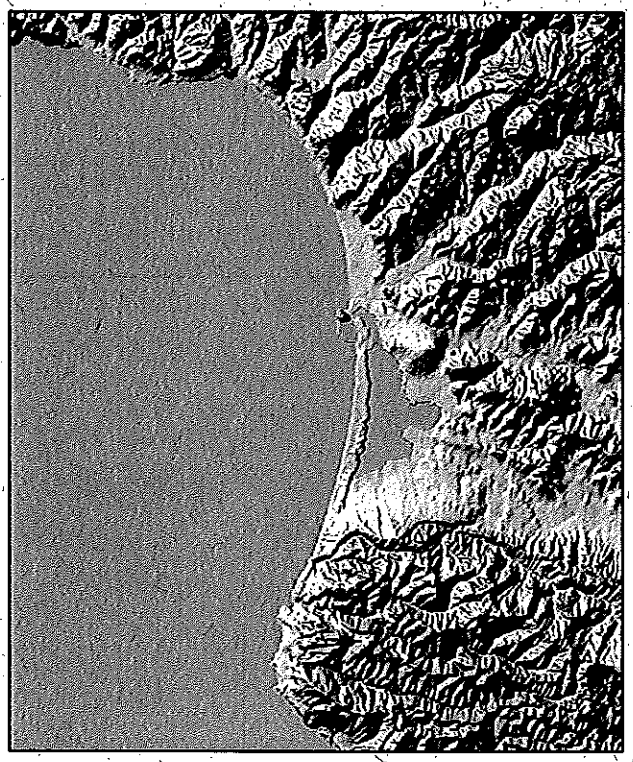
City of Morro Bay and
Cayucos Sanitary District

OFFSHORE MONITORING AND REPORTING PROGRAM

RESIDUAL BIOSOLIDS CHEMICAL ANALYSIS RESULTS

SEPTEMBER 2005



Marine Research Specialists

3140 Telegraph Rd., Suite A

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 2005

Prepared by

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November 2005

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

8 November 2005

Reference: Chemical Analysis Results for Biosolid Samples Collected in September 2005

Dear Mr. Keogh:

Enclosed are the results of chemical analyses conducted on a representative composite of biosolid samples collected from the drying beds on 8 September 2005. 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 final[3] measured concentrations in the composite sample and applicable State and Federal regulations, the biosolids are not considered hazardous waste and are 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 biosolid sample were detected. All final concentrations were low, near the detection limit and well below the applicable standards. Most bulk trace-metal concentrations measured in the September-2005 sample were close to, or lower than in samples collected in 1999,[4] 2000,[5] 2001,[6] 2002,[7] 2003[8], and 2004[9]. The analysis of the 2005 biosolid sample included three additional metals (barium, cobalt,

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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] As described in the following paragraphs, initial analyses for organophosphorus pesticides in the bulk sample, and dissolved lead in the liquid extract, were found to be anomalously elevated. Subsequent reanalysis determined these initial analyses to be in error.

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

[5] Marine Research Specialists (MRS). 2000. City of Morro Bay and Cayucos Sanitary District, Residual Biosolids Chemical Analysis Results, September 2000. Prepared for the City of Morro Bay and Cayucos Sanitary District, Morro Bay, CA. October 2000.

[6] Marine Research Specialists (MRS). 2001. Offshore Monitoring and Reporting Program. City of Morro Bay and Cayucos Sanitary District, Residual Biosolids Chemical Analysis Results, September 2001. Prepared for the City of Morro Bay and Cayucos Sanitary District, Morro Bay, CA. October 2001.

[7] Marine Research Specialists (MRS). 2002. City of Morro Bay and Cayucos Sanitary District, Residual Biosolids Chemical Analysis Results, September 2002. Prepared for the City of Morro Bay and Cayucos Sanitary District, Morro Bay, CA. October 2002.

[8] Marine Research Specialists (MRS). 2003. City of Morro Bay and Cayucos Sanitary District, Residual Biosolids Chemical Analysis Results, September 2003. Prepared for the City of Morro Bay and Cayucos Sanitary District, Morro Bay, CA. October 2003.

and vanadium) that had not been analyzed prior to 2003. They were included in the analysis of the 2005 sample to provide a complete suite of CAM-17[10] analytes, even though their analyses are not required by the current NPDES discharge permit.

All trace-metal concentrations measured in the September-2005 sample were below Total Threshold Limit Concentrations (TTLC) that would designate them as hazardous under federal regulations[11]. Similarly, dry-weight concentrations for all the metals were well below both of the federally mandated limits, including the monthly limit for biosolids suitable for land application. Three metals, copper, lead, and selenium, 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 concentrations of these metals were below the applicable STLC limits that would designate the biosolids as hazardous in the state of California.

All three 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 are almost always detected at low concentrations within effluent samples while selenium is only occasionally detected. Copper and lead also enter the collection system through internal corrosion of household plumbing systems, which probably accounts for their consistent detection. Bulk copper and lead concentrations determined in the September-2005 sample were generally comparable to concentrations measured in biosolid samples collected historically.

At 31 mg/kg, the bulk selenium concentration in the September-2005 sample remained well below the TTLC but was somewhat elevated compared to historical concentrations, which typically range between 4 mg/kg and 6 mg/kg. In contrast to past biosolid samples, the September-2005 bulk concentration exceeded ten-times the selenium STLC, and a WET was conducted. The resulting dissolved-selenium concentration was below the detection limit of 0.2 mg/L. This indicates that the selenium was bound into the biosolid matrix and would not easily leach out into the environment in a bioavailable form.

A dissolved-lead concentration of 5.9 mg/L that was initially measured in the leachate extracted with sodium citrate was found to be anomalous in a subsequent analysis. The initial concentration slightly exceeded its SLTC limiting concentration of 5 mg/L. However, the measurement was considered suspect for two reasons. First, there was no detectable dissolved-lead concentration (0.1 mg/L) in the leachate from an extraction using de-ionized water. Second, the associated bulk lead concentration of 56 mg/kg was lower than bulk lead concentrations measured in biosolid samples collected over the past six years. Accordingly, one would expect the dissolved-lead concentration to be lower in the September-2005 sample as well, largely because the character of the biosolids has not changed over the years. Instead, the dissolved-lead concentrations in all of these previously collected biosolid samples were more than three-times lower (= 1.9 mg/L) than the concentration measured in the initial WET analysis of the September-2005 sample. Because of uncertainty as to the veracity of the initial dissolved-lead concentration, a sodium-citrate extraction was conducted on a second subsample from the original biosolid sample collected in September 2005. The dissolved-lead concentration of 1.2 mg/L in the leachate from this second extraction was almost five-times lower than the initial measurement, and it was consistent with historical dissolved-lead concentrations.

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[9] Marine Research Specialists (MRS). 2004. City of Morro Bay and Cayucos Sanitary District, Residual Biosolids Chemical Analysis Results, October 2004. Prepared for the City of Morro Bay and Cayucos Sanitary District, Morro Bay, CA. December 2004.

[10] 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.*

[11] 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.

One organic contaminant was detected in the September-2005 biosolid sample. Bis(2-ethylhexyl)phthalate (BEHP), is a compound that has been consistently detected at low levels in effluent and biosolid samples collected over the past decade.[12] 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.

Initially, four unusual organophosphorus pesticides were erroneously detected by American Scientific Laboratories in the biosolids composite sample using EPA Method 8141A. The analysis incorrectly indicated the presence of tetrachlorvinphos (Stirophos), diazinon, chlorpyrifos (Dursban), and methyl parathion at very low concentrations. However, that analysis did not account for severe matrix interference in establishing the reported detection limits (= 0.04 ppm). A subsequent re-analysis by Environmental Micro Analysis correctly accounted for the matrix interference and confirmed that organophosphorus compounds were below detection limits.

Analysis for these organophosphorus compounds in a millable-solid sample, such as a biosolid sample, is fraught with difficulty. High dilutions are required, severe matrix interference results, and numerous extraneous peaks from naturally occurring compounds confound the interpretation of chromatograms. Invariably, some of the low-level, randomly occurring peaks coincide with those of target pesticides, and can be misinterpreted as a detectable concentration of these compounds. Similar false detections of organophosphorus pesticides occurred using Method 8140 on samples collected during 2000. Both an effluent sample collected in July 2000, and a biosolid sample analyzed in October 2000 initially tested positive for the presence of organophosphorus pesticides. However, re-analysis of those samples using a high-resolution mass spectrometer confirmed that the initial detections were due to laboratory error.

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 (Four Report Copies)

[12] Section 2.2.12, Page 2-43 of the MBCSD 2004 Annual Report to the City of Morro Bay and Cayucos Sanitary District. Prepared by Marine Research Specialists, February 2005.

