

BODOG1-TMA

000001

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WESTINGHOUSE HANFORD COMPANY

Results of Analyses For:

ORGANICS
CASE NO. 09-068
(TMA/ARLI Work Order # A4-09-068)

Organic results are presented
for the following WHC SOIL samples:

BODOG1



Norcal Work Order # N4-09-132

Thermo Analytical Inc.
160 Taylor Street
Monrovia, CA 91016
(818) 357-3247

Date submitted:

10 / 24 / 94

CASE NARRATIVE

LABORATORY : TMA/ARLI

CASE : 09-068

CONTRACT ID : WESTINGHOUSE HANFORD COMPANY

SDG RECEIPT DATE : September 29, 1994

1.0 DESCRIPTION OF CASE :

One soil sample was analyzed for TCL Organics- Pesticides/PCBs, Organophosphorus Pesticides and Herbicides in accordance with USEPA SW-846 Methods 8080, 8140, and 8150, respectively. All of the final sample results have been reported on a dry weight basis.

2.0 SAMPLE LIST :

<u>WESTINGHOUSE ID</u>	<u>LAB ID</u>	<u>ANALYSIS REQUESTED</u>	<u>MATRIX</u>
B0DOG1	A4-09-068-01	P, OP, H	SOIL
B0DOG1 MS	A4-09-068-01	P, OP, H	SOIL
B0DOG1 MSD	A4-09-068-01	P, OP, H	SOIL

3.0 COMMENTS :

3.1 SHIPPING AND DOCUMENTATION :

All of the samples were received intact and properly documented.

3.2 ANALYSIS

3.2.1 PESTICIDE/PCB ANALYSIS COMMENTS :

SEQUENCE NOTES :

The sequence was started on 10/04/94 and was analyzed according to the SW-846 Method 8080. The initial calibration for the multiresponse analytes was performed from 09/22/94 through 09/26/94. The sequence was analyzed by single injection into a dual column system.

On both the DB-5 and the DB-608 columns, the %RSD for all Pesticide analytes were below the QC limit. The %D for Aroclor-1254 exceeded the 15% limit on the DB-608 column in GC file BJ04021. The %D for Aroclor-1232 exceeded the 15% limit on the DB-5 column in GC file AJ04018.

All of the other QC results were within the limits specified by the SW-846 Method 8080.

The chromatograms were presented in the manner consistent with the capabilities of the Nelson 2700 Turbochrome Data System which normalized the largest peak to scale.

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SAMPLE NOTES :

LOW LEVEL SOIL :

The samples were extracted and analyzed within the required SW-846 holding times.

All of the QC results were within the limits specified by the SW-846 Method 8080.

3.2.2 ORGANOPHOSPHORUS PESTICIDE ANALYSIS COMMENTS :

SEQUENCE NOTES :

The sequence was started on 10/05/94 and was analyzed according to the SW-846 Method 8140. The sequence was analyzed by single injection into a primary column.

The retention times for several of the TCL analytes in the ending continuing calibration standard (AJ05016) shifted outside of their established windows. The following analytes were outside of the windows: Dementon-O, Ethoprop, Phorate, Bolstar, Azinphos Methyl, and surrogates TPP and TBP. The shift in retention time ranged from 0.01-0.02 minutes. The samples were not reinjected since there were no TCL analytes detected by the very specific detector used for this analysis.

All of the other QC results were within the limits specified by the SW-846 Method 8140.

SAMPLE NOTES :

LOW LEVEL SOIL :

The samples were extracted and analyzed within the required SW-846 holding times.

All of the QC results were within the limits specified by the SW-846 Method 8140.

3.2.3 HERICIDES ANALYSIS COMMENTS :

SEQUENCE NOTES :

The sequence was started on 10/05/94 and was analyzed according to the SW-846 Method 8150. The sequence was analyzed by single injection into a dual column system.

