

Appendix B

Soil Testing Laboratory Results

From: tom mccluskey [tom@mccloskeyconsultants.com]
Sent: Wednesday, September 29, 2010 5:24 PM
To: Julie Mier
Subject: FW: Report for Nortech Pipeline 1009161 (CA)

Attachments: 1009161_McCloskey Consultants.pdf

Hi Julie,

Attached are the sampling results from the deeper sampling along the Nortech pipeline. It appears that the arsenic is consistently less than @9 mg/kg which is just right with expected naturally-occurring concentrations for that area. Therefore, the earlier surface samples with @20 mg/kg arsenic represent anthropogenic contamination and those concentrations exceed Calif. Human Health Screening Levels for worker safety. Therefore, health and safety measures would be needed to protect workers from exposure to this surface soils during construction. The material would not be a hazardous waste so disposal of the material is not an issue. The workers may or may not need special training to work in the material – I'll have to check that out.

Let me know if you have any questions.

Tom McCloskey, P.G., C.E.G., C.Hg.
Principal
(925)786-2667
tom@mccloskeyconsultants.com
McCloskey Consultants, Inc.
Environmental & Geologic Assessments
420 Sycamore Valley Road West
Danville, CA 94526

From: Torrent Laboratory, Inc. [mailto:torrent@torrentlab.com]
Sent: Wednesday, September 29, 2010 3:23 PM
To: tom@mccloskeyconsultants.com
Subject: Report for Nortech Pipeline 1009161 (CA)

Hi Tom,

Here is the report for our WO# 1009161.

Thanks!
Nutan

Best Regards,

Project Management Team
Torrent Laboratory, Inc.
483 Sinclair Frontage Rd
Milpitas, CA 95035
PH:(408)263-5258; Nutan x209, Patti x208, Stacy 707-206-0216
Fax:(408)263-8293
Email: pm@torrentlab.com
www.torrentlab.com

From: tom mccloskey [tom@mccloskeyconsultants.com]

Sent: Tuesday, October 05, 2010 3:46 PM

To: Julie Mier

Subject: Nortech Arsenic

Hi Julie,

I spoke to a Certified Industrial Hygienist about the excess arsenic in soils along the Nortech pipeline. There is an OSHA requirement that workers receive 2-hours of health and safety awareness training if arsenic is present exceeding worker standards. If the workers are already 40-hour hazardous worker trained, would not need to 2 hour training. A health and safety would also be needed. There would also have to be protective clothing and washing facilities on site. This is pretty standard and easy to implement. Many contractors have people with the 40-hour training so maybe this can be put into the contract. Let me know if you have any questions.

Best regards,

Tom McCloskey, P.G., C.E.G., C.Hg.

Principal

(925)786-2667

tom@mccloskeyconsultants.com

McCloskey Consultants, Inc.

Environmental & Geologic Assessments

420 Sycamore Valley Road West

Danville, CA 94526



McCloskey Consultants
420 Sycamore Valley Road West
Danville, California 94526
Tel: 925 786 2667
RE: Nortech Pipeline

Work Order No.: 1009161

Dear Tom McCloskey:

Torrent Laboratory, Inc. received 4 sample(s) on September 22, 2010 for the analyses presented in the following Report.

All data for associated QC met EPA or laboratory specification(s) except where noted in the case narrative.

Torrent Laboratory, Inc. is certified by the State of California, ELAP #1991. If you have any questions regarding these test results, please feel free to contact the Project Management Team at (408)263-5258; ext 204.

Patti Sandrock

September 29, 2010

Date



Date: 9/29/2010

Client: McCloskey Consultants

Project: Nortech Pipeline

Work Order: 1009161

CASE NARRATIVE

No issues encountered with the receiving, preparation, analysis or reporting of the results associated with this work order.

Analytical Comments for method S-6010BCAM17, 1009161-001A MS/MSD, QC Analytical Batch ID 402317, Note: The % recoveries for Nickel are outside of laboratory control limits but are within % RPD limits. The associated LCS/LCSD % recoveries and % RPD are within limits. No corrective action required.

Analytical Comment for S_6010BCAM17, Note: The spikes in the MS/MSD for Barium are not recoverable. The sample concentration is greater than 4X the spike concentration. No corrective action is required.



Sample Result Summary

Report prepared for: Tom McCloskey
McCloskey Consultants

Date Received: 09/22/10

Date Reported: 09/29/10

SS-1D2' 1009161-001

<u>Parameters:</u>	<u>Analysis Method</u>	<u>DF</u>	<u>MDL</u>	<u>PQL</u>	<u>Results</u>	<u>Unit</u>
Arsenic	SW6010B	1	0.28	1.7	9.6	mg/Kg

SS-1D4' 1009161-002

<u>Parameters:</u>	<u>Analysis Method</u>	<u>DF</u>	<u>MDL</u>	<u>PQL</u>	<u>Results</u>	<u>Unit</u>
Arsenic	SW6010B	1	0.28	1.7	8.2	mg/Kg

SS-2D2' 1009161-003

<u>Parameters:</u>	<u>Analysis Method</u>	<u>DF</u>	<u>MDL</u>	<u>PQL</u>	<u>Results</u>	<u>Unit</u>
Arsenic	SW6010B	1	0.28	1.7	7.7	mg/Kg

SS-2D4' 1009161-004

<u>Parameters:</u>	<u>Analysis Method</u>	<u>DF</u>	<u>MDL</u>	<u>PQL</u>	<u>Results</u>	<u>Unit</u>
Arsenic	SW6010B	1	0.28	1.7	8.4	mg/Kg



SAMPLE RESULTS

Report prepared for: Tom McCloskey
McCloskey Consultants

Date Received: 09/22/10
Date Reported: 09/29/10

Client Sample ID:	SS-1D2'	Lab Sample ID:	1009161-001A
Project Name/Location:	Nortech Pipeline	Sample Matrix:	Soil
Project Number:			
Date/Time Sampled:	09/22/10 / 11:10		
Tag Number:	Nortech Pipeline		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
Arsenic	SW6010B	9/24/10	09/24/10	1	0.28	1.7	9.6		mg/Kg	402317	1128



SAMPLE RESULTS

Report prepared for: Tom McCloskey
McCloskey Consultants

Date Received: 09/22/10
Date Reported: 09/29/10

Client Sample ID:	SS-1D4'	Lab Sample ID:	1009161-002A
Project Name/Location:	Nortech Pipeline	Sample Matrix:	Soil
Project Number:			
Date/Time Sampled:	09/22/10 / 11:27		
Tag Number:	Nortech Pipeline		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
Arsenic	SW6010B	9/24/10	09/24/10	1	0.28	1.7	8.2		mg/Kg	402317	1128



SAMPLE RESULTS

Report prepared for: Tom McCloskey
McCloskey Consultants

Date Received: 09/22/10
Date Reported: 09/29/10

Client Sample ID:	SS-2D2'	Lab Sample ID:	1009161-003A
Project Name/Location:	Nortech Pipeline	Sample Matrix:	Soil
Project Number:			
Date/Time Sampled:	09/22/10 / 12:05		
Tag Number:	Nortech Pipeline		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
Arsenic	SW6010B	9/24/10	09/24/10	1	0.28	1.7	7.7		mg/Kg	402317	1128



SAMPLE RESULTS

Report prepared for: Tom McCloskey
McCloskey Consultants

Date Received: 09/22/10
Date Reported: 09/29/10

Client Sample ID:	SS-2D4'	Lab Sample ID:	1009161-004A
Project Name/Location:	Nortech Pipeline	Sample Matrix:	Soil
Project Number:			
Date/Time Sampled:	09/22/10 / 12:30		
Tag Number:	Nortech Pipeline		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
Arsenic	SW6010B	9/24/10	09/24/10	1	0.28	1.7	8.4		mg/Kg	402317	1128



MB Summary Report

Work Order:	1009161	Prep Method:	3050	Prep Date:	09/24/10	Prep Batch:	1128
Matrix:	Soil	Analytical Method:	SW6010B	Analyzed Date:	09/24/10	Analytical Batch:	402317
Units:	mg/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier	
Arsenic	0.28	1.7	ND		
Lead	0.13	1.0	0.24		



LCS/LCSD Summary Report

Raw values are used in quality control assessment.

Work Order:	1009161	Prep Method:	3050	Prep Date:	09/24/10	Prep Batch:	1128
Matrix:	Soil	Analytical Method:	SW6010B	Analyzed Date:	09/24/10	Analytical Batch:	402317
Units:	mg/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
Arsenic	0.28	1.7		50	91.53	91.7	0.240	71 - 121	30	
Lead	0.13	1		50	94.03	93.6	0.469	67.9 - 118	30	



MS/MSD Summary Report

Raw values are used in quality control assessment.