Table 1. Summary of Results for Biosolids Analyses

		Wet Weight				Dry Weight		
		Measured		Limit		Measured	Limit	
Constituent	Units	Bulk [13]	WET [14]	STLC [15]	TTLC [16]	Bulk	Monthly [17]	Ceiling [18]
Solids	%	90.0	— [19]	—	—	—	—	—
Total Dissolved Solids	ppm	—	3,000.	—	—	—	—	—
Cyanide	ppm	<0.1	—	—	—	<0.11	—	—
Antimony	ppm	<3.	—	15.	500.	<3.3	—	—
Arsenic	ppm	11.	—	5.	500.	12.2	41.	75.
Barium	ppm	570.	—	100.	10,000.	633.	—	—
Beryllium	ppm	<0.2	—	0.75	75.	<0.22	—	—
Boron	ppm	14.	—	—	—	15.6	—	—
Cadmium	ppm	5.5	—	1.	100.	6.1	39.	85.
Chromium (Total)	ppm	39.	—	5.	500.	43.3	—	—
Cobalt	ppm	4.5	—	80.	8,000.	5.0	1,500.	4,300.
Copper	ppm	**550.** [20]	10. [21]	25.	2,500.	611.	1,500.	4,300.
Lead	ppm	**56.**	3.6 [22]	5.	1,000.	62.	300.	840.
Mercury	ppm	1.3	—	0.2	20.	1.4	17.	57.
Molybdenum	ppm	18.	—	350.	3,500.	20.	—	—
Nickel	ppm	37.	—	20.	2,000.	41.	420.	420.
Selenium	ppm	**31.**	<0.2	1.	100.	34.	100.	100.
Silver	ppm	4.3	—	5.	500.	4.8	—	—
Thallium	ppm	<3.	—	7.	700.	<3.3.	—	—
Vanadium	ppm	21.	—	24.	2,400.	23.	—	—
Zinc	ppm	1,300.	—	250.	5,000.	1,444.	2,800.	7,500.
Asbestos	%	ND	—	—	1.	ND	—	—
Bis(2-ethylhexyl) phthalate	ppm	36.	—	—	—	40.	—	—
Hydrogen-Ion	pH	6.9	—	—	—	—	—	—
Phosphate	ppm	26,000.	—	—	—	29,000.	—	—

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

[14] 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.

[15] 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.*

[16] 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.*

[17] 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)].

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

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

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

[21] The reported dissolved concentration is for a leachate extracted with sodium citrate. The concentration in the leachate extracted with de-ionized water was 0.14 mg/L.

[22] The reported dissolved concentration is the average of concentrations (5.9 mg/L and 1.2 mg/L) measured in the leachate from sodium-citrate extractions conducted two separate subsamples. The concentration in a leachate extracted with de-ionized water was below the detection limit of 0.1 mg/L.

		Wet Weight				Dry Weight		
		Measured		Limit		Measured	Limit	
Constituent	Units	Bulk [13]	WET [14]	STLC [15]	TTLC [16]	Bulk	Monthly [17]	Ceiling [18]
Ammonia	ppm	2,000.	—	—	—	2,200.	—	—
TKN	ppm	23,000.	—	—	—	25,600.	—	—
Organic Nitrogen [23]	ppm	21,000.	—	—	—	23,300.	—	—
Nitrate as N	ppm	69.	—	—	—	77.	—	—
Oil & Grease	ppm	39,000.	—	—	—	43,300.	—	—

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

ANALYTICAL RESULTS

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Doug Coats
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Suite A
Morro Bay, CA 93003

Log Number: 05-C12575
Order: M5691
Project: Morro Bay WWTP biosolids
Received: 10/24/05

REPORT OF ANALYTICAL RESULTS

SAMPLE DESCRIPTION	SAMPLED BY	SAMPLED DATE @ TIME	MATRIX
Biosolids composite (05c-10267)		09/08/05@12:30	Solid

ANALYTE	RESULT	DLR	UNITS	METHOD	ANALYZED
Lead, STLC extract	1.2	0.2	mg/L	EPA 6010	11/02/05

DLR = Detection Limit for Reporting. Results of "Not Detected" are below DLR.

CREEK ENVIRONMENTAL LABORATORIES

Lab Director, Michael Ng

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Doug Coats
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Suite A
Morro Bay, CA 93003

Log Number: 05-C10267
Order: M4731
Project: Morro Bay WWTP biosolids
Received: 09/08/05

REPORT OF ANALYTICAL RESULTS

SAMPLE DESCRIPTION	SAMPLED BY	SAMPLED DATE @ TIME	MATRIX
Biosolids (composite)		09/08/05@12:30	Solid

ANALYTE	RESULT	DLR	UNITS	METHOD	ANALYZED
Total Cyanide	Not Detected	0.1	mg/Kg	EPA 9010/9014	09/20/05
Percent Moisture	10	---	%	EPA 160.3	09/12/05
Ammonia, Total, as N	2,000	3	mg/Kg	EPA 350.2	09/16/05
Nitrate as N	69	1	mg/Kg	EPA 300.0	09/09/05
Oil & Grease	39,000	5	mg/Kg	EPA 1664	09/16/05
pH	6.9	0.1	units	EPA 9045	09/17/05
Total Phosphorus as P	26,000	6	mg/Kg	EPA 365.2	09/14/05
Total Dissolved Solids	3,000	100	mg/L	EPA 160.1	09/21/05
Total Kjeldahl Nitrogen	23,000	60	mg/Kg	EPA 351.3	09/15/05
Silver	4.3	0.3	mg/Kg	EPA 6010	09/13/05
Arsenic	11	3	mg/Kg	EPA 6010	09/20/05
Boron	14	3	mg/Kg	EPA 6010	09/12/05
Barium	570	0.8	mg/Kg	EPA 6010	09/13/05
Beryllium	Not Detected	0.2	mg/Kg	EPA 6010	09/13/05
Cadmium	5.5	0.3	mg/Kg	EPA 6010	09/13/05
Cobalt	4.5	0.3	mg/Kg	EPA 6010	09/13/05
Chromium	39	0.6	mg/Kg	EPA 6010	09/13/05
Copper	550	1	mg/Kg	EPA 6010	09/13/05
Copper, STLC Extract	10	0.02	mg/L	EPA 6010	10/18/05
Copper, DI-WET extract	0.14	0.1	mg/L	EPA 6010	09/20/05
Mercury	1.3	0.04	mg/Kg	EPA 7471	09/19/05
Molybdenum	18	0.6	mg/Kg	EPA 6010	09/13/05
Nickel	37	0.6	mg/Kg	EPA 6010	09/13/05
Lead	56	1	mg/Kg	EPA 6010	09/13/05
Lead, STLC extract	5.9	0.02	mg/L	EPA 6010	10/19/05
Lead, DI-Wet extract	Not Detected	0.1	mg/L	EPA 6010	09/20/05
Antimony	Not Detected	3	mg/Kg	EPA 6010	09/13/05
Selenium	31	3	mg/Kg	EPA 6010	09/20/05
Thallium	Not Detected	3	mg/Kg	EPA 6010	09/20/05
Vanadium	21	0.3	mg/Kg	EPA 6010	09/13/05

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Doug Coats
Marine Research Specialists
3140 Telephagh Road
Suite A
Morro Bay, CA 93003

Log Number: 05-C10267
Order: M4731
Project: Morro Bay WWTP biosolids
Received: 09/08/05

REPORT OF ANALYTICAL RESULTS

SAMPLE DESCRIPTION	SAMPLED BY	SAMPLED DATE @ TIME	MATRIX
Biosolids (composite)		09/08/05@12:30	Solid

ANALYTE	RESULT	DLR	UNITS	METHOD	ANALYZED
Zinc	1,300	1	mg/Kg	EPA 6010	09/13/05
Benzene	Not Detected	5	ug/Kg	EPA 8260	09/15/05
Bromobenzene	Not Detected	5	ug/Kg	EPA 8260	09/15/05
Bromochloromethane	Not Detected	5	ug/Kg	EPA 8260	09/15/05
Bromodichloromethane	Not Detected	5	ug/Kg	EPA 8260	09/15/05
Bromoform	Not Detected	5	ug/Kg	EPA 8260	09/15/05
Bromomethane	Not Detected	5	ug/Kg	EPA 8260	09/15/05
t-Butylbenzene	Not Detected	5	ug/Kg	EPA 8260	09/15/05
n-Butylbenzene	Not Detected	5	ug/Kg	EPA 8260	09/15/05
sec-Butyl Benzene	Not Detected	5	ug/Kg	EPA 8260	09/15/05
Carbon Tetrachloride	Not Detected	5	ug/Kg	EPA 8260	09/15/05
Chlorobenzene	Not Detected	5	ug/Kg	EPA 8260	09/15/05
Chloroethane	Not Detected	5	ug/Kg	EPA 8260	09/15/05
2-Chloroethylvinyl ether	Not Detected	5	ug/Kg	EPA 8260	09/15/05
Chloroform	Not Detected	5	ug/Kg	EPA 8260	09/15/05
Chloromethane	Not Detected	5	ug/Kg	EPA 8260	09/15/05
2-Chlorotoluene	Not Detected	5	ug/Kg	EPA 8260	09/15/05
4-Chlorotoluene	Not Detected	5	ug/Kg	EPA 8260	09/15/05
1,2-Dibromo-3-Chloropropane	Not Detected	5	ug/Kg	EPA 8260	09/15/05
Dibromochloromethane	Not Detected	5	ug/Kg	EPA 8260	09/15/05
Dibromomethane	Not Detected	5	ug/Kg	EPA 8260	09/15/05
1,2-Dibromoethane (EDB)	Not Detected	5	ug/Kg	EPA 8260	09/15/05
Dichlorodifluoromethane	Not Detected	5	ug/Kg	EPA 8260	09/15/05
1,2-Dichlorobenzene	Not Detected	5	ug/Kg	EPA 8260	09/15/05
1,3-Dichlorobenzene	Not Detected	5	ug/Kg	EPA 8260	09/15/05
1,4-Dichlorobenzene	Not Detected	5	ug/Kg	EPA 8260	09/15/05
1,1-Dichloroethane	Not Detected	5	ug/Kg	EPA 8260	09/15/05
1,2-Dichloroethane (EDC)	Not Detected	5	ug/Kg	EPA 8260	09/15/05
1,1-Dichloroethene	Not Detected	5	ug/Kg	EPA 8260	09/15/05
cis-1,2-Dichloroethene	Not Detected	5	ug/Kg	EPA 8260	09/15/05

