Appendix A - Well Permits

WELL PERMIT APPLICATION - NON PRODUCTION WELLS
WATER QUALITY PROGRAM - ENVIRONMENTAL HEALTH DIVISION
5050 COMMERCE DRIVE, BALDWIN PARK, CA 91706 TELE (626) 430-5420 FAX (626) 813-3016

DATE 10/31/11

☒ NEW WELL CONSTRUCTION ☐ RECONSTRUCTION OR RENOVATION ☐ DECOMMISSIONING ☐ OTHER: ______
☒ MONITORING ☐ CATHODIC ☐ INJECTION ☐ EXTRACTION ☐ HEAT EXCHANGE
☐ HYDROPUNCH ☐ C.P.T. (For Ground Water Sampling) ☐ OTHER: ______

WELL LOCATION

Site Address: Malibu Civic Center Area (3939 Cross Creek Rd)	City: Malibu		Zip Code: 90265
Nearest Intersection: PCH & Webb Way	Thomas Guide Map Book Page/Grid:		Number of Wells in Each Parcel: ~~8~~ 2

WELL STRUCTURE

Total Depth of Well: ~120 feet	Depth of Well Casing: ~100 feet	Sanitary / Annular Sealing Material: Bentonite grout
Depth of Sanitary / Annular Seal: ~95 feet		Conductor Casing Seal: Bentonite chips

OWNER INFORMATION

Owner's Name: City of Malibu	Telephone Number: 310-456-2489		
Address: 23825 Stuart Ranch Rd	City: Malibu		Zip Code: 90265

DRILLER INFORMATION

Driller's Name: Boart Longyear	Telephone Number: 909-946-1605	C-57 License Number: 694686
Address: 1333 W. 9th St. Upland, CA 91786	City	Zip Code

WELL DECOMMISSIONING INFORMATION

Well Depth ☐ log/records	Method of Well Assessment		Depth and Number of Perforations
Type and Amount of Sealant	Type of Perforator	Size of Perforations	Method of Upper Seal Pressure Application

CONSULTANT INFORMATION

Company: Earth Forensics			
Address: 12532 Vista Panorama	City: North Tustin	State: CA	Zip Code: 92705
Project Manager: W. Laton	Telephone Number: 714-296-4055		Fax Number: 562-~~740~~-4587

ATTENTION: WORK PLAN MODIFICATIONS MAY BE REQUIRED IF WELL AND GEOLOGIC CONDITIONS ENCOUNTERED AT THE SITE INSPECTION ARE FOUND TO DIFFER FROM THE SCOPE OF WORK PRESENTED TO THIS DEPARTMENT.

I hereby agree to comply in every respect with all the regulations of the County Environmental Health Division and with all ordinances and laws of the County of Los Angeles and the State of California pertaining to well construction, reconstruction, and decommissioning data deemed necessary by the County Environmental Health Division Of Los Angeles County.

Signature of Applicant: [signature] Printed Name: Nicholas Napoli

RECEIVED APR 2012

THIS PERMIT IS NOT COMPLETE UNTIL ALL OF THE FOLLOWING REQUIREMENTS ARE SIGNED OFF BY THE DEPUTY HEALTH OFFICER. WELL CONSTRUCTION OR DECOMMISSIONING CANNOT BE INITIATED WITHOUT A WORK PLAN APPROVAL FROM THIS DEPARTMENT.

(DEPARTMENT USE ONLY)

WORK PLAN APPROVAL
This Approval is Valid for 180 Days

REHS: Arnoldo Juarez DATE: 11/4/11

Conditions:
Permit # 891640 - 11~13 MWs Maintain all required setbacks.
Follow workplan as submitted. All field work must be conducted
by or under the direct supervision of a lic. geologist in the state of Calif.
AJuarez@ph.lacounty.gov (213) 761-0708

FINAL INSPECTION
The Final Inspection must be witnessed by a Deputy Health Officer for the permit to be valid. Contact this Department to arrange for an appointment.

REHS DATE

NOTICE
This well permit approval is limited to compliance with the California Well Standards and the Los Angeles County Code and does not grant any rights to construct, reconstruct, or decommission any well. The applicant is responsible for securing all other necessary permits.

WELL PERMIT APPLICATION - NON PRODUCTION WELLS

DATE 10/31/11

X NEW WELL CONSTRUCTION — RECONSTRUCTION OR REACTIVATION — DECOMMISSIONING — OTHER

X EXPLORATORY — CATHODIC — INJECTION — EXTRACTION — OBSERVATION

— HYDROPUNCH — C.P.T. (For Ground Water Sampling) — OTHER

WELL LOCATION

Site Address: Approximately 23762 Malibu Rd — City: Malibu — Zip Code: 90265

Nearest Intersection: PCH & Webb Way — Thomas Guide Map Book Page/Grid — Number of Wells in Each Parcel

WELL STRUCTURE

Total Depth of Well: ~100 ft — Depth of Well Casing: ~100 feet — Sanitary Annular Sealing Material: Bentonite Seal

Depth of Annular Sanitary Seal: ~95 feet — Conductor Casing Seal: Bentonite Chips

OWNER INFORMATION

Owner's Name: City of Malibu — Telephone Number: 310-456-2489

Address: 23825 Stuart Ranch Rd — City: Malibu — Zip Code: 90265

DRILLER INFORMATION

Driller Name: Boart Longyear — Telephone Number: 909-946-1605 — C-57 License Number: 694686

Address: 1333 W. 9th St. Upland, CA 91786 — City — Zip Code

WELL DECOMMISSIONING INFORMATION

Well Depth — Method of — Depth and Number

Logs/Records — Well Assessment — of Perforations

Type and Amount of Sealant — Type of Perforator — Size of Perforations — Method of Upper Seal Pressure Application

CONSULTANT INFORMATION

Company: Earth Forensics

Address: 12532 Vista Panorama — City: North Tustin — State: CA — Zip Code: 92705

Project Manager: W. Laton — Telephone Number: 714-296-4055 — Fax Number: 562-[illegible]-4587

ATTENTION: WORK PLAN MODIFICATIONS MAY BE REQUIRED IF WELL AND GEOLOGIC CONDITIONS ENCOUNTERED AT THE SITE INSPECTION ARE FOUND TO DIFFER FROM THE SCOPE OF WORK PRESENTED TO THIS DEPARTMENT.

I hereby agree to comply in every respect with all the regulations of the County Environmental Health Division and with all ordinances and laws of the County of Los Angeles and the State of California pertaining to well construction, reconstruction and decommissioning data deemed necessary by the County Environmental Health Division Of Los Angeles County.

Signature of Applicant: [signature] — Printed Name: Nicholas Napoli

THIS PERMIT IS NOT COMPLETE UNTIL ALL OF THE FOLLOWING REQUIREMENTS ARE SIGNED OFF BY THE DEPUTY HEALTH OFFICER. WELL CONSTRUCTION OR DECOMMISSIONING CANNOT BE INITIATED WITHOUT A WORK PLAN APPROVAL FROM THIS DEPARTMENT.

(DEPARTMENT USE ONLY)

WORK PLAN APPROVAL

This Approval is Valid for 180 Days

REHS: Arnaldo Juarez — DATE: 11/4/11

Conditions: Permit # 891817 - 1~3 must maintain all required setbacks. Follow workplan submitted. All field work must be conducted by or under the direct supervision of a lic. geologist in the state of Calif. AJuarez @ ph.lacounty.gov (213) 761-0708 (48hr.)

FINAL INSPECTION

The placement of the annular seal must be witnessed by a Deputy Health Officer for the permit to be valid. Contact this Department to arrange for an appointment.

REHS — DATE

NOTICE

This well permit approval is limited to compliance with the California Well Standards and the Los Angeles County Code and does not grant any rights to construct, reconstruct, or decommission any well. The applicant is responsible for securing all other necessary permits.

City of Malibu

23825 Stuart Ranch Road, Malibu, California 90265-4861
(310) 456-2489 - fax (310) 456-7650

GEOLOGIC/ GEOTECHNICAL EXPLORATORY EXCAVATION APPLICATION SEISMIC TRENCHING

Instructions:

- Provide all information & initial where indicated.
- A survey must be submitted – see the attached handout regarding requirements.
- **Email completed application with 8 ½ x 11 map to Marianne Riggins – mriggins@malibucity.org**
- Upon approval, you will be notified via email.
- Complete Miscellaneous Permit application form available at Malibu City Hall. Permits are issued at the Building and Safety public counter, weekdays between 8:00 a.m. and 12:30 p.m.
- **The total permit fee is $357.00** ($156.00 permit fee, and a one hour site inspection fee of $156.00, plus $6.00 document retention fee and $39.00 permit processing fee)

Applicant name: Earth Forensics Inc **Phone:** (562) 458-0614 **Email:** nnapoli@earthforensics.com
Site address: 3939 Cross Creek Road **APN:** 4458-020-903
Date(s) of Exploration: 11/7/2011-11/28/11
Geotechnical Firm: Earth Forensics Inc
Engineering Geologist/ Geotechnical Engineer: W. Richard Laton
License Type: PG **License #:** 7098 **Exp. Date:** 9/1/12
Phone#: (714) 296-4055 **FAX#:** (562) 741-4587
Property Owner: City of Malibu **Phone #:** (310) 456-2489

Description of proposed exploration program and method: Drill 2 approximately 200 foot borings and install wells

UNDERGROUND SERVICE ALERT# B13050050-00B **Valid until:** 11/29/11

Applicant's statement:

1. **The proposed scope of work does not include grading.** initial NN
2. **Trenching will be as shown on the survey submitted.** initial NN
3. **The proposed scope of work does not nclude the creation of temporary road(s).** initial NN
4. **Vegetation will be removed** ☐ yes ■ no
   If yes, clearly show on the topo map the areas of vegetation to be removed.
5. **The location of exploration is on a beach.** ☐ yes ■ no
   If yes, will any mechanized equipment be used ? ☐ yes ☐ no

I declare under penalty of perjury under the laws of the State of California that the information provided on this application is true and correct.

Applicant signature: _____ **Date:** 11/1/11

City of Malibu

23825 Stuart Ranch Road, Malibu, California 90265-4861
(310) 456-2489 - fax (310) 456-7650

GEOLOGIC/ GEOTECHNICAL EXPLORATORY EXCAVATION APPLICATION SEISMIC TRENCHING

Instructions:

- Provide all information & initial where indicated.
- A survey must be submitted – see the attached handout regarding requirements.
- **Email completed application with 8 ½ x 11 map to Marianne Riggins – mriggins@malibucity.org**
- Upon approval, you will be notified via email.
- Complete Miscellaneous Permit application form available at Malibu City Hall. Permits are issued at the Building and Safety public counter, weekdays between 8:00 a.m. and 12:30 p.m.
- **The total permit fee is $357.00** ($156.00 permit fee, and a one hour site inspection fee of $156.00, plus $6.00 document retention fee and $39.00 permit processing fee)

Applicant name: Earth Forensics Inc **Phone:** (562) 458-0614 **Email:** nnapoli@earthforensics.com
Site address: N/SIDE OF MALIBU RD AT APPROX 1100FT W/OF WEBB WAY APPROX 23762 MALIBU RD **APN:**
Date(s) of Exploration: 11/7/2011-11/28/11
Geotechnical Firm: Earth Forensics Inc
Engineering Geologist/ Geotechnical Engineer: W. Richard Laton
License Type: PG **License #:** 7098 **Exp. Date:** 9/1/12
Phone#: (714) 296-4055 **FAX#:** (562) 741-4587
Property Owner: City of Malibu **Phone #:** (310) 456-2489
Description of proposed exploration program and method: Drill 1 approximately 200 foot boring and install well

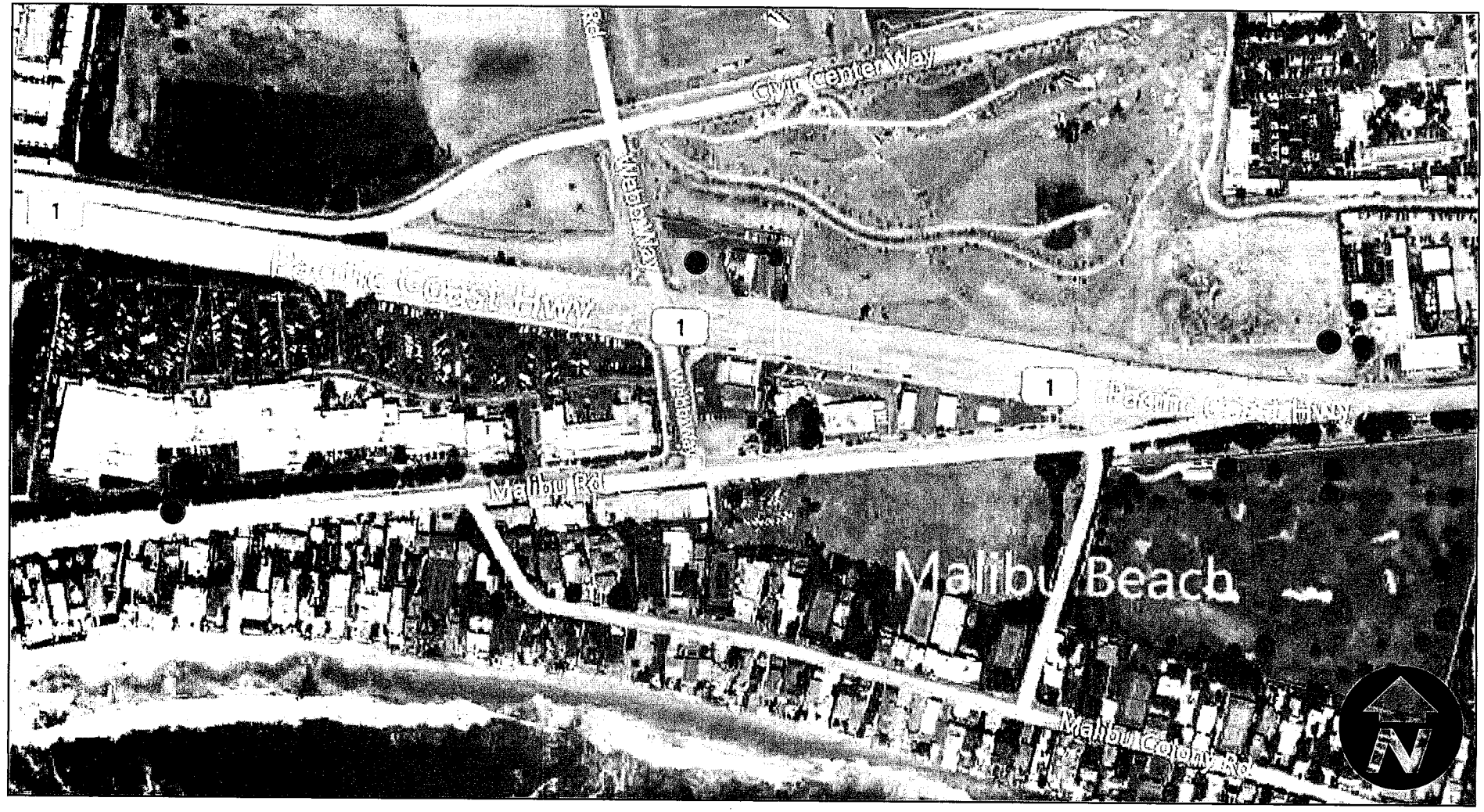
UNDERGROUND SERVICE ALERT# A13050416-00A **Valid until:** 11/29/11

Applicant's statement:

1. **The proposed scope of work does not include grading.** **initial** NN
2. **Trenching will be as shown on the survey submitted.** **initial** NN
3. **The proposed scope of work does not nclude the creation of temporary road(s).** **initial** NN
4. **Vegetation will be removed** ☐ **yes** ■ **no**
   If yes, clearly show on the topo map the areas of vegetation to be removed.
5. **The location of exploration is on a beach.** ☐ **yes** ■ **no**
   If yes, will any mechanized equipment be used ? ☐ **yes** ☐ **no**

I declare under penalty of perjury under the laws of the State of California that the information provided on this application is true and correct.

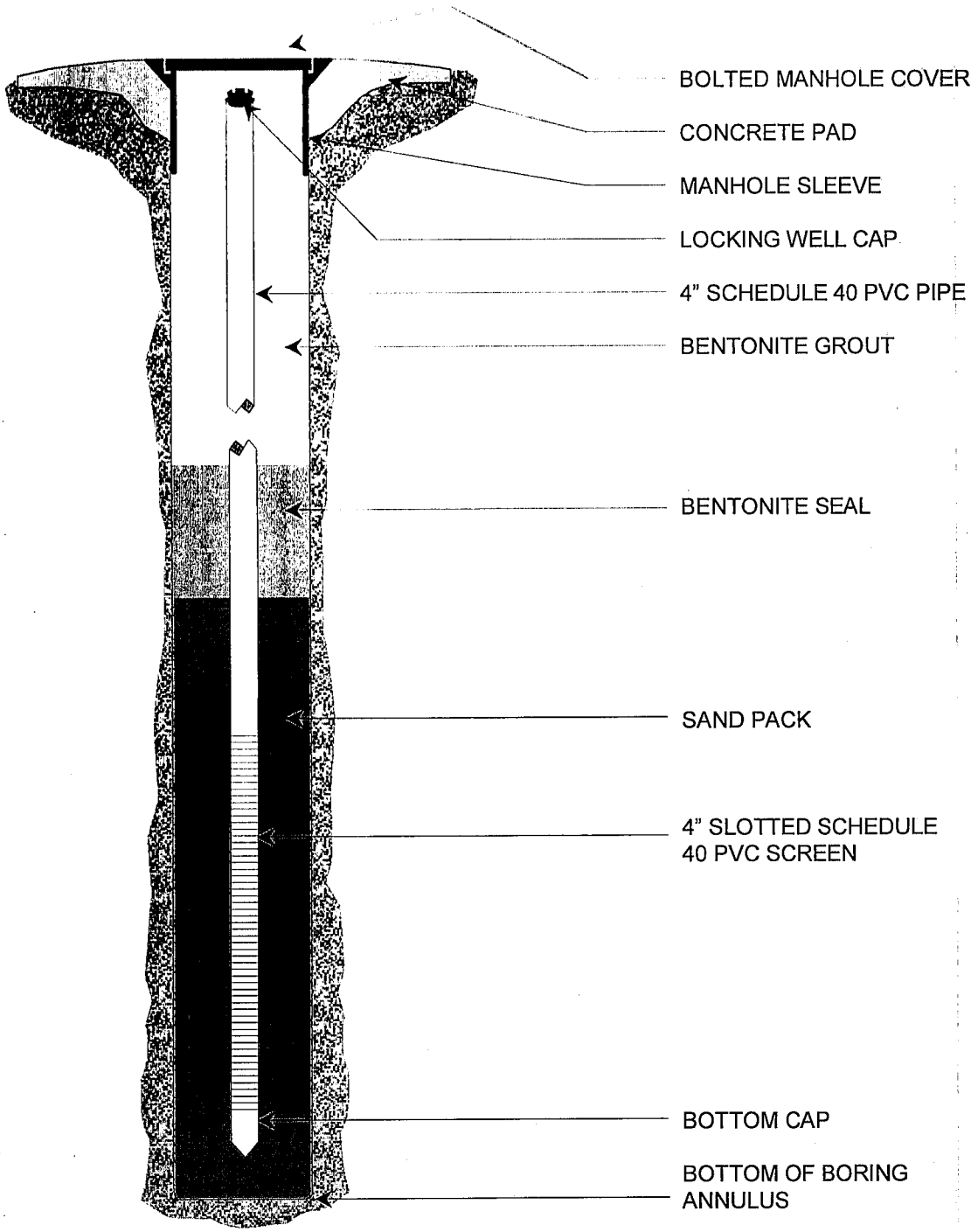
Applicant signature: _____ **Date:** 11/1/11



130 65 0 130 260
Feet

Proposed Well Locations

Monitoring Well Schematic



Appendix B - Well Logs

WELL NUMBER MCWP-MW01

earthforensics, inc.

NORTHING 1835932.37
EASTIING 6352316.16

CLIENT City of Malibu
PROJECT NUMBER 2011.145
DATE STARTED 11/14/11 COMPLETED 11/16/11
DRILLING CONTRACTOR Boart Longyear
DRILLING METHOD Sonic
LOGGED BY NN/KSP CHECKED BY KSP
NOTES Southwest end of Legacy Park

PROJECT NAME Malibu Contrallzed Wastewater Project
PROJECT LOCATION Civic Center Area, Malibu, CA
GROUND ELEVATION 17.90 ft NAVD HOLE SIZE 10 inches
GROUND WATER LEVELS:
AT TIME OF DRILLING 10.00 ft / Elev 7.90 ft
AT END OF DRILLING —
AFTER DRILLING 11.00 ft / Elev 6.90 ft

DEPTH (ft)	ELEVATION (ft)	REMARKS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
0						Casing Top Elev: 17.9 (ft) Casing Type: PVC
	15		CL-ML		(CL-ML) Silty CLAY, trace angular gravel, medium brown, dry to slightly moist, low plasticity	
5					5.0 / 12.9	
	10		SC		(SC) Clayey fine SAND, medium brown, wet, medium dense	
10					▽ ▼	
	5				14.6 / 3.3	
15			CL		(CL) Sandy CLAY, trace angular gravel, olive gray, moist, medium stiff, medium plastic, few roots	
	0				22.0 / -4.1	← Bentonite Cement Grout
20			SC		(SC) Clayey fine SAND, olive gray, wet, medium dense	
	-5				25.0 / -7.1	
25			CL		(CL) Sandy CLAY, trace angular gravel, olive gray, moist, medium stiff, medium plastic, few roots	
	-10				27.0 / -9.1	
30			SC		(SC) Clayey fine SAND, olive gray, wet, medium dense	
					30.0 / -12.1	
			CL		(CL) Sandy CLAY, trace angular gravel, olive gray, moist, medium stiff, medium plastic, few roots	
	-15				32.0 / -14.1	
			SP		(SP) SAND, some clay, olive gray, wet, medium dense	
35					35.0 / -17.1	

(Continued Next Page)

WELL NUMBER MCWP-MW01

earthforensics, inc.

CLIENT City of Malibu **PROJECT NAME** Malibu Centralized Wastewater Project

PROJECT NUMBER 2011.145 **PROJECT LOCATION** Civic Center Area, Malibu, CA

DEPTH (ft)	ELEVATION (ft)	REMARKS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION		WELL DIAGRAM
35			CL		(CL) Sandy CLAY, trace angular gravel, olive gray, moist, medium stiff, medium plastic, few roots		
					37.5	-19.6	
	-20		SM		(SM) Silty fine SAND, olive gray, wet, medium dense		
40							
	-25						Medium Bentonite Chips
					44.0	-26.1	
45			SP		(SP) Fine SAND, olive gray, wet, medium dense		
					46.0	-28.1	
			SP		46.3	-28.4	
			ML		(SP) Fine to medium SAND, few coarse sand grains, dark gray, wet		
	-30				47.5	-29.6	
			SP		(ML) Clayey SILT, dark gray, very moist, massive		
50					(SP) Very fine to medium SAND, medium gray to brown, very moist		
					50.2	-32.3	
			GP		(GP) Fine to coarse sandy GRAVEL, abundant rounded cobbles to 6 inches, medium gray to brown, wet		
	-35	Sieve 52.5'-55' Gravel 45.7% C Sand 16.1% M Sand 32.8% F Sand 4.79% Silt/Clay 0.48%			54.7	-36.8	
55			ML		55.0	-37.1	
			SP		(ML) Gravelly clayey SILT, medium brown, very moist		
					55.7	-37.8	
					(SP) Gravelly fine to medium SAND, medium brown, very moist		
	-40		SP		(SP) Fine to medium SAND, medium brown, very moist		
		Sieve 58'-58.5' Gravel 3.51% C Sand 5.54% M Sand 55.8% F Sand 30.5% Silt/Clay 4.55%			60.0	-42.1	
60			GP		(GP) Fine to coarse sandy GRAVEL, medium gray to brown, wet		
					61.0	-43.1	
			SP		62.0	-44.1	
					(SP) Gravelly fine to medium SAND, medium gray to brown, wet		
	-45		CL-ML		62.5	-44.6	
					63.0	-45.1	
			GW		(CL-ML) Silty CLAY, medium brown, very moist		
			SP		(GW) Silty fine to coarse sandy GRAVEL, medium brown, wet		
65					(SP) Fine to medium SAND, with trace coarse sand and scattered fine gravel, medium brown, wet		
					65.0	-47.1	
			SW		(SW) Gravelly fine to coarse SAND, medium brown, wet		
	-50				67.5	-49.6	
			ML		(ML) Clayey SILT, medium brown, faint gray mottles, very moist, massive		
70					69.5	-51.6	
			GP		(GP) Medium to coarse sandy GRAVEL, with trace cobbles to 4 inches, medium brown, wet		
	-55						
					74.5	-56.6	
75			SP		75.0	-57.1	

(Continued Next Page)

WELL NUMBER MCWP-MW01

earthforensics, inc.

CLIENT City of Malibu **PROJECT NAME** Malibu Centralized Wastewater Project

PROJECT NUMBER 2011.145 **PROJECT LOCATION** Civic Center Area, Malibu, CA

DEPTH (ft)	ELEVATION (ft)	REMARKS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
75			SW		75.5 (SP) Gravelly fine to medium SAND, medium brown, wet -57.6	
			GP		(SW) Gravelly fine to coarse SAND, medium brown, wet	
	-60				77.0 (GP) Fine to medium sandy GRAVEL, with trace cobbles to 4 inches, medium brown, wet -59.1	
			SP		(SP) Gravelly fine to medium SAND, medium brown, wet	
80					79.0 -61.1	
			SW		(SW) Gravelly fine to coarse SAND, medium brown, wet	
					81.5 -63.6	
	-65		ML-SM		82.5 (ML-SM) Very fine sandy SILT / silty SAND, medium brown, moist -64.6	
			SP		83.5 (SP) Fine SAND, medium brown, very moist -65.6	
85			SW		(SW) Gravelly fine to coarse SAND, with trace cobbles to 4 inches, medium brown, wet	
					85.0 -67.1	
	-70		GP-SW		(GP-SW) Fine to coarse sandy GRAVEL / gravelly SAND, crudely interbedded, medium brown, wet	
					88.0 -70.1	6" Stainless Steel .060" slot
90			SP		(SP) Gravelly fine to medium SAND, medium brown, wet	
					90.0 -72.1	
			SW		(SW) Very Gravelly fine to coarse SAND and slightly gravelly fine to medium SAND, crudely interbedded, medium brown, wet	
	-75				92.5 -74.6	
			GP		(GP) Fine to coarse sandy GRAVEL, some cobbles to 5 inches, minor silt/clay in matrix, medium brown, wet	
95					96.5 -78.6	
			SP		(SP) Fine to medium SAND, medium brown, very moist to wet	
	-80	Sieve 97.5'-100' Gravel 0.61% C Sand 2.38% M Sand 18.2% F Sand 69.4% Silt/Clay 9.23%			98.5 -80.6	
100			SP		(SP) Fine SAND, few scattered fine gravel, medium brown, very moist	Aquarium Sand
					101.5 -83.6	
			GP		102.5 (GP) Slightly clayey silty fine sandy GRAVEL, medium brown, wet -84.6	
	-85		SP		(SP) Gravelly fine to medium SAND, with trace cobbles to 6 inches, medium brown, wet	
105					105.0 -87.1	
			SW		(SW) Gravelly fine to coarse SAND, medium brown, wet	
					106.5 -88.6	
	-90		GP		(GP) Fine to coarse sandy GRAVEL, with trace cobbles to 6 inches, medium brown, wet	
					109.0 -91.1	
110			SP		(SP) Fine to medium SAND, medium brown, wet	
					110.5 -92.6	
			GP		111.5 (GP) Fine to medium sandy GRAVEL, medium brown, wet -93.6	
	-95		SW		(SW) Gravelly fine to coarse SAND, medium brown, wet	
115					115.0 -97.1	

(Continued Next Page)

WELL NUMBER MCWP-MW01

earthforensics, inc.

CLIENT City of Malibu **PROJECT NAME** Malibu Centralized Wastewater Project

PROJECT NUMBER 2011.145 **PROJECT LOCATION** Civic Center Area, Malibu, CA

DEPTH (ft)	ELEVATION (ft)	REMARKS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
115		Sieve 115'-117.5' Gravel 23.8% C Sand 4.63% M Sand 53.4% F Sand 16.5% Silt/Clay 1.50%	SP		(SP) Gravelly fine to medium SAND, medium brown, wet	
	-100				118.5 -100.6	
120			GP		(GP) Fine to medium sandy GRAVEL, medium brown, wet	
					121.5 -103.6	
	-105		GP		(GP) Silty fine to medium sandy GRAVEL, with cobbles and small boulders, medium brown, wet, coring through larger clasts (clasts consist primarily of broken angular fragments of siltstone and sandstone plus a lesser amount of rounded gravel	
125					125.0 -107.1	
			SP		(SP) Slightly gravelly fine to medium SAND, medium brown, wet	
	-110				127.5 -109.6	
			GP		(GP) Fine to coarse sandy GRAVEL, medium brown, wet, sandstone cobbles or possibly cored boulders greater than 8 inches plus abundant rounded clasts	
130					131.0 -113.1	
			GP		(GP) Medium to coarse sandy GRAVEL, medium brown, wet, primarily rounded clasts to 3 inches	
	-115				133.5 -115.6	
			CL		(CL) Silty CLAY, one large cobble, dark gray, moist	
135					135.0 -117.1	
			SM		(SM) Silty very fine SAND, trace scattered fine gravel, medium dark gray, very moist	
	-120				138.0 -120.1	6" Stainless Steel .050" slot
			CL		139.0 (CL) Grades to silty CLAY, medium dark gray, very moist -121.1	
			SM		140.0 (SM) Grades to silty gravelly fine SAND, trace clay, medium dark gray, wet -122.1	
140			SP		(SP) Gravelly fine to medium SAND, olive brown, wet	
					141.5 -123.6	
	-125		SP-SC		(SP-SC) Gravelly clayey fine to medium SAND, olive brown, wet	
					143.5 -125.6	
			SC		(SC) Clayey fine to medium SAND, scattered gravel, olive brown, wet	
145					145.0 -127.1	
			SP-SC		(SP-SC) Grades to gravelly clayey fine SAND, olive brown, wet	
	-130				146.5 -128.6	
			SP		(SP) Gravelly medium to coarse SAND, with trace large cobbles, olive brown, wet	
					149.5 -131.6	
150					SILTSTONE, thin bedded to laminated, fractured, brittle, charcoal gray to black and brown (unoxidized)	
	-135					
155					155.0 -137.1	

Bottom of borehole at 155.0 feet.

GENERAL BH / TP / WELL - GINT STD US LAB.GDT - 1/26/12 11:50 - C:\USERS\PUBLIC\DOCUMENTS\BENTLEY\GINT\PROJECTS\CITYOFMALIBU.GPJ

WELL NUMBER MCWP-MW02

Earthforensics, Inc.

NORTHING 1835691.72
EASTIING 6353652.24

CLIENT City of Malibu
PROJECT NUMBER 2011.145
DATE STARTED 11/8/11 COMPLETED 11/14/11
DRILLING CONTRACTOR Boart Longyear
DRILLING METHOD Sonic
LOGGED BY NN/KSP CHECKED BY KSP
NOTES Southeast end of Legacy Park

PROJECT NAME Malibu Centralized Wastewater Project
PROJECT LOCATION Civic Center Area, Malibu, CA
GROUND ELEVATION 18.06 ft NAVD HOLE SIZE 10 Inches
GROUND WATER LEVELS:
AT TIME OF DRILLING 15.00 ft / Elev 3.06 ft
AT END OF DRILLING ---
AFTER DRILLING 10.95 ft / Elev 7.11 ft

DEPTH (ft)	ELEVATION (ft)	REMARKS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION		WELL DIAGRAM
0							Casing Top Elev: 18.06 (ft) Casing Type: PVC
	15		SC		(SC) Sandy gravelly CLAY, medium brown, very moist		
5					5.0	13.1	
					No recovery		
					6.5	11.6	
	10		SC		7.5 (SC) Sandy gravelly CLAY, medium brown, moist	10.6	
			SC		9.0 (SC) Sandy gravelly CLAY / clayey gravelly SAND, medium brown, moist	9.1	
10			SP		10.0 (SP) Fine to medium SAND, medium brown, moist, friable	8.1	
					11.5 ▽ No recovery	6.6	
	5		SM		12.5 (SM) Clayey gravelly fine to medium sandy SILT, medium brown, moist, includes grass fragments (possible slough)	5.6	
15			SP		(SP) Fine to medium SAND, minor gravel, medium brown, damp, friable		
					15.0 ▽	3.1	
			SP		(SP) Medium to coarse SAND, trace gravel, some small cobbles, grayish brown, wet		
	0				17.5	0.6	
			SP		19.0 (SP) Gravelly medium to coarse SAND, abundant gravel to 3 inches, gray, wet	-0.9	← Bentonite Cement Grout
20			SC-CL		19.5 (SC-CL) Slightly gravelly clayey fine to medium SAND / fine to medium sandy CLAY, with trace cobbles, medium dark gray, wet	-1.4	
					20.0 No recovery	-1.9	
	-5		SP		(SP) Fine to coarse gravelly SAND, trace silt, gravel to 2 inches, medium grayish brown, wet		
					24.0	-5.9	
25			SM		25.0 (SM) Silty fine SAND, light to medium grayish brown, wet	-6.9	
					25.5 No recovery	-7.4	
			SP		26.0 (SP) Medium to coarse gravelly SAND, few cobbles, grayish brown, wet	-7.9	
			SM		27.5	-9.4	
	-10		SM		28.0 (SM) Silty fine to coarse SAND, with trace gravel and cobbles to 4 inches, medium dark gray, wet	-9.9	
			SM		(SM) Silty fine to coarse SAND, with trace gravel, medium dark gray, wet		
30					29.7	-11.6	
			SW		30.0	-11.9	
			SM		(SM) Silty fine SAND, trace medium to coarse sand, dark gray, wet, pockets of twig and plant fragments		
					31.5 (SW) Gravelly fine to coarse SAND, dark gray, wet	-13.4	
			SP		32.5 (SM) Silty fine to coarse SAND, with trace gravel to 3 inches, dark gray, wet	-14.4	
	-15		GP		(SP) Medium to coarse SAND, some gravel to 2 inches, medium brown, wet, one cobble to 6 inches		
35					35.0	-16.9	

(Continued Next Page)

WELL NUMBER MCWP-MW02

earthforensics, inc.

CLIENT City of Malibu **PROJECT NAME** Malibu Centralized Wastewater Project

PROJECT NUMBER 2011.145 **PROJECT LOCATION** Civic Center Area, Malibu, CA

DEPTH (ft)	ELEVATION (ft)	REMARKS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
35			SW		(GP) Fine to coarse sandy GRAVEL, gravel to 3 inches, medium brown, wet	
	-20				(SW) Gravelly fine to coarse SAND, light to medium brown, wet	
					37.8 -19.7	
			ML-SM		(ML-SM) Clayey silty very fine SAND / sandy SILT, medium dark gray, wet, massive	
					39.0 -20.9	
40			CL-ML		(CL-ML) Clayey SILT / silty CLAY, medium to dark gray, wet, massive	← Medium Bentonite Chips
					40.0 -21.9	
			CL		(CL) Silty CLAY, medium to dark gray, moist, massive	
	-25				43.0 -24.9	
			GW		(GW) Clayey silty fine to coarse GRAVEL, medium brown, wet	
					44.0 -25.9	
45			SM		(SM) Silty very fine SAND / sandy SILT, trace clay, medium to dark gray, wet	
					45.0 -26.9	
			SW		(SW) Fine to coarse SAND, some fine gravel, brown, wet	
					46.8 -28.7	
			ML		47.0 (ML) Clayey SILT, dark gray, wet -28.9	
	-30		SW		47.5 (SW) Fine to coarse SAND, with trace fine gravel, brown, wet; @ 46.8 is 1-inch layer of clayey SILT, dark gray -29.4	
			GP		(GP) Medium to coarse sandy GRAVEL, brown, wet	
50					50.0 -31.9	
			GP		(GP) Medium to coarse fine sandy GRAVEL, gravel to 3 inches, brown, wet	
					52.3 -34.2	
	-35		ML		(ML) Very fine sandy SILT, trace clay, grades downward to clayey silt, trace scattered gravel to 1.5 inches, dark gray, wet, massive	
55		Sieve 55'-57.5' Gravel 34.4% C Sand 13.7% M Sand 38.1% F Sand 11.0% Silt/Clay 2.62%			55.0 -36.9	
			SW		(SW) Gravelly fine to coarse SAND, rounded to sub-rounded gravel to 1.5 inches, medium brown, wet	
	-40				58.0 -39.9	
			CL		(CL) Silty CLAY, gray and brown mottled, wet	
60					60.0 -41.9	
			CL		(CL) Silty CLAY/clayey SILT, dark gray with brown mottling, moist (brown areas are slightly coarser: very fine sandy silt with trace scattered fine gravel)	
					62.0 -43.9	
	-45		SW		62.2 (SW) Gravelly fine to coarse SAND -44.1	
			CL-ML		(CL-ML) Silty CLAY/clayey SILT, dark gray with brown mottling, moist (brown areas are slightly coarser: very fine sandy silt with trace scattered fine gravel)	
65					65.0 -46.9	
			ML		(ML) Clayey SILT, olive green, mottled with olive brown very fine sandy SILT/silty SAND, very moist	
					67.5 -49.4	
	-50		SM		(SM) Silty fine SAND, olive brown, wet	
					68.5 -50.4	
			SW		68.9 (SW) Gravelly fine to coarse SAND, brown, wet -50.8	
70			SP		(SP) Gravelly fine to medium SAND, olive brown, wet, trace gravel and cobbles at base	
					71.0 -52.9	
			ML		(ML) Clayey SILT, dark grayish brown, wet	
	-55				73.5 -55.4	
			SP		73.9 (SP) Gravelly medium to coarse SAND, light to medium olive brown, wet -55.8	
75			ML		75.0 -56.9	

(Continued Next Page)

WELL NUMBER MCWP-MW02

earthforensics, inc.

CLIENT City of Malibu **PROJECT NAME** Malibu Centralized Wastewater Project

PROJECT NUMBER 2011.145 **PROJECT LOCATION** Civic Center Area, Malibu, CA

DEPTH (ft)	ELEVATION (ft)	REMARKS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
75			SM		(ML) Clayey very fine sandy SILT, medium to dark gray, wet (SM) Silty very fine SAND, dark gray, wet, wood fragments	
	-60		SP-SM		77.5 -59.4 (SP-SM) Gravelly silty fine to medium SAND, gravel to 2 inches, dark gray, wet, wood fragments, grades downward to gravelly fine SAND	
80			SP		79.5 -61.4 80.0 (SP) Fine to coarse gravelly SAND, dark gray, wet -61.9	
			GP		81.0 (GP) Fine to coarse sandy GRAVEL, gravel to 1 inch, brown to grayish brown, wet -62.9	
	-65		CL		(CL) Silty CLAY, olive brown, very moist, faint mottling, massive, grades downward to silty very fine SAND	
85					85.0 -66.9	
			ML		(ML) Clayey SILT to clayey very fine sandy SILT, gray to brown, moist	
	-70	Sieve 88'-90' Gravel 0% C Sand 0% M Sand 12.5% F Sand 44.7% Silt 35.3% Clay 7.33%	SP		87.5 -69.4 88.0 (SP) Fine to medium SAND, gray to brown, moist -69.9	
90			SM		(SM) Grades to silty fine SAND, gray to brown, moist, massive 90.0 -71.9	
			SP		(SP) Fine to medium SAND, brown, very moist 91.5 -73.4	
	-75		SP-CL		92.0 (SP-CL) Mix of fine SAND, fine to medium SAND, and silty CLAY, medium brown, very moist -73.9 92.5 -74.4	
			SP		(SP) Fine to medium SAND, trace fine gravel, brown, very moist to wet	
95			SP		94.8 (SP) Fine to medium SAND, medium to dark gray, wet -76.7	
			SM		95.2 (SM) Silty very fine SAND, dark gray, very moist to wet -77.1	6" Stainless Steel .060" slot
			CL		(CL) Grades to silty CLAY, dark gray, moist, massive 97.5 -79.4	Aquarium Sand
	-80		CL-ML		(CL-ML) Silty CLAY/clayey SILT, dark gray, moist, few thin layers of fine to medium sand, trace fine gravel, dark gray, wet	
100					100.0 -81.9	
			SP-ML		(SP-ML) Fine to medium SAND, interbedded with thin layers of very fine sandy SILT, medium to dark gray, wet 102.0 -83.9	
	-85		ML-SM		103.0 (ML-SM) Very fine sandy SILT/silty SAND, medium to dark gray, wet -84.9	
105			CL		(CL) Silty CLAY, medium to dark gray, moist, massive, light gray specs	
					106.5 -88.4	
	-90	Sieve 108.5'-109' Gravel 8.29% C Sand 3.48% M Sand 58.4% F Sand 25.4% Silt/Clay 4.32%	SP		(SP) Fine to medium SAND, medium gray to brown, wet	
110					110.0 -91.9	
			SP		(SP) Fine to medium SAND, trace gravel, gray to brown, wet 111.5 -93.4	
	-95		SP		(SP) Fine SAND, medium to dark gray to brown, very moist 113.5 -95.4	
115			SM		(SM) Gravelly silty fine to coarse SAND, gravel to 3 inches, gray to brown, very moist	

(Continued Next Page)

WELL NUMBER MCWP-MW02

earthforensics, inc.

CLIENT City of Malibu **PROJECT NAME** Malibu Centralized Wastewater Project

PROJECT NUMBER 2011.145 **PROJECT LOCATION** Civic Center Area, Malibu, CA

DEPTH (ft)	ELEVATION (ft)	REMARKS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
115					115.5 -97.4	
			SM		(SM) Silty fine to medium SAND, trace gravel to 3 inches, grayish brown, wood fragments	
					116.5 -98.4	
			SC		(SC) Clayey very fine to fine SAND, gray, very moist	
	-100				117.5 -99.4	
			SP		(SP) Very fine to medium SAND, trace gravel, trace cobbles to 5 inches, very moist, coarsens to gravelly coarse SAND at base	
120					121.5 -103.4	
			SP		(SP) Very fine to fine SAND, gray, very moist	
	-105				122.5 -104.4	
			SM		(SM) Silty very fine SAND, gray, very moist	
125					125.0 -106.9	
			SW		(SW) Gravelly fine to coarse SAND, sub-rounded gravel to 3 inches, medium brown, very moist, friable	
	-110				128.0 -109.9	
			SP		(SP) Fine to medium SAND, trace coarse sub-rounded gravel, medium brown, very moist	
					129.0 -110.9	
			SP		130.0 (SP) Fine to medium SAND, trace fine gravel, few cobbles to 7 inches, medium brown, very moist -111.9	
130			SP		(SP) Fine gravelly medium to coarse SAND, trace sub-rounded gravel to 3 inches, medium brown, very moist	
					132.0 -113.9	
	-115		SP		(SP) Fine to coarse gravelly medium to coarse SAND, minor silt, trace sub-rounded cobbles to 6 inches, gray, very moist	
135					135.0 -116.9	
					(SP) Sub-rounded fine to coarse gravelly medium to coarse SAND, trace sub-rounded cobbles to 4 inches, medium brown, very moist	
	-120					
140			SP			
		Sieve 142.5'-145' Gravel 14.4% C Sand 18.4% M Sand 46.9% F Sand 16.7% Silt/Clay 3.45%				
	-125					
145					145.0 -126.9	
					Weathered SILTSTONE, trace sub-angular green oxidized fine gravel, dark brown, moist, low plastic	
					146.5 -128.4	
	-130				SILTSTONE, dark brown, slightly moist, fractured, thin white specs	
150					153.0 -134.9	

Bottom of borehole at 153.0 feet.

GENERAL BH / TP / WELL - GINT STD US LAB.GDT - 1/26/12 11:50 - C:\USERS\PUBLIC\DOCUMENTS\BENTLEY\GINT\PROJECTS\CITYOFMALIBU.GPJ

WELL NUMBER MCWP-MW03

earthforensics, inc.

NORTHING 1835307.24
EASTIING 6351229.66

CLIENT City of Malibu
PROJECT NUMBER 2011.145
DATE STARTED 11/17/11 COMPLETED 11/19/11
DRILLING CONTRACTOR Boart Longyear
DRILLING METHOD Sonic
LOGGED BY NN/KSP CHECKED BY KSP
NOTES 1000' west of Webb Way on Malibu Rd

PROJECT NAME Malibu Centralized Wastewater Project
PROJECT LOCATION Civic Center Area, Malibu, CA
GROUND ELEVATION 15.31 ft NAVD HOLE SIZE 10 inches
GROUND WATER LEVELS:
AT TIME OF DRILLING 7.50 ft / Elev 7.81 ft
AT END OF DRILLING ---
AFTER DRILLING 9.03 ft / Elev 6.28 ft

DEPTH (ft)	ELEVATION (ft)	U.S.C.S.	MATERIAL DESCRIPTION		WELL DIAGRAM
0	15				Casing Top Elev: 15.31 (ft) Casing Type: PVC
			0.5 Asphalt roadway	14.8	
		SP	(SP) Medium SAND, some gravel, light brown to gray, slightly moist		
			2.0	13.3	
5	10	SP	(SP) Fine SAND, trace coarse sand, trace asphal fragments, medium to dark brown, slightly moist, few rounded cobbles to 6 inches at 4 feet		
			7.5 ▽	7.8	
		SM	(SM) Silty medium SAND, medium brown, wet massive		
10	5		▽		
			10.5	4.8	
		SM	(SM) Silty fine to medium SAND and interbedded silty fine SAND, medium brown, moist		
			12.7	2.6	
		SC	13.7 (SC) Clayey fine to medium SAND, medium brown and dark brown mottled, moist	1.6	
		SP	14.5 (SP) Fine to medium SAND, one 3 inch gravel, medium brown, wet	0.8	
15	0	SM	15.0	0.3	
			(SM) Silty fine SAND, medium brown and light brown mottled, moist		
			(CL) CLAY, some silt, medium gray, dark gray, and greenish gray mottled, moist, very plastic, few black specs - possible charcoal		Bentonite Cement Grout
20	-5	CL			
25	-10				
			29.0	-13.7	
30	-15	SP	(SP) Fine to medium SAND, trace gravel, medium gray, wet		
			31.0	-15.7	
		SP	32.0 (SP) Very fine to fine SAND, medium gray and dark gray, very moist, fragments of wood and charcoal	-16.7	
		SM	32.5	-17.2	
35		CL	(SM) Silty very fine SAND and sandy SILT, medium gray and dark gray laminated, very moist		

(Continued Next Page)

WELL NUMBER MCWP-MW03

earthforensics, inc.

CLIENT City of Malibu **PROJECT NAME** Malibu Centralized Wastewater Project

PROJECT NUMBER 2011.145 **PROJECT LOCATION** Civic Center Area, Malibu, CA

DEPTH (ft)	ELEVATION (ft)	REMARKS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
35	-20		CL		(CL) Slightly silty CLAY, medium gray, dark gray, and greenish gray mottled, moist, very plastic, few black specs - possible charcoal fragments *(continued)*	
40	-25				42.0 -26.7	← Medium Bentonite Chips
			CL		42.5 (CL) Increase in silt content, Silty CLAY, as above -27.2	
			SP-SM		(SP-SM) Grades downward from silty very fine SAND to fine SAND, medium dark gray, very moist, black specs and plant fibers	
45	-30				45.0 -29.7	
			SW		(SW) Interbedded gravelly fine to coarse SAND and gravelly fine SAND, medium dark gray, wet	
					47.5 -32.2	
50	-35		SW		(SW) Gravelly fine to coarse SAND, gray to gray-brown, wet, increasing gravel with depth	
					52.5 -37.2	
			GP		(GP) Fine to coarse sandy GRAVEL, medium olive-brown, wet, gravel size increase with depth, large cobbles at 54-55 feet	
55	-40				55.0 -39.7	
			SW		(SW) Gravelly fine to coarse SAND, brown to gray, wet	
					57.5 -42.2	
			GP		58.5 (GP) Fine to coarse sandy GRAVEL, brown to gray, wet -43.2	
60	-45		CL		(CL) Silty CLAY, medium dark gray, moist	
					61.0 -45.7	
			SP		(SP) Gravelly medium to coarse SAND, gravel to 3 inches, gray at 61-62 feet, brown and gray at 62-65 feet, wet	
65	-50				65.0 -49.7	
			SP		(SP) Interbedded medium SAND with trace gravel, and gravelly medium to coarse SAND, gray to brown, wet	
		Sieve 67.5'-69' Gravel 30.7% C Sand 20.9% M Sand 32.3% F Sand 12.0% Silt/Clay 3.89%			67.5 -52.2	
			SP		(SP) Medium to coarse SAND, with trace gravel, gray to brown, wet	
					69.0 -53.7	
70	-55		GP		(GP) Medium to coarse sandy GRAVEL, gray to brown, wet	
					70.5 -55.2	
			CL		71.5 (CL) Silty CLAY, trace scattered gravel, gray and brown mottled, moist -56.2	
			GP		(GP) Medium to coarse sandy GRAVEL, gray to brown, wet	
					73.5 -58.2	
75			CL		(CL) Silty CLAY, gray and brown mottled, moist	
					75.0 -59.7	

(Continued Next Page)

WELL NUMBER MCWP-MW03

earthforensics, inc.

CLIENT City of Malibu **PROJECT NAME** Malibu Centralized Wastewater Project

PROJECT NUMBER 2011.145 **PROJECT LOCATION** Civic Center Area, Malibu, CA

DEPTH (ft)	ELEVATION (ft)	REMARKS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
75	-60		GP		75.5 (GP) Medium to coarse sandy GRAVEL, gray to brown, wet -60.2	
			CL		76.5 (CL) Silty CLAY, gray to brown, moist, very plastic -61.2	
			GP		77.5 (GP) Medium to coarse sandy GRAVEL, medium brown to gray, wet -62.2	
			SP		(SP) Gravelly medium to coarse SAND, gray to brown, wet 79.0 -63.7	
80	-65		GP-SP		(GP-SP) Crudely interbedded gravelly medium to coarse SAND and medium to coarse sandy GRAVEL, with a 5-inch silty clay layer, gravel to 3 inches, gray to brown, wet 83.5 -68.2	6" Stainless Steel .050" slot
85	-70		GP-SP		(GP-SP) Gravelly fine to medium SAND, gray to brown, wet, bottom 3 inches is sandy GRAVEL 89.0 -73.7	
90	-75		CL		(CL) Slightly silty CLAY, gray, moist, very plastic, wood fragments 91.5 -76.2	Aquarium Sand
			GP		92.0 (GP) Fine to coarse sandy GRAVEL, gray to brown, wet -76.7	
			CL		92.5 (CL) Silty CLAY, gray, moist -77.2	
95	-80		SP		(SP) Medium SAND, gray to brown, wet, bottom 4 inches has several large cobbles 97.5 -82.2	
			GP		98.5 (GP) Sandy GRAVEL, gray to brown, wet, two large sandstone cobbles to 8 inches (possibly cored) -83.2	
100	-85		CL		(CL) Sandy gravelly CLAY, gray to brown, moist, stiff 101.0 -85.7	
		Sieve 102.3'-104' Gravel 0% C Sand 0% M Sand 5.11% F Sand 39.0% Silt 47.5% Clay 8.22%	CL		102.3 (CL) Silty CLAY, with trace scattered gravel, gray to brown, moist, medium plastic -87.0	
			SM		(SM) Very fine SAND and silty very fine SAND, gray, moist 104.0 -88.7	
105	-90		SP		105.0 (SP) Fine SAND, gray, moist, large wood fragments -89.7	
			GP		(GP) Medium to coarse sandy GRAVEL, with trace cobbles to 5 inches, gray to brown, wet 110.0 -94.7	
110	-95		CL		(CL) Silty CLAY, medium dark gray, moist, medium plastic 113.5 -98.2	
115			GP			

(Continued Next Page)

WELL NUMBER MCWP-MW03

earthforensics, inc.

CLIENT City of Malibu **PROJECT NAME** Malibu Centralized Wastewater Project

PROJECT NUMBER 2011.145 **PROJECT LOCATION** Civic Center Area, Malibu, CA

DEPTH (ft)	ELEVATION (ft)	REMARKS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION		WELL DIAGRAM
115	-100	Sieve 125'-127.5' Gravel 15.5% C Sand 16.9% M Sand 47.7% F Sand 14.9% Silt/Clay 4.77%	GP		(GP) Sandy GRAVEL, with trace cobbles, gray to brown, moist, clasts consists of broken cemented rock (angular fragments to 7 inches) *(continued)*		6" Stainless Steel .056" slot
120	-105				121.0	-105.7	
			SP		(SP) Gravelly medium SAND, trace cobbles to 6 inches, medium dark gray, very moist, friable, large wood fragments at 125 feet		
125	-110				125.0	-109.7	
			SP		(SP) Gravelly medium to coarse SAND, trace cobbles to 6 inches, medium dark gray, very moist, friable, wood fragments		
130	-115				127.5	-112.2	
			GP		(GP) Sandy fine GRAVEL, with trace cobbles to 6 inches, medium dark gray, very moist, friable, wood fragments		
					131.5	-116.2	
			GP		(GP) Coarse GRAVEL, some medium brown clay, some medium sand, some cobbles to 7 inches (consisting of sandstone and indurated ignious or metamorphic clasts, matrix medium brown to greenish gray, slightly moist		
135	-120				134.0	-118.7	
					SILTSTONE, thinly bedded, sulfer odor, in some places massive with white specs, dark brown, slightly moist		
140					140.0	-124.7	

Bottom of borehole at 140.0 feet.

Appendix C – Sieve Analyses

PTS Laboratories, Inc.

Earth Forensics, Inc.
PTS File No: 41863

PARTICLE SIZE SUMMARY

(METHODOLOGY: ASTM D422)

PROJECT NAME: N/A
PROJECT NO: N/A

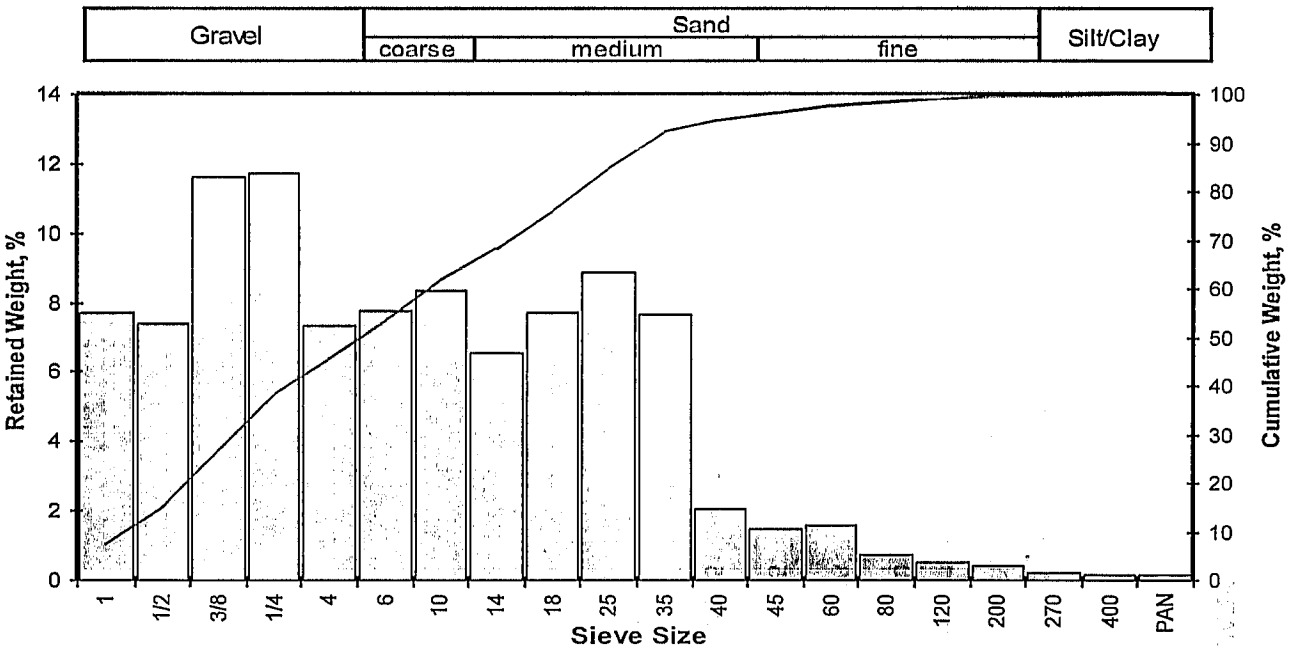
Sample ID	Depth, ft.	Description USCS/ASTM (1)	Median Grain Size, mm	Particle Size Distribution, wt. percent				
				Gravel	Sand Size			Silt/Clay
					Coarse	Medium	Fine	
MCWP-MW01	52.5-55	Gravel	3.940	45.77	16.14	32.82	4.79	0.48
MCWP-MW01	97.5-100	Fine sand	0.246	0.61	2.39	18.26	69.50	9.23
MCWP-MW01	115-117.5	Coarse sand	0.875	23.83	4.64	53.46	16.56	1.51
Gravel Pack	N/A	Coarse sand	2.905	4.86	72.60	22.46	0.03	0.06

(1) based on Mean fromTrask

PTS Laboratories, Inc.

Particle Size Analysis - ASTM D422M

Client:	Earth Forensics, Inc.	**PTS File No:**	41863
Project:	N/A	**Sample ID:**	MCWP-MW01
Project No:	N/A	**Depth, ft:**	52.5-55



Opening		Phi of	U.S. Sieve	Sample Weight	Incremental Weight,	Cumulative Weight,
Inches	Millimeters	Screen	No.	grams	percent	percent
0.9844	25.002	-4.64	1	51.07	7.73	7.73
0.4922	12.501	-3.64	1/2	48.69	7.37	15.10
0.3740	9.500	-3.25	3/8	76.67	11.61	26.71
0.2500	6.351	-2.67	1/4	77.51	11.73	38.44
0.1873	4.757	-2.25	4	48.37	7.32	45.77
0.1324	3.364	-1.75	6	51.46	7.79	53.56
0.0787	2.000	-1.00	10	55.16	8.35	61.91
0.0557	1.414	-0.50	14	43.11	6.53	68.43
0.0394	1.000	0.00	18	50.93	7.71	76.14
0.0278	0.707	0.50	25	58.50	8.86	85.00
0.0197	0.500	1.00	35	50.47	7.64	92.64
0.0166	0.420	1.25	40	13.77	2.08	94.72
0.0139	0.354	1.50	45	9.77	1.48	96.20
0.0098	0.250	2.00	60	10.54	1.60	97.80
0.0070	0.177	2.50	80	4.88	0.74	98.54
0.0049	0.125	3.00	120	3.57	0.54	99.08
0.0029	0.074	3.75	200	2.91	0.44	99.52
0.0021	0.053	4.25	270	1.24	0.19	99.71
0.0015	0.037	4.75	400	0.91	0.14	99.84
			PAN	1.03	0.16	100.00
TOTALS				660.56	100.00	100.00

Cumulative Weight Percent greater than			
Weight	Phi	Particle Size	
percent	Value	Inches	Millimeters
5			
10	-4.34	0.7952	20.199
16	-3.61	0.4818	12.239
25	-3.31	0.3895	9.892
40	-2.58	0.2351	5.973
50	-1.98	0.1551	3.940
60	-1.17	0.0887	2.252
75	-0.07	0.0414	1.053
84	0.44	0.0289	0.735
90	0.83	0.0222	0.564
95	1.30	0.0160	0.407

Measure	Trask	Inman	Folk-Ward
Median, phi	-1.98	-1.98	-1.98
Median, in.	0.1551	0.1551	0.1551
Median, mm	3.940	3.940	3.940
Mean, phi	-2.45	-1.58	-1.72
Mean, in.	0.2155	0.1181	0.1293
Mean, mm	5.473	3.000	3.285
Sorting	3.065	2.028	
Skewness	0.819	0.194	
Kurtosis	0.225		

Grain Size Description (ASTM-USCS Scale)	Gravel (based on Mean from Trask)

Description	Retained on Sieve #	Weight Percent
Gravel	4	45.77
C Sand	10	16.14
M Sand	40	32.82
F Sand	200	4.79
Silt/Clay	<200	0.48
	Total	100

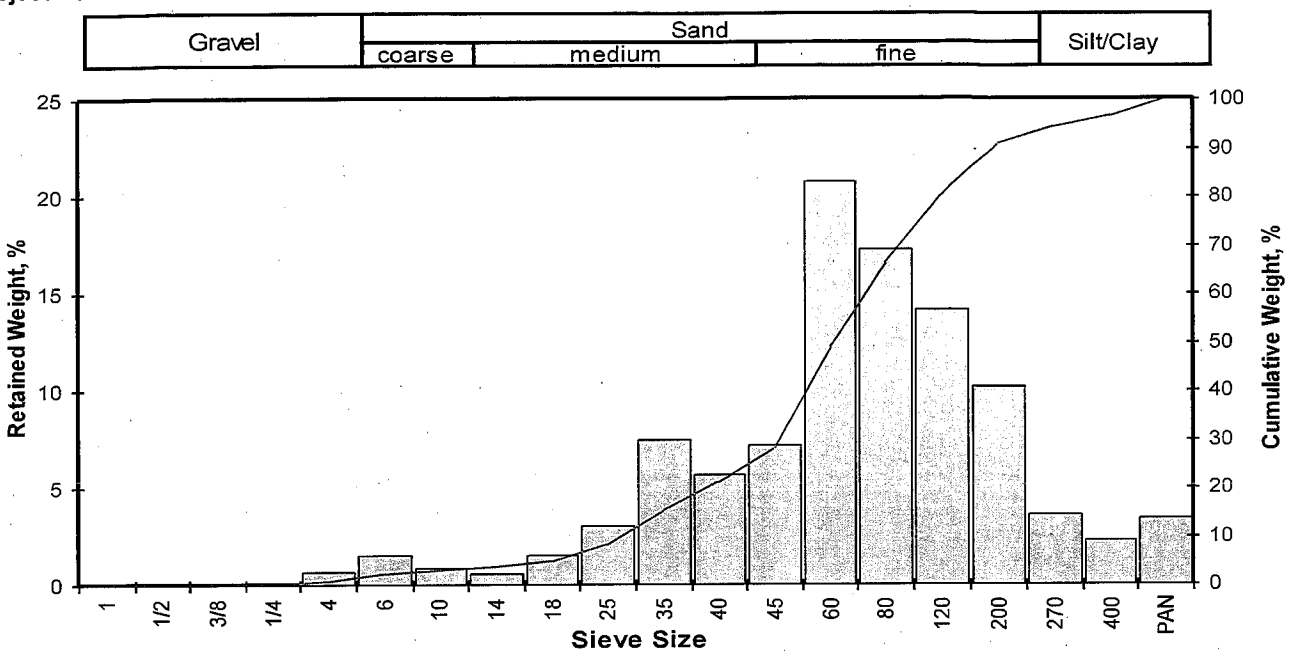
Phone: (562) 907-3607
Fax: (562) 907-3610

PTS Laboratories, Inc.

Particle Size Analysis - ASTM D422M

Client: Earth Forensics, Inc.
Project: N/A
Project No: N/A

PTS File No: 41863
Sample ID: MCWP-MW01
Depth, ft: 97.5-100



Opening		Phi of	U.S. Sieve	Sample Weight	Incremental Weight,	Cumulative Weight,
Inches	Millimeters	Screen	No.	grams	percent	percent
0.9844	25.002	-4.64	1	0.00	0.00	0.00
0.4922	12.501	-3.64	1/2	0.00	0.00	0.00
0.3740	9.500	-3.25	3/8	0.00	0.00	0.00
0.2500	6.351	-2.67	1/4	0.00	0.00	0.00
0.1873	4.757	-2.25	4	0.87	0.61	0.61
0.1324	3.364	-1.75	6	2.12	1.50	2.11
0.0787	2.000	-1.00	10	1.26	0.89	3.00
0.0557	1.414	-0.50	14	0.84	0.59	3.60
0.0394	1.000	0.00	18	2.10	1.48	5.08
0.0278	0.707	0.50	25	4.30	3.04	8.12
0.0197	0.500	1.00	35	10.54	7.45	15.57
0.0166	0.420	1.25	40	8.07	5.70	21.27
0.0139	0.354	1.50	45	10.14	7.16	28.43
0.0098	0.250	2.00	60	29.32	20.72	49.15
0.0070	0.177	2.50	80	24.38	17.23	66.37
0.0049	0.125	3.00	120	20.08	14.19	80.56
0.0029	0.074	3.75	200	14.44	10.20	90.77
0.0021	0.053	4.25	270	5.03	3.55	94.32
0.0015	0.037	4.75	400	3.19	2.25	96.57
			PAN	4.85	3.43	100.00
TOTALS				141.53	100.00	100.00

Cumulative Weight Percent greater than			
Weight	Phi	Particle Size	
percent	Value	Inches	Millimeters
5	-0.03	0.0401	1.019
10	0.63	0.0255	0.648
16	1.02	0.0194	0.493
25	1.38	0.0151	0.384
40	1.78	0.0115	0.291
50	2.02	0.0097	0.246
60	2.31	0.0079	0.201
75	2.80	0.0056	0.143
84	3.25	0.0041	0.105
90	3.69	0.0030	0.077
95	4.40	0.0019	0.047

Measure	Trask	Inman	Folk-Ward
Median, phi	2.02	2.02	2.02
Median, in.	0.0097	0.0097	0.0097
Median, mm	0.246	0.246	0.246
Mean, phi	1.92	2.14	2.10
Mean, in.	0.0104	0.0090	0.0092
Mean, mm	0.264	0.228	0.233
Sorting	1.638	1.117	1.229
Skewness	0.954	0.100	0.086
Kurtosis	0.211	0.982	1.275

Grain Size Description (ASTM-USCS Scale)	Fine sand (based on Mean from Trask)

Description	Retained on Sieve #	Weight Percent
Gravel	4	0.61
C Sand	10	2.39
M Sand	40	18.26
F Sand	200	69.50
Silt/Clay	<200	9.23
	Total	100

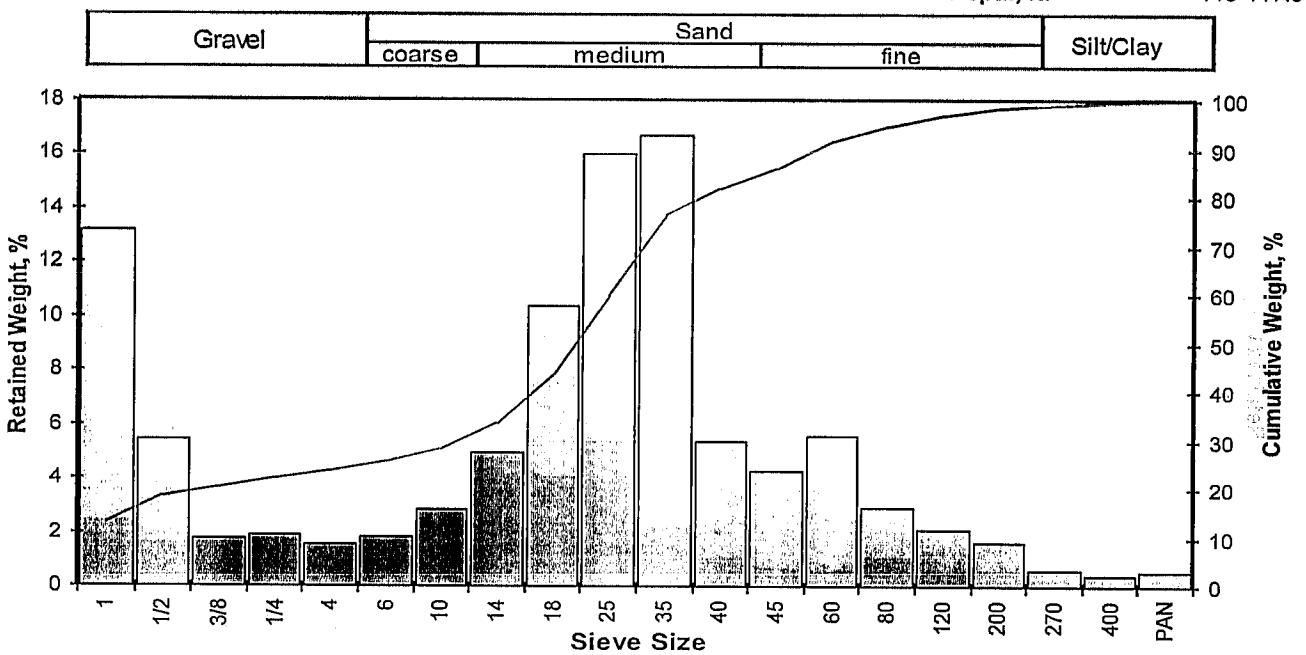
Phone: (562) 907-3607
Fax: (562) 907-3610

PTS Laboratories, Inc.

Particle Size Analysis - ASTM D422M

Client: Earth Forensics, Inc.
Project: N/A
Project No: N/A

PTS File No: 41863
Sample ID: MCWP-MW01
Depth, ft: 115-117.5



Opening		Phi of	U.S. Sieve	Sample Weight	Incremental Weight,	Cumulative Weight,
Inches	Millimeters	Screen	No.	grams	percent	percent
0.9844	25.002	-4.64	1	51.68	13.15	13.15
0.4922	12.501	-3.64	1/2	21.32	5.42	18.57
0.3740	9.500	-3.25	3/8	7.03	1.79	20.36
0.2500	6.351	-2.67	1/4	7.41	1.89	22.25
0.1873	4.757	-2.25	4	6.23	1.59	23.83
0.1324	3.364	-1.75	6	7.10	1.81	25.64
0.0787	2.000	-1.00	10	11.13	2.83	28.47
0.0557	1.414	-0.50	14	19.36	4.93	33.40
0.0394	1.000	0.00	18	40.94	10.42	43.82
0.0278	0.707	0.50	25	63.05	16.04	59.86
0.0197	0.500	1.00	35	65.64	16.70	76.56
0.0166	0.420	1.25	40	21.13	5.38	81.94
0.0139	0.354	1.50	45	16.75	4.26	86.20
0.0098	0.250	2.00	60	21.92	5.58	91.78
0.0070	0.177	2.50	80	11.51	2.93	94.70
0.0049	0.125	3.00	120	8.36	2.13	96.83
0.0029	0.074	3.75	200	6.53	1.66	98.49
0.0021	0.053	4.25	270	2.32	0.59	99.08
0.0015	0.037	4.75	400	1.55	0.39	99.48
			PAN	2.05	0.52	100.00
TOTALS				393.01	100.00	100.00

Cumulative Weight Percent greater than			
Weight	Phi	Particle Size	
percent	Value	Inches	Millimeters
5			
10			
16	-4.12	0.6839	17.371
25	-1.93	0.1497	3.803
40	-0.18	0.0447	1.135
50	0.19	0.0344	0.875
60	0.50	0.0278	0.705
75	0.95	0.0203	0.516
84	1.37	0.0152	0.387
90	1.84	0.0110	0.279
95	2.57	0.0066	0.168

Measure	Trask	Inman	Folk-Ward
Median, phi	0.19	0.19	0.19
Median, in.	0.0344	0.0344	0.0344
Median, mm	0.875	0.875	0.875
Mean, phi	-1.11	-1.37	-0.85
Mean, in.	0.0850	0.1020	0.0710
Mean, mm	2.160	2.592	1.805
Sorting	2.714	2.745	
Skewness	1.602	-0.571	
Kurtosis			

Grain Size Description (ASTM-USCS Scale)	Coarse sand (based on Mean from Trask)

Description	Retained on Sieve #	Weight Percent
Gravel	4	23.83
C Sand	10	4.64
M Sand	40	53.46
F Sand	200	16.56
Silt/Clay	<200	1.51
	Total	100

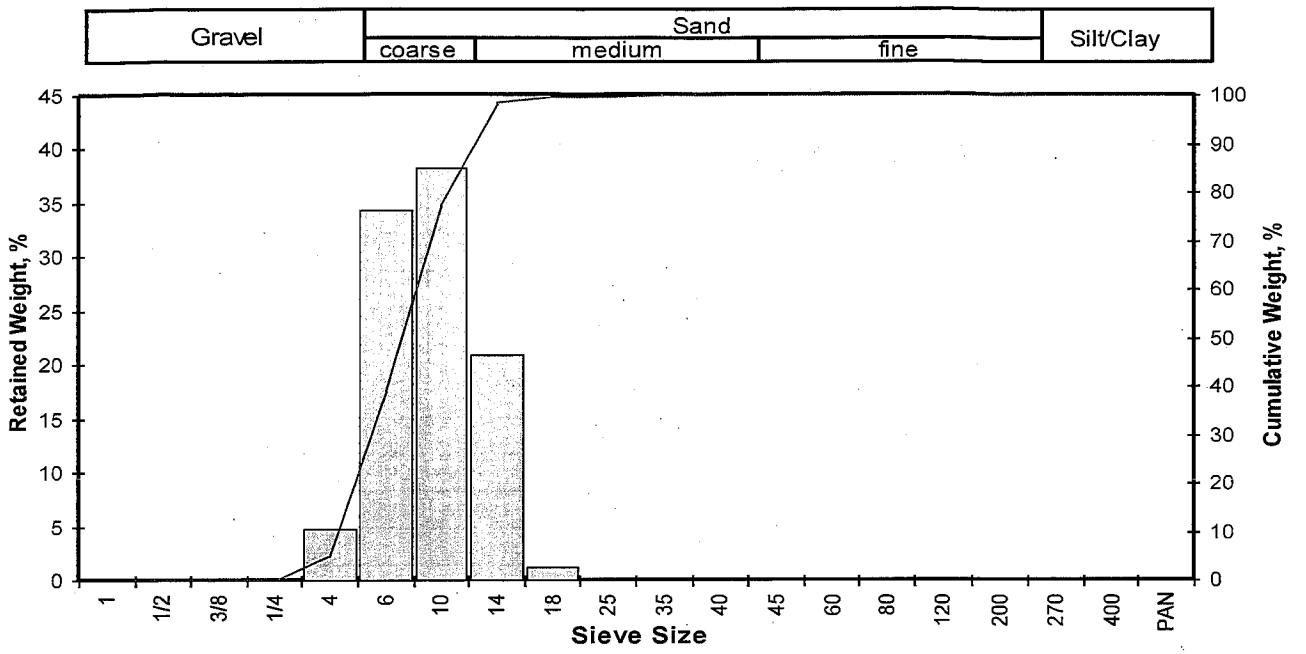
Phone: (562) 907-3607
Fax: (562) 907-3610

PTS Laboratories, Inc.

