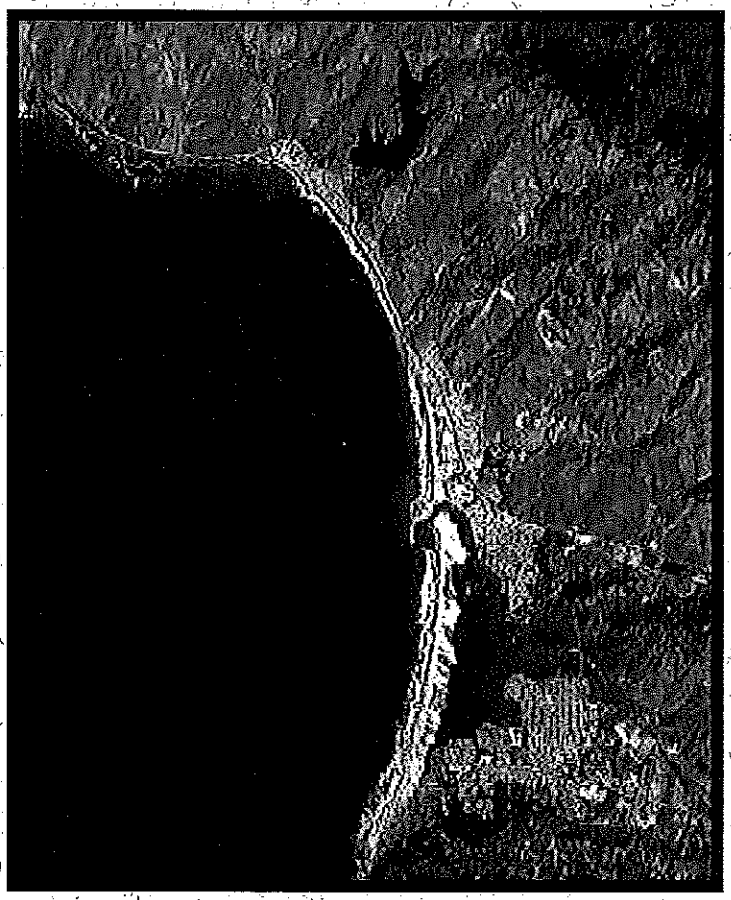
City of Morro Bay and
Cayucos Sanitary District

OFFSHORE MONITORING AND REPORTING PROGRAM

RESIDUAL BIOSOLIDS CHEMICAL ANALYSIS RESULTS

SEPTEMBER 2006



Marine Research Specialists

3140 Telegraph Rd., Suite A
Ventura, California 93003

Report to

City of Morro Bay and
Cayucos Sanitary District

955 Shasta Avenue
Morro Bay, California 93442
(805) 772-6272

MONITORING AND REPORTING PROGRAM

ANNUAL BIOSOLIDS REPORT

CHEMICAL ANALYSIS RESULTS

SEPTEMBER 2006

Prepared by

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November 2006

marine research specialists

3140 Telegraph Rd., Suite A · Ventura, CA 93003 · 805-644-1180

Mr. Bruce Keogh
Wastewater Division Manager
City of Morro Bay
955 Shasta Avenue
Morro Bay, CA 93442

9 November 2006

Reference: Chemical Analysis Results for Biosolid Samples Collected in September 2006

Dear Mr. Keogh:

Enclosed are the results of chemical analyses conducted on a representative composite of biosolid samples collected from the drying beds on 20 September 2006. Also included in this report are pertinent QA/QC data, including chains of custody and analyses of method blanks and spikes. All analyses were conducted following the requirements of Monitoring and Reporting Program Number 98-15[1] to assess compliance with the limitations specified in the Waste Discharge Requirements of the NPDES Permit.[2]

Based on a comparison between measured chemical concentrations in the composite sample and applicable State and Federal regulations, the biosolids amassed in 2006 are not considered hazardous waste, and are considered suitable for land application. A summary of the analytical results is presented in Table 1. Only a few of the more than 150 compounds analyzed in the composite sample were detected at quantifiable concentrations. Nine detected chemicals had concentrations so low they could not be quantified. All detected chemicals had concentrations well below the applicable standards. Bulk trace-metal concentrations measured in the September-2006 sample were comparable to concentrations measured in samples collected annually from 1999 through 2005.[3] The analysis of the 2006 biosolids sample included an assessment of three additional metals (barium, cobalt, and vanadium) that were not analyzed prior to 2003. They were included in the recent analyses to provide a complete suite of CAM-17[4] analytes, even though the current NPDES discharge permit does not require analyses of these additional metals.

All trace-metal concentrations measured in the September-2006 sample were below Total Threshold Limit Concentrations (TTLC) that would designate them as hazardous under federal regulations.[5] Similarly, dry-weight concentrations for all the metals were well below the federally mandated limits, including the monthly limit for biosolids suitable for land application. Two metals, copper and lead, had bulk wet-weight concentrations that exceeded ten-times the Soluble Threshold Limit Concentration (STLC). As a result, waste extraction tests (WET) were conducted on these compounds. The tests indicated that soluble

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[1] Monitoring and Reporting Program No. 98-15 for City of Morro Bay and Cayucos Sanitary District Wastewater Treatment Plant, San Luis Obispo County promulgated by the State of California Regional Water Quality Control Board Central Coast Region and the United States Environmental Protection Agency Region IX, San Francisco California. 11 December 1998.

[2] State of California Regional Water Quality Control Board Central Coast Region Waste Discharge Requirements Order No. 98-15 and United States Environmental Protection Agency Region IX, San Francisco California National Pollutant Discharge Elimination System Permit No. CA0047881 for City of Morro Bay and Cayucos Sanitary District Wastewater Treatment Plant, San Luis Obispo County.

[3] Marine Research Specialists (MRS). 1999 through 2005. City of Morro Bay and Cayucos Sanitary District, Residual Biosolids Chemical Analysis Results. Prepared for the City of Morro Bay and Cayucos Sanitary District, Morro Bay, CA.

[4] CAM is an acronym for California Administrative Manual and CAM-17 refers to the list of heavy metals identified in the California Code of Regulations (CCR), Title 22, Chapter 11: *Identification and Listing of Hazardous Waste.*

[5] U.S. Government Printing Office (USGPO). 1997b. Code of Federal Regulations. Environmental Protection. Standards for the use or disposal of Sewage Sludge, Land Application, Pollutant Limits. Chapter 40, Part 503, Subpart B. 1 July 1997 edition.

concentrations of these metals were below the applicable STLC limits that would designate the biosolids as hazardous in the State of California.

Both of these metals occur naturally in the mineralogy of ambient sediments in the central coast region. As a result, their presence in bulk biosolid samples is not unexpected because sediments enter the collection system through runoff. Copper and lead also enter the collection system through internal corrosion of household plumbing systems, which probably accounts for their consistent detection at low concentrations within effluent samples. As with other metals, the bulk copper and lead concentrations determined in the September-2006 sample were comparable to concentrations measured in biosolids samples collected historically.

Two synthetic organic contaminants, bis(2-ethylhexyl) phthalate and xylene, were detected at quantifiable concentrations in the September-2006 biosolid sample. Bis(2-ethylhexyl)phthalate (BEHP), is a compound has been consistently detected at low levels in effluent and biosolid samples collected over the past decade.[6] There is no limit on this compound specified in State and Federal regulations governing biosolids. Phthalate esters, such as BEHP, are components of synthetic dyes, resins, plasticizers, insecticides, and, pharmaceuticals. Nearly 2.7 million metric tons (6 billion pounds) of phthalate esters are produced each year, of which more than half is BEHP. BEHP is a physical plasticizer added to plastic resins to soften them, providing increased flexibility. It is not, however, covalently bound to the resin, which allows it to slowly leach out of the plastic and into the environment over time through evaporation or dissolution. Because of their mobility, high vapor pressure, and the massive scale at which they are produced, phthalate esters, and BEHP in particular, have become pervasive in the environment.

The second, gasoline-related compound, xylene, was detected at a very low concentration (0.012 ppm), just above the lowest concentration that can be reliably quantified (0.01 ppm). Xylene comprises one of the four aromatic hydrocarbon compounds collectively known as BTEX (benzene, toluene, ethyl benzene, and xylene). BTEX compounds are primarily associated with gasoline contamination. BTEX compounds at similarly low concentrations are occasionally detected within effluent samples. Xylene has a low potential for accumulation in aquatic life.

Other compounds listed in Table 1 further characterize the biosolids as required in the waste discharge requirements. Although testing for asbestos is no longer required as part of the NPDES permit, this test was included for completeness.

Please contact the undersigned if you have any questions regarding these results.

Sincerely,

Douglas A. Coats

Douglas A. Coats, Ph.D.
Program Manager
Enclosure (Five Report Copies)

[6] Section 2.2.12, Page 2-43 of the MBCSD 2005 Annual Report to the City of Morro Bay and Cayucos Sanitary District. Prepared by Marine Research Specialists, February 2006.

Table 1. Summary of Results for Biosolids Analyses

		Wet Weight				Dry Weight		
		Measured		Limit		Measured	Limit	
Constituent	Units	Bulk [7]	WET [8]	STLC [9]	TTLC [10]	Bulk	Monthly [11]	Ceiling [12]
Solids	%	79.9	— [13]	—	—	—	—	—
Total Dissolved Solids	ppm	—	4,400.	—	—	—	—	—
Cyanide	ppm	1.5	—	—	—	1.9	—	—
Antimony	ppm	*4.8* [14]	—	15.	500.	6.0	—	—
Arsenic	ppm	*2.2*	—	5.	500.	2.7	41.	75.
Barium	ppm	450.	—	100.	10,000.	560.	—	—
Beryllium	ppm	<0.2	—	0.75	75.	<0.25	—	—
Boron	ppm	*15.*	—	—	—	19.	—	—
Cadmium	ppm	4.2	—	1.	100.	5.2	39.	85.
Chromium (Total)	ppm	57.	—	560.	2500.	71.	—	—
Chromium (Hexavalent)	ppm	—	<0.13	5.	500.	—	—	—
Cobalt	ppm	*5.3*	—	80.	8,000.	6.7	1,500.	4,300.
Copper	ppm	**560.** [15]	6.1	25.	2,500.	700.	1,500.	4,300.
Lead	ppm	**68.**	0.74	5.	1,000.	85.	300.	840.
Mercury	ppm	0.77	—	0.2	20.	0.96	17.	57.
Molybdenum	ppm	37.	—	350.	3,500.	46.	—	—
Nickel	ppm	47.	—	20.	2,000.	59.	420.	420.
Selenium	ppm	6.1	—	1.	100.	7.7	100.	100.
Silver	ppm	4.9	—	5.	500.	6.1	—	—
Thallium	ppm	<4.2	—	7.	700.	<3.8	—	—
Vanadium	ppm	26.	—	24.	2,400.	33.	—	—
Zinc	ppm	1,100.	—	250.	5,000.	1,400.	2,800.	7,500.
Asbestos	%	ND	—	—	1.	ND	—	—
Bis(2-ethylhexyl) phthalate	ppm	150.	—	—	—	188.	—	—
Total Xylenes	ppm	0.012	—	—	—	0.015	—	—
Hydrogen-Ion	pH	7.64	—	—	—	—	—	—
Phosphate	mg/kg	57,000.	—	—	—	71,300.	—	—

[7] The total wet-weight concentration (mg/Kg) within a bulk biosolid sample consisting of the entire millable solid matrix rather than just the leachate

[8] Waste Extraction Tests (WET) measure the soluble leachate (mg/L) or the extractable amount of a substance contained within a bulk sample of biosolids. A WET is indicated if the bulk wet-weight concentration of a contaminant in a biosolids sample exceeds ten times the STLC.

[9] Soluble Threshold Limit Concentrations (STLC) apply to the measured concentration in the liquid extract from a biosolid sample, as determined by a WET. Biosolids with leachate concentrations exceeding the STLC are classified as hazardous in the State of California as described in the California Code of Regulations (CCR), Title 22, Chapter 11: *Identification and Listing of Hazardous Waste.*

[10] Total Threshold Limit Concentrations (TTLC) apply to the total wet-weight concentration of a contaminant (mg/Kg) within a bulk biosolid sample consisting of the entire millable solid matrix rather than just the leachate. Biosolids are designated as hazardous wastes in the State of California if measured bulk concentrations exceed the TTLC as described in the CCRs, *op. cit.*

[11] Federally mandated dry-weight limits imposed on biosolids suitable for application on agricultural land apply to monthly average concentrations as defined in Table 3 of the Code of Federal Regulations (CFRs). Environmental Protection. Standards for the use or disposal of Sewage Sludge, Land Application, Pollutant Limits. Chapter 40, Part 503, Subpart B [40 CFR §503.13(b)(1)].

[12] Federally mandated dry-weight ceiling concentrations above which biosolids are considered hazardous waste as defined in Table 1 of the CFRs, *op. cit.*

[13] "—" indicates that the measurement was not required or its limit was not specified.

[14] Italicized concentrations were too low to be reliably quantified.

[15] Bulk concentrations shown in bold were greater than ten times the STLC and a WET was conducted.

		Wet Weight				Dry Weight		
		Measured		Limit		Measured	Limit	
Constituent	**Units**	**Bulk [7]**	**WET [8]**	**STLC [9]**	**TTLC [10]**	**Bulk**	**Monthly [11]**	**Ceiling [12]**
Ammonia	mg/kg	4,400.	—	—	—	5,500.	—	—
TKN	mg/kg	20,000.	—	—	—	25,000.	—	—
Organic Nitrogen[16]	mg/kg	15,600.	—	—	—	29,500.	—	—
Nitrate as NO_3	mg/kg	140.	—	—	—	175.	—	—
Oil & Grease	ppm	64,000.	—	—	—	80,000.	—	—

[16] The amount of nitrogen measure by the TKN without ammonia

ANALYTICAL RESULTS

Marine Research Specialists
3140 Telegraph Road, Suite A
Ventura CA, 93003-3238

Project: Biosolids from MBWWTP
Project Number: [none]
Project Manager: Doug Coats

Reported: 11/02/06 09:54

Total Concentrations (TTLC)

BCL Sample ID: 0609752-01 | **Client Sample Name:** MORRO BAY WWTP BIOSOLIDS, 9/20/2006 8:30:00AM

Constituent	Dry Basis Result	As Recvd Result	Units	PQL	MDL	Method	Prep Date	Run Date/Time	Analyst	Instrument ID	Dilution	QC Batch ID	MB Bias	Lab Quals
Antimony	6.0	4.8	mg/kg	25	1.7	EPA-6010B	09/27/06	09/28/06 14:00	JCC	TJA61E	4.90	BPI1242	ND	A01, J
Arsenic	2.7	2.2	mg/kg	2.5	2.2	EPA-6010B	09/27/06	09/28/06 14:00	JCC	TJA61E	4.90	BPI1242	ND	A01
Barium	560	450	mg/kg	2.5	0.34	EPA-6010B	09/27/06	09/28/06 14:00	JCC	TJA61E	4.90	BPI1242	ND	A01
Beryllium	ND	ND	mg/kg	2.5	0.20	EPA-6010B	09/27/06	09/28/06 14:00	JCC	TJA61E	4.90	BPI1242	ND	A01
Cadmium	5.2	4.2	mg/kg	2.5	0.36	EPA-6010B	09/27/06	09/28/06 14:00	JCC	TJA61E	4.90	BPI1242	ND	A01
Chromium	71	57	mg/kg	2.5	0.85	EPA-6010B	09/27/06	09/28/06 14:00	JCC	TJA61E	4.90	BPI1242	ND	A01
Cobalt	6.7	5.3	mg/kg	12	0.65	EPA-6010B	09/27/06	09/28/06 14:00	JCC	TJA61E	4.90	BPI1242	ND	A01, J
Copper	700	560	mg/kg	5.0	0.45	EPA-6010B	09/27/06	09/28/06 14:00	JCC	TJA61E	4.90	BPI1242	ND	A01
Lead	85	68	mg/kg	12	1.4	EPA-6010B	09/27/06	09/28/06 14:00	JCC	TJA61E	4.90	BPI1242	ND	A01
Mercury	0.96	0.77	mg/kg	0.16	0.041	EPA-7471A	09/27/06	09/27/06 16:40	PRA	CETAC1	1.04	BPI1253	ND	
Molybdenum	46	37	mg/kg	12	0.60	EPA-6010B	09/27/06	09/28/06 14:00	JCC	TJA61E	4.90	BPI1242	ND	A01
Nickel	59	47	mg/kg	2.5	1.2	EPA-6010B	09/27/06	09/28/06 14:00	JCC	TJA61E	4.90	BPI1242	ND	A01
Selenium	7.7	6.1	mg/kg	2.5	2.0	EPA-6010B	09/27/06	09/28/06 14:00	JCC	TJA61E	4.90	BPI1242	ND	A01
Silver	6.1	4.9	mg/kg	2.5	0.30	EPA-6010B	09/27/06	09/28/06 14:00	JCC	TJA61E	4.90	BPI1242	ND	A01
Thallium	ND	ND	mg/kg	25	4.2	EPA-6010B	09/27/06	09/28/06 14:00	JCC	TJA61E	4.90	BPI1242	ND	A01
Vanadium	33	26	mg/kg	2.5	0.32	EPA-6010B	09/27/06	09/28/06 14:00	JCC	TJA61E	4.90	BPI1242	ND	A01
Zinc	1400	1100	mg/kg	12	1.6	EPA-6010B	09/27/06	09/28/06 14:00	JCC	TJA61E	4.90	BPI1242	ND	A01
Boron	19	15	mg/kg	25	4.1	EPA-6010B	09/27/06	09/28/06 14:00	JCC	TJA61E	4.90	BPI1242	ND	A01, J

BC LABORATORIES, INC.