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Doug Coats
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3140 Telephagh Road
Suite A
Morro Bay, CA 93003

Log Number: 05-C10267
Order: M4731
Project: Morro Bay WWTP biosolids
Received: 09/08/05

REPORT OF ANALYTICAL RESULTS

SAMPLE DESCRIPTION	SAMPLED BY	SAMPLED DATE @ TIME	MATRIX
Biosolids (composite)		09/08/05@12:30	Solid

ANALYTE	RESULT	DLR	UNITS	METHOD	ANALYZED
trans-1,2-Dichloethene	Not Detected	5	ug/Kg	EPA 8260	09/15/05
1,2-Dichloropropane	Not Detected	5	ug/Kg	EPA 8260	09/15/05
1,3-Dichloropropane	Not Detected	5	ug/Kg	EPA 8260	09/15/05
2,2-Dichloropropane	Not Detected	5	ug/Kg	EPA 8260	09/15/05
1,1-Dichloropropene	Not Detected	5	ug/Kg	EPA 8260	09/15/05
cis-1,3-Dichloropropene	Not Detected	5	ug/Kg	EPA 8260	09/15/05
trans-1,3-Dichloropropene	Not Detected	5	ug/Kg	EPA 8260	09/15/05
Ethylbenzene	Not Detected	5	ug/Kg	EPA 8260	09/15/05
Hexachlorobutadiene	Not Detected	5	ug/Kg	EPA 8260	09/15/05
Isopropylbenzene	Not Detected	5	ug/Kg	EPA 8260	09/15/05
4-Isopropyltoluene	Not Detected	5	ug/Kg	EPA 8260	09/15/05
Methylene Chloride	Not Detected	5	ug/Kg	EPA 8260	09/15/05
MTBE	Not Detected	5	ug/Kg	EPA 8260	09/15/05
Naphthalene	Not Detected	5	ug/Kg	EPA 8260	09/15/05
n-Propylbenzene	Not Detected	5	ug/Kg	EPA 8260	09/15/05
Styrene	Not Detected	5	ug/Kg	EPA 8260	09/15/05
1,1,1,2-Tetrachloroethane	Not Detected	5	ug/Kg	EPA 8260	09/15/05
1,1,2,2-Tetrachloroethane	Not Detected	5	ug/Kg	EPA 8260	09/15/05
Tetrachloroethene	Not Detected	5	ug/Kg	EPA 8260	09/15/05
Toluene	Not Detected	5	ug/Kg	EPA 8260	09/15/05
1,2,3-Trichlorobenzene	Not Detected	5	ug/Kg	EPA 8260	09/15/05
1,2,4-Trichlorobenzene	Not Detected	5	ug/Kg	EPA 8260	09/15/05
1,1,1-Trichloroethane	Not Detected	5	ug/Kg	EPA 8260	09/15/05
1,1,2-Trichloroethane	Not Detected	5	ug/Kg	EPA 8260	09/15/05
Trichloroethene	Not Detected	5	ug/Kg	EPA 8260	09/15/05
Trichlorofluoromethane	Not Detected	5	ug/Kg	EPA 8260	09/15/05
1,2,3-Trichloropropane	Not Detected	5	ug/Kg	EPA 8260	09/15/05
1,2,4-Trimethylbenzene	Not Detected	5	ug/Kg	EPA 8260	09/15/05
1,3,5-Trimethylbenzene	Not Detected	5	ug/Kg	EPA 8260	09/15/05
Vinyl Chloride	Not Detected	5	ug/Kg	EPA 8260	09/15/05

CREEK ENVIRONMENTAL LABORATORIES, INC.
A Minority-owned Business Enterprise
141 SUBURBAN ROAD, SUITE C-5 • SAN LUIS OBISPO, CA 93401 • (805) 545-9838 • FAX (805) 545-0107

Doug Coats
Marine Research Specialists
3140 Telephagh Road
Suite A
Morro Bay, CA 93003

Log Number: 05-C10267
Order: M4731
Project: Morro Bay WWTP biosolids
Received: 09/08/05

REPORT OF ANALYTICAL RESULTS

SAMPLE DESCRIPTION	SAMPLED BY	SAMPLED DATE @ TIME	MATRIX
Biosolids (composite)		09/08/05@12:30	Solid

ANALYTE	RESULT	DLR	UNITS	METHOD	ANALYZED
m,p-Xylene	Not Detected	5	ug/Kg	EPA 8260	09/15/05
o-Xylene	Not Detected	5	ug/Kg	EPA 8260	09/15/05
Acenaphthene	Not Detected	10000	ug/Kg	EPA 8270	09/14/05
Acenaphthylene	Not Detected	10000	ug/Kg	EPA 8270	09/14/05
Anthracene	Not Detected	10000	ug/Kg	EPA 8270	09/14/05
Azobenzene	Not Detected	10000	ug/Kg	EPA 8270	09/14/05
Benz[a]anthracene	Not Detected	10000	ug/Kg	EPA 8270	09/14/05
Benzo[a]pyrene	Not Detected	10000	ug/Kg	EPA 8270	09/14/05
Benzo[b]fluoranthene	Not Detected	10000	ug/Kg	EPA 8270	09/14/05
Benzo[ghi]perylene	Not Detected	10000	ug/Kg	EPA 8270	09/14/05
Benzo[k]fluoranthene	Not Detected	10000	ug/Kg	EPA 8270	09/14/05
Benzoic acid	Not Detected	10000	ug/Kg	EPA 8270	09/14/05
Benzyl butyl phthalate	Not Detected	10000	ug/Kg	EPA 8270	09/14/05
Bis(2-chloroethoxy)methane	Not Detected	10000	ug/Kg	EPA 8270	09/14/05
Bis(2-chloroethyl)ether	Not Detected	10000	ug/Kg	EPA 8270	09/14/05
Bis(2-chloroisopropyl)ether	Not Detected	10000	ug/Kg	EPA 8270	09/14/05
Bis(2-ethylhexyl)phthalate	36,000	10000	ug/Kg	EPA 8270	09/14/05
4-Bromodiphenyl ether	Not Detected	10000	ug/Kg	EPA 8270	09/14/05
Carbazole	Not Detected	10000	ug/Kg	EPA 8270	09/14/05
4-Chloro-3-methylphenol	Not Detected	10000	ug/Kg	EPA 8270	09/14/05
4-Chloroaniline	Not Detected	10000	ug/Kg	EPA 8270	09/14/05
2-Chloronaphthalene	Not Detected	10000	ug/Kg	EPA 8270	09/14/05
2-Chlorophenol	Not Detected	10000	ug/Kg	EPA 8270	09/14/05
4-Chlorophenyl phenyl ether	Not Detected	10000	ug/Kg	EPA 8270	09/14/05
Chrysene	Not Detected	10000	ug/Kg	EPA 8270	09/14/05
Dibenz[a,h]anthracene	Not Detected	10000	ug/Kg	EPA 8270	09/14/05
Dibenzofuran	Not Detected	10000	ug/Kg	EPA 8270	09/14/05
Dibutyl phthalate	Not Detected	10000	ug/Kg	EPA 8270	09/14/05
1,2-Dichlorbenzene	Not Detected	10000	ug/Kg	EPA 8270	09/14/05
1,3-Dichlorbenzene	Not Detected	10000	ug/Kg	EPA 8270	09/14/05

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Doug Coats
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3140 Telephagh Road
Suite A
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Log Number: 05-C10267
Order: M4731
Project: Morro Bay WWTP biosolids
Received: 09/08/05

REPORT OF ANALYTICAL RESULTS

SAMPLE DESCRIPTION	SAMPLED BY	SAMPLED DATE @ TIME	MATRIX
Biosolids (composite)		09/08/05@12:30	Solid

