# State of Hawaii DEPARTMENT OF LAND AND NATURAL RESOURCES ENGINEERING DIVISION

1151 Punchbowl Street, Room 221 Honolulu, Hawaii 96813

## ADDENDUM NO. 2

TO

Job No. J00AO99B DLNR Human Resources Office Improvements Kalanimoku Building, Room 231 Honolulu, Oahu, Hawaii

May 24, 2024

This addendum as issued shall become part of the Contract Documents for the subject project. The bid documents, plans, and specifications shall be amended as follows:

# **SPECIFICATIONS**

- 1. 01715 Existing Conditions Asbestos / Lead / Hazardous Material Survey Added Section 1.6 for Polychlorinated Biphenyls (PCB) testing results for asbestos materials, including a revised Hazardous Material Survey Report.
- 2. 13281 Asbestos Abatement, Section 1.02(A)(1) Revised paragraph to state: "Removal and disposal of the beige/tan vinyl floor tile (VFT) and associated black mastic located in room 231 as identified in the Hazardous Material Inspection Report and/or Project Drawings. The black mastic shall be completely removed from the concrete floor substrate."
- 3. 13281 Asbestos Abatement, Section 3.10(A)
  Revised paragraph to state: "If identified, painted asbestos-containing waste shall be TCLP tested by the Contractor prior to disposal to determine if the asbestos-containing waste must be disposed of as hazardous waste or as asbestos-containing waste. If painted asbestos-containing waste passes the TCLP test, the waste may be disposed of as asbestos-containing waste. If the painted asbestos-containing waste fails the TCLP test, the waste must be disposed of as hazardous waste.

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# **REQUEST FOR INFORMATION**

1. Question: What does "Wood Treatment" in the Bid Proposal cover?

Response: Wood Treatment is mainly to protect any wood products from termites.

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**Engineering Division** 

128

Carty S. Chang Chief Engineer

#### **SECTION 01715**

## EXISTING CONDITIONS - ASBESTOS / LEAD / HAZARDOUS MATERIAL SURVEY

#### PART 1 - GENERAL

## 1.1 GENERAL REQUIREMENTS

As specified in Section 01019 - GENERAL SPECIFICATIONS, Special Provisions, and the General Conditions of the Contract.

## 1.2 DESCRIPTION OF WORK

Accomplish all demolition and removal indicated on or required by the drawings, and as specified herein.

# 1.3 GENERAL REQUIREMENTS

- A. This section includes the results of the State's surveys for Asbestos Containing Materials, Lead-Containing Paint, and other hazardous materials; and is provided for the Contractor's information.
- B. Related Sections include the following:
  - 1. SECTION 13281 ASBESTOS ABATEMENT
  - 2. SECTION 13288 TESTING AND AIR MONITORING

## 1.4 ASBESTOS

- A. The structure or structures to be renovated or modified under this contract were surveyed for the presence of asbestos containing material (ACM), using NESHAP requirements. ACM was identified in the areas to be renovated or modified. A copy of the initial survey report, as well as any subsequent supplemental survey report(s) if performed, is included in this Section.
  - 1. The report(s) are included for the Contractor's information. Review the attached report(s) for other materials to be disturbed. The Contractor may perform further surveys at its own expense, if ACBM not shown in the report(s) is suspected in the areas of the building(s) in which work will be performed. If ACBM is found, notify the Engineer immediately. The Engineer will reimburse the Contractor for the testing cost if ACBM is found.
  - 2. If there is ACBM outside of the area in which work will be performed, this ACBM shall not be disturbed in any way.
- B. If applicable, notify employees, Subcontractors and all other persons engaged on the project of the presence of asbestos in the existing buildings in accordance with the requirements of State of Hawaii: Occupational Safety and Health Administration 29 CFR 1926.1101, Asbestos.

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C. In the event work is required in any building or buildings on the site other than the one(s) designated within this project scope, request copies of the asbestos survey report(s) for such building(s) from the Engineer assuming they are available. Based on the information contained in the additional survey(s), notify affected personnel per paragraph 1.02 B. If not available, Engineer and/or DAGS Project Coordinator must decide to perform additional hazardous materials survey as soon as practicable.

## 1.5 LEAD PAINT

- A. Inform employees, Subcontractors and all other persons engaged in the project that lead paints are present in the existing building(s) and at the job site. Conduct work in accordance with the requirements of Occupational Safety and Health Administration 29 CFR 1926.62 Lead.
- B. Review the attached lead testing data which identifies locations where lead paint was found and ensure that all workers that need to be involved understand the contents of the report(s) referring to areas in which work is to be performed. Contractor must understand that lead testing was for design purposes only, and the results do not satisfy any of the requirements of Occupational Safety and Health Administration 29 CFR 1926.62 Lead.

#### 1.6 POLYCHLORINATED BIPHENYLS

- A. Review the attached PCBs testing data which was for design purposes only, and the results do not satisfy any of the OSHA Requirements
- B. PCBs were not detected in the floor mastic below the EPA threshold level of 50 mg/kg.

## PART 2 - PRODUCTS (NOT USED)

## PART 3 - EXECUTION

## 3.1 SURVEY (Attached)

A. Limited Hazardous Materials Survey, Kalanimoku Building, Information Technology Services Office, 1151 Punchbowl Street, Room 231, Honolulu, Hawaii 96813, 64 pages, dated April 2024, revised May 2024 prepared by Environmental Risk Analysis LLC.

## **END OF SECTION**



## HAZARDOUS MATERIALS SURVEY

Kalanimoku Building Department of Land and Natural Resources Personal Office 1151 Punchbowl Street, Room 231 Honolulu, Hawaii 96813

## Submitted to:

## OMIZU ARCHITECTURE INC

826 Kaheka Street, #305 Honolulu, Hawaii 96814

Submitted by:

## ENVIRONMENTAL RISK ANALYSIS LLC

905A Makahiki Way Honolulu, Hawai'i 96826

April 2024 revised May 2024

Job No. J00AO99B DLNR Human Resources Office Improvements Kalanimoku Building, Room 231 Honolulu, Oahu, Hawaii Existing Conditions - Asbestos / Lead / Hazardous Material Survey

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#### EXECUTIVE SUMMARY

Environmental Risk Analysis, LLC (ERA) was retained by Omizu Architecture Inc. to conduct a hazardous materials assessment for the proposed renovation project located at the Personnel Office of Department of Land and Natural Resources (DLNR) Room 231 in Honolulu, Hawaii. This survey was performed in accordance with federal, state, and local regulatory requirements and evaluated suspect asbestos and lead. Summary findings of the site investigation are detailed below. Samples were collected of materials which are anticipated to be disturbed during future renovation work. Photographic documentation (Appendix A), sample locations (Appendix B), inspector certification (Appendix C) and laboratory analytical results (Appendix D) and tables of sample results are provided at the end of this document.

#### ASBESTOS-CONTAINING MATERIALS

According to United States Occupational Safety and Health Administration (OSHA) regulations 1926.1101, prior to the start of renovation or construction work, a building owner must identify the presence, location, and quantity of asbestos-containing materials (ACM) and/or presumed ACM (PACM) in the work. area. This information must be communicated to contractors bidding on work, contractors performing other work, and employees and tenants in or adjacent to the work area.

Samples were submitted to Hawaii Analytical Laboratory, LLC (HAL) for asbestos analysis by polarized light microscopy (PLM) analysis procedures outlined in the United States Protection Agency's (USEPA's) "Interim Method for the Determination of Asbestos in Bulk Insulation Samples" (EPA-600/M4-82-020) and/or "Method for Determination of Asbestos in Bulk Building Materials (EPA-600/R-93-116). ACM at the Site consisted of the following:

#### June 30, 2023

- C1 Beige Vinyl Floor Tile: 4% ASBESTOS
- C1 Black Mastic: 8% ASBESTOS
- C2 Beige Vinyl Floor Tile: 2% ASBESTOS
- C2 Black Mastic: 6% ASBESTOS
- C3 Beige Vinyl Floor Tile: 2% ASBESTOS
- C3 Black Mastic: 6% ASBESTOS

#### March 20, 2024

- E1 Beige Floor Tile: <1% ASBESTOS
- E1 Black Mastic: 3% ASBESTOS
- E2 Yellow Mastic with Black Mastic (Trace): <1% ASBESTOS
- E3 Beige Floor Tile: <1% ASBESTOS
- E3 Black Mastic: 3% ASBESTOS

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Table 1 provides the results of the samples. Laboratory analytical data reports are provided in Appendix D. Should additional suspect ACM be encountered during renovation activities, these materials should be handled as asbestos containing materials, until they can be adequately characterized for asbestos content.

#### LEAD-CONTAINING PAINTS

The OSHA considers any detectable concentration of lead to be a potential hazard during construction activities. Samples were submitted to Hawaii Analytical Laboratory, LLC for total lead (Pb) analysis by National Institute for Occupational Safety and Health (NIOSH) Method 7082m. Building materials identified as Lead-Containing Paint (LCP) include:

#### . LD3 - White Metal Paint: 84 mg/kg

Table 2 provides the results of the samples. Laboratory analytical data reports are provided in Appendix D

If other painted areas not previously sampled are disturbed, they should be considered lead containing until confirmation samples are collected. Appropriate health and safety precautions should be taken when working with these materials. The general contractor performing the renovation and demolition work should be informed of the presence of lead in the project area. All personnel impacting lead-containing paint (or other lead-containing materials) should be provided additional training concerning the health effects of lead, proper work methods, appropriate use of personnel protective equipment, and regulations governing lead exposures. Air monitoring to assess lead exposures should be performed for all personnel involved in the renovation process where lead-containing paint may be removed.

#### Polychlorinated Biphenyls (PCBs)

Per disposal requirements at Waimanalo Gulch Landfill, asbestos containing mastic and caulk are also required to be tested for PCBs. Samples were submitted to Hawaii Analytical Laboratory, LLC for PCB analysis by EPA Method 3550cm/3665an.8082a-m. Building materials sampled were determined NOT to contain detectable concentrations of PCBs. Results of the PCB sampling are presented in Table 3. Laboratory analytical data reports are provided in Appendix D.

#### RECOMMENDATIONS

ACM and LCP materials were observed in this assessment. These materials are subject to regulatory control. The presence and location of ACM and LCP must be communicated to contractors bidding on work, contractors performing other work, and employees and tenants in or adjacent to the work area. A licensed asbestos abatement contractor must be contracted for the removal of asbestos-containing and asbestos-contaminated building materials prior to the renovation of the structures by certified asbestos workers to comply with OSHA Regulations 29CFR1910.1001 and 29CFR1926.1101 and Hawaii Occupational Safety and Health Division.

For LCP identified, the general contractor performing the renovation and demolition work should be informed of the presence of lead in the project area. All personnel impacting lead-containing paint (or other lead-containing materials) should be provided additional training concerning the health effects of lead, proper work methods, appropriate use of personnel protective equipment and regulations governing

lead exposures. Air monitoring to assess lead exposures should be performed for all personnel involved in the renovation process where lead-containing paint may be removed.

Safe work practices are also recommended for all other materials including:

- · Respiratory protection;
- Protective clothing;
- · Clean change areas; and
- · Clean hand-washing facilities

Should additional suspect ACM or LCP be encountered during renovation activities, these materials should be handled as asbestos or lead containing materials, until they can be adequately characterized for asbestos or lead content. Asbestos containing mastic and caulk should be considered to contain PCBs until they can also be adequately characterized.

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#### 1.0 INTRODUCTION

Environmental Risk Analysis, LLC (ERA) was retained by Omizu Architecture Inc. to conduct a hazardous materials assessment for the proposed renovation project located at the Personnel Office of Department of Land and Natural Resources (DLNR) Room 231 in Honolulu, Hawaii. This survey was performed in accordance with federal, state, and local regulatory requirements and evaluated suspect asbestos and lead. Summary findings of the site investigation are detailed below. The hazardous material survey was performed on June 23, 2023, June 30, 2023, March 20, 2024, and May 15, 2024. Photographic documentation of the sampling events is provided in Appendix A.

The purpose of the survey was to provide information to assist with planning documents for the proposed renovation project planned at the Site. This survey was performed in accordance with federal, state, and local regulatory requirements and was limited to the collection of bulk asbestos, lead paint chip, and poly chlorinated biphenyls (PCBs) as necessary, to identify regulated building materials that may be potentially impacted by future work.

The remainder of this report documents the findings of the hazardous materials assessment and provides tables summarizing materials sampled, analytical data, comments, and recommendations for handling of hazardous materials identified.

#### 2.0 WARRANTY (LIMITATIONS OF THE ASSESSMENT)

Building materials sampled were collected from areas that were easily accessible. Additional suspect building materials may be encountered during the renovation process. These materials should be analyzed prior to any disturbance from work activities. Every effort was made to collect all building materials. However, ERA does not guarantee the survey covers 100% of all building materials at the Site.

Conclusions contained within the report are professional opinions based solely upon visual observations at the Site and interpretations of analyses. The opinions presented herein apply to the conditions of the Site at the time of the investigation, and interpretation of current regulations. Therefore, opinions and recommendations provided may not apply to future conditions that may exist at the Site. Current regulations should always be verified prior to any work involving hazardous materials.

#### 3.0 METHODOLOGY

This section describes the sampling methodology used.

#### 3.1 Asbestos Survey Methodology

A visual 'walk-through' inspection of accessible areas was conducted to identify areas which will be demolished or renovated. Suspect asbestos-containing materials (ACM) were identified that will be impacted by the proposed renovation at the Site. All suspect ACM was sampled for the presence or absence of asbestos (Appendix B). The asbestos survey was performed by a State of Hawai'i certified AHERA Building Inspector (Appendix C) in accordance with federal and state regulations.

#### 3.1.1 Sampling

Suspect ACM were grouped into homogeneous sampling areas and categorized as thermal systems insulation (TSI), surfacing material, or miscellaneous material. The sampling plan included, at a minimum, the collection and analysis of samples as follows:

## Thermal System Insulation

- In a distributive manner as deemed sufficient by the Inspector, a minimum of three (3) samples
  of each HSA that was suspected to contain asbestos.
- At least one bulk sample from each homogenous area of patched TSI if the patch was less than 6 square feet.

#### Surfacing Material

In a distributive manner as deemed sufficient by the Inspector, a minimum of three (3) samples
were collected from each homogenous area that was suspected to contain asbestos.

## Miscellaneous Material

In a distributive manner as deemed sufficient by the Inspector, at least three (3) samples were
collected of each miscellaneous material suspected to contain asbestos.

#### Non-Suspect Materials

According to 40 CFR 763-86(4), sampling of the following materials are not required where
the accredited inspector has deemed the material to be fiberglass, foam glass, or other
recognized non-ACM.

#### 3.1.2 Sample Documentation

Suspect ACM samples were collected by carefully removing small portions of the suspect material with a sharp knife or other hand tool suitable for the material being sampled. Each sample was placed in a labeled plastic container immediately after collection. Sample containers were then placed in a large rescalable plastic bag for transportation to the laboratory. The sampling instrument was wiped with a clean moist cloth to decontaminate the tool and minimize the potential release of asbestos fibers or contamination of subsequent samples.

To identify each sample collected, a unique identification numbering system was employed. Data pertinent to each sample (e.g., date, sample number, material description, and material category) was recorded on a field data sheet.

#### 3.1.3 Laboratory Analysis

Asbestos bulk samples, copies of the field data sheet, and chain-of-custody submittal sheets were delivered to Hawaii Analytical Laboratory, LLC (hereafter referred to as HAL) in Honolulu, Hawaii for asbestos analysis. HAL participates in the National Voluntary Laboratory Accreditation Program (NVLAP) for quality control procedures. As specified in 40 CFR Chapter I (1-1-87 edition) Part 763, Subpart F, each sample was analyzed using Polarized Light Microscopy (PLM) with dispersion staining techniques, in accordance with EPA Method 600/R-93/116. The detection limit for this type of analysis is approximately one percent (by volume). Materials containing more than one percent asbestos are considered to be ACM. Laboratory analytical data reports are provided in Appendix D.

#### 3.2 Lead Survey Methodology

A 'walk-through' inspection of accessible areas was conducted to identify suspect lead-containing paint (LCP).

#### 3.2.1 Sampling

Suspect LCP was grouped into homogeneous sampling areas. The sampling plan included, at a minimum, the collection and analysis of one (1) paint chip sample from each homogeneous sampling area (Appendix B).

#### 3.2.2 Sample Documentation

Suspect lead-containing paint samples were collected by carefully removing small portions of paint with a sharp knife or other hand tool suitable for the material being sampled. Each sample was placed in a labeled plastic container immediately after collection. Sample containers were then placed in a large resealable plastic bag for transportation to the laboratory. The sampling instrument was wiped with a clean moist cloth to decontaminate the tool and minimize contamination of subsequent samples. For lead paint chip samples collected during the survey, a unique identification numbering system was employed. Data pertinent to each sample (i.e.., date, sample number, material description, and material category) was recorded on a field data sheet.

