/18	Acceptable
Fluoranthene-d10	67	23-110	11/14/18	Acceptable
Terphenyl-d14	75	27-115	11/14/18	Acceptable

† Analyte Comments

Benzo(b)fluoranthene	This analyte cannot be separated from Benzo(j)fluoranthene.

Comments:

QA/QC Report

Client: Pacific Groundwater Group (PGG) **Service Request:** K1810270
Project: DTNA Swan Island Sediment/2006-00115
Sample Matrix: Sediment

Surrogate Recovery Summary
Polynuclear Aromatic Hydrocarbons

Extraction Method: EPA 3541 **Units:** Percent
Analysis Method: 8270D SIM **Level:** Low

Sample Name	Lab Code	Sur1	Sur2	Sur3
N3-0to26-101518	K1810270-001	72 D	67 D	77 D
L1-0to30-101518	K1810270-004	70 D	72 D	80 D
N1-0to30-101518	K1810270-006	62	69	74
T1-0to30-101518	K1810270-010	62	61	62
R1-0to30-101518	K1810270-011	66 D	69 D	73 D
P1-0to30-101518	K1810270-012	65 D	64 D	70 D
T3-0to28-101618	K1810270-013	61 D	63 D	65 D
T7-0to31-101618	K1810270-015	67 D	69 D	72 D
T5-0to26-101618	K1810270-016	64 D	67 D	66 D
P3-0to29-101618	K1810270-017	65 D	70 D	72 D
R5-0to25-101618	K1810270-018	66 D	74 D	73 D
514-0to29-101618	K1810270-019	64 D	69 D	70 D
P5-0to26-101618	K1810270-020	58	61	65
R3-0to33-101718	K1810270-029	66	73	74
Method Blank	KWG1805597-4	66	66	71
Method Blank	KWG1805796-6	72	67	75
T1-0to30-101518MS	KWG1805597-1	58	58	58
T1-0to30-101518DMS	KWG1805597-2	53	54	56
Lab Control Sample	KWG1805597-3	69	71	79
Lab Control Sample	KWG1805796-5	78	79	87

Surrogate Recovery Control Limits (%)

Sur1	=	Fluorene-d10	26-102
Sur2	=	Fluoranthene-d10	23-110
Sur3	=	Terphenyl-d14	27-115

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

QA/QC Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Analyzed:**	11/05/2018
		Time Analyzed:	09:41

Internal Standard Area and RT Summary
Polynuclear Aromatic Hydrocarbons

File ID:	J:\MS14\DATA\110518\1105F002.D	**Lab Code:**	KWG1806019-2
Instrument ID:	MS14	**Analysis Lot:**	KWG1806019
Analysis Method:	8270D SIM		

		Naphthalene-d8		Acenaphthene-d10		Phenanthrene-d10	
		Area	**RT**	**Area**	**RT**	**Area**	**RT**
	Results ==>	68,045	4.76	28,083	6.32	57,938	7.56
	Upper Limit ==>	136,090	5.26	56,166	6.82	115,876	8.06
	Lower Limit ==>	34,023	4.26	14,042	5.82	28,969	7.06
	ICAL Result ==>	60,855	4.80	25,959	6.35	53,916	7.59
Associated Analyses							
Method Blank	KWG1805597-4	76,096	4.77	33,148	6.32	70,658	7.56
T1-0to30-101518MS	KWG1805597-1	76,303	4.77	30,184	6.32	58,895	7.56
T1-0to30-101518DMS	KWG1805597-2	76,240	4.77	29,904	6.32	58,072	7.56
T1-0to30-101518	K1810270-010	73,964	4.77	31,751	6.32	59,620	7.56
N1-0to30-101518	K1810270-006	73,202	4.77	32,934	6.32	65,954	7.56
P5-0to26-101618	K1810270-020	71,357	4.77	32,606	6.32	65,476	7.56
R3-0to33-101718	K1810270-029	73,213	4.77	32,512	6.32	66,609	7.56

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Pacific Groundwater Group (PGG)
Project: DTNA Swan Island Sediment/2006-00115

Service Request: K1810270
Date Analyzed: 11/05/2018
Time Analyzed: 09:41

Internal Standard Area and RT Summary
Polynuclear Aromatic Hydrocarbons

File ID: J:\MS14\DATA\110518\1105F002.D
Instrument ID: MS14
Analysis Method: 8270D SIM

Lab Code: KWG1806019-2
Analysis Lot: KWG1806019

		Chrysene-d12		Perylene-d12	
		Area	**RT**	**Area**	**RT**
	Results ==>	79,003	10.10	92,808	13.26
	Upper Limit ==>	158,006	10.60	185,616	13.76
	Lower Limit ==>	39,502	9.60	46,404	12.76
	ICAL Result ==>	68,964	10.15	73,742	13.30
Associated Analyses					
Method Blank	KWG1805597-4	84,189	10.11	91,029	13.29
T1-0to30-101518MS	KWG1805597-1	77,686	10.11	89,245	13.29
T1-0to30-101518DMS	KWG1805597-2	74,436	10.11	88,810	13.28
T1-0to30-101518	K1810270-010	76,034	10.11	91,548	13.27
N1-0to30-101518	K1810270-006	78,844	10.11	90,255	13.28
P5-0to26-101618	K1810270-020	81,376	10.12	94,405	13.35
R3-0to33-101718	K1810270-029	84,062	10.13	93,566	13.38

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Report

Client: Pacific Groundwater Group (PGG)
Project: DTNA Swan Island Sediment/2006-00115

Service Request: K1810270
Date Analyzed: 11/06/2018
Time Analyzed: 05:35

Internal Standard Area and RT Summary
Polynuclear Aromatic Hydrocarbons

File ID: J:\MS14\DATA\110618\1106F002.D
Instrument ID: MS14
Analysis Method: 8270D SIM

Lab Code: KWG1806026-2
Analysis Lot: KWG1806026

		Naphthalene-d8		Acenaphthene-d10		Phenanthrene-d10	
		Area	**RT**	**Area**	**RT**	**Area**	**RT**
	Results ==>	65,709	4.76	29,101	6.32	61,986	7.56
	Upper Limit ==>	131,418	5.26	58,202	6.82	123,972	8.06
	Lower Limit ==>	32,855	4.26	14,551	5.82	30,993	7.06
	ICAL Result ==>	60,855	4.80	25,959	6.35	53,916	7.59
Associated Analyses							
Lab Control Sample	KWG1805597-3	66,672	4.75	29,220	6.32	61,419	7.56
T3-0to28-101618	K1810270-013	65,459	4.76	31,384	6.32	63,553	7.56
T7-0to31-101618	K1810270-015	65,576	4.76	31,057	6.32	62,927	7.56
T5-0to26-101618	K1810270-016	62,762	4.76	30,408	6.32	61,730	7.56
P3-0to29-101618	K1810270-017	66,277	4.76	31,500	6.32	64,204	7.56
R5-0to25-101618	K1810270-018	66,491	4.76	30,903	6.32	62,644	7.56
514-0to29-101618	K1810270-019	66,644	4.76	31,032	6.32	62,836	7.56

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Analyzed:**	11/06/2018
		Time Analyzed:	05:35

Internal Standard Area and RT Summary
Polynuclear Aromatic Hydrocarbons

File ID:	J:\MS14\DATA\110618\1106F002.D	**Lab Code:**	KWG1806026-2
Instrument ID:	MS14	**Analysis Lot:**	KWG1806026
Analysis Method:	8270D SIM		

		Chrysene-d12		Perylene-d12	
		Area	**RT**	**Area**	**RT**
	Results ==>	76,116	10.11	89,350	13.27
	Upper Limit ==>	152,232	10.61	178,700	13.77
	Lower Limit ==>	38,058	9.61	44,675	12.77
	ICAL Result ==>	68,964	10.15	73,742	13.30
Associated Analyses					
Lab Control Sample	KWG1805597-3	68,916	10.11	78,051	13.27
T3-0to28-101618	K1810270-013	80,827	10.11	95,678	13.30
T7-0to31-101618	K1810270-015	81,131	10.12	94,792	13.31
T5-0to26-101618	K1810270-016	83,344	10.12	94,949	13.35
P3-0to29-101618	K1810270-017	82,493	10.12	95,626	13.32
R5-0to25-101618	K1810270-018	82,257	10.12	95,692	13.34
514-0to29-101618	K1810270-019	82,262	10.12	94,884	13.32

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Report

Client: Pacific Groundwater Group (PGG)
Project: DTNA Swan Island Sediment/2006-00115

Service Request: K1810270
Date Analyzed: 11/07/2018
Time Analyzed: 05:26

Internal Standard Area and RT Summary
Polynuclear Aromatic Hydrocarbons

File ID: J:\MS14\DATA\110718\1107F002.D
Instrument ID: MS14
Analysis Method: 8270D SIM

Lab Code: KWG1806028-2
Analysis Lot: KWG1806028

		Naphthalene-d8		Acenaphthene-d10		Phenanthrene-d10	
		Area	**RT**	**Area**	**RT**	**Area**	**RT**
	Results ==>	68,316	4.76	31,023	6.32	63,263	7.56
	Upper Limit ==>	136,632	5.26	62,046	6.82	126,526	8.06
	Lower Limit ==>	34,158	4.26	15,512	5.82	31,632	7.06
	ICAL Result ==>	60,855	4.80	25,959	6.35	53,916	7.59
Associated Analyses							
L1-0to30-101518	K1810270-004	64,297	4.75	31,463	6.32	65,645	7.56
R1-0to30-101518	K1810270-011	64,050	4.75	31,363	6.32	64,105	7.56
P1-0to30-101518	K1810270-012	63,426	4.75	30,950	6.32	64,665	7.56

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Pacific Groundwater Group (PGG)
Project: DTNA Swan Island Sediment/2006-00115

Service Request: K1810270
Date Analyzed: 11/07/2018
Time Analyzed: 05:26

Internal Standard Area and RT Summary
Polynuclear Aromatic Hydrocarbons

File ID: J:\MS14\DATA\110718\1107F002.D
Instrument ID: MS14
Analysis Method: 8270D SIM

Lab Code: KWG1806028-2
Analysis Lot: KWG1806028

		Chrysene-d12		Perylene-d12	
		Area	**RT**	**Area**	**RT**
	Results ==>	75,807	10.11	86,791	13.28
	Upper Limit ==>	151,614	10.61	173,582	13.78
	Lower Limit ==>	37,904	9.61	43,396	12.78
	ICAL Result ==>	68,964	10.15	73,742	13.30
Associated Analyses					
L1-0to30-101518	K1810270-004	78,079	10.11	88,139	13.30
R1-0to30-101518	K1810270-011	77,988	10.11	88,655	13.29
P1-0to30-101518	K1810270-012	75,545	10.11	87,616	13.32

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Report

Client: Pacific Groundwater Group (PGG)
Project: DTNA Swan Island Sediment/2006-00115

Service Request: K1810270
Date Analyzed: 11/14/2018
Time Analyzed: 06:17

Internal Standard Area and RT Summary
Polynuclear Aromatic Hydrocarbons

File ID: J:\MS14\DATA\111418\1114F002.D
Instrument ID: MS14
Analysis Method: 8270D SIM

Lab Code: KWG1806235-2
Analysis Lot: KWG1806235

		Naphthalene-d8		Acenaphthene-d10		Phenanthrene-d10	
		Area	**RT**	**Area**	**RT**	**Area**	**RT**
	Results ==>	58,386	4.75	27,245	6.31	66,920	7.55
	Upper Limit ==>	116,772	5.25	54,490	6.81	133,840	8.05
	Lower Limit ==>	29,193	4.25	13,623	5.81	33,460	7.05
	ICAL Result ==>	60,855	4.80	25,959	6.35	53,916	7.59
Associated Analyses							
Method Blank	KWG1805796-6	59,123	4.74	31,330	6.31	73,826	7.55
Lab Control Sample	KWG1805796-5	60,453	4.75	29,887	6.31	65,739	7.55
N3-0to26-101518	K1810270-001	54,405	4.74	28,102	6.31	69,438	7.55

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Analyzed:**	11/14/2018
		Time Analyzed:	06:17

Internal Standard Area and RT Summary
Polynuclear Aromatic Hydrocarbons

File ID:	J:\MS14\DATA\111418\1114F002.D	**Lab Code:**	KWG1806235-2
Instrument ID:	MS14	**Analysis Lot:**	KWG1806235
Analysis Method:	8270D SIM		

		Chrysene-d12		Perylene-d12	
		Area	**RT**	**Area**	**RT**
	Results ==>	75,302	10.10	83,299	13.29
	Upper Limit ==>	150,604	10.60	166,598	13.79
	Lower Limit ==>	37,651	9.60	41,650	12.79
	ICAL Result ==>	68,964	10.15	73,742	13.30
Associated Analyses					
Method Blank	KWG1805796-6	83,472	10.10	90,973	13.28
Lab Control Sample	KWG1805796-5	75,453	10.10	83,033	13.29
N3-0to26-101518	K1810270-001	76,819	10.11	83,953	13.32

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Extracted:**	10/29/2018
Sample Matrix:	Sediment	**Date Analyzed:**	11/05/2018

Matrix Spike/Duplicate Matrix Spike Summary
Polynuclear Aromatic Hydrocarbons

Sample Name:	T1-0to30-101518	**Units:**	ug/Kg
Lab Code:	K1810270-010	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270D SIM	**Extraction Lot:**	KWG1805597