ANALYTE	RESULT	DLR	UNITS	METHOD	ANALYZED
1,4-Dichlorbenzene	Not Detected	10000	ug/Kg	EPA 8270	09/14/05
3,3'-Dichlorobenzidine	Not Detected	10000	ug/Kg	EPA 8270	09/14/05
2,4-Dichlorophenol	Not Detected	10000	ug/Kg	EPA 8270	09/14/05
Diethyl phthalate	Not Detected	10000	ug/Kg	EPA 8270	09/14/05
Dimethyl phthalate	Not Detected	10000	ug/Kg	EPA 8270	09/14/05
2,4-Dimethylphenol	Not Detected	10000	ug/Kg	EPA 8270	09/14/05
2,4-Dinitrophenol	Not Detected	80000	ug/Kg	EPA 8270	09/14/05
2,4-Dinitrotoluene	Not Detected	10000	ug/Kg	EPA 8270	09/14/05
2,6-Dinitrotoluene	Not Detected	10000	ug/Kg	EPA 8270	09/14/05
Di-n-octyl phthalate	Not Detected	10000	ug/Kg	EPA 8270	09/14/05
Fluoranthene	Not Detected	10000	ug/Kg	EPA 8270	09/14/05
Fluorene	Not Detected	10000	ug/Kg	EPA 8270	09/14/05
Hexachlorethane	Not Detected	10000	ug/Kg	EPA 8270	09/14/05
Hexachlorobenzene	Not Detected	10000	ug/Kg	EPA 8270	09/14/05
Hexachlorobutadiene	Not Detected	10000	ug/Kg	EPA 8270	09/14/05
Hexachlorocyclopentadiene	Not Detected	10000	ug/Kg	EPA 8270	09/14/05
Indeno[1,2,3-cd]pyrene	Not Detected	10000	ug/Kg	EPA 8270	09/14/05
Isophorone	Not Detected	10000	ug/Kg	EPA 8270	09/14/05
2-Methyl-4,6-dinitrophenol	Not Detected	10000	ug/Kg	EPA 8270	09/14/05
2-Methylnaphthalene	Not Detected	10000	ug/Kg	EPA 8270	09/14/05
2-Methylphenol	Not Detected	10000	ug/Kg	EPA 8270	09/14/05
4-Methylphenol	Not Detected	10000	ug/Kg	EPA 8270	09/14/05
Naphthalene	Not Detected	10000	ug/Kg	EPA 8270	09/14/05
2-Nitroaniline	Not Detected	10000	ug/Kg	EPA 8270	09/14/05
3-Nitroaniline	Not Detected	10000	ug/Kg	EPA 8270	09/14/05
4-Nitroaniline	Not Detected	10000	ug/Kg	EPA 8270	09/14/05
Nitrobenzene	Not Detected	10000	ug/Kg	EPA 8270	09/14/05
2-Nitrophenol	Not Detected	10000	ug/Kg	EPA 8270	09/14/05
4-Nitrophenol	Not Detected	10000	ug/Kg	EPA 8270	09/14/05
N-nitrosodiphenylamine	Not Detected	10000	ug/Kg	EPA 8270	09/14/05

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Doug Coats
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Log Number: 05-C10267
Order: M4731
Project: Morro Bay WWTP biosolids
Received: 09/08/05

REPORT OF ANALYTICAL RESULTS

SAMPLE DESCRIPTION	SAMPLED BY	SAMPLED DATE @ TIME	MATRIX
Biosolids (composite)		09/08/05@12:30	Solid

ANALYTE	RESULT	DLR	UNITS	METHOD	ANALYZED
N-nitrosodipropylamine	Not Detected	10000	ug/Kg	EPA 8270	09/14/05
Pentachlorophenol	Not Detected	10000	ug/Kg	EPA 8270	09/14/05
Phenanthrene	Not Detected	10000	ug/Kg	EPA 8270	09/14/05
Phenol	Not Detected	10000	ug/Kg	EPA 8270	09/14/05
Pyrene	Not Detected	10000	ug/Kg	EPA 8270	09/14/05
1,2,4-Trichlorobenzene	Not Detected	10000	ug/Kg	EPA 8270	09/14/05
2,4,5-Trichlorophenol	Not Detected	10000	ug/Kg	EPA 8270	09/14/05
2,4,6-Trichlorophenol	Not Detected	10000	ug/Kg	EPA 8270	09/14/05
Selenium, STLC extract	Not Detected	0.2	mg/L	EPA 6020	10/20/05

DLR = Detection Limit for Reporting. Results of "Not Detected" are below DLR.

CREEK ENVIRONMENTAL LABORATORIES

Lab Director, Michael Ng

EMSL Analytical, Inc.

382 South Abbott Ave, Milpitas, CA 95035 • (408) 934-7010 • fax (408) 934-7015 • milpitaslab@emsl.com

Client:	Creek Environmental Laboratories 141 Suburban Road, Ste. C-5 San Luis Obispo, CA 93401	**EMSL Order:**	**090503547**
		Date Received:	09/12/05
Attention:	Orval Osborne	**Date Analyzed:**	09/16/05
Fax:	(805) 545-0107 **Phone:** (805) 545-9838	**Date Reported:**	09/19/05
Project:	**M4731**		

Asbestos Analysis of Bulk Samples via EPA 600/R-93/116 Method using the 400 Point Count Procedure with CARB 435 Prep (Milling) Level A for 0.25% Target Analytical Sensitivity

Client Sample ID	*EMSL Sample ID*	*Appearance*	*Non-Asbestos*		*Asbestos*
			% Fibrous	*% Non-Fibrous*	*% Type*
Biosolids-Composite (10267)	090503547-0001	Tan Non-Fibrous Homogeneous		100.00% Non-fibrous (other)	**None Detected**

Approved EMSL Signatory

Some samples may contain asbestos fibers present in dimensions below PLM resolution limits. EMSL Analytical suggests that samples reported as < 0.25% or none detected undergo additional analysis via TEM. EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL is not responsible for sample collection activities or analytical method limitations. Interpretation and use of results are the responsibility of the client.

Environmental Micro Analysis, Inc. ELAP Certificate #2211
40 N East Street, Suite B
Woodland, CA 95776

Phone: (530) 666-6890 Fax: (530) 666-2987
e-mail: emalab@emalab.com website: www.emalab.com

Analytical Report

October 13, 2005

Client: Orval Osborne
Creek Analytical Laboratories, Inc.
141 Suburban Road, Suite C-5
San Louis Obispo, CA 93401
Phone: (805) 545-9838
Fax: (805) 545-0107
Email:
Report via: ☐ Fax ☐ E-Mail

Project No: M4731

PO No:

Client Sample ID: Biosolids - comp 10267

Sample Date: 9/8/2005
EMA Sample No: 05093001-01
Date Received: 9/30/2005
Sample Matrix: Soil

Analytical Method: EPA 8141A (s) (OP's)
Extraction Method: EPA 3550
Date Extracted: 10/10/2005
Date Completed: 10/12/2005
Surrogate: Triphenylphosphate
Surrogate Level: 0.17 ppm
Recovery: *

*Due to severe matrix interference, the surrogate recovery could not be determined.

Analyte	Amount ppm	MRL ppm
Azinphos-methyl (Guthion)	ND	25.000
Bolstar (Sulprofos)	ND	25.000
Bensulide	ND	25.000
Carbofenthion (Trithion)	ND	100.000
Chlorfenvinphos (Supona)	ND	25.000
Chlorpyrifos (Dursban)	ND	15.000
Chlorpyrifos-methyl	ND	15.000
Ciodrin (Crotophos)	ND	25.000
Coumaphos (Co-Ral)	ND	75.000
DEF	ND	25.000
Demeton (Systox) O/S Analogues	ND	25.000
Diazinon	ND	25.000
Dibrom (Naled)	ND	25.000
Dicrotophos (Didrin)	ND	25.000
Dimethoate (Cygon)	ND	25.000
Disulfoton (Disyston)	ND	15.000
EPN	ND	50.000
Ethion	ND	25.000
Ethoprop (Modap)	ND	25.000
Fenamiphos (Nemacur)	ND	25.000
Fenitrothion (Sumithion)	ND	25.000
Fenthion (Baytex)	ND	25.000
Fonofos (Dyfonate)	ND	25.000
Imidan (Phosmet)	ND	25.000
Isofenphos (Oftanol)	ND	25.000
Malathion	ND	25.000
Methidathion (Supracide)	ND	25.000
Methyl Parathion	ND	25.000
Mevinphos (Phosdrin)	ND	25.000
Parathion	ND	25.000
Phorate (Thimet)	ND	25.000
Phosalone (Zolone)	ND	75.000
Phosphamidon (Dimecron)	ND	50.000
Primiphos-methyl	ND	25.000
Profenofos (Curacron)	ND	50.000
Propetamiphos (Safrotin)	ND	25.000
Ronnel (Fenchlorfos)	ND	25.000
Tetrachlorvinphos (Gardona)	ND	25.000
Thionazin (Zinophos)	ND	25.000

ND = Not Detected at or above Environmental Micro Anlaysis, Inc. Method Reporting Limit (MRL)

Date: 10/13/05 Signed: Donald Aiken, Laboratory Director

Environmental Micro Analysis, Inc. ELAP Certificate #2211
40 N East Street, Suite B
Woodland, CA 95776

Phone: (530) 666-6890 Fax: (530) 666-2987
e-mail: emalab@emalab.com website: www.emalab.com

Analytical Report

October 13, 2005

Client: Orval Osborne
Creek Analytical Laboratories, Inc.
141 Suburban Road, Suite C-5
San Louis Obispo, CA 93401
Phone: (805) 545-9838
Fax: (805) 545-0107
Email:
Report via: ☐ Fax ☐ E-Mail

Project No: M4731

PO No:

Client Sample ID: Biosolids - comp
10267

Sample Date: 9/8/2005
EMA Sample No: 05093001-01
Date Received: 9/30/2005
Sample Matrix: Soil

Analytical Method: EPA 8141A (s) (ON's)
Extraction Method: EPA 3550
Date Extracted: 10/10/2005
Date Completed: 10/12/2005
Surrogate: Triphenylphosphate
Surrogate Level: 0.17 ppm
Recovery: *

*Due to severe matrix interference, the surrogate recovery could not be determined.

