

September 15, 2022

Ms. Anne Antin
Hawaii Analytical Laboratory, LLC
3615 Harding Ave Ste 308
Honolulu, HI 96816
USA

Dear Anne,

Thank you for participating in the HW0722 Soil / Hazardous Waste PT Study. Enclosed is your final report, which has been carefully reviewed by the PT specialists at Phenova. This report presents some additional sections and features which will give you more information on the study data for the standards that were reported by your laboratory and more information regarding the overall performance of your laboratory in relation to other study participants.

The enclosed report is in two sections, the "Evaluation Report" and the "Statistical Report". The "Evaluation Report" contains the evaluation of your reported data as well the reported method, analysis date and analyst. The "Evaluation Report" is an updated and enhanced version of the reports you previously received at the conclusion of our PT studies. The "Statistical Report" contains your passing percentage as well as statistics from the study for the analytes reported by your laboratory.

For any analyte falling outside the established acceptance limits, our PT management staff would like to assist you in determining the most appropriate course of corrective action for your facility. Please contact us at any time if we may be of service to you.

Thank you again for participating in the HW0722 Soil / Hazardous Waste PT Study. We appreciate working with you and look forward to our next study. If you have any questions, please call us at 866-942-2978.

Report Definitions:

Assigned Value

The Assigned Value is determined from the study mean, gravimetric and volumetric true concentration of an analyte to be analyzed, calculation and/or an appropriate reference value as stipulated in the EPA National Standards for Water Proficiency Testing Studies Criteria Document (current version), the National Environmental Laboratory Accreditation Conference Institute (TNI) criteria (ref: TNI FOT tables, TNI PT Committee) and other documents distributed by accrediting agencies as applicable.

Evaluation Limits

Acceptance Limits are derived from fixed limits, coefficients, constants and calculations stipulated in the EPA National Standards for Water Proficiency Testing Studies Criteria Documents (current version), the National Environmental Laboratory Accreditation Conference Institute (TNI) criteria (ref: TNI FOT tables, TNI PT Committee) and other documents distributed by accrediting agencies as applicable.

Evaluation

Acceptable

The reported value falls within the Acceptance Limits.

Not Acceptable

The reported value falls outside the Acceptance Limits.

No Evaluation

The reported value is non-numeric and can not be evaluated.

NR

As required by the TNI standards and requested by state authorities, any analyte purchased but not reported by your facility is listed as NR (Not Reported).

Study Mean and Standard Deviation

The mean and standard deviation are calculated from the study data using robust statistical calculations when possible. Other statistical calculations may be used if robust statistical calculations are not possible. The displayed values are independent of any statistical calculations required for the calculation of the analyte evaluation limits.

This report must not be reproduced except in full, without the written approval of Phenova.

Various aspects of Phenova's proficiency testing schemes can from time to time be subcontracted. If subcontracting occurs, it is placed with a competent and qualified subcontractor and Phenova is responsible for all work performed.

This report must not be used to claim product certification, approval, or endorsement by the American Association for Laboratory Accreditation (A2LA) or any agency of the federal government.



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Phone 303-940-0033
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State Regulatory Agency Request(s):

No requests were made to send a copy of your HW0722 final results to a state agency.

Other Regulatory Agency Request(s):

No requests were made to send a copy of your HW0722 final results to an agency.

Third Party Request(s):

No requests were made to send a copy of your HW0722 final results to a third party.

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Final Report - Soil / Hazardous Waste PT

Study: HW0722

Opening Date: July 25, 2022 - Closing Date: September 8, 2022

Laboratory: Hawaii Analytical Laboratory, LLC
3615 Harding Ave Ste 308
Honolulu, HI 96816
USA

Contact: Ms. Anne Antin
8087350422

EPA Lab ID:

Pesticides (PT-PEST-SOIL) Lot #: 7089-14

NELAC Code	Analyte	Analysis Date	Analyst	Method Code	Method Description	Units	Assigned Value	Result	Acceptance Limits	Evaluation
7025	Aldrin	9/2/2022	wr	10178811	EPA 8081B Rev.2 2007	µg/kg	275	222.2	77.6 - 346	Acceptable
7110	alpha-BHC	9/2/2022	wr	10178811	EPA 8081B Rev.2 2007	µg/kg	245	178.3	67.7 - 319	Acceptable
7115	beta-BHC	9/2/2022	wr	10178811	EPA 8081B Rev.2 2007	µg/kg	178	133.4	38.9 - 251	Acceptable
7105	delta-BHC	9/2/2022	wr	10178811	EPA 8081B Rev.2 2007	µg/kg	358	251.3	93.0 - 473	Acceptable
7120	gamma-BHC (Lindane)	9/2/2022	wr	10178811	EPA 8081B Rev.2 2007	µg/kg	162	115.3	33.0 - 214	Acceptable
7240	alpha-Chlordane	9/2/2022	wr	10178811	EPA 8081B Rev.2 2007	µg/kg	162	130.2	55.2 - 207	Acceptable
7245	gamma-Chlordane	9/2/2022	wr	10178811	EPA 8081B Rev.2 2007	µg/kg	184	146.5	68.4 - 230	Acceptable
7355	4,4'-DDD	9/2/2022	wr	10178811	EPA 8081B Rev.2 2007	µg/kg	370	259.7	124 - 482	Acceptable
7360	4,4'-DDE	9/2/2022	wr	10178811	EPA 8081B Rev.2 2007	µg/kg	412	304.2	144 - 548	Acceptable
7365	4,4'-DDT	9/2/2022	wr	10178811	EPA 8081B Rev.2 2007	µg/kg	330	281.1	78.0 - 448	Acceptable
7470	Dieldrin	9/2/2022	wr	10178811	EPA 8081B Rev.2 2007	µg/kg	100	81.27	30.8 - 141	Acceptable
7510	Endosulfan I	9/2/2022	wr	10178811	EPA 8081B Rev.2 2007	µg/kg	271	140.8	70.5 - 308	Acceptable
7515	Endosulfan II	9/2/2022	wr	10178811	EPA 8081B Rev.2 2007	µg/kg	333	200.3	84.2 - 395	Acceptable
7520	Endosulfan sulfate	9/2/2022	wr	10178811	EPA 8081B Rev.2 2007	µg/kg	330	245.8	69.3 - 458	Acceptable
7540	Endrin	9/2/2022	wr	10178811	EPA 8081B Rev.2 2007	µg/kg	174	143.0	62.7 - 233	Acceptable
7530	Endrin aldehyde	9/2/2022	wr	10178811	EPA 8081B Rev.2 2007	µg/kg	170	51.64	17.0 - 187	Acceptable
7535	Endrin ketone	9/2/2022	wr	10178811	EPA 8081B Rev.2 2007	µg/kg	339	241.4	84.3 - 455	Acceptable
7685	Heptachlor	9/2/2022	wr	10178811	EPA 8081B Rev.2 2007	µg/kg	406	307.5	133 - 528	Acceptable
7690	Heptachlor epoxide	9/2/2022	wr	10178811	EPA 8081B Rev.2 2007	µg/kg	359	266.5	128 - 456	Acceptable
7810	Methoxychlor	9/2/2022	wr	10178811	EPA 8081B Rev.2 2007	µg/kg	492	312.1	56.2 - 723	Acceptable

Chlordane (PT-CHLR-SOIL) Lot #: 7089-15

NELAC Code	Analyte	Analysis Date	Analyst	Method Code	Method Description	Units	Assigned Value	Result	Acceptance Limits	Evaluation
7250	Chlordane	9/2/2022	wr	10178811	EPA 8081B Rev.2 2007	µg/kg	286	202.4	65.4 - 405	Acceptable

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Final Report - Soil / Hazardous Waste PT

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USA

Contact: Ms. Anne Antin
8087350422

EPA Lab ID:

TCLP Metals (PT-TCLPMET-SOIL)										Lot #: 7089-52
NELAC Code	Analyte	Analysis Date	Analyst	Method Code	Method Description	Units	Assigned Value	Result	Acceptance Limits	Evaluation
Additional State Specific Analytes										
1005	Antimony					mg/L	4.11		3.12 - 4.90	NR
1010	Arsenic	9/7/2022	sh	10118806	EPA 1311 Rev.Update I 1992	mg/L	2.18	2.15	1.74 - 2.71	Acceptable
1015	Barium	9/7/2022	sh	10118806	EPA 1311 Rev.Update I 1992	mg/L	1.20	1.14	0.943 - 1.42	Acceptable
1020	Beryllium					mg/L	3.05		2.23 - 3.65	NR
1025	Boron					mg/L	3.25		2.34 - 4.06	NR
1030	Cadmium	9/7/2022	sh	10118806	EPA 1311 Rev.Update I 1992	mg/L	2.81	2.30	2.22 - 3.30	Acceptable
1040	Chromium	9/7/2022	sh	10118806	EPA 1311 Rev.Update I 1992	mg/L	4.05	3.92	3.19 - 4.63	Acceptable
1050	Cobalt					mg/L	4.28		3.20 - 4.97	NR
1055	Copper					mg/L	2.96		2.19 - 3.60	NR
1075	Lead	9/7/2022	sh	10118806	EPA 1311 Rev.Update I 1992	mg/L	3.31	3.29	2.51 - 3.83	Acceptable
1095	Mercury	9/8/2022	sh	10118806	EPA 1311 Rev.Update I 1992	mg/L	0.913	0.59	0.362 - 1.04	Acceptable
1105	Nickel					mg/L	2.05		1.60 - 2.41	NR
1140	Selenium	9/7/2022	sh	10118806	EPA 1311 Rev.Update I 1992	mg/L	1.16	1.07	0.891 - 1.43	Acceptable
1150	Silver	9/7/2022	sh	10118806	EPA 1311 Rev.Update I 1992	mg/L	1.82	1.66	1.11 - 2.30	Acceptable
1165	Thallium					mg/L	3.82		2.42 - 4.53	NR
1190	Zinc					mg/L	3.98		3.01 - 4.93	NR