		T1-0to30-101518MS KWG1805597-1 Matrix Spike			T1-0to30-101518DMS KWG1805597-2 Duplicate Matrix Spike					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**%Rec**	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
Naphthalene	0.18	41.1	79.3	52 *	37.6	79.3	47 *	70-130	9	40
2-Methylnaphthalene	0.088	38.2	79.3	48 *	35.2	79.3	44 *	70-130	8	40
Acenaphthylene	0.14	45.9	79.3	58 *	42.3	79.3	53 *	70-130	8	40
Acenaphthene	0.052	44.5	79.3	56 *	41.1	79.3	52 *	70-130	8	40
Dibenzofuran	0.075	44.2	79.3	56 *	40.8	79.3	51 *	70-130	8	40
Fluorene	0.067	44.9	79.3	57 *	41.5	79.3	52 *	70-130	8	40
Phenanthrene	0.28	45.3	79.3	57 *	42.3	79.3	53 *	70-130	7	40
Anthracene	0.11	48.2	79.3	61 *	45.1	79.3	57 *	70-130	7	40
Fluoranthene	0.43	44.5	79.3	56 *	41.2	79.3	51 *	70-130	8	40
Pyrene	0.47	42.0	79.3	52 *	39.8	79.3	50 *	70-130	5	40
Benz(a)anthracene	0.33	53.2	79.3	67 *	50.0	79.3	63 *	70-130	6	40
Chrysene	0.56	51.4	79.3	64 *	48.3	79.3	60 *	70-130	6	40
Benzo(b)fluoranthene	1.2	52.9	79.3	65 *	50.0	79.3	62 *	70-130	6	40
Benzo(k)fluoranthene	0.34	50.8	79.3	64 *	47.8	79.3	60 *	70-130	6	40
Benzo(a)pyrene	0.43	53.1	79.3	66 *	49.8	79.3	62 *	70-130	6	40
Indeno(1,2,3-cd)pyrene	0.70	55.2	79.3	69 *	52.3	79.3	65 *	70-130	5	40
Dibenz(a,h)anthracene	0.16	54.5	79.3	69 *	49.9	79.3	63 *	70-130	9	40
Benzo(g,h,i)perylene	0.64	49.8	79.3	62 *	47.7	79.3	59 *	70-130	4	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Extracted:**	10/29/2018
Sample Matrix:	Sediment	**Date Analyzed:**	11/06/2018

Lab Control Spike Summary
Polynuclear Aromatic Hydrocarbons

Extraction Method:	EPA 3541	**Units:**	ug/Kg
Analysis Method:	8270D SIM	**Basis:**	Dry
		Level:	Low
		Extraction Lot:	KWG1805597

	Lab Control Sample KWG1805597-3 Lab Control Spike			
Analyte Name	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**
Naphthalene	61.1	100	61	48-77
2-Methylnaphthalene	60.8	100	61	52-85
Acenaphthylene	68.7	100	69	51-80
Acenaphthene	67.3	100	67	51-82
Dibenzofuran	69.3	100	69	14-125
Fluorene	68.2	100	68	52-83
Phenanthrene	67.2	100	67	48-85
Anthracene	71.9	100	72	56-87
Fluoranthene	66.9	100	67	45-96
Pyrene	72.1	100	72	59-98
Benz(a)anthracene	80.7	100	81	65-97
Chrysene	77.1	100	77	63-100
Benzo(b)fluoranthene	83.5	100	84	63-99
Benzo(k)fluoranthene	78.6	100	79	62-99
Benzo(a)pyrene	82.4	100	82	64-103
Indeno(1,2,3-cd)pyrene	87.6	100	88	61-105
Dibenz(a,h)anthracene	82.9	100	83	56-104
Benzo(g,h,i)perylene	80.3	100	80	56-101

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Extracted:**	11/07/2018
Sample Matrix:	Sediment	**Date Analyzed:**	11/14/2018

Lab Control Spike Summary
Polynuclear Aromatic Hydrocarbons

Extraction Method:	EPA 3541	**Units:**	ug/Kg
Analysis Method:	8270D SIM	**Basis:**	Dry
		Level:	Low
		Extraction Lot:	KWG1805796

Lab Control Sample
KWG1805796-5
Lab Control Spike

Analyte Name	Result	Spike Amount	%Rec	%Rec Limits
Naphthalene	63.7	100	64	48-77
2-Methylnaphthalene	67.3	100	67	52-85
Acenaphthylene	68.6	100	69	51-80
Acenaphthene	68.4	100	68	51-82
Dibenzofuran	67.8	100	68	14-125
Fluorene	72.0	100	72	52-83
Phenanthrene	68.9	100	69	48-85
Anthracene	74.2	100	74	56-87
Fluoranthene	68.9	100	69	45-96
Pyrene	73.4	100	73	59-98
Benz(a)anthracene	82.2	100	82	65-97
Chrysene	79.0	100	79	63-100
Benzo(b)fluoranthene	84.4	100	84	63-99
Benzo(k)fluoranthene	81.1	100	81	62-99
Benzo(a)pyrene	85.3	100	85	64-103
Indeno(1,2,3-cd)pyrene	85.9	100	86	61-105
Dibenz(a,h)anthracene	82.2	100	82	56-104
Benzo(g,h,i)perylene	73.4	100	73	56-101

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Extracted:**	10/29/2018
Sample Matrix:	Sediment	**Date Analyzed:**	11/05/2018
		Time Analyzed:	16:12

Method Blank Summary
Polynuclear Aromatic Hydrocarbons

Sample Name:	Method Blank	**Instrument ID:**	MS14
Lab Code:	KWG1805597-4	**File ID:**	J:\MS14\DATA\110518\1105F015.D
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270D SIM	**Extraction Lot:**	KWG1805597

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
T1-0to30-101518MS	KWG1805597-1	J:\MS14\DATA\110518\1105F017.D	11/05/18	17:12
T1-0to30-101518DMS	KWG1805597-2	J:\MS14\DATA\110518\1105F018.D	11/05/18	17:42
T1-0to30-101518	K1810270-010	J:\MS14\DATA\110518\1105F019.D	11/05/18	18:11
N1-0to30-101518	K1810270-006	J:\MS14\DATA\110518\1105F020.D	11/05/18	18:41
P5-0to26-101618	K1810270-020	J:\MS14\DATA\110518\1105F021.D	11/05/18	19:10
R3-0to33-101718	K1810270-029	J:\MS14\DATA\110518\1105F022.D	11/05/18	19:40
Lab Control Sample	KWG1805597-3	J:\MS14\DATA\110618\1106F005.D	11/06/18	07:01
T3-0to28-101618	K1810270-013	J:\MS14\DATA\110618\1106F016.D	11/06/18	12:18
T7-0to31-101618	K1810270-015	J:\MS14\DATA\110618\1106F017.D	11/06/18	12:46
T5-0to26-101618	K1810270-016	J:\MS14\DATA\110618\1106F018.D	11/06/18	13:15
P3-0to29-101618	K1810270-017	J:\MS14\DATA\110618\1106F019.D	11/06/18	13:44
R5-0to25-101618	K1810270-018	J:\MS14\DATA\110618\1106F020.D	11/06/18	14:13
514-0to29-101618	K1810270-019	J:\MS14\DATA\110618\1106F021.D	11/06/18	14:42
L1-0to30-101518	K1810270-004	J:\MS14\DATA\110718\1107F009.D	11/07/18	08:58
R1-0to30-101518	K1810270-011	J:\MS14\DATA\110718\1107F010.D	11/07/18	09:28
P1-0to30-101518	K1810270-012	J:\MS14\DATA\110718\1107F011.D	11/07/18	09:59

QA/QC Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Extracted:**	11/07/2018
Sample Matrix:	Sediment	**Date Analyzed:**	11/14/2018
		Time Analyzed:	06:42

Method Blank Summary
Polynuclear Aromatic Hydrocarbons

Sample Name:	Method Blank	**Instrument ID:**	MS14
Lab Code:	KWG1805796-6	**File ID:**	J:\MS14\DATA\111418\1114F003.D
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270D SIM	**Extraction Lot:**	KWG1805796

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Lab Control Sample	KWG1805796-5	J:\MS14\DATA\111418\1114F004.D	11/14/18	07:08
N3-0to26-101518	K1810270-001	J:\MS14\DATA\111418\1114F013.D	11/14/18	10:56

QA/QC Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Extracted:**	10/29/2018
Sample Matrix:	Sediment	**Date Analyzed:**	11/06/2018
		Time Analyzed:	07:01

Lab Control Sample Summary
Polynuclear Aromatic Hydrocarbons

Sample Name:	Lab Control Sample	**Instrument ID:**	MS14
Lab Code:	KWG1805597-3	**File ID:**	J:\MS14\DATA\110618\1106F005.D
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270D SIM	**Extraction Lot:**	KWG1805597

This Lab Control Sample applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Method Blank	KWG1805597-4	J:\MS14\DATA\110518\1105F015.D	11/05/18	16:12
T1-0to30-101518MS	KWG1805597-1	J:\MS14\DATA\110518\1105F017.D	11/05/18	17:12
T1-0to30-101518DMS	KWG1805597-2	J:\MS14\DATA\110518\1105F018.D	11/05/18	17:42
T1-0to30-101518	K1810270-010	J:\MS14\DATA\110518\1105F019.D	11/05/18	18:11
N1-0to30-101518	K1810270-006	J:\MS14\DATA\110518\1105F020.D	11/05/18	18:41
P5-0to26-101618	K1810270-020	J:\MS14\DATA\110518\1105F021.D	11/05/18	19:10
R3-0to33-101718	K1810270-029	J:\MS14\DATA\110518\1105F022.D	11/05/18	19:40
T3-0to28-101618	K1810270-013	J:\MS14\DATA\110618\1106F016.D	11/06/18	12:18
T7-0to31-101618	K1810270-015	J:\MS14\DATA\110618\1106F017.D	11/06/18	12:46
T5-0to26-101618	K1810270-016	J:\MS14\DATA\110618\1106F018.D	11/06/18	13:15
P3-0to29-101618	K1810270-017	J:\MS14\DATA\110618\1106F019.D	11/06/18	13:44
R5-0to25-101618	K1810270-018	J:\MS14\DATA\110618\1106F020.D	11/06/18	14:13
514-0to29-101618	K1810270-019	J:\MS14\DATA\110618\1106F021.D	11/06/18	14:42
L1-0to30-101518	K1810270-004	J:\MS14\DATA\110718\1107F009.D	11/07/18	08:58
R1-0to30-101518	K1810270-011	J:\MS14\DATA\110718\1107F010.D	11/07/18	09:28
P1-0to30-101518	K1810270-012	J:\MS14\DATA\110718\1107F011.D	11/07/18	09:59

QA/QC Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Extracted:**	11/07/2018
Sample Matrix:	Sediment	**Date Analyzed:**	11/14/2018
		Time Analyzed:	07:08

Lab Control Sample Summary
Polynuclear Aromatic Hydrocarbons

Sample Name:	Lab Control Sample	**Instrument ID:**	MS14
Lab Code:	KWG1805796-5	**File ID:**	J:\MS14\DATA\111418\1114F004.D
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270D SIM	**Extraction Lot:**	KWG1805796

This Lab Control Sample applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Method Blank	KWG1805796-6	J:\MS14\DATA\111418\1114F003.D	11/14/18	06:42
N3-0to26-101518	K1810270-001	J:\MS14\DATA\111418\1114F013.D	11/14/18	10:56

QA/QC Results

Client: Pacific Groundwater Group (PGG)
Project: DTNA Swan Island Sediment/2006-00115

Service Request: K1810270
Date Analyzed: 11/05/2018
Time Analyzed: 09:12

Tune Summary
Polynuclear Aromatic Hydrocarbons

File ID: J:\MS14\DATA\110518\1105F001.D
Instrument ID: MS14
Column:

Analysis Method: 8270D SIM
Analysis Lot: KWG1806019

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
275	198	10	60	34.5	77008	PASS
365	442	1	50	2.8	12239	PASS
441	443	0	100	72.4	62621	PASS
442	442	100	100	100.0	431914	PASS
443	442	15	24	20.0	86541	PASS
51	198	10	80	44.2	98624	PASS
68	69	0	2	0.0	0	PASS
69	198	0	100	46.3	103352	PASS
70	69	0	2	0.8	806	PASS
127	198	10	80	51.3	114608	PASS
197	198	0	2	0.0	0	PASS
198	442	30	100	51.7	223210	PASS
199	198	5	9	6.8	15105	PASS

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed	Q
Continuing Calibration Verification	KWG1806019-2	J:\MS14\DATA\110518\1105F002.D	11/05/2018	09:41	
Method Blank	KWG1805597-4	J:\MS14\DATA\110518\1105F015.D	11/05/2018	16:12	
T1-0to30-101518MS	KWG1805597-1	J:\MS14\DATA\110518\1105F017.D	11/05/2018	17:12	
T1-0to30-101518DMS	KWG1805597-2	J:\MS14\DATA\110518\1105F018.D	11/05/2018	17:42	
T1-0to30-101518	K1810270-010	J:\MS14\DATA\110518\1105F019.D	11/05/2018	18:11	
N1-0to30-101518	K1810270-006	J:\MS14\DATA\110518\1105F020.D	11/05/2018	18:41	
P5-0to26-101618	K1810270-020	J:\MS14\DATA\110518\1105F021.D	11/05/2018	19:10	
R3-0to33-101718	K1810270-029	J:\MS14\DATA\110518\1105F022.D	11/05/2018	19:40	

Results flagged with an asterisk (*) indicate the analysis performed outside specified tune window

QA/QC Results

Client: Pacific Groundwater Group (PGG)
Project: DTNA Swan Island Sediment/2006-00115

Service Request: K1810270
Date Analyzed: 11/06/2018
Time Analyzed: 05:06

Tune Summary
Polynuclear Aromatic Hydrocarbons

File ID: J:\MS14\DATA\110618\1106F001.D
Instrument ID: MS14
Column:

