



March 24, 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 HW0122 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 HW0122 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.



6390 Joyce Drive
100
Golden, CO 80403

Phone 303-940-0033
Fax 866-283-0269
www.phenova.com

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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State Regulatory Agency Request(s):

No requests were made to send a copy of your HW0122 final results to a state agency.

Other Regulatory Agency Request(s):

No requests were made to send a copy of your HW0122 final results to an agency.

Third Party Request(s):

No requests were made to send a copy of your HW0122 final results to a third party.

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Final Report - Soil / Hazardous Waste PT

Study: HW0122

Opening Date: January 31, 2022 - Closing Date: March 17, 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 #: 7087-14

NELAC Code	Analyte	Analysis Date	Analyst	Method Code	Method Description	Units	Assigned Value	Result	Acceptance Limits	Evaluation
7025	Aldrin	3/15/2022	wr	10178811	EPA 8081B Rev.2 2007	µg/kg	275	215.4	78.0 - 347	Acceptable
7110	alpha-BHC	3/15/2022	wr	10178811	EPA 8081B Rev.2 2007	µg/kg	245	201.1	70.6 - 331	Acceptable
7115	beta-BHC	3/15/2022	wr	10178811	EPA 8081B Rev.2 2007	µg/kg	274	214.9	73.6 - 366	Acceptable
7105	delta-BHC	3/15/2022	wr	10178811	EPA 8081B Rev.2 2007	µg/kg	244	184.4	57.3 - 325	Acceptable
7120	gamma-BHC (Lindane)	3/15/2022	wr	10178811	EPA 8081B Rev.2 2007	µg/kg	264	211.9	70.0 - 356	Acceptable
7240	alpha-Chlordane	3/15/2022	wr	10178811	EPA 8081B Rev.2 2007	µg/kg	406	299.3	144 - 523	Acceptable
7245	gamma-Chlordane	3/15/2022	wr	10178811	EPA 8081B Rev.2 2007	µg/kg	116	90.3	42.4 - 152	Acceptable
7355	4,4'-DDD	3/15/2022	wr	10178811	EPA 8081B Rev.2 2007	µg/kg	260	226.2	83.1 - 355	Acceptable
7360	4,4'-DDE	3/15/2022	wr	10178811	EPA 8081B Rev.2 2007	µg/kg	412	322.2	144 - 547	Acceptable
7365	4,4'-DDT	3/15/2022	wr	10178811	EPA 8081B Rev.2 2007	µg/kg	130	94.8	26.4 - 184	Acceptable
7470	Dieldrin	3/15/2022	wr	10178811	EPA 8081B Rev.2 2007	µg/kg	200	153.6	72.3 - 266	Acceptable
7510	Endosulfan I	3/15/2022	wr	10178811	EPA 8081B Rev.2 2007	µg/kg	126	79.6	25.3 - 154	Acceptable
7515	Endosulfan II	3/15/2022	wr	10178811	EPA 8081B Rev.2 2007	µg/kg	370	260.2	98.8 - 454	Acceptable
7520	Endosulfan sulfate	3/15/2022	wr	10178811	EPA 8081B Rev.2 2007	µg/kg	329	228.2	72.2 - 475	Acceptable
7540	Endrin	3/15/2022	wr	10178811	EPA 8081B Rev.2 2007	µg/kg	109	94.3	31.3 - 154	Acceptable
7530	Endrin aldehyde	3/15/2022	wr	10178811	EPA 8081B Rev.2 2007	µg/kg	271	92.9	27.1 - 299	Acceptable
7535	Endrin ketone	3/15/2022	wr	10178811	EPA 8081B Rev.2 2007	µg/kg	198	143.2	46.3 - 271	Acceptable
7685	Heptachlor	3/15/2022	wr	10178811	EPA 8081B Rev.2 2007	µg/kg	67.0	55.3	15.7 - 93.8	Acceptable
7690	Heptachlor epoxide	3/15/2022	wr	10178811	EPA 8081B Rev.2 2007	µg/kg	154	117.0	50.3 - 198	Acceptable
7810	Methoxychlor	3/15/2022	wr	10178811	EPA 8081B Rev.2 2007	µg/kg	81.9	66.7	8.19 - 148	Acceptable

Chlordane (PT-CHLR-SOIL) Lot #: 7087-15B

NELAC Code	Analyte	Analysis Date	Analyst	Method Code	Method Description	Units	Assigned Value	Result	Acceptance Limits	Evaluation
7250	Chlordane	3/15/2022	wr	10178811	EPA 8081B Rev.2 2007	µg/kg	622	509.9	142 - 853	Acceptable

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Opening Date: January 31, 2022 - Closing Date: March 17, 2022

Laboratory: Hawaii Analytical Laboratory, LLC
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USA

Contact: Ms. Anne Antin
8087350422

EPA Lab ID:

TCLP Metals (PT-TCLPMET-SOIL)