Particle Size Analysis - ASTM D422M

Client: Earth Forensics, Inc.
Project: N/A
Project No: N/A

PTS File No: 41863
Sample ID: Gravel Pack
Depth, ft: N/A



Opening		Phi of	U.S. Sieve	Sample Weight	Incremental Weight,	Cumulative Weight,
Inches	Millimeters	Screen	No.	grams	percent	percent
0.9844	25.002	-4.64	1	0.00	0.00	0.00
0.4922	12.501	-3.64	1/2	0.00	0.00	0.00
0.3740	9.500	-3.25	3/8	0.00	0.00	0.00
0.2500	6.351	-2.67	1/4	0.19	0.07	0.07
0.1873	4.757	-2.25	4	13.27	4.79	4.86
0.1324	3.364	-1.75	6	95.21	34.35	39.20
0.0787	2.000	-1.00	10	106.03	38.25	77.45
0.0557	1.414	-0.50	14	58.06	20.95	98.40
0.0394	1.000	0.00	18	3.22	1.16	99.56
0.0278	0.707	0.50	25	0.34	0.12	99.68
0.0197	0.500	1.00	35	0.55	0.20	99.88
0.0166	0.420	1.25	40	0.08	0.03	99.91
0.0139	0.354	1.50	45	0.02	0.01	99.92
0.0098	0.250	2.00	60	0.00	0.00	99.92
0.0070	0.177	2.50	80	0.02	0.01	99.92
0.0049	0.125	3.00	120	0.01	0.00	99.93
0.0029	0.074	3.75	200	0.03	0.01	99.94
0.0021	0.053	4.25	270	0.03	0.01	99.95
0.0015	0.037	4.75	400	0.04	0.01	99.96
			PAN	0.10	0.04	100.00
TOTALS				277.20	100.00	100.00

Cumulative Weight Percent greater than			
Weight	Phi	Particle Size	
percent	Value	Inches	Millimeters
5	-2.25	0.1870	4.750
10	-2.18	0.1778	4.516
16	-2.09	0.1674	4.251
25	-1.96	0.1528	3.882
40	-1.73	0.1310	3.327
50	-1.54	0.1144	2.905
60	-1.34	0.0998	2.535
75	-1.05	0.0814	2.068
84	-0.84	0.0707	1.795
90	-0.70	0.0640	1.625
95	-0.58	0.0589	1.496

Measure	Trask	Inman	Folk-Ward
Median, phi	-1.54	-1.54	-1.54
Median, in.	0.1144	0.1144	0.1144
Median, mm	2.905	2.905	2.905
Mean, phi	-1.57	-1.47	-1.49
Mean, in.	0.1171	0.1087	0.1106
Mean, mm	2.975	2.762	2.809
Sorting	1.370	0.622	0.564
Skewness	0.975	0.117	0.133
Kurtosis	0.314	0.340	0.752

Grain Size Description (ASTM-USCS Scale)	Coarse sand (based on Mean from Trask)

Description	Retained on Sieve #	Weight Percent
Gravel	4	4.86
Coarse Sand	10	72.60
Medium Sand	40	22.46
Fine Sand	200	0.03
Silt/Clay	<200	0.06
	Total	100

Phone: (562) 907-3607
Fax: (562) 907-3610

PTS Laboratories, Inc.

CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

COMPANY	Earth Forensics
ADDRESS / CITY / ZIP CODE	12532 Vista Panorama, Santa Ana 92705
PROJECT MANAGER	Richard Eaton
PROJECT NAME	
PHONE NUMBER	714-296-4055
PROJECT NUMBER	
FAX NUMBER	
SITE LOCATION	Malibu, CA
SAMPLER SIGNATURE	

ANALYSIS REQUEST

SAMPLE ID NUMBER	DATE	TIME	DEPTH, FT	NUMBER OF SAMPLES	GRAIN SIZE DISTRIBUTION, ASTM D422/4464M	COMMENTS
MCWP-MW01	11/15/11	noon	52.5-55		X	
" "	"	"	97.5-100		X	
" "	"	"	115-117.5		X	
brass sleeve	"	"	—		X	Will arrive / Received 11/19/11 EB 11/19/11 PB

PO#

TURNAROUND TIME
24 HOURS ☐ 5 DAYS ☒
48 HOURS ☐ NORMAL ☐
72 HOURS ☐
OTHER: _____

SAMPLE INTEGRITY (CHECK):
INTACT ____ ON ICE ____

PTS QUOTE NO.

PTS FILE: 41863

1. RELINQUISHED BY	2. RECEIVED BY	3. RELINQUISHED BY	4. RECEIVED BY
COMPANY: Earth Forensics	COMPANY: PTS Labs Inc	COMPANY:	COMPANY:
DATE / TIME: 11/18/11 9:50 am	DATE / TIME: 11/18/11 0950	DATE / TIME:	DATE / TIME:

PTS Laboratories, Inc.

Earth Forensics, Inc.
PTS File No: 41959

PARTICLE SIZE SUMMARY

(METHODOLOGY: ASTM D422)

PROJECT NAME: Particle Size
PROJECT NO: N/A

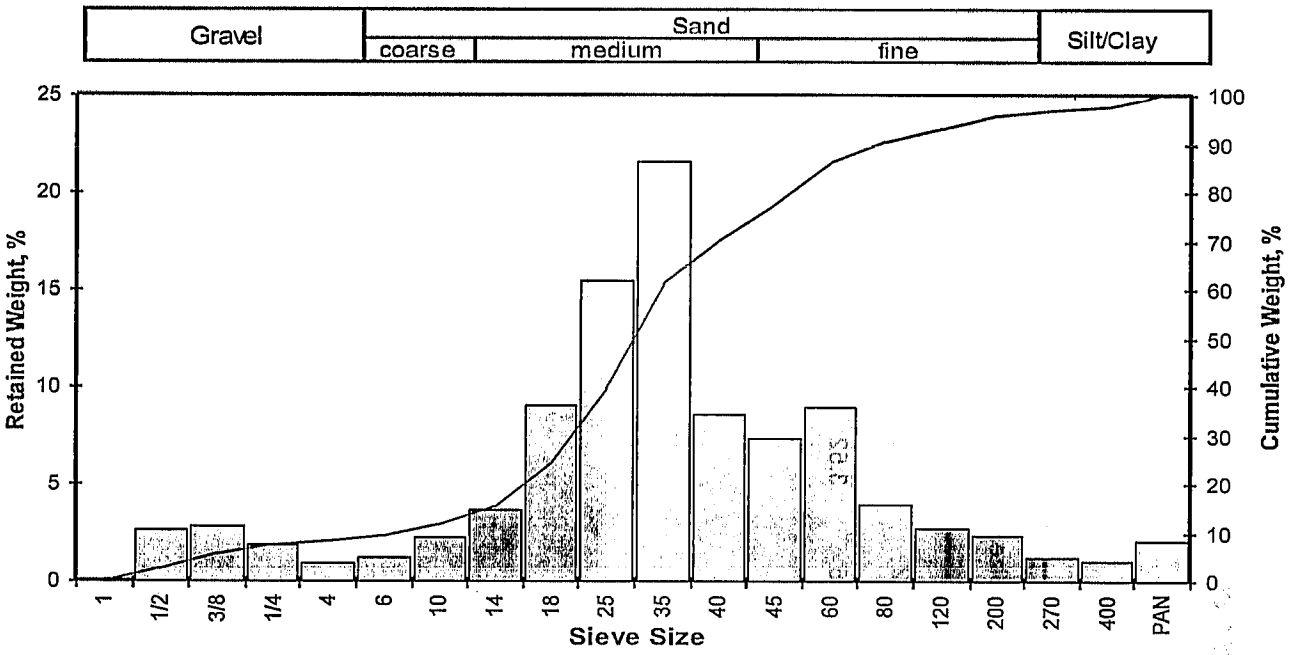
Sample ID	Depth, ft.	Description USCS/ASTM (1)	Median Grain Size, mm	Particle Size Distribution, wt. percent				
				Gravel	Sand Size			Silt/Clay
					Coarse	Medium	Fine	
MCWP-MW01	109	Medium sand	0.602	8.30	3.49	58.42	25.46	4.33
MCWP-MW02	58	Medium sand	0.576	3.52	5.55	55.84	30.54	4.56

(1) based on Mean fromTrask

PTS Laboratories, Inc.

Particle Size Analysis - ASTM D422M

Client:	Earth Forensics, Inc.	**PTS File No:**	41959
Project:	Particle Size	**Sample ID:**	MCWP-MW01
Project No:	N/A	**Depth, ft:**	109



Opening		Phi of	U.S. Sieve	Sample Weight	Incremental Weight,	Cumulative Weight,
Inches	Millimeters	Screen	No.	grams	percent	percent
0.9844	25.002	-4.64	1	0.00	0.00	0.00
0.4922	12.501	-3.64	1/2	7.90	2.65	2.65
0.3740	9.500	-3.25	3/8	8.43	2.83	5.47
0.2500	6.351	-2.67	1/4	5.72	1.92	7.39
0.1873	4.757	-2.25	4	2.70	0.91	8.30
0.1324	3.364	-1.75	6	3.58	1.20	9.50
0.0787	2.000	-1.00	10	6.82	2.29	11.78
0.0557	1.414	-0.50	14	11.07	3.71	15.50
0.0394	1.000	0.00	18	26.94	9.03	24.53
0.0278	0.707	0.50	25	46.08	15.45	39.98
0.0197	0.500	1.00	35	64.47	21.61	61.59
0.0166	0.420	1.25	40	25.71	8.62	70.21
0.0139	0.354	1.50	45	22.08	7.40	77.61
0.0098	0.250	2.00	60	26.71	8.95	86.57
0.0070	0.177	2.50	80	11.86	3.98	90.54
0.0049	0.125	3.00	120	8.28	2.78	93.32
0.0029	0.074	3.75	200	7.02	2.35	95.67
0.0021	0.053	4.25	270	3.60	1.21	96.88
0.0015	0.037	4.75	400	3.02	1.01	97.89
			PAN	6.29	2.11	100.00
TOTALS				298.28	100.00	100.00

Cumulative Weight Percent greater than			
Weight	Phi	Particle Size	
percent	Value	Inches	Millimeters
5	-3.31	0.3917	9.949
10	-1.59	0.1181	3.001
16	-0.47	0.0546	1.387
25	0.02	0.0390	0.989
40	0.50	0.0278	0.707
50	0.73	0.0237	0.602
60	0.96	0.0202	0.513
75	1.41	0.0148	0.376
84	1.86	0.0109	0.276
90	2.43	0.0073	0.185
95	3.54	0.0034	0.086

Measure	Trask	Inman	Folk-Ward
Median, phi	0.73	0.73	0.73
Median, in.	0.0237	0.0237	0.0237
Median, mm	0.602	0.602	0.602
Mean, phi	0.55	0.69	0.71
Mean, in.	0.0269	0.0244	0.0241
Mean, mm	0.683	0.619	0.613
Sorting	1.623	1.164	1.620
Skewness	1.013	-0.034	-0.108
Kurtosis	0.109	1.942	2.010
Grain Size Description (ASTM-USCS Scale)		Medium sand (based on Mean from Trask)	

Description	Retained on Sieve #	Weight Percent
Gravel	4	8.30
C Sand	10	3.49
M Sand	40	58.42
F Sand	200	25.46
Silt/Clay	<200	4.33
	Total	100

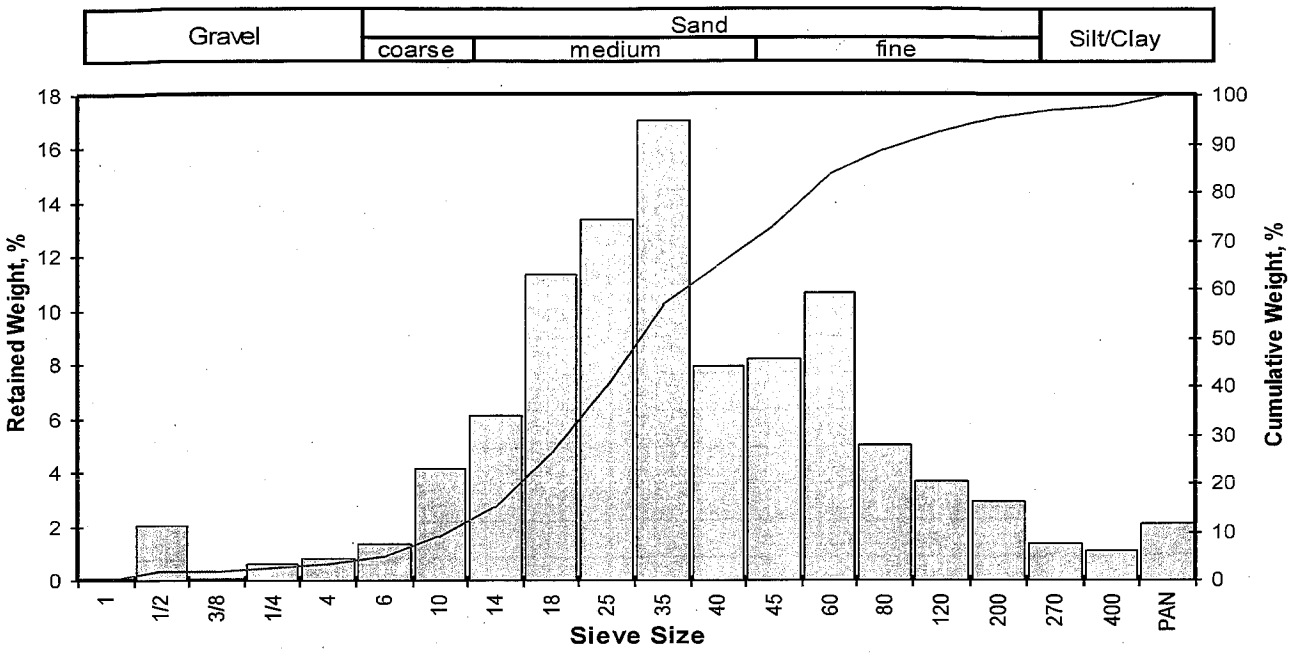
Phone: (562) 907-3607
Fax: (562) 907-3610

PTS Laboratories, Inc.

Particle Size Analysis - ASTM D422M

Client: Earth Forensics, Inc.
Project: Particle Size
Project No: N/A

PTS File No: 41959
Sample ID: MCWP-MW02
Depth, ft: 58



Opening		Phi of	U.S. Sieve	Sample Weight	Incremental Weight,	Cumulative Weight,
Inches	Millimeters	Screen	No.	grams	percent	percent
0.9844	25.002	-4.64	1	0.00	0.00	0.00
0.4922	12.501	-3.64	1/2	6.74	2.03	2.03
0.3740	9.500	-3.25	3/8	0.00	0.00	2.03
0.2500	6.351	-2.67	1/4	2.14	0.64	2.67
0.1873	4.757	-2.25	4	2.80	0.84	3.52
0.1324	3.364	-1.75	6	4.55	1.37	4.89
0.0787	2.000	-1.00	10	13.87	4.18	9.06
0.0557	1.414	-0.50	14	20.36	6.13	15.19
0.0394	1.000	0.00	18	37.57	11.31	26.50
0.0278	0.707	0.50	25	44.36	13.36	39.86
0.0197	0.500	1.00	35	56.69	17.07	56.93
0.0166	0.420	1.25	40	26.48	7.97	64.90
0.0139	0.354	1.50	45	27.41	8.25	73.16
0.0098	0.250	2.00	60	35.43	10.67	83.82
0.0070	0.177	2.50	80	16.71	5.03	88.85
0.0049	0.125	3.00	120	12.15	3.66	92.51
0.0029	0.074	3.75	200	9.73	2.93	95.44
0.0021	0.053	4.25	270	4.57	1.38	96.82
0.0015	0.037	4.75	400	3.61	1.09	97.90
			PAN	6.96	2.10	100.00
TOTALS				332.13	100.00	100.00

Cumulative Weight Percent greater than			
Weight	Phi	Particle Size	
percent	Value	Inches	Millimeters
5	-1.73	0.1306	3.316
10	-0.92	0.0747	1.897
16	-0.46	0.0543	1.380
25	-0.07	0.0412	1.047
40	0.50	0.0278	0.705
50	0.80	0.0227	0.576
60	1.10	0.0184	0.468
75	1.59	0.0131	0.333
84	2.02	0.0097	0.247
90	2.66	0.0062	0.159
95	3.64	0.0032	0.080

Measure	Trask	Inman	Folk-Ward
Median, phi	0.80	0.80	0.80
Median, in.	0.0227	0.0227	0.0227
Median, mm	0.576	0.576	0.576
Mean, phi	0.54	0.78	0.78
Mean, in.	0.0272	0.0230	0.0229
Mean, mm	0.690	0.584	0.581
Sorting	1.773	1.241	1.434
Skewness	1.026	-0.016	0.021
Kurtosis	0.205	1.162	1.331

Grain Size Description (ASTM-USCS Scale)	Medium sand (based on Mean from Trask)

Description	Retained on Sieve #	Weight Percent
Gravel	4	3.52
C Sand	10	5.55
M Sand	40	55.84
F Sand	200	30.54
Silt/Clay	<200	4.56
	Total	100

Phone: (562) 907-3607
Fax: (562) 907-3610

PTS Laboratories, Inc.

CHAIN OF CUSTODY RECORD

PAGE / OF/

COMPANY	Earth Forensics
ADDRESS / CITY / ZIP CODE	12532 Vista Panorama N. Tustin CA 92705
PROJECT MANAGER	W. Richard Leaton PhD wleaton@earthforensics.com
PROJECT NAME	—
PHONE NUMBER	714 296 4055
PROJECT NUMBER	—
FAX NUMBER	
SITE LOCATION	—
SAMPLER SIGNATURE	

SAMPLE ID NUMBER	DATE	TIME	DEPTH, FT	NUMBER OF SAMPLES	SOIL PROPERTIES PACKAGE	HYDRAULIC CONDUCTIVITY PACKAGE	PORE FLUID SATURATIONS PACKAGE	TCEQ/TNRCC PROPERTIES PACKAGE	CAPILLARITY PACKAGE	FLUID PROPERTIES PACKAGE	PHOTOLOG: CORE PHOTOGRAPHY	MOISTURE CONTENT, ASTM D2216	POROSITY: TOTAL, API RP40	POROSITY: EFFECTIVE, ASTM D425M	SPECIFIC GRAVITY, ASTM D854	BULK DENSITY (DRY), API RP40 or ASTM D2937	AIR PERMEABILITY, API RP40	HYDRAULIC CONDUCTIVITY, EPA9100, API RP40, D5084	GRAIN SIZE DISTRIBUTION, ASTM D422/4464M	TOC: WALKLEY-BLACK	ATTERBERG LIMITS, ASTM D4318				
MCWP-MW01	—	—	108'	1															X						
MCWP-MW02	—	—	58'	1															X						

PO#

TURNAROUND TIME
24 HOURS ☐ 5 DAYS ☐
48 HOURS ☐ NORMAL ☒
72 HOURS ☐
OTHER: _____

SAMPLE INTEGRITY (CHECK):
INTACT X ON ICE ____

PTS QUOTE NO.

PTS FILE:
41959

COMMENTS

1. RELINQUISHED BY	2. RECEIVED BY	3. RELINQUISHED BY	4. RECEIVED BY
COMPANY	COMPANY PTS Labs Inc	COMPANY	COMPANY
DATE TIME	DATE 12/15/11 TIME 1633	DATE TIME	DATE TIME

PTS Laboratories, Inc.

Earth Forensics, Inc.
PTS File No: 41889

PARTICLE SIZE SUMMARY

(METHODOLOGY: ASTM D422/D4464M)

PROJECT NAME: Malibu Centralized Wastewater Project
PROJECT NO: N/A

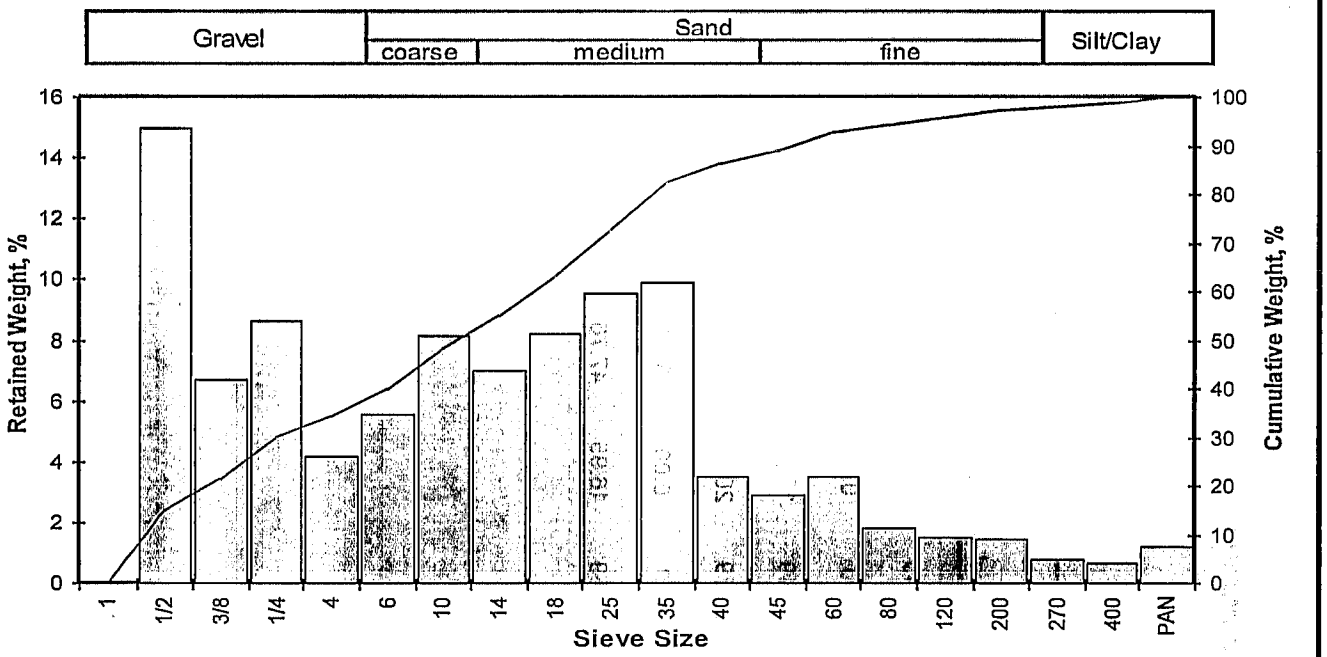
Sample ID	Depth, ft.	Mean Grain Size Description (1)	Median Grain Size mm	Particle Size Distribution, wt. percent						Silt & Clay
				Gravel	Sand Size			Silt	Clay	
					Coarse	Medium	Fine			
MCWP-MW02-55-57.5	55-57.5	Coarse sand	1.825	34.45	13.71	38.14	11.07	(2)	(2)	2.63
MCWP-MW02-88-90	88-90	Fine sand	0.092	0.00	0.00	12.58	44.73	35.35	7.34	42.69
MCWP-MW02-142.5-145	142.5-145	Medium sand	0.985	14.49	18.44	46.93	16.70	(2)	(2)	3.45
MCWP-MW03-67.5-69	67.5-69	Coarse sand	2.164	30.79	20.95	32.33	12.03	(2)	(2)	3.89
MCWP-MW03-102.3-104	102.3-104	Fine sand	0.065	0.00	0.00	5.12	39.06	47.59	8.22	55.82
MCWP-MW03-125-127.5	125-127.5	Medium sand	1.132	15.59	16.95	47.76	14.92	(2)	(2)	4.77

(1) Based on Mean from Trask
(2) Mechanical sieve does not differentiate silt/clay fractions

PTS Laboratories, Inc.

Particle Size Analysis - ASTM D422M

Client:	Earth Forensics, Inc.	**PTS File No:**	41889
Project:	Malibu Centralized Wastewater Project	**Sample ID:**	MCWP-MW02-55-57.5
Project No:	N/A	**Depth, ft:**	55-57.5



Opening Inches	Opening Millimeters	Phi of Screen	U.S. Sieve No.	Sample Weight grams	Incremental Weight, percent	Cumulative Weight, percent
0.9844	25.002	-4.64	1	0.00	0.00	0.00
0.4922	12.501	-3.64	1/2	57.14	15.00	15.00
0.3740	9.500	-3.25	3/8	25.46	6.68	21.68
0.2500	6.351	-2.67	1/4	32.88	8.63	30.31
0.1873	4.757	-2.25	4	15.77	4.14	34.45
0.1324	3.364	-1.75	6	21.09	5.54	39.99
0.0787	2.000	-1.00	10	31.14	8.17	48.16
0.0557	1.414	-0.50	14	26.61	6.98	55.14
0.0394	1.000	0.00	18	31.28	8.21	63.35
0.0278	0.707	0.50	25	36.33	9.54	72.89
0.0197	0.500	1.00	35	37.73	9.90	82.79
0.0166	0.420	1.25	40	13.37	3.51	86.30
0.0139	0.354	1.50	45	10.96	2.88	89.18
0.0098	0.250	2.00	60	13.24	3.48	92.65
0.0070	0.177	2.50	80	6.84	1.80	94.45
0.0049	0.125	3.00	120	5.66	1.49	95.93
0.0029	0.074	3.75	200	5.47	1.44	97.37
0.0021	0.053	4.25	270	3.03	0.80	98.17
0.0015	0.037	4.75	400	2.42	0.64	98.80
			PAN	4.57	1.20	100.00
TOTALS				380.99	100.00	100.00

Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size Inches	Particle Size Millimeters
5	-4.31	0.7813	19.844
10	-3.98	0.6201	15.750
16	-3.58	0.4723	11.997
25	-3.02	0.3204	8.137
40	-1.75	0.1323	3.360
50	-0.87	0.0719	1.825
60	-0.20	0.0454	1.152
75	0.61	0.0259	0.657
84	1.09	0.0185	0.471
90	1.62	0.0128	0.326
95	2.69	0.0061	0.155

Measure	Trask	Inman	Folk-Ward
Median, phi	-0.87	-0.87	-0.87
Median, in.	0.0719	0.0719	0.0719
Median, mm	1.825	1.825	1.825
Mean, phi	-2.14	-1.25	-1.12
Mean, in.	0.1731	0.0936	0.0857
Mean, mm	4.397	2.377	2.177
Sorting	3.520	2.335	2.228
Skewness	1.266	-0.163	-0.074
Kurtosis	0.242	0.498	0.790

Grain Size Description (ASTM-USCS Scale)	Coarse sand (based on Mean from Trask)

Description	Retained on Sieve #	Weight Percent
Gravel	4	34.45
C Sand	10	13.71
M Sand	40	38.14
F Sand	200	11.07
Silt/Clay	<200	2.63
	Total	100

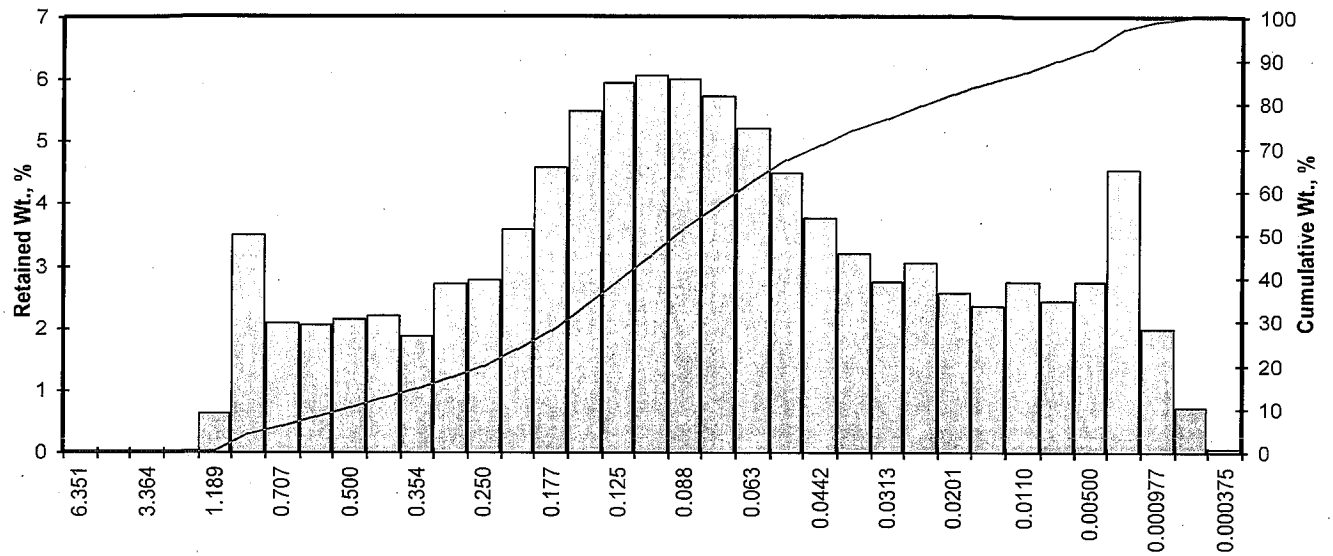
Phone: (562) 907-3607
Fax: (562) 907-3610

PTS Laboratories, Inc.

Particle Size Analysis - ASTM D4464M

Client:	Earth Forensics, Inc.	**PTS File No:**	41889
Project:	Malibu Centralized Wastewater Project	**Sample ID:**	MCWP-MW02-88-90
Project No:	N/A	**Depth, ft:**	88-90

Grv	Sand Size			Silt	Clay
	crs	medium	fine		



Particle Size, mm

Opening		Phi of	U.S.	Sample	Increment	Cumulative
Inches	Millimeters	Screen	No.	Weight, grams	Weight, percent	Weight, percent
0.2500	6.351	-2.67	1/4	0.00	0.00	0.00
0.1873	4.757	-2.25	4	0.00	0.00	0.00
0.1324	3.364	-1.75	6	0.00	0.00	0.00
0.0787	2.000	-1.00	10	0.00	0.00	0.00
0.0468	1.189	-0.25	16	0.62	0.62	0.62
0.0331	0.841	0.25	20	3.49	3.49	4.11
0.0278	0.707	0.50	25	2.07	2.07	6.18
0.0234	0.595	0.75	30	2.06	2.06	8.24
0.0197	0.500	1.00	35	2.13	2.13	10.37
0.0166	0.420	1.25	40	2.21	2.21	12.58
0.0139	0.354	1.50	45	1.87	1.87	14.45
0.0117	0.297	1.75	50	2.71	2.71	17.16
0.0098	0.250	2.00	60	2.77	2.77	19.93
0.0083	0.210	2.25	70	3.58	3.58	23.51
0.0070	0.177	2.50	80	4.58	4.58	28.09
0.0059	0.149	2.75	100	5.49	5.49	33.58
0.0049	0.125	3.00	120	5.94	5.94	39.52
0.0041	0.105	3.25	140	6.06	6.06	45.58
0.0035	0.088	3.50	170	5.99	5.99	51.57
0.0029	0.074	3.75	200	5.74	5.74	57.31
0.0025	0.063	4.00	230	5.22	5.22	62.53
0.0021	0.053	4.25	270	4.51	4.51	67.04
0.00174	0.0442	4.50	325	3.78	3.78	70.82
0.00146	0.0372	4.75	400	3.20	3.20	74.02
0.00123	0.0313	5.00	450	2.76	2.76	76.78
0.000986	0.0250	5.32	500	3.04	3.04	79.82
0.000790	0.0201	5.64	635	2.55	2.55	82.37
0.000615	0.0156	6.00		2.36	2.36	84.73
0.000435	0.0110	6.50		2.76	2.76	87.49
0.000308	0.00781	7.00		2.43	2.43	89.92
0.000197	0.00500	7.65		2.74	2.74	92.66
0.000077	0.00195	9.00		4.57	4.57	97.23
0.000038	0.000977	10.00		1.98	1.98	99.21
0.000019	0.000488	11.00		0.73	0.73	99.94
0.000015	0.000375	11.38		0.06	0.06	100.00
TOTALS				100.00	100.00	100.00

Cumulative Weight Percent greater than			
Weight	Phi	Particle Size	
percent	Value	Inches	Millimeters
5	0.36	0.0307	0.781
10	0.96	0.0203	0.515
16	1.64	0.0126	0.320
25	2.33	0.0078	0.199
40	3.02	0.0049	0.123
50	3.43	0.0036	0.092
60	3.88	0.0027	0.068
75	4.84	0.0014	0.035
84	5.89	0.0007	0.017
90	7.02	0.0003	0.008
95	8.34	0.0001	0.003

Measure	Trask	Inman	Folk-Ward
Median, phi	3.43	3.43	3.43
Median, in.	0.0036	0.0036	0.0036
Median, mm	0.092	0.092	0.092
Mean, phi	3.10	3.77	3.66
Mean, in.	0.0046	0.0029	0.0031
Mean, mm	0.117	0.074	0.079
Sorting	2.385	2.123	2.271
Skewness	0.901	0.156	0.192
Kurtosis	0.161	0.880	1.305
Grain Size Description (ASTM-USCS Scale)		Fine sand (based on Mean from Trask)	

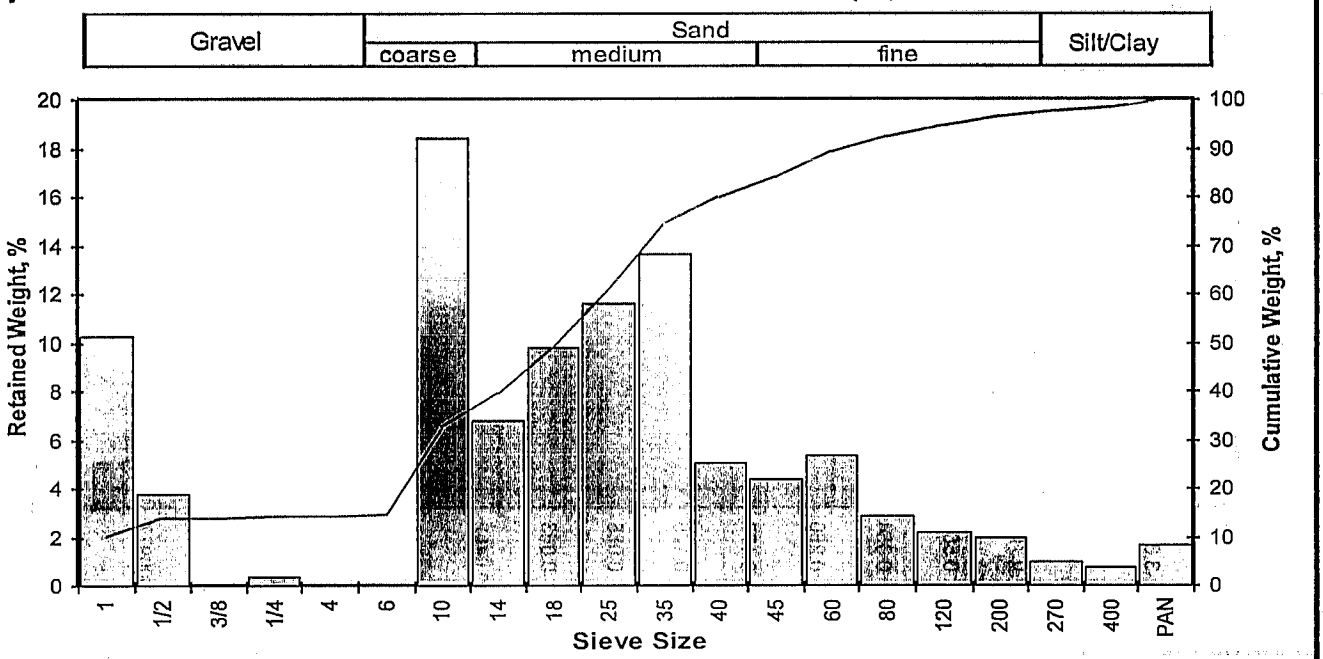
Description	Retained on Sieve #	Weight Percent
Gravel	4	0.00
C Sand	10	0.00
M Sand	40	12.58
F Sand	200	44.73
Silt	>0.005 mm	35.35
Clay	<0.005 mm	7.34
	Total	100

Phone: (562) 907-3607 Fax: (562) 907-3610

PTS Laboratories, Inc.

Particle Size Analysis - ASTM D422M

Client:	Earth Forensics, Inc.	**PTS File No:**	41889
Project:	Malibu Centralized Wastewater Project	**Sample ID:**	MCWP-MW02-142.5-145
Project No:	N/A	**Depth, ft:**	142.5-145



Opening		Phi of	U.S. Sieve	Sample Weight	Incremental Weight,	Cumulative Weight,
Inches	Millimeters	Screen	No.	grams	percent	percent
0.9844	25.002	-4.64	1	31.37	10.29	10.29
0.4922	12.501	-3.64	1/2	11.55	3.79	14.08
0.3740	9.500	-3.25	3/8	0.00	0.00	14.08
0.2500	6.351	-2.67	1/4	1.12	0.37	14.44
0.1873	4.757	-2.25	4	0.13	0.04	14.49
0.1324	3.364	-1.75	6	0.16	0.05	14.54
0.0787	2.000	-1.00	10	56.05	18.38	32.92
0.0557	1.414	-0.50	14	20.63	6.77	39.69
0.0394	1.000	0.00	18	29.93	9.82	49.51
0.0278	0.707	0.50	25	35.48	11.64	61.14
0.0197	0.500	1.00	35	41.63	13.65	74.80
0.0166	0.420	1.25	40	15.40	5.05	79.85
0.0139	0.354	1.50	45	13.25	4.35	84.19
0.0098	0.250	2.00	60	16.33	5.36	89.55
0.0070	0.177	2.50	80	8.66	2.84	92.39
0.0049	0.125	3.00	120	6.76	2.22	94.61
0.0029	0.074	3.75	200	5.92	1.94	96.55
0.0021	0.053	4.25	270	3.07	1.01	97.56
0.0015	0.037	4.75	400	2.41	0.79	98.35
			PAN	5.04	1.65	100.00
TOTALS				304.89	100.00	100.00

Cumulative Weight Percent greater than			
Weight	Phi	Particle Size	
percent	Value	Inches	Millimeters
5			
10			
16	-1.69	0.1271	3.228
25	-1.32	0.0985	2.502
40	-0.48	0.0551	1.399
50	0.02	0.0388	0.985
60	0.45	0.0288	0.732
75	1.01	0.0195	0.497
84	1.49	0.0140	0.356
90	2.08	0.0093	0.237
95	3.15	0.0044	0.113

Measure	Trask	Inman	Folk-Ward
Median, phi	0.02	0.02	0.02
Median, in.	0.0388	0.0388	0.0388
Median, mm	0.985	0.985	0.985
Mean, phi	-0.58	-0.10	-0.06
Mean, in.	0.0590	0.0422	0.0410
Mean, mm	1.499	1.072	1.043
Sorting	2.245	1.590	
Skewness	1.131	-0.077	
Kurtosis			

Grain Size Description (ASTM-USCS Scale)	Medium sand (based on Mean from Trask)

Description	Retained on Sieve #	Weight Percent
Gravel	4	14.49
C Sand	10	18.44
M Sand	40	46.93
F Sand	200	16.70
Silt/Clay	<200	3.45
	Total	100

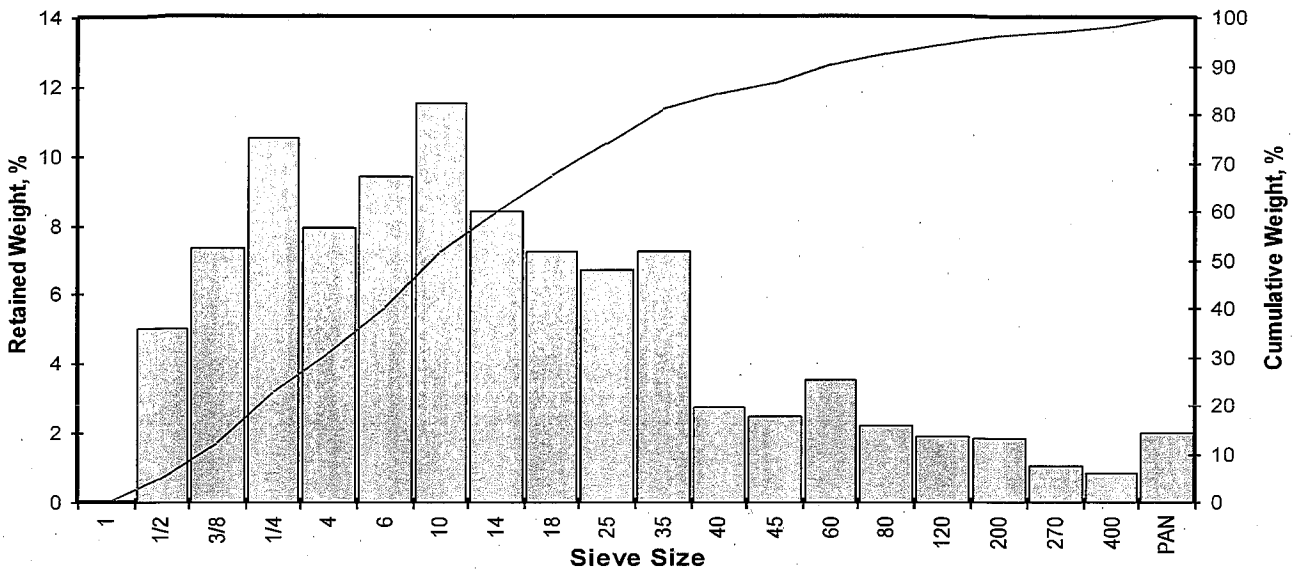
Phone: (562) 907-3607
Fax: (562) 907-3610

PTS Laboratories, Inc.

Particle Size Analysis - ASTM D422M

Client:	Earth Forensics, Inc.	**PTS File No:**	41889
Project:	Malibu Centralized Wastewater Project	**Sample ID:**	MCWP-MW03-67.5-69
Project No:	N/A	**Depth, ft:**	67.5-69

Gravel	Sand			Silt/Clay
	coarse	medium	fine	



Opening		Phi of	U.S. Sieve	Sample Weight	Incremental Weight,	Cumulative Weight,
Inches	Millimeters	Screen	No.	grams	percent	percent
0.9844	25.002	-4.64	1	0.00	0.00	0.00
0.4922	12.501	-3.64	1/2	17.06	5.03	5.03
0.3740	9.500	-3.25	3/8	24.83	7.32	12.36
0.2500	6.351	-2.67	1/4	35.67	10.52	22.88
0.1873	4.757	-2.25	4	26.84	7.92	30.79
0.1324	3.364	-1.75	6	31.97	9.43	40.22
0.0787	2.000	-1.00	10	39.05	11.52	51.74
0.0557	1.414	-0.50	14	28.53	8.42	60.16
0.0394	1.000	0.00	18	24.45	7.21	67.37
0.0278	0.707	0.50	25	22.80	6.73	74.10
0.0197	0.500	1.00	35	24.49	7.22	81.32
0.0166	0.420	1.25	40	9.35	2.76	84.08
0.0139	0.354	1.50	45	8.37	2.47	86.55
0.0098	0.250	2.00	60	12.08	3.56	90.11
0.0070	0.177	2.50	80	7.55	2.23	92.34
0.0049	0.125	3.00	120	6.50	1.92	94.25
0.0029	0.074	3.75	200	6.28	1.85	96.11
0.0021	0.053	4.25	270	3.52	1.04	97.14
0.0015	0.037	4.75	400	2.92	0.86	98.01
			PAN	6.76	1.99	100.00
TOTALS				339.02	100.00	100.00

Cumulative Weight Percent greater than			
Weight	Phi	Particle Size	
percent	Value	Inches	Millimeters
5	-3.65	0.4944	12.557
10	-3.38	0.4086	10.378
16	-3.05	0.3253	8.264
25	-2.56	0.2314	5.878
40	-1.76	0.1335	3.391
50	-1.11	0.0852	2.164
60	-0.51	0.0560	1.423
75	0.56	0.0267	0.677
84	1.24	0.0166	0.423
90	1.98	0.0099	0.253
95	3.30	0.0040	0.101

Measure	Trask	Inman	Folk-Ward
Median, phi	-1.11	-1.11	-1.11
Median, in.	0.0852	0.0852	0.0852
Median, mm	2.164	2.164	2.164
Mean, phi	-1.71	-0.90	-0.97
Mean, in.	0.1290	0.0736	0.0773
Mean, mm	3.277	1.869	1.962
Sorting	2.946	2.145	2.126
Skewness	0.922	0.099	0.184
Kurtosis	0.257	0.621	0.914

Grain Size Description (ASTM-USCS Scale)	Coarse sand (based on Mean from Trask)

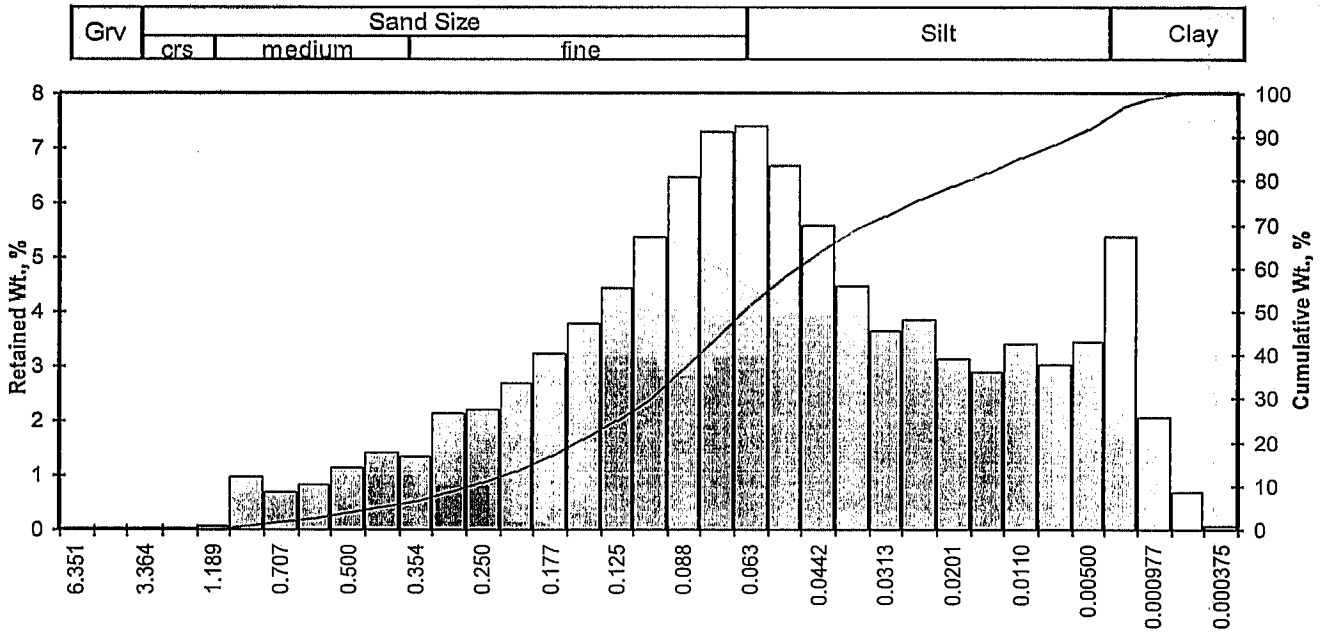
Description	Retained on Sieve #	Weight Percent
Gravel	4	30.79
C Sand	10	20.95
M Sand	40	32.33
F Sand	200	12.03
Silt/Clay	<200	3.89
	Total	100

Phone: (562) 907-3607 Fax: (562) 907-3610

PTS Laboratories, Inc.

Particle Size Analysis - ASTM D4464M

Client:	Earth Forensics, Inc.	**PTS File No:**	41889
Project:	Malibu Centralized Wastewater Project	**Sample ID:**	MCWP-MW03-102.3-104
Project No:	N/A	**Depth, ft:**	102.3-104



Opening Inches	Opening Millimeters	Phi of Screen	U.S. No.	Sample Weight, grams	Increment Weight, percent	Cumulative Weight, percent
0.2500	6.351	-2.67	1/4	0.00	0.00	0.00
0.1873	4.757	-2.25	4	0.00	0.00	0.00
0.1324	3.364	-1.75	6	0.00	0.00	0.00
0.0787	2.000	-1.00	10	0.00	0.00	0.00
0.0468	1.189	-0.25	16	0.07	0.07	0.07
0.0331	0.841	0.25	20	0.98	0.98	1.05
0.0278	0.707	0.50	25	0.69	0.69	1.74
0.0234	0.595	0.75	30	0.83	0.83	2.57
0.0197	0.500	1.00	35	1.13	1.13	3.70
0.0166	0.420	1.25	40	1.42	1.42	5.12
0.0139	0.354	1.50	45	1.35	1.35	6.47
0.0117	0.297	1.75	50	2.14	2.14	8.61
0.0098	0.250	2.00	60	2.21	2.21	10.82
0.0083	0.210	2.25	70	2.70	2.70	13.52
0.0070	0.177	2.50	80	3.24	3.24	16.76
0.0059	0.149	2.75	100	3.80	3.80	20.56
0.0049	0.125	3.00	120	4.44	4.44	24.99
0.0041	0.105	3.25	140	5.38	5.38	30.37
0.0035	0.088	3.50	170	6.49	6.49	36.86
0.0029	0.074	3.75	200	7.32	7.32	44.18
0.0025	0.063	4.00	230	7.41	7.41	51.59
0.0021	0.053	4.25	270	6.70	6.70	58.29
0.00174	0.0442	4.50	325	5.57	5.57	63.86
0.00146	0.0372	4.75	400	4.49	4.49	68.35
0.00123	0.0313	5.00	450	3.67	3.67	72.02
0.000986	0.0250	5.32	500	3.86	3.86	75.88
0.000790	0.0201	5.64	635	3.14	3.14	79.02
0.000615	0.0156	6.00		2.89	2.89	81.91
0.000435	0.0110	6.50		3.40	3.40	85.31
0.000308	0.00781	7.00		3.03	3.03	88.34
0.000197	0.00500	7.65		3.44	3.44	91.78
0.000077	0.00195	9.00		5.39	5.39	97.17
0.000038	0.000977	10.00		2.08	2.08	99.25
0.000019	0.000488	11.00		0.70	0.70	99.95
0.000015	0.000375	11.38		0.06	0.05	100.00
TOTALS				**100.00**	**100.00**	**100.00**

Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size Inches	Particle Size Millimeters
5	1.23	0.0168	0.427
10	1.91	0.0105	0.267
16	2.44	0.0072	0.184
25	3.00	0.0049	0.125
40	3.61	0.0032	0.082
50	3.95	0.0026	0.065
60	4.33	0.0020	0.050
75	5.25	0.0010	0.026
84	6.31	0.0005	0.013
90	7.31	0.0002	0.006
95	8.46	0.0001	0.003

Measure	Trask	Inman	Folk-Ward
Median, phi	3.95	3.95	3.95
Median, in.	0.0026	0.0026	0.0026
Median, mm	0.065	0.065	0.065
Mean, phi	3.72	4.37	4.23
Mean, in.	0.0030	0.0019	0.0021
Mean, mm	0.076	0.048	0.053
Sorting	2.179	1.933	2.061
Skewness	0.884	0.222	0.235
Kurtosis	0.190	0.869	1.318
Grain Size Description (ASTM-USCS Scale)		Fine sand (based on Mean from Trask)	

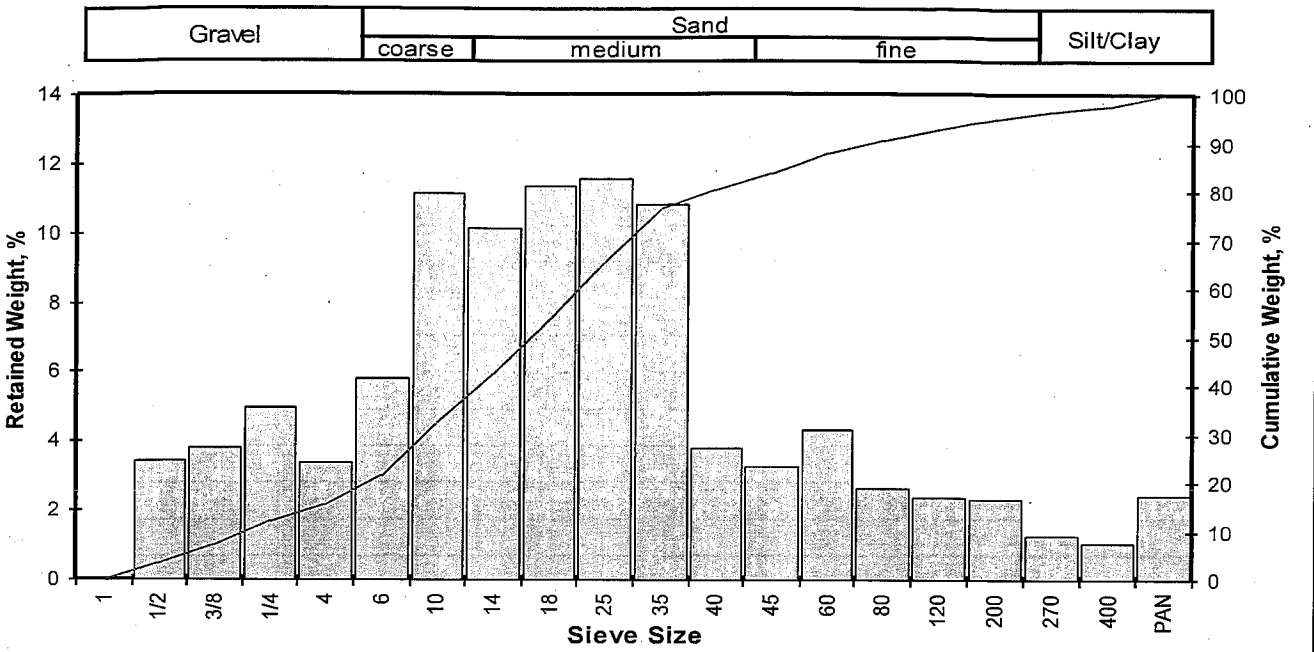
Description	Retained on Sieve #	Weight Percent
Gravel	4	0.00
C Sand	10	0.00
M Sand	40	5.12
F Sand	200	39.06
Silt	>0.005 mm	47.59
Clay	<0.005 mm	8.22
	Total	**100**

Phone: (562) 907-3607 Fax: (562) 907-3610

PTS Laboratories, Inc.

Particle Size Analysis - ASTM D422M

Client:	Earth Forensics, Inc.	**PTS File No:**	41889
Project:	Malibu Centralized Wastewater Project	**Sample ID:**	MCWP-MW03-125-127.5
Project No:	N/A	**Depth, ft:**	125-127.5



Opening		Phi of	U.S. Sieve	Sample Weight	Incremental Weight,	Cumulative Weight,
Inches	Millimeters	Screen	No.	grams	percent	percent
0.9844	25.002	-4.64	1	0.00	0.00	0.00
0.4922	12.501	-3.64	1/2	10.18	3.42	3.42
0.3740	9.500	-3.25	3/8	11.33	3.81	7.23
0.2500	6.351	-2.67	1/4	14.75	4.96	12.19
0.1873	4.757	-2.25	4	10.13	3.40	15.59
0.1324	3.364	-1.75	6	17.29	5.81	21.40
0.0787	2.000	-1.00	10	33.15	11.14	32.54
0.0557	1.414	-0.50	14	30.22	10.16	42.70
0.0394	1.000	0.00	18	33.87	11.38	54.08
0.0278	0.707	0.50	25	34.50	11.59	65.68
0.0197	0.500	1.00	35	32.22	10.83	76.50
0.0166	0.420	1.25	40	11.31	3.80	80.31
0.0139	0.354	1.50	45	9.76	3.28	83.59
0.0098	0.250	2.00	60	12.84	4.32	87.90
0.0070	0.177	2.50	80	7.92	2.66	90.56
0.0049	0.125	3.00	120	7.02	2.36	92.92
0.0029	0.074	3.75	200	6.86	2.31	95.23
0.0021	0.053	4.25	270	3.85	1.29	96.52
0.0015	0.037	4.75	400	3.14	1.06	97.58
			PAN	7.21	2.42	100.00
TOTALS				297.55	100.00	100.00

Cumulative Weight Percent greater than			
Weight	Phi	Particle Size	
percent	Value	Inches	Millimeters
5	-3.48	0.4392	11.157
10	-2.92	0.2986	7.585
16	-2.21	0.1828	4.642
25	-1.51	0.1120	2.844
40	-0.63	0.0610	1.551
50	-0.18	0.0446	1.132
60	0.26	0.0330	0.838
75	0.93	0.0207	0.525
84	1.55	0.0135	0.342
90	2.39	0.0075	0.190
95	3.68	0.0031	0.078

Measure	Trask	Inman	Folk-Ward
Median, phi	-0.18	-0.18	-0.18
Median, in.	0.0446	0.0446	0.0446
Median, mm	1.132	1.132	1.132
Mean, phi	-0.75	-0.33	-0.28
Mean, in.	0.0663	0.0496	0.0479
Mean, mm	1.684	1.260	1.216
Sorting	2.328	1.881	2.025
Skewness	1.079	-0.082	-0.002
Kurtosis	0.157	0.902	1.203

Grain Size Description (ASTM-USCS Scale)	Medium sand (based on Mean from Trask)

Description	Retained on Sieve #	Weight Percent
Gravel	4	15.59
C Sand	10	16.95
M Sand	40	47.76
F Sand	200	14.92
Silt/Clay	<200	4.77
	Total	100

Phone: (562) 907-3607
Fax: (562) 907-3610

PTS Laboratories, Inc.

CHAIN OF CUSTODY RECORD

PAGE OF

COMPANY: Earth Forensics

ADDRESS: 12532 Vista Panorama N. Tustin CITY: ZIP CODE: 92705

PROJECT MANAGER: W. Laten

PROJECT NAME: Malibu Centralized Wastewater Project PHONE NUMBER:

PROJECT NUMBER: FAX NUMBER:

SITE LOCATION: Malibu, CA

SAMPLER SIGNATURE:

PO#:

TURNAROUND TIME
24 HOURS ☐ 5 DAYS ☐
48 HOURS ☐ NORMAL ☒
72 HOURS ☐
OTHER:

SAMPLE INTEGRITY (CHECK):
INTACT ____ ON ICE ____

PTS QUOTE NO.:

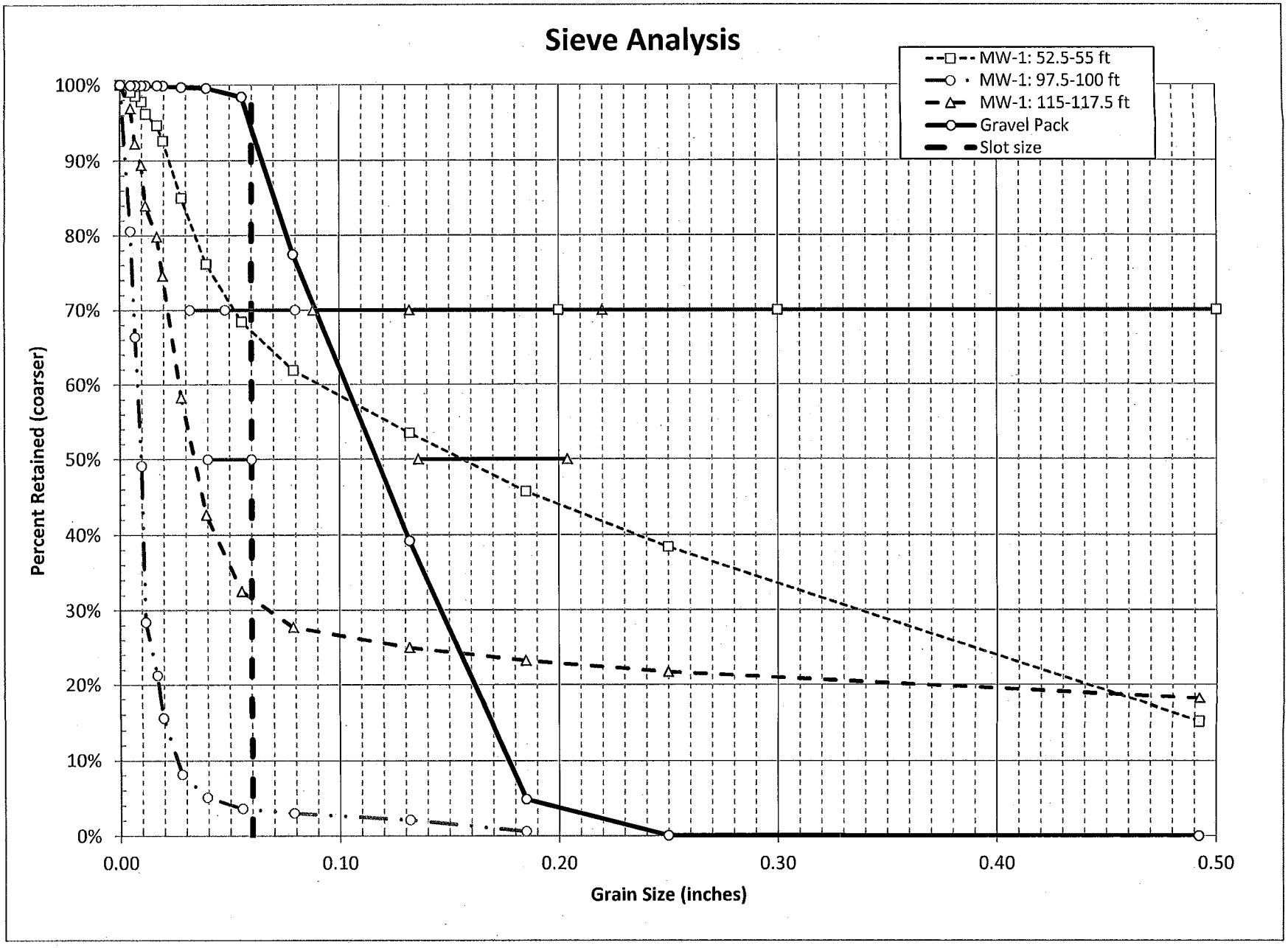
PTS FILE: 41889

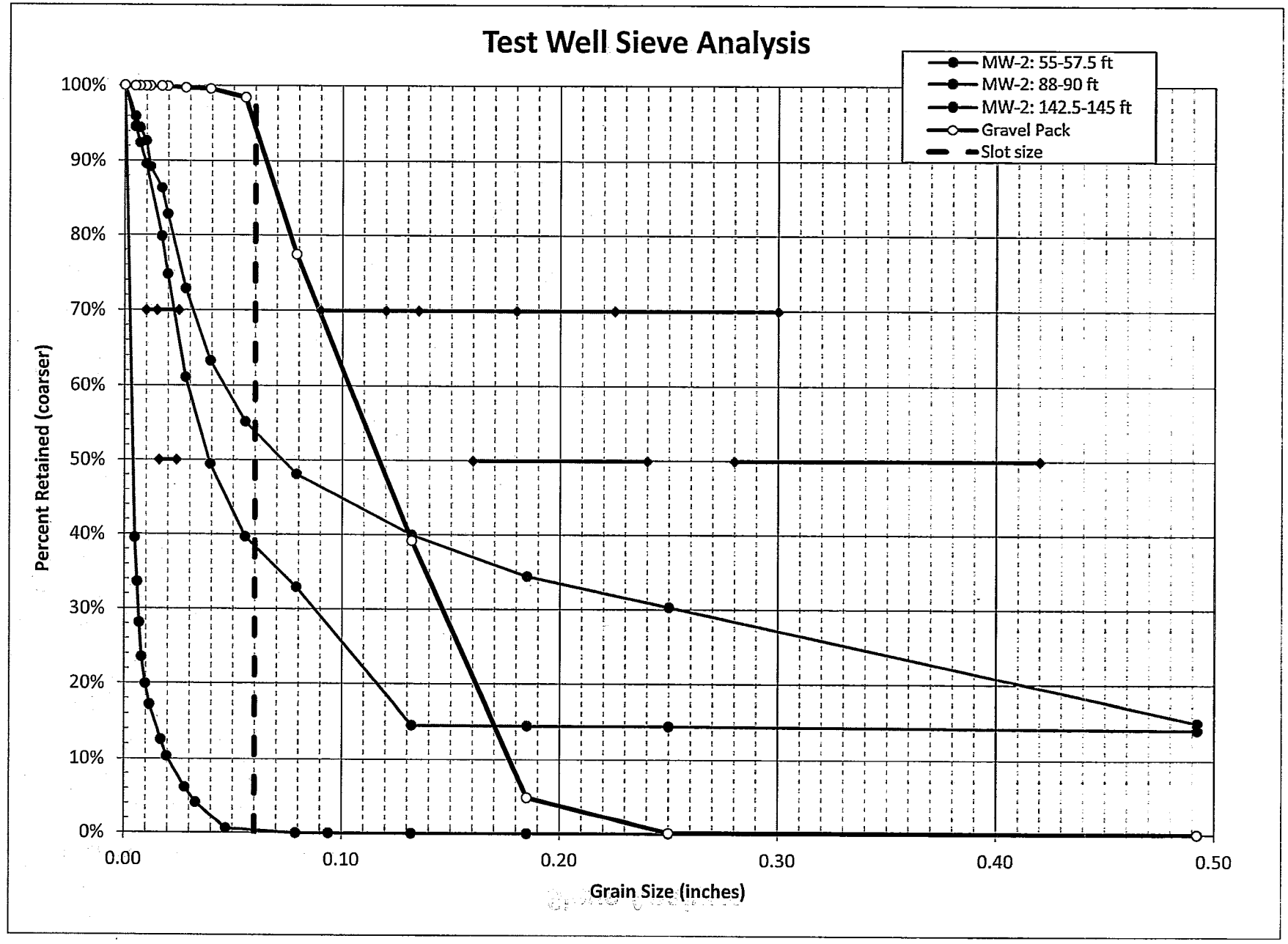
ANALYSIS REQUEST

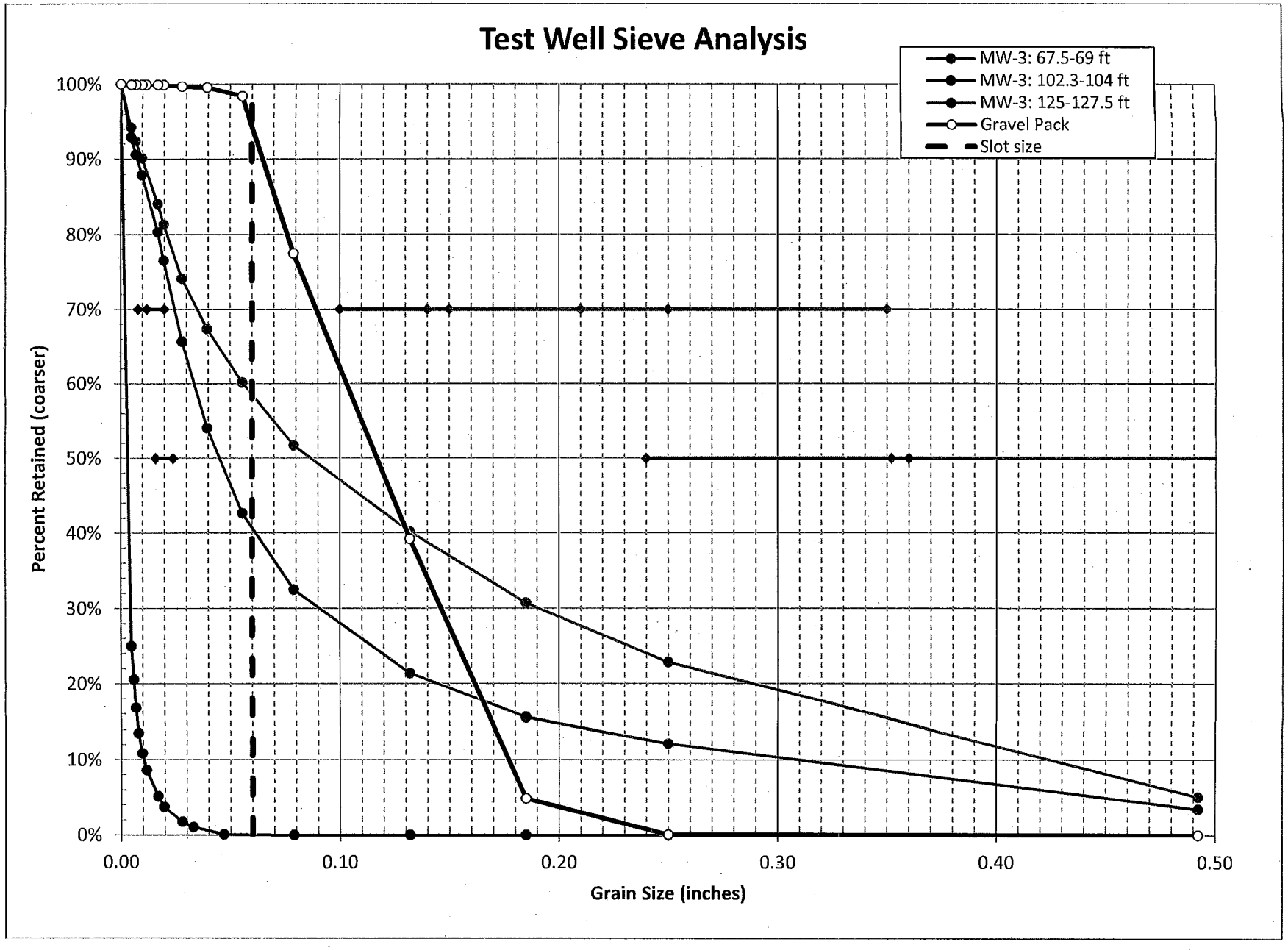
SAMPLE ID NUMBER	DATE	TIME	DEPTH, FT	NUMBER OF SAMPLES	GRAIN SIZE DISTRIBUTION, ASTM D422/4464M	TOC: WALKLEY-BLACK Either method	ATTERBERG LIMITS, ASTM D4318
MCWP-MW02-55-57.5	11/29/11	1400	55-57.5	1	X		
MCWP-MW02-88-90	11/29/11	1400	88-90	1	X		
MCWP-MW02-142.5-145	11/29/11	1400	142.5-145	1	X		
MCWP-MW03-67.5-69	11/29/11	1400	67.5-69	1	X		
MWCP-MW03-102.3-104	11/29/11	1400	102.3-104	1	X		
MWCP-MW03-125-127.5	11/29/11	1400	125-127.5	1	X		

COMMENTS

1. RELINQUISHED BY	2. RECEIVED BY	3. RELINQUISHED BY	4. RECEIVED BY
COMPANY: EF	COMPANY: PTS Labs	COMPANY:	COMPANY:
DATE: 11/29/11 TIME: 1545	DATE: 11/29/11 TIME: 1545	DATE: TIME:	DATE: TIME:


Sieve Analysis
MW-1: 52.5-55 ft
MW-1: 97.5-100 ft
MW-1: 115-117.5 ft
Gravel Pack
Slot size
Percent Retained (coarser)
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
0.00
0.10
0.20
0.30
0.40
0.50
Grain Size (inches)


Test Well Sieve Analysis
MW-2: 55-57.5 ft
MW-2: 88-90 ft
MW-2: 142.5-145 ft
Gravel Pack
Slot size
Percent Retained (coarser)
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
0.00
0.10
0.20
0.30
0.40
0.50
Grain Size (inches)


Test Well Sieve Analysis
MW-3: 67.5-69 ft
MW-3: 102.3-104 ft
MW-3: 125-127.5 ft
Gravel Pack
Slot size
Percent Retained (coarser)
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
0.00
0.10
0.20
0.30
0.40
0.50
Grain Size (inches)

Appendix D - Groundwater Sampling Logs

Earth Forensics

GROUNDWATER SAMPLING FIELD DATA SHEET

[redacted] Project No.: MCWP DATE: 12/19/11 WELL NO MCWP-MW01

FACILITY NAME: _____ TEMPERATURE: 65 °F or ~~°C~~

FIELD PERSONNEL: N. Napoli WEATHER: Overcast / Light Rain

FIELD MEASUREMENTS:

A. Static Water Level (SWL) below top of casing/piezometer: @ 11:15 10.94 FT. or IN.

B. Thickness of Free Product, if present: _____ Inches _____ FT. or IN.

C. Total Depth of well (TD) from top of casing/piezometer: _____ FT. or IN.

D. Height of Water Column in casing (h = TD - SWL): _____ FT. or IN.

E. **Useful approximate Purge Volumes (PV) per foot of water column for common casing sizes:**

	3 Well Vols.	5 Well Vols.		
2" Diameter =	0.5 gals/ft	0.82 gals/ft	x feet of water_____ =	_____PV (Gal)
4" Diameter =	2.0 gals/ft	3.25 gals/ft	x feet of water_____ =	_____PV (Gal)
6" Diameter =	4.4 gals/ft	7.35 gals/ft	x feet of water_____ =	_____PV (Gal)

PURGING METHOD: ~100gal/min Pump DURATION: 72 hours total

OBSERVATIONS:

~~Meter Value (Gal) Cum. PV (Gal)~~	Time	Turbidity	DO	ORP	pH	Temp.	Conduct.	SWL
769900	1115							10.94
769000	1200	0.00	0.00	9	7.13	18.42	2.55	16.90
774900	1300	0.00	0.00	12	7.11	17.53	2.58	16.92
780900	1400	0.00	0.00	11	7.11	17.56	2.58	16.85
786900	1500	0.00	0.00	8	7.12	17.67	2.57	16.77
792900	1600	0.00	0.00	6	7.13	17.27	—	16.64
798800	1700	0.00	0.00	4	7.11	17.78	2.59	16.65

TOTAL VOLUME OF WATER PURGED FROM WELL: _____

PURGE WATER STORED/DISPOSED OF WHERE/HOW: _____

SAMPLES COLLECTED: Depth to Water at time of sample collection: _____

Sample Number(s)	Time	Size/Number of Container(s)	Preservative
MCWP-MW01-20111219	1700	See Chain	

COMMENTS:

Casing Capacities:
2-inch hole.....0.16 gal/lin ft.
4-inch hole.....0.65 gal/lin ft.
6.5-inch hole.....1.70 gal/lin ft.
8-inch hole.....2.60 gal/lin ft.
10-inch hole.....4.10 gal/lin ft.

Recharge Calculation at Time of Sample Collection:

Total Depth of Well:
Original Water Column: _____ x 0.80 = --(_____)
Collect sample when Depth to Water measures
Less than or equal to:

Signature: _____

GROUNDWATER SAMPLING FIELD DATA SHEET

Project No.: MCWP DATE: 12/20/11 WELL NO. MCWP-MW01

FACILITY NAME: _____ TEMPERATURE: _____ °F or °C

FIELD PERSONNEL: N. Napoli WEATHER: _____

FIELD MEASUREMENTS:

A. Static Water Level (SWL) below top of casing/piezometer: _____ FT. or IN.

~~B. Thickness of Free Product, if present: _____ Inches~~ _____ FT. or IN.

C. Total Depth of well (TD) from top of casing/piezometer: _____ FT. or IN.

D. Height of Water Column in casing (h = TD - SWL): _____ FT. or IN.

E. **Useful approximate Purge Volumes (PV) per foot of water column for common casing sizes:**

	3 Well Vols.	5 Well Vols.			
2" Diameter =	0.5 gals/ft	0.82 gals/ft	x feet of water _____	=	_____ PV (Gal)
4" Diameter =	2.0 gals/ft	3.25 gals/ft	x feet of water _____	=	_____ PV (Gal)
6" Diameter =	4.4 gals/ft	7.35 gals/ft	x feet of water _____	=	_____ PV (Gal)

PURGING METHOD: 100gal/min DURATION: _____

OBSERVATIONS:

Cum. PV (Gal)	Time	Turbidity	DO	ORP	pH	Temp.	Conduct.	SWL
930200	1500	0.00	0.00	13	7.12	19.21	2.51	17.10
936200	1600	0.00	0.00	-12	7.13	19.18	2.50	~~16.~~16.94
942200	1700	0.00	0.00	-11	7.13	18.68	2.50	16.79
948100	1800	0.00	0.00	-13	7.13	18.50	2.50	16.65

TOTAL VOLUME OF WATER PURGED FROM WELL: _____

PURGE WATER STORED/DISPOSED OF WHERE/HOW: _____

SAMPLES COLLECTED: Depth to Water at time of sample collection: _____

Sample Number(s)	Time	Size/Number of Container(s)	Preservative
MCWP-MW01-20111220	1800	See Chain	

COMMENTS:

_____

_____

Casing Capacities:
2-inch hole.....0.16 gal/lin ft.
4-inch hole.....0.65 gal/lin ft.
6.5-inch hole.....1.70 gal/lin ft.
8-inch hole.....2.60 gal/lin ft.
10-inch hole.....4.10 gal/lin ft.