Analysis Method: 8270D SIM
Analysis Lot: KWG1806026

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
51	198	10	80	41.1	96829	PASS
68	69	0	2	0.0	0	PASS
69	198	0	100	42.3	99561	PASS
70	69	0	2	0.8	792	PASS
127	198	10	80	48.1	113298	PASS
197	198	0	2	0.0	0	PASS
198	442	30	100	43.7	235477	PASS
199	198	5	9	6.7	15817	PASS
275	198	10	60	36.8	86610	PASS
365	442	1	50	2.7	14505	PASS
441	443	0	100	73.5	78210	PASS
442	442	100	100	100.0	539029	PASS
443	442	15	24	19.7	106368	PASS

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed	Q
Continuing Calibration Verification	KWG1806026-2	J:\MS14\DATA\110618\1106F002.D	11/06/2018	05:35	
Lab Control Sample	KWG1805597-3	J:\MS14\DATA\110618\1106F005.D	11/06/2018	07:01	
T3-0to28-101618	K1810270-013	J:\MS14\DATA\110618\1106F016.D	11/06/2018	12:18	
T7-0to31-101618	K1810270-015	J:\MS14\DATA\110618\1106F017.D	11/06/2018	12:46	
T5-0to26-101618	K1810270-016	J:\MS14\DATA\110618\1106F018.D	11/06/2018	13:15	
P3-0to29-101618	K1810270-017	J:\MS14\DATA\110618\1106F019.D	11/06/2018	13:44	
R5-0to25-101618	K1810270-018	J:\MS14\DATA\110618\1106F020.D	11/06/2018	14:13	
514-0to29-101618	K1810270-019	J:\MS14\DATA\110618\1106F021.D	11/06/2018	14:42	

Results flagged with an asterisk (*) indicate the analysis performed outside specified tune window

QA/QC Results

Client: Pacific Groundwater Group (PGG)
Project: DTNA Swan Island Sediment/2006-00115

Service Request: K1810270
Date Analyzed: 11/07/2018
Time Analyzed: 04:55

Tune Summary
Polynuclear Aromatic Hydrocarbons

File ID: J:\MS14\DATA\110718\1107F001.D
Instrument ID: MS14
Column:

Analysis Method: 8270D SIM
Analysis Lot: KWG1806028

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
51	198	10	80	40.7	98834	PASS
68	69	0	2	0.0	0	PASS
69	198	0	100	42.4	103141	PASS
70	69	0	2	0.8	832	PASS
127	198	10	80	47.9	116466	PASS
197	198	0	2	0.0	0	PASS
198	442	30	100	44.4	243029	PASS
199	198	5	9	7.1	17181	PASS
275	198	10	60	37.9	92040	PASS
365	442	1	50	2.8	15565	PASS
441	443	0	100	75.3	79482	PASS
442	442	100	100	100.0	547541	PASS
443	442	15	24	19.3	105498	PASS

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed	Q
Continuing Calibration Verification	KWG1806028-2	J:\MS14\DATA\110718\1107F002.D	11/07/2018	05:26	
L1-0to30-101518	K1810270-004	J:\MS14\DATA\110718\1107F009.D	11/07/2018	08:58	
R1-0to30-101518	K1810270-011	J:\MS14\DATA\110718\1107F010.D	11/07/2018	09:28	
P1-0to30-101518	K1810270-012	J:\MS14\DATA\110718\1107F011.D	11/07/2018	09:59	

Results flagged with an asterisk (*) indicate the analysis performed outside specified tune window

QA/QC Results

Client: Pacific Groundwater Group (PGG)
Project: DTNA Swan Island Sediment/2006-00115

Service Request: K1810270
Date Analyzed: 11/14/2018
Time Analyzed: 05:51

Tune Summary
Polynuclear Aromatic Hydrocarbons

File ID: J:\MS14\DATA\111418\1114F001.D
Instrument ID: MS14
Column:

Analysis Method: 8270D SIM
Analysis Lot: KWG1806235

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
51	198	10	80	46.5	157589	PASS
68	69	0	2	0.0	0	PASS
69	198	0	100	46.9	158868	PASS
70	69	0	2	0.7	1054	PASS
127	198	10	80	51.6	174890	PASS
197	198	0	2	0.0	0	PASS
198	442	30	100	48.5	339050	PASS
199	198	5	9	6.8	22890	PASS
275	198	10	60	35.0	118562	PASS
365	442	1	50	3.4	24040	PASS
441	443	0	100	75.3	101050	PASS
442	442	100	100	100.0	698368	PASS
443	442	15	24	19.2	134280	PASS

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed	Q
Continuing Calibration Verification	KWG1806235-2	J:\MS14\DATA\111418\1114F002.D	11/14/2018	06:17	
Method Blank	KWG1805796-6	J:\MS14\DATA\111418\1114F003.D	11/14/2018	06:42	
Lab Control Sample	KWG1805796-5	J:\MS14\DATA\111418\1114F004.D	11/14/2018	07:08	
N3-0to26-101518	K1810270-001	J:\MS14\DATA\111418\1114F013.D	11/14/2018	10:56	

Results flagged with an asterisk (*) indicate the analysis performed outside specified tune window

Client: Pacific Groundwater Group (PGG) **Service Request:** K1810270
Project: DTNA Swan Island Sediment/2006-00115 **Calibration Date:** 07/11/2018

Initial Calibration Summary
Polynuclear Aromatic Hydrocarbons

Calibration ID: CAL15779 **Column:** MS
Instrument ID: MS14

Level ID	File ID	Level ID	File ID
A	J:\MS14\DATA\071118\0711F003.D	G	J:\MS14\DATA\071118\0711F009.D
B	J:\MS14\DATA\071118\0711F004.D	H	J:\MS14\DATA\071118\0711F010.D
C	J:\MS14\DATA\071118\0711F005.D	I	J:\MS14\DATA\071118\0711F011.D
D	J:\MS14\DATA\071118\0711F006.D	J	J:\MS14\DATA\071118\0711F012.D
E	J:\MS14\DATA\071118\0711F007.D		
F	J:\MS14\DATA\071118\0711F008.D		

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Naphthalene	A	2.0	1.42	B	4.0	1.31	C	8.0	1.19	D	20	1.15	E	100	1.13
	F	200	1.11	G	400	1.09	H	1000	1.06	I	1600	1.03	J	2000	1.07
2-Methylnaphthalene	A	2.0	0.789	B	4.0	0.741	C	8.0	0.734	D	20	0.715	E	100	0.718
	F	200	0.692	G	400	0.662	H	1000	0.650	I	1600	0.627	J	2000	0.635
Acenaphthylene	A	2.0	2.52	B	4.0	2.35	C	8.0	2.29	D	20	2.33	E	100	2.37
	F	200	2.41	G	400	2.42	H	1000	2.41	I	1600	2.43	J	2000	2.34
Acenaphthene	A	2.0	1.44	B	4.0	1.38	C	8.0	1.33	D	20	1.38	E	100	1.38
	F	200	1.39	G	400	1.38	H	1000	1.35	I	1600	1.38	J	2000	1.32
Dibenzofuran	A	2.0	2.25	B	4.0	2.12	C	8.0	2.21	D	20	2.09	E	100	2.22
	F	200	2.29	G	400	2.24	H	1000	2.22	I	1600	2.24	J	2000	2.11
Fluorene	A	2.0	1.81	B	4.0	1.68	C	8.0	1.62	D	20	1.64	E	100	1.70
	F	200	1.68	G	400	1.67	H	1000	1.60	I	1600	1.63	J	2000	1.56
Phenanthrene	A	2.0	1.33	B	4.0	1.33	C	8.0	1.25	D	20	1.23	E	100	1.25
	F	200	1.25	G	400	1.22	H	1000	1.23	I	1600	1.22	J	2000	1.16
Anthracene	A	2.0	1.20	B	4.0	1.17	C	8.0	1.17	D	20	1.14	E	100	1.21
	F	200	1.22	G	400	1.22	H	1000	1.22	I	1600	1.21	J	2000	1.17
Fluoranthene	A	2.0	1.50	B	4.0	1.44	C	8.0	1.44	D	20	1.41	E	100	1.54
	F	200	1.60	G	400	1.58	H	1000	1.63	I	1600	1.65	J	2000	1.62
Pyrene	A	2.0	1.49	B	4.0	1.46	C	8.0	1.38	D	20	1.37	E	100	1.34
	F	200	1.29	G	400	1.32	H	1000	1.33	I	1600	1.39	J	2000	1.36
Benz(a)anthracene	A	2.0	1.50	B	4.0	1.32	C	8.0	1.26	D	20	1.19	E	100	1.20
	F	200	1.23	G	400	1.27	H	1000	1.32	I	1600	1.34	J	2000	1.31
Chrysene	A	2.0	1.23	B	4.0	1.21	C	8.0	1.23	D	20	1.20	E	100	1.24
	F	200	1.25	G	400	1.25	H	1000	1.26	I	1600	1.28	J	2000	1.24
Benzo(b)fluoranthene	A	2.0	1.19	B	4.0	1.16	C	8.0	1.15	D	20	1.16	E	100	1.20
	F	200	1.26	G	400	1.30	H	1000	1.34	I	1600	1.32	J	2000	1.27
Benzo(k)fluoranthene	A	2.0	1.16	B	4.0	1.17	C	8.0	1.13	D	20	1.19	E	100	1.23
	F	200	1.26	G	400	1.29	H	1000	1.29	I	1600	1.29	J	2000	1.25

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound **‡ CCC Compound**

Client: Pacific Groundwater Group (PGG) **Service Request:** K1810270
Project: DTNA Swan Island Sediment/2006-00115 **Calibration Date:** 07/11/2018

Initial Calibration Summary
Polynuclear Aromatic Hydrocarbons

Calibration ID: CAL15779 **Column:** MS
Instrument ID: MS14

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Benzo(a)pyrene	A	2.0	1.09	B	4.0	1.01	C	8.0	1.03	D	20	1.04	E	100	1.05
	F	200	1.07	G	400	1.11	H	1000	1.15	I	1600	1.16	J	2000	1.12
Indeno(1,2,3-cd)pyrene	A	2.0	1.23	B	4.0	1.10	C	8.0	1.06	D	20	1.06	E	100	1.07
	F	200	1.08	G	400	1.05	H	1000	1.01	I	1600	0.996	J	2000	0.959
Dibenz(a,h)anthracene	A	2.0	1.12	B	4.0	1.10	C	8.0	1.09	D	20	1.17	E	100	1.12
	F	200	1.10	G	400	1.07	H	1000	1.02	I	1600	1.00	J	2000	0.971
Benzo(g,h,i)perylene	A	2.0	1.44	B	4.0	1.37	C	8.0	1.31	D	20	1.34	E	100	1.28
	F	200	1.27	G	400	1.21	H	1000	1.12	I	1600	1.07	J	2000	1.04
Fluorene-d10				B	4.0	1.49	C	8.0	1.33	D	20	1.28	E	100	1.25
	F	200	1.24	G	400	1.25	H	1000	1.21	I	1600	1.24	J	2000	1.20
Fluoranthene-d10	A	2.0	1.18	B	4.0	1.19	C	8.0	1.15	D	20	1.11	E	100	1.20
	F	200	1.26	G	400	1.31	H	1000	1.40	I	1600	1.42	J	2000	1.39
Terphenyl-d14				B	4.0	1.05	C	8.0	0.934	D	20	0.867	E	100	0.832
	F	200	0.823	G	400	0.835	H	1000	0.837	I	1600	0.830	J	2000	0.801

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound **‡ CCC Compound**

Client: Pacific Groundwater Group (PGG) **Service Request:** K1810270
Project: DTNA Swan Island Sediment/2006-00115 **Calibration Date:** 07/11/2018

Initial Calibration Summary
Polynuclear Aromatic Hydrocarbons

Calibration ID: CAL15779 **Column:** MS
Instrument ID: MS14

		Calibration Evaluation					RRF Evaluation		
Analyte Name	**Compound Type**	**Fit Type**	**Eval.**	**Eval. Result**	**Q**	**Control Criteria**	**Average RRF**	**Q**	**Minimum RRF**
Naphthalene	MS	AverageRF	% RSD	10.7		≤ 20	1.15		0.70
2-Methylnaphthalene	MS	AverageRF	% RSD	7.5		≤ 20	0.696		0.40
Acenaphthylene	MS	AverageRF	% RSD	2.7		≤ 20	2.39		0.90
Acenaphthene	MS	AverageRF	% RSD	2.3		≤ 20	1.37		0.90
Dibenzofuran	MS	AverageRF	% RSD	3.1		≤ 20	2.20		0.80
Fluorene	MS	AverageRF	% RSD	4.1		≤ 20	1.66		0.90
Phenanthrene	MS	AverageRF	% RSD	4.1		≤ 20	1.25		0.70
Anthracene	MS	AverageRF	% RSD	2.4		≤ 20	1.19		0.70
Fluoranthene	MS	AverageRF	% RSD	5.8		≤ 20	1.54		0.60
Pyrene	MS	AverageRF	% RSD	4.5		≤ 20	1.37		0.60
Benz(a)anthracene	MS	AverageRF	% RSD	6.8		≤ 20	1.29		0.80
Chrysene	MS	AverageRF	% RSD	1.9		≤ 20	1.24		0.70
Benzo(b)fluoranthene	MS	AverageRF	% RSD	5.7		≤ 20	1.24		0.70
Benzo(k)fluoranthene	MS	AverageRF	% RSD	4.7		≤ 20	1.23		0.70
Benzo(a)pyrene	MS	AverageRF	% RSD	4.7		≤ 20	1.08		0.70
Indeno(1,2,3-cd)pyrene	MS	AverageRF	% RSD	6.9		≤ 20	1.06		0.50
Dibenz(a,h)anthracene	MS	AverageRF	% RSD	5.7		≤ 20	1.08		0.40
Benzo(g,h,i)perylene	MS	AverageRF	% RSD	10.7		≤ 20	1.24		0.50
Fluorene-d10	SURR	AverageRF	% RSD	6.9		≤ 20	1.28		0.01
Fluoranthene-d10	SURR	AverageRF	% RSD	9.0		≤ 20	1.26		0.01
Terphenyl-d14	SURR	AverageRF	% RSD	8.9		≤ 20	0.867		0.01