On the DB-1701 (confirmation) column, the %RSD for MCPA exceeded the 20% QC limit for the ICAL as well as the 15% D QC limit in the continuing calibration standards.

All of the other QC results were within the limits specified by the SW-846 Method 8150.

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SAMPLE NOTES :

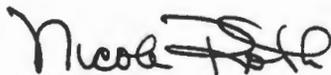
LOW LEVEL SOIL :

The samples were extracted and analyzed within the required SW-846 holding times. 2,4-D was detected in the sample at approximately 140 ug/Kg.

The matrix spike recoveries in the MS and MSD samples were very low for 2,4-D as a result of the higher concentration detected in the unspiked sample than the MS and MSD (non-homogenous). The MSD sample also showed an increase in the background interferences. The MSD sample yielded higher spike recoveries for Silvex and Dichlorprop and lower surrogate recovery for DCAA. An LCS was processed throughout the entire process and it yielded good recoveries. The results of the LCS have been included in the package.

All of the other QC results were within the limits specified by the SW-846 Method 8150.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data in this hardcopy data package is authorized by the Laboratory Manager or his designee, as verified by the following signature.



Nicole Roth
CLP Program Manager

10/24/94

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PAGE 1 TMA/Morcal CHAIN OF CUSTODY ORD # M4-09-132
RCVD: 09/29/94 DUE: 10/09/94 09/29/94 14:27:18 KKKP: 10/09/95 DISP: 8

DASH	SAMPLE IDENTIFICATION	STORED	TESTS for FRACTIONS with work in DEPT: SU and CATEGORY		
01A-S	BODOG1	ARLI	WH200	WH203	WH204
01B-S	BODOG1 MS	ARLI	WH200	WH203	WH204
01C-S	BODOG1 MSD	ARLI	WH200	WH203	WH204

RELEASED BY	DATE	TRANSFERRED TO	DATE	RECEIVED BY	DATE
<u>Gyamamoto</u>	<u>9/29/94</u>	<u>ARH</u>	<u>9/29/94</u>	<u>Pat M. Heath</u>	<u>9/30/94</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

"Data Deliverable - Summary" "Priority Turnaround"

Ch2M Hill
Hanford

CHAIN OF CUSTODY

Custody Form Initiator *C.E. Heiden*
 Company Contact *C.E. Heiden*
 Project Designation/Sampling Locations *Riverland ERA*
Suspect Waste Site
 Ice Chest No. *IT-1*
 Bill of Lading/Airbill No.
 Method of Shipment *Burlington*
 Shipped to *TMA* *Richmond, CA*
 Possible Sample Hazards/Remarks *Potential 2H-D Amine Contamination*

Telephone *376-2640*
 Collection Date *9/26/94*
 Field Logbook No. *ERL-1042-3*
 Offsite Property No. *W94-0-0944 #24*

Sample Identification

BODOG1 - Soil (3) 120 ml alg jars, (1) cat
9/27/94

Field Transfer of Custody Chain of Possession (Sign and Print Names)

Relinquished By	Date	Time	Received By	Date	Time
<i>C.E. Heiden C.E. Heiden</i>	<i>9/28/94</i>	<i>1245</i>	<i>[Signature]</i>	<i>9-29-94</i>	<i>1:30</i>

Final Sample Disposition

Disposal Method: _____ Disposed by: _____ Date/Time: _____
 Comments: _____

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"Next Day Delivery"

Contractor <i>CH2M Hill Hanford</i>	OFF-SITE PROPERTY CONTROL	CONTROL NO. (To be obtained from PROPERTY MANAGEMENT) <i>1294-0-0944 #25</i>
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PART I - TO BE COMPLETED BY ORIGINATOR

