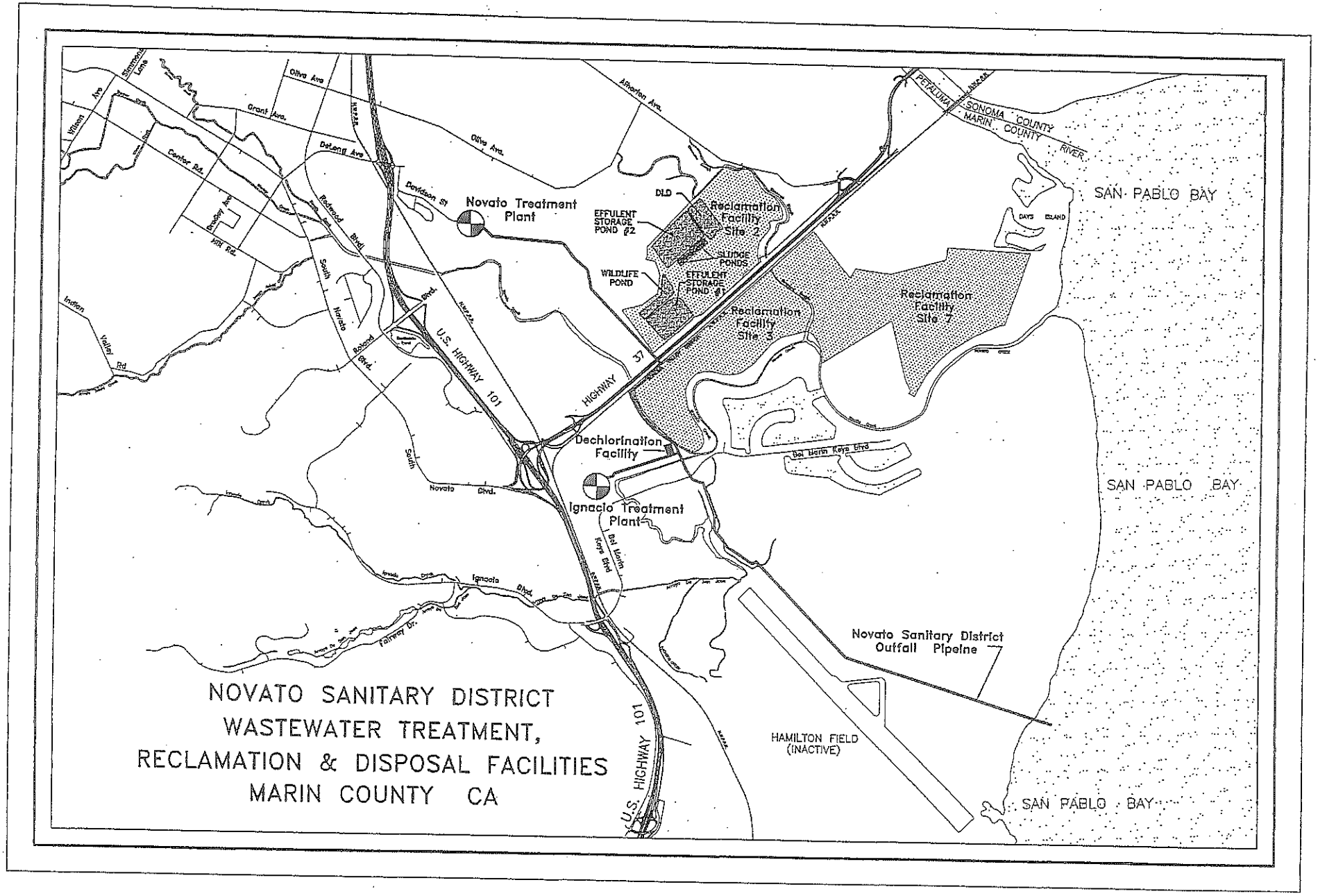
JANUARY 2013

NOVATO SANITARY DISTRICT
VEOLIA WATER WEST OPERATING SERVICES

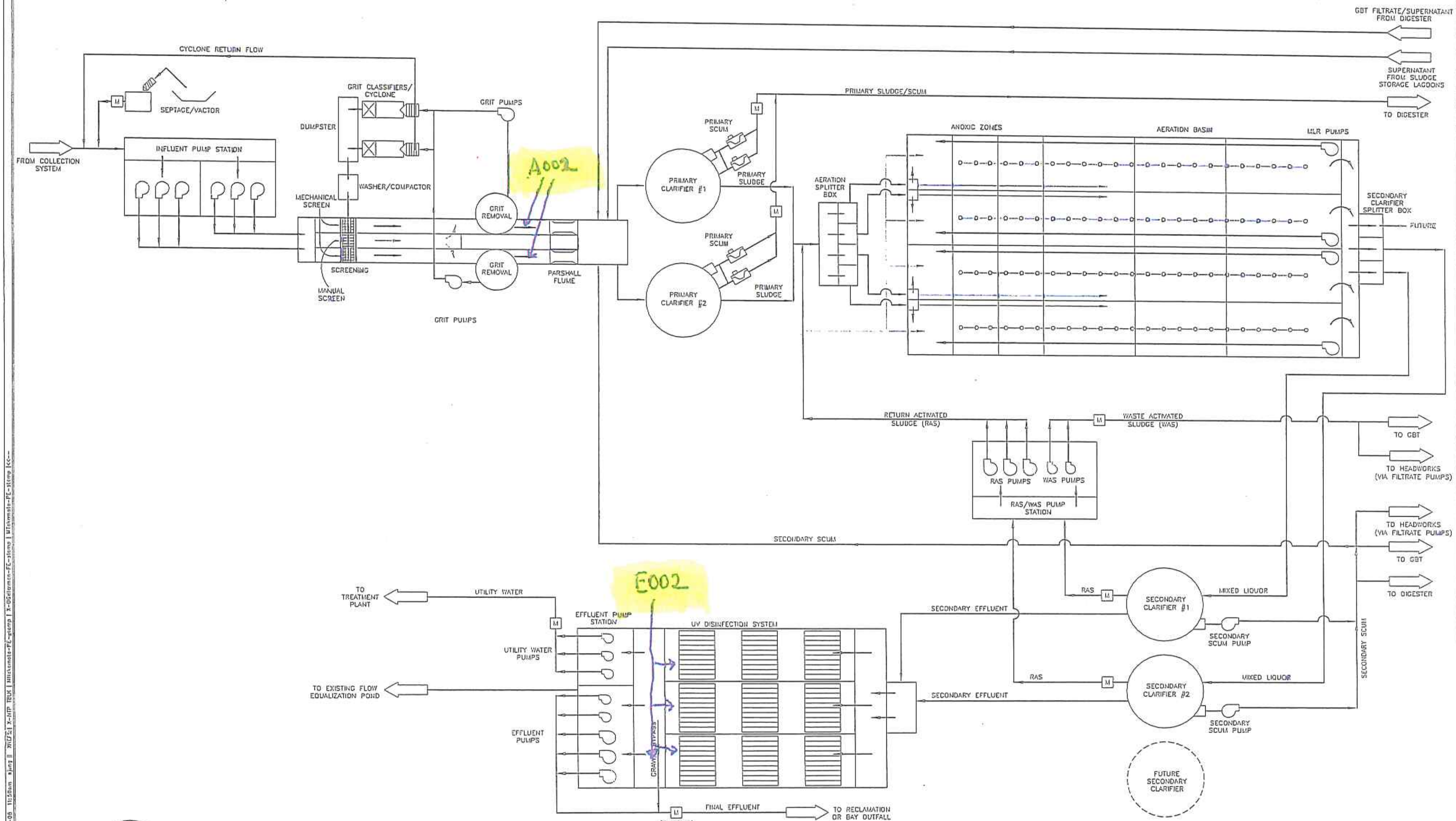
SELF MONITORING REPORT

SECTION III

ATTACHMENTS


Olive Ave
Grant Ave.
Olive Ave.
Atherton Ave.
Novato Treatment Plant
Davidson St
DLD
Reclamation Facility Site 2
EFFLUENT STORAGE POND #2
SLUDGE PONDS
WILDLIFE POND
EFFLUENT STORAGE POND #1
Reclamation Facility Site 3
Reclamation Facility Site 7
PETALUMA RIVER
SONOMA COUNTY
MARIN COUNTY
SAN PABLO BAY
DAYS ISLAND
Center Rd.
Redwood Blvd.
South Novato Blvd.
U.S. HIGHWAY 101
HIGHWAY 37
Dechlorination Facility
Bel Marin Keys Blvd
Ignacio Treatment Plant
Ignacio Blvd.
Novato Sanitary District Outfall Pipeline
HAMILTON FIELD (INACTIVE)
SAN PABLO BAY
NOVATO SANITARY DISTRICT
WASTEWATER TREATMENT,
RECLAMATION & DISPOSAL FACILITIES
MARIN COUNTY CA

Sample Locations



VERIFY SCALES — BAR IS ONE INCH LONG ON FULL SIZE DRAWING. IF NOT ONE INCH LONG ON THIS DRAWING, ADJUST SCALES ACCORDINGLY

RMC Water & Environment

REV	DATE	BY	APVD	DESCRIPTION

DESIGNED M. TOLCHER
DRAWN S. JUNG
CHECKED M. MATSON

SUBMITTED: DENNIS GELLERMAN, RMC PROJ ENGR
APPROVED: STEVE CLARY, RMC ENGR

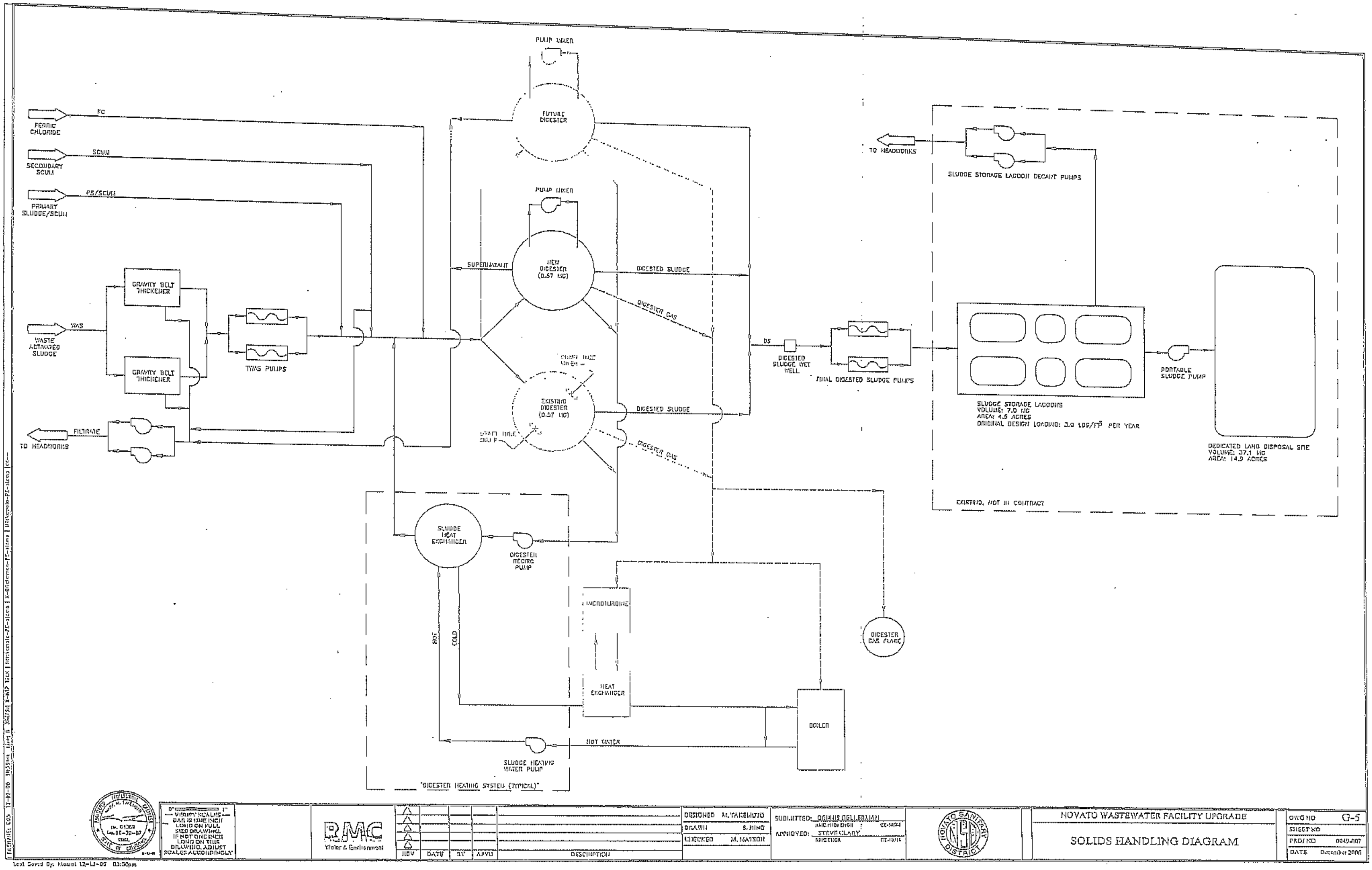
NOVATO SANITARY DISTRICT

NOVATO WASTEWATER FACILITY UPGRADE

LIQUID PROCESS DIAGRAM

DWG NO G-4
SHEET NO
PROJ NO 0049-007
DATE December 2006

Last Saved By: mtolcher 12-13-06 03:58pm



PUMP MIXER
FUTURE DIGESTER
FERRIC CHLORIDE
FC
SECONDARY SCUM
SCUM
PRIMARY SLUDGE/SCUM
PS/SCUM
PUMP MIXER
SUPERNATANT
NEW DIGESTER (0.57 MG)
DIGESTED SLUDGE
DIGESTER GAS
GRAVITY BELT THICKENER
WAS
WASTE ACTIVATED SLUDGE
TWAS PUMPS
GRAVITY BELT THICKENER
FILTRATE
TO HEADWORKS
EXISTING DIGESTER (0.57 MG)
DIGESTED SLUDGE
DIGESTER GAS
DS
DIGESTED SLUDGE WET WELL
FINAL DIGESTED SLUDGE PUMPS
TO HEADWORKS
SLUDGE STORAGE LAGOON DECANT PUMPS
SLUDGE STORAGE LAGOONS
VOLUME: 7.0 MG
AREA: 4.5 ACRES
PORTABLE SLUDGE PUMP
DEDICATED LAND DISPOSAL SITE
VOLUME: 37.1 MG
AREA: 14.0 ACRES
EXISTING, NOT IN CONTRACT
SLUDGE HEAT EXCHANGER
DIGESTER RECIRC PUMP
HOT
COLD
MICROTURBINE
HEAT EXCHANGER
BOILER
DIGESTER GAS FLARE
HOT WATER
SLUDGE HEATING WATER PUMP
"DIGESTER HEATING SYSTEM (TYPICAL)"
VERIFY SCALES
BAR IS ONE INCH LONG ON FULL SIZE DRAWING.
IF NOT ONE INCH LONG ON THIS DRAWING, ADJUST SCALES ACCORDINGLY
RMC
Water & Environment
REV
DATE
BY
APVD
DESCRIPTION
DESIGNED
DRAWN
CHECKED
SUBMITTED:
APPROVED:
NOVATO SANITARY DISTRICT
NOVATO WASTEWATER FACILITY UPGRADE
SOLIDS HANDLING DIAGRAM
DWG NO
G-5
SHEET NO
PROJ NO
DATE