Marine Research Specialists 3140 Telegraph Road, Suite A Ventura CA, 93003-3238	Project: Biosolids from MBWWTP Project Number: [none] Project Manager: Doug Coats	**Reported:** 11/02/06 09:49

Chemical Analysis

BCL Sample ID: 0609752-01 | **Client Sample Name:** MORRO BAY WWTP BIOSOLIDS, 9/20/2006 8:30:00AM

Constituent	Result	Units	PQL	MDL	Method	Prep Date	Run Date/Time	Analyst	Instrument ID	Dilution	QC Batch ID	MB Bias	Lab Quals
Total Cyanide	1.5	mg/kg	0.50	0.25	EPA-9012	09/26/06	09/27/06 04:00	MRM	AAII-1	1	BPI1202	ND	
pH	7.64	pH Units	0.05	0.05	EPA-9045	09/22/06	09/22/06 15:25	JSM	B360	1	BPI1065		pH1:1
Nitrate as NO3	140	mg/kg	22	2.4	EPA-300.0	09/22/06	09/23/06 01:45	LMB	IC2	5	BPI0883	ND	A01
Total Kjeldahl Nitrogen	20000	mg/kg	2000	1000	EPA-351.2	09/28/06	09/28/06 09:30	VC1	RFA-1	50	BPI1331	ND	A01
Ammonia as N	4400	mg/kg	500	200	EPA-350.1	09/28/06	09/29/06 13:00	VC1	AAII-5	99.90	BPI1427	ND	A01
Total Phosphate	57000	mg/kg	6000	2400	EPA-365.4	09/25/06	09/26/06 03:45	MRM	AAII-4	200	BPI1070	ND	A01

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Marine Research Specialists
3140 Telegraph Road, Suite A
Ventura CA, 93003-3238

Project: Biosolids from MBWWTP
Project Number: [none]
Project Manager: Doug Coats

Reported: 11/02/06 09:54

Chemical Analysis

BCL Sample ID: 0609752-01 | **Client Sample Name:** MORRO BAY WWTP BIOSOLIDS, 9/20/2006 8:30:00AM

Constituent	Dry Basis Result	As Recvd Result	Units	PQL	MDL	Method	Prep Date	Run Date/Time	Analyst	Instrument ID	Dilution	QC Batch ID	MB Bias	Lab Quals
Moisture	0	20.1	%	0.05	0.05	Calc	09/25/06	09/29/06 10:20	MSA	Calc	1	BPI1088	ND	
Solids	100	79.9	%	0.05	0.05	SM-2540G	09/28/06	09/28/06 12:00	VBA	MANUAL	1	BPI1356		

BC LABORATORIES, INC.

Marine Research Specialists 3140 Telegraph Road, Suite A Ventura CA, 93003-3238	Project: Biosolids from MBWWTP Project Number: [none] Project Manager: Doug Coats	**Reported:** 11/02/06 09:49

WET Test (STLC)

BCL Sample ID: 0609752-01 | **Client Sample Name:** MORRO BAY WWTP BIOSOLIDS, 9/20/2006 8:30:00AM

Constituent	Result	Units	PQL	MDL	Method	Prep Date	Run Date/Time	Analyst	Instrument ID	Dilution	QC Batch ID	MB Bias	Lab Quals
Copper	6.1	mg/L	0.10	0.0092	EPA-6010B	09/29/06	10/02/06 18:19	JCC	TJA61E	1	BPJ0058	ND	
Lead	0.74	mg/L	0.50	0.054	EPA-6010B	09/29/06	10/02/06 18:19	JCC	TJA61E	1	BPJ0058	ND	

Marine Research Specialists
3140 Telegraph Road, Suite A
Ventura CA, 93003-3238

Project: Biosolids from MBWWTP
Project Number: [none]
Project Manager: Doug Coats

Reported: 11/02/06 09:49

Modified WET Test (STLC)

BCL Sample ID: 0609752-01 | **Client Sample Name:** MORRO BAY WWTP BIOSOLIDS, 9/20/2006 8:30:00AM

Constituent	Result	Units	PQL	MDL	Method	Prep Date	Run Date/Time	Analyst	Instrument ID	Dilution	QC Batch ID	MB Bias	Lab Quals
Hexavalent Chromium	ND	mg/L	0.20	0.13	EPA-7196	09/29/06	09/29/06 11:11	TDC	KONE-1	1	BPJ0060	ND	
Total Dissolved Solids @ 180 C	4400	mg/L	200	200	EPA-160.1	10/02/06	10/02/06 15:40	VEL	MANUAL	20	BPJ0627	ND	

BC LABORATORIES, INC.

Marine Research Specialists 3140 Telegraph Road, Suite A Ventura CA, 93003-3238	Project: Biosolids from MBWWTP Project Number: [none] Project Manager: Doug Coats	**Reported:** 11/02/06 09:49

EPA Method 1664

BCL Sample ID: 0609752-01 | **Client Sample Name:** MORRO BAY WWTP BIOSOLIDS, 9/20/2006 8:30:00AM

Constituent	Result	Units	PQL	MDL	Method	Prep Date	Run Date/Time	Analyst	Instrument ID	Dilution	QC Batch ID	MB Bias	Lab Quals
Oil and Grease	64000	mg/kg	250	140	EPA-1664H	10/03/06	10/03/06 09:00	JAK	MAN-SV	5	BPJ0176	ND	

Marine Research Specialists
3140 Telegraph Road, Suite A
Ventura CA, 93003-3238

Project: Biosolids from MBWWTP
Project Number: [none]
Project Manager: Doug Coats

Reported: 11/02/06 09:49

Organochlorine Pesticides and PCB's (EPA Method 8080)

BCL Sample ID: 0609752-01 | **Client Sample Name:** MORRO BAY WWTP BIOSOLIDS, 9/20/2006 8:30:00AM

Constituent	Result	Units	PQL	MDL	Method	Prep Date	Run Date/Time	Analyst	Instrument ID	Dilution	QC Batch ID	MB Bias	Lab Quals
Aldrin	ND	mg/kg	0.030	0.0016	EPA-8080	10/03/06	10/10/06 17:27	hks	GC-1	60	BPJ0425	ND	A01
alpha-BHC	ND	mg/kg	0.030	0.0017	EPA-8080	10/03/06	10/10/06 17:27	hks	GC-1	60	BPJ0425	ND	A01
beta-BHC	ND	mg/kg	0.030	0.0084	EPA-8080	10/03/06	10/10/06 17:27	hks	GC-1	60	BPJ0425	ND	A01
delta-BHC	ND	mg/kg	0.030	0.0026	EPA-8080	10/03/06	10/10/06 17:27	hks	GC-1	60	BPJ0425	ND	A01
gamma-BHC (Lindane)	ND	mg/kg	0.030	0.0031	EPA-8080	10/03/06	10/10/06 17:27	hks	GC-1	60	BPJ0425	ND	A01
Chlordane (Technical)	ND	mg/kg	3.0	0.90	EPA-8080	10/03/06	10/10/06 17:27	hks	GC-1	60	BPJ0425	ND	A01
4,4'-DDD	ND	mg/kg	0.030	0.0025	EPA-8080	10/03/06	10/10/06 17:27	hks	GC-1	60	BPJ0425	ND	A01
4,4'-DDE	ND	mg/kg	0.030	0.0020	EPA-8080	10/03/06	10/10/06 17:27	hks	GC-1	60	BPJ0425	ND	A01
4,4'-DDT	ND	mg/kg	0.030	0.0023	EPA-8080	10/03/06	10/10/06 17:27	hks	GC-1	60	BPJ0425	ND	A01
Dieldrin	ND	mg/kg	0.030	0.0013	EPA-8080	10/03/06	10/10/06 17:27	hks	GC-1	60	BPJ0425	ND	A01
Endosulfan I	0.023	mg/kg	0.030	0.0017	EPA-8080	10/03/06	10/10/06 17:27	hks	GC-1	60	BPJ0425	ND	J, A01
Endosulfan II	ND	mg/kg	0.030	0.0019	EPA-8080	10/03/06	10/10/06 17:27	hks	GC-1	60	BPJ0425	ND	A01
Endosulfan sulfate	ND	mg/kg	0.030	0.0023	EPA-8080	10/03/06	10/10/06 17:27	hks	GC-1	60	BPJ0425	ND	A01
Endrin	ND	mg/kg	0.030	0.0014	EPA-8080	10/03/06	10/10/06 17:27	hks	GC-1	60	BPJ0425	ND	A01
Endrin aldehyde	ND	mg/kg	0.030	0.0029	EPA-8080	10/03/06	10/10/06 17:27	hks	GC-1	60	BPJ0425	ND	A01
Heptachlor	ND	mg/kg	0.030	0.0016	EPA-8080	10/03/06	10/10/06 17:27	hks	GC-1	60	BPJ0425	ND	A01
Heptachlor epoxide	ND	mg/kg	0.030	0.0026	EPA-8080	10/03/06	10/10/06 17:27	hks	GC-1	60	BPJ0425	ND	A01
Methoxychlor	ND	mg/kg	0.030	0.0037	EPA-8080	10/03/06	10/10/06 17:27	hks	GC-1	60	BPJ0425	ND	A01
Toxaphene	ND	mg/kg	3.0	0.44	EPA-8080	10/03/06	10/10/06 17:27	hks	GC-1	60	BPJ0425	ND	A01
PCB-1016	ND	mg/kg	0.60	0.11	EPA-8080	10/03/06	10/10/06 17:27	hks	GC-1	60	BPJ0425	ND	A01
PCB-1221	ND	mg/kg	0.60	0.30	EPA-8080	10/03/06	10/10/06 17:27	hks	GC-1	60	BPJ0425	ND	A01
PCB-1232	ND	mg/kg	0.60	0.072	EPA-8080	10/03/06	10/10/06 17:27	hks	GC-1	60	BPJ0425	ND	A01
PCB-1242	ND	mg/kg	0.60	0.097	EPA-8080	10/03/06	10/10/06 17:27	hks	GC-1	60	BPJ0425	ND	A01

BC LABORATORIES, INC.

Marine Research Specialists 3140 Telegraph Road, Suite A Ventura CA, 93003-3238	Project: Biosolids from MBWWTP Project Number: [none] Project Manager: Doug Coats	**Reported:** 11/02/06 09:49

Organochlorine Pesticides and PCB's (EPA Method 8080)

BCL Sample ID: 0609752-01 | **Client Sample Name:** MORRO BAY WWTP BIOSOLIDS, 9/20/2006 8:30:00AM

Constituent	Result	Units	PQL	MDL	Method	Prep Date	Run Date/Time	Analyst	Instrument ID	Dilution	QC Batch ID	MB Bias	Lab Quals
PCB-1248	ND	mg/kg	0.60	0.072	EPA-8080	10/03/06	10/10/06 17:27	hks	GC-1	60	BPJ0425	ND	A01
PCB-1254	ND	mg/kg	0.60	0.047	EPA-8080	10/03/06	10/10/06 17:27	hks	GC-1	60	BPJ0425	ND	A01
PCB-1260	ND	mg/kg	0.60	0.084	EPA-8080	10/03/06	10/10/06 17:27	hks	GC-1	60	BPJ0425	ND	A01
Total PCB's (Summation)	ND	mg/kg	0.60	0.30	EPA-8080	10/03/06	10/10/06 17:27	hks	GC-1	60	BPJ0425	ND	A01
TCMX (Surrogate)	102	%	70 - 120	(LCL - UCL)	EPA-8080	10/03/06	10/10/06 17:27	hks	GC-1	60	BPJ0425		A01
Dibutyl chlorendate (Surrogate)	38.5	%	79 - 136	(LCL - UCL)	EPA-8080	10/03/06	10/10/06 17:27	hks	GC-1	60	BPJ0425		S09, A01

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Project: Biosolids from MBWWTP
Project Number: [none]
Project Manager: Doug Coats

Reported: 11/02/06 09:49

Volatile Organic Analysis (EPA Method 8240)

BCL Sample ID: 0609752-01 | **Client Sample Name:** MORRO BAY WWTP BIOSOLIDS, 9/20/2006 8:30:00AM

Constituent	Result	Units	PQL	MDL	Method	Prep Date	Run Date/Time	Analyst	Instrument ID	Dilution	QC Batch ID	MB Bias	Lab Quals
Benzene	ND	mg/kg	0.0052	0.0015	EPA-8240	09/25/06	09/25/06 20:47	TLF	MS-V2	1.03	BPI1194	ND	S08
Bromodichloromethane	ND	mg/kg	0.0052	0.00076	EPA-8240	09/25/06	09/25/06 20:47	TLF	MS-V2	1.03	BPI1194	ND	S08
Bromoform	ND	mg/kg	0.0052	0.00084	EPA-8240	09/25/06	09/25/06 20:47	TLF	MS-V2	1.03	BPI1194	ND	S08
Bromomethane	ND	mg/kg	0.0052	0.0014	EPA-8240	09/25/06	09/25/06 20:47	TLF	MS-V2	1.03	BPI1194	ND	S08
Carbon tetrachloride	ND	mg/kg	0.0052	0.0016	EPA-8240	09/25/06	09/25/06 20:47	TLF	MS-V2	1.03	BPI1194	ND	S08
Chlorobenzene	ND	mg/kg	0.0052	0.0011	EPA-8240	09/25/06	09/25/06 20:47	TLF	MS-V2	1.03	BPI1194	ND	S08
Chloroethane	ND	mg/kg	0.0052	0.0012	EPA-8240	09/25/06	09/25/06 20:47	TLF	MS-V2	1.03	BPI1194	ND	S08
Chloroform	ND	mg/kg	0.0052	0.0010	EPA-8240	09/25/06	09/25/06 20:47	TLF	MS-V2	1.03	BPI1194	ND	S08
Chloromethane	ND	mg/kg	0.0052	0.0020	EPA-8240	09/25/06	09/25/06 20:47	TLF	MS-V2	1.03	BPI1194	ND	S08
Dibromochloromethane	ND	mg/kg	0.0052	0.00095	EPA-8240	09/25/06	09/25/06 20:47	TLF	MS-V2	1.03	BPI1194	ND	S08
1,2-Dichlorobenzene	ND	mg/kg	0.0052	0.0011	EPA-8240	09/25/06	09/25/06 20:47	TLF	MS-V2	1.03	BPI1194	ND	S08
1,3-Dichlorobenzene	0.0049	mg/kg	0.0052	0.0013	EPA-8240	09/25/06	09/25/06 20:47	TLF	MS-V2	1.03	BPI1194	ND	J, S08
1,4-Dichlorobenzene	0.0051	mg/kg	0.0052	0.00096	EPA-8240	09/25/06	09/25/06 20:47	TLF	MS-V2	1.03	BPI1194	ND	J, S08
1,1-Dichloroethane	ND	mg/kg	0.0052	0.0011	EPA-8240	09/25/06	09/25/06 20:47	TLF	MS-V2	1.03	BPI1194	ND	S08
1,2-Dichloroethane	ND	mg/kg	0.0052	0.00060	EPA-8240	09/25/06	09/25/06 20:47	TLF	MS-V2	1.03	BPI1194	ND	S08
1,1-Dichloroethene	ND	mg/kg	0.0052	0.0014	EPA-8240	09/25/06	09/25/06 20:47	TLF	MS-V2	1.03	BPI1194	ND	S08
trans-1,2-Dichloroethene	ND	mg/kg	0.0052	0.0011	EPA-8240	09/25/06	09/25/06 20:47	TLF	MS-V2	1.03	BPI1194	ND	S08
1,2-Dichloropropane	ND	mg/kg	0.0052	0.00066	EPA-8240	09/25/06	09/25/06 20:47	TLF	MS-V2	1.03	BPI1194	ND	S08
cis-1,3-Dichloropropene	ND	mg/kg	0.0052	0.00087	EPA-8240	09/25/06	09/25/06 20:47	TLF	MS-V2	1.03	BPI1194	ND	S08
trans-1,3-Dichloropropene	ND	mg/kg	0.0052	0.00093	EPA-8240	09/25/06	09/25/06 20:47	TLF	MS-V2	1.03	BPI1194	ND	S08
Ethylbenzene	ND	mg/kg	0.0052	0.0012	EPA-8240	09/25/06	09/25/06 20:47	TLF	MS-V2	1.03	BPI1194	ND	S08
Methylene chloride	0.0031	mg/kg	0.010	0.00064	EPA-8240	09/25/06	09/25/06 20:47	TLF	MS-V2	1.03	BPI1194	ND	J, S08
Methyl t-butyl ether	ND	mg/kg	0.0052	0.00053	EPA-8240	09/25/06	09/25/06 20:47	TLF	MS-V2	1.03	BPI1194	ND	S08

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Volatile Organic Analysis (EPA Method 8240)

BCL Sample ID: 0609752-01 | **Client Sample Name:** MORRO BAY WWTP BIOSOLIDS, 9/20/2006 8:30:00AM