PT Study Score Report

EPA ID:
 Laboratory: Hawaii Analytical Laboratory, LLC
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Study Number	Number of Reported Results	Number of Passing Results	Percent Passing
HW0722	29	29	100%

Report Definitions:

- Number of Reported Results** The number of results reported which could be evaluated. Results receiving an evaluation of "NR" or "No Evaluation" are not included.
- Number of Passing Results** The number of results reported receiving an evaluation of "Acceptable" or "Check for Error".
- Percent Passing** The percentage of results reported receiving an evaluation of "Acceptable" or "Check for Error".

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Statistical Summary Report - Soil / Hazardous Waste PT

Opening Date: July 25, 2022 - Closing Date: September 8, 2022

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Contact: Ms. Anne Antin
8087350422

EPA Lab ID:

Pesticides (PT-PEST-SOIL) Lot #: 7089-14						
NELAC Code	Analyte	Units	Study Mean	Study Standard Deviation	Low Acceptance Limit %	High Acceptance Limit %
7025	Aldrin	µg/kg	212	49.8	28.2	126
7110	alpha-BHC	µg/kg	194	48.5	27.6	130
7115	beta-BHC	µg/kg	145	33.2	21.9	141
7105	delta-BHC	µg/kg	283	63.2	26.0	132
7120	gamma-BHC (Lindane)	µg/kg	123	31.0	20.4	132
7240	alpha-Chlordane	µg/kg	131	28.7	34.1	128
7245	gamma-Chlordane	µg/kg	149	32.5	37.2	125
7355	4,4'-DDD	µg/kg	303	69.2	33.5	130
7360	4,4'-DDE	µg/kg	346	77.0	35.0	133
7365	4,4'-DDT	µg/kg	263	66.5	23.6	136
7470	Dieldrin	µg/kg	86.0	18.9	30.8	141
7510	Endosulfan I	µg/kg	189	45.7	26.0	114
7515	Endosulfan II	µg/kg	239	54.8	25.3	119
7520	Endosulfan sulfate	µg/kg	264	70.6	21.0	139
7540	Endrin	µg/kg	148	31.6	36.0	134
7530	Endrin aldehyde	µg/kg	91.3	32.1	10.0	110
7535	Endrin ketone	µg/kg	270	71.9	24.9	134
7685	Heptachlor	µg/kg	331	79.4	32.8	130
7690	Heptachlor epoxide	µg/kg	292	63.2	35.7	127
7810	Methoxychlor	µg/kg	389	114	11.4	147
Chlordane (PT-CHLR-SOIL) Lot #: 7089-15						
NELAC Code	Analyte	Units	Study Mean	Study Standard Deviation	Low Acceptance Limit %	High Acceptance Limit %
7250	Chlordane	µg/kg	235	51.0	22.9	142

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EPA Lab ID:

TCLP Metals (PT-TCLPMET-SOIL) Lot #: 7089-52

NELAC Code	Analyte	Units	Study Mean	Study Standard Deviation	Low Acceptance Limit %	High Acceptance Limit %
Additional State Specific Analytes						
1005	Antimony	mg/L	3.93	0.365	75.9	119
1010	Arsenic	mg/L	2.20	0.223	79.8	124
1015	Barium	mg/L	1.17	0.0951	78.6	118
1020	Beryllium	mg/L	2.92	0.325	73.1	120
1025	Boron	mg/L	3.20	0.397	72.0	125
1030	Cadmium	mg/L	2.77	0.242	79.0	117
1040	Chromium	mg/L	4.00	0.280	78.8	114
1050	Cobalt	mg/L	4.27	0.274	74.8	116
1055	Copper	mg/L	2.97	0.185	74.0	122
1075	Lead	mg/L	3.18	0.311	75.8	116
1095	Mercury	mg/L	0.752	0.0948	39.6	114
1105	Nickel	mg/L	1.95	0.0940	78.0	118
1140	Selenium	mg/L	1.18	0.150	76.8	123
1150	Silver	mg/L	1.72	0.245	61.0	126
1165	Thallium	mg/L	3.60	0.352	63.4	119
1190	Zinc	mg/L	3.87	0.365	75.6	124