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound **‡ CCC Compound**

QA/QC Results

Client: Pacific Groundwater Group (PGG)
Project: DTNA Swan Island Sediment/2006-00115

Service Request: K1810270
Calibration Date: 07/11/2018
Date Analyzed: 07/11/2018

Second Source Calibration Verification
Polynuclear Aromatic Hydrocarbons

Calibration Type: Internal Standard
Analysis Method: 8270D SIM

Calibration ID: CAL15779
Units: ng/ml

File ID: J:\MS14\DATA\071118\0711F013.D

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
Naphthalene	400	370	1.15	1.06	-8	NA	± 30 %	AverageRF
2-Methylnaphthalene	400	390	0.696	0.683	-2	NA	± 30 %	AverageRF
Acenaphthylene	400	390	2.39	2.33	-2	NA	± 30 %	AverageRF
Acenaphthene	400	380	1.37	1.32	-4	NA	± 30 %	AverageRF
Dibenzofuran	400	370	2.20	2.05	-7	NA	± 30 %	AverageRF
Fluorene	400	390	1.66	1.60	-4	NA	± 30 %	AverageRF
Phenanthrene	400	380	1.25	1.19	-4	NA	± 30 %	AverageRF
Anthracene	400	400	1.19	1.18	-1	NA	± 30 %	AverageRF
Fluoranthene	400	410	1.54	1.60	4	NA	± 30 %	AverageRF
Pyrene	400	350	1.37	1.21	-12	NA	± 30 %	AverageRF
Benz(a)anthracene	400	380	1.29	1.22	-6	NA	± 30 %	AverageRF
Chrysene	400	390	1.24	1.20	-3	NA	± 30 %	AverageRF
Benzo(b)fluoranthene	400	410	1.24	1.27	2	NA	± 30 %	AverageRF
Benzo(k)fluoranthene	400	420	1.23	1.28	4	NA	± 30 %	AverageRF
Benzo(a)pyrene	400	400	1.08	1.08	0	NA	± 30 %	AverageRF
Indeno(1,2,3-cd)pyrene	400	370	1.06	0.993	-7	NA	± 30 %	AverageRF
Dibenz(a,h)anthracene	400	380	1.08	1.03	-4	NA	± 30 %	AverageRF
Benzo(g,h,i)perylene	400	370	1.24	1.14	-9	NA	± 30 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound **‡ CCC Compound**

Client: Pacific Groundwater Group (PGG) **Service Request:** K1810270
Project: DTNA Swan Island Sediment/2006-00115 **Date Analyzed:** 11/05/2018

Continuing Calibration Verification Summary
Polynuclear Aromatic Hydrocarbons

Calibration Type: Internal Standard **Calibration Date:** 07/11/2018
Analysis Method: 8270D SIM **Calibration ID:** CAL15779
Analysis Lot: KWG1806019
Units: ng/ml

File ID: J:\MS14\DATA\110518\1105F002.D

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Naphthalene	400	390	0.70	1.15	1.12	-3	NA	± 20	AverageRF
2-Methylnaphthalene	400	380	0.40	0.696	0.655	-6	NA	± 20	AverageRF
Acenaphthylene	400	420	0.90	2.39	2.49	4	NA	± 20	AverageRF
Acenaphthene	400	410	0.90	1.37	1.39	1	NA	± 20	AverageRF
Dibenzofuran	400	390	0.80	2.20	2.17	-1	NA	± 20	AverageRF
Fluorene	400	400	0.90	1.66	1.67	1	NA	± 20	AverageRF
Phenanthrene	400	400	0.70	1.25	1.26	1	NA	± 20	AverageRF
Anthracene	400	370	0.70	1.19	1.09	-8	NA	± 20	AverageRF
Fluoranthene	400	430	0.60	1.54	1.66	8	NA	± 20	AverageRF
Pyrene	400	380	0.60	1.37	1.31	-5	NA	± 20	AverageRF
Benz(a)anthracene	400	420	0.80	1.29	1.35	5	NA	± 20	AverageRF
Chrysene	400	400	0.70	1.24	1.25	1	NA	± 20	AverageRF
Benzo(b)fluoranthene	400	420	0.70	1.24	1.29	4	NA	± 20	AverageRF
Benzo(k)fluoranthene	400	400	0.70	1.23	1.23	0	NA	± 20	AverageRF
Benzo(a)pyrene	400	440	0.70	1.08	1.18	9	NA	± 20	AverageRF
Indeno(1,2,3-cd)pyrene	400	460	0.50	1.06	1.23	16	NA	± 20	AverageRF
Dibenz(a,h)anthracene	400	450	0.40	1.08	1.22	14	NA	± 20	AverageRF
Benzo(g,h,i)perylene	400	420	0.50	1.24	1.32	6	NA	± 20	AverageRF
Fluorene-d10	400	370	0.01	1.28	1.17	-8	NA	± 20	AverageRF
Fluoranthene-d10	400	410	0.01	1.26	1.30	3	NA	± 20	AverageRF
Terphenyl-d14	400	380	0.01	0.867	0.815	-6	NA	± 20	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound **‡ CCC Compound**

Client: Pacific Groundwater Group (PGG) **Service Request:** K1810270
Project: DTNA Swan Island Sediment/2006-00115 **Date Analyzed:** 11/06/2018

Continuing Calibration Verification Summary
Polynuclear Aromatic Hydrocarbons

Calibration Type: Internal Standard **Calibration Date:** 07/11/2018
Analysis Method: 8270D SIM **Calibration ID:** CAL15779
Analysis Lot: KWG1806026
Units: ng/ml

File ID: J:\MS14\DATA\110618\1106F002.D

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Naphthalene	400	380	0.70	1.15	1.11	-4	NA	± 20	AverageRF
2-Methylnaphthalene	400	390	0.40	0.696	0.672	-3	NA	± 20	AverageRF
Acenaphthylene	400	420	0.90	2.39	2.50	5	NA	± 20	AverageRF
Acenaphthene	400	410	0.90	1.37	1.40	2	NA	± 20	AverageRF
Dibenzofuran	400	420	0.80	2.20	2.32	6	NA	± 20	AverageRF
Fluorene	400	420	0.90	1.66	1.73	5	NA	± 20	AverageRF
Phenanthrene	400	400	0.70	1.25	1.23	-1	NA	± 20	AverageRF
Anthracene	400	360	0.70	1.19	1.09	-9	NA	± 20	AverageRF
Fluoranthene	400	390	0.60	1.54	1.51	-2	NA	± 20	AverageRF
Pyrene	400	380	0.60	1.37	1.31	-5	NA	± 20	AverageRF
Benz(a)anthracene	400	410	0.80	1.29	1.34	4	NA	± 20	AverageRF
Chrysene	400	400	0.70	1.24	1.24	0	NA	± 20	AverageRF
Benzo(b)fluoranthene	400	410	0.70	1.24	1.28	4	NA	± 20	AverageRF
Benzo(k)fluoranthene	400	400	0.70	1.23	1.22	-1	NA	± 20	AverageRF
Benzo(a)pyrene	400	440	0.70	1.08	1.19	10	NA	± 20	AverageRF
Indeno(1,2,3-cd)pyrene	400	460	0.50	1.06	1.23	16	NA	± 20	AverageRF
Dibenz(a,h)anthracene	400	440	0.40	1.08	1.18	10	NA	± 20	AverageRF
Benzo(g,h,i)perylene	400	420	0.50	1.24	1.32	6	NA	± 20	AverageRF
Fluorene-d10	400	380	0.01	1.28	1.23	-4	NA	± 20	AverageRF
Fluoranthene-d10	400	380	0.01	1.26	1.19	-6	NA	± 20	AverageRF
Terphenyl-d14	400	380	0.01	0.867	0.826	-5	NA	± 20	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound **‡ CCC Compound**

Client: Pacific Groundwater Group (PGG) **Service Request:** K1810270
Project: DTNA Swan Island Sediment/2006-00115 **Date Analyzed:** 11/07/2018

Continuing Calibration Verification Summary
Polynuclear Aromatic Hydrocarbons

Calibration Type: Internal Standard **Calibration Date:** 07/11/2018
Analysis Method: 8270D SIM **Calibration ID:** CAL15779
Analysis Lot: KWG1806028
Units: ng/ml

File ID: J:\MS14\DATA\110718\1107F002.D

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Naphthalene	400	380	0.70	1.15	1.10	-5	NA	± 20	AverageRF
2-Methylnaphthalene	400	390	0.40	0.696	0.682	-2	NA	± 20	AverageRF
Acenaphthylene	400	410	0.90	2.39	2.46	3	NA	± 20	AverageRF
Acenaphthene	400	400	0.90	1.37	1.38	1	NA	± 20	AverageRF
Dibenzofuran	400	410	0.80	2.20	2.25	2	NA	± 20	AverageRF
Fluorene	400	400	0.90	1.66	1.66	0	NA	± 20	AverageRF
Phenanthrene	400	390	0.70	1.25	1.23	-2	NA	± 20	AverageRF
Anthracene	400	360	0.70	1.19	1.06	-11	NA	± 20	AverageRF
Fluoranthene	400	380	0.60	1.54	1.46	-5	NA	± 20	AverageRF
Pyrene	400	380	0.60	1.37	1.29	-6	NA	± 20	AverageRF
Benz(a)anthracene	400	410	0.80	1.29	1.33	2	NA	± 20	AverageRF
Chrysene	400	400	0.70	1.24	1.24	0	NA	± 20	AverageRF
Benzo(b)fluoranthene	400	420	0.70	1.24	1.29	4	NA	± 20	AverageRF
Benzo(k)fluoranthene	400	400	0.70	1.23	1.21	-1	NA	± 20	AverageRF
Benzo(a)pyrene	400	440	0.70	1.08	1.20	11	NA	± 20	AverageRF
Indeno(1,2,3-cd)pyrene	400	460	0.50	1.06	1.22	15	NA	± 20	AverageRF
Dibenz(a,h)anthracene	400	440	0.40	1.08	1.18	10	NA	± 20	AverageRF
Benzo(g,h,i)perylene	400	430	0.50	1.24	1.32	6	NA	± 20	AverageRF
Fluorene-d10	400	370	0.01	1.28	1.19	-7	NA	± 20	AverageRF
Fluoranthene-d10	400	370	0.01	1.26	1.15	-9	NA	± 20	AverageRF
Terphenyl-d14	400	380	0.01	0.867	0.815	-6	NA	± 20	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound **‡ CCC Compound**

Client: Pacific Groundwater Group (PGG) **Service Request:** K1810270
Project: DTNA Swan Island Sediment/2006-00115 **Date Analyzed:** 11/14/2018

Continuing Calibration Verification Summary
Polynuclear Aromatic Hydrocarbons

Calibration Type: Internal Standard **Calibration Date:** 07/11/2018
Analysis Method: 8270D SIM **Calibration ID:** CAL15779
Analysis Lot: KWG1806235
Units: ng/ml

File ID: J:\MS14\DATA\111418\1114F002.D

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Naphthalene	400	350	0.70	1.15	0.996	-14	NA	± 20	AverageRF
2-Methylnaphthalene	400	350	0.40	0.696	0.609	-13	NA	± 20	AverageRF
Acenaphthylene	400	360	0.90	2.39	2.13	-11	NA	± 20	AverageRF
Acenaphthene	400	360	0.90	1.37	1.22	-11	NA	± 20	AverageRF
Dibenzofuran	400	360	0.80	2.20	1.96	-11	NA	± 20	AverageRF
Fluorene	400	390	0.90	1.66	1.63	-2	NA	± 20	AverageRF
Phenanthrene	400	340	0.70	1.25	1.07	-14	NA	± 20	AverageRF
Anthracene	400	360	0.70	1.19	1.07	-11	NA	± 20	AverageRF
Fluoranthene	400	330	0.60	1.54	1.27	-17	NA	± 20	AverageRF
Pyrene	400	350	0.60	1.37	1.19	-13	NA	± 20	AverageRF
Benz(a)anthracene	400	360	0.80	1.29	1.17	-10	NA	± 20	AverageRF
Chrysene	400	350	0.70	1.24	1.10	-11	NA	± 20	AverageRF
Benzo(b)fluoranthene	400	380	0.70	1.24	1.18	-5	NA	± 20	AverageRF
Benzo(k)fluoranthene	400	370	0.70	1.23	1.12	-8	NA	± 20	AverageRF
Benzo(a)pyrene	400	380	0.70	1.08	1.04	-4	NA	± 20	AverageRF
Indeno(1,2,3-cd)pyrene	400	360	0.50	1.06	0.966	-9	NA	± 20	AverageRF
Dibenz(a,h)anthracene	400	360	0.40	1.08	0.969	-10	NA	± 20	AverageRF
Benzo(g,h,i)perylene	400	320	0.50	1.24	1.01	-19	NA	± 20	AverageRF
Fluorene-d10	400	440	0.01	1.28	1.41	10	NA	± 20	AverageRF
Fluoranthene-d10	400	390	0.01	1.26	1.21	-4	NA	± 20	AverageRF
Terphenyl-d14	400	400	0.01	0.867	0.868	0	NA	± 20	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound **‡ CCC Compound**