Constituent	Result	Units	PQL	MDL	Method	Prep Date	Run Date/Time	Analyst	Instrument ID	Dilution	QC Batch ID	MB Bias	Lab Quals
1,1,2,2-Tetrachloroethane	ND	mg/kg	0.0052	0.00054	EPA-8240	09/25/06	09/25/06 20:47	TLF	MS-V2	1.03	BPI1194	ND	S08
Tetrachloroethene	ND	mg/kg	0.0052	0.0013	EPA-8240	09/25/06	09/25/06 20:47	TLF	MS-V2	1.03	BPI1194	ND	S08
Toluene	0.0031	mg/kg	0.0052	0.0016	EPA-8240	09/25/06	09/25/06 20:47	TLF	MS-V2	1.03	BPI1194	ND	J, S08
1,1,1-Trichloroethane	ND	mg/kg	0.0052	0.0013	EPA-8240	09/25/06	09/25/06 20:47	TLF	MS-V2	1.03	BPI1194	ND	S08
1,1,2-Trichloroethane	ND	mg/kg	0.0052	0.0013	EPA-8240	09/25/06	09/25/06 20:47	TLF	MS-V2	1.03	BPI1194	ND	S08
Trichloroethene	ND	mg/kg	0.0052	0.0011	EPA-8240	09/25/06	09/25/06 20:47	TLF	MS-V2	1.03	BPI1194	ND	S08
Trichlorofluoromethane	ND	mg/kg	0.0052	0.0020	EPA-8240	09/25/06	09/25/06 20:47	TLF	MS-V2	1.03	BPI1194	ND	S08
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	mg/kg	0.0052	0.0021	EPA-8240	09/25/06	09/25/06 20:47	TLF	MS-V2	1.03	BPI1194	ND	S08
Vinyl chloride	ND	mg/kg	0.0052	0.0022	EPA-8240	09/25/06	09/25/06 20:47	TLF	MS-V2	1.03	BPI1194	ND	S08
Total Xylenes	0.012	mg/kg	0.010	0.0032	EPA-8240	09/25/06	09/25/06 20:47	TLF	MS-V2	1.03	BPI1194	ND	S08
p- & m-Xylenes	0.010	mg/kg	0.0052	0.0023	EPA-8240	09/25/06	09/25/06 20:47	TLF	MS-V2	1.03	BPI1194	ND	S08
o-Xylene	0.0015	mg/kg	0.0052	0.00094	EPA-8240	09/25/06	09/25/06 20:47	TLF	MS-V2	1.03	BPI1194	ND	J, S08
1,2-Dichloroethane-d4 (Surrogate)	117	%	70 - 121 (LCL - UCL)		EPA-8240	09/25/06	09/25/06 20:47	TLF	MS-V2	1.03	BPI1194		
Toluene-d8 (Surrogate)	77.5	%	81 - 117 (LCL - UCL)		EPA-8240	09/25/06	09/25/06 20:47	TLF	MS-V2	1.03	BPI1194		A19, S09
4-Bromofluorobenzene (Surrogate)	80.1	%	74 - 121 (LCL - UCL)		EPA-8240	09/25/06	09/25/06 20:47	TLF	MS-V2	1.03	BPI1194		

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Project: Biosolids from MBWWTP
Project Number: [none]
Project Manager: Doug Coats

Reported: 11/02/06 09:49

Base Neutral and Acid Extractables Organic Analysis (EPA Method 8270C)

BCL Sample ID: 0609752-01 | **Client Sample Name:** MORRO BAY WWTP BIOSOLIDS, 9/20/2006 8:30:00AM

Constituent	Result	Units	PQL	MDL	Method	Prep Date	Run Date/Time	Analyst	Instrument ID	Dilution	QC Batch ID	MB Bias	Lab Quals
Acenaphthene	ND	mg/kg	15	9.7	EPA-8270C	09/27/06	10/02/06 19:46	SKC	MS-B1	150	BPI1367	ND	A10
Acenaphthylene	ND	mg/kg	15	8.7	EPA-8270C	09/27/06	10/02/06 19:46	SKC	MS-B1	150	BPI1367	ND	A10
Aldrin	ND	mg/kg	15	8.5	EPA-8270C	09/27/06	10/02/06 19:46	SKC	MS-B1	150	BPI1367	ND	A10
Aniline	ND	mg/kg	30	3.4	EPA-8270C	09/27/06	10/02/06 19:46	SKC	MS-B1	150	BPI1367	ND	A10
Anthracene	ND	mg/kg	15	10	EPA-8270C	09/27/06	10/02/06 19:46	SKC	MS-B1	150	BPI1367	ND	A10
Benzidine	ND	mg/kg	450	220	EPA-8270C	09/27/06	10/02/06 19:46	SKC	MS-B1	150	BPI1367	ND	V11, A10
Benzo[a]anthracene	ND	mg/kg	15	8.5	EPA-8270C	09/27/06	10/02/06 19:46	SKC	MS-B1	150	BPI1367	ND	A10
Benzo[b]fluoranthene	ND	mg/kg	15	9.1	EPA-8270C	09/27/06	10/02/06 19:46	SKC	MS-B1	150	BPI1367	ND	A10
Benzo[k]fluoranthene	ND	mg/kg	15	9.6	EPA-8270C	09/27/06	10/02/06 19:46	SKC	MS-B1	150	BPI1367	ND	A10
Benzo[a]pyrene	ND	mg/kg	15	7.9	EPA-8270C	09/27/06	10/02/06 19:46	SKC	MS-B1	150	BPI1367	ND	A10
Benzo[g,h,i]perylene	ND	mg/kg	15	6.9	EPA-8270C	09/27/06	10/02/06 19:46	SKC	MS-B1	150	BPI1367	ND	A10
Benzoic acid	ND	mg/kg	75	5.2	EPA-8270C	09/27/06	10/02/06 19:46	SKC	MS-B1	150	BPI1367	ND	A10
Benzyl alcohol	ND	mg/kg	15	8.1	EPA-8270C	09/27/06	10/02/06 19:46	SKC	MS-B1	150	BPI1367	ND	A10
Benzyl butyl phthalate	ND	mg/kg	15	9.0	EPA-8270C	09/27/06	10/02/06 19:46	SKC	MS-B1	150	BPI1367	ND	A10
alpha-BHC	ND	mg/kg	15	9.0	EPA-8270C	09/27/06	10/02/06 19:46	SKC	MS-B1	150	BPI1367	ND	A10
beta-BHC	ND	mg/kg	15	8.7	EPA-8270C	09/27/06	10/02/06 19:46	SKC	MS-B1	150	BPI1367	ND	A10
delta-BHC	ND	mg/kg	15	8.7	EPA-8270C	09/27/06	10/02/06 19:46	SKC	MS-B1	150	BPI1367	ND	A10
gamma-BHC (Lindane)	ND	mg/kg	15	8.7	EPA-8270C	09/27/06	10/02/06 19:46	SKC	MS-B1	150	BPI1367	ND	A10
bis(2-Chloroethoxy)methane	ND	mg/kg	15	7.3	EPA-8270C	09/27/06	10/02/06 19:46	SKC	MS-B1	150	BPI1367	ND	A10
bis(2-Chloroethyl) ether	ND	mg/kg	15	7.3	EPA-8270C	09/27/06	10/02/06 19:46	SKC	MS-B1	150	BPI1367	ND	A10
bis(2-Chloroisopropyl)ether	ND	mg/kg	15	7.3	EPA-8270C	09/27/06	10/02/06 19:46	SKC	MS-B1	150	BPI1367	ND	A10
bis(2-Ethylhexyl)phthalate	150	mg/kg	30	10	EPA-8270C	09/27/06	10/02/06 19:46	SKC	MS-B1	150	BPI1367	ND	A10
4-Bromophenyl phenyl ether	ND	mg/kg	15	10	EPA-8270C	09/27/06	10/02/06 19:46	SKC	MS-B1	150	BPI1367	ND	A10

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Base Neutral and Acid Extractables Organic Analysis (EPA Method 8270C)

BCL Sample ID: 0609752-01 | **Client Sample Name:** MORRO BAY WWTP BIOSOLIDS, 9/20/2006 8:30:00AM

Constituent	Result	Units	PQL	MDL	Method	Prep Date	Run Date/Time	Analyst	Instrument ID	Dilution	QC Batch ID	MB Bias	Lab Quals
4-Chloroaniline	ND	mg/kg	15	5.5	EPA-8270C	09/27/06	10/02/06 19:46	SKC	MS-B1	150	BPI1367	ND	A10
2-Chloronaphthalene	ND	mg/kg	15	8.8	EPA-8270C	09/27/06	10/02/06 19:46	SKC	MS-B1	150	BPI1367	ND	A10
4-Chlorophenyl phenyl ether	ND	mg/kg	15	9.1	EPA-8270C	09/27/06	10/02/06 19:46	SKC	MS-B1	150	BPI1367	ND	A10
Chrysene	ND	mg/kg	15	9.4	EPA-8270C	09/27/06	10/02/06 19:46	SKC	MS-B1	150	BPI1367	ND	A10
4,4'-DDD	ND	mg/kg	15	7.8	EPA-8270C	09/27/06	10/02/06 19:46	SKC	MS-B1	150	BPI1367	ND	A10
4,4'-DDE	ND	mg/kg	15	8.2	EPA-8270C	09/27/06	10/02/06 19:46	SKC	MS-B1	150	BPI1367	ND	A10
4,4'-DDT	ND	mg/kg	15	6.9	EPA-8270C	09/27/06	10/02/06 19:46	SKC	MS-B1	150	BPI1367	ND	V11, A10
Dibenzo[a,h]anthracene	ND	mg/kg	15	8.7	EPA-8270C	09/27/06	10/02/06 19:46	SKC	MS-B1	150	BPI1367	ND	A10
Dibenzofuran	ND	mg/kg	15	9.3	EPA-8270C	09/27/06	10/02/06 19:46	SKC	MS-B1	150	BPI1367	ND	A10
1,2-Dichlorobenzene	ND	mg/kg	15	6.3	EPA-8270C	09/27/06	10/02/06 19:46	SKC	MS-B1	150	BPI1367	ND	A10
1,3-Dichlorobenzene	ND	mg/kg	15	7.8	EPA-8270C	09/27/06	10/02/06 19:46	SKC	MS-B1	150	BPI1367	ND	A10
1,4-Dichlorobenzene	ND	mg/kg	15	7.6	EPA-8270C	09/27/06	10/02/06 19:46	SKC	MS-B1	150	BPI1367	ND	A10
3,3-Dichlorobenzidine	ND	mg/kg	30	6.6	EPA-8270C	09/27/06	10/02/06 19:46	SKC	MS-B1	150	BPI1367	ND	V11, A10
Dieldrin	ND	mg/kg	15	3.3	EPA-8270C	09/27/06	10/02/06 19:46	SKC	MS-B1	150	BPI1367	ND	A10
Diethyl phthalate	ND	mg/kg	15	12	EPA-8270C	09/27/06	10/02/06 19:46	SKC	MS-B1	150	BPI1367	ND	A10
Dimethyl phthalate	ND	mg/kg	15	9.1	EPA-8270C	09/27/06	10/02/06 19:46	SKC	MS-B1	150	BPI1367	ND	A10
Di-n-butyl phthalate	ND	mg/kg	15	1.3	EPA-8270C	09/27/06	10/02/06 19:46	SKC	MS-B1	150	BPI1367	ND	A10
2,4-Dinitrotoluene	ND	mg/kg	15	6.9	EPA-8270C	09/27/06	10/02/06 19:46	SKC	MS-B1	150	BPI1367	ND	A10
2,6-Dinitrotoluene	ND	mg/kg	15	7.8	EPA-8270C	09/27/06	10/02/06 19:46	SKC	MS-B1	150	BPI1367	ND	A10
Di-n-octyl phthalate	ND	mg/kg	15	12	EPA-8270C	09/27/06	10/02/06 19:46	SKC	MS-B1	150	BPI1367	ND	A10
1,2-Diphenylhydrazine	ND	mg/kg	15	1.4	EPA-8270C	09/27/06	10/02/06 19:46	SKC	MS-B1	150	BPI1367	ND	A10
Endosulfan I	ND	mg/kg	30	7.3	EPA-8270C	09/27/06	10/02/06 19:46	SKC	MS-B1	150	BPI1367	ND	A10
Endosulfan II	ND	mg/kg	30	7.3	EPA-8270C	09/27/06	10/02/06 19:46	SKC	MS-B1	150	BPI1367	ND	A10

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Project: Biosolids from MBWWTP
Project Number: [none]
Project Manager: Doug Coats

Reported: 11/02/06 09:49

Base Neutral and Acid Extractables Organic Analysis (EPA Method 8270C)

BCL Sample ID: 0609752-01 | **Client Sample Name:** MORRO BAY WWTP BIOSOLIDS, 9/20/2006 8:30:00AM

Constituent	Result	Units	PQL	MDL	Method	Prep Date	Run Date/Time	Analyst	Instrument ID	Dilution	QC Batch ID	MB Bias	Lab Quals
Endosulfan sulfate	ND	mg/kg	15	8.2	EPA-8270C	09/27/06	10/02/06 19:46	SKC	MS-B1	150	BPI1367	ND	V11, A10
Endrin	ND	mg/kg	30	7.0	EPA-8270C	09/27/06	10/02/06 19:46	SKC	MS-B1	150	BPI1367	ND	A10
Endrin aldehyde	ND	mg/kg	75	8.1	EPA-8270C	09/27/06	10/02/06 19:46	SKC	MS-B1	150	BPI1367	ND	A10
Fluoranthene	ND	mg/kg	15	9.9	EPA-8270C	09/27/06	10/02/06 19:46	SKC	MS-B1	150	BPI1367	ND	A10
Fluorene	ND	mg/kg	15	6.6	EPA-8270C	09/27/06	10/02/06 19:46	SKC	MS-B1	150	BPI1367	ND	A10
Heptachlor	ND	mg/kg	15	6.9	EPA-8270C	09/27/06	10/02/06 19:46	SKC	MS-B1	150	BPI1367	ND	A10
Heptachlor epoxide	ND	mg/kg	15	9.0	EPA-8270C	09/27/06	10/02/06 19:46	SKC	MS-B1	150	BPI1367	ND	A10
Hexachlorobenzene	ND	mg/kg	15	9.6	EPA-8270C	09/27/06	10/02/06 19:46	SKC	MS-B1	150	BPI1367	ND	A10
Hexachlorobutadiene	ND	mg/kg	15	7.5	EPA-8270C	09/27/06	10/02/06 19:46	SKC	MS-B1	150	BPI1367	ND	A10
Hexachlorocyclopentadiene	ND	mg/kg	15	5.1	EPA-8270C	09/27/06	10/02/06 19:46	SKC	MS-B1	150	BPI1367	ND	V11, A10
Hexachloroethane	ND	mg/kg	15	6.9	EPA-8270C	09/27/06	10/02/06 19:46	SKC	MS-B1	150	BPI1367	ND	A10
Indeno[1,2,3-cd]pyrene	ND	mg/kg	15	11	EPA-8270C	09/27/06	10/02/06 19:46	SKC	MS-B1	150	BPI1367	ND	A10
Isophorone	ND	mg/kg	15	7.0	EPA-8270C	09/27/06	10/02/06 19:46	SKC	MS-B1	150	BPI1367	ND	A10
2-Methylnaphthalene	ND	mg/kg	15	8.4	EPA-8270C	09/27/06	10/02/06 19:46	SKC	MS-B1	150	BPI1367	ND	A10
Naphthalene	ND	mg/kg	15	7.0	EPA-8270C	09/27/06	10/02/06 19:46	SKC	MS-B1	150	BPI1367	ND	A10
2-Naphthylamine	ND	mg/kg	450	7.0	EPA-8270C	09/27/06	10/02/06 19:46	SKC	MS-B1	150	BPI1367	ND	A10
2-Nitroaniline	ND	mg/kg	15	7.9	EPA-8270C	09/27/06	10/02/06 19:46	SKC	MS-B1	150	BPI1367	ND	A10
3-Nitroaniline	ND	mg/kg	15	7.5	EPA-8270C	09/27/06	10/02/06 19:46	SKC	MS-B1	150	BPI1367	ND	V11, A10
4-Nitroaniline	ND	mg/kg	30	7.8	EPA-8270C	09/27/06	10/02/06 19:46	SKC	MS-B1	150	BPI1367	ND	A10
Nitrobenzene	ND	mg/kg	15	6.9	EPA-8270C	09/27/06	10/02/06 19:46	SKC	MS-B1	150	BPI1367	ND	A10
N-Nitrosodimethylamine	ND	mg/kg	15	5.7	EPA-8270C	09/27/06	10/02/06 19:46	SKC	MS-B1	150	BPI1367	ND	A10
N-Nitrosodi-N-propylamine	ND	mg/kg	15	7.8	EPA-8270C	09/27/06	10/02/06 19:46	SKC	MS-B1	150	BPI1367	ND	A10
N-Nitrosodiphenylamine	ND	mg/kg	15	9.1	EPA-8270C	09/27/06	10/02/06 19:46	SKC	MS-B1	150	BPI1367	ND	A10

BC LABORATORIES, INC.