Analyte	Amount ppm	MRL ppm
Acetamaprid	ND	100.000
Ametryn	ND	50.000
Atrazine	ND	25.000
Azoxystrobin	ND	25.000
Benthiocarb	ND	100.000
Cyanazine (Bladex)	ND	25.000
Diphenyl Amine	ND	100.000
Hexazinone (Velpar)	ND	50.000
Imazalil	ND	100.000
Metalaxyl (Ridomil)	ND	100.000
Metolachlor (Dual)	ND	50.000
Metribuzin (Sencor)	ND	50.000
Molinate (Ordram)	ND	50.000
Myclobutanil	ND	25.000
Prometon	ND	25.000
Prometryne	ND	25.000
Pymetrazine	ND	25.000
Simazine	ND	25.000
Terbacil	ND	250.000
Thiabendazole	ND	50.000

ND = Not Detected at or above Environmental Micro Anlaysis, Inc. Method Reporting Limit (MRL)

Date: 10/13/05 Signed: _____, Laboratory Director

AMERICAN SCIENTIFIC LABORATORIES, LLC
Environmental Testing Services
2520 N. San Fernando Rd., Los Angeles, CA 90065 Tel: (323) 223-9700 Fax: (323) 223-9500

ANALYTICAL RESULTS

Ordered By

Creek Environmental Labs, Inc.
141 Suburban Rd Suite C-5
San Luis Obispo, CA 93401-

Telephone: (805)545-9838
Attn: Orval Osborne

Page: 2
Project ID: M4731
Project Name:

Job Number	Order Date	Client
26834	09/09/2005	CREEK

Method: 8081A, Organochlorine Pesticides

Batch No:

Our Lab I.D.		**155383**				
Sample ID		B10 Solid -C (10267)				
Date Sampled		09/08/2005				
Date Extracted		09/09/2005				
Preparation Method						
Date Analyzed		09/09/2005				
Matrix		Sludge				
Units		ug/kg				
Detection Limit Multiplier		1				
Analytes	**PQL**	**Results**				
Aldrin	2.00	ND				
alpha-Hexachlorocyclohexane (Alpha-BHC)	2.00	ND				
Beta-Hexachlorocyclohexane (Beta-BHC)	2.00	ND				
Gamma-Chlordane	2.00	ND				
alpha-Chlordane	2.00	ND				
4,4'-DDD (DDD)	4.00	ND				
4,4'-DDE (DDE)	4.00	ND				
4,4'-DDT (DDT)	4.00	ND				
delta-Hexachlorocyclohexane (Delta-BHC)	2.00	ND				
Dieldrin	4.00	ND				
Endosulfan 1	2.00	ND				
Endosulfan 11	4.00	ND				
Endosulfan sulfate	4.00	ND				
Endrin	4.00	ND				
Endrin aldehyde	4.00	ND				
Endrin ketone	4.00	ND				
gamma-Hexachlorocyclohexane (Gamma-BHC, Lindane)	2.00	ND				
Heptachlor	2.00	ND				
Heptachlor epoxide	2.00	ND				
Methoxychlor	17.00	ND				
Toxaphene	170	ND				

AMERICAN SCIENTIFIC LABORATORIES, LLC
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ANALYTICAL RESULTS

Page: 3
Project ID: M4731
Project Name:

Job Number	Order Date	Client
26834	09/09/2005	CREEK

Method: 8081A, Organochlorine Pesticides

Our Lab I.D.		155383				
Surrogates	Con.Limit	% Rec.				
Surrogate Percent Recovery						
Decachlorobiphenyl	43-169	83				

QUALITY CONTROL REPORT

Batch No:

Analytes	LCS % REC	LCS DUP % REC	LCS RPD % REC	LCS/LCSD % Limit	LCS RPD % Limit					
Aldrin	82	82	<1	42-122	<30					
4,4'-DDT (DDT)	92	98	6.3	25-160	<30					
Dieldrin	96	111	14.5	36-146	<30					
Endrin	102	113	10.2	30-147	<30					
gamma-Hexachlorocyclohexane (Gamma-BHC, Lindane)	80	81	1.2	32-127	<30					
Heptachlor	91	93	2.2	34-111	<30					

AMERICAN SCIENTIFIC LABORATORIES, LLC
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ANALYTICAL RESULTS

Ordered By

Creek Environmental Labs, Inc.
141 Suburban Rd Suite C-5
San Luis Obispo, CA 93401-

Telephone: (805)545-9838
Attn: Orval Osborne

Page: 4
Project ID: M4731
Project Name:

Job Number	Order Date	Client
26834	09/09/2005	CREEK

Method: 8082, Polychlorinated Biphenyls(PCBs) by Gas Chromatography

Batch No:

Our Lab I.D.		**155383**				
Sample ID		B10 Solid -C (10267)				
Date Sampled		09/08/2005				
Date Extracted		09/09/2005				
Preparation Method						
Date Analyzed		09/09/2005				
Matrix		Sludge				
Units		ug/kg				
Detection Limit Multiplier		1				
Analytes	**PQL**	**Results**				
Aroclor-1016 (PCB-1016)	33.00	ND				
Aroclor-1221 (PCB-1221)	67.00	ND				
Aroclor-1232 (PCB-1232)	33.00	ND				
Aroclor-1242 (PCB-1242)	33.00	ND				
Aroclor-1248 (PCB-1248)	33.00	ND				
Aroclor-1254 (PCB-1254)	33.00	ND				
Aroclor-1260 (PCB-1260)	33.00	ND				

Our Lab I.D.		**155383**				
Surrogates	**Con.Limit**	**% Rec.**				
Surrogate Percent Recovery						
Decachlorobiphenyl	43-169	109				

QUALITY CONTROL REPORT

Batch No:

Analytes	LCS % REC	LCS DUP % REC	LCS RPD % REC	LCS/LCSD % Limit	LCS RPD % Limit					
Aroclor-1260 (PCB-1260)	103	92	11.3	39-150	<30					

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Environmental Testing Services
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ANALYTICAL RESULTS

Ordered By

Creek Environmental Labs, Inc.
141 Suburban Rd Suite C-5
San Luis Obispo, CA 93401-

Telephone: (805)545-9838
Attn: Orval Osborne

Page: 5
Project ID: M4731
Project Name:

Job Number	Order Date	Client
26834	09/09/2005	CREEK

Method: 8141A, Organophosphorus Compounds by Gas Chromatography

Batch No: 091605-1

Our Lab I.D.		**155383**				
Sample ID		B10 Solid -C (10267)				
Date Sampled		09/08/2005				
Date Extracted		09/13/2005				
Preparation Method						
Date Analyzed		09/16/2005				
Matrix		Sludge				
Units		ug/kg				
Detection Limit Multiplier		1				
Analytes	**PQL**	**Results**				
Azinphos-methyl	5.000	ND				
Bolstar (Sulprofos)	5.000	ND				
Chlorpyrifos	40.000	130				
Coumaphos	5.000	ND				
Demeton	5.000	ND				
Diazinon	5.000	12.7				
Dichlorvos (DDVP, Diclorovos)	5.000	ND				
Disulfoton	5.000	ND				
Ethoprop	5.000	ND				
Fensulfothion	10.000	ND				
Fenthion	5.000	ND				
Merphos	5.000	ND				
Methyl parathion (Parathion methyl)	10.000	30.4				
Mevinphos	5.000	ND				
Naled	5.000	ND				
Phorate (Phosphorodithioic acid)	5.000	ND				
Ronnel	5.000	ND				
Tetrachlorvinphos (Stirophos)	40.000	194				
Tokuthion (Prothiofos)	5.000	ND				
Trichloronate	5.000	ND				

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ANALYTICAL RESULTS

Page: 6
Project ID: M4731
Project Name:

Job Number	Order Date	Client
26834	09/09/2005	CREEK

Method: 8141A, Organophosphorus Compounds by Gas Chromatography

Our Lab I.D.		155383				
Surrogates	Con.Limit	% Rec.				
Surrogate Percent Recovery						
Tributylphosphate	50-170	80				

QUALITY CONTROL REPORT

Batch No: 091605-1

Analytes	MS % REC	MS DUP % REC	RPD %							
Chlorpyrifos	102	108	5.7							
Diazinon	100	99	1.0							
Methyl parathion (Parathion methyl)	100	96	4.1							
Tetrachlorvinphos (Stirophos)	80	77	3.8							

QA/QC REPORTS & CHAINS OF CUSTODY

CREEK ENVIRONMENTAL LABORATORIES, INC.
A Minority-owned Business Enterprise
141 SUBURBAN ROAD, SUITE C-5 • SAN LUIS OBISPO, CA 93401 • (805) 545-9838 • FAX (805) 545-0107