Work Order:	1009161	Prep Method:	3050	Prep Date:	09/24/10	Prep Batch:	1128
Matrix:	Soil	Analytical Method:	SW6010B	Analyzed Date:	09/24/10	Analytical Batch:	402317
Spiked Sample:	1009161-001A						
Units:	mg/Kg						

Parameters	MDL	PQL	Sample Conc.	Spike Conc.	MS % Recovery	MSD % Recovery	MS/MSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
Arsenic	0.28	1.7	0.19	50	87.3	82.2	4.63	71 - 121	30	
Lead	0.13	1.0	0.32	50	78.2	77.5	0.456	67.9 - 118	30	



Laboratory Qualifiers and Definitions

DEFINITIONS:

Accuracy/Bias (% Recovery) - The closeness of agreement between an observed value and an accepted reference value.
Blank (Method/Preparation Blank) -MB/PB - An analyte-free matrix to which all reagents are added in the same volumes/proportions as used in sample processing. The method blank is used to document contamination resulting from the analytical process.
Duplicate - a field sample and/or laboratory QC sample prepared in duplicate following all of the same processes and procedures used on the original sample (sample duplicate, LCSD, MSD)
Laboratory Control Sample (LCS ad LCSD) - A known matrix spiked with compounds representative of the target analyte(s). This is used to document laboratory performance.
Matrix - the component or substrate that contains the analyte of interest (e.g., - groundwater, sediment, soil, waste water, etc)
Matrix Spike (MS/MSD) - Client sample spiked with identical concentrations of target analyte (s). The spiking occurs prior to the sample preparation and analysis. They are used to document the precision and bias of a method in a given sample matrix.
Method Detection Limit (MDL) - the minimum concentration of a substance that can be measured and reported with a 99% confidence that the analyte concentration is greater than zero
Practical Quantitation Limit (PQL) - a laboratory determined value at 2 to 5 times above the MDL that can be reproduced in a manner that results in a 99% confidence level that the result is both accurate and precise. PQLs reflect all preparation factors and/or dilution factors that have been applied to the sample during the preparation and/or analytical processes.
Precision (%RPD) - The agreement among a set of replicate/duplicate measurements without regard to known value of the replicates
Surrogate (S) or (Surr) - An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. Surrogates are used in most organic analysis to demonstrate matrix compatibility with the chosen method of analysis
Tentatively Identified Compound (TIC) - A compound not contained within the analytical calibration standards but present in the GCMS library of defined compounds. When the library is searched for an unknown compound, it can frequently give a tentative identification to the compound based on retention time and primary and secondary ion match. TICs are reported as estimates and are candidates for further investigation.
Units: the unit of measure used to express the reported result - mg/L and mg/Kg (equivalent to PPM - parts per million in liquid and solid), ug/L and ug/Kg (equivalent to PPB - parts per billion in liquid and solid), ug/m3 , mg.m3 , ppbv and ppmv (all units of measure for reporting concentrations in air), % (equivalent to 10000 ppm or 1,000,000 ppb), ug/Wipe (concentration found on the surface of a single Wipe usually taken over a 100cm2 surface)

LABORATORY QUALIFIERS:

<p>B - Indicates when the analyte is found in the associated method or preparation blank</p> <p>D - Surrogate is not recoverable due to the necessary dilution of the sample</p> <p>E - Indicates the reportable value is outside of the calibration range of the instrument but within the linear range of the instrument (unless otherwise noted) Values reported with an E qualifier should be considered as estimated.</p> <p>H- Indicates that the recommended holding time for the analyte or compound has been exceeded</p> <p>J- Indicates a value between the method MDL and PQL and that the reported concentration should be considered as estimated rather the quantitative</p> <p>NA - Not Analyzed</p> <p>N/A - Not Applicable</p> <p>NR - Not recoverable - a matrix spike concentration is not recoverable due to a concentration within the original sample that is greater than four times the spike concentration added</p> <p>R- The % RPD between a duplicate set of samples is outside of the absolute values established by laboratory control charts</p> <p>S- Spike recovery is outside of established method and/or laboratory control limits. Further explanation of the use of this qualifier should be included within a case narrative</p> <p>X -Used to indicate that a value based on pattern identification is within the pattern range but not typical of the pattern found in standards. Further explanation may or may not be provided within the sample footnote and/or the case narrative.</p>



Sample Receipt Checklist

Client Name: McCloskey Consultants

Project Name: Nortech Pipeline

Work Order No.: 1009161

Date and Time Received: 9/22/2010 16:30

Received By: navin

Physically Logged By: lorna

Checklist Completed By: lorna

Carrier Name: Gold Bullet Courier

Chain of Custody (COC) Information

Chain of custody present? Yes
Chain of custody signed when relinquished and received? Yes
Chain of custody agrees with sample labels? Yes
Custody seals intact on sample bottles? Not Present

Sample Receipt Information

Custody seals intact on shipping container/cooler? Not Present
Shipping Container/Cooler In Good Condition? Yes
Samples in proper container/bottle? Yes
Samples containers intact? Yes
Sufficient sample volume for indicated test? Yes

Sample Preservation and Hold Time (HT) Information

All samples received within holding time? Yes
Container/Temp Blank temperature in compliance? Temperature: 6 °C
Water-VOA vials have zero headspace? No VOA vials submitted
Water-pH acceptable upon receipt?
pH Checked by: pH Adjusted by:



Login Summary Report

Client ID:	TL5324	McCloskey Consultants	QC Level:
Project Name:	Nortech Pipeline		TAT Requested: 5+ day:0
Project # :			Date Received: 9/22/2010
Report Due Date:	9/29/2010		Time Received: 16:30
Comments:	5 day TAT!!! Recv'd 4 soils for Arsenic.Pls. email tom@mccloskeyconsultants.com.		
Work Order # :	1009161		

<u>WO Sample ID</u>	<u>Client Sample ID</u>	<u>Collection Date/Time</u>	<u>Matrix</u>	<u>Scheduled Disposal</u>	<u>Sample On Hold</u>	<u>Test On Hold</u>	<u>Requested Tests</u>	<u>Subbed</u>
1009161-001A	SS-1D2'	09/22/10 11:10	Soil	03/21/11			S_6010BCAM17	
Sample Note: Metals-As only for all samples.								
1009161-002A	SS-1D4'	09/22/10 11:27	Soil	03/21/11			S_6010BCAM17	
1009161-003A	SS-2D2'	09/22/10 12:05	Soil	03/21/11			S_6010BCAM17	
1009161-004A	SS-2D4'	09/22/10 12:30	Soil	03/21/11			S_6010BCAM17	



483 Sinclair Frontage Road
Milpitas, CA 95035
Phone: 408.263.5258
FAX: 408.263.8293
www.torrentlab.com

CHAIN OF CUSTODY

LAB WORK ORDER NO

1009161

NOTE: SHADED AREAS ARE FOR TORRENT LAB USE ONLY.

Company Name: McCloskey Consultants Inc Location of Sampling: Nortech Pipeline
 Address: 420 Sycamore Valley Road West Purpose:
 City: Danville State: CA Zip Code: 94526 Special Instructions / Comments:
 Telephone: 925 786-2667 FAX:
 REPORT TO: Tom McCloskey SAMPLER: Ross Trimble P.O.#: Nortech Pipeline EMAIL: tom@mccliskeyconsultants.com

TURNAROUND TIME: Standard SAMPLE TYPE: Storm Water Air QC Level IV
 7 Work Days 2 Work Days 2-8 Hours Waste Water Other EDF
 5 Work Days 1 Work Day Other Ground Water Soil Excel / EDD

REPORT FORMAT: EPA 8260B - Full List EPA 8260B - 8010 List THP gas BTEX Oxygenates MTBE THP Diesel SI-Gel Motor Oil Pesticide - 8081 PCB - 8082 Metals CAM - 17 LUFT 5 7 Metals 8270 Full List PAHs Only Arsenic

ANALYSIS REQUESTED

LAB ID	CLIENT'S SAMPLE I.D.	DATE / TIME SAMPLED	MATRIX	# OF CONT	CONT TYPE	EPA 8260B - Full List	EPA 8260B - 8010 List	THP gas	BTEX	Oxygenates	MTBE	THP Diesel	SI-Gel	Motor Oil	Pesticide - 8081	PCB - 8082	Metals	CAM - 17	LUFT 5	7 Metals	8270 Full List	PAHs Only	Arsenic	REMARKS	
001A	SS-1D2'	9-22-10 11:10	S	1	2x6" SS Rin																				
002A	SS-1D4'	9-22-10 11:27	S	1																					
003A	SS-2D2'	9-22-10 12:05	S	1																					
004A	SS-2D4'	9-22-10 12:30	S	1																					

Relinquished By: Ross Trimble Print: Ross Trimble Date: 9-22-10 Time: 3:55
 Received By: NATIN G Print: NATIN G Date: 9-22-10 Time: 4:30 P.M.

Were Samples Received in Good Condition? Yes NO Samples on Ice? Yes NO Method of Shipment Gold Bullet Sample seals intact? Yes NO N/A
 NOTE: Samples are discarded by the laboratory 30 days from date of receipt unless other arrangements are made. Page 1 of 1
 Log In By: _____ Date: _____ Log In Reviewed By: _____ Date: _____



September 20, 2010

Ms. Julie Mier
David J. Powers & Associates, Inc.
1885 The Alameda, Suite 204
San Jose, California 95126

RE: Results from Phase II Environmental Site Sampling, San Jose Municipal Water Main Project – Nortech Boulevard, Alviso, California

Dear Julie:

In this report, Strategic Engineering and Science, Inc. (SES) presents the results of our Phase II Environmental Site Assessment (ESA) of the proposed location of the new San Jose Municipal Water Main in Alviso, California. The purpose of the assessment was to identify environmental conditions along the proposed pipeline construction area associated with the historical use of the site as orchards.

SCOPE OF WORK

The following scope of work was developed to evaluate the soil quality along the proposed pipeline alignment for construction worker/trench worker safety:

- Collection of two discrete surface soil samples;
- Preparation of a Phase II summary letter and figure presenting the results of the sampling.