Marine Research Specialists	Project: Biosolids from MBWWTP	
3140 Telegraph Road, Suite A	Project Number: [none]	
Ventura CA, 93003-3238	Project Manager: Doug Coats	**Reported:** 11/02/06 09:49

Base Neutral and Acid Extractables Organic Analysis (EPA Method 8270C)

BCL Sample ID: 0609752-01 | **Client Sample Name:** MORRO BAY WWTP BIOSOLIDS, 9/20/2006 8:30:00AM

Constituent	Result	Units	PQL	MDL	Method	Prep Date	Run Date/Time	Analyst	Instrument ID	Dilution	QC Batch ID	MB Bias	Lab Quals
Phenanthrene	ND	mg/kg	15	10	EPA-8270C	09/27/06	10/02/06 19:46	SKC	MS-B1	150	BPI1367	ND	A10
Pyrene	ND	mg/kg	15	9.0	EPA-8270C	09/27/06	10/02/06 19:46	SKC	MS-B1	150	BPI1367	ND	A10
1,2,4-Trichlorobenzene	ND	mg/kg	15	7.5	EPA-8270C	09/27/06	10/02/06 19:46	SKC	MS-B1	150	BPI1367	ND	A10
4-Chloro-3-methylphenol	ND	mg/kg	30	7.9	EPA-8270C	09/27/06	10/02/06 19:46	SKC	MS-B1	150	BPI1367	ND	A10
2-Chlorophenol	ND	mg/kg	15	7.8	EPA-8270C	09/27/06	10/02/06 19:46	SKC	MS-B1	150	BPI1367	ND	A10
2,4-Dichlorophenol	ND	mg/kg	15	8.1	EPA-8270C	09/27/06	10/02/06 19:46	SKC	MS-B1	150	BPI1367	ND	A10
2,4-Dimethylphenol	ND	mg/kg	15	7.0	EPA-8270C	09/27/06	10/02/06 19:46	SKC	MS-B1	150	BPI1367	ND	A10
4,6-Dinitro-2-methylphenol	ND	mg/kg	75	4.2	EPA-8270C	09/27/06	10/02/06 19:46	SKC	MS-B1	150	BPI1367	ND	A10
2,4-Dinitrophenol	ND	mg/kg	75	33	EPA-8270C	09/27/06	10/02/06 19:46	SKC	MS-B1	150	BPI1367	ND	A10
2-Methylphenol	ND	mg/kg	15	7.8	EPA-8270C	09/27/06	10/02/06 19:46	SKC	MS-B1	150	BPI1367	ND	A10
3- & 4-Methylphenol	ND	mg/kg	30	18	EPA-8270C	09/27/06	10/02/06 19:46	SKC	MS-B1	150	BPI1367	ND	A10
2-Nitrophenol	ND	mg/kg	15	7.0	EPA-8270C	09/27/06	10/02/06 19:46	SKC	MS-B1	150	BPI1367	ND	A10
4-Nitrophenol	ND	mg/kg	30	8.1	EPA-8270C	09/27/06	10/02/06 19:46	SKC	MS-B1	150	BPI1367	ND	A10
Pentachlorophenol	ND	mg/kg	30	9.3	EPA-8270C	09/27/06	10/02/06 19:46	SKC	MS-B1	150	BPI1367	ND	A10
Phenol	ND	mg/kg	15	8.5	EPA-8270C	09/27/06	10/02/06 19:46	SKC	MS-B1	150	BPI1367	ND	A10
2,4,5-Trichlorophenol	ND	mg/kg	30	9.4	EPA-8270C	09/27/06	10/02/06 19:46	SKC	MS-B1	150	BPI1367	ND	A10
2,4,6-Trichlorophenol	ND	mg/kg	30	11	EPA-8270C	09/27/06	10/02/06 19:46	SKC	MS-B1	150	BPI1367	ND	A10
2-Fluorophenol (Surrogate)	125	%	47 - 120	(LCL - UCL)	EPA-8270C	09/27/06	10/02/06 19:46	SKC	MS-B1	150	BPI1367		S09, A10
Phenol-d5 (Surrogate)	103	%	41 - 116	(LCL - UCL)	EPA-8270C	09/27/06	10/02/06 19:46	SKC	MS-B1	150	BPI1367		A10
Nitrobenzene-d5 (Surrogate)	116	%	50 - 115	(LCL - UCL)	EPA-8270C	09/27/06	10/02/06 19:46	SKC	MS-B1	150	BPI1367		S09, A10
2-Fluorobiphenyl (Surrogate)	113	%	49 - 125	(LCL - UCL)	EPA-8270C	09/27/06	10/02/06 19:46	SKC	MS-B1	150	BPI1367		A10
2,4,6-Tribromophenol (Surrogate)	136	%	47 - 144	(LCL - UCL)	EPA-8270C	09/27/06	10/02/06 19:46	SKC	MS-B1	150	BPI1367		A10
p-Terphenyl-d14 (Surrogate)	138	%	43 - 157	(LCL - UCL)	EPA-8270C	09/27/06	10/02/06 19:46	SKC	MS-B1	150	BPI1367		A10

Marine Research Specialists
3140 Telegraph Road, Suite A
Ventura CA, 93003-3238

Project: Biosolids from MBWWTP
Project Number: [none]
Project Manager: Doug Coats

Reported: 11/02/06 09:49

Organo-Phosphorus Pesticide Analysis (EPA Method 8140)

BCL Sample ID: 0609752-01 | **Client Sample Name:** MORRO BAY WWTP BIOSOLIDS, 9/20/2006 8:30:00AM

Constituent	Result	Units	PQL	MDL	Method	Prep Date	Run Date/Time	Analyst	Instrument ID	Dilution	QC Batch ID	MB Bias	Lab Quals
Azinphos methyl	ND	mg/kg	0.060	0.011	EPA-8140	10/02/06	10/09/06 17:56	JAC	GC-7	6	BPJ0274	ND	
Bolstar	ND	mg/kg	0.060	0.0084	EPA-8140	10/02/06	10/09/06 17:56	JAC	GC-7	6	BPJ0274	ND	
Chlorpyrifos	ND	mg/kg	0.060	0.0048	EPA-8140	10/02/06	10/09/06 17:56	JAC	GC-7	6	BPJ0274	ND	
Coumaphos	ND	mg/kg	0.060	0.013	EPA-8140	10/02/06	10/09/06 17:56	JAC	GC-7	6	BPJ0274	ND	
Demeton O/S	ND	mg/kg	0.060	0.0090	EPA-8140	10/02/06	10/09/06 17:56	JAC	GC-7	6	BPJ0274	ND	
Diazinon	ND	mg/kg	0.060	0.0036	EPA-8140	10/02/06	10/09/06 17:56	JAC	GC-7	6	BPJ0274	ND	
Dichlorvos	ND	mg/kg	0.060	0.037	EPA-8140	10/02/06	10/09/06 17:56	JAC	GC-7	6	BPJ0274	ND	
Disulfoton	ND	mg/kg	0.060	0.0066	EPA-8140	10/02/06	10/09/06 17:56	JAC	GC-7	6	BPJ0274	ND	
Ethoprop	ND	mg/kg	0.060	0.0048	EPA-8140	10/02/06	10/09/06 17:56	JAC	GC-7	6	BPJ0274	ND	
Fensulfothion	ND	mg/kg	0.060	0.032	EPA-8140	10/02/06	10/09/06 17:56	JAC	GC-7	6	BPJ0274	ND	
Fenthion	ND	mg/kg	0.060	0.0060	EPA-8140	10/02/06	10/09/06 17:56	JAC	GC-7	6	BPJ0274	ND	V01
Merphos	ND	mg/kg	0.060	0.0066	EPA-8140	10/02/06	10/09/06 17:56	JAC	GC-7	6	BPJ0274	ND	
Methyl parathion	ND	mg/kg	0.060	0.012	EPA-8140	10/02/06	10/09/06 17:56	JAC	GC-7	6	BPJ0274	ND	
Mevinphos	ND	mg/kg	0.060	0.0084	EPA-8140	10/02/06	10/09/06 17:56	JAC	GC-7	6	BPJ0274	ND	
Naled	ND	mg/kg	0.060	0.010	EPA-8140	10/02/06	10/09/06 17:56	JAC	GC-7	6	BPJ0274	ND	
Phorate	ND	mg/kg	0.060	0.0036	EPA-8140	10/02/06	10/09/06 17:56	JAC	GC-7	6	BPJ0274	ND	V01
Ronnel (Fenchlorphos)	ND	mg/kg	0.060	0.0096	EPA-8140	10/02/06	10/09/06 17:56	JAC	GC-7	6	BPJ0274	ND	
Stirophos (Tetrachlorvinphos)	ND	mg/kg	0.060	0.015	EPA-8140	10/02/06	10/09/06 17:56	JAC	GC-7	6	BPJ0274	ND	
Tokuthion (Prothiofos)	ND	mg/kg	0.060	0.0060	EPA-8140	10/02/06	10/09/06 17:56	JAC	GC-7	6	BPJ0274	ND	
Trichloronate	ND	mg/kg	0.060	0.0066	EPA-8140	10/02/06	10/09/06 17:56	JAC	GC-7	6	BPJ0274	ND	
Triphenylphosphate (Surrogate)	195	%	70 - 130	(LCL - UCL)	EPA-8140	10/02/06	10/09/06 17:56	JAC	GC-7	6	BPJ0274		S09

EMSL Analytical, Inc
2235 Polvorosa Ave , Suite 230, San Leandro, CA 94577
Phone: (510) 895-3675 Fax: 5108953680 Email: mlipltaslab@emsl.com

Attn: **Linda Phoudamneun**
BC Laboratories, Inc.
4100 Atlas Court
Bakersfield, CA 93308

Fax: (661) 327-1918 Phone: (661) 327-4911
Project: **06-9752**

Customer ID: BCLA50
Customer PO: 06-9752
Received: 09/29/06 9:52 AM
EMSL Order: 090605017

EMSL Proj:
Analysis Date: 10/12/2006
Report Date: 10/13/2006

Asbestos Analysis via Polarized Light Microscopy, Qualitative

Sample	Location	Appearance	Result	Notes
06-9752-1 *090605017-0001*			**None Detected**	

Soil is a known problem matrix; negative results cannot be guaranteed. TEM method analysis w/ CARB 435 milling prep is recommended for proper quantification of asbestos in soil.

Analyst(s)

James Wright (1)

or other approved signatory

EMSL recommends that soil samples reported as "ND" be tested by the EPA Screening Method/Qualitative. The above report relates only to the items tested. This report may not be reproduced, except in full, without written approval by EMSL Analytical, Inc. The above test must not be used by the client to claim product endorsement by NVLAP nor any agency of the United States Government. Unless otherwise noted, the results in this report have not been blank corrected.Samples received in good condition unless otherwise noted.
Analysis performed by EMSL San Leandro AIHA #107748, NVLAP #101048-3

THIS IS THE LAST PAGE OF THE REPORT.

QA/QC REPORTS & CHAINS OF CUSTODY

Marine Research Specialists
3140 Telegraph Road, Suite A
Ventura CA, 93003-3238

Project: Biosolids from MBWWTP
Project Number: [none]
Project Manager: Doug Coats

Reported: 11/02/06 09:54

Total Concentrations (TTLC)

Quality Control Report - Precision & Accuracy

Constituent	Batch ID	QC Sample Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
Antimony	BPI1242	Duplicate	0609840-01	1.1373	0.74510		mg/kg	41.7		20		J, A02
		Matrix Spike	0609840-01	1.1373	44.333	98.039	mg/kg		44.1		16 - 119	
		Matrix Spike Duplicate	0609840-01	1.1373	49.167	98.039	mg/kg	10.5	49.0	20	16 - 119	
Arsenic	BPI1242	Duplicate	0609840-01	8.0980	9.0000		mg/kg	10.6		20		
		Matrix Spike	0609840-01	8.0980	15.304	4.9020	mg/kg		147		75 - 125	Q03
		Matrix Spike Duplicate	0609840-01	8.0980	15.245	4.9020	mg/kg	0.683	146	20	75 - 125	Q03
Barium	BPI1242	Duplicate	0609840-01	183.82	146.67		mg/kg	22.5		20		Q01
		Matrix Spike	0609840-01	183.82	258.04	98.039	mg/kg		75.7		75 - 125	
		Matrix Spike Duplicate	0609840-01	183.82	254.41	98.039	mg/kg	5.01	72.0	20	75 - 125	Q03
Beryllium	BPI1242	Duplicate	0609840-01	0.42157	0.41176		mg/kg	2.35		20		J
		Matrix Spike	0609840-01	0.42157	11.863	9.8039	mg/kg		117		75 - 125	
		Matrix Spike Duplicate	0609840-01	0.42157	12.118	9.8039	mg/kg	1.69	119	20	75 - 125	
Cadmium	BPI1242	Duplicate	0609840-01	ND	ND		mg/kg			20		
		Matrix Spike	0609840-01	ND	11.245	9.8039	mg/kg		115		75 - 125	
		Matrix Spike Duplicate	0609840-01	ND	11.500	9.8039	mg/kg	1.72	117	20	75 - 125	
Chromium	BPI1242	Duplicate	0609840-01	16.402	16.127		mg/kg	1.69		20		
		Matrix Spike	0609840-01	16.402	123.33	98.039	mg/kg		109		75 - 125	
		Matrix Spike Duplicate	0609840-01	16.402	126.18	98.039	mg/kg	2.71	112	20	75 - 125	
Cobalt	BPI1242	Duplicate	0609840-01	6.0882	5.8824		mg/kg	3.44		20		
		Matrix Spike	0609840-01	6.0882	117.65	98.039	mg/kg		114		75 - 125	
		Matrix Spike Duplicate	0609840-01	6.0882	120.59	98.039	mg/kg	2.60	117	20	75 - 125	
Copper	BPI1242	Duplicate	0609840-01	9.8235	9.5294		mg/kg	3.04		20		
		Matrix Spike	0609840-01	9.8235	119.22	98.039	mg/kg		112		75 - 125	
		Matrix Spike Duplicate	0609840-01	9.8235	120.98	98.039	mg/kg	0.889	113	20	75 - 125	
Lead	BPI1242	Duplicate	0609840-01	4.0882	4.0098		mg/kg	1.94		20		J
		Matrix Spike	0609840-01	4.0882	111.67	98.039	mg/kg		110		75 - 125	
		Matrix Spike Duplicate	0609840-01	4.0882	114.12	98.039	mg/kg	1.80	112	20	75 - 125	

Marine Research Specialists
3140 Telegraph Road, Suite A
Ventura CA, 93003-3238

Project: Biosolids from MBWWTP
Project Number: [none]
Project Manager: Doug Coats

Reported: 11/02/06 09:54

Total Concentrations (TTLC)

Quality Control Report - Precision & Accuracy

Constituent	Batch ID	QC Sample Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
Molybdenum	BPI1242	Duplicate	0609840-01	0.84314	0.71569		mg/kg	16.4		20		J
		Matrix Spike	0609840-01	0.84314	100.29	98.039	mg/kg		101		75 - 125	
		Matrix Spike Duplicate	0609840-01	0.84314	103.73	98.039	mg/kg	3.88	105	20	75 - 125	
Nickel	BPI1242	Duplicate	0609840-01	12.853	12.333		mg/kg	4.13		20		
		Matrix Spike	0609840-01	12.853	124.31	98.039	mg/kg		114		75 - 125	
		Matrix Spike Duplicate	0609840-01	12.853	127.75	98.039	mg/kg	2.60	117	20	75 - 125	
Selenium	BPI1242	Duplicate	0609840-01	ND	ND		mg/kg			20		
		Matrix Spike	0609840-01	ND	5.4706	4.9020	mg/kg		112		75 - 125	
		Matrix Spike Duplicate	0609840-01	ND	5.5686	4.9020	mg/kg	1.77	114	20	75 - 125	
Silver	BPI1242	Duplicate	0609840-01	ND	ND		mg/kg			20		
		Matrix Spike	0609840-01	ND	10.392	9.8039	mg/kg		106		75 - 125	
		Matrix Spike Duplicate	0609840-01	ND	10.647	9.8039	mg/kg	2.79	109	20	75 - 125	
Thallium	BPI1242	Duplicate	0609840-01	ND	ND		mg/kg			20		
		Matrix Spike	0609840-01	ND	110.10	98.039	mg/kg		112		75 - 125	
		Matrix Spike Duplicate	0609840-01	ND	114.51	98.039	mg/kg	4.37	117	20	75 - 125	
Vanadium	BPI1242	Duplicate	0609840-01	44.706	43.245		mg/kg	3.32		20		
		Matrix Spike	0609840-01	44.706	155.78	98.039	mg/kg		113		75 - 125	
		Matrix Spike Duplicate	0609840-01	44.706	159.71	98.039	mg/kg	3.48	117	20	75 - 125	
Zinc	BPI1242	Duplicate	0609840-01	41.676	38.206		mg/kg	8.69		20		
		Matrix Spike	0609840-01	41.676	152.75	98.039	mg/kg		113		75 - 125	
		Matrix Spike Duplicate	0609840-01	41.676	157.84	98.039	mg/kg	4.33	118	20	75 - 125	
Boron	BPI1242	Duplicate	0609840-01	11.922	11.696		mg/kg	1.91		20		
		Matrix Spike	0609840-01	11.922	116.96	98.039	mg/kg		107		75 - 125	
		Matrix Spike Duplicate	0609840-01	11.922	120.88	98.039	mg/kg	3.67	111	20	75 - 125	
Mercury	BPI1253	Duplicate	0609748-01	ND	ND		mg/kg			20		
		Matrix Spike	0609748-01	ND	0.69250	0.78125	mg/kg		88.6		85 - 115	
		Matrix Spike Duplicate	0609748-01	ND	0.69774	0.80645	mg/kg	2.40	86.5	20	85 - 115	

Marine Research Specialists
3140 Telegraph Road, Suite A
Ventura CA, 93003-3238

Project: Biosolids from MBWWTP
Project Number: [none]
Project Manager: Doug Coats