Recharge Calculation at Time of Sample Collection:

Total Depth of Well:

Original Water Column: _____ x 0.80 = --( )

Collect sample when Depth to Water measures **Less than or equal to:**

Signature: _____

GROUNDWATER SAMPLING FIELD DATA SHEET

Project No.: MCWP DATE: 12/21/11 WELL NO: MCWP-MW01

FACILITY NAME: _____ TEMPERATURE: 69 (°F) or °C

FIELD PERSONNEL: N. Napoli WEATHER: Sunny

FIELD MEASUREMENTS:

A. Static Water Level (SWL) below top of casing/piezometer: _____ FT. or IN.

B. Thickness of Free Product, if present: _____ Inches _____ FT. or IN.

C. Total Depth of well (TD) from top of casing/piezometer: _____ FT. or IN.

D. Height of Water Column in casing (h = TD - SWL): _____ FT. or IN.

E. **Useful approximate Purge Volumes (PV) per foot of water column for common casing sizes:**

	3 Well Vols.	5 Well Vols.		
2" Diameter =	0.5 gals/ft	0.82 gals/ft	x feet of water _____ =	_____ PV (Gal)
4" Diameter =	2.0 gals/ft	3.25 gals/ft	x feet of water _____ =	_____ PV (Gal)
6" Diameter =	4.4 gals/ft	7.35 gals/ft	x feet of water _____ =	_____ PV (Gal)

PURGING METHOD: ~100 gal/min DURATION: 72 hours

OBSERVATIONS:

~~Cum. PV (Gal)~~	Time	Turbidity	DO	ORP	pH	Temp.	Conduct.	SWL
1037800	0100	0.00	0.13	-14	7.33	19.16	2.47	16.72
1043800	1000	0.00	0.00	-18	7.31	19.27	2.47	16.96
1049800	1100	0.00	0.00	-22	7.31	19.33	2.47	17.18

TOTAL VOLUME OF WATER PURGED FROM WELL: _____

PURGE WATER STORED/DISPOSED OF WHERE/HOW: _____

SAMPLES COLLECTED: Depth to Water at time of sample collection: _____

Sample Number(s)	Time	Size/Number of Container(s)	Preservative
MCWP-MW01-20111221	1100	See Chain - Title 22 + 11	

COMMENTS:

Casing Capacities:
2-inch hole.....0.16 gal/lin ft.
4-inch hole.....0.65 gal/lin ft.
6.5-inch hole.....1.70 gal/lin ft.
8-inch hole.....2.60 gal/lin ft.
10-inch hole.....4.10 gal/lin ft.

Recharge Calculation at Time of Sample Collection:

Total Depth of Well:
Original Water Column: _____ x 0.80 = -- ( )
Collect sample when Depth to Water measures
Less than or equal to:

Signature: _____

[redacted] Forensics

GROUNDWATER SAMPLING FIELD DATA SHEET

EF [redacted] Project No.: MCWP DATE: 12/15/11 WELL NO. MCWP-MW02

FACILITY NAME: [redacted] @12/16/11 TEMPERATURE: _____ °F or °C

FIELD PERSONNEL: N. Napoli WEATHER: _____

FIELD MEASUREMENTS:

A. Static Water Level (SWL) below top of casing/piezometer: @ 8.45 10.48 FT. or IN.

B. Thickness of Free Product, if present: _____ Inches _____ FT. or IN.

C. Total Depth of well (TD) from top of casing/piezometer: 143.2 FT. or IN.

D. Height of Water Column in casing (h = TD - SWL): _____ FT. or IN.

E. **Useful approximate Purge Volumes (PV) per foot of water column for common casing sizes:**

	3 Well Vols.	5 Well Vols.	
2" Diameter =	0.5 gals/ft	0.82 gals/ft	x feet of water_____ = _____PV (Gal)
4" Diameter =	2.0 gals/ft	3.25 gals/ft	x feet of water_____ = _____PV (Gal)
6" Diameter =	4.4 gals/ft	7.35 gals/ft	x feet of water_____ = _____PV (Gal)

PURGING METHOD: ~100gal/min DURATION: 72 hours

OBSERVATIONS:

~~Cum. PV (Gal)~~ gal meter	Time	NTU Turbidity	mg/L DO	oepmV ORP	pH	°C Temp.	mS/cm Conduct.	ft SWL
~~343800~~	~~1220~~	—	—	—	—	—	—	~~10.30~~
348500	1305	15.2	0.06	-23	7.37	18.37	2.39	18.30
354000	1400	7.93	0.00	-49	7.43	18.54	2.3	18.45
359800	1500	~~0.00~~ 4.56	0.00	-42	7.42	18.97	2.35	18.54
464000	0845	16.6	0.00	-5	7.27	18.63	2.44	18.85
465700	0900	0.75	0.00	-46	7.48	18.88	2.40	18.88
471700	1000	0.52	0.00	-58	7.53	19.76	2.33	18.80
477300	1100	0.57	0.00	-57	7.47	20.75	2.30	~~18.74~~

11/15/11 - 11/16/11

TOTAL VOLUME OF WATER PURGED FROM WELL: _____

PURGE WATER STORED/DISPOSED OF WHERE/HOW: _____

SAMPLES COLLECTED: Depth to Water at time of sample collection: _____

Sample Number(s)	Time	Size/Number of Container(s)	Preservative
MCWP-MW02-20111215	1400	2x500ml poly 1x500 filtered	1x500ml H_2SO_4
MCWP-MW02-20111216	1100	"	"

COMMENTS:

Casing Capacities:
2-inch hole.....0.16 gal/lin ft.
4-inch hole.....0.65 gal/lin ft.
6.5-inch hole.....1.70 gal/lin ft.
8-inch hole.....2.60 gal/lin ft.
10-inch hole.....4.10 gal/lin ft.

Recharge Calculation at Time of Sample Collection:

Total Depth of Well:
Original Water Column: _____ x 0.80 = --(_____)
Collect sample when Depth to Water measures
Less than or equal to:

Signature: _____

Earth Forensics
[redacted]

GROUNDWATER SAMPLING FIELD DATA SHEET

EP ~~EC~~ Project No.: MCWP DATE: 12/17/11 WELL NO. MCWP-MW02

FACILITY NAME: _____ TEMPERATURE: _____ °F or °C

FIELD PERSONNEL: N Napoli WEATHER: _____

FIELD MEASUREMENTS:

A. Static Water Level (SWL) below top of casing/piezometer: @ 8:05 19.00 FT. or IN.

B. Thickness of Free Product, if present: _____ Inches _____ FT. or IN.

C. Total Depth of well (TD) from top of casing/piezometer: _____ FT. or IN.

D. Height of Water Column in casing (h = TD - SWL): _____ FT. or IN.

E. **Useful approximate Purge Volumes (PV) per foot of water column for common casing sizes:**

	3 Well Vols.	5 Well Vols.		
2" Diameter =	0.5 gals/ft	0.82 gals/ft	x feet of water_____ =	_____PV (Gal)
4" Diameter =	2.0 gals/ft	3.25 gals/ft	x feet of water_____ =	_____PV (Gal)
6" Diameter =	4.4 gals/ft	7.35 gals/ft	x feet of water_____ =	_____PV (Gal)

PURGING METHOD: Pump 100 gal / min DURATION: _____

OBSERVATIONS:

Cum. PV (Gal)	Time	Turbidity	DO	ORP	pH	Temp.	Conduct.	SWL
600200	0805	4.07	0.00	-33	7.31	18.98	2.36	19.00
602600	0831	7.16	0.00	-44	7.35	19.06	2.31	19.10
604800	0853	2.16	0.00	-48	7.37	19.29	2.29	19.08
607000	0915	3.13	0.00	-52	7.39	19.43	2.28	19.08
609100	0938	2.26	0.00	-52	7.40	19.93	2.26	19.05

TOTAL VOLUME OF WATER PURGED FROM WELL: _____

PURGE WATER STORED/DISPOSED OF WHERE/HOW: _____

SAMPLES COLLECTED: Depth to Water at time of sample collection: _____

Sample Number(s)	Time	Size/Number of Container(s)	Preservative
MCWP-MW02-20111217	0930	Title 22 +	(See Chain)

COMMENTS:

Casing Capacities:
2-inch hole.....0.16 gal/lin ft.
4-inch hole.....0.65 gal/lin ft.
6.5-inch hole.....1.70 gal/lin ft.
8-inch hole.....2.60 gal/lin ft.
10-inch hole.....4.10 gal/lin ft.

Recharge Calculation at Time of Sample Collection:

Total Depth of Well:
Original Water Column: _____ x 0.80 = -- (_____)
Collect sample when Depth to Water measures
Less than or equal to:

Signature: _____

GROUNDWATER SAMPLING FIELD DATA SHEET

Project No.: MCWP DATE: 12/22/11 – 12/23/11 WELL NO. MCWP-MW03

FACILITY NAME: _____ TEMPERATURE: 65 °F or °C

FIELD PERSONNEL: N. Napoli WEATHER: _____

FIELD MEASUREMENTS:

A. Static Water Level (SWL) below top of casing/piezometer: 15:15 @ 9.50 FT. or IN.

B. Thickness of Free Product, if present: _____ Inches _____ FT. or IN.

C. Total Depth of well (TD) from top of casing/piezometer: _____ FT. or IN.

D. Height of Water Column in casing (h = TD - SWL): _____ FT. or IN.

E. **Useful approximate Purge Volumes (PV) per foot of water column for common casing sizes:**

	3 Well Vols.	5 Well Vols.		
2" Diameter =	0.5 gals/ft	0.82 gals/ft	x feet of water _____ =	_____ PV (Gal)
4" Diameter =	2.0 gals/ft	3.25 gals/ft	x feet of water _____ =	_____ PV (Gal)
6" Diameter =	4.4 gals/ft	7.35 gals/ft	x feet of water _____ =	_____ PV (Gal)

PURGING METHOD: 100gal/min until ~4:30 change to 90 gal/min DURATION: _____

OBSERVATIONS:

Cum. PV (Gal)	Time	Turbidity	DO	ORP	pH	Temp.	Conduct.	SWL
1195000	1515	—	—	—	—	—	—	9.50
1195800	1530	52.1	1.80	-53	7.10	20.71	3.54	14.08
1198800	1600	6.38	0.00	-57	7.12	20.60	3.55	14.00
1204800	1700	3.14	0.39	-74	7.07	20.50	3.15	13.76
1214800	1800	30.3	0.00	-72	7.09	19.95	3.62	13.44
1278300	0500	49.4	0.00	-98	7.10	19.64	3.63	11.94
1279600	~~0530~~ 0515	54.1	0.00	-101	7.09	19.58	3.65	11.91
1280900	0530	40.6	0.00	-106	7.15	19.66	3.64	11.78

TOTAL VOLUME OF WATER PURGED FROM WELL: _____

PURGE WATER STORED/DISPOSED OF WHERE/HOW: _____

SAMPLES COLLECTED: Depth to Water at time of sample collection: _____

Sample Number(s)	Time	Size/Number of Container(s)	Preservative
MCWP-MW03-20111223	0530	"See Chain"	

COMMENTS:

Casing Capacities:
2-inch hole.....0.16 gal/lin ft.
4-inch hole.....0.65 gal/lin ft.
6.5-inch hole.....1.70 gal/lin ft.
8-inch hole.....2.60 gal/lin ft.
10-inch hole.....4.10 gal/lin ft.

Recharge Calculation at Time of Sample Collection:

Total Depth of Well:
Original Water Column: _____ x 0.80 = --( )
Collect sample when Depth to Water measures
Less than or equal to:

Signature: _____

Appendix E – Water Quality Analyses

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Irvine
17461 Derian Avenue. Suite 100
Irvine, CA 92614
Tel: (949) 261-1022

TestAmerica Job ID: IUL2387
Client Project/Site: Malibu Centralized Wastewater Project

For:
Earth Forensics
12532 Vista Panorama
North Tustin, CA 92705

Attn: Richard Laton

Authorized for release by:
1/9/2012 3:04:12 PM

Pat Abe
Project Manager
Pat.Abe@testamericainc.com

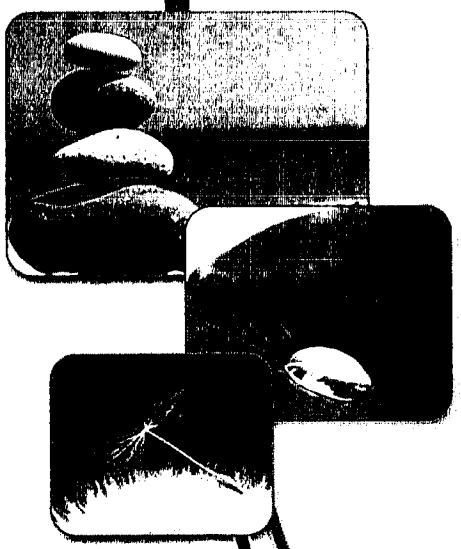


Table of Contents

Sample Summary

Client: Earth Forensics
Project/Site: Malibu Centralized Wastewater Project

TestAmerica Job ID: IUL2387

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
IUL2387-01	MCWP-MW01-20111219	Water	12/19/11 17:00	12/21/11 13:45
IUL2387-02	MCWP-MW01-20111220	Water	12/20/11 18:00	12/21/11 13:45

Case Narrative

Client: Earth Forensics
Project/Site: Malibu Centralized Wastewater Project

TestAmerica Job ID: IUL2387

Job ID: IUL2387

Laboratory: TestAmerica Irvine

4

Narrative

Comments: The samples were received with approximately 3.5 hours remaining of the 48 hour holding time for Nitrate and ortho-Phosphate, and the laboratory was not able to perform the requested analyses within the method specified holding time. The client instructed the laboratory to continue with the analyses past hold time.

Client Sample Results

Client: Earth Forensics
Project/Site: Malibu Centralized Wastewater Project

TestAmerica Job ID: IUL2387

Client Sample ID: MCWP-MW01-20111219
Date Collected: 12/19/11 17:00
Date Received: 12/21/11 13:45

Lab Sample ID: IUL2387-01
Matrix: Water

5

Method: EPA 6010B-Diss - DISSOLVED METALS - Dissolved

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		0.050	mg/l		12/27/11 15:48	01/04/12 18:07	1.0
Silica (as SIO2)	**32**		0.11	mg/l		12/27/11 15:48	12/31/11 17:23	1.0
Arsenic	ND		0.010	mg/l		12/27/11 15:48	01/04/12 18:07	1.0
Barium	**0.048**		0.010	mg/l		12/27/11 15:48	12/31/11 17:23	1.0
Boron	**0.78**		0.050	mg/l		12/27/11 15:48	12/31/11 17:23	1.0
Cadmium	ND		0.0050	mg/l		12/27/11 15:48	12/31/11 17:23	1.0
Calcium	**180**		0.10	mg/l		12/27/11 15:48	12/31/11 17:23	1.0
Chromium	ND		0.0050	mg/l		12/27/11 15:48	12/31/11 17:23	1.0
Cobalt	ND		0.010	mg/l		12/27/11 15:48	12/31/11 17:23	1.0
Copper	ND		0.010	mg/l		12/27/11 15:48	01/03/12 11:51	1.0
Iron	**0.070**		0.040	mg/l		12/27/11 15:48	12/31/11 17:23	1.0
Lead	ND		0.0050	mg/l		12/27/11 15:48	01/03/12 11:51	1.0
Magnesium	**110**		0.020	mg/l		12/27/11 15:48	12/31/11 17:23	1.0
Manganese	**0.084**		0.020	mg/l		12/27/11 15:48	12/31/11 17:23	1.0
Nickel	ND		0.010	mg/l		12/27/11 15:48	12/31/11 17:23	1.0
Potassium	**3.0**		0.50	mg/l		12/27/11 15:48	12/31/11 17:23	1.0
Selenium	ND		0.010	mg/l		12/27/11 15:48	01/03/12 11:51	1.0
Silver	ND		0.010	mg/l		12/27/11 15:48	12/31/11 17:23	1.0
Sodium	**220**		0.50	mg/l		12/27/11 15:48	01/03/12 11:51	1.0
Vanadium	ND		0.010	mg/l		12/27/11 15:48	12/31/11 17:23	1.0
Zinc	**0.034**		0.020	mg/l		12/27/11 15:48	12/31/11 17:23	1.0

Method: EPA 7470A-Diss - DISSOLVED METALS - Dissolved

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	mg/l		12/22/11 14:09	12/23/11 15:44	1.0

Method: Filtration - DISSOLVED METALS-FILTRATION

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Filtration	**DET**		1.000	N/A		12/21/11 17:32	12/21/11 17:35	1.000

Method: EPA 300.0 - INORGANICS

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**220**		25	mg/l		12/21/11 20:15	12/22/11 02:19	50
Nitrate-N	**1.7**	**H-1**	0.11	mg/l		12/21/11 20:15	12/21/11 20:28	1.0
Orthophosphate - P	ND	H-1	0.16	mg/l		12/22/11 15:15	12/22/11 15:30	1.0
Sulfate	**650**		25	mg/l		12/21/11 20:15	12/22/11 02:19	50

Method: SM 4500-F-C - INORGANICS

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	**0.41**		0.10	mg/l		12/23/11 04:30	12/23/11 05:41	1.0

Method: SM2320B - INORGANICS

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	**64**		2.0	mg/l		12/30/11 09:21	12/30/11 09:30	1.0
Bicarbonate Alkalinity as CaCO3	ND		2.0	mg/l		12/30/11 09:21	12/30/11 09:30	1.0
Carbonate Alkalinity as CaCO3	ND		2.0	mg/l		12/30/11 09:21	12/30/11 09:30	1.0
Hydroxide Alkalinity as CaCO3	ND		2.0	mg/l		12/30/11 09:21	12/30/11 09:30	1.0

Method: SM2540C - INORGANICS

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**1600**		20	mg/l		12/22/11 10:40	12/22/11 10:40	1.0

Client Sample Results

Client: Earth Forensics
Project/Site: Malibu Centralized Wastewater Project

TestAmerica Job ID: IUL2387

Client Sample ID: MCWP-MW01-20111219
Date Collected: 12/19/11 17:00
Date Received: 12/21/11 13:45

Lab Sample ID: IUL2387-01
Matrix: Water

5

Method: SM4500NH3-D - INORGANICS

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia-N	ND		0.50	mg/l		12/28/11 20:23	12/28/11 20:40	1.0

Client Sample ID: MCWP-MW01-20111220
Date Collected: 12/20/11 18:00
Date Received: 12/21/11 13:45

Lab Sample ID: IUL2387-02
Matrix: Water

Method: EPA 6010B-Diss - DISSOLVED METALS - Dissolved

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		0.050	mg/l		12/27/11 15:48	01/04/12 18:11	1.0
Silica (as SiO2)	**32**		0.11	mg/l		12/27/11 15:48	12/31/11 17:30	1.0
Arsenic	ND	C	0.010	mg/l		12/27/11 15:48	12/31/11 17:30	1.0
Barium	**0.044**		0.010	mg/l		12/27/11 15:48	12/31/11 17:30	1.0
Boron	**0.74**		0.050	mg/l		12/27/11 15:48	12/31/11 17:30	1.0
Cadmium	ND		0.0050	mg/l		12/27/11 15:48	12/31/11 17:30	1.0
Calcium	**180**		0.10	mg/l		12/27/11 15:48	12/31/11 17:30	1.0
Chromium	ND		0.0050	mg/l		12/27/11 15:48	12/31/11 17:30	1.0
Cobalt	ND		0.010	mg/l		12/27/11 15:48	12/31/11 17:30	1.0
Copper	ND		0.010	mg/l		12/27/11 15:48	01/03/12 11:54	1.0
Iron	ND		0.040	mg/l		12/27/11 15:48	12/31/11 17:30	1.0
Lead	ND		0.0050	mg/l		12/27/11 15:48	01/03/12 11:54	1.0
Magnesium	**110**		0.020	mg/l		12/27/11 15:48	12/31/11 17:30	1.0
Manganese	**0.055**		0.020	mg/l		12/27/11 15:48	12/31/11 17:30	1.0
Nickel	ND		0.010	mg/l		12/27/11 15:48	12/31/11 17:30	1.0
Potassium	**3.0**		0.50	mg/l		12/27/11 15:48	12/31/11 17:30	1.0
Selenium	ND		0.010	mg/l		12/27/11 15:48	01/03/12 11:54	1.0
Silver	ND		0.010	mg/l		12/27/11 15:48	12/31/11 17:30	1.0
Sodium	**220**		0.50	mg/l		12/27/11 15:48	01/03/12 11:54	1.0
Vanadium	ND		0.010	mg/l		12/27/11 15:48	12/31/11 17:30	1.0
Zinc	**0.025**		0.020	mg/l		12/27/11 15:48	12/31/11 17:30	1.0

Method: EPA 7470A-Diss - DISSOLVED METALS - Dissolved

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	mg/l		12/22/11 14:09	12/23/11 15:51	1.0

Method: Filtration - DISSOLVED METALS-FILTRATION

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Filtration	**DET**		1.000	N/A		12/21/11 17:32	12/21/11 17:35	1.000

Method: EPA 300.0 - INORGANICS

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**220**	**MHA**	25	mg/l		12/21/11 20:15	12/22/11 02:32	50
Nitrate-N	**1.8**		0.11	mg/l		12/21/11 20:15	12/21/11 20:41	1.0
Orthophosphate - P	ND		0.16	mg/l		12/22/11 15:15	12/22/11 15:46	1.0
Sulfate	**650**	**MHA**	25	mg/l		12/21/11 20:15	12/22/11 02:32	50

Method: SM 4500-F-C - INORGANICS

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	**0.49**		0.10	mg/l		12/23/11 04:30	12/23/11 05:41	1.0

Client Sample Results

Client: Earth Forensics
Project/Site: Malibu Centralized Wastewater Project

TestAmerica Job ID: IUL2387

Client Sample ID: MCWP-MW01-20111220
Date Collected: 12/20/11 18:00
Date Received: 12/21/11 13:45

Lab Sample ID: IUL2387-02
Matrix: Water

5

Method: SM2320B - INORGANICS

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	**330**		2.0	mg/l		01/03/12 10:59	01/03/12 11:30	1.0
Bicarbonate Alkalinity as CaCO3	**330**		2.0	mg/l		01/03/12 10:59	01/03/12 11:30	1.0
Carbonate Alkalinity as CaCO3	ND		2.0	mg/l		01/03/12 10:59	01/03/12 11:30	1.0
Hydroxide Alkalinity as CaCO3	ND		2.0	mg/l		01/03/12 10:59	01/03/12 11:30	1.0

Method: SM2540C - INORGANICS

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**1600**		20	mg/l		12/22/11 10:40	12/22/11 10:40	1.0

Method: SM4500NH3-D - INORGANICS

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia-N	ND		0.50	mg/l		12/28/11 20:23	12/28/11 20:40	1.0

Lab Chronicle

Client: Earth Forensics
Project/Site: Malibu Centralized Wastewater Project

TestAmerica Job ID: IUL2387

Client Sample ID: MCWP-MW01-20111219

Date Collected: 12/19/11 17:00
Date Received: 12/21/11 13:45

Lab Sample ID: IUL2387-01
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	EPA 3005A ICP		1.0	50 ml	50 ml	11L3557_P	12/27/11 15:48	YS1	TAL IRV
Dissolved	Analysis	EPA 6010B-Diss		1.0			11L3557	01/04/12 18:07	NH	TAL IRV
Dissolved	Analysis	EPA 6010B-Diss		1.0			11L3557	12/31/11 17:23	NH	TAL IRV
Dissolved	Analysis	EPA 6010B-Diss		1.0			11L3557	01/03/12 11:51	DP	TAL IRV
Total	Prep	Filtration-Metals		1.000	250 ml	250 ml	11L2987_P	12/21/11 17:32	KP	TAL IRV
Total	Analysis	Filtration		1.000			11L2987	12/21/11 17:35	KP	TAL IRV
Dissolved	Prep	EPA 7470A Hg		1.0	20 ml	20 ml	11L3176_P	12/22/11 14:09	SN	TAL IRV
Dissolved	Analysis	EPA 7470A-Diss		1.0			11L3176	12/23/11 15:44	DB	TAL IRV
Total	Prep	General Prep		1.0	25 ml	25 ml	11L4057_P	12/30/11 09:21	MNS	TAL IRV
Total	Analysis	SM2320B		1.0			11L4057	12/30/11 09:30	DC	TAL IRV
Total	Prep	General Prep		1.0	50 ml	50 ml	11L3774_P	12/28/11 20:23	NCP	TAL IRV
Total	Analysis	SM4500NH3-D		1.0			11L3774	12/28/11 20:40	NCP	TAL IRV
Total	Prep	General Prep		1.0	10 ml	10 ml	11L2931_P	12/21/11 20:15	CC	TAL IRV
Total	Analysis	EPA 300.0		50			U000948	12/22/11 02:19	NN	TAL IRV
Total	Prep	General Prep		1.0	25 ml	25 ml	11L3237_P	12/23/11 04:30	FZ	TAL IRV
Total	Analysis	SM 4500-F-C		1.0			11L3237	12/23/11 05:41	FZ	TAL IRV
Total	Analysis	EPA 300.0		1.0			U000948	12/21/11 20:28	NN	TAL IRV
Total	Prep	General Prep		1.0	10 ml	10 ml	11L3137_P	12/22/11 15:15	CC	TAL IRV
Total	Analysis	EPA 300.0		1.0			11L3137	12/22/11 15:30	NN	TAL IRV
Total	Analysis	SM2540C		1.0			11L3020	12/22/11 10:40	MC	TAL IRV
Total	Prep	General Prep		2.0	50 ml	100 ml	11L3020_P	12/22/11 10:40	MC	TAL IRV

Client Sample ID: MCWP-MW01-20111220

Date Collected: 12/20/11 18:00
Date Received: 12/21/11 13:45

Lab Sample ID: IUL2387-02
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	EPA 3005A ICP		1.0	50 ml	50 ml	11L3557_P	12/27/11 15:48	YS1	TAL IRV
Dissolved	Analysis	EPA 6010B-Diss		1.0			11L3557	01/04/12 18:11	NH	TAL IRV
Dissolved	Analysis	EPA 6010B-Diss		1.0			11L3557	12/31/11 17:30	NH	TAL IRV
Dissolved	Analysis	EPA 6010B-Diss		1.0			11L3557	01/03/12 11:54	DP	TAL IRV
Total	Prep	Filtration-Metals		1.000	250 ml	250 ml	11L2987_P	12/21/11 17:32	KP	TAL IRV
Total	Analysis	Filtration		1.000			11L2987	12/21/11 17:35	KP	TAL IRV
Dissolved	Prep	EPA 7470A Hg		1.0	20 ml	20 ml	11L3176_P	12/22/11 14:09	SN	TAL IRV
Dissolved	Analysis	EPA 7470A-Diss		1.0			11L3176	12/23/11 15:51	DB	TAL IRV
Total	Prep	General Prep		1.0	25 ml	25 ml	12A0113_P	01/03/12 10:59	DC	TAL IRV
Total	Analysis	SM2320B		1.0			12A0113	01/03/12 11:30	DC	TAL IRV
Total	Prep	General Prep		1.0	50 ml	50 ml	11L3774_P	12/28/11 20:23	NCP	TAL IRV
Total	Analysis	SM4500NH3-D		1.0			11L3774	12/28/11 20:40	NCP	TAL IRV
Total	Prep	General Prep		1.0	10 ml	10 ml	11L2931_P	12/21/11 20:15	CC	TAL IRV
Total	Analysis	EPA 300.0		50			U000948	12/22/11 02:32	NN	TAL IRV
Total	Prep	General Prep		1.0	25 ml	25 ml	11L3237_P	12/23/11 04:30	FZ	TAL IRV
Total	Analysis	SM 4500-F-C		1.0			11L3237	12/23/11 05:41	FZ	TAL IRV
Total	Analysis	EPA 300.0		1.0			U000948	12/21/11 20:41	NN	TAL IRV

Lab Chronicle

Client: Earth Forensics
Project/Site: Malibu Centralized Wastewater Project

TestAmerica Job ID: IUL2387

Client Sample ID: MCWP-MW01-20111220
Date Collected: 12/20/11 18:00
Date Received: 12/21/11 13:45

Lab Sample ID: IUL2387-02
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total	Prep	General Prep		1.0	10 ml	10 ml	11L3137_P	12/22/11 15:15	CC	TAL IRV
Total	Analysis	EPA 300.0		1.0			11L3137	12/22/11 15:46	NN	TAL IRV
Total	Analysis	SM2540C		1.0			11L3020	12/22/11 10:40	MC	TAL IRV
Total	Prep	General Prep		2.0	50 ml	100 ml	11L3020_P	12/22/11 10:40	MC	TAL IRV

Laboratory References:

TAL IRV = TestAmerica Irvine, 17461 Derian Avenue. Suite 100, Irvine, CA 92614, TEL (949) 261-1022

Method: EPA 6010B-Diss - DISSOLVED METALS

Lab Sample ID: 11L3557-BLK1
Matrix: Water
Analysis Batch: 11L3557

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 11L3557_P

Analyte	Blank Result	Blank Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		0.050	mg/l		12/27/11 15:48	12/31/11 16:50	1.00
Silica (as SiO2)	ND		0.11	mg/l		12/27/11 15:48	12/31/11 16:50	1.00
Arsenic	ND		0.010	mg/l		12/27/11 15:48	12/31/11 16:50	1.00
Barium	ND		0.010	mg/l		12/27/11 15:48	12/31/11 16:50	1.00
Boron	ND		0.050	mg/l		12/27/11 15:48	12/31/11 16:50	1.00
Cadmium	ND		0.0050	mg/l		12/27/11 15:48	12/31/11 16:50	1.00
Calcium	ND		0.10	mg/l		12/27/11 15:48	12/31/11 16:50	1.00
Chromium	ND		0.0050	mg/l		12/27/11 15:48	12/31/11 16:50	1.00
Cobalt	ND		0.010	mg/l		12/27/11 15:48	12/31/11 16:50	1.00
Iron	ND		0.040	mg/l		12/27/11 15:48	12/31/11 16:50	1.00
Magnesium	ND		0.020	mg/l		12/27/11 15:48	12/31/11 16:50	1.00
Manganese	ND		0.020	mg/l		12/27/11 15:48	12/31/11 16:50	1.00
Nickel	ND		0.010	mg/l		12/27/11 15:48	12/31/11 16:50	1.00
Potassium	ND		0.50	mg/l		12/27/11 15:48	12/31/11 16:50	1.00
Silver	ND		0.010	mg/l		12/27/11 15:48	12/31/11 16:50	1.00
Vanadium	ND		0.010	mg/l		12/27/11 15:48	12/31/11 16:50	1.00
Zinc	ND		0.020	mg/l		12/27/11 15:48	12/31/11 16:50	1.00

Lab Sample ID: 11L3557-BLK1
Matrix: Water
Analysis Batch: 11L3557

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 11L3557_P

Analyte	Blank Result	Blank Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Copper	ND		0.010	mg/l		12/27/11 15:48	01/03/12 11:27	1.00
Lead	ND		0.0050	mg/l		12/27/11 15:48	01/03/12 11:27	1.00
Selenium	ND		0.010	mg/l		12/27/11 15:48	01/03/12 11:27	1.00
Sodium	ND		0.50	mg/l		12/27/11 15:48	01/03/12 11:27	1.00

Lab Sample ID: 11L3557-BS1
Matrix: Water
Analysis Batch: 11L3557

Client Sample ID: Lab Control Sample
Prep Type: Dissolved
Prep Batch: 11L3557_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	1.00	1.11		mg/l		111	80 - 120
Silica (as SiO2)	10.7	10.2		mg/l		95	80 - 120
Arsenic	1.00	1.14		mg/l		114	80 - 120
Barium	1.00	1.09		mg/l		109	80 - 120
Boron	1.00	1.03		mg/l		103	80 - 120
Cadmium	1.00	1.00		mg/l		100	80 - 120
Calcium	5.00	4.85		mg/l		97	80 - 120
Chromium	1.00	1.10		mg/l		110	80 - 120
Cobalt	1.00	0.968		mg/l		97	80 - 120
Iron	1.00	0.961		mg/l		96	80 - 120
Magnesium	5.00	4.98		mg/l		100	80 - 120
Manganese	1.00	0.990		mg/l		99	80 - 120
Nickel	1.00	1.02		mg/l		102	80 - 120
Potassium	10.0	9.79		mg/l		98	80 - 120
Silver	0.500	0.505		mg/l		101	80 - 120
Vanadium	1.00	1.03		mg/l		103	80 - 120
Zinc	1.00	1.03		mg/l		103	80 - 120

Method: EPA 6010B-Diss - DISSOLVED METALS (Continued)

Lab Sample ID: 11L3557-BS1
Matrix: Water
Analysis Batch: 11L3557

Client Sample ID: Lab Control Sample
Prep Type: Dissolved
Prep Batch: 11L3557_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Copper	1.00	1.04		mg/l		104	80 - 120
Lead	1.00	1.06		mg/l		106	80 - 120
Selenium	1.00	0.986		mg/l		99	80 - 120
Sodium	10.0	10.3		mg/l		103	80 - 120

Lab Sample ID: 11L3557-MS1
Matrix: Water
Analysis Batch: 11L3557

Client Sample ID: Matrix Spike
Prep Type: Dissolved
Prep Batch: 11L3557_P

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Result	Matrix Spike Qualifier	Unit	D	%Rec	%Rec. Limits
Silica (as SiO2)	ND		10.7	9.68		mg/l		90	75 - 125
Arsenic	ND		1.00	1.12		mg/l		112	75 - 125
Barium	ND		1.00	1.04		mg/l		104	75 - 125
Boron	ND		1.00	0.978		mg/l		98	75 - 125
Cadmium	ND		1.00	0.959		mg/l		96	75 - 125
Calcium	0.0656		5.00	4.70		mg/l		93	75 - 125
Chromium	0.00379		1.00	1.06		mg/l		106	75 - 125
Cobalt	ND		1.00	0.925		mg/l		93	75 - 125
Iron	0.131		1.00	0.948		mg/l		82	75 - 125
Magnesium	0.0152		5.00	4.75		mg/l		95	75 - 125
Manganese	ND		1.00	0.958		mg/l		96	75 - 125
Nickel	ND		1.00	0.979		mg/l		98	75 - 125
Potassium	ND		10.0	9.31		mg/l		93	75 - 125
Silver	ND		0.500	0.479		mg/l		96	75 - 125
Vanadium	ND		1.00	0.992		mg/l		99	75 - 125
Zinc	ND		1.00	0.989		mg/l		99	75 - 125

Lab Sample ID: 11L3557-MS1
Matrix: Water
Analysis Batch: 11L3557

Client Sample ID: Matrix Spike
Prep Type: Dissolved
Prep Batch: 11L3557_P

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Result	Matrix Spike Qualifier	Unit	D	%Rec	%Rec. Limits
Copper	ND		1.00	1.03		mg/l		103	75 - 125
Lead	ND		1.00	1.04		mg/l		104	75 - 125
Selenium	ND		1.00	0.979		mg/l		98	75 - 125
Sodium	ND		10.0	10.0		mg/l		100	75 - 125

Lab Sample ID: 11L3557-MS1
Matrix: Water
Analysis Batch: 11L3557

Client Sample ID: Matrix Spike
Prep Type: Dissolved
Prep Batch: 11L3557_P

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Result	Matrix Spike Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	ND		1.00	1.01		mg/l		101	75 - 125

Lab Sample ID: 11L3557-MSD1
Matrix: Water
Analysis Batch: 11L3557

Client Sample ID: Matrix Spike Duplicate
Prep Type: Dissolved
Prep Batch: 11L3557_P

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Dup Result	Matrix Spike Dup Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Silica (as SiO2)	ND		10.7	9.98		mg/l		93	75 - 125	3	20

Method: EPA 6010B-Diss - DISSOLVED METALS (Continued)

Lab Sample ID: 11L3557-MSD1
Matrix: Water
Analysis Batch: 11L3557

Client Sample ID: Matrix Spike Duplicate
Prep Type: Dissolved
Prep Batch: 11L3557_P

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Dup Result	Matrix Spike Dup Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	ND		1.00	1.14		mg/l		114	75 - 125	2	20
Barium	ND		1.00	1.07		mg/l		107	75 - 125	3	20
Boron	ND		1.00	1.01		mg/l		101	75 - 125	3	20
Cadmium	ND		1.00	0.990		mg/l		99	75 - 125	3	20
Calcium	0.0656		5.00	4.74		mg/l		93	75 - 125	0.7	20
Chromium	0.00379		1.00	1.10		mg/l		110	75 - 125	3	20
Cobalt	ND		1.00	0.954		mg/l		95	75 - 125	3	20
Iron	0.131		1.00	1.05		mg/l		92	75 - 125	10	20
Magnesium	0.0152		5.00	4.91		mg/l		98	75 - 125	3	20
Manganese	ND		1.00	0.982		mg/l		98	75 - 125	3	20
Nickel	ND		1.00	1.01		mg/l		101	75 - 125	3	20
Potassium	ND		10.0	9.41		mg/l		94	75 - 125	1	20
Silver	ND		0.500	0.494		mg/l		99	75 - 125	3	20
Vanadium	ND		1.00	1.02		mg/l		102	75 - 125	3	20
Zinc	ND		1.00	1.02		mg/l		102	75 - 125	3	20

Lab Sample ID: 11L3557-MSD1
Matrix: Water
Analysis Batch: 11L3557

Client Sample ID: Matrix Spike Duplicate
Prep Type: Dissolved
Prep Batch: 11L3557_P

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Dup Result	Matrix Spike Dup Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Copper	ND		1.00	1.03		mg/l		103	75 - 125	0.1	20
Lead	ND		1.00	1.05		mg/l		105	75 - 125	1	20
Selenium	ND		1.00	0.992		mg/l		99	75 - 125	1	20
Sodium	ND		10.0	10.3		mg/l		103	75 - 125	3	20

Lab Sample ID: 11L3557-MSD1
Matrix: Water
Analysis Batch: 11L3557

Client Sample ID: Matrix Spike Duplicate
Prep Type: Dissolved
Prep Batch: 11L3557_P

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Dup Result	Matrix Spike Dup Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aluminum	ND		1.00	1.01		mg/l		101	75 - 125	0.5	20

Method: EPA 7470A-Diss - DISSOLVED METALS

Lab Sample ID: 11L3176-BLK1
Matrix: Water
Analysis Batch: 11L3176

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 11L3176_P

Analyte	Blank Result	Blank Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	mg/l		12/22/11 14:09	12/23/11 15:24	1.00

Lab Sample ID: 11L3176-BS1
Matrix: Water
Analysis Batch: 11L3176

Client Sample ID: Lab Control Sample
Prep Type: Dissolved
Prep Batch: 11L3176_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00800	0.00868		mg/l		108	80 - 120

QC Sample Results

Client: Earth Forensics
Project/Site: Malibu Centralized Wastewater Project

TestAmerica Job ID: IUL2387

Method: EPA 7470A-Diss - DISSOLVED METALS (Continued)

Lab Sample ID: 11L3176-MS1
Matrix: Water
Analysis Batch: 11L3176

Client Sample ID: Matrix Spike
Prep Type: Dissolved
Prep Batch: 11L3176_P

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Result	Matrix Spike Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	ND		0.00800	0.00799		mg/l		100	70 - 130

Lab Sample ID: 11L3176-MSD1
Matrix: Water
Analysis Batch: 11L3176

Client Sample ID: Matrix Spike Duplicate
Prep Type: Dissolved
Prep Batch: 11L3176_P

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Dup Result	Matrix Spike Dup Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	ND		0.00800	0.00815		mg/l		102	70 - 130	2	20

Method: EPA 300.0 - INORGANICS

Lab Sample ID: 11L2931-BLK1
Matrix: Water
Analysis Batch: U000948

Client Sample ID: Method Blank
Prep Type: Total
Prep Batch: 11L2931_P

Analyte	Blank Result	Blank Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.50	mg/l		12/21/11 13:00	12/21/11 13:27	1.00
Nitrate-N	ND		0.11	mg/l		12/21/11 13:00	12/21/11 13:27	1.00
Sulfate	ND		0.50	mg/l		12/21/11 13:00	12/21/11 13:27	1.00

Lab Sample ID: 11L2931-BS1
Matrix: Water
Analysis Batch: U000948

Client Sample ID: Lab Control Sample
Prep Type: Total
Prep Batch: 11L2931_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	5.00	4.97		mg/l		99	90 - 110
Nitrate-N	1.13	1.18		mg/l		105	90 - 110
Sulfate	10.0	10.1		mg/l		101	90 - 110

Lab Sample ID: 11L2931-MS1
Matrix: Water
Analysis Batch: U000948

Client Sample ID: Matrix Spike
Prep Type: Total
Prep Batch: 11L2931_P

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Result	Matrix Spike Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	4.30		5.00	8.48		mg/l		83	80 - 120
Nitrate-N	ND		1.13	1.18		mg/l		105	80 - 120
Sulfate	0.511		10.0	10.3		mg/l		98	80 - 120

Lab Sample ID: 11L2931-MS2
Matrix: Water
Analysis Batch: U000948

Client Sample ID: MCWP-MW01-20111220
Prep Type: Total
Prep Batch: 11L2931_P

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Result	Matrix Spike Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	219	MHA	50.0	263	MHA	mg/l		87	80 - 120
Nitrate-N	1.82		11.3	14.8		mg/l		115	80 - 120
Sulfate	654	MHA	100	748	MHA	mg/l		94	80 - 120

Method: EPA 300.0 - INORGANICS (Continued)

Lab Sample ID: 11L2931-MSD1
Matrix: Water
Analysis Batch: U000948

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total
Prep Batch: 11L2931_P

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Dup Result	Matrix Spike Dup Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	4.30		5.00	8.51		mg/l		84	80 - 120	0.4	20
Nitrate-N	ND		1.13	1.18		mg/l		105	80 - 120	0.2	20
Sulfate	0.511		10.0	10.3		mg/l		98	80 - 120	0.4	20

Lab Sample ID: 11L3137-BLK1
Matrix: Water
Analysis Batch: U000953

Client Sample ID: Method Blank
Prep Type: Total
Prep Batch: 11L3137_P

Analyte	Blank Result	Blank Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Orthophosphate - P	ND		0.16	mg/l		12/22/11 14:00	12/22/11 14:28	1.00

Lab Sample ID: 11L3137-BS1
Matrix: Water
Analysis Batch: U000953

Client Sample ID: Lab Control Sample
Prep Type: Total
Prep Batch: 11L3137_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Orthophosphate - P	1.63	1.51		mg/l		93	90 - 110

Lab Sample ID: 11L3137-MS1
Matrix: Water
Analysis Batch: U000953

Client Sample ID: Matrix Spike
Prep Type: Total
Prep Batch: 11L3137_P

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Result	Matrix Spike Qualifier	Unit	D	%Rec	%Rec. Limits
Orthophosphate - P	ND		1.63	1.45		mg/l		89	80 - 120

Lab Sample ID: 11L3137-MS2
Matrix: Water
Analysis Batch: U000953

Client Sample ID: Matrix Spike
Prep Type: Total
Prep Batch: 11L3137_P

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Result	Matrix Spike Qualifier	Unit	D	%Rec	%Rec. Limits
Orthophosphate - P	ND		16.3	15.7		mg/l		96	80 - 120

Lab Sample ID: 11L3137-MSD1
Matrix: Water
Analysis Batch: U000953

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total
Prep Batch: 11L3137_P

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Dup Result	Matrix Spike Dup Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Orthophosphate - P	ND		1.63	1.46		mg/l		90	80 - 120	1	20

Method: SM 4500-F-C - INORGANICS

Lab Sample ID: 11L3237-BLK1
Matrix: Water
Analysis Batch: 11L3237

Client Sample ID: Method Blank
Prep Type: Total
Prep Batch: 11L3237_P

Analyte	Blank Result	Blank Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	ND		0.10	mg/l		12/23/11 04:30	12/23/11 05:41	1.00

Method: SM 4500-F-C - INORGANICS (Continued)

Lab Sample ID: 11L3237-BS1
Matrix: Water
Analysis Batch: 11L3237

Client Sample ID: Lab Control Sample
Prep Type: Total
Prep Batch: 11L3237_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	1.00	0.997		mg/l		100	90 - 110

Lab Sample ID: 11L3237-MS1
Matrix: Water
Analysis Batch: 11L3237

Client Sample ID: Matrix Spike
Prep Type: Total
Prep Batch: 11L3237_P

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Result	Matrix Spike Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	0.201		1.00	1.21		mg/l		101	80 - 120

Lab Sample ID: 11L3237-MSD1
Matrix: Water
Analysis Batch: 11L3237

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total
Prep Batch: 11L3237_P

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Dup Result	Matrix Spike Dup Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Fluoride	0.201		1.00	1.21		mg/l		101	80 - 120	0.4	20

Method: SM2320B - INORGANICS

Lab Sample ID: 11L4057-BLK1
Matrix: Water
Analysis Batch: 11L4057

Client Sample ID: Method Blank
Prep Type: Total
Prep Batch: 11L4057_P

Analyte	Blank Result	Blank Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	ND		2.0	mg/l		12/30/11 09:21	12/30/11 09:30	1.00
Bicarbonate Alkalinity as CaCO3	ND		2.0	mg/l		12/30/11 09:21	12/30/11 09:30	1.00
Carbonate Alkalinity as CaCO3	ND		2.0	mg/l		12/30/11 09:21	12/30/11 09:30	1.00
Hydroxide Alkalinity as CaCO3	ND		2.0	mg/l		12/30/11 09:21	12/30/11 09:30	1.00

Lab Sample ID: 11L4057-BS1
Matrix: Water
Analysis Batch: 11L4057

Client Sample ID: Lab Control Sample
Prep Type: Total
Prep Batch: 11L4057_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity as CaCO3	183	166		mg/l		91	90 - 110

Lab Sample ID: 11L4057-DUP1
Matrix: Water
Analysis Batch: 11L4057

Client Sample ID: Duplicate
Prep Type: Total
Prep Batch: 11L4057_P

Analyte	Sample Result	Sample Qualifier	Duplicate Result	Duplicate Qualifier	Unit	D	RPD	RPD Limit
Alkalinity as CaCO3	24.0		22.0		mg/l		9	20
Bicarbonate Alkalinity as CaCO3	24.0		22.0		mg/l		9	20
Carbonate Alkalinity as CaCO3	ND		ND		mg/l			20
Hydroxide Alkalinity as CaCO3	ND		ND		mg/l			20

Lab Sample ID: 12A0113-BLK1
Matrix: Water
Analysis Batch: 12A0113

Client Sample ID: Method Blank
Prep Type: Total
Prep Batch: 12A0113_P

Analyte	Blank Result	Blank Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	ND		2.0	mg/l		01/03/12 10:59	01/03/12 11:30	1.00

Method: SM2320B - INORGANICS (Continued)

Lab Sample ID: 12A0113-BLK1
Matrix: Water
Analysis Batch: 12A0113

Client Sample ID: Method Blank
Prep Type: Total
Prep Batch: 12A0113_P

Analyte	Blank Result	Blank Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Bicarbonate Alkalinity as CaCO3	ND		2.0	mg/l		01/03/12 10:59	01/03/12 11:30	1.00
Carbonate Alkalinity as CaCO3	ND		2.0	mg/l		01/03/12 10:59	01/03/12 11:30	1.00
Hydroxide Alkalinity as CaCO3	ND		2.0	mg/l		01/03/12 10:59	01/03/12 11:30	1.00

Lab Sample ID: 12A0113-BS1
Matrix: Water
Analysis Batch: 12A0113

Client Sample ID: Lab Control Sample
Prep Type: Total
Prep Batch: 12A0113_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity as CaCO3	183	166		mg/l		91	90 - 110

Lab Sample ID: 12A0113-DUP1
Matrix: Water
Analysis Batch: 12A0113

Client Sample ID: Duplicate
Prep Type: Total
Prep Batch: 12A0113_P

Analyte	Sample Result	Sample Qualifier	Duplicate Result	Duplicate Qualifier	Unit	D	RPD	RPD Limit
Alkalinity as CaCO3	52.0		50.0		mg/l		4	20
Bicarbonate Alkalinity as CaCO3	52.0		50.0		mg/l		4	20
Carbonate Alkalinity as CaCO3	ND		ND		mg/l			20
Hydroxide Alkalinity as CaCO3	ND		ND		mg/l			20

Method: SM2540C - INORGANICS

Lab Sample ID: 11L3020-BLK1
Matrix: Water
Analysis Batch: 11L3020

Client Sample ID: Method Blank
Prep Type: Total
Prep Batch: 11L3020_P

Analyte	Blank Result	Blank Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	ND		10	mg/l		12/22/11 10:40	12/22/11 10:40	1.00

Lab Sample ID: 11L3020-BS1
Matrix: Water
Analysis Batch: 11L3020

Client Sample ID: Lab Control Sample
Prep Type: Total
Prep Batch: 11L3020_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	1000	1000		mg/l		100	90 - 110

Lab Sample ID: 11L3020-DUP1
Matrix: Water
Analysis Batch: 11L3020

Client Sample ID: Duplicate
Prep Type: Total
Prep Batch: 11L3020_P

Analyte	Sample Result	Sample Qualifier	Duplicate Result	Duplicate Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	5990		6080		mg/l		1	10

QC Sample Results

Client: Earth Forensics
Project/Site: Malibu Centralized Wastewater Project

TestAmerica Job ID: IUL2387

Method: SM4500NH3-D - INORGANICS

Lab Sample ID: 11L3774-BLK1
Matrix: Water
Analysis Batch: 11L3774

Client Sample ID: Method Blank
Prep Type: Total
Prep Batch: 11L3774_P

Analyte	Blank Result	Blank Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia-N	ND		0.50	mg/l		12/28/11 20:23	12/28/11 20:40	1.00

Lab Sample ID: 11L3774-BS1
Matrix: Water
Analysis Batch: 11L3774

Client Sample ID: Lab Control Sample
Prep Type: Total
Prep Batch: 11L3774_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia-N	1.00	1.03		mg/l		103	85 - 115

Lab Sample ID: 11L3774-MS1
Matrix: Water
Analysis Batch: 11L3774

Client Sample ID: Matrix Spike
Prep Type: Total
Prep Batch: 11L3774_P

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Result	Matrix Spike Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia-N	0.136		2.00	2.56		mg/l		121	75 - 125

Lab Sample ID: 11L3774-MSD1
Matrix: Water
Analysis Batch: 11L3774

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total
Prep Batch: 11L3774_P

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Dup Result	Matrix Spike Dup Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ammonia-N	0.136		2.00	2.56		mg/l		121	75 - 125	0	15

QC Association Summary

Client: Earth Forensics
Project/Site: Malibu Centralized Wastewater Project

TestAmerica Job ID: IUL2387

Metals

Analysis Batch: 11L2987

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
IUL2387-01	MCWP-MW01-20111219	Total	Water	Filtration	11L2987_P
IUL2387-02	MCWP-MW01-20111220	Total	Water	Filtration	11L2987_P

Analysis Batch: 11L3176

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11L3176-BLK1	Method Blank	Dissolved	Water	EPA 7470A-Diss	11L3176_P
11L3176-BS1	Lab Control Sample	Dissolved	Water	EPA 7470A-Diss	11L3176_P
11L3176-MS1	Matrix Spike	Dissolved	Water	EPA 7470A-Diss	11L3176_P
11L3176-MSD1	Matrix Spike Duplicate	Dissolved	Water	EPA 7470A-Diss	11L3176_P
IUL2387-01	MCWP-MW01-20111219	Dissolved	Water	EPA 7470A-Diss	11L3176_P
IUL2387-02	MCWP-MW01-20111220	Dissolved	Water	EPA 7470A-Diss	11L3176_P

Analysis Batch: 11L3557

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11L3557-BLK1	Method Blank	Dissolved	Water	EPA 6010B-Diss	11L3557_P
11L3557-BS1	Lab Control Sample	Dissolved	Water	EPA 6010B-Diss	11L3557_P
11L3557-MS1	Matrix Spike	Dissolved	Water	EPA 6010B-Diss	11L3557_P
11L3557-MSD1	Matrix Spike Duplicate	Dissolved	Water	EPA 6010B-Diss	11L3557_P
IUL2387-01	MCWP-MW01-20111219	Dissolved	Water	EPA 6010B-Diss	11L3557_P
IUL2387-02	MCWP-MW01-20111220	Dissolved	Water	EPA 6010B-Diss	11L3557_P

Prep Batch: 11L2987_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
IUL2387-01	MCWP-MW01-20111219	Total	Water	Filtration-Metals	
IUL2387-02	MCWP-MW01-20111220	Total	Water	Filtration-Metals	

Prep Batch: 11L3176_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11L3176-BLK1	Method Blank	Dissolved	Water	EPA 7470A Hg	
11L3176-BS1	Lab Control Sample	Dissolved	Water	EPA 7470A Hg	
11L3176-MS1	Matrix Spike	Dissolved	Water	EPA 7470A Hg	
11L3176-MSD1	Matrix Spike Duplicate	Dissolved	Water	EPA 7470A Hg	
IUL2387-01	MCWP-MW01-20111219	Dissolved	Water	EPA 7470A Hg	
IUL2387-02	MCWP-MW01-20111220	Dissolved	Water	EPA 7470A Hg	

Prep Batch: 11L3557_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11L3557-BLK1	Method Blank	Dissolved	Water	EPA 3005A ICP	
11L3557-BS1	Lab Control Sample	Dissolved	Water	EPA 3005A ICP	
11L3557-MS1	Matrix Spike	Dissolved	Water	EPA 3005A ICP	
11L3557-MSD1	Matrix Spike Duplicate	Dissolved	Water	EPA 3005A ICP	
IUL2387-01	MCWP-MW01-20111219	Dissolved	Water	EPA 3005A ICP	
IUL2387-02	MCWP-MW01-20111220	Dissolved	Water	EPA 3005A ICP	

Wet Chemistry

Analysis Batch: 11L3020

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11L3020-BLK1	Method Blank	Total	Water	SM2540C	11L3020_P
11L3020-BS1	Lab Control Sample	Total	Water	SM2540C	11L3020_P
11L3020-DUP1	Duplicate	Total	Water	SM2540C	11L3020_P
IUL2387-01	MCWP-MW01-20111219	Total	Water	SM2540C	11L3020_P

QC Association Summary

Client: Earth Forensics
Project/Site: Malibu Centralized Wastewater Project

TestAmerica Job ID: IUL2387

Wet Chemistry (Continued)

Analysis Batch: 11L3020 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
IUL2387-02	MCWP-MW01-20111220	Total	Water	SM2540C	11L3020_P

Analysis Batch: 11L3137

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
IUL2387-01	MCWP-MW01-20111219	Total	Water	EPA 300.0	11L3137_P
IUL2387-02	MCWP-MW01-20111220	Total	Water	EPA 300.0	11L3137_P

Analysis Batch: 11L3237

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11L3237-BLK1	Method Blank	Total	Water	SM 4500-F-C	11L3237_P
11L3237-BS1	Lab Control Sample	Total	Water	SM 4500-F-C	11L3237_P
11L3237-MS1	Matrix Spike	Total	Water	SM 4500-F-C	11L3237_P
11L3237-MSD1	Matrix Spike Duplicate	Total	Water	SM 4500-F-C	11L3237_P
IUL2387-01	MCWP-MW01-20111219	Total	Water	SM 4500-F-C	11L3237_P
IUL2387-02	MCWP-MW01-20111220	Total	Water	SM 4500-F-C	11L3237_P

Analysis Batch: 11L3774

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11L3774-BLK1	Method Blank	Total	Water	SM4500NH3-D	11L3774_P
11L3774-BS1	Lab Control Sample	Total	Water	SM4500NH3-D	11L3774_P
11L3774-MS1	Matrix Spike	Total	Water	SM4500NH3-D	11L3774_P
11L3774-MSD1	Matrix Spike Duplicate	Total	Water	SM4500NH3-D	11L3774_P
IUL2387-01	MCWP-MW01-20111219	Total	Water	SM4500NH3-D	11L3774_P
IUL2387-02	MCWP-MW01-20111220	Total	Water	SM4500NH3-D	11L3774_P

Analysis Batch: 11L4057

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11L4057-BLK1	Method Blank	Total	Water	SM2320B	11L4057_P
11L4057-BS1	Lab Control Sample	Total	Water	SM2320B	11L4057_P
11L4057-DUP1	Duplicate	Total	Water	SM2320B	11L4057_P
IUL2387-01	MCWP-MW01-20111219	Total	Water	SM2320B	11L4057_P

Analysis Batch: 12A0113

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
12A0113-BLK1	Method Blank	Total	Water	SM2320B	12A0113_P
12A0113-BS1	Lab Control Sample	Total	Water	SM2320B	12A0113_P
12A0113-DUP1	Duplicate	Total	Water	SM2320B	12A0113_P
IUL2387-02	MCWP-MW01-20111220	Total	Water	SM2320B	12A0113_P

Analysis Batch: U000948

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11L2931-BLK1	Method Blank	Total	Water	EPA 300.0	11L2931_P
11L2931-BS1	Lab Control Sample	Total	Water	EPA 300.0	11L2931_P
11L2931-MS1	Matrix Spike	Total	Water	EPA 300.0	11L2931_P
11L2931-MS2	MCWP-MW01-20111220	Total	Water	EPA 300.0	11L2931_P
11L2931-MSD1	Matrix Spike Duplicate	Total	Water	EPA 300.0	11L2931_P
IUL2387-01	MCWP-MW01-20111219	Total	Water	EPA 300.0	11L2931_P
IUL2387-02	MCWP-MW01-20111220	Total	Water	EPA 300.0	11L2931_P

Analysis Batch: U000953

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11L3137-BLK1	Method Blank	Total	Water	EPA 300.0	11L3137_P

QC Association Summary

Client: Earth Forensics
Project/Site: Malibu Centralized Wastewater Project

TestAmerica Job ID: IUL2387

Wet Chemistry (Continued)

Analysis Batch: U000953 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11L3137-BS1	Lab Control Sample	Total	Water	EPA 300.0	11L3137_P
11L3137-MS1	Matrix Spike	Total	Water	EPA 300.0	11L3137_P
11L3137-MS2	Matrix Spike	Total	Water	EPA 300.0	11L3137_P
11L3137-MSD1	Matrix Spike Duplicate	Total	Water	EPA 300.0	11L3137_P

Prep Batch: 11L2931_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11L2931-BLK1	Method Blank	Total	Water	General Prep	
11L2931-BS1	Lab Control Sample	Total	Water	General Prep	
11L2931-MS1	Matrix Spike	Total	Water	General Prep	
11L2931-MS2	MCWP-MW01-20111220	Total	Water	General Prep	
11L2931-MSD1	Matrix Spike Duplicate	Total	Water	General Prep	
IUL2387-01	MCWP-MW01-20111219	Total	Water	General Prep	
IUL2387-02	MCWP-MW01-20111220	Total	Water	General Prep	

Prep Batch: 11L3020_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11L3020-BLK1	Method Blank	Total	Water	General Prep	
11L3020-BS1	Lab Control Sample	Total	Water	General Prep	
11L3020-DUP1	Duplicate	Total	Water	General Prep	
IUL2387-01	MCWP-MW01-20111219	Total	Water	General Prep	
IUL2387-02	MCWP-MW01-20111220	Total	Water	General Prep	

Prep Batch: 11L3137_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11L3137-BLK1	Method Blank	Total	Water	General Prep	
11L3137-BS1	Lab Control Sample	Total	Water	General Prep	
11L3137-MS1	Matrix Spike	Total	Water	General Prep	
11L3137-MS2	Matrix Spike	Total	Water	General Prep	
11L3137-MSD1	Matrix Spike Duplicate	Total	Water	General Prep	
IUL2387-01	MCWP-MW01-20111219	Total	Water	General Prep	
IUL2387-02	MCWP-MW01-20111220	Total	Water	General Prep	

Prep Batch: 11L3237_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11L3237-BLK1	Method Blank	Total	Water	General Prep	
11L3237-BS1	Lab Control Sample	Total	Water	General Prep	
11L3237-MS1	Matrix Spike	Total	Water	General Prep	
11L3237-MSD1	Matrix Spike Duplicate	Total	Water	General Prep	
IUL2387-01	MCWP-MW01-20111219	Total	Water	General Prep	
IUL2387-02	MCWP-MW01-20111220	Total	Water	General Prep	

Prep Batch: 11L3774_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11L3774-BLK1	Method Blank	Total	Water	General Prep	
11L3774-BS1	Lab Control Sample	Total	Water	General Prep	
11L3774-MS1	Matrix Spike	Total	Water	General Prep	
11L3774-MSD1	Matrix Spike Duplicate	Total	Water	General Prep	
IUL2387-01	MCWP-MW01-20111219	Total	Water	General Prep	
IUL2387-02	MCWP-MW01-20111220	Total	Water	General Prep	

QC Association Summary

Client: Earth Forensics
Project/Site: Malibu Centralized Wastewater Project

TestAmerica Job ID: IUL2387

Wet Chemistry (Continued)

Prep Batch: 11L4057_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11L4057-BLK1	Method Blank	Total	Water	General Prep	
11L4057-BS1	Lab Control Sample	Total	Water	General Prep	
11L4057-DUP1	Duplicate	Total	Water	General Prep	
IUL2387-01	MCWP-MW01-20111219	Total	Water	General Prep	

Prep Batch: 12A0113_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
12A0113-BLK1	Method Blank	Total	Water	General Prep	
12A0113-BS1	Lab Control Sample	Total	Water	General Prep	
12A0113-DUP1	Duplicate	Total	Water	General Prep	
IUL2387-02	MCWP-MW01-20111220	Total	Water	General Prep	

8

Definitions/Glossary

Client: Earth Forensics
Project/Site: Malibu Centralized Wastewater Project

TestAmerica Job ID: IUL2387

Qualifiers

Metals

Qualifier	Qualifier Description
C	Calibration Verification recovery was above the method control limit for this analyte. Analyte not detected, data not impacted.

Wet Chemistry

Qualifier	Qualifier Description
MHA	Due to high levels of analyte in the sample, the MS/MSD calculation does not provide useful spike recovery information. See Blank Spike (LCS).
H-1	Sample analysis performed past the method-specified holding time per client's approval.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RL	Reporting Limit
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

9

Certification Summary

Client: Earth Forensics
Project/Site: Malibu Centralized Wastewater Project

TestAmerica Job ID: IUL2387

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica Irvine	Arizona	State Program	9	AZ0671
TestAmerica Irvine	California	LA Cty Sanitation Districts	9	10256
TestAmerica Irvine	California	NELAC	9	1108CA
TestAmerica Irvine	California	State Program	9	2706
TestAmerica Irvine	Guam	State Program	9	Cert. No. 10.001r
TestAmerica Irvine	Hawaii	State Program	9	N/A
TestAmerica Irvine	Nevada	State Program	9	CA015312007A
TestAmerica Irvine	New Mexico	State Program	6	N/A
TestAmerica Irvine	Northern Mariana Islands	State Program	9	MP0002
TestAmerica Irvine	Oregon	NELAC	10	4005
TestAmerica Irvine	USDA	USDA		P330-09-00080

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TAL-0013 (0911)

CHAIN OF CUSTODY FORM

17461 Derian Ave., #100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297
1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046
4625 E. Cotton Center Blvd., Suite 189, Phoenix, AZ 85040 (602) 437-3340 FAX (602) 454-93
6000 S. Eastern Ave., Suite 5E, Las Vegas, NV 89119 (702) 429-1264

IVL2387 REV

Client Name/Address:	Project/PO Number:
Earth Forensics 12532 Vista Panorama North Testin, CA 92705	Malibu Centralized Wastewater Project
Project Manager: W. Richard Laton (714) 296-4055	**Phone Number:** (562) 458-0614
Sampler: N. Napoli	**Fax Number:** (562) 741-4587

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives
MCWP-MW01-20111219	GW		4	12.19.11	1700	
MCWP-~~MW02~~-20111220 MW01 N.N 12/29/11	GW		4	12.20.11	1800	

Analysis Required

Ammonia-N IE4500NH3-D
Fluoride-SM4500FC
TDS-SM2540C
Alkalinity (All forms as $CaCO_3$ SM2320B)
Phos-P ortho 300.0
Sulfate EPA 300.0
Nitrate-N EPA 300.0
Chloride EPA-300.0
Aluminum 6010B Diss
Arsenic
Barium 6010B Diss
Boron
Cadmium
Calcium 6010B Diss
Chromium
Cobalt
Copper, Iron 6010B Diss
Lead, Manganese
Magnesium, Nickel
Potassium, Selenium, 6010B Diss
Silica, Silver
Sodium, Tin, 6010B Diss
Vanadium
Mercury 7470A

Special Instructions

TN 12/21/11 1525

Relinquished By:	Date/Time:	Received By:	Date/Time:
	12/21/11 1345		
Relinquished By:	Date/Time:	Received By:	Date/Time:
Relinquished By:	Date/Time:	Received In Lab By:	Date/Time: 12/21/11 13:45

Turnaround Time: (Check)
same day ____ 72 hours ____
24 hours ____ 5 days ____
48 hours ____ normal X

Sample Integrity: (Check)
Intact X on ice X 2.3°C

Note: By relinquishing samples to TestAmerica, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TAL-0013 (0911)

CHAIN OF CUSTODY FORM

17461 Derian Ave., #100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297
1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046
4625 E. Cotton Center Blvd., Suite 189, Phoenix, AZ 85040 (602) 437-3340 FAX (602) 454-9303
6000 S. Eastern Ave., Suite 5E, Las Vegas, NV 89119 (702) 429-1264

EVL2387

Page 1 of 1

Client Name/Address:	Project/PO Number:
Earth Forensics 12532 Vista Panorama North Tustin, CA 92705	Malibu Centralized Wastewater Project
Project Manager: W. Richard Laton (714) 296-4055	**Phone Number:** (562) 458-0614
Sampler: N. Napoli	**Fax Number:** (562) 741-4587

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives
MCWP-MW01-20111219	GW		4	12.19.11	1700	
MCWP-MW02-20111220	GW		4	12.20.11	1800	

Analysis Required

Ammonia-N ISE4500NH3-D	Fluoride-SM4500 FC	TDS-SM2540C	Alkalinity (All forms as $CaCO_3$ SM2320B)	Phos-P ortho Sulfate-DI EPA 300.0	Nitrate-N EPA 300.0	Chloride EPA-300.0	Aluminum 6010B Diss	Arsenic 6010B Diss	Barium 6010B Diss	Boron 6010B Diss	Cadmium 6010B Diss	Calcium 6010B Diss	Chromium 6010B Diss	Cobalt 6010B Diss	Copper 6010B Diss	Iron 6010B Diss	Lead 6010B Diss	Magnesium 6010B Diss	Manganese 6010B Diss	Nickel 6010B Diss	Potassium 6010B Diss	Selenium 6010B Diss	Silica 6010B Diss	Silver 6010B Diss	Sodium 6010B Diss	Zinc 6010B Diss	Vanadium 6010B Diss	Mercury 7470A	Special Instructions
X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	TN 12/21/11 1525
X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	

Relinquished By:	Date/Time:	Received By:	Date/Time:	Turnaround Time: (Check)	
	12/21/11 1345			same day ____	72 hours ____
Relinquished By:	Date/Time:	Received By:	Date/Time:	24 hours ____	5 days ____
				48 hours ____	normal X
Relinquished By:	Date/Time:	Received in Lab By:	Date/Time:	Sample Integrity: (Check)	
			12/21/11 13:45	intact X	on ice X 2.3c

Note: By relinquishing samples to TestAmerica, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

17461 Derian Avenue. Suite 100, Irvine, CA 92614 (949) 261-1022 Fax:(949) 260-3297

LABORATORY REPORT

Prepared For: Earth Forensics
12532 Vista Panorama
North Tustin, CA 92705
Attention: Richard Laton

Project: 44002987 - Title 22 Analysis
Malibu Centralized Wastewater Project
Sampled: 12/21/11
Received: 12/21/11
Issued: 01/25/12 21:39

NELAP #01108CA California ELAP#2706 CSDLAC #10256 AZ #AZ0671 NV #CA01531

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of TestAmerica and its client. This report shall not be reproduced, except in full, without written permission from TestAmerica. The Chain(s) of Custody, 6 pages, are included and are an integral part of this report.
This entire report was reviewed and approved for release.

SAMPLE CROSS REFERENCE

SUBCONTRACTED: Refer to the last page for specific subcontract laboratory information included in this report.