Department <i>Environmental Engineering & Sciences</i>	Section <i>Field Characterization & Sampling</i>	Unit —
The following items are to be shipped from		<input checked="" type="checkbox"/> Contractor <input type="checkbox"/> Vendor
Routing		<input checked="" type="checkbox"/> Prepaid <input type="checkbox"/> Collect
Shipped to <i>TMA/Norcal</i>	Off-site Custodian <i>Attn: Robert Fox</i>	
Company <i>2030 Wright Ave.</i>	On-site Custodian	
Address <i>Richmond</i>	State <i>CA</i> Zip Code <i>94804</i>	Payroll No.
City		
Country		

Qty.	Property No.	Description (include Manufacture Name, Model, Serial No.)	Acquisition Cost
<i>1</i>		<i>Polycooler (IT-1) Samples packed in plastic bags and vermiculite. Samples stored with blue ice. Sample # BODOG1 Weight - 22 lbs.</i>	

Classified Unclassified Shipped Under DOE Contract Shipped Under Contractor's Use Permit Contract.

Necessity for the off-site use of this property

Required for Project Work. List Project No. _____

Business Trip

Off-site Assignment

Shipment to Subcontractor. List Subcontract No. _____

Other (Please specify) *Samples require analysis that is not presently available on site.*

Bill of Lading # 520 302 607.

CERTIFICATION OF THE RADIATION MONITORING RELEASE MUST BE SECURED THE SAME DAY THAT MATERIAL IS DELIVERED TO SHIPPING.

RM Clearance for Public Release <i>L. Muller</i>	RM Survey No. <i>179393</i>	Date <i>9-28-94</i>
Location of and Contact for Property (Name/Phone No./Bldg./Area) <i>Riverland ERA / Suspect Waste Site</i>		
Date Ready for Shipment <i>9/28/94</i>	Cost Code to be Charged <i>PB6AE</i>	Approximate Date This Property will be Returned
Originated By <i>CE Heiden</i>	Date <i>9/28/94</i>	Authorized By <i>Jonathan G. Lucas</i>
Property Representative Signature	Date	Property Management Approval <i>Kathy Carey</i>
		Date <i>9/28/94</i>

PART II - TO BE COMPLETED BY SHIPPING

Authorized Shipping Signature <i>Jim Foss</i>	Date <i>9/28/94</i>
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DISTRIBUTION (AFTER FINAL SIGNATURES)

White - Property Management Yellow - Shipping Green - Accounts Payable Pink - Originator Goldenrod - Property Management

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SAMPLE LOG-IN SHEET

LAB NAME : TMA/ARLI

PAGE : 1 OF 1

RECEIVED BY (PRINT NAME): NAL McELRATH

LOG-IN-DATE : 9/30/94

RECEIVED BY (SIGNATURE): [Signature]

ICE CHEST NO. <u>RM89</u>	CORRESPONDING			REMARKS: CONDITION OF SAMPLE SHIPMENT, ETC
	EPA SAMPLE #	SAMPLE TAG #	ASSIGNED LAB #	
REMARKS:	BOD061		A409068	GOOD
1. Custody Seal(s) <u>Present/Absent*</u> <u>Intact/Broken</u>	BOD056		A409067	1 w/BUBBLES
2. Custody Seal Nos: <u>N/A</u>	BOD057		↓	1 w/BUBBLES
3. Chain of Custody Records <u>Present/Absent*</u>				
4. Traffic Reports or Packing List <u>Present/Absent*</u>				
5. Air bill <u>Air Bill/Sticker</u> <u>Present/Absent*</u>				
6. Air bill No.: <u>9552159304</u>				
7. Sample Tags <u>Present/Absent*</u>				
8. Sample Tags Numbers <u>N/A</u> <u>Listed/Not Listed on Chain of Custody</u>				
9. Sample Condition: <u>Intact/Broken*/Leaking</u>				
10. Does information on custody records, traffic reports, and sample tags agree <u>Yes/No*</u>				
11. Date Received at Lab: <u>9/30/94</u>				
12. Temp of ice chest <u>3 °C</u>				
13. Time Received: <u>0940</u>				
SAMPLE TRANSFER				
Fraction: _____				
Area #: _____				
By: _____				
On: _____				