Reported: 11/02/06 09:49

Chemical Analysis

Quality Control Report - Precision & Accuracy

Constituent	Batch ID	QC Sample Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
Nitrate as NO3	BPI0883	Duplicate	0609476-01	35.326	35.813		mg/kg	1.37		20		
		Matrix Spike	0609476-01	35.326	273.21	223.58	mg/kg		106		80 - 120	
		Matrix Spike Duplicate	0609476-01	35.326	267.26	223.58	mg/kg	1.90	104	20	80 - 120	
pH	BPI1065	Duplicate	0609713-01	12.663	12.654		pH Units	0.0711		20		
Total Phosphate	BPI1070	Duplicate	0609752-01	56895	60320		mg/kg	5.84		20		
		Matrix Spike	0609752-01	56895	61176	306.60	mg/kg		1400		80 - 120	A03
		Matrix Spike Duplicate	0609752-01	56895	62888	306.60	mg/kg	32.8	1950	20	80 - 120	A03
Total Cyanide	BPI1202	Duplicate	0609752-01	1.5300	1.5300		mg/kg	0.00		20		
		Matrix Spike	0609752-01	1.5300	10.690	10.000	mg/kg		91.6		80 - 120	
		Matrix Spike Duplicate	0609752-01	1.5300	10.740	10.000	mg/kg	0.544	92.1	20	80 - 120	
Total Kjeldahl Nitrogen	BPI1331	Duplicate	0609584-01	27498	27789		mg/kg	1.05		20		
		Matrix Spike	0609584-01	27498	27207	400.00	mg/kg		-72.8		80 - 120	A03
		Matrix Spike Duplicate	0609584-01	27498	27207	400.00	mg/kg	0.00	-72.8	20	80 - 120	A03
Ammonia as N	BPI1427	Duplicate	0609584-01	2651.4	2709.4		mg/kg	2.16		20		
		Matrix Spike	0609584-01	2651.4	2651.4	40.000	mg/kg		0.00		80 - 120	A03
		Matrix Spike Duplicate	0609584-01	2651.4	2622.4	40.000	mg/kg		-72.5	20	80 - 120	A03

Marine Research Specialists
3140 Telegraph Road, Suite A
Ventura CA, 93003-3238

Project: Biosolids from MBWWTP
Project Number: [none]
Project Manager: Doug Coats

Reported: 11/02/06 09:54

Chemical Analysis

Quality Control Report - Precision & Accuracy

Constituent	Batch ID	QC Sample Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
Solids	BPI1356	Duplicate	0609752-01	100.00	99.249		%	0.754		20		

Marine Research Specialists
3140 Telegraph Road, Suite A
Ventura CA, 93003-3238

Project: Biosolids from MBWWTP
Project Number: [none]
Project Manager: Doug Coats

Reported: 11/02/06 09:49

WET Test (STLC)

Quality Control Report - Precision & Accuracy

Constituent	Batch ID	QC Sample Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
Copper	BPJ0058	Duplicate	0609752-01	6.0820	5.9970		mg/L	1.41		20		
		Matrix Spike	0609752-01	6.0820	10.650	5.0000	mg/L		91.4		75 - 125	
		Matrix Spike Duplicate	0609752-01	6.0820	10.630	5.0000	mg/L	0.439	91.0	20	75 - 125	
Lead	BPJ0058	Duplicate	0609752-01	0.74500	0.73000		mg/L	2.03		20		
		Matrix Spike	0609752-01	0.74500	5.8880	5.0000	mg/L		103		75 - 125	
		Matrix Spike Duplicate	0609752-01	0.74500	5.8250	5.0000	mg/L	0.976	102	20	75 - 125	

Marine Research Specialists
3140 Telegraph Road, Suite A
Ventura CA, 93003-3238

Project: Biosolids from MBWWTP
Project Number: [none]
Project Manager: Doug Coats

Reported: 11/02/06 09:49

Modified WET Test (STLC)

Quality Control Report - Precision & Accuracy

Constituent	Batch ID	QC Sample Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
Hexavalent Chromium	BPJ0060	Duplicate	0609741-01	ND	ND		mg/L			20		
		Matrix Spike	0609741-01	ND	4.9452	5.2632	mg/L		94.0		85 - 115	
		Matrix Spike Duplicate	0609741-01	ND	4.9521	5.2632	mg/L	0.106	94.1	20	85 - 115	
Total Dissolved Solids @ 180 C	BPJ0627	Duplicate	0609741-01	242.00	229.00		mg/L	5.52		20		

Marine Research Specialists
3140 Telegraph Road, Suite A
Ventura CA, 93003-3238

Project: Biosolids from MBWWTP
Project Number: [none]
Project Manager: Doug Coats

Reported: 11/02/06 09:49

EPA Method 1664

Quality Control Report - Precision & Accuracy

Constituent	Batch ID	QC Sample Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
Oil and Grease	BPJ0176	Duplicate	0609589-01	5888.0	6604.0		mg/kg	11.5		30		
		Matrix Spike	0608879-69	ND	741.00	828.00	mg/kg		89.5		56 - 111	
		Matrix Spike Duplicate	0608879-69	ND	590.00	828.00	mg/kg	22.6	71.3	30	56 - 111	

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Marine Research Specialists 3140 Telegraph Road, Suite A Ventura CA, 93003-3238	Project: Biosolids from MBWWTP Project Number: [none] Project Manager: Doug Coats	**Reported:** 11/02/06 09:49

Organochlorine Pesticides and PCB's (EPA Method 8080)

Quality Control Report - Precision & Accuracy

Constituent	Batch ID	QC Sample Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
Aldrin	BPJ0425	Matrix Spike	0608879-52	ND	0.0092531	0.0083333	mg/kg		111		48 - 139	
		Matrix Spike Duplicate	0608879-52	ND	0.0092081	0.0083333	mg/kg	0.905	110	30	48 - 139	
gamma-BHC (Lindane)	BPJ0425	Matrix Spike	0608879-52	ND	0.0085885	0.0083333	mg/kg		103		43 - 113	
		Matrix Spike Duplicate	0608879-52	ND	0.0088697	0.0083333	mg/kg	2.87	106	30	43 - 113	
4,4'-DDT	BPJ0425	Matrix Spike	0608879-52	0.00018310	0.0086404	0.0083333	mg/kg		101		44 - 124	
		Matrix Spike Duplicate	0608879-52	0.00018310	0.0087990	0.0083333	mg/kg	1.96	103	30	44 - 124	
Dieldrin	BPJ0425	Matrix Spike	0608879-52	0.00014802	0.0093490	0.0083333	mg/kg		110		50 - 135	
		Matrix Spike Duplicate	0608879-52	0.00014802	0.0095073	0.0083333	mg/kg	1.80	112	30	50 - 135	
Endrin	BPJ0425	Matrix Spike	0608879-52	ND	0.0086415	0.0083333	mg/kg		104		47 - 143	
		Matrix Spike Duplicate	0608879-52	ND	0.0090310	0.0083333	mg/kg	3.77	108	30	47 - 143	
Heptachlor	BPJ0425	Matrix Spike	0608879-52	0.0018554	0.0091975	0.0083333	mg/kg		88.1		59 - 133	
		Matrix Spike Duplicate	0608879-52	0.0018554	0.0091576	0.0083333	mg/kg	0.569	87.6	30	59 - 133	
TCMX (Surrogate)	BPJ0425	Matrix Spike	0608879-52	ND	0.0090797	0.010000	mg/kg		90.8		70 - 120	
		Matrix Spike Duplicate	0608879-52	ND	0.0094568	0.010000	mg/kg		94.6		70 - 120	
Dibutyl chlorendate (Surrogate)	BPJ0425	Matrix Spike	0608879-52	ND	0.036271	0.025000	mg/kg		145		79 - 136	S09
		Matrix Spike Duplicate	0608879-52	ND	0.037460	0.025000	mg/kg		150		79 - 136	S09

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

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Project: Biosolids from MBWWTP
Project Number: [none]
Project Manager: Doug Coats

Reported: 11/02/06 09:49

Volatile Organic Analysis (EPA Method 8240)

Quality Control Report - Precision & Accuracy

Constituent	Batch ID	QC Sample Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
Benzene	BPI1194	Matrix Spike	0608879-55	ND	0.12308	0.12500	mg/kg		98.5		70 - 130	
		Matrix Spike Duplicate	0608879-55	ND	0.12267	0.12500	mg/kg	0.407	98.1	20	70 - 130	
Bromodichloromethane	BPI1194	Matrix Spike	0608879-55	ND	0.13813	0.12500	mg/kg		111		70 - 130	
		Matrix Spike Duplicate	0608879-55	ND	0.13686	0.12500	mg/kg	1.82	109	20	70 - 130	
Chlorobenzene	BPI1194	Matrix Spike	0608879-55	ND	0.12149	0.12500	mg/kg		97.2		70 - 130	
		Matrix Spike Duplicate	0608879-55	ND	0.12324	0.12500	mg/kg	1.43	98.6	20	70 - 130	
Chloroethane	BPI1194	Matrix Spike	0608879-55	ND	0.11637	0.12500	mg/kg		93.1		70 - 130	
		Matrix Spike Duplicate	0608879-55	ND	0.10905	0.12500	mg/kg	6.54	87.2	20	70 - 130	
1,4-Dichlorobenzene	BPI1194	Matrix Spike	0608879-55	ND	0.12964	0.12500	mg/kg		104		70 - 130	
		Matrix Spike Duplicate	0608879-55	ND	0.13531	0.12500	mg/kg	3.77	108	20	70 - 130	
1,1-Dichloroethane	BPI1194	Matrix Spike	0608879-55	ND	0.12312	0.12500	mg/kg		98.5		70 - 130	
		Matrix Spike Duplicate	0608879-55	ND	0.12365	0.12500	mg/kg	0.405	98.9	20	70 - 130	
1,1-Dichloroethene	BPI1194	Matrix Spike	0608879-55	ND	0.13125	0.12500	mg/kg		105		70 - 130	
		Matrix Spike Duplicate	0608879-55	ND	0.12410	0.12500	mg/kg	5.58	99.3	20	70 - 130	
Toluene	BPI1194	Matrix Spike	0608879-55	ND	0.12898	0.12500	mg/kg		103		70 - 130	
		Matrix Spike Duplicate	0608879-55	ND	0.12823	0.12500	mg/kg	0.00	103	20	70 - 130	
Trichloroethene	BPI1194	Matrix Spike	0608879-55	ND	0.13025	0.12500	mg/kg		104		70 - 130	
		Matrix Spike Duplicate	0608879-55	ND	0.13143	0.12500	mg/kg	0.957	105	20	70 - 130	
1,2-Dichloroethane-d4 (Surrogate)	BPI1194	Matrix Spike	0608879-55	ND	0.056660	0.050000	mg/kg		113		70 - 121	
		Matrix Spike Duplicate	0608879-55	ND	0.056330	0.050000	mg/kg		113		70 - 121	
Toluene-d8 (Surrogate)	BPI1194	Matrix Spike	0608879-55	ND	0.052990	0.050000	mg/kg		106		81 - 117	
		Matrix Spike Duplicate	0608879-55	ND	0.052540	0.050000	mg/kg		105		81 - 117	
4-Bromofluorobenzene (Surrogate)	BPI1194	Matrix Spike	0608879-55	ND	0.052350	0.050000	mg/kg		105		74 - 121	
		Matrix Spike Duplicate	0608879-55	ND	0.052840	0.050000	mg/kg		106		74 - 121	

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Marine Research Specialists	Project:	Biosolids from MBWWTP
3140 Telegraph Road, Suite A	Project Number:	[none]
Ventura CA, 93003-3238	Project Manager:	Doug Coats
		Reported: 11/02/06 09:49

Base Neutral and Acid Extractables Organic Analysis (EPA Method 8270C)

Quality Control Report - Precision & Accuracy

Constituent	Batch ID	QC Sample Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
Acenaphthene	BPI1367	Matrix Spike	0608879-62	ND	4.2874	2.6578	mg/kg		161		39 - 137	Q03
		Matrix Spike Duplicate	0608879-62	ND	5.1787	2.6578	mg/kg	19.1	195	21	39 - 137	Q03
1,4-Dichlorobenzene	BPI1367	Matrix Spike	0608879-62	ND	2.7763	2.6578	mg/kg		104		40 - 113	
		Matrix Spike Duplicate	0608879-62	ND	3.7232	2.6578	mg/kg	29.5	140	18	40 - 113	Q02, Q03
2,4-Dinitrotoluene	BPI1367	Matrix Spike	0608879-62	ND	3.8757	2.6578	mg/kg		146		48 - 107	Q03
		Matrix Spike Duplicate	0608879-62	ND	4.4697	2.6578	mg/kg	14.0	168	24	48 - 107	Q03
Hexachlorobenzene	BPI1367	Matrix Spike	0608879-62	ND	4.1318	2.6578	mg/kg		155		48 - 121	Q03
		Matrix Spike Duplicate	0608879-62	ND	4.4583	2.6578	mg/kg	8.05	168	26	48 - 121	Q03
Hexachlorobutadiene	BPI1367	Matrix Spike	0608879-62	ND	2.9026	2.6578	mg/kg		109		29 - 118	
		Matrix Spike Duplicate	0608879-62	ND	3.6500	2.6578	mg/kg	22.8	137	27	29 - 118	Q03
Hexachloroethane	BPI1367	Matrix Spike	0608879-62	ND	3.1088	2.6578	mg/kg		117		36 - 104	Q03
		Matrix Spike Duplicate	0608879-62	ND	4.0600	2.6578	mg/kg	26.7	153	21	36 - 104	Q02, Q03
Nitrobenzene	BPI1367	Matrix Spike	0608879-62	ND	3.4524	2.6578	mg/kg		130		43 - 119	Q03
		Matrix Spike Duplicate	0608879-62	ND	4.2201	2.6578	mg/kg	20.1	159	24	43 - 119	Q03
N-Nitrosodi-N-propylamine	BPI1367	Matrix Spike	0608879-62	ND	2.6212	2.6578	mg/kg		98.6		41 - 103	
		Matrix Spike Duplicate	0608879-62	ND	3.3681	2.6578	mg/kg	25.2	127	21	41 - 103	Q02, Q03
Pyrene	BPI1367	Matrix Spike	0608879-62	ND	4.8001	2.6578	mg/kg		181		43 - 145	Q03
		Matrix Spike Duplicate	0608879-62	ND	5.0250	2.6578	mg/kg	4.32	189	24	43 - 145	Q03
1,2,4-Trichlorobenzene	BPI1367	Matrix Spike	0608879-62	ND	3.0589	2.6578	mg/kg		115		37 - 124	
		Matrix Spike Duplicate	0608879-62	ND	3.8612	2.6578	mg/kg	23.1	145	24	37 - 124	Q03
4-Chloro-3-methylphenol	BPI1367	Matrix Spike	0608879-62	ND	3.1717	2.6578	mg/kg		119		49 - 130	
		Matrix Spike Duplicate	0608879-62	ND	3.8429	2.6578	mg/kg	19.7	145	24	49 - 130	Q03
2-Chlorophenol	BPI1367	Matrix Spike	0608879-62	ND	2.0903	2.6578	mg/kg		78.6		42 - 101	
		Matrix Spike Duplicate	0608879-62	ND	2.6317	2.6578	mg/kg	23.0	99.0	22	42 - 101	Q02
2-Methylphenol	BPI1367	Matrix Spike	0608879-62	ND	2.1365	2.6578	mg/kg		80.4		17 - 132	
		Matrix Spike Duplicate	0608879-62	ND	2.6801	2.6578	mg/kg	22.7	101	29	17 - 132	

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Project: Biosolids from MBWWTP
Project Number: [none]
Project Manager: Doug Coats

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Base Neutral and Acid Extractables Organic Analysis (EPA Method 8270C)

Quality Control Report - Precision & Accuracy

Constituent	Batch ID	QC Sample Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
3- & 4-Methylphenol	BPI1367	Matrix Spike	0608879-62	ND	4.2031	2.6578	mg/kg		158		48 - 190	
		Matrix Spike Duplicate	0608879-62	ND	5.2145	2.6578	mg/kg	21.5	196	23	48 - 190	Q03
4-Nitrophenol	BPI1367	Matrix Spike	0608879-62	ND	3.3358	2.6578	mg/kg		126		35 - 144	
		Matrix Spike Duplicate	0608879-62	ND	4.0422	2.6578	mg/kg	18.7	152	22	35 - 144	Q03
Pentachlorophenol	BPI1367	Matrix Spike	0608879-62	ND	2.5099	2.6578	mg/kg		94.4		26 - 117	
		Matrix Spike Duplicate	0608879-62	ND	2.8699	2.6578	mg/kg	13.4	108	22	26 - 117	
Phenol	BPI1367	Matrix Spike	0608879-62	ND	2.0354	2.6578	mg/kg		76.6		32 - 98	
		Matrix Spike Duplicate	0608879-62	ND	2.5552	2.6578	mg/kg	22.6	96.1	20	32 - 98	Q02
2,4,6-Trichlorophenol	BPI1367	Matrix Spike	0608879-62	ND	3.0438	2.6578	mg/kg		115		51 - 114	Q03
		Matrix Spike Duplicate	0608879-62	ND	3.7911	2.6578	mg/kg	21.7	143	26	51 - 114	Q03
2-Fluorophenol (Surrogate)	BPI1367	Matrix Spike	0608879-62	ND	3.1563	2.6578	mg/kg		119		47 - 120	
		Matrix Spike Duplicate	0608879-62	ND	3.9596	2.6578	mg/kg		149		47 - 120	S09
Phenol-d5 (Surrogate)	BPI1367	Matrix Spike	0608879-62	ND	2.8634	2.6578	mg/kg		108		41 - 116	
		Matrix Spike Duplicate	0608879-62	ND	3.5192	2.6578	mg/kg		132		41 - 116	S09
Nitrobenzene-d5 (Surrogate)	BPI1367	Matrix Spike	0608879-62	ND	3.1634	2.6578	mg/kg		119		50 - 115	S09
		Matrix Spike Duplicate	0608879-62	ND	3.8739	2.6578	mg/kg		146		50 - 115	S09
2-Fluorobiphenyl (Surrogate)	BPI1367	Matrix Spike	0608879-62	ND	3.7906	2.6578	mg/kg		143		49 - 125	S09
		Matrix Spike Duplicate	0608879-62	ND	4.7883	2.6578	mg/kg		180		49 - 125	S09
2,4,6-Tribromophenol (Surrogate)	BPI1367	Matrix Spike	0608879-62	ND	4.4445	2.6578	mg/kg		167		47 - 144	S09
		Matrix Spike Duplicate	0608879-62	ND	5.1171	2.6578	mg/kg		193		47 - 144	S09
p-Terphenyl-d14 (Surrogate)	BPI1367	Matrix Spike	0608879-62	ND	2.0268	1.3289	mg/kg		153		43 - 157	
		Matrix Spike Duplicate	0608879-62	ND	2.1261	1.3289	mg/kg		160		43 - 157	S09