QA/QC Results

Client: Pacific Groundwater Group (PGG) **Service Request:** K1810270
Project: DTNA Swan Island Sediment/2006-00115

Analysis Run Log
Polynuclear Aromatic Hydrocarbons

Analysis Method: 8270D SIM **Analysis Lot:** KWG1806019
Instrument ID: MS14

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
1105F001.D	GC/MS Tuning - Decafluorotriphenylphosph	KWG1806019-1	11/5/2018	09:12		11/5/2018	09:32
1105F002.D	Continuing Calibration Verification	KWG1806019-2	11/5/2018	09:41		11/5/2018	10:00
1105F005.D	ZZZZZZ	ZZZZZZ	11/5/2018	11:10		11/5/2018	11:29
1105F006.D	ZZZZZZ	ZZZZZZ	11/5/2018	11:39		11/5/2018	11:58
1105F007.D	ZZZZZZ	ZZZZZZ	11/5/2018	12:08		11/5/2018	12:27
1105F008.D	ZZZZZZ	ZZZZZZ	11/5/2018	12:40		11/5/2018	12:59
1105F009.D	ZZZZZZ	ZZZZZZ	11/5/2018	13:11		11/5/2018	13:30
1105F010.D	ZZZZZZ	ZZZZZZ	11/5/2018	13:41		11/5/2018	14:00
1105F011.D	ZZZZZZ	ZZZZZZ	11/5/2018	14:12		11/5/2018	14:31
1105F012.D	ZZZZZZ	ZZZZZZ	11/5/2018	14:42		11/5/2018	15:01
1105F013.D	ZZZZZZ	ZZZZZZ	11/5/2018	15:12		11/5/2018	15:31
1105F014.D	ZZZZZZ	ZZZZZZ	11/5/2018	15:42		11/5/2018	16:01
1105F015.D	Method Blank	KWG1805597-4	11/5/2018	16:12		11/5/2018	16:31
1105F017.D	T1-0to30-101518MS	KWG1805597-1	11/5/2018	17:12		11/5/2018	17:31
1105F018.D	T1-0to30-101518DMS	KWG1805597-2	11/5/2018	17:42		11/5/2018	18:01
1105F019.D	T1-0to30-101518	K1810270-010	11/5/2018	18:11		11/5/2018	18:30
1105F020.D	N1-0to30-101518	K1810270-006	11/5/2018	18:41		11/5/2018	19:00
1105F021.D	P5-0to26-101618	K1810270-020	11/5/2018	19:10		11/5/2018	19:29
1105F022.D	R3-0to33-101718	K1810270-029	11/5/2018	19:40		11/5/2018	19:59

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

ALS Group USA, Corp. dba ALS Environmental

QA/QC Results

Client: Pacific Groundwater Group (PGG) **Service Request:** K1810270
Project: DTNA Swan Island Sediment/2006-00115

Analysis Run Log
Polynuclear Aromatic Hydrocarbons

Analysis Method: 8270D SIM **Analysis Lot:** KWG1806026
Instrument ID: MS14

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
1106F001.D	GC/MS Tuning - Decafluorotriphenylphosph	KWG1806026-1	11/6/2018	05:06		11/6/2018	05:26
1106F002.D	Continuing Calibration Verification	KWG1806026-2	11/6/2018	05:35		11/6/2018	05:54
1106F003.D	ZZZZZZ	ZZZZZZ	11/6/2018	06:04		11/6/2018	06:23
1106F004.D	ZZZZZZ	ZZZZZZ	11/6/2018	06:33		11/6/2018	06:52
1106F005.D	Lab Control Sample	KWG1805597-3	11/6/2018	07:01		11/6/2018	07:20
1106F006.D	ZZZZZZ	ZZZZZZ	11/6/2018	07:30		11/6/2018	07:49
1106F007.D	ZZZZZZ	ZZZZZZ	11/6/2018	07:59		11/6/2018	08:18
1106F008.D	ZZZZZZ	ZZZZZZ	11/6/2018	08:27		11/6/2018	08:46
1106F009.D	ZZZZZZ	ZZZZZZ	11/6/2018	08:56		11/6/2018	09:15
1106F010.D	ZZZZZZ	ZZZZZZ	11/6/2018	09:25		11/6/2018	09:44
1106F011.D	ZZZZZZ	ZZZZZZ	11/6/2018	09:53		11/6/2018	10:12
1106F012.D	ZZZZZZ	ZZZZZZ	11/6/2018	10:22		11/6/2018	10:41
1106F013.D	ZZZZZZ	ZZZZZZ	11/6/2018	10:51		11/6/2018	11:10
1106F014.D	ZZZZZZ	ZZZZZZ	11/6/2018	11:20		11/6/2018	11:39
1106F015.D	ZZZZZZ	ZZZZZZ	11/6/2018	11:49		11/6/2018	12:08
1106F016.D	T3-0to28-101618	K1810270-013	11/6/2018	12:18		11/6/2018	12:37
1106F017.D	T7-0to31-101618	K1810270-015	11/6/2018	12:46		11/6/2018	13:05
1106F018.D	T5-0to26-101618	K1810270-016	11/6/2018	13:15		11/6/2018	13:34
1106F019.D	P3-0to29-101618	K1810270-017	11/6/2018	13:44		11/6/2018	14:03
1106F020.D	R5-0to25-101618	K1810270-018	11/6/2018	14:13		11/6/2018	14:32
1106F021.D	514-0to29-101618	K1810270-019	11/6/2018	14:42		11/6/2018	15:01
1106F022.D	ZZZZZZ	ZZZZZZ	11/6/2018	15:10		11/6/2018	15:29
1106F023.D	ZZZZZZ	ZZZZZZ	11/6/2018	15:39		11/6/2018	15:58
1106F024.D	ZZZZZZ	ZZZZZZ	11/6/2018	16:08		11/6/2018	16:27
1106F025.D	ZZZZZZ	ZZZZZZ	11/6/2018	16:37		11/6/2018	16:56

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

QA/QC Results

Client: Pacific Groundwater Group (PGG) **Service Request:** K1810270
Project: DTNA Swan Island Sediment/2006-00115

Analysis Run Log
Polynuclear Aromatic Hydrocarbons

Analysis Method: 8270D SIM **Analysis Lot:** KWG1806028
Instrument ID: MS14

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
1107F001.D	GC/MS Tuning - Decafluorotriphenylphosph	KWG1806028-1	11/7/2018	04:55		11/7/2018	05:15
1107F002.D	Continuing Calibration Verification	KWG1806028-2	11/7/2018	05:26		11/7/2018	05:45
1107F003.D	ZZZZZZ	ZZZZZZ	11/7/2018	05:56		11/7/2018	06:15
1107F004.D	ZZZZZZ	ZZZZZZ	11/7/2018	06:26		11/7/2018	06:45
1107F005.D	ZZZZZZ	ZZZZZZ	11/7/2018	06:56		11/7/2018	07:15
1107F006.D	ZZZZZZ	ZZZZZZ	11/7/2018	07:26		11/7/2018	07:45
1107F007.D	ZZZZZZ	ZZZZZZ	11/7/2018	07:56		11/7/2018	08:15
1107F008.D	ZZZZZZ	ZZZZZZ	11/7/2018	08:27		11/7/2018	08:46
1107F009.D	L1-0to30-101518	K1810270-004	11/7/2018	08:58		11/7/2018	09:17
1107F010.D	R1-0to30-101518	K1810270-011	11/7/2018	09:28		11/7/2018	09:47
1107F011.D	P1-0to30-101518	K1810270-012	11/7/2018	09:59		11/7/2018	10:18
1107F012.D	ZZZZZZ	ZZZZZZ	11/7/2018	10:29		11/7/2018	10:48
1107F013.D	ZZZZZZ	ZZZZZZ	11/7/2018	10:59		11/7/2018	11:18
1107F014.D	ZZZZZZ	ZZZZZZ	11/7/2018	11:30		11/7/2018	11:49
1107F015.D	ZZZZZZ	ZZZZZZ	11/7/2018	12:00		11/7/2018	12:19
1107F016.D	ZZZZZZ	ZZZZZZ	11/7/2018	12:31		11/7/2018	12:50
1107F017.D	ZZZZZZ	ZZZZZZ	11/7/2018	13:01		11/7/2018	13:20
1107F018.D	ZZZZZZ	ZZZZZZ	11/7/2018	13:32		11/7/2018	13:51
1107F019.D	ZZZZZZ	ZZZZZZ	11/7/2018	14:02		11/7/2018	14:21
1107F020.D	ZZZZZZ	ZZZZZZ	11/7/2018	14:32		11/7/2018	14:51
1107F021.D	ZZZZZZ	ZZZZZZ	11/7/2018	15:03		11/7/2018	15:22
1107F022.D	ZZZZZZ	ZZZZZZ	11/7/2018	15:33		11/7/2018	15:52
1107F023.D	ZZZZZZ	ZZZZZZ	11/7/2018	16:03		11/7/2018	16:22
1107F024.D	ZZZZZZ	ZZZZZZ	11/7/2018	16:33		11/7/2018	16:52

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

ALS Group USA, Corp. dba ALS Environmental

QA/QC Results

Client: Pacific Groundwater Group (PGG) **Service Request:** K1810270
Project: DTNA Swan Island Sediment/2006-00115

Analysis Run Log
Polynuclear Aromatic Hydrocarbons

Analysis Method: 8270D SIM **Analysis Lot:** KWG1806235
Instrument ID: MS14

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
1114F001.D	GC/MS Tuning - Decafluorotriphenylphosph	KWG1806235-1	11/14/2018	05:51		11/14/2018	06:11
1114F002.D	Continuing Calibration Verification	KWG1806235-2	11/14/2018	06:17		11/14/2018	06:36
1114F003.D	Method Blank	KWG1805796-6	11/14/2018	06:42		11/14/2018	07:01
1114F004.D	Lab Control Sample	KWG1805796-5	11/14/2018	07:08		11/14/2018	07:27
1114F005.D	ZZZZZZ	ZZZZZZ	11/14/2018	07:33		11/14/2018	07:52
1114F006.D	ZZZZZZ	ZZZZZZ	11/14/2018	07:58		11/14/2018	08:17
1114F007.D	ZZZZZZ	ZZZZZZ	11/14/2018	08:23		11/14/2018	08:42
1114F008.D	ZZZZZZ	ZZZZZZ	11/14/2018	08:48		11/14/2018	09:07
1114F009.D	ZZZZZZ	ZZZZZZ	11/14/2018	09:14		11/14/2018	09:33
1114F010.D	ZZZZZZ	ZZZZZZ	11/14/2018	09:40		11/14/2018	09:59
1114F011.D	ZZZZZZ	ZZZZZZ	11/14/2018	10:05		11/14/2018	10:24
1114F012.D	ZZZZZZ	ZZZZZZ	11/14/2018	10:30		11/14/2018	10:49
1114F013.D	N3-0to26-101518	K1810270-001	11/14/2018	10:56		11/14/2018	11:15
1114F014.D	ZZZZZZ	ZZZZZZ	11/14/2018	11:21		11/14/2018	11:40
1114F015.D	ZZZZZZ	ZZZZZZ	11/14/2018	11:46		11/14/2018	12:05
1114F016.D	ZZZZZZ	ZZZZZZ	11/14/2018	12:12		11/14/2018	12:31
1114F017.D	ZZZZZZ	ZZZZZZ	11/14/2018	12:39		11/14/2018	12:58
1114F018.D	ZZZZZZ	ZZZZZZ	11/14/2018	13:05		11/14/2018	13:24
1114F019.D	ZZZZZZ	ZZZZZZ	11/14/2018	13:31		11/14/2018	13:50
1114F020.D	ZZZZZZ	ZZZZZZ	11/14/2018	13:57		11/14/2018	14:16
1114F021.D	ZZZZZZ	ZZZZZZ	11/14/2018	14:25		11/14/2018	14:44
1114F022.D	ZZZZZZ	ZZZZZZ	11/14/2018	14:51		11/14/2018	15:10
1114F023.D	ZZZZZZ	ZZZZZZ	11/14/2018	15:17		11/14/2018	15:36
1114F024.D	ZZZZZZ	ZZZZZZ	11/14/2018	15:43		11/14/2018	16:02
1114F025.D	ZZZZZZ	ZZZZZZ	11/14/2018	16:09		11/14/2018	16:28
1114F026.D	ZZZZZZ	ZZZZZZ	11/14/2018	16:35		11/14/2018	16:54
1114F027.D	ZZZZZZ	ZZZZZZ	11/14/2018	17:01		11/14/2018	17:20
1114F028.D	ZZZZZZ	ZZZZZZ	11/14/2018	17:27		11/14/2018	17:46

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

QA/QC Results

Client: Pacific Groundwater Group (PGG) **Service Request:** K1810270
Project: DTNA Swan Island Sediment/2006-00115 **Date Extracted:** 10/29/2018
Sample Matrix: Sediment

Extraction Prep Log
Polynuclear Aromatic Hydrocarbons

Extraction Method: EPA 3541 **Extraction Lot:** KWG1805597
Analysis Method: 8270D SIM **Level:** Low