* Contact SHD and attach record of resolution

Reviewed By: Maureen Parrish

Logbook No.: N/A

Date: 9/30/94

Logbook Page No.: _____

FORM DC-1

000007



USE THIS AIRBILL FOR SHIPMENTS WITHIN THE CONTINENTAL U.S., ALASKA AND HAWAII. USE THE INTERNATIONAL AIRWAYBILL FOR SHIPMENTS TO EUROPE, JAPAN AND ALL OTHER U.S. LOCATIONS. QUESTIONS? CALL 800-238-5353 TOLL FREE.

AIRBILL PACKAGE TRACKING NUMBER 9552159304

41234 9552159304

RECIPIENT'S COPY

From (Your Name) Please Print SAMPLE CONTROL	Your Phone Number (Very Important) (510) 255-2033	To (Recipient's Name) Please Print Neil S. McElkath	Recipient's Phone Number (Very Important) (818) 357-321
Company (Optional) ETHA/BUREAU	Department/Floor No. TMA/ARLI	Company TMA/ARLI	Department/Floor No.
Street Address 2030 WRIGHT		Exact Street Address (We Cannot Deliver to P.O. Boxes or P.O. Zip Codes.) 160 TAYLOR STREET	
City RICHMOND	State CA	City MONROVIA	State CA
YOUR INTERNAL BILLING REFERENCE INFORMATION (optional) (First 24 characters will appear on invoice) 23406406		IF HOLD AT FEDEX LOCATION, Print FEDEX Address Here SHIPMENT	
PAYMENT <input checked="" type="checkbox"/> Cash <input type="checkbox"/> Check		ZIP Required 94601	

SERVICES (Check only one box)		DELIVERY AND SPECIAL HANDLING (Check services required)		WEIGHT 35 35 35		Federal Express Use <input type="checkbox"/> Cash Received <input type="checkbox"/> Return Shipment <input type="checkbox"/> Third Party <input type="checkbox"/> Chg. To Del. <input type="checkbox"/> Chg. To Hold Street Address City State Zip Received By: <input checked="" type="checkbox"/> X Date/Time Received FedEx Employee Number	
<input type="checkbox"/> Priority Overnight <input checked="" type="checkbox"/> OTHER PACKAGING <input type="checkbox"/> FEDEX LETTER <input type="checkbox"/> FEDEX PAK <input type="checkbox"/> FEDEX BOX <input type="checkbox"/> FEDEX TUBE <input type="checkbox"/> Economy Two-Day <input type="checkbox"/> Government Overnight <input type="checkbox"/> Freight Service	<input type="checkbox"/> Standard Overnight <input checked="" type="checkbox"/> OTHER PACKAGING <input type="checkbox"/> FEDEX LETTER <input type="checkbox"/> FEDEX PAK <input type="checkbox"/> FEDEX BOX <input type="checkbox"/> FEDEX TUBE	<input checked="" type="checkbox"/> WEEKDAY SERVICE <input type="checkbox"/> HOLD AT FEDEX LOCATION WEEKDAY <input checked="" type="checkbox"/> DELIVER WEEKDAY <input type="checkbox"/> Saturday Service <input type="checkbox"/> HOLD AT FEDEX LOCATION SATURDAY <input type="checkbox"/> DELIVER SATURDAY <input checked="" type="checkbox"/> SATURDAY PICK-UP	<input type="checkbox"/> DANGEROUS GOODS <input type="checkbox"/> DUTY <input type="checkbox"/> HOLIDAY DELIVERY	<input type="checkbox"/> DIM SHIPMENT L x W x H	<input type="checkbox"/> Regular Stop <input type="checkbox"/> Drop Stop <input type="checkbox"/> On-Call Stop <input type="checkbox"/> S.S.C. <input type="checkbox"/> Station	<input type="checkbox"/> Base Charge <input type="checkbox"/> Declared Value Charge Other 1 Other 2 Total Charges REVISION DATE 2/94 PART #137204 FXEM 4/94 FORMAT #153 158 © 1992-93 FEDEX PRINTED IN U.S.A.	