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Project: Biosolids from MBWWTP
Project Number: [none]
Project Manager: Doug Coats

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Organo-Phosphorus Pesticide Analysis (EPA Method 8140)

Quality Control Report - Precision & Accuracy

Constituent	Batch ID	QC Sample Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
Bolstar	BPJ0274	Matrix Spike	0608879-70	ND	0.029043	0.033003	mg/kg		88.0		60 - 140	
		Matrix Spike Duplicate	0608879-70	ND	0.028487	0.032895	mg/kg	1.60	86.6	30	60 - 140	
Chlorpyrifos	BPJ0274	Matrix Spike	0608879-70	ND	0.032079	0.033003	mg/kg		97.2		60 - 140	
		Matrix Spike Duplicate	0608879-70	ND	0.028322	0.032895	mg/kg	12.1	86.1	30	60 - 140	
Diazinon	BPJ0274	Matrix Spike	0608879-70	ND	0.024950	0.033003	mg/kg		75.6		60 - 140	
		Matrix Spike Duplicate	0608879-70	ND	0.028421	0.032895	mg/kg	13.3	86.4	30	60 - 140	
Methyl parathion	BPJ0274	Matrix Spike	0608879-70	ND	0.031683	0.033003	mg/kg		96.0		60 - 140	
		Matrix Spike Duplicate	0608879-70	ND	0.029046	0.032895	mg/kg	8.36	88.3	30	60 - 140	
Mevinphos	BPJ0274	Matrix Spike	0608879-70	ND	0.028432	0.033003	mg/kg		86.1		60 - 140	
		Matrix Spike Duplicate	0608879-70	ND	0.028224	0.032895	mg/kg	0.349	85.8	30	60 - 140	
Ronnel (Fenchlorphos)	BPJ0274	Matrix Spike	0608879-70	ND	0.028482	0.033003	mg/kg		86.3		60 - 140	
		Matrix Spike Duplicate	0608879-70	ND	0.028438	0.032895	mg/kg	0.231	86.5	30	60 - 140	
Stirophos (Tetrachlorvinphos)	BPJ0274	Matrix Spike	0608879-70	ND	0.032871	0.033003	mg/kg		99.6		60 - 140	
		Matrix Spike Duplicate	0608879-70	ND	0.031974	0.032895	mg/kg	2.44	97.2	30	60 - 140	
Triphenylphosphate (Surrogate)	BPJ0274	Matrix Spike	0608879-70	ND	0.085017	0.082508	mg/kg		103		70 - 130	
		Matrix Spike Duplicate	0608879-70	ND	0.073914	0.082237	mg/kg		89.9		70 - 130	

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Total Concentrations (TTLC)

Quality Control Report - Laboratory Control Sample

Constituent	Batch ID	QC Sample ID	QC Type	Result	Spike Level	PQL	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
Antimony	BPI1242	BPI1242-BS1	LCS	1.5100	1.6362	5.0	mg/kg	92.3		75 - 125		J
Arsenic	BPI1242	BPI1242-BS1	LCS	11.095	10.260	0.50	mg/kg	108		75 - 125		
Barium	BPI1242	BPI1242-BS1	LCS	103.60	92.340	0.50	mg/kg	112		75 - 125		
Beryllium	BPI1242	BPI1242-BS1	LCS	6.0800	5.9400	0.50	mg/kg	102		75 - 125		
Cadmium	BPI1242	BPI1242-BS1	LCS	6.0500	5.4540	0.50	mg/kg	111		75 - 125		
Chromium	BPI1242	BPI1242-BS1	LCS	13.905	13.608	0.50	mg/kg	102		75 - 125		
Cobalt	BPI1242	BPI1242-BS1	LCS	10.120	8.8020	2.5	mg/kg	115		75 - 125		
Copper	BPI1242	BPI1242-BS1	LCS	12.795	13.986	1.0	mg/kg	91.5		75 - 125		
Lead	BPI1242	BPI1242-BS1	LCS	11.165	9.5580	2.5	mg/kg	117		75 - 125		
Molybdenum	BPI1242	BPI1242-BS1	LCS	5.8850	5.9400	2.5	mg/kg	99.1		75 - 125		
Nickel	BPI1242	BPI1242-BS1	LCS	12.190	11.394	0.50	mg/kg	107		75 - 125		
Selenium	BPI1242	BPI1242-BS1	LCS	5.7800	4.7628	0.50	mg/kg	121		75 - 125		
Silver	BPI1242	BPI1242-BS1	LCS	5.5400	5.2218	0.50	mg/kg	106		75 - 125		
Thallium	BPI1242	BPI1242-BS1	LCS	6.3450	5.0706	5.0	mg/kg	125		75 - 125		
Vanadium	BPI1242	BPI1242-BS1	LCS	30.675	28.782	0.50	mg/kg	107		75 - 125		
Zinc	BPI1242	BPI1242-BS1	LCS	40.075	34.938	2.5	mg/kg	115		75 - 125		
Boron	BPI1242	BPI1242-BS1	LCS	16.780	16.740	5.0	mg/kg	100		75 - 125		
Mercury	BPI1253	BPI1253-BS1	LCS	1.3803	1.5000	0.16	mg/kg	92.0		75 - 125		

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Project: Biosolids from MBWWTP
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Chemical Analysis

Quality Control Report - Laboratory Control Sample

Constituent	Batch ID	QC Sample ID	QC Type	Result	Spike Level	PQL	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
Nitrate as NO3	BPI0883	BPI0883-BS1	LCS	20.638	22.134	0.44	mg/kg	93.2		90 - 110		
pH	BPI1065	BPI1065-BS1	LCS	7.0020	7.0000	0.05	pH Units	100		95 - 105		
Total Phosphate	BPI1070	BPI1070-BS1	LCS	310.16	306.60	30	mg/kg	101		85 - 115		
Total Cyanide	BPI1202	BPI1202-BS1	LCS	10.290	10.600	0.50	mg/kg	97.1		90 - 110		
Total Kjeldahl Nitrogen	BPI1331	BPI1331-BS1	LCS	357.90	400.00	40	mg/kg	89.5		85 - 115		
Ammonia as N	BPI1427	BPI1427-BS1	LCS	79.105	80.000	5.0	mg/kg	98.9		80 - 120		

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Chemical Analysis

Quality Control Report - Method Blank Analysis

Constituent	Batch ID	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
Moisture	BPI1088	BPI1088-BLK1	ND	%	0.05	0.05	

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Modified WET Test (STLC)

Quality Control Report - Laboratory Control Sample

Constituent	Batch ID	QC Sample ID	QC Type	Result	Spike Level	PQL	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
Hexavalent Chromium	BPJ0060	BPJ0060-BS1	LCS	4.6751	5.0000	0.20	mg/L	93.5		85 - 115		
Total Dissolved Solids @ 180 C	BPJ0627	BPJ0627-BS1	LCS	ND	586.00	50	mg/L			90 - 110		L01

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Project: Biosolids from MBWWTP
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WET Test (STLC)

Quality Control Report - Laboratory Control Sample

Constituent	Batch ID	QC Sample ID	QC Type	Result	Spike Level	PQL	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
Copper	BPJ0058	BPJ0058-BS1	LCS	5.2010	5.0000	0.10	mg/L	104		85 - 115		
Lead	BPJ0058	BPJ0058-BS1	LCS	5.2970	5.0000	0.50	mg/L	106		85 - 115		

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EPA Method 1664

Quality Control Report - Laboratory Control Sample

Constituent	Batch ID	QC Sample ID	QC Type	Result	Spike Level	PQL	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
Oil and Grease	BPJ0176	BPJ0176-BS1	LCS	709.00	828.00	50	mg/kg	85.6		59 - 117		

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Project Manager: Doug Coats

Reported: 11/02/06 09:49

Organochlorine Pesticides and PCB's (EPA Method 8080)

Quality Control Report - Laboratory Control Sample

Constituent	Batch ID	QC Sample ID	QC Type	Result	Spike Level	PQL	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
Aldrin	BPJ0425	BPJ0425-BS1	LCS	0.0085410	0.0082781	0.00050	mg/kg	103		61 - 122		
gamma-BHC (Lindane)	BPJ0425	BPJ0425-BS1	LCS	0.0080044	0.0082781	0.00050	mg/kg	96.7		37 - 117		
4,4'-DDT	BPJ0425	BPJ0425-BS1	LCS	0.0077407	0.0082781	0.00050	mg/kg	93.5		58 - 116		
Dieldrin	BPJ0425	BPJ0425-BS1	LCS	0.0087487	0.0082781	0.00050	mg/kg	106		61 - 126		
Endrin	BPJ0425	BPJ0425-BS1	LCS	0.0079412	0.0082781	0.00050	mg/kg	95.9		62 - 128		
Heptachlor	BPJ0425	BPJ0425-BS1	LCS	0.0083096	0.0082781	0.00050	mg/kg	100		58 - 134		
TCMX (Surrogate)	BPJ0425	BPJ0425-BS1	LCS	0.0085509	0.0099338		mg/kg	86.1		70 - 120		
Dibutyl chlorendate (Surrogate)	BPJ0425	BPJ0425-BS1	LCS	0.032935	0.024834		mg/kg	133		79 - 136		

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Ventura CA, 93003-3238

Project: Biosolids from MBWWTP
Project Number: [none]
Project Manager: Doug Coats

Reported: 11/02/06 09:49

Volatile Organic Analysis (EPA Method 8240)

Quality Control Report - Laboratory Control Sample

Constituent	Batch ID	QC Sample ID	QC Type	Result	Spike Level	PQL	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
Benzene	BPI1194	BPI1194-BS1	LCS	0.12367	0.12500	0.0050	mg/kg	98.9		70 - 130		
Bromodichloromethane	BPI1194	BPI1194-BS1	LCS	0.13461	0.12500	0.0050	mg/kg	108		70 - 130		
Chlorobenzene	BPI1194	BPI1194-BS1	LCS	0.12191	0.12500	0.0050	mg/kg	97.5		70 - 130		
Chloroethane	BPI1194	BPI1194-BS1	LCS	0.11777	0.12500	0.0050	mg/kg	94.2		70 - 130		
1,4-Dichlorobenzene	BPI1194	BPI1194-BS1	LCS	0.13174	0.12500	0.0050	mg/kg	105		70 - 130		
1,1-Dichloroethane	BPI1194	BPI1194-BS1	LCS	0.12966	0.12500	0.0050	mg/kg	104		70 - 130		
1,1-Dichloroethene	BPI1194	BPI1194-BS1	LCS	0.12889	0.12500	0.0050	mg/kg	103		70 - 130		
Toluene	BPI1194	BPI1194-BS1	LCS	0.12969	0.12500	0.0050	mg/kg	104		70 - 130		
Trichloroethene	BPI1194	BPI1194-BS1	LCS	0.12987	0.12500	0.0050	mg/kg	104		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	BPI1194	BPI1194-BS1	LCS	0.056650	0.050000		mg/kg	113		70 - 121		
Toluene-d8 (Surrogate)	BPI1194	BPI1194-BS1	LCS	0.053500	0.050000		mg/kg	107		81 - 117		
4-Bromofluorobenzene (Surrogate)	BPI1194	BPI1194-BS1	LCS	0.049940	0.050000		mg/kg	99.9		74 - 121		

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Project: Biosolids from MBWWTP
Project Number: [none]
Project Manager: Doug Coats

Reported: 11/02/06 09:49

Base Neutral and Acid Extractables Organic Analysis (EPA Method 8270C)

Quality Control Report - Laboratory Control Sample

Constituent	Batch ID	QC Sample ID	QC Type	Result	Spike Level	PQL	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
Acenaphthene	BPI1367	BPI1367-BS1	LCS	5.4300	2.6667	0.10	mg/kg	204		40 - 134		L21
1,4-Dichlorobenzene	BPI1367	BPI1367-BS1	LCS	3.5670	2.6667	0.10	mg/kg	134		44 - 110		L21
2,4-Dinitrotoluene	BPI1367	BPI1367-BS1	LCS	4.6515	2.6667	0.10	mg/kg	174		50 - 106		L21
Hexachlorobenzene	BPI1367	BPI1367-BS1	LCS	4.7072	2.6667	0.10	mg/kg	177		46 - 125		L21
Hexachlorobutadiene	BPI1367	BPI1367-BS1	LCS	3.4489	2.6667	0.10	mg/kg	129		33 - 115		L21
Hexachloroethane	BPI1367	BPI1367-BS1	LCS	3.7648	2.6667	0.10	mg/kg	141		37 - 107		L21
Nitrobenzene	BPI1367	BPI1367-BS1	LCS	4.1980	2.6667	0.10	mg/kg	157		46 - 121		L21
N-Nitrosodi-N-propylamine	BPI1367	BPI1367-BS1	LCS	3.5100	2.6667	0.10	mg/kg	132		38 - 109		L21
Pyrene	BPI1367	BPI1367-BS1	LCS	5.3107	2.6667	0.10	mg/kg	199		46 - 137		L21
1,2,4-Trichlorobenzene	BPI1367	BPI1367-BS1	LCS	3.7417	2.6667	0.10	mg/kg	140		41 - 120		L21
4-Chloro-3-methylphenol	BPI1367	BPI1367-BS1	LCS	3.9816	2.6667	0.20	mg/kg	149		46 - 134		L21
2-Chlorophenol	BPI1367	BPI1367-BS1	LCS	2.5469	2.6667	0.10	mg/kg	95.5		41 - 103		
2-Methylphenol	BPI1367	BPI1367-BS1	LCS	2.6192	2.6667	0.10	mg/kg	98.2		33 - 115		
3- & 4-Methylphenol	BPI1367	BPI1367-BS1	LCS	5.3272	2.6667	0.20	mg/kg	200		43 - 190		L21
4-Nitrophenol	BPI1367	BPI1367-BS1	LCS	4.0154	2.6667	0.20	mg/kg	151		33 - 147		L21
Pentachlorophenol	BPI1367	BPI1367-BS1	LCS	2.9460	2.6667	0.20	mg/kg	110		27 - 116		
Phenol	BPI1367	BPI1367-BS1	LCS	2.5940	2.6667	0.10	mg/kg	97.3		35 - 98		
2,4,6-Trichlorophenol	BPI1367	BPI1367-BS1	LCS	3.8714	2.6667	0.20	mg/kg	145		46 - 121		L21
2-Fluorophenol (Surrogate)	BPI1367	BPI1367-BS1	LCS	3.8972	2.6667		mg/kg	146		47 - 120		S09
Phenol-d5 (Surrogate)	BPI1367	BPI1367-BS1	LCS	3.5272	2.6667		mg/kg	132		41 - 116		S09
Nitrobenzene-d5 (Surrogate)	BPI1367	BPI1367-BS1	LCS	3.8027	2.6667		mg/kg	143		50 - 115		S09
2-Fluorobiphenyl (Surrogate)	BPI1367	BPI1367-BS1	LCS	4.9380	2.6667		mg/kg	185		49 - 125		S09
2,4,6-Tribromophenol (Surrogate)	BPI1367	BPI1367-BS1	LCS	5.2843	2.6667		mg/kg	198		47 - 144		S09
p-Terphenyl-d14 (Surrogate)	BPI1367	BPI1367-BS1	LCS	2.2526	1.3333		mg/kg	169		43 - 157		S09

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Marine Research Specialists	Project:	Biosolids from MBWWTP
3140 Telegraph Road, Suite A	Project Number:	[none]
Ventura CA, 93003-3238	Project Manager:	Doug Coats

Reported: 11/02/06 09:49

Organo-Phosphorus Pesticide Analysis (EPA Method 8140)

Quality Control Report - Laboratory Control Sample

Constituent	Batch ID	QC Sample ID	QC Type	Result	Spike Level	PQL	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
Bolstar	BPJ0274	BPJ0274-BS1	LCS	0.028262	0.032787	0.010	mg/kg	86.2		60 - 140		
Chlorpyrifos	BPJ0274	BPJ0274-BS1	LCS	0.026934	0.032787	0.010	mg/kg	82.1		60 - 140		
Diazinon	BPJ0274	BPJ0274-BS1	LCS	0.021410	0.032787	0.010	mg/kg	65.3		60 - 140		
Methyl parathion	BPJ0274	BPJ0274-BS1	LCS	0.028869	0.032787	0.010	mg/kg	88.1		60 - 140		
Mevinphos	BPJ0274	BPJ0274-BS1	LCS	0.022262	0.032787	0.010	mg/kg	67.9		60 - 140		
Ronnel (Fenchlorphos)	BPJ0274	BPJ0274-BS1	LCS	0.028443	0.032787	0.010	mg/kg	86.8		60 - 140		
Stirophos (Tetrachlorvinphos)	BPJ0274	BPJ0274-BS1	LCS	0.029475	0.032787	0.010	mg/kg	89.9		60 - 140		
Triphenylphosphate (Surrogate)	BPJ0274	BPJ0274-BS1	LCS	0.070902	0.081967		mg/kg	86.5		70 - 130		

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Project: Biosolids from MBWWTP
Project Number: [none]
Project Manager: Doug Coats