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Volume	% Solids	Note
L1-0to30-101518	K1810270-004	10/15/18	10/19/18	40.410g	2mL	90.3	
N1-0to30-101518	K1810270-006	10/15/18	10/19/18	40.031g	2mL	75.8	
T1-0to30-101518	K1810270-010	10/15/18	10/19/18	40.087g	2mL	63	
R1-0to30-101518	K1810270-011	10/15/18	10/19/18	40.247g	2mL	83.9	
P1-0to30-101518	K1810270-012	10/15/18	10/19/18	40.385g	2mL	76.7	
T3-0to28-101618	K1810270-013	10/16/18	10/19/18	40.290g	2mL	43.8	
T7-0to31-101618	K1810270-015	10/16/18	10/19/18	40.183g	2mL	39.3	
T5-0to26-101618	K1810270-016	10/16/18	10/19/18	40.416g	2mL	47.8	
P3-0to29-101618	K1810270-017	10/16/18	10/19/18	40.290g	2mL	48.7	
R5-0to25-101618	K1810270-018	10/16/18	10/19/18	40.319g	2mL	45.9	
514-0to29-101618	K1810270-019	10/16/18	10/19/18	40.149g	2mL	40.5	
P5-0to26-101618	K1810270-020	10/16/18	10/19/18	40.302g	2mL	35.2	
R3-0to33-101718	K1810270-029	10/17/18	10/19/18	40.487g	2mL	36.1	
Method Blank	KWG1805597-4	NA	NA	40.487g	2mL	NA	
T1-0to30-101518MS	KWG1805597-1	10/15/18	10/19/18	40.044g	2mL	63	
T1-0to30-101518DMS	KWG1805597-2	10/15/18	10/19/18	40.056g	2mL	63	
Lab Control Sample	KWG1805597-3	NA	NA	20.000g	2mL	NA	

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

QA/QC Results

Client: Pacific Groundwater Group (PGG) **Service Request:** K1810270
Project: DTNA Swan Island Sediment/2006-00115 **Date Extracted:** 11/07/2018
Sample Matrix: Sediment

Extraction Prep Log
Polynuclear Aromatic Hydrocarbons

Extraction Method: EPA 3541 **Extraction Lot:** KWG1805796
Analysis Method: 8270D SIM **Level:** Low

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Volume	% Solids	Note
N3-0to26-101518	K1810270-001	10/15/18	10/19/18	40.062g	2mL	74.3	
Method Blank	KWG1805796-6	NA	NA	40.332g	2mL	NA	
Lab Control Sample	KWG1805796-5	NA	NA	20.000g	2mL	NA	

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

Low Level Semivolatile Organic Compounds by GC/MS

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Analytical Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/15/18 08:46
Sample Matrix:	Sediment	**Date Received:**	10/19/18 12:30
Sample Name:	N3-0to26-101518	**Units:**	ug/Kg
Lab Code:	K1810270-001	**Basis:**	Dry

Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Bis(2-ethylhexyl) Phthalate	**220**	67	8.9	1	11/14/18 15:50	11/7/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
p-Terphenyl-d14	65	30 - 102	11/14/18 15:50	

Analytical Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/15/18 10:10
Sample Matrix:	Sediment	**Date Received:**	10/19/18 12:30
Sample Name:	L1-0to30-101518	**Units:**	ug/Kg
Lab Code:	K1810270-004	**Basis:**	Dry

Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Bis(2-ethylhexyl) Phthalate	**30 J**	55	8.9	1	11/08/18 05:35	10/29/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
p-Terphenyl-d14	62	30 - 102	11/08/18 05:35	

Analytical Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/15/18 11:40
Sample Matrix:	Sediment	**Date Received:**	10/19/18 12:30
Sample Name:	N1-0to30-101518	**Units:**	ug/Kg
Lab Code:	K1810270-006	**Basis:**	Dry

Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Bis(2-ethylhexyl) Phthalate	**13 J**	65	8.9	1	11/08/18 06:04	10/29/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
p-Terphenyl-d14	59	30 - 102	11/08/18 06:04	

Analytical Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/15/18 15:35
Sample Matrix:	Sediment	**Date Received:**	10/19/18 12:30
Sample Name:	T1-0to30-101518	**Units:**	ug/Kg
Lab Code:	K1810270-010	**Basis:**	Dry

Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Bis(2-ethylhexyl) Phthalate	ND U	79	8.9	1	11/08/18 06:32	10/29/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
p-Terphenyl-d14	70	30 - 102	11/08/18 06:32	

Analytical Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/15/18 14:37
Sample Matrix:	Sediment	**Date Received:**	10/19/18 12:30
Sample Name:	R1-0to30-101518	**Units:**	ug/Kg
Lab Code:	K1810270-011	**Basis:**	Dry

Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Bis(2-ethylhexyl) Phthalate	**27 J**	59	8.9	1	11/08/18 05:07	10/29/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
p-Terphenyl-d14	61	30 - 102	11/08/18 05:07	

Analytical Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/15/18 13:50
Sample Matrix:	Sediment	**Date Received:**	10/19/18 12:30
Sample Name:	P1-0to30-101518	**Units:**	ug/Kg
Lab Code:	K1810270-012	**Basis:**	Dry

Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Bis(2-ethylhexyl) Phthalate	**19 J**	65	8.9	1	11/08/18 07:00	10/29/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
p-Terphenyl-d14	64	30 - 102	11/08/18 07:00	

Analytical Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/16/18 16:30
Sample Matrix:	Sediment	**Date Received:**	10/19/18 12:30
Sample Name:	T3-0to28-101618	**Units:**	ug/Kg
Lab Code:	K1810270-013	**Basis:**	Dry

Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Bis(2-ethylhexyl) Phthalate	**340**	110	11	1	11/08/18 07:29	10/29/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
p-Terphenyl-d14	63	30 - 102	11/08/18 07:29	

Analytical Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/16/18 14:00
Sample Matrix:	Sediment	**Date Received:**	10/19/18 12:30
Sample Name:	T7-0to31-101618	**Units:**	ug/Kg
Lab Code:	K1810270-015	**Basis:**	Dry

Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Bis(2-ethylhexyl) Phthalate	**340**	130	12	1	11/08/18 07:57	10/29/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
p-Terphenyl-d14	59	30 - 102	11/08/18 07:57	

Analytical Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/16/18 15:13
Sample Matrix:	Sediment	**Date Received:**	10/19/18 12:30
Sample Name:	T5-0to26-101618	**Units:**	ug/Kg
Lab Code:	K1810270-016	**Basis:**	Dry

Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Bis(2-ethylhexyl) Phthalate	**690**	100	9.3	1	11/08/18 08:25	10/29/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
p-Terphenyl-d14	61	30 - 102	11/08/18 08:25	

Analytical Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/16/18 10:50
Sample Matrix:	Sediment	**Date Received:**	10/19/18 12:30
Sample Name:	P3-0to29-101618	**Units:**	ug/Kg
Lab Code:	K1810270-017	**Basis:**	Dry

Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Bis(2-ethylhexyl) Phthalate	**390**	100	9.1	1	11/08/18 08:54	10/29/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
p-Terphenyl-d14	65	30 - 102	11/08/18 08:54	

Analytical Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/16/18 12:09
Sample Matrix:	Sediment	**Date Received:**	10/19/18 12:30
Sample Name:	R5-0to25-101618	**Units:**	ug/Kg
Lab Code:	K1810270-018	**Basis:**	Dry

Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Bis(2-ethylhexyl) Phthalate	**620**	110	9.7	1	11/08/18 09:22	10/29/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
p-Terphenyl-d14	66	30 - 102	11/08/18 09:22	

Analytical Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/16/18 11:25
Sample Matrix:	Sediment	**Date Received:**	10/19/18 12:30
Sample Name:	514-0to29-101618	**Units:**	ug/Kg
Lab Code:	K1810270-019	**Basis:**	Dry

Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Bis(2-ethylhexyl) Phthalate	**470**	120	11	1	11/08/18 09:50	10/29/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
p-Terphenyl-d14	62	30 - 102	11/08/18 09:50	

Analytical Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/16/18 09:16
Sample Matrix:	Sediment	**Date Received:**	10/19/18 12:30
Sample Name:	P5-0to26-101618	**Units:**	ug/Kg
Lab Code:	K1810270-020	**Basis:**	Dry

Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Bis(2-ethylhexyl) Phthalate	**800**	140	13	1	11/08/18 10:19	10/29/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
p-Terphenyl-d14	68	30 - 102	11/08/18 10:19	

Analytical Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/17/18 09:28
Sample Matrix:	Sediment	**Date Received:**	10/19/18 12:30
Sample Name:	R3-0to33-101718	**Units:**	ug/Kg
Lab Code:	K1810270-029	**Basis:**	Dry

Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Bis(2-ethylhexyl) Phthalate	**380**	140	13	1	11/08/18 10:47	10/29/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
p-Terphenyl-d14	66	30 - 102	11/08/18 10:47	

Analytical Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	NA
Sample Matrix:	Sediment	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/Kg
Lab Code:	KQ1815626-04	**Basis:**	Dry

Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Bis(2-ethylhexyl) Phthalate	ND U	49	8.9	1	11/08/18 03:13	10/29/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
p-Terphenyl-d14	62	30 - 102	11/08/18 03:13	

Analytical Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	NA
Sample Matrix:	Sediment	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/Kg
Lab Code:	KQ1816032-04	**Basis:**	Dry

Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Bis(2-ethylhexyl) Phthalate	ND U	50	8.9	1	11/14/18 12:03	11/7/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
p-Terphenyl-d14	67	30 - 102	11/14/18 12:03	

Client: Pacific Groundwater Group (PGG) **Service Request:** K1810270
Project: DTNA Swan Island Sediment/2006-00115
Sample Matrix: Sediment

SURROGATE RECOVERY SUMMARY
Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Extraction Method: EPA 3541

Sample Name	Lab Code	p-Terphenyl-d14 30-102
N3-0to26-101518	K1810270-001	65
L1-0to30-101518	K1810270-004	62
N1-0to30-101518	K1810270-006	59
T1-0to30-101518	K1810270-010	70
R1-0to30-101518	K1810270-011	61
P1-0to30-101518	K1810270-012	64
T3-0to28-101618	K1810270-013	63
T7-0to31-101618	K1810270-015	59
T5-0to26-101618	K1810270-016	61
P3-0to29-101618	K1810270-017	65
R5-0to25-101618	K1810270-018	66
514-0to29-101618	K1810270-019	62
P5-0to26-101618	K1810270-020	68
R3-0to33-101718	K1810270-029	66
Method Blank	KQ1815626-04	62
Method Blank	KQ1816032-04	67
Lab Control Sample	KQ1815626-03	62
Lab Control Sample	KQ1816032-03	66
R1-0to30-101518	KQ1815626-01	62
R1-0to30-101518	KQ1815626-02	59

Client: Pacific Groundwater Group (PGG) **Service Request:**K1810270
Project: DTNA Swan Island Sediment/2006-00115 **Date Analyzed:**11/08/18 02:45

Internal Standard Area and RT SUMMARY
Low Level Semivolatile Organic Compounds by GC/MS

File ID: J:\MS29\DATA\110718\1107F042.D\ **Lab Code:**KQ1816400-02
Instrument ID: K-MS-29 **Analysis Lot:**614446
Analysis Method: 8270D **Signal ID:**1

		Chrysene-d12	
		Area	**RT**
	Result ==>	241,645	15.61
	Upper Limit ==>	483,290	16.11
	Lower Limit ==>	120,823	15.11
Associated Analyses			
Method Blank	KQ1815626-04	195878	15.61
Lab Control Sample	KQ1815626-03	209866	15.61
R1-0to30-101518MS	KQ1815626-01	253859	15.62
R1-0to30-101518DMS	KQ1815626-02	246213	15.61
R1-0to30-101518	K1810270-011	244534	15.61
L1-0to30-101518	K1810270-004	244176	15.61
N1-0to30-101518	K1810270-006	233221	15.61
T1-0to30-101518	K1810270-010	192237	15.61
P1-0to30-101518	K1810270-012	250135	15.61
T3-0to28-101618	K1810270-013	242976	15.62
T7-0to31-101618	K1810270-015	270723	15.62
T5-0to26-101618	K1810270-016	251836	15.64
P3-0to29-101618	K1810270-017	255467	15.63
R5-0to25-101618	K1810270-018	252474	15.63
514-0to29-101618	K1810270-019	252533	15.62
P5-0to26-101618	K1810270-020	248066	15.62
R3-0to33-101718	K1810270-029	250928	15.62

Client: Pacific Groundwater Group (PGG) **Service Request:** K1810270
Project: DTNA Swan Island Sediment/2006-00115 **Date Analyzed:** 11/14/18 09:22

Internal Standard Area and RT SUMMARY
Low Level Semivolatile Organic Compounds by GC/MS

File ID: J:\MS29\DATA\111418\1114F002.D\ **Lab Code:** KQ1816925-02
Instrument ID: K-MS-29 **Analysis Lot:** 615539
Analysis Method: 8270D **Signal ID:** 1

		Chrysene-d12	
		Area	**RT**
	Result ==>	182,932	15.64
	Upper Limit ==>	365,864	16.14
	Lower Limit ==>	91,466	15.14
Associated Analyses			
Method Blank	KQ1816032-04	206934	15.65
Lab Control Sample	KQ1816032-03	200343	15.64
N3-0to26-101518	K1810270-001	267978	15.65

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Collected:**	10/15/18
Sample Matrix:	Sediment	**Date Received:**	10/19/18
		Date Analyzed:	11/8/18
		Date Extracted:	10/29/18

Duplicate Matrix Spike Summary
Low Level Semivolatile Organic Compounds by GC/MS

Sample Name:	R1-0to30-101518	**Units:**	ug/Kg
Lab Code:	K1810270-011	**Basis:**	Dry
Analysis Method:	8270D		
Prep Method:	EPA 3541		

		Matrix Spike			Duplicate Matrix Spike					
		KQ1815626-01			KQ1815626-02					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Bis(2-ethylhexyl) Phthalate	27 J	132	148	71	112	148	57	23-123	16	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Analyzed:**	11/08/18
Sample Matrix:	Sediment	**Date Extracted:**	10/29/18

Lab Control Sample Summary
Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method:	8270D	**Units:**	ug/Kg
Prep Method:	EPA 3541	**Basis:**	Dry
		Analysis Lot:	614446

Lab Control Sample
KQ1815626-03

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
Bis(2-ethylhexyl) Phthalate	165	250	66	39-113

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Analyzed:**	11/14/18
Sample Matrix:	Sediment	**Date Extracted:**	11/07/18

Lab Control Sample Summary
Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method:	8270D	**Units:**	ug/Kg
Prep Method:	EPA 3541	**Basis:**	Dry
		Analysis Lot:	615539

Lab Control Sample
KQ1816032-03

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
Bis(2-ethylhexyl) Phthalate	183	250	73	39-113

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Analyzed:**	11/08/18 03:13
Sample Matrix:	Sediment	**Date Extracted:**	10/29/18

Method Blank Summary
Low Level Semivolatile Organic Compounds by GC/MS

Sample Name:	Method Blank	**Instrument ID:**	K-MS-29
Lab Code:	KQ1815626-04	**File ID:**	J:\MS29\DATA\110718\1107F043.D\
Analysis Method:	8270D	**Analysis Lot:**	614446
Prep Method:	EPA 3541	**Extraction Lot:**	325139

This Method Blank applies to the following analyses.