TMA/ARLI
Thermo Analytical Inc.

RADIATION DOSE RATE SURVEY FORM

Date 9/30/94 COMPANY TMA/RICHMOND (WMC) OTHER ORD # FED EX 9552159304
 Surveyor's Name NEIL MCLEOD

Model No. HP-210 / ESP-1 Model No. AC-3-7 / ESP-1
 Serial Nos. 710289 / 02619 Serial Nos. 407726 / 02628

Calibration Date 5/17/94 Calibration Date 9/12/94

Instrument Calibration Factor 28.4% Instrument Calibration Factor 19.3%

Sample	Location	HP-210 CPM	HP-210 Factor	HP-210 DPM	AC-3-7 CPM	AC-3-7 Factor	AC-3-7 DPM	Spillage or Breakage?	Activity, nCi/mL or nCi/g
Background		25			2				
Consistency		7250	28.0%		5010	19.3%			
Smears:									
RMB9		35			1				
WESTINGHOUSE REPORTS ALL SAMPLES < 50 P ⁶ /g									
(D) 9/30/94									

Comments: VIATORON SURVEY = 225 uREM/HR

All OK Approved [Signature]

Not OK Date 9/30/94

000013

Received: 09/30/94

TMA Inc. REPORT
Results by Sample

Work Order # A4-09-068

SAMPLE ID BODOG1FRACTION 01A TEST CODE 8080SP NAME Pest/PCB Soil Pkg.
Date & Time Collected 09/26/94 Category OTHER

8080 PESTICIDE/PCB ORGANICS

Matrix: SOIL
Sample wt/vol: 30.2 g
Moisture: 4
Extraction (SepF/Cont/Sonc): SONC
Concentrated Extract Volume: 10 mL
Injection Volume: 1 uL
GPC Cleanup (Y/N): N pH Lab File Id: BJ04030
Decanted (Y/N): N
Date Prepared: 10/03/94
Date Analyzed: 10/05/94
Dilution Factor 1.0
Sulfur Cleanup (Y/N): N

CAS NO.	COMPOUND	RESULT ug/Kg	DET. LIM ug/Kg
319-84-6	alpha-BHC	ND	1.8
319-85-7	beta-BHC	ND	1.8
319-86-8	delta-BHC	ND	1.8
58-89-9	gamma-BHC (Lindane)	ND	1.8
76-44-8	Heptachlor	ND	1.8
309-00-2	Aldrin	ND	1.8
1024-57-3	Heptachlor epoxide	ND	1.8
959-98-8	Endosulfan I	ND	1.8
60-57-1	Dieldrin	ND	3.4
72-55-9	4,4'-DDE	ND	3.4
72-20-8	Endrin	ND	3.4
33213-65-9	Endosulfan II	ND	3.4
72-54-8	4,4'-DDD	ND	3.4
1031-07-8	Endosulfan sulfate	ND	3.4
50-29-3	4,4'-DDT	ND	3.4
72-43-5	Methoxychlor	ND	18
53494-70-5	Endrin ketone	ND	3.4
7421-93-4	Endrin aldehyde	ND	3.4
57-74-9	Chlordane	ND	18
8001-35-2	Toxaphene	ND	180
12674-11-2	Aroclor-1016	ND	34
11104-28-2	Aroclor-1221	ND	68
11141-16-5	Aroclor-1232	ND	34
53469-21-9	Aroclor-1242	ND	34
12672-29-6	Aroclor-1248	ND	34
11097-69-1	Aroclor-1254	ND	34
11096-82-5	Aroclor-1260	ND	34

Percent Surrogate Recovery

TCX 87DCB 108

FORM I