Reported: 11/02/06 09:54

Total Concentrations (TTLC)

Quality Control Report - Method Blank Analysis

Constituent	Batch ID	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
Antimony	BPI1242	BPI1242-BLK1	ND	mg/kg	5.0	0.34	
Arsenic	BPI1242	BPI1242-BLK1	ND	mg/kg	0.50	0.44	
Barium	BPI1242	BPI1242-BLK1	ND	mg/kg	0.50	0.067	
Beryllium	BPI1242	BPI1242-BLK1	ND	mg/kg	0.50	0.039	
Cadmium	BPI1242	BPI1242-BLK1	ND	mg/kg	0.50	0.073	
Chromium	BPI1242	BPI1242-BLK1	ND	mg/kg	0.50	0.17	
Cobalt	BPI1242	BPI1242-BLK1	ND	mg/kg	2.5	0.13	
Copper	BPI1242	BPI1242-BLK1	ND	mg/kg	1.0	0.090	
Lead	BPI1242	BPI1242-BLK1	ND	mg/kg	2.5	0.29	
Molybdenum	BPI1242	BPI1242-BLK1	ND	mg/kg	2.5	0.12	
Nickel	BPI1242	BPI1242-BLK1	ND	mg/kg	0.50	0.25	
Selenium	BPI1242	BPI1242-BLK1	ND	mg/kg	0.50	0.40	
Silver	BPI1242	BPI1242-BLK1	ND	mg/kg	0.50	0.059	
Thallium	BPI1242	BPI1242-BLK1	ND	mg/kg	5.0	0.83	
Vanadium	BPI1242	BPI1242-BLK1	ND	mg/kg	0.50	0.065	
Zinc	BPI1242	BPI1242-BLK1	ND	mg/kg	2.5	0.31	
Boron	BPI1242	BPI1242-BLK1	ND	mg/kg	5.0	0.82	
Mercury	BPI1253	BPI1253-BLK1	ND	mg/kg	0.16	0.041	

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Marine Research Specialists	Project: Biosolids from MBWWTP	
3140 Telegraph Road, Suite A	Project Number: [none]	
Ventura CA, 93003-3238	Project Manager: Doug Coats	**Reported:** 11/02/06 09:49

Chemical Analysis

Quality Control Report - Method Blank Analysis

Constituent	Batch ID	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
Nitrate as NO3	BPI0883	BPI0883-BLK1	ND	mg/kg	4.4	0.48	
Total Phosphate	BPI1070	BPI1070-BLK1	ND	mg/kg	30	12	
Total Cyanide	BPI1202	BPI1202-BLK1	ND	mg/kg	0.50	0.25	
Total Kjeldahl Nitrogen	BPI1331	BPI1331-BLK1	ND	mg/kg	40	20	
Ammonia as N	BPI1427	BPI1427-BLK1	ND	mg/kg	5.0	2.0	

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Project: Biosolids from MBWWTP
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WET Test (STLC)

Quality Control Report - Method Blank Analysis

Constituent	Batch ID	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
Copper	BPJ0058	BPJ0058-BLK1	ND	mg/L	0.10	0.0092	
Lead	BPJ0058	BPJ0058-BLK1	ND	mg/L	0.50	0.054	

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Project: Biosolids from MBWWTP
Project Number: [none]
Project Manager: Doug Coats

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Modified WET Test (STLC)

Quality Control Report - Method Blank Analysis

Constituent	Batch ID	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
Hexavalent Chromium	BPJ0060	BPJ0060-BLK1	ND	mg/L	0.20	0.13	
Total Dissolved Solids @ 180 C	BPJ0627	BPJ0627-BLK1	ND	mg/L	6.7	6.7	

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Project: Biosolids from MBWWTP
Project Number: [none]
Project Manager: Doug Coats

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EPA Method 1664

Quality Control Report - Method Blank Analysis

Constituent	Batch ID	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
Oil and Grease	BPJ0176	BPJ0176-BLK1	ND	mg/kg	50	27	

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Marine Research Specialists	Project: Biosolids from MBWWTP	
3140 Telegraph Road, Suite A	Project Number: [none]	
Ventura CA, 93003-3238	Project Manager: Doug Coats	**Reported:** 11/02/06 09:49

Organochlorine Pesticides and PCB's (EPA Method 8080)

Quality Control Report - Method Blank Analysis

Constituent	Batch ID	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
Aldrin	BPJ0425	BPJ0425-BLK1	ND	mg/kg	0.00050	0.000027	
alpha-BHC	BPJ0425	BPJ0425-BLK1	ND	mg/kg	0.00050	0.000029	
beta-BHC	BPJ0425	BPJ0425-BLK1	ND	mg/kg	0.00050	0.00014	
delta-BHC	BPJ0425	BPJ0425-BLK1	ND	mg/kg	0.00050	0.000044	
gamma-BHC (Lindane)	BPJ0425	BPJ0425-BLK1	ND	mg/kg	0.00050	0.000051	
Chlordane (Technical)	BPJ0425	BPJ0425-BLK1	ND	mg/kg	0.050	0.015	
4,4'-DDD	BPJ0425	BPJ0425-BLK1	ND	mg/kg	0.00050	0.000041	
4,4'-DDE	BPJ0425	BPJ0425-BLK1	ND	mg/kg	0.00050	0.000034	
4,4'-DDT	BPJ0425	BPJ0425-BLK1	ND	mg/kg	0.00050	0.000039	
Dieldrin	BPJ0425	BPJ0425-BLK1	ND	mg/kg	0.00050	0.000022	
Endosulfan I	BPJ0425	BPJ0425-BLK1	ND	mg/kg	0.00050	0.000028	
Endosulfan II	BPJ0425	BPJ0425-BLK1	ND	mg/kg	0.00050	0.000032	
Endosulfan sulfate	BPJ0425	BPJ0425-BLK1	ND	mg/kg	0.00050	0.000038	
Endrin	BPJ0425	BPJ0425-BLK1	ND	mg/kg	0.00050	0.000023	
Endrin aldehyde	BPJ0425	BPJ0425-BLK1	ND	mg/kg	0.00050	0.000048	
Heptachlor	BPJ0425	BPJ0425-BLK1	ND	mg/kg	0.00050	0.000026	
Heptachlor epoxide	BPJ0425	BPJ0425-BLK1	ND	mg/kg	0.00050	0.000043	
Methoxychlor	BPJ0425	BPJ0425-BLK1	ND	mg/kg	0.00050	0.000061	
Toxaphene	BPJ0425	BPJ0425-BLK1	ND	mg/kg	0.050	0.0074	
PCB-1016	BPJ0425	BPJ0425-BLK1	ND	mg/kg	0.010	0.0018	
PCB-1221	BPJ0425	BPJ0425-BLK1	ND	mg/kg	0.010	0.0050	
PCB-1232	BPJ0425	BPJ0425-BLK1	ND	mg/kg	0.010	0.0012	
PCB-1242	BPJ0425	BPJ0425-BLK1	ND	mg/kg	0.010	0.0016	
PCB-1248	BPJ0425	BPJ0425-BLK1	ND	mg/kg	0.010	0.0012	
PCB-1254	BPJ0425	BPJ0425-BLK1	ND	mg/kg	0.010	0.00078	

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Project: Biosolids from MBWWTP
Project Number: [none]
Project Manager: Doug Coats

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Organochlorine Pesticides and PCB's (EPA Method 8080)

Quality Control Report - Method Blank Analysis

Constituent	Batch ID	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
PCB-1260	BPJ0425	BPJ0425-BLK1	ND	mg/kg	0.010	0.0014	
Total PCB's (Summation)	BPJ0425	BPJ0425-BLK1	ND	mg/kg	0.010	0.0050	
TCMX (Surrogate)	BPJ0425	BPJ0425-BLK1	92.1	%	70 - 120 (LCL - UCL)		
Dibutyl chlorendate (Surrogate)	BPJ0425	BPJ0425-BLK1	97.3	%	79 - 136 (LCL - UCL)		

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Volatile Organic Analysis (EPA Method 8240)

Quality Control Report - Method Blank Analysis

Constituent	Batch ID	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
Benzene	BPI1194	BPI1194-BLK1	ND	mg/kg	0.0050	0.0015	
Bromodichloromethane	BPI1194	BPI1194-BLK1	ND	mg/kg	0.0050	0.00074	
Bromoform	BPI1194	BPI1194-BLK1	ND	mg/kg	0.0050	0.00082	
Bromomethane	BPI1194	BPI1194-BLK1	ND	mg/kg	0.0050	0.0014	
Carbon tetrachloride	BPI1194	BPI1194-BLK1	ND	mg/kg	0.0050	0.0016	
Chlorobenzene	BPI1194	BPI1194-BLK1	ND	mg/kg	0.0050	0.0011	
Chloroethane	BPI1194	BPI1194-BLK1	ND	mg/kg	0.0050	0.0012	
Chloroform	BPI1194	BPI1194-BLK1	ND	mg/kg	0.0050	0.00099	
Chloromethane	BPI1194	BPI1194-BLK1	ND	mg/kg	0.0050	0.0019	
Dibromochloromethane	BPI1194	BPI1194-BLK1	ND	mg/kg	0.0050	0.00092	
1,2-Dichlorobenzene	BPI1194	BPI1194-BLK1	ND	mg/kg	0.0050	0.0011	
1,3-Dichlorobenzene	BPI1194	BPI1194-BLK1	ND	mg/kg	0.0050	0.0013	
1,4-Dichlorobenzene	BPI1194	BPI1194-BLK1	ND	mg/kg	0.0050	0.00093	
1,1-Dichloroethane	BPI1194	BPI1194-BLK1	ND	mg/kg	0.0050	0.0011	
1,2-Dichloroethane	BPI1194	BPI1194-BLK1	ND	mg/kg	0.0050	0.00058	
1,1-Dichloroethene	BPI1194	BPI1194-BLK1	ND	mg/kg	0.0050	0.0014	
trans-1,2-Dichloroethene	BPI1194	BPI1194-BLK1	ND	mg/kg	0.0050	0.0011	
1,2-Dichloropropane	BPI1194	BPI1194-BLK1	ND	mg/kg	0.0050	0.00064	
cis-1,3-Dichloropropene	BPI1194	BPI1194-BLK1	ND	mg/kg	0.0050	0.00084	
trans-1,3-Dichloropropene	BPI1194	BPI1194-BLK1	ND	mg/kg	0.0050	0.00090	
Ethylbenzene	BPI1194	BPI1194-BLK1	ND	mg/kg	0.0050	0.0012	
Methylene chloride	BPI1194	BPI1194-BLK1	ND	mg/kg	0.010	0.00062	
Methyl t-butyl ether	BPI1194	BPI1194-BLK1	ND	mg/kg	0.0050	0.00051	
1,1,2,2-Tetrachloroethane	BPI1194	BPI1194-BLK1	ND	mg/kg	0.0050	0.00052	
Tetrachloroethene	BPI1194	BPI1194-BLK1	ND	mg/kg	0.0050	0.0013	

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Project: Biosolids from MBWWTP
Project Number: [none]
Project Manager: Doug Coats

Reported: 11/02/06 09:49

Volatile Organic Analysis (EPA Method 8240)

Quality Control Report - Method Blank Analysis

Constituent	Batch ID	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
Toluene	BPI1194	BPI1194-BLK1	ND	mg/kg	0.0050	0.0016	
1,1,1-Trichloroethane	BPI1194	BPI1194-BLK1	ND	mg/kg	0.0050	0.0013	
1,1,2-Trichloroethane	BPI1194	BPI1194-BLK1	ND	mg/kg	0.0050	0.0013	
Trichloroethene	BPI1194	BPI1194-BLK1	ND	mg/kg	0.0050	0.0011	
Trichlorofluoromethane	BPI1194	BPI1194-BLK1	ND	mg/kg	0.0050	0.0019	
1,1,2-Trichloro-1,2,2-trifluoroethane	BPI1194	BPI1194-BLK1	ND	mg/kg	0.0050	0.0020	
Vinyl chloride	BPI1194	BPI1194-BLK1	ND	mg/kg	0.0050	0.0021	
Total Xylenes	BPI1194	BPI1194-BLK1	ND	mg/kg	0.010	0.0031	
p- & m-Xylenes	BPI1194	BPI1194-BLK1	ND	mg/kg	0.0050	0.0022	
o-Xylene	BPI1194	BPI1194-BLK1	ND	mg/kg	0.0050	0.00091	
1,2-Dichloroethane-d4 (Surrogate)	BPI1194	BPI1194-BLK1	111	%	70 - 121 (LCL - UCL)		
Toluene-d8 (Surrogate)	BPI1194	BPI1194-BLK1	103	%	81 - 117 (LCL - UCL)		
4-Bromofluorobenzene (Surrogate)	BPI1194	BPI1194-BLK1	93.6	%	74 - 121 (LCL - UCL)		

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Base Neutral and Acid Extractables Organic Analysis (EPA Method 8270C)

Quality Control Report - Method Blank Analysis

Constituent	Batch ID	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
Acenaphthene	BPI1367	BPI1367-BLK1	ND	mg/kg	0.10	0.065	
Acenaphthylene	BPI1367	BPI1367-BLK1	ND	mg/kg	0.10	0.058	
Aldrin	BPI1367	BPI1367-BLK1	ND	mg/kg	0.10	0.057	
Aniline	BPI1367	BPI1367-BLK1	ND	mg/kg	0.20	0.023	
Anthracene	BPI1367	BPI1367-BLK1	ND	mg/kg	0.10	0.067	
Benzidine	BPI1367	BPI1367-BLK1	ND	mg/kg	3.0	1.5	
Benzo[a]anthracene	BPI1367	BPI1367-BLK1	ND	mg/kg	0.10	0.057	
Benzo[b]fluoranthene	BPI1367	BPI1367-BLK1	ND	mg/kg	0.10	0.061	
Benzo[k]fluoranthene	BPI1367	BPI1367-BLK1	ND	mg/kg	0.10	0.064	
Benzo[a]pyrene	BPI1367	BPI1367-BLK1	ND	mg/kg	0.10	0.053	
Benzo[g,h,i]perylene	BPI1367	BPI1367-BLK1	ND	mg/kg	0.10	0.046	
Benzoic acid	BPI1367	BPI1367-BLK1	ND	mg/kg	0.50	0.035	
Benzyl alcohol	BPI1367	BPI1367-BLK1	ND	mg/kg	0.10	0.054	
Benzyl butyl phthalate	BPI1367	BPI1367-BLK1	ND	mg/kg	0.10	0.060	
alpha-BHC	BPI1367	BPI1367-BLK1	ND	mg/kg	0.10	0.060	
beta-BHC	BPI1367	BPI1367-BLK1	ND	mg/kg	0.10	0.058	
delta-BHC	BPI1367	BPI1367-BLK1	ND	mg/kg	0.10	0.058	
gamma-BHC (Lindane)	BPI1367	BPI1367-BLK1	ND	mg/kg	0.10	0.058	
bis(2-Chloroethoxy)methane	BPI1367	BPI1367-BLK1	ND	mg/kg	0.10	0.049	
bis(2-Chloroethyl) ether	BPI1367	BPI1367-BLK1	ND	mg/kg	0.10	0.049	
bis(2-Chloroisopropyl)ether	BPI1367	BPI1367-BLK1	ND	mg/kg	0.10	0.049	
bis(2-Ethylhexyl)phthalate	BPI1367	BPI1367-BLK1	ND	mg/kg	0.20	0.068	
4-Bromophenyl phenyl ether	BPI1367	BPI1367-BLK1	ND	mg/kg	0.10	0.067	
4-Chloroaniline	BPI1367	BPI1367-BLK1	ND	mg/kg	0.10	0.037	
2-Chloronaphthalene	BPI1367	BPI1367-BLK1	ND	mg/kg	0.10	0.059	

Marine Research Specialists
3140 Telegraph Road, Suite A
Ventura CA, 93003-3238

Project: Biosolids from MBWWTP
Project Number: [none]
Project Manager: Doug Coats

Reported: 11/02/06 09:49

Base Neutral and Acid Extractables Organic Analysis (EPA Method 8270C)

Quality Control Report - Method Blank Analysis

Constituent	Batch ID	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
4-Chlorophenyl phenyl ether	BPI1367	BPI1367-BLK1	ND	mg/kg	0.10	0.061	
Chrysene	BPI1367	BPI1367-BLK1	ND	mg/kg	0.10	0.063	
4,4'-DDD	BPI1367	BPI1367-BLK1	ND	mg/kg	0.10	0.052	
4,4'-DDE	BPI1367	BPI1367-BLK1	ND	mg/kg	0.10	0.055	
4,4'-DDT	BPI1367	BPI1367-BLK1	ND	mg/kg	0.10	0.046	
Dibenzo[a,h]anthracene	BPI1367	BPI1367-BLK1	ND	mg/kg	0.10	0.058	
Dibenzofuran	BPI1367	BPI1367-BLK1	ND	mg/kg	0.10	0.062	
1,2-Dichlorobenzene	BPI1367	BPI1367-BLK1	ND	mg/kg	0.10	0.042	
1,3-Dichlorobenzene	BPI1367	BPI1367-BLK1	ND	mg/kg	0.10	0.052	
1,4-Dichlorobenzene	BPI1367	BPI1367-BLK1	ND	mg/kg	0.10	0.051	
3,3-Dichlorobenzidine	BPI1367	BPI1367-BLK1	ND	mg/kg	0.20	0.044	
Dieldrin	BPI1367	BPI1367-BLK1	ND	mg/kg	0.10	0.022	
Diethyl phthalate	BPI1367	BPI1367-BLK1	ND	mg/kg	0.10	0.080	
Dimethyl phthalate	BPI1367	BPI1367-BLK1	ND	mg/kg	0.10	0.061	
Di-n-butyl phthalate	BPI1367	BPI1367-BLK1	ND	mg/kg	0.10	0.0088	
2,4-Dinitrotoluene	BPI1367	BPI1367-BLK1	ND	mg/kg	0.10	0.046	
2,6-Dinitrotoluene	BPI1367	BPI1367-BLK1	ND	mg/kg	0.10	0.052	
Di-n-octyl phthalate	BPI1367	BPI1367-BLK1	ND	mg/kg	0.10	0.081	
1,2-Diphenylhydrazine	BPI1367	BPI1367-BLK1	ND	mg/kg	0.10	0.0090	
Endosulfan I	BPI1367	BPI1367-BLK1	ND	mg/kg	0.20	0.049	
Endosulfan II	BPI1367	BPI1367-BLK1	ND	mg/kg	0.20	0.049	
Endosulfan sulfate	BPI1367	BPI1367-BLK1	ND	mg/kg	0.10	0.055	
Endrin	BPI1367	BPI1367-BLK1	ND	mg/kg	0.20	0.047	
Endrin aldehyde	BPI1367	BPI1367-BLK1	ND	mg/kg	0.50	0.054	
Fluoranthene	BPI1367	BPI1367-BLK1	ND	mg/kg	0.10	0.066	