Quality Control Results

Order No.: M4731

Laboratory Reagent Blank

Test	Method	Results	Units
Cyanide, Total (SL)	EPA 9014	< 0.1	mg/Kg
Percent Moisture		0.0	%
Ammonia-Nitrogen Soil		< 3	mg/Kg
Nitrate (NO3-N) SL		< 1	mg/Kg
Oil & Grease	EPA 1664	< 5	ppm
Total Phosphorous - Soil	EPA 365.2	< 5	mg/Kg
Silver (SL 6010 ICP)	EPA 6010	< 0.3	mg/Kg
Barium (SL 6010 ICP)	EPA 6010	< 0.7	mg/Kg
Beryllium (SL 6010 ICP)	EPA 6010	< 0.14	mg/Kg
Cadmium (SL 6010 ICP)	EPA 6010	< 0.3	mg/Kg
Cobalt (SL 6010 ICP)	EPA 6010	< 0.3	mg/Kg
Chromium (SL 6010 ICP)	EPA 6010	< 0.5	mg/Kg
Copper (SL 6010 ICP)	EPA 6010	< 1	mg/Kg
Copper (STLC 6010 ICP)	EPA 6010	< 0.02	mg/L
Mercury (SL 7471 CVAA)	EPA 7471	< 0.04	mg/Kg
Molybdenum (SL 6010 ICP)	EPA 6010	< 0.5	mg/Kg
Nickel (SL 6010 ICP)	EPA 6010	< 0.5	mg/Kg
Lead (SL 6010 ICP)	EPA 6010	< 1	mg/Kg
Lead (STLC 6010 ICP)	EPA 6010	< 0.02	mg/L
Antimony (SL 6010 ICP)	EPA 6010	< 3	mg/Kg
Vanadium (SL 6010 ICP)	EPA 6010	< 0.3	mg/Kg
Zinc (SL 6010 ICP)	EPA 6010	< 1	mg/Kg
Benzene	EPA 8260	< 5	ug/Kg
Bromobenzene	EPA 8260	< 5	ug/Kg
Bromochloromethane	EPA 8260	< 5	ug/Kg
Bromodichloromethane	EPA 8260	< 5	ug/Kg
Bromoform	EPA 8260	< 5	ug/Kg
Bromomethane	EPA 8260	< 5	ug/Kg
t-Butylbenzene	EPA 8260	< 5	ug/Kg
n-Butylbenzene	EPA 8260	< 5	ug/Kg
sec-Butylbenzene	EPA 8260	< 5	ug/Kg
Carbon Tetrachloride	EPA 8260	< 5	ug/Kg
Chlorobenzene	EPA 8260	< 5	ug/Kg
Chloroethane	EPA 8260	< 5	ug/Kg
2-Chloroethylvinylether	EPA 8260	< 5	ug/Kg
Chloroform	EPA 8260	< 5	ug/Kg
Chloromethane	EPA 8260	< 5	ug/Kg
2-Chlorotoluene	EPA 8260	< 5	ug/Kg
4-Chlorotoluene	EPA 8260	< 5	ug/Kg
1,2-Dibromo-3-Chloroprop.	EPA 8260	< 5	ug/Kg
Dibromochloromethane	EPA 8260	< 5	ug/Kg
Dibromomethane	EPA 8260	< 5	ug/Kg
EDB (1,2-Dibromoethane)	EPA 8260	< 5	ug/Kg
Dichlorodifluoromethane	EPA 8260	< 5	ug/Kg
1,2-Dichlorbenzene	EPA 8260	< 5	ug/Kg

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Order No.: M4731

Laboratory Reagent Blank (continued)

Test	Method	Results	Units
1,3-Dichlorobenzene	EPA 8260	< 5	ug/Kg
1,4-Dichlorobenzene	EPA 8260	< 5	ug/Kg
1,1-Dichloroethane	EPA 8260	< 5	ug/Kg
1,2-Dichloroethane	EPA 8260	< 5	ug/Kg
1,1-Dichloroethene	EPA 8260	< 5	ug/Kg
cis-1,2-Dichloroethene	EPA 8260	< 5	ug/Kg
trans-1,2-Dichlorethene	EPA 8260	< 5	ug/Kg
1,2-Dichloropropane	EPA 8260	< 5	ug/Kg
1,3-Dichloropropane	EPA 8260	< 5	ug/Kg
2,2-Dichloropropane	EPA 8260	< 5	ug/Kg
1,1-Dichloropropene	EPA 8260	< 5	ug/Kg
cis-1,3-Dichloropropene	EPA 8260	< 5	ug/Kg
trans-1,3-Dichloropropene	EPA 8260	< 5	ug/Kg
Ethylbenzene	EPA 8260	< 5	ug/Kg
Hexachlorobutadiene	EPA 8260	< 5	ug/Kg
Isopropylbenzene	EPA 8260	< 5	ug/Kg
4-Isopropyl Toluene	EPA 8260	< 5	ug/Kg
Methylene Chloride	EPA 8260	< 5	ug/Kg
MTBE(SL)	EPA 8260	< 5	ug/Kg
Naphthalene	EPA 8260	< 5	ug/Kg
n-Propylbenzene	EPA 8260	< 5	ug/Kg
Styrene	EPA 8260	< 5	ug/Kg
1,1,1,2-Tetrachloroethane	EPA 8260	< 5	ug/Kg
1,1,2,2-Tetrachloroethane	EPA 8260	< 5	ug/Kg
Tetrachloroethene	EPA 8260	< 5	ug/Kg
Toluene	EPA 8260	< 5	ug/Kg
1,2,3-Trichlorobenzene	EPA 8260	< 5	ug/Kg
1,2,4-Trichlorobenzene	EPA 8260	< 5	ug/Kg
1,1,1-Trichloroethane	EPA 8260	< 5	ug/Kg
1,1,2-Trichloroethane	EPA 8260	< 5	ug/Kg
Trichloroethene	EPA 8260	< 5	ug/Kg
Trichlorofluoromethane	EPA 8260	< 5	ug/Kg
1,2,3-Trichloropropane	EPA 8260	< 5	ug/Kg
1,2,4-Trimethylbenzene	EPA 8260	< 5	ug/Kg
1,3,5-Trimethylbenzene	EPA 8260	< 5	ug/Kg
Vinyl Chloride	EPA 8260	< 5	ug/Kg
m,p-Xylene	EPA 8260	< 5	ug/Kg
o-Xylene	EPA 8260	< 5	ug/Kg
Acenaphthene	EPA 8270	< 100	ug/Kg
Acenaphthylene	EPA 8270	< 100	ug/Kg
Anthracene	EPA 8270	< 100	ug/Kg
Azobenzene	EPA 8270	< 100	ug/Kg
Benz[a]anthracene	EPA 8270	< 100	ug/Kg
Benzo[a]pyrene	EPA 8270	< 100	ug/Kg
Benzo[b]fluoranthene	EPA 8270	< 100	ug/Kg

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Order No.: M4731

Laboratory Reagent Blank (continued)

Test	Method	Results	Units
Benzo[ghi]perylene	EPA 8270	< 100	ug/Kg
Benzo[k]fluoranthene	EPA 8270	< 100	ug/Kg
Benzoic acid	EPA 8270	< 100	ug/Kg
Benzyl butyl phthalate	EPA 8270	< 100	ug/Kg
Bis(2chloroethoxy)methane	EPA 8270	< 100	ug/Kg
Bis(2-chloroethyl)ether	EPA 8270	< 100	ug/Kg
Bis(2-chloroisopropyl) et	EPA 8270	< 100	ug/Kg
Bis(2-ethylhexyl) phthala	EPA 8270	< 100	ug/Kg
4-Bromodiphenyl ether	EPA 8270	< 100	ug/Kg
Carbazole	EPA 8270	< 100	ug/Kg
4-Chloro-3-methylphenol	EPA 8270	< 100	ug/Kg
4-Chloroaniline	EPA 8270	< 100	ug/Kg
2-Chloronaphthalene	EPA 8270	< 100	ug/Kg
2-Chlorophenol	EPA 8270	< 100	ug/Kg
4-Chlorophenyl phenyl eth	EPA 8270	< 100	ug/Kg
Chrysene	EPA 8270	< 100	ug/Kg
Dibenz[a,h]anthracene	EPA 8270	< 100	ug/Kg
Dibenzofuran	EPA 8270	< 100	ug/Kg
Dibutyl phthalate	EPA 8270	< 100	ug/Kg
1,2-Dichlorbenzene	EPA 8270	< 100	ug/Kg
1,3-Dichlorbenzene	EPA 8270	< 100	ug/Kg
1,4-Dichlorbenzene	EPA 8270	< 100	ug/Kg
3,3'-Dichlorobenzidine	EPA 8270	< 100	ug/Kg
2,4-Dichlorophenol	EPA 8270	< 100	ug/Kg
Diethyl phthalate	EPA 8270	< 100	ug/Kg
Dimethyl phthalate	EPA 8270	< 100	ug/Kg
2,4-Dimethylphenol	EPA 8270	< 100	ug/Kg
2,4-Dinitrophenol	EPA 8270	< 750	ug/Kg
2,4-Dinitrotoluene	EPA 8270	< 100	ug/Kg
2,6-Dinitrotoluene	EPA 8270	< 100	ug/Kg
Di-n-octyl phthalate	EPA 8270	< 100	ug/Kg
Fluoranthene	EPA 8270	< 100	ug/Kg
Fluorene	EPA 8270	< 100	ug/Kg
Hexachlorethane	EPA 8270	< 100	ug/Kg
Hexachlorobenzene	EPA 8270	< 100	ug/Kg
Hexachlorobutadiene	EPA 8270	< 100	ug/Kg
Hexachlorocyclopentadiene	EPA 8270	< 100	ug/Kg
Indeno[1,2,3-cd]pyrene	EPA 8270	< 100	ug/Kg
Isophorone	EPA 8270	< 100	ug/Kg
2-Methyl-4,6-dinitropheno	EPA 8270	< 100	ug/Kg
2-Methylnaphthalene	EPA 8270	< 100	ug/Kg
2-Methylphenol	EPA 8270	< 100	ug/Kg
4-Methylphenol	EPA 8270	< 100	ug/Kg
Naphthalene	EPA 8270	< 100	ug/Kg
2-Nitroaniline	EPA 8270	< 100	ug/Kg

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Order No.: M4731

Laboratory Reagent Blank (continued)

Test	Method	Results	Units
3-Nitroaniline	EPA 8270	< 100	ug/Kg
4-Nitroaniline	EPA 8270	< 100	ug/Kg
Nitrobenzene	EPA 8270	< 100	ug/Kg
2-Nitrophenol	EPA 8270	< 100	ug/Kg
4-Nitrophenol	EPA 8270	< 100	ug/Kg
N-nitrosodiphenylamine	EPA 8270	< 100	ug/Kg
N-nitrosodipropylamine	EPA 8270	< 100	ug/Kg
Pentachlorophenol	EPA 8270	< 100	ug/Kg
Phenanthrene	EPA 8270	< 100	ug/Kg
Phenol	EPA 8270	< 100	ug/Kg
Pyrene	EPA 8270	< 100	ug/Kg
1,2,4-Trichlorobenzene	EPA 8270	< 100	ug/Kg
2,4,5-Trichlorophenol	EPA 8270	< 100	ug/Kg
2,4,6-Trichlorophenol	EPA 8270	< 100	ug/Kg
Se (STLC 6020 ICPMS)	EPA 6020	< 0.2	mg/L