PHASE II SOIL SAMPLING SCOPE OF WORK

Sample Collection and Analysis

To evaluate the soil along the proposed pipeline for the presence of residual pesticide chemicals, we collected two surface soil samples from two locations to a maximum depth of 6 inches below surface grade. The sampling locations are shown on Figure 1. The two soil samples were analyzed for the following constituents:

- Pesticides by EPA Test Method 8081A
- Arsenic and Lead by EPA Method 6010B
- Mercury by EPA Method 7471A



Analytical Results

A summary of the soil sampling results are presented in Table 1. Only compounds with concentrations that exceeded their respective laboratory reporting limits are shown in the table. Copies of the analytical reports and chain of custody documentation are presented in Appendix B. The sampling results were compared to the California Regional Water Quality Control Board Environmental Screening Levels (ESLs) for direct exposures soil screening levels for construction and trench workers and the hazardous waste standards.

Of the pesticides compounds, only 4,4'-DDE was detected exceeding the laboratory reporting limits in both the soil samples. The concentrations of 4,4'-DDE did not exceed any of the regulatory thresholds.

Arsenic was detected exceeding the laboratory limit at both sampling locations. The arsenic concentrations ranged from 12.8 milligrams per kilogram, (mg/kg) to 19.9 mg/kg. The arsenic concentration at SS-1 (19.9 mg/kg) exceeded the construction / trench worker direct exposure level of 15 mg/kg. The arsenic concentrations did not exceed the hazardous waste thresholds.

Lead was detected exceeding the laboratory limit at both sampling locations. The lead concentrations ranged from 28.7 mg/kg to 59.0 mg/kg. The lead concentrations did not exceed the construction / trench worker direct exposure level or the hazardous waste threshold for total lead. Neither sample was analyzed for soluble lead.

Mercury was detected exceeding the laboratory limit at both sampling locations. The concentrations detected were all well below the direct exposure regulatory threshold and appear consistent with naturally-occurring background levels.



Table 1. Soil Sampling Results
(concentrations in milligram per kilogram [mg/kg])

Sample ID	Depth Below Existing Grade (Feet)	4,4'-DDE	Arsenic	Lead	Mercury
SS-1	0-½	0.126	19.9	59.0	0.33
SS-2	0-½	0.0796	12.8	28.7	0.19
ESL Direct Exposure– Construction / Trench Worker – Table K-3*		87	15	750	58
TTLC (mg/kg) / STLC (mg/L)		1.0** / 0.1	500 / 5.0	1,000 / 5.0	20 / 0.2

< Indicates that the compound was not detected at or above stated laboratory detection limits
* Environmental Screening Levels - San Francisco Regional Water Quality Control Board, November 2007 (Revised May 2008)

TTLC Total threshold limit concentration for hazardous waste classification
STLC Soluble threshold limit concentration for hazardous waste classification – mg/L

** TTLC listed is for Total DDT

Indicates exceedance of regulatory threshold concentration

CONCLUSIONS AND RECOMMENDATIONS

Soil samples were collected from two surface locations along the proposed water main for the evaluation of residual pesticides and pesticide-related metals.

Of the pesticide compounds, only 4,4'-DDE was detected exceeding the laboratory reporting limits. The 4,4'-DDE concentrations were less than the thresholds for construction / trench work direct exposure.

One of the arsenic concentrations detected exceeded the thresholds for construction / trench work direct exposure, but both concentrations did not exceed the hazardous waste threshold. The elevated arsenic concentration presents health and safety concerns for construction / trench workers exposed to the trench spoils. We recommend further sampling and analysis be performed to evaluate the lateral and vertical extent of the elevated arsenic concentrations. We recommend that worker direct exposure with the trench spoils be avoided when possible. We recommend a Site Management Plan (SMP) be prepared to mitigate the potential risks associated with the elevated arsenic concentrations. A SMP will assure that site redevelopment is conducted in a manner protective of the health and safety of site workers.



The lead concentrations were less than the construction / trench work direct exposure threshold and total hazardous waste thresholds. If the trench spoils from the installation of the proposed water main will have to be off-hauled to a landfill, soluble lead testing may need to be performed prior of the off-haul. Landfills typically require soluble lead analysis performed for total lead concentrations greater than 50 mg/kg. A concentration of 59 mg/kg was detected at sampling location SS-1.

The mercury concentrations were less than the construction / trench work direct exposure threshold and hazardous waste thresholds and appear consistent with naturally-occurring background levels.

LIMITATIONS

This report was prepared for the sole use of the David J. Powers and Associates and the City of San Jose in evaluating soil quality along the proposed municipal water main. We make no warranty, expressed or implied, except that our services have been performed in accordance with environmental principles generally accepted at this time and location. The chemical and other data presented in this report can change over time and are applicable only to the time this study was performed. We are not responsible for the data presented by others.

REFERENCES

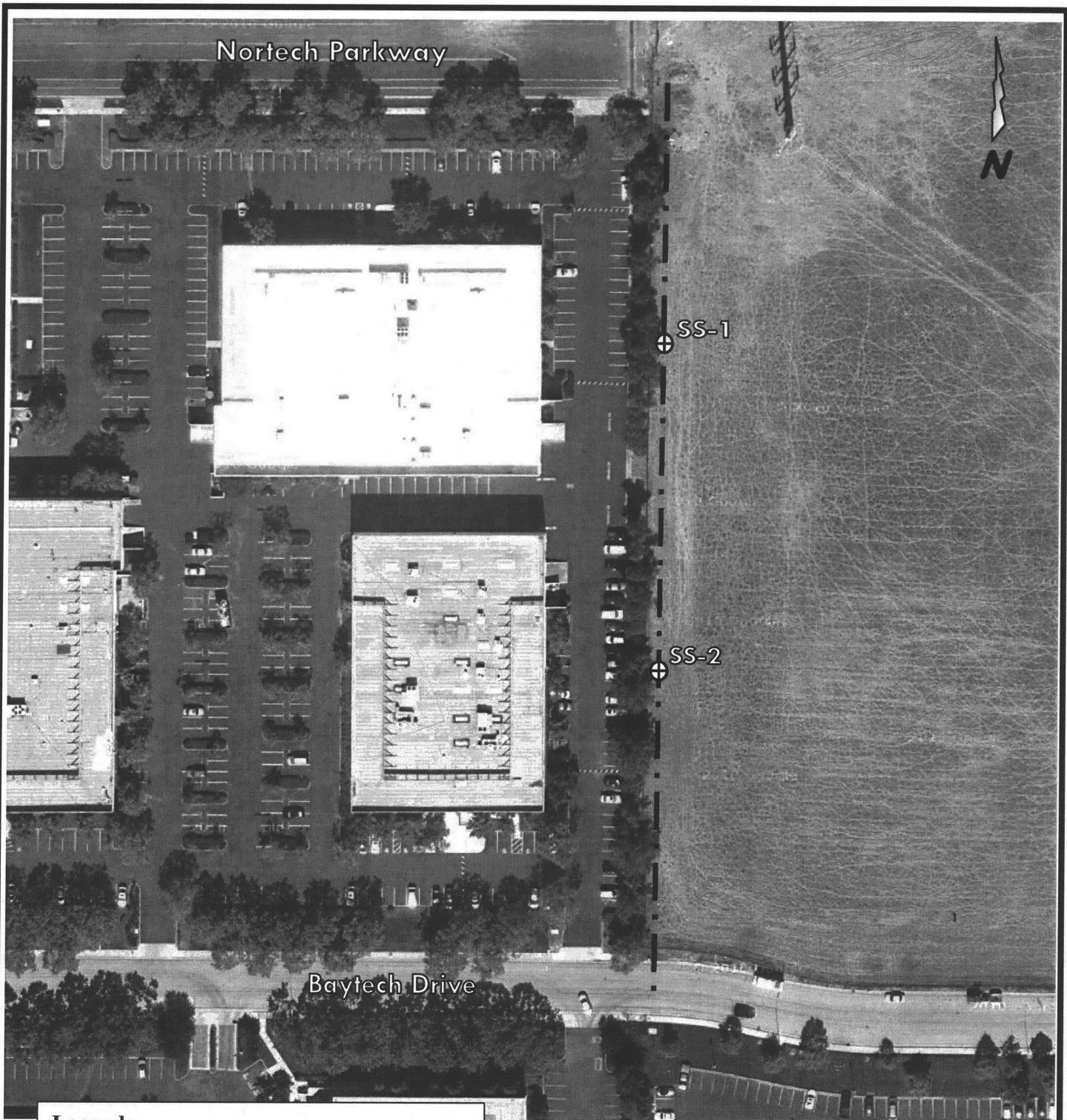
California Regional Water Quality Control Board, San Francisco Bay Region, November 2007 (Revised May 2008). *Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater.*

If you have any questions or concerns regarding the analytical results, please contact me at (510) 451-1761x201 or (510) 384-2680.

Sincerely,

Mohammad Bazargani, P.E.
Principal Engineer

Attachments:
Figure 1
Analytical Results



Legend:

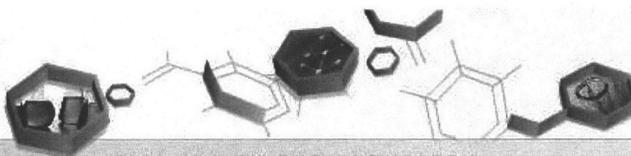
- ⊕ Approximate Sampling Location
- . - . Approximate Location of Proposed Pipeline



Site Plan & Sampling Locations

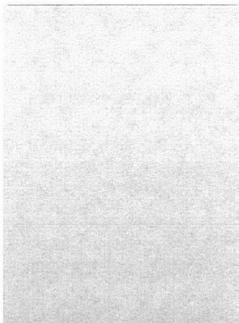
Nortech Water Main
Alviso, California

Figure 1



IT'S ALL IN THE CHEMISTRY

07/26/10



Technical Report for

Strategic Engineering & Science

Nortech Water Main(WM) - San Jose, CA

Accutest Job Number: C11761

Sampling Date: 07/16/10

Report to:

Strategic Engineering & Science
110 11th Street, 2nd Floor
Oakland, CA 94607
tmccloskey@sesinonline.net

ATTN: Tom McCloskey

Total number of pages in report: 26



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

Laurie Glantz-Murphy
Laboratory Director

Client Service contact: Anne Kathain 408-588-0200

Certifications: CA (08258CA) DoD/ISO/IEC 17025:2005 (L2242)

This report shall not be reproduced, except in its entirety, without the written approval of Accutest Laboratories.