#### 3.2.3 Laboratory Analysis

Paint chip samples were analyzed by EPA Method 7082 for percent of lead by weight by HAL. HAL participates in the National Environmental Laboratory Accreditation Program (NELAP) and American Industrial Hygiene Association (AIHA) for quality control procedures. Laboratory analytical data reports are provided in Appendix D.

#### 3.3 Polychlorinated Biphenyl (PCB) Survey Methodology

#### 3.3.1 Sampling

Materials previously testing positive for asbestos was resampled for PCB content. Samples were collected in the same manner as asbestos sampling.

## 3.3.2 Sample Documentation

Positive asbestos mastic samples were collected by carefully removing floor tile with a sharp knife or other hand tool suitable for the material being sampled. Each sample was placed in a labeled plastic container immediately after collection. Sample containers were then placed in a large re-sealable plastic bag for transportation to the laboratory. The sampling instrument was wiped with a clean moist cloth to decontaminate the tool and minimize contamination of subsequent samples. For PCB samples collected during the survey, a unique identification numbering system was employed. Data pertinent to each sample (i.e.., date, sample number, material description, and material category) was recorded on a field data sheet.

#### 3.3.3 Laboratory Analysis

Paint chip samples were analyzed by EPA Method 3550cm/3665an.8082a-m for PCB concentration. HAL participates in the National Environmental Laboratory Accreditation Program (NELAP) and American Industrial Hygiene Association (AIHA) for quality control procedures. Laboratory analytical data reports are provided in Appendix D.

#### 4.0 FINDINGS

The following describes the findings of the survey:

#### 4.1 Asbestos-Containing Materials

A total of twenty-seven (27) bulk asbestos samples were collected and analyzed as part of the survey. Suspect asbestos-containing materials sampled were comprised of a variety of building materials. Six (6) of the sampled materials were identified as regulated ACM (greater than 1% asbestos). A summary of the asbestos sampling and results are presented in Table 1 at the end of the report. The table includes the unique sample number, building location, material description and analytical results. Locations of where the samples were collected are depicted in Figures 1 through 3 in Appendix B. Laboratory reports and chain of custody are presented in Appendix D.

#### 4.2 Lead-Containing Paints

Five (5) paint chip samples were collected as part of this survey. One (1) of the materials were identified with detectable concentrations of lead. Table 2 summarizes the locations of the lead paint chip sampling, color of paint, sample location and the corresponding results. Sample locations are depicted in Figures 1 through 3 in Appendix B. Laboratory reports and chain of custody are presented in Appendix D.

#### 4.3 PCBs

Two (2) samples were collected as part of this survey. None of the samples contained detectable concentrations of PCBs. Table 3 summarizes the locations of the sample material, sample location and the corresponding results. Sample locations are depicted in Figures 1 through 3 in Appendix B. Laboratory reports and chain of custody are presented in Appendix D.

#### 5.0 SUMMARY/CONCLUSIONS

ACM was observed in this assessment (Table 1). The presence and location of ACM must be communicated to contractors bidding on work, contractors performing other work, and employees and tenants in or adjacent to the work area. Any materials not tested that may contain asbestos should be considered asbestos containing, until they can be adequately characterized for asbestos content. A licensed asbestos-abatement contractor must be contracted for the removal of asbestos-containing and asbestos-contaminated building materials prior to renovation of the structures by certified asbestos workers to comply with OSHA Regulations 29CFR1910.1001 and 29CFR1926.1101 and Hawaii Occupational Safety and Health Division. Any materials not tested may contain asbestos should be considered asbestos-containing, until they can be adequately characterized for asbestos content.

PCBs were not observed in the samples collected. Results were require for disposal characterization. Materials with positive asbestos content in mastic do not need to be treated as PCB-containing, and can be disposed of as regular asbestos waste.

Lead-containing paint was observed in this assessment (Table 2). OSHA considers any detectable concentration of lead to be a potential hazard during construction activities. For work on all building components that have not been tested, they must be considered containing lead. The general contractor performing the renovation and demolition work should be informed of the presence of lead in the project area. All personnel impacting lead-containing paint (or other lead-containing materials) should be provided additional training concerning the health effects of lead, proper work methods, appropriate use of personal protective equipment and regulations governing lead exposures.

The contractor must assess the hazard to determine if it will result in personnel exposures. Based on the assessment, and previous similar work and exposure monitoring results, the contractor may have to provide any or all of the following for employees per OSHA 1926.62 and applicable HIOSH regulations:

- · Respiratory protection;
- · Protective clothing;
- Clean change areas;
- · Clean hand-washing facilities;
- Biological monitoring to consist of blood sampling and analysis for lead and zinc protoporphyrin levels; and
- · Hazard Communication Training.

Air monitoring to assess lead exposures should be performed for all personnel involved in the renovation process where lead-containing paint may be removed. Initial employee exposure monitoring must be conducted for each separate task involving the handling of lead-containing painted building materials. If 8-hour time-weighted average (TWA) exposures exceed the action level of 30 micrograms of lead per cubic meter of air (ug/m³) the contractor must continue to conduct periodic air monitoring at specified intervals, and institute medical surveillance and comprehensive training programs. If the HIOSH/OSHA 8-hour TWA permissible exposure limit of 50 ug/m³ for lead is exceeded, more stringent and additional requirements become effective, such as engineering controls, respiratory protection, regulated work areas and warning signs in lead work areas.

Safe work practices are also recommended for all other materials including:

- · Respiratory protection;
- Protective clothing;
- Clean change areas; and
- · Clean hand-washing facilities

Report prepared by:

Rachel Okoji

State of Hawaii Certified

Lead Risk Assessor

PB-0014, Expiration: 04/20/2026

and

Christopher Corpus

State of Hawaii Certified

Asbestos Building Inspector and Project Monitor

HIASB-5190, Expiration: 03/6/2025

## TABLES

TABLE 1 SUMMARY OF ASBESTOS SAMPLES

June 2023 Homogeneous Area	Sample ID	Layer	Туре	Percer
	A1	Brown Mastic	NONE	1
	A1	Cream Mastic	NONE	
	A1	Gray Covebase	NONE	
	A2	Brown Mastic	NONE	
A	A2	Cream Mastic	NONE	
	A2	Gray Covebase	NONE	-
	A3	Brown Mastic	NONE	_
	A3	Cream Mastic	NONE	+-
	A3 B1	Gray Covebase Blue Carpet	NONE	_
	B1	Yellow Mastic	NONE	+
	B2	Blue Carpet	NONE	+
В	B2	Yellow Mastic	NONE	-
	B3	Blue Carpet	NONE	_
	B3	Yellow Mastic	NONE	
	C1	Beige Vinyl Floor Tile	Chrysotile	4%
	C1	Black Mastic	Chrysotile	8%
	C1	Yellow Mastic	NONE	
	C2	Beige Vinyl Floor Tile	Chrysotile	4%
	C2	Black Mastic	Chrysotile	6%
c	C2	Gray Vinyl Floor Tile-like Material	NONE	1
	C2	Yellow Mastic	NONE	-
	C3	Beige Vinyl Floor Tile	Chrysotile	2% 6%
	C3	Black Mastic Gray Vinyl Floor Tile-like Material	Chrysotile NONE	6%
	C3	Gray Viryl Floor Tile-like Material Yellow Mastic	NONE	+
March 2024	U3	TORM MIGNIC	NONE	_
lomogeneous Area	Sample ID	Layer	Type	Perce
	A1	White Joint Compound with Paint	NONE	
	A1	Beige Tape	NONE	$\neg$
	A1	White Joint Compound	NONE	
	A1	Belge Tape	NONE	
	A1	White Joint Compound	NONE	
	A1	White Drywall with Brown Paper	NONE	_
7027	A1	Composite Non-Asbesto's Content	NONE	_
A	A2	White Joint Compound with Paint	NONE	-
	A2 A2	Beige Tape White Joint Compound	NONE	-
	A2	Composite Non-Asbestos Content	NONE	+
	A3	Off-White Joint Compound with Paint	NONE	+
	A3	Beige Tape(Trace)	NONE	+
	A3	White Joint Compound with Gray Cementitious Material (Trace) and Paint	NONE	_
	A3	Composite Non-Asbestos Content	NONE	_
	B1	White Cementitious Material with Brown Mastic	NONE	
	B1	Gray Cementitious Material	NONE	
	B1	Composite Non-Asbestos Content	NONE	
В	B2	White Cementitious Material with Brown Mastic	NONE	
	B2	Gray Cementitious Material	NONE	
	B3	White Compound with Paint	NONE	_
	B3	White Cementitious Material	NONE	1
	B3	Gray Cementitious Material	NONE	_
	C1	Brown CoveBase Brown Mastic with White Compound (Trace) and Paint	NONE	+
	C1	White Cementitious Material (Trace) with Brown Mastic	NONE	+
c	C2	Brown Cove Base	NONE	+
	C2	White Cementitious Material (Trace) with Brown Mastic	NONE	
	C3	Brown CoveBase	NONE	_
	C3	Beige Mastic (Trace)	NONE	
	D1	Yellow Celling Tilewith White Surface	NONE	
	D1	Composite Non-Asbestos Content	NONE	
D	D2	Yellow Ceiling Tile with White Surface	NONE	
	D2	Composite Non-Asbestos Content	NONE	
	D3	Yellow Celling Tillewith White Surface	NONE	
	D3	Composite Non-Asbestos Content	NONE	_
	E1	Beige Floor Tile	Chrysotile	<1%
	E1	Black Mastic	Chrysotile	3%
	E2	Semi-Transparent Adhesive (Trace)	NONE	+
E	E2	Tan Floor Tile	NONE	<1%
	E2 E3	Yellow Mastic with Black Mastic (Trace)	Chrysotile	<1%
		Beige Floor Tile Black Mastic	Chrysotile Chrysotile	3%
				3%
	E3			
F	F1 F2	White Caulk with White Compound (Trace) and Paint White Caulk with White Compound (Trace) and Paint	NONE	-

Notes: Bold results indicated a postive detection

1 of 1

TABLE 2 SUMMARY OF LEAD SAMPLES

Sample ID	Description	Result (mg/kg)	
LD1 (June 23, 2023)	Unit 231 Drywall White Paint	<	40
LD2 (June 23, 2023)	Unit 231 Concrete White Paint	<	40
LD1 (March 20, 2024)	Unit 231 Drywall White Paint	<	40
LD2 (March 20, 2024)	Unit 231 Concrete White Paint Unit 231 Metal White Paint	<	40 <b>84</b>

Notes:

Bold results indicated a postive detection

Bold and italics results indicate an elevated reporting limit which should be treated as LCP

TABLE 3
SUMMARY OF PCB SAMPLES

Sample ID	Description	Aroclor	Result (mg/kg)
		Aroclor 1016	< 0.85
		Aroclor 1221	< 0.85
		Aroclor 1232	< 0.85
PCB1 (May 15, 2025)	Room #231 - Floor tile mastic	Aroclor 1242	< 0.85
		Aroclor 1248	< 0.85
		Aroclor 1254	< 0.85
		Aroclor 1260	< 0.85
12		Aroclor 1016	< 0.86
		Aroclor 1221	< 0.86
	Hallway - Floor tile mastic	Aroclor 1232	< 0.86
PCB2 (May 15, 2025)		Aroclor 1242	< 0.86
		Aroclor 1248	< 0.86
		Aroclor 1254	< 0.86
		Aroclor 1260	< 0.86

Notes:

**Bold** results indicated a postive detection

## APPENDIX A

**Photographic Documentation** 





## Description of Photograph:

Survey location: Kalaimoku Building Department of Land & Natural Resources Personnel Office 1151 Punchbowl Street, Room 231

# Date:

June 23, 2023



## Photograph #2

## Description of Photograph:

Overview: Department of Land & Natural Resources Personnel Office

## Date:

June 23, 2023





## Description of Photograph:

Sample LD1 – White paint sample from drywall determined not to be lead containing paint.

Date: June 23, 2023



## Photograph #4

## Description of Photograph:

Sample LD2 – White paint sample from concrete determined not to be lead containing paint.

Date: June 23, 2023





## Description of Photograph:

Samples: A1, A2, & 33: Gray covebase, cream mastic, and brown mastic determined not to be ACM.

#### Date:

June 23, 2023



## Photograph #6

## Description of Photograph:

Sample B1 – Blue carpet and yellow mastic determined not to be ACM

## Date:

June 23, 2023





## Description of Photograph:

Sample B2 – Blue carpet and yellow mastic determined not to be ACM.

## Date:

June 23, 2023



## Photograph #8

## Description of Photograph:

Sample B3 – Blue carpet and yellow mastic determined not to be ACM.

## Date:

June 23, 2023





## Description of Photograph:

Sample C1 – Beige floor tile, black mastic, and yellow mastic **determined to be ACM.** 

# Date:

June 30, 2023



## Photograph #10

## Description of Photograph:

Sample C2 – Gray vinyl floor tile, beige floor tile, black mastic, and yellow mastic **determined to be ACM.** 

# Date:

June 30, 2023





#### **Description of Photograph:**

Sample C3 – Gray floor tile, beige floor tile, black mastic, and yellow mastic **determined** to be ACM.

Date:

June 30, 2023



## Photograph #12

## Description of Photograph:

Samples A1, A2, & A3 – Drywall and joint compound material determined NOT to be ACM.

Date:

March 20, 2024





## Description of Photograph:

Sample B1, B2, & B3 – Concrete samples determined not to be ACM.

#### Date:

March 20, 2024



# Photograph #14

## Description of Photograph:

Sample C1, C2, & C3 – Brown cove base and mastic samples determined not to be ACM.

Date:

March 20, 2024





## Description of Photograph:

Sample D1, D2, & D3 – Acoustic ceiling tiles determined not to be ACM.

## Date:

March 20, 2024



## Photograph #16

## **Description of Photograph:**

Sample E1, E2, & E3 – Beige vinyl floor tile, black mastic, and yellow mastic **determined to be ACM.** 

Date:

March 20, 2024





#### Description of Photograph:

Sample F1, F2, & F3 – Door caulk samples determined not to be ACM.

#### Date:

March 20, 2024



## Photograph #18

## Description of Photograph:

Sample LD1 – Off-white Paint sample from drywall determined NOT to be lead containing paint.

Date:

March 20, 2024





#### Description of Photograph:

Sample LD2 – Off-white Paint sample from concrete determined NOT to be lead containing paint.

Date:

March 20, 2024



## Photograph #20

## Description of Photograph:

Sample LD1 – Off-white Paint sample from metal **determined to be lead containing paint.** 

Date:

March 20, 2024





#### Description of Photograph:

Sample PCB1 – Room 231 floor tile mastic determined NOT to contain detectable PCB concentrations.

Date:

May 15, 2024



## Photograph #22

# Description of Photograph:

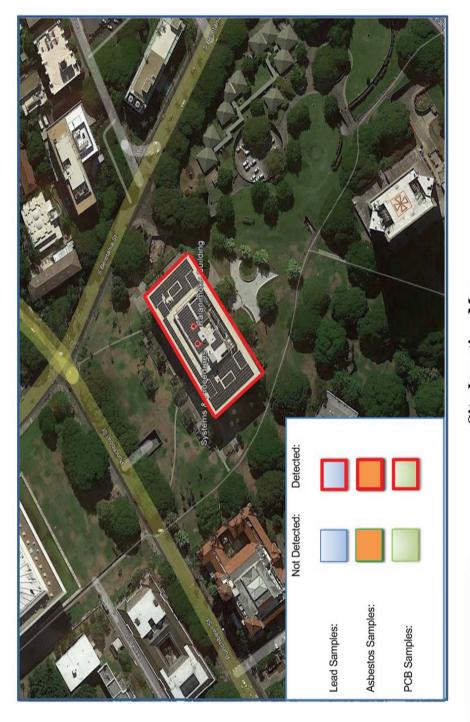
Sample PCB2 – hallway floor tile mastic determined NOT to contain detectable PCB concentrations.

