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LIMITED HAZARDOUS MATERIALS SURVEY REPORT

Keku Cannery

Kake, Alaska

June 20th, 2016

Prepared For:

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- Environmental Consulting
- Hazardous Materials Management
- Industrial Hygiene Services
- Construction Management
- Indoor Air Quality
- Construction Management

EHS–International, Inc.

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Keku Cannery
Kake, Alaska

EHSI Project No.: # 50000-Keku Cannery

The material and data in this report were prepared under the supervision and direction of the undersigned.

Report Approved By:

Herb Brod, CIH
Technical Director

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ACRONYM LIST

ACM	Asbestos-Containing Material
AHERA	Asbestos Hazard Emergency Response Act
ACU	Air Handling Unit
AIHA	American Industrial Hygiene Association
ADEC	Alaska Department of Environmental Conservation
AKOSH	Alaska Division of Occupational Safety and Health
CAB	Cement Asbestos Board
CFR	Code of Federal Regulations
E & E	Ecology and Environment, Inc.
EA	Each
EHSI	EHS-International, Inc.
ELLAP	Environmental Lead Laboratory Accreditation Program
EPA	U.S. Environmental Protection Agency
GWB	Gypsum Wall Board
Hg	Mercury
Internals	Typically present suspect materials inside boilers, heaters, air handling units, electrical panels, switchgear and other equipment that is inaccessible for inspection and sampling, including, but not limited to: gaskets, seam sealants, spray applied or batt interior insulation, fire bricks, castable refractory and/or pipe TSI, arc chutes, wire insulation, paper lining, etc.)
LCM	Lead-Containing Material
LCP	Lead-Containing Paint
mg/L	Milligrams Per Liter
mg/m^3	Milligrams Per Cubic Meter
N/A	Not Applicable
ND	None Detected
NIS	Not In Scope
NVL	NVL Laboratories, Inc.
NVLAP	National Voluntary Laboratory Accreditation Program
OD	Outer Diameter
OSHA	US Occupational Safety and Health Administration
Pb	Lead
PCBs	Polychlorinated Biphenyls
PLM	Polarized Light Microscopy
ppm	Parts per Million
QA	Quality Assurance
SACT	Suspended Acoustical Ceiling Tiles
SAT	Seattle Asbestos Test, LLC
SF	Square Feet
SVF	Sheet Vinyl Flooring
TCLP	Toxicity Characteristic Leaching Procedure
TSCA	Toxic Substance Control Act
TSI	Thermal System Insulation
WT	Weight
w/	With
XRF	x-ray fluorescence

1.0 EXECUTIVE SUMMARY

1.1 BACKGROUND

Ecology and Environment, Inc. (E & E), is under contract with the U.S. Environmental Protection Agency (EPA), to conduct a Targeted Brownfield Assessment (TBA) of the Keku Cannery (Cannery) site, located in Kake, Alaska. In conjunction with that project, E & E contracted EHS-International, Inc. (EHSI), a hazardous materials and industrial hygiene consulting firm, to conduct a Limited Hazardous Materials Survey of the Cannery. The intent of the survey is to specifically identify and quantify both friable and non-friable asbestos-containing materials (ACM), lead containing paint (LCP), lead-containing building materials (LCM), mercury (Hg)-containing thermostats, light fixtures with Hg-containing fluorescent light tubes, polychlorinated biphenyl (PCB)-containing light ballasts, and PCB-containing transformers.

1.2 EXTENT OF CURRENT SURVEY

EHSI inspected all accessible interior and exterior materials within the scope of the Cannery site, except as noted below. Accessible suspect materials were sampled including, but not limited to: interior and exterior wall systems, ceiling and floor systems, plumbing materials, HVAC and heating systems, and exterior components. EHSI accomplished representative destructive inspection; however, in areas inaccessible for inspection (e.g., materials concealed above "hard lid" ceilings or in "plumbing walls" and materials in energized electrical components) materials were not sampled.

1.3 ACM MATERIALS FOUND

SUMMARY OF ASBESTOS-CONTAINING MATERIALS KEKU CANNERY			
ASBESTOS MATERIAL DESCRIPTION	**CON. (Condition)**	**MATERIAL TYPE (Friable vs. Non-Friable)**	**LOCATION**
CANNERY BUILDING			
ACM red 24" OD pipe flange gasket (Sample # 50000-KEKU-01)	Fair-Poor	Non-Friable	Exterior on Beach Below and 12' North of Women's Restrooms
Non-ACM green 12" OD flange gasket w/ non-ACM copper interior w/ **ACM brown paper gasket interior** (Sample # 50000-KEKU-02)	Poor	Non-Friable	Exterior on Beach Below SE Corner of Restrooms
Non-ACM green 6" OD flange gasket w/ non-ACM copper interior w/ **ACM brown paper gasket interior** (Sample # 50000-KEKU-03)	Poor	Non-Friable	Exterior on Beach Below SE Corner of Restrooms