Test results relate only to samples analyzed.

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Sample Summary

Strategic Engineering & Science

Job No: C11761

Nortech Water Main(WM) - San Jose, CA

Sample Number	Collected			Matrix		Client Sample ID
	Date	Time	By	Received	Code Type	
C11761-1	07/16/10	09:34	CV	07/16/10	SO Soil	SS-1 NORTECH WM
C11761-2	07/16/10	09:37	CV	07/16/10	SO Soil	SS-2 NORTECH WM

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



IT'S ALL IN THE CHEMISTRY

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	SS-1 NORTECH WM	Date Sampled:	07/16/10
Lab Sample ID:	C11761-1	Date Received:	07/16/10
Matrix:	SO - Soil	Percent Solids:	n/a ^a
Method:	SW846 8081A SW846 3545A		
Project:	Nortech Water Main(WM) - San Jose, CA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^b	PP10426.D	2	07/21/10	NB	07/19/10	OP2410	GPP405
Run #2							

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

Pesticide PPL List

CAS No.	Compound	Result	RL	Units	Q
309-00-2	Aldrin	ND	50	ug/kg	
319-84-6	alpha-BHC	ND	50	ug/kg	
319-85-7	beta-BHC	ND	50	ug/kg	
319-86-8	delta-BHC	ND	50	ug/kg	
58-89-9	gamma-BHC (Lindane)	ND	50	ug/kg	
12789-03-6	Chlordane	ND	200	ug/kg	
60-57-1	Dieldrin	ND	50	ug/kg	
72-54-8	4,4'-DDD	ND	50	ug/kg	
72-55-9	4,4'-DDE	126	50	ug/kg	
50-29-3	4,4'-DDT	ND	50	ug/kg	
72-20-8	Endrin	ND	50	ug/kg	
7421-93-4	Endrin aldehyde	ND	50	ug/kg	
959-98-8	Endosulfan-I	ND	50	ug/kg	
33213-65-9	Endosulfan-II	ND	50	ug/kg	
1031-07-8	Endosulfan sulfate	ND	50	ug/kg	
76-44-8	Heptachlor	ND	50	ug/kg	
1024-57-3	Heptachlor epoxide	ND	50	ug/kg	
72-43-5	Methoxychlor	ND	50	ug/kg	
8001-35-2	Toxaphene	ND	200	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	58%		35-132%
877-09-8	Tetrachloro-m-xylene	61%		35-132%
2051-24-3	Decachlorobiphenyl	70%		35-132%
2051-24-3	Decachlorobiphenyl	77%		35-132%

(a) All results reported on wet weight basis.

(b) Reporting limits raised due to nature of sample matrix.

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SS-1 NORTECH WM	Date Sampled:	07/16/10
Lab Sample ID:	C11761-1	Date Received:	07/16/10
Matrix:	SO - Soil	Percent Solids:	n/a ^a
Project:	Nortech Water Main(WM) - San Jose, CA		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	19.9	1.9	mg/kg	1	07/19/10	07/23/10 RS	SW846 6010B ²	SW846 3050B ³
Lead	59.0	0.93	mg/kg	1	07/19/10	07/23/10 RS	SW846 6010B ²	SW846 3050B ³
Mercury	0.33	0.038	mg/kg	1	07/19/10	07/20/10 RW	SW846 7471A ¹	SW846 7471A ⁴

- (1) Instrument QC Batch: MA1319
- (2) Instrument QC Batch: MA1329
- (3) Prep QC Batch: MP2595
- (4) Prep QC Batch: MP2597

(a) All results reported on wet weight basis.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	SS-2 NORTECH WM	Date Sampled:	07/16/10
Lab Sample ID:	C11761-2	Date Received:	07/16/10
Matrix:	SO - Soil	Percent Solids:	n/a ^a
Method:	SW846 8081A SW846 3545A		
Project:	Nortech Water Main(WM) - San Jose, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^b	PP10427.D	2	07/21/10	NB	07/19/10	OP2410	GPP405
Run #2							

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

Pesticide PPL List

CAS No.	Compound	Result	RL	Units	Q
309-00-2	Aldrin	ND	50	ug/kg	
319-84-6	alpha-BHC	ND	50	ug/kg	
319-85-7	beta-BHC	ND	50	ug/kg	
319-86-8	delta-BHC	ND	50	ug/kg	
58-89-9	gamma-BHC (Lindane)	ND	50	ug/kg	
12789-03-6	Chlordane	ND	200	ug/kg	
60-57-1	Dieldrin	ND	50	ug/kg	
72-54-8	4,4'-DDD	ND	50	ug/kg	
72-55-9	4,4'-DDE	79.6	50	ug/kg	
50-29-3	4,4'-DDT	ND	50	ug/kg	
72-20-8	Endrin	ND	50	ug/kg	
7421-93-4	Endrin aldehyde	ND	50	ug/kg	
959-98-8	Endosulfan-I	ND	50	ug/kg	
33213-65-9	Endosulfan-II	ND	50	ug/kg	
1031-07-8	Endosulfan sulfate	ND	50	ug/kg	
76-44-8	Heptachlor	ND	50	ug/kg	
1024-57-3	Heptachlor epoxide	ND	50	ug/kg	
72-43-5	Methoxychlor	ND	50	ug/kg	
8001-35-2	Toxaphene	ND	200	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	70%		35-132%
877-09-8	Tetrachloro-m-xylene	72%		35-132%
2051-24-3	Decachlorobiphenyl	85%		35-132%
2051-24-3	Decachlorobiphenyl	88%		35-132%

- (a) All results reported on wet weight basis.
- (b) Reporting limits raised due to nature of sample matrix.

ND = Not detected
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SS-2 NORTECH WM	Date Sampled:	07/16/10
Lab Sample ID:	C11761-2	Date Received:	07/16/10
Matrix:	SO - Soil	Percent Solids:	n/a ^a
Project:	Nortech Water Main(WM) - San Jose, CA		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	12.8	1.9	mg/kg	1	07/19/10	07/23/10 RS	SW846 6010B ²	SW846 3050B ³
Lead	28.7	0.95	mg/kg	1	07/19/10	07/23/10 RS	SW846 6010B ²	SW846 3050B ³
Mercury	0.19	0.038	mg/kg	1	07/19/10	07/20/10 RW	SW846 7471A ¹	SW846 7471A ⁴

- (1) Instrument QC Batch: MA1319
- (2) Instrument QC Batch: MA1329
- (3) Prep QC Batch: MP2595
- (4) Prep QC Batch: MP2597

(a) All results reported on wet weight basis.

RL = Reporting Limit



Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody



GC Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: C11761
Account: SESCAO Strategic Engineering & Science
Project: Nortech Water Main(WM) - San Jose, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP2410-MB	PP10420.D	1	07/21/10	NB	07/19/10	OP2410	GPP405

The QC reported here applies to the following samples:

Method: SW846 8081A

C11761-1, C11761-2

CAS No.	Compound	Result	RL	Units	Q
309-00-2	Aldrin	ND	25	ug/kg	
319-84-6	alpha-BHC	ND	25	ug/kg	
319-85-7	beta-BHC	ND	25	ug/kg	
319-86-8	delta-BHC	ND	25	ug/kg	
58-89-9	gamma-BHC (Lindane)	ND	25	ug/kg	
12789-03-6	Chlordane	ND	100	ug/kg	
60-57-1	Dieldrin	ND	25	ug/kg	
72-54-8	4,4'-DDD	ND	25	ug/kg	
72-55-9	4,4'-DDE	ND	25	ug/kg	
50-29-3	4,4'-DDT	ND	25	ug/kg	
72-20-8	Endrin	ND	25	ug/kg	
7421-93-4	Endrin aldehyde	ND	25	ug/kg	
959-98-8	Endosulfan-I	ND	25	ug/kg	
33213-65-9	Endosulfan-II	ND	25	ug/kg	
1031-07-8	Endosulfan sulfate	ND	25	ug/kg	
76-44-8	Heptachlor	ND	25	ug/kg	
1024-57-3	Heptachlor epoxide	ND	25	ug/kg	
72-43-5	Methoxychlor	ND	25	ug/kg	
8001-35-2	Toxaphene	ND	100	ug/kg	

CAS No.	Surrogate Recoveries	Limits	
877-09-8	Tetrachloro-m-xylene	78%	35-132%
877-09-8	Tetrachloro-m-xylene	83%	35-132%
2051-24-3	Decachlorobiphenyl	93%	35-132%
2051-24-3	Decachlorobiphenyl	96%	35-132%

4.1.1
4

Blank Spike/Blank Spike Duplicate Summary

Job Number: C11761
Account: SESCAO Strategic Engineering & Science
Project: Nortech Water Main(WM) - San Jose, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP2410-BS	PP10421.D	1	07/21/10	NB	07/19/10	OP2410	GPP405
OP2410-BSD	PP10422.D	1	07/21/10	NB	07/19/10	OP2410	GPP405

The QC reported here applies to the following samples:

Method: SW846 8081A

C11761-1, C11761-2

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	BSD ug/kg	BSD %	RPD	Limits Rec/RPD
309-00-2	Aldrin	100	69.0	69	87.0	87	23	40-140/30
319-84-6	alpha-BHC	100	73.0	73	90.6	91	22	40-140/30
319-85-7	beta-BHC	100	79.1	79	93.8	94	17	40-140/30
319-86-8	delta-BHC	100	86.8	87	103	103	17	40-140/30
58-89-9	gamma-BHC (Lindane)	100	74.2	74	94.2	94	24	40-140/30
60-57-1	Dieldrin	100	79.9	80	97.2	97	20	40-145/30
72-54-8	4,4'-DDD	100	95.5	96	110	110	14	40-140/30
72-55-9	4,4'-DDE	100	84.1	84	99.2	99	16	40-140/30
50-29-3	4,4'-DDT	100	97.3	97	112	112	14	40-140/30
72-20-8	Endrin	100	82.9	83	98.3	98	17	40-140/30
7421-93-4	Endrin aldehyde	100	90.6	91	107	107	17	40-140/30
959-98-8	Endosulfan-I	100	77.3	77	94.1	94	20	40-140/30
33213-65-9	Endosulfan-II	100	88.7	89	103	103	15	40-140/30
1031-07-8	Endosulfan sulfate	100	99.4	99	114	114	14	40-140/30
76-44-8	Heptachlor	100	72.0	72	89.6	90	22	40-140/30
1024-57-3	Heptachlor epoxide	100	76.1	76	93.0	93	20	40-140/30
72-43-5	Methoxychlor	100	92.8	93	106	106	13	40-140/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
877-09-8	Tetrachloro-m-xylene	70%	83%	35-132%
877-09-8	Tetrachloro-m-xylene	74%	89%	35-132%
2051-24-3	Decachlorobiphenyl	89%	100%	35-132%
2051-24-3	Decachlorobiphenyl	92%	103%	35-132%

4.2.1
4

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C11761
Account: SESCAO Strategic Engineering & Science
Project: Nortech Water Main(WM) - San Jose, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP2410-MS	PP10428.D	2	07/21/10	NB	07/19/10	OP2410	GPP405
OP2410-MSD	PP10429.D	2	07/21/10	NB	07/19/10	OP2410	GPP405
C11761-2 ^a	PP10427.D	2	07/21/10	NB	07/19/10	OP2410	GPP405

The QC reported here applies to the following samples:

Method: SW846 8081A

C11761-1, C11761-2

CAS No.	Compound	C11761-2 ug/kg	Spike Q	ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
309-00-2	Aldrin	ND	100	76.4	76	83.5	84	9	40-140/40	
319-84-6	alpha-BHC	ND	100	72.6	73	80.1	80	10	40-140/40	
319-85-7	beta-BHC	ND	100	86.6	87	95.1	95	9	40-140/40	
319-86-8	delta-BHC	ND	100	93.7	94	102	102	8	40-140/40	
58-89-9	gamma-BHC (Lindane)	ND	100	81.3	81	88.4	88	8	40-140/40	
60-57-1	Dieldrin	ND	100	77.5	78	87.5	88	12	40-145/40	
72-54-8	4,4'-DDD	ND	100	91.5	92	100	100	9	40-140/40	
72-55-9	4,4'-DDE	79.6	100	168	88	196	116	15	40-140/40	
50-29-3	4,4'-DDT	ND	100	95.0	95	103	103	8	40-140/40	
72-20-8	Endrin	ND	100	90.0	90	92.8	93	3	40-145/40	
7421-93-4	Endrin aldehyde	ND	100	88.4	88	95.1	95	7	40-140/40	
959-98-8	Endosulfan-I	ND	100	86.1	86	95.7	96	11	40-140/40	
33213-65-9	Endosulfan-II	ND	100	86.7	87	93.5	94	8	40-140/40	
1031-07-8	Endosulfan sulfate	ND	100	101	101	111	111	9	40-140/40	
76-44-8	Heptachlor	ND	100	80.0	80	87.9	88	9	40-140/40	
1024-57-3	Heptachlor epoxide	ND	100	83.4	83	90.1	90	8	40-140/40	
72-43-5	Methoxychlor	ND	100	85.9	86	91.4	91	6	40-140/40	

CAS No.	Surrogate Recoveries	MS	MSD	C11761-2	Limits
877-09-8	Tetrachloro-m-xylene	70%	78%	70%	35-132%
877-09-8	Tetrachloro-m-xylene	71%	81%	72%	35-132%
2051-24-3	Decachlorobiphenyl	87%	95%	85%	35-132%
2051-24-3	Decachlorobiphenyl	94%	98%	88%	35-132%

(a) Reporting limits raised due to nature of sample matrix.

4.3.1
4



Metals Analysis

5

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: C11761
Account: SESCAO - Strategic Engineering & Science
Project: Nortech Water Main(WM) - San Jose, CA

QC Batch ID: MP2595
Matrix Type: SOLID

Methods: SW846 6010B
Units: mg/kg

Prep Date: 07/19/10

Metal	RL	IDL	MDL	MB raw	final
Aluminum	10	1.4	1.5		
Antimony	2.0	.69	1.2		
Arsenic	2.0	.44	.51	0.52	<2.0
Barium	1.0	.06	.11		
Beryllium	1.0	.01	.02		
Boron	2.0	.86	.29		
Cadmium	1.0	.03	.05		
Calcium	50	2.9	6.9		
Chromium	1.0	.04	.06		
Copper	1.0	.08	.51		
Iron	10	.26	.43		
Lead	1.0	.33	.54	0.030	<1.0
Lithium	1.0	.22	.12		
Magnesium	10	.96	1.4		
Manganese	1.0	.01	.04		
Molybdenum	1.0	.13	.19		
Nickel	1.0	.08	.1		
Potassium	50	5.8	6.2		
Selenium	2.0	1.4	1.5		
Silicon	20	.34	7		
Silver	1.0	.09	.13		
Sodium	50	1.5	3		
Strontium	1.0	.03	.04		
Thallium	2.0	.65	.74		
Tin	50	.23	2		
Titanium	1.0	.02	.15		
Zinc	2.0	.09	.24		

Associated samples MP2595: C11761-1, C11761-2

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

5.1.1
5

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: C11761
 Account: SESCAO - Strategic Engineering & Science
 Project: Nortech Water Main(WM) - San Jose, CA

QC Batch ID: MP2595
 Matrix Type: SOLID

Methods: SW846 6010B
 Units: mg/kg

Prep Date: 07/19/10

Metal	C11778-3 Original MS	Spikelot MPIR1	% Rec	QC Limits
Aluminum				
Antimony	anr			
Arsenic	2.6	48.9	48.1	96.3 80-120
Barium	anr			
Beryllium	anr			
Boron				
Cadmium	anr			
Calcium				
Chromium	anr			
Copper	anr			
Iron				
Lead	7.9	55.0	48.1	98.0 80-120
Lithium				
Magnesium				
Manganese				
Molybdenum	anr			
Nickel	anr			
Potassium				
Selenium	anr			
Silicon				
Silver	anr			
Sodium				
Strontium				
Thallium	anr			
Tin				
Titanium				
Zinc	anr			

Associated samples MP2595: C11761-1, C11761-2

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (N) Matrix Spike Rec. outside of QC limits
 (anr) Analyte not requested

5.1.2
5

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: C11761
 Account: SESCAO - Strategic Engineering & Science
 Project: Nortech Water Main(WM) - San Jose, CA

QC Batch ID: MP2595
 Matrix Type: SOLID

Methods: SW846 6010B
 Units: mg/kg

Prep Date: 07/19/10

Metal	C11778-3 Original MSD	Spikelot MPIR1	% Rec	MSD RPD	QC Limit	
Aluminum						
Antimony	anr					
Arsenic	2.6	48.1	47.6	95.6	1.6	20
Barium	anr					
Beryllium	anr					
Boron						
Cadmium	anr					
Calcium						
Chromium	anr					
Copper	anr					
Iron						
Lead	7.9	52.0	47.6	92.6	5.6	20
Lithium						
Magnesium						
Manganese						
Molybdenum	anr					
Nickel	anr					
Potassium						
Selenium	anr					
Silicon						
Silver	anr					
Sodium						
Strontium						
Thallium	anr					
Tin						
Titanium						
Zinc	anr					

Associated samples MP2595: C11761-1, C11761-2

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (N) Matrix Spike Rec. outside of QC limits
 (anr) Analyte not requested

5.1.2
5

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: C11761
 Account: SESCAO - Strategic Engineering & Science
 Project: Nortech Water Main (WM) - San Jose, CA

QC Batch ID: MP2595
 Matrix Type: SOLID

Methods: SW846 6010B
 Units: mg/kg

Prep Date: 07/19/10 07/19/10

Metal	BSP Result	Spikelot MPIR1	% Rec	QC Limits	BSD Result	Spikelot MPIR1	% Rec	BSD RPD	QC Limit
Aluminum									
Antimony	anr								
Arsenic	50.9	50	101.8	80-120	48.4	50	96.8	5.0	
Barium	anr								
Beryllium	anr								
Boron									
Cadmium	anr								
Calcium									
Chromium	anr								
Copper	anr								
Iron									
Lead	52.5	50	105.0	80-120	50.0	50	100.0	4.9	
Lithium									
Magnesium									
Manganese									
Molybdenum	anr								
Nickel	anr								
Potassium									
Selenium	anr								
Silicon									
Silver	anr								
Sodium									
Strontium									
Thallium	anr								
Tin									
Titanium									
Zinc	anr								