Date:

May 15, 2024

# APPENDIX B

**Figures** 

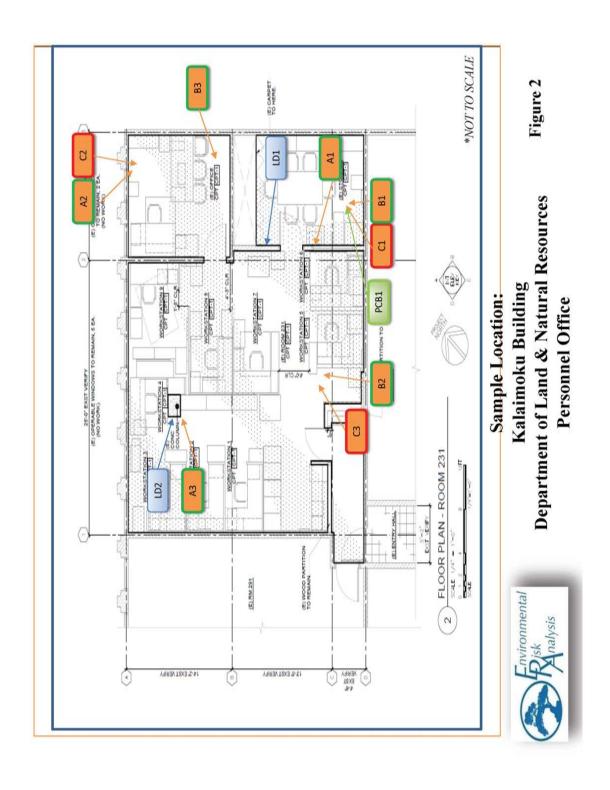


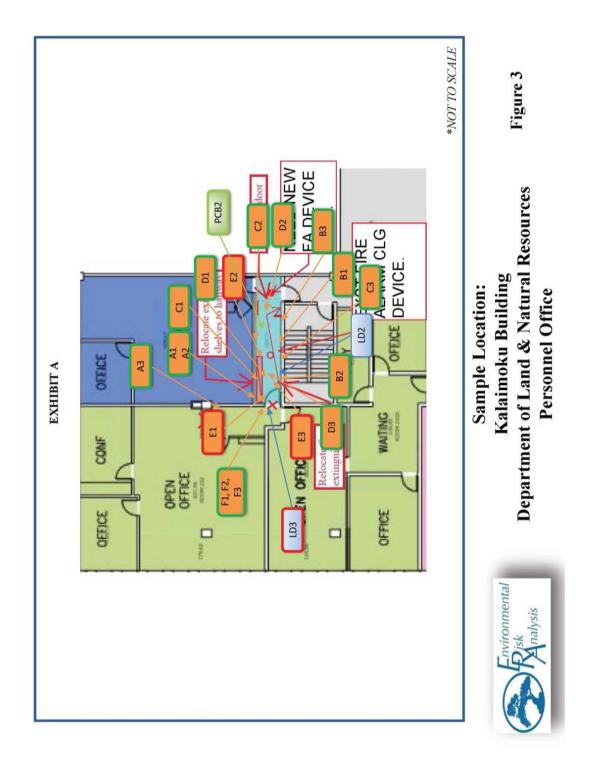
Site Location Map: Kalaimoku Building Honolulu, HI 96813



Job No. J00AO99B
DLNR Human Resources Office Improvements
Kalanimoku Building, Room 231
Honolulu, Oahu, Hawaii

Addendum No. 2



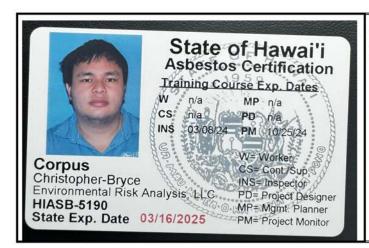


### APPENDIX C

**Inspector Certifications** 



Lead Risk Assessor Rachel Okoji PB-0014



Asbestos Building Inspector Christopher Corpus HIASB-5190

## APPENDIX D

**Laboratory Results** 



# Hawaii Analytical Laboratory ANALYTICAL REPORT

Monday, June 26, 2023

Phone Number: (808)783-6840

Environmental Risk Analysis 905 A Makahiki Way Honolulu HI 96826

Facsimile: Email:

rachelokoji@enviroriskhawaii.com;

russellokoji@enviroriskhawaii.com

Lab Job No: 202306013 Date Submitted: 6/23/2023

Your Project: 1151 Punchbowl St. #231, 6/23/23

	Bulk Asbestos Determination							
Sample No.	Your Sample ID / Description	Asbestos Present?	Туре	% <i>vI</i> v	Other Fibrous	% v/v	Matrix	Date Analyzed
202344040	A1		NONE DETECTED		None detected		Binder	6/26/2023
<u>Layer</u> Comments	Brown mastic							
202344040	A1		NONE DETECTED		None detected		Binder	6/26/2023
<u>Layer</u> Comments	Cream mastic							
202344040	A1		NONE DETECTED		None detected		Vinyl	6/26/2023
<u>Layer</u> Comments	Gray covebase							
202344041	A2		NONE DETECTED		None detected		Binder	6/26/2023
<u>Layer</u> Comments	Brown mastic							
202344041	A2		NONE DETECTED		None detected		Binder	6/26/2023
<u>Layer</u> Comments	Cream mastic							
202344041	A2		NONE DETECTED		None detected		Vinyl	6/26/2023
<u>Layer</u> Comments	Gray covebase							

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DLINK Human Resources Office Improvements Kalanimoku Building, Room 231 Honolulu, Oahu, Hawaii

Addendum No. 2

Existing Conditions - Asbestos / Lead / Hazardous Material Survey

01715 - 40

Job No. J00AO99B

Phone Number: (808)783-6840 Facsimile:

Environmental Risk Analysis 905 A Makahiki Way Honolulu HI 96826

Email:

rachelokoji@enviroriskhawaii.com; russellokoji@enviroriskhawaii.com

Lab Job No: 202306013 Date Submitted: 6/23/2023

Your Project: 1151 Punchbowl St. #231, 6/23/23

	Bul	k Asbes	tos Dete	rmina	tion			
Sample No.	Your Sample ID / Description	Asbestos Present?	Туре	%v/v	Other Fibrous	%v/v	Matrix	Date Analyzed
202344042	A3		NONE DETECTED		None detected		Binder	6/26/2023
<u>Layer</u> Comments	Brown mastic							
202344042	A3		NONE DETECTED		None detected		Binder	6/26/2023
<u>Layer</u> Comments	Cream mastic							
202344042	A3		NONE DETECTED		None detected		Vinyl	6/26/2023
<u>Layer</u> Comments	Gray covebase							
202344043	B1		NONE DETECTED		Synthetic fiber	90	Other	6/26/2023
<u>Layer</u> Comments	Blue carpet				(undulose)			
202344043	B1		NONE DETECTED		None detected		Binder	6/26/2023
<u>Layer</u> Comments	Yellow mastic							
202344044	B2		NONE DETECTED		Synthetic fiber	90	Other	6/26/2023
<u>Layer</u> Comments	Blue carpet				(undulose)			
202344044	B2		NONE DETECTED		None detected		Binder	6/26/2023
<u>Layer</u> Comments	Yellow mastic							
202344045	В3		NONE DETECTED		Synthetic fiber	90	Other	6/26/2023
<u>Layer</u> Comments	Blue carpet				(undulose)			

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Job No. J00AO99B DLNR Human Resources Office Improvements Kalanimoku Building, Room 231 Honolulu, Oahu, Hawaii

Phone Number:

(808)783-6840

Environmental Risk Analysis 905 A Makahiki Way Honolulu HI 96826

Facsimile: Email:

rachelokoji@enviroriskhawaii.com; russellokoji@enviroriskhawaii.com

Lab Job No: 202306013 Date Submitted: 6/23/2023

Your Project: 1151 Punchbowl St. #231, 6/23/23

	Bulk Asbestos Determination						
Sample No.	Your Sample ID / Description	Asbestos Present?	Туре	%v/v	Other Fibrous	%v/v Matrix	Date Analyzed
202344045	В3		NONE DETECTED		None detected	Binder	6/26/2023
<u>Layer</u> Comments	Yellow mastic						

#### General Comments

The bulk sample(s) analysis subject of this analytical report were conducted in general accordance with the procedures outlined in the United States Environmental Protection Agency's "Interim Method for the Determination of Asbestos in Bulk Insulation Samples" (EPA-600/M4-82-020, Dec. 1982) and / or "Method for Determination of Asbestos in bulk Building Materials" (EPA-600/R-93-116, July 1993). The analysis of each bulk sample relates only to the material examined, and may or may not represent the overall composition of its original source. Floor tile and other resinously bound materials, when analyzed by the EPA methods referenced above may yield false negative results because of limitations in separating closely bound fibers and in detecting fibers of small length and diameter. Alternative methods of identification, including Transmission Electron Microscopy (TEM) may or may not be applicable. We utilize calibrated visual area estimation on a routine basis and do not conduct point counting unless specifically requested to do so. Estimated error for the visual determinations presented are 75% relative (1 to 2%), 50% relative (3 to 5%); 25% relative (6 to 25%) and 20% (>26% v/v). We will not separate layers which in our opinion are not readily discemable. This report is not to be duplicated except in full without the expressed written permission of Hawaii Analytical Laboratory. This report must not be used by the client to claim product certification, approval or endorsement by of Federal Government. Unless otherwise indicated, the sample condition at the time of receipt was acceptable This report must not be used by the client to claim product certification, approval or endorsement by NVLAP, NIST or any agency

#### Results and Symbols Definitions

- > This testing result is greater than the numerical value listed.

Verif the Line

< This testing result is less than the numerical value listed.

None Detected = asbestos was not observed in the sample. If trace amount of asbestos was detected below our quantifiable limits of 1.0%, <1% (trace) would be indicated and the asbestos type listed. Point counting, where applicable, are recommended to improve accuracy

Jennifer Hsu Liao Laboratory Manager

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Job No. J00AO99B **DLNR Human Resources Office Improvements** Kalanimoku Building, Room 231 Honolulu, Oahu, Hawaii



# Hawaii Analytical Laboratory ANALYTICAL REPORT

Monday, June 26, 2023

Environmental Risk Analysis 905 A Makahiki Way Honolulu HI 96826 Phone Number: (808)783-6840

Facsimile:

Email: rachelokoji@enviroriskhawaii.com;

russellokoji@enviroriskhawaii.com

Lab Job No: 202306013 Date Submitted: 6/23/2023

Project Name: 1151 Punchbowl St. #231, 6/23/23

Total Lead (paint chips)				
Sample No.	NIOSH Method: 7082m LEAD by FAAS  Your Sample ID / Description	Results	Units	Date Analyzed
<b>202344046</b> Comments	LD1	< 40	mg/kg	6/23/2023
202344047 Comments	LD2	< 40	mg/kg	6/23/2023

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Page 1 of 2

DLINK Human Kesources Office Improvements Kalanimoku Building, Room 231 Honolulu, Oahu, Hawaii

Environmental Risk Analysis Phone Number: (808)783-6840

905 A Makahiki Way Facsimile:

Honolulu HI 96826 rachelokoji@enviroriskhawaii.com; Email: russellokoji@enviroriskhawaii.com

Lab Job No: 202306013 Date Submitted: 6/23/2023

Project Name: 1151 Punchbowl St. #231, 6/23/23

All Quality Control data are acceptable unless otherwise noted.

MRL for lead wipe is 10ug

MRL for lead paint or soil is 40 mg/kg for a 0.25g sample.

The sample[s] analysis subject of this analytical report were conducted in general accordance with the procedures associated with the "analytical method" referenced above. Modifications to this methodology may have been made based upon the analyst's professional judgment and / or sample matrix effects encountered. The analysis of sample relates only to the sample analyzed, and may or may not be representative of the original source of the material submitted for our analysis. All analysts participate in interlaboratory quality control representative of the original source of the material submitted for our analysis. All analysis participate in interlaboratory quality control testing to continuously document profiency. This report is not be duplicated except in full without the expressed written permission of Hawaii Analytical Laboratory. This report should not be construed as an endorsement for a product or a service by the AIHA LAP, LLC or any affiliated organizations. Sample and associated sampling / collection data is reported as provided by client. TWA values have been calculated based on information supplied by the client that the laboratory has not independently verified. Results have not been corrected for blank determinations unless noted in remarks. Unless otherwise indicated the sample condition at the time of receipt was acceptable.

Results and Symbols Definitions

- > This testing result is greater than the numerical value listed < This testing result is less than the numerical value listed.
- # = Analytical methods marked with an "#" are not within our AIHA LAP, LLC Scope of Accreditation. MRL = Method Reporting Limit.

**Anne Antin** 

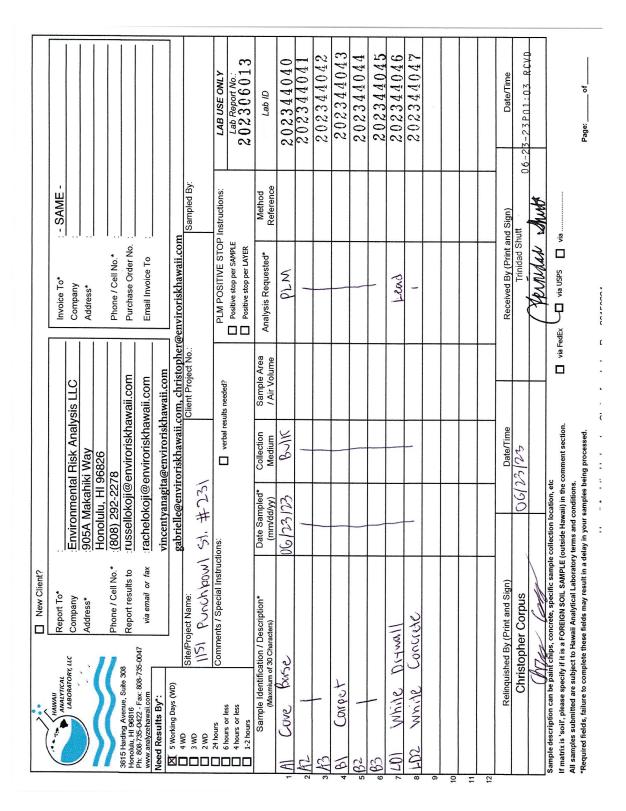
**Quality Control Manager** 

Anne Butin D

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Page 2 of 2





# Hawaii Analytical Laboratory ANALYTICAL REPORT

Monday, July 10, 2023

Phone Number: (808)783-6840 Facsimile:

Environmental Risk Analysis 905 A Makahiki Way Honolulu HI 96826

Email:

rachelokoji@enviroriskhawaii.com; russellokoji@enviroriskhawaii.com

Lab Job No: 202306239 Date Submitted: 6/30/2023

Your Project: 1151 Punchbowl St. #231, 6/30/23

	Bulk Asbestos Determination						
Sample No.	Your Sample ID / Description	Asbestos Present?	Туре	% <i>vI</i> v	Other Fibrous	% v/v Matrix	Date Analyzed
202345330	C1	Yes	Chrysotile	4	None	Vinyl	7/6/2023
Layer	Beige vinyl floor tile				detected		
Comments							
202345330	C1	Yes	Chrysotile	8	None	Tar	7/6/2023
Layer	Black mastic				detected		
Comments	-0%						
202345330	C1		NONE DETECTED		None detected	Binder	7/6/2023
Layer	Yellow mastic						
Comments							
202345331	C2	Yes	Chrysotile	2	None	Vinyl	7/6/2023
Layer	Beige vinyl floor tile				detected		
Comments							
202345331	C2	Yes	Chrysotile	6	None	Tar	7/6/2023
Layer	Black mastic				detected		
Comments							
202345331	C2		NONE DETECTED		None detected	Calcite + other	7/6/2023
<u>Layer</u>	Gray vinyl floor tile-like material						
Comments							
202345331	C2		NONE DETECTED		None detected	Binder	7/6/2023
Layer	Yellow mastic						
Comments							

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DLINK Human Resources Office Improvements Kalanimoku Building, Room 231 Honolulu, Oahu, Hawaii

Addendum No. 2

Existing Conditions - Asbestos / Lead / Hazardous Material Survey

01715 - 46

Job No. J00AO99B

Phone Number:

(808)783-6840

Environmental Risk Analysis 905 A Makahiki Way Honolulu HI 96826

Facsimile: Email:

rachelokoji@enviroriskhawaii.com; russellokoji@enviroriskhawaii.com

Lab Job No: 202306239 Date Submitted: 6/30/2023

Your Project: 1151 Punchbowl St. #231, 6/30/23

	Bul	k Asbes	tos Dete	rmina	tion		
Sample No.	Your Sample ID / Description	Asbestos Present?	Туре	%v/v	Other Fibrous	%v/v Matrix	Date Analyzed
202345332	C3	Yes	Chrysotile	2	None	Vinyl	7/6/2023
Layer	Beige vinyl floor tile				detected		
Comments							
202345332	C3	Yes	Chrysotile	6	None	Tar	7/6/2023
Layer	Black mastic				detected		
Comments							
202345332	C3		NONE DETECTED		None detected	Calcite + other	7/6/2023
Layer	Gray vinyl floor tile-like material						
Comments							
202345332	C3		NONE DETECTED		None detected	Binder	7/6/2023
Layer	Yellow mastic						
Comments							