Marine Research Specialists
3140 Telegraph Road, Suite A
Ventura CA, 93003-3238

Project: Biosolids from MBWWTP
Project Number: [none]
Project Manager: Doug Coats

Reported: 11/02/06 09:49

Base Neutral and Acid Extractables Organic Analysis (EPA Method 8270C)

Quality Control Report - Method Blank Analysis

Constituent	Batch ID	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
Fluorene	BPI1367	BPI1367-BLK1	ND	mg/kg	0.10	0.044	
Heptachlor	BPI1367	BPI1367-BLK1	ND	mg/kg	0.10	0.046	
Heptachlor epoxide	BPI1367	BPI1367-BLK1	ND	mg/kg	0.10	0.060	
Hexachlorobenzene	BPI1367	BPI1367-BLK1	ND	mg/kg	0.10	0.064	
Hexachlorobutadiene	BPI1367	BPI1367-BLK1	ND	mg/kg	0.10	0.050	
Hexachlorocyclopentadiene	BPI1367	BPI1367-BLK1	ND	mg/kg	0.10	0.034	
Hexachloroethane	BPI1367	BPI1367-BLK1	ND	mg/kg	0.10	0.046	
Indeno[1,2,3-cd]pyrene	BPI1367	BPI1367-BLK1	ND	mg/kg	0.10	0.075	
Isophorone	BPI1367	BPI1367-BLK1	ND	mg/kg	0.10	0.047	
2-Methylnaphthalene	BPI1367	BPI1367-BLK1	ND	mg/kg	0.10	0.056	
Naphthalene	BPI1367	BPI1367-BLK1	ND	mg/kg	0.10	0.047	
2-Naphthylamine	BPI1367	BPI1367-BLK1	ND	mg/kg	3.0	0.047	
2-Nitroaniline	BPI1367	BPI1367-BLK1	ND	mg/kg	0.10	0.053	
3-Nitroaniline	BPI1367	BPI1367-BLK1	ND	mg/kg	0.10	0.050	
4-Nitroaniline	BPI1367	BPI1367-BLK1	ND	mg/kg	0.20	0.052	
Nitrobenzene	BPI1367	BPI1367-BLK1	ND	mg/kg	0.10	0.046	
N-Nitrosodimethylamine	BPI1367	BPI1367-BLK1	ND	mg/kg	0.10	0.038	
N-Nitrosodi-N-propylamine	BPI1367	BPI1367-BLK1	ND	mg/kg	0.10	0.052	
N-Nitrosodiphenylamine	BPI1367	BPI1367-BLK1	ND	mg/kg	0.10	0.061	
Phenanthrene	BPI1367	BPI1367-BLK1	ND	mg/kg	0.10	0.070	
Pyrene	BPI1367	BPI1367-BLK1	ND	mg/kg	0.10	0.060	
1,2,4-Trichlorobenzene	BPI1367	BPI1367-BLK1	ND	mg/kg	0.10	0.050	
4-Chloro-3-methylphenol	BPI1367	BPI1367-BLK1	ND	mg/kg	0.20	0.053	
2-Chlorophenol	BPI1367	BPI1367-BLK1	ND	mg/kg	0.10	0.052	
2,4-Dichlorophenol	BPI1367	BPI1367-BLK1	ND	mg/kg	0.10	0.054	

Marine Research Specialists
3140 Telegraph Road, Suite A
Ventura CA, 93003-3238

Project: Biosolids from MBWWTP
Project Number: [none]
Project Manager: Doug Coats

Reported: 11/02/06 09:49

Base Neutral and Acid Extractables Organic Analysis (EPA Method 8270C)

Quality Control Report - Method Blank Analysis

Constituent	Batch ID	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
2,4-Dimethylphenol	BPI1367	BPI1367-BLK1	ND	mg/kg	0.10	0.047	
4,6-Dinitro-2-methylphenol	BPI1367	BPI1367-BLK1	ND	mg/kg	0.50	0.028	
2,4-Dinitrophenol	BPI1367	BPI1367-BLK1	ND	mg/kg	0.50	0.22	
2-Methylphenol	BPI1367	BPI1367-BLK1	ND	mg/kg	0.10	0.052	
3- & 4-Methylphenol	BPI1367	BPI1367-BLK1	ND	mg/kg	0.20	0.12	
2-Nitrophenol	BPI1367	BPI1367-BLK1	ND	mg/kg	0.10	0.047	
4-Nitrophenol	BPI1367	BPI1367-BLK1	ND	mg/kg	0.20	0.054	
Pentachlorophenol	BPI1367	BPI1367-BLK1	ND	mg/kg	0.20	0.062	
Phenol	BPI1367	BPI1367-BLK1	ND	mg/kg	0.10	0.057	
2,4,5-Trichlorophenol	BPI1367	BPI1367-BLK1	ND	mg/kg	0.20	0.063	
2,4,6-Trichlorophenol	BPI1367	BPI1367-BLK1	ND	mg/kg	0.20	0.071	
2-Fluorophenol (Surrogate)	BPI1367	BPI1367-BLK1	152	%	47 - 120 (LCL - UCL)		S09
Phenol-d5 (Surrogate)	BPI1367	BPI1367-BLK1	130	%	41 - 116 (LCL - UCL)		S09
Nitrobenzene-d5 (Surrogate)	BPI1367	BPI1367-BLK1	146	%	50 - 115 (LCL - UCL)		S09
2-Fluorobiphenyl (Surrogate)	BPI1367	BPI1367-BLK1	169	%	49 - 125 (LCL - UCL)		S09
2,4,6-Tribromophenol (Surrogate)	BPI1367	BPI1367-BLK1	176	%	47 - 144 (LCL - UCL)		S09
p-Terphenyl-d14 (Surrogate)	BPI1367	BPI1367-BLK1	174	%	43 - 157 (LCL - UCL)		S09

Marine Research Specialists
3140 Telegraph Road, Suite A
Ventura CA, 93003-3238

Project: Biosolids from MBWWTP
Project Number: [none]
Project Manager: Doug Coats

Reported: 11/02/06 09:49

Organo-Phosphorus Pesticide Analysis (EPA Method 8140)

Quality Control Report - Method Blank Analysis

Constituent	Batch ID	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
Azinphos methyl	BPJ0274	BPJ0274-BLK1	ND	mg/kg	0.010	0.0019	
Bolstar	BPJ0274	BPJ0274-BLK1	ND	mg/kg	0.010	0.0014	
Chlorpyrifos	BPJ0274	BPJ0274-BLK1	ND	mg/kg	0.010	0.00080	
Coumaphos	BPJ0274	BPJ0274-BLK1	ND	mg/kg	0.010	0.0022	
Demeton O/S	BPJ0274	BPJ0274-BLK1	ND	mg/kg	0.010	0.0015	
Diazinon	BPJ0274	BPJ0274-BLK1	ND	mg/kg	0.010	0.00060	
Dichlorvos	BPJ0274	BPJ0274-BLK1	ND	mg/kg	0.010	0.0062	
Disulfoton	BPJ0274	BPJ0274-BLK1	ND	mg/kg	0.010	0.0011	
Ethoprop	BPJ0274	BPJ0274-BLK1	ND	mg/kg	0.010	0.00080	
Fensulfothion	BPJ0274	BPJ0274-BLK1	ND	mg/kg	0.010	0.0054	
Fenthion	BPJ0274	BPJ0274-BLK1	ND	mg/kg	0.010	0.0010	V01
Merphos	BPJ0274	BPJ0274-BLK1	ND	mg/kg	0.010	0.0011	
Methyl parathion	BPJ0274	BPJ0274-BLK1	ND	mg/kg	0.010	0.0021	
Mevinphos	BPJ0274	BPJ0274-BLK1	ND	mg/kg	0.010	0.0014	
Naled	BPJ0274	BPJ0274-BLK1	ND	mg/kg	0.010	0.0017	
Phorate	BPJ0274	BPJ0274-BLK1	ND	mg/kg	0.010	0.00060	V01
Ronnel (Fenchlorphos)	BPJ0274	BPJ0274-BLK1	ND	mg/kg	0.010	0.0016	
Stirophos (Tetrachlorvinphos)	BPJ0274	BPJ0274-BLK1	ND	mg/kg	0.010	0.0025	
Tokuthion (Prothiofos)	BPJ0274	BPJ0274-BLK1	ND	mg/kg	0.010	0.0010	
Trichloronate	BPJ0274	BPJ0274-BLK1	ND	mg/kg	0.010	0.0011	
Triphenylphosphate (Surrogate)	BPJ0274	BPJ0274-BLK1	67.5	%	70 - 130 (LCL - UCL)		S09

Marine Research Specialists
3140 Telegraph Road, Suite A
Ventura CA, 93003-3238

Project: Biosolids from MBWWTP
Project Number: [none]
Project Manager: Doug Coats

Reported: 11/02/06 09:49

Notes and Definitions

V11	The Continuing Calibration Verification (CCV) recovery is not within established control limits.
V01	The Initial Calibration Verification (ICV) recovery is not within established control limits.
S09	The surrogate recovery on the sample for this compound was not within the control limits.
S08	The internal standard on the sample was not within the control limits.
Q03	Matrix spike recovery(s) is(are) not within the control limits.
Q02	Matrix spike precision is not within the control limits.
pH1:1	pH result reported on a 1:1 dilution of sample
L21	The Laboratory Control Sample Soil (LCSS) recovery is not within laboratory established control limits.
L01	The Laboratory Control Sample Water (LCSW) recovery is not within laboratory established control limits.
J	Estimated value
A19	Surrogate is high due to matrix interference. Interferences verified through second extraction/analysis.
A10	PQL's and MDL's were raised due to matrix interference.
A03	The sample concentration is more than 4 times the spike level.
A01	PQL's and MDL's are raised due to sample dilution.
ND	Analyte NOT DETECTED at or above the reporting limit
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

BC LABORATORIES, INC.

Marine Research Specialists	Project: Biosolids from MBWWTP	
3140 Telegraph Road, Suite A	Project Number: [none]	
Ventura CA, 93003-3238	Project Manager: Doug Coats	**Reported:** 11/02/06 09:54

Notes and Definitions

Q03	Matrix spike recovery(s) is(are) not within the control limits.
Q01	Sample precision is not within the control limits.
J	Estimated value
A02	The difference between duplicate readings is less than the PQL.
A01	PQL's and MDL's are raised due to sample dilution.
ND	Analyte NOT DETECTED at or above the reporting limit
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

BC LABORATORIES, INC.

Date of Report: 10/26/2006

Doug Coats
Marine Research Specialists
3140 Telegraph Road, Suite A
Ventura, CA 93003-3238

RE: Biosolids from MBWWTP

BC Lab Number: 0609752

Enclosed are the results of analyses for samples received by the laboratory on 09/20/06 20:35. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Tina Green
Client Services Manager

Authorized Signature

06-09752

CITY OF MORRO BAY WWTP
CHAIN OF CUSTODY

Project Name: MORRO BAY WWTP BIOSOLIDS	Date: 9-20-06
Project Mngr: DR. DOUG COATS	Page 1 of 1
City of Morro Bay	Special Instruction's: PLEASE SEE ATTACHED SHEET. SEND RESULTS TO DR. DOUG COATS. FAX # 289-3935 PHONE 644-1180 (805)
160 Atascadero Rd.	
Morro Bay, Ca. 93442	
Phone # 805-772-6273	

Sample I.D.	Date	Time	Analysis Requested	Remark's
-1 MORRO BAY WWTP BIOSOLIDS	9-20-06	0830	SEE ATTACHED SHEET	SEND RESULTS TO MARINE RESEARCH SPECIALISTS

Relinquished/ Received By:	Date	Time	Firm/City	Signature:
DAVID WILLIAMS	9-20-06	1235	MORRO BAY WWTP	David Williams
	9-20-06	1235	BC Labs	David Rittenhouse
Teri Olafani	9/20/06	2035	BC labs	

C LABORATORIES INC. SAMPLE RECEIPT FORM Rev. No. 10 01/21/04 Page __ Of __

ubmission #: 06-09752 Project Code: TB Batch #

SHIPPING INFORMATION

ederal Express ☐ UPS ☐ Hand Delivery ☐
C Lab Field Service ☑ Other ☐ (Specify)_____

SHIPPING CONTAINER

Ice Chest ☑ None ☐
Box ☐ Other ☐ (Specify)_____

efrigerant: Ice ☑ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals: Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☑ Comments:

samples received? Yes ☑ No ☐ All samples containers intact? Yes ☑ No ☐ Description(s) match COC? Yes ☑ No ☐

COC Received ☑ YES ☐ NO

Ice Chest ID R/W Temperature: 3.6 °C Thermometer ID: #4
Emissivity 0.98 Container 32oz-pl
Date/Time 9/20/06 Analyst Init OTO

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
GENERAL MINERAL/ GENERAL PHYSICAL										
PE UNPRESERVED										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS										
CYANIDE										
PT NITROGEN FORMS										
TOTAL SULFIDE										
NITRATE / NITRITE										
100ml TOTAL ORGANIC CARBON										
TOX										
CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
l VOA VIAL TRAVEL BLANK										
l VOA VIAL	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
QT EPA 413.1, 413.2, 418.1										
ODOR										
DIOLOGICAL										
BACTERIOLOGICAL										
l VOA VIAL- 504										
EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
EPA 525 TRAVEL BLANK										
100ml EPA 547										
100ml EPA 531.1										
EPA 548										
QT EPA 549										
QT EPA 632										
EPA 8015M										
QT QA/QC										
QT AMBER	A,B,C,D									
8 Z. JAR										
3 OZ. JAR										
SOIL SLEEVE										
VIAL										
STIC BAG										
FERROUS IRON										
ORE										

CHK BY: [illegible] DISTRIBUTION: WHITE YELLOW SUB-OUT ☑

Comments:
Sample Numbering Completed By: OTO Date/Time: 9/20/06 2300

[H:\DOCS\WP80\LAB_DOCS\FORMS\SAMREC2.WPD]

BC LABORATORIES, INC.

Marine Research Specialists	Project: Biosolids from MBWWTP	
3140 Telegraph Road, Suite A	Project Number: [none]	
Ventura CA, 93003-3238	Project Manager: Doug Coats	**Reported:** 11/02/06 09:49

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
0609752-01	**COC Number:**	---	**Receive Date:**	09/20/06 20:35
	Project Number:	---	**Sampling Date:**	09/20/06 08:30
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MORRO BAY WWTP BIOSOLIDS	**Sample Matrix:**	Solids
	Sampled By:	---		

BC LABORATORIES, INC.

Date of Report: 11/02/2006

Doug Coats
Marine Research Specialists
3140 Telegraph Road, Suite A
Ventura, CA 93003-3238

RE: Biosolids from MBWWTP

BC Lab Number: 0609752

Enclosed are the results of analyses for samples received by the laboratory on 09/20/06 20:35. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Tina Green
Client Services Manager

Authorized Signature

4100 Atlas Court * Bakersfield, CA 93308 * (661) 327-4911 * FAX (661) 327-1918 * www.bclabs.com

BC Laboratories, Inc

Marine Research Specialists
3140 Telegraph Road
Suite A
Ventura, CA 93003
Attn: Doug Coats

Lab #	EMSL #	Client Description	Date/Time Sampled
06-9752-1	090605017-001	Morro Bay WWTP Biosolids	9-20-06 0830

Attached is the Asbestos result analyzed by EMSL Analytical.

BC LABORATORIES, INC.

Marine Research Specialists 3140 Telegraph Road, Suite A Ventura CA, 93003-3238	Project: Biosolids from MBWWTP Project Number: [none] Project Manager: Doug Coats	**Reported:** 11/02/06 09:54

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
0609752-01	**COC Number:**	---	**Receive Date:**	09/20/06 20:35
	Project Number:	---	**Sampling Date:**	09/20/06 08:30
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MORRO BAY WWTP BIOSOLIDS	**Sample Matrix:**	Solids
	Sampled By:	---		

4100 Atlas Court * Bakersfield, CA 93308 * (661) 327-4911 * FAX (661) 327-1918 * www.bclabs.com

Marine Research Specialists
3140 Telegraph Road, Suite A
Ventura CA, 93003-3238

Project: Biosolids from MBWWTP
Project Number: [none]
Project Manager: Doug Coats

Reported: 11/02/06 09:54

Case Narratives

Case Narrative for Work Order 0609752

PQL's are reported on an "as received" basis.