LABORATORY ID	CLIENT ID	MATRIX
IUL2400-01	MCWP-MW01-20111221	Water

Reviewed By:

TestAmerica Irvine

Kathleen A. Robb For Pat Abe
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

17461 Derian Avenue, Suite 100, Irvine, CA 92614 (949) 261-1022 Fax:(949) 260-3297

Earth Forensics
12532 Vista Panorama
North Tustin, CA 92705
Attention: Richard Laton

Project ID: 44002987 - Title 22 Analysis
Malibu Centralized Wastewater Project
Report Number: IUL2400

Sampled: 12/21/11
Received: 12/21/11

CHLORINATED ACIDS (EPA 515.4)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IUL2400-01 (MCWP-MW01-20111221 - Water)								
Reporting Units: ug/l								
Bentazon	EPA 515.4	11L3140	2.0	ND	0.986	12/22/2011	12/22/2011	
2,4-D	EPA 515.4	11L3140	9.9	ND	0.986	12/22/2011	12/22/2011	
Dacthal acid metabolites	EPA 515.4	11L3140	2.0	ND	0.986	12/22/2011	12/22/2011	
Dalapon	EPA 515.4	11L3140	9.9	ND	0.986	12/22/2011	12/22/2011	
Dicamba	EPA 515.4	11L3140	1.5	ND	0.986	12/22/2011	12/22/2011	
Dinoseb	EPA 515.4	11L3140	2.0	ND	0.986	12/22/2011	12/22/2011	
Pentachlorophenol	EPA 515.4	11L3140	0.20	ND	0.986	12/22/2011	12/22/2011	
Picloram	EPA 515.4	11L3140	0.99	ND	0.986	12/22/2011	12/22/2011	
2,4,5-TP (Silvex)	EPA 515.4	11L3140	0.99	ND	0.986	12/22/2011	12/22/2011	
Surrogate: 2,4-Dichlorophenylacetic acid (70-130%)				*99 %*				

TestAmerica Irvine

Kathleen A. Robb For Pat Abe
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
17461 Derian Avenue. Suite 100, Irvine, CA 92614 (949) 261-1022 Fax:(949) 260-3297

Earth Forensics
12532 Vista Panorama
North Tustin, CA 92705
Attention: Richard Laton

Project ID: 44002987 - Title 22 Analysis
Malibu Centralized Wastewater Project
Report Number: IUL2400

Sampled: 12/21/11
Received: 12/21/11

PURGEABLE ORGANIC COMPOUNDS BY GC/MS (EPA 524.2)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IUL2400-01 (MCWP-MW01-20111221 - Water)								
Reporting Units: ug/l								
1,2,3-Trichloropropane	SRL 524.2 M-TCP	11L3125	0.0050	ND	1	12/22/2011	12/22/2011	
Benzene	EPA 524.2	11L3124	0.50	ND	1	12/22/2011	12/22/2011	
Bromodichloromethane	EPA 524.2	11L3124	1.0	ND	1	12/22/2011	12/22/2011	
Bromoform	EPA 524.2	11L3124	1.0	ND	1	12/22/2011	12/22/2011	
Carbon tetrachloride	EPA 524.2	11L3124	0.50	ND	1	12/22/2011	12/22/2011	
Chlorobenzene	EPA 524.2	11L3124	0.50	ND	1	12/22/2011	12/22/2011	
Chloroform	EPA 524.2	11L3124	1.0	ND	1	12/22/2011	12/22/2011	
Dibromochloromethane	EPA 524.2	11L3124	1.0	ND	1	12/22/2011	12/22/2011	
1,2-Dichlorobenzene	EPA 524.2	11L3124	0.50	ND	1	12/22/2011	12/22/2011	
1,4-Dichlorobenzene	EPA 524.2	11L3124	0.50	ND	1	12/22/2011	12/22/2011	
1,1-Dichloroethane	EPA 524.2	11L3124	0.50	ND	1	12/22/2011	12/22/2011	
1,2-Dichloroethane	EPA 524.2	11L3124	0.50	ND	1	12/22/2011	12/22/2011	
1,1-Dichloroethene	EPA 524.2	11L3124	0.50	ND	1	12/22/2011	12/22/2011	
cis-1,2-Dichloroethene	EPA 524.2	11L3124	0.50	ND	1	12/22/2011	12/22/2011	
trans-1,2-Dichloroethene	EPA 524.2	11L3124	0.50	ND	1	12/22/2011	12/22/2011	
1,2-Dichloropropane	EPA 524.2	11L3124	0.50	ND	1	12/22/2011	12/22/2011	
cis-1,3-Dichloropropene	EPA 524.2	11L3124	0.50	ND	1	12/22/2011	12/22/2011	
trans-1,3-Dichloropropene	EPA 524.2	11L3124	0.50	ND	1	12/22/2011	12/22/2011	
1,3-Dichloropropene, Total	EPA 524.2	11L3124	0.50	ND	1	12/22/2011	12/22/2011	
Ethylbenzene	EPA 524.2	11L3124	0.50	ND	1	12/22/2011	12/22/2011	
Methylene chloride	EPA 524.2	11L3124	0.50	ND	1	12/22/2011	12/22/2011	
Styrene	EPA 524.2	11L3124	0.50	ND	1	12/22/2011	12/22/2011	
1,1,2,2-Tetrachloroethane	EPA 524.2	11L3124	0.50	ND	1	12/22/2011	12/22/2011	
Tetrachloroethene	EPA 524.2	11L3124	0.50	ND	1	12/22/2011	12/22/2011	
Toluene	EPA 524.2	11L3124	0.50	ND	1	12/22/2011	12/22/2011	
1,2,4-Trichlorobenzene	EPA 524.2	11L3124	0.50	ND	1	12/22/2011	12/22/2011	
1,1,1-Trichloroethane	EPA 524.2	11L3124	0.50	ND	1	12/22/2011	12/22/2011	
1,1,2-Trichloroethane	EPA 524.2	11L3124	0.50	ND	1	12/22/2011	12/22/2011	
Trichloroethene	EPA 524.2	11L3124	0.50	ND	1	12/22/2011	12/22/2011	
Trichlorofluoromethane	EPA 524.2	11L3124	5.0	ND	1	12/22/2011	12/22/2011	
Trichlorotrifluoroethane (Freon 113)	EPA 524.2	11L3124	10	ND	1	12/22/2011	12/22/2011	
Vinyl chloride	EPA 524.2	11L3124	0.50	ND	1	12/22/2011	12/22/2011	
m,p-Xylenes	EPA 524.2	11L3124	0.50	ND	1	12/22/2011	12/22/2011	
o-Xylene	EPA 524.2	11L3124	0.50	ND	1	12/22/2011	12/22/2011	
Xylenes, Total	EPA 524.2	11L3124	1.0	ND	1	12/22/2011	12/22/2011	
Methyl-tert-butyl Ether (MTBE)	EPA 524.2	11L3124	3.0	ND	1	12/22/2011	12/22/2011	
Trihalomethanes, Total	EPA 524.2	11L3124	1.0	**<4.0**	1	12/22/2011	12/22/2011	
Surrogate: 4-Bromofluorobenzene (70-130%)				*78 %*				
Surrogate: 1,2-Dichlorobenzene-d4 (70-130%)				*89 %*				

TestAmerica Irvine

Kathleen A. Robb For Pat Abe
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

17461 Derian Avenue, Suite 100, Irvine, CA 92614 (949) 261-1022 Fax:(949) 260-3297

Earth Forensics
12532 Vista Panorama
North Tustin, CA 92705
Attention: Richard Laton

Project ID: 44002987 - Title 22 Analysis
Malibu Centralized Wastewater Project
Report Number: IUL2400

Sampled: 12/21/11
Received: 12/21/11

EDB and DBCP in Water by GC/ECD (EPA 504.1)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IUL2400-01 (MCWP-MW01-20111221 - Water)								
Reporting Units: ug/l								
1,2-Dibromoethane (EDB)	EPA 504.1	11L3309	0.019	ND	0.926	12/23/2011	12/23/2011	
1,2-Dibromo-3-chloropropane	EPA 504.1	11L3309	0.0093	ND	0.926	12/23/2011	12/23/2011	
Surrogate: 4-Bromofluorobenzene (50-150%)				*62 %*				

TestAmerica Irvine

Kathleen A. Robb For Pat Abe
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
17461 Derian Avenue. Suite 100, Irvine, CA 92614 (949) 261-1022 Fax:(949) 260-3297

Earth Forensics
12532 Vista Panorama
North Tustin, CA 92705
Attention: Richard Laton

Project ID: 44002987 - Title 22 Analysis
Malibu Centralized Wastewater Project
Report Number: IUL2400

Sampled: 12/21/11
Received: 12/21/11

ORGANIC COMPOUNDS BY GC/MS (EPA 525.2)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IUL2400-01 (MCWP-MW01-20111221 - Water)								
Reporting Units: ug/l								
Atrazine	EPA 525.2	11L3519	0.51	ND	1.01	12/27/2011	12/29/2011	
Benzo(a)pyrene	EPA 525.2	11L3519	0.10	ND	1.01	12/27/2011	12/29/2011	
Di(2-ethylhexyl)adipate	EPA 525.2	11L3519	5.1	ND	1.01	12/27/2011	12/29/2011	
Di(2-ethylhexyl)phthalate	EPA 525.2	11L3519	3.0	ND	1.01	12/27/2011	12/29/2011	
Hexachlorobenzene	EPA 525.2	11L3519	0.51	ND	1.01	12/27/2011	12/29/2011	L
Hexachlorocyclopentadiene	EPA 525.2	11L3519	1.0	ND	1.01	12/27/2011	12/29/2011	
Molinate	EPA 525.2	11L3519	2.0	ND	1.01	12/27/2011	12/29/2011	
Simazine	EPA 525.2	11L3519	1.0	ND	1.01	12/27/2011	12/29/2011	
Thiobencarb	EPA 525.2	11L3519	1.0	ND	1.01	12/27/2011	12/29/2011	
Surrogate: 1,3-Dimethyl-2-nitrobenzene (70-130%)				*95 %*				
Surrogate: Triphenylphosphate (70-130%)				*121 %*				
Surrogate: Perylene-d12 (70-130%)				*89 %*				

TestAmerica Irvine

Kathleen A. Robb For Pat Abe
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

17461 Derian Avenue, Suite 100, Irvine, CA 92614 (949) 261-1022 Fax:(949) 260-3297

Earth Forensics
12532 Vista Panorama
North Tustin, CA 92705
Attention: Richard Laton

Project ID: 44002987 - Title 22 Analysis
Malibu Centralized Wastewater Project
Report Number: IUL2400

Sampled: 12/21/11
Received: 12/21/11

ORGANOCHLORINE PESTICIDES AND PCBS (EPA 505)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IUL2400-01 (MCWP-MW01-20111221 - Water)								
Reporting Units: ug/l								
Alachlor	EPA 505	11L3132	0.94	ND	0.941	12/22/2011	12/23/2011	
Endrin	EPA 505	11L3132	0.094	ND	0.941	12/22/2011	12/23/2011	
Heptachlor	EPA 505	11L3132	0.0094	ND	0.941	12/22/2011	12/23/2011	
Heptachlor epoxide	EPA 505	11L3132	0.0094	ND	0.941	12/22/2011	12/23/2011	
gamma-BHC (Lindane)	EPA 505	11L3132	0.19	ND	0.941	12/22/2011	12/23/2011	
Methoxychlor	EPA 505	11L3132	9.4	ND	0.941	12/22/2011	12/23/2011	
PCBs as Decachlorobiphenyl (DCB)	EPA 505	11L3132	0.47	ND	0.941	12/22/2011	12/23/2011	
Chlordane	EPA 505	11L3132	0.094	ND	0.941	12/22/2011	12/23/2011	
Toxaphene	EPA 505	11L3132	0.94	ND	0.941	12/22/2011	12/23/2011	
Aroclor 1016	EPA 505	11L3132	0.24	ND	0.941	12/22/2011	12/23/2011	
Aroclor 1221	EPA 505	11L3132	0.18	ND	0.941	12/22/2011	12/23/2011	
Aroclor 1232	EPA 505	11L3132	0.22	ND	0.941	12/22/2011	12/23/2011	
Aroclor 1242	EPA 505	11L3132	0.24	ND	0.941	12/22/2011	12/23/2011	
Aroclor 1248	EPA 505	11L3132	0.28	ND	0.941	12/22/2011	12/23/2011	
Aroclor 1254	EPA 505	11L3132	0.31	ND	0.941	12/22/2011	12/23/2011	
Aroclor 1260	EPA 505	11L3132	0.34	ND	0.941	12/22/2011	12/23/2011	

TestAmerica Irvine

Kathleen A. Robb For Pat Abe
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
17461 Derian Avenue. Suite 100, Irvine, CA 92614 (949) 261-1022 Fax:(949) 260-3297

Earth Forensics
12532 Vista Panorama
North Tustin, CA 92705
Attention: Richard Laton

Project ID: 44002987 - Title 22 Analysis
Malibu Centralized Wastewater Project
Report Number: IUL2400

Sampled: 12/21/11
Received: 12/21/11

CARBAMATES BY HPLC (EPA 531.1)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IUL2400-01 (MCWP-MW01-20111221 - Water)								
Reporting Units: ug/l								
Aldicarb Sulfoxide	EPA 531.1	11L3331	3.0	ND	1	12/23/2011	12/27/2011	
Aldicarb Sulfone	EPA 531.1	11L3331	4.0	ND	1	12/23/2011	12/27/2011	
Oxamyl	EPA 531.1	11L3331	20	ND	1	12/23/2011	12/27/2011	
Methomyl	EPA 531.1	11L3331	2.0	ND	1	12/23/2011	12/27/2011	
3-Hydroxycarbofuran	EPA 531.1	11L3331	3.0	ND	1	12/23/2011	12/27/2011	
Aldicarb	EPA 531.1	11L3331	3.0	ND	1	12/23/2011	12/27/2011	
Carbofuran	EPA 531.1	11L3331	5.0	ND	1	12/23/2011	12/27/2011	
Carbaryl	EPA 531.1	11L3331	5.0	ND	1	12/23/2011	12/27/2011	

TestAmerica Irvine

Kathleen A. Robb For Pat Abe
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

17461 Derian Avenue, Suite 100, Irvine, CA 92614 (949) 261-1022 Fax:(949) 260-3297

Earth Forensics
12532 Vista Panorama
North Tustin, CA 92705
Attention: Richard Laton

Project ID: 44002987 - Title 22 Analysis
Malibu Centralized Wastewater Project
Report Number: IUL2400

Sampled: 12/21/11
Received: 12/21/11

ENDOTHALL (EPA 548.1)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IUL2400-01 (MCWP-MW01-20111221 - Water)								
Reporting Units: ug/l								
Endothall	EPA 548.1	11L3450	45	ND	5	12/27/2011	12/27/2011	M2

TestAmerica Irvine

Kathleen A. Robb For Pat Abe
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
17461 Derian Avenue. Suite 100, Irvine, CA 92614 (949) 261-1022 Fax:(949) 260-3297

Earth Forensics
12532 Vista Panorama
North Tustin, CA 92705
Attention: Richard Laton

Project ID: 44002987 - Title 22 Analysis
Malibu Centralized Wastewater Project
Report Number: IUL2400

Sampled: 12/21/11
Received: 12/21/11

GLYPHOSATE (EPA 547)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IUL2400-01 (MCWP-MW01-20111221 - Water)								
Reporting Units: ug/l								
Glyphosate	EPA 547	11L3679	25	ND	1	12/28/2011	12/29/2011	

TestAmerica Irvine

Kathleen A. Robb For Pat Abe
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
17461 Derian Avenue, Suite 100, Irvine, CA 92614 (949) 261-1022 Fax:(949) 260-3297

Earth Forensics
12532 Vista Panorama
North Tustin, CA 92705
Attention: Richard Laton

Project ID: 44002987 - Title 22 Analysis
Malibu Centralized Wastewater Project
Report Number: IUL2400

Sampled: 12/21/11
Received: 12/21/11

DIQUAT/PARAQUAT (EPA 549.2)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IUL2400-01 (MCWP-MW01-20111221 - Water)								
Reporting Units: ug/l								
Diquat	EPA 549.2	11L3451	4.0	ND	1	12/27/2011	12/27/2011	M2
Paraquat	EPA 549.2	11L3451	20	ND	1	12/27/2011	12/27/2011	M2

TestAmerica Irvine

Kathleen A. Robb For Pat Abe
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
17461 Derian Avenue. Suite 100, Irvine, CA 92614 (949) 261-1022 Fax:(949) 260-3297

Earth Forensics
12532 Vista Panorama
North Tustin, CA 92705
Attention: Richard Laton

Project ID: 44002987 - Title 22 Analysis
Malibu Centralized Wastewater Project
Report Number: IUL2400

Sampled: 12/21/11
Received: 12/21/11

HALOACETIC ACIDS (EPA 552.2)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IUL2400-01 (MCWP-MW01-20111221 - Water)								
Reporting Units: ug/l								
Dibromoacetic acid (DBAA)	EPA 552.2	11L3892	0.98	ND	0.984	12/29/2011	12/29/2011	
Dichloroacetic acid (DCAA)	EPA 552.2	11L3892	0.98	ND	0.984	12/29/2011	12/29/2011	
Monobromoacetic acid (MBAA)	EPA 552.2	11L3892	0.98	ND	0.984	12/29/2011	12/29/2011	
Monochloroacetic acid (MCAA)	EPA 552.2	11L3892	2.0	ND	0.984	12/29/2011	12/29/2011	
Trichloroacetic acid (TCAA)	EPA 552.2	11L3892	0.98	ND	0.984	12/29/2011	12/29/2011	
Haloacetic acids (Five) (HAA5)	EPA 552.2	11L3892	0.98	**<6**	0.984	12/29/2011	12/29/2011	
Surrogate: 2,3-Dibromopropanoic acid (70-130%)				*104 %*				

TestAmerica Irvine

Kathleen A. Robb For Pat Abe
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
17461 Derian Avenue, Suite 100, Irvine, CA 92614 (949) 261-1022 Fax:(949) 260-3297

Earth Forensics
12532 Vista Panorama
North Tustin, CA 92705
Attention: Richard Laton

Project ID: 44002987 - Title 22 Analysis
Malibu Centralized Wastewater Project
Report Number: IUL2400

Sampled: 12/21/11
Received: 12/21/11

METALS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IUL2400-01 (MCWP-MW01-20111221 - Water)								
Reporting Units: mg/l								
Mercury	EPA 245.1	11L3180	0.00020	ND	1	12/22/2011	12/23/2011	C
Silica (as SiO2)	EPA 200.7	11L3703	0.11	**29**	1	12/28/2011	1/9/2012	
Boron	EPA 200.7	11L3703	0.050	**0.73**	1	12/28/2011	12/30/2011	
Calcium	EPA 200.7	11L3703	0.10	**180**	1	12/28/2011	12/30/2011	
Iron	EPA 200.7	11L3703	0.040	ND	1	12/28/2011	12/30/2011	
Magnesium	EPA 200.7	11L3703	0.020	**110**	1	12/28/2011	12/30/2011	
Potassium	EPA 200.7	11L3703	0.50	**4.0**	1	12/28/2011	12/30/2011	
Sodium	EPA 200.7	11L3703	0.50	**240**	1	12/28/2011	12/30/2011	B-1
Sample ID: IUL2400-01 (MCWP-MW01-20111221 - Water)								
Reporting Units: ug/l								
Aluminum	EPA 200.8	11L3283	10	ND	1	12/23/2011	12/23/2011	
Antimony	EPA 200.8	11L3283	2.0	ND	1	12/23/2011	12/23/2011	
Arsenic	EPA 200.8	11L3283	1.0	ND	1	12/23/2011	12/23/2011	
Barium	EPA 200.8	11L3283	1.0	**39**	1	12/23/2011	12/23/2011	
Beryllium	EPA 200.8	11L3283	0.50	ND	1	12/23/2011	12/23/2011	
Cadmium	EPA 200.8	11L3283	1.0	ND	1	12/23/2011	12/23/2011	
Chromium	EPA 200.8	11L3283	2.0	ND	1	12/23/2011	12/23/2011	
Cobalt	EPA 200.8	11L3283	1.0	ND	1	12/23/2011	12/23/2011	
Copper	EPA 200.8	11L3283	2.0	**4.0**	1	12/23/2011	12/23/2011	
Lead	EPA 200.8	11L3283	1.0	ND	1	12/23/2011	12/23/2011	
Manganese	EPA 200.8	11L3283	1.0	**48**	1	12/23/2011	12/23/2011	
Nickel	EPA 200.8	11L3283	2.0	**4.8**	1	12/23/2011	12/23/2011	
Selenium	EPA 200.8	11L3283	2.0	ND	1	12/23/2011	12/23/2011	
Silver	EPA 200.8	11L3283	1.0	ND	1	12/23/2011	12/23/2011	
Thallium	EPA 200.8	11L3283	1.0	ND	1	12/23/2011	12/23/2011	
Vanadium	EPA 200.8	11L3283	2.0	**9.0**	1	12/23/2011	12/23/2011	
Zinc	EPA 200.8	11L3283	20	**24**	1	12/23/2011	12/23/2011	

TestAmerica Irvine

Kathleen A. Robb For Pat Abe
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
17461 Derian Avenue. Suite 100, Irvine, CA 92614 (949) 261-1022 Fax:(949) 260-3297

Earth Forensics
12532 Vista Panorama
North Tustin, CA 92705
Attention: Richard Laton

Project ID: 44002987 - Title 22 Analysis
Malibu Centralized Wastewater Project
Report Number: IUL2400

Sampled: 12/21/11
Received: 12/21/11

INORGANICS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IUL2400-01 (MCWP-MW01-20111221 - Water)								
Reporting Units: Color Units								
Color	SM2120B	11L3092	1.0	ND	1	12/22/2011	12/22/2011	pHa
Sample ID: IUL2400-01 (MCWP-MW01-20111221 - Water)								
Reporting Units: mg/l								
Total Kjeldahl Nitrogen	EPA 351.2	11L3549	0.50	ND	1	12/27/2011	12/27/2011	
Alkalinity as CaCO3	SM2320B	12A0113	2.0	**300**	1	1/3/2012	1/3/2012	
Bicarbonate Alkalinity as CaCO3	SM2320B	12A0113	2.0	**300**	1	1/3/2012	1/3/2012	
Carbonate Alkalinity as CaCO3	SM2320B	12A0113	2.0	ND	1	1/3/2012	1/3/2012	
Hydroxide Alkalinity as CaCO3	SM2320B	12A0113	2.0	ND	1	1/3/2012	1/3/2012	
Ammonia-N	SM4500NH3-D	11L3774	0.50	ND	1	12/28/2011	12/28/2011	
Chloride	EPA 300.0	11L2933	10	**240**	20	12/21/2011	12/21/2011	MHA
Total Cyanide	SM4500CN-E	11L3956	0.025	ND	1	12/29/2011	12/29/2011	
Fluoride	SM 4500-F-C	11L3238	0.10	**0.51**	1	12/23/2011	12/23/2011	
Hardness (as CaCO3)	SM2340B	11L3703	1.0	**900**	1	12/28/2011	12/30/2011	
Nitrate-N	EPA 300.0	11L2933	0.11	**1.7**	1	12/21/2011	12/21/2011	
Nitrate-NO3	EPA 300.0	11L2933	0.50	**7.6**	1	12/21/2011	12/21/2011	
Nitrite-N	EPA 300.0	11L2933	0.15	ND	1	12/21/2011	12/21/2011	
Nitrate/Nitrite-N	EPA 300.0	11L2933	0.26	**1.7**	1	12/21/2011	12/21/2011	
Phosphorus	EPA 365.3	11L4086	0.050	**0.068**	1	12/30/2011	12/30/2011	
Sulfate	EPA 300.0	11L2933	10	**670**	20	12/21/2011	12/21/2011	MHA
Surfactants (MBAS)	SM5540-C	11L3215	0.10	ND	1	12/22/2011	12/22/2011	
Total Dissolved Solids	SM2540C	11L3020	20	**1600**	1	12/22/2011	12/22/2011	
Total Organic Carbon	SM5310C	11L3446	0.10	**2.7**	1	12/27/2011	12/27/2011	
Sample ID: IUL2400-01 (MCWP-MW01-20111221 - Water)								
Reporting Units: NTU								
Turbidity	EPA 180.1	11L3100	0.10	ND	1	12/22/2011	12/22/2011	
Sample ID: IUL2400-01 (MCWP-MW01-20111221 - Water)								
Reporting Units: pH Units								
pH	EPA 150.1	11L3097	0.10	**7.7**	1	12/22/2011	12/22/2011	HFT
Sample ID: IUL2400-01 (MCWP-MW01-20111221 - Water)								
Reporting Units: T.O.N.								
Odor	SM2150B	11L3105	1.0	ND	1	12/22/2011	12/22/2011	
Sample ID: IUL2400-01 (MCWP-MW01-20111221 - Water)								
Reporting Units: umhos/cm @ 25C								
Specific Conductance	SM2510B	11L3018	1.0	**2200**	1	12/22/2011	12/22/2011	

TestAmerica Irvine

Kathleen A. Robb For Pat Abe
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

17461 Derian Avenue, Suite 100, Irvine, CA 92614 (949) 261-1022 Fax:(949) 260-3297

Earth Forensics
12532 Vista Panorama
North Tustin, CA 92705
Attention: Richard Laton

Project ID: 44002987 - Title 22 Analysis
Malibu Centralized Wastewater Project
Report Number: IUL2400

Sampled: 12/21/11
Received: 12/21/11

AGGRESSIVE INDEX

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IUL2400-01 (MCWP-MW01-20111221 - Water)								
Reporting Units: SI Units								
Aggressive Index	Calculation	12A0149	0.010	**13**	1	1/3/2012	1/3/2012	

TestAmerica Irvine

Kathleen A. Robb For Pat Abe
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
17461 Derian Avenue. Suite 100, Irvine, CA 92614 (949) 261-1022 Fax:(949) 260-3297

Earth Forensics
12532 Vista Panorama
North Tustin, CA 92705
Attention: Richard Laton

Project ID: 44002987 - Title 22 Analysis
Malibu Centralized Wastewater Project
Report Number: IUL2400

Sampled: 12/21/11
Received: 12/21/11

COLIFORMS BY CHROMOGENIC SUBSTRATE - P/A (SM9223B)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IUL2400-01 (MCWP-MW01-20111221 - Water)								
Reporting Units: Present/Absent								
Total Coliform	SM9223B	11L3005	0.90	Absent	1	12/21/2011	12/22/2011	
E. Coli	SM9223B	11L3005	0.90	Absent	1	12/21/2011	12/22/2011	

TestAmerica Irvine

Kathleen A. Robb For Pat Abe
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

17461 Derian Avenue, Suite 100, Irvine, CA 92614 (949) 261-1022 Fax:(949) 260-3297

Earth Forensics
12532 Vista Panorama
North Tustin, CA 92705
Attention: Richard Laton

Project ID: 44002987 - Title 22 Analysis
Malibu Centralized Wastewater Project
Report Number: IUL2400

Sampled: 12/21/11
Received: 12/21/11

EPA 600 R 94 134, 100.2

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IUL2400-01 (MCWP-MW01-20111221 - Water)								
Reporting Units: MFL								
ASBESTOS	TEM	148609	NA	<0.2	1	12/22/2011	12/29/2011	

TestAmerica Irvine

Kathleen A. Robb For Pat Abe
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
17461 Derian Avenue. Suite 100, Irvine, CA 92614 (949) 261-1022 Fax:(949) 260-3297

Earth Forensics
12532 Vista Panorama
North Tustin, CA 92705
Attention: Richard Laton

Project ID: 44002987 - Title 22 Analysis
Malibu Centralized Wastewater Project
Report Number: IUL2400

Sampled: 12/21/11
Received: 12/21/11

EPA-5 1613B-Tetrasx

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IUL2400-01 (MCWP-MW01-20111221 - Water)								
Reporting Units: pg/L								
2,3,7,8-TCDD	EPA-5 1613B-Tetras	1362055	5	ND	0.96	12/28/2011	12/29/2011	
Surrogate: 13C-2,3,7,8-TCDD (31-137%)				*63 %*				

TestAmerica Irvine

Kathleen A. Robb For Pat Abe
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

17461 Derian Avenue, Suite 100, Irvine, CA 92614 (949) 261-1022 Fax:(949) 260-3297

Earth Forensics
12532 Vista Panorama
North Tustin, CA 92705
Attention: Richard Laton

Project ID: 44002987 - Title 22 Analysis
Malibu Centralized Wastewater Project
Report Number: IUL2400

Sampled: 12/21/11
Received: 12/21/11

SHORT HOLD TIME DETAIL REPORT

	Hold Time (in days)	Date/Time Sampled	Date/Time Received	Date/Time Extracted	Date/Time Analyzed
Sample ID: MCWP-MW01-20111221 (IUL2400-01) - Water					
EPA 150.1	0	12/21/2011 11:00	12/21/2011 13:45	12/22/2011 12:05	12/22/2011 12:05
EPA 180.1	2	12/21/2011 11:00	12/21/2011 13:45	12/22/2011 14:34	12/22/2011 14:34
EPA 300.0	2	12/21/2011 11:00	12/21/2011 13:45	12/21/2011 18:00	12/21/2011 18:10
SM2120B	2	12/21/2011 11:00	12/21/2011 13:45	12/22/2011 10:46	12/22/2011 10:46
SM2150B	1	12/21/2011 11:00	12/21/2011 13:45	12/22/2011 15:45	12/22/2011 15:45
SM5540-C	2	12/21/2011 11:00	12/21/2011 13:45	12/22/2011 19:32	12/22/2011 21:10
SM9223B	1	12/21/2011 11:00	12/21/2011 13:45	12/21/2011 19:42	12/22/2011 12:25

TestAmerica Irvine

Kathleen A. Robb For Pat Abe
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

17461 Derian Avenue. Suite 100, Irvine, CA 92614 (949) 261-1022 Fax:(949) 260-3297

Earth Forensics
12532 Vista Panorama
North Tustin, CA 92705
Attention: Richard Laton

Project ID: 44002987 - Title 22 Analysis
Malibu Centralized Wastewater Project
Report Number: IUL2400

Sampled: 12/21/11
Received: 12/21/11

METHOD BLANK/QC DATA

CHLORINATED ACIDS (EPA 515.4)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11L3140 Extracted: 12/22/11										
Blank Analyzed: 12/22/2011 (11L3140-BLK1)										
Bentazon	ND	2.0	ug/l							
2,4-D	ND	9.9	ug/l							
Dacthal acid metabolites	ND	2.0	ug/l							
Dalapon	ND	9.9	ug/l							
Dicamba	ND	1.5	ug/l							
Dinoseb	ND	2.0	ug/l							
Pentachlorophenol	ND	0.20	ug/l							
Picloram	ND	0.99	ug/l							
2,4,5-TP (Silvex)	ND	0.99	ug/l							
Surrogate: 2,4-Dichlorophenylacetic acid	*1.80*		*ug/l*	*1.98*		*91*	*70-130*			
LCS Analyzed: 12/22/2011 (11L3140-BS1)										
Bentazon	1.42	2.0	ug/l	1.59		89	70-130			
2,4-D	1.51	10	ug/l	1.59		95	70-130			
Dacthal acid metabolites	0.726	2.0	ug/l	0.796		91	70-130			
Dalapon	1.30	10	ug/l	1.59		82	70-130			
Dicamba	0.737	1.5	ug/l	0.796		93	70-130			
Dinoseb	1.42	2.0	ug/l	1.59		89	70-130			
Pentachlorophenol	0.151	0.20	ug/l	0.159		95	70-130			
Picloram	0.738	1.0	ug/l	0.796		93	70-130			
2,4,5-TP (Silvex)	0.378	1.0	ug/l	0.398		95	70-130			
Surrogate: 2,4-Dichlorophenylacetic acid	*1.89*		*ug/l*	*1.99*		*95*	*70-130*			
LCS Dup Analyzed: 12/22/2011 (11L3140-BSD1)										
Bentazon	1.55	2.0	ug/l	1.58		98	70-130	10	20	
2,4-D	1.48	9.9	ug/l	1.58		93	70-130	2	20	
Dacthal acid metabolites	0.725	2.0	ug/l	0.792		92	70-130	0.4	20	
Dalapon	1.34	9.9	ug/l	1.58		85	70-130	3	20	
Dicamba	0.741	1.5	ug/l	0.792		93	70-130	1	20	
Dinoseb	1.46	2.0	ug/l	1.58		92	70-130	3	20	
Pentachlorophenol	0.151	0.20	ug/l	0.158		96	70-130	1	20	
Picloram	0.687	0.99	ug/l	0.792		87	70-130	7	20	
2,4,5-TP (Silvex)	0.377	0.99	ug/l	0.396		95	70-130	0.4	20	
Surrogate: 2,4-Dichlorophenylacetic acid	*1.92*		*ug/l*	*1.98*		*97*	*70-130*			

TestAmerica Irvine

Kathleen A. Robb For Pat Abe
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

17461 Derian Avenue, Suite 100, Irvine, CA 92614 (949) 261-1022 Fax:(949) 260-3297

Earth Forensics
12532 Vista Panorama
North Tustin, CA 92705
Attention: Richard Laton

Project ID: 44002987 - Title 22 Analysis
Malibu Centralized Wastewater Project
Report Number: IUL2400

Sampled: 12/21/11
Received: 12/21/11

METHOD BLANK/QC DATA

CHLORINATED ACIDS (EPA 515.4)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11L3140 Extracted: 12/22/11										
Matrix Spike Analyzed: 12/22/2011 (11L3140-MS1)					**Source: IUL2374-01**					
Bentazon	1.49	2.0	ug/l	1.59	ND	94	70-130			
2,4-D	1.50	9.9	ug/l	1.59	ND	94	70-130			
Dacthal acid metabolites	0.740	2.0	ug/l	0.796	ND	93	70-130			
Dalapon	1.44	9.9	ug/l	1.59	ND	91	70-130			
Dicamba	0.717	1.5	ug/l	0.796	ND	90	70-130			
Dinoseb	1.37	2.0	ug/l	1.59	ND	86	70-130			
Pentachlorophenol	0.142	0.20	ug/l	0.159	ND	89	70-130			
Picloram	0.739	0.99	ug/l	0.796	ND	93	70-130			
2,4,5-TP (Silvex)	0.369	0.99	ug/l	0.398	ND	93	70-130			
Surrogate: 2,4-Dichlorophenylacetic acid	*1.87*		*ug/l*	*1.99*		*94*	*70-130*			
Matrix Spike Dup Analyzed: 12/22/2011 (11L3140-MSD1)					**Source: IUL2374-01**					
Bentazon	1.28	2.0	ug/l	1.58	ND	81	70-130	14	20	
2,4-D	1.43	9.9	ug/l	1.58	ND	91	70-130	4	20	
Dacthal acid metabolites	0.698	2.0	ug/l	0.788	ND	89	70-130	5	20	
Dalapon	1.31	9.9	ug/l	1.58	ND	83	70-130	9	20	
Dicamba	0.710	1.5	ug/l	0.788	ND	90	70-130	0.02	20	
Dinoseb	1.40	2.0	ug/l	1.58	ND	89	70-130	3	20	
Pentachlorophenol	0.138	0.20	ug/l	0.158	ND	88	70-130	2	20	
Picloram	0.711	0.99	ug/l	0.788	ND	90	70-130	3	20	
2,4,5-TP (Silvex)	0.355	0.99	ug/l	0.394	ND	90	70-130	3	20	
Surrogate: 2,4-Dichlorophenylacetic acid	*1.85*		*ug/l*	*1.97*		*94*	*70-130*			

TestAmerica Irvine

Kathleen A. Robb For Pat Abe
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
17461 Derian Avenue. Suite 100, Irvine, CA 92614 (949) 261-1022 Fax:(949) 260-3297

Earth Forensics
12532 Vista Panorama
North Tustin, CA 92705
Attention: Richard Laton

Project ID: 44002987 - Title 22 Analysis
Malibu Centralized Wastewater Project
Report Number: IUL2400

Sampled: 12/21/11
Received: 12/21/11

METHOD BLANK/QC DATA

PURGEABLE ORGANIC COMPOUNDS BY GC/MS (EPA 524.2)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11L3124 Extracted: 12/22/11										
Blank Analyzed: 12/22/2011 (11L3124-BLK1)										
Benzene	ND	0.50	ug/l							
Bromodichloromethane	ND	1.0	ug/l							
Bromoform	ND	1.0	ug/l							
Carbon tetrachloride	ND	0.50	ug/l							
Chlorobenzene	ND	0.50	ug/l							
Chloroform	ND	1.0	ug/l							
Dibromochloromethane	ND	1.0	ug/l							
1,2-Dichlorobenzene	ND	0.50	ug/l							
1,4-Dichlorobenzene	ND	0.50	ug/l							
1,1-Dichloroethane	ND	0.50	ug/l							
1,2-Dichloroethane	ND	0.50	ug/l							
1,1-Dichloroethene	ND	0.50	ug/l							
cis-1,2-Dichloroethene	ND	0.50	ug/l							
trans-1,2-Dichloroethene	ND	0.50	ug/l							
1,2-Dichloropropane	ND	0.50	ug/l							
cis-1,3-Dichloropropene	ND	0.50	ug/l							
trans-1,3-Dichloropropene	ND	0.50	ug/l							
1,3-Dichloropropene, Total	ND	0.50	ug/l							
Ethylbenzene	ND	0.50	ug/l							
Methylene chloride	ND	0.50	ug/l							
Styrene	ND	0.50	ug/l							
1,1,2,2-Tetrachloroethane	ND	0.50	ug/l							
Tetrachloroethene	ND	0.50	ug/l							
Toluene	ND	0.50	ug/l							
1,2,4-Trichlorobenzene	ND	0.50	ug/l							
1,1,1-Trichloroethane	ND	0.50	ug/l							
1,1,2-Trichloroethane	ND	0.50	ug/l							
Trichloroethene	ND	0.50	ug/l							
Trichlorofluoromethane	ND	5.0	ug/l							
Trichlorotrifluoroethane (Freon 113)	ND	10	ug/l							
Vinyl chloride	ND	0.50	ug/l							
m,p-Xylenes	ND	0.50	ug/l							
o-Xylene	ND	0.50	ug/l							
Xylenes, Total	ND	1.0	ug/l							
Methyl-tert-butyl Ether (MTBE)	ND	3.0	ug/l							
Trihalomethanes, Total	<4.0	1.0	ug/l							

TestAmerica Irvine

Kathleen A. Robb For Pat Abe
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
17461 Derian Avenue, Suite 100, Irvine, CA 92614 (949) 261-1022 Fax:(949) 260-3297

Earth Forensics
12532 Vista Panorama
North Tustin, CA 92705
Attention: Richard Laton

Project ID: 44002987 - Title 22 Analysis
Malibu Centralized Wastewater Project
Report Number: IUL2400

Sampled: 12/21/11
Received: 12/21/11

METHOD BLANK/QC DATA

PURGEABLE ORGANIC COMPOUNDS BY GC/MS (EPA 524.2)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11L3124 Extracted: 12/22/11										
Blank Analyzed: 12/22/2011 (11L3124-BLK1)										
Surrogate: 4-Bromofluorobenzene	*8.11*		*ug/l*	*10.0*		*81*	*70-130*			
Surrogate: 1,2-Dichlorobenzene-d4	*8.53*		*ug/l*	*10.0*		*85*	*70-130*			
LCS Analyzed: 12/22/2011 (11L3124-BS1)										
Benzene	11.0	0.50	ug/l	10.0		110	70-130			
Bromodichloromethane	10.4	1.0	ug/l	10.0		104	70-130			
Bromoform	9.34	1.0	ug/l	10.0		93	70-130			
Carbon tetrachloride	10.7	0.50	ug/l	10.0		107	70-130			
Chlorobenzene	9.74	0.50	ug/l	10.0		97	70-130			
Chloroform	9.74	1.0	ug/l	10.0		97	70-130			
Dibromochloromethane	10.1	1.0	ug/l	10.0		101	70-130			
1,2-Dichlorobenzene	9.22	0.50	ug/l	10.0		92	70-130			
1,4-Dichlorobenzene	10.2	0.50	ug/l	10.0		102	70-130			
1,1-Dichloroethane	9.76	0.50	ug/l	10.0		98	70-130			
1,2-Dichloroethane	11.5	0.50	ug/l	10.0		115	70-130			
1,1-Dichloroethene	9.66	0.50	ug/l	10.0		97	70-130			
cis-1,2-Dichloroethene	9.51	0.50	ug/l	10.0		95	70-130			
trans-1,2-Dichloroethene	9.56	0.50	ug/l	10.0		96	70-130			
1,2-Dichloropropane	9.97	0.50	ug/l	10.0		100	70-130			
cis-1,3-Dichloropropene	10.6	0.50	ug/l	10.0		106	70-130			
trans-1,3-Dichloropropene	10.5	0.50	ug/l	10.0		105	70-130			
Ethylbenzene	11.9	0.50	ug/l	10.0		119	70-130			
Methylene chloride	9.86	0.50	ug/l	10.0		99	70-130			
Styrene	11.1	0.50	ug/l	10.0		111	70-130			
1,1,2,2-Tetrachloroethane	10.1	0.50	ug/l	10.0		101	70-130			
Tetrachloroethene	9.76	0.50	ug/l	10.0		98	70-130			
Toluene	11.3	0.50	ug/l	10.0		113	70-130			
1,2,4-Trichlorobenzene	8.90	0.50	ug/l	10.0		89	70-130			
1,1,1-Trichloroethane	11.0	0.50	ug/l	10.0		110	70-130			
1,1,2-Trichloroethane	9.91	0.50	ug/l	10.0		99	70-130			
Trichloroethene	9.83	0.50	ug/l	10.0		98	70-130			
Trichlorofluoromethane	9.73	5.0	ug/l	10.0		97	70-130			
Trichlorotrifluoroethane (Freon 113)	10.2	10	ug/l	10.0		102	70-130			
Vinyl chloride	10.1	0.50	ug/l	10.0		101	70-130			
m,p-Xylenes	23.6	0.50	ug/l	20.0		118	70-130			
o-Xylene	11.5	0.50	ug/l	10.0		115	70-130			

TestAmerica Irvine

Kathleen A. Robb For Pat Abe
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

17461 Derian Avenue. Suite 100, Irvine, CA 92614 (949) 261-1022 Fax:(949) 260-3297

Earth Forensics
12532 Vista Panorama
North Tustin, CA 92705
Attention: Richard Laton

Project ID: 44002987 - Title 22 Analysis
Malibu Centralized Wastewater Project
Report Number: IUL2400

Sampled: 12/21/11
Received: 12/21/11

METHOD BLANK/QC DATA

PURGEABLE ORGANIC COMPOUNDS BY GC/MS (EPA 524.2)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11L3124 Extracted: 12/22/11										
LCS Analyzed: 12/22/2011 (11L3124-BS1)										
Methyl-tert-butyl Ether (MTBE)	18.6	3.0	ug/l	20.0		93	70-130			
Surrogate: 4-Bromofluorobenzene	*10.2*		*ug/l*	*10.0*		*102*	*70-130*			
Surrogate: 1,2-Dichlorobenzene-d4	*9.24*		*ug/l*	*10.0*		*92*	*70-130*			
Matrix Spike Analyzed: 12/22/2011 (11L3124-MS1)					**Source: IUL2005-01**					
Benzene	10.6	0.50	ug/l	10.0	ND	106	70-130			
Bromodichloromethane	10.2	1.0	ug/l	10.0	ND	102	70-130			
Bromoform	9.39	1.0	ug/l	10.0	ND	94	70-130			
Carbon tetrachloride	9.97	0.50	ug/l	10.0	ND	100	70-130			
Chlorobenzene	9.48	0.50	ug/l	10.0	ND	95	70-130			
Chloroform	9.35	1.0	ug/l	10.0	ND	94	70-130			
Dibromochloromethane	10.1	1.0	ug/l	10.0	ND	101	70-130			
1,2-Dichlorobenzene	9.58	0.50	ug/l	10.0	ND	96	70-130			
1,4-Dichlorobenzene	10.6	0.50	ug/l	10.0	ND	106	70-130			
1,2-Dichloroethane	9.56	0.50	ug/l	10.0	ND	96	70-130			
1,1-Dichloroethene	8.90	0.50	ug/l	10.0	ND	89	70-130			
cis-1,2-Dichloroethene	9.14	0.50	ug/l	10.0	ND	91	70-130			
trans-1,2-Dichloroethene	8.99	0.50	ug/l	10.0	ND	90	70-130			
1,2-Dichloropropane	9.78	0.50	ug/l	10.0	ND	98	70-130			
1,3-Dichloropropene, Total	20.8	0.50	ug/l	20.0	0.200	103	70-130			
Ethylbenzene	11.5	0.50	ug/l	10.0	ND	115	70-130			
Methylene chloride	9.69	0.50	ug/l	10.0	ND	97	70-130			
Styrene	10.9	0.50	ug/l	10.0	ND	109	70-130			
Tetrachloroethene	9.28	0.50	ug/l	10.0	ND	93	70-130			
Toluene	11.0	0.50	ug/l	10.0	ND	110	70-130			
1,2,4-Trichlorobenzene	10.1	0.50	ug/l	10.0	ND	101	70-130			
1,1,1-Trichloroethane	9.86	0.50	ug/l	10.0	ND	99	70-130			
1,1,2-Trichloroethane	10.0	0.50	ug/l	10.0	ND	100	70-130			
Trichloroethene	9.45	0.50	ug/l	10.0	ND	94	70-130			
Vinyl chloride	9.25	0.50	ug/l	10.0	ND	92	70-130			
m,p-Xylenes	23.1	0.50	ug/l	20.0	ND	115	70-130			
o-Xylene	11.2	0.50	ug/l	10.0	ND	112	70-130			
Surrogate: 4-Bromofluorobenzene	*10.7*		*ug/l*	*10.0*		*107*	*70-130*			
Surrogate: 1,2-Dichlorobenzene-d4	*10.0*		*ug/l*	*10.0*		*100*	*70-130*			

TestAmerica Irvine

Kathleen A. Robb For Pat Abe
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

17461 Derian Avenue, Suite 100, Irvine, CA 92614 (949) 261-1022 Fax:(949) 260-3297

Earth Forensics
12532 Vista Panorama
North Tustin, CA 92705
Attention: Richard Laton

Project ID: 44002987 - Title 22 Analysis
Malibu Centralized Wastewater Project
Report Number: IUL2400

Sampled: 12/21/11
Received: 12/21/11

METHOD BLANK/QC DATA

PURGEABLE ORGANIC COMPOUNDS BY GC/MS (EPA 524.2)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11L3124 Extracted: 12/22/11										
Matrix Spike Dup Analyzed: 12/22/2011 (11L3124-MSD1)					**Source: IUL2005-01**					
Benzene	11.6	0.50	ug/l	10.0	ND	116	70-130	9	20	
Bromodichloromethane	11.0	1.0	ug/l	10.0	ND	110	70-130	7	20	
Bromoform	10.4	1.0	ug/l	10.0	ND	104	70-130	10	20	
Carbon tetrachloride	11.2	0.50	ug/l	10.0	ND	112	70-130	12	20	
Chlorobenzene	10.5	0.50	ug/l	10.0	ND	105	70-130	11	20	
Chloroform	10.2	1.0	ug/l	10.0	ND	102	70-130	9	20	
Dibromochloromethane	11.0	1.0	ug/l	10.0	ND	110	70-130	8	20	
1,2-Dichlorobenzene	10.4	0.50	ug/l	10.0	ND	104	70-130	8	20	
1,4-Dichlorobenzene	11.4	0.50	ug/l	10.0	ND	114	70-130	8	20	
1,2-Dichloroethane	10.6	0.50	ug/l	10.0	ND	106	70-130	10	20	
1,1-Dichloroethene	10.1	0.50	ug/l	10.0	ND	101	70-130	13	20	
cis-1,2-Dichloroethene	10.0	0.50	ug/l	10.0	ND	100	70-130	9	20	
trans-1,2-Dichloroethene	9.96	0.50	ug/l	10.0	ND	100	70-130	10	20	
1,2-Dichloropropane	10.7	0.50	ug/l	10.0	ND	107	70-130	9	20	
1,3-Dichloropropene, Total	23.0	0.50	ug/l	20.0	0.200	114	70-130	10	20	
Ethylbenzene	12.7	0.50	ug/l	10.0	ND	127	70-130	10	20	
Methylene chloride	10.6	0.50	ug/l	10.0	ND	106	70-130	9	20	
Styrene	11.8	0.50	ug/l	10.0	ND	118	70-130	8	20	
Tetrachloroethene	10.3	0.50	ug/l	10.0	ND	103	70-130	11	20	
Toluene	12.0	0.50	ug/l	10.0	ND	120	70-130	9	20	
1,2,4-Trichlorobenzene	11.2	0.50	ug/l	10.0	ND	112	70-130	10	20	
1,1,1-Trichloroethane	11.0	0.50	ug/l	10.0	ND	110	70-130	11	20	
1,1,2-Trichloroethane	10.7	0.50	ug/l	10.0	ND	107	70-130	7	20	
Trichloroethene	10.5	0.50	ug/l	10.0	ND	105	70-130	10	20	
Vinyl chloride	10.5	0.50	ug/l	10.0	ND	105	70-130	13	20	
m,p-Xylenes	25.3	0.50	ug/l	20.0	ND	126	70-130	9	20	
o-Xylene	12.3	0.50	ug/l	10.0	ND	123	70-130	9	20	
Surrogate: 4-Bromofluorobenzene	*10.5*		*ug/l*	*10.0*		*105*	*70-130*			
Surrogate: 1,2-Dichlorobenzene-d4	*9.94*		*ug/l*	*10.0*		*99*	*70-130*			

TestAmerica Irvine

Kathleen A. Robb For Pat Abe
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

17461 Derian Avenue. Suite 100, Irvine, CA 92614 (949) 261-1022 Fax:(949) 260-3297

Earth Forensics
12532 Vista Panorama
North Tustin, CA 92705
Attention: Richard Laton

Project ID: 44002987 - Title 22 Analysis
Malibu Centralized Wastewater Project
Report Number: IUL2400

Sampled: 12/21/11
Received: 12/21/11

METHOD BLANK/QC DATA

PURGEABLE ORGANIC COMPOUNDS BY GC/MS (EPA 524.2)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11L3125 Extracted: 12/22/11										
Blank Analyzed: 12/22/2011 (11L3125-BLK1)										
1,2,3-Trichloropropane	ND	0.0050	ug/l							
LCS Analyzed: 12/22/2011 (11L3125-BS1)										
1,2,3-Trichloropropane	0.00437	0.0050	ug/l	0.00500		87	80-120			
Duplicate Analyzed: 12/22/2011 (11L3125-DUP1)					**Source: IUL2400-01**					
1,2,3-Trichloropropane	ND	0.0050	ug/l		ND				30	

TestAmerica Irvine

Kathleen A. Robb For Pat Abe
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

17461 Derian Avenue, Suite 100, Irvine, CA 92614 (949) 261-1022 Fax:(949) 260-3297

Earth Forensics
12532 Vista Panorama
North Tustin, CA 92705
Attention: Richard Laton

Project ID: 44002987 - Title 22 Analysis
Malibu Centralized Wastewater Project
Report Number: IUL2400

Sampled: 12/21/11
Received: 12/21/11

METHOD BLANK/QC DATA

EDB and DBCP in Water by GC/ECD (EPA 504.1)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11L3309 Extracted: 12/23/11										
Blank Analyzed: 12/23/2011 (11L3309-BLK1)										
1,2-Dibromoethane (EDB)	ND	0.020	ug/l							
1,2-Dibromo-3-chloropropane	ND	0.0099	ug/l							
Surrogate: 4-Bromofluorobenzene	*4.11*		*ug/l*	*3.97*		*104*	*50-150*			
LCS Analyzed: 12/23/2011 (11L3309-BS1)										
1,2-Dibromoethane (EDB)	0.232	0.020	ug/l	0.248		94	70-130			
1,2-Dibromo-3-chloropropane	0.240	0.0099	ug/l	0.248		97	70-130			
Surrogate: 4-Bromofluorobenzene	*4.10*		*ug/l*	*3.97*		*103*	*50-150*			
LCS Analyzed: 12/23/2011 (11L3309-BS2)										
1,2-Dibromoethane (EDB)	0.102	0.020	ug/l	0.0992		103	70-130			
1,2-Dibromo-3-chloropropane	0.0993	0.0099	ug/l	0.0992		100	70-130			
Surrogate: 4-Bromofluorobenzene	*4.05*		*ug/l*	*3.97*		*102*	*50-150*			
LCS Dup Analyzed: 12/23/2011 (11L3309-BSD1)										
1,2-Dibromoethane (EDB)	0.236	0.020	ug/l	0.248		95	70-130	2	20	
1,2-Dibromo-3-chloropropane	0.230	0.0099	ug/l	0.248		93	70-130	4	20	
Surrogate: 4-Bromofluorobenzene	*4.08*		*ug/l*	*3.97*		*103*	*50-150*			
Matrix Spike Analyzed: 12/23/2011 (11L3309-MS1)					**Source: IUL1950-01**					
1,2-Dibromoethane (EDB)	0.174	0.019	ug/l	0.238	ND	73	65-135			
1,2-Dibromo-3-chloropropane	0.171	0.0095	ug/l	0.238	ND	72	65-135			
Surrogate: 4-Bromofluorobenzene	*3.11*		*ug/l*	*3.82*		*81*	*50-150*			

TestAmerica Irvine

Kathleen A. Robb For Pat Abe
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
17461 Derian Avenue. Suite 100, Irvine, CA 92614 (949) 261-1022 Fax:(949) 260-3297

Earth Forensics
12532 Vista Panorama
North Tustin, CA 92705
Attention: Richard Laton

Project ID: 44002987 - Title 22 Analysis
Malibu Centralized Wastewater Project
Report Number: IUL2400

Sampled: 12/21/11
Received: 12/21/11

METHOD BLANK/QC DATA

ORGANIC COMPOUNDS BY GC/MS (EPA 525.2)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11L3519 Extracted: 12/27/11										
Blank Analyzed: 12/29/2011 (11L3519-BLK1)										
Atrazine	ND	0.50	ug/l							
Benzo(a)pyrene	ND	0.10	ug/l							
Di(2-ethylhexyl)adipate	ND	5.0	ug/l							
Di(2-ethylhexyl)phthalate	ND	3.0	ug/l							
Hexachlorobenzene	ND	0.50	ug/l							
Hexachlorocyclopentadiene	ND	1.0	ug/l							
Molinate	ND	2.0	ug/l							
Simazine	ND	1.0	ug/l							
Thiobencarb	ND	1.0	ug/l							
Surrogate: 1,3-Dimethyl-2-nitrobenzene	*4.78*		*ug/l*	*5.00*		*96*	*70-130*			
Surrogate: Triphenylphosphate	*6.17*		*ug/l*	*5.00*		*123*	*70-130*			
Surrogate: Perylene-d12	*4.59*		*ug/l*	*5.00*		*92*	*70-130*			
LCS Analyzed: 12/29/2011 (11L3519-BS1)										**MNR1**
Atrazine	5.08	0.50	ug/l	5.00		102	70-130			
Benzo(a)pyrene	5.14	0.10	ug/l	5.00		103	70-130			
Di(2-ethylhexyl)adipate	12.0	5.0	ug/l	10.0		120	70-130			
Di(2-ethylhexyl)phthalate	11.9	3.0	ug/l	10.0		119	70-130			
Hexachlorobenzene	5.41	0.50	ug/l	5.00		108	70-130			
Hexachlorocyclopentadiene	9.91	1.0	ug/l	10.0		99	70-130			
Molinate	5.09	2.0	ug/l	5.00		102	70-130			
Simazine	5.24	1.0	ug/l	5.00		105	70-130			
Thiobencarb	5.01	1.0	ug/l	5.00		100	70-130			
Surrogate: 1,3-Dimethyl-2-nitrobenzene	*4.64*		*ug/l*	*5.00*		*93*	*70-130*			
Surrogate: Triphenylphosphate	*7.05*		*ug/l*	*5.00*		*141*	*70-130*			*Z2*
Surrogate: Perylene-d12	*4.56*		*ug/l*	*5.00*		*91*	*70-130*			
LCS Dup Analyzed: 12/29/2011 (11L3519-BSD1)										
Atrazine	5.25	0.50	ug/l	5.00		105	70-130	3	30	
Benzo(a)pyrene	5.29	0.10	ug/l	5.00		106	70-130	3	30	
Di(2-ethylhexyl)adipate	12.4	5.0	ug/l	10.0		124	70-130	4	30	
Di(2-ethylhexyl)phthalate	13.1	3.0	ug/l	10.0		131	70-130	9	30	*L*
Hexachlorobenzene	5.46	0.50	ug/l	5.00		109	70-130	1	30	
Hexachlorocyclopentadiene	9.95	1.0	ug/l	10.0		99	70-130	0.4	30	
Molinate	4.39	2.0	ug/l	5.00		88	70-130	15	30	
Simazine	5.00	1.0	ug/l	5.00		100	70-130	5	30	
Thiobencarb	4.90	1.0	ug/l	5.00		98	70-130	2	30	

TestAmerica Irvine

Kathleen A. Robb For Pat Abe
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
17461 Derian Avenue, Suite 100, Irvine, CA 92614 (949) 261-1022 Fax:(949) 260-3297

Earth Forensics
12532 Vista Panorama
North Tustin, CA 92705
Attention: Richard Laton

Project ID: 44002987 - Title 22 Analysis
Malibu Centralized Wastewater Project
Report Number: IUL2400

Sampled: 12/21/11
Received: 12/21/11

METHOD BLANK/QC DATA

ORGANIC COMPOUNDS BY GC/MS (EPA 525.2)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11L3519 Extracted: 12/27/11										
LCS Dup Analyzed: 12/29/2011 (11L3519-BSD1)										
Surrogate: 1,3-Dimethyl-2-nitrobenzene	*4.64*		*ug/l*	*5.00*		*93*	*70-130*			
Surrogate: Triphenylphosphate	*6.83*		*ug/l*	*5.00*		*137*	*70-130*			*Z2*
Surrogate: Perylene-d12	*4.59*		*ug/l*	*5.00*		*92*	*70-130*			

TestAmerica Irvine

Kathleen A. Robb For Pat Abe
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
17461 Derian Avenue. Suite 100, Irvine, CA 92614 (949) 261-1022 Fax:(949) 260-3297

Earth Forensics
12532 Vista Panorama
North Tustin, CA 92705
Attention: Richard Laton

Project ID: 44002987 - Title 22 Analysis
Malibu Centralized Wastewater Project
Report Number: IUL2400

Sampled: 12/21/11
Received: 12/21/11

METHOD BLANK/QC DATA

ORGANOCHLORINE PESTICIDES AND PCBS (EPA 505)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11L3132 Extracted: 12/22/11										
Blank Analyzed: 12/22/2011 (11L3132-BLK1)										
Alachlor	ND	0.99	ug/l							
Endrin	ND	0.099	ug/l							
Heptachlor	ND	0.0099	ug/l							
Heptachlor epoxide	ND	0.0099	ug/l							
gamma-BHC (Lindane)	ND	0.20	ug/l							
Methoxychlor	ND	9.9	ug/l							
PCBs as Decachlorobiphenyl (DCB)	ND	0.49	ug/l							
Chlordane	ND	0.099	ug/l							
Toxaphene	ND	0.99	ug/l							
Aroclor 1016	ND	0.26	ug/l							
Aroclor 1221	ND	0.19	ug/l							
Aroclor 1232	ND	0.23	ug/l							
Aroclor 1242	ND	0.26	ug/l							
Aroclor 1248	ND	0.30	ug/l							
Aroclor 1254	ND	0.33	ug/l							
Aroclor 1260	ND	0.36	ug/l							
LCS Analyzed: 12/22/2011 (11L3132-BS1)										
Alachlor	0.859	0.98	ug/l	0.976		88	70-130			
Endrin	0.0893	0.098	ug/l	0.0976		92	70-130			
Heptachlor	0.0887	0.0098	ug/l	0.0976		91	70-130			
Heptachlor epoxide	0.0924	0.0098	ug/l	0.0976		95	70-130			
gamma-BHC (Lindane)	0.0867	0.20	ug/l	0.0976		89	70-130			
Methoxychlor	0.419	9.8	ug/l	0.488		86	70-130			
LCS Analyzed: 12/22/2011 (11L3132-BS2)										
Aroclor 1254	0.913	0.32	ug/l	0.975		94	70-130			

TestAmerica Irvine

Kathleen A. Robb For Pat Abe
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

17461 Derian Avenue. Suite 100, Irvine, CA 92614 (949) 261-1022 Fax:(949) 260-3297

Earth Forensics
12532 Vista Panorama
North Tustin, CA 92705
Attention: Richard Laton

Project ID: 44002987 - Title 22 Analysis
Malibu Centralized Wastewater Project
Report Number: IUL2400

Sampled: 12/21/11
Received: 12/21/11

METHOD BLANK/QC DATA

ORGANOCHLORINE PESTICIDES AND PCBS (EPA 505)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11L3132 Extracted: 12/22/11										
LCS Dup Analyzed: 12/22/2011 (11L3132-BSD1)										
Alachlor	0.938	0.99	ug/l	0.995		94	70-130	7	20	
Endrin	0.0951	0.099	ug/l	0.0995		96	70-130	4	20	
Heptachlor	0.0989	0.0099	ug/l	0.0995		99	70-130	9	20	
Heptachlor epoxide	0.0992	0.0099	ug/l	0.0995		100	70-130	5	20	
gamma-BHC (Lindane)	0.0956	0.20	ug/l	0.0995		96	70-130	8	20	
Methoxychlor	0.462	9.9	ug/l	0.497		93	70-130	8	20	
LCS Dup Analyzed: 12/22/2011 (11L3132-BSD2)										
Aroclor 1254	1.05	0.33	ug/l	1.00		105	70-130	11	20	
Matrix Spike Analyzed: 12/22/2011 (11L3132-MS1)					**Source: IUL1950-01**					
Alachlor	0.645	0.93	ug/l	0.934	ND	69	65-135			
Endrin	0.0651	0.093	ug/l	0.0934	ND	70	65-135			
Heptachlor	0.0666	0.0093	ug/l	0.0934	ND	71	65-135			
Heptachlor epoxide	0.0664	0.0093	ug/l	0.0934	ND	71	65-135			
gamma-BHC (Lindane)	0.0656	0.19	ug/l	0.0934	ND	70	65-135			
Methoxychlor	0.299	9.3	ug/l	0.467	ND	64	65-135			M2

TestAmerica Irvine

Kathleen A. Robb For Pat Abe
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
17461 Derian Avenue. Suite 100, Irvine, CA 92614 (949) 261-1022 Fax:(949) 260-3297

Earth Forensics
12532 Vista Panorama
North Tustin, CA 92705
Attention: Richard Laton

Project ID: 44002987 - Title 22 Analysis
Malibu Centralized Wastewater Project
Report Number: IUL2400

Sampled: 12/21/11
Received: 12/21/11

METHOD BLANK/QC DATA

CARBAMATES BY HPLC (EPA 531.1)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11L3331 Extracted: 12/23/11										
Blank Analyzed: 12/27/2011 (11L3331-BLK1)										
Aldicarb Sulfoxide	ND	3.0	ug/l							
Aldicarb Sulfone	ND	4.0	ug/l							
Oxamyl	ND	20	ug/l							
Methomyl	ND	2.0	ug/l							
3-Hydroxycarbofuran	ND	3.0	ug/l							
Aldicarb	ND	3.0	ug/l							
Carbofuran	ND	5.0	ug/l							
Carbaryl	ND	5.0	ug/l							
LCS Analyzed: 12/27/2011 (11L3331-BS1)										
Aldicarb Sulfoxide	23.0	3.0	ug/l	20.0		115	80-120			
Aldicarb Sulfone	22.1	4.0	ug/l	20.0		111	80-120			
Oxamyl	22.0	20	ug/l	20.0		110	80-120			
Methomyl	21.8	2.0	ug/l	20.0		109	80-120			
3-Hydroxycarbofuran	23.6	3.0	ug/l	20.0		118	80-120			
Aldicarb	23.3	3.0	ug/l	20.0		116	80-120			
Carbofuran	22.8	5.0	ug/l	20.0		114	80-120			
Carbaryl	23.0	5.0	ug/l	20.0		115	80-120			
LCS Dup Analyzed: 12/27/2011 (11L3331-BSD1)										
Aldicarb Sulfoxide	22.5	3.0	ug/l	20.0		113	80-120	2	20	
Aldicarb Sulfone	21.6	4.0	ug/l	20.0		108	80-120	2	20	
Oxamyl	21.5	20	ug/l	20.0		107	80-120	2	20	
Methomyl	21.4	2.0	ug/l	20.0		107	80-120	2	20	
3-Hydroxycarbofuran	23.1	3.0	ug/l	20.0		115	80-120	2	20	
Aldicarb	22.7	3.0	ug/l	20.0		113	80-120	3	20	
Carbofuran	22.1	5.0	ug/l	20.0		111	80-120	3	20	
Carbaryl	22.2	5.0	ug/l	20.0		111	80-120	4	20	

TestAmerica Irvine

Kathleen A. Robb For Pat Abe
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

17461 Derian Avenue, Suite 100, Irvine, CA 92614 (949) 261-1022 Fax:(949) 260-3297

Earth Forensics
12532 Vista Panorama
North Tustin, CA 92705
Attention: Richard Laton

Project ID: 44002987 - Title 22 Analysis
Malibu Centralized Wastewater Project
Report Number: IUL2400

Sampled: 12/21/11
Received: 12/21/11

METHOD BLANK/QC DATA

CARBAMATES BY HPLC (EPA 531.1)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11L3331 Extracted: 12/23/11										
Matrix Spike Analyzed: 12/27/2011 (11L3331-MS1)					**Source: IUL1950-01**					
Aldicarb Sulfoxide	22.5	3.0	ug/l	20.0	ND	113	65-135			
Aldicarb Sulfone	22.1	4.0	ug/l	20.0	ND	110	65-135			
Oxamyl	23.8	20	ug/l	20.0	ND	119	65-135			
Methomyl	22.2	2.0	ug/l	20.0	ND	111	65-135			
3-Hydroxycarbofuran	22.8	3.0	ug/l	20.0	ND	114	65-135			
Aldicarb	22.7	3.0	ug/l	20.0	ND	114	65-135			
Carbofuran	22.0	5.0	ug/l	20.0	ND	110	65-135			
Carbaryl	22.3	5.0	ug/l	20.0	ND	111	65-135			

TestAmerica Irvine

Kathleen A. Robb For Pat Abe
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
17461 Derian Avenue. Suite 100, Irvine, CA 92614 (949) 261-1022 Fax:(949) 260-3297

Earth Forensics
12532 Vista Panorama
North Tustin, CA 92705
Attention: Richard Laton

Project ID: 44002987 - Title 22 Analysis
Malibu Centralized Wastewater Project
Report Number: IUL2400

Sampled: 12/21/11
Received: 12/21/11

METHOD BLANK/QC DATA

ENDOTHALL (EPA 548.1)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11L3450 Extracted: 12/27/11										
Blank Analyzed: 12/27/2011 (11L3450-BLK1)										
Endothall	ND	45	ug/l							
LCS Analyzed: 12/27/2011 (11L3450-BS1)										
Endothall	44.5	45	ug/l	50.0		89	45-125			
LCS Dup Analyzed: 12/27/2011 (11L3450-BSD1)										
Endothall	47.7	45	ug/l	50.0		95	45-125	7	30	
Matrix Spike Analyzed: 12/27/2011 (11L3450-MS1)					**Source: IUL2400-01**					
Endothall	6.27	45	ug/l	50.0	ND	13	45-125			*M2*

TestAmerica Irvine

Kathleen A. Robb For Pat Abe
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

17461 Derian Avenue, Suite 100, Irvine, CA 92614 (949) 261-1022 Fax:(949) 260-3297

Earth Forensics
12532 Vista Panorama
North Tustin, CA 92705
Attention: Richard Laton

Project ID: 44002987 - Title 22 Analysis
Malibu Centralized Wastewater Project
Report Number: IUL2400

Sampled: 12/21/11
Received: 12/21/11

METHOD BLANK/QC DATA

GLYPHOSATE (EPA 547)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11L3679 Extracted: 12/28/11										
Blank Analyzed: 12/29/2011 (11L3679-BLK1)										
Glyphosate	ND	25	ug/l							
LCS Analyzed: 12/29/2011 (11L3679-BS1)										
Glyphosate	25.6	25	ug/l	25.0		103	70-130			
LCS Dup Analyzed: 12/29/2011 (11L3679-BSD1)										
Glyphosate	28.1	25	ug/l	25.0		112	70-130	9	30	
Matrix Spike Analyzed: 12/29/2011 (11L3679-MS1)					**Source: IUL2374-01**					
Glyphosate	28.2	25	ug/l	25.0	ND	113	70-130			

TestAmerica Irvine

Kathleen A. Robb For Pat Abe
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
17461 Derian Avenue. Suite 100, Irvine, CA 92614 (949) 261-1022 Fax:(949) 260-3297

Earth Forensics
12532 Vista Panorama
North Tustin, CA 92705
Attention: Richard Laton

Project ID: 44002987 - Title 22 Analysis
Malibu Centralized Wastewater Project
Report Number: IUL2400

Sampled: 12/21/11
Received: 12/21/11

METHOD BLANK/QC DATA

DIQUAT/PARAQUAT (EPA 549.2)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11L3451 Extracted: 12/27/11										
Blank Analyzed: 12/27/2011 (11L3451-BLK1)										
Diquat	ND	4.0	ug/l							
Paraquat	ND	20	ug/l							
LCS Analyzed: 12/27/2011 (11L3451-BS1)										
Diquat	21.4	4.0	ug/l	20.0		107	70-130			
Paraquat	18.5	20	ug/l	20.0		92	70-130			
LCS Dup Analyzed: 12/27/2011 (11L3451-BSD1)										
Diquat	20.6	4.0	ug/l	20.0		103	70-130	4	20	
Paraquat	17.2	20	ug/l	20.0		86	70-130	7	20	
Matrix Spike Analyzed: 12/27/2011 (11L3451-MS1)					**Source: IUL2400-01**					
Diquat	5.40	4.0	ug/l	20.0	ND	27	70-130			*M2*
Paraquat	10.1	20	ug/l	20.0	ND	51	70-130			*M2*

TestAmerica Irvine

Kathleen A. Robb For Pat Abe
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

17461 Derian Avenue, Suite 100, Irvine, CA 92614 (949) 261-1022 Fax:(949) 260-3297

Earth Forensics
12532 Vista Panorama
North Tustin, CA 92705
Attention: Richard Laton

Project ID: 44002987 - Title 22 Analysis
Malibu Centralized Wastewater Project
Report Number: IUL2400

Sampled: 12/21/11
Received: 12/21/11

METHOD BLANK/QC DATA

HALOACETIC ACIDS (EPA 552.2)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11L3892 Extracted: 12/29/11										
Blank Analyzed: 12/29/2011 (11L3892-BLK1)										
Dibromoacetic acid (DBAA)	ND	0.99	ug/l							
Dichloroacetic acid (DCAA)	ND	0.99	ug/l							
Monobromoacetic acid (MBAA)	ND	0.99	ug/l							
Monochloroacetic acid (MCAA)	ND	2.0	ug/l							
Trichloroacetic acid (TCAA)	ND	0.99	ug/l							
Haloacetic acids (Five) (HAA5)	<6	0.99	ug/l							
Surrogate: 2,3-Dibromopropanoic acid	*4.96*		*ug/l*	*4.95*		*100*	*70-130*			
LCS Analyzed: 12/29/2011 (11L3892-BS1)										
Dibromoacetic acid (DBAA)	2.73	0.98	ug/l	2.46		111	70-130			
Dichloroacetic acid (DCAA)	7.82	0.98	ug/l	7.39		106	70-130			
Monobromoacetic acid (MBAA)	4.86	0.98	ug/l	4.92		99	70-130			
Monochloroacetic acid (MCAA)	6.99	2.0	ug/l	7.39		95	70-130			
Trichloroacetic acid (TCAA)	2.43	0.98	ug/l	2.46		99	70-130			
Haloacetic acids (Five) (HAA5)	24.8	0.98	ug/l	24.6		101	70-130			
Surrogate: 2,3-Dibromopropanoic acid	*5.70*		*ug/l*	*4.92*		*116*	*70-130*			
LCS Dup Analyzed: 12/29/2011 (11L3892-BSD1)										
Dibromoacetic acid (DBAA)	2.46	0.98	ug/l	2.45		101	70-130	10	20	
Dichloroacetic acid (DCAA)	7.12	0.98	ug/l	7.34		97	70-130	9	20	
Monobromoacetic acid (MBAA)	4.79	0.98	ug/l	4.89		98	70-130	0.8	20	
Monochloroacetic acid (MCAA)	6.67	2.0	ug/l	7.34		91	70-130	4	20	
Trichloroacetic acid (TCAA)	2.31	0.98	ug/l	2.45		95	70-130	4	20	
Haloacetic acids (Five) (HAA5)	23.3	0.98	ug/l	24.5		95	70-130	5	20	
Surrogate: 2,3-Dibromopropanoic acid	*4.99*		*ug/l*	*4.89*		*102*	*70-130*			
Matrix Spike Analyzed: 12/29/2011 (11L3892-MS1)					**Source: IUL2647-01**					
Dibromoacetic acid (DBAA)	2.69	0.99	ug/l	2.48	ND	108	70-130			
Dichloroacetic acid (DCAA)	7.89	0.99	ug/l	7.44	ND	106	70-130			
Monobromoacetic acid (MBAA)	5.19	0.99	ug/l	4.96	ND	105	70-130			
Monochloroacetic acid (MCAA)	7.45	2.0	ug/l	7.44	ND	100	70-130			
Trichloroacetic acid (TCAA)	2.48	0.99	ug/l	2.48	ND	100	70-130			
Haloacetic acids (Five) (HAA5)	25.7	0.99	ug/l	24.8	0.00	104	70-130			
Surrogate: 2,3-Dibromopropanoic acid	*5.50*		*ug/l*	*4.96*		*111*	*70-130*			

TestAmerica Irvine

Kathleen A. Robb For Pat Abe
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
17461 Derian Avenue. Suite 100, Irvine, CA 92614 (949) 261-1022 Fax:(949) 260-3297

Earth Forensics
12532 Vista Panorama
North Tustin, CA 92705
Attention: Richard Laton

Project ID: 44002987 - Title 22 Analysis
Malibu Centralized Wastewater Project
Report Number: IUL2400

Sampled: 12/21/11
Received: 12/21/11

METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11L3180 Extracted: 12/22/11										
Blank Analyzed: 12/23/2011 (11L3180-BLK1)										
Mercury	ND	0.00020	mg/l							
LCS Analyzed: 12/23/2011 (11L3180-BS1)										
Mercury	0.00883	0.00020	mg/l	0.00800		110	85-115			
Matrix Spike Analyzed: 12/23/2011 (11L3180-MS1)					**Source: IUL2343-01**					
Mercury	0.00876	0.00020	mg/l	0.00800	ND	110	70-130			
Matrix Spike Dup Analyzed: 12/23/2011 (11L3180-MSD1)					**Source: IUL2343-01**					
Mercury	0.00892	0.00020	mg/l	0.00800	ND	111	70-130	2	20	
Batch: 11L3283 Extracted: 12/23/11										
Blank Analyzed: 12/23/2011 (11L3283-BLK1)										
Aluminum	ND	10	ug/l							
Antimony	ND	2.0	ug/l							
Arsenic	ND	1.0	ug/l							
Barium	ND	1.0	ug/l							
Beryllium	ND	0.50	ug/l							
Cadmium	ND	1.0	ug/l							
Chromium	ND	2.0	ug/l							
Cobalt	ND	1.0	ug/l							
Copper	ND	2.0	ug/l							
Lead	ND	1.0	ug/l							
Manganese	ND	1.0	ug/l							
Nickel	ND	2.0	ug/l							
Selenium	ND	2.0	ug/l							
Silver	ND	1.0	ug/l							
Thallium	ND	1.0	ug/l							
Vanadium	ND	2.0	ug/l							
Zinc	ND	20	ug/l							

TestAmerica Irvine

Kathleen A. Robb For Pat Abe
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
17461 Derian Avenue, Suite 100, Irvine, CA 92614 (949) 261-1022 Fax:(949) 260-3297

Earth Forensics
12532 Vista Panorama
North Tustin, CA 92705
Attention: Richard Laton

Project ID: 44002987 - Title 22 Analysis
Malibu Centralized Wastewater Project
Report Number: IUL2400

Sampled: 12/21/11
Received: 12/21/11

METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11L3283 Extracted: 12/23/11										
LCS Analyzed: 12/23/2011 (11L3283-BS1)										
Aluminum	76.1	10	ug/l	80.0		95	85-115			
Antimony	78.6	2.0	ug/l	80.0		98	85-115			
Arsenic	77.7	1.0	ug/l	80.0		97	85-115			
Barium	77.6	1.0	ug/l	80.0		97	85-115			
Beryllium	84.9	0.50	ug/l	80.0		106	85-115			
Cadmium	79.1	1.0	ug/l	80.0		99	85-115			
Chromium	81.2	2.0	ug/l	80.0		101	85-115			
Cobalt	78.6	1.0	ug/l	80.0		98	85-115			
Copper	80.4	2.0	ug/l	80.0		100	85-115			
Lead	77.8	1.0	ug/l	80.0		97	85-115			
Manganese	78.6	1.0	ug/l	80.0		98	85-115			
Nickel	80.0	2.0	ug/l	80.0		100	85-115			
Selenium	78.3	2.0	ug/l	80.0		98	85-115			
Silver	88.4	1.0	ug/l	80.0		111	85-115			
Thallium	78.1	1.0	ug/l	80.0		98	85-115			
Vanadium	80.3	2.0	ug/l	80.0		100	85-115			
Zinc	77.4	20	ug/l	80.0		97	85-115			
Matrix Spike Analyzed: 12/23/2011 (11L3283-MS1)					**Source: IUL1968-01**					
Aluminum	106	10	ug/l	80.0	33.0	91	70-130			
Antimony	77.3	2.0	ug/l	80.0	ND	97	70-130			
Arsenic	78.2	1.0	ug/l	80.0	ND	98	70-130			
Barium	151	1.0	ug/l	80.0	74.2	96	70-130			
Beryllium	88.3	0.50	ug/l	80.0	0.102	110	70-130			
Cadmium	74.7	1.0	ug/l	80.0	ND	93	70-130			
Chromium	82.5	2.0	ug/l	80.0	3.02	99	70-130			
Cobalt	75.7	1.0	ug/l	80.0	0.172	94	70-130			
Copper	152	2.0	ug/l	80.0	78.4	92	70-130			
Lead	74.6	1.0	ug/l	80.0	ND	93	70-130			
Manganese	77.0	1.0	ug/l	80.0	0.850	95	70-130			
Nickel	74.7	2.0	ug/l	80.0	ND	93	70-130			
Selenium	76.8	2.0	ug/l	80.0	ND	96	70-130			
Silver	82.2	1.0	ug/l	80.0	ND	103	70-130			
Thallium	76.8	1.0	ug/l	80.0	ND	96	70-130			
Vanadium	78.4	2.0	ug/l	80.0	2.95	94	70-130			
Zinc	75.2	20	ug/l	80.0	ND	94	70-130			

TestAmerica Irvine

Kathleen A. Robb For Pat Abe
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
17461 Derian Avenue. Suite 100, Irvine, CA 92614 (949) 261-1022 Fax:(949) 260-3297

Earth Forensics
12532 Vista Panorama
North Tustin, CA 92705
Attention: Richard Laton

Project ID: 44002987 - Title 22 Analysis
Malibu Centralized Wastewater Project
Report Number: IUL2400

Sampled: 12/21/11
Received: 12/21/11

METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11L3283 Extracted: 12/23/11										
Matrix Spike Analyzed: 12/23/2011 (11L3283-MS2)					**Source: IUL1968-02**					
Aluminum	82.7	10	ug/l	80.0	ND	103	70-130			
Antimony	78.0	2.0	ug/l	80.0	0.619	97	70-130			
Arsenic	76.4	1.0	ug/l	80.0	ND	95	70-130			
Barium	79.2	1.0	ug/l	80.0	0.443	98	70-130			
Beryllium	86.1	0.50	ug/l	80.0	0.102	107	70-130			
Cadmium	77.9	1.0	ug/l	80.0	ND	97	70-130			
Chromium	81.2	2.0	ug/l	80.0	ND	102	70-130			
Cobalt	78.3	1.0	ug/l	80.0	ND	98	70-130			
Copper	80.6	2.0	ug/l	80.0	2.03	98	70-130			
Lead	79.2	1.0	ug/l	80.0	0.201	99	70-130			
Manganese	80.7	1.0	ug/l	80.0	2.35	98	70-130			
Nickel	79.1	2.0	ug/l	80.0	ND	99	70-130			
Selenium	78.2	2.0	ug/l	80.0	ND	98	70-130			
Silver	87.0	1.0	ug/l	80.0	ND	109	70-130			
Thallium	80.1	1.0	ug/l	80.0	0.202	100	70-130			
Vanadium	76.7	2.0	ug/l	80.0	ND	96	70-130			
Zinc	78.1	20	ug/l	80.0	ND	98	70-130			
Matrix Spike Dup Analyzed: 12/23/2011 (11L3283-MSD1)					**Source: IUL1968-01**					
Aluminum	109	10	ug/l	80.0	33.0	95	70-130	3	20	
Antimony	78.2	2.0	ug/l	80.0	ND	98	70-130	1	20	
Arsenic	77.3	1.0	ug/l	80.0	ND	97	70-130	1	20	
Barium	153	1.0	ug/l	80.0	74.2	98	70-130	1	20	
Beryllium	88.5	0.50	ug/l	80.0	0.102	111	70-130	0.2	20	
Cadmium	77.0	1.0	ug/l	80.0	ND	96	70-130	3	20	
Chromium	84.7	2.0	ug/l	80.0	3.02	102	70-130	3	20	
Cobalt	76.8	1.0	ug/l	80.0	0.172	96	70-130	1	20	
Copper	153	2.0	ug/l	80.0	78.4	94	70-130	1	20	
Lead	77.9	1.0	ug/l	80.0	ND	97	70-130	4	20	
Manganese	78.3	1.0	ug/l	80.0	0.850	97	70-130	2	20	
Nickel	77.4	2.0	ug/l	80.0	ND	97	70-130	4	20	
Selenium	77.8	2.0	ug/l	80.0	ND	97	70-130	1	20	
Silver	83.6	1.0	ug/l	80.0	ND	105	70-130	2	20	
Thallium	78.5	1.0	ug/l	80.0	ND	98	70-130	2	20	
Vanadium	79.4	2.0	ug/l	80.0	2.95	96	70-130	1	20	
Zinc	77.2	20	ug/l	80.0	ND	97	70-130	3	20	