Sample Name	Lab Code	File ID	Date Analyzed
Lab Control Sample	KQ1815626-03	J:\MS29\DATA\110718\1107F044.D\	11/08/18 03:42
R1-0to30-101518MS	KQ1815626-01	J:\MS29\DATA\110718\1107F045.D\	11/08/18 04:10
R1-0to30-101518DMS	KQ1815626-02	J:\MS29\DATA\110718\1107F046.D\	11/08/18 04:38
R1-0to30-101518	K1810270-011	J:\MS29\DATA\110718\1107F047.D\	11/08/18 05:07
L1-0to30-101518	K1810270-004	J:\MS29\DATA\110718\1107F048.D\	11/08/18 05:35
N1-0to30-101518	K1810270-006	J:\MS29\DATA\110718\1107F049.D\	11/08/18 06:04
T1-0to30-101518	K1810270-010	J:\MS29\DATA\110718\1107F050.D\	11/08/18 06:32
P1-0to30-101518	K1810270-012	J:\MS29\DATA\110718\1107F051.D\	11/08/18 07:00
T3-0to28-101618	K1810270-013	J:\MS29\DATA\110718\1107F052.D\	11/08/18 07:29
T7-0to31-101618	K1810270-015	J:\MS29\DATA\110718\1107F053.D\	11/08/18 07:57
T5-0to26-101618	K1810270-016	J:\MS29\DATA\110718\1107F054.D\	11/08/18 08:25
P3-0to29-101618	K1810270-017	J:\MS29\DATA\110718\1107F055.D\	11/08/18 08:54
R5-0to25-101618	K1810270-018	J:\MS29\DATA\110718\1107F056.D\	11/08/18 09:22
514-0to29-101618	K1810270-019	J:\MS29\DATA\110718\1107F057.D\	11/08/18 09:50
P5-0to26-101618	K1810270-020	J:\MS29\DATA\110718\1107F058.D\	11/08/18 10:19
R3-0to33-101718	K1810270-029	J:\MS29\DATA\110718\1107F059.D\	11/08/18 10:47

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Analyzed:**	11/14/18 12:03
Sample Matrix:	Sediment	**Date Extracted:**	11/07/18

Method Blank Summary
Low Level Semivolatile Organic Compounds by GC/MS

Sample Name:	Method Blank	**Instrument ID:**	K-MS-29
Lab Code:	KQ1816032-04	**File ID:**	J:\MS29\DATA\111418\1114F004.D\
Analysis Method:	8270D	**Analysis Lot:**	615539
Prep Method:	EPA 3541	**Extraction Lot:**	325584

This Method Blank applies to the following analyses.

Sample Name	Lab Code	File ID	Date Analyzed
Lab Control Sample	KQ1816032-03	J:\MS29\DATA\111418\1114F005.D\	11/14/18 12:31
N3-0to26-101518	K1810270-001	J:\MS29\DATA\111418\1114F012.D\	11/14/18 15:50

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Analyzed:**	11/08/18 03:42
Sample Matrix:	Sediment	**Date Extracted:**	10/29/18

Lab Control Sample Summary
Low Level Semivolatile Organic Compounds by GC/MS

Sample Name:	Lab Control Sample	**Instrument ID:**	K-MS-29
Lab Code:	KQ1815626-03	**File ID:**	J:\MS29\DATA\110718\1107F044.D\
Analysis Method:	8270D	**Analysis Lot:**	614446
Prep Method:	EPA 3541	**Extraction Lot:**	325139

This Lab Control Sample applies to the following analyses.

Sample Name	Lab Code	File ID	Date Analyzed
Method Blank	KQ1815626-04	J:\MS29\DATA\110718\1107F043.D\	11/08/18 03:13
R1-0to30-101518MS	KQ1815626-01	J:\MS29\DATA\110718\1107F045.D\	11/08/18 04:10
R1-0to30-101518DMS	KQ1815626-02	J:\MS29\DATA\110718\1107F046.D\	11/08/18 04:38
R1-0to30-101518	K1810270-011	J:\MS29\DATA\110718\1107F047.D\	11/08/18 05:07
L1-0to30-101518	K1810270-004	J:\MS29\DATA\110718\1107F048.D\	11/08/18 05:35
N1-0to30-101518	K1810270-006	J:\MS29\DATA\110718\1107F049.D\	11/08/18 06:04
T1-0to30-101518	K1810270-010	J:\MS29\DATA\110718\1107F050.D\	11/08/18 06:32
P1-0to30-101518	K1810270-012	J:\MS29\DATA\110718\1107F051.D\	11/08/18 07:00
T3-0to28-101618	K1810270-013	J:\MS29\DATA\110718\1107F052.D\	11/08/18 07:29
T7-0to31-101618	K1810270-015	J:\MS29\DATA\110718\1107F053.D\	11/08/18 07:57
T5-0to26-101618	K1810270-016	J:\MS29\DATA\110718\1107F054.D\	11/08/18 08:25
P3-0to29-101618	K1810270-017	J:\MS29\DATA\110718\1107F055.D\	11/08/18 08:54
R5-0to25-101618	K1810270-018	J:\MS29\DATA\110718\1107F056.D\	11/08/18 09:22
514-0to29-101618	K1810270-019	J:\MS29\DATA\110718\1107F057.D\	11/08/18 09:50
P5-0to26-101618	K1810270-020	J:\MS29\DATA\110718\1107F058.D\	11/08/18 10:19
R3-0to33-101718	K1810270-029	J:\MS29\DATA\110718\1107F059.D\	11/08/18 10:47

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Analyzed:**	11/14/18 12:31
Sample Matrix:	Sediment	**Date Extracted:**	11/07/18

Lab Control Sample Summary
Low Level Semivolatile Organic Compounds by GC/MS

Sample Name:	Lab Control Sample	**Instrument ID:**	K-MS-29
Lab Code:	KQ1816032-03	**File ID:**	J:\MS29\DATA\111418\1114F005.D\
Analysis Method:	8270D	**Analysis Lot:**	615539
Prep Method:	EPA 3541	**Extraction Lot:**	325584

This Lab Control Sample applies to the following analyses.

Sample Name	Lab Code	File ID	Date Analyzed
Method Blank	KQ1816032-04	J:\MS29\DATA\111418\1114F004.D\	11/14/18 12:03
N3-0to26-101518	K1810270-001	J:\MS29\DATA\111418\1114F012.D\	11/14/18 15:50

Client: Pacific Groundwater Group (PGG) **Service Request:**K1810270
Project: DTNA Swan Island Sediment/2006-00115 **Date Analyzed:**11/08/18 02:17

Tune Summary
Low Level Semivolatile Organic Compounds by GC/MS

File ID: J:\MS29\DATA\110718\1107F041.D\ **Analytical Method:** 8270D
Instrument ID: K-MS-29 **Analysis Lot:** 614446

Target Mass	Relative to Mass	Lower Limit %	Upper Limit %	Relative Abundance %	Raw Abundance	Result Pass/Fail
51	198	10	80	32.98	334362	Pass
68	69	0	2	0.00	0	Pass
69	198	0	100	38.18	387058	Pass
70	69	0	2	0.54	2093	Pass
127	198	10	80	45.02	456405	Pass
197	198	0	2	0.00	0	Pass
198	442	30	100	62.13	1013738	Pass
199	198	5	9	6.63	67216	Pass
275	198	10	60	30.64	310570	Pass
365	442	1	50	1.89	30877	Pass
441	443	0.01	100	81.19	251605	Pass
442	442	30	100	100.00	1631573	Pass
443	442	15	24	18.99	309888	Pass

Sample Name	Lab Code	File ID:	Date Analyzed:	Q
Continuing Calibration Verification	KQ1816400-02	J:\MS29\DATA\110718\1107F042.D\	11/08/18 02:45	
Method Blank	KQ1815626-04	J:\MS29\DATA\110718\1107F043.D\	11/08/18 03:13	
Lab Control Sample	KQ1815626-03	J:\MS29\DATA\110718\1107F044.D\	11/08/18 03:42	
R1-0to30-101518	KQ1815626-01	J:\MS29\DATA\110718\1107F045.D\	11/08/18 04:10	
R1-0to30-101518	KQ1815626-02	J:\MS29\DATA\110718\1107F046.D\	11/08/18 04:38	
R1-0to30-101518	K1810270-011	J:\MS29\DATA\110718\1107F047.D\	11/08/18 05:07	
L1-0to30-101518	K1810270-004	J:\MS29\DATA\110718\1107F048.D\	11/08/18 05:35	
N1-0to30-101518	K1810270-006	J:\MS29\DATA\110718\1107F049.D\	11/08/18 06:04	
T1-0to30-101518	K1810270-010	J:\MS29\DATA\110718\1107F050.D\	11/08/18 06:32	
P1-0to30-101518	K1810270-012	J:\MS29\DATA\110718\1107F051.D\	11/08/18 07:00	
T3-0to28-101618	K1810270-013	J:\MS29\DATA\110718\1107F052.D\	11/08/18 07:29	
T7-0to31-101618	K1810270-015	J:\MS29\DATA\110718\1107F053.D\	11/08/18 07:57	
T5-0to26-101618	K1810270-016	J:\MS29\DATA\110718\1107F054.D\	11/08/18 08:25	
P3-0to29-101618	K1810270-017	J:\MS29\DATA\110718\1107F055.D\	11/08/18 08:54	
R5-0to25-101618	K1810270-018	J:\MS29\DATA\110718\1107F056.D\	11/08/18 09:22	
514-0to29-101618	K1810270-019	J:\MS29\DATA\110718\1107F057.D\	11/08/18 09:50	
P5-0to26-101618	K1810270-020	J:\MS29\DATA\110718\1107F058.D\	11/08/18 10:19	
R3-0to33-101718	K1810270-029	J:\MS29\DATA\110718\1107F059.D\	11/08/18 10:47	

Client: Pacific Groundwater Group (PGG) **Service Request:**K1810270
Project: DTNA Swan Island Sediment/2006-00115 **Date Analyzed:**11/14/18 08:54

Tune Summary
Low Level Semivolatile Organic Compounds by GC/MS

File ID: J:\MS29\DATA\111418\1114F001.D\ **Analytical Method:** 8270D
Instrument ID: K-MS-29 **Analysis Lot:** 615539

Target Mass	Relative to Mass	Lower Limit %	Upper Limit %	Relative Abundance %	Raw Abundance	Result Pass/Fail
51	198	10	80	36.61	422677	Pass
68	69	0	2	0.00	0	Pass
69	198	0	100	41.39	477923	Pass
70	69	0	2	0.45	2172	Pass
127	198	10	80	47.02	542890	Pass
197	198	0	2	0.00	0	Pass
198	442	30	100	74.35	1154560	Pass
199	198	5	9	6.67	77037	Pass
275	198	10	60	28.74	331776	Pass
365	442	1	50	2.00	31008	Pass
441	443	0.01	100	79.59	239752	Pass
442	442	30	100	100.00	1552917	Pass
443	442	15	24	19.40	301248	Pass

Sample Name	Lab Code	File ID:	Date Analyzed:	Q
Continuing Calibration Verification	KQ1816925-02	J:\MS29\DATA\111418\1114F002.D\	11/14/18 09:22	
Method Blank	KQ1816032-04	J:\MS29\DATA\111418\1114F004.D\	11/14/18 12:03	
Lab Control Sample	KQ1816032-03	J:\MS29\DATA\111418\1114F005.D\	11/14/18 12:31	
N3-0to26-101518	K1810270-001	J:\MS29\DATA\111418\1114F012.D\	11/14/18 15:50	

Client: Pacific Groundwater Group (PGG) **Service Request:** K1810270
Project: DTNA Swan Island Sediment **Calibration Date:** 11/6/2018