Lot #: 7087-52

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	3.69		2.80 - 4.40	NR
1010	Arsenic	3/16/2022	sh	10118806	EPA 1311 Rev.Update I 1992	mg/L	3.91	3.73	3.13 - 4.87	Acceptable
1015	Barium	3/16/2022	sh	10118806	EPA 1311 Rev.Update I 1992	mg/L	2.98	2.94	2.33 - 3.50	Acceptable
1020	Beryllium					mg/L	4.25		3.11 - 5.09	NR
1025	Boron					mg/L	4.28		3.08 - 5.33	NR
1030	Cadmium	3/16/2022	sh	10118806	EPA 1311 Rev.Update I 1992	mg/L	3.92	3.57	3.10 - 4.61	Acceptable
1040	Chromium	3/16/2022	sh	10118806	EPA 1311 Rev.Update I 1992	mg/L	1.23	1.29	0.971 - 1.41	Acceptable
1050	Cobalt					mg/L	3.80		2.84 - 4.41	NR
1055	Copper					mg/L	3.96		2.92 - 4.81	NR
1075	Lead	3/16/2022	sh	10118806	EPA 1311 Rev.Update I 1992	mg/L	1.82	1.85	1.38 - 2.11	Acceptable
1095	Mercury	3/16/2022	sh	10118806	EPA 1311 Rev.Update I 1992	mg/L	1.64	0.612	0.649 - 1.86	Not Acceptable
1105	Nickel					mg/L	3.26		2.54 - 3.84	NR
1140	Selenium	3/16/2022	sh	10118806	EPA 1311 Rev.Update I 1992	mg/L	4.57	4.08	3.51 - 5.62	Acceptable
1150	Silver	3/16/2022	sh	10118806	EPA 1311 Rev.Update I 1992	mg/L	2.18	2.01	1.33 - 2.75	Acceptable
1165	Thallium					mg/L	3.32		2.11 - 3.95	NR
1190	Zinc					mg/L	1.26		0.956 - 1.56	NR

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PT Study Score Report

EPA ID:

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

Study Number	Number of Reported Results	Number of Passing Results	Percent Passing
HW0122	29	28	96.6%

Report Definitions:

<i>Number of Reported Results</i>	The number of results reported which could be evaluated. Results receiving an evaluation of "NR" or "No Evaluation" are not included.
<i>Number of Passing Results</i>	The number of results reported receiving an evaluation of "Acceptable" or "Check for Error".
<i>Percent Passing</i>	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: January 31, 2022 - Closing Date: March 17, 2022

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Contact: Ms. Anne Antin
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EPA Lab ID:

Pesticides (PT-PEST-SOIL) Lot #: 7087-14

NELAC Code	Analyte	Units	Study Mean	Study Standard Deviation	Low Acceptance Limit %	High Acceptance Limit %
7025	Aldrin	µg/kg	213	52.6	28.4	126
7110	alpha-BHC	µg/kg	201	50.1	28.8	135
7115	beta-BHC	µg/kg	220	51.2	26.9	134
7105	delta-BHC	µg/kg	191	43.5	23.5	133
7120	gamma-BHC (Lindane)	µg/kg	213	52.6	26.5	135
7240	alpha-Chlordane	µg/kg	334	73.4	35.5	129
7245	gamma-Chlordane	µg/kg	97.2	22.0	36.6	131
7355	4,4'-DDD	µg/kg	219	52.6	32.0	137
7360	4,4'-DDE	µg/kg	345	83.7	35.0	133
7365	4,4'-DDT	µg/kg	105	31.8	20.3	142
7470	Dieldrin	µg/kg	169	37.5	36.2	133
7510	Endosulfan I	µg/kg	89.5	21.1	20.1	122
7515	Endosulfan II	µg/kg	277	59.0	26.7	123
7520	Endosulfan sulfate	µg/kg	273	68.0	21.9	144
7540	Endrin	µg/kg	92.8	20.4	28.7	141
7530	Endrin aldehyde	µg/kg	123	45.9	10.0	110
7535	Endrin ketone	µg/kg	159	36.7	23.4	137
7685	Heptachlor	µg/kg	54.7	14.1	23.4	140
7690	Heptachlor epoxide	µg/kg	124	26.1	32.7	129
7810	Methoxychlor	µg/kg	71.8	19.9	10.0	181

Chlordane (PT-CHLR-SOIL) Lot #: 7087-15B

NELAC Code	Analyte	Units	Study Mean	Study Standard Deviation	Low Acceptance Limit %	High Acceptance Limit %
7250	Chlordane	µg/kg	497	43.5	22.8	137



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TCLP Metals (PT-TCLPMET-SOIL)

Lot #: 7087-52

NELAC Code	Analyte	Units	Study Mean	Study Standard Deviation	Low Acceptance Limit %	High Acceptance Limit %
Additional State Specific Analytes						
1005	Antimony	mg/L	3.65	0.271	75.9	119
1010	Arsenic	mg/L	3.98	0.357	80.1	125
1015	Barium	mg/L	2.94	0.225	78.2	117
1020	Beryllium	mg/L	4.07	0.184	73.2	120
1025	Boron	mg/L	4.12	0.271	72.0	125
1030	Cadmium	mg/L	3.92	0.300	79.1	118
1040	Chromium	mg/L	1.22	0.0781	78.9	115
1050	Cobalt	mg/L	3.71	0.216	74.7	116
1055	Copper	mg/L	3.89	0.281	73.7	121
1075	Lead	mg/L	1.79	0.104	75.8	116
1095	Mercury	mg/L	1.42	0.255	39.6	113
1105	Nickel	mg/L	3.17	0.183	77.9	118
1140	Selenium	mg/L	4.56	0.397	76.8	123
1150	Silver	mg/L	2.17	0.179	61.0	126
1165	Thallium	mg/L	3.21	0.242	63.6	119
1190	Zinc	mg/L	1.26	0.0949	75.9	124