Associated samples MP2595: C11761-1, C11761-2

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (anr) Analyte not requested

5.1.3
5

SERIAL DILUTION RESULTS SUMMARY

Login Number: C11761
 Account: SESCO - Strategic Engineering & Science
 Project: Nortech Water Main(WM) - San Jose, CA

QC Batch ID: MP2595
 Matrix Type: SOLID

Methods: SW846 6010B
 Units: ug/l

Prep Date: 07/19/10

Metal	C11778-3 Original	SDL 1:5	%DIF	QC Limits
Aluminum				
Antimony	anr			
Arsenic	27.2	40.5	48.9 (a)	0-10
Barium	anr			
Beryllium	anr			
Boron				
Cadmium	anr			
Calcium				
Chromium	anr			
Copper	anr			
Iron				
Lead	81.8	91.0	11.2 (a)	0-10
Lithium				
Magnesium				
Manganese				
Molybdenum	anr			
Nickel	anr			
Potassium				
Selenium	anr			
Silicon				
Silver	anr			
Sodium				
Strontium				
Thallium	anr			
Tin				
Titanium				
Zinc	anr			

Associated samples MP2595: C11761-1, C11761-2

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(anr) Analyte not requested

(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

5.1.4
5

POST DIGESTATE SPIKE SUMMARY

Login Number: C11761
 Account: SESCAO - Strategic Engineering & Science
 Project: Nortech Water Main(WM) - San Jose, CA

QC Batch ID: MP2595
 Matrix Type: SOLID

Methods: SW846 6010B
 Units: ug/l

Prep Date:

07/19/10

Metal	Sample ml	Final ml	C11778-3 Raw	PS Corr.** ug/l	Spike ml	Spike ug/ml	Spike ug/l	% Rec	QC Limits
Aluminum									
Antimony									
Arsenic	10	10.1	27.2	26.93069	507.9	0.05	100	495.0495	97.2 -
Barium									
Beryllium									
Boron									
Cadmium									
Calcium									
Chromium									
Copper									
Iron									
Lead	10	10.1	81.8	80.9901	556.6	0.05	100	495.0495	96.1 -
Lithium									
Magnesium									
Manganese									
Molybdenum									
Nickel									
Potassium									
Selenium									
Silicon									
Silver									
Sodium									
Strontium									
Thallium									
Tin									
Titanium									
Zinc									

Associated samples MP2595: C11761-1, C11761-2

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (**) Corr. sample result = Raw * (sample volume / final volume)
 (anr) Analyte not requested

5.1.5
5

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: C11761
Account: SESCAO - Strategic Engineering & Science
Project: Nortech Water Main (WM) - San Jose, CA

QC Batch ID: MP2597
Matrix Type: SOLID

Methods: SW846 7471A
Units: mg/kg

Prep Date: 07/19/10

Metal	RL	IDL	MDL	MB	
				raw	final
Mercury	0.042	.0017	.0043	0.00040	<0.042

Associated samples MP2597: C11761-1, C11761-2

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

5.2.1
5

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: C11761
Account: SESCAO - Strategic Engineering & Science
Project: Nortech Water Main(WM) - San Jose, CA

QC Batch ID: MP2597
Matrix Type: SOLID

Methods: SW846 7471A
Units: mg/kg

Prep Date: 07/19/10

Metal	C11778-3 Original MS	Spikelot HGPWS1	% Rec	QC Limits
Mercury	0.30	0.63	0.308	107.3 75-125

Associated samples MP2597: C11761-1, C11761-2

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

5.2.2
5

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: C11761
 Account: SESCAO - Strategic Engineering & Science
 Project: Nortech Water Main(WM) - San Jose, CA

QC Batch ID: MP2597
 Matrix Type: SOLID

Methods: SW846 7471A
 Units: mg/kg

Prep Date: 07/19/10

Metal	C11778-3 Original MSD	Spikelot HGPWS1	% Rec	MSD RPD	QC Limit
Mercury	0.30	0.63	0.299	110.6	0.0 20

Associated samples MP2597: C11761-1, C11761-2

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (N) Matrix Spike Rec. outside of QC limits
 (anr) Analyte not requested

5.2.2
5

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: C11761
 Account: SESCAO - Strategic Engineering & Science
 Project: Nortech Water Main(WM) - San Jose, CA

QC Batch ID: MP2597
 Matrix Type: SOLID

Methods: SW846 7471A
 Units: mg/kg

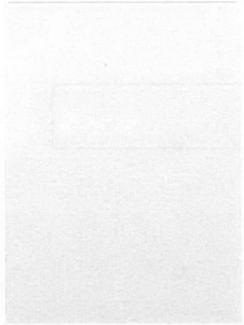
Prep Date: 07/19/10 07/19/10

Metal	BSP Result	Spikelot HGPWS1	% Rec	QC Limits	BSD Result	Spikelot HGPWS1	% Rec	BSD RPD	QC Limit
Mercury	0.16	0.167	96.0	80-120	0.17	0.167	102.0	6.1	

Associated samples MP2597: C11761-1, C11761-2

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (anr) Analyte not requested

5.2.3
5



Technical Report for

Strategic Engineering & Science

Nortech Water Main(WM) - San Jose, CA

Accutest Job Number: C11761

Sampling Date: 07/16/10

Report to:

Strategic Engineering & Science
110 11th Street, 2nd Floor
Oakland, CA 94607
tmccloskey@sesinonline.net

ATTN: Tom McCloskey

Total number of pages in report: 26



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

Laurie Glantz-Murphy
Laboratory Director

Client Service contact: Anne Kathain 408-588-0200

Certifications: CA (08258CA) DoD/ISO/IEC 17025:2005 (L2242)

This report shall not be reproduced, except in its entirety, without the written approval of Accutest Laboratories.

Test results relate only to samples analyzed.

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Sample Summary

Strategic Engineering & Science

Job No: C11761

Nortech Water Main(WM) - San Jose, CA

Sample Number	Collected		Matrix			Client Sample ID
	Date	Time By	Received	Code	Type	
C11761-1	07/16/10	09:34 CV	07/16/10	SO	Soil	SS-1 NORTECH WM
C11761-2	07/16/10	09:37 CV	07/16/10	SO	Soil	SS-2 NORTECH WM

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



IT'S ALL IN THE CHEMISTRY

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	SS-1 NORTECH WM	Date Sampled:	07/16/10
Lab Sample ID:	C11761-1	Date Received:	07/16/10
Matrix:	SO - Soil	Percent Solids:	n/a ^a
Method:	SW846 8081A SW846 3545A		
Project:	Nortech Water Main(WM) - San Jose, CA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^b	PP10426.D	2	07/21/10	NB	07/19/10	OP2410	GPP405
Run #2							

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

Pesticide PPL List

CAS No.	Compound	Result	RL	Units	Q
309-00-2	Aldrin	ND	50	ug/kg	
319-84-6	alpha-BHC	ND	50	ug/kg	
319-85-7	beta-BHC	ND	50	ug/kg	
319-86-8	delta-BHC	ND	50	ug/kg	
58-89-9	gamma-BHC (Lindane)	ND	50	ug/kg	
12789-03-6	Chlordane	ND	200	ug/kg	
60-57-1	Dieldrin	ND	50	ug/kg	
72-54-8	4,4'-DDD	ND	50	ug/kg	
72-55-9	4,4'-DDE	126	50	ug/kg	
50-29-3	4,4'-DDT	ND	50	ug/kg	
72-20-8	Endrin	ND	50	ug/kg	
7421-93-4	Endrin aldehyde	ND	50	ug/kg	
959-98-8	Endosulfan-I	ND	50	ug/kg	
33213-65-9	Endosulfan-II	ND	50	ug/kg	
1031-07-8	Endosulfan sulfate	ND	50	ug/kg	
76-44-8	Heptachlor	ND	50	ug/kg	
1024-57-3	Heptachlor epoxide	ND	50	ug/kg	
72-43-5	Methoxychlor	ND	50	ug/kg	
8001-35-2	Toxaphene	ND	200	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	58%		35-132%
877-09-8	Tetrachloro-m-xylene	61%		35-132%
2051-24-3	Decachlorobiphenyl	70%		35-132%
2051-24-3	Decachlorobiphenyl	77%		35-132%

- (a) All results reported on wet weight basis.
- (b) Reporting limits raised due to nature of sample matrix.

ND = Not detected
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SS-1 NORTECH WM	Date Sampled:	07/16/10
Lab Sample ID:	C11761-1	Date Received:	07/16/10
Matrix:	SO - Soil	Percent Solids:	n/a ^a
Project:	Nortech Water Main(WM) - San Jose, CA		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	19.9	1.9	mg/kg	1	07/19/10	07/23/10 RS	SW846 6010B ²	SW846 3050B ³
Lead	59.0	0.93	mg/kg	1	07/19/10	07/23/10 RS	SW846 6010B ²	SW846 3050B ³
Mercury	0.33	0.038	mg/kg	1	07/19/10	07/20/10 RW	SW846 7471A ¹	SW846 7471A ⁴

- (1) Instrument QC Batch: MA1319
- (2) Instrument QC Batch: MA1329
- (3) Prep QC Batch: MP2595
- (4) Prep QC Batch: MP2597

(a) All results reported on wet weight basis.