Initial Calibration Summary
Low Level Semivolatile Organic Compounds by GC/MS

Calibration ID: KC1800516 **Signal ID:** 1
Instrument ID: K-MS-29

#	Lab Code	Sample Name	File Location	Acquisition Date
01	KC1800516-01	SVO_LL ICAL @ 0.05ppm | SVM59-69C	J:\MS29\DATA\110618A\1106A003.D	11/06/2018 14:33
02	KC1800516-02	SVO_LL ICAL @ 0.10ppm | SVM59-69D	J:\MS29\DATA\110618A\1106A004.D	11/06/2018 15:01
03	KC1800516-03	SVO_LL ICAL @ 0.20ppm | SVM59-69E	J:\MS29\DATA\110618A\1106A005.D	11/06/2018 15:30
04	KC1800516-04	SVO_LL ICAL @ 0.50ppm | SVM59-69F	J:\MS29\DATA\110618A\1106A006.D	11/06/2018 15:58
05	KC1800516-05	SVO_LL ICAL @ 1.0ppm | SVM59-69G	J:\MS29\DATA\110618A\1106A007.D	11/06/2018 16:27
06	KC1800516-06	SVO_LL ICAL @ 2.0ppm | SVM59-69H	J:\MS29\DATA\110618A\1106A008.D	11/06/2018 16:55
07	KC1800516-07	SVO_LL ICAL @ 3.0ppm | SVM59-69I	J:\MS29\DATA\110618A\1106A009.D	11/06/2018 17:23
08	KC1800516-08	SVO_LL ICAL @ 5.0ppm | SVM59-69J	J:\MS29\DATA\110618A\1106A010.D	11/06/2018 17:52
09	KC1800516-09	SVO_LL ICAL @ 7.0ppm | SVM59-69K	J:\MS29\DATA\110618A\1106A011.D	11/06/2018 18:20
10	KC1800516-10	SVO_LL ICAL @ 10ppm | SVM59-69L	J:\MS29\DATA\110618A\1106A012.D	11/06/2018 18:48

Analyte

Bis(2-ethylhexyl) Phthalate

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	50.000	0.7365	02	100.000	0.7638	03	200.000	0.7799	04	500.000	0.7432
05	1000.000	0.8336	06	2000.000	0.8704	07	3000.000	0.9469	08	5000.000	0.9807
09	7000.000	0.9593	10	10000.000	0.8905						

p-Terphenyl-d14

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
03	200.000	1.093	04	500.000	0.9527	05	1000.000	0.9712	06	2000.000	0.9746
07	3000.000	1.037	08	5000.000	1.066	09	7000.000	1.024	10	10000.000	0.9392

Client: Pacific Groundwater Group (PGG) **Service Request:** K1810270
Project: DTNA Swan Island Sediment **Calibration Date:** 11/6/2018

Initial Calibration Summary
Low Level Semivolatile Organic Compounds by GC/MS

Calibration ID: KC1800516 **Signal ID:** 1
Instrument ID: K-MS-29

		Calibration Evaluation				Calibration Evaluation	
Analyte Name	Compound Type	Fit Type	Eval	Eval Result	Control Criteria	Average RRF	Minimum RRF
Bis(2-ethylhexyl) Phthalate	TRG	Average RF	% RSD	10.9	≤20	0.8505	0.010
p-Terphenyl-d14	SURR	Average RF	% RSD	5.6	≤20	1.007	0.010

Client: Pacific Groundwater Group (PGG) **Service Request:** K1810270
Project: DTNA Swan Island Sediment **Calibration Date:** 11/6/2018

Initial Calibration Verification Summary
Low Level Semivolatile Organic Compounds by GC/MS

Calibration ID: KC1800516 **Signal ID:** 1
Instrument ID: K-MS-29

#	Lab Code	Sample Name	File Location	Acquisition Date
11	KC1800516-11	SVO_LL ICV @ 3.0ppm | SVM59-63B	J:\MS29\DATA\110618A\1106A013.D	11/06/2018 19:17

Analyte Name	Expected	Result	Average RF	SSV RF	% D	Criteria	Curve Fit
Bis(2-ethylhexyl) Phthalate	3000	2930	8.505E-1	8.32E-1	-2.173	±30	Average RF

Analyte Name	Expected	Result	Average RF	SSV RF	% D	Criteria	Curve Fit
p-Terphenyl-d14	3000	2810	1.007E0	9.447E-1	-6.195	±30	Average RF

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Analyzed:**	11/08/18 02:45

Continuing Calibration Verification (CCV) Summary
Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method:	8270D	**Calibration Date:**	11/6/2018
File ID:	J:\MS29\DATA\110718\1107F042.D\	**Calibration ID:**	KC1800516
Signal ID:	1	**Analysis Lot:**	614446
		Units:	ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
Bis(2-ethylhexyl) Phthalate	3000	2640	0.8505	0.7482	-12.0	NA	±20	Average RF

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
p-Terphenyl-d14	3000	2540	1.0071	0.8512	-15.5	NA	±20	Average RF

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810270
Project:	DTNA Swan Island Sediment/2006-00115	**Date Analyzed:**	11/14/18 09:22

Continuing Calibration Verification (CCV) Summary
Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method:	8270D	**Calibration Date:**	11/6/2018
File ID:	J:\MS29\DATA\111418\1114F002.D\	**Calibration ID:**	KC1800516
Signal ID:	1	**Analysis Lot:**	615539
		Units:	ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
Bis(2-ethylhexyl) Phthalate	3000	3140	0.8505	0.8904	4.7	NA	±20	Average RF

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
p-Terphenyl-d14	3000	2680	1.0071	0.9002	-10.6	NA	±20	Average RF

Client: Pacific Groundwater Group (PGG) **Service Request:**K1810270
Project: DTNA Swan Island Sediment/2006-00115

Analysis Run Log
Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: **Analysis Lot:**614446
Instrument ID:K-MS-29

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
J:\MS29\DATA\110718\1107F041.D\	ZZZZZZZ	ZZZZZZZ	11/8/2018	02:17:00	
J:\MS29\DATA\110718\1107F042.D\	Continuing Calibration Verification	KQ1816400-02	11/8/2018	02:45:00	
J:\MS29\DATA\110718\1107F043.D\	Method Blank	KQ1815626-04	11/8/2018	03:13:00	
J:\MS29\DATA\110718\1107F044.D\	Lab Control Sample	KQ1815626-03	11/8/2018	03:42:00	
J:\MS29\DATA\110718\1107F045.D\	R1-0to30-101518 MS	KQ1815626-01	11/8/2018	04:10:00	
J:\MS29\DATA\110718\1107F046.D\	R1-0to30-101518 DMS	KQ1815626-02	11/8/2018	04:38:00	
J:\MS29\DATA\110718\1107F047.D\	R1-0to30-101518	K1810270-011	11/8/2018	05:07:00	
J:\MS29\DATA\110718\1107F048.D\	L1-0to30-101518	K1810270-004	11/8/2018	05:35:00	
J:\MS29\DATA\110718\1107F049.D\	N1-0to30-101518	K1810270-006	11/8/2018	06:04:00	
J:\MS29\DATA\110718\1107F050.D\	T1-0to30-101518	K1810270-010	11/8/2018	06:32:00	
J:\MS29\DATA\110718\1107F051.D\	P1-0to30-101518	K1810270-012	11/8/2018	07:00:00	
J:\MS29\DATA\110718\1107F052.D\	T3-0to28-101618	K1810270-013	11/8/2018	07:29:00	
J:\MS29\DATA\110718\1107F053.D\	T7-0to31-101618	K1810270-015	11/8/2018	07:57:00	
J:\MS29\DATA\110718\1107F054.D\	T5-0to26-101618	K1810270-016	11/8/2018	08:25:00	
J:\MS29\DATA\110718\1107F055.D\	P3-0to29-101618	K1810270-017	11/8/2018	08:54:00	
J:\MS29\DATA\110718\1107F056.D\	R5-0to25-101618	K1810270-018	11/8/2018	09:22:00	
J:\MS29\DATA\110718\1107F057.D\	514-0to29-101618	K1810270-019	11/8/2018	09:50:00	
J:\MS29\DATA\110718\1107F058.D\	P5-0to26-101618	K1810270-020	11/8/2018	10:19:00	
J:\MS29\DATA\110718\1107F059.D\	R3-0to33-101718	K1810270-029	11/8/2018	10:47:00	

Client: Pacific Groundwater Group (PGG) **Service Request:**K1810270
Project: DTNA Swan Island Sediment/2006-00115

Analysis Run Log
Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: **Analysis Lot:**615539
Instrument ID:K-MS-29

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
J:\MS29\DATA\111418\1114F001.D\	ZZZZZZZ	ZZZZZZZ	11/14/2018	08:54:00	
J:\MS29\DATA\111418\1114F001.D\	ZZZZZZZ	ZZZZZZZ	11/14/2018	08:54:00	
J:\MS29\DATA\111418\1114F002.D\	ZZZZZZZ	ZZZZZZZ	11/14/2018	09:22:00	
J:\MS29\DATA\111418\1114F002.D\	Continuing Calibration Verification	KQ1816925-02	11/14/2018	09:22:00	
J:\MS29\DATA\111418\1114F004.D\	Method Blank	KQ1816032-04	11/14/2018	12:03:00	
J:\MS29\DATA\111418\1114F005.D\	Lab Control Sample	KQ1816032-03	11/14/2018	12:31:00	
J:\MS29\DATA\111418\1114F006.D\	ZZZZZZZ	ZZZZZZZ	11/14/2018	13:00:00	
J:\MS29\DATA\111418\1114F007.D\	ZZZZZZZ	ZZZZZZZ	11/14/2018	13:28:00	
J:\MS29\DATA\111418\1114F008.D\	ZZZZZZZ	ZZZZZZZ	11/14/2018	13:56:00	
J:\MS29\DATA\111418\1114F009.D\	ZZZZZZZ	ZZZZZZZ	11/14/2018	14:25:00	
J:\MS29\DATA\111418\1114F010.D\	ZZZZZZZ	ZZZZZZZ	11/14/2018	14:53:00	
J:\MS29\DATA\111418\1114F011.D\	ZZZZZZZ	ZZZZZZZ	11/14/2018	15:21:00	
J:\MS29\DATA\111418\1114F012.D\	N3-0to26-101518	K1810270-001	11/14/2018	15:50:00	
J:\MS29\DATA\111418\1114F013.D\	ZZZZZZZ	ZZZZZZZ	11/14/2018	16:18:00	
J:\MS29\DATA\111418\1114F014.D\	ZZZZZZZ	ZZZZZZZ	11/14/2018	17:31:00	
J:\MS29\DATA\111418\1114F015.D\	ZZZZZZZ	ZZZZZZZ	11/14/2018	17:59:00	
J:\MS29\DATA\111418\1114F016.D\	ZZZZZZZ	ZZZZZZZ	11/14/2018	18:27:00	
J:\MS29\DATA\111418\1114F017.D\	ZZZZZZZ	ZZZZZZZ	11/14/2018	18:55:00	
J:\MS29\DATA\111418\1114F018.D\	ZZZZZZZ	ZZZZZZZ	11/14/2018	19:23:00	
J:\MS29\DATA\111418\1114F019.D\	ZZZZZZZ	ZZZZZZZ	11/14/2018	19:52:00	
J:\MS29\DATA\111418\1114F020.D\	ZZZZZZZ	ZZZZZZZ	11/14/2018	20:20:00	
J:\MS29\DATA\111418\1114F021.D\	ZZZZZZZ	ZZZZZZZ	11/14/2018	20:48:00	

Prep Summary Report

Client: Pacific Groundwater Group (PGG) **Service Request:**K1810270
Project: DTNA Swan Island Sediment/2006-00115
Sample Matrix: Sediment

Low Level Semivolatile Organic Compounds by GC/MS

Prep Method: EPA 3541 **Extraction Lot:** 325584
Analytical Method: 8270D **Extraction Date:** 11/07/18 11:19

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Amount	Percent Solids
N3-0to26-101518	K1810270-001	10/15/18	10/19/18	40.093 g	2 mL	74.3
Lab Control Sample	KQ1816032-03LCS	NA	NA	20.00 g	2 mL	
Method Blank	KQ1816032-04MB	NA	NA	40.3880 g	2 mL	

Prep Summary Report

Client: Pacific Groundwater Group (PGG) **Service Request:**K1810270
Project: DTNA Swan Island Sediment/2006-00115
Sample Matrix: Sediment

Low Level Semivolatile Organic Compounds by GC/MS

Prep Method: EPA 3541 **Extraction Lot:** 325139
Analytical Method: 8270D **Extraction Date:** 10/29/18 20:00

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Amount	Percent Solids
L1-0to30-101518	K1810270-004	10/15/18	10/19/18	40.176 g	2 mL	90.3
N1-0to30-101518	K1810270-006	10/15/18	10/19/18	40.423 g	2 mL	75.8
T1-0to30-101518	K1810270-010	10/15/18	10/19/18	40.144 g	2 mL	63.0
R1-0to30-101518	K1810270-011	10/15/18	10/19/18	40.194 g	2 mL	83.9
P1-0to30-101518	K1810270-012	10/15/18	10/19/18	40.264 g	2 mL	76.7
T3-0to28-101618	K1810270-013	10/16/18	10/19/18	40.377 g	2 mL	43.8
T7-0to31-101618	K1810270-015	10/16/18	10/19/18	40.154 g	2 mL	39.3
T5-0to26-101618	K1810270-016	10/16/18	10/19/18	40.385 g	2 mL	47.8
P3-0to29-101618	K1810270-017	10/16/18	10/19/18	40.271 g	2 mL	48.7
R5-0to25-101618	K1810270-018	10/16/18	10/19/18	40.183 g	2 mL	45.9
514-0to29-101618	K1810270-019	10/16/18	10/19/18	40.301 g	2 mL	40.5
P5-0to26-101618	K1810270-020	10/16/18	10/19/18	40.412 g	2 mL	35.2
R3-0to33-101718	K1810270-029	10/17/18	10/19/18	40.425 g	2 mL	36.1
Matrix Spike	KQ1815626-01MS	10/15/18	10/19/18	40.352 g	2 mL	83.9
Duplicate Matrix Spike	KQ1815626-02DMS	10/15/18	10/19/18	40.213 g	2 mL	83.9
Lab Control Sample	KQ1815626-03LCS	NA	NA	20.00 g	2 mL	
Method Blank	KQ1815626-04MB	NA	NA	40.4250 g	2 mL	