TestAmerica Irvine

Kathleen A. Robb For Pat Abe
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

17461 Derian Avenue, Suite 100, Irvine, CA 92614 (949) 261-1022 Fax:(949) 260-3297

Earth Forensics
12532 Vista Panorama
North Tustin, CA 92705
Attention: Richard Laton

Project ID: 44002987 - Title 22 Analysis
Malibu Centralized Wastewater Project
Report Number: IUL2400

Sampled: 12/21/11
Received: 12/21/11

METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11L3703 Extracted: 12/29/11										
Blank Analyzed: 12/30/2011-01/09/2012 (11L3703-BLK1)										
Silica (as SiO2)	ND	0.11	mg/l							
Boron	ND	0.050	mg/l							
Calcium	ND	0.10	mg/l							
Iron	ND	0.040	mg/l							
Magnesium	ND	0.020	mg/l							
Potassium	ND	0.50	mg/l							
Sodium	0.601	0.50	mg/l							*B*
LCS Analyzed: 12/30/2011-01/09/2012 (11L3703-BS1)										
Silica (as SiO2)	9.81	0.11	mg/l	10.7		92	85-115			
Boron	0.896	0.050	mg/l	1.00		90	85-115			
Calcium	0.890	0.10	mg/l	1.00		89	85-115			
Iron	0.921	0.040	mg/l	1.00		92	85-115			
Magnesium	0.929	0.020	mg/l	1.00		93	85-115			
Potassium	9.56	0.50	mg/l	10.0		96	85-115			
Sodium	9.13	0.50	mg/l	10.0		91	85-115			
Matrix Spike Analyzed: 12/30/2011-01/09/2012 (11L3703-MS1)					**Source: IUL2279-03**					
Silica (as SiO2)	30.0	0.11	mg/l	10.7	21.5	79	70-130			
Boron	1.02	0.050	mg/l	1.00	0.113	91	70-130			
Calcium	52.6	0.10	mg/l	1.00	52.3	38	70-130			*MHA*
Iron	0.955	0.040	mg/l	1.00	0.0154	94	70-130			
Magnesium	12.4	0.020	mg/l	1.00	11.7	70	70-130			*MHA*
Potassium	13.4	0.50	mg/l	10.0	3.47	99	70-130			
Sodium	54.4	0.50	mg/l	10.0	44.2	102	70-130			*MHA*
Matrix Spike Analyzed: 12/30/2011-01/09/2012 (11L3703-MS2)					**Source: IUL2279-05**					
Silica (as SiO2)	20.6	0.11	mg/l	10.7	12.6	75	70-130			
Boron	1.06	0.050	mg/l	1.00	0.163	90	70-130			
Calcium	22.9	0.10	mg/l	1.00	23.3	-44	70-130			*MHA*
Iron	0.931	0.040	mg/l	1.00	ND	93	70-130			
Magnesium	12.0	0.020	mg/l	1.00	11.3	67	70-130			*MHA*
Potassium	12.6	0.50	mg/l	10.0	2.41	102	70-130			
Sodium	53.3	0.50	mg/l	10.0	43.6	98	70-130			*MHA*

TestAmerica Irvine

Kathleen A. Robb For Pat Abe
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

17461 Derian Avenue. Suite 100, Irvine, CA 92614 (949) 261-1022 Fax:(949) 260-3297

Earth Forensics
12532 Vista Panorama
North Tustin, CA 92705
Attention: Richard Laton

Project ID: 44002987 - Title 22 Analysis
Malibu Centralized Wastewater Project
Report Number: IUL2400

Sampled: 12/21/11
Received: 12/21/11

METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11L3703 Extracted: 12/29/11										
Matrix Spike Dup Analyzed: 12/30/2011-01/09/2012 (11L3703-MSD1)					**Source: IUL2279-03**					
Silica (as SiO2)	29.8	0.11	mg/l	10.7	21.5	77	70-130	0.5	20	
Boron	1.01	0.050	mg/l	1.00	0.113	90	70-130	0.6	20	
Calcium	54.8	0.10	mg/l	1.00	52.3	255	70-130	4	20	*MHA*
Iron	0.957	0.040	mg/l	1.00	0.0154	94	70-130	0.3	20	
Magnesium	12.4	0.020	mg/l	1.00	11.7	68	70-130	0.1	20	*MHA*
Potassium	13.8	0.50	mg/l	10.0	3.47	103	70-130	3	20	
Sodium	52.6	0.50	mg/l	10.0	44.2	84	70-130	3	20	*MHA*

TestAmerica Irvine

Kathleen A. Robb For Pat Abe
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
17461 Derian Avenue, Suite 100, Irvine, CA 92614 (949) 261-1022 Fax:(949) 260-3297

Earth Forensics
12532 Vista Panorama
North Tustin, CA 92705
Attention: Richard Laton

Project ID: 44002987 - Title 22 Analysis
Malibu Centralized Wastewater Project
Report Number: IUL2400

Sampled: 12/21/11
Received: 12/21/11

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11L2933 Extracted: 12/21/11										
Blank Analyzed: 12/21/2011 (11L2933-BLK1)										
Chloride	ND	0.50	mg/l							
Nitrate-N	ND	0.11	mg/l							
Nitrate-NO3	ND	0.50	mg/l							
Nitrite-N	ND	0.15	mg/l							
Nitrate/Nitrite-N	ND	0.26	mg/l							
Sulfate	ND	0.50	mg/l							
LCS Analyzed: 12/21/2011 (11L2933-BS1)										
Chloride	5.26	0.50	mg/l	5.00		105	90-110			
Nitrate-N	1.08	0.11	mg/l	1.13		95	90-110			
Nitrate-NO3	4.77	0.50	mg/l	5.00		95	90-110			
Nitrite-N	1.58	0.15	mg/l	1.52		104	90-110			
Sulfate	9.73	0.50	mg/l	10.0		97	90-110			
Matrix Spike Analyzed: 12/21/2011 (11L2933-MS1)					**Source: IUL2400-01**					
Chloride	287	10	mg/l	50.0	241	93	80-120			*MHA*
Nitrate-N	11.7	2.2	mg/l	11.3	1.71	89	80-120			
Nitrate-NO3	52.0	10	mg/l	50.0	7.60	89	80-120			
Nitrite-N	15.4	3.0	mg/l	15.2	ND	101	80-120			
Sulfate	774	10	mg/l	100	672	102	80-120			*MHA*
Matrix Spike Dup Analyzed: 12/21/2011 (11L2933-MSD1)					**Source: IUL2400-01**					
Chloride	290	10	mg/l	50.0	241	98	80-120	0.9	20	*MHA*
Nitrate-N	11.3	2.2	mg/l	11.3	1.71	85	80-120	4	20	
Nitrate-NO3	50.0	10	mg/l	50.0	7.60	85	80-120	4	20	
Nitrite-N	15.4	3.0	mg/l	15.2	ND	101	80-120	0	20	
Sulfate	785	10	mg/l	100	672	112	80-120	1	20	*MHA*

TestAmerica Irvine

Kathleen A. Robb For Pat Abe
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
17461 Derian Avenue. Suite 100, Irvine, CA 92614 (949) 261-1022 Fax:(949) 260-3297

Earth Forensics
12532 Vista Panorama
North Tustin, CA 92705
Attention: Richard Laton

Project ID: 44002987 - Title 22 Analysis
Malibu Centralized Wastewater Project
Report Number: IUL2400

Sampled: 12/21/11
Received: 12/21/11

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11L3018 Extracted: 12/22/11										
Blank Analyzed: 12/22/2011 (11L3018-BLK1)										
Specific Conductance	ND	1.0	umhos/cm @ 25C							
LCS Analyzed: 12/22/2011 (11L3018-BS1)										
Specific Conductance	517	1.0	umhos/cm @ 25C	501		103	90-110			
Duplicate Analyzed: 12/22/2011 (11L3018-DUP1)					**Source: IUL2331-01**					
Specific Conductance	1080	1.0	umhos/cm @ 25C		1080			0.7	5	
Duplicate Analyzed: 12/22/2011 (11L3018-DUP2)					**Source: IUL2348-07**					
Specific Conductance	20500	2.0	umhos/cm @ 25C		20500			0.1	5	
Batch: 11L3020 Extracted: 12/22/11										
Blank Analyzed: 12/22/2011 (11L3020-BLK1)										
Total Dissolved Solids	ND	10	mg/l							
LCS Analyzed: 12/22/2011 (11L3020-BS1)										
Total Dissolved Solids	1000	10	mg/l	1000		100	90-110			
Duplicate Analyzed: 12/22/2011 (11L3020-DUP1)					**Source: IUL2348-03**					
Total Dissolved Solids	6080	100	mg/l		5990			1	10	
Batch: 11L3092 Extracted: 12/22/11										
Duplicate Analyzed: 12/22/2011 (11L3092-DUP1)					**Source: IUL2330-01**					
Color	ND	1.0	Color Units		ND				20	*pH*

TestAmerica Irvine

Kathleen A. Robb For Pat Abe
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

17461 Derian Avenue, Suite 100, Irvine, CA 92614 (949) 261-1022 Fax:(949) 260-3297

Earth Forensics
12532 Vista Panorama
North Tustin, CA 92705
Attention: Richard Laton

Project ID: 44002987 - Title 22 Analysis
Malibu Centralized Wastewater Project
Report Number: IUL2400

Sampled: 12/21/11
Received: 12/21/11

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11L3092 Extracted: 12/22/11										
Duplicate Analyzed: 12/22/2011 (11L3092-DUP2)					**Source: IUL2409-07**					
Color	ND	1.0	Color Units		ND				20	*pHb*
Batch: 11L3097 Extracted: 12/22/11										
Duplicate Analyzed: 12/22/2011 (11L3097-DUP1)					**Source: IUL2331-01**					
pH	7.43	0.10	pH Units		7.45			0.3	5	
Batch: 11L3100 Extracted: 12/22/11										
Blank Analyzed: 12/22/2011 (11L3100-BLK1)										
Turbidity	ND	0.10	NTU							
Duplicate Analyzed: 12/22/2011 (11L3100-DUP1)					**Source: IUL2330-01**					
Turbidity	0.120	0.10	NTU		0.130			8	20	
Duplicate Analyzed: 12/22/2011 (11L3100-DUP2)					**Source: IUL2409-07**					
Turbidity	0.360	0.10	NTU		0.370			3	20	
Batch: 11L3105 Extracted: 12/22/11										
Blank Analyzed: 12/22/2011 (11L3105-BLK1)										
Odor	ND	1.0	T.O.N.							
Batch: 11L3215 Extracted: 12/22/11										
Blank Analyzed: 12/22/2011 (11L3215-BLK1)										
Surfactants (MBAS)	ND	0.10	mg/l							

TestAmerica Irvine

Kathleen A. Robb For Pat Abe
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
17461 Derian Avenue. Suite 100, Irvine, CA 92614 (949) 261-1022 Fax:(949) 260-3297

Earth Forensics
12532 Vista Panorama
North Tustin, CA 92705
Attention: Richard Laton

Project ID: 44002987 - Title 22 Analysis
Malibu Centralized Wastewater Project
Report Number: IUL2400

Sampled: 12/21/11
Received: 12/21/11

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11L3215 Extracted: 12/22/11										
LCS Analyzed: 12/22/2011 (11L3215-BS1)										
Surfactants (MBAS)	0.242	0.10	mg/l	0.250		97	90-110			
Matrix Spike Analyzed: 12/22/2011 (11L3215-MS1)					**Source: IUL2331-01**					
Surfactants (MBAS)	0.238	0.10	mg/l	0.250	ND	95	50-125			
Matrix Spike Dup Analyzed: 12/22/2011 (11L3215-MSD1)					**Source: IUL2331-01**					
Surfactants (MBAS)	0.245	0.10	mg/l	0.250	ND	98	50-125	3	20	
Batch: 11L3238 Extracted: 12/23/11										
Blank Analyzed: 12/23/2011 (11L3238-BLK1)										
Fluoride	ND	0.10	mg/l							
LCS Analyzed: 12/23/2011 (11L3238-BS1)										
Fluoride	1.00	0.10	mg/l	1.00		100	90-110			
Matrix Spike Analyzed: 12/23/2011 (11L3238-MS1)					**Source: IUL1829-02**					
Fluoride	1.26	0.10	mg/l	1.00	0.262	100	80-120			
Matrix Spike Dup Analyzed: 12/23/2011 (11L3238-MSD1)					**Source: IUL1829-02**					
Fluoride	1.26	0.10	mg/l	1.00	0.262	99	80-120	0.4	20	
Batch: 11L3446 Extracted: 12/27/11										
Blank Analyzed: 12/27/2011 (11L3446-BLK1)										
Total Organic Carbon	ND	0.10	mg/l							

TestAmerica Irvine

Kathleen A. Robb For Pat Abe
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
17461 Derian Avenue. Suite 100, Irvine, CA 92614 (949) 261-1022 Fax:(949) 260-3297

Earth Forensics
12532 Vista Panorama
North Tustin, CA 92705
Attention: Richard Laton

Project ID: 44002987 - Title 22 Analysis
Malibu Centralized Wastewater Project
Report Number: IUL2400

Sampled: 12/21/11
Received: 12/21/11

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11L3446 Extracted: 12/27/11										
LCS Analyzed: 12/27/2011 (11L3446-BS1)										
Total Organic Carbon	9.62	0.10	mg/l	10.0		96	90-110			
Matrix Spike Analyzed: 12/27/2011 (11L3446-MS1)					**Source: IUL2454-07**					
Total Organic Carbon	10.2	0.10	mg/l	10.0	2.33	79	80-120			*M2*
Matrix Spike Dup Analyzed: 12/27/2011 (11L3446-MSD1)					**Source: IUL2454-07**					
Total Organic Carbon	10.6	0.10	mg/l	10.0	2.33	82	80-120	3	20	
Batch: 11L3549 Extracted: 12/27/11										
Blank Analyzed: 12/27/2011 (11L3549-BLK1)										
Total Kjeldahl Nitrogen	ND	0.50	mg/l							
LCS Analyzed: 12/27/2011 (11L3549-BS1)										
Total Kjeldahl Nitrogen	4.82	0.50	mg/l	5.00		96	90-110			
Matrix Spike Analyzed: 12/27/2011 (11L3549-MS1)					**Source: IUL2126-01**					
Total Kjeldahl Nitrogen	4.96	0.50	mg/l	5.00	ND	99	90-110			
Matrix Spike Analyzed: 12/27/2011 (11L3549-MS2)					**Source: IUL2126-02**					
Total Kjeldahl Nitrogen	5.09	0.50	mg/l	5.00	ND	102	90-110			
Matrix Spike Dup Analyzed: 12/27/2011 (11L3549-MSD1)					**Source: IUL2126-01**					
Total Kjeldahl Nitrogen	4.92	0.50	mg/l	5.00	ND	98	90-110	0.8	20	
Matrix Spike Dup Analyzed: 12/27/2011 (11L3549-MSD2)					**Source: IUL2126-02**					
Total Kjeldahl Nitrogen	4.97	0.50	mg/l	5.00	ND	99	90-110	2	20	

TestAmerica Irvine

Kathleen A. Robb For Pat Abe
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
17461 Derian Avenue. Suite 100, Irvine, CA 92614 (949) 261-1022 Fax:(949) 260-3297

Earth Forensics
12532 Vista Panorama
North Tustin, CA 92705
Attention: Richard Laton

Project ID: 44002987 - Title 22 Analysis
Malibu Centralized Wastewater Project
Report Number: IUL2400

Sampled: 12/21/11
Received: 12/21/11

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11L3703 Extracted: 12/29/11										
Blank Analyzed: 12/30/2011 (11L3703-BLK1)										
Hardness (as CaCO3)	ND	1.0	mg/l							
Batch: 11L3774 Extracted: 12/28/11										
Blank Analyzed: 12/28/2011 (11L3774-BLK1)										
Ammonia-N	ND	0.50	mg/l							
LCS Analyzed: 12/28/2011 (11L3774-BS1)										
Ammonia-N	1.03	0.50	mg/l	1.00		103	85-115			
Matrix Spike Analyzed: 12/28/2011 (11L3774-MS1)					**Source: IUL1962-01**					
Ammonia-N	2.56	0.50	mg/l	2.00	0.136	121	75-125			
Matrix Spike Dup Analyzed: 12/28/2011 (11L3774-MSD1)					**Source: IUL1962-01**					
Ammonia-N	2.56	0.50	mg/l	2.00	0.136	121	75-125	0	15	
Batch: 11L3956 Extracted: 12/29/11										
Blank Analyzed: 12/29/2011 (11L3956-BLK1)										
Total Cyanide	ND	0.025	mg/l							
LCS Analyzed: 12/29/2011 (11L3956-BS1)										
Total Cyanide	0.202	0.025	mg/l	0.200		101	90-110			
Matrix Spike Analyzed: 12/29/2011 (11L3956-MS1)					**Source: IUL2400-01**					
Total Cyanide	0.202	0.025	mg/l	0.200	ND	101	70-115			

TestAmerica Irvine

Kathleen A. Robb For Pat Abe
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
17461 Derian Avenue. Suite 100, Irvine, CA 92614 (949) 261-1022 Fax:(949) 260-3297

Earth Forensics
12532 Vista Panorama
North Tustin, CA 92705
Attention: Richard Laton

Project ID: 44002987 - Title 22 Analysis
Malibu Centralized Wastewater Project
Report Number: IUL2400

Sampled: 12/21/11
Received: 12/21/11

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11L3956 Extracted: 12/29/11										
Matrix Spike Dup Analyzed: 12/29/2011 (11L3956-MSD1)					**Source: IUL2400-01**					
Total Cyanide	0.204	0.025	mg/l	0.200	ND	102	70-115	1	15	
Batch: 11L4086 Extracted: 12/30/11										
Blank Analyzed: 12/30/2011 (11L4086-BLK1)										
Phosphorus	ND	0.050	mg/l							
LCS Analyzed: 12/30/2011 (11L4086-BS1)										
Phosphorus	0.424	0.050	mg/l	0.500		85	80-120			
Matrix Spike Analyzed: 12/30/2011 (11L4086-MS1)					**Source: IUL2450-01**					
Phosphorus	0.680	0.050	mg/l	0.500	0.266	83	65-130			
Matrix Spike Dup Analyzed: 12/30/2011 (11L4086-MSD1)					**Source: IUL2450-01**					
Phosphorus	0.660	0.050	mg/l	0.500	0.266	79	65-130	3	20	
Batch: 12A0113 Extracted: 01/03/12										
Blank Analyzed: 01/03/2012 (12A0113-BLK1)										
Alkalinity as CaCO3	ND	2.0	mg/l							
Bicarbonate Alkalinity as CaCO3	ND	2.0	mg/l							
Carbonate Alkalinity as CaCO3	ND	2.0	mg/l							
Hydroxide Alkalinity as CaCO3	ND	2.0	mg/l							
LCS Analyzed: 01/03/2012 (12A0113-BS1)										
Alkalinity as CaCO3	166	2.0	mg/l	183		91	90-110			

TestAmerica Irvine

Kathleen A. Robb For Pat Abe
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
17461 Derian Avenue. Suite 100, Irvine, CA 92614 (949) 261-1022 Fax:(949) 260-3297

Earth Forensics
12532 Vista Panorama
North Tustin, CA 92705
Attention: Richard Laton

Project ID: 44002987 - Title 22 Analysis
Malibu Centralized Wastewater Project
Report Number: IUL2400

Sampled: 12/21/11
Received: 12/21/11

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 12A0113 Extracted: 01/03/12										
Duplicate Analyzed: 01/03/2012 (12A0113-DUP1)					**Source: IUL2331-01**					
Alkalinity as CaCO3	50.0	2.0	mg/l		52.0			4	20	
Bicarbonate Alkalinity as CaCO3	50.0	2.0	mg/l		52.0			4	20	
Carbonate Alkalinity as CaCO3	ND	2.0	mg/l		ND				20	
Hydroxide Alkalinity as CaCO3	ND	2.0	mg/l		ND				20	

TestAmerica Irvine

Kathleen A. Robb For Pat Abe
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
17461 Derian Avenue, Suite 100, Irvine, CA 92614 (949) 261-1022 Fax:(949) 260-3297

Earth Forensics
12532 Vista Panorama
North Tustin, CA 92705
Attention: Richard Laton

Project ID: 44002987 - Title 22 Analysis
Malibu Centralized Wastewater Project
Report Number: IUL2400

Sampled: 12/21/11
Received: 12/21/11

METHOD BLANK/QC DATA

EPA 600 R 94 134, 100.2

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 148609 Extracted: 12/22/11										
BLANK Analyzed: 12/29/2011 (BLANK)					**Source: BLANK**					
ASBESTOS	ND	NA	MFL	0	ND		-			

TestAmerica Irvine

Kathleen A. Robb For Pat Abe
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
17461 Derian Avenue. Suite 100, Irvine, CA 92614 (949) 261-1022 Fax:(949) 260-3297

Earth Forensics
12532 Vista Panorama
North Tustin, CA 92705
Attention: Richard Laton

Project ID: 44002987 - Title 22 Analysis
Malibu Centralized Wastewater Project
Report Number: IUL2400

Sampled: 12/21/11
Received: 12/21/11

METHOD BLANK/QC DATA

EPA-5 1613B-Tetrasx

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 1362055 Extracted: 12/28/11										
Blank Analyzed: 12/29/2011 (G1L280000055B)					**Source:**					
2,3,7,8-TCDD	ND	5	pg/L				-			
Surrogate: 13C-2,3,7,8-TCDD	*1200*		*pg/L*	*2000*		*60*	*31-137*			
LCS Analyzed: 12/29/2011 (G1L280000055C)					**Source:**					
2,3,7,8-TCDD	217	5	pg/L	200		109	73-146			
Surrogate: 13C-2,3,7,8-TCDD	*1230*		*pg/L*	*2000*		*62*	*25-141*			

TestAmerica Irvine

Kathleen A. Robb For Pat Abe
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
17461 Derian Avenue, Suite 100, Irvine, CA 92614 (949) 261-1022 Fax:(949) 260-3297

Earth Forensics
12532 Vista Panorama
North Tustin, CA 92705
Attention: Richard Laton

Project ID: 44002987 - Title 22 Analysis
Malibu Centralized Wastewater Project
Report Number: IUL2400

Sampled: 12/21/11
Received: 12/21/11

DATA QUALIFIERS AND DEFINITIONS

B	Analyte was detected in the associated Method Blank.
B-1	Analyte was detected in the associated method blank. Analyte concentration in the sample is greater than 10x the concentration found in the method blank.
C	Calibration Verification recovery was above the method control limit for this analyte. Analyte not detected, data not impacted.
HFT	The holding time for this test is immediate. It was analyzed in the laboratory as soon as possible after receipt.
L	Laboratory Control Sample and/or Laboratory Control Sample Duplicate recovery was above the acceptance limits. Analyte not detected, data not impacted.
M2	The MS and/or MSD were below the acceptance limits due to sample matrix interference. See Blank Spike (LCS).
MHA	Due to high levels of analyte in the sample, the MS/MSD calculation does not provide useful spike recovery information. See Blank Spike (LCS).
MNR1	There was no MS/MSD analyzed with this batch due to insufficient sample volume. See Blank Spike/Blank Spike Duplicate.
pH	pH = 7.17
pHa	pH = 7.28
pHb	pH = 7.80
Z2	Surrogate recovery was above the acceptance limits. Data not impacted.
ND	Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.
RPD	Relative Percent Difference
T.O.N.	Threshhold Odor Number
SI Units	Saturation Index Units

TestAmerica Irvine

Kathleen A. Robb For Pat Abe
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
17461 Derian Avenue. Suite 100, Irvine, CA 92614 (949) 261-1022 Fax:(949) 260-3297

Earth Forensics
12532 Vista Panorama
North Tustin, CA 92705
Attention: Richard Laton

Project ID: 44002987 - Title 22 Analysis
Malibu Centralized Wastewater Project
Report Number: IUL2400

Sampled: 12/21/11
Received: 12/21/11

Certification Summary

TestAmerica Irvine

Method	Matrix	Nelac	California
Calculation	Water	X	X
EPA 150.1	Water	X	X
EPA 180.1	Water	X	N/A
EPA 200.7	Water	X	N/A
EPA 200.8	Water	X	N/A
EPA 245.1	Water	X	N/A
EPA 300.0	Water	X	N/A
EPA 351.2	Water		X
EPA 365.3	Water	X	X
EPA 504.1	Water	X	N/A
EPA 505	Water	X	
EPA 515.4	Water	X	N/A
EPA 524.2	Water	X	N/A
EPA 525.2	Water	X	N/A
EPA 531.1	Water	X	N/A
EPA 547	Water	X	N/A
EPA 548.1	Water	X	N/A
EPA 549.2	Water	X	N/A
EPA 552.2	Water	X	N/A
SM 4500-F-C	Water	X	N/A
SM2120B	Water	X	N/A
SM2150B	Water	N/A	N/A
SM2320B	Water	X	N/A
SM2340B	Water	X	N/A
SM2510B	Water	X	N/A
SM2540C	Water	X	N/A
SM4500CN-E	Water	X	N/A
SM4500NH3-D	Water	X	X
SM5310C	Water	X	N/A
SM5540-C	Water	X	N/A
SM9223B	Water	X	
SRL 524.2 M-TCP	Water	N/A	X

Nevada and NELAP provide analyte specific accreditations. Analyte specific information for TestAmerica may be obtained by contacting the laboratory or visiting our website at www.testamericainc.com

Subcontracted Laboratories

EMS Laboratories

Method Performed: TEM
Samples: IUL2400-01

TestAmerica Irvine

Kathleen A. Robb For Pat Abe
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
17461 Derian Avenue. Suite 100, Irvine, CA 92614 (949) 261-1022 Fax:(949) 260-3297

Earth Forensics
12532 Vista Panorama
North Tustin, CA 92705
Attention: Richard Laton

Project ID: 44002987 - Title 22 Analysis
Malibu Centralized Wastewater Project
Report Number: IUL2400

Sampled: 12/21/11
Received: 12/21/11

TestAmerica West Sacramento *NELAC Cert #1119CA, Nevada Cert #CA44*
880 Riverside Parkway - West Sacramento, CA 95605
Method Performed: EPA-5 1613B-Tetras
Samples: IUL2400-01

Truesdail Laboratories-SUB *California Cert #1237*
14201 Franklin Avenue - Tustin, CA 92680
Analysis Performed: UV 254
Samples: IUL2400-01

TestAmerica Irvine

Kathleen A. Robb For Pat Abe
Project Manager

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TAL-0013 (0911)

CHAIN OF CUSTODY FORM

IUL2400

17461 Derian Ave., #100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297
1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046
4625 E. Cotton Center Blvd., Suite 189, Phoenix, AZ 85040 (602) 437-3340 FAX (602) 454-9303
6000 S. Eastern Ave., Suite 5E, Las Vegas, NV 89119 (702) 429-1264

Client Name/Address:
Earth Forensics
12532 Vista Panorama
North Tustin, CA 92705

Project/PO Number:
Malibu Centralized Wastewater Project

Project Manager:
W. Richard Laton (714) 296-4055

Phone Number:
(562) 458-0614

Sampler:
N. Napoli

Fax Number:
(562) 741-4587

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives
MCWP-MW01-20111221	GW		37	12.21.11	1100	

Analysis Required

552.2 CA Regulated (HAA5)	Asbestos - TEM (100.2)	9223B, Total, P/A DW E.coli, Coliform	UV254	Phos-P, Total 365.3 Ammonia-N 350.1 TKN-351.2	TDS-SM2540C CA DW	Sulfate 300.0 CA DW	pH 150.1 CA DW	Alkalinity - All Forms (As $CaCO_3$) CA DW SM2320B	Special Instructions
X	X	X	X	X	X	X	X	X	

BR
12-21-11
17:22.

Relinquished By:	Date/Time:	Received By:	Date/Time:
	12/21/11 1345		
Relinquished By:	Date/Time:	Received By:	Date/Time:
Relinquished By:	Date/Time:	Received in Lab By:	Date/Time: 12/21/11 13:45

Turnaround Time: (Check)
same day ____ 72 hours ____
24 hours ____ 5 days ____
48 hours ____ normal X

Sample Integrity: (Check)
intact X on ice X 1.4°

Note: By relinquishing samples to TestAmerica, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TAL-0013 (0911)

CHAIN OF CUSTODY FORM

17461 Derian Ave., #100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297
1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046
4625 E. Cotton Center Blvd., Suite 189, Phoenix, AZ 85040 (602) 437-3340 FAX (602) 454-9303
6000 S. Eastern Ave., Suite 5E, Las Vegas, NV 89119 (702) 429-1264

Client Name/Address:
Earth Forensics
12532 Vista Panorama
North Tustin, CA 92705

Project/PO Number:
Malibu Centralized Wastewater Project

Project Manager:
W. Richard Laton (714)296-4055

Phone Number:
(562) 458-0614

Sampler:
N. Napoli

Fax Number:
(562) 741-4587

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives	Analysis Required: Chloride 300.0 CA DW	Conductivity SM2510B CA DW	Fluoride SM4500F-C CA DW	MBAS SM5540C CA DW	Nitrate 300.0 CA DW	Nitrite 300.0 CA DW	Chromium (200.7)	Calcium (200.8)	Cadmium	Boron	Barium	Arsenic	Aluminum	Potassium	Special Instructions
MCWP-MW01-20111221	GW		37	12.21.11	1100		X	X	X	X	X	X	X	X	X	X	X	X	X	X	

Relinquished By: Date/Time: 12/21/11 1345

Relinquished By: Date/Time:

Relinquished By: Date/Time:

Received By: Date/Time:

Received By: Date/Time:

Received in Lab By: Date/Time: 12/21/11 13:45

Turnaround Time: (Check)
same day ____ 72 hours ____
24 hours ____ 5 days ____
48 hours ____ normal X

Sample Integrity: (Check)
intact X on ice X 1.0c

Note: By relinquishing samples to TestAmerica, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TAL-0013 (0911)

CHAIN OF CUSTODY FORM

17461 Derian Ave., #100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297
1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046
4625 E. Cotton Center Blvd., Suite 189, Phoenix, AZ 85040 (602) 437-3340 FAX (602) 454-9303
6000 S. Eastern Ave., Suite 5E, Las Vegas, NV 89119 (702) 429-1264

Client Name/Address:
Earth Forensics
12532 Vista Panorama
North Tustin, CA 92705

Project/PO Number:
Malibu Centralized Wastewater Project

Project Manager:
W. Richard Laton (714)296-4055

Phone Number:
(562)458-0614

Sampler:
N. Napoli

Fax Number:
(562) 741-4587

Analysis Required

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives	Cobalt 200.7/200.8	Magnesium	Selenium	Sodium	Manganese	Nickel	Silica	Silver	Zinc	Copper	Lead	Iron	Vanadium	Mercury 245.1	Thallium 200.7/200.8	Beryllium	Antimony	Special Instructions
MCWP-MW01-20111221	GW		37	12.21.11	1100		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	

Relinquished By:	Date/Time:	Received By:	Date/Time:
	12/21/11 1345		
Relinquished By:	Date/Time:	Received By:	Date/Time:
Relinquished By:	Date/Time:	Received in Lab By:	Date/Time: 12/22/11 13:45

Turnaround Time: (Check)
same day ____ 72 hours ____
24 hours ____ 5 days ____
48 hours ____ normal X

Sample Integrity: (Check)
intact X on ice X 1.6°

Note: By relinquishing samples to TestAmerica, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

CHAIN OF CUSTODY FORM

17461 Derian Ave., #100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297
1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046
4625 E. Cotton Center Blvd., Suite 189, Phoenix, AZ 85040 (602) 437-3340 FAX (602) 454-9303
6000 S. Eastern Ave., Suite 5E, Las Vegas, NV 89119 (702) 429-1264

TAL-0013 (0911)

Client Name/Address:
Earth Forensics
12532 Vista Panorama
North Tustin, CA 92705

Project/PO Number:
Malibu Centralized Wastewater Project

Project Manager:
W. Richard Laton (714) 296-4055

Phone Number:
(562) 458-0614

Sampler:
N. Napoli

Fax Number:
(562) 741-4587

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives	Hardness SM2340B CA DW	TOC SM5310C	Odor Turbidity CA DW Color	Cyanides, Total CA DW 4500CN-C,E	1613 Dioxin (2,3,7,8) TCDD CA DW	504.1 CA (EDB, DBCP)	505 CA Regulated organochlorides Pesticides	515.4 CA Chlorinated Acids Herbicides	524.2 CA Regulated VOC	524.2 CA 123-TCP (SIM)	Special Instructions
MCWP-MW01-20111221	GW		37	12.21.11	1100		X	X	X	X	X	X	X	X	X	X	

Relinquished By:	Date/Time:	Received By:	Date/Time:	Turnaround Time: (Check)	
	12/21/11 1345			same day ____	72 hours ____
Relinquished By:	Date/Time:	Received By:	Date/Time:	24 hours ____	5 days ____
				48 hours ____	normal X
Relinquished By:	Date/Time:	Received in Lab By:	Date/Time:	Sample Integrity: (Check)	
			12/21/11 13:45	intact X	on ice X 1.6°

Note: By relinquishing samples to TestAmerica, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TAL-0013 (0911)

CHAIN OF CUSTODY FORM

17461 Derian Ave., #100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297
1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046
4625 E. Cotton Center Blvd., Suite 189, Phoenix, AZ 85040 (602) 437-3340 FAX (602) 454-9303
6000 S. Eastern Ave., Suite 5E, Las Vegas, NV 89119 (702) 429-1264

Client Name/Address:
Earth Forensics
12532 Vista Panorama
North Tustin, CA 92705

Project/PO Number:
Malibu Centralized Wastewater Project

Project Manager:
W. Richard Laton (714) 296-4055

Phone Number:
(562) 458-0614

Sampler:
N. Napoli

Fax Number:
(562) 741-4587

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives	Analysis Required: 525.2 Ca Regulated SVOC	526.2 CA DLR Regulated List	531.1 CA Carbamates	547 CA Glyphosate	548.1 CA Endothal	549.2 Diquat/Paraquat Chlor	8260B SIM 1,2,3-TCP			Special Instructions
MCWP-MW01-20111221	GW		3	12.21.11	1100		X	X	X	X	X	X	X			

Relinquished By: Date/Time: 12/21/11 1345

Relinquished By: Date/Time:

Relinquished By: Date/Time:

Received By: Date/Time:

Received By: Date/Time:

Received in Lab By: Date/Time: 12/21/11 13:45

Turnaround Time: (Check)
same day ____ 72 hours ____
24 hours ____ 5 days ____
48 hours ____ normal X

Sample Integrity: (Check)
intact X on ice X 1.6°

Note: By relinquishing samples to TestAmerica, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TAL-0013 (0911)

CHAIN OF CUSTODY FORM

17461 Derian Ave., #100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297
1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046
4625 E. Cotton Center Blvd., Suite 189, Phoenix, AZ 85040 (602) 437-3340 FAX (602) 454-9303
6000 S. Eastern Ave., Suite 5E, Las Vegas, NV 89119 (702) 429-1264

Client Name/Address: Earth Forensics, 12532 Vista Panorama, North Tustin, CA 92705

Project/PO Number: Malibu Centralized Wastewater Project

Project Manager: W. Richard Laton (714) 296-4055

Phone Number: (562) 458-0614

Fax Number: (562) 741-4587

Sampler: N. Napoli

Analysis Required:

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives	525.2 Ca Regulated SVOC	526.2 CA DLR Regulated List	531.1 CA Carbamates	547 CA Glyphosate	548.1 CA Endothal	549.2 Diquat/Paraquat CA DLR	~~8260B SIM~~ 1,2,3-TCP 524.2 / 8260 SIM TCP			Special Instructions
MCWP-MW01-20111221	GW		37	12.21.11	1100		X	X	X	X	X	X	X			

Relinquished By:	Date/Time:	Received By:	Date/Time:
[signature]	12/21/11 1345		
Relinquished By:	Date/Time:	Received By:	Date/Time:
Relinquished By:	Date/Time:	Received in Lab By: [signature]	Date/Time: 12/21/11 13:45

Turnaround Time: (Check)
same day ____ 72 hours ____
24 hours ____ 5 days ____
48 hours ____ normal X

Sample Integrity: (Check)
intact X on ice X 1.6°c

Note: By relinquishing samples to TestAmerica, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

TRUESDAIL LABORATORIES, INC.
EXCELLENCE IN INDEPENDENT TESTING

Established 1931

14201 FRANKLIN AVENUE
TUSTIN, CALIFORNIA 92780-7008
(714) 730-6239 · FAX (714) 730-6462
www.truesdail.com

REPORT

Test America Irvine
17461 Derian Avenue, Suite 100
Irvine, CA 92614
Attn: Pat Abe
Phone: 949-261-1022
FAX: 949-260-3297

DATE: December 27, 2011

RECEIVED: December 21, 2011

P.O.#: IUL2400

LABORATORY NO: 999244

Sample ID	Date Analyzed	UV 254 Absorbance
IUL2400-01 (MCWP-MW01-20111221)	12/22/2011	0.029

Respectfully Submitted,

TRUESDAIL LABORATORIES, INC.

Ali Kharrazi

Ali Kharrazi, M.S.
Assistant Manager, Analytical Services

Subcontract Order - TestAmerica Irvine (IUL2400)

99924

SENDING LABORATORY:

TestAmerica Irvine
17461 Derian Avenue, Suite 100
Irvine, CA 92614
Phone: (949) 261-1022
Fax: (949) 260-3297
Project Manager: Pat Abe

RECEIVING LABORATORY:

Truesdail Laboratories
14201 Franklin Avenue
Tustin, CA 92680
Phone: (714) 730-6239
Fax: (714) 730-6462
Project Location: California
Receipt Temperature: _____ °C Ice: Y / N

Rec'd 12/21/11
s14a 99924

Standard TAT is requested unless specific due date is requested. => Due Date: _____ Initials: _____

Analysis	Units	Expires	Comments
Sample ID: IUL2400-01 (MCWP-MW01-20111221 - Water)		**Sampled: 12/21/11 11:00**	
UV 254	pCi/L	12/23/11 11:00	

Containers Supplied:
1 L Amber (AE)

For Sample Conditions See Form Attached

Released By _____ Date/Time 12-21-11 1645

Released By _____ Date/Time 12-21-11 1700

Received By _____ Date/Time 12-21-11 1645

Received By _____ Date/Time 12-21-11 17:00

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Irvine
17461 Derian Avenue. Suite 100
Irvine, CA 92614
Tel: (949) 261-1022

TestAmerica Job ID: IUL1882
Client Project/Site: Malibu Centralized Wastewater Project

For:
Earth Forensics
12532 Vista Panorama
North Tustin, CA 92705

Attn: Richard Laton

Authorized for release by:
1/6/2012 5:46:19 PM

Pat Abe
Project Manager
Pat.Abe@testamericainc.com

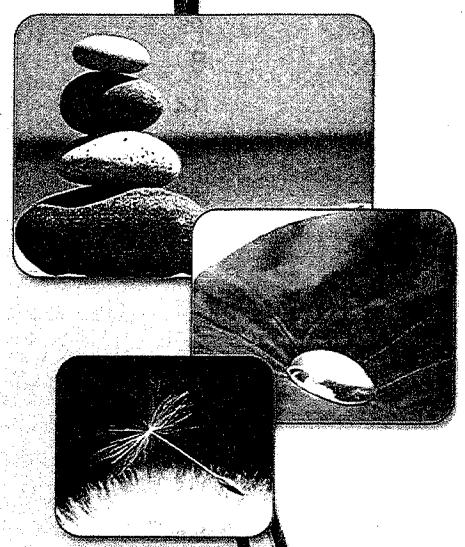


Table of Contents

Sample Summary

Client: Earth Forensics
Project/Site: Malibu Centralized Wastewater Project

TestAmerica Job ID: IUL1882

3

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
IUL1882-01	MCWP-MW02-20111215	Water	12/15/11 14:00	12/16/11 13:15
IUL1882-02	MCWP-MW02-20111216	Water	12/16/11 11:00	12/16/11 13:15

Client Sample Results

Client: Earth Forensics
Project/Site: Malibu Centralized Wastewater Project

TestAmerica Job ID: IUL1882

Client Sample ID: MCWP-MW02-20111215
Date Collected: 12/15/11 14:00
Date Received: 12/16/11 13:15

Lab Sample ID: IUL1882-01
Matrix: Water

4

Method: EPA 6010B-Diss - DISSOLVED METALS - Dissolved

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		0.050	mg/l		12/22/11 09:26	12/28/11 01:52	1.0
Silica (as SiO2)	**34**		0.11	mg/l		12/22/11 09:26	12/28/11 01:52	1.0
Arsenic	ND		0.010	mg/l		12/22/11 09:26	12/28/11 01:52	1.0
Barium	**0.055**		0.010	mg/l		12/22/11 09:26	12/28/11 01:52	1.0
Boron	**0.86**		0.050	mg/l		12/22/11 09:26	12/28/11 01:52	1.0
Cadmium	ND		0.0050	mg/l		12/22/11 09:26	12/28/11 01:52	1.0
Calcium	**160**		0.10	mg/l		12/22/11 09:26	12/28/11 01:52	1.0
Chromium	ND		0.0050	mg/l		12/22/11 09:26	12/28/11 01:52	1.0
Cobalt	ND		0.010	mg/l		12/22/11 09:26	12/28/11 01:52	1.0
Copper	ND		0.010	mg/l		12/22/11 09:26	12/28/11 01:52	1.0
Iron	ND		0.040	mg/l		12/22/11 09:26	12/28/11 01:52	1.0
Lead	ND		0.0050	mg/l		12/22/11 09:26	12/29/11 15:06	1.0
Magnesium	**83**		0.020	mg/l		12/22/11 09:26	12/28/11 01:52	1.0
Manganese	**0.77**		0.020	mg/l		12/22/11 09:26	12/28/11 01:52	1.0
Nickel	ND		0.010	mg/l		12/22/11 09:26	12/28/11 01:52	1.0
Potassium	**3.5**		0.50	mg/l		12/22/11 09:26	12/28/11 01:52	1.0
Selenium	**0.026**		0.010	mg/l		12/22/11 09:26	12/28/11 01:52	1.0
Silver	ND		0.010	mg/l		12/22/11 09:26	12/28/11 01:52	1.0
Sodium	**210**		0.50	mg/l		12/22/11 09:26	12/28/11 01:52	1.0
Vanadium	ND		0.010	mg/l		12/22/11 09:26	12/28/11 01:52	1.0
Zinc	**0.030**		0.020	mg/l		12/22/11 09:26	12/28/11 01:52	1.0

Method: EPA 7470A-Diss - DISSOLVED METALS - Dissolved

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	mg/l		12/20/11 16:06	12/21/11 16:35	1.0

Method: Filtration - DISSOLVED METALS-FILTRATION

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Filtration	**DET**		1.000	N/A		12/16/11 19:26	12/16/11 19:27	1.000

Method: EPA 300.0 - INORGANICS

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**270**		25	mg/l		12/16/11 16:00	12/16/11 19:10	50
Nitrate-N	**0.18**		0.11	mg/l		12/16/11 16:00	12/16/11 17:04	1.0
Orthophosphate - P	ND		0.16	mg/l		12/16/11 16:00	12/16/11 17:04	1.0
Sulfate	**490**		25	mg/l		12/16/11 16:00	12/16/11 19:10	50

Method: SM 4500-F-C - INORGANICS

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	**0.20**		0.10	mg/l		12/23/11 04:30	12/23/11 05:41	1.0

Method: SM2320B - INORGANICS

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	**310**		2.0	mg/l		12/27/11 13:12	12/27/11 13:30	1.0
Bicarbonate Alkalinity as CaCO3	**310**		2.0	mg/l		12/27/11 13:12	12/27/11 13:30	1.0
Carbonate Alkalinity as CaCO3	ND		2.0	mg/l		12/27/11 13:12	12/27/11 13:30	1.0
Hydroxide Alkalinity as CaCO3	ND		2.0	mg/l		12/27/11 13:12	12/27/11 13:30	1.0

Method: SM2540C - INORGANICS

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**1500**		20	mg/l		12/19/11 04:48	12/19/11 10:30	1.0

Client Sample Results

Client: Earth Forensics
Project/Site: Malibu Centralized Wastewater Project

TestAmerica Job ID: IUL1882

Client Sample ID: MCWP-MW02-20111215
Date Collected: 12/15/11 14:00
Date Received: 12/16/11 13:15

Lab Sample ID: IUL1882-01
Matrix: Water

Method: SM4500NH3-D - INORGANICS

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia-N	ND		0.50	mg/l		12/19/11 19:14	12/19/11 19:40	1.0

Client Sample ID: MCWP-MW02-20111216
Date Collected: 12/16/11 11:00
Date Received: 12/16/11 13:15

Lab Sample ID: IUL1882-02
Matrix: Water

Method: EPA 6010B-Diss - DISSOLVED METALS - Dissolved

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		0.050	mg/l		12/22/11 09:26	12/28/11 01:55	1.0
Silica (as SiO2)	**34**		0.11	mg/l		12/22/11 09:26	12/28/11 01:55	1.0
Arsenic	ND		0.010	mg/l		12/22/11 09:26	12/28/11 01:55	1.0
Barium	**0.053**		0.010	mg/l		12/22/11 09:26	12/28/11 01:55	1.0
Boron	**0.85**		0.050	mg/l		12/22/11 09:26	12/28/11 01:55	1.0
Cadmium	ND		0.0050	mg/l		12/22/11 09:26	12/28/11 01:55	1.0
Calcium	**160**		0.10	mg/l		12/22/11 09:26	12/28/11 01:55	1.0
Chromium	ND		0.0050	mg/l		12/22/11 09:26	12/28/11 01:55	1.0
Cobalt	ND		0.010	mg/l		12/22/11 09:26	12/28/11 01:55	1.0
Copper	ND		0.010	mg/l		12/22/11 09:26	12/28/11 01:55	1.0
Iron	ND		0.040	mg/l		12/22/11 09:26	12/28/11 01:55	1.0
Lead	ND		0.0050	mg/l		12/22/11 09:26	12/29/11 15:09	1.0
Magnesium	**85**		0.020	mg/l		12/22/11 09:26	12/28/11 01:55	1.0
Manganese	**0.76**		0.020	mg/l		12/22/11 09:26	12/28/11 01:55	1.0
Nickel	ND		0.010	mg/l		12/22/11 09:26	12/28/11 01:55	1.0
Potassium	**3.4**		0.50	mg/l		12/22/11 09:26	12/28/11 01:55	1.0
Selenium	ND		0.010	mg/l		12/22/11 09:26	12/29/11 15:09	1.0
Silver	ND		0.010	mg/l		12/22/11 09:26	12/28/11 01:55	1.0
Sodium	**210**		0.50	mg/l		12/22/11 09:26	12/28/11 01:55	1.0
Vanadium	ND		0.010	mg/l		12/22/11 09:26	12/28/11 01:55	1.0
Zinc	**0.021**		0.020	mg/l		12/22/11 09:26	12/28/11 01:55	1.0

Method: EPA 7470A-Diss - DISSOLVED METALS - Dissolved

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	mg/l		12/20/11 16:06	12/21/11 16:37	1.0

Method: Filtration - DISSOLVED METALS-FILTRATION

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Filtration	**DET**		1.000	N/A		12/16/11 19:26	12/16/11 19:27	1.000

Method: EPA 300.0 - INORGANICS

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**270**		25	mg/l		12/16/11 16:00	12/16/11 19:24	50
Nitrate-N	**0.34**		0.11	mg/l		12/16/11 16:00	12/16/11 17:18	1.0
Orthophosphate - P	ND		0.16	mg/l		12/16/11 16:00	12/16/11 17:18	1.0
Sulfate	**490**		25	mg/l		12/16/11 16:00	12/16/11 19:24	50

Method: SM 4500-F-C - INORGANICS

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	**0.32**		0.10	mg/l		12/23/11 04:30	12/23/11 05:41	1.0

Client Sample Results

Client: Earth Forensics
Project/Site: Malibu Centralized Wastewater Project

TestAmerica Job ID: IUL1882

Client Sample ID: MCWP-MW02-20111216
Date Collected: 12/16/11 11:00
Date Received: 12/16/11 13:15

Lab Sample ID: IUL1882-02
Matrix: Water

4

Method: SM2320B - INORGANICS

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	**340**		2.0	mg/l		12/27/11 13:12	12/27/11 13:30	1.0
Bicarbonate Alkalinity as CaCO3	**340**		2.0	mg/l		12/27/11 13:12	12/27/11 13:30	1.0
Carbonate Alkalinity as CaCO3	ND		2.0	mg/l		12/27/11 13:12	12/27/11 13:30	1.0
Hydroxide Alkalinity as CaCO3	ND		2.0	mg/l		12/27/11 13:12	12/27/11 13:30	1.0

Method: SM2540C - INORGANICS

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**1600**		20	mg/l		12/19/11 04:48	12/19/11 10:30	1.0

Method: SM4500NH3-D - INORGANICS

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia-N	ND		0.50	mg/l		12/19/11 19:14	12/19/11 19:40	1.0

Lab Chronicle

Client: Earth Forensics
Project/Site: Malibu Centralized Wastewater Project

TestAmerica Job ID: IUL1882

5

Client Sample ID: MCWP-MW02-20111215

Date Collected: 12/15/11 14:00
Date Received: 12/16/11 13:15

Lab Sample ID: IUL1882-01
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	EPA 3005A ICP		1.0	50 ml	50 ml	11L3120_P	12/22/11 09:26	NEX	TAL IRV
Dissolved	Analysis	EPA 6010B-Diss		1.0			11L3120	12/28/11 01:52	DT	TAL IRV
Total	Prep	Filtration-Metals		1.000	250 ml	250 ml	11L2322_P	12/16/11 19:26	KP	TAL IRV
Total	Analysis	Filtration		1.000			11L2322	12/16/11 19:27	KP	TAL IRV
Dissolved	Analysis	EPA 6010B-Diss		1.0			11L3120	12/29/11 15:06	TK	TAL IRV
Dissolved	Prep	EPA 7470A Hg		1.0	20 ml	20 ml	11L2783_P	12/20/11 16:06	SN	TAL IRV
Dissolved	Analysis	EPA 7470A-Diss		1.0			11L2783	12/21/11 16:35	DB	TAL IRV
Total	Prep	General Prep		1.0	25 ml	25 ml	11L3532_P	12/27/11 13:12	DC	TAL IRV
Total	Analysis	SM2320B		1.0			11L3532	12/27/11 13:30	DC	TAL IRV
Total	Prep	General Prep		1.0	50 ml	50 ml	11L2599_P	12/19/11 19:14	NCP	TAL IRV
Total	Analysis	SM4500NH3-D		1.0			11L2599	12/19/11 19:40	NCP	TAL IRV
Total	Prep	General Prep		1.0	10 ml	10 ml	11L2252_P	12/16/11 16:00	NN	TAL IRV
Total	Analysis	EPA 300.0		50			11L2252	12/16/11 19:10	NN	TAL IRV
Total	Prep	General Prep		1.0	25 ml	25 ml	11L3237_P	12/23/11 04:30	FZ	TAL IRV
Total	Analysis	SM 4500-F-C		1.0			11L3237	12/23/11 05:41	FZ	TAL IRV
Total	Analysis	EPA 300.0		1.0			11L2252	12/16/11 17:04	NN	TAL IRV
Total	Prep	General Prep		2.0	50 ml	100 ml	11L2472_P	12/19/11 04:48	MC	TAL IRV
Total	Analysis	SM2540C		1.0			11L2472	12/19/11 10:30	MC	TAL IRV

Client Sample ID: MCWP-MW02-20111216

Date Collected: 12/16/11 11:00
Date Received: 12/16/11 13:15

Lab Sample ID: IUL1882-02
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	EPA 3005A ICP		1.0	50 ml	50 ml	11L3120_P	12/22/11 09:26	NEX	TAL IRV
Dissolved	Analysis	EPA 6010B-Diss		1.0			11L3120	12/28/11 01:55	DT	TAL IRV
Total	Prep	Filtration-Metals		1.000	250 ml	250 ml	11L2322_P	12/16/11 19:26	KP	TAL IRV
Total	Analysis	Filtration		1.000			11L2322	12/16/11 19:27	KP	TAL IRV
Dissolved	Analysis	EPA 6010B-Diss		1.0			11L3120	12/29/11 15:09	TK	TAL IRV
Dissolved	Prep	EPA 7470A Hg		1.0	20 ml	20 ml	11L2783_P	12/20/11 16:06	SN	TAL IRV
Dissolved	Analysis	EPA 7470A-Diss		1.0			11L2783	12/21/11 16:37	DB	TAL IRV
Total	Prep	General Prep		1.0	25 ml	25 ml	11L3532_P	12/27/11 13:12	DC	TAL IRV
Total	Analysis	SM2320B		1.0			11L3532	12/27/11 13:30	DC	TAL IRV
Total	Prep	General Prep		1.0	50 ml	50 ml	11L2599_P	12/19/11 19:14	NCP	TAL IRV
Total	Analysis	SM4500NH3-D		1.0			11L2599	12/19/11 19:40	NCP	TAL IRV
Total	Prep	General Prep		1.0	10 ml	10 ml	11L2252_P	12/16/11 16:00	NN	TAL IRV
Total	Analysis	EPA 300.0		50			11L2252	12/16/11 19:24	NN	TAL IRV
Total	Prep	General Prep		1.0	25 ml	25 ml	11L3237_P	12/23/11 04:30	FZ	TAL IRV
Total	Analysis	SM 4500-F-C		1.0			11L3237	12/23/11 05:41	FZ	TAL IRV
Total	Analysis	EPA 300.0		1.0			11L2252	12/16/11 17:18	NN	TAL IRV
Total	Prep	General Prep		2.0	50 ml	100 ml	11L2472_P	12/19/11 04:48	MC	TAL IRV
Total	Analysis	SM2540C		1.0			11L2472	12/19/11 10:30	MC	TAL IRV

Laboratory References:

TAL IRV = TestAmerica Irvine, 17461 Derian Avenue. Suite 100, Irvine, CA 92614, TEL (949) 261-1022

Method: EPA 6010B-Diss - DISSOLVED METALS

Lab Sample ID: 11L3120-BLK1
Matrix: Water
Analysis Batch: 11L3120

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 11L3120_P

Analyte	Blank Result	Blank Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		0.050	mg/l		12/22/11 09:26	12/28/11 14:36	1.00
Silica (as SiO2)	ND		0.11	mg/l		12/22/11 09:26	12/28/11 14:36	1.00
Arsenic	ND		0.010	mg/l		12/22/11 09:26	12/28/11 14:36	1.00
Barium	ND		0.010	mg/l		12/22/11 09:26	12/28/11 14:36	1.00
Boron	ND		0.050	mg/l		12/22/11 09:26	12/28/11 14:36	1.00
Cadmium	ND		0.0050	mg/l		12/22/11 09:26	12/28/11 14:36	1.00
Calcium	ND		0.10	mg/l		12/22/11 09:26	12/28/11 14:36	1.00
Chromium	ND		0.0050	mg/l		12/22/11 09:26	12/28/11 14:36	1.00
Cobalt	ND		0.010	mg/l		12/22/11 09:26	12/28/11 14:36	1.00
Copper	ND		0.010	mg/l		12/22/11 09:26	12/28/11 14:36	1.00
Iron	ND		0.040	mg/l		12/22/11 09:26	12/28/11 14:36	1.00
Lead	ND		0.0050	mg/l		12/22/11 09:26	12/28/11 14:36	1.00
Magnesium	ND		0.020	mg/l		12/22/11 09:26	12/28/11 14:36	1.00
Manganese	ND		0.020	mg/l		12/22/11 09:26	12/28/11 14:36	1.00
Nickel	ND		0.010	mg/l		12/22/11 09:26	12/28/11 14:36	1.00
Potassium	ND		0.50	mg/l		12/22/11 09:26	12/28/11 14:36	1.00
Selenium	ND		0.010	mg/l		12/22/11 09:26	12/28/11 14:36	1.00
Silver	ND		0.010	mg/l		12/22/11 09:26	12/28/11 14:36	1.00
Sodium	ND		0.50	mg/l		12/22/11 09:26	12/28/11 14:36	1.00
Vanadium	ND		0.010	mg/l		12/22/11 09:26	12/28/11 14:36	1.00
Zinc	ND		0.020	mg/l		12/22/11 09:26	12/28/11 14:36	1.00

Lab Sample ID: 11L3120-BS1
Matrix: Water
Analysis Batch: 11L3120

Client Sample ID: Lab Control Sample
Prep Type: Dissolved
Prep Batch: 11L3120_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	1.00	0.956		mg/l		96	80 - 120
Silica (as SiO2)	10.7	10.3		mg/l		97	80 - 120
Arsenic	1.00	1.03		mg/l		103	80 - 120
Barium	1.00	1.01		mg/l		101	80 - 120
Boron	1.00	1.01		mg/l		101	80 - 120
Cadmium	1.00	1.01		mg/l		101	80 - 120
Calcium	5.00	5.05		mg/l		101	80 - 120
Chromium	1.00	1.04		mg/l		104	80 - 120
Cobalt	1.00	0.978		mg/l		98	80 - 120
Copper	1.00	0.991		mg/l		99	80 - 120
Iron	1.00	1.02		mg/l		102	80 - 120
Lead	1.00	1.03		mg/l		103	80 - 120
Magnesium	5.00	5.15		mg/l		103	80 - 120
Manganese	1.00	1.01		mg/l		101	80 - 120
Nickel	1.00	0.995		mg/l		99	80 - 120
Potassium	10.0	9.95		mg/l		100	80 - 120
Selenium	1.00	0.992		mg/l		99	80 - 120
Silver	0.500	0.538		mg/l		108	80 - 120
Sodium	10.0	9.86		mg/l		99	80 - 120
Vanadium	1.00	1.01		mg/l		101	80 - 120
Zinc	1.00	0.968		mg/l		97	80 - 120

Method: EPA 6010B-Diss - DISSOLVED METALS (Continued)

Lab Sample ID: 11L3120-MS1
Matrix: Water
Analysis Batch: 11L3120

Client Sample ID: Matrix Spike
Prep Type: Dissolved
Prep Batch: 11L3120_P

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Result	Matrix Spike Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	ND		1.00	0.787		mg/l		79	75 - 125
Silica (as SiO2)	32.3		10.7	41.7		mg/l		88	75 - 125
Arsenic	ND		1.00	1.05		mg/l		105	75 - 125
Barium	0.0261		1.00	0.995		mg/l		97	75 - 125
Boron	0.299		1.00	1.32		mg/l		102	75 - 125
Cadmium	ND		1.00	0.955		mg/l		95	75 - 125
Calcium	748		5.00	754	MHA	mg/l		126	75 - 125
Chromium	0.00478		1.00	0.996		mg/l		99	75 - 125
Cobalt	ND		1.00	0.914		mg/l		91	75 - 125
Copper	ND		1.00	0.999		mg/l		100	75 - 125
Iron	ND		1.00	1.05		mg/l		105	75 - 125
Lead	ND		1.00	0.982		mg/l		98	75 - 125
Magnesium	220		5.00	222	MHA	mg/l		49	75 - 125
Manganese	0.0490		1.00	1.02		mg/l		97	75 - 125
Nickel	ND		1.00	0.915		mg/l		92	75 - 125
Potassium	10.4		10.0	20.9		mg/l		105	75 - 125
Selenium	ND		1.00	0.973		mg/l		97	75 - 125
Silver	ND		0.500	0.541		mg/l		108	75 - 125
Sodium	163		10.0	173	MHA	mg/l		98	75 - 125
Vanadium	ND		1.00	0.997		mg/l		100	75 - 125
Zinc	0.0127		1.00	0.951		mg/l		94	75 - 125

Lab Sample ID: 11L3120-MSD1
Matrix: Water
Analysis Batch: 11L3120

Client Sample ID: Matrix Spike Duplicate
Prep Type: Dissolved
Prep Batch: 11L3120_P

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Dup Result	Matrix Spike Dup Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aluminum	ND		1.00	0.786		mg/l		79	75 - 125	0.05	20
Silica (as SiO2)	32.3		10.7	41.1		mg/l		83	75 - 125	1	20
Arsenic	ND		1.00	1.02		mg/l		102	75 - 125	3	20
Barium	0.0261		1.00	0.992		mg/l		97	75 - 125	0.4	20
Boron	0.299		1.00	1.31		mg/l		101	75 - 125	1	20
Cadmium	ND		1.00	0.947		mg/l		95	75 - 125	0.8	20
Calcium	748		5.00	740	MHA	mg/l		-153	75 - 125	2	20
Chromium	0.00478		1.00	0.980		mg/l		97	75 - 125	2	20
Cobalt	ND		1.00	0.896		mg/l		90	75 - 125	2	20
Copper	ND		1.00	0.987		mg/l		99	75 - 125	1	20
Iron	ND		1.00	1.02		mg/l		102	75 - 125	3	20
Lead	ND		1.00	0.968		mg/l		97	75 - 125	1	20
Magnesium	220		5.00	218	MHA	mg/l		-44	75 - 125	2	20
Manganese	0.0490		1.00	1.01		mg/l		96	75 - 125	1	20
Nickel	ND		1.00	0.900		mg/l		90	75 - 125	2	20
Potassium	10.4		10.0	20.5		mg/l		102	75 - 125	2	20
Selenium	ND		1.00	0.975		mg/l		98	75 - 125	0.2	20
Silver	ND		0.500	0.533		mg/l		107	75 - 125	1	20
Sodium	163		10.0	170	MHA	mg/l		66	75 - 125	2	20
Vanadium	ND		1.00	0.987		mg/l		99	75 - 125	1	20
Zinc	0.0127		1.00	0.941		mg/l		93	75 - 125	1	20

QC Sample Results

Client: Earth Forensics
Project/Site: Malibu Centralized Wastewater Project

TestAmerica Job ID: IUL1882

Method: EPA 7470A-Diss - DISSOLVED METALS

Lab Sample ID: 11L2783-BLK1
Matrix: Water
Analysis Batch: 11L2783

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 11L2783_P

Analyte	Blank Result	Blank Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	mg/l		12/20/11 16:06	12/21/11 16:22	1.00

Lab Sample ID: 11L2783-BS1
Matrix: Water
Analysis Batch: 11L2783

Client Sample ID: Lab Control Sample
Prep Type: Dissolved
Prep Batch: 11L2783_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00800	0.00865		mg/l		108	80 - 120

Lab Sample ID: 11L2783-MS1
Matrix: Water
Analysis Batch: 11L2783

Client Sample ID: Matrix Spike
Prep Type: Dissolved
Prep Batch: 11L2783_P

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Result	Matrix Spike Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	ND		0.00800	0.00895		mg/l		112	70 - 130

Lab Sample ID: 11L2783-MSD1
Matrix: Water
Analysis Batch: 11L2783

Client Sample ID: Matrix Spike Duplicate
Prep Type: Dissolved
Prep Batch: 11L2783_P

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Dup Result	Matrix Spike Dup Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	ND		0.00800	0.00860		mg/l		108	70 - 130	4	20

Method: EPA 300.0 - INORGANICS

Lab Sample ID: 11L2252-BLK1
Matrix: Water
Analysis Batch: 11L2252

Client Sample ID: Method Blank
Prep Type: Total
Prep Batch: 11L2252_P

Analyte	Blank Result	Blank Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.50	mg/l		12/16/11 08:00	12/16/11 10:28	1.00
Nitrate-N	ND		0.11	mg/l		12/16/11 08:00	12/16/11 10:28	1.00
Orthophosphate - P	ND		0.16	mg/l		12/16/11 08:00	12/16/11 10:28	1.00
Sulfate	ND		0.50	mg/l		12/16/11 08:00	12/16/11 10:28	1.00

Lab Sample ID: 11L2252-BS1
Matrix: Water
Analysis Batch: 11L2252

Client Sample ID: Lab Control Sample
Prep Type: Total
Prep Batch: 11L2252_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	5.00	4.85	M-3	mg/l		97	90 - 110
Nitrate-N	1.13	1.13	M-3	mg/l		100	90 - 110
Orthophosphate - P	1.63	1.61		mg/l		99	90 - 110
Sulfate	10.0	9.59	M-3	mg/l		96	90 - 110

Lab Sample ID: 11L2252-MS1
Matrix: Water
Analysis Batch: 11L2252

Client Sample ID: Matrix Spike
Prep Type: Total
Prep Batch: 11L2252_P

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Result	Matrix Spike Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate-N	0.447		1.13	1.54		mg/l		96	80 - 120

Method: EPA 300.0 - INORGANICS (Continued)

Lab Sample ID: 11L2252-MS1
Matrix: Water
Analysis Batch: 11L2252

Client Sample ID: Matrix Spike
Prep Type: Total
Prep Batch: 11L2252_P

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Result	Matrix Spike Qualifier	Unit	D	%Rec	%Rec. Limits
Orthophosphate - P	ND		1.63	1.24	M2	mg/l		76	80 - 120

Lab Sample ID: 11L2252-MS2
Matrix: Water
Analysis Batch: 11L2252

Client Sample ID: Matrix Spike
Prep Type: Total
Prep Batch: 11L2252_P

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Result	Matrix Spike Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	9.54		5.00	15.1		mg/l		111	80 - 120
Orthophosphate - P	0.486		1.63	3.22	M1	mg/l		168	80 - 120
Sulfate	22.8		10.0	34.0		mg/l		112	80 - 120

Lab Sample ID: 11L2252-MSD1
Matrix: Water
Analysis Batch: 11L2252

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total
Prep Batch: 11L2252_P

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Dup Result	Matrix Spike Dup Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate-N	0.447		1.13	1.54		mg/l		97	80 - 120	0.2	20
Orthophosphate - P	ND		1.63	1.33		mg/l		81	80 - 120	7	20

Method: SM 4500-F-C - INORGANICS

Lab Sample ID: 11L3237-BLK1
Matrix: Water
Analysis Batch: 11L3237

Client Sample ID: Method Blank
Prep Type: Total
Prep Batch: 11L3237_P

Analyte	Blank Result	Blank Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	ND		0.10	mg/l		12/23/11 04:30	12/23/11 05:41	1.00

Lab Sample ID: 11L3237-BS1
Matrix: Water
Analysis Batch: 11L3237

Client Sample ID: Lab Control Sample
Prep Type: Total
Prep Batch: 11L3237_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	1.00	0.997		mg/l		100	90 - 110

Lab Sample ID: 11L3237-MS1
Matrix: Water
Analysis Batch: 11L3237

Client Sample ID: MCWP-MW02-20111215
Prep Type: Total
Prep Batch: 11L3237_P

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Result	Matrix Spike Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	0.201		1.00	1.21		mg/l		101	80 - 120

Lab Sample ID: 11L3237-MSD1
Matrix: Water
Analysis Batch: 11L3237

Client Sample ID: MCWP-MW02-20111215
Prep Type: Total
Prep Batch: 11L3237_P

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Dup Result	Matrix Spike Dup Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Fluoride	0.201		1.00	1.21		mg/l		101	80 - 120	0.4	20

QC Sample Results

Client: Earth Forensics
Project/Site: Malibu Centralized Wastewater Project

TestAmerica Job ID: IUL1882

Method: SM2320B - INORGANICS

Lab Sample ID: 11L3532-BLK1
Matrix: Water
Analysis Batch: 11L3532

Client Sample ID: Method Blank
Prep Type: Total
Prep Batch: 11L3532_P

Analyte	Blank Result	Blank Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	ND		2.0	mg/l		12/27/11 13:12	12/27/11 13:30	1.00
Bicarbonate Alkalinity as CaCO3	ND		2.0	mg/l		12/27/11 13:12	12/27/11 13:30	1.00
Carbonate Alkalinity as CaCO3	ND		2.0	mg/l		12/27/11 13:12	12/27/11 13:30	1.00
Hydroxide Alkalinity as CaCO3	ND		2.0	mg/l		12/27/11 13:12	12/27/11 13:30	1.00

Lab Sample ID: 11L3532-BS1
Matrix: Water
Analysis Batch: 11L3532

Client Sample ID: Lab Control Sample
Prep Type: Total
Prep Batch: 11L3532_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity as CaCO3	183	166		mg/l		91	90 - 110

Lab Sample ID: 11L3532-DUP1
Matrix: Water
Analysis Batch: 11L3532

Client Sample ID: Duplicate
Prep Type: Total
Prep Batch: 11L3532_P

Analyte	Sample Result	Sample Qualifier	Duplicate Result	Duplicate Qualifier	Unit	D	RPD	RPD Limit
Alkalinity as CaCO3	300		304		mg/l		1	20
Bicarbonate Alkalinity as CaCO3	300		304		mg/l		1	20
Carbonate Alkalinity as CaCO3	ND		ND		mg/l			20
Hydroxide Alkalinity as CaCO3	ND		ND		mg/l			20

Method: SM2540C - INORGANICS

Lab Sample ID: 11L2472-BLK1
Matrix: Water
Analysis Batch: 11L2472

Client Sample ID: Method Blank
Prep Type: Total
Prep Batch: 11L2472_P

Analyte	Blank Result	Blank Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	ND		10	mg/l		12/19/11 04:48	12/19/11 10:30	1.00

Lab Sample ID: 11L2472-BS1
Matrix: Water
Analysis Batch: 11L2472

Client Sample ID: Lab Control Sample
Prep Type: Total
Prep Batch: 11L2472_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	1000	996		mg/l		100	90 - 110

Lab Sample ID: 11L2472-DUP1
Matrix: Water
Analysis Batch: 11L2472

Client Sample ID: Duplicate
Prep Type: Total
Prep Batch: 11L2472_P

Analyte	Sample Result	Sample Qualifier	Duplicate Result	Duplicate Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	247		244		mg/l		1	10

QC Sample Results

Client: Earth Forensics
Project/Site: Malibu Centralized Wastewater Project

TestAmerica Job ID: IUL1882

Method: SM4500NH3-D - INORGANICS

Lab Sample ID: 11L2599-BLK1
Matrix: Water
Analysis Batch: 11L2599

Client Sample ID: Method Blank
Prep Type: Total
Prep Batch: 11L2599_P

Analyte	Blank Result	Blank Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia-N	ND		0.50	mg/l		12/19/11 19:14	12/19/11 19:40	1.00

Lab Sample ID: 11L2599-BS1
Matrix: Water
Analysis Batch: 11L2599

Client Sample ID: Lab Control Sample
Prep Type: Total
Prep Batch: 11L2599_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia-N	1.00	1.06		mg/l		106	85 - 115

Lab Sample ID: 11L2599-MS1
Matrix: Water
Analysis Batch: 11L2599

Client Sample ID: Matrix Spike
Prep Type: Total
Prep Batch: 11L2599_P

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Result	Matrix Spike Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia-N	ND		2.00	1.92		mg/l		96	75 - 125

Lab Sample ID: 11L2599-MSD1
Matrix: Water
Analysis Batch: 11L2599

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total
Prep Batch: 11L2599_P

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Dup Result	Matrix Spike Dup Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ammonia-N	ND		2.00	1.92		mg/l		96	75 - 125	0	15

6

QC Association Summary

Client: Earth Forensics
Project/Site: Malibu Centralized Wastewater Project

TestAmerica Job ID: IUL1882

Metals

Analysis Batch: 11L2322

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
IUL1882-01	MCWP-MW02-20111215	Total	Water	Filtration	11L2322_P
IUL1882-02	MCWP-MW02-20111216	Total	Water	Filtration	11L2322_P

Analysis Batch: 11L2783

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11L2783-BLK1	Method Blank	Dissolved	Water	EPA 7470A-Diss	11L2783_P
11L2783-BS1	Lab Control Sample	Dissolved	Water	EPA 7470A-Diss	11L2783_P
11L2783-MS1	Matrix Spike	Dissolved	Water	EPA 7470A-Diss	11L2783_P
11L2783-MSD1	Matrix Spike Duplicate	Dissolved	Water	EPA 7470A-Diss	11L2783_P
IUL1882-01	MCWP-MW02-20111215	Dissolved	Water	EPA 7470A-Diss	11L2783_P
IUL1882-02	MCWP-MW02-20111216	Dissolved	Water	EPA 7470A-Diss	11L2783_P

Analysis Batch: 11L3120

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11L3120-BLK1	Method Blank	Dissolved	Water	EPA 6010B-Diss	11L3120_P
11L3120-BS1	Lab Control Sample	Dissolved	Water	EPA 6010B-Diss	11L3120_P
11L3120-MS1	Matrix Spike	Dissolved	Water	EPA 6010B-Diss	11L3120_P
11L3120-MSD1	Matrix Spike Duplicate	Dissolved	Water	EPA 6010B-Diss	11L3120_P
IUL1882-01	MCWP-MW02-20111215	Dissolved	Water	EPA 6010B-Diss	11L3120_P
IUL1882-02	MCWP-MW02-20111216	Dissolved	Water	EPA 6010B-Diss	11L3120_P

Prep Batch: 11L2322_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
IUL1882-01	MCWP-MW02-20111215	Total	Water	Filtration-Metals	
IUL1882-02	MCWP-MW02-20111216	Total	Water	Filtration-Metals	

Prep Batch: 11L2783_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11L2783-BLK1	Method Blank	Dissolved	Water	EPA 7470A Hg	
11L2783-BS1	Lab Control Sample	Dissolved	Water	EPA 7470A Hg	
11L2783-MS1	Matrix Spike	Dissolved	Water	EPA 7470A Hg	
11L2783-MSD1	Matrix Spike Duplicate	Dissolved	Water	EPA 7470A Hg	
IUL1882-01	MCWP-MW02-20111215	Dissolved	Water	EPA 7470A Hg	
IUL1882-02	MCWP-MW02-20111216	Dissolved	Water	EPA 7470A Hg	

Prep Batch: 11L3120_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11L3120-BLK1	Method Blank	Dissolved	Water	EPA 3005A ICP	
11L3120-BS1	Lab Control Sample	Dissolved	Water	EPA 3005A ICP	
11L3120-MS1	Matrix Spike	Dissolved	Water	EPA 3005A ICP	
11L3120-MSD1	Matrix Spike Duplicate	Dissolved	Water	EPA 3005A ICP	
IUL1882-01	MCWP-MW02-20111215	Dissolved	Water	EPA 3005A ICP	
IUL1882-02	MCWP-MW02-20111216	Dissolved	Water	EPA 3005A ICP	

Wet Chemistry

Analysis Batch: 11L2252

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11L2252-BLK1	Method Blank	Total	Water	EPA 300.0	11L2252_P
11L2252-BS1	Lab Control Sample	Total	Water	EPA 300.0	11L2252_P
11L2252-MS1	Matrix Spike	Total	Water	EPA 300.0	11L2252_P
11L2252-MS2	Matrix Spike	Total	Water	EPA 300.0	11L2252_P

QC Association Summary

Client: Earth Forensics
Project/Site: Malibu Centralized Wastewater Project

TestAmerica Job ID: IUL1882

Wet Chemistry (Continued)

Analysis Batch: 11L2252 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11L2252-MSD1	Matrix Spike Duplicate	Total	Water	EPA 300.0	11L2252_P
IUL1882-01	MCWP-MW02-20111215	Total	Water	EPA 300.0	11L2252_P
IUL1882-02	MCWP-MW02-20111216	Total	Water	EPA 300.0	11L2252_P

Analysis Batch: 11L2472

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11L2472-BLK1	Method Blank	Total	Water	SM2540C	11L2472_P
11L2472-BS1	Lab Control Sample	Total	Water	SM2540C	11L2472_P
11L2472-DUP1	Duplicate	Total	Water	SM2540C	11L2472_P
IUL1882-01	MCWP-MW02-20111215	Total	Water	SM2540C	11L2472_P
IUL1882-02	MCWP-MW02-20111216	Total	Water	SM2540C	11L2472_P

Analysis Batch: 11L2599

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11L2599-BLK1	Method Blank	Total	Water	SM4500NH3-D	11L2599_P
11L2599-BS1	Lab Control Sample	Total	Water	SM4500NH3-D	11L2599_P
11L2599-MS1	Matrix Spike	Total	Water	SM4500NH3-D	11L2599_P
11L2599-MSD1	Matrix Spike Duplicate	Total	Water	SM4500NH3-D	11L2599_P
IUL1882-01	MCWP-MW02-20111215	Total	Water	SM4500NH3-D	11L2599_P
IUL1882-02	MCWP-MW02-20111216	Total	Water	SM4500NH3-D	11L2599_P

Analysis Batch: 11L3237

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11L3237-BLK1	Method Blank	Total	Water	SM 4500-F-C	11L3237_P
11L3237-BS1	Lab Control Sample	Total	Water	SM 4500-F-C	11L3237_P
11L3237-MS1	MCWP-MW02-20111215	Total	Water	SM 4500-F-C	11L3237_P
11L3237-MSD1	MCWP-MW02-20111215	Total	Water	SM 4500-F-C	11L3237_P
IUL1882-01	MCWP-MW02-20111215	Total	Water	SM 4500-F-C	11L3237_P
IUL1882-02	MCWP-MW02-20111216	Total	Water	SM 4500-F-C	11L3237_P

Analysis Batch: 11L3532

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11L3532-BLK1	Method Blank	Total	Water	SM2320B	11L3532_P
11L3532-BS1	Lab Control Sample	Total	Water	SM2320B	11L3532_P
11L3532-DUP1	Duplicate	Total	Water	SM2320B	11L3532_P
IUL1882-01	MCWP-MW02-20111215	Total	Water	SM2320B	11L3532_P
IUL1882-02	MCWP-MW02-20111216	Total	Water	SM2320B	11L3532_P

Prep Batch: 11L2252_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11L2252-BLK1	Method Blank	Total	Water	General Prep	
11L2252-BS1	Lab Control Sample	Total	Water	General Prep	
11L2252-MS1	Matrix Spike	Total	Water	General Prep	
11L2252-MS2	Matrix Spike	Total	Water	General Prep	
11L2252-MSD1	Matrix Spike Duplicate	Total	Water	General Prep	
IUL1882-01	MCWP-MW02-20111215	Total	Water	General Prep	
IUL1882-02	MCWP-MW02-20111216	Total	Water	General Prep	

Prep Batch: 11L2472_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11L2472-BLK1	Method Blank	Total	Water	General Prep	
11L2472-BS1	Lab Control Sample	Total	Water	General Prep	

QC Association Summary

Client: Earth Forensics
Project/Site: Malibu Centralized Wastewater Project

TestAmerica Job ID: IUL1882

Wet Chemistry (Continued)

Prep Batch: 11L2472_P (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11L2472-DUP1	Duplicate	Total	Water	General Prep	
IUL1882-01	MCWP-MW02-20111215	Total	Water	General Prep	
IUL1882-02	MCWP-MW02-20111216	Total	Water	General Prep	

Prep Batch: 11L2599_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11L2599-BLK1	Method Blank	Total	Water	General Prep	
11L2599-BS1	Lab Control Sample	Total	Water	General Prep	
11L2599-MS1	Matrix Spike	Total	Water	General Prep	
11L2599-MSD1	Matrix Spike Duplicate	Total	Water	General Prep	
IUL1882-01	MCWP-MW02-20111215	Total	Water	General Prep	
IUL1882-02	MCWP-MW02-20111216	Total	Water	General Prep	

Prep Batch: 11L3237_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11L3237-BLK1	Method Blank	Total	Water	General Prep	
11L3237-BS1	Lab Control Sample	Total	Water	General Prep	
11L3237-MS1	MCWP-MW02-20111215	Total	Water	General Prep	
11L3237-MSD1	MCWP-MW02-20111215	Total	Water	General Prep	
IUL1882-01	MCWP-MW02-20111215	Total	Water	General Prep	
IUL1882-02	MCWP-MW02-20111216	Total	Water	General Prep	

Prep Batch: 11L3532_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11L3532-BLK1	Method Blank	Total	Water	General Prep	
11L3532-BS1	Lab Control Sample	Total	Water	General Prep	
11L3532-DUP1	Duplicate	Total	Water	General Prep	
IUL1882-01	MCWP-MW02-20111215	Total	Water	General Prep	
IUL1882-02	MCWP-MW02-20111216	Total	Water	General Prep	

Definitions/Glossary

Client: Earth Forensics
Project/Site: Malibu Centralized Wastewater Project

TestAmerica Job ID: IUL1882

Qualifiers

Metals

Qualifier	Qualifier Description
MHA	Due to high levels of analyte in the sample, the MS/MSD calculation does not provide useful spike recovery information. See Blank Spike (LCS).