RL = Reporting Limit

Report of Analysis

Page 1 of 1

Client Sample ID:	SS-2 NORTECH WM	
Lab Sample ID:	C11761-2	Date Sampled: 07/16/10
Matrix:	SO - Soil	Date Received: 07/16/10
Method:	SW846 8081A SW846 3545A	Percent Solids: n/a ^a
Project:	Nortech Water Main(WM) - San Jose, CA	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^b	PP10427.D	2	07/21/10	NB	07/19/10	OP2410	GPP405
Run #2							

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

Pesticide PPL List

CAS No.	Compound	Result	RL	Units	Q
309-00-2	Aldrin	ND	50	ug/kg	
319-84-6	alpha-BHC	ND	50	ug/kg	
319-85-7	beta-BHC	ND	50	ug/kg	
319-86-8	delta-BHC	ND	50	ug/kg	
58-89-9	gamma-BHC (Lindane)	ND	50	ug/kg	
12789-03-6	Chlordane	ND	200	ug/kg	
60-57-1	Dieldrin	ND	50	ug/kg	
72-54-8	4,4'-DDD	ND	50	ug/kg	
72-55-9	4,4'-DDE	79.6	50	ug/kg	
50-29-3	4,4'-DDT	ND	50	ug/kg	
72-20-8	Endrin	ND	50	ug/kg	
7421-93-4	Endrin aldehyde	ND	50	ug/kg	
959-98-8	Endosulfan-I	ND	50	ug/kg	
33213-65-9	Endosulfan-II	ND	50	ug/kg	
1031-07-8	Endosulfan sulfate	ND	50	ug/kg	
76-44-8	Heptachlor	ND	50	ug/kg	
1024-57-3	Heptachlor epoxide	ND	50	ug/kg	
72-43-5	Methoxychlor	ND	50	ug/kg	
8001-35-2	Toxaphene	ND	200	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	70%		35-132%
877-09-8	Tetrachloro-m-xylene	72%		35-132%
2051-24-3	Decachlorobiphenyl	85%		35-132%
2051-24-3	Decachlorobiphenyl	88%		35-132%

(a) All results reported on wet weight basis.

(b) Reporting limits raised due to nature of sample matrix.

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SS-2 NORTECH WM	Date Sampled:	07/16/10
Lab Sample ID:	C11761-2	Date Received:	07/16/10
Matrix:	SO - Soil	Percent Solids:	n/a ^a
Project:	Nortech Water Main(WM) - San Jose, CA		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	12.8	1.9	mg/kg	1	07/19/10	07/23/10 RS	SW846 6010B ²	SW846 3050B ³
Lead	28.7	0.95	mg/kg	1	07/19/10	07/23/10 RS	SW846 6010B ²	SW846 3050B ³
Mercury	0.19	0.038	mg/kg	1	07/19/10	07/20/10 RW	SW846 7471A ¹	SW846 7471A ⁴

- (1) Instrument QC Batch: MA1319
- (2) Instrument QC Batch: MA1329
- (3) Prep QC Batch: MP2595
- (4) Prep QC Batch: MP2597

(a) All results reported on wet weight basis.

RL = Reporting Limit



Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody



GC Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: C11761
Account: SESCAO Strategic Engineering & Science
Project: Nortech Water Main(WM) - San Jose, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP2410-MB	PP10420.D	1	07/21/10	NB	07/19/10	OP2410	GPP405

4.1.1
4

The QC reported here applies to the following samples:

Method: SW846 8081A

C11761-1, C11761-2

CAS No.	Compound	Result	RL	Units	Q
309-00-2	Aldrin	ND	25	ug/kg	
319-84-6	alpha-BHC	ND	25	ug/kg	
319-85-7	beta-BHC	ND	25	ug/kg	
319-86-8	delta-BHC	ND	25	ug/kg	
58-89-9	gamma-BHC (Lindane)	ND	25	ug/kg	
12789-03-6	Chlordane	ND	100	ug/kg	
60-57-1	Dieldrin	ND	25	ug/kg	
72-54-8	4,4'-DDD	ND	25	ug/kg	
72-55-9	4,4'-DDE	ND	25	ug/kg	
50-29-3	4,4'-DDT	ND	25	ug/kg	
72-20-8	Endrin	ND	25	ug/kg	
7421-93-4	Endrin aldehyde	ND	25	ug/kg	
959-98-8	Endosulfan-I	ND	25	ug/kg	
33213-65-9	Endosulfan-II	ND	25	ug/kg	
1031-07-8	Endosulfan sulfate	ND	25	ug/kg	
76-44-8	Heptachlor	ND	25	ug/kg	
1024-57-3	Heptachlor epoxide	ND	25	ug/kg	
72-43-5	Methoxychlor	ND	25	ug/kg	
8001-35-2	Toxaphene	ND	100	ug/kg	

CAS No.	Surrogate Recoveries	Limits
877-09-8	Tetrachloro-m-xylene	78% 35-132%
877-09-8	Tetrachloro-m-xylene	83% 35-132%
2051-24-3	Decachlorobiphenyl	93% 35-132%
2051-24-3	Decachlorobiphenyl	96% 35-132%

Blank Spike/Blank Spike Duplicate Summary

Job Number: C11761
Account: SESCAO Strategic Engineering & Science
Project: Nortech Water Main(WM) - San Jose, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP2410-BS	PP10421.D	1	07/21/10	NB	07/19/10	OP2410	GPP405
OP2410-BSD	PP10422.D	1	07/21/10	NB	07/19/10	OP2410	GPP405

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

C11761-1, C11761-2

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	BSD ug/kg	BSD %	RPD	Limits Rec/RPD
309-00-2	Aldrin	100	69.0	69	87.0	87	23	40-140/30
319-84-6	alpha-BHC	100	73.0	73	90.6	91	22	40-140/30
319-85-7	beta-BHC	100	79.1	79	93.8	94	17	40-140/30
319-86-8	delta-BHC	100	86.8	87	103	103	17	40-140/30
58-89-9	gamma-BHC (Lindane)	100	74.2	74	94.2	94	24	40-140/30
60-57-1	Dieldrin	100	79.9	80	97.2	97	20	40-145/30
72-54-8	4,4'-DDD	100	95.5	96	110	110	14	40-140/30
72-55-9	4,4'-DDE	100	84.1	84	99.2	99	16	40-140/30
50-29-3	4,4'-DDT	100	97.3	97	112	112	14	40-140/30
72-20-8	Endrin	100	82.9	83	98.3	98	17	40-140/30
7421-93-4	Endrin aldehyde	100	90.6	91	107	107	17	40-140/30
959-98-8	Endosulfan-I	100	77.3	77	94.1	94	20	40-140/30
33213-65-9	Endosulfan-II	100	88.7	89	103	103	15	40-140/30
1031-07-8	Endosulfan sulfate	100	99.4	99	114	114	14	40-140/30
76-44-8	Heptachlor	100	72.0	72	89.6	90	22	40-140/30
1024-57-3	Heptachlor epoxide	100	76.1	76	93.0	93	20	40-140/30
72-43-5	Methoxychlor	100	92.8	93	106	106	13	40-140/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
877-09-8	Tetrachloro-m-xylene	70%	83%	35-132%
877-09-8	Tetrachloro-m-xylene	74%	89%	35-132%
2051-24-3	Decachlorobiphenyl	89%	100%	35-132%
2051-24-3	Decachlorobiphenyl	92%	103%	35-132%

4.2.1
4

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C11761
Account: SESCAO Strategic Engineering & Science
Project: Nortech Water Main(WM) - San Jose, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP2410-MS	PP10428.D	2	07/21/10	NB	07/19/10	OP2410	GPP405
OP2410-MSD	PP10429.D	2	07/21/10	NB	07/19/10	OP2410	GPP405
C11761-2 ^a	PP10427.D	2	07/21/10	NB	07/19/10	OP2410	GPP405

The QC reported here applies to the following samples:

Method: SW846 8081A

C11761-1, C11761-2

CAS No.	Compound	C11761-2 ug/kg	Spike Q	ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
309-00-2	Aldrin	ND	100	76.4	76	83.5	84	9	40-140/40	
319-84-6	alpha-BHC	ND	100	72.6	73	80.1	80	10	40-140/40	
319-85-7	beta-BHC	ND	100	86.6	87	95.1	95	9	40-140/40	
319-86-8	delta-BHC	ND	100	93.7	94	102	102	8	40-140/40	
58-89-9	gamma-BHC (Lindane)	ND	100	81.3	81	88.4	88	8	40-140/40	
60-57-1	Dieldrin	ND	100	77.5	78	87.5	88	12	40-145/40	
72-54-8	4,4'-DDD	ND	100	91.5	92	100	100	9	40-140/40	
72-55-9	4,4'-DDE	79.6	100	168	88	196	116	15	40-140/40	
50-29-3	4,4'-DDT	ND	100	95.0	95	103	103	8	40-140/40	
72-20-8	Endrin	ND	100	90.0	90	92.8	93	3	40-145/40	
7421-93-4	Endrin aldehyde	ND	100	88.4	88	95.1	95	7	40-140/40	
959-98-8	Endosulfan-I	ND	100	86.1	86	95.7	96	11	40-140/40	
33213-65-9	Endosulfan-II	ND	100	86.7	87	93.5	94	8	40-140/40	
1031-07-8	Endosulfan sulfate	ND	100	101	101	111	111	9	40-140/40	
76-44-8	Heptachlor	ND	100	80.0	80	87.9	88	9	40-140/40	
1024-57-3	Heptachlor epoxide	ND	100	83.4	83	90.1	90	8	40-140/40	
72-43-5	Methoxychlor	ND	100	85.9	86	91.4	91	6	40-140/40	

CAS No.	Surrogate Recoveries	MS	MSD	C11761-2	Limits
877-09-8	Tetrachloro-m-xylene	70%	78%	70%	35-132%
877-09-8	Tetrachloro-m-xylene	71%	81%	72%	35-132%
2051-24-3	Decachlorobiphenyl	87%	95%	85%	35-132%
2051-24-3	Decachlorobiphenyl	94%	98%	88%	35-132%

(a) Reporting limits raised due to nature of sample matrix.