Laboratory Known Analysis (LCS)

Test	Method	Recovery
Cyanide, Total (SL)	EPA 9014	54%
Nitrate (NO3-N) SL		96%
Oil & Grease	EPA 1664	105%
Total Phosphorous - Soil	EPA 365.2	102%
Total Kjeldahl Nit. Soil	EPA 351.3	109%
Silver (SL 6010 ICP)	EPA 6010	89%
Barium (SL 6010 ICP)	EPA 6010	92%
Beryllium (SL 6010 ICP)	EPA 6010	100%
Cadmium (SL 6010 ICP)	EPA 6010	91%
Cobalt (SL 6010 ICP)	EPA 6010	90%
Chromium (SL 6010 ICP)	EPA 6010	87%
Copper (SL 6010 ICP)	EPA 6010	91%
Copper (STLC 6010 ICP)	EPA 6010	97%
Mercury (SL 7471 CVAA)	EPA 7471	105%
Mercury (SL 7471 CVAA)	EPA 7471	108%
Molybdenum (SL 6010 ICP)	EPA 6010	87%
Nickel (SL 6010 ICP)	EPA 6010	91%
Lead (SL 6010 ICP)	EPA 6010	92%
Lead (STLC 6010 ICP)	EPA 6010	97%
Antimony (SL 6010 ICP)	EPA 6010	51%
Vanadium (SL 6010 ICP)	EPA 6010	86%
Zinc (SL 6010 ICP)	EPA 6010	90%
Benzene	EPA 8260	100%
Chlorobenzene	EPA 8260	96%

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Order No.: M4731

Laboratory Known Analysis (continued)

Test	Method	Recovery
1,1-Dichloroethene	EPA 8260	100%
Toluene	EPA 8260	94%
Trichloroethene	EPA 8260	98%
Acenaphthene	EPA 8270	88%
4-Chloro-3-methylphenol	EPA 8270	79%
2-Chlorophenol	EPA 8270	93%
1,4-Dichlorbenzene	EPA 8270	87%
2,4-Dinitrotoluene	EPA 8270	86%
4-Nitrophenol	EPA 8270	73%
N-nitrosodipropylamine	EPA 8270	108%
Pentachlorophenol	EPA 8270	80%
Phenol	EPA 8270	100%
Pyrene	EPA 8270	79%
1,2,4-Trichlorobenzene	EPA 8270	81%
Se (STLC 6020 ICPMS)	EPA 6020	91%

Matrix Spike/Matrix Spike Duplicates

Test	Method	MS (%) Recovery	MSD (%) Recovery	RPD	Matrix Sample
Silver (SL 6010 ICP)	EPA 6010	81	80	1	05-C10295
Barium (SL 6010 ICP)	EPA 6010	86	85	0	05-C10295
Beryllium (SL 6010 ICP)	EPA 6010	88	88	0	05-C10295
Cadmium (SL 6010 ICP)	EPA 6010	89	92	3	05-C10295
Cobalt (SL 6010 ICP)	EPA 6010	82	81	0	05-C10295
Chromium (SL 6010 ICP)	EPA 6010	83	84	1	05-C10295
Copper (SL 6010 ICP)	EPA 6010	80	84	2	05-C10295
Copper (STLC 6010 ICP)	EPA 6010	97			05-C10267
Copper (STLC 6010 ICP)	EPA 6010	91			05-C10267
Mercury (SL 7471 CVAA)	EPA 7471	75	89	7	05-C10267
Molybdenum (SL 6010 ICP)	EPA 6010	83	82	1	05-C10295
Nickel (SL 6010 ICP)	EPA 6010	82	81	1	05-C10295
Lead (SL 6010 ICP)	EPA 6010	80	79	1	05-C10295
Lead (STLC 6010 ICP)	EPA 6010	92	86	3	05-C10267
Antimony (SL 6010 ICP)	EPA 6010	81	80	1	05-C10295
Vanadium (SL 6010 ICP)	EPA 6010	86	85	0	05-C10295
Zinc (SL 6010 ICP)	EPA 6010	78	77	1	05-C10295
Se (STLC 6020 ICPMS)	EPA 6020	110	109	0	05-C10267

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Order No.: M4731

Sample Duplicate

Test	Method	Sample ID	Sample Value	Sample Duplicate	RPD
Cyanide, Total (SL)	EPA 9014	05-C10267	< 0.1	< 0.1	0
Ammonia-Nitrogen Soil		05-C10295	940	919	2
Nitrate (NO3-N) SL		05-C10295	< 1	< 1	0
Oil & Grease	EPA 1664	kv:LCS	42	41	2
pH (Soil)	EPA 9045	05-C10267	6.9	6.9	0
Total Phosphorous - Soil	EPA 365.2	05-C10295	4670	4650	0
Total Dissolved Solids	EPA 160.1	05-C10267	3000	3740	22
Total Kjeldahl Nit. Soil	EPA 351.3	05-C10267	20400	19000	7
Benzene	EPA 8260	05-C10267	< 5	< 5	0
Bromobenzene	EPA 8260	05-C10267	< 5	< 5	0
Bromochloromethane	EPA 8260	05-C10267	< 5	< 5	0
Bromodichloromethane	EPA 8260	05-C10267	< 5	< 5	0
Bromoform	EPA 8260	05-C10267	< 5	< 5	0
Bromomethane	EPA 8260	05-C10267	< 5	< 5	0
t-Butylbenzene	EPA 8260	05-C10267	< 5	< 5	0
n-Butylbenzene	EPA 8260	05-C10267	< 5	< 5	0
sec-Butylbenzene	EPA 8260	05-C10267	< 5	< 5	0
Carbon Tetrachloride	EPA 8260	05-C10267	< 5	< 5	0
Chlorobenzene	EPA 8260	05-C10267	< 5	< 5	0
Chloroethane	EPA 8260	05-C10267	< 5	< 5	0
2-Chloroethylvinylether	EPA 8260	05-C10267	< 5	< 5	0
Chloroform	EPA 8260	05-C10267	< 5	< 5	0
Chloromethane	EPA 8260	05-C10267	< 5	< 5	0
2-Chlorotoluene	EPA 8260	05-C10267	< 5	< 5	0
4-Chlorotoluene	EPA 8260	05-C10267	< 5	< 5	0
1,2-Dibromo-3-Chloroprop.	EPA 8260	05-C10267	< 5	< 5	0
Dibromochloromethane	EPA 8260	05-C10267	< 5	< 5	0
Dibromomethane	EPA 8260	05-C10267	< 5	< 5	0
EDB (1,2-Dibromoethane)	EPA 8260	05-C10267	< 5	< 5	0
Dichlorodifluoromethane	EPA 8260	05-C10267	< 5	< 5	0
1,2-Dichlorbenzene	EPA 8260	05-C10267	< 5	< 5	0
1,3-Dichlorobenzene	EPA 8260	05-C10267	< 5	< 5	0
1,4-Dichlorobenzene	EPA 8260	05-C10267	< 5	< 5	0
1,1-Dichloroethane	EPA 8260	05-C10267	< 5	< 5	0
1,2-Dichloroethane	EPA 8260	05-C10267	< 5	< 5	0
1,1-Dichloroethene	EPA 8260	05-C10267	< 5	< 5	0
cis-1,2-Dichloroethene	EPA 8260	05-C10267	< 5	< 5	0
trans-1,2-Dichlorethene	EPA 8260	05-C10267	< 5	< 5	0
1,2-Dichloropropane	EPA 8260	05-C10267	< 5	< 5	0
1,3-Dichloropropane	EPA 8260	05-C10267	< 5	< 5	0
2,2-Dichloropropane	EPA 8260	05-C10267	< 5	< 5	0
1,1-Dichloropropene	EPA 8260	05-C10267	< 5	< 5	0

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Quality Control Results

Order No.: M4731

Sample Duplicate (continued)

Test	Method	Sample ID	Sample Value	Sample Duplicate	RPD
cis-1,3-Dichloropropene	EPA 8260	05-C10267	< 5	< 5	0
trans-1,3-Dichloropropene	EPA 8260	05-C10267	< 5	< 5	0
Ethylbenzene	EPA 8260	05-C10267	< 5	< 5	0
Hexachlorobutadiene	EPA 8260	05-C10267	< 5	< 5	0
Isopropylbenzene	EPA 8260	05-C10267	< 5	< 5	0
4-Isopropyl Toluene	EPA 8260	05-C10267	< 5	< 5	0
Methylene Chloride	EPA 8260	05-C10267	< 5	< 5	0
MTBE(SL)	EPA 8260	05-C10267	< 5	< 5	0
Naphthalene	EPA 8260	05-C10267	< 5	< 5	0
n-Propylbenzene	EPA 8260	05-C10267	< 5	< 5	0
Styrene	EPA 8260	05-C10267	< 5	< 5	0
1,1,1,2-Tetrachloroethane	EPA 8260	05-C10267	< 5	< 5	0
1,1,2,2-Tetrachloroethane	EPA 8260	05-C10267	< 5	< 5	0
Tetrachloroethene	EPA 8260	05-C10267	< 5	< 5	0
Toluene	EPA 8260	05-C10267	< 5	< 5	0
1,2,3-Trichlorobenzene	EPA 8260	05-C10267	< 5	< 5	0
1,2,4-Trichlorobenzene	EPA 8260	05-C10267	< 5	< 5	0
1,1,1-Trichloroethane	EPA 8260	05-C10267	< 5	< 5	0
1,1,2-Trichloroethane	EPA 8260	05-C10267	< 5	< 5	0
Trichloroethene	EPA 8260	05-C10267	< 5	< 5	0
Trichlorofluoromethane	EPA 8260	05-C10267	< 5	< 5	0
1,2,3-Trichloropropane	EPA 8260	05-C10267	< 5	< 5	0
1,2,4-Trimethylbenzene	EPA 8260	05-C10267	< 5	< 5	0
1,3,5-Trimethylbenzene	EPA 8260	05-C10267	< 5	< 5	0
Vinyl Chloride	EPA 8260	05-C10267	< 5	< 5	0
m,p-Xylene	EPA 8260	05-C10267	< 5	< 5	0
o-Xylene	EPA 8260	05-C10267	< 5	< 5	0