General Comments
The bulk sample[s] analysis subject of this analytical report were conducted in general accordance with the procedures outlined in the United States Environmental Protection Agency's "Interim Method for the Determination of Asbestos in Bulk Insulation Samples" (EPA-600/M4-82-020, Dec. 1982) and / or "Method for Determination of Asbestos in bulk Building Materials" (EPA-600/R-93-116, July 1993). The analysis of each bulk sample relates only to the material examined, and may or may not represent the overall composition of its original source. Floor tile and other resinously bound materials, when analyzed by the EPA methods referenced above may yield false negative results because of limitations in separating closely bound fibers and in detecting fibers of small length and diameter. Alternative methods of identification, including Transmission Electron Microscopy (TEM) may or may not be applicable. We utilize calibrated visual area estimation on a routine basis and do not conduct point counting unless specifically requested to do so. Estimated error for the visual determinations presented are 75% relative (1 to 2%), 50% relative (3 to 5%); 25% relative (6 to 25%) and 20% (>26% vIv). We will not separate layers which in our opinion are not readily discernable. This report is not to be duplicated except in full without the expressed written permission of Hawaii Analytical Laboratory. This report must not be used by the client to claim product certification, approval or endorsement by NVLAP, NIST or any agency of Federal Government. Unless otherwise indicated, the sample condition at the time of receipt was acceptable. of Federal Government. Unless otherwise indicated, the sample condition at the time of receipt was acceptable

#### Results and Symbols Definitions

- > This testing result is greater than the numerical value listed.
  < This testing result is less than the numerical value listed.</p>

Jemp the Line

None Detected = asbestos was not observed in the sample. If trace amount of asbestos was detected below our quantifiable limits of 1.0%. <1% (trace) would be indicated and the asbestos type listed. Point counting, where applicable, are recommended to improve accuracy

Jennifer Hsu Liao

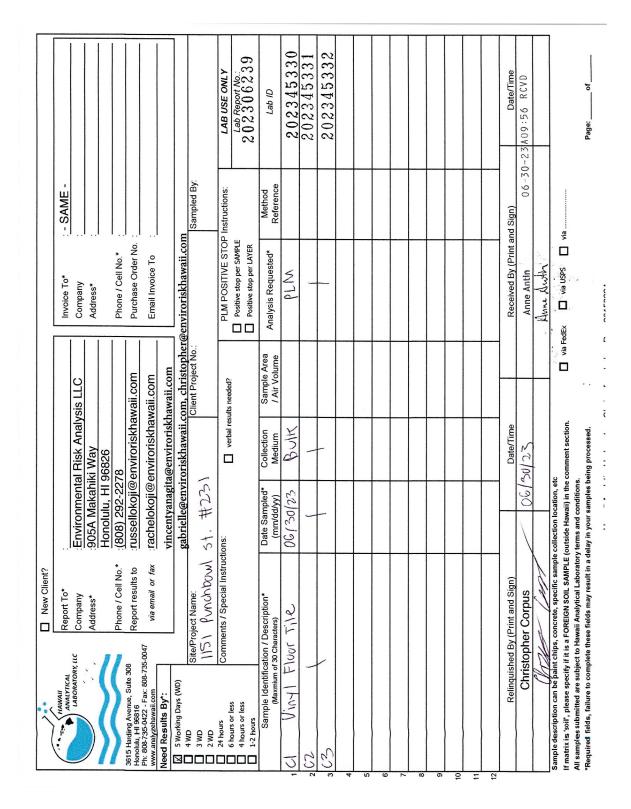
Laboratory Manager

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Page 2 of 2

Job No. J00AO99B **DLNR Human Resources Office Improvements** Kalanimoku Building, Room 231 Honolulu, Oahu, Hawaii





## Hawaii Analytical Laboratory

3615 Harding Avenue, Suite 308, Honolulu, Hawaii, 96816 Tel: (808) 735-0422 – Fax: (808) 735-0047

March 27, 2024

Environmental Risk Analysis 905 A Makahiki Way Honolulu, HI 96826

Project Name: 1151 Punchbowl St. #231

Date collected: 3/20/2024 Date received: 3/20/2024 HAL #: 202403149

Dear Mr. Okoji,

Enclosed are the analytical results for the samples received by our laboratory on March 20, 2024. The samples on the chain of custody were received in good condition unless otherwise noted.

The eighteen (18) samples submitted for PLM analysis were subcontracted to Eurofins EMLab P&K in Pomona, CA (a NVLAP accredited Laboratory, NVLAP LAB CODE: 600282-0.). Its report is enclosed in its entirety.

Results in this report are based on the sampling data provided by the client and refer only to the sample as it was received at the laboratory. Unless otherwise requested, all samples will be discarded 14 days from the date of this report.

Quality assurance data is collected to accompany all analyses and to ensure that results generated meet Hawaii Analytical Laboratory's quality standards. This data is available upon request.

Please contact us at 808-735-0422 if you have questions.

Thank you for using Hawaii Analytical Laboratory and have a great day!!

Anne Antin Quality Manager Hawaii Analytical Laboratory 3615 Harding Ave. Ste. 308 Honolulu, HI 96816

Phone: (808) 735-0422

E-mail: aantin@analyzehawaii.com

AIHA Accredited Laboratory • NVLAP Lab code 200655-0 - ISO/IEC 17025:2005 Accredited Laboratory

Controlled Document ID M-100: HAL Letterhead Template Rev: 20140701

Job No. J00AO99B DLNR Human Resources Office Improvements Kalanimoku Building, Room 231 Honolulu, Oahu, Hawaii



Report for:

Anne Antin Hawaii Analytical Lab 3615 Harding Ave Suite 308 Honolulu, HI 96816

Eurofins EPK Built Environment Testing, LLC Project: 202403149; 1151 Punchbowl St. #231

EML ID: 3584101

Approved by:

Dates of Analysis: Asbestos PLM: 03-27-2024

Approved Signatory Dr. Ami Modha

Service SOPs: Asbestos PLM (EPA 40CFR App E to Sub E of Part 763 & EPA METHOD 600/R-93-116, SOP EM-AS-S-1267) NVLAP Lab Code 600282-0

All samples were received in acceptable condition unless noted in the Report Comments portion in the body of the report. The results relate only to the samples as received and tested. The results include an inherent uncertainty of measurement associated with estimating percentages by polarized light microscopy. Measurement uncertainty data for sample results with >1% asbestos concentration can be provided when requested.

Eurofins EPK Built Environment Testing, LLC ("the Company"), a member of the Eurofins Built Environment Testing group of companies, shall have no liability to the client or the client's customer with respect to decisions or recommendations made, actions taken or courses of conduct implemented by either the client or the client's customer as a result of or based upon the Test Results. In no event shall the Company be liable to the client with respect to the Test Results except for the Company's own willful misconduct or gross negligence nor shall the Company be liable for incidental or consequential damages or lost profits or revenues to the fullest extent such liability may be disclaimed by law, even if the Company has been advised of the possibility of such damages, lost profits or lost revenues. In no event shall the Company's liability with respect to the Test Results exceed the amount paid to the Company by the client therefor.

Eurofins EPK Built Environment Testing, LLC

EMLab ID: 3584101, Page 1 of 7

931 Corporate Center Drive, Pomona, CA 91768 (800) 651-4802 www.eurofinsus.com/Built

Client: Hawaii Analytical Lab

C/O: Anne Antin Re: 202403149; 1151 Punchbowl St. #231 Date of Receipt: 03-22-2024 Date of Report: 03-27-2024

#### ASBESTOS PLM REPORT

**Total Samples Submitted:** 18 **Total Samples Analyzed:** 18

Total Samples with Layer Asbestos Content > 1%:

Location: A1 Lab ID-Version‡: 17524745-1

Sample Layers	Asbestos Content
White Joint Compound with Paint	ND
Beige Tape	ND
White Joint Compound	ND
Beige Tape	ND
White Joint Compound	ND
White Drywall with Brown Paper	ND
Composite Non-Asbestos Content:	10% Cellulose
Sample Composite Homogeneity:	Poor

Location: A2 Lab ID-Version ‡: 17524746-1

Sample Layers	Asbestos Content
White Joint Compound with Paint	ND
Beige Tape	ND
White Joint Compound	ND
Composite Non-Asbestos Content:	10% Cellulose
Sample Composite Homogeneity:	Poor

Location: A3 Lab ID-Version‡: 17524747-1

Asbestos Content
ND
ND
ND
5% Cellulose
Poor
۰

Comments: Some layers in the sample were inseparable without cross contamination.

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Inhomogeneous samples are separated into homogeneous subsamples and analyzed individually. ND means no fibers were detected. When detected, the minimum detection and reporting limit is less than 1% unless point counting is performed. Floor tile samples may contain large amounts of interference material and it is recommended that the sample be analyzed by gravimetric point count analysis to lower the detection limit and to aid in asbestos identification.

‡ A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

Eurofins EPK Built Environment Testing, LLC

EMLab ID: 3584101, Page 2 of 7

Job No. J00AO99B **DLNR Human Resources Office Improvements** Kalanimoku Building, Room 231 Honolulu, Oahu, Hawaii

931 Corporate Center Drive, Pomona, CA 91768 (800) 651-4802 www.eurofinsus.com/Built

Client: Hawaii Analytical Lab

C/O: Anne Antin Date of Receipt: 03-22-2024 Re: 202403149; 1151 Punchbowl St. #231 Date of Report: 03-27-2024

#### ASBESTOS PLM REPORT

Location: B1 Lab ID-Version‡: 17524748-1

Sample Layers	Asbestos Content
White Cementitious Material with Brown Mastic	ND
Gray Cementitious Material	ND
Composite Non-Asbestos Content:	7% Vermiculite < 1% Cellulose < 1% Glass Fibers
Sample Composite Homogeneity:	Poor

Comments: Some layers in the sample were inseparable without cross contamination.

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Inhomogeneous samples are separated into homogeneous subsamples and analyzed individually. ND means no fibers were detected. When detected, the minimum detection and reporting limit is less than 1% unless point counting is performed. Floor tile samples may contain large amounts of interference material and it is recommended that the sample be analyzed by gravimetric point count analysis to lower the detection limit and to aid in asbestos identification.

‡ A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

Eurofins EPK Built Environment Testing, LLC

EMLab ID: 3584101, Page 3 of 7

Job No. J00AO99B **DLNR Human Resources Office Improvements** Kalanimoku Building, Room 231 Honolulu, Oahu, Hawaii

931 Corporate Center Drive, Pomona, CA 91768 (800) 651-4802 www.eurofinsus.com/Built

Client: Hawaii Analytical Lab

C/O: Anne Antin Date of Receipt: 03-22-2024 Re: 202403149; 1151 Punchbowl St. #231 Date of Report: 03-27-2024

#### ASBESTOS PLM REPORT

Location: B2 Lab ID-Version‡: 17524749-1

Sample Layers	Asbestos Content
White Cementitious Material with Brown Mastic	ND
Gray Cementitious Material	ND
Sample Composite Homogeneity: Poor	

Comments: Some layers in the sample were inseparable without cross contamination.

Location: B3 Lab ID-Version 2: 17524750-1

Sample Layers	Asbestos Content
White Compound with Paint	ND
White Cementitious Material	ND
Gray Cementitious Material	ND
Sample Composite Homogeneity: Po	or

Location: C1 Lab ID-Version \$\pi\$: 17524751-1

Sample Layers	Asbestos Content	
Brown Cove Base	ND	
Brown Mastic with White Compound (Trace) and Paint	ND	
White Cementitious Material (Trace) with Brown Mastic	ND	
Sample Composite Homogeneity: Poor		

Comments: Some layers in the sample were inseparable without cross contamination.

Location: C2 Lab ID-Version‡: 17524752-1

Sample Layers	Asbestos Content
Brown Cove Base	ND
White Cementitious Material (Trace) with Brown Mastic	ND
Sample Composite Homogeneity:	Poor

Comments: Some layers in the sample were inseparable without cross contamination.

The test report shall not be reproduced except in full, without written approval of the laboratory. The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government. The Company reserves the right to dispose of all samples after a period of thirty (30) days, according to all state and federal guidelines, unless otherwise specified.

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Eurofins EPK Built Environment Testing, LLC

EMLab ID: 3584101, Page 4 of 7

Job No. J00AO99B **DLNR Human Resources Office Improvements** Kalanimoku Building, Room 231 Honolulu, Oahu, Hawaii

931 Corporate Center Drive, Pomona, CA 91768 (800) 651-4802 www.eurofinsus.com/Built

Client: Hawaii Analytical Lab

C/O: Anne Antin Date of Receipt: 03-22-2024 Re: 202403149; 1151 Punchbowl St. #231 Date of Report: 03-27-2024

#### ASBESTOS PLM REPORT

Location: C3 Lab ID-Version‡: 17524753-1

Sample Layers	Asbestos Content
Brown Cove Base	ND
Beige Mastic (Trace)	ND
Sample Composite Homogeneity:	Poor

Location: D1 Lab ID-Version 2: 17524754-1

22.7.111.7.11.2.2	
Sample Layers	Asbestos Content
Yellow Ceiling Tile with White Surface	ND
Composite Non-Asbestos Content:	85% Glass Fibers
Sample Composite Homogeneity:	Moderate

Location: D2 Lab ID-Version‡: 17524755-1

Sample Layers	Asbestos Content
Yellow Ceiling Tile with White Surface	ND
Composite Non-Asbestos Content:	85% Glass Fibers
Sample Composite Homogeneity:	Moderate

Location: D3 Lab ID-Version‡: 17524756-1

Sample Layers	Asbestos Content
Yellow Ceiling Tile with White Surface	ND
Composite Non-Asbestos Content:	85% Glass Fibers
Sample Composite Homogeneity:	Moderate

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Eurofins EPK Built Environment Testing, LLC

EMLab ID: 3584101, Page 5 of 7

Job No. J00AO99B **DLNR Human Resources Office Improvements** Kalanimoku Building, Room 231 Honolulu, Oahu, Hawaii

931 Corporate Center Drive, Pomona, CA 91768 (800) 651-4802 www.eurofinsus.com/Built

Client: Hawaii Analytical Lab

C/O: Anne Antin Date of Receipt: 03-22-2024 Re: 202403149; 1151 Punchbowl St. #231 Date of Report: 03-27-2024

#### ASBESTOS PLM REPORT

Location: E1 Lab ID-Version‡: 17524757-1

Sample Layers	Asbestos Content
Beige Floor Tile	< 1% Chrysotile
Black Mastic	3% Chrysotile
Sample Composite Homogeneity	y: Poor

Location: E2 Lab ID-Version ‡: 17524758-1

Sample Layers	Asbestos Content
Semi-Transparent Adhesive (Trace)	ND
Tan Floor Tile	ND
Yellow Mastic with Black Mastic (Trace)	< 1% Chrysotile
Sample Composite Homogeneity: Poor	

Comments: Some layers in the sample were inseparable without cross contamination.

Location: E3 Lab ID-Version \$\pi\$: 17524759-1

Sample Layers	Asbestos Content
Beige Floor Tile	< 1% Chrysotile
Black Mastic	3% Chrysotile
Sample Composite Homogeneity	y: Poor

Location: F1 Lab ID-Version ‡: 17524760-1

Sample Layers	Asbestos Content
White Caulk with White Compound (Trace) and Paint	ND
Sample Composite Homogeneity:	Poor

Comments: Sample layers inseparable without cross contamination.

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Eurofins EPK Built Environment Testing, LLC

EMLab ID: 3584101, Page 6 of 7

Job No. J00AO99B **DLNR Human Resources Office Improvements** Kalanimoku Building, Room 231 Honolulu, Oahu, Hawaii

931 Corporate Center Drive, Pomona, CA 91768 (800) 651-4802 www.eurofinsus.com/Built

Client: Hawaii Analytical Lab

C/O: Anne Antin Re: 202403149; 1151 Punchbowl St. #231 Date of Receipt: 03-22-2024 Date of Report: 03-27-2024

### ASBESTOS PLM REPORT

Location: F2 Lab ID-Version 2: 17524761-1

Sample Layers	Asbestos Content
White Caulk with White Compound (Trace) and Paint	ND
Sample Composite Homogeneity:	Poor

Comments: Sample layers inseparable without cross contamination.

Location: F3 Lab ID-Version‡: 17524762-1

Sample Layers	Asbestos Content
White Caulk with White Compound (Trace) and Paint	ND
Sample Composite Homogeneity: Poor	

Comments: Sample layers inseparable without cross contamination.