JANUARY 2013

NOVATO SANITARY DISTRICT
VEOLIA WATER WEST OPERATING SERVICES

SELF MONITORING REPORT

SECTION IV

ATTACHMENTS

LAB DATA

ATTACHMENTS
LAB DATA

EPA 1664A – INFLUENT & EFFLUENT TOTAL PHENOLS

EPA 608 – INFLUENT PESTICIDES & PCBs

EPA 608 – EFFLUENT PESTICIDES & PCBs

EPA 624 – INFLUENT VOLATILE ORGANIC COMPOUNDS

EPA 624 – EFFLUENT VOLATILE ORGANIC COMPOUNDS

EPA 625 – INFLUENT SEMI-VOLATILE ORGANIC COMPOUNDS

EPA 625 – EFFLUENT SEMI-VOLATILE ORGANIC COMPOUNDS

EPA 1613 D/F – DIOXIN

ACUTE TOXICITY, 96 HOUR – EFFLUENT

CHRONIC TOXICITY - EFFLUENT

Monday, January 28, 2013

Andrew Oko
Novato Sanitary District
500 Davidson St.
Novato, CA 94945

RE: Lab Order: N010442
Project ID: OG/PHEN-JAN 9,2013

Collected By: KEN BESNIA
PO/Contract #:

Dear Andrew Oko:

Enclosed are the analytical results for sample(s) received by the laboratory on Wednesday, January 09, 2013. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

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

Enclosures

Project Manager: Todd Albertson

1885 North Kelly Road • Napa, California 94558
(707) 258-4000 • Fax (707) 226-1001 • e-mail: info@caltestlabs.com

SAMPLE SUMMARY

Lab Order: N010442

Project ID: OG/PHEN-JAN 9,2013

Lab ID	Sample ID	Matrix	Date Collected	Date Received
N010442001	**NOVATO EFFLUENT**	Water	1/9/2013 12:00	1/9/2013 16:10
N010442002	**NOVATO INFLUENT**	Water	1/9/2013 09:55	1/9/2013 16:10
N010442003	**NOVATO EFFLUENT**	Water	1/9/2013 10:00	1/9/2013 16:10

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NARRATIVE

Lab Order: N010442

Project ID: OG/PHEN-JAN 9,2013

General Qualifiers and Notes

Caltest authorizes this report to be reproduced only in its entirety. Results are specific to the sample(s) as submitted and only to the parameter(s) reported.

Caltest certifies that all test results for wastewater and hazardous waste analyses meet all applicable NELAC requirements; all microbiology and drinking water testing meet applicable ELAP requirements, unless stated otherwise.

All analyses performed by EPA Methods or Standard Methods (SM) 20th Edition except where noted (SMOL=online edition).

Caltest collects samples in compliance with 40 CFR, EPA Methods, Cal. Title 22, and Standard Methods.

Dilution Factors (DF) reported greater than '1' have been used to adjust the result, Reporting Limit (RL), and Method Detection Limit (MDL).

All Solid, sludge, and/or biosolids data is reported in Wet Weight, unless otherwise specified.

Filtrations performed at Caltest for dissolved metals (excluding mercury) and/or pH analysis were not performed within the 15 minute holding time as specified by 40CFR 136.3 table II.

Results Qualifiers: Report fields may contain codes and non-numeric data correlating to one or more of the following definitions:

ND - Non Detect - indicates analytical result has not been detected.

RL - Reporting Limit is the quantitation limit at which the laboratory is able to detect an analyte. An analyte not detected at or above the RL is reported as ND unless otherwise noted or qualified. For analyses pertaining to the State Implementation Plan of the California Toxics Rule, the Caltest Reporting Limit (RL) is equivalent to the Minimum Level (ML). A standard is always run at or below the ML. Where Reporting Limits are elevated due to dilution, the ML calibration criteria has been met.

J - reflects estimated analytical result value detected below the Reporting Limit (RL) and above the Method Detection Limit (MDL). The 'J' flag is equivalent to the DNQ Estimated Concentration flag.

E - indicates an estimated analytical result value.

B - indicates the analyte has been detected in the blank associated with the sample.

NC - means not able to be calculated for RPD or Spike Recoveries.

SS - compound is a Surrogate Spike used per laboratory quality assurance manual.

NOTE: This document represents a complete Analytical Report for the samples referenced herein and should be retained as a permanent record thereof.

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(707) 258-4000 • Fax (707) 226-1001 • e-mail: info@caltestlabs.com

ANALYTICAL RESULTS

Lab Order: N010442

Project ID OG/PHEN-JAN 9,2013

Lab ID: **N010442001** Date Collected: 1/9/2013 12:00 Matrix: Water

Sample ID: **NOVATO EFFLUENT** Date Received: 1/9/2013 16:10

Parameters	Result	Units	R. L.	MDL	DF	Prepared	Batch	Analyzed	Batch	Qual
Oil & Grease, Gravimetric Analysis		**Prep Method:**	EPA 1664A			**Prep by:** ATA				
		Analytical Method:	EPA 1664A					**Analyzed by:** ATA		
Oil & Grease, Total	ND	mg/L	5.0	1.4	1	01/16/13 08:25	SOG 1051	01/16/13 08:27	SOG 1052	

Lab ID: **N010442002** Date Collected: 1/9/2013 09:55 Matrix: Water

Sample ID: **NOVATO INFLUENT** Date Received: 1/9/2013 16:10

Parameters	Result	Units	R. L.	MDL	DF	Prepared	Batch	Analyzed	Batch	Qual
Phenols, Total Analysis		**Analytical Method:**	EPA 420.4					**Analyzed by:** MYS		
Total Phenols	54	ug/L	5.0	2.0	1			01/19/13 00:00	WET 6902	

Lab ID: **N010442003** Date Collected: 1/9/2013 10:00 Matrix: Water

Sample ID: **NOVATO EFFLUENT** Date Received: 1/9/2013 16:10

Parameters	Result	Units	R. L.	MDL	DF	Prepared	Batch	Analyzed	Batch	Qual
Phenols, Total Analysis		**Analytical Method:**	EPA 420.4					**Analyzed by:** MYS		
Total Phenols	J4.3	ug/L	5.0	2.0	1			01/19/13 00:00	WET 6902	

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Tuesday, January 22, 2013

Andrew Oko
Novato Sanitary District
500 Davidson St.
Novato, CA 94945

RE: Lab Order: N010440
Project ID: INFLUENT 608-JANUARY 8, 2013

Collected By: KEN BESNIA
PO/Contract #:

Dear Andrew Oko:

Enclosed are the analytical results for sample(s) received by the laboratory on Wednesday, January 09, 2013. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

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

Enclosures

Project Manager: Todd Albertson

1885 North Kelly Road • Napa, California 94558
(707) 258-4000 • Fax (707) 226-1001 • e-mail: info@caltestlabs.com

SAMPLE SUMMARY

Lab Order: N010440

Project ID: INFLUENT 608-JANUARY 8, 2013

Lab ID	Sample ID	Matrix	Date Collected	Date Received
N010440001	**A-002 NOVATO INFLUENT**	Water	1/8/2013 10:00	1/9/2013 16:10

1885 North Kelly Road • Napa, California 94558
(707) 258-4000 • Fax (707) 226-1001 • e-mail: info@caltestlabs.com

NARRATIVE

Lab Order: N010440

Project ID: INFLUENT 608-JANUARY 8, 2013

General Qualifiers and Notes

Caltest authorizes this report to be reproduced only in its entirety. Results are specific to the sample(s) as submitted and only to the parameter(s) reported.

Caltest certifies that all test results for wastewater and hazardous waste analyses meet all applicable NELAC requirements; all microbiology and drinking water testing meet applicable ELAP requirements, unless stated otherwise.

All analyses performed by EPA Methods or Standard Methods (SM) 20th Edition except where noted (SMOL=online edition).

Caltest collects samples in compliance with 40 CFR, EPA Methods, Cal. Title 22, and Standard Methods.

Dilution Factors (DF) reported greater than '1' have been used to adjust the result, Reporting Limit (RL), and Method Detection Limit (MDL).

All Solid, sludge, and/or biosolids data is reported in Wet Weight, unless otherwise specified.

Filtrations performed at Caltest for dissolved metals (excluding mercury) and/or pH analysis were not performed within the 15 minute holding time as specified by 40CFR 136.3 table II.

Results Qualifiers: Report fields may contain codes and non-numeric data correlating to one or more of the following definitions:

ND - Non Detect - indicates analytical result has not been detected.

RL - Reporting Limit is the quantitation limit at which the laboratory is able to detect an analyte. An analyte not detected at or above the RL is reported as ND unless otherwise noted or qualified. For analyses pertaining to the State Implementation Plan of the California Toxics Rule, the Caltest Reporting Limit (RL) is equivalent to the Minimum Level (ML). A standard is always run at or below the ML. Where Reporting Limits are elevated due to dilution, the ML calibration criteria has been met.

J - reflects estimated analytical result value detected below the Reporting Limit (RL) and above the Method Detection Limit (MDL). The 'J' flag is equivalent to the DNQ Estimated Concentration flag.

E - indicates an estimated analytical result value.

B - indicates the analyte has been detected in the blank associated with the sample.

NC - means not able to be calculated for RPD or Spike Recoveries.

SS - compound is a Surrogate Spike used per laboratory quality assurance manual.

NOTE: This document represents a complete Analytical Report for the samples referenced herein and should be retained as a permanent record thereof.

Qualifiers and Compound Notes

1	Analyte(s) reported as 'ND' means not detected at or above the listed Method Detection Limits (MDL).
2	Sample diluted due to a high concentration of non-target analyte(s), resulting in increased reporting limits.

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ANALYTICAL RESULTS

Lab Order: N010440

Project ID INFLUENT 608-JANUARY 8, 2013

Lab ID: **N010440001** Date Collected: 1/8/2013 10:00 Matrix: Water

Sample ID: **A-002 NOVATO INFLUENT** Date Received: 1/9/2013 16:10

Parameters	Result	Units	R. L.	MDL	DF	Prepared	Batch	Analyzed	Batch	Qual
Chlorinated Pesticides & PCBs Analysis		**Prep Method:**	EPA 608			**Prep by:** EAB				
		Analytical Method:	EPA 608					**Analyzed by:** NTA		
Aldrin	ND	ug/L	0.050	0.0080	2	01/14/13 00:00	SPR 5693	01/19/13 08:20	SMS 2981	1,2
alpha-BHC	ND	ug/L	0.050	0.010	2	01/14/13 00:00	SPR 5693	01/19/13 08:20	SMS 2981	
beta-BHC	ND	ug/L	0.050	0.0080	2	01/14/13 00:00	SPR 5693	01/19/13 08:20	SMS 2981	
delta-BHC	ND	ug/L	0.050	0.0080	2	01/14/13 00:00	SPR 5693	01/19/13 08:20	SMS 2981	
gamma-BHC (Lindane)	ND	ug/L	0.050	0.0080	2	01/14/13 00:00	SPR 5693	01/19/13 08:20	SMS 2981	
Chlordane	ND	ug/L	0.50	0.040	2	01/14/13 00:00	SPR 5693	01/19/13 08:20	SMS 2981	
4,4'-DDD	ND	ug/L	0.10	0.0080	2	01/14/13 00:00	SPR 5693	01/19/13 08:20	SMS 2981	
4,4'-DDE	ND	ug/L	0.10	0.0060	2	01/14/13 00:00	SPR 5693	01/19/13 08:20	SMS 2981	
4,4'-DDT	ND	ug/L	0.10	0.0080	2	01/14/13 00:00	SPR 5693	01/19/13 08:20	SMS 2981	
Dieldrin	ND	ug/L	0.10	0.0080	2	01/14/13 00:00	SPR 5693	01/19/13 08:20	SMS 2981	
Endosulfan I	ND	ug/L	0.050	0.0080	2	01/14/13 00:00	SPR 5693	01/19/13 08:20	SMS 2981	
Endosulfan II	ND	ug/L	0.10	0.010	2	01/14/13 00:00	SPR 5693	01/19/13 08:20	SMS 2981	
Endosulfan sulfate	ND	ug/L	0.10	0.010	2	01/14/13 00:00	SPR 5693	01/19/13 08:20	SMS 2981	
Endrin	ND	ug/L	0.10	0.010	2	01/14/13 00:00	SPR 5693	01/19/13 08:20	SMS 2981	
Endrin aldehyde	ND	ug/L	0.050	0.010	2	01/14/13 00:00	SPR 5693	01/19/13 08:20	SMS 2981	
Endrin ketone	ND	ug/L	0.10	0.010	2	01/14/13 00:00	SPR 5693	01/19/13 08:20	SMS 2981	
Heptachlor	ND	ug/L	0.050	0.010	2	01/14/13 00:00	SPR 5693	01/19/13 08:20	SMS 2981	
Heptachlor epoxide	ND	ug/L	0.050	0.0080	2	01/14/13 00:00	SPR 5693	01/19/13 08:20	SMS 2981	
Methoxychlor	ND	ug/L	0.50	0.010	2	01/14/13 00:00	SPR 5693	01/19/13 08:20	SMS 2981	
PCB 1016	ND	ug/L	0.20	0.10	2	01/14/13 00:00	SPR 5693	01/19/13 08:20	SMS 2981	
PCB 1221	ND	ug/L	0.20	0.10	2	01/14/13 00:00	SPR 5693	01/19/13 08:20	SMS 2981	
PCB 1232	ND	ug/L	0.20	0.10	2	01/14/13 00:00	SPR 5693	01/19/13 08:20	SMS 2981	
PCB 1242	ND	ug/L	0.20	0.080	2	01/14/13 00:00	SPR 5693	01/19/13 08:20	SMS 2981	
PCB 1248	ND	ug/L	0.20	0.10	2	01/14/13 00:00	SPR 5693	01/19/13 08:20	SMS 2981	
PCB 1254	ND	ug/L	0.20	0.10	2	01/14/13 00:00	SPR 5693	01/19/13 08:20	SMS 2981	
PCB 1260	ND	ug/L	0.20	0.10	2	01/14/13 00:00	SPR 5693	01/19/13 08:20	SMS 2981	
Toxaphene	ND	ug/L	1.0	0.60	2	01/14/13 00:00	SPR 5693	01/19/13 08:20	SMS 2981	
Decachlorobiphenyl (SS)	15	%	10-195		2	01/14/13 00:00	SPR 5693	01/19/13 08:20	SMS 2981	
Tetrachloro-m-xylene (SS)	42	%	25-105		2	01/14/13 00:00	SPR 5693	01/19/13 08:20	SMS 2981	