Wet Chemistry

Qualifier	Qualifier Description
M-3	Results exceeded the linear range in the MS/MSD and therefore are not available for reporting. The batch was accepted based on acceptable recovery in the Blank Spike (LCS).
M2	The MS and/or MSD were below the acceptance limits due to sample matrix interference. See Blank Spike (LCS).
M1	The MS and/or MSD were above the acceptance limits due to sample matrix interference. See Blank Spike (LCS).

8

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RL	Reporting Limit
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Certification Summary

Client: Earth Forensics
Project/Site: Malibu Centralized Wastewater Project

TestAmerica Job ID: IUL1882

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica Irvine	Arizona	State Program	9	AZ0671
TestAmerica Irvine	California	LA Cty Sanitation Districts	9	10256
TestAmerica Irvine	California	NELAC	9	1108CA
TestAmerica Irvine	California	State Program	9	2706
TestAmerica Irvine	Guam	State Program	9	Cert. No. 10.001r
TestAmerica Irvine	Hawaii	State Program	9	N/A
TestAmerica Irvine	Nevada	State Program	9	CA015312007A
TestAmerica Irvine	New Mexico	State Program	6	N/A
TestAmerica Irvine	Northern Mariana Islands	State Program	9	MP0002
TestAmerica Irvine	Oregon	NELAC	10	4005
TestAmerica Irvine	USDA	USDA		P330-09-00080

9

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TAL-0013 (0911)

CHAIN OF CUSTODY FORM

17461 Derian Ave., #100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297
1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046
4625 E. Cotton Center Blvd., Suite 189, Phoenix, AZ 85040 (602) 437-3340 FAX (602) 454-9303
6000 S. Eastern Ave., Suite 5E, Las Vegas, NV 89119 (702) 429-1264

IU L4882

Client Name/Address:
Earth Forensics
12532 Vista Panorama
North Tustin, CA 92705

Project/PO Number:
Malibu Centralized Wastewater Project

Project Manager:
W. Richard Laton (714) 296-4055

Phone Number:
562-458-0614

Sampler:
N. Napoli

Fax Number:
562-741-4587

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives	Analysis Required: Ammonia-N ISE 4500NH3-D	Phos-P, ortho - 300 Sulfate - EPA 300 Nitrate-N EPA 300	Chloride EPA 300 Fluoride (total) SM4500FC TDS - SM2540C	Alkalinity - All forms as CaCO3 SM2320B Carb (bicarb)	Aluminum 6010B Diss Arsenic Barium	Boron Cadmium 6010B Diss Calcium	Chromium Cobalt 6010B Diss Copper	Iron, Lead, Manganese, Magnesium, Nickel, 6010B Diss Potassium, Selenium	Silica, Silver, Sodium, Zinc, Vanadium 6010B Diss	Mercury - 7470A	Special Instructions
MCWP-MW02-20111215	GW	500ml	4	12.15.11	1400		X	X	X	X	X	X	X	X	X	X	
MCWP-MW02-20111216	GW	500	4	12.16.11	1100		X	X	X	X	X	X	X	X	X	X	BR 12-16-11 15:50

10

Relinquished By: Date/Time: 12/16/11 1315

Relinquished By: Date/Time:

Relinquished By: Date/Time:

Received By: Date/Time:

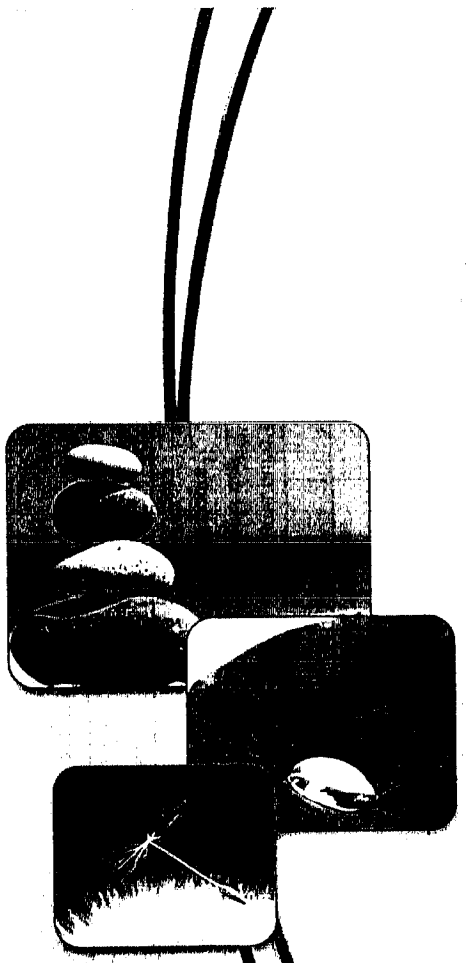
Received By: Date/Time:

Received in Lab By: Date/Time: 12/16/11 13:15

Turnaround Time: (Check)
same day ____ 72 hours ____
24 hours ____ 5 days ____
48 hours ____ normal X

Sample Integrity: (Check)
intact X on ice 3.9

Note: By relinquishing samples to TestAmerica, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.



TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Irvine
17461 Derian Avenue. Suite 100
Irvine, CA 92614
Tel: (949) 261-1022

TestAmerica Job ID: IUL2023
Client Project/Site: 44002987 - Title 22 Analysis
Client Project Description: 44002987 - Title 22 Analysis

For:
Earth Forensics
12532 Vista Panorama
North Tustin, CA 92705

Attn: Richard Laton

Authorized for release by:
1/17/2012 8:33:48 PM
Kathleen A. Robb
Client Services Manager
Kathleen.Robb@testamericainc.com

Designee for

Pat Abe
Project Manager
Pat.Abe@testamericainc.com

Table of Contents

Sample Summary

Client: Earth Forensics
Project/Site: 44002987 - Title 22 Analysis

TestAmerica Job ID: IUL2023

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
IUL2023-01	MCWP-MW02-20111217	Water	12/17/11 09:30	12/17/11 13:00

Client Sample ID: MCWP-MW02-20111217
Date Collected: 12/17/11 09:30
Date Received: 12/17/11 13:00

Lab Sample ID: IUL2023-01
Matrix: Water

4

Method: EPA 524.2 - PURGEABLE ORGANIC COMPOUNDS BY GC/MS (EPA 524.2)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.50	ug/l		12/21/11 09:08	12/21/11 18:19	1.0
Bromodichloromethane	ND		1.0	ug/l		12/21/11 09:08	12/21/11 18:19	1.0
Bromoform	ND		1.0	ug/l		12/21/11 09:08	12/21/11 18:19	1.0
Carbon tetrachloride	ND		0.50	ug/l		12/21/11 09:08	12/21/11 18:19	1.0
Chlorobenzene	ND		0.50	ug/l		12/21/11 09:08	12/21/11 18:19	1.0
Chloroform	ND		1.0	ug/l		12/21/11 09:08	12/21/11 18:19	1.0
Dibromochloromethane	ND		1.0	ug/l		12/21/11 09:08	12/21/11 18:19	1.0
1,2-Dichlorobenzene	ND		0.50	ug/l		12/21/11 09:08	12/21/11 18:19	1.0
1,4-Dichlorobenzene	ND		0.50	ug/l		12/21/11 09:08	12/21/11 18:19	1.0
1,1-Dichloroethane	ND		0.50	ug/l		12/21/11 09:08	12/21/11 18:19	1.0
1,2-Dichloroethane	ND		0.50	ug/l		12/21/11 09:08	12/21/11 18:19	1.0
1,1-Dichloroethene	ND		0.50	ug/l		12/21/11 09:08	12/21/11 18:19	1.0
cis-1,2-Dichloroethene	ND		0.50	ug/l		12/21/11 09:08	12/21/11 18:19	1.0
trans-1,2-Dichloroethene	ND		0.50	ug/l		12/21/11 09:08	12/21/11 18:19	1.0
1,2-Dichloropropane	ND		0.50	ug/l		12/21/11 09:08	12/21/11 18:19	1.0
cis-1,3-Dichloropropene	ND		0.50	ug/l		12/21/11 09:08	12/21/11 18:19	1.0
trans-1,3-Dichloropropene	ND		0.50	ug/l		12/21/11 09:08	12/21/11 18:19	1.0
1,3-Dichloropropene, Total	ND		0.50	ug/l		12/21/11 09:08	12/21/11 18:19	1.0
Ethylbenzene	ND		0.50	ug/l		12/21/11 09:08	12/21/11 18:19	1.0
Methylene chloride	ND		0.50	ug/l		12/21/11 09:08	12/21/11 18:19	1.0
Styrene	ND		0.50	ug/l		12/21/11 09:08	12/21/11 18:19	1.0
1,1,2,2-Tetrachloroethane	ND		0.50	ug/l		12/21/11 09:08	12/21/11 18:19	1.0
Tetrachloroethene	ND		0.50	ug/l		12/21/11 09:08	12/21/11 18:19	1.0
Toluene	ND		0.50	ug/l		12/21/11 09:08	12/21/11 18:19	1.0
1,2,4-Trichlorobenzene	ND		0.50	ug/l		12/21/11 09:08	12/21/11 18:19	1.0
1,1,1-Trichloroethane	ND		0.50	ug/l		12/21/11 09:08	12/21/11 18:19	1.0
1,1,2-Trichloroethane	ND		0.50	ug/l		12/21/11 09:08	12/21/11 18:19	1.0
Trichloroethene	ND		0.50	ug/l		12/21/11 09:08	12/21/11 18:19	1.0
Trichlorofluoromethane	ND		5.0	ug/l		12/21/11 09:08	12/21/11 18:19	1.0
Trichlorotrifluoroethane (Freon 113)	ND		10	ug/l		12/21/11 09:08	12/21/11 18:19	1.0
Vinyl chloride	ND		0.50	ug/l		12/21/11 09:08	12/21/11 18:19	1.0
m,p-Xylenes	ND		0.50	ug/l		12/21/11 09:08	12/21/11 18:19	1.0
o-Xylene	ND		0.50	ug/l		12/21/11 09:08	12/21/11 18:19	1.0
Xylenes, Total	ND		1.0	ug/l		12/21/11 09:08	12/21/11 18:19	1.0
Methyl-tert-butyl Ether (MTBE)	ND		3.0	ug/l		12/21/11 09:08	12/21/11 18:19	1.0
Trihalomethanes, Total	**<4.0**		1.0	ug/l		12/21/11 09:08	12/21/11 18:19	1.0

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*75*		*70 - 130*	*12/21/11 09:08*	*12/21/11 18:19*	*1.0*
1,2-Dichlorobenzene-d4	*84*		*70 - 130*	*12/21/11 09:08*	*12/21/11 18:19*	*1.0*

Method: SRL 524.2 M-TCP - PURGEABLE ORGANIC COMPOUNDS BY GC/MS (EPA 524.2)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND		0.0050	ug/l		12/22/11 11:00	12/22/11 14:11	1.0

Method: EPA 504.1 - EDB and DBCP in Water by GC/ECD (EPA 504.1)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.020	ug/l		12/21/11 15:00	12/22/11 00:58	1.0
1,2-Dibromo-3-chloropropane	ND		0.0098	ug/l		12/21/11 15:00	12/22/11 00:58	1.0

Client Sample ID: MCWP-MW02-20111217
Date Collected: 12/17/11 09:30
Date Received: 12/17/11 13:00

Lab Sample ID: IUL2023-01
Matrix: Water

4

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*99*		*50 - 150*	*12/21/11 15:00*	*12/22/11 00:58*	*1.0*

Method: EPA 505 - ORGANOCHLORINE PESTICIDES AND PCBS (EPA 505)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alachlor	ND		0.97	ug/l		12/22/11 10:01	12/22/11 23:19	1.0
Endrin	ND		0.097	ug/l		12/22/11 10:01	12/22/11 23:19	1.0
Heptachlor	ND		0.0097	ug/l		12/22/11 10:01	12/22/11 23:19	1.0
Heptachlor epoxide	ND		0.0097	ug/l		12/22/11 10:01	12/22/11 23:19	1.0
gamma-BHC (Lindane)	ND		0.19	ug/l		12/22/11 10:01	12/22/11 23:19	1.0
Methoxychlor	ND		9.7	ug/l		12/22/11 10:01	12/22/11 23:19	1.0
PCBs as Decachlorobiphenyl (DCB)	ND		0.48	ug/l		12/22/11 10:01	12/22/11 23:19	1.0
Chlordane	ND		0.097	ug/l		12/22/11 10:01	12/22/11 23:19	1.0
Toxaphene	ND		0.97	ug/l		12/22/11 10:01	12/22/11 23:19	1.0
Aroclor 1016	ND		0.25	ug/l		12/22/11 10:01	12/22/11 23:19	1.0
Aroclor 1221	ND		0.18	ug/l		12/22/11 10:01	12/22/11 23:19	1.0
Aroclor 1232	ND		0.22	ug/l		12/22/11 10:01	12/22/11 23:19	1.0
Aroclor 1242	ND		0.25	ug/l		12/22/11 10:01	12/22/11 23:19	1.0
Aroclor 1248	ND		0.29	ug/l		12/22/11 10:01	12/22/11 23:19	1.0
Aroclor 1254	ND		0.32	ug/l		12/22/11 10:01	12/22/11 23:19	1.0
Aroclor 1260	ND		0.35	ug/l		12/22/11 10:01	12/22/11 23:19	1.0

Method: EPA 515.4 - CHLORINATED ACIDS (EPA 515.4)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Bentazon	ND		2.0	ug/l		12/19/11 13:30	12/20/11 01:22	1.0
2,4-D	ND		9.9	ug/l		12/19/11 13:30	12/20/11 01:22	1.0
Dacthal acid metabolites	ND		2.0	ug/l		12/19/11 13:30	12/20/11 01:22	1.0
Dalapon	ND		9.9	ug/l		12/19/11 13:30	12/20/11 01:22	1.0
Dicamba	ND		1.5	ug/l		12/19/11 13:30	12/20/11 01:22	1.0
Dinoseb	ND		2.0	ug/l		12/19/11 13:30	12/20/11 01:22	1.0
Pentachlorophenol	ND		0.20	ug/l		12/19/11 13:30	12/20/11 01:22	1.0
Picloram	ND		0.99	ug/l		12/19/11 13:30	12/20/11 01:22	1.0
2,4,5-TP (Silvex)	ND		0.99	ug/l		12/19/11 13:30	12/20/11 01:22	1.0

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*104*		*70 - 130*	*12/19/11 13:30*	*12/20/11 01:22*	*1.0*

Method: EPA 552.2 - HALOACETIC ACIDS (EPA 552.2)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Dibromoacetic acid (DBAA)	ND		0.99	ug/l		12/20/11 13:20	12/21/11 04:15	1.0
Dichloroacetic acid (DCAA)	ND		0.99	ug/l		12/20/11 13:20	12/21/11 04:15	1.0
Monobromoacetic acid (MBAA)	ND		0.99	ug/l		12/20/11 13:20	12/21/11 04:15	1.0
Monochloroacetic acid (MCAA)	ND		2.0	ug/l		12/20/11 13:20	12/21/11 04:15	1.0
Trichloroacetic acid (TCAA)	ND		0.99	ug/l		12/20/11 13:20	12/21/11 04:15	1.0
Haloacetic acids (Five) (HAA5)	**<6**		0.99	ug/l		12/20/11 13:20	12/21/11 04:15	1.0

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,3-Dibromopropanoic acid	*108*		*70 - 130*	*12/20/11 13:20*	*12/21/11 04:15*	*1.0*

Method: EPA 531.1 - CARBAMATES BY HPLC (EPA 531.1)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Aldicarb Sulfoxide	ND		3.0	ug/l			12/27/11 12:53	1.0
Aldicarb Sulfone	ND		4.0	ug/l			12/27/11 12:53	1.0

Client Sample ID: MCWP-MW02-20111217
Date Collected: 12/17/11 09:30
Date Received: 12/17/11 13:00

Lab Sample ID: IUL2023-01
Matrix: Water

4

Method: EPA 531.1 - CARBAMATES BY HPLC (EPA 531.1) (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Oxamyl	ND		20	ug/l			12/27/11 12:53	1.0
Methomyl	ND		2.0	ug/l			12/27/11 12:53	1.0
3-Hydroxycarbofuran	ND		3.0	ug/l			12/27/11 12:53	1.0
Aldicarb	ND		3.0	ug/l			12/27/11 12:53	1.0
Carbofuran	ND		5.0	ug/l			12/27/11 12:53	1.0
Carbaryl	ND		5.0	ug/l			12/27/11 12:53	1.0

Method: EPA 547 - GLYPHOSATE (EPA 547)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Glyphosate	ND		25	ug/l		12/21/11 09:33	12/21/11 17:13	1.0

Method: EPA 549.2 - DIQUAT/PARAQUAT (EPA 549.2)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diquat	ND		4.0	ug/l		12/19/11 06:20	12/20/11 14:35	1.0
Paraquat	ND		20	ug/l		12/19/11 06:20	12/20/11 14:35	1.0

Method: EPA 200.7 - METALS

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Silica (as SiO2)	**32**		0.11	mg/l		12/23/11 15:55	12/29/11 15:20	1.0
Boron	**0.82**		0.050	mg/l		12/23/11 15:55	12/23/11 20:01	1.0
Calcium	**150**	**MHA**	0.10	mg/l		12/23/11 15:55	12/23/11 20:01	1.0
Iron	ND		0.040	mg/l		12/23/11 15:55	12/23/11 20:01	1.0
Magnesium	**88**	**MHA**	0.020	mg/l		12/23/11 15:55	12/23/11 20:01	1.0
Potassium	**4.1**		0.50	mg/l		12/23/11 15:55	12/29/11 15:20	1.0
Sodium	**210**	**MHA B-1**	0.50	mg/l		12/23/11 15:55	12/29/11 15:20	1.0

Method: EPA 200.8 - METALS

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		10	ug/l		12/22/11 14:34	12/28/11 17:14	1.0
Antimony	ND	C	2.0	ug/l		12/22/11 14:34	12/23/11 14:53	1.0
Arsenic	**3.0**		1.0	ug/l		12/22/11 14:34	12/23/11 14:53	1.0
Barium	**53**		1.0	ug/l		12/22/11 14:34	12/23/11 14:53	1.0
Beryllium	ND		0.50	ug/l		12/22/11 14:34	12/27/11 23:44	1.0
Cadmium	ND		1.0	ug/l		12/22/11 14:34	12/23/11 14:53	1.0
Chromium	ND		2.0	ug/l		12/22/11 14:34	12/23/11 14:53	1.0
Cobalt	ND		1.0	ug/l		12/22/11 14:34	12/23/11 14:53	1.0
Copper	ND		2.0	ug/l		12/22/11 14:34	12/23/11 14:53	1.0
Lead	ND		1.0	ug/l		12/22/11 14:34	12/23/11 14:53	1.0
Manganese	**660**		1.0	ug/l		12/22/11 14:34	12/23/11 14:53	1.0
Nickel	**2.6**		2.0	ug/l		12/22/11 14:34	12/23/11 14:53	1.0
Selenium	**4.1**		2.0	ug/l		12/22/11 14:34	12/23/11 14:53	1.0
Silver	ND	C	1.0	ug/l		12/22/11 14:34	12/23/11 14:53	1.0
Thallium	ND		1.0	ug/l		12/22/11 14:34	12/23/11 14:53	1.0
Vanadium	**5.7**		2.0	ug/l		12/22/11 14:34	12/23/11 14:53	1.0
Zinc	ND		20	ug/l		12/22/11 14:34	12/23/11 14:53	1.0

Method: EPA 245.1 - METALS

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	mg/l		12/19/11 13:34	12/20/11 21:15	1.0

Client Sample Results

Client: Earth Forensics
Project/Site: 44002987 - Title 22 Analysis

TestAmerica Job ID: IUL2023

Client Sample ID: MCWP-MW02-20111217
Date Collected: 12/17/11 09:30
Date Received: 12/17/11 13:00

Lab Sample ID: IUL2023-01
Matrix: Water

4

Method: SM2340B - INORGANICS

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hardness (as CaCO3)	**740**		1.0	mg/l		12/23/11 15:55	12/23/11 20:01	1.0

Method: Calculation - AGGRESSIVE INDEX

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Aggressive Index	**13**		0.010	SI Units		12/29/11 10:43	12/29/11 10:47	1.0

Method: EPA 300.0 - INORGANICS

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**290**		10	mg/l		12/19/11 16:00	12/19/11 16:23	20
Nitrate-N	**0.33**		0.11	mg/l		12/17/11 14:20	12/17/11 14:40	1.0
Nitrate-NO3	**1.5**		0.50	mg/l		12/17/11 14:20	12/17/11 14:40	1.0
Nitrite-N	ND		0.15	mg/l		12/17/11 14:20	12/17/11 14:40	1.0
Nitrate/Nitrite-N	**0.33**		0.26	mg/l		12/17/11 14:20	12/17/11 14:40	1.0
Sulfate	**500**		10	mg/l		12/19/11 16:00	12/19/11 16:23	20

Method: EPA 351.2 - INORGANICS

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Kjeldahl Nitrogen	ND		0.50	mg/l		12/27/11 15:00	12/27/11 20:24	1.0

Method: EPA 365.3 - INORGANICS

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Phosphorus	**0.11**		0.050	mg/l		12/20/11 08:01	12/20/11 15:13	1.0

Method: SM 4500-F-C - INORGANICS

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	**0.48**		0.10	mg/l		12/23/11 04:30	12/23/11 07:55	1.0

Method: SM2320B - INORGANICS

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	**310**		2.0	mg/l		12/28/11 10:36	12/28/11 11:30	1.0
Bicarbonate Alkalinity as CaCO3	**310**		2.0	mg/l		12/28/11 10:36	12/28/11 11:30	1.0
Carbonate Alkalinity as CaCO3	ND		2.0	mg/l		12/28/11 10:36	12/28/11 11:30	1.0
Hydroxide Alkalinity as CaCO3	ND		2.0	mg/l		12/28/11 10:36	12/28/11 11:30	1.0

Method: SM2510B - INORGANICS

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	**2300**		1.0	umhos/cm @ 25C		12/19/11 06:45	12/19/11 06:45	1.0

Method: SM2540C - INORGANICS

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**1500**		20	mg/l		12/19/11 04:52	12/19/11 11:30	1.0

Method: SM4500CN-E - INORGANICS

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Cyanide	ND		0.025	mg/l		12/28/11 14:15	12/28/11 17:00	1.0

Method: SM4500NH3-D - INORGANICS

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia-N	ND		0.50	mg/l		12/27/11 20:51	12/27/11 22:38	1.0

Client Sample Results

Client: Earth Forensics
Project/Site: 44002987 - Title 22 Analysis

TestAmerica Job ID: IUL2023

Client Sample ID: MCWP-MW02-20111217
Date Collected: 12/17/11 09:30
Date Received: 12/17/11 13:00

Lab Sample ID: IUL2023-01
Matrix: Water

4

Method: SM5310C - INORGANICS

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	**2.0**		0.10	mg/l		12/23/11 04:30	12/23/11 05:59	1.0

Method: SM5540-C - INORGANICS

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Surfactants (MBAS)	ND		0.10	mg/l		12/17/11 14:20	12/17/11 14:40	1.0

Method: SM9223B - COLIFORMS BY CHROMOGENIC SUBSTRATE - P/A (SM9223B)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Coliform	Absent		0.90	N/A		12/17/11 21:14	12/18/11 14:16	1.0
E. Coli	Absent		0.90	N/A		12/17/11 21:14	12/18/11 14:16	1.0

Method: EPA 525.2 - ORGANIC COMPOUNDS BY GC/MS (EPA 525.2)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND		0.50	ug/l		12/21/11 12:29	12/23/11 00:10	1.0
Benzo(a)pyrene	ND		0.099	ug/l		12/21/11 12:29	12/23/11 00:10	1.0
Di(2-ethylhexyl)adipate	ND		5.0	ug/l		12/21/11 12:29	12/23/11 00:10	1.0
Di(2-ethylhexyl)phthalate	ND		3.0	ug/l		12/21/11 12:29	12/23/11 00:10	1.0
Hexachlorobenzene	ND		0.50	ug/l		12/21/11 12:29	12/23/11 00:10	1.0
Hexachlorocyclopentadiene	ND		0.99	ug/l		12/21/11 12:29	12/23/11 00:10	1.0
Molinate	ND		2.0	ug/l		12/21/11 12:29	12/23/11 00:10	1.0
Simazine	ND		0.99	ug/l		12/21/11 12:29	12/23/11 00:10	1.0
Thiobencarb	ND		0.99	ug/l		12/21/11 12:29	12/23/11 00:10	1.0

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,3-Dimethyl-2-nitrobenzene	*96*		*70 - 130*	*12/21/11 12:29*	*12/23/11 00:10*	*1.0*
Triphenylphosphate	*122*		*70 - 130*	*12/21/11 12:29*	*12/23/11 00:10*	*1.0*
Perylene-d12	*94*		*70 - 130*	*12/21/11 12:29*	*12/23/11 00:10*	*1.0*

Method: EPA 548.1 - ENDOTHALL (EPA 548.1)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Endothall	ND		45	ug/l		12/19/11 06:15	12/19/11 17:42	5.0

Method: EPA-5 1613B-Tetras - EPA-5 1613B-Tetrasx

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		5	pg/L		12/28/11 09:00	12/30/11 02:19	0.97

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*60*		*31 - 137*	*12/28/11 09:00*	*12/30/11 02:19*	*0.97*

Method: EPA 150.1 - INORGANICS

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**8.0**	**HFT**	0.10	pH Units		12/19/11 14:47	12/19/11 14:47	1.0

Method: EPA 180.1 - INORGANICS

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Turbidity	ND		0.10	NTU		12/17/11 15:51	12/17/11 15:51	1.0

Method: SM2120B - INORGANICS

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Color	ND	pH	1.0	Color Units		12/17/11 17:14	12/17/11 17:14	1.0

Client Sample Results

Client: Earth Forensics
Project/Site: 44002987 - Title 22 Analysis

TestAmerica Job ID: IUL2023

Client Sample ID: MCWP-MW02-20111217
Date Collected: 12/17/11 09:30
Date Received: 12/17/11 13:00

Lab Sample ID: IUL2023-01
Matrix: Water

Method: SM2150B - INORGANICS

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Odor	ND		1.0	T.O.N.		12/17/11 16:10	12/17/11 16:10	1.0

Lab Chronicle

Client: Earth Forensics
Project/Site: 44002987 - Title 22 Analysis

TestAmerica Job ID: IUL2023

Client Sample ID: MCWP-MW02-20111217
Date Collected: 12/17/11 09:30
Date Received: 12/17/11 13:00

Lab Sample ID: IUL2023-01
Matrix: Water

5

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total	Prep	EPA 524.2		1.0	25 ml	25 ml	11L3125_P	12/22/11 11:00	MF	TAL IRV
Total	Analysis	SRL 524.2 M-TCP		1.0			11L3125	12/22/11 14:11	AX	TAL IRV
Total	Prep	EPA 524.2		1.0	25 ml	25 ml	11L2909_P	12/21/11 09:08	AX	TAL IRV
Total	Analysis	EPA 524.2		1.0			11L2909	12/21/11 18:19	AX	TAL IRV
Total	Prep	EPA 504.1		0.98	35.84 ml	2 ml	11L2921_P	12/21/11 15:00	NXH	TAL IRV
Total	Analysis	EPA 504.1		1.0			11L2921	12/22/11 00:58	JHR	TAL IRV
Total	Prep	EPA 505		0.97	36.14 ml	2 ml	11L3132_P	12/22/11 10:01	JHR	TAL IRV
Total	Analysis	EPA 505		1.0			11L3132	12/22/11 23:19	JHR	TAL IRV
Total	Prep	515.4		0.99	50.51 ml	4 ml	11L2242_P	12/19/11 13:30	NXH	TAL IRV
Total	Analysis	EPA 515.4		1.0			11L2242	12/20/11 01:22	DIS	TAL IRV
Total	Prep	EPA 552.2		0.99	40.42 ml	4 ml	11L2755_P	12/20/11 13:20	JHR	TAL IRV
Total	Analysis	EPA 552.2		1.0			11L2755	12/21/11 04:15	JHR	TAL IRV
Total	Analysis	EPA 531.1		1.0	10 ml	10 ml	11L3331	12/27/11 12:53	ACB	TAL IRV
Total	Prep	EPA 547		1.0	1 ml	1 ml	11L2922_P	12/21/11 09:33	JHR	TAL IRV
Total	Analysis	EPA 547		1.0			11L2922	12/21/11 17:13	JHR	TAL IRV
Total	Prep	*** DEFAULT PREP ***		1.0	250 ml	5 ml	11L2506_P	12/19/11 06:20	JM	TAL IRV
Total	Analysis	EPA 549.2		1.0			11L2506	12/20/11 14:35	DIS	TAL IRV
Total	Prep	EPA 200.2 ICPMS		1.0	50 ml	50 ml	11L3187_P	12/22/11 14:34	YS1	TAL IRV
Total	Analysis	EPA 200.8		1.0			11L3187	12/28/11 17:14	NH	TAL IRV
Total	Analysis	EPA 200.8		1.0			11L3187	12/23/11 14:53	NH	TAL IRV
Total	Analysis	EPA 200.8		1.0			11L3187	12/27/11 23:44	NH	TAL IRV
Total	Prep	EPA 200.2		1.0	50 ml	50 ml	11L3356_P	12/23/11 15:55	KP	TAL IRV
Total	Analysis	EPA 200.7		1.0			11L3356	12/23/11 20:01	DP	TAL IRV
Total	Analysis	SM2340B		1.0			11L3356	12/23/11 20:01	DP	TAL IRV
Total	Prep	EPA 245.1		1.0	20 ml	20 ml	11L2452_P	12/19/11 13:34	SN	TAL IRV
Total	Analysis	EPA 245.1		1.0			11L2452	12/20/11 21:15	DB	TAL IRV
Total	Analysis	EPA 200.7		1.0			11L3356	12/29/11 15:20	TK	TAL IRV
Total	Prep	General Prep		1.0	1 ml	1 ml	11L3898_P	12/29/11 10:43	KS	TAL IRV
Total	Analysis	Calculation		1.0			11L3898	12/29/11 10:47	KS	TAL IRV
Total	Prep	General Prep		1.0	25 ml	25 ml	11L3682_P	12/28/11 10:36	DC	TAL IRV
Total	Analysis	SM2320B		1.0			11L3682	12/28/11 11:30	KS	TAL IRV
Total	Prep	General Prep		1.0	50 ml	50 ml	11L3575_P	12/27/11 20:51	NCP	TAL IRV
Total	Analysis	SM4500NH3-D		1.0			11L3575	12/27/11 22:38	NCP	TAL IRV
Total	Prep	General Prep		1.0	10 ml	10 ml	11L2524_P	12/19/11 16:00	NN	TAL IRV
Total	Analysis	EPA 300.0		20			11L2524	12/19/11 16:23	NN	TAL IRV
Total	Analysis	SM2510B		1.0			11L2513	12/19/11 06:45	MC	TAL IRV
Total	Prep	General Prep		1.0	50 ml	50 ml	11L2513_P	12/19/11 06:45	MC	TAL IRV
Total	Prep	General Prep		1.0	50 ml	50 ml	11L3721_P	12/28/11 14:15	PXI	TAL IRV
Total	Analysis	SM4500CN-E		1.0			11L3721	12/28/11 17:00	PXI	TAL IRV
Total	Prep	General Prep		1.0	25 ml	25 ml	11L3238_P	12/23/11 04:30	FZ	TAL IRV
Total	Analysis	SM 4500-F-C		1.0			11L3238	12/23/11 07:55	FZ	TAL IRV
Total	Prep	General Prep		1.0	100 ml	100 ml	11L2373_P	12/17/11 14:20	SLA	TAL IRV
Total	Analysis	SM5540-C		1.0			11L2373	12/17/11 14:40	SLA	TAL IRV
Total	Prep	General Prep		1.0	10 ml	10 ml	11L2361_P	12/17/11 14:20	NN	TAL IRV

Lab Chronicle

Client: Earth Forensics
Project/Site: 44002987 - Title 22 Analysis

TestAmerica Job ID: IUL2023

Client Sample ID: MCWP-MW02-20111217
Date Collected: 12/17/11 09:30
Date Received: 12/17/11 13:00

Lab Sample ID: IUL2023-01
Matrix: Water

5

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total	Analysis	EPA 300.0		1.0			11L2361	12/17/11 14:40	NN	TAL IRV
Total	Prep	General Prep		1.0	50 ml	50 ml	11L2729_P	12/20/11 08:01	KYP	TAL IRV
Total	Analysis	EPA 365.3		1.0			11L2729	12/20/11 15:13	KYP	TAL IRV
Total	Prep	General Prep		2.0	50 ml	100 ml	11L2473_P	12/19/11 04:52	MC	TAL IRV
Total	Analysis	SM2540C		1.0			11L2473	12/19/11 11:30	MC	TAL IRV
Total	Prep	General Prep		1.0	25 ml	25 ml	11L3549_P	12/27/11 15:00	NCP	TAL IRV
Total	Analysis	EPA 351.2		1.0			11L3549	12/27/11 20:24	NCP	TAL IRV
Total	Prep	General Prep		1.0	10 ml	10 ml	11L3236_P	12/23/11 04:30	FZ	TAL IRV
Total	Analysis	SM5310C		1.0			11L3236	12/23/11 05:59	FZ	TAL IRV
Total	Prep	Microbiology		1.0	100 ml	100 ml	11L2461_P	12/17/11 21:14	SK	TAL IRV
Total	Analysis	SM9223B		1.0			11L2461	12/18/11 14:16	ST	TAL IRV
Total	Prep	EPA 525.2		0.99	1010 ml	1 ml	11L2955_P	12/21/11 12:29	DIS	TAL IRV
Total	Analysis	EPA 525.2		1.0			11L2955	12/23/11 00:10	PM	TAL IRV
Total	Prep	EPA 548.1		1.0	100 ml	1 ml	11L2505_P	12/19/11 06:15	JM	TAL IRV
Total	Analysis	EPA 548.1		5.0			11L2505	12/19/11 17:42	JM	TAL IRV
Total	Prep	3510C					1362055_P	12/28/11 09:00		TAL WSC
Total	Analysis	EPA-5 1613B-Tetras		0.97			1362055	12/30/11 02:19	SO	TAL WSC
Total	Analysis	SM2120B		1.0			11L2376	12/17/11 17:14	EC1	TAL IRV
Total	Prep	GEN PREP		1.0	50 ml	50 ml	11L2376_P	12/17/11 17:14	EC1	TAL IRV
Total	Analysis	SM2150B		1.0			11L2377	12/17/11 16:10	EC1	TAL IRV
Total	Prep	GEN PREP		1.0	100 ml	100 ml	11L2377_P	12/17/11 16:10	EC1	TAL IRV
Total	Analysis	EPA 150.1		1.0			11L2518	12/19/11 14:47	RRZ	TAL IRV
Total	Prep	GEN PREP		1.0	50 ml	50 ml	11L2518_P	12/19/11 14:47	RRZ	TAL IRV
Total	Analysis	EPA 180.1		1.0			11L2374	12/17/11 15:51	EC1	TAL IRV
Total	Prep	GEN PREP		1.0	20 ml	20 ml	11L2374_P	12/17/11 15:51	EC1	TAL IRV

Laboratory References:

TAL IRV = TestAmerica Irvine, 17461 Derian Avenue. Suite 100, Irvine, CA 92614, TEL (949) 261-1022

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

Method: EPA 524.2 - PURGEABLE ORGANIC COMPOUNDS BY GC/MS (EPA 524.2)

Lab Sample ID: 11L2909-BLK1
Matrix: Water
Analysis Batch: 11L2909

Client Sample ID: Method Blank
Prep Type: Total
Prep Batch: 11L2909_P

Analyte	Blank Result	Blank Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.50	ug/l		12/21/11 09:08	12/21/11 10:02	1.00
Bromodichloromethane	ND		1.0	ug/l		12/21/11 09:08	12/21/11 10:02	1.00
Bromoform	ND		1.0	ug/l		12/21/11 09:08	12/21/11 10:02	1.00
Carbon tetrachloride	ND		0.50	ug/l		12/21/11 09:08	12/21/11 10:02	1.00
Chlorobenzene	ND		0.50	ug/l		12/21/11 09:08	12/21/11 10:02	1.00
Chloroform	ND		1.0	ug/l		12/21/11 09:08	12/21/11 10:02	1.00
Dibromochloromethane	ND		1.0	ug/l		12/21/11 09:08	12/21/11 10:02	1.00
1,2-Dichlorobenzene	ND		0.50	ug/l		12/21/11 09:08	12/21/11 10:02	1.00
1,4-Dichlorobenzene	ND		0.50	ug/l		12/21/11 09:08	12/21/11 10:02	1.00
1,1-Dichloroethane	ND		0.50	ug/l		12/21/11 09:08	12/21/11 10:02	1.00
1,2-Dichloroethane	ND		0.50	ug/l		12/21/11 09:08	12/21/11 10:02	1.00
1,1-Dichloroethene	ND		0.50	ug/l		12/21/11 09:08	12/21/11 10:02	1.00
cis-1,2-Dichloroethene	ND		0.50	ug/l		12/21/11 09:08	12/21/11 10:02	1.00
trans-1,2-Dichloroethene	ND		0.50	ug/l		12/21/11 09:08	12/21/11 10:02	1.00
1,2-Dichloropropane	ND		0.50	ug/l		12/21/11 09:08	12/21/11 10:02	1.00
cis-1,3-Dichloropropene	ND		0.50	ug/l		12/21/11 09:08	12/21/11 10:02	1.00
trans-1,3-Dichloropropene	ND		0.50	ug/l		12/21/11 09:08	12/21/11 10:02	1.00
1,3-Dichloropropene, Total	ND		0.50	ug/l		12/21/11 09:08	12/21/11 10:02	1.00
Ethylbenzene	ND		0.50	ug/l		12/21/11 09:08	12/21/11 10:02	1.00
Methylene chloride	ND		0.50	ug/l		12/21/11 09:08	12/21/11 10:02	1.00
Styrene	ND		0.50	ug/l		12/21/11 09:08	12/21/11 10:02	1.00
1,1,2,2-Tetrachloroethane	ND		0.50	ug/l		12/21/11 09:08	12/21/11 10:02	1.00
Tetrachloroethene	ND		0.50	ug/l		12/21/11 09:08	12/21/11 10:02	1.00
Toluene	ND		0.50	ug/l		12/21/11 09:08	12/21/11 10:02	1.00
1,2,4-Trichlorobenzene	ND		0.50	ug/l		12/21/11 09:08	12/21/11 10:02	1.00
1,1,1-Trichloroethane	ND		0.50	ug/l		12/21/11 09:08	12/21/11 10:02	1.00
1,1,2-Trichloroethane	ND		0.50	ug/l		12/21/11 09:08	12/21/11 10:02	1.00
Trichloroethene	ND		0.50	ug/l		12/21/11 09:08	12/21/11 10:02	1.00
Trichlorofluoromethane	ND		5.0	ug/l		12/21/11 09:08	12/21/11 10:02	1.00
Trichlorotrifluoroethane (Freon 113)	ND		10	ug/l		12/21/11 09:08	12/21/11 10:02	1.00
Vinyl chloride	ND		0.50	ug/l		12/21/11 09:08	12/21/11 10:02	1.00
m,p-Xylenes	ND		0.50	ug/l		12/21/11 09:08	12/21/11 10:02	1.00
o-Xylene	ND		0.50	ug/l		12/21/11 09:08	12/21/11 10:02	1.00
Xylenes, Total	ND		1.0	ug/l		12/21/11 09:08	12/21/11 10:02	1.00
Methyl-tert-butyl Ether (MTBE)	ND		3.0	ug/l		12/21/11 09:08	12/21/11 10:02	1.00
Trihalomethanes, Total	<4.0		1.0	ug/l		12/21/11 09:08	12/21/11 10:02	1.00

Surrogate	*Blank %Recovery*	*Blank Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*85*		*70 - 130*	*12/21/11 09:08*	*12/21/11 10:02*	*1.00*
1,2-Dichlorobenzene-d4	*90*		*70 - 130*	*12/21/11 09:08*	*12/21/11 10:02*	*1.00*

Lab Sample ID: 11L2909-BS1
Matrix: Water
Analysis Batch: 11L2909

Client Sample ID: Lab Control Sample
Prep Type: Total
Prep Batch: 11L2909_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	5.00	5.70		ug/l		114	70 - 130
Bromodichloromethane	5.00	5.41		ug/l		108	70 - 130
Bromoform	5.00	4.90		ug/l		98	70 - 130

Method: EPA 524.2 - PURGEABLE ORGANIC COMPOUNDS BY GC/MS (EPA 524.2) (Continued)

Lab Sample ID: 11L2909-BS1
Matrix: Water
Analysis Batch: 11L2909

Client Sample ID: Lab Control Sample
Prep Type: Total
Prep Batch: 11L2909_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Carbon tetrachloride	5.00	5.68		ug/l		114	70 - 130
Chlorobenzene	5.00	4.96		ug/l		99	70 - 130
Chloroform	5.00	5.16		ug/l		103	70 - 130
Dibromochloromethane	5.00	5.32		ug/l		106	70 - 130
1,2-Dichlorobenzene	5.00	4.97		ug/l		99	70 - 130
1,4-Dichlorobenzene	5.00	5.55		ug/l		111	70 - 130
1,1-Dichloroethane	5.00	5.23		ug/l		105	70 - 130
1,2-Dichloroethane	5.00	5.38		ug/l		108	70 - 130
1,1-Dichloroethene	5.00	5.11		ug/l		102	70 - 130
cis-1,2-Dichloroethene	5.00	5.04		ug/l		101	70 - 130
trans-1,2-Dichloroethene	5.00	5.01		ug/l		100	70 - 130
1,2-Dichloropropane	5.00	5.13		ug/l		103	70 - 130
cis-1,3-Dichloropropene	5.00	5.25		ug/l		105	70 - 130
trans-1,3-Dichloropropene	5.00	5.29		ug/l		106	70 - 130
Ethylbenzene	5.00	6.05		ug/l		121	70 - 130
Methylene chloride	5.00	5.37		ug/l		107	70 - 130
Styrene	5.00	5.50		ug/l		110	70 - 130
1,1,2,2-Tetrachloroethane	5.00	5.30		ug/l		106	70 - 130
Tetrachloroethene	5.00	5.06		ug/l		101	70 - 130
Toluene	5.00	5.70		ug/l		114	70 - 130
1,2,4-Trichlorobenzene	5.00	5.08		ug/l		102	70 - 130
1,1,1-Trichloroethane	5.00	5.49		ug/l		110	70 - 130
1,1,2-Trichloroethane	5.00	5.20		ug/l		104	70 - 130
Trichloroethene	5.00	5.12		ug/l		102	70 - 130
Trichlorofluoromethane	5.00	5.20		ug/l		104	70 - 130
Trichlorotrifluoroethane (Freon 113)	5.00	5.43		ug/l		109	70 - 130
Vinyl chloride	5.00	5.32		ug/l		106	70 - 130
m,p-Xylenes	10.0	12.1		ug/l		121	70 - 130
o-Xylene	5.00	5.87		ug/l		117	70 - 130
Methyl-tert-butyl Ether (MTBE)	10.0	10.0		ug/l		100	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*104*		*70 - 130*
1,2-Dichlorobenzene-d4	*96*		*70 - 130*

Lab Sample ID: 11L2909-MS1
Matrix: Water
Analysis Batch: 11L2909

Client Sample ID: Matrix Spike
Prep Type: Total
Prep Batch: 11L2909_P

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Result	Matrix Spike Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	ND		10.0	10.7		ug/l		107	70 - 130
Bromodichloromethane	2.16		10.0	12.1		ug/l		99	70 - 130
Bromoform	0.660		10.0	9.95		ug/l		93	70 - 130
Carbon tetrachloride	ND		10.0	10.3		ug/l		103	70 - 130
Chlorobenzene	ND		10.0	9.65		ug/l		96	70 - 130
Chloroform	1.97		10.0	11.4		ug/l		94	70 - 130
Dibromochloromethane	1.81		10.0	11.8		ug/l		100	70 - 130
1,2-Dichlorobenzene	ND		10.0	9.49		ug/l		95	70 - 130
1,4-Dichlorobenzene	ND		10.0	10.5		ug/l		105	70 - 130

Method: EPA 524.2 - PURGEABLE ORGANIC COMPOUNDS BY GC/MS (EPA 524.2) (Continued)

Lab Sample ID: 11L2909-MS1
Matrix: Water
Analysis Batch: 11L2909

Client Sample ID: Matrix Spike
Prep Type: Total
Prep Batch: 11L2909_P

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Result	Matrix Spike Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichloroethane	ND		10.0	10.2		ug/l		102	70 - 130
1,1-Dichloroethene	ND		10.0	9.24		ug/l		92	70 - 130
cis-1,2-Dichloroethene	ND		10.0	9.29		ug/l		93	70 - 130
trans-1,2-Dichloroethene	ND		10.0	9.17		ug/l		92	70 - 130
1,2-Dichloropropane	ND		10.0	9.82		ug/l		98	70 - 130
1,3-Dichloropropene, Total	ND		20.0	18.0		ug/l		90	70 - 130
Ethylbenzene	ND		10.0	11.8		ug/l		118	70 - 130
Methylene chloride	ND		10.0	9.83		ug/l		98	70 - 130
Styrene	ND		10.0	11.0		ug/l		110	70 - 130
Tetrachloroethene	ND		10.0	13.2	M1	ug/l		132	70 - 130
Toluene	ND		10.0	11.1		ug/l		111	70 - 130
1,2,4-Trichlorobenzene	ND		10.0	9.64		ug/l		96	70 - 130
1,1,1-Trichloroethane	ND		10.0	10.2		ug/l		102	70 - 130
1,1,2-Trichloroethane	ND		10.0	9.75		ug/l		98	70 - 130
Trichloroethene	ND		10.0	9.74		ug/l		97	70 - 130
Vinyl chloride	ND		10.0	9.72		ug/l		97	70 - 130
m,p-Xylenes	ND		20.0	23.5		ug/l		117	70 - 130
o-Xylene	ND		10.0	11.5		ug/l		115	70 - 130

Surrogate	*Matrix Spike %Recovery*	*Matrix Spike Qualifier*	*Limits*
4-Bromofluorobenzene	*106*		*70 - 130*
1,2-Dichlorobenzene-d4	*99*		*70 - 130*

Lab Sample ID: 11L2909-MSD1
Matrix: Water
Analysis Batch: 11L2909

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total
Prep Batch: 11L2909_P

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Dup Result	Matrix Spike Dup Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	ND		10.0	11.4		ug/l		114	70 - 130	7	20
Bromodichloromethane	2.16		10.0	13.0		ug/l		108	70 - 130	7	20
Bromoform	0.660		10.0	11.1		ug/l		104	70 - 130	11	20
Carbon tetrachloride	ND		10.0	10.9		ug/l		109	70 - 130	5	20
Chlorobenzene	ND		10.0	10.4		ug/l		104	70 - 130	8	20
Chloroform	1.97		10.0	12.0		ug/l		100	70 - 130	5	20
Dibromochloromethane	1.81		10.0	12.7		ug/l		109	70 - 130	8	20
1,2-Dichlorobenzene	ND		10.0	10.2		ug/l		102	70 - 130	8	20
1,4-Dichlorobenzene	ND		10.0	11.3		ug/l		113	70 - 130	8	20
1,2-Dichloroethane	ND		10.0	12.0		ug/l		120	70 - 130	15	20
1,1-Dichloroethene	ND		10.0	9.94		ug/l		99	70 - 130	7	20
cis-1,2-Dichloroethene	ND		10.0	9.91		ug/l		99	70 - 130	6	20
trans-1,2-Dichloroethene	ND		10.0	9.85		ug/l		98	70 - 130	7	20
1,2-Dichloropropane	ND		10.0	10.5		ug/l		105	70 - 130	7	20
1,3-Dichloropropene, Total	ND		20.0	19.4		ug/l		97	70 - 130	7	20
Ethylbenzene	ND		10.0	12.6		ug/l		126	70 - 130	6	20
Methylene chloride	ND		10.0	10.5		ug/l		105	70 - 130	6	20
Styrene	ND		10.0	12.1		ug/l		121	70 - 130	9	20
Tetrachloroethene	ND		10.0	14.7	M1	ug/l		147	70 - 130	11	20
Toluene	ND		10.0	11.8		ug/l		118	70 - 130	6	20
1,2,4-Trichlorobenzene	ND		10.0	10.9		ug/l		109	70 - 130	12	20

Method: EPA 524.2 - PURGEABLE ORGANIC COMPOUNDS BY GC/MS (EPA 524.2) (Continued)

Lab Sample ID: 11L2909-MSD1 — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total**
Analysis Batch: 11L2909 — **Prep Batch: 11L2909_P**

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Dup Result	Matrix Spike Dup Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1-Trichloroethane	ND		10.0	11.0		ug/l		110	70 - 130	7	20
1,1,2-Trichloroethane	ND		10.0	10.6		ug/l		106	70 - 130	9	20
Trichloroethene	ND		10.0	10.5		ug/l		105	70 - 130	7	20
Vinyl chloride	ND		10.0	10.3		ug/l		103	70 - 130	6	20
m,p-Xylenes	ND		20.0	25.1		ug/l		126	70 - 130	7	20
o-Xylene	ND		10.0	12.2		ug/l		122	70 - 130	6	20

Surrogate	*Matrix Spike Dup %Recovery*	*Matrix Spike Dup Qualifier*	*Limits*
4-Bromofluorobenzene	*107*		*70 - 130*
1,2-Dichlorobenzene-d4	*100*		*70 - 130*

Method: SRL 524.2 M-TCP - PURGEABLE ORGANIC COMPOUNDS BY GC/MS (EPA 524.2)

Lab Sample ID: 11L3125-BLK1 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total**
Analysis Batch: 11L3125 — **Prep Batch: 11L3125_P**

Analyte	Blank Result	Blank Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND		0.0050	ug/l		12/22/11 11:00	12/22/11 12:00	1.00

Lab Sample ID: 11L3125-BS1 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total**
Analysis Batch: 11L3125 — **Prep Batch: 11L3125_P**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,3-Trichloropropane	0.00500	0.00437		ug/l		87	80 - 120

Lab Sample ID: 11L3125-DUP1 — **Client Sample ID: Duplicate**
Matrix: Water — **Prep Type: Total**
Analysis Batch: 11L3125 — **Prep Batch: 11L3125_P**

Analyte	Sample Result	Sample Qualifier	Duplicate Result	Duplicate Qualifier	Unit	D	RPD	RPD Limit
1,2,3-Trichloropropane	ND		ND		ug/l			30

Method: EPA 504.1 - EDB and DBCP in Water by GC/ECD (EPA 504.1)

Lab Sample ID: 11L2921-BLK1 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total**
Analysis Batch: 11L2921 — **Prep Batch: 11L2921_P**

Analyte	Blank Result	Blank Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.020	ug/l		12/21/11 15:00	12/21/11 18:21	1.00
1,2-Dibromo-3-chloropropane	ND		0.0098	ug/l		12/21/11 15:00	12/21/11 18:21	1.00

Surrogate	*Blank %Recovery*	*Blank Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*108*		*50 - 150*	*12/21/11 15:00*	*12/21/11 18:21*	*1.00*

Method: EPA 504.1 - EDB and DBCP in Water by GC/ECD (EPA 504.1) (Continued)

Lab Sample ID: 11L2921-BS1
Matrix: Water
Analysis Batch: 11L2921

Client Sample ID: Lab Control Sample
Prep Type: Total
Prep Batch: 11L2921_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dibromoethane (EDB)	0.246	0.235		ug/l		96	70 - 130
1,2-Dibromo-3-chloropropane	0.246	0.232		ug/l		95	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*105*		*50 - 150*

Lab Sample ID: 11L2921-BS2
Matrix: Water
Analysis Batch: 11L2921

Client Sample ID: Lab Control Sample
Prep Type: Total
Prep Batch: 11L2921_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dibromoethane (EDB)	0.0982	0.105		ug/l		107	70 - 130
1,2-Dibromo-3-chloropropane	0.0982	0.109		ug/l		111	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*107*		*50 - 150*

Lab Sample ID: 11L2921-BSD1
Matrix: Water
Analysis Batch: 11L2921

Client Sample ID: Lab Control Sample Dup
Prep Type: Total
Prep Batch: 11L2921_P

Analyte	Spike Added	LCS Dup Result	LCS Dup Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2-Dibromoethane (EDB)	0.246	0.234		ug/l		95	70 - 130	0.7	20
1,2-Dibromo-3-chloropropane	0.246	0.254		ug/l		103	70 - 130	9	20

Surrogate	*LCS Dup %Recovery*	*LCS Dup Qualifier*	*Limits*
4-Bromofluorobenzene	*107*		*50 - 150*

Lab Sample ID: 11L2921-MS1
Matrix: Water
Analysis Batch: 11L2921

Client Sample ID: Matrix Spike
Prep Type: Total
Prep Batch: 11L2921_P

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Result	Matrix Spike Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dibromoethane (EDB)	ND		0.239	0.189		ug/l		79	65 - 135
1,2-Dibromo-3-chloropropane	ND		0.239	0.195		ug/l		82	65 - 135

Surrogate	*Matrix Spike %Recovery*	*Matrix Spike Qualifier*	*Limits*
4-Bromofluorobenzene	*83*		*50 - 150*

Method: EPA 505 - ORGANOCHLORINE PESTICIDES AND PCBS (EPA 505)

Lab Sample ID: 11L3132-BLK1
Matrix: Water
Analysis Batch: 11L3132

Client Sample ID: Method Blank
Prep Type: Total
Prep Batch: 11L3132_P

Analyte	Blank Result	Blank Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alachlor	ND		0.99	ug/l		12/22/11 11:30	12/22/11 22:06	1.00
Endrin	ND		0.099	ug/l		12/22/11 11:30	12/22/11 22:06	1.00

Method: EPA 505 - ORGANOCHLORINE PESTICIDES AND PCBS (EPA 505) (Continued)

Lab Sample ID: 11L3132-BLK1
Matrix: Water
Analysis Batch: 11L3132

Client Sample ID: Method Blank
Prep Type: Total
Prep Batch: 11L3132_P

Analyte	Blank Result	Blank Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Heptachlor	ND		0.0099	ug/l		12/22/11 11:30	12/22/11 22:06	1.00
Heptachlor epoxide	ND		0.0099	ug/l		12/22/11 11:30	12/22/11 22:06	1.00
gamma-BHC (Lindane)	ND		0.20	ug/l		12/22/11 11:30	12/22/11 22:06	1.00
Methoxychlor	ND		9.9	ug/l		12/22/11 11:30	12/22/11 22:06	1.00
PCBs as Decachlorobiphenyl (DCB)	ND		0.49	ug/l		12/22/11 11:30	12/22/11 22:06	1.00
Chlordane	ND		0.099	ug/l		12/22/11 11:30	12/22/11 22:06	1.00
Toxaphene	ND		0.99	ug/l		12/22/11 11:30	12/22/11 22:06	1.00
Aroclor 1016	ND		0.26	ug/l		12/22/11 11:30	12/22/11 22:06	1.00
Aroclor 1221	ND		0.19	ug/l		12/22/11 11:30	12/22/11 22:06	1.00
Aroclor 1232	ND		0.23	ug/l		12/22/11 11:30	12/22/11 22:06	1.00
Aroclor 1242	ND		0.26	ug/l		12/22/11 11:30	12/22/11 22:06	1.00
Aroclor 1248	ND		0.30	ug/l		12/22/11 11:30	12/22/11 22:06	1.00
Aroclor 1254	ND		0.33	ug/l		12/22/11 11:30	12/22/11 22:06	1.00
Aroclor 1260	ND		0.36	ug/l		12/22/11 11:30	12/22/11 22:06	1.00

Lab Sample ID: 11L3132-BS1
Matrix: Water
Analysis Batch: 11L3132

Client Sample ID: Lab Control Sample
Prep Type: Total
Prep Batch: 11L3132_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Alachlor	0.976	0.859		ug/l		88	70 - 130
Endrin	0.0976	0.0893		ug/l		92	70 - 130
Heptachlor	0.0976	0.0887		ug/l		91	70 - 130
Heptachlor epoxide	0.0976	0.0924		ug/l		95	70 - 130
gamma-BHC (Lindane)	0.0976	0.0867		ug/l		89	70 - 130
Methoxychlor	0.488	0.419		ug/l		86	70 - 130

Lab Sample ID: 11L3132-BS2
Matrix: Water
Analysis Batch: 11L3132

Client Sample ID: Lab Control Sample
Prep Type: Total
Prep Batch: 11L3132_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aroclor 1254	0.975	0.913		ug/l		94	70 - 130

Lab Sample ID: 11L3132-BSD1
Matrix: Water
Analysis Batch: 11L3132

Client Sample ID: Lab Control Sample Dup
Prep Type: Total
Prep Batch: 11L3132_P

Analyte	Spike Added	LCS Dup Result	LCS Dup Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Alachlor	0.995	0.938		ug/l		94	70 - 130	7	20
Endrin	0.0995	0.0951		ug/l		96	70 - 130	4	20
Heptachlor	0.0995	0.0989		ug/l		99	70 - 130	9	20
Heptachlor epoxide	0.0995	0.0992		ug/l		100	70 - 130	5	20
gamma-BHC (Lindane)	0.0995	0.0956		ug/l		96	70 - 130	8	20
Methoxychlor	0.497	0.462		ug/l		93	70 - 130	8	20

Method: EPA 505 - ORGANOCHLORINE PESTICIDES AND PCBS (EPA 505) (Continued)

Lab Sample ID: 11L3132-BSD2
Matrix: Water
Analysis Batch: 11L3132

Client Sample ID: Lab Control Sample Dup
Prep Type: Total
Prep Batch: 11L3132_P

Analyte	Spike Added	LCS Dup Result	LCS Dup Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aroclor 1254	1.00	1.05		ug/l		105	70 - 130	11	20

Lab Sample ID: 11L3132-MS1
Matrix: Water
Analysis Batch: 11L3132

Client Sample ID: Matrix Spike
Prep Type: Total
Prep Batch: 11L3132_P

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Result	Matrix Spike Qualifier	Unit	D	%Rec	%Rec. Limits
Alachlor	ND		0.934	0.645		ug/l		69	65 - 135
Endrin	ND		0.0934	0.0651		ug/l		70	65 - 135
Heptachlor	ND		0.0934	0.0666		ug/l		71	65 - 135
Heptachlor epoxide	ND		0.0934	0.0664		ug/l		71	65 - 135
gamma-BHC (Lindane)	ND		0.0934	0.0656		ug/l		70	65 - 135
Methoxychlor	ND		0.467	0.299	M2	ug/l		64	65 - 135

Method: EPA 515.4 - CHLORINATED ACIDS (EPA 515.4)

Lab Sample ID: 11L2242-BLK1
Matrix: Water
Analysis Batch: 11L2242

Client Sample ID: Method Blank
Prep Type: Total
Prep Batch: 11L2242_P

Analyte	Blank Result	Blank Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Bentazon	ND		2.0	ug/l		12/19/11 13:30	12/19/11 22:11	1.00
2,4-D	ND		10	ug/l		12/19/11 13:30	12/19/11 22:11	1.00
Dacthal acid metabolites	ND		2.0	ug/l		12/19/11 13:30	12/19/11 22:11	1.00
Dalapon	ND		10	ug/l		12/19/11 13:30	12/19/11 22:11	1.00
Dicamba	ND		1.5	ug/l		12/19/11 13:30	12/19/11 22:11	1.00
Dinoseb	ND		2.0	ug/l		12/19/11 13:30	12/19/11 22:11	1.00
Pentachlorophenol	ND		0.20	ug/l		12/19/11 13:30	12/19/11 22:11	1.00
Picloram	ND		1.0	ug/l		12/19/11 13:30	12/19/11 22:11	1.00
2,4,5-TP (Silvex)	ND		1.0	ug/l		12/19/11 13:30	12/19/11 22:11	1.00

Surrogate	*Blank %Recovery*	*Blank Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*93*		*70 - 130*	*12/19/11 13:30*	*12/19/11 22:11*	*1.00*

Lab Sample ID: 11L2242-BS1
Matrix: Water
Analysis Batch: 11L2242

Client Sample ID: Lab Control Sample
Prep Type: Total
Prep Batch: 11L2242_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Bentazon	1.58	1.62		ug/l		103	70 - 130
2,4-D	1.58	1.58		ug/l		100	70 - 130
Dacthal acid metabolites	0.789	0.812		ug/l		103	70 - 130
Dalapon	1.58	1.63		ug/l		103	70 - 130
Dicamba	0.789	0.781		ug/l		99	70 - 130
Dinoseb	1.58	1.47		ug/l		93	70 - 130
Pentachlorophenol	0.158	0.161		ug/l		102	70 - 130
Picloram	0.789	0.791		ug/l		100	70 - 130
2,4,5-TP (Silvex)	0.394	0.383		ug/l		97	70 - 130

Method: EPA 515.4 - CHLORINATED ACIDS (EPA 515.4) (Continued)

Lab Sample ID: 11L2242-BS1
Matrix: Water
Analysis Batch: 11L2242

Client Sample ID: Lab Control Sample
Prep Type: Total
Prep Batch: 11L2242_P

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4-Dichlorophenylacetic acid	*99*		*70 - 130*

Lab Sample ID: 11L2242-BSD1
Matrix: Water
Analysis Batch: 11L2242

Client Sample ID: Lab Control Sample Dup
Prep Type: Total
Prep Batch: 11L2242_P

Analyte	Spike Added	LCS Dup Result	LCS Dup Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Bentazon	1.58	1.42		ug/l		90	70 - 130	14	20
2,4-D	1.58	1.59		ug/l		100	70 - 130	0.02	20
Dacthal acid metabolites	0.791	0.796		ug/l		101	70 - 130	2	20
Dalapon	1.58	1.54		ug/l		97	70 - 130	6	20
Dicamba	0.791	0.796		ug/l		101	70 - 130	2	20
Dinoseb	1.58	1.56		ug/l		98	70 - 130	6	20
Pentachlorophenol	0.158	0.158		ug/l		100	70 - 130	2	20
Picloram	0.791	0.717		ug/l		91	70 - 130	10	20
2,4,5-TP (Silvex)	0.396	0.376		ug/l		95	70 - 130	2	20

Surrogate	*LCS Dup %Recovery*	*LCS Dup Qualifier*	*Limits*
2,4-Dichlorophenylacetic acid	*101*		*70 - 130*

Lab Sample ID: 11L2242-MS1
Matrix: Water
Analysis Batch: 11L2242

Client Sample ID: Matrix Spike
Prep Type: Total
Prep Batch: 11L2242_P

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Result	Matrix Spike Qualifier	Unit	D	%Rec	%Rec. Limits
Bentazon	ND		1.60	1.45		ug/l		91	70 - 130
2,4-D	ND		1.60	1.68		ug/l		105	70 - 130
Dacthal acid metabolites	1.33		0.799	2.13		ug/l		99	70 - 130
Dalapon	ND		1.60	1.52		ug/l		95	70 - 130
Dicamba	ND		0.799	0.801		ug/l		100	70 - 130
Dinoseb	ND		1.60	1.65		ug/l		103	70 - 130
Pentachlorophenol	ND		0.160	0.0634	M2	ug/l		40	70 - 130
Picloram	ND		0.799	0.810		ug/l		101	70 - 130
2,4,5-TP (Silvex)	ND		0.400	0.376		ug/l		94	70 - 130

Surrogate	*Matrix Spike %Recovery*	*Matrix Spike Qualifier*	*Limits*
2,4-Dichlorophenylacetic acid	*103*		*70 - 130*

Lab Sample ID: 11L2242-MSD1
Matrix: Water
Analysis Batch: 11L2242

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total
Prep Batch: 11L2242_P

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Dup Result	Matrix Spike Dup Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Bentazon	ND		1.59	1.45		ug/l		91	70 - 130	0.4	20
2,4-D	ND		1.59	1.83		ug/l		116	70 - 130	9	20
Dacthal acid metabolites	1.33		0.794	2.22		ug/l		112	70 - 130	12	20
Dalapon	ND		1.59	1.70		ug/l		107	70 - 130	12	20
Dicamba	ND		0.794	0.778		ug/l		98	70 - 130	2	20
Dinoseb	ND		1.59	1.78		ug/l		112	70 - 130	8	20

Method: EPA 515.4 - CHLORINATED ACIDS (EPA 515.4) (Continued)

Lab Sample ID: 11L2242-MSD1
Matrix: Water
Analysis Batch: 11L2242

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total
Prep Batch: 11L2242_P

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Dup Result	Matrix Spike Dup Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Pentachlorophenol	ND		0.159	0.0728	M2	ug/l		46	70 - 130	15	20
Picloram	ND		0.794	0.839		ug/l		106	70 - 130	4	20
2,4,5-TP (Silvex)	ND		0.397	0.372		ug/l		94	70 - 130	0.2	20

Surrogate	*Matrix Spike Dup %Recovery*	*Matrix Spike Dup Qualifier*	*Limits*
2,4-Dichlorophenylacetic acid	*101*		*70 - 130*

Method: EPA 552.2 - HALOACETIC ACIDS (EPA 552.2)

Lab Sample ID: 11L2755-BLK1
Matrix: Water
Analysis Batch: 11L2755

Client Sample ID: Method Blank
Prep Type: Total
Prep Batch: 11L2755_P

Analyte	Blank Result	Blank Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Dibromoacetic acid (DBAA)	ND		0.99	ug/l		12/20/11 13:20	12/20/11 22:32	1.00
Dichloroacetic acid (DCAA)	ND		0.99	ug/l		12/20/11 13:20	12/20/11 22:32	1.00
Monobromoacetic acid (MBAA)	ND		0.99	ug/l		12/20/11 13:20	12/20/11 22:32	1.00
Monochloroacetic acid (MCAA)	ND		2.0	ug/l		12/20/11 13:20	12/20/11 22:32	1.00
Trichloroacetic acid (TCAA)	ND		0.99	ug/l		12/20/11 13:20	12/20/11 22:32	1.00
Haloacetic acids (Five) (HAA5)	<6		0.99	ug/l		12/20/11 13:20	12/20/11 22:32	1.00

Surrogate	*Blank %Recovery*	*Blank Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,3-Dibromopropanoic acid	*129*		*70 - 130*	*12/20/11 13:20*	*12/20/11 22:32*	*1.00*

Lab Sample ID: 11L2755-BS1
Matrix: Water
Analysis Batch: 11L2755

Client Sample ID: Lab Control Sample
Prep Type: Total
Prep Batch: 11L2755_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Dibromoacetic acid (DBAA)	2.50	2.42		ug/l		97	70 - 130
Dichloroacetic acid (DCAA)	7.49	7.54		ug/l		101	70 - 130
Monobromoacetic acid (MBAA)	4.99	4.86		ug/l		97	70 - 130
Monochloroacetic acid (MCAA)	7.49	7.34		ug/l		98	70 - 130
Trichloroacetic acid (TCAA)	2.50	2.87		ug/l		115	70 - 130
Haloacetic acids (Five) (HAA5)	25.0	25.0		ug/l		100	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,3-Dibromopropanoic acid	*128*		*70 - 130*

Lab Sample ID: 11L2755-BSD1
Matrix: Water
Analysis Batch: 11L2755

Client Sample ID: Lab Control Sample Dup
Prep Type: Total
Prep Batch: 11L2755_P

Analyte	Spike Added	LCS Dup Result	LCS Dup Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Dibromoacetic acid (DBAA)	2.48	2.25		ug/l		91	70 - 130	7	20
Dichloroacetic acid (DCAA)	7.43	7.10		ug/l		96	70 - 130	5	20
Monobromoacetic acid (MBAA)	4.96	4.59		ug/l		93	70 - 130	5	20
Monochloroacetic acid (MCAA)	7.43	6.26		ug/l		84	70 - 130	15	20
Trichloroacetic acid (TCAA)	2.48	2.58		ug/l		104	70 - 130	10	20

Method: EPA 552.2 - HALOACETIC ACIDS (EPA 552.2) (Continued)

Lab Sample ID: 11L2755-BSD1
Matrix: Water
Analysis Batch: 11L2755

Client Sample ID: Lab Control Sample Dup
Prep Type: Total
Prep Batch: 11L2755_P

Analyte	Spike Added	LCS Dup Result	LCS Dup Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Haloacetic acids (Five) (HAA5)	24.8	22.8		ug/l		92	70 - 130	9	20

Surrogate	*LCS Dup %Recovery*	*LCS Dup Qualifier*	*Limits*
2,3-Dibromopropanoic acid	*112*		*70 - 130*