Environmental Micro Analysis, Inc. ELAP Certificate #2211
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Analytical Report

October 13, 2005

Client: Orval Osborne
Creek Analytical Laboratories, Inc.
141 Suburban Road, Suite C-5
San Louis Obispo, CA 93401
Phone: (805) 545-9838
Fax: (805) 545-0107
Email:
Report via: ☐ Fax ☐ E-Mail

Project No: M4731

PO No:

Client Sample ID: Blank

Sample Date: ?
EMA Sample No: 05093001-00
Date Received: 9/30/2005
Sample Matrix: Soil

Analytical Method: EPA 8141A (s) (OP's)
Extraction Method: EPA 3550
Date Extracted: 10/10/2005
Date Completed: 10/12/2005
Surrogate: Triphenylphosphate
Surrogate Level: 0.17 ppm
Recovery: 110

Analyte	Amount ppm	MRL ppm
Azinphos-methyl (Guthion)	ND	0.050
Bolstar (Sulprofos)	ND	0.050
Bensulide	ND	0.050
Carbofenthion (Trithion)	ND	0.200
Chlorfenvinphos (Supona)	ND	0.050
Chlorpyrifos (Dursban)	ND	0.030
Chlorpyrifos-methyl	ND	0.030
Ciodrin (Crotophos)	ND	0.050
Coumaphos (Co-Ral)	ND	0.150
DEF	ND	0.050
Demeton (Systox) O/S Analogues	ND	0.050
Diazinon	ND	0.050
Dibrom (Naled)	ND	0.050
Dicrotophos (Didrin)	ND	0.050
Dimethoate (Cygon)	ND	0.050
Disulfoton (Disyston)	ND	0.030
EPN	ND	0.100
Ethion	ND	0.050
Ethoprop (Modap)	ND	0.050
Fenamiphos (Nemacur)	ND	0.050
Fenitrothion (Sumithion)	ND	0.050
Fenthion (Baytex)	ND	0.050
Fonofos (Dyfonate)	ND	0.050
Imidan (Phosmet)	ND	0.050
Isofenphos (Oftanol)	ND	0.050
Malathion	ND	0.050
Methidathion (Supracide)	ND	0.050
Methyl Parathion	ND	0.050
Mevinphos (Phosdrin)	ND	0.050
Parathion	ND	0.050
Phorate (Thimet)	ND	0.050
Phosalone (Zolone)	ND	0.150
Phosphamidon (Dimecron)	ND	0.100
Primiphos-methyl	ND	0.050
Profenofos (Curacron)	ND	0.100
Propetamphos (Safrotin)	ND	0.050
Ronnel (Fenchlorfos)	ND	0.050
Tetrachlorvinphos (Gardona)	ND	0.050
Thionazin (Zinophos)	ND	0.050

ND = Not Detected at or above Environmental Micro Anlaysis, Inc. Method Reporting Limit (MRL)

Date: 10/13/05 Signed: Donald A. Pitt, Laboratory Director

Environmental Micro Analysis, Inc. ELAP Certificate #2211
40 N East Street, Suite B
Woodland, CA 95776

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e-mail: emalab@emalab.com website: www.emalab.com

Analytical Report

October 13, 2005

Client: Orval Osborne
Creek Analytical Laboratories, Inc.
141 Suburban Road, Suite C-5
San Louis Obispo, CA 93401
Phone: (805) 545-9838
Fax: (805) 545-0107
Email:
Report via: ☐ Fax ☐ E-Mail

Project No: M4731

PO No:

Client Sample ID: Blank

Sample Date: ?
EMA Sample No: 05093001-00
Date Received: 9/30/2005
Sample Matrix: Soil

Analytical Method: EPA 8141A (s) (ON's)
Extraction Method: EPA 3550
Date Extracted: 10/10/2005
Date Completed: 10/12/2005
Surrogate: Triphenylphosphate
Surrogate Level: 0.17 ppm
Recovery: 110

Analyte	Amount ppm	MRL ppm
Acetamaprid	ND	0.200
Ametryn	ND	0.100
Atrazine	ND	0.050
Azoxystrobin	ND	0.050
Benthiocarb	ND	0.200
Cyanazine (Bladex)	ND	0.050
Diphenyl Amine	ND	0.200
Hexazinone (Velpar)	ND	0.100
Imazalil	ND	0.200
Metalaxyl (Ridomil)	ND	0.200
Metolachlor (Dual)	ND	0.100
Metribuzin (Sencor)	ND	0.100
Molinate (Ordram)	ND	0.100
Myclobutanil	ND	0.050
Prometon	ND	0.050
Prometryne	ND	0.050
Pymetrazine	ND	0.050
Simazine	ND	0.050
Terbacil	ND	0.500
Thiabendazole	ND	0.100

ND = Not Detected at or above Environmental Micro Anlaysis, Inc. Method Reporting Limit (MRL)

Date: 10/13/05 Signed: _____, Laboratory Director

Environmental Micro Analysis, Inc.

40 N. East Street, Suite B, Woodland, CA 95776
Phone: (530) 666-6890 Fax (530) 666-2987
E-Mail emalab@emalab.com Website: www.emalab.com
California State Certification #2211

QUALITY CONTROL REPORT

Client: Orval Osborne
Creek Analytical Laboratories, Inc.
141 Suburban Road, Suite C-5
San Louis Obispo , CA 93401

EMA Data Set: 05093001

Date Analyzed: 10/12/2005

Matrix: Soil

Sample Spiked: 05100410-01

Test: OP/ON Screen

Spike Compound	Spike Level	Units	Recovery In Percent Spike	Duplicate
Diazinon	0.50	ppm	111.3	107.2
Tetrachlorvinphos	0.50	ppm	91.1	87.5
Azinphos Methyl	0.50	ppm	111.4	98.8

Sample 05100410-02 was used as the spike duplicate.

Creek Environmental Laboratories, Inc.

141 Suburban Road, Suite C-5, San Luis Obispo, CA 93401 phone (805) 545-9838 fax (805) 545-0107

SUB CONTRACT

Client Name	Contact	Phone	Due Date:
CREEK ENVIRONMENTAL LABORATORIES INC.	ORVAL OSBORNE	805-545-9838	
Address 141 SUBURBAN ROAD SUITE C-5	**City** SAN LUIS OBISPO **State** CA **Zip** 93401	Fax 805-545-0107	Normal T.A.T. 24 hour 48 hour Other 72 hour
Project Name / Number M4731	Sampler Name	Sampler Employed By:	
Subcontracting Laboratory EMA	Address 40 N. East St. Suite B Woodland, CA 95776		Matrix Key: DW = Drinking Water AQ = Aqueous SL = Soil/Solid

Creek Labs	Sample Description	Date / Time Sampled	Analysis Requested	Matrix	# of Containers	Preservative / Bottle Type	Lab Sample #
( )	solids-comp (10267) ~~10267~~	9-8-05 1230 hrs.	8141	SL	1	4oz jar	
	We are aware that the sample is outside of hold time. Please proceed with analysis						

Relinquished for Creek Laboratories Inc. by:

Sign	Print	Company Name	Date / Time
J Struthers	J Struthers	Creek	9/28/05 1700

Received by:

Sign	Print	Company Name	
Denise Lucchesi	D. Lucchesi	EMA	9/30/05 9:09

Shipping Method: Client / Lab / Courier Sample Conditions: Intact: Y / N Cold: Y / N Custody Sealed: Y / N

Courier Name: _____ Package Weight _____ Date Shipped _____

State Forms Required: Yes / No User ID: _____ System #: _____ System Name: _____

AMERICAN SCIENTIFIC LABORATORIES, LLC
Environmental Testing Services
2520 N. San Fernando Rd., Los Angeles, CA 90065 Tel: (323) 223-9700 Fax: (323) 223-9500

Ordered By

Creek Environmental Labs, Inc.
141 Suburban Rd Suite C-5
San Luis Obispo, CA 93401-

Telephone (805)545-9838
Attn Orval Osborne

Number of Pages 6
Date Received 09/09/2005
Date Reported 09/21/2005

Job Number	Ordered	Client
26834	09/09/2005	CREEK

Project ID: M4731
Project Name:

Enclosed are the results of analyses on 1 sample analyzed as specified on attached chain of custody.

Wendy Lu
Organics Supervisor

Rojert G. Araghi
Laboratory Director