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(707) 258-4000 • Fax (707) 226-1001 • e-mail: info@caltestlabs.com

Tuesday, January 22, 2013

Andrew Oko
Novato Sanitary District
500 Davidson St.
Novato, CA 94945

RE: Lab Order: N010441
Project ID: EFFLUENT 608-JANUARY 9, 2013

Collected By: KEN BESNIA
PO/Contract #:

Dear Andrew Oko:

Enclosed are the analytical results for sample(s) received by the laboratory on Wednesday, January 09, 2013. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

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Enclosures

Project Manager: Todd Albertson

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(707) 258-4000 • Fax (707) 226-1001 • e-mail: info@caltestlabs.com

SAMPLE SUMMARY

Lab Order: N010441
Project ID: EFFLUENT 608-JANUARY 9, 2013

Lab ID	Sample ID	Matrix	Date Collected	Date Received
N010441001	**E-002 NOVATO EFFLUENT**	Water	1/9/2013 10:00	1/9/2013 16:10

1885 North Kelly Road • Napa, California 94558
(707) 258-4000 • Fax (707) 226-1001 • e-mail: info@caltestlabs.com

NARRATIVE

Lab Order: N010441

Project ID: EFFLUENT 608-JANUARY 9, 2013

General Qualifiers and Notes

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SS - compound is a Surrogate Spike used per laboratory quality assurance manual.

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Qualifiers and Compound Notes

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ANALYTICAL RESULTS

Lab Order: N010441

Project ID EFFLUENT 608-JANUARY 9, 2013

Lab ID: **N010441001** Date Collected: 1/9/2013 10:00 Matrix: Water

Sample ID: **E-002 NOVATO EFFLUENT** Date Received: 1/9/2013 16:10

Parameters	Result	Units	R. L.	MDL	DF	Prepared	Batch	Analyzed	Batch	Qual
Chlorinated Pesticides & PCBs Analysis		**Prep Method:**	EPA 608			**Prep by:** EAB				
		Analytical Method:	EPA 608					**Analyzed by:** NTA		
Aldrin	ND	ug/L	0.005	0.0040	1	01/15/13 00:00	SPR 5695	01/18/13 03:40	SMS 2978	1
alpha-BHC	ND	ug/L	0.010	0.0050	1	01/15/13 00:00	SPR 5695	01/18/13 03:40	SMS 2978	
beta-BHC	ND	ug/L	0.005	0.0040	1	01/15/13 00:00	SPR 5695	01/18/13 03:40	SMS 2978	
delta-BHC	ND	ug/L	0.005	0.0040	1	01/15/13 00:00	SPR 5695	01/18/13 03:40	SMS 2978	
gamma-BHC (Lindane)	ND	ug/L	0.010	0.0040	1	01/15/13 00:00	SPR 5695	01/18/13 03:40	SMS 2978	
Chlordane	ND	ug/L	0.050	0.020	1	01/15/13 00:00	SPR 5695	01/18/13 03:40	SMS 2978	
4,4'-DDD	ND	ug/L	0.010	0.0040	1	01/15/13 00:00	SPR 5695	01/18/13 03:40	SMS 2978	
4,4'-DDE	ND	ug/L	0.010	0.0030	1	01/15/13 00:00	SPR 5695	01/18/13 03:40	SMS 2978	
4,4'-DDT	ND	ug/L	0.010	0.0040	1	01/15/13 00:00	SPR 5695	01/18/13 03:40	SMS 2978	
Dieldrin	ND	ug/L	0.010	0.0040	1	01/15/13 00:00	SPR 5695	01/18/13 03:40	SMS 2978	
Endosulfan I	ND	ug/L	0.010	0.0040	1	01/15/13 00:00	SPR 5695	01/18/13 03:40	SMS 2978	
Endosulfan II	ND	ug/L	0.010	0.0050	1	01/15/13 00:00	SPR 5695	01/18/13 03:40	SMS 2978	
Endosulfan sulfate	ND	ug/L	0.010	0.0050	1	01/15/13 00:00	SPR 5695	01/18/13 03:40	SMS 2978	
Endrin	ND	ug/L	0.010	0.0050	1	01/15/13 00:00	SPR 5695	01/18/13 03:40	SMS 2978	
Endrin aldehyde	ND	ug/L	0.010	0.0050	1	01/15/13 00:00	SPR 5695	01/18/13 03:40	SMS 2978	
Endrin ketone	ND	ug/L	0.010	0.0050	1	01/15/13 00:00	SPR 5695	01/18/13 03:40	SMS 2978	
Heptachlor	ND	ug/L	0.010	0.0050	1	01/15/13 00:00	SPR 5695	01/18/13 03:40	SMS 2978	
Heptachlor epoxide	ND	ug/L	0.010	0.0040	1	01/15/13 00:00	SPR 5695	01/18/13 03:40	SMS 2978	
Methoxychlor	ND	ug/L	0.010	0.0050	1	01/15/13 00:00	SPR 5695	01/18/13 03:40	SMS 2978	
PCB 1016	ND	ug/L	0.10	0.050	1	01/15/13 00:00	SPR 5695	01/18/13 03:40	SMS 2978	
PCB 1221	ND	ug/L	0.10	0.050	1	01/15/13 00:00	SPR 5695	01/18/13 03:40	SMS 2978	
PCB 1232	ND	ug/L	0.10	0.050	1	01/15/13 00:00	SPR 5695	01/18/13 03:40	SMS 2978	
PCB 1242	ND	ug/L	0.10	0.040	1	01/15/13 00:00	SPR 5695	01/18/13 03:40	SMS 2978	
PCB 1248	ND	ug/L	0.10	0.050	1	01/15/13 00:00	SPR 5695	01/18/13 03:40	SMS 2978	
PCB 1254	ND	ug/L	0.10	0.050	1	01/15/13 00:00	SPR 5695	01/18/13 03:40	SMS 2978	
PCB 1260	ND	ug/L	0.10	0.050	1	01/15/13 00:00	SPR 5695	01/18/13 03:40	SMS 2978	
Toxaphene	ND	ug/L	0.5	0.30	1	01/15/13 00:00	SPR 5695	01/18/13 03:40	SMS 2978	
Decachlorobiphenyl (SS)	61	%	10-195		1	01/15/13 00:00	SPR 5695	01/18/13 03:40	SMS 2978	
Tetrachloro-m-xylene (SS)	56	%	25-105		1	01/15/13 00:00	SPR 5695	01/18/13 03:40	SMS 2978	

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Tuesday, January 22, 2013

Andrew Oko
Novato Sanitary District
500 Davidson St.
Novato, CA 94945

RE: Lab Order: N010439
Project ID: EFFLUENT 614-JANUARY 9, 2013

Collected By: KEN BESNIA
PO/Contract #:

Dear Andrew Oko:

Enclosed are the analytical results for sample(s) received by the laboratory on Wednesday, January 09, 2013. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

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

Enclosures

Project Manager: Todd Albertson

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SAMPLE SUMMARY

Lab Order: N010439

Project ID: EFFLUENT 614-JANUARY 9, 2013

Lab ID	Sample ID	Matrix	Date Collected	Date Received
N010439001	**E-002 NOVATO EFFLUENT**	Water	1/9/2013 08:00	1/9/2013 16:10

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NARRATIVE

Lab Order: N010439

Project ID: EFFLUENT 614-JANUARY 9, 2013

General Qualifiers and Notes

Caltest authorizes this report to be reproduced only in its entirety. Results are specific to the sample(s) as submitted and only to the parameter(s) reported.

Caltest certifies that all test results for wastewater and hazardous waste analyses meet all applicable NELAC requirements; all microbiology and drinking water testing meet applicable ELAP requirements, unless stated otherwise.

All analyses performed by EPA Methods or Standard Methods (SM) 20th Edition except where noted (SMOL=online edition).

Caltest collects samples in compliance with 40 CFR, EPA Methods, Cal. Title 22, and Standard Methods.

Dilution Factors (DF) reported greater than '1' have been used to adjust the result, Reporting Limit (RL), and Method Detection Limit (MDL).

All Solid, sludge, and/or biosolids data is reported in Wet Weight, unless otherwise specified.

Filtrations performed at Caltest for dissolved metals (excluding mercury) and/or pH analysis were not performed within the 15 minute holding time as specified by 40CFR 136.3 table II.

Results Qualifiers: Report fields may contain codes and non-numeric data correlating to one or more of the following definitions:

ND - Non Detect - indicates analytical result has not been detected.

RL - Reporting Limit is the quantitation limit at which the laboratory is able to detect an analyte. An analyte not detected at or above the RL is reported as ND unless otherwise noted or qualified. For analyses pertaining to the State Implementation Plan of the California Toxics Rule, the Caltest Reporting Limit (RL) is equivalent to the Minimum Level (ML). A standard is always run at or below the ML. Where Reporting Limits are elevated due to dilution, the ML calibration criteria has been met.

J - reflects estimated analytical result value detected below the Reporting Limit (RL) and above the Method Detection Limit (MDL). The 'J' flag is equivalent to the DNQ Estimated Concentration flag.

E - indicates an estimated analytical result value.

B - indicates the analyte has been detected in the blank associated with the sample.

NC - means not able to be calculated for RPD or Spike Recoveries.

SS - compound is a Surrogate Spike used per laboratory quality assurance manual.

NOTE: This document represents a complete Analytical Report for the samples referenced herein and should be retained as a permanent record thereof.

Qualifiers and Compound Notes

1 Analyte(s) reported as 'ND' means not detected at or above the listed Method Detection Limits (MDL).

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ANALYTICAL RESULTS

Lab Order: N010439

Project ID EFFLUENT 614-JANUARY 9, 2013

Lab ID: **N010439001** Date Collected: 1/9/2013 08:00 Matrix: Water

Sample ID: **E-002 NOVATO EFFLUENT** Date Received: 1/9/2013 16:10

Parameters	Result	Units	R. L.	MDL	DF	Prepared	Batch	Analyzed	Batch	Qual
Organophosphorous Pesticides		**Prep Method:**	EPA 614			**Prep by:** EAB				
		Analytical Method:	EPA 614					**Analyzed by:** NTA		
Azinphos methyl (Guthion)	ND	ug/L	0.05	0.04	1	01/15/13 00:00	SPR 5696	01/17/13 22:27	SMS 2977	1
Chlorpyrifos	ND	ug/L	0.01	0.005	1	01/15/13 00:00	SPR 5696	01/17/13 22:27	SMS 2977	
Demeton -O and -S	ND	ug/L	0.1	0.02	1	01/15/13 00:00	SPR 5696	01/17/13 22:27	SMS 2977	
Diazinon	ND	ug/L	0.02	0.007	1	01/15/13 00:00	SPR 5696	01/17/13 22:27	SMS 2977	
Disulfoton (Di-Syston)	ND	ug/L	0.1	0.08	1	01/15/13 00:00	SPR 5696	01/17/13 22:27	SMS 2977	
Ethion	ND	ug/L	0.02	0.005	1	01/15/13 00:00	SPR 5696	01/17/13 22:27	SMS 2977	
Malathion	ND	ug/L	0.05	0.005	1	01/15/13 00:00	SPR 5696	01/17/13 22:27	SMS 2977	
Parathion (Parathion ethyl)	ND	ug/L	0.05	0.008	1	01/15/13 00:00	SPR 5696	01/17/13 22:27	SMS 2977	
Parathion methyl	ND	ug/L	0.1	0.05	1	01/15/13 00:00	SPR 5696	01/17/13 22:27	SMS 2977	
Thiobencarb	ND	ug/L	0.05	0.008	1	01/15/13 00:00	SPR 5696	01/17/13 22:27	SMS 2977	
Dichlofenthion (SS)	82	%	45-105		1	01/15/13 00:00	SPR 5696	01/17/13 22:27	SMS 2977	
Triphenylphosphate (SS)	92	%	61-120		1	01/15/13 00:00	SPR 5696	01/17/13 22:27	SMS 2977	

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Wednesday, January 16, 2013

Andrew Oko
Novato Sanitary District
500 Davidson St.
Novato, CA 94945

RE: Lab Order: N010446 Collected By: KEN BESNIA
Project ID: INFLUENT 624-JANUARY 8, 2013 PO/Contract #:

Dear Andrew Oko:

Enclosed are the analytical results for sample(s) received by the laboratory on Wednesday, January 09, 2013. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

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

Enclosures

Project Manager: Todd Albertson

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SAMPLE SUMMARY

Lab Order: N010446

Project ID: INFLUENT 624-JANUARY 8, 2013

Lab ID	Sample ID	Matrix	Date Collected	Date Received
N010446001	**A-002 NOVATO INFLUENT**	Water	1/8/2013 14:00	1/9/2013 16:10

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NARRATIVE

Lab Order: N010446

Project ID: INFLUENT 624-JANUARY 8, 2013

General Qualifiers and Notes

Caltest authorizes this report to be reproduced only in its entirety. Results are specific to the sample(s) as submitted and only to the parameter(s) reported.