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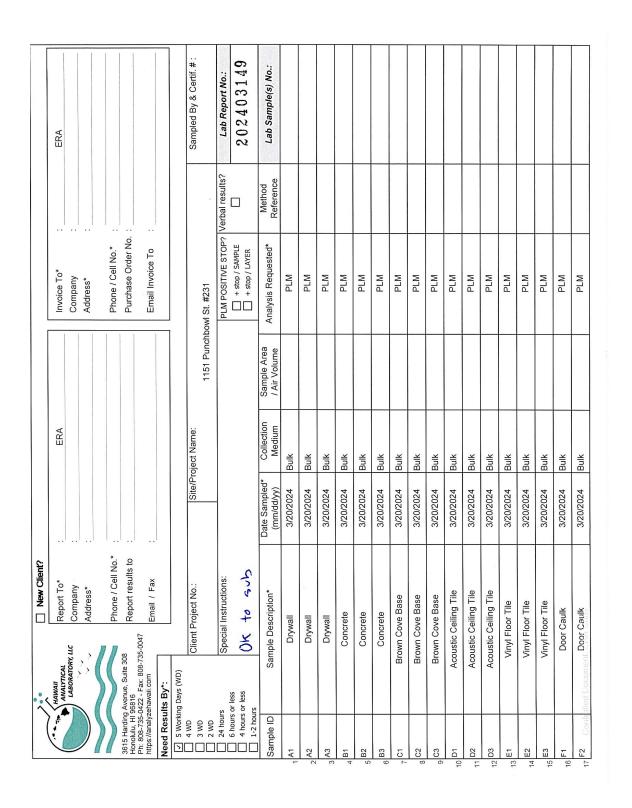
‡ A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

Eurofins EPK Built Environment Testing, LLC

EMLab ID: 3584101, Page 7 of 7

Job No. J00AO99B **DLNR Human Resources Office Improvements** Kalanimoku Building, Room 231 Honolulu, Oahu, Hawaii

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SAMPLE ID	DESCRIPTION	NO	Sample Type (Below)	e TAT (Above)	Total Volume/Area (as applicable)	N (Time of day	NOTES Time of day, Temp, RH, etc.)	Spore T Other bi M toerid	Quantite	eibeM-f Guithurab S men	onoige/ ColletoT TitneuiD	Asbesto	Asbesto PCR (pl	negraliA
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me:  1151 Punchbow St. #231  PLM POSITIVE STOP? Verbal results?    PLM POSITIVE STOP? Verbal results?   Lab Report No.:       + stop / SAMPLE	Phone / Cell No.*	
Email Invoice To :	Furchase Order No. :   Email Invoice To :   Email Invoice To :   Sampled By & Certif. #   Sample Area	
1151 Punchbowl St. #231   Sampled By & Certif. #	Sampled By & Certif. #	
1151 Punchbowl St. #231   PLIM POSITIVE STOPP   Verbal results?   Lab Report No.:	1151 Punchbowl St. #231	
PLM POSITIVE STOP?   Verbal results?   Lab Report No.:       + stop / SamPLE	PLM POSITIVE STOP?   Verbal results?   Lab Report No.:	Site/Project Name:
Sample Area   Sample Area   Sample Area   Sample Area   Analysis Requested*   Method   Lab Sample(s) No:	Sample Area	
Sample Area         Analysis Requested*         Method Reference         Lab Sample(s) No           A Air Volume         PLM         202422858           Lead         202422858           Lead         202422859           HOLD         HOLD           HOLD         Date/Time           Received By (Print and Sign)         Date/Time           Savannah Newman         03-20-24 P02:19	Sample Area         Analysis Requested*         Method         Lab Sample(s) No.:           PLM         202422858           Lead         202422858           Lead         202422859           HOLD         202422850           HOLD         Date/Time           Savannah Newman         03-20-24 P 02:19           Lab Notes:         In a HAC In via drop box In via drop box In via Pedex In via paper In vi	
PLM   202422858   Lead   202422858   Lead   202422859   Lead   202422859   Lead   202422850   Lead   Lead   202422860   Lead   Lead	PLM	Date Sampled* Colle (mm/dd/yy)
Lead   202422858     Lead   202422859     Lead   202422859     HOLD   HOLD     Received By (Print and Sign)   Date/Time     Savannah Newman   03-20-24 P02:19	Lead   202422858     Lead   202422859     Lead   202422859     HOLD   HOLD     Received By (Print and Sign)   Date/Time     Savannah Newman   03-20-24 Po2:19     Lab Notes:	3/20/2024 Bulk
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Controlled Document: ERA Chris



# Hawaii Analytical Laboratory ANALYTICAL REPORT

Wednesday, March 27, 2024

Environmental Risk Analysis 905 A Makahiki Way Honolulu HI 96826 Phone Number: (808)783-6840

Facsimile:

Email: rachelokoji@enviroriskhawaii.com;

russellokoji@enviroriskhawaii.com

Lab Job No: 202403149

Date Submitted: 3/20/2024

Project Name: 1151 Punchbowl St. #231, 3/20/24

	Total Lead (paint ch	ips)		
Sample No.	NIOSH Method: 7082m LEAD by Your Sample ID / Description	FAAS Results	Units	Date Analyzed
202422858 Comments	LD1	< 40	mg/kg	3/21/2024
202422859 Comments	LD2	< 40	mg/kg	3/21/2024
202422860 Comments	LD3	84	mg/kg	3/21/2024

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3615 Harding Avenue, Ste. 308, Honolulu, HI 96816 - Telephone: (808) 735-0422 - Fax: (808) 735-0047

Page 1 of 2

DLINK Human Kesources Office Improvements Kalanimoku Building, Room 231 Honolulu, Oahu, Hawaii

Environmental Risk Analysis Phone Number: (808)783-6840

905 A Makahiki Way Facsimile:

Honolulu HI 96826 rachelokoji@enviroriskhawaii.com; Email: russellokoji@enviroriskhawaii.com

Lab Job No: 202403149 Date Submitted: 3/20/2024

Project Name: 1151 Punchbowl St. #231, 3/20/24

All Quality Control data are acceptable unless otherwise noted.

MRL for lead wipe is 10ug

MRL for lead paint or soil is 40 mg/kg for a 0.25g sample.

The sample[s] analysis subject of this analytical report were conducted in general accordance with the procedures associated with the "analytical method" referenced above. Modifications to this methodology may have been made based upon the analyst's professional judgment and / or sample matrix effects encountered. The analysis of sample relates only to the sample analyzed, and may or may not be representative of the original source of the material submitted for our analysis. All analysts participate in interlaboratory quality control representative of the original source of the material submitted for our analysis. All analysis participate in interlaboratory quality control testing to continuously document profiency. This report is not be duplicated except in full without the expressed written permission of Hawaii Analytical Laboratory. This report should not be construed as an endorsement for a product or a service by the AIHA LAP, LLC or any affiliated organizations. Sample and associated sampling / collection data is reported as provided by client. TWA values have been calculated based on information supplied by the client that the laboratory has not independently verified. Results have not been corrected for blank determinations unless noted in remarks. Unless otherwise indicated the sample condition at the time of receipt was acceptable.

Results and Symbols Definitions

- > This testing result is greater than the numerical value listed < This testing result is less than the numerical value listed.
- # = Analytical methods marked with an "#" are not within our AIHA LAP, LLC Scope of Accreditation. MRL = Method Reporting Limit.

**Anne Antin** 

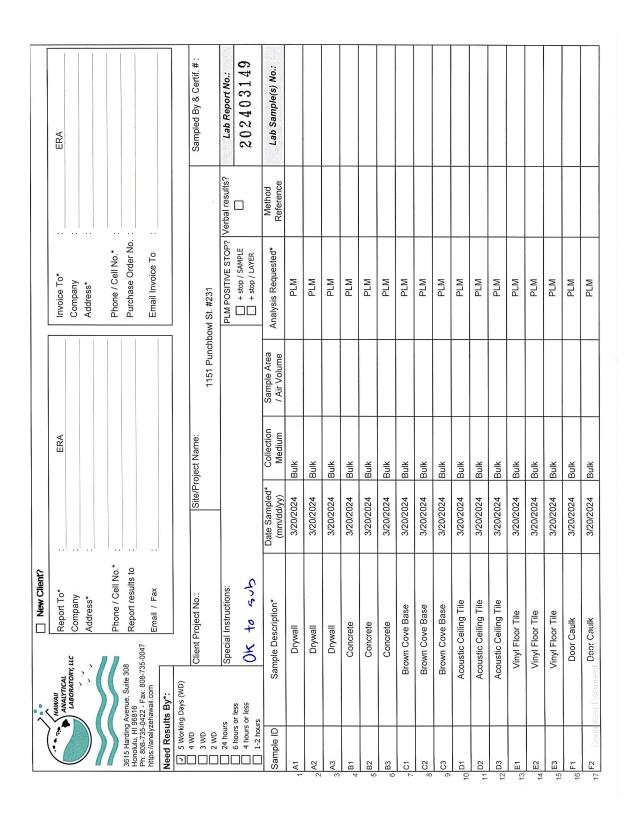
**Quality Control Manager** 

Anne Buting

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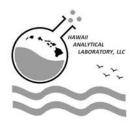
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Page 2 of 2



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	•••	☐ New Client?						
	HAWAII	Report To*		ERA		Invoice To*		ERA
	LABORATORY, LLC	Company				Company		
	>> >>	Address*				Address*		
		Phone / Cell No.*				Phone / Cell No.*		
3615 Harding Aveni Honolulu, HI 96816 Db. 808, 735, 0422	3615 Harding Avenue, Suite 308 Honolulu, HI 96816 Dr. 808,736,0422 , Eav. 808,735,0047	Report results to				Purchase Order No.		
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	Client	Client Project No.:	Site/Pr	Site/Project Name:				Sampled By & Certif. #:
3 WD					1151 Punchk	1151 Punchbowl St. #231		
24 hours		Special Instructions:				PLM POSITIVE STOP? Verbal results?	Verbal results?	Lab Report No.:
6 hours or less 4 hours or less 1-2 hours	6 hours or less 4 hours or less 1-2 hours					+ stop / SAMPLE + stop / LAYER + stop / LAYER		202403149
Sample ID	Sample Description*	escription*	Date Sampled* (mm/dd/yy)	Collection Medium	Sample Area / Air Volume	Analysis Requested*	Method Reference	Lab Sample(s) No.:
F3	Door Caulk	Caulk	3/20/2024	Bulk		PLM		
107 El	Off-white Dr	Drywall Paint	3/20/2024	Bulk		Lead		202422858
20 LD2	Off-white Co	Soncrete Paint	3/20/2024	Bulk		Lead		202422859
17 LD3	Off-white N	Metal Paint	3/20/2024	Bulk	2.	Lead		202422860
PCB1	Door Caulk	Saulk	3/20/2024	Bulk	13	НОГР	3	
	Relinquished By (Print and Sign)	(Print and Sign)		Date/Time		Received By (Print and Sign)	Sign)	Date/Time
	Christophe	hgistopher Corpus		-9720/2023 -9720/2023		Savannah Newman		03-00-80-00-80
	Charles	Ray		42/02/24		Swannet Newm	Cennew .	07 50-24FUZ:19 RC
*Sample des	Sample description can be paint chips, concrete, specific sample collection location, etc	, concrete, specific samp	ole collection location,	, etc	Lab Notes:		via ÚSPS 🔲 via drop	🔲 via HAC 🔲 via USPS 🔲 via drop box 🔲 via FedEx 📋 via pick uj
All samples s *Required fie	innator is som, prease specify in the provision of the pr	awaii Analytical Laborato	ry terms and condition delay in your samples	ns. s being processed.		<u>awb#:</u> 173-		Page: of



# Hawaii Analytical Laboratory ANALYTICAL REPORT

Friday, May 17, 2024

Phone Number:

(808)783-6840

Environmental Risk Analysis 905 A Makahiki Way Honolulu HI 96826 Facsimile: Email:

rachelokoji@enviroriskhawaii.com;

russellokoji@enviroriskhawaii.com

Lab Job No: 202405171 Date Submitted: 5/15/2024

Project Name: 1151 Punchbowl St. #231, 5/15/24

	PCBs in Bulk (7	7 Aroclor) #	
-	EPA Method: 3550Cm/3665Am/8082A -	m [Gas Chromatography - ECD]	Date
Sample No.	Your Sample ID / Description	Results Units	Analyzed
202435705	PCB1		5/16/2024
Comments:	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 Results are on a dry weight basis.	< 0.85 mg/kg < 0.85 mg/kg < 0.85 mg/kg < 0.85 mg/kg < 0.85 mg/kg < 0.85 mg/kg < 0.85 mg/kg	
202435706	PCB2		5/16/2024
Comments:	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260	< 0.86 mg/kg < 0.86 mg/kg < 0.86 mg/kg < 0.86 mg/kg < 0.86 mg/kg < 0.86 mg/kg < 0.86 mg/kg	
	Results are on a dry weight basis.		

All Quality Control data are acceptable unless otherwise noted.

Hawaii Analytical Laboratory (101812) is accredited by the AIHA LAP, LLC in the EMILAP, IHLAP, and ELLAP programs for the scope of work listed on www.aihaaccreditedlabs.org, in accordance with the recognized ISO/IEC 17025:2005. AIHA is a NLLAP recognized accrediting body. Controlled doc.: Analytical Report, rev. 3 – 20181015

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DLNK Human Kesources Office Improvements

Kalanimoku Building, Room 231

Honolulu, Oahu, Hawaii

Addendum No. 2

Existing Conditions - Asbestos / Lead / Hazardous Material Survey

01715 - 64

Job No. J00AO99B

Phone Number: (808)783-6840

Environmental Risk Analysis 905 A Makahiki Way Honolulu HI 96826

Facsimile: Email:

rachelokoji@enviroriskhawaii.com;

russellokoji@enviroriskhawaii.com

Lab Job No: 202405171 Date Submitted: 5/15/2024

Project Name: 1151 Punchbowl St. #231, 5/15/24

The sample[s] analysis subject of this analytical report were conducted in general accordance with the procedures associated with the "analytical method" referenced above. Modifications to this methodology may have been made based upon the analyst's professional judgment and / or sample matrix effects encountered. The analysis of sample relates only to the sample analyzed, and may or may not be representative of the original source of the material submitted for our analysis. All analysts participate in interlaboratory quality control testing to continuously document profiency. This report is not to be duplicated except in full without the expressed written permission of Hawaii Analytical Laboratory. This report should not be construed as an endorsement for a product or a service by the AIHA LAP, LLC or any affiliated organizations. Sample and associated sampling / collection data is reported as provided by client. TWA values have been calculated based on information supplied by the client that the laboratory has not independently verified. Results have not been corrected for blank determinations unless noted in remarks. Unless otherwise indicated the sample condition at the time of receipt was acceptable.

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- < This testing result is less than the numerical value listed
- Analytical methods marked with an "#" are not within our AIHA LAP, LLC Scope of Accreditation. MRL = Method Reporting Limit.

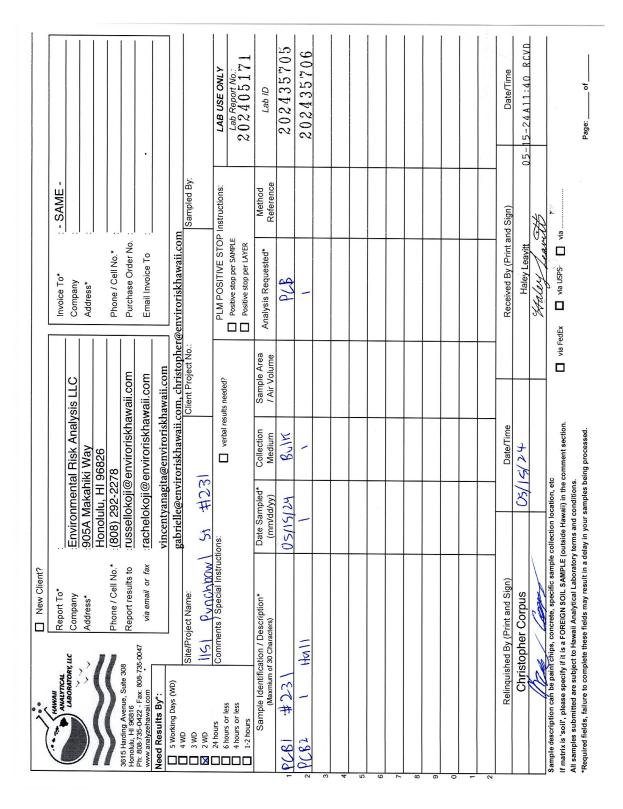
Jennifer Hsu Liao Laboratory Manager

Court the Line

Hawaii Analytical Laboratory (101812) is accredited by the AIHA LAP, LLC in the EMLAP, IHLAP, and ELLAP programs for the scope of work listed on www.aihaaccreditedlabs.org, in accordance with the recognized ISO/ IEC 17025:2005. AIHA is a NLLAP recognized accrediting body. Controlled doc.: Analytical Report, rev. 3 - 20181015

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Job No. J00AO99B **DLNR Human Resources Office Improvements** Kalanimoku Building, Room 231 Honolulu, Oahu, Hawaii



### **DIVISION 13 - SPECIAL CONSTRUCTION**

### SECTION 13281

### ASBESTOS ABATEMENT

### PART 1 - GENERAL

#### 1.01 SUMMARY

A. In performing this project, all possible safeguards, precautions and protective measures shall be utilized to prevent exposure of any individual to asbestos particulates.