4.3.1
4



Metals Analysis

5

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: C11761
Account: SESCAO - Strategic Engineering & Science
Project: Nortech Water Main(WM) - San Jose, CA

QC Batch ID: MP2595
Matrix Type: SOLID

Methods: SW846 6010B
Units: mg/kg

Prep Date: 07/19/10

Metal	RL	IDL	MDL	MB raw	final
Aluminum	10	1.4	1.5		
Antimony	2.0	.69	1.2		
Arsenic	2.0	.44	.51	0.52	<2.0
Barium	1.0	.06	.11		
Beryllium	1.0	.01	.02		
Boron	2.0	.86	.29		
Cadmium	1.0	.03	.05		
Calcium	50	2.9	6.9		
Chromium	1.0	.04	.06		
Copper	1.0	.08	.51		
Iron	10	.26	.43		
Lead	1.0	.33	.54	0.030	<1.0
Lithium	1.0	.22	.12		
Magnesium	10	.96	1.4		
Manganese	1.0	.01	.04		
Molybdenum	1.0	.13	.19		
Nickel	1.0	.08	.1		
Potassium	50	5.8	6.2		
Selenium	2.0	1.4	1.5		
Silicon	20	.34	7		
Silver	1.0	.09	.13		
Sodium	50	1.5	3		
Strontium	1.0	.03	.04		
Thallium	2.0	.65	.74		
Tin	50	.23	2		
Titanium	1.0	.02	.15		
Zinc	2.0	.09	.24		

Associated samples MP2595: C11761-1, C11761-2

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

5.1.1
5

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: C11761
 Account: SESCAO - Strategic Engineering & Science
 Project: Nortech Water Main(WM) - San Jose, CA

QC Batch ID: MP2595
 Matrix Type: SOLID

Methods: SW846 6010B
 Units: mg/kg

Prep Date: 07/19/10

Metal	C11778-3 Original MS	Spikelot MPIR1	% Rec	QC Limits
Aluminum				
Antimony	anr			
Arsenic	2.6	48.9	48.1	96.3 80-120
Barium	anr			
Beryllium	anr			
Boron				
Cadmium	anr			
Calcium				
Chromium	anr			
Copper	anr			
Iron				
Lead	7.9	55.0	48.1	98.0 80-120
Lithium				
Magnesium				
Manganese				
Molybdenum	anr			
Nickel	anr			
Potassium				
Selenium	anr			
Silicon				
Silver	anr			
Sodium				
Strontium				
Thallium	anr			
Tin				
Titanium				
Zinc	anr			

Associated samples MP2595: C11761-1, C11761-2

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (N) Matrix Spike Rec. outside of QC limits
 (anr) Analyte not requested

5.1.2
5

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: C11761
 Account: SESCAO - Strategic Engineering & Science
 Project: Nortech Water Main(WM) - San Jose, CA

QC Batch ID: MP2595
 Matrix Type: SOLID

Methods: SW846 6010B
 Units: mg/kg

Prep Date: 07/19/10

Metal	C11778-3 Original MSD	Spikelot MPIRI	% Rec	MSD RPD	QC Limit	
Aluminum						
Antimony	anr					
Arsenic	2.6	48.1	47.6	95.6	1.6	20
Barium	anr					
Beryllium	anr					
Boron						
Cadmium	anr					
Calcium						
Chromium	anr					
Copper	anr					
Iron						
Lead	7.9	52.0	47.6	92.6	5.6	20
Lithium						
Magnesium						
Manganese						
Molybdenum	anr					
Nickel	anr					
Potassium						
Selenium	anr					
Silicon						
Silver	anr					
Sodium						
Strontium						
Thallium	anr					
Tin						
Titanium						
Zinc	anr					

Associated samples MP2595: C11761-1, C11761-2

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (N) Matrix Spike Rec. outside of QC limits
 (anr) Analyte not requested

5.1.2
5

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: C11761
 Account: SESCAO - Strategic Engineering & Science
 Project: Nortech Water Main(WM) - San Jose, CA

QC Batch ID: MP2595
 Matrix Type: SOLID

Methods: SW846 6010B
 Units: mg/kg

Prep Date: 07/19/10 07/19/10

Metal	BSP Result	Spikelot MPIR1	% Rec	QC Limits	BSD Result	Spikelot MPIR1	% Rec	BSD RPD	QC Limit
Aluminum									
Antimony	anr								
Arsenic	50.9	50	101.8	80-120	48.4	50	96.8	5.0	
Barium	anr								
Beryllium	anr								
Boron									
Cadmium	anr								
Calcium									
Chromium	anr								
Copper	anr								
Iron									
Lead	52.5	50	105.0	80-120	50.0	50	100.0	4.9	
Lithium									
Magnesium									
Manganese									
Molybdenum	anr								
Nickel	anr								
Potassium									
Selenium	anr								
Silicon									
Silver	anr								
Sodium									
Strontium									
Thallium	anr								
Tin									
Titanium									
Zinc	anr								

Associated samples MP2595: C11761-1, C11761-2

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (anr) Analyte not requested

5.1.3
5

SERIAL DILUTION RESULTS SUMMARY

Login Number: C11761
 Account: SESCAO - Strategic Engineering & Science
 Project: Nortech Water Main(WM) - San Jose, CA

QC Batch ID: MP2595
 Matrix Type: SOLID

Methods: SW846 6010B
 Units: ug/l

Prep Date: 07/19/10

Metal	C11778-3 Original	SDL 1:5	%DIF	QC Limits
Aluminum				
Antimony	anr			
Arsenic	27.2	40.5	48.9 (a)	0-10
Barium	anr			
Beryllium	anr			
Boron				
Cadmium	anr			
Calcium				
Chromium	anr			
Copper	anr			
Iron				
Lead	81.8	91.0	11.2 (a)	0-10
Lithium				
Magnesium				
Manganese				
Molybdenum	anr			
Nickel	anr			
Potassium				
Selenium	anr			
Silicon				
Silver	anr			
Sodium				
Strontium				
Thallium	anr			
Tin				
Titanium				
Zinc	anr			

Associated samples MP2595: C11761-1, C11761-2

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(anr) Analyte not requested

(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

5.1.4
5

POST DIGESTATE SPIKE SUMMARY

Login Number: C11761
 Account: SESCAO - Strategic Engineering & Science
 Project: Nortech Water Main(WM) - San Jose, CA

QC Batch ID: MP2595
 Matrix Type: SOLID

Methods: SW846 6010B
 Units: ug/l

Prep Date:

07/19/10

Metal	Sample ml	Final ml	C11778-3 Raw	PS Corr.**	ug/l	Spike ml	Spike ug/ml	Spike ug/l	% Rec	QC Limits
Aluminum										
Antimony										
Arsenic	10	10.1	27.2	26.93069	507.9	0.05	100	495.0495	97.2	-
Barium										
Beryllium										
Boron										
Cadmium										
Calcium										
Chromium										
Copper										
Iron										
Lead	10	10.1	81.8	80.9901	556.6	0.05	100	495.0495	96.1	-
Lithium										
Magnesium										
Manganese										
Molybdenum										
Nickel										
Potassium										
Selenium										
Silicon										
Silver										
Sodium										
Strontium										
Thallium										
Tin										
Titanium										
Zinc										

Associated samples MP2595: C11761-1, C11761-2

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (**) Corr. sample result = Raw * (sample volume / final volume)
 (anr) Analyte not requested

5.1.5
5

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: C11761
Account: SESCAO - Strategic Engineering & Science
Project: Nortech Water Main(WM) - San Jose, CA

QC Batch ID: MP2597
Matrix Type: SOLID

Methods: SW846 7471A
Units: mg/kg

Prep Date: 07/19/10

Metal	RL	IDL	MDL	MB	
				raw	final
Mercury	0.042	.0017	.0043	0.00040	<0.042

Associated samples MP2597: C11761-1, C11761-2

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

5.2.1
5

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: C11761
Account: SESCAO - Strategic Engineering & Science
Project: Nortech Water Main(WM) - San Jose, CA

QC Batch ID: MP2597
Matrix Type: SOLID

Methods: SW846 7471A
Units: mg/kg

Prep Date: 07/19/10

Metal	C11778-3 Original MS	Spikelot HGPWS1	% Rec	QC Limits	
Mercury	0.30	0.63	0.308	107.3	75-125

Associated samples MP2597: C11761-1, C11761-2

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

5.2.2
5

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: C11761
Account: SESCOA - Strategic Engineering & Science
Project: Nortech Water Main(WM) - San Jose, CA

QC Batch ID: MP2597
Matrix Type: SOLID

Methods: SW846 7471A
Units: mg/kg

Prep Date: 07/19/10

Metal	C11778-3 Original MSD	Spikelot HGPWS1	% Rec	MSD RPD	QC Limit	
Mercury	0.30	0.63	0.299	110.6	0.0	20

Associated samples MP2597: C11761-1, C11761-2

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

5.2.2
5

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: C11761
 Account: SESCAO - Strategic Engineering & Science
 Project: Nortech Water Main(WM) - San Jose, CA

QC Batch ID: MP2597
 Matrix Type: SOLID

Methods: SW846 7471A
 Units: mg/kg

Prep Date: 07/19/10 07/19/10

Metal	BSP Result	Spikelot HGPWS1	% Rec	QC Limits	BSD Result	Spikelot HGPWS1	% Rec	BSD RPD	QC Limit
Mercury	0.16	0.167	96.0	80-120	0.17	0.167	102.0	6.1	

Associated samples MP2597: C11761-1, C11761-2

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (anr) Analyte not requested

5.2.3
5