Caltest certifies that all test results for wastewater and hazardous waste analyses meet all applicable NELAC requirements; all microbiology and drinking water testing meet applicable ELAP requirements, unless stated otherwise.

All analyses performed by EPA Methods or Standard Methods (SM) 20th Edition except where noted (SMOL=online edition).

Caltest collects samples in compliance with 40 CFR, EPA Methods, Cal. Title 22, and Standard Methods.

Dilution Factors (DF) reported greater than '1' have been used to adjust the result, Reporting Limit (RL), and Method Detection Limit (MDL).

All Solid, sludge, and/or biosolids data is reported in Wet Weight, unless otherwise specified.

Filtrations performed at Caltest for dissolved metals (excluding mercury) and/or pH analysis were not performed within the 15 minute holding time as specified by 40CFR 136.3 table II.

Results Qualifiers: Report fields may contain codes and non-numeric data correlating to one or more of the following definitions:

ND - Non Detect - indicates analytical result has not been detected.

RL - Reporting Limit is the quantitation limit at which the laboratory is able to detect an analyte. An analyte not detected at or above the RL is reported as ND unless otherwise noted or qualified. For analyses pertaining to the State Implementation Plan of the California Toxics Rule, the Caltest Reporting Limit (RL) is equivalent to the Minimum Level (ML). A standard is always run at or below the ML. Where Reporting Limits are elevated due to dilution, the ML calibration criteria has been met.

J - reflects estimated analytical result value detected below the Reporting Limit (RL) and above the Method Detection Limit (MDL). The 'J' flag is equivalent to the DNQ Estimated Concentration flag.

E - indicates an estimated analytical result value.

B - indicates the analyte has been detected in the blank associated with the sample.

NC - means not able to be calculated for RPD or Spike Recoveries.

SS - compound is a Surrogate Spike used per laboratory quality assurance manual.

NOTE: This document represents a complete Analytical Report for the samples referenced herein and should be retained as a permanent record thereof.

Qualifiers and Compound Notes

1	Sample was flow composited prior to analysis.
2	Sample diluted prior to analysis in an effort to reduce matrix interferences resulting in higher reporting limit(s).
3	Acrolein: The container and/or chain of custody indicated preservation at pH 4-5. The sample was no longer in this range when checked by the analyst.

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ANALYTICAL RESULTS

Lab Order: N010446

Project ID INFLUENT 624-JANUARY 8, 2013

Lab ID: **N010446001** Date Collected: 1/8/2013 14:00 Matrix: Water

Sample ID: **A-002 NOVATO INFLUENT** Date Received: 1/9/2013 16:10

Parameters	Result	Units	R. L.	MDL	DF	Prepared	Batch	Analyzed	Batch	Qual
Volatile Organic Analysis		**Analytical Method:**	EPA 624					**Analyzed by:**	AN	
Acrolein	ND	ug/L	20	8.5	5			01/14/13 19:51	VMS 2806	1,2,3
Acrylonitrile	ND	ug/L	10	3.4	5			01/14/13 19:51	VMS 2806	
Benzene	ND	ug/L	2.5	0.90	5			01/14/13 19:51	VMS 2806	
Bromodichloromethane	ND	ug/L	2.5	0.80	5			01/14/13 19:51	VMS 2806	
Bromoform	ND	ug/L	2.5	0.75	5			01/14/13 19:51	VMS 2806	
Bromomethane (Methyl Bromide)	ND	ug/L	2.5	0.85	5			01/14/13 19:51	VMS 2806	
Carbon tetrachloride	ND	ug/L	2.5	0.80	5			01/14/13 19:51	VMS 2806	
Chlorobenzene	ND	ug/L	2.5	0.90	5			01/14/13 19:51	VMS 2806	
Chloroethane (Ethyl Chloride)	ND	ug/L	2.5	1.9	5			01/14/13 19:51	VMS 2806	
2-Chloroethyl vinyl ether	ND	ug/L	5.0	1.4	5			01/14/13 19:51	VMS 2806	
Chloroform	ND	ug/L	2.5	0.95	5			01/14/13 19:51	VMS 2806	
Chloromethane(Methyl Chloride)	ND	ug/L	2.5	1.2	5			01/14/13 19:51	VMS 2806	
Dibromochloromethane	ND	ug/L	2.5	0.85	5			01/14/13 19:51	VMS 2806	
1,2-Dichlorobenzene	ND	ug/L	2.5	1.4	5			01/14/13 19:51	VMS 2806	
1,3-Dichlorobenzene	ND	ug/L	2.5	0.90	5			01/14/13 19:51	VMS 2806	
1,4-Dichlorobenzene	ND	ug/L	2.5	0.90	5			01/14/13 19:51	VMS 2806	
Dichlorodifluoromethane (F-12)	ND	ug/L	2.5	1.0	5			01/14/13 19:51	VMS 2806	
1,1-Dichloroethane	ND	ug/L	2.5	0.95	5			01/14/13 19:51	VMS 2806	
1,2-Dichloroethane (EDC)	ND	ug/L	2.5	0.90	5			01/14/13 19:51	VMS 2806	
1,1-Dichloroethene	ND	ug/L	2.5	1.0	5			01/14/13 19:51	VMS 2806	
cis-1,2-Dichloroethene	ND	ug/L	2.5	1.0	5			01/14/13 19:51	VMS 2806	
trans-1,2-Dichloroethene	ND	ug/L	2.5	1.1	5			01/14/13 19:51	VMS 2806	
1,2-Dichloropropane	ND	ug/L	2.5	0.90	5			01/14/13 19:51	VMS 2806	
cis-1,3-Dichloropropene	ND	ug/L	2.5	0.80	5			01/14/13 19:51	VMS 2806	
trans-1,3-Dichloropropene	ND	ug/L	2.5	0.80	5			01/14/13 19:51	VMS 2806	
Dichlorotrifluoroethane (F123)	ND	ug/L	2.5	0.70	5			01/14/13 19:51	VMS 2806	
Ethylbenzene	ND	ug/L	2.5	1.3	5			01/14/13 19:51	VMS 2806	
Methyl tert-butyl ether (MTBE)	ND	ug/L	2.5	0.75	5			01/14/13 19:51	VMS 2806	
Methylene chloride	13	ug/L	3.0	1.0	5			01/14/13 19:51	VMS 2806	
1,1,2,2-Tetrachloroethane	ND	ug/L	2.5	0.50	5			01/14/13 19:51	VMS 2806	
Tetrachloroethene (PCE)	ND	ug/L	2.5	0.95	5			01/14/13 19:51	VMS 2806	
Toluene	ND	ug/L	2.5	0.95	5			01/14/13 19:51	VMS 2806	
1,1,2-Trichloroethane	ND	ug/L	2.5	0.80	5			01/14/13 19:51	VMS 2806	
1,1,1-Trichloroethane (TCA)	ND	ug/L	2.5	0.95	5			01/14/13 19:51	VMS 2806	
Trichloroethene (TCE)	ND	ug/L	2.5	1.0	5			01/14/13 19:51	VMS 2806	

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ANALYTICAL RESULTS

Lab Order: N010446

Project ID INFLUENT 624-JANUARY 8, 2013

Lab ID: **N010446001** Date Collected: 1/8/2013 14:00 Matrix: Water

Sample ID: **A-002 NOVATO INFLUENT** Date Received: 1/9/2013 16:10

Parameters	Result	Units	R. L.	MDL	DF	Prepared	Batch	Analyzed	Batch	Qual
Trichlorofluoromethane (F-11)	ND	ug/L	2.5	1.4	5			01/14/13 19:51	VMS 2806	
Trichlorotrifluorethane (F113)	ND	ug/L	2.5	0.55	5			01/14/13 19:51	VMS 2806	
Vinyl chloride	ND	ug/L	2.5	1.2	5			01/14/13 19:51	VMS 2806	
Xylenes, total	ND	ug/L	2.5	1.3	5			01/14/13 19:51	VMS 2806	
4-Bromofluorobenzene (SS)	97	%	85-115		5			01/14/13 19:51	VMS 2806	
Dibromofluoromethane (SS)	99	%	85-115		5			01/14/13 19:51	VMS 2806	
1,2-Dichloroethane-d4 (SS)	92	%	75-125		5			01/14/13 19:51	VMS 2806	
Toluene-d8 (SS)	101	%	90-121		5			01/14/13 19:51	VMS 2806	

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Wednesday, January 16, 2013

Andrew Oko
Novato Sanitary District
500 Davidson St.
Novato, CA 94945

RE: Lab Order: N010445
Project ID: EFFLUENT 624-JANUARY 9, 2013
Collected By: KEN BESNIA
PO/Contract #:

Dear Andrew Oko:

Enclosed are the analytical results for sample(s) received by the laboratory on Wednesday, January 09, 2013. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

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

Enclosures

Project Manager: Todd Albertson

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SAMPLE SUMMARY

Lab Order: N010445
Project ID: EFFLUENT 624-JANUARY 9, 2013

Lab ID	Sample ID	Matrix	Date Collected	Date Received
N010445001	**E-002 NOVATO EFFLUENT**	Water	1/9/2013 14:00	1/9/2013 16:10

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NARRATIVE

Lab Order: N010445

Project ID: EFFLUENT 624-JANUARY 9, 2013

General Qualifiers and Notes

Caltest authorizes this report to be reproduced only in its entirety. Results are specific to the sample(s) as submitted and only to the parameter(s) reported.

Caltest certifies that all test results for wastewater and hazardous waste analyses meet all applicable NELAC requirements; all microbiology and drinking water testing meet applicable ELAP requirements, unless stated otherwise.

All analyses performed by EPA Methods or Standard Methods (SM) 20th Edition except where noted (SMOL=online edition).

Caltest collects samples in compliance with 40 CFR, EPA Methods, Cal. Title 22, and Standard Methods.

Dilution Factors (DF) reported greater than '1' have been used to adjust the result, Reporting Limit (RL), and Method Detection Limit (MDL).

All Solid, sludge, and/or biosolids data is reported in Wet Weight, unless otherwise specified.

Filtrations performed at Caltest for dissolved metals (excluding mercury) and/or pH analysis were not performed within the 15 minute holding time as specified by 40CFR 136.3 table II.

Results Qualifiers: Report fields may contain codes and non-numeric data correlating to one or more of the following definitions:

ND - Non Detect - indicates analytical result has not been detected.

RL - Reporting Limit is the quantitation limit at which the laboratory is able to detect an analyte. An analyte not detected at or above the RL is reported as ND unless otherwise noted or qualified. For analyses pertaining to the State Implementation Plan of the California Toxics Rule, the Caltest Reporting Limit (RL) is equivalent to the Minimum Level (ML). A standard is always run at or below the ML. Where Reporting Limits are elevated due to dilution, the ML calibration criteria has been met.

J - reflects estimated analytical result value detected below the Reporting Limit (RL) and above the Method Detection Limit (MDL). The 'J' flag is equivalent to the DNQ Estimated Concentration flag.

E - indicates an estimated analytical result value.

B - indicates the analyte has been detected in the blank associated with the sample.

NC - means not able to be calculated for RPD or Spike Recoveries.

SS - compound is a Surrogate Spike used per laboratory quality assurance manual.

NOTE: This document represents a complete Analytical Report for the samples referenced herein and should be retained as a permanent record thereof.

Qualifiers and Compound Notes

1 Sample was flow composited prior to analysis.

2 Analyte(s) reported as 'ND' means not detected at or above the listed Method Detection Limits (MDL).

3 Acrolein: The container and/or chain of custody indicated preservation at pH 4-5. The sample was no longer in this range when checked by the analyst.