### 1.02 DESCRIPTION OF WORK

- A. Furnish all labor, materials, equipment, and services, necessary to carry out the safe removal and disposal of asbestos-containing material in compliance with these specifications, EPA, OSHA, State of Hawaii regulations, and any other applicable Federal and State regulations. Whenever there is a conflict or overlap of the above references, the most stringent shall apply. The asbestos work at the school, if applicable, shall generally include:
  - 1. Removal and disposal of the beige/tan vinyl floor tile (VFT) and associated black mastic located in Room 231 as identified in the Hazardous Material Inspection Report and/or Project Drawings. The black mastic shall be completely removed from the concrete floor substrate.
  - 2. All work is to be completed after business hours or when the area is vacated.
  - 3. Contractor to coordinate all work with the Engineer and the State's hired Qualified Consultant. Contractor is responsible to satisfy himself as to the total extent of all work, including to but not limited to the quantity, location, thickness, layers, accessibility, etc. of all material prior to commencement of any work.
- B. In general, the principal items of the asbestos removal work shall be as follows:
  - 1. Worker Protection
  - 2. Decontamination Enclosure System
  - 3. Preparation of Work Area
  - 4. Removal of asbestos-containing materials
  - 5. Removal of protective sheeting
  - 6. Disposal

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- C. Cleaning shall include areas within and immediately around the work area affected by the abatement work and all areas contaminated by the Contractor's work.
- D. The asbestos abatement work shall include removal of all asbestos-containing materials within the work area as specified herein and noted on the drawing.
- E. Contractor shall comply with all regulations pertaining to asbestos removal. If there is a conflict with the specifications, the more stringent requirement shall apply.

## 1.03 COORDINATION WITH OTHER SECTIONS

A. Prior to commencement of work, an annotated description of all existing damaged and missing items shall be submitted to the Engineer. It will be the Contractor's responsibility to repair and/or replace to the Engineer satisfaction all items identified as damaged and/or missing that cannot be proven to have been in this condition prior to the commencement of this project.

## 1.04 SUBMITTALS PRIOR TO WORK

- A. Submit in accordance with SECTION 01300 SUBMITTALS.
- B. Final payment will not be made until copies of all submittals have been furnished to and accepted by DAGS. Submit 6 copies of the submittal package, no later than 10 consecutive working days from award notice, which will include the items listed below.
- C. Notices: As early as possible but prior to commencement of work, as regulated by each agency and before commencement of any on-site project activity, send a courtesy 10-day notice in accordance with 40 CFR Part 61.145 of Subpart M, of the proposed asbestos abatement work with copies to the Engineer and to the following agencies:
  - 1. The Administrator of the Environmental Protection Agency (EPA) Regional Office having jurisdiction over the project.
  - State of Hawaii, Department of Health, "Notification of Demolition and Renovation" form. Send to: Noise, Radiation and Indoor Air Quality Branch, Asbestos Abatement Office, State Department of Health, P.O. Box 3378, Honolulu, Hawaii 76801-9984.
- D. Permits & Licenses: Copies of all permits, licenses (C-19) and arrangements for removal, transportation and disposal of asbestos-containing materials and waste water, no later than 20 consecutive working days from notice of award unless otherwise instructed in writing by the Engineer.
- E. Insurance: Proof of insurance for Workman's Compensation and General Liability that covers asbestos, lead, and pollution.

- F. Qualifications of the Qualified Consultant
- G. Manufacturer's Data: Copies of manufacturer's specifications, installation instructions and field test procedures for each material and all equipment related to asbestos handling and abatement and include other data as may be required to show compliance with these specifications and proposed uses.
- H. Samples: Samples of the following items for approval prior to ordering materials:
  - 1. Surfactant: copies of manufacturer's literature including all laboratory data, mixing and application instructions.
  - 2. Tapes and Adhesives: copies of manufacturer's literature including all laboratory data.
  - 3. Warning Labels and Signs: copies of examples of all required signage.
  - 4. Protective Clothing: copies of manufacturer's literature on all protective clothing and one sample of each item which will be returned to the Contractor.
  - 5. Respirator Equipment: copies of manufacturer's literature on all respirator equipment and one sample of each item which will be returned to the Contractor.
  - 6. Asbestos Encapsulant(s): copies of manufacturer's literature including all laboratory data, application instructions.
- I. Work Plan: Submit a project Work Plan for the asbestos-containing material disturbance work written and signed by the Contractor's State of Hawaii, Department of Health certified Asbestos Project Designer. The Contractor shall also provide detailed information concerning:
  - 1. Preparation of the work area including erecting a negative pressure enclosure system for the removal of interior floor tiles/adhesives and exterior paint/coat.
  - 2. Personal protective equipment including respiratory protection and protective clothing.
  - 3. Decontamination procedures for the personnel who may be exposed to asbestos.
  - 4. Handling and disposal methods and procedures to be used.
  - 5. Required air monitoring procedures and sampling protocols.
  - 6. Procedures for final cleanup.
  - 7. A sequence of work and performance schedule in coordination with other trades.

- 8. Emergency procedures.
- J. Shop Drawings: Submit shop drawings for the following items as a minimum:
  - 1. Descriptions of any equipment to be employed not discussed in this section.
  - 2. Security provisions, if any, in and around the project area.
  - 3. Outline of work procedures to be employed.
  - 4. Location and construction of all airtight barriers including temporary air tight negative pressure enclosure containment system for the removal of exterior paint and coating material
  - 5. Location of waste dumpster.
  - 6. Staging of the work, the sequence
  - 7. Entrances and exits to the work place
  - 8. Location and construction of worker decontamination units
  - 9. Water filtration system for all contaminated water. Description of water disposal and copy of water disposal permit from the City & County of Honolulu, Environmental Services, Division of Environmental Quality, *Temporary Industrial Wastewater Discharge* Permit.
  - 10. Proposed method of attaching plasticizing (polyethylene sheeting) shall be approved in advance to minimize damage to equipment and surfaces. Method of attachment may include any combination of duct tape or other approved waterproof tape, furring strips, spray glue, staples, nails screws or other effective procedures capable of sealing adjacent sheets of polyethylene sheeting and capable of sealing polyethylene to dissimilar finished or unfinished surfaces both under wet and dry conditions (including amended water).
  - 11. Proposed method of patching and repairing all damage to existing finishes from the attachment of polyethylene sheeting (as applicable).
- K. Documentation for Instruction: Submit documentation that each and every individual, including foremen, supervisors, and other company personnel or agents and any other individual who may be exposed to airborne asbestos fibers, who may be responsible for any aspect of abatement activities, or who is allowed or permitted to enter areas where such exposure may occur has currently attended and passed the Abatement Worker and/or Abatement Contractor/Supervisor course whichever is relevant to that workers responsibilities as specified in 40 CFR Part 763, "Asbestos Materials in Schools". These courses shall be EPA-approved or approved by a State

Accreditation Program in the most current listing of the Federal Register. No worker shall be allowed on site if they are found to have either an expired accreditation certificate or does not comply with the requirements set forth in 40 CFR Part 763 on training. All workers shall be certified for asbestos related work in accordance with Department of Health, Chapter 11-504, Hawaii Administrative Rules, *Asbestos Abatement Certification Program*.

The Contractor shall be responsible for keeping the documentation up to date and subsequent submittals to the Engineer before any additional employee or individual, not currently on the list, is allowed within the project site.

Submit completed and signed "Employee Acknowledgment of Instruction and Release" forms. A sample "Employee Acknowledgment of Instruction and Release" form is provided at the end of this section.

- L. Documentation from Physician: Submit documentation from a physician that all employees or agents who may be exposed to airborne asbestos have been provided with an opportunity to be medically monitored to determine whether they are physically capable of working while wearing the respirator required without suffering adverse health effects. In addition, document that all individuals permitted within the project site have received medical monitoring or had such monitoring made available to them as required in OSHA 29 CFR 1926.1101, and HIOSH 12-145.1. The Contractor must be aware of and provide information to the examining physician about unusual conditions in the workplace environment (e.g. high temperatures, humidity, chemical contaminants) that may impact on the employee's ability to perform work activities. The Contractor shall keep and make available to all affected individuals a record and the results of such examinations.
- M. HEPA Vacuums: Submit manufacturer's certification that vacuums conform to ANSI Z9.2-79, Fundamentals Governing the Design and Operation of Local Exhaust Systems as applicable to this project.
- N. Rental Equipment: When rental equipment is to be used in abatement areas or to transport asbestos contaminated waste, a written notification concerning intended use of the rental equipment must be provided to the rental agency with a copy submitted to the Engineer.
- O. Emergency Planning Procedures: Contractor shall submit for review and acceptance by the Engineer an emergency plan prior to abatement initiation.
  - 1. Emergency procedures shall be in written form and prominently posted adjacent to the Worker Protection Notices specified hereinafter. Everyone prior to entering the work area must read and sign these procedures to acknowledge receipt of emergency exits and emergency procedures.

- 2. Emergency planning shall include notification of police, fire, and emergency medical personnel of planned abatement activities work schedule, and layout of the work area, particularly barriers that may affect response capabilities.
- 3. Emergency planning shall include considerations of fire, explosion, toxic atmospheres, electrical hazards, slips, trips and falls, and heat related injury. Written procedures shall be developed and employee training procedures shall be provided in Contractors plan.

# 1.05 SUBMITTAL AFTER WORK IS COMPLETED

- A. Submit in accordance with SECTION 01300 SUBMITTALS.
- B. At the completion of the work, a final report shall be prepared by the Contractor for acceptance by the Engineer. Six copies of the report shall be submitted and shall include the items listed below.
- C. The project name, Abatement Contractor, Abatement Contractor license number, notification form to the Hawaii Department of Health and EPA, work duration, material removed, respiratory protection employed, asbestos waste manifest, total quantity of waste, employee exposure air sample results, and results of the most current PAT round results for the laboratory or laboratories conducting the employee exposure, ambient, and TEM air sample analysis (if applicable).
- D. Certification of the Abatement Contractor's employees.
- E. Visitor/Worker Entry Log: The daily log of all personnel including the Contractor's employees and agents who enter the work area while asbestos abatement operations are in progress, until final clearance is received that the work area is asbestos free. The log shall contain the listed information as a minimum and shall be certified by the Qualified Consultant.
  - 1. Date of visit/worker entry
  - 2. Visitor/Worker's name, employer, business address and telephone number
  - 3. Time of entry and exit from work area
  - 4. Purpose of visit
  - 5. Type of protective clothing and respirator worn
  - 6. Certificate of release signed and filed with the contractor
- F. Clearance certifications received from the Qualified Consultant.

G. A statement signed by the Asbestos Abatement Contractor that all asbestos abatement and disposal was completed in compliance with this specification, Federal and State regulations, and the approved Work Plan.

# 1.06 PRODUCT HANDLING

A. Delivery and Storage of Materials: Deliver materials to the site in original packages, containers or bags fully identified with manufacturer's name, brand and lot number. Store materials in a dry well-ventilated space, under cover, off the ground and away from surfaces subject to dampness or condensation as approved by the Engineer Material that becomes contaminated with asbestos shall be disposed of in accordance with applicable regulations. Replacement materials shall be stored outside the contaminated work area until abatement is completed.

#### 1.07 PROTECTION

- A. Site Security: The work area is to be restricted only to authorized, trained, and protected personnel. These may include the Contractor's employees, employee's of subcontractors, the Engineer and its representatives, State and local inspectors and any other designated individuals. A list of authorized personnel shall be established prior to job start.
  - 1. Entry to the work area by unauthorized individuals shall not be permitted without the express approval of the Engineer and any such entry shall be reported immediately to the Engineer by the Contractor.
  - 2. A Visitor/Worker Entry Log shall be maintained.
  - 3. The Contractor shall have control, subject to approval of the Engineer, of security in the work area and in proximity of Contractor's equipment and materials.
- B. Site Protection and Safety: As a minimum follow the requirements of EPA, HIOSH (State of Hawaii), OSHA and NIOSH. Take all necessary precaution to ensure there is no asbestos contamination to those areas not included in the work schedule.
- C. Protective Covering: The Contractor shall provide and install protective covering on an "as required" or "upon request" by the Qualified Consultant. Protective covering shall be clean plastic sheets minimum thickness of 6-mil.
- D. Safeguarding of Property: The Contractor shall take whatever steps necessary to safeguard his work and also the property of the State and other individuals in the vicinity of his work area during the execution of this Contract. He shall be responsible for and make good on any and all damages by his employees negligence. Do not load structure with weight that will endanger the structure.
- E. Completed Work: The Contractor shall provide all necessary protection for surfaces encapsulated under this section.

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#### 1.08 ABBREVIATIONS

- A. ANSI: American National Standards Institute, Inc.
- B. CFR: Code of Federal Regulations
- C. HIOSH: Division of Occupational Safety and Health, Department of Labor and Industrial Relations, State of Hawaii
- D. EPA: U.S. Environmental Protection Agency
- E. NESHAP: National Emission Standards for Hazardous Air pollutants
- F. NIOSH: National Institute for Occupation Safety and Health
- G. OSHA: Occupational Safety and Health Administration

# 1.09 GENERAL REQUIREMENTS

- A. Contractor shall examine and have at all times in his possession at his office (one copy) and in view at each job site office (one copy) a current issue of the following publications:
  - 1. State of Hawaii: Occupational Safety and Health Standards; Title 12, Subtitle 8, Chapter 145.1, Asbestos
  - 2. State of Hawaii, Department of Health, Title 11, Chapter 501-1, Asbestos Requirements
  - 3. State of Hawaii, Department of Health, Title 11, Chapter 501-2, Asbestos Containing Materials in Schools
  - 4. State of Hawaii, Department of Health, Title 11, Chapter 501-4, Asbestos Abatement Certification Program
  - 5. Title 29, Code of Federal Regulations, Section 1910.134 General Industry Standard for Respiratory Protection, Occupational Safety and Health Administration (OSHA), U.S. Department of Labor
  - 6. Title 29, Code of Federal Regulations, Section 1926.1101 Asbestos, Construction Industry, Occupational Safety and Health Administration (OSHA), U.S. Department of Labor
  - 7. Title 29, Code of Federal Regulations, Section 1910.2 Access to Employee Exposure and Medical Records, Occupational Safety and Health Administration (OSHA), U.S. Department of Labor

- 8. Title 29, Code of Federal Regulations, Section 1910.1200 Hazard Communication, Occupational Safety and Health Administration (OSHA), U.S. Department of Labor
- 9. Title 40, Code of Federal Regulations, Part 61, Subparts A and M (Revised Subpart B), National Emission of Standards for Hazardous Air Pollutants, U.S. Environmental Protection Agency (EPA)
- 10. Guidance for Controlling Asbestos-Containing Materials in Buildings, EPA 560/5-85-024 (Purple Book), U.S. Environmental Protection Agency (EPA)
- 11. Title 34, Code of Federal Regulations, Part 231, Appendix C, Procedures For Containing and Removing Building Materials Containing Asbestos, U.S. Environmental Protection Agency (EPA)
- 12. Title 29, Code of Federal Regulations, Section 1910.145 Specifications for Accident Prevention, Signs and Tags, Occupational Safety and Health Administration (OSHA), U.S. Department of Labor
- 13. ANSI Z88.2-80 Practice for Respiratory Protection
- 14. EPA, Final Response to the Asbestos Hazard Emergency Response Act (AHERA), 40 CFR, Part 763, Subpart E.
- B. The Contractor shall comply with the above requirements and any applicable State and City & County regulations. Where conflict or any inconsistency among requirements or with this specification exists, the more stringent requirements shall apply. Ignorance of the above requirements and any applicable State and City & County regulations resulting in additional cost to the Contractor shall be solely the Contractor's responsibility.
- C. All regulations shall govern over these specifications, except that any more stringent specification or specification providing greater protection against asbestos exposure, injury, loss or liability, shall control to the extent permitted by regulation. Any question regarding conflict or inconsistency between specification and/or regulations should be directed to the Engineer.
- D. Whenever approval of the Engineer is required prior to proceeding with other work, the following shall be complied with:
  - 1. The Contractor shall allow the Engineer 72 hours from notification to respond to the request for inspection.
  - 2. The Contractor shall designate one person (either a foreman or superintendent) who will be authorized to request for inspections. The name of the designated

person shall be submitted in writing to the Engineer prior to commencing with the work. Request from any other person will not be considered an official request.

- 3. The designated person when requesting for inspection shall provide the following information:
  - a. Name of caller.
  - b. Building and rooms to be inspected (as applicable).
  - c. Work phase of inspection, as specified.