Lab Sample ID: 11L2755-MS1
Matrix: Water
Analysis Batch: 11L2755

Client Sample ID: Matrix Spike
Prep Type: Total
Prep Batch: 11L2755_P

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Result	Matrix Spike Qualifier	Unit	D	%Rec	%Rec. Limits
Dibromoacetic acid (DBAA)	1.22		2.45	3.80		ug/l		105	70 - 130
Dichloroacetic acid (DCAA)	2.40		7.34	9.74		ug/l		100	70 - 130
Monobromoacetic acid (MBAA)	0.570		4.89	5.48		ug/l		100	70 - 130
Monochloroacetic acid (MCAA)	ND		7.34	9.17		ug/l		125	70 - 130
Trichloroacetic acid (TCAA)	0.394		2.45	3.70	M1	ug/l		135	70 - 130
Haloacetic acids (Five) (HAA5)	3.63		24.5	31.9		ug/l		116	70 - 130

Surrogate	*Matrix Spike %Recovery*	*Matrix Spike Qualifier*	*Limits*
2,3-Dibromopropanoic acid	*118*		*70 - 130*

Lab Sample ID: 11L2755-MS2
Matrix: Water
Analysis Batch: 11L2755

Client Sample ID: Matrix Spike
Prep Type: Total
Prep Batch: 11L2755_P

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Result	Matrix Spike Qualifier	Unit	D	%Rec	%Rec. Limits
Dibromoacetic acid (DBAA)	7.24		2.44	10.8	M1	ug/l		146	70 - 130
Dichloroacetic acid (DCAA)	ND		7.33	7.51		ug/l		103	70 - 130
Monobromoacetic acid (MBAA)	1.09		4.89	5.94		ug/l		99	70 - 130
Monochloroacetic acid (MCAA)	ND		7.33	7.64		ug/l		104	70 - 130
Trichloroacetic acid (TCAA)	ND		2.44	2.50		ug/l		102	70 - 130
Haloacetic acids (Five) (HAA5)	8.32		24.4	34.4		ug/l		107	70 - 130

Surrogate	*Matrix Spike %Recovery*	*Matrix Spike Qualifier*	*Limits*
2,3-Dibromopropanoic acid	*126*		*70 - 130*

Method: EPA 531.1 - CARBAMATES BY HPLC (EPA 531.1)

Lab Sample ID: 11L3331-BLK1
Matrix: Water
Analysis Batch: 11L3331

Client Sample ID: Method Blank
Prep Type: Total

Analyte	Blank Result	Blank Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Aldicarb Sulfoxide	ND		3.0	ug/l			12/27/11 11:45	1.00
Aldicarb Sulfone	ND		4.0	ug/l			12/27/11 11:45	1.00
Oxamyl	ND		20	ug/l			12/27/11 11:45	1.00
Methomyl	ND		2.0	ug/l			12/27/11 11:45	1.00
3-Hydroxycarbofuran	ND		3.0	ug/l			12/27/11 11:45	1.00
Aldicarb	ND		3.0	ug/l			12/27/11 11:45	1.00
Carbofuran	ND		5.0	ug/l			12/27/11 11:45	1.00

Method: EPA 531.1 - CARBAMATES BY HPLC (EPA 531.1) (Continued)

Lab Sample ID: 11L3331-BLK1
Matrix: Water
Analysis Batch: 11L3331

Client Sample ID: Method Blank
Prep Type: Total

Analyte	Blank Result	Blank Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbaryl	ND		5.0	ug/l			12/27/11 11:45	1.00

Lab Sample ID: 11L3331-BS1
Matrix: Water
Analysis Batch: 11L3331

Client Sample ID: Lab Control Sample
Prep Type: Total

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aldicarb Sulfoxide	20.0	23.0		ug/l		115	80 - 120
Aldicarb Sulfone	20.0	22.1		ug/l		111	80 - 120
Oxamyl	20.0	22.0		ug/l		110	80 - 120
Methomyl	20.0	21.8		ug/l		109	80 - 120
3-Hydroxycarbofuran	20.0	23.6		ug/l		118	80 - 120
Aldicarb	20.0	23.3		ug/l		116	80 - 120
Carbofuran	20.0	22.8		ug/l		114	80 - 120
Carbaryl	20.0	23.0		ug/l		115	80 - 120

Lab Sample ID: 11L3331-BSD1
Matrix: Water
Analysis Batch: 11L3331

Client Sample ID: Lab Control Sample Dup
Prep Type: Total

Analyte	Spike Added	LCS Dup Result	LCS Dup Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aldicarb Sulfoxide	20.0	22.5		ug/l		113	80 - 120	2	20
Aldicarb Sulfone	20.0	21.6		ug/l		108	80 - 120	2	20
Oxamyl	20.0	21.5		ug/l		107	80 - 120	2	20
Methomyl	20.0	21.4		ug/l		107	80 - 120	2	20
3-Hydroxycarbofuran	20.0	23.1		ug/l		115	80 - 120	2	20
Aldicarb	20.0	22.7		ug/l		113	80 - 120	3	20
Carbofuran	20.0	22.1		ug/l		111	80 - 120	3	20
Carbaryl	20.0	22.2		ug/l		111	80 - 120	4	20

Lab Sample ID: 11L3331-MS1
Matrix: Water
Analysis Batch: 11L3331

Client Sample ID: Matrix Spike
Prep Type: Total

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Result	Matrix Spike Qualifier	Unit	D	%Rec	%Rec. Limits
Aldicarb Sulfoxide	ND		20.0	22.5		ug/l		113	65 - 135
Aldicarb Sulfone	ND		20.0	22.1		ug/l		110	65 - 135
Oxamyl	ND		20.0	23.8		ug/l		119	65 - 135
Methomyl	ND		20.0	22.2		ug/l		111	65 - 135
3-Hydroxycarbofuran	ND		20.0	22.8		ug/l		114	65 - 135
Aldicarb	ND		20.0	22.7		ug/l		114	65 - 135
Carbofuran	ND		20.0	22.0		ug/l		110	65 - 135
Carbaryl	ND		20.0	22.3		ug/l		111	65 - 135

Method: EPA 547 - GLYPHOSATE (EPA 547)

Lab Sample ID: 11L2922-BLK1
Matrix: Water
Analysis Batch: 11L2922

Client Sample ID: Method Blank
Prep Type: Total
Prep Batch: 11L2922_P

Analyte	Blank Result	Blank Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Glyphosate	ND		25	ug/l		12/21/11 09:33	12/21/11 13:20	1.00

Lab Sample ID: 11L2922-BS1
Matrix: Water
Analysis Batch: 11L2922

Client Sample ID: Lab Control Sample
Prep Type: Total
Prep Batch: 11L2922_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Glyphosate	25.0	28.2		ug/l		113	70 - 130

Lab Sample ID: 11L2922-BSD1
Matrix: Water
Analysis Batch: 11L2922

Client Sample ID: Lab Control Sample Dup
Prep Type: Total
Prep Batch: 11L2922_P

Analyte	Spike Added	LCS Dup Result	LCS Dup Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Glyphosate	25.0	28.8		ug/l		115	70 - 130	2	30

Lab Sample ID: 11L2922-MS1
Matrix: Water
Analysis Batch: 11L2922

Client Sample ID: Matrix Spike
Prep Type: Total
Prep Batch: 11L2922_P

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Result	Matrix Spike Qualifier	Unit	D	%Rec	%Rec. Limits
Glyphosate	ND		25.0	29.3		ug/l		117	70 - 130

Method: EPA 549.2 - DIQUAT/PARAQUAT (EPA 549.2)

Lab Sample ID: 11L2506-BLK1
Matrix: Water
Analysis Batch: 11L2506

Client Sample ID: Method Blank
Prep Type: Total
Prep Batch: 11L2506_P

Analyte	Blank Result	Blank Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diquat	ND		4.0	ug/l		12/19/11 06:20	12/20/11 12:17	1.00
Paraquat	ND		20	ug/l		12/19/11 06:20	12/20/11 12:17	1.00

Lab Sample ID: 11L2506-BS1
Matrix: Water
Analysis Batch: 11L2506

Client Sample ID: Lab Control Sample
Prep Type: Total
Prep Batch: 11L2506_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Diquat	20.0	21.2		ug/l		106	70 - 130
Paraquat	20.0	18.3		ug/l		91	70 - 130

Lab Sample ID: 11L2506-BSD1
Matrix: Water
Analysis Batch: 11L2506

Client Sample ID: Lab Control Sample Dup
Prep Type: Total
Prep Batch: 11L2506_P

Analyte	Spike Added	LCS Dup Result	LCS Dup Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diquat	20.0	21.4		ug/l		107	70 - 130	0.8	20
Paraquat	20.0	18.2		ug/l		91	70 - 130	0.4	20

Method: EPA 549.2 - DIQUAT/PARAQUAT (EPA 549.2) (Continued)

Lab Sample ID: 11L2506-MS1 — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total**
Analysis Batch: 11L2506 — **Prep Batch: 11L2506_P**

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Result	Matrix Spike Qualifier	Unit	D	%Rec	%Rec. Limits
Diquat	ND		20.0	6.79	M2	ug/l		34	70 - 130
Paraquat	ND		20.0	11.8	M2	ug/l		59	70 - 130

Method: EPA 200.7 - METALS

Lab Sample ID: 11L3356-BLK1 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total**
Analysis Batch: 11L3356 — **Prep Batch: 11L3356_P**

Analyte	Blank Result	Blank Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		0.050	mg/l		12/23/11 16:53	12/23/11 19:56	1.00
Calcium	ND		0.10	mg/l		12/23/11 16:53	12/23/11 19:56	1.00
Iron	ND		0.040	mg/l		12/23/11 16:53	12/23/11 19:56	1.00
Magnesium	ND		0.020	mg/l		12/23/11 16:53	12/23/11 19:56	1.00

Lab Sample ID: 11L3356-BLK1 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total**
Analysis Batch: 11L3356 — **Prep Batch: 11L3356_P**

Analyte	Blank Result	Blank Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Silica (as SiO2)	ND		0.11	mg/l		12/23/11 16:53	12/29/11 15:14	1.00
Potassium	ND		0.50	mg/l		12/23/11 16:53	12/29/11 15:14	1.00
Sodium	0.544	B	0.50	mg/l		12/23/11 16:53	12/29/11 15:14	1.00

Lab Sample ID: 11L3356-BS1 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total**
Analysis Batch: 11L3356 — **Prep Batch: 11L3356_P**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	1.00	0.992		mg/l		99	85 - 115
Calcium	1.00	0.985		mg/l		98	85 - 115
Iron	1.00	0.956		mg/l		96	85 - 115
Magnesium	1.00	1.01		mg/l		101	85 - 115

Lab Sample ID: 11L3356-BS1 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total**
Analysis Batch: 11L3356 — **Prep Batch: 11L3356_P**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Silica (as SiO2)	10.7	10.8		mg/l		101	85 - 115
Potassium	10.0	9.62		mg/l		96	85 - 115
Sodium	10.0	10.0		mg/l		100	85 - 115

Lab Sample ID: 11L3356-MS1 — **Client Sample ID: MCWP-MW02-20111217**
Matrix: Water — **Prep Type: Total**
Analysis Batch: 11L3356 — **Prep Batch: 11L3356_P**

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Result	Matrix Spike Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	0.821		1.00	1.77		mg/l		95	70 - 130
Calcium	150	MHA	1.00	154	MHA	mg/l		425	70 - 130

Method: EPA 200.7 - METALS (Continued)

Lab Sample ID: 11L3356-MS1 — **Client Sample ID: MCWP-MW02-20111217**
Matrix: Water — **Prep Type: Total**
Analysis Batch: 11L3356 — **Prep Batch: 11L3356_P**

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Result	Matrix Spike Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	0.0244		1.00	0.938		mg/l		91	70 - 130
Magnesium	88.2	MHA	1.00	85.6	MHA	mg/l		-255	70 - 130

Lab Sample ID: 11L3356-MS1 — **Client Sample ID: MCWP-MW02-20111217**
Matrix: Water — **Prep Type: Total**
Analysis Batch: 11L3356 — **Prep Batch: 11L3356_P**

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Result	Matrix Spike Qualifier	Unit	D	%Rec	%Rec. Limits
Silica (as SiO2)	31.6		10.7	41.5		mg/l		93	70 - 130
Potassium	4.14		10.0	16.4		mg/l		123	70 - 130
Sodium	209	MHA B-1	10.0	222	MHA	mg/l		131	70 - 130

Lab Sample ID: 11L3356-MS2 — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total**
Analysis Batch: 11L3356 — **Prep Batch: 11L3356_P**

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Result	Matrix Spike Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	0.0211		1.00	0.989		mg/l		97	70 - 130
Calcium	66.4		1.00	63.2	MHA	mg/l		-319	70 - 130
Iron	ND		1.00	0.941		mg/l		94	70 - 130
Magnesium	14.0		1.00	14.3	MHA	mg/l		24	70 - 130

Lab Sample ID: 11L3356-MS2 — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total**
Analysis Batch: 11L3356 — **Prep Batch: 11L3356_P**

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Result	Matrix Spike Qualifier	Unit	D	%Rec	%Rec. Limits
Silica (as SiO2)	23.1		10.7	30.3	M2	mg/l		68	70 - 130
Potassium	2.38		10.0	13.0		mg/l		106	70 - 130
Sodium	26.1		10.0	35.6		mg/l		95	70 - 130

Lab Sample ID: 11L3356-MSD1 — **Client Sample ID: MCWP-MW02-20111217**
Matrix: Water — **Prep Type: Total**
Analysis Batch: 11L3356 — **Prep Batch: 11L3356_P**

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Dup Result	Matrix Spike Dup Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Boron	0.821		1.00	1.84		mg/l		102	70 - 130	4	20
Calcium	150	MHA	1.00	157	MHA	mg/l		737	70 - 130	2	20
Iron	0.0244		1.00	0.920		mg/l		90	70 - 130	2	20
Magnesium	88.2	MHA	1.00	90.9	MHA	mg/l		272	70 - 130	6	20

Lab Sample ID: 11L3356-MSD1 — **Client Sample ID: MCWP-MW02-20111217**
Matrix: Water — **Prep Type: Total**
Analysis Batch: 11L3356 — **Prep Batch: 11L3356_P**

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Dup Result	Matrix Spike Dup Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Silica (as SiO2)	31.6		10.7	40.0		mg/l		79	70 - 130	4	20
Potassium	4.14		10.0	17.1		mg/l		129	70 - 130	4	20
Sodium	209	MHA B-1	10.0	221	MHA	mg/l		116	70 - 130	0.7	20

Method: EPA 200.8 - METALS

Lab Sample ID: 11L3187-BLK1
Matrix: Water
Analysis Batch: 11L3187

Client Sample ID: Method Blank
Prep Type: Total
Prep Batch: 11L3187_P

Analyte	Blank Result	Blank Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	ug/l		12/22/11 14:34	12/23/11 14:37	1.00
Arsenic	ND		1.0	ug/l		12/22/11 14:34	12/23/11 14:37	1.00
Barium	ND		1.0	ug/l		12/22/11 14:34	12/23/11 14:37	1.00
Cadmium	ND		1.0	ug/l		12/22/11 14:34	12/23/11 14:37	1.00
Chromium	ND		2.0	ug/l		12/22/11 14:34	12/23/11 14:37	1.00
Cobalt	ND		1.0	ug/l		12/22/11 14:34	12/23/11 14:37	1.00
Copper	ND		2.0	ug/l		12/22/11 14:34	12/23/11 14:37	1.00
Lead	ND		1.0	ug/l		12/22/11 14:34	12/23/11 14:37	1.00
Manganese	ND		1.0	ug/l		12/22/11 14:34	12/23/11 14:37	1.00
Nickel	ND		2.0	ug/l		12/22/11 14:34	12/23/11 14:37	1.00
Selenium	ND		2.0	ug/l		12/22/11 14:34	12/23/11 14:37	1.00
Silver	ND		1.0	ug/l		12/22/11 14:34	12/23/11 14:37	1.00
Thallium	ND		1.0	ug/l		12/22/11 14:34	12/23/11 14:37	1.00
Vanadium	ND		2.0	ug/l		12/22/11 14:34	12/23/11 14:37	1.00
Zinc	ND		20	ug/l		12/22/11 14:34	12/23/11 14:37	1.00

Lab Sample ID: 11L3187-BLK1
Matrix: Water
Analysis Batch: 11L3187

Client Sample ID: Method Blank
Prep Type: Total
Prep Batch: 11L3187_P

Analyte	Blank Result	Blank Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	ND		0.50	ug/l		12/22/11 14:34	12/27/11 22:59	1.00

Lab Sample ID: 11L3187-BLK1
Matrix: Water
Analysis Batch: 11L3187

Client Sample ID: Method Blank
Prep Type: Total
Prep Batch: 11L3187_P

Analyte	Blank Result	Blank Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		10	ug/l		12/22/11 14:34	12/28/11 16:14	1.00

Lab Sample ID: 11L3187-BS1
Matrix: Water
Analysis Batch: 11L3187

Client Sample ID: Lab Control Sample
Prep Type: Total
Prep Batch: 11L3187_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	80.0	79.3		ug/l		99	85 - 115
Arsenic	80.0	80.0		ug/l		100	85 - 115
Barium	80.0	78.9		ug/l		99	85 - 115
Cadmium	80.0	77.5		ug/l		97	85 - 115
Chromium	80.0	78.8		ug/l		98	85 - 115
Cobalt	80.0	79.3		ug/l		99	85 - 115
Copper	80.0	78.6		ug/l		98	85 - 115
Lead	80.0	79.0		ug/l		99	85 - 115
Manganese	80.0	77.9		ug/l		97	85 - 115
Nickel	80.0	78.5		ug/l		98	85 - 115
Selenium	80.0	78.1		ug/l		98	85 - 115
Silver	80.0	90.2		ug/l		113	85 - 115
Thallium	80.0	78.0		ug/l		98	85 - 115
Vanadium	80.0	79.0		ug/l		99	85 - 115
Zinc	80.0	75.2		ug/l		94	85 - 115

Method: EPA 200.8 - METALS (Continued)

Lab Sample ID: 11L3187-BS1
Matrix: Water
Analysis Batch: 11L3187

Client Sample ID: Lab Control Sample
Prep Type: Total
Prep Batch: 11L3187_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Beryllium	80.0	81.0		ug/l		101	85 - 115

Lab Sample ID: 11L3187-BS1
Matrix: Water
Analysis Batch: 11L3187

Client Sample ID: Lab Control Sample
Prep Type: Total
Prep Batch: 11L3187_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	80.0	84.4		ug/l		106	85 - 115

Lab Sample ID: 11L3187-MS1
Matrix: Water
Analysis Batch: 11L3187

Client Sample ID: Matrix Spike
Prep Type: Total
Prep Batch: 11L3187_P

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Result	Matrix Spike Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	ND		80.0	83.4		ug/l		104	70 - 130
Arsenic	1.25		80.0	80.1		ug/l		99	70 - 130
Barium	35.5		80.0	114		ug/l		98	70 - 130
Cadmium	ND		80.0	74.9		ug/l		94	70 - 130
Chromium	ND		80.0	76.6		ug/l		96	70 - 130
Cobalt	0.163		80.0	74.9		ug/l		93	70 - 130
Copper	1.17		80.0	75.8		ug/l		93	70 - 130
Lead	0.209		80.0	75.4		ug/l		94	70 - 130
Manganese	7.53		80.0	81.1		ug/l		92	70 - 130
Nickel	1.04		80.0	73.7		ug/l		91	70 - 130
Selenium	ND		80.0	76.8		ug/l		96	70 - 130
Silver	0.286		80.0	87.2		ug/l		109	70 - 130
Thallium	0.289		80.0	75.5		ug/l		94	70 - 130
Vanadium	2.29		80.0	80.3		ug/l		98	70 - 130
Zinc	ND		80.0	72.2		ug/l		90	70 - 130

Lab Sample ID: 11L3187-MS1
Matrix: Water
Analysis Batch: 11L3187

Client Sample ID: Matrix Spike
Prep Type: Total
Prep Batch: 11L3187_P

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Result	Matrix Spike Qualifier	Unit	D	%Rec	%Rec. Limits
Beryllium	ND		80.0	82.0		ug/l		103	70 - 130

Lab Sample ID: 11L3187-MS1
Matrix: Water
Analysis Batch: 11L3187

Client Sample ID: Matrix Spike
Prep Type: Total
Prep Batch: 11L3187_P

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Result	Matrix Spike Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	84.1		80.0	151		ug/l		83	70 - 130

Lab Sample ID: 11L3187-MS2
Matrix: Water
Analysis Batch: 11L3187

Client Sample ID: Matrix Spike
Prep Type: Total
Prep Batch: 11L3187_P

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Result	Matrix Spike Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.412		80.0	91.3		ug/l		114	70 - 130
Arsenic	177		80.0	268		ug/l		114	70 - 130

Method: EPA 200.8 - METALS (Continued)

Lab Sample ID: 11L3187-MS2
Matrix: Water
Analysis Batch: 11L3187

Client Sample ID: Matrix Spike
Prep Type: Total
Prep Batch: 11L3187_P

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Result	Matrix Spike Qualifier	Unit	D	%Rec	%Rec. Limits
Barium	117		80.0	194		ug/l		97	70 - 130
Cadmium	0.124		80.0	77.8		ug/l		97	70 - 130
Chromium	ND		80.0	78.6		ug/l		98	70 - 130
Cobalt	0.346		80.0	75.5		ug/l		94	70 - 130
Copper	3.20		80.0	76.7		ug/l		92	70 - 130
Lead	ND		80.0	75.8		ug/l		95	70 - 130
Manganese	1780		80.0	1840	MHA	ug/l		78	70 - 130
Nickel	2.18		80.0	74.9		ug/l		91	70 - 130
Selenium	0.768		80.0	81.7		ug/l		101	70 - 130
Silver	0.417		80.0	88.9		ug/l		111	70 - 130
Thallium	0.292		80.0	75.6		ug/l		94	70 - 130
Vanadium	3.06		80.0	85.1		ug/l		102	70 - 130
Zinc	7.84		80.0	80.7		ug/l		91	70 - 130

Lab Sample ID: 11L3187-MS2
Matrix: Water
Analysis Batch: 11L3187

Client Sample ID: Matrix Spike
Prep Type: Total
Prep Batch: 11L3187_P

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Result	Matrix Spike Qualifier	Unit	D	%Rec	%Rec. Limits
Beryllium	ND		80.0	85.7		ug/l		107	70 - 130

Lab Sample ID: 11L3187-MS2
Matrix: Water
Analysis Batch: 11L3187

Client Sample ID: Matrix Spike
Prep Type: Total
Prep Batch: 11L3187_P

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Result	Matrix Spike Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	9.83		80.0	85.0		ug/l		94	70 - 130

Lab Sample ID: 11L3187-MSD1
Matrix: Water
Analysis Batch: 11L3187

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total
Prep Batch: 11L3187_P

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Dup Result	Matrix Spike Dup Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	ND		80.0	80.4		ug/l		101	70 - 130	4	20
Arsenic	1.25		80.0	81.5		ug/l		100	70 - 130	2	20
Barium	35.5		80.0	115		ug/l		99	70 - 130	1	20
Cadmium	ND		80.0	76.5		ug/l		96	70 - 130	2	20
Chromium	ND		80.0	78.3		ug/l		98	70 - 130	2	20
Cobalt	0.163		80.0	75.7		ug/l		94	70 - 130	1	20
Copper	1.17		80.0	77.8		ug/l		96	70 - 130	3	20
Lead	0.209		80.0	77.6		ug/l		97	70 - 130	3	20
Manganese	7.53		80.0	82.6		ug/l		94	70 - 130	2	20
Nickel	1.04		80.0	74.9		ug/l		92	70 - 130	2	20
Selenium	ND		80.0	76.1		ug/l		95	70 - 130	0.9	20
Silver	0.286		80.0	88.3		ug/l		110	70 - 130	1	20
Thallium	0.289		80.0	78.0		ug/l		97	70 - 130	3	20
Vanadium	2.29		80.0	82.1		ug/l		100	70 - 130	2	20
Zinc	ND		80.0	75.1		ug/l		94	70 - 130	4	20

Method: EPA 200.8 - METALS (Continued)

Lab Sample ID: 11L3187-MSD1 — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total**
Analysis Batch: 11L3187 — **Prep Batch: 11L3187_P**

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Dup Result	Matrix Spike Dup Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Beryllium	ND		80.0	84.7		ug/l		106	70 - 130	3	20

Lab Sample ID: 11L3187-MSD1 — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total**
Analysis Batch: 11L3187 — **Prep Batch: 11L3187_P**

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Dup Result	Matrix Spike Dup Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aluminum	84.1		80.0	157		ug/l		92	70 - 130	4	20

Method: EPA 245.1 - METALS

Lab Sample ID: 11L2452-BLK1 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total**
Analysis Batch: 11L2452 — **Prep Batch: 11L2452_P**

Analyte	Blank Result	Blank Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	mg/l		12/19/11 13:34	12/20/11 20:07	1.00

Lab Sample ID: 11L2452-BS1 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total**
Analysis Batch: 11L2452 — **Prep Batch: 11L2452_P**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00800	0.00856		mg/l		107	85 - 115

Lab Sample ID: 11L2452-MS1 — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total**
Analysis Batch: 11L2452 — **Prep Batch: 11L2452_P**

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Result	Matrix Spike Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	ND		0.00800	0.00767		mg/l		96	70 - 130

Lab Sample ID: 11L2452-MSD1 — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total**
Analysis Batch: 11L2452 — **Prep Batch: 11L2452_P**

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Dup Result	Matrix Spike Dup Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	ND		0.00800	0.00783		mg/l		98	70 - 130	2	20

Method: SM2340B - INORGANICS

Lab Sample ID: 11L3356-BLK1 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total**
Analysis Batch: 11L3356 — **Prep Batch: 11L3356_P**

Analyte	Blank Result	Blank Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hardness (as CaCO3)	ND		1.0	mg/l		12/23/11 16:53	12/23/11 19:56	1.00

QC Sample Results

Client: Earth Forensics
Project/Site: 44002987 - Title 22 Analysis

TestAmerica Job ID: IUL2023

Method: EPA 300.0 - INORGANICS

Lab Sample ID: 11L2361-BLK1
Matrix: Water
Analysis Batch: 11L2361

Client Sample ID: Method Blank
Prep Type: Total
Prep Batch: 11L2361_P

Analyte	Blank Result	Blank Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate-N	ND		0.11	mg/l		12/17/11 08:00	12/17/11 10:08	1.00
Nitrate-NO3	ND		0.50	mg/l		12/17/11 08:00	12/17/11 10:08	1.00
Nitrite-N	ND		0.15	mg/l		12/17/11 08:00	12/17/11 10:08	1.00
Nitrate/Nitrite-N	ND		0.26	mg/l		12/17/11 08:00	12/17/11 10:08	1.00

Lab Sample ID: 11L2361-BS1
Matrix: Water
Analysis Batch: 11L2361

Client Sample ID: Lab Control Sample
Prep Type: Total
Prep Batch: 11L2361_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate-N	1.13	1.16		mg/l		103	90 - 110
Nitrate-NO3	5.00	5.16		mg/l		103	90 - 110
Nitrite-N	1.52	1.52		mg/l		100	90 - 110

Lab Sample ID: 11L2361-MS1
Matrix: Water
Analysis Batch: 11L2361

Client Sample ID: Matrix Spike
Prep Type: Total
Prep Batch: 11L2361_P

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Result	Matrix Spike Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate-N	0.643		1.13	2.02	M1	mg/l		122	80 - 120
Nitrate-NO3	2.85		5.00	8.93	M1	mg/l		122	80 - 120
Nitrite-N	2.17		1.52	4.69	M1	mg/l		165	80 - 120

Lab Sample ID: 11L2361-MSD1
Matrix: Water
Analysis Batch: 11L2361

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total
Prep Batch: 11L2361_P

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Dup Result	Matrix Spike Dup Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate-N	0.643		1.13	2.04	M1	mg/l		124	80 - 120	1	20
Nitrate-NO3	2.85		5.00	9.05	M1	mg/l		124	80 - 120	1	20
Nitrite-N	2.17		1.52	4.74	M1	mg/l		169	80 - 120	1	20

Lab Sample ID: 11L2524-BLK1
Matrix: Water
Analysis Batch: 11L2524

Client Sample ID: Method Blank
Prep Type: Total
Prep Batch: 11L2524_P

Analyte	Blank Result	Blank Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.50	mg/l		12/19/11 08:00	12/19/11 09:59	1.00
Sulfate	ND		0.50	mg/l		12/19/11 08:00	12/19/11 09:59	1.00

Lab Sample ID: 11L2524-BS1
Matrix: Water
Analysis Batch: 11L2524

Client Sample ID: Lab Control Sample
Prep Type: Total
Prep Batch: 11L2524_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	5.00	4.99		mg/l		100	90 - 110
Sulfate	10.0	9.80	M-3	mg/l		98	90 - 110

Method: EPA 300.0 - INORGANICS (Continued)

Lab Sample ID: 11L2524-MS1 — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total**
Analysis Batch: 11L2524 — **Prep Batch: 11L2524_P**

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Result	Matrix Spike Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	47.0		50.0	96.2		mg/l		98	80 - 120

Lab Sample ID: 11L2524-MSD1 — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total**
Analysis Batch: 11L2524 — **Prep Batch: 11L2524_P**

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Dup Result	Matrix Spike Dup Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	47.0		50.0	97.4		mg/l		101	80 - 120	1	20

Method: EPA 351.2 - INORGANICS

Lab Sample ID: 11L3549-BLK1 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total**
Analysis Batch: 11L3549 — **Prep Batch: 11L3549_P**

Analyte	Blank Result	Blank Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Kjeldahl Nitrogen	ND		0.50	mg/l		12/27/11 15:00	12/27/11 20:24	1.00

Lab Sample ID: 11L3549-BS1 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total**
Analysis Batch: 11L3549 — **Prep Batch: 11L3549_P**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Kjeldahl Nitrogen	5.00	4.82		mg/l		96	90 - 110

Lab Sample ID: 11L3549-MS1 — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total**
Analysis Batch: 11L3549 — **Prep Batch: 11L3549_P**

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Result	Matrix Spike Qualifier	Unit	D	%Rec	%Rec. Limits
Total Kjeldahl Nitrogen	ND		5.00	4.96		mg/l		99	90 - 110

Lab Sample ID: 11L3549-MS2 — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total**
Analysis Batch: 11L3549 — **Prep Batch: 11L3549_P**

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Result	Matrix Spike Qualifier	Unit	D	%Rec	%Rec. Limits
Total Kjeldahl Nitrogen	ND		5.00	5.09		mg/l		102	90 - 110

Lab Sample ID: 11L3549-MSD1 — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total**
Analysis Batch: 11L3549 — **Prep Batch: 11L3549_P**

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Dup Result	Matrix Spike Dup Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Kjeldahl Nitrogen	ND		5.00	4.92		mg/l		98	90 - 110	0.8	20

Method: EPA 351.2 - INORGANICS (Continued)

Lab Sample ID: 11L3549-MSD2 — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total**
Analysis Batch: 11L3549 — **Prep Batch: 11L3549_P**

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Dup Result	Matrix Spike Dup Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Kjeldahl Nitrogen	ND		5.00	4.97		mg/l		99	90 - 110	2	20

Method: EPA 365.3 - INORGANICS

Lab Sample ID: 11L2729-BLK1 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total**
Analysis Batch: 11L2729 — **Prep Batch: 11L2729_P**

Analyte	Blank Result	Blank Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Phosphorus	ND		0.050	mg/l		12/20/11 08:01	12/20/11 15:13	1.00

Lab Sample ID: 11L2729-BS1 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total**
Analysis Batch: 11L2729 — **Prep Batch: 11L2729_P**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Phosphorus	0.500	0.425		mg/l		85	80 - 120

Lab Sample ID: 11L2729-MS1 — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total**
Analysis Batch: 11L2729 — **Prep Batch: 11L2729_P**

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Result	Matrix Spike Qualifier	Unit	D	%Rec	%Rec. Limits
Phosphorus	0.106		0.500	0.564		mg/l		92	65 - 130

Lab Sample ID: 11L2729-MSD1 — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total**
Analysis Batch: 11L2729 — **Prep Batch: 11L2729_P**

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Dup Result	Matrix Spike Dup Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Phosphorus	0.106		0.500	0.547		mg/l		88	65 - 130	3	20

Method: SM 4500-F-C - INORGANICS

Lab Sample ID: 11L3238-BLK1 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total**
Analysis Batch: 11L3238 — **Prep Batch: 11L3238_P**

Analyte	Blank Result	Blank Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	ND		0.10	mg/l		12/23/11 04:30	12/23/11 07:55	1.00

Lab Sample ID: 11L3238-BS1 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total**
Analysis Batch: 11L3238 — **Prep Batch: 11L3238_P**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	1.00	1.00		mg/l		100	90 - 110

Method: SM 4500-F-C - INORGANICS (Continued)

Lab Sample ID: 11L3238-MS1
Matrix: Water
Analysis Batch: 11L3238

Client Sample ID: Matrix Spike
Prep Type: Total
Prep Batch: 11L3238_P

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Result	Matrix Spike Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	0.262		1.00	1.26		mg/l		100	80 - 120

Lab Sample ID: 11L3238-MSD1
Matrix: Water
Analysis Batch: 11L3238

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total
Prep Batch: 11L3238_P

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Dup Result	Matrix Spike Dup Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Fluoride	0.262		1.00	1.26		mg/l		99	80 - 120	0.4	20

Method: SM2320B - INORGANICS

Lab Sample ID: 11L3682-BLK1
Matrix: Water
Analysis Batch: 11L3682

Client Sample ID: Method Blank
Prep Type: Total
Prep Batch: 11L3682_P

Analyte	Blank Result	Blank Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	ND		2.0	mg/l		12/28/11 10:36	12/28/11 11:30	1.00
Bicarbonate Alkalinity as CaCO3	ND		2.0	mg/l		12/28/11 10:36	12/28/11 11:30	1.00
Carbonate Alkalinity as CaCO3	ND		2.0	mg/l		12/28/11 10:36	12/28/11 11:30	1.00
Hydroxide Alkalinity as CaCO3	ND		2.0	mg/l		12/28/11 10:36	12/28/11 11:30	1.00

Lab Sample ID: 11L3682-BS1
Matrix: Water
Analysis Batch: 11L3682

Client Sample ID: Lab Control Sample
Prep Type: Total
Prep Batch: 11L3682_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity as CaCO3	183	166		mg/l		91	90 - 110

Lab Sample ID: 11L3682-DUP1
Matrix: Water
Analysis Batch: 11L3682

Client Sample ID: Duplicate
Prep Type: Total
Prep Batch: 11L3682_P

Analyte	Sample Result	Sample Qualifier	Duplicate Result	Duplicate Qualifier	Unit	D	RPD	RPD Limit
Alkalinity as CaCO3	74.0		76.0		mg/l		3	20
Bicarbonate Alkalinity as CaCO3	74.0		76.0		mg/l		3	20
Carbonate Alkalinity as CaCO3	ND		ND		mg/l			20
Hydroxide Alkalinity as CaCO3	ND		ND		mg/l			20

Method: SM2510B - INORGANICS

Lab Sample ID: 11L2513-BLK1
Matrix: Water
Analysis Batch: 11L2513

Client Sample ID: Method Blank
Prep Type: Total
Prep Batch: 11L2513_P

Analyte	Blank Result	Blank Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	ND		1.0	umhos/cm @ 25C		12/19/11 06:45	12/19/11 06:45	1.00

Method: SM2510B - INORGANICS (Continued)

Lab Sample ID: 11L2513-BS1
Matrix: Water
Analysis Batch: 11L2513

Client Sample ID: Lab Control Sample
Prep Type: Total
Prep Batch: 11L2513_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Specific Conductance	501	525		umhos/cm @ 25C		105	90 - 110

Lab Sample ID: 11L2513-DUP1
Matrix: Water
Analysis Batch: 11L2513

Client Sample ID: MCWP-MW02-20111217
Prep Type: Total
Prep Batch: 11L2513_P

Analyte	Sample Result	Sample Qualifier	Duplicate Result	Duplicate Qualifier	Unit	D	RPD	RPD Limit
Specific Conductance	2260		2250		umhos/cm @ 25C		0.4	5

Method: SM2540C - INORGANICS

Lab Sample ID: 11L2473-BLK1
Matrix: Water
Analysis Batch: 11L2473

Client Sample ID: Method Blank
Prep Type: Total
Prep Batch: 11L2473_P

Analyte	Blank Result	Blank Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	ND		10	mg/l		12/19/11 04:52	12/19/11 11:30	1.00

Lab Sample ID: 11L2473-BS1
Matrix: Water
Analysis Batch: 11L2473

Client Sample ID: Lab Control Sample
Prep Type: Total
Prep Batch: 11L2473_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	1000	1000		mg/l		100	90 - 110

Lab Sample ID: 11L2473-DUP1
Matrix: Water
Analysis Batch: 11L2473

Client Sample ID: Duplicate
Prep Type: Total
Prep Batch: 11L2473_P

Analyte	Sample Result	Sample Qualifier	Duplicate Result	Duplicate Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	392		386		mg/l		2	10

Method: SM4500CN-E - INORGANICS

Lab Sample ID: 11L3721-BLK1
Matrix: Water
Analysis Batch: 11L3721

Client Sample ID: Method Blank
Prep Type: Total
Prep Batch: 11L3721_P

Analyte	Blank Result	Blank Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Cyanide	ND		0.025	mg/l		12/28/11 14:15	12/28/11 17:00	1.00

Lab Sample ID: 11L3721-BS1
Matrix: Water
Analysis Batch: 11L3721

Client Sample ID: Lab Control Sample
Prep Type: Total
Prep Batch: 11L3721_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Cyanide	0.200	0.205		mg/l		103	90 - 110

Method: SM4500CN-E - INORGANICS (Continued)

Lab Sample ID: 11L3721-MS1 — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total**
Analysis Batch: 11L3721 — **Prep Batch: 11L3721_P**

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Result	Matrix Spike Qualifier	Unit	D	%Rec	%Rec. Limits
Total Cyanide	ND		0.200	0.201		mg/l		100	70 - 115

Lab Sample ID: 11L3721-MSD1 — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total**
Analysis Batch: 11L3721 — **Prep Batch: 11L3721_P**

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Dup Result	Matrix Spike Dup Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Cyanide	ND		0.200	0.202		mg/l		101	70 - 115	0.4	15

Method: SM4500NH3-D - INORGANICS

Lab Sample ID: 11L3575-BLK1 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total**
Analysis Batch: 11L3575 — **Prep Batch: 11L3575_P**

Analyte	Blank Result	Blank Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia-N	ND		0.50	mg/l		12/27/11 20:51	12/27/11 22:38	1.00

Lab Sample ID: 11L3575-BS1 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total**
Analysis Batch: 11L3575 — **Prep Batch: 11L3575_P**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia-N	1.00	1.02		mg/l		102	85 - 115

Lab Sample ID: 11L3575-MS1 — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total**
Analysis Batch: 11L3575 — **Prep Batch: 11L3575_P**

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Result	Matrix Spike Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia-N	ND		2.00	2.03		mg/l		101	75 - 125

Lab Sample ID: 11L3575-MSD1 — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total**
Analysis Batch: 11L3575 — **Prep Batch: 11L3575_P**

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Dup Result	Matrix Spike Dup Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ammonia-N	ND		2.00	2.03		mg/l		101	75 - 125	0	15

Method: SM5310C - INORGANICS

Lab Sample ID: 11L3236-BLK1 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total**
Analysis Batch: 11L3236 — **Prep Batch: 11L3236_P**

Analyte	Blank Result	Blank Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		0.10	mg/l		12/23/11 04:30	12/23/11 05:59	1.00

Method: SM5310C - INORGANICS (Continued)

Lab Sample ID: 11L3236-BS1 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total**
Analysis Batch: 11L3236 — **Prep Batch: 11L3236_P**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	10.0	10.5		mg/l		105	90 - 110

Lab Sample ID: 11L3236-MS1 — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total**
Analysis Batch: 11L3236 — **Prep Batch: 11L3236_P**

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Result	Matrix Spike Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	2.02		10.0	11.3		mg/l		92	80 - 120

Lab Sample ID: 11L3236-MSD1 — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total**
Analysis Batch: 11L3236 — **Prep Batch: 11L3236_P**

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Dup Result	Matrix Spike Dup Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Organic Carbon	2.02		10.0	11.3		mg/l		93	80 - 120	0.1	20

Method: SM5540-C - INORGANICS

Lab Sample ID: 11L2373-BLK1 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total**
Analysis Batch: 11L2373 — **Prep Batch: 11L2373_P**

Analyte	Blank Result	Blank Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Surfactants (MBAS)	ND		0.10	mg/l		12/17/11 13:45	12/17/11 14:40	1.00

Lab Sample ID: 11L2373-BS1 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total**
Analysis Batch: 11L2373 — **Prep Batch: 11L2373_P**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Surfactants (MBAS)	0.250	0.255		mg/l		102	90 - 110

Lab Sample ID: 11L2373-MS1 — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total**
Analysis Batch: 11L2373 — **Prep Batch: 11L2373_P**

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Result	Matrix Spike Qualifier	Unit	D	%Rec	%Rec. Limits
Surfactants (MBAS)	ND		0.250	0.245		mg/l		98	50 - 125

Lab Sample ID: 11L2373-MSD1 — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total**
Analysis Batch: 11L2373 — **Prep Batch: 11L2373_P**

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Dup Result	Matrix Spike Dup Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Surfactants (MBAS)	ND		0.250	0.256		mg/l		102	50 - 125	4	20

QC Sample Results

Client: Earth Forensics
Project/Site: 44002987 - Title 22 Analysis

TestAmerica Job ID: IUL2023

Method: EPA 525.2 - ORGANIC COMPOUNDS BY GC/MS (EPA 525.2)

Lab Sample ID: 11L2955-BLK1
Matrix: Water
Analysis Batch: 11L2955

Client Sample ID: Method Blank
Prep Type: Total
Prep Batch: 11L2955_P

Analyte	Blank Result	Blank Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND		0.50	ug/l		12/21/11 12:29	12/22/11 18:41	1.00
Benzo(a)pyrene	ND		0.10	ug/l		12/21/11 12:29	12/22/11 18:41	1.00
Di(2-ethylhexyl)adipate	ND		5.0	ug/l		12/21/11 12:29	12/22/11 18:41	1.00
Di(2-ethylhexyl)phthalate	ND		3.0	ug/l		12/21/11 12:29	12/22/11 18:41	1.00
Hexachlorobenzene	ND		0.50	ug/l		12/21/11 12:29	12/22/11 18:41	1.00
Hexachlorocyclopentadiene	ND		1.0	ug/l		12/21/11 12:29	12/22/11 18:41	1.00
Molinate	ND		2.0	ug/l		12/21/11 12:29	12/22/11 18:41	1.00
Simazine	ND		1.0	ug/l		12/21/11 12:29	12/22/11 18:41	1.00
Thiobencarb	ND		1.0	ug/l		12/21/11 12:29	12/22/11 18:41	1.00

Surrogate	*Blank %Recovery*	*Blank Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,3-Dimethyl-2-nitrobenzene	*88*		*70 - 130*	*12/21/11 12:29*	*12/22/11 18:41*	*1.00*
Triphenylphosphate	*110*		*70 - 130*	*12/21/11 12:29*	*12/22/11 18:41*	*1.00*
Perylene-d12	*93*		*70 - 130*	*12/21/11 12:29*	*12/22/11 18:41*	*1.00*

Lab Sample ID: 11L2955-BS1
Matrix: Water
Analysis Batch: 11L2955

Client Sample ID: Lab Control Sample
Prep Type: Total
Prep Batch: 11L2955_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Atrazine	5.00	4.89	MNR1	ug/l		98	70 - 130
Benzo(a)pyrene	5.00	4.59	MNR1	ug/l		92	70 - 130
Di(2-ethylhexyl)adipate	10.0	11.0	MNR1	ug/l		110	70 - 130
Di(2-ethylhexyl)phthalate	10.0	10.9	MNR1	ug/l		109	70 - 130
Hexachlorobenzene	5.00	5.21	MNR1	ug/l		104	70 - 130
Hexachlorocyclopentadiene	10.0	9.35	MNR1	ug/l		94	70 - 130
Molinate	5.00	4.45	MNR1	ug/l		89	70 - 130
Simazine	5.00	4.80	MNR1	ug/l		96	70 - 130
Thiobencarb	5.00	4.82	MNR1	ug/l		96	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,3-Dimethyl-2-nitrobenzene	*107*	*MNR1*	*70 - 130*
Triphenylphosphate	*117*	*MNR1*	*70 - 130*
Perylene-d12	*95*	*MNR1*	*70 - 130*

Lab Sample ID: 11L2955-BSD1
Matrix: Water
Analysis Batch: 11L2955

Client Sample ID: Lab Control Sample Dup
Prep Type: Total
Prep Batch: 11L2955_P

Analyte	Spike Added	LCS Dup Result	LCS Dup Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Atrazine	5.00	4.94		ug/l		99	70 - 130	1	30
Benzo(a)pyrene	5.00	4.51		ug/l		90	70 - 130	2	30
Di(2-ethylhexyl)adipate	10.0	10.5		ug/l		105	70 - 130	4	30
Di(2-ethylhexyl)phthalate	10.0	10.9		ug/l		109	70 - 130	0.3	30
Hexachlorobenzene	5.00	4.69		ug/l		94	70 - 130	11	30
Hexachlorocyclopentadiene	10.0	10.0		ug/l		100	70 - 130	7	30
Molinate	5.00	4.57		ug/l		91	70 - 130	3	30
Simazine	5.00	4.64		ug/l		93	70 - 130	3	30
Thiobencarb	5.00	4.74		ug/l		95	70 - 130	2	30

Method: EPA 525.2 - ORGANIC COMPOUNDS BY GC/MS (EPA 525.2) (Continued)

Lab Sample ID: 11L2955-BSD1
Matrix: Water
Analysis Batch: 11L2955

Client Sample ID: Lab Control Sample Dup
Prep Type: Total
Prep Batch: 11L2955_P

Surrogate	*LCS Dup %Recovery*	*LCS Dup Qualifier*	*Limits*
1,3-Dimethyl-2-nitrobenzene	*102*		*70 - 130*
Triphenylphosphate	*120*		*70 - 130*
Perylene-d12	*92*		*70 - 130*

6

Method: EPA 548.1 - ENDOTHALL (EPA 548.1)

Lab Sample ID: 11L2505-BLK1
Matrix: Water
Analysis Batch: 11L2505

Client Sample ID: Method Blank
Prep Type: Total
Prep Batch: 11L2505_P

Analyte	Blank Result	Blank Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Endothall	ND		45	ug/l		12/19/11 06:15	12/19/11 15:18	1.00

Lab Sample ID: 11L2505-BS1
Matrix: Water
Analysis Batch: 11L2505

Client Sample ID: Lab Control Sample
Prep Type: Total
Prep Batch: 11L2505_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Endothall	50.0	52.1		ug/l		104	45 - 125

Lab Sample ID: 11L2505-BSD1
Matrix: Water
Analysis Batch: 11L2505

Client Sample ID: Lab Control Sample Dup
Prep Type: Total
Prep Batch: 11L2505_P

Analyte	Spike Added	LCS Dup Result	LCS Dup Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Endothall	50.0	25.6	R-7	ug/l		51	45 - 125	68	30

Lab Sample ID: 11L2505-MS1
Matrix: Water
Analysis Batch: 11L2505

Client Sample ID: Matrix Spike
Prep Type: Total
Prep Batch: 11L2505_P

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Result	Matrix Spike Qualifier	Unit	D	%Rec	%Rec. Limits
Endothall	ND		50.0	50.4		ug/l		101	45 - 125

Method: EPA-5 1613B-Tetras - EPA-5 1613B-Tetrasx

Lab Sample ID: G1L280000055B
Matrix: WATER
Analysis Batch: 1362055

Client Sample ID: Method Blank
Prep Type: Total
Prep Batch: 1362055_P

Analyte	Blank Result	Blank Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		5	pg/L		12/28/11 09:00	12/29/11 19:38	1

Surrogate	*Blank %Recovery*	*Blank Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*60*		*31 - 137*	*12/28/11 09:00*	*12/29/11 19:38*	*1*

Method: EPA-5 1613B-Tetras - EPA-5 1613B-Tetrasx (Continued)

Lab Sample ID: G1L280000055C — **Client Sample ID: Lab Control Sample**
Matrix: WATER — **Prep Type: Total**
Analysis Batch: 1362055 — **Prep Batch: 1362055_P**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,3,7,8-TCDD	200	217		pg/L		109	73 - 146

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C-2,3,7,8-TCDD	*62*		*25 - 141*

Method: EPA 150.1 - INORGANICS

Lab Sample ID: 11L2518-DUP1 — **Client Sample ID: MCWP-MW02-20111217**
Matrix: Water — **Prep Type: Total**
Analysis Batch: 11L2518 — **Prep Batch: 11L2518_P**

Analyte	Sample Result	Sample Qualifier	Duplicate Result	Duplicate Qualifier	Unit	D	RPD	RPD Limit
pH	8.03	HFT	8.06		pH Units		0.4	5

Method: EPA 180.1 - INORGANICS

Lab Sample ID: 11L2374-BLK1 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total**
Analysis Batch: 11L2374 — **Prep Batch: 11L2374_P**

Analyte	Blank Result	Blank Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Turbidity	ND		0.10	NTU		12/17/11 15:51	12/17/11 15:51	1.00

Lab Sample ID: 11L2374-DUP1 — **Client Sample ID: Duplicate**
Matrix: Water — **Prep Type: Total**
Analysis Batch: 11L2374 — **Prep Batch: 11L2374_P**

Analyte	Sample Result	Sample Qualifier	Duplicate Result	Duplicate Qualifier	Unit	D	RPD	RPD Limit
Turbidity	ND		ND		NTU			20

Method: SM2120B - INORGANICS

Lab Sample ID: 11L2376-DUP1 — **Client Sample ID: MCWP-MW02-20111217**
Matrix: Water — **Prep Type: Total**
Analysis Batch: 11L2376 — **Prep Batch: 11L2376_P**

Analyte	Sample Result	Sample Qualifier	Duplicate Result	Duplicate Qualifier	Unit	D	RPD	RPD Limit
Color	ND	pH	ND	pHa	Color Units			20

Method: SM2150B - INORGANICS

Lab Sample ID: 11L2377-BLK1 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total**
Analysis Batch: 11L2377 — **Prep Batch: 11L2377_P**

Analyte	Blank Result	Blank Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Odor	ND		1.0	T.O.N.		12/17/11 16:10	12/17/11 16:10	1.00

QC Association Summary

Client: Earth Forensics
Project/Site: 44002987 - Title 22 Analysis

TestAmerica Job ID: IUL2023

GCMS-Vol Drinking Water

Analysis Batch: 11L2909

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11L2909-BLK1	Method Blank	Total	Water	EPA 524.2	11L2909_P
11L2909-BS1	Lab Control Sample	Total	Water	EPA 524.2	11L2909_P
11L2909-MS1	Matrix Spike	Total	Water	EPA 524.2	11L2909_P
11L2909-MSD1	Matrix Spike Duplicate	Total	Water	EPA 524.2	11L2909_P
IUL2023-01	MCWP-MW02-20111217	Total	Water	EPA 524.2	11L2909_P

Analysis Batch: 11L3125

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11L3125-BLK1	Method Blank	Total	Water	SRL 524.2 M-TCP	11L3125_P
11L3125-BS1	Lab Control Sample	Total	Water	SRL 524.2 M-TCP	11L3125_P
11L3125-DUP1	Duplicate	Total	Water	SRL 524.2 M-TCP	11L3125_P
IUL2023-01	MCWP-MW02-20111217	Total	Water	SRL 524.2 M-TCP	11L3125_P

Prep Batch: 11L2909_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11L2909-BLK1	Method Blank	Total	Water	EPA 524.2	
11L2909-BS1	Lab Control Sample	Total	Water	EPA 524.2	
11L2909-MS1	Matrix Spike	Total	Water	EPA 524.2	
11L2909-MSD1	Matrix Spike Duplicate	Total	Water	EPA 524.2	
IUL2023-01	MCWP-MW02-20111217	Total	Water	EPA 524.2	

Prep Batch: 11L3125_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11L3125-BLK1	Method Blank	Total	Water	EPA 524.2	
11L3125-BS1	Lab Control Sample	Total	Water	EPA 524.2	
11L3125-DUP1	Duplicate	Total	Water	EPA 524.2	
IUL2023-01	MCWP-MW02-20111217	Total	Water	EPA 524.2	

GC-SV Drinking Water

Analysis Batch: 11L2242

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11L2242-BLK1	Method Blank	Total	Water	EPA 515.4	11L2242_P
11L2242-BS1	Lab Control Sample	Total	Water	EPA 515.4	11L2242_P
11L2242-BSD1	Lab Control Sample Dup	Total	Water	EPA 515.4	11L2242_P
11L2242-MS1	Matrix Spike	Total	Water	EPA 515.4	11L2242_P
11L2242-MSD1	Matrix Spike Duplicate	Total	Water	EPA 515.4	11L2242_P
IUL2023-01	MCWP-MW02-20111217	Total	Water	EPA 515.4	11L2242_P

Analysis Batch: 11L2755

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11L2755-BLK1	Method Blank	Total	Water	EPA 552.2	11L2755_P
11L2755-BS1	Lab Control Sample	Total	Water	EPA 552.2	11L2755_P
11L2755-BSD1	Lab Control Sample Dup	Total	Water	EPA 552.2	11L2755_P
11L2755-MS1	Matrix Spike	Total	Water	EPA 552.2	11L2755_P
11L2755-MS2	Matrix Spike	Total	Water	EPA 552.2	11L2755_P
IUL2023-01	MCWP-MW02-20111217	Total	Water	EPA 552.2	11L2755_P

QC Association Summary

Client: Earth Forensics
Project/Site: 44002987 - Title 22 Analysis

TestAmerica Job ID: IUL2023

GC-SV Drinking Water (Continued)

Analysis Batch: 11L2921

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11L2921-BLK1	Method Blank	Total	Water	EPA 504.1	11L2921_P
11L2921-BS1	Lab Control Sample	Total	Water	EPA 504.1	11L2921_P
11L2921-BS2	Lab Control Sample	Total	Water	EPA 504.1	11L2921_P
11L2921-BSD1	Lab Control Sample Dup	Total	Water	EPA 504.1	11L2921_P
11L2921-MS1	Matrix Spike	Total	Water	EPA 504.1	11L2921_P
IUL2023-01	MCWP-MW02-20111217	Total	Water	EPA 504.1	11L2921_P

Analysis Batch: 11L3132

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11L3132-BLK1	Method Blank	Total	Water	EPA 505	11L3132_P
11L3132-BS1	Lab Control Sample	Total	Water	EPA 505	11L3132_P
11L3132-BS2	Lab Control Sample	Total	Water	EPA 505	11L3132_P
11L3132-BSD1	Lab Control Sample Dup	Total	Water	EPA 505	11L3132_P
11L3132-BSD2	Lab Control Sample Dup	Total	Water	EPA 505	11L3132_P
11L3132-MS1	Matrix Spike	Total	Water	EPA 505	11L3132_P
IUL2023-01	MCWP-MW02-20111217	Total	Water	EPA 505	11L3132_P

Prep Batch: 11L2242_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11L2242-BLK1	Method Blank	Total	Water	515.4	
11L2242-BS1	Lab Control Sample	Total	Water	515.4	
11L2242-BSD1	Lab Control Sample Dup	Total	Water	515.4	
11L2242-MS1	Matrix Spike	Total	Water	515.4	
11L2242-MSD1	Matrix Spike Duplicate	Total	Water	515.4	
IUL2023-01	MCWP-MW02-20111217	Total	Water	515.4	

Prep Batch: 11L2755_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11L2755-BLK1	Method Blank	Total	Water	EPA 552.2	
11L2755-BS1	Lab Control Sample	Total	Water	EPA 552.2	
11L2755-BSD1	Lab Control Sample Dup	Total	Water	EPA 552.2	
11L2755-MS1	Matrix Spike	Total	Water	EPA 552.2	
11L2755-MS2	Matrix Spike	Total	Water	EPA 552.2	
IUL2023-01	MCWP-MW02-20111217	Total	Water	EPA 552.2	

Prep Batch: 11L2921_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11L2921-BLK1	Method Blank	Total	Water	EPA 504.1	
11L2921-BS1	Lab Control Sample	Total	Water	EPA 504.1	
11L2921-BS2	Lab Control Sample	Total	Water	EPA 504.1	
11L2921-BSD1	Lab Control Sample Dup	Total	Water	EPA 504.1	
11L2921-MS1	Matrix Spike	Total	Water	EPA 504.1	
IUL2023-01	MCWP-MW02-20111217	Total	Water	EPA 504.1	

Prep Batch: 11L3132_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11L3132-BLK1	Method Blank	Total	Water	EPA 505	
11L3132-BS1	Lab Control Sample	Total	Water	EPA 505	
11L3132-BS2	Lab Control Sample	Total	Water	EPA 505	
11L3132-BSD1	Lab Control Sample Dup	Total	Water	EPA 505	
11L3132-BSD2	Lab Control Sample Dup	Total	Water	EPA 505	
11L3132-MS1	Matrix Spike	Total	Water	EPA 505	

GC-SV Drinking Water (Continued)

Prep Batch: 11L3132_P (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
IUL2023-01	MCWP-MW02-20111217	Total	Water	EPA 505	

HPLC

Analysis Batch: 11L2506

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11L2506-BLK1	Method Blank	Total	Water	EPA 549.2	11L2506_P
11L2506-BS1	Lab Control Sample	Total	Water	EPA 549.2	11L2506_P
11L2506-BSD1	Lab Control Sample Dup	Total	Water	EPA 549.2	11L2506_P
11L2506-MS1	Matrix Spike	Total	Water	EPA 549.2	11L2506_P
IUL2023-01	MCWP-MW02-20111217	Total	Water	EPA 549.2	11L2506_P

Analysis Batch: 11L2922

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11L2922-BLK1	Method Blank	Total	Water	EPA 547	11L2922_P
11L2922-BS1	Lab Control Sample	Total	Water	EPA 547	11L2922_P
11L2922-BSD1	Lab Control Sample Dup	Total	Water	EPA 547	11L2922_P
11L2922-MS1	Matrix Spike	Total	Water	EPA 547	11L2922_P
IUL2023-01	MCWP-MW02-20111217	Total	Water	EPA 547	11L2922_P

Analysis Batch: 11L3331

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11L3331-BLK1	Method Blank	Total	Water	EPA 531.1	
11L3331-BS1	Lab Control Sample	Total	Water	EPA 531.1	
11L3331-BSD1	Lab Control Sample Dup	Total	Water	EPA 531.1	
11L3331-MS1	Matrix Spike	Total	Water	EPA 531.1	
IUL2023-01	MCWP-MW02-20111217	Total	Water	EPA 531.1	

Prep Batch: 11L2506_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11L2506-BLK1	Method Blank	Total	Water	*** DEFAULT PREP ***	
11L2506-BS1	Lab Control Sample	Total	Water	*** DEFAULT PREP ***	
11L2506-BSD1	Lab Control Sample Dup	Total	Water	*** DEFAULT PREP ***	
11L2506-MS1	Matrix Spike	Total	Water	*** DEFAULT PREP ***	
IUL2023-01	MCWP-MW02-20111217	Total	Water	*** DEFAULT PREP ***	

Prep Batch: 11L2922_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11L2922-BLK1	Method Blank	Total	Water	EPA 547	
11L2922-BS1	Lab Control Sample	Total	Water	EPA 547	
11L2922-BSD1	Lab Control Sample Dup	Total	Water	EPA 547	
11L2922-MS1	Matrix Spike	Total	Water	EPA 547	
IUL2023-01	MCWP-MW02-20111217	Total	Water	EPA 547	

QC Association Summary

Client: Earth Forensics
Project/Site: 44002987 - Title 22 Analysis

TestAmerica Job ID: IUL2023

Metals

Analysis Batch: 11L2452

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11L2452-BLK1	Method Blank	Total	Water	EPA 245.1	11L2452_P
11L2452-BS1	Lab Control Sample	Total	Water	EPA 245.1	11L2452_P
11L2452-MS1	Matrix Spike	Total	Water	EPA 245.1	11L2452_P
11L2452-MSD1	Matrix Spike Duplicate	Total	Water	EPA 245.1	11L2452_P
IUL2023-01	MCWP-MW02-20111217	Total	Water	EPA 245.1	11L2452_P

Analysis Batch: 11L3187

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11L3187-BLK1	Method Blank	Total	Water	EPA 200.8	11L3187_P
11L3187-BS1	Lab Control Sample	Total	Water	EPA 200.8	11L3187_P
11L3187-MS1	Matrix Spike	Total	Water	EPA 200.8	11L3187_P
11L3187-MS2	Matrix Spike	Total	Water	EPA 200.8	11L3187_P
11L3187-MSD1	Matrix Spike Duplicate	Total	Water	EPA 200.8	11L3187_P
IUL2023-01	MCWP-MW02-20111217	Total	Water	EPA 200.8	11L3187_P

Analysis Batch: 11L3356

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11L3356-BLK1	Method Blank	Total	Water	EPA 200.7	11L3356_P
11L3356-BLK1	Method Blank	Total	Water	SM2340B	11L3356_P
11L3356-BS1	Lab Control Sample	Total	Water	EPA 200.7	11L3356_P
11L3356-MS1	MCWP-MW02-20111217	Total	Water	EPA 200.7	11L3356_P
11L3356-MS2	Matrix Spike	Total	Water	EPA 200.7	11L3356_P
11L3356-MSD1	MCWP-MW02-20111217	Total	Water	EPA 200.7	11L3356_P
IUL2023-01	MCWP-MW02-20111217	Total	Water	EPA 200.7	11L3356_P
IUL2023-01	MCWP-MW02-20111217	Total	Water	SM2340B	11L3356_P

Prep Batch: 11L2452_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11L2452-BLK1	Method Blank	Total	Water	EPA 245.1	
11L2452-BS1	Lab Control Sample	Total	Water	EPA 245.1	
11L2452-MS1	Matrix Spike	Total	Water	EPA 245.1	
11L2452-MSD1	Matrix Spike Duplicate	Total	Water	EPA 245.1	
IUL2023-01	MCWP-MW02-20111217	Total	Water	EPA 245.1	

Prep Batch: 11L3187_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11L3187-BLK1	Method Blank	Total	Water	EPA 200.2 ICPMS	
11L3187-BS1	Lab Control Sample	Total	Water	EPA 200.2 ICPMS	
11L3187-MS1	Matrix Spike	Total	Water	EPA 200.2 ICPMS	
11L3187-MS2	Matrix Spike	Total	Water	EPA 200.2 ICPMS	
11L3187-MSD1	Matrix Spike Duplicate	Total	Water	EPA 200.2 ICPMS	
IUL2023-01	MCWP-MW02-20111217	Total	Water	EPA 200.2 ICPMS	

Prep Batch: 11L3356_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11L3356-BLK1	Method Blank	Total	Water	EPA 200.2	
11L3356-BS1	Lab Control Sample	Total	Water	EPA 200.2	
11L3356-MS1	MCWP-MW02-20111217	Total	Water	EPA 200.2	

QC Association Summary

Client: Earth Forensics
Project/Site: 44002987 - Title 22 Analysis

TestAmerica Job ID: IUL2023

Metals (Continued)

Prep Batch: 11L3356_P (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11L3356-MS2	Matrix Spike	Total	Water	EPA 200.2	
11L3356-MSD1	MCWP-MW02-20111217	Total	Water	EPA 200.2	
IUL2023-01	MCWP-MW02-20111217	Total	Water	EPA 200.2	

Wet Chemistry

Analysis Batch: 11L2361

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11L2361-BLK1	Method Blank	Total	Water	EPA 300.0	11L2361_P
11L2361-BS1	Lab Control Sample	Total	Water	EPA 300.0	11L2361_P
11L2361-MS1	Matrix Spike	Total	Water	EPA 300.0	11L2361_P
11L2361-MSD1	Matrix Spike Duplicate	Total	Water	EPA 300.0	11L2361_P
IUL2023-01	MCWP-MW02-20111217	Total	Water	EPA 300.0	11L2361_P

Analysis Batch: 11L2373

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11L2373-BLK1	Method Blank	Total	Water	SM5540-C	11L2373_P
11L2373-BS1	Lab Control Sample	Total	Water	SM5540-C	11L2373_P
11L2373-MS1	Matrix Spike	Total	Water	SM5540-C	11L2373_P
11L2373-MSD1	Matrix Spike Duplicate	Total	Water	SM5540-C	11L2373_P
IUL2023-01	MCWP-MW02-20111217	Total	Water	SM5540-C	11L2373_P

Analysis Batch: 11L2473

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11L2473-BLK1	Method Blank	Total	Water	SM2540C	11L2473_P
11L2473-BS1	Lab Control Sample	Total	Water	SM2540C	11L2473_P
11L2473-DUP1	Duplicate	Total	Water	SM2540C	11L2473_P
IUL2023-01	MCWP-MW02-20111217	Total	Water	SM2540C	11L2473_P

Analysis Batch: 11L2513

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11L2513-BLK1	Method Blank	Total	Water	SM2510B	11L2513_P
11L2513-BS1	Lab Control Sample	Total	Water	SM2510B	11L2513_P
11L2513-DUP1	MCWP-MW02-20111217	Total	Water	SM2510B	11L2513_P
IUL2023-01	MCWP-MW02-20111217	Total	Water	SM2510B	11L2513_P

Analysis Batch: 11L2524

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11L2524-BLK1	Method Blank	Total	Water	EPA 300.0	11L2524_P
11L2524-BS1	Lab Control Sample	Total	Water	EPA 300.0	11L2524_P
11L2524-MS1	Matrix Spike	Total	Water	EPA 300.0	11L2524_P
11L2524-MSD1	Matrix Spike Duplicate	Total	Water	EPA 300.0	11L2524_P
IUL2023-01	MCWP-MW02-20111217	Total	Water	EPA 300.0	11L2524_P

Analysis Batch: 11L2729

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11L2729-BLK1	Method Blank	Total	Water	EPA 365.3	11L2729_P
11L2729-BS1	Lab Control Sample	Total	Water	EPA 365.3	11L2729_P
11L2729-MS1	Matrix Spike	Total	Water	EPA 365.3	11L2729_P
11L2729-MSD1	Matrix Spike Duplicate	Total	Water	EPA 365.3	11L2729_P
IUL2023-01	MCWP-MW02-20111217	Total	Water	EPA 365.3	11L2729_P

QC Association Summary

Client: Earth Forensics
Project/Site: 44002987 - Title 22 Analysis

TestAmerica Job ID: IUL2023

Wet Chemistry (Continued)

Analysis Batch: 11L3236

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11L3236-BLK1	Method Blank	Total	Water	SM5310C	11L3236_P
11L3236-BS1	Lab Control Sample	Total	Water	SM5310C	11L3236_P
11L3236-MS1	Matrix Spike	Total	Water	SM5310C	11L3236_P
11L3236-MSD1	Matrix Spike Duplicate	Total	Water	SM5310C	11L3236_P
IUL2023-01	MCWP-MW02-20111217	Total	Water	SM5310C	11L3236_P

Analysis Batch: 11L3238

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11L3238-BLK1	Method Blank	Total	Water	SM 4500-F-C	11L3238_P
11L3238-BS1	Lab Control Sample	Total	Water	SM 4500-F-C	11L3238_P
11L3238-MS1	Matrix Spike	Total	Water	SM 4500-F-C	11L3238_P
11L3238-MSD1	Matrix Spike Duplicate	Total	Water	SM 4500-F-C	11L3238_P
IUL2023-01	MCWP-MW02-20111217	Total	Water	SM 4500-F-C	11L3238_P

Analysis Batch: 11L3549

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11L3549-BLK1	Method Blank	Total	Water	EPA 351.2	11L3549_P
11L3549-BS1	Lab Control Sample	Total	Water	EPA 351.2	11L3549_P
11L3549-MS1	Matrix Spike	Total	Water	EPA 351.2	11L3549_P
11L3549-MS2	Matrix Spike	Total	Water	EPA 351.2	11L3549_P
11L3549-MSD1	Matrix Spike Duplicate	Total	Water	EPA 351.2	11L3549_P
11L3549-MSD2	Matrix Spike Duplicate	Total	Water	EPA 351.2	11L3549_P
IUL2023-01	MCWP-MW02-20111217	Total	Water	EPA 351.2	11L3549_P

Analysis Batch: 11L3575

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11L3575-BLK1	Method Blank	Total	Water	SM4500NH3-D	11L3575_P
11L3575-BS1	Lab Control Sample	Total	Water	SM4500NH3-D	11L3575_P
11L3575-MS1	Matrix Spike	Total	Water	SM4500NH3-D	11L3575_P
11L3575-MSD1	Matrix Spike Duplicate	Total	Water	SM4500NH3-D	11L3575_P
IUL2023-01	MCWP-MW02-20111217	Total	Water	SM4500NH3-D	11L3575_P

Analysis Batch: 11L3682

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11L3682-BLK1	Method Blank	Total	Water	SM2320B	11L3682_P
11L3682-BS1	Lab Control Sample	Total	Water	SM2320B	11L3682_P
11L3682-DUP1	Duplicate	Total	Water	SM2320B	11L3682_P
IUL2023-01	MCWP-MW02-20111217	Total	Water	SM2320B	11L3682_P

Analysis Batch: 11L3721

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11L3721-BLK1	Method Blank	Total	Water	SM4500CN-E	11L3721_P
11L3721-BS1	Lab Control Sample	Total	Water	SM4500CN-E	11L3721_P
11L3721-MS1	Matrix Spike	Total	Water	SM4500CN-E	11L3721_P
11L3721-MSD1	Matrix Spike Duplicate	Total	Water	SM4500CN-E	11L3721_P
IUL2023-01	MCWP-MW02-20111217	Total	Water	SM4500CN-E	11L3721_P

Analysis Batch: 11L3898

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
IUL2023-01	MCWP-MW02-20111217	Total	Water	Calculation	11L3898_P

QC Association Summary

Client: Earth Forensics
Project/Site: 44002987 - Title 22 Analysis

TestAmerica Job ID: IUL2023

Wet Chemistry (Continued)

Prep Batch: 11L2361_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11L2361-BLK1	Method Blank	Total	Water	General Prep	
11L2361-BS1	Lab Control Sample	Total	Water	General Prep	
11L2361-MS1	Matrix Spike	Total	Water	General Prep	
11L2361-MSD1	Matrix Spike Duplicate	Total	Water	General Prep	
IUL2023-01	MCWP-MW02-20111217	Total	Water	General Prep	

Prep Batch: 11L2373_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11L2373-BLK1	Method Blank	Total	Water	General Prep	
11L2373-BS1	Lab Control Sample	Total	Water	General Prep	
11L2373-MS1	Matrix Spike	Total	Water	General Prep	
11L2373-MSD1	Matrix Spike Duplicate	Total	Water	General Prep	
IUL2023-01	MCWP-MW02-20111217	Total	Water	General Prep	

Prep Batch: 11L2473_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11L2473-BLK1	Method Blank	Total	Water	General Prep	
11L2473-BS1	Lab Control Sample	Total	Water	General Prep	
11L2473-DUP1	Duplicate	Total	Water	General Prep	
IUL2023-01	MCWP-MW02-20111217	Total	Water	General Prep	

Prep Batch: 11L2513_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11L2513-BLK1	Method Blank	Total	Water	General Prep	
11L2513-BS1	Lab Control Sample	Total	Water	General Prep	
11L2513-DUP1	MCWP-MW02-20111217	Total	Water	General Prep	
IUL2023-01	MCWP-MW02-20111217	Total	Water	General Prep	

Prep Batch: 11L2524_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11L2524-BLK1	Method Blank	Total	Water	General Prep	
11L2524-BS1	Lab Control Sample	Total	Water	General Prep	
11L2524-MS1	Matrix Spike	Total	Water	General Prep	
11L2524-MSD1	Matrix Spike Duplicate	Total	Water	General Prep	
IUL2023-01	MCWP-MW02-20111217	Total	Water	General Prep	

Prep Batch: 11L2729_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11L2729-BLK1	Method Blank	Total	Water	General Prep	
11L2729-BS1	Lab Control Sample	Total	Water	General Prep	
11L2729-MS1	Matrix Spike	Total	Water	General Prep	
11L2729-MSD1	Matrix Spike Duplicate	Total	Water	General Prep	
IUL2023-01	MCWP-MW02-20111217	Total	Water	General Prep	

Prep Batch: 11L3236_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11L3236-BLK1	Method Blank	Total	Water	General Prep	
11L3236-BS1	Lab Control Sample	Total	Water	General Prep	
11L3236-MS1	Matrix Spike	Total	Water	General Prep	
11L3236-MSD1	Matrix Spike Duplicate	Total	Water	General Prep	
IUL2023-01	MCWP-MW02-20111217	Total	Water	General Prep	

QC Association Summary

Client: Earth Forensics
Project/Site: 44002987 - Title 22 Analysis

TestAmerica Job ID: IUL2023

Wet Chemistry (Continued)

Prep Batch: 11L3238_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11L3238-BLK1	Method Blank	Total	Water	General Prep	
11L3238-BS1	Lab Control Sample	Total	Water	General Prep	
11L3238-MS1	Matrix Spike	Total	Water	General Prep	
11L3238-MSD1	Matrix Spike Duplicate	Total	Water	General Prep	
IUL2023-01	MCWP-MW02-20111217	Total	Water	General Prep	

Prep Batch: 11L3549_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11L3549-BLK1	Method Blank	Total	Water	General Prep	
11L3549-BS1	Lab Control Sample	Total	Water	General Prep	
11L3549-MS1	Matrix Spike	Total	Water	General Prep	
11L3549-MS2	Matrix Spike	Total	Water	General Prep	
11L3549-MSD1	Matrix Spike Duplicate	Total	Water	General Prep	
11L3549-MSD2	Matrix Spike Duplicate	Total	Water	General Prep	
IUL2023-01	MCWP-MW02-20111217	Total	Water	General Prep	

Prep Batch: 11L3575_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11L3575-BLK1	Method Blank	Total	Water	General Prep	
11L3575-BS1	Lab Control Sample	Total	Water	General Prep	
11L3575-MS1	Matrix Spike	Total	Water	General Prep	
11L3575-MSD1	Matrix Spike Duplicate	Total	Water	General Prep	
IUL2023-01	MCWP-MW02-20111217	Total	Water	General Prep	

Prep Batch: 11L3682_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11L3682-BLK1	Method Blank	Total	Water	General Prep	
11L3682-BS1	Lab Control Sample	Total	Water	General Prep	
11L3682-DUP1	Duplicate	Total	Water	General Prep	
IUL2023-01	MCWP-MW02-20111217	Total	Water	General Prep	

Prep Batch: 11L3721_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11L3721-BLK1	Method Blank	Total	Water	General Prep	
11L3721-BS1	Lab Control Sample	Total	Water	General Prep	
11L3721-MS1	Matrix Spike	Total	Water	General Prep	
11L3721-MSD1	Matrix Spike Duplicate	Total	Water	General Prep	
IUL2023-01	MCWP-MW02-20111217	Total	Water	General Prep	

Prep Batch: 11L3898_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
IUL2023-01	MCWP-MW02-20111217	Total	Water	General Prep	

Microbiology

Analysis Batch: 11L2461

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
IUL2023-01	MCWP-MW02-20111217	Total	Water	SM9223B	11L2461_P

Prep Batch: 11L2461_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
IUL2023-01	MCWP-MW02-20111217	Total	Water	Microbiology	

QC Association Summary

Client: Earth Forensics
Project/Site: 44002987 - Title 22 Analysis

TestAmerica Job ID: IUL2023

GCMS-SV Drinking Water

Analysis Batch: 11L2505

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11L2505-BLK1	Method Blank	Total	Water	EPA 548.1	11L2505_P
11L2505-BS1	Lab Control Sample	Total	Water	EPA 548.1	11L2505_P
11L2505-BSD1	Lab Control Sample Dup	Total	Water	EPA 548.1	11L2505_P
11L2505-MRL1	MRL1	Total	Water	EPA 548.1	11L2505_P
11L2505-MS1	Matrix Spike	Total	Water	EPA 548.1	11L2505_P
IUL2023-01	MCWP-MW02-20111217	Total	Water	EPA 548.1	11L2505_P

Analysis Batch: 11L2955

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11L2955-BLK1	Method Blank	Total	Water	EPA 525.2	11L2955_P
11L2955-BS1	Lab Control Sample	Total	Water	EPA 525.2	11L2955_P
11L2955-BSD1	Lab Control Sample Dup	Total	Water	EPA 525.2	11L2955_P
IUL2023-01	MCWP-MW02-20111217	Total	Water	EPA 525.2	11L2955_P

Prep Batch: 11L2505_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11L2505-BLK1	Method Blank	Total	Water	EPA 548.1	
11L2505-BS1	Lab Control Sample	Total	Water	EPA 548.1	
11L2505-BSD1	Lab Control Sample Dup	Total	Water	EPA 548.1	
11L2505-MRL1	MRL1	Total	Water	EPA 548.1	
11L2505-MS1	Matrix Spike	Total	Water	EPA 548.1	
IUL2023-01	MCWP-MW02-20111217	Total	Water	EPA 548.1	

Prep Batch: 11L2955_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11L2955-BLK1	Method Blank	Total	Water	EPA 525.2	
11L2955-BS1	Lab Control Sample	Total	Water	EPA 525.2	
11L2955-BSD1	Lab Control Sample Dup	Total	Water	EPA 525.2	
IUL2023-01	MCWP-MW02-20111217	Total	Water	EPA 525.2	

TWSA

Analysis Batch: 1362055

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
G1L280000055B	Method Blank	Total	WATER	EPA-5 1613B-Tetras	1362055_P
G1L280000055C	Lab Control Sample	Total	WATER	EPA-5 1613B-Tetras	1362055_P
IUL2023-01	MCWP-MW02-20111217	Total	Water	EPA-5 1613B-Tetras	1362055_P

Prep Batch: 1362055_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
G1L280000055B	Method Blank	Total	WATER	3510C	
G1L280000055C	Lab Control Sample	Total	WATER	3510C	
IUL2023-01	MCWP-MW02-20111217	Total	Water	3510C	

Inorganics Prep

Analysis Batch: 11L2374

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11L2374-BLK1	Method Blank	Total	Water	EPA 180.1	11L2374_P

Inorganics Prep (Continued)

Analysis Batch: 11L2374 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11L2374-DUP1	Duplicate	Total	Water	EPA 180.1	11L2374_P
IUL2023-01	MCWP-MW02-20111217	Total	Water	EPA 180.1	11L2374_P

Analysis Batch: 11L2376

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11L2376-DUP1	MCWP-MW02-20111217	Total	Water	SM2120B	11L2376_P
IUL2023-01	MCWP-MW02-20111217	Total	Water	SM2120B	11L2376_P

Analysis Batch: 11L2377

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11L2377-BLK1	Method Blank	Total	Water	SM2150B	11L2377_P
IUL2023-01	MCWP-MW02-20111217	Total	Water	SM2150B	11L2377_P

Analysis Batch: 11L2518

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11L2518-DUP1	MCWP-MW02-20111217	Total	Water	EPA 150.1	11L2518_P
IUL2023-01	MCWP-MW02-20111217	Total	Water	EPA 150.1	11L2518_P

Prep Batch: 11L2374_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11L2374-BLK1	Method Blank	Total	Water	GEN PREP	
11L2374-DUP1	Duplicate	Total	Water	GEN PREP	
IUL2023-01	MCWP-MW02-20111217	Total	Water	GEN PREP	

Prep Batch: 11L2376_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11L2376-DUP1	MCWP-MW02-20111217	Total	Water	GEN PREP	
IUL2023-01	MCWP-MW02-20111217	Total	Water	GEN PREP	

Prep Batch: 11L2377_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11L2377-BLK1	Method Blank	Total	Water	GEN PREP	
IUL2023-01	MCWP-MW02-20111217	Total	Water	GEN PREP	

Prep Batch: 11L2518_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11L2518-DUP1	MCWP-MW02-20111217	Total	Water	GEN PREP	
IUL2023-01	MCWP-MW02-20111217	Total	Water	GEN PREP	

Definitions/Glossary

Client: Earth Forensics
Project/Site: 44002987 - Title 22 Analysis

TestAmerica Job ID: IUL2023

Qualifiers

GCMS-Vol Drinking Water

Qualifier	Qualifier Description
M1	The MS and/or MSD were above the acceptance limits due to sample matrix interference. See Blank Spike (LCS).