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ANALYTICAL RESULTS

Lab Order: N010445

Project ID EFFLUENT 624-JANUARY 9, 2013

Lab ID: **N010445001** Date Collected: 1/9/2013 14:00 Matrix: Water

Sample ID: **E-002 NOVATO EFFLUENT** Date Received: 1/9/2013 16:10

Parameters	Result	Units	R. L.	MDL	DF	Prepared	Batch	Analyzed	Batch	Qual
Volatile Organic Analysis		**Analytical Method:**	EPA 624					**Analyzed by:**	AN	
Acrolein	ND	ug/L	5	1.7	1			01/14/13 17:48	VMS 2806	1,2,3
Acrylonitrile	ND	ug/L	2.0	0.69	1			01/14/13 17:48	VMS 2806	
Benzene	ND	ug/L	0.5	0.18	1			01/14/13 17:48	VMS 2806	
Bromodichloromethane	ND	ug/L	0.5	0.16	1			01/14/13 17:48	VMS 2806	
Bromoform	ND	ug/L	0.5	0.15	1			01/14/13 17:48	VMS 2806	
Bromomethane (Methyl Bromide)	ND	ug/L	0.5	0.17	1			01/14/13 17:48	VMS 2806	
Carbon tetrachloride	ND	ug/L	0.5	0.16	1			01/14/13 17:48	VMS 2806	
Chlorobenzene	ND	ug/L	0.5	0.18	1			01/14/13 17:48	VMS 2806	
Chloroethane (Ethyl Chloride)	ND	ug/L	0.5	0.38	1			01/14/13 17:48	VMS 2806	
2-Chloroethyl vinyl ether	ND	ug/L	1.0	0.28	1			01/14/13 17:48	VMS 2806	
Chloroform	J0.49	ug/L	0.5	0.19	1			01/14/13 17:48	VMS 2806	
Chloromethane(Methyl Chloride)	ND	ug/L	0.5	0.23	1			01/14/13 17:48	VMS 2806	
Dibromochloromethane	ND	ug/L	0.5	0.17	1			01/14/13 17:48	VMS 2806	
1,2-Dichlorobenzene	ND	ug/L	0.5	0.27	1			01/14/13 17:48	VMS 2806	
1,3-Dichlorobenzene	ND	ug/L	0.5	0.18	1			01/14/13 17:48	VMS 2806	
1,4-Dichlorobenzene	ND	ug/L	0.5	0.18	1			01/14/13 17:48	VMS 2806	
Dichlorodifluoromethane (F-12)	ND	ug/L	0.5	0.20	1			01/14/13 17:48	VMS 2806	
1,1-Dichloroethane	ND	ug/L	0.5	0.19	1			01/14/13 17:48	VMS 2806	
1,2-Dichloroethane (EDC)	ND	ug/L	0.5	0.18	1			01/14/13 17:48	VMS 2806	
1,1-Dichloroethene	ND	ug/L	0.5	0.21	1			01/14/13 17:48	VMS 2806	
cis-1,2-Dichloroethene	ND	ug/L	0.5	0.20	1			01/14/13 17:48	VMS 2806	
trans-1,2-Dichloroethene	ND	ug/L	0.5	0.22	1			01/14/13 17:48	VMS 2806	
1,2-Dichloropropane	ND	ug/L	0.5	0.18	1			01/14/13 17:48	VMS 2806	
cis-1,3-Dichloropropene	ND	ug/L	0.5	0.16	1			01/14/13 17:48	VMS 2806	
trans-1,3-Dichloropropene	ND	ug/L	0.5	0.16	1			01/14/13 17:48	VMS 2806	
Dichlorotrifluoroethane (F123)	ND	ug/L	0.5	0.14	1			01/14/13 17:48	VMS 2806	
Ethylbenzene	ND	ug/L	0.5	0.26	1			01/14/13 17:48	VMS 2806	
Methyl tert-butyl ether (MTBE)	ND	ug/L	0.5	0.15	1			01/14/13 17:48	VMS 2806	
Methylene chloride	0.8	ug/L	0.5	0.20	1			01/14/13 17:48	VMS 2806	
1,1,2,2-Tetrachloroethane	ND	ug/L	0.5	0.10	1			01/14/13 17:48	VMS 2806	
Tetrachloroethene (PCE)	ND	ug/L	0.5	0.19	1			01/14/13 17:48	VMS 2806	
Toluene	ND	ug/L	0.5	0.19	1			01/14/13 17:48	VMS 2806	
1,1,2-Trichloroethane	ND	ug/L	0.5	0.16	1			01/14/13 17:48	VMS 2806	
1,1,1-Trichloroethane (TCA)	ND	ug/L	0.5	0.19	1			01/14/13 17:48	VMS 2806	
Trichloroethene (TCE)	ND	ug/L	0.5	0.20	1			01/14/13 17:48	VMS 2806	

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ANALYTICAL RESULTS

Lab Order: N010445

Project ID EFFLUENT 624-JANUARY 9, 2013

Lab ID: **N010445001** Date Collected: 1/9/2013 14:00 Matrix: Water

Sample ID: **E-002 NOVATO EFFLUENT** Date Received: 1/9/2013 16:10

Parameters	Result	Units	R. L.	MDL	DF	Prepared	Batch	Analyzed	Batch	Qual
Trichlorofluoromethane (F-11)	ND	ug/L	0.5	0.29	1			01/14/13 17:48	VMS 2806	
Trichlorotrifluorethane (F113)	ND	ug/L	1.0	0.11	1			01/14/13 17:48	VMS 2806	
Vinyl chloride	ND	ug/L	0.5	0.25	1			01/14/13 17:48	VMS 2806	
Xylenes, total	ND	ug/L	0.5	0.26	1			01/14/13 17:48	VMS 2806	
4-Bromofluorobenzene (SS)	95	%	85-115		1			01/14/13 17:48	VMS 2806	
Dibromofluoromethane (SS)	104	%	85-115		1			01/14/13 17:48	VMS 2806	
1,2-Dichloroethane-d4 (SS)	97	%	75-125		1			01/14/13 17:48	VMS 2806	
Toluene-d8 (SS)	102	%	90-121		1			01/14/13 17:48	VMS 2806	

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Wednesday, January 23, 2013

Andrew Oko
Novato Sanitary District
500 Davidson St.
Novato, CA 94945

RE: Lab Order: N010438
Project ID: INFLUENT 625-JANUARY 8, 2013

Collected By: KEN BESNIA
PO/Contract #:

Dear Andrew Oko:

Enclosed are the analytical results for sample(s) received by the laboratory on Wednesday, January 09, 2013. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

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

Enclosures

Project Manager: Todd Albertson

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SAMPLE SUMMARY

Lab Order: N010438

Project ID: INFLUENT 625-JANUARY 8, 2013

Lab ID	Sample ID	Matrix	Date Collected	Date Received
N010438001	**A-002 NOVATO INFLUENT**	Water	1/8/2013 14:00	1/9/2013 16:10

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NARRATIVE

Lab Order: N010438

Project ID: INFLUENT 625-JANUARY 8, 2013

General Qualifiers and Notes

Caltest authorizes this report to be reproduced only in its entirety. Results are specific to the sample(s) as submitted and only to the parameter(s) reported.

Caltest certifies that all test results for wastewater and hazardous waste analyses meet all applicable NELAC requirements; all microbiology and drinking water testing meet applicable ELAP requirements, unless stated otherwise.

All analyses performed by EPA Methods or Standard Methods (SM) 20th Edition except where noted (SMOL=online edition).

Caltest collects samples in compliance with 40 CFR, EPA Methods, Cal. Title 22, and Standard Methods.

Dilution Factors (DF) reported greater than '1' have been used to adjust the result, Reporting Limit (RL), and Method Detection Limit (MDL).

All Solid, sludge, and/or biosolids data is reported in Wet Weight, unless otherwise specified.

Filtrations performed at Caltest for dissolved metals (excluding mercury) and/or pH analysis were not performed within the 15 minute holding time as specified by 40CFR 136.3 table II.

Results Qualifiers: Report fields may contain codes and non-numeric data correlating to one or more of the following definitions:

ND - Non Detect - indicates analytical result has not been detected.

RL - Reporting Limit is the quantitation limit at which the laboratory is able to detect an analyte. An analyte not detected at or above the RL is reported as ND unless otherwise noted or qualified. For analyses pertaining to the State Implementation Plan of the California Toxics Rule, the Caltest Reporting Limit (RL) is equivalent to the Minimum Level (ML). A standard is always run at or below the ML. Where Reporting Limits are elevated due to dilution, the ML calibration criteria has been met.

J - reflects estimated analytical result value detected below the Reporting Limit (RL) and above the Method Detection Limit (MDL). The 'J' flag is equivalent to the DNQ Estimated Concentration flag.

E - indicates an estimated analytical result value.

B - indicates the analyte has been detected in the blank associated with the sample.

NC - means not able to be calculated for RPD or Spike Recoveries.

SS - compound is a Surrogate Spike used per laboratory quality assurance manual.

NOTE: This document represents a complete Analytical Report for the samples referenced herein and should be retained as a permanent record thereof.

Qualifiers and Compound Notes

1	Sample diluted due to a high concentration of non-target analyte(s), resulting in increased reporting limits.

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ANALYTICAL RESULTS

Lab Order: N010438

Project ID INFLUENT 625-JANUARY 8, 2013

Lab ID: **N010438001** Date Collected: 1/8/2013 14:00 Matrix: Water

Sample ID: **A-002 NOVATO INFLUENT** Date Received: 1/9/2013 16:10

Parameters	Result	Units	R. L.	MDL	DF	Prepared	Batch	Analyzed	Batch	Qual
Semivolatile Organic Analysis		**Prep Method:**	EPA 625			**Prep by:** EAB				
		Analytical Method:	EPA 625					**Analyzed by:** MDT		
Acenaphthene	ND	ug/L	5.0	0.3	10	01/14/13 00:00	SPR 5692	01/21/13 12:24	SMS 2980	1
Acenaphthylene	ND	ug/L	5.0	0.3	10	01/14/13 00:00	SPR 5692	01/21/13 12:24	SMS 2980	
Anthracene	ND	ug/L	5.0	0.3	10	01/14/13 00:00	SPR 5692	01/21/13 12:24	SMS 2980	
Benzidine	ND	ug/L	50	50	10	01/14/13 00:00	SPR 5692	01/21/13 12:24	SMS 2980	
Benzo(a)anthracene	ND	ug/L	5.0	0.3	10	01/14/13 00:00	SPR 5692	01/21/13 12:24	SMS 2980	
Benzo(a)pyrene	ND	ug/L	5.0	0.3	10	01/14/13 00:00	SPR 5692	01/21/13 12:24	SMS 2980	
Benzo(b)fluoranthene	ND	ug/L	5.0	0.3	10	01/14/13 00:00	SPR 5692	01/21/13 12:24	SMS 2980	
Benzo(g,h,i)perylene	ND	ug/L	5.0	0.3	10	01/14/13 00:00	SPR 5692	01/21/13 12:24	SMS 2980	
Benzo(k)fluoranthene	ND	ug/L	5.0	0.3	10	01/14/13 00:00	SPR 5692	01/21/13 12:24	SMS 2980	
Benzyl butyl phthalate	ND	ug/L	20	9.8	10	01/14/13 00:00	SPR 5692	01/21/13 12:24	SMS 2980	
4-Bromophenyl phenyl ether	ND	ug/L	20	9.7	10	01/14/13 00:00	SPR 5692	01/21/13 12:24	SMS 2980	
bis(2-Chloroethoxy) methane	ND	ug/L	10	9.3	10	01/14/13 00:00	SPR 5692	01/21/13 12:24	SMS 2980	
bis(2-Chloroethyl) ether	ND	ug/L	10	9.5	10	01/14/13 00:00	SPR 5692	01/21/13 12:24	SMS 2980	
bis(2-Chloroisopropyl) ether	ND	ug/L	10	8.1	10	01/14/13 00:00	SPR 5692	01/21/13 12:24	SMS 2980	
4-Chloro-3-methylphenol	ND	ug/L	10	9.1	10	01/14/13 00:00	SPR 5692	01/21/13 12:24	SMS 2980	
2-Chloronaphthalene	ND	ug/L	10	9.8	10	01/14/13 00:00	SPR 5692	01/21/13 12:24	SMS 2980	
2-Chlorophenol	ND	ug/L	20	9.8	10	01/14/13 00:00	SPR 5692	01/21/13 12:24	SMS 2980	
4-Chlorophenyl phenyl ether	ND	ug/L	20	9.9	10	01/14/13 00:00	SPR 5692	01/21/13 12:24	SMS 2980	
Chrysene	ND	ug/L	5.0	0.3	10	01/14/13 00:00	SPR 5692	01/21/13 12:24	SMS 2980	
Dibenzo(a,h)anthracene	ND	ug/L	5.0	0.3	10	01/14/13 00:00	SPR 5692	01/21/13 12:24	SMS 2980	
3,3'-Dichlorobenzidine	ND	ug/L	50	50	10	01/14/13 00:00	SPR 5692	01/21/13 12:24	SMS 2980	
2,4-Dichlorophenol	ND	ug/L	10	9.9	10	01/14/13 00:00	SPR 5692	01/21/13 12:24	SMS 2980	
Diethylphthalate	ND	ug/L	10	8.6	10	01/14/13 00:00	SPR 5692	01/21/13 12:24	SMS 2980	
2,4-Dimethylphenol	ND	ug/L	20	8.7	10	01/14/13 00:00	SPR 5692	01/21/13 12:24	SMS 2980	
Dimethylphthalate	ND	ug/L	10	9.7	10	01/14/13 00:00	SPR 5692	01/21/13 12:24	SMS 2980	
Di-n-butylphthalate	ND	ug/L	10	9.1	10	01/14/13 00:00	SPR 5692	01/21/13 12:24	SMS 2980	
2,4-Dinitrophenol	ND	ug/L	20	8.3	10	01/14/13 00:00	SPR 5692	01/21/13 12:24	SMS 2980	
2,4-Dinitrotoluene	ND	ug/L	10	9.6	10	01/14/13 00:00	SPR 5692	01/21/13 12:24	SMS 2980	
2,6-Dinitrotoluene	ND	ug/L	10	9.8	10	01/14/13 00:00	SPR 5692	01/21/13 12:24	SMS 2980	
Di-n-octylphthalate	ND	ug/L	10	9.2	10	01/14/13 00:00	SPR 5692	01/21/13 12:24	SMS 2980	
12Diphenylhydrazine/Azobenzene	ND	ug/L	10	9.0	10	01/14/13 00:00	SPR 5692	01/21/13 12:24	SMS 2980	
bis(2-Ethylhexyl) phthalate	16	ug/L	10	9.5	10	01/14/13 00:00	SPR 5692	01/21/13 12:24	SMS 2980	
Fluoranthene	ND	ug/L	5.0	0.3	10	01/14/13 00:00	SPR 5692	01/21/13 12:24	SMS 2980	
Fluorene	ND	ug/L	5.0	0.3	10	01/14/13 00:00	SPR 5692	01/21/13 12:24	SMS 2980	
Hexachlorobenzene	ND	ug/L	10	9.1	10	01/14/13 00:00	SPR 5692	01/21/13 12:24	SMS 2980	