#### 1.10 DEFINITIONS

- A. Abatement: Procedure to control fiber release from asbestos-containing building materials.
  - 1. Removal: All herein specified procedures necessary to remove asbestoscontaining materials at an approved site in an acceptable manner.
  - 2. Post-Removal Surface Encapsulation: Procedures necessary to coat surfaces from which asbestos-containing materials have been removed and where designated on the drawings to control any residual fiber release.
- B. Air Monitoring: The process of measuring the fiber content of a specific, known, volume of air in a stated period of time.
- C. Amended Water: Water to which a surfactant has been added to reduce water surface tension and thereby provide a more rapid penetration.
- D. Authorized Visitor: the Engineer, the Qualified Consultant, his representatives, air monitoring personnel, or a representative of any regulatory or other agency having jurisdiction over the project.
- E. Holding Area: A secure area used for the storage of double-bagged asbestos containing material before removal from the project site to an approved disposal site.
- F. Fixed Object: A unit of equipment or furniture in the work area which cannot be removed from the work area without dismantling.
- G. Friable Asbestos: Asbestos containing material which can be crumbled to dust, when dry, under hand pressure.
- H. HEPA Filter: A High Efficiency Particulate Absolute filter capable of trapping and retaining 99.97% of asbestos fibers greater than 0.3 micron in length.
- I. HEPA Vacuum Equipment: Vacuuming equipment that utilizes a High Efficiency Particulate Absolute (HEPA) filter.

- J. Surfactant: A chemical wetting agent added to water to improve penetration, thus reducing the quantity of water required for a given operation or area.
- K. Post-Removal Encapsulation: A liquid material which can be applied to surfaces from which asbestos-containing material has been removed to control the possible release of residual fibers, either by creating a membrane over the surface (bridging encapsulant) or by penetrating in to the material and binding its components (penetrating encapsulant). Selected product shall be compatible with the existing finishes including wood, metal, and plastic.
- L. Qualified Consultant: Consultant hired by the Contractor who will perform air monitoring and inspection during abatement work and shall have the authority to initiate engineering controls. The Qualified Consultant will be accredited as a State of Hawaii Department of Health accredited Asbestos Building Inspector, Contractor Supervisor, Project Monitor; and NIOSH 582 certified.

# PART 2 - PRODUCTS

#### 2.01 MATERIALS

- A. Plastic Sheeting: Minimum thickness is 6-mil polyethylene film.
- B. Plastic Bags: Minimum thickness 6-mil polyethylene film labeled as specified hereinafter.
- C. Tapes: Tape shall be capable of sealing joints of adjacent sheets of polyethylene and for attaching polyethylene sheets to finished or unfinished surfaces of dissimilar materials and capable of adhering under both dry and wet conditions, including the use of amended water. Silver cloth duct tape, minimum 2 inches wide; red or NATO orange tape, minimum 2 inches wide for exit arrows; and double faced foam tapes, by Nashua, 3-M, Arno, or approved equal.
- D. Adhesives: Adhesives (3-M #76, #77, or approved equal) shall be capable of sealing joints of adjacent sheets of polyethylene and for attachment of polyethylene sheet to finished or unfinished surfaces of dissimilar materials and capable of adhering under both dry and wet conditions, including use of amended water.
- E. Surfactant (Wetting Agent): 50 percent polyoxyethylene ester and 50 percent polyoxyethylene ether, or equivalent, and shall be mixed with water to provide a concentration of one ounce, or more as needed, of surfactant to 5 gallons of water. (An equivalent surfactant shall be understood to mean material with a surface tension of 29 dynes/cm as tested in its properly mixed concentration, using ASTM method D 1331-56 (R 1980), "Surface and Interfacial Tension of Solutions of Surface-Active Agents.")

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- F. Warning Labels and Signs: As required by OSHA regulations 29 CFR 1926.1101 and HIOSH 12-145.1. Permanent signage for access panels and areas with encapsulated asbestos-containing materials shall be as specified hereinafter. Signage shall be as approved by the Engineer.
- G. Protective Clothing: As specified hereinafter. The Contractor shall have all the required sets of coveralls required for this project on island prior to the start of work. There will be no time extension for the unavailability of coveralls or related equipment.
- H. Post-Removal Encapsulation: The encapsulant shall be applied to surfaces from which asbestos-containing material has been removed to control the possible release of residual fibers, either by creating a membrane over the surface (bridging encapsulant) or by penetrating in to the material and binding its components (penetrating encapsulant) and shall be compatible with the existing finishes including wood, metal, and plastic.
- I. Other Materials: Provide all other materials, such as, but not limited to lumber, plywood, nails, fasteners, metal studs, hardware, foam sealants, and caulking which may be required to properly prepare and complete this project.

# 2.02 TOOLS AND EQUIPMENT

- A. General: Provide and fabricate suitable tools for the asbestos abatement procedures.
- B. Water Sprayer: Airless or a pressure sprayer for amended water application as applicable.
- C. Air Purification Equipment: High Efficiency Particulate Absolute (HEPA) filtration systems.
- D. Paint/Encapsulant Sprayer: Airless type.
- E. Other tools and equipment as necessary.

# 2.03 PERSONNEL PROTECTION REQUIREMENTS

- A. The contractor acknowledges he alone is responsible for instruction and for enforcing personnel protection requirements and that these specifications provide only a minimum acceptable standard.
- B. Provide workers with sufficient sets of disposable protective full body clothing consisting of material impenetrable by asbestos fibers and of the proper size for each individual to accommodate movement without tearing. Such clothing shall consist of full body coveralls, footwear, gloves and headgear. Provide hard hats as required by applicable safety regulations. Disposable clothing shall not be allowed to accumulate

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- and shall be disposed of as asbestos contaminated waste. Protective clothing shall be worn by all personnel within the work area from the start of the removal and post-removal encapsulation work until the work area has received its final clearance.
- C. Insulated non-skid rubber boots or an approved equal shall be required for all individuals entering the work area. Protective full body clothing without elastic at sleeves and legs shall require separate elastic or taped protection to seal the opening. Visitors shall be provided full body protective clothing.
- D. No visitors shall be allowed in work areas, except as authorized by the Engineer. Visitors must supply their own respiratory protection and show proof training in accordance with DOH 11-501-504.
  - Provide authorized visitors with suitable disposable protective full body clothing consisting of material impenetrable by asbestos fibers and of the proper size for each individual to accommodate movement without tearing. Such clothing shall consist of full body coveralls, footwear, gloves and headgear including hard hat when required and insulated rubber boots or equal. The Contractor shall include in his Bid the expense of a total of 4 changes of clothing per day for each day of asbestos abatement work for visitor's use. The quantity shall accumulate and may be used at any time during asbestos abatement work at the discretion of the Engineer.
- E. All electrical systems used for asbestos abatement operations shall as a minimum be protected with "Ground Fault Circuit Interrupters" selected and installed in strict accordance with the manufacturer's instructions, the National Electric Code and all other pertinent codes.
- F. Additional safety equipment (e.g. hardhats meeting the requirements of ANSI Z-89.1-1981, eye protection meeting the requirements of ANSI Z87.1-1979, safety shoes meeting the requirements of ANSI Z41.1-1967, disposable PVC gloves), as necessary, shall be provided to all workers and authorized visitors.

# PART 3 - EXECUTION

# 3.01 SEPARATION OF WORK AREAS FROM NON WORK AREAS

- A. Visual Separation: Visual separation shall be accomplished at all glazed areas using opaque polyethylene. This separation shall not be incorporated within the other seals required on this project.
- B. Air Systems: Shut down and isolate all ventilation air systems to prevent contamination and fiber dispersal to other areas of the building. During the abatement operations, air intake vents within the work area shall all be sealed with tape and two layers of 6-mil polyethylene sheeting.

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- C. Penetrations: Ceiling and wall penetrations, windows and doors, shall be sealed with two layers of 6-mil poly sheeting and secured with duct tape.
- D. For exterior paint/coating removal work, the Contractor shall construct an air-tight negative pressure mini enclosure.
- E. Emergency Exits: Designate and maintain emergency and fire exits from the work area in accordance with local codes and regulations. Provide knockout/cut away panels in the barriers in the direction of emergency egress. Properly mark the knockout/cut away panels, seal them airtight, and on a continuing basis instruct workers and authorized personnel as to their locations. Post a diagram in each Clean Room and Equipment Room locating the emergency exits. In case of fire while doing work in the work areas, emergency exit procedures have priority over normal work exiting procedures.
- F. Inspection: The Contractor shall inspect all barriers at least twice a day (once prior to the start of each day's abatement operations and following the day's abatement operations). Document the inspections and observations in a daily project log.

# 3.02 DECONTAMINATION ENCLOSURE SYSTEMS

- A. General: The Contractor shall construct the decontamination enclosure system or use portable units acceptable to the Qualified Consultant and as described in the approved Work Plan.
- B. Personnel Decontamination Unit: As deemed necessary by the Qualified Consultant, provide a personnel decontamination enclosure system contiguous to the work area consisting of three totally enclosed chambers as follows:
  - 1. An Equipment Room with two curtained doorways, one to the work area and one to the shower.
  - 2. A Shower Room with two curtained doorways, one to the Equipment Room and one to the Clean Room. The Shower Room shall contain at least one shower. Careful attention must be paid to the shower enclosure to insure against leakage of any kind. Ensure a supply of soap at all times in the shower. Drainage from the shower shall be disposed of as contaminated waste water or filtered as specified hereinafter.
  - 3. A Clean Room with one curtained doorway to the Shower Room and one entrance/exit door to non-contaminated area. The Clean Room shall have sufficient space for storage of worker's street clothes and personal effects, towels, and other non-contaminated items.
- C. Maintenance of Decontamination Units: At the beginning of each work shift and throughout abatement operations, all seals and curtained doorways shall be inspected and if not found in proper condition, repaired immediately. All areas shall be kept

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clean at all times. Ensure that drainage filtering systems are kept clean and operational at all times.

- 1. Personnel Decontamination Unit:
  - a. The Contractor shall maintain Clean Room and shall repair and sanitize respirator equipment after each use.
  - b. Soap and shampoo shall be in the showers at all times.
  - c. Fresh towels shall be available at all times.
  - d. Provide a disposal bag for contaminated filters in the Shower Room at all times.
  - e. Provide storage for wet and dry towels.
  - f. Provide a fine bristle brush outside the Equipment Room in the work area.
  - g. At the end of each work shift the shower shall be thoroughly disinfected, the filter bag (if applicable) shall be returned to the Equipment Room for disposal, and the Equipment Room shall be thoroughly HEPA vacuumed and wet cleaned. The decontamination enclosures shall be sealed and removed (as necessary) and area restored after each work day.
- D. Worker Protection Notice: Post the following notice in each Clean Room and Equipment Room:
  - 1. Workers and authorized personnel, in order to enter the work area, shall:
    - a. Remove all clothing, unless it is to remain in the Equipment room for eventual disposal.
    - b. Don the appropriate respiratory protection, follow all training procedures and manufacturer's instructions. Once all of the above has been completed, proceed to the shower. Check the equipment out for proper operation before proceeding any further.
    - c. Don protective clothing (full body coveralls, gloves, boots, headgear etc.) after donning respirator.
  - 2. All workers and authorized personnel, in order to leave the work area, shall:
    - a. Remove gross (visible) contamination from themselves and their equipment. Brush off dust with a fine bristle brush and leave the brush outside the Equipment Room in the work area.
    - b. Enter the Equipment Room and, keeping your respirator in place, remove all protective clothing, including full body coveralls, gloves, boots, and

- headgear. Place contaminated clothing in the bag(s) provided. Store reusable gloves and boots in their respective areas in the Equipment Room.
- c. Respirator still in place, move into the Shower Room and rinse off thoroughly.
- d. Accomplish complete showering, thoroughly soaping and shampooing.
- e. Proceed to the Clean Room: Dry off, get dressed and return respirator to its proper place.
- f. No smoking, eating, drinking shall be allowed inside the work area or the decontamination enclosures.

# 3.03 WASTE WATER FILTERING SYSTEM

- A. Prior to any waste water disposal into the sanitary sewer system, the Contractor shall be responsible for obtaining from the City and County of Honolulu, Environmental Services, Division of Environmental Quality, *Temporary Industrial Wastewater Discharge* Permit.
- B. Filter: All waste water that will be discharged into the sanitary sewer system shall be treated as contaminated with asbestos and shall be filtered using two in-line filter cartridges with 2" inlets and outlets. The outlet of the first cartridge shall connect to the inlet of the second cartridge. The first cartridge shall contain six 100-micron prefilters and a second cartridge shall contain six 0.5-micron filters or equal staging according to type filtering unit.
- C. One spare set of 100-micron prefilters shall be maintained at the site at all times to replace prefilters during cleaning. Maintain at least one set of 0.5-micron or equal filters at the site at all items form replacement as necessary.
- D. When prefilters become clogged, replace with spares, and wash out the prefilters in the Shower Room, allowing drainage from the cleaning operation to go through the filtering system.
- E. When the final filters become clogged, remove the filters, replace with new, and dispose of the clogged filters as contaminated waste.
- F. Provide a holding tank for contaminated waste water as required to prevent backup of water into the shower when the amount of water generated exceeds the flow rate of the filters.

# 3.04 COMMUNICATIONS

A. Provide a communications system suitable to monitor all activities within the work area and to readily transfer messages from one location to another.

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#### 3.05 WORK AREA PREPARATION

A. Work by the Asbestos Abatement Contractor:

# 1. Step 1:

- a. Posting of Danger Signs: Post danger signs in and around the work area to comply with 29 CFR 1926.1101, HIOSH 12-145.1 and all other Federal, State and local requirements. Signs shall be posted at a distance sufficiently far enough away from the work area to permit a person to read the sign and take the necessary protective measures to avoid exposure.
- b. Inspect the Building Openings: At the beginning of each work day, the Contractor shall inspect and ensure that all doors, windows and other openings of affected building(s) and all surrounding buildings are closed and locked (as applicable).
- c. Barrier Enclosures: Cover all openings between the work area and the occupied portions of the building with opaque plastic. Construct all general and separation barriers.
- d. Sealing Openings: Seal all openings including but not limited to ducts, vents, electrical penetrations, and any other penetrations of the work areas, with plastic sheeting sealed with tape.
- e. Erect an air tight negative pressure enclosure containment system attached to the exterior surfaces for the removal of paint/coating material.

# 2. Step 2:

- a. Provide Decontamination Units where appropriate: Personnel Decontamination Unit(s) specified hereinafter shall be required.
- b. Air Filtration Units: Install sufficient number of HEPA air filtration units to create a minimum of four air changes per hour and create a negative pressure differential of 0.2 inches of water. Contractor to monitor the pressure differential for the duration of the project using a portable manometer. Contractor will keep one spare unit at the job site for the duration of the work.
- c. Pre-cleaning/Wet-wiping:
  - 1) Preclean fixed object within the work area, first using HEPA vacuum equipment and then wet cleaning methods as appropriate and separately enclose with minimum 6-mil plastic sheeting sealed with tape. Fixed objects shall include, but not be limited to exposed electrical conduits and all other permanently fixed items.

# 3. Step 3:

- a. Plasticizing: Objects which may be contaminated during abatement or difficult to clean shall be taped and sealed in a minimum of 6-mil polyethylene plastic sheeting. A minimum of 2 layers of 6-mil polyethylene plastic sheeting shall be used for preparation of critical barriers and containments.
- b. When sealing (plasticizing), plastic sheet shall be protected against damages by sharp edges, projections, etc. Provide 2" squares of duct tape at all sharp projections prior to applying plastic sheet to prevent puncture and tearing.
- c. NOTE: Combining lower mil thickness sheets to total the minimum mil thickness is not acceptable.
- d. Marking Exits: Maintain and mark both normal and emergency exits from the work areas to include large tape or spray painted orange arrows in the direction of egress and at curtained doorways which side of plastic sheeting to access first. One arrow marking shall be visible from every work location. Establish a color or designation system to distinguish normal exiting to the personnel decontamination unit and emergency exiting when life safety conditions prevail.

# 4. Step 4: Temporary utility services:

- a. Temporary Electricity and Lighting:
  - 1) Existing electrical service to the building may be used for temporary electrical power during abatement and replacement work; however, the electrical power to the work area will be shut down during abatement work.
  - 2) The Contractor shall verify the locations(s) of available electrical service outside the work areas and shall tie into the existing system at a location approved by the Engineer.
  - 3) Install circuit and branch wiring, with area distribution boxes located so that power is available throughout the project by use of construction type power cords. All lighting shall be three wire with a ground fault interrupter.
  - 4) Provide a minimum of 35 foot-candles of illumination on surface for finishing operation and 100-foot candles for removal operations. Provide 24 volt safety lighting.

# b. Temporary Water:

1) Existing domestic water service to the building may be used for temporary water during construction. Location of tie-in shall be approved by the Engineer.

- 2) Install branch piping as necessary throughout the construction area.
- c. Temporary Fire Protection:
  - 1) Provide and maintain temporary fire protection equipment during the asbestos abatement operations.
  - 2) Equipment shall be of the appropriate type to fight fires associated with the existing building materials and those materials used during the construction operations.
  - 3) The Contractor shall clearly mark the location of all fire extinguishers.
- 5. Step 5: After the sealing and temporary facility work is completed, notify the Qualified Consultant and get his approval prior to proceeding with abatement.