GC-SV Drinking Water

Qualifier	Qualifier Description
M2	The MS and/or MSD were below the acceptance limits due to sample matrix interference. See Blank Spike (LCS).
M1	The MS and/or MSD were above the acceptance limits due to sample matrix interference. See Blank Spike (LCS).

HPLC

Qualifier	Qualifier Description
M2	The MS and/or MSD were below the acceptance limits due to sample matrix interference. See Blank Spike (LCS).

Metals

Qualifier	Qualifier Description
MHA	Due to high levels of analyte in the sample, the MS/MSD calculation does not provide useful spike recovery information. See Blank Spike (LCS).
B	Analyte was detected in the associated Method Blank.
M2	The MS and/or MSD were below the acceptance limits due to sample matrix interference. See Blank Spike (LCS).
C	Calibration Verification recovery was above the method control limit for this analyte. Analyte not detected, data not impacted.
B-1	Analyte was detected in the associated method blank. Analyte concentration in the sample is greater than 10x the concentration found in the method blank.

Wet Chemistry

Qualifier	Qualifier Description
M1	The MS and/or MSD were above the acceptance limits due to sample matrix interference. See Blank Spike (LCS).
M-3	Results exceeded the linear range in the MS/MSD and therefore are not available for reporting. The batch was accepted based on acceptable recovery in the Blank Spike (LCS).

GCMS-SV Drinking Water

Qualifier	Qualifier Description
R-7	LCS/LCSD RPD exceeded the acceptance limit. Recovery met acceptance criteria.
MNR1	There was no MS/MSD analyzed with this batch due to insufficient sample volume. See Blank Spike/Blank Spike Duplicate.

Inorganics Prep

Qualifier	Qualifier Description
pHa	pH = 7.40
pH	pH = 7.39
HFT	The holding time for this test is immediate. It was analyzed in the laboratory as soon as possible after receipt.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RL	Reporting Limit
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Certification Summary

Client: Earth Forensics
Project/Site: 44002987 - Title 22 Analysis

TestAmerica Job ID: IUL2023

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica Irvine	Arizona	State Program	9	AZ0671
TestAmerica Irvine	California	LA City Sanitation Districts	9	10256
TestAmerica Irvine	California	NELAC	9	1108CA
TestAmerica Irvine	California	State Program	9	2706
TestAmerica Irvine	Guam	State Program	9	Cert. No. 10.001r
TestAmerica Irvine	Hawaii	State Program	9	N/A
TestAmerica Irvine	Nevada	State Program	9	CA015312007A
TestAmerica Irvine	New Mexico	State Program	6	N/A
TestAmerica Irvine	Northern Mariana Islands	State Program	9	MP0002
TestAmerica Irvine	Oregon	NELAC	10	4005
TestAmerica Irvine	USDA	USDA		P330-09-00080
TestAmerica West Sacramento	A2LA	DoD ELAP		2928-01
TestAmerica West Sacramento	Alaska	Alaska UST	10	UST-055
TestAmerica West Sacramento	Arizona	State Program	9	AZ0708
TestAmerica West Sacramento	Arkansas	State Program	6	88-0691
TestAmerica West Sacramento	Colorado	State Program	8	N/A
TestAmerica West Sacramento	Connecticut	State Program	1	PH-0691
TestAmerica West Sacramento	Florida	NELAC	4	E87570
TestAmerica West Sacramento	Georgia	State Program	4	960
TestAmerica West Sacramento	Guam	State Program	9	N/A
TestAmerica West Sacramento	Hawaii	State Program	9	N/A
TestAmerica West Sacramento	Illinois	NELAC	5	200060
TestAmerica West Sacramento	Kansas	NELAC	7	E-10375
TestAmerica West Sacramento	Louisiana	NELAC	6	30612
TestAmerica West Sacramento	Michigan	State Program	5	9947
TestAmerica West Sacramento	Nevada	State Program	9	CA44
TestAmerica West Sacramento	New Jersey	NELAC	2	CA005
TestAmerica West Sacramento	New Mexico	State Program	6	N/A
TestAmerica West Sacramento	New York	NELAC	2	11666
TestAmerica West Sacramento	Oregon	NELAC	10	CA200005
TestAmerica West Sacramento	Pennsylvania	NELAC	3	68-01272
TestAmerica West Sacramento	South Carolina	State Program	4	87014
TestAmerica West Sacramento	Texas	NELAC	6	T104704399-08-TX
TestAmerica West Sacramento	US Fish & Wildlife	US Fish & Wildlife		LE148388-0
TestAmerica West Sacramento	USDA	USDA		P330-09-00055
TestAmerica West Sacramento	Utah	NELAC	8	QUAN1
TestAmerica West Sacramento	Virginia	State Program	3	178
TestAmerica West Sacramento	Washington	State Program	10	C581
TestAmerica West Sacramento	West Virginia	West Virginia DEP	3	334
TestAmerica West Sacramento	West Virginia	West Virginia DHHR (DW)	3	9930C
TestAmerica West Sacramento	Wisconsin	State Program	5	998204680
TestAmerica West Sacramento	Wyoming	State Program	8	8TMS-Q

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.

JUL 2013

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TAL-0013 (0911)

CHAIN OF CUSTODY FORM

17461 Derian Ave., #100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297
1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046
4625 E. Cotton Center Blvd., Suite 189, Phoenix, AZ 85040 (602) 437-3340 FAX (602) 454-9303
6000 S. Eastern Ave., Suite 5E, Las Vegas, NV 89119 (702) 429-1264

Client Name/Address:	Project/PO Number:
Earth Forensics 12532 Vista Panorama North Tustin, CA 92705	Malibu Centralized Wastewater Project
Project Manager: W. Richard Laton (714) 316-4055	**Phone Number:** 562-458-0614
Sampler: N. Napoli	**Fax Number:** 562-741-4587

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives	Analysis Required: 552.2 CA Regulated (HAA5)	Asbestos TEM (100.2)	9223B Total, P/A DW E. coli, coliform,	UV254	Phos-P, total 365.3 Ammonia-N ISE 4500NH3 CA DW TKN 351.2	TDS-SM2540C CA DW	Sulfate 300 CA DW	pH 150.1 CA DW	Alkalinity - 411 Forms As CaCO3 CA DW SM2320B	Special Instructions
MCWP-MW02-20111217	GW			12.17.11	0930		X		X		X	X	X	X	X	

10

Relinquished By:	Date/Time:	Received By:	Date/Time:	Turnaround Time: (Check)	
	12/17/11 1300			same day ____	72 hours ____
Relinquished By:	Date/Time:	Received By:	Date/Time:	24 hours ____	5 days ____
				48 hours ____	normal X
Relinquished By:	Date/Time:	Received in Lab By:	Date/Time:	Sample Integrity: (Check)	
			12/17/11 1300	intact X	on ice X 3.4c

Note: By relinquishing samples to TestAmerica, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

1/4/2023

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TAL-0013 (0911)

CHAIN OF CUSTODY FORM

17461 Derian Ave., #100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297
1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046
4625 E. Cotton Center Blvd., Suite 189, Phoenix, AZ 85040 (602) 437-3340 FAX (602) 454-9303
6000 S. Eastern Ave., Suite 5E, Las Vegas, NV 89119 (702) 429-1264

Client Name/Address:	Project/PO Number:
Earth Forensics 12532 Vista Panorama North Destin, CA 92705	Malibo Centralized Wastewater Proj
Project Manager: W. Richard Luton (714) 296-4055	**Phone Number:** 562-458-0614
Sampler: N. Napoli	**Fax Number:** 562-741-4587

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives	Chloride 300.0 CA DW	Conductivity SM2510B CA DW	Fluoride SM4500F,C CA DW	MBAS - SM5540C CA DW	Nitrate 300.0 CA DW	Nitrite 300.0 CA DW	Chromium 200.7	Calcium 200.7	Cadmium	Boron	Barium	Arsenic	Aluminum	Potassium	Special Instructions
							Analysis Required														
MCWP-MW02-20111217	GW			12.17.11	0930		X	X	X	X	X	X	X	X	X	X	X	X	X	X	

Relinquished By:	Date/Time:	Received By:	Date/Time:	Turnaround Time: (Check)	
	12/17/11 1300			same day ____	72 hours ____
Relinquished By:	Date/Time:	Received By:	Date/Time:	24 hours ____	5 days ____
				48 hours ____	normal X
Relinquished By:	Date/Time:	Received in Lab By:	Date/Time:	Sample Integrity: (Check)	
			12/17/11 1300	intact X	on ice X 3.4°

Note: By relinquishing samples to TestAmerica, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

1/4/2023

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

CHAIN OF CUSTODY FORM

17461 Derian Ave., #100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297
1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046
4625 E. Cotton Center Blvd., Suite 189, Phoenix, AZ 85040 (602) 437-3340 FAX (602) 454-9303
6000 S. Eastern Ave., Suite 5E, Las Vegas, NV 89119 (702) 429-1264

TAL-0013 (0911)

Client Name/Address:
Earth Forensics
12532 Vista Panorama
North Tustin CA 92705

Project/PO Number:
Malibu Centralized Wastewater Project

Project Manager:
W. Richard Eaton (714) 296-4055

Phone Number:
562-458-0614

Sampler:
N. Napoli

Fax Number:
562-741-4587

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives	Analysis Required: Cobalt 200.7	Magnesium 200.7	Selenium 200.8	Sodium	Manganese	Nickel	Silica	Silver	Zinc	Copper	Lead	Iron	Vanadium	Mercury 245.1	Thallium 200.7	Beryllium 200.8	Antimony	Special Instructions
MCWP-MW02-20111217	GW			12.17.11	0930		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	

Relinquished By: 12/17/11 1300 Date/Time:
Received By: Date/Time:
Turnaround Time: (Check)
same day ____ 72 hours ____
24 hours ____ 5 days ____
48 hours ____ normal X

Relinquished By: Date/Time:
Received By: Date/Time:

Relinquished By: Date/Time:
Received in Lab By: 12/17/11 1300 Date/Time:
Sample Integrity: (Check)
intact X on ice X 3.4°C

Note: By relinquishing samples to TestAmerica, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

10

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TAL-0013 (0911)

CHAIN OF CUSTODY FORM

17461 Derian Ave., #100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297
1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046
4625 E. Cotton Center Blvd., Suite 189, Phoenix, AZ 85040 (602) 437-3340 FAX (602) 454-9303
6000 S. Eastern Ave., Suite 5E, Las Vegas, NV 89119 (702) 429-1264

1UL2023

Client Name/Address:
Earth Forensics
12532 Vista Panorama
North Tustin, CA 92705

Project/PO Number:
Malibu Centralized Wastewater Project

Project Manager:
W. Richard Laton (714) 296-4055

Phone Number:
562-458-0614

Sampler: N. Napoli

Fax Number:
562-741-4587

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives	Hardness SM2340B (CA DW)	TOC SM5310C	Odor Turbidity CA DW Color	Cyanide, total CA DW 4500N C,E	1613 Dioxin (2,3,7,8 TCDD CA DW)	8011 CA (EDB, DBCP)	505 CA Regulated Organochlorines Pesticides	515.4 CA Chlorinated Acidic Herbicides	524.2 CA Regulated VOC	524.2 CA 1,2,3-TCP (SIM)	Special Instructions
MCWP-MW02-20111217	GW			12.17.11	0930		X	X	X	X	X	X	X	X	X	X	

Analysis Required

Relinquished By:	Date/Time:	Received By:	Date/Time:	Turnaround Time: (Check)	
	12/17/11 1300			same day ____	72 hours ____
Relinquished By:	Date/Time:	Received By:	Date/Time:	24 hours ____	5 days ____
				48 hours ____	normal X
Relinquished By:	Date/Time:	Received in Lab By:	Date/Time:	Sample Integrity: (Check)	
			12/17/11 1300	intact X	on ice X 3.4°

Note: By relinquishing samples to TestAmerica, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

14L2023

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

CHAIN OF CUSTODY FORM

17461 Derian Ave., #100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297
1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046
4625 E. Cotton Center Blvd., Suite 189, Phoenix, AZ 85040 (602) 437-3340 FAX (602) 454-9303
6000 S. Eastern Ave., Suite 5E, Las Vegas, NV 89119 (702) 429-1264

TAL-0013 (0911)

Client Name/Address:	Project/PO Number:
Earth Forensics 12532 Vista Panorama North Tustin, CA 92705	Malibu Centralized Wastewater Project
Project Manager: W. Richard Laton (714) 996-4055	**Phone Number:**
Sampler: M. Napoli	**Fax Number:**

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives	Analysis Required: 525.2 CA Regulated SVOC	525.2 CA DLR Reg list	531.1 CA Carbamates	547 CA Glyphosate	548.1 CA Endothall	549.2 Diquat / Paraquat CA DLR	8260B SIM 1,4-D, 1,2,3-TCP			Special Instructions
MCWP-MW02-20111214	GW			12.17.11	0930		X	X	X	X	X	X	X			

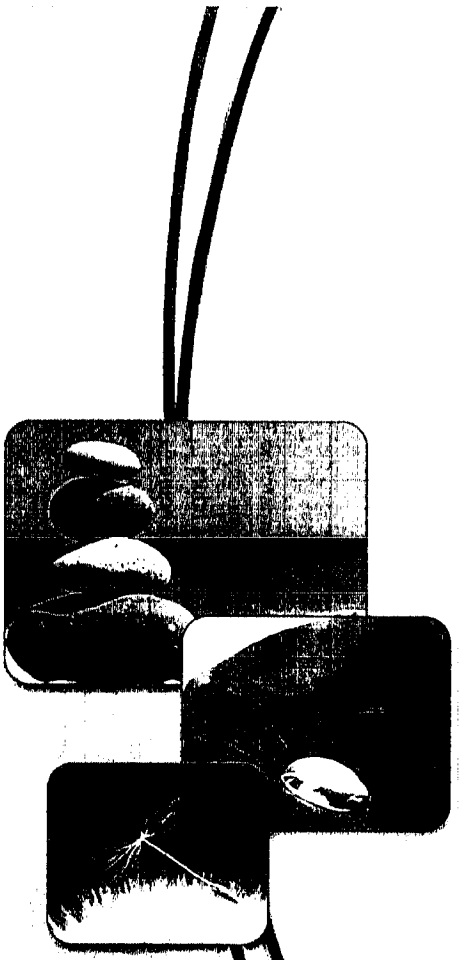
10

Relinquished By:	Date/Time:	Received By:	Date/Time:
	12/17/11 1300		
Relinquished By:	Date/Time:	Received By:	Date/Time:
Relinquished By:	Date/Time:	Received in Lab By:	Date/Time: 12/17/11 1300

Turnaround Time: (Check)
same day ____ 72 hours ____
24 hours ____ 5 days ____
48 hours ____ normal X

Sample Integrity: (Check)
intact X on ice X 3.4°C

Note: By relinquishing samples to TestAmerica, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.



TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Irvine
17461 Derian Avenue. Suite 100
Irvine, CA 92614
Tel: (949) 261-1022

TestAmerica Job ID: IUL2662
Client Project/Site: Malibu Centralized Wastewater Project

For:
Earth Forensics
12532 Vista Panorama
North Tustin, CA 92705

Attn: Richard Laton

Authorized for release by:
1/9/2012 3:10:29 PM

Pat Abe
Project Manager
Pat.Abe@testamericainc.com

Table of Contents

Sample Summary

Client: Earth Forensics
Project/Site: Malibu Centralized Wastewater Project

TestAmerica Job ID: IUL2662

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
IUL2662-01	MCWP-MW03-20111223	Water	12/23/11 05:30	12/23/11 12:00

Client Sample Results

Client: Earth Forensics
Project/Site: Malibu Centralized Wastewater Project

TestAmerica Job ID: IUL2662

Client Sample ID: MCWP-MW03-20111223
Date Collected: 12/23/11 05:30
Date Received: 12/23/11 12:00

Lab Sample ID: IUL2662-01
Matrix: Water

Method: EPA 6010B-Diss - DISSOLVED METALS - Dissolved

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		0.050	mg/l		12/29/11 08:17	01/04/12 01:29	1.0
Silica (as SiO2)	**42**		0.11	mg/l		12/29/11 08:17	01/04/12 01:29	1.0
Arsenic	ND	C	0.010	mg/l		12/29/11 08:17	12/31/11 19:12	1.0
Barium	**0.071**		0.010	mg/l		12/29/11 08:17	12/31/11 19:12	1.0
Boron	**0.56**		0.050	mg/l		12/29/11 08:17	12/31/11 19:12	1.0
Cadmium	ND		0.0050	mg/l		12/29/11 08:17	12/31/11 19:12	1.0
Calcium	**290**		0.10	mg/l		12/29/11 08:17	01/04/12 22:21	1.0
Chromium	ND		0.0050	mg/l		12/29/11 08:17	12/31/11 19:12	1.0
Cobalt	ND		0.010	mg/l		12/29/11 08:17	01/04/12 01:29	1.0
Copper	ND		0.010	mg/l		12/29/11 08:17	01/04/12 01:29	1.0
Iron	ND		0.040	mg/l		12/29/11 08:17	01/04/12 22:21	1.0
Lead	ND		0.0050	mg/l		12/29/11 08:17	01/04/12 22:21	1.0
Magnesium	**200**		0.020	mg/l		12/29/11 08:17	01/04/12 01:29	1.0
Manganese	**0.66**		0.020	mg/l		12/29/11 08:17	12/31/11 19:12	1.0
Nickel	ND		0.010	mg/l		12/29/11 08:17	12/31/11 19:12	1.0
Potassium	**4.5**		0.50	mg/l		12/29/11 08:17	01/04/12 01:29	1.0
Selenium	**0.019**		0.010	mg/l		12/29/11 08:17	01/06/12 12:17	1.0
Silver	ND		0.010	mg/l		12/29/11 08:17	12/31/11 19:12	1.0
Sodium	**340**		0.50	mg/l		12/29/11 08:17	01/04/12 01:29	1.0
Vanadium	ND		0.010	mg/l		12/29/11 08:17	12/31/11 19:12	1.0
Zinc	**0.021**		0.020	mg/l		12/29/11 08:17	12/31/11 19:12	1.0

Method: EPA 7470A-Diss - DISSOLVED METALS - Dissolved

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	mg/l		01/03/12 12:37	01/04/12 14:18	1.0

Method: Filtration - DISSOLVED METALS-FILTRATION

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Filtration	**DET**		1.000	N/A		12/23/11 18:53	12/23/11 18:54	1.000

Method: EPA 300.0 - INORGANICS

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**360**		100	mg/l		12/23/11 18:00	12/23/11 19:51	200
Nitrate-N	ND	RL1	1.1	mg/l		12/23/11 18:00	12/23/11 18:12	10
Orthophosphate - P	ND	RL1	1.6	mg/l		12/23/11 18:00	12/23/11 18:12	10
Sulfate	**1100**		100	mg/l		12/23/11 18:00	12/23/11 19:51	200

Method: SM 4500-F-C - INORGANICS

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	**0.29**		0.10	mg/l		12/29/11 04:00	12/29/11 05:45	1.0

Method: SM2320B - INORGANICS

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	**570**		2.0	mg/l		01/04/12 09:05	01/04/12 10:00	1.0
Bicarbonate Alkalinity as CaCO3	**570**		2.0	mg/l		01/04/12 09:05	01/04/12 10:00	1.0
Carbonate Alkalinity as CaCO3	ND		2.0	mg/l		01/04/12 09:05	01/04/12 10:00	1.0
Hydroxide Alkalinity as CaCO3	ND		2.0	mg/l		01/04/12 09:05	01/04/12 10:00	1.0

Method: SM2540C - INORGANICS

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**2700**		20	mg/l		12/27/11 04:25	12/27/11 10:45	1.0

Client Sample Results

Client: Earth Forensics
Project/Site: Malibu Centralized Wastewater Project

TestAmerica Job ID: IUL2662

Client Sample ID: MCWP-MW03-20111223
Date Collected: 12/23/11 05:30
Date Received: 12/23/11 12:00

Lab Sample ID: IUL2662-01
Matrix: Water

Method: SM4500NH3-D - INORGANICS

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia-N	ND		0.50	mg/l		12/29/11 19:47	12/29/11 20:49	1.0

Lab Chronicle

Client: Earth Forensics
Project/Site: Malibu Centralized Wastewater Project

TestAmerica Job ID: IUL2662

Client Sample ID: MCWP-MW03-20111223
Date Collected: 12/23/11 05:30
Date Received: 12/23/11 12:00

Lab Sample ID: IUL2662-01
Matrix: Water

5

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	EPA 3005A ICP		1.0	50 ml	50 ml	11L3866_P	12/29/11 08:17	NEX	TAL IRV
Dissolved	Analysis	EPA 6010B-Diss		1.0			11L3866	01/04/12 01:29	DT	TAL IRV
Dissolved	Analysis	EPA 6010B-Diss		1.0			11L3866	12/31/11 19:12	NH	TAL IRV
Dissolved	Analysis	EPA 6010B-Diss		1.0			11L3866	01/04/12 22:21	DT	TAL IRV
Total	Prep	Filtration-Metals		1.000	250 ml	250 ml	11L3380_P	12/23/11 18:53	KP	TAL IRV
Total	Analysis	Filtration		1.000			11L3380	12/23/11 18:54	KP	TAL IRV
Dissolved	Prep	EPA 7470A Hg		1.0	20 ml	20 ml	12A0128_P	01/03/12 12:37	SN	TAL IRV
Dissolved	Analysis	EPA 7470A-Diss		1.0			12A0128	01/04/12 14:18	DB	TAL IRV
Dissolved	Analysis	EPA 6010B-Diss		1.0			11L3866	01/06/12 12:17	DP	TAL IRV
Total	Prep	General Prep		1.0	25 ml	25 ml	12A0283_P	01/04/12 09:05	DC	TAL IRV
Total	Analysis	SM2320B		1.0			12A0283	01/04/12 10:00	DC	TAL IRV
Total	Prep	General Prep		1.0	50 ml	50 ml	11L3960_P	12/29/11 19:47	NCP	TAL IRV
Total	Analysis	SM4500NH3-D		1.0			11L3960	12/29/11 20:49	NCP	TAL IRV
Total	Prep	General Prep		1.0	10 ml	10 ml	11L3299_P	12/23/11 18:00	NN	TAL IRV
Total	Analysis	EPA 300.0		200			11L3299	12/23/11 19:51	NN	TAL IRV
Total	Prep	General Prep		1.0	25 ml	25 ml	11L3795_P	12/29/11 04:00	FZ	TAL IRV
Total	Analysis	SM 4500-F-C		1.0			11L3795	12/29/11 05:45	FZ	TAL IRV
Total	Analysis	EPA 300.0		10			11L3299	12/23/11 18:12	NN	TAL IRV
Total	Prep	General Prep		2.0	50 ml	100 ml	11L3437_P	12/27/11 04:25	MC	TAL IRV
Total	Analysis	SM2540C		1.0			11L3437	12/27/11 10:45	MC	TAL IRV

Laboratory References:

TAL IRV = TestAmerica Irvine, 17461 Derian Avenue. Suite 100, Irvine, CA 92614, TEL (949) 261-1022

QC Sample Results

Client: Earth Forensics
Project/Site: Malibu Centralized Wastewater Project

TestAmerica Job ID: IUL2662

Method: EPA 6010B-Diss - DISSOLVED METALS

Lab Sample ID: 11L3866-BLK1
Matrix: Water
Analysis Batch: 11L3866

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 11L3866_P

Analyte	Blank Result	Blank Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.010	mg/l		12/29/11 08:17	12/31/11 18:24	1.00
Barium	ND		0.010	mg/l		12/29/11 08:17	12/31/11 18:24	1.00
Boron	ND		0.050	mg/l		12/29/11 08:17	12/31/11 18:24	1.00
Cadmium	ND		0.0050	mg/l		12/29/11 08:17	12/31/11 18:24	1.00
Chromium	ND		0.0050	mg/l		12/29/11 08:17	12/31/11 18:24	1.00
Cobalt	ND		0.010	mg/l		12/29/11 08:17	12/31/11 18:24	1.00
Magnesium	ND		0.020	mg/l		12/29/11 08:17	12/31/11 18:24	1.00
Manganese	ND		0.020	mg/l		12/29/11 08:17	12/31/11 18:24	1.00
Nickel	ND		0.010	mg/l		12/29/11 08:17	12/31/11 18:24	1.00
Silver	ND		0.010	mg/l		12/29/11 08:17	12/31/11 18:24	1.00
Vanadium	ND		0.010	mg/l		12/29/11 08:17	12/31/11 18:24	1.00
Zinc	ND		0.020	mg/l		12/29/11 08:17	12/31/11 18:24	1.00

Lab Sample ID: 11L3866-BLK1
Matrix: Water
Analysis Batch: 11L3866

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 11L3866_P

Analyte	Blank Result	Blank Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		0.050	mg/l		12/29/11 08:17	01/04/12 00:36	1.00
Silica (as SiO2)	ND		0.11	mg/l		12/29/11 08:17	01/04/12 00:36	1.00
Calcium	ND		0.10	mg/l		12/29/11 08:17	01/04/12 00:36	1.00
Copper	ND		0.010	mg/l		12/29/11 08:17	01/04/12 00:36	1.00
Potassium	ND		0.50	mg/l		12/29/11 08:17	01/04/12 00:36	1.00
Sodium	ND		0.50	mg/l		12/29/11 08:17	01/04/12 00:36	1.00

Lab Sample ID: 11L3866-BLK1
Matrix: Water
Analysis Batch: 11L3866

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 11L3866_P

Analyte	Blank Result	Blank Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	0.0531	B	0.040	mg/l		12/29/11 08:17	01/04/12 19:23	1.00
Lead	ND		0.0050	mg/l		12/29/11 08:17	01/04/12 19:23	1.00
Selenium	ND		0.010	mg/l		12/29/11 08:17	01/04/12 19:23	1.00

Lab Sample ID: 11L3866-BS1
Matrix: Water
Analysis Batch: 11L3866

Client Sample ID: Lab Control Sample
Prep Type: Dissolved
Prep Batch: 11L3866_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Barium	1.00	1.14		mg/l		114	80 - 120
Boron	1.00	1.06		mg/l		106	80 - 120
Cadmium	1.00	1.03		mg/l		103	80 - 120
Chromium	1.00	1.18		mg/l		118	80 - 120
Cobalt	1.00	0.975		mg/l		98	80 - 120
Magnesium	5.00	5.01		mg/l		100	80 - 120
Manganese	1.00	1.00		mg/l		100	80 - 120
Nickel	1.00	1.05		mg/l		105	80 - 120
Silver	0.500	0.511		mg/l		102	80 - 120
Vanadium	1.00	1.08		mg/l		108	80 - 120
Zinc	1.00	1.08		mg/l		108	80 - 120

Method: EPA 6010B-Diss - DISSOLVED METALS (Continued)

Lab Sample ID: 11L3866-BS1
Matrix: Water
Analysis Batch: 11L3866

Client Sample ID: Lab Control Sample
Prep Type: Dissolved
Prep Batch: 11L3866_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	1.00	1.01		mg/l		101	80 - 120
Silica (as SiO2)	10.7	10.7		mg/l		100	80 - 120
Arsenic	1.00	1.04		mg/l		104	80 - 120
Calcium	5.00	4.84	M-3	mg/l		97	80 - 120
Copper	1.00	1.02		mg/l		102	80 - 120
Iron	1.00	1.01		mg/l		101	80 - 120
Lead	1.00	1.01		mg/l		101	80 - 120
Potassium	10.0	10.2		mg/l		102	80 - 120
Sodium	10.0	10.2		mg/l		102	80 - 120

Lab Sample ID: 11L3866-BS1
Matrix: Water
Analysis Batch: 11L3866

Client Sample ID: Lab Control Sample
Prep Type: Dissolved
Prep Batch: 11L3866_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Selenium	1.00	0.971		mg/l		97	80 - 120

Lab Sample ID: 11L3866-MS1
Matrix: Water
Analysis Batch: 11L3866

Client Sample ID: Matrix Spike
Prep Type: Dissolved
Prep Batch: 11L3866_P

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Result	Matrix Spike Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	ND		1.00	1.25		mg/l		125	75 - 125
Barium	0.339		1.00	1.39		mg/l		106	75 - 125
Boron	0.237		1.00	1.26		mg/l		102	75 - 125
Cadmium	ND		1.00	0.932		mg/l		93	75 - 125
Chromium	ND		1.00	1.08		mg/l		108	75 - 125
Cobalt	0.00455		1.00	0.903		mg/l		90	75 - 125
Magnesium	125		5.00	126	MHA	mg/l		31	75 - 125
Manganese	2.85		1.00	3.76		mg/l		91	75 - 125
Nickel	0.00324		1.00	0.932		mg/l		93	75 - 125
Silver	ND		0.500	0.514		mg/l		103	75 - 125
Vanadium	ND		1.00	1.03		mg/l		103	75 - 125
Zinc	0.0413		1.00	1.04		mg/l		100	75 - 125

Lab Sample ID: 11L3866-MS1
Matrix: Water
Analysis Batch: 11L3866

Client Sample ID: Matrix Spike
Prep Type: Dissolved
Prep Batch: 11L3866_P

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Result	Matrix Spike Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	ND		1.00	1.14		mg/l		114	75 - 125
Silica (as SiO2)	26.2		10.7	36.0		mg/l		91	75 - 125
Copper	ND		1.00	1.12		mg/l		112	75 - 125
Potassium	14.7		10.0	25.0		mg/l		103	75 - 125
Sodium	479		10.0	484	MHA	mg/l		51	75 - 125

Method: EPA 6010B-Diss - DISSOLVED METALS (Continued)

Lab Sample ID: 11L3866-MS1
Matrix: Water
Analysis Batch: 11L3866

Client Sample ID: Matrix Spike
Prep Type: Dissolved
Prep Batch: 11L3866_P

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Result	Matrix Spike Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	0.163		1.00	1.17		mg/l		100	75 - 125
Lead	ND		1.00	0.953		mg/l		95	75 - 125
Selenium	ND		1.00	0.899		mg/l		90	75 - 125

Lab Sample ID: 11L3866-MSD1
Matrix: Water
Analysis Batch: 11L3866

Client Sample ID: Matrix Spike Duplicate
Prep Type: Dissolved
Prep Batch: 11L3866_P

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Dup Result	Matrix Spike Dup Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Barium	0.339		1.00	1.47		mg/l		113	75 - 125	5	20
Boron	0.237		1.00	1.33		mg/l		109	75 - 125	5	20
Cadmium	ND		1.00	0.977		mg/l		98	75 - 125	5	20
Chromium	ND		1.00	1.15		mg/l		115	75 - 125	6	20
Cobalt	0.00455		1.00	0.954		mg/l		95	75 - 125	6	20
Magnesium	125		5.00	134	MHA	mg/l		177	75 - 125	6	20
Manganese	2.85		1.00	3.97		mg/l		112	75 - 125	5	20
Nickel	0.00324		1.00	0.985		mg/l		98	75 - 125	5	20
Silver	ND		0.500	0.539		mg/l		108	75 - 125	5	20
Vanadium	ND		1.00	1.08		mg/l		108	75 - 125	5	20
Zinc	0.0413		1.00	1.10		mg/l		106	75 - 125	5	20

Lab Sample ID: 11L3866-MSD1
Matrix: Water
Analysis Batch: 11L3866

Client Sample ID: Matrix Spike Duplicate
Prep Type: Dissolved
Prep Batch: 11L3866_P

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Dup Result	Matrix Spike Dup Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aluminum	ND		1.00	1.12		mg/l		112	75 - 125	2	20
Silica (as SiO2)	26.2		10.7	37.5		mg/l		105	75 - 125	4	20
Arsenic	ND		1.00	1.11		mg/l		111	75 - 125	12	20
Copper	ND		1.00	1.16		mg/l		116	75 - 125	3	20
Potassium	14.7		10.0	26.0		mg/l		113	75 - 125	4	20
Sodium	479		10.0	501	MHA	mg/l		227	75 - 125	4	20

Lab Sample ID: 11L3866-MSD1
Matrix: Water
Analysis Batch: 11L3866

Client Sample ID: Matrix Spike Duplicate
Prep Type: Dissolved
Prep Batch: 11L3866_P

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Dup Result	Matrix Spike Dup Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Iron	0.163		1.00	1.59	M1 R-3	mg/l		143	75 - 125	31	20
Lead	ND		1.00	0.935		mg/l		93	75 - 125	2	20
Selenium	ND		1.00	0.883		mg/l		88	75 - 125	2	20

Method: EPA 7470A-Diss - DISSOLVED METALS

Lab Sample ID: 12A0128-BLK1
Matrix: Water
Analysis Batch: 12A0128

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 12A0128_P

Analyte	Blank Result	Blank Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	mg/l		01/03/12 12:37	01/04/12 14:13	1.00

Method: EPA 7470A-Diss - DISSOLVED METALS (Continued)

Lab Sample ID: 12A0128-BS1 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 12A0128 — **Prep Batch: 12A0128_P**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00800	0.00819		mg/l		102	80 - 120

Lab Sample ID: 12A0128-MS1 — **Client Sample ID: MCWP-MW03-20111223**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 12A0128 — **Prep Batch: 12A0128_P**

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Result	Matrix Spike Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	ND		0.00800	0.00796		mg/l		100	70 - 130

Lab Sample ID: 12A0128-MSD1 — **Client Sample ID: MCWP-MW03-20111223**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 12A0128 — **Prep Batch: 12A0128_P**

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Dup Result	Matrix Spike Dup Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	ND		0.00800	0.00802		mg/l		100	70 - 130	0.7	20

Method: EPA 300.0 - INORGANICS

Lab Sample ID: 11L3299-BLK1 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total**
Analysis Batch: 11L3299 — **Prep Batch: 11L3299_P**

Analyte	Blank Result	Blank Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.50	mg/l		12/23/11 08:00	12/23/11 12:17	1.00
Nitrate-N	ND		0.11	mg/l		12/23/11 08:00	12/23/11 12:17	1.00
Orthophosphate - P	ND		0.16	mg/l		12/23/11 08:00	12/23/11 12:17	1.00
Sulfate	ND		0.50	mg/l		12/23/11 08:00	12/23/11 12:17	1.00

Lab Sample ID: 11L3299-BS1 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total**
Analysis Batch: 11L3299 — **Prep Batch: 11L3299_P**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	5.00	4.89		mg/l		98	90 - 110
Nitrate-N	1.13	1.15		mg/l		102	90 - 110
Orthophosphate - P	1.63	1.53		mg/l		94	90 - 110
Sulfate	10.0	10.0		mg/l		100	90 - 110

Lab Sample ID: 11L3299-MS1 — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total**
Analysis Batch: 11L3299 — **Prep Batch: 11L3299_P**

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Result	Matrix Spike Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	12.5		50.0	61.1		mg/l		97	80 - 120
Nitrate-N	7.25		11.3	18.9		mg/l		103	80 - 120
Orthophosphate - P	ND		16.3	18.3		mg/l		112	80 - 120
Sulfate	43.4		100	144		mg/l		101	80 - 120

QC Sample Results

Client: Earth Forensics
Project/Site: Malibu Centralized Wastewater Project

TestAmerica Job ID: IUL2662

Method: EPA 300.0 - INORGANICS (Continued)

Lab Sample ID: 11L3299-MS2
Matrix: Water
Analysis Batch: 11L3299

Client Sample ID: Matrix Spike
Prep Type: Total
Prep Batch: 11L3299_P

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Result	Matrix Spike Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	74.0		50.0	121		mg/l		93	80 - 120
Nitrate-N	13.4		11.3	24.4		mg/l		98	80 - 120
Orthophosphate - P	ND		16.3	20.3	M1	mg/l		125	80 - 120
Sulfate	215		100	313		mg/l		98	80 - 120

Lab Sample ID: 11L3299-MSD1
Matrix: Water
Analysis Batch: 11L3299

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total
Prep Batch: 11L3299_P

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Dup Result	Matrix Spike Dup Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	12.5		50.0	60.6		mg/l		96	80 - 120	0.9	20
Nitrate-N	7.25		11.3	18.0		mg/l		95	80 - 120	5	20
Orthophosphate - P	ND		16.3	20.1	M1	mg/l		123	80 - 120	9	20
Sulfate	43.4		100	143		mg/l		99	80 - 120	0.8	20

Method: SM 4500-F-C - INORGANICS

Lab Sample ID: 11L3795-BLK1
Matrix: Water
Analysis Batch: 11L3795

Client Sample ID: Method Blank
Prep Type: Total
Prep Batch: 11L3795_P

Analyte	Blank Result	Blank Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	ND		0.10	mg/l		12/29/11 04:00	12/29/11 05:45	1.00

Lab Sample ID: 11L3795-BS1
Matrix: Water
Analysis Batch: 11L3795

Client Sample ID: Lab Control Sample
Prep Type: Total
Prep Batch: 11L3795_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	1.00	0.988		mg/l		99	90 - 110

Lab Sample ID: 11L3795-MS1
Matrix: Water
Analysis Batch: 11L3795

Client Sample ID: Matrix Spike
Prep Type: Total
Prep Batch: 11L3795_P

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Result	Matrix Spike Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	0.0286		1.00	1.04		mg/l		102	80 - 120

Lab Sample ID: 11L3795-MSD1
Matrix: Water
Analysis Batch: 11L3795

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total
Prep Batch: 11L3795_P

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Dup Result	Matrix Spike Dup Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Fluoride	0.0286		1.00	1.04		mg/l		101	80 - 120	0.8	20

QC Sample Results

Client: Earth Forensics
Project/Site: Malibu Centralized Wastewater Project

TestAmerica Job ID: IUL2662

Method: SM2320B - INORGANICS

Lab Sample ID: 12A0283-BLK1
Matrix: Water
Analysis Batch: 12A0283

Client Sample ID: Method Blank
Prep Type: Total
Prep Batch: 12A0283_P

Analyte	Blank Result	Blank Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	ND		2.0	mg/l		01/04/12 09:05	01/04/12 10:00	1.00
Bicarbonate Alkalinity as CaCO3	ND		2.0	mg/l		01/04/12 09:05	01/04/12 10:00	1.00
Carbonate Alkalinity as CaCO3	ND		2.0	mg/l		01/04/12 09:05	01/04/12 10:00	1.00
Hydroxide Alkalinity as CaCO3	ND		2.0	mg/l		01/04/12 09:05	01/04/12 10:00	1.00

Lab Sample ID: 12A0283-BS1
Matrix: Water
Analysis Batch: 12A0283

Client Sample ID: Lab Control Sample
Prep Type: Total
Prep Batch: 12A0283_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity as CaCO3	183	166		mg/l		91	90 - 110

Lab Sample ID: 12A0283-DUP1
Matrix: Water
Analysis Batch: 12A0283

Client Sample ID: Duplicate
Prep Type: Total
Prep Batch: 12A0283_P

Analyte	Sample Result	Sample Qualifier	Duplicate Result	Duplicate Qualifier	Unit	D	RPD	RPD Limit
Alkalinity as CaCO3	140		144		mg/l		3	20
Bicarbonate Alkalinity as CaCO3	140		144		mg/l		3	20
Carbonate Alkalinity as CaCO3	ND		ND		mg/l			20
Hydroxide Alkalinity as CaCO3	ND		ND		mg/l			20

Method: SM2540C - INORGANICS

Lab Sample ID: 11L3437-BLK1
Matrix: Water
Analysis Batch: 11L3437

Client Sample ID: Method Blank
Prep Type: Total
Prep Batch: 11L3437_P

Analyte	Blank Result	Blank Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	ND		10	mg/l		12/27/11 04:25	12/27/11 10:45	1.00

Lab Sample ID: 11L3437-BS1
Matrix: Water
Analysis Batch: 11L3437

Client Sample ID: Lab Control Sample
Prep Type: Total
Prep Batch: 11L3437_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	1000	990		mg/l		99	90 - 110

Lab Sample ID: 11L3437-DUP1
Matrix: Water
Analysis Batch: 11L3437

Client Sample ID: Duplicate
Prep Type: Total
Prep Batch: 11L3437_P

Analyte	Sample Result	Sample Qualifier	Duplicate Result	Duplicate Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	316		313		mg/l		1	10

QC Sample Results

Client: Earth Forensics
Project/Site: Malibu Centralized Wastewater Project

TestAmerica Job ID: IUL2662

Method: SM4500NH3-D - INORGANICS

Lab Sample ID: 11L3960-BLK1
Matrix: Water
Analysis Batch: 11L3960

Client Sample ID: Method Blank
Prep Type: Total
Prep Batch: 11L3960_P

Analyte	Blank Result	Blank Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia-N	ND		0.50	mg/l		12/29/11 19:47	12/29/11 20:49	1.00

Lab Sample ID: 11L3960-BS1
Matrix: Water
Analysis Batch: 11L3960

Client Sample ID: Lab Control Sample
Prep Type: Total
Prep Batch: 11L3960_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia-N	1.00	1.03		mg/l		103	85 - 115

Lab Sample ID: 11L3960-MS1
Matrix: Water
Analysis Batch: 11L3960

Client Sample ID: Matrix Spike
Prep Type: Total
Prep Batch: 11L3960_P

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Result	Matrix Spike Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia-N	0.313		2.00	2.36		mg/l		102	75 - 125

Lab Sample ID: 11L3960-MSD1
Matrix: Water
Analysis Batch: 11L3960

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total
Prep Batch: 11L3960_P

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Dup Result	Matrix Spike Dup Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ammonia-N	0.313		2.00	2.36		mg/l		102	75 - 125	0	15

QC Association Summary

Client: Earth Forensics
Project/Site: Malibu Centralized Wastewater Project

TestAmerica Job ID: IUL2662

Metals

Analysis Batch: 11L3380

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
IUL2662-01	MCWP-MW03-20111223	Total	Water	Filtration	11L3380_P

Analysis Batch: 11L3866

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11L3866-BLK1	Method Blank	Dissolved	Water	EPA 6010B-Diss	11L3866_P
11L3866-BS1	Lab Control Sample	Dissolved	Water	EPA 6010B-Diss	11L3866_P
11L3866-MS1	Matrix Spike	Dissolved	Water	EPA 6010B-Diss	11L3866_P
11L3866-MSD1	Matrix Spike Duplicate	Dissolved	Water	EPA 6010B-Diss	11L3866_P
IUL2662-01	MCWP-MW03-20111223	Dissolved	Water	EPA 6010B-Diss	11L3866_P

Analysis Batch: 12A0128

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
12A0128-BLK1	Method Blank	Dissolved	Water	EPA 7470A-Diss	12A0128_P
12A0128-BS1	Lab Control Sample	Dissolved	Water	EPA 7470A-Diss	12A0128_P
12A0128-MS1	MCWP-MW03-20111223	Dissolved	Water	EPA 7470A-Diss	12A0128_P
12A0128-MSD1	MCWP-MW03-20111223	Dissolved	Water	EPA 7470A-Diss	12A0128_P
IUL2662-01	MCWP-MW03-20111223	Dissolved	Water	EPA 7470A-Diss	12A0128_P

Prep Batch: 11L3380_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
IUL2662-01	MCWP-MW03-20111223	Total	Water	Filtration-Metals	

Prep Batch: 11L3866_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11L3866-BLK1	Method Blank	Dissolved	Water	EPA 3005A ICP	
11L3866-BS1	Lab Control Sample	Dissolved	Water	EPA 3005A ICP	
11L3866-MS1	Matrix Spike	Dissolved	Water	EPA 3005A ICP	
11L3866-MSD1	Matrix Spike Duplicate	Dissolved	Water	EPA 3005A ICP	
IUL2662-01	MCWP-MW03-20111223	Dissolved	Water	EPA 3005A ICP	

Prep Batch: 12A0128_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
12A0128-BLK1	Method Blank	Dissolved	Water	EPA 7470A Hg	
12A0128-BS1	Lab Control Sample	Dissolved	Water	EPA 7470A Hg	
12A0128-MS1	MCWP-MW03-20111223	Dissolved	Water	EPA 7470A Hg	
12A0128-MSD1	MCWP-MW03-20111223	Dissolved	Water	EPA 7470A Hg	
IUL2662-01	MCWP-MW03-20111223	Dissolved	Water	EPA 7470A Hg	

Wet Chemistry

Analysis Batch: 11L3299

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11L3299-BLK1	Method Blank	Total	Water	EPA 300.0	11L3299_P
11L3299-BS1	Lab Control Sample	Total	Water	EPA 300.0	11L3299_P
11L3299-MS1	Matrix Spike	Total	Water	EPA 300.0	11L3299_P
11L3299-MS2	Matrix Spike	Total	Water	EPA 300.0	11L3299_P
11L3299-MSD1	Matrix Spike Duplicate	Total	Water	EPA 300.0	11L3299_P
IUL2662-01	MCWP-MW03-20111223	Total	Water	EPA 300.0	11L3299_P

Analysis Batch: 11L3437

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11L3437-BLK1	Method Blank	Total	Water	SM2540C	11L3437_P

QC Association Summary

Client: Earth Forensics
Project/Site: Malibu Centralized Wastewater Project

TestAmerica Job ID: IUL2662

Wet Chemistry (Continued)

Analysis Batch: 11L3437 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11L3437-BS1	Lab Control Sample	Total	Water	SM2540C	11L3437_P
11L3437-DUP1	Duplicate	Total	Water	SM2540C	11L3437_P
IUL2662-01	MCWP-MW03-20111223	Total	Water	SM2540C	11L3437_P

Analysis Batch: 11L3795

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11L3795-BLK1	Method Blank	Total	Water	SM 4500-F-C	11L3795_P
11L3795-BS1	Lab Control Sample	Total	Water	SM 4500-F-C	11L3795_P
11L3795-MS1	Matrix Spike	Total	Water	SM 4500-F-C	11L3795_P
11L3795-MSD1	Matrix Spike Duplicate	Total	Water	SM 4500-F-C	11L3795_P
IUL2662-01	MCWP-MW03-20111223	Total	Water	SM 4500-F-C	11L3795_P

Analysis Batch: 11L3960

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11L3960-BLK1	Method Blank	Total	Water	SM4500NH3-D	11L3960_P
11L3960-BS1	Lab Control Sample	Total	Water	SM4500NH3-D	11L3960_P
11L3960-MS1	Matrix Spike	Total	Water	SM4500NH3-D	11L3960_P
11L3960-MSD1	Matrix Spike Duplicate	Total	Water	SM4500NH3-D	11L3960_P
IUL2662-01	MCWP-MW03-20111223	Total	Water	SM4500NH3-D	11L3960_P

Analysis Batch: 12A0283

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
12A0283-BLK1	Method Blank	Total	Water	SM2320B	12A0283_P
12A0283-BS1	Lab Control Sample	Total	Water	SM2320B	12A0283_P
12A0283-DUP1	Duplicate	Total	Water	SM2320B	12A0283_P
IUL2662-01	MCWP-MW03-20111223	Total	Water	SM2320B	12A0283_P

Prep Batch: 11L3299_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11L3299-BLK1	Method Blank	Total	Water	General Prep	
11L3299-BS1	Lab Control Sample	Total	Water	General Prep	
11L3299-MS1	Matrix Spike	Total	Water	General Prep	
11L3299-MS2	Matrix Spike	Total	Water	General Prep	
11L3299-MSD1	Matrix Spike Duplicate	Total	Water	General Prep	
IUL2662-01	MCWP-MW03-20111223	Total	Water	General Prep	

Prep Batch: 11L3437_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11L3437-BLK1	Method Blank	Total	Water	General Prep	
11L3437-BS1	Lab Control Sample	Total	Water	General Prep	
11L3437-DUP1	Duplicate	Total	Water	General Prep	
IUL2662-01	MCWP-MW03-20111223	Total	Water	General Prep	

Prep Batch: 11L3795_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11L3795-BLK1	Method Blank	Total	Water	General Prep	
11L3795-BS1	Lab Control Sample	Total	Water	General Prep	
11L3795-MS1	Matrix Spike	Total	Water	General Prep	
11L3795-MSD1	Matrix Spike Duplicate	Total	Water	General Prep	
IUL2662-01	MCWP-MW03-20111223	Total	Water	General Prep	

QC Association Summary

Client: Earth Forensics
Project/Site: Malibu Centralized Wastewater Project

TestAmerica Job ID: IUL2662

Wet Chemistry (Continued)

Prep Batch: 11L3960_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11L3960-BLK1	Method Blank	Total	Water	General Prep	
11L3960-BS1	Lab Control Sample	Total	Water	General Prep	
11L3960-MS1	Matrix Spike	Total	Water	General Prep	
11L3960-MSD1	Matrix Spike Duplicate	Total	Water	General Prep	
IUL2662-01	MCWP-MW03-20111223	Total	Water	General Prep	

Prep Batch: 12A0283_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
12A0283-BLK1	Method Blank	Total	Water	General Prep	
12A0283-BS1	Lab Control Sample	Total	Water	General Prep	
12A0283-DUP1	Duplicate	Total	Water	General Prep	
IUL2662-01	MCWP-MW03-20111223	Total	Water	General Prep	

Definitions/Glossary

Client: Earth Forensics
Project/Site: Malibu Centralized Wastewater Project

TestAmerica Job ID: IUL2662

Qualifiers

Metals

Qualifier	Qualifier Description
B	Analyte was detected in the associated Method Blank.
M-3	Results exceeded the linear range in the MS/MSD and therefore are not available for reporting. The batch was accepted based on acceptable recovery in the Blank Spike (LCS).
MHA	Due to high levels of analyte in the sample, the MS/MSD calculation does not provide useful spike recovery information. See Blank Spike (LCS).
M1	The MS and/or MSD were above the acceptance limits due to sample matrix interference. See Blank Spike (LCS).
R-3	The RPD exceeded the acceptance limit due to sample matrix effects.
C	Calibration Verification recovery was above the method control limit for this analyte. Analyte not detected, data not impacted.

Wet Chemistry

Qualifier	Qualifier Description
M1	The MS and/or MSD were above the acceptance limits due to sample matrix interference. See Blank Spike (LCS).
RL1	Reporting limit raised due to sample matrix effects.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RL	Reporting Limit
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Certification Summary

Client: Earth Forensics
Project/Site: Malibu Centralized Wastewater Project

TestAmerica Job ID: IUL2662

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica Irvine	Arizona	State Program	9	AZ0671
TestAmerica Irvine	California	LA Cty Sanitation Districts	9	10256
TestAmerica Irvine	California	NELAC	9	1108CA
TestAmerica Irvine	California	State Program	9	2706
TestAmerica Irvine	Guam	State Program	9	Cert. No. 10.001r
TestAmerica Irvine	Hawaii	State Program	9	N/A
TestAmerica Irvine	Nevada	State Program	9	CA015312007A
TestAmerica Irvine	New Mexico	State Program	6	N/A
TestAmerica Irvine	Northern Mariana Islands	State Program	9	MP0002
TestAmerica Irvine	Oregon	NELAC	10	4005
TestAmerica Irvine	USDA	USDA		P330-09-00080

9

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TAL-0013 (0911)

CHAIN OF CUSTODY FORM

17461 Derian Ave., #100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297
1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046
4625 E. Cotton Center Blvd., Suite 189, Phoenix, AZ 85040 (602) 437-3340 FAX (602) 454-9303
6000 S. Eastern Ave., Suite 5E, Las Vegas, NV 89119 (702) 429-1264

EVL2062

Client Name/Address:	Project/PO Number:
Earth Forensics 12632 Vista Panorama North Tustin, CA	Malibu Centralized Wastewater Project
Project Manager: W. Richard Lawton (714) 296-4055	**Phone Number:** (562) 458-0614
Sampler: N. Napoli	**Fax Number:** (562) 741-4587

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives
MCWP-MW03-20111223			4	12.23.11	0630	

Analysis Required

Ammonia-N ISE 4500NH3-D	Phos-P, ortho - 300.0 Sulfate - EPA 300.0 Nitrate-N EPA 300.0	Chloride, EPA 300.0 Fluoride (Total) SM4500F-C TDS-SM2540C	Alkalinity-All Forms (as $CaCO_3$) SM2320B (carb/bicarb)	Aluminum 6010B Diss Arsenic Boron	Cadmium 6010B Diss Calcium	Chromium 6010B Diss Cobalt Copper	Iron, Lead, Manganese, Nickel 6010B Diss Magnesium Potassium, Selenium	Silica, Silver, Sodium 6010B Diss Zinc, Vanadium Mercury 7470A	Special Instructions
X	X	X	X	X	X	X	X	X	TN 12/23/11 1453

Relinquished By:	Date/Time:	Received By:	Date/Time:
	12/23/11 1200		
Relinquished By:	Date/Time:	Received By:	Date/Time:
Relinquished By:	Date/Time:	Received in Lab By:	Date/Time: 12/23/11 12:00

Turnaround Time: (Check)
same day ____ 72 hours ____
24 hours ____ 5 days ____
48 hours ____ normal X

Sample Integrity: (Check)
intact X on ice. X 3.7°C

Note: By relinquishing samples to TestAmerica, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

Appendix F – Pumping Logs

Date: 12-19-11 Page 1

Customer: RMC MW-1 #1

Job No. ~~12~~ 103470

Meter 1 X 1000 Static level 10.94 Feet Hours/Page 1

Airline depth 1 Feet Total hours

Operator: Don Hansen 100 % Drawdown G.P.D.

Don & Randy 12-19-11

Time	P.P.M.	G.P.M.	Pumping Level	Draw-down	Engine R.P.M.	Specific Capacity	Comments	FAU	TSS
11:15 am		90					clear (764900)		
11:21		95	15.20				clear		
11:31	N/A	100	16.58	5.64	N/A	17.73	Clear 767000		
11:40	N/A	100	16.84	5.90	N/A	1694	clear ~~767800~~		
11:50	N/A	100	16.88	5.94	N/A	16.83	Clear 768100		
12:00	N/A	100	16.90	5.96	N/A	~~16.90~~ 16.77	clear 769000		
1:00 pm	N/A	100	16.92	5.98	N/A	16.72	clear 774900		
2:00	N/A	100	16.85	5.91	N/A	16.92	clear 780900		
3:00	N/A	100	16.77	5.83	N/A	17.15	clear 786900		
4:00	N/A	100	16.64	5.70	N/A	17.54	clear 792900		
5:00	N/A	100	16.65	5.71	N/A	17.51	Clear 798800		
6:00 Randy	N/A	99	16.64	5.70	N/A	17.54	clear 804800		
7:00	N/A	99	16.71	5.77	N/A	17.32	clear 810700		
800	N/A	100	16.81	5.87	N/A	17.3	Clear 816700		
900	N/A	100	16.92	5.98	N/A	16.72	Clear 822600		
10:00	N/A	98	17.00	6.06	N/A	16.50	Clear 828600		
11:00	N/A	98	17.01	6.07	N/A	16.47	Clear 834600		
12:00 12-20-11 A.M	N/A	98	16.90	5.96	N/A	16.77	Clear 840500		
100	N/A	100	16.81	5.87	N/A	17.03	Clear 846500		
200	N/A	98	16.61	5.67	N/A	17.63	Clear 852400		
300	N/A	98	16.45	5.51	N/A	18.14	Clear 858500		
400	N/A	100	16.21	5.21	N/A	19.19	Clear 864400		
5:00	N/A	98	16.30	5.36	N/A	18.65	Clear 870300		
6:00 Don	N/A	98	16.31	5.37	N/A	18.62	Clear 876300		
7:00	N/A	98	16.38	5.44	N/A	18.38	clear 882300		
8:00	N/A	100	16.61	5.67	N/A	17.63	clear 888300		
9:00	N/A	100	16.83	5.89	N/A	16.97	clear 894300		
10:00	N/A	100	17.00	6.06	N/A	16.50	clear 900300		
11:00	N/A	100	17.13	6.19	N/A	16.15	clear 906300		
12:00 P.M.	N/A	100	17.21	6.27	N/A	15.94	clear 912300		
1:00	N/A	99	17.21	6.27	N/A	15.94	clear 918200		
2:00	N/A	100	17.14	6.20	N/A	16.12	clear 924200		

Date: 12-20-11 Page 2

Customer: RMC MW-#1

Job No. 27-105470

Meter 1 x 100 Static level 10.94 Feet

Airline depth _____ Feet

Hours/Page 2

Total hours ____

G.P.D. ____

Operator: Don Hansen & Randy Newman

100 = Drawdown

Time	P.P.M.	G.P.M.	Pumping Level	Draw-down	Engine R.P.M.	Specific Capacity	Comments	FAL
3:00	N/A	100	17.10	6.16	N/A	16.23	clear	930200
4:00	N/A	100	16.94	6.00	N/A	16.66	clear	936200
5:00	N/A	100	16.79	5.85	N/A	17.09	clear	942200
6:00	N/A	98	16.68	5.74	N/A	17.42	clear	948100
700	N/A	98	16.68	5.74	N/A	17.42	Clear	954100
800	N/A	100	16.78	5.84	N/A	17.12	Clear	960000
900	N/A	100	16.83	5.89	N/A	16.97	clear	966000
1000	N/A	100	16.91	5.97	N/A	16.75	clear	972000
1100	N/A	100	16.98	6.04	N/A	16.55	clear	978000
12:00	N/A	98	17.00	6.06	N/A	16.50	clear	983900
100	N/A	98	16.90	5.96	N/A	16.77	clear	999000
200	N/A	98	16.74	5.80	N/A	17.24	clear	994500
300	N/A	100	16.55	5.61	N/A	17.82	clear	1002 00
400	N/A	100	16.40	5.46	N/A	18.31	clear	1007 00
500	N/A	98	16.31	5.37	N/A	18.62	clear	1013800
600	N/A	100	16.20	5.26	N/A	19.01	clear	1020000
700	N/A	100	16.25	5.31	N/A	18.83	clear	1025700
8:00	N/A	100	16.45	5.51	N/A	18.14	clear	1031800
9:00	N/A	100	16.72	5.78	N/A	17.30	clear	1037800
10:00	N/A	100	16.96	6.02	N/A	16.61	clear	1043800
11:00	N/A	100	17.18	6.24	N/A	16.02	clear	1049700
12:00	N/A	100	17.27	6.33	N/A	15.79	clear	1056300
1:00	N/A	100	17.38	6.44	N/A	15.52	clear	1061700
2:00	N/A	100	17.35	6.41	N/A	15.60	clear	1067700
3:00	N/A	100	17.27	6.33	N/A	15.79	clear	1073700
4:00	N/A	100	17.12	6.18	N/A	16.18	clear	1079600
5:00	N/A	100	16.97	6.03	N/A	16.58	clear	1085600
6:00	N/A	100	16.82	5.88	N/A	17.00	clear	1091600
7:00	N/A	100	16.80	5.86	N/A	17.06	Clear	1097600
800	N/A	100	16.81	5.87	N/A	17.03	Clear	1103600
900	N/A	100	16.82	5.88	N/A	17.00	clear	1109700
	N/A	100	16.98	6.04	N/A	16.55	Clear	1115500

pm

Randy →

12-Am-27-11 ↓

Don

Fill Generators →

BANDY

Date: 12-21-11 Page 3

Customer: RMC mw-1#

Job No. EP 103470

Meter 1 X 100 Static level 10.94 Feet

Airline depth _____ Feet

Hours/Page 1

Total hours 2

G.P.D.

Operator: Don Hansen / Randy Newman

Time	P.P.M.	G.P.M.	Pumping Level	Draw-down	Engine R.P.M.	Specific Capacity	Comments	FAL
AM 11:00	N/A	100	17.08	6.14	N/A	16.28	Clear	1121600
12:00	N/A	100	17.10	6.16	N/A	16.23	clear	1127400
1:00	N/A	100	17.10	6.16	N/A	16.23	clear	1133600
2:00	N/A	100	17.00	6.06	N/A	16.50	clear	1139400
3:00	N/A	100	16.85	5.91	N/A	16.92	clear	1145400
4:00	N/A	100	16.54	5.60	N/A	17.85	clear	1151100
5:00	N/A	100	16.40	5.47	N/A	18.28	clear	1157600
6:00	N/A	100	16.30	5.36	N/A	18.65	clear	1163500
7:00	N/A	100	16.23	5.29	N/A	18.90	clear	1169500
8:00	N/A	100	16.34	5.40	N/A	18.51	clear	1175500
9:00	N/A	100	16.52	5.58	N/A	17.92	clear	1181500
10:00	N/A	100	16.77	5.83	N/A	17.15	clear	1187500
11:00	N/A	100	17.06	6.12	N/A	~~16.33~~ 17.06	clear	1193500
11:14	N/A	100	17.10	6.18	N/A	16.18	clear	1195000
11:16			11:39					
11:18			11:35					
11:20			11:33					
11:40			11:33					
11:50			11:35					
12:00			11:36					
PM 12:50	pull pump							

well MW-2

Customer: RMC

Date: 12-15-11 Page 1

Job No. 27-10347

Meter 1 x 100 Static level 10.49 Feet

Airline depth N/A Feet

Hours/Page 1

Total hours 9

G.P.D. 2

Operator: Don Hansen meter Began #344900

÷100 ÷ Draw Down

	Time	P.P.M.	G.P.M.	Pumping Level	Draw-down	Engine R.P.M.	Specific Capacity	Comments	FAU	TSS
Don	12:20	N/A	100	18.85	8.37	N/A	11.94	Cloudy water		
	12:44	N/A	100	18.32	7.84	N/A	12.75	clearing		
	1:18	N/A	100	18.30	7.82	N/A	12.78	clear		
	2:10	N/A	100	18.45	7.95	N/A	12.57	clear		
	3:00	N/A	100	18.54	8.06	N/A	12.40	clear		
Randy	4:00	N/A	100	18.62	8.14	N/A	12.28	clear		
	5.00	N/A	100	18.64	8.16	N/A	12.25	clear		
	6.00	N/A	100	18.75	8.27	N/A	12.09	clear		
	7:00	N/A	100	18.81	8.33	N/A	12.00	clear		
	8:00	N/A	100	18.83	8.35	N/A	11.97	clear		
	9:00	N/A	100	18.78	8.30	N/A	12.04	clear		
	10:00	N/A	100	18.76	8.28	N/A	12.07	clear		
Jose	11:00	N/A	100	18.70	8.22	N/A	12.16	clear		
	12:00	N/A	100	18.69	8.21	N/A	12.18	clear		
	12-16-11									
	1:00AM	N/A	100	18.65	8.17	N/A	12.23	clear		
	2:00	N/A	100	18.65	8.17	N/A	12.23	clear		
	3:00	N/A	100	18.65	8.17	N/A	12.23	clear		
	4:00	N/A	100	18.70	8.22	N/A	12.16	clear		
Don	5:00	N/A	100	18.78	8.27	N/A	12.09	clear		
	6:00	N/A	100	18.75	8.27	N/A	12.09	clear		
	7:00	N/A	100	18.75	8.27	N/A	12.09	clear		
	8:00	N/A	100	18.85	8.37	N/A	11.94	clear 462000		
	9:00	N/A	100	18.82	8.34	N/A	11.99	clear		
	10:00	N/A	100	18.82	8.34	N/A	11.99	clear		
	11:00	N/A	100	18.74	8.26	N/A	12.10	clear		
	12:00	N/A	100	18.67	8.19	N/A	12.21	clear		
	1:00Pm	N/A	100	18.68	8.20	N/A	12.19	clear		
Randy	2:10	N/A	100	18.71	8.23	N/A	12.15	clear		
	3:06	N/A	100	18.72	8.24	N/A	12.13	clear		
	4:00	N/A	100	18.81	8.33	N/A	12.00	clear		
	5:00	N/A	100	18.91	8.43	N/A	11.86	clear		

12-15-11

Date: 12-NOV 11 Page 2

Customer: RMC WELL # MW-2 Job No. 27-103420

Meter 1 X 100 Static level 10.48 Feet

Airline depth N/A Feet

Operator: DON HANSON (—) 100. % DRAWDOWN

Hours/Page 1

Total hours -0-

G.P.D. -0-

↑ METER AT START (344900)

Time	P.P.M.	G.P.M.	Pumping Level	Draw-down	Engine R.P.M.	Specific Capacity	Comments — WATER —	FAU	TSS
RANDY 6:00	N/A	100	18.91	8.43	N/A	11.86	CLEAR.		
7:00	N/A	100	18.96	8.48	N/A	11.79	CLEAR.		
8:00	N/A	100	19.00	8.52	N/A	11.73	CLEAR.		
9:00	N/A	100	19.00	8.52	N/A	11.73	CLEAR.		
10:00	N/A	100	18.97	8.49	N/A	11.77	Clear		
11:00	N/A	100	18.96	8.48	N/A	11.76	Clear		
ROB AM 11-17-11 12:00	N/A	100	18.90	8.42	N/A	11.87	Clear		
01:00	N/A	100	18.84	8.36	N/A	11.96	Clear		
02:00	N/A	100	18.81	8.33	N/A	12.00	Clear		
03:00	N/A	100	18.75	8.27	N/A	12.09	Clear		
04:00	N/A	100	18.76	8.28	N/A	12.07	Clear		
05:00	N/A	100	18.78	8.30	N/A	12.04	Clear		
Fill Generator Down 06:00	N/A	100	18.83	8.35	N/A	11.97	Clear		
07:00	N/A	100	18.88	8.40	N/A	11.90	Clear		
8:00	N/A	100	19.00	8.52	N/A	11.73	clear 599800		
9:00	N/A	98	19.06	8.58	N/A	11.65	clear 605500		
10:00	N/A	97	19.13	8.65	N/A	11.56	clear 611300		
11:00	N/A	98	19.00	8.65	N/A	11.56	clear 617200		
12:00	N/A	98	19.02	8.54	N/A	11.70	clear 623000		
PM 1:00	N/A	98	18.97	8.49	N/A	11.77	clear 628800		
2:00	N/A	98	18.95	8.47	N/A	11.80	Clear 634700		
3:00	N/A	98	18.85	8.37	N/A	11.94	clear 640500		
RANDY 4:00	N/A	98	19.04	8.56	N/A	11.68	CLEAR 646400		
5:00	N/A	98	19.05	8.57	N/A	11.69	CLEAR 652200		
6:00	N/A	98	19.10	8.62	N/A	11.60	Clear 658000		
7:00	N/A	98	19.16	8.68	N/A	11.52	CLEAR 663800		
8:00	N/A	98	19.17	8.69	N/A	11.50	CLEAR 668700		
9:00	N/A	98	19.17	8.69	N/A	11.50	Clear 675400		
10:00	N/A	98	19.19	8.71	N/A	11.48	Clear 681300		
11:00	N/A	97	19.15	8.67	N/A	11.53	Clear 687200		
12:00	N/A	97	19.09	8.61	N/A	11.61	Clear 693000		
01:00	N/A	98	19.00	8.52	N/A	11.73	Clear 698900		

Job # 103470

12-15-11
12-16-11

Customer: RMC MW-2

Date: 12-17-11 Page 3

Job No. 27103420

Meter 1 X 100

Static level 10.48 Feet
Airline depth N/A Feet

Hours/Page 1
Total hours
G.P.D.

Operator: Don Hason

12-15-11

Time	P.P.M.	G.P.M.	Pumping Level	Draw-down	Engine R.P.M.	Specific Capacity	Comments	FAU	TSS
0200	N/A	98	18.95	8.47	N/A	11.80	Clear	704700	
0300	N/A	98	18.92	8.44	N/A	11.84	Clear	710400	
0400	N/A	99	18.92	8.44	N/A	11.84	Clear	716300	
0500	N/A	97	18.93	8.45	N/A	11.83	Clear	722100	
0600	N/A	98	18.96	8.48	N/A	11.79	Clear	728000	
Don 0700	N/A	99	19.03	8.55	N/A	11.69	Clear	733800	
8:00	N/A	98	19.13	8.65	N/A	11.56	clear	739600	
9:00	N/A	98	19.18	8.70	N/A	11.49	clear	745500	
10:00	N/A	98	19.20	8.72	N/A	11.46	clear	751300	
11:00	N/A	98	19.21	8.73	N/A	11.45	clear	757100	
Pump 12:00	N/A	98	19.18	8.70	N/A	11.49	clear	763000	
OFF 12:20	N/A							764900	
12:22		Recharge	11:43						
12:25			11.38						
12:30			11.32						
12:45			11:23						
1:05			11.19						
1:30			11.13						
1:49			11.10						
2:44			11.10						

Date: 12-22-11 Page 1

Customer: RMC MW #3 Job No. 27-103470

Meter 1 X 100 Static level 9.50 Feet
Airline depth ____ Feet
Hours/Page 1
Total hours ____
G.P.D. ____

Operator: Don Hansen (-) GPM ÷ Drawdown

	Time	P.P.M.	G.P.M.	Pumping Level	Draw-down	Engine R.P.M.	Specific Capacity	Comments	FAU	TSS
PM Start pump	3:15	N/A		9.50				Cloudy 1196000		
	3:22	N/A		14.0				Cloudy ~~1196300~~		
	3:28	N/A	101	14.08				Cloudy		
	3.55	N/A	101	14.00	4.50	N/A	22.44	Clearing 1196300		
	3.40	N/A	101	14.00	4.50	N/A	22.44	clear 1196900		
	3.50	N/A	100	14.00	4.50	N/A	22.22	clear 1197800		
	4:00	N/A	100	14.00	4.50	N/A	2222	clear 1198800		
	5:00	N/A	100	13.78	4.28	N/A	23.36	clear 1204900		
RANDY	6:00	N/A	101	13.44	3.94	N/A	25.63	clear 1211000		
	7:00	N/A	100	13.22	3.72	N/A	26.88	Clear 1217000		
	8:00	N/A	100	13.22	3.72	N/A	26.88	CLEAR 1223000		
	9:00	N/A	98	13.29	3.79	N/A	26.38	Clear 1229500		
	10:00	N/A	98	13.42	3.92	N/A	25.51	CLEAR 1235700		
	11:00	N/A	100	13.65	4.15	N/A	24.09	CLEAR 1241900		
	12:00	N/A	100	13.90	4.40	N/A	22.72	CLEAR 1248000		
AM	1:00	N/A	100	13.91	4.41	N/A	22.67	CLEAR 1254000		
	2:00	N/A	98	13.80	4.30	N/A	23.25	CLEAR 1260000		
	3:00	N/A	98	13.54	4.04	N/A	24.75	Clear 1266000		
Don	4:00	N/A	98	13.18	3.68	N/A	27.31	Clear 1272600		
	5:00	N/A	98	11.94	2.44	N/A	36.88	clear 1278300		
	6:00	N/A	90	11.66	2.16	N/A	41.66	Clear 1283600		
off	6:00	pump off								
	6:01			8.18						
	6:04			8.06						
	6:16			7.90						
	6:22			7.85						
	6:37			7.76						
AM	6:56			7.67						
	7:00			7.62						