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ANALYTICAL RESULTS

Lab Order: N010438

Project ID INFLUENT 625-JANUARY 8, 2013

Lab ID: **N010438001** Date Collected: 1/8/2013 14:00 Matrix: Water

Sample ID: **A-002 NOVATO INFLUENT** Date Received: 1/9/2013 16:10

Parameters	Result	Units	R. L.	MDL	DF	Prepared	Batch	Analyzed	Batch	Qual
Hexachlorobutadiene	ND	ug/L	10	9.2	10	01/14/13 00:00	SPR 5692	01/21/13 12:24	SMS 2980	
Hexachlorocyclo pentadiene	ND	ug/L	10	9.0	10	01/14/13 00:00	SPR 5692	01/21/13 12:24	SMS 2980	
Hexachloroethane	ND	ug/L	10	9.4	10	01/14/13 00:00	SPR 5692	01/21/13 12:24	SMS 2980	
Indeno(1,2,3-cd)pyrene	ND	ug/L	5.0	0.3	10	01/14/13 00:00	SPR 5692	01/21/13 12:24	SMS 2980	
Isophorone	ND	ug/L	10	9.3	10	01/14/13 00:00	SPR 5692	01/21/13 12:24	SMS 2980	
2-Methyl-4,6-dinitrophenol	ND	ug/L	20	9.1	10	01/14/13 00:00	SPR 5692	01/21/13 12:24	SMS 2980	
Naphthalene	ND	ug/L	5.0	0.3	10	01/14/13 00:00	SPR 5692	01/21/13 12:24	SMS 2980	
Nitrobenzene	ND	ug/L	10	9.5	10	01/14/13 00:00	SPR 5692	01/21/13 12:24	SMS 2980	
2-Nitrophenol	ND	ug/L	20	8.9	10	01/14/13 00:00	SPR 5692	01/21/13 12:24	SMS 2980	
4-Nitrophenol	ND	ug/L	10	8.3	10	01/14/13 00:00	SPR 5692	01/21/13 12:24	SMS 2980	
N-Nitrosodimethylamine	ND	ug/L	10	8.8	10	01/14/13 00:00	SPR 5692	01/21/13 12:24	SMS 2980	
N-Nitroso-di-n-propylamine	ND	ug/L	10	9.7	10	01/14/13 00:00	SPR 5692	01/21/13 12:24	SMS 2980	
N-Nitrosodiphenylamine	ND	ug/L	10	8.3	10	01/14/13 00:00	SPR 5692	01/21/13 12:24	SMS 2980	
Pentachlorophenol	ND	ug/L	10	8.1	10	01/14/13 00:00	SPR 5692	01/21/13 12:24	SMS 2980	
Phenanthrene	J0.34	ug/L	5.0	0.3	10	01/14/13 00:00	SPR 5692	01/21/13 12:24	SMS 2980	
Phenol	ND	ug/L	10	6.9	10	01/14/13 00:00	SPR 5692	01/21/13 12:24	SMS 2980	
Pyrene	J1.1	ug/L	5.0	0.3	10	01/14/13 00:00	SPR 5692	01/21/13 12:24	SMS 2980	
1,2,4-Trichlorobenzene	ND	ug/L	20	9.8	10	01/14/13 00:00	SPR 5692	01/21/13 12:24	SMS 2980	
2,4,6-Trichlorophenol	ND	ug/L	20	9.7	10	01/14/13 00:00	SPR 5692	01/21/13 12:24	SMS 2980	
2-Fluorobiphenyl (SS)	81	%	10-100		10	01/14/13 00:00	SPR 5692	01/21/13 12:24	SMS 2980	
2-Fluorophenol (SS)	44	%	10-100		10	01/14/13 00:00	SPR 5692	01/21/13 12:24	SMS 2980	
Nitrobenzene-d5 (SS)	75	%	27-109		10	01/14/13 00:00	SPR 5692	01/21/13 12:24	SMS 2980	
Phenol-d6 (SS)	27	%	12-100		10	01/14/13 00:00	SPR 5692	01/21/13 12:24	SMS 2980	
Terphenyl-d14 (SS)	145	%	35-153		10	01/14/13 00:00	SPR 5692	01/21/13 12:24	SMS 2980	
2,4,6-Tribromophenol (SS)	100	%	32-148		10	01/14/13 00:00	SPR 5692	01/21/13 12:24	SMS 2980	

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Wednesday, January 23, 2013

Andrew Oko
Novato Sanitary District
500 Davidson St.
Novato, CA 94945

RE: Lab Order: N010437
Project ID: EFFLUENT 625-JANUARY 9, 2013

Collected By: KEN BESNIA
PO/Contract #:

Dear Andrew Oko:

Enclosed are the analytical results for sample(s) received by the laboratory on Wednesday, January 09, 2013. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

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

Enclosures

Project Manager: Todd Albertson

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SAMPLE SUMMARY

Lab Order: N010437

Project ID: EFFLUENT 625-JANUARY 9, 2013

Lab ID	Sample ID	Matrix	Date Collected	Date Received
N010437001	**E-002 NOVATO EFFLUENT**	Water	1/9/2013 14:00	1/9/2013 16:10

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NARRATIVE

Lab Order: N010437

Project ID: EFFLUENT 625-JANUARY 9, 2013

General Qualifiers and Notes

Caltest authorizes this report to be reproduced only in its entirety. Results are specific to the sample(s) as submitted and only to the parameter(s) reported.

Caltest certifies that all test results for wastewater and hazardous waste analyses meet all applicable NELAC requirements; all microbiology and drinking water testing meet applicable ELAP requirements, unless stated otherwise.

All analyses performed by EPA Methods or Standard Methods (SM) 20th Edition except where noted (SMOL=online edition).

Caltest collects samples in compliance with 40 CFR, EPA Methods, Cal. Title 22, and Standard Methods.

Dilution Factors (DF) reported greater than '1' have been used to adjust the result, Reporting Limit (RL), and Method Detection Limit (MDL).

All Solid, sludge, and/or biosolids data is reported in Wet Weight, unless otherwise specified.

Filtrations performed at Caltest for dissolved metals (excluding mercury) and/or pH analysis were not performed within the 15 minute holding time as specified by 40CFR 136.3 table II.

Results Qualifiers: Report fields may contain codes and non-numeric data correlating to one or more of the following definitions:

ND - Non Detect - indicates analytical result has not been detected.

RL - Reporting Limit is the quantitation limit at which the laboratory is able to detect an analyte. An analyte not detected at or above the RL is reported as ND unless otherwise noted or qualified. For analyses pertaining to the State Implementation Plan of the California Toxics Rule, the Caltest Reporting Limit (RL) is equivalent to the Minimum Level (ML). A standard is always run at or below the ML. Where Reporting Limits are elevated due to dilution, the ML calibration criteria has been met.

J - reflects estimated analytical result value detected below the Reporting Limit (RL) and above the Method Detection Limit (MDL). The 'J' flag is equivalent to the DNQ Estimated Concentration flag.

E - indicates an estimated analytical result value.

B - indicates the analyte has been detected in the blank associated with the sample.

NC - means not able to be calculated for RPD or Spike Recoveries.

SS - compound is a Surrogate Spike used per laboratory quality assurance manual.

NOTE: This document represents a complete Analytical Report for the samples referenced herein and should be retained as a permanent record thereof.

Qualifiers and Compound Notes

1 Analyte(s) reported as 'ND' means not detected at or above the listed Method Detection Limits (MDL).

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ANALYTICAL RESULTS

Lab Order: N010437

Project ID EFFLUENT 625-JANUARY 9, 2013

Lab ID: N010437001 Date Collected: 1/9/2013 14:00 Matrix: Water

Sample ID: E-002 NOVATO EFFLUENT Date Received: 1/9/2013 16:10

Parameters	Result	Units	R. L.	MDL	DF	Prepared	Batch	Analyzed	Batch	Qual
Semivolatile Organic Analysis		**Prep Method:**	EPA 625			**Prep by:** EAB				
		Analytical Method:	EPA 625					**Analyzed by:** MDT		
Acenaphthene	J0.03	ug/L	0.3	0.030	1	01/16/13 00:00	SPR 5699	01/18/13 18:10	SMS 2979	1
Acenaphthylene	ND	ug/L	0.2	0.030	1	01/16/13 00:00	SPR 5699	01/18/13 18:10	SMS 2979	
Anthracene	ND	ug/L	0.3	0.030	1	01/16/13 00:00	SPR 5699	01/18/13 18:10	SMS 2979	
Benzidine	ND	ug/L	5.0	5.0	1	01/16/13 00:00	SPR 5699	01/18/13 18:10	SMS 2979	
Benzo(a)anthracene	ND	ug/L	0.3	0.030	1	01/16/13 00:00	SPR 5699	01/18/13 18:10	SMS 2979	
Benzo(a)pyrene	ND	ug/L	0.3	0.030	1	01/16/13 00:00	SPR 5699	01/18/13 18:10	SMS 2979	
Benzo(b)fluoranthene	ND	ug/L	0.3	0.030	1	01/16/13 00:00	SPR 5699	01/18/13 18:10	SMS 2979	
Benzo(g,h,i)perylene	ND	ug/L	0.1	0.030	1	01/16/13 00:00	SPR 5699	01/18/13 18:10	SMS 2979	
Benzo(k)fluoranthene	ND	ug/L	0.3	0.030	1	01/16/13 00:00	SPR 5699	01/18/13 18:10	SMS 2979	
Benzyl butyl phthalate	ND	ug/L	5.0	0.98	1	01/16/13 00:00	SPR 5699	01/18/13 18:10	SMS 2979	
4-Bromophenyl phenyl ether	ND	ug/L	5.0	0.97	1	01/16/13 00:00	SPR 5699	01/18/13 18:10	SMS 2979	
bis(2-Chloroethoxy) methane	ND	ug/L	5.0	0.93	1	01/16/13 00:00	SPR 5699	01/18/13 18:10	SMS 2979	
bis(2-Chloroethyl) ether	ND	ug/L	1.0	0.95	1	01/16/13 00:00	SPR 5699	01/18/13 18:10	SMS 2979	
bis(2-Chloroisopropyl) ether	ND	ug/L	2.0	0.81	1	01/16/13 00:00	SPR 5699	01/18/13 18:10	SMS 2979	
4-Chloro-3-methylphenol	ND	ug/L	1.0	0.91	1	01/16/13 00:00	SPR 5699	01/18/13 18:10	SMS 2979	
2-Chloronaphthalene	ND	ug/L	5.0	0.98	1	01/16/13 00:00	SPR 5699	01/18/13 18:10	SMS 2979	
2-Chlorophenol	ND	ug/L	2.0	0.98	1	01/16/13 00:00	SPR 5699	01/18/13 18:10	SMS 2979	
4-Chlorophenyl phenyl ether	ND	ug/L	5.0	0.99	1	01/16/13 00:00	SPR 5699	01/18/13 18:10	SMS 2979	
Chrysene	ND	ug/L	0.3	0.030	1	01/16/13 00:00	SPR 5699	01/18/13 18:10	SMS 2979	
Dibenzo(a,h)anthracene	ND	ug/L	0.1	0.030	1	01/16/13 00:00	SPR 5699	01/18/13 18:10	SMS 2979	
3,3'-Dichlorobenzidine	ND	ug/L	5.0	5.0	1	01/16/13 00:00	SPR 5699	01/18/13 18:10	SMS 2979	
2,4-Dichlorophenol	ND	ug/L	1.0	0.99	1	01/16/13 00:00	SPR 5699	01/18/13 18:10	SMS 2979	
Diethylphthalate	ND	ug/L	2.0	0.86	1	01/16/13 00:00	SPR 5699	01/18/13 18:10	SMS 2979	
2,4-Dimethylphenol	ND	ug/L	2.0	0.87	1	01/16/13 00:00	SPR 5699	01/18/13 18:10	SMS 2979	
Dimethylphthalate	ND	ug/L	2.0	0.97	1	01/16/13 00:00	SPR 5699	01/18/13 18:10	SMS 2979	
Di-n-butylphthalate	ND	ug/L	5.0	0.91	1	01/16/13 00:00	SPR 5699	01/18/13 18:10	SMS 2979	
2,4-Dinitrophenol	ND	ug/L	5.0	0.83	1	01/16/13 00:00	SPR 5699	01/18/13 18:10	SMS 2979	
2,4-Dinitrotoluene	ND	ug/L	5.0	0.96	1	01/16/13 00:00	SPR 5699	01/18/13 18:10	SMS 2979	
2,6-Dinitrotoluene	ND	ug/L	5.0	0.98	1	01/16/13 00:00	SPR 5699	01/18/13 18:10	SMS 2979	
Di-n-octylphthalate	ND	ug/L	5.0	0.92	1	01/16/13 00:00	SPR 5699	01/18/13 18:10	SMS 2979	
12Diphenylhydrazine/Azobenzene	ND	ug/L	1.0	0.90	1	01/16/13 00:00	SPR 5699	01/18/13 18:10	SMS 2979	
bis(2-Ethylhexyl) phthalate	J1.1	ug/L	3.0	0.95	1	01/16/13 00:00	SPR 5699	01/18/13 18:10	SMS 2979	
Fluoranthene	ND	ug/L	0.05	0.030	1	01/16/13 00:00	SPR 5699	01/18/13 18:10	SMS 2979	
Fluorene	ND	ug/L	0.1	0.030	1	01/16/13 00:00	SPR 5699	01/18/13 18:10	SMS 2979	
Hexachlorobenzene	ND	ug/L	1.0	0.91	1	01/16/13 00:00	SPR 5699	01/18/13 18:10	SMS 2979	