# 3.06 VINYL FLOOR TILE WITH MASTIC REMOVAL

- A. Removal work will be conducted in a negative pressure enclosure containment system.
- B. Thoroughly wet the affected floor covering with amended water before starting the removal.
- C. Spray the flooring material repeatedly during the removal operations to maintain a wet condition and to minimize asbestos fiber dispersion. The Qualified Consultant shall have the authority to stop all work due to improper work techniques.
- D. The asbestos-containing materials shall be removed in small sections. Before beginning the next section, the material shall be packed while still moist into 6-mil double polyethylene bags and sealed airtight. No removed material, bagged or unbagged, shall be allowed to dry, fall to the ground, be crumbled into small pieces, pulverized, or made friable.
- E. The Contractor is prohibited from using methods of removal that create excessive amounts of dust and debris.
- F. Exposed raw surfaces will be completely sealed using an appropriate encapsulant.

# 3.07 EQUIPMENT CLEANING

A. All contaminated equipment and tools used for removal work shall be washed and cleaned in the work area prior to removing them from the work area. No washing of contaminated equipment and tools will be allowed outside the work area.

# 3.08 ASBESTOS-CONTAINING WASTE HANDLING

- A. Collect and bag all asbestos debris and any other contaminated debris found in the work area. Clean the visible residual by HEPA vacuuming.
- B. Clean fixed object within the work area, using HEPA vacuum equipment. Fixed objects shall include, but not be limited to pipes, wiring and all other permanently fixed items. Do not use methods that raise dust, such as dry sweeping or vacuuming with equipment not equipped with HEPA filters. Do not use HEPA vacuum equipment on wet surfaces.
- C. Debris shall be bagged and sealed in 6-mil plastic bags immediately after removal. All gross debris created by the removal process shall be bagged and sealed at the end of each removal day.
- D. The bags containing the asbestos waste material shall be checked for evidence of waste material attached to the outside of the bags. If dirty, the bags shall be washed down in the work area. The bags are then moved to the Holding bin. Bags and containers shall be marked with OSHA label prescribed by the Hawaii OSHA regulations referenced in these specifications. Label shall state, "DANGER CONTAINS ASBESTOS FIBERS AVOID CREATING DUST CANCER AND LUNG DISEASE HAZARD." Additionally, label bags in accordance with OSHA 40 CFR 61.150; or EPA 40 CFR 763 if more restrictive. Labeling shall include the name of the waste generator and the site where the waste was generated.
- E. Asbestos contaminated waste with sharp edges (e.g. nails, screws, metal lath, etc.) will tear the polyethylene bags and sheeting and therefore shall be placed in drums or enclosed with cardboard and double wrapped and sealed with plastic.
- F. During the removal process, if plastic sheeting tears, or the duct tape loosens from the surface, the Abatement Contractor shall immediately stop work, cleanup loose asbestos—containing materials, and then reseal the surface by taping over the torn or loosened surface, before commencing again.
- G. Protect the plastic sheeting against tearing caused by sharp projection, corners, edges, etc., of all equipment being used in the removal process. However, if the plastic sheeting tears, the Abatement Contractor shall follow repair procedure specified above.
- H. Any housing or penetration concealing asbestos—containing materials shall be removed and protected to provide access to the materials. Replacement or reattachment of these shall be in a manner such that function and appearance is equal or exceeds the original condition.

# 3.09 CLEANING AND CLEARANCE OF THE WORK AREA

A. Should the Contractor fail to commence work to clean-up and make the work area asbestos free within one working day after the clean-up thereof has been requested by

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the Engineer, and thereafter to expeditiously complete the said clean-up, Engineer may without further notice and without termination of contract, have the clean-up done and deduct the cost thereof from the contract.

- B. Visual Clearance of Removal Work Areas: Remove all visible accumulation of asbestos-containing materials and debris by HEPA vacuums, sponging, and wetwiping. The work areas shall be totally visibly clean and remaining material encapsulated. The Contractor, in the presence of the Qualified Consultant, shall make a complete visual inspection of the work area to ensure dust-free conditions.
- C. Once the Qualified Consultant verifies that the work areas are essentially clean of visible asbestos-containing debris, the Qualified Consultant will collect post abatement PCM air clearance samples.
- D. For interior removal work, air clearance samples will be collected by the Qualified Consultant until an air clearance level of 0.01 fibers/cc is obtained.
- E. Should the Contractor fail to achieve the respective clearance level lower than 0.01 f/cc in the removal work area. The Contractor will re-clean the area at no additional cost to the State and all additional fees to perform the sampling and analysis by the Qualified Consultant shall be paid for by the Contractor.
- F. After achieving a respective clearance level lower than 0.01 f/cc, the work area will be cleared of all remaining containment enclosure sheeting and released to the Engineer. Signage applicable to job site safety and the performance of the remaining portions of the work shall remain as applicable.

# 3.10 DISPOSAL OF ASBESTOS-CONTAINING MATERIAL

- A. If identified, painted asbestos-containing waste shall be TCLP tested by the Contractor prior to disposal to determine if the asbestos-containing waste must be disposed of as hazardous waste or as asbestos-containing waste. If painted asbestos-containing waste passes the TCLP test, the waste may be disposed of as asbestos-containing waste. If the painted asbestos-containing waste fails the TCLP test, the waste must be disposed of as hazardous waste.
- B. As the work progresses asbestos-containing waste is generated the Contractor shall transport all waste generated on a pre-scheduled day to the State of Hawaii, Department of Health's authorized disposal site, or as specifically approved by the Engineer to delay a disposal operation. Transport all waste to the predesignated disposal site in accordance with EPA regulations and specific landfill requirements.

Contaminated material shall be double—bagged in bags with OSHA label prescribed by the HIOSH regulations referenced in these specifications. Label shall state, "DANGER – CONTAINS ASBESTOS FIBERS – AVOID CREATING DUST – CANCER AND LUNG DISEASE HAZARD." Additionally, label bags in

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- accordance with OSHA requirement 29 CFR 1926.1101, HIOSH 12–145.1 or EPA 40 CFR 61.150 if more restrictive. Labeling shall include the name of the waste generator and the site where the waste was generated.
- C. Mark vehicles used to transport asbestos-containing waste material during the loading and unloading of the waste so that the signs are visible. The marking must be displayed in such a manner and location that a person can easily read the legend. Refer to 40 CFR Part 61.149 for lettering size, fonts and wording of sign requirements. For all loading and unloading activities, the sign referred to in 40 CFR Part 61.150 (b) (3) shall be displayed prominently.
- D. Vehicles used for transporting waste to the disposal sites shall have a completely enclosed, lockable storage compartment. Storage compartments shall be plasticized and sealed with a minimum of one layer of 6 mil polyethylene sheeting on the sides and top and two layers of 6 mil polyethylene on the floor (bed). Waste materials, except those with sharp edges (metal lath, screws, nails, metal suspension system, etc.), properly double bagged may be transported to the disposal site without being placed in drums if the transporting vehicle is prepared as specified above in addition to any more stringent requirements by HIOSH. The compartments shall be thoroughly wet—cleaned and/or HEPA vacuumed following the disposal of each load at the disposal sites at an approved location with electrical power as required. At the conclusion of the asbestos abatement, or before transport vehicles are used for other purposes, the polyethylene sheeting shall be properly removed and disposed of as contaminated waste. After this has been accomplished, compartments shall once again be wet—cleaned and HEPA vacuumed in order to eliminate all debris.
- E. At the landfill, upon delivery of the waste for disposal, the Contractor shall notify the Scale Attendant and Landfill Spotter that the waste to be disposed of is asbestos material.
- F. Workers unloading bags at the disposal sites shall be dressed in full body protective clothing and dual cartridge respirators.
- G. Waste disposal manifest forms shall be properly completed to assure custody and disposal of all asbestos—containing material and asbestos contaminated waste at approved disposal sites. Forms shall be kept on file as directed by the Engineer with copies submitted to the Qualified Consultant the next working day after each trip.

NOTE: IT IS THE CONTRACTOR'S RESPONSIBILITY TO ASSURE THAT ANY LANDFILL USED FOR DISPOSAL OF ASBESTOS—CONTAINING OR ASBESTOS CONTAMINATED WASTE IS APPROVED FOR THAT PURPOSE.

H. Bags must be placed in the hole for burial. Dumping of bags from the containers will not be allowed. However, if a bag is torn and if acceptable by the landfill, the entire container may be buried.

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- I. Liquid waste for disposal shall be filtered as specified herein.
- J. The Contractor shall pay the waste disposal charge and any special handling charges at the landfills. All expenses for landfills shall be the complete responsibility of the Contractor. The bagged material shall be loaded in drums except as noted previously and transported to a landfill authorized by the State Department of Health to accept material containing asbestos. In the event the bag is torn, the tear shall be immediately mended with duct tape and the bag placed into another bag and sealed, and the wrapped material covered with another wrap and sealed. The Contractor shall make all prior arrangements with the landfill.

# 3.11 LOCK DOWN

A. After clean-up of gross contamination and final visual inspection, a compatible post removal (lockdown) encapsulant shall then be spray applied to all surfaces. The removal area shall include but not to be limited to constructed enclosures, barriers, polyethylene sheeting that covers any equipment articles to be discarded, critical barriers, air locks, load out units for bag removal, and on-site constructed decontamination unit.

# TEN DAY NOTICE FORM

(sample) page 1

This 3-page form is to be filled in and filed with both state and regional officials a minimum of 10 working days before start of the asbestos abatement contract. An electronic version can be found at:

 $\underline{http://hawaii.gov/health/environmental/noise/asbestoslead/asbestoslead/pdf/asbnotificationinf} \\ \underline{o.pdf}$ 

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# Asbestos Notification of Demolition & Renovation (Ref. HAR Chapter 11-501)

SEND TO: STATE DEPARTMENT OF HEALTH

INDOOR AND RADIOLOGICAL HEALTH BRANCH

99-945 HALAWA VALLEY STREET

AIEA, HAWAII 96701

Phone (808) 586-5800 Fax (808) 586-5811



I.	Type of notification: O=original R=revised C=cancelled				
II.	Type of operation: D=Demolition R=Renovation OD=Ordered Demolition ER=Emergency Renovation				
III.	Facility information				
	Owner name:				
	Address:				
	City: Zip code:				
	Contact person:	Telephone #:			
	Removal contractor:	License #:			
	Address:				
	City:	State:	Zip code: Telephone #:		
	Contact person:				
	Other operator:				
	Address:				
	City:	State:	Zip code:		
	Contact person:	Telephone #:			
IV.	Is asbestos present (y/n): Inspector's name: Certification #: State of certification:				
V.	Facility description (Include building number, floor and room number)				
	Building name:				
	Address:				
	City:	State:	Zip code:		
	Location(s) on site:				
	Building size (sq. ft.):	# Floors:	Age:		
	Present use:	Present use: Prior use:			
	icial Use Only				
Pos	stmark Date:	Received by:	State Record Number:		

TEN DAY NOTICE FORM (sample) page 2

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This 3-page form is to be filled in and filed with both state and regional officials a minimum of 10 working days before start of the asbestos abatement contract. An electronic version can be found at:

 $\underline{http://hawaii.gov/health/environmental/noise/asbestoslead/asbestoslead/pdf/asbnotificationinf} \\ \underline{o.pdf}$ 

VI. Procedure used to detect the pr Laboratory name:	Procedure used to detect the presence of asbestos Laboratory name: Analytical method:					
VII. Specify the nature of the asbestos material (TSI, surfacing, VAT, miscellaneous):						
Amount of asbestos, including:  1. RACM to be removed	RACM to be		Nonfriable ACM (not) to be removed			o be removed
<ol> <li>CAT Heft in place, and</li> <li>CAT II left in place</li> </ol>	removed		Category I			Category II
Pipes (linear ft.)						
Surfacing (square ft.)						
Facility components (cu. ft.)						
Scheduled asbestos abatement dates Start (mm/dd/yy): Finish (mm/dd/yy)						
	ekdays: daytim		nttime			
Scheduled renovation/demolit	weekends: daytime nighttime  Scheduled renovation/demolition dates					
Start (mm/dd/yy):	Start (mm/dd/yy): Finish (mm/dd/yy)					
we	ekdays: daytim ekends: daytim	e nigh	nttime nttime			
Description of the planned rer	novation/demoli	ition wo	ork and r	nethods	to be use	d:
Description of the work practi asbestos from the work-si		ering c	ontrols t	o be us	ed to preve	ent emissions of
Project designer name:			Certification	n #.		State:
XII. Waste transporter #1						
Name:						
Address:	Address:					
City:	City:			State:		Zip code:
Contact Person:	Contact Person:			Telephone:		
Waste transporter #2	Waste transporter #2					
Name:	Name:					
Address:						
City:	City:					Zip code:
Contact Person:	Contact Person: Telephone:					
XIII. Waste disposal site						
Facility Name:	Facility Name:			Telephone:		
Address:						
City:	State:			Zip code:		

Page 2 of 3

# TEN DAY NOTICE FORM

(sample) page 3

This 3-page form is to be filled in and filed with both state and regional officials a minimum of 10 working days before start of the asbestos abatement contract. An electronic version can

http://hawaii.gov/health/environmental/noise/asbestoslead/asbestoslead/pdf/asbnotificationinf o.pdf

XIV.	For demolition ordered by a government	ent agency, please identify			
Na	ime:	Title:			
Au	thority (Agency):				
Date of order (mm/dd/yy):  Date ordered to begin (mm/dd/yy):					
XV. For emergency renovations (Please call 808-586-5800 for additional instructions)					
Date and time of emergency Date (mm/dd/yy): Time: (a.m./p.m.)					
	scription of sudden, unexpected event and the dam				
Ex	planation of how the event caused an unsafe condit	ion or would cause equipment damage or an unreasonable financial burden:			
Pe	rson contacted for approval at the Indoor and Radic	ogical Health Branch:			
Na	ime: Date (mm	//dd/yy): Time: (a.m./p.m.)			
XVI.	Description of procedures to be followed in the event that unexpected asbestos is found or previously nonfriable asbestos material becomes crumbled, pulverized or reduced to powder:				
	contractor/supervisor, will be on-site during the training has been accomplished for this and a				
10.00	Signature of owner/operator	Date (mm/dd/yy):			
XVIII.	I certify that the information on this notification	n is correct.			
	Signature of owner/operator	Date (mm/dd/yy):			
XIX.	Additional Comments:				
		inge 2 of 2			

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# VISITOR/WORKER ENTRY LOG (Sample)

**DATE** 

**PROJECT** 

ALL PERSONNEL MUST SIGN-IN AND SIGN-OUT EVERY TIME THEY ENTER/EXIT THE WORK AREA. PLEASE PRINT CLEARLY. ATTACH EMPLOYEE RELEASE FORM FOR ALL VISITORS.

NAME	EMPLOYER	TIME	TIME	*PURPOSE	**TYPE OF
	Name, *Address, *Phone		OUT	OF VISIT	PPE ISSUED
	1	1		l	

<sup>\*</sup>NOT required of Contractor's employees

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<sup>\*\*</sup> Type of PPE (Personal Protective Equipment) Issued to include list of protective clothing worn and type of respirator used (Type "C", half-face dual cartridge, etc.

# EMPLOYEE ACKNOWLEDGMENT OF INSTRUCTION AND RELEASE FORM (sample)

Employee Name:			
Employee Address:			
Employee Telephone No.:			
DOH Asbestos Certification Number:			
Classification of Worker:			
Have you had in the past, or present, any respiratory problems?			
Yes No			
Have you worked in the past with asbestos or fiberglass type materials?			
Yes No			
The project you will be working on involves the use of asbestos and the removal of the asbestos from the building. Asbestos is considered a health hazard.			
The company is supplying all necessary safety clothing and working conditions required and necessary for your protection from asbestos hazard.			
You shall be instructed a commencement of the job on the required use of safety equipment, clothing, working conditions and procedures. These must be rigidly adhered to. Smoking is not permitted in the work areas. Disregarding of safety instructions shall result in instant dismissal.			
I acknowledge that safety instructions have been given to me by the company at my work commencement and I am thoroughly conversant with them and have answered the above questions truthfully.			
Signed: Employee			
Date:			

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# ASBESTOS DISPOSAL FORM (sample)

	Date: .	
Owner or Operator	of Landfill	
Name		
Address		
City	State	Zip
Phone:		
Name of Landfill		
Name		
Address		
City	State	Zip
Phone:		
Hauler		
Approximate Volum	ne of Asbestos F	Received
Type of Container	Asbestos in	
Asbestos Container	Labeled? YES	NO
	s. The delivered	are true and that the landfill has been approved for the material will be covered within 6 inches (15 cm.) of non-
signed Landfill Owner-Op	erator	

**END OF SECTION** 

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