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ANALYTICAL RESULTS

Lab Order: N010437

Project ID EFFLUENT 625-JANUARY 9, 2013

Lab ID: **N010437001** Date Collected: 1/9/2013 14:00 Matrix: Water

Sample ID: **E-002 NOVATO EFFLUENT** Date Received: 1/9/2013 16:10

Parameters	Result	Units	R. L.	MDL	DF	Prepared	Batch	Analyzed	Batch	Qual
Hexachlorobutadiene	ND	ug/L	1.0	0.92	1	01/16/13 00:00	SPR 5699	01/18/13 18:10	SMS 2979	
Hexachlorocyclo pentadiene	ND	ug/L	1.0	0.90	1	01/16/13 00:00	SPR 5699	01/18/13 18:10	SMS 2979	
Hexachloroethane	ND	ug/L	1.0	0.94	1	01/16/13 00:00	SPR 5699	01/18/13 18:10	SMS 2979	
Indeno(1,2,3-cd)pyrene	ND	ug/L	0.05	0.030	1	01/16/13 00:00	SPR 5699	01/18/13 18:10	SMS 2979	
Isophorone	ND	ug/L	1.0	0.93	1	01/16/13 00:00	SPR 5699	01/18/13 18:10	SMS 2979	
2-Methyl-4,6-dinitrophenol	ND	ug/L	5.0	0.91	1	01/16/13 00:00	SPR 5699	01/18/13 18:10	SMS 2979	
Naphthalene	J0.06	ug/L	0.2	0.030	1	01/16/13 00:00	SPR 5699	01/18/13 18:10	SMS 2979	
Nitrobenzene	ND	ug/L	1.0	0.95	1	01/16/13 00:00	SPR 5699	01/18/13 18:10	SMS 2979	
2-Nitrophenol	ND	ug/L	5.0	0.89	1	01/16/13 00:00	SPR 5699	01/18/13 18:10	SMS 2979	
4-Nitrophenol	ND	ug/L	5.0	0.83	1	01/16/13 00:00	SPR 5699	01/18/13 18:10	SMS 2979	
N-Nitrosodimethylamine	ND	ug/L	5.0	0.88	1	01/16/13 00:00	SPR 5699	01/18/13 18:10	SMS 2979	
N-Nitroso-di-n-propylamine	ND	ug/L	5.0	0.97	1	01/16/13 00:00	SPR 5699	01/18/13 18:10	SMS 2979	
N-Nitrosodiphenylamine	ND	ug/L	1.0	0.83	1	01/16/13 00:00	SPR 5699	01/18/13 18:10	SMS 2979	
Pentachlorophenol	ND	ug/L	1.0	0.81	1	01/16/13 00:00	SPR 5699	01/18/13 18:10	SMS 2979	
Phenanthrene	ND	ug/L	0.05	0.030	1	01/16/13 00:00	SPR 5699	01/18/13 18:10	SMS 2979	
Phenol	ND	ug/L	1.0	0.69	1	01/16/13 00:00	SPR 5699	01/18/13 18:10	SMS 2979	
Pyrene	ND	ug/L	0.05	0.030	1	01/16/13 00:00	SPR 5699	01/18/13 18:10	SMS 2979	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	0.98	1	01/16/13 00:00	SPR 5699	01/18/13 18:10	SMS 2979	
2,4,6-Trichlorophenol	ND	ug/L	5.0	0.97	1	01/16/13 00:00	SPR 5699	01/18/13 18:10	SMS 2979	
2-Fluorobiphenyl (SS)	46	%	10-100		1	01/16/13 00:00	SPR 5699	01/18/13 18:10	SMS 2979	
2-Fluorophenol (SS)	37	%	10-100		1	01/16/13 00:00	SPR 5699	01/18/13 18:10	SMS 2979	
Nitrobenzene-d5 (SS)	43	%	27-109		1	01/16/13 00:00	SPR 5699	01/18/13 18:10	SMS 2979	
Phenol-d6 (SS)	23	%	12-100		1	01/16/13 00:00	SPR 5699	01/18/13 18:10	SMS 2979	
Terphenyl-d14 (SS)	85	%	35-153		1	01/16/13 00:00	SPR 5699	01/18/13 18:10	SMS 2979	
2,4,6-Tribromophenol (SS)	84	%	32-148		1	01/16/13 00:00	SPR 5699	01/18/13 18:10	SMS 2979	

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FRONTIER
ANALYTICAL LABORATORY

NELAP ACCREDITED TNI LABORATORY

January 17, 2013

FAL Project ID: 7672

Mr. Ken Besnia
Novato Sanitary District
500 Davidson Street
Novato, CA 94945

Dear Mr. Besnia,

The following results are for Frontier Analytical Laboratory project **7672**. This corresponds to your **January 2013 Semi Annual** project. One aqueous sample was received on 1/10/2013 in good condition. This sample was extracted and analyzed by EPA Method 1613 for tetra through octa chlorinated dibenzo dioxins and furans. The guidelines from Regional Order R2-2010-0054 were followed. This includes using the 1998 World Health Organizations toxic equivalency factors (TEFs) as well as the Bioaccumulation Equivalency Factors (BEFs) to determine the overall toxic equivalency (TEQ) of your sample. Please also note that we followed the specific guidelines for determination of the DNQ qualifiers. Novato Sanitary District requested a turnaround time of ten business days for project **7672.**

The following report consists of an Analytical Data section and a Sample Receipt section. The Analytical Data section contains our project-sample tracking log and the analytical results. The Sample Receipt section contains your original chain of custody, our sample login form and a sample photo. The enclosed results and electronic data deliverables (EDD) are specifically for the sample referenced in this report only. These results meet all National Environmental Laboratory Accreditation Program (NELAP) requirements and shall not be reproduced except in full. Frontier Analytical Laboratory's State of California NELAP certificate number is **02113CA**. This report along with the associated electronic data deliverable (EDD) has been emailed to you as a PDF file. A hardcopy will not be sent to you unless specifically requested.

If you have any questions regarding project **7672**, please feel free to contact me at (916) 934-0900. Thank you for choosing Frontier Analytical Laboratory for your analytical testing needs.

Sincerely,

Thomas C. Crabtree

Tom Crabtree
Director

Frontier Analytical Laboratory

Sample Tracking Log

FAL Project ID: **7672**

Received on: **01/10/2013** Project Due: **01/25/2013** Storage: **R1**

FAL Sample ID	Dup	Client Project ID	Client Sample ID	Requested Method	Matrix	Sampling Date	Sampling Time	Hold Time Due Date
7672-001-SA	1	Jan 2013 Semiannual	EFFLUENT	EPA 1613 D/F	Aqueous	01/09/2013	10:00 am	01/09/2014

FAL Sample ID	Notes
7672-001-SA	'Using hand written sample ID from bottle label for our tracking purposes. '

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EPA Method 1613
PCDD/F

FRONTIER ANALYTICAL LABORATORY

FAL ID: 7672-001-MB
Client ID: Method Blank
Matrix: Aqueous
Batch No: X2749

Date Extracted: 01-15-2013
Date Received: NA
Amount: 1.000 L

ICal: PCDDFAL3-12-28-12
GC Column: DB5
Units: pg/L

Acquired: 01-16-2013
CRWQCB-SFBR
Dioxin TEQ: 0.00

Compound	Conc	DL	Qual	1998 WHO Tox	TEF x BEF	ML	MDL
2,3,7,8-TCDD	ND	0.682		-	-	10.0	0.260
1,2,3,7,8-PeCDD	ND	0.644		-	-	50.0	0.268
1,2,3,4,7,8-HxCDD	ND	1.24		-	-	50.0	0.482
1,2,3,6,7,8-HxCDD	ND	1.32		-	-	50.0	0.484
1,2,3,7,8,9-HxCDD	ND	1.24		-	-	50.0	0.460
1,2,3,4,6,7,8-HpCDD	ND	1.66		-	-	50.0	0.478
OCDD	ND	2.66		-	-	100	1.40
2,3,7,8-TCDF	ND	0.612		-	-	10.0	0.257
1,2,3,7,8-PeCDF	ND	0.568		-	-	50.0	0.335
2,3,4,7,8-PeCDF	ND	0.560		-	-	50.0	0.340
1,2,3,4,7,8-HxCDF	ND	0.501		-	-	50.0	0.284
1,2,3,6,7,8-HxCDF	ND	0.528		-	-	50.0	0.281
2,3,4,6,7,8-HxCDF	ND	0.575		-	-	50.0	0.294
1,2,3,7,8,9-HxCDF	ND	0.827		-	-	50.0	0.348
1,2,3,4,6,7,8-HpCDF	ND	0.696		-	-	50.0	0.295
1,2,3,4,7,8,9-HpCDF	ND	1.09		-	-	50.0	0.397
OCDF	ND	1.32		-	-	100	0.738

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	94.5	25.0 - 164	
13C-1,2,3,7,8-PeCDD	85.2	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	90.2	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	92.1	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	87.0	23.0 - 140	
13C-OCDD	93.6	17.0 - 157	
13C-2,3,7,8-TCDF	91.7	24.0 - 169	
13C-1,2,3,7,8-PeCDF	81.2	24.0 - 185	
13C-2,3,4,7,8-PeCDF	80.5	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	91.6	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	90.1	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	91.2	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	94.8	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	79.1	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	79.4	26.0 - 138	
13C-OCDF	98.0	17.0 - 157	
Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	97.1	35.0 - 197	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
DNQ	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected
NP	Not Provided
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: JC

Date: 1/17/2013

Reviewed By: DPV

Date: 1/17/2013

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EPA Method 1613
PCDD/F

FRONTIER ANALYTICAL LABORATORY

FAL ID: 7672-001-OPR
Client ID: OPR
Matrix: Aqueous
Batch No: X2749

Date Extracted: 01-15-2013
Date Received: NA
Amount: 1.000 L

ICal: PCDDFAL3-12-28-12
GC Column: DB5
Units: ng/ml

Acquired: 01-16-2013
CRWQCB-SFBR
Dioxin TEQ: NA

Compound	Conc	QC Limits	Qual
2,3,7,8-TCDD	8.90	6.70 - 15.8	
1,2,3,7,8-PeCDD	47.9	35.0 - 71.0	
1,2,3,4,7,8-HxCDD	49.5	35.0 - 82.0	
1,2,3,6,7,8-HxCDD	51.1	38.0 - 67.0	
1,2,3,7,8,9-HxCDD	49.2	32.0 - 81.0	
1,2,3,4,6,7,8-HpCDD	50.9	35.0 - 70.0	
OCDD	98.3	78.0 - 144	
2,3,7,8-TCDF	9.02	7.50 - 15.8	
1,2,3,7,8-PeCDF	45.9	40.0 - 67.0	
2,3,4,7,8-PeCDF	45.6	34.0 - 80.0	
1,2,3,4,7,8-HxCDF	45.9	36.0 - 67.0	
1,2,3,6,7,8-HxCDF	45.8	42.0 - 65.0	
2,3,4,6,7,8-HxCDF	45.7	35.0 - 78.0	
1,2,3,7,8,9-HxCDF	45.9	39.0 - 65.0	
1,2,3,4,6,7,8-HpCDF	48.0	41.0 - 61.0	
1,2,3,4,7,8,9-HpCDF	47.1	39.0 - 69.0	
OCDF	87.9	63.0 - 170	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	78.6	20.0 - 175	
13C-1,2,3,7,8-PeCDD	67.6	21.0 - 227	
13C-1,2,3,4,7,8-HxCDD	71.7	21.0 - 193	
13C-1,2,3,6,7,8-HxCDD	71.8	25.0 - 163	
13C-1,2,3,4,6,7,8-HpCDD	65.7	26.0 - 166	
13C-OCDD	71.0	13.0 - 198	
13C-2,3,7,8-TCDF	78.5	22.0 - 152	
13C-1,2,3,7,8-PeCDF	66.2	21.0 - 192	
13C-2,3,4,7,8-PeCDF	66.2	13.0 - 328	
13C-1,2,3,4,7,8-HxCDF	71.8	19.0 - 202	
13C-1,2,3,6,7,8-HxCDF	72.8	21.0 - 159	
13C-2,3,4,6,7,8-HxCDF	73.3	22.0 - 176	
13C-1,2,3,7,8,9-HxCDF	73.5	17.0 - 205	
13C-1,2,3,4,6,7,8-HpCDF	59.0	21.0 - 158	
13C-1,2,3,4,7,8,9-HpCDF	61.0	20.0 - 186	
13C-OCDF	72.7	13.0 - 198	

Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	87.0	31.0 - 191	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
DNQ	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected
NP	Not Provided
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____

Date: 1/17/2013

Reviewed By: _____

Date: 1/17/2013

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EPA Method 1613
PCDD/F

FRONTIER ANALYTICAL LABORATORY

FAL ID: 7672-001-SA
Client ID: EFFLUENT
Matrix: Aqueous
Batch No: X2749

Date Extracted: 01-15-2013
Date Received: 01-10-2013
Amount: 1.032 L

ICal: PCDDFAL3-12-28-12
GC Column: DB5
Units: pg/L

Acquired: 01-16-2013
CRWQCB-SFBR
Dioxin TEQ: 0.00

Compound	Conc	DL	Qual	1998 WHO Tox	TEF x BEF	ML	MDL
2,3,7,8-TCDD	ND	0.819		-	-	10.0	0.260
1,2,3,7,8-PeCDD	ND	0.939		-	-	50.0	0.268
1,2,3,4,7,8-HxCDD	ND	1.24		-	-	50.0	0.482
1,2,3,6,7,8-HxCDD	ND	1.31		-	-	50.0	0.484
1,2,3,7,8,9-HxCDD	ND	1.23		-	-	50.0	0.460
1,2,3,4,6,7,8-HpCDD	ND	1.88		-	-	50.0	0.478
OCDD	ND	3.47		-	-	100	1.40
2,3,7,8-TCDF	ND	0.682		-	-	10.0	0.257
1,2,3,7,8-PeCDF	ND	0.730		-	-	50.0	0.335
2,3,4,7,8-PeCDF	ND	0.715		-	-	50.0	0.340
1,2,3,4,7,8-HxCDF	ND	0.767		-	-	50.0	0.284
1,2,3,6,7,8-HxCDF	ND	0.773		-	-	50.0	0.281
2,3,4,6,7,8-HxCDF	ND	0.891		-	-	50.0	0.294
1,2,3,7,8,9-HxCDF	ND	1.30		-	-	50.0	0.348
1,2,3,4,6,7,8-HpCDF	ND	0.644		-	-	50.0	0.295
1,2,3,4,7,8,9-HpCDF	ND	0.909		-	-	50.0	0.397
OCDF	ND	1.55		-	-	100	0.738

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	82.8	25.0 - 164	
13C-1,2,3,7,8-PeCDD	73.3	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	77.7	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	80.3	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	84.7	23.0 - 140	
13C-OCDD	89.3	17.0 - 157	
13C-2,3,7,8-TCDF	81.8	24.0 - 169	
13C-1,2,3,7,8-PeCDF	70.1	24.0 - 185	
13C-2,3,4,7,8-PeCDF	69.4	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	80.3	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	78.1	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	78.6	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	83.1	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	72.9	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	83.3	26.0 - 138	
13C-OCDF	92.4	17.0 - 157	

Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	89.4	35.0 - 197	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
DNQ	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected
NP	Not Provided
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____

Date: 1/17/2013

Reviewed By: DPV

Date: 1/17/2013

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AQUA SCIENCE

ENVIRONMENTAL TOXICOLOGY SPECIALISTS

ACUTE FATHEAD MINNOW TOXICITY TEST WITH NOVATO SANITARY DISTRICT EFFLUENT

Submitted to:

Andrew Oko
Novato Sanitary District
500 Davidson Street
Novato, CA 94945

Submitted by:

AQUA-Science
630 Cantrill Drive
Davis, CA 95618
ELAP Certificate No. 2205
Expires: 1/31/2013

February 5, 2013

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ACUTE FATHEAD MINNOW TOXICITY TEST WITH NOVATO SANITARY DISTRICT EFFLUENT

1.0 EXECUTIVE SUMMARY

Novato Sanitary District final effluent (E-002) was tested using the acute *Pimephales promelas* (fathead minnow) toxicity flow-through test protocol. The 96-hour fathead minnow bioassay did not detect significant mortality when compared to the control. This test met all protocol and QA/QC requirements.

2.0 INTRODUCTION

AQUA-Science (Davis, CA) was retained by the Novato Sanitary District to perform a 96-hour acute flow-through fathead minnow (*Pimephales promelas*) survival toxicity test with final effluent E-002.

3.0 MATERIALS AND METHODS

3.1 Sample Collection and Transport

A 24-hour composite effluent sample was collected daily (1/15-18/13) by Novato Sanitary District personnel in cubitainers and delivered on wet ice to AQUA-Science via courier. Appropriate chain-of-custody procedures were employed during collection and transport.

3.2 Sample Receipt

Water quality measurements including temperature, dissolved oxygen (DO), and pH were recorded on chain-of-custody form at sample receipt. Samples were stored in the dark at ≤4 °C until used for bioassays.

3.3 Water Quality Measurements

Temperature was continuously recorded in all bioassay test chambers with a Dickson pen recorder (Model ICT855, Addison, IL). DO (YSI Model 550A, Yellow Springs, OH), pH (Beckman 240, Fulton, CO), and temperature (calibrated digital thermometer; Central Co., Friendswood, TX) were measured in initial and 24-hour test solutions at change-out. Conductivity (WTW Model 330, Ft. Myers, FL), alkalinity (Hach Model AL-DT calorimetric test, Hach Co., Loveland, CO), and hardness (Hach HA-DT colorimetric test) were measured in the initial test solutions.

3.4 Fathead Minnow Toxicity Tests

The 96-hour acute flow-through fathead minnow bioassays were conducted in accordance with the U.S. Environmental Protection Agency (USEPA) 5th edition protocol[1]. Fathead minnows were obtained from Aquatox, Inc. (Hot Springs, AK), and were maintained in EPA moderately hard (EPAMH) water until tested at 7 days old. The effluent was tested using 2 replicates of 10 fish each in 400 mL plastic beakers containing 250 mL of test solutions. The effluent was continuously delivered to the test chambers using a 4-channel peristaltic pump at a flow rate of 5 mL/min, which provided a total of approximately 29 test chamber volumes per day. The effluent flow-rate was measured daily. Fish were fed *Artemia* nauplii daily. Tests were conducted at 25 ± 2 °C with a 16 hour light:8 hour dark photoperiod. Mortality was recorded daily.

3.5 Reference Toxicant Tests

A concurrent reference toxicant test was conducted with this species. Sodium chloride was the reference toxicant material used for the fathead minnows (control, 1.25, 2.5, 5, 7.5, and 10 g/L).

4.0 RESULTS

The acute fathead minnow flow-through toxicity test was initiated on 1/16/13 (Event 13-01). A summary of the test results and water quality parameters are presented in Tables 1 and 2, respectively. Statistical analyses were performed using CETIS™ v1.8.0.13 (Tidepool Scientific, McKinleyville, CA). A summary of the reference toxicant test results is presented in Table 3. All raw data is found in Appendix I.

Table 1. Summary of Acute Fathead Minnow Mortality

Test Sample	*Survival (%)*	*Survival (NOEC %)*	*PMSD (%)*[a]	*Comments*
Lab Control	100	100	n/a	No mortality was detected with the effluent
E-002 (100%)	100	100	b	

a PMSD = percent minimum significant difference
b Value not calculated since there was 100% survival

Table 2. Summary of Water Quality Parameters

Parameter @ 100% Effluent	*Temp. (°C)*	*D.O. (mg/L)*	*pH*	*Alkalinity (mg/L)*	*Conductivity (mg/L)*	*Hardness (mg/L)*
Initial Value Range	24-26	7.6-8.1	7.89-8.14	150-157	658-690	154-167
24-hr Value Range	24-25	5.9-6.7	7.71-7.85	n/a	n/a	n/a

[1] Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms. Fifth Edition. October 2002. EPA 821-R-02-012.

Table 3. Summary of Reference Toxicant Results

Test Endpoint	*NOEC (g/L)*	*LOEC (g/L)*	*EC_{25} (g/L)*	*EC_{50} (g/L)*	*PMSD (%)*
Survival	5.0	7.5	5.4	6.2	20.0

The effluent (E-002) did not cause any mortality in the 96-hour acute flow-through fathead minnow aquatic bioassay. Although the reference toxicant test produced an ideal dose response, the EC_{50} value for this test was outside the normal limits for this laboratory (i.e., the organisms were apparently more sensitive than usual for the reference toxicant). However, since the since there was no toxicity seen with the effluent test, this does not effect the interpretation of the study.

Approved by/Issue date: Jeff Miller 2/7/13

Jeff Miller, Ph.D., DABT
President

AQUA SCIENCE

ENVIRONMENTAL TOXICOLOGY SPECIALISTS

EFFLUENT TOXICITY TESTS FOR ASSESSING COMPLIANCE WITH NPDES CHRONIC TOXICITY LIMITS

NOVATO SANITARY DISTRICT WASTEWATER TREATMENT PLANT

SUBMITTED TO:

Andrew Oko
Novato Sanitary District
500 Davidson Street
Novato, CA 94945

SUBMITTED BY:

AQUA-Science
630 Cantrill Drive
Davis, CA 95618

December 5, 2012

EFFLUENT TOXICITY TESTS FOR ASSESSING COMPLIANCE WITH NOVATO SANITARY DISTRICT WASTEWATER TREATMENT PLANT NPDES CHRONIC TOXICITY LIMITS

1.0 CLIENT INFORMATION

Client:	**Novato Sanitary District**
Address:	500 Davidson Street Novato, CA 94945
Contact:	**Andrew Oko**
Phone/Fax:	(415) 892-1694 / (415) 898-2279

2.0 BIOTOXICITY TESTING REQUIREMENTS

Test Type:	**7-Day *Ceriodaphnia dubia* Chronic Survival and Reproduction Test**
Test Frequency:	**Toxicity Identification Evaluation**
Test Protocol:	**EPA 821-R-02-013**
Dilution Series:	**0, 6.25, 12.5, 25, 50, and 100% Effluent E-002**
	Antibiotic treatment (dilution series)
	Concurrent Reference Toxicant Series

3.0 CURRENT TEST INFORMATION

Event No.:	**Fourth Quarter, 2012 (2012-08)**
Test Sample:	**Daily composite samples: 11/27/12 - 12/3/12**
Test Initiation:	**11/27/12**
Test Completion:	**12/4/12**

4.0 SUMMARY OF RESULTS

The *C. dubia* chronic survival and reproduction test did not detect any significant toxicity with the E-002 effluent [< 1.0 TUc ($100/EC_{25}$)]. Since there was no effluent toxicity detected in this test, the effects of antibiotic addition on effluent *C. dubia* toxicity could not be evaluated. The concurrent reference toxicant test for this species was within the acceptable range, and all protocol and QA/QC requirements were met.

5.0 RESULTS OF INDIVIDUAL TESTS

5.1 *Effluent*

5.1.1 Current Effluent Test Data

Sample Concentration (%)	*Survival (%)*	*Reproduction (neonates/female)*	*QA/QC Requirements Met:*
Lab Control	100	23.4	• ≥80% survival in controls • average neonates/female in controls ≥15 • 60% of surviving control females produced at least three broods
6.25	100	19.0	
12.5	100	21.6	
25	100	20.1	
50	100	23.2	
100	100	17.6	

5.1.2 Current Effluent Test Results

Test Endpoint[a]		*NOEC (%)*	*LOEC (%)*	*EC_{25} (%)*	*EC_{50} (%)*	*PMSD*[b] *(%)*
Survival	**% Effluent**	100	> 100	> 100	> 100	*c*
	TUc	1.0	n/a	**< 1.0**	< 1.0	
Reproduction	**% Effluent**	100	> 100	> 100	> 100	*32*
	TUc	1.0	n/a	**< 1.0**	< 1.0	

a Cetis™ v. 1.8.0.13 was used to calculate test endpoint

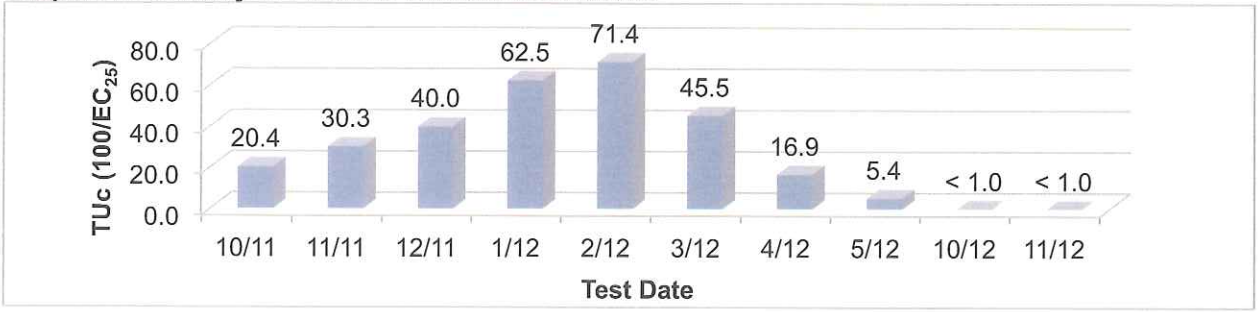
b PMSD = Percent Minimum Significant Difference

c Statistical analyses not performed since 100% survival

5.1.3 Tabular Summary of Effluent Test Results (most sensitive endpoint)

Test Date	*10/11*	*11/11*	*12/11*	*1/12*	*2/12*	*3/12*	*4/12*	*5/12*	*10/12*	*11/12*
EC_{25} (%)	4.9	3.3	2.5	1.6	1.4	2.2	5.9	18.6	> 100	> 100
NOEC (%)	12.5	< 6.25	< 6.25	< 6.25	< 6.25	< 6.25	100	12.5	100	100
TU ($100/EC_{25}$)	**20.4**	**30.3**	**40.0**	**62.5**	**71.4**	**45.5**	**16.9**	**5.4**	**< 1.0**	**< 1.0**

5.1.4 Graphical Summary of Previous Effluent Test Results



5.1.5 Comments

The *C. dubia* chronic survival and reproduction test did not detect any significant toxicity with the E-002 effluent [< 1.0 TUc ($100/EC_{25}$)].

5.2 Reference Toxicant

5.2.1 Current Reference Toxicant Test Results

Test Endpoint[a]	NOEC (g/L NaCl)	LOEC (g/L NaCl)	EC_{25} (g/L NaCl)	EC_{50} (g/L NaCl)	PMSD[b] (%)
Survival	2.0	4.0	2.1	2.6	c
Reproduction	0.0625	0.125	0.85	1.3	14

a Cetis™ v. 1.8.0.13 was used to calculate test endpoint

b PMSD = percent minimum significant difference

c The PMSD could not be calculated due to the statistical method used

5.2.2 Comments

The reference toxicant test was within normal limits for this laboratory, and produced a Type 7 dose response for the survival endpoint and a Type 6 dose response for the reproduction endpoint. Appendix I shows the laboratory reference control charts for *C. dubia* survival and reproduction.

5.3 Antibiotic Treatment

5.3.1 Current Antibiotic Treatment Test Data

Sample Concentration (%)	Survival (%)	Reproduction (neonates/female)	QA/QC Requirements Met:
Lab Control	100	23.3	• ≥80% survival in controls • average neonates/female in controls ≥15 • 60% of surviving control females produced at least three broods
6.25	90	27.9	
12.5	100	22.7	
25	100	27.3	
50	90	24.8	
100	90	27.1	

5.3.2 Comments

Since there was no effluent toxicity detected in this test, the effects of antibiotic addition on effluent *C. dubia* toxicity could not be evaluated.

6.0 TESTING FACILITY

AQUA-Science
630 Cantrill Drive
Davis, CA 95618
(530) 753-5456

California Department of Health Services ELAP
Certification No. 2205 (1/31/13)

File Reference: *Novato (2012-08)*

Approved By/Issue Date: 12/5/12

Jeffrey L. Miller, Ph.D., DABT