SUMMARY OF ASBESTOS-CONTAINING MATERIALS KEKU CANNERY			
ASBESTOS MATERIAL DESCRIPTION	**CON. (Condition)**	**MATERIAL TYPE (Friable vs. Non-Friable)**	**LOCATION**
ACM hard gray 8" OD gasket w/ fibrous interior (Sample # 50000-KEKU-05)	Fair	Non-Friable	Exterior on Beach Below Center of Machine Shop
ACM hard black fibrous Bakelite™ backing board component w/ non-ACM Gray Bakelite™ backing board component w/ non-ACM red paper insulation/spacer components (in approx. 2'x3' old abandoned electrical panels and electrical switchgear panels) (Sample # 50000-KEKU-20)	Fair	Non-Friable	Mezzanine above Canning Room W. ½, Canning Room W. ½, Egg Room, Machine Shop, Boiler House, and Warehouse
ACM hard black fibrous Bakelite™ backing board component w/ non-ACM Gray Bakelite™ backing board component w/ non-ACM red paper insulation/spacer components (in approx. 1'x1' old abandoned small electrical panels and electrical switchgear panel) (Sample # 50000-KEKU-20)	Fair	Non-Friable	Canning Room W. and E. ½, and Egg Room
ACM gray caulking/sealant (on gutter) (Sample # 50000-KEKU-38)	Fair	Non-Friable	1st Floor, Wash Room
4'x4'x4' ACU w/ **ACM black wrap on copper piping,** w/ **ACM black 1'x1' motor gaskets, and** w/ **ACM gray penetration sealant** at all penetrations for ACU w/ assumed ACM internal components (Samples # 50000-KEKU-51, 52, and 53)	Fair	Non-Friable	1st Floor, Egg Room and Egg Room Storage
ACM white 8" OD pipe flange gasket w/ blue paint (Sample # 50000-KEKU-58)	Fair	Non-Friable	1st Floor, Canning Room E. ½
ACM tan fibrous 12" OD gaskets (on vacuum pump) (Sample # 50000-KEKU-59)	Fair	Non-Friable	1st Floor, Canning Room E. ½
ACM 3'x1' red & gray fibrous head gaskets (on abandoned generator motor) (Samples # 50000-KEKU-72 and 72QA)	Poor	Non-Friable	1st Floor, Boiler House Storage (On Old Abandoned Generator)

SUMMARY OF ASBESTOS-CONTAINING MATERIALS KEKU CANNERY			
ASBESTOS MATERIAL DESCRIPTION	**CON. (Condition)**	**MATERIAL TYPE (Friable vs. Non-Friable)**	**LOCATION**
Non-ACM tan material on **ACM 16" OD white woven fibrous double layered gasket** w/ non-ACM white mastic (Sample # 50000-KEKU-82)	Fair	Friable	1st Floor, Boiler House, in Writing Desk
ACM 6" and 8" OD white/silvery gray fibrous pipe flange gaskets w/ non-ACM black brittle material w/ non-ACM paint (on tank between Boiler 2 and 1) (Sample # 50000-KEKU-86)	Fair	Non-Friable	1st Floor, Boiler House
Non-ACM silver paint on **ACM tan fibrous hatch gasket** (on tank between Boiler 2 and 1) (Sample # 50000-KEKU-87)	Fair	Friable	1st Floor, Boiler House
ACM white fibrous insulation board material (on north end interior of Boiler 3) (Sample # 50000-KEKU-94)	Poor	Friable	1st Floor, Boiler House, Boiler 3
CAB siding debris (on ground) (Sample # 50000-KEKU-100)	Poor	Friable	Mezzanine, above Canning Room E. ½
ACM gray and white hard mudded elbow TSI (abandoned on wall framing) (Sample # 50000-KEKU-147)	Poor	Friable	1st Floor, Canning Room E. ½, Compressor Tank Area
ACM tiny white ¾" gaskets w/ non-ACM metal core (Sample # 50000-KEKU-149)	Fair	Non-Friable	1st Floor, Boiler House, Boiler 3
Water tank w/ assumed ACM internal components (on tank between Boiler 2 and 1)	Fair	Non-Friable	1st Floor, Boiler House
Old small water heater w/ assumed ACM internal components (below hatch in floor)	Poor	Non-Friable	1st Floor, Women's Restroom, Beneath Floor
Vacuum pump w/ assumed ACM internal components	Fair	Non-Friable	1st Floor, Canning Room E. ½
Small electrical panels or electrical switchgear panels w/ assumed ACM internal components	Fair-Poor	Non-Friable	1st Floor: Fish House, Egg Room, Warehouse, Canning Room E. ½, Boiler House
***ACM 6"-12" OD pipe flange gaskets** (on piping associated with Boilers 1, 2, and 3)	Fair	Non-Friable	1st Floor, Boiler House
***ACM white fibrous gasket material**	Poor	Friable	N. Exterior, E. Side (Loose on dirt pathway 3' away from building)

SUMMARY OF ASBESTOS-CONTAINING MATERIALS KEKU CANNERY			
ASBESTOS MATERIAL DESCRIPTION	**CON. (Condition)**	**MATERIAL TYPE (Friable vs. Non-Friable)**	**LOCATION**
WAREHOUSE			
ACM black asphaltic sealant (seeping through roof seam) (Sample # 50000-KEKU-110)	Fair	Non-Friable	Mezzanine, N. ½, Bay 1
ACM white fibrous coating on 4" gray CAB pipe (loose in front of boat) (Sample # 50000-KEKU-123 and 124)	Fair	Friable	1st Floor, N. ½, Bay 5
ACM red/tan 6" OD flange gasket w/ non-ACM black brittle material (on abandoned pump/ motor) (Sample # 50000-KEKU-126)	Poor	Non-Friable	1st Floor, S. ½, Bay 9
Old safe w/ assumed ACM insulation/fire coating	Fair	Friable	1st Floor, S. ½, Bay 16 Center
1'x1' Small electrical panels or electrical switchgear panels w/ assumed ACM internal components	Fair-Poor	Non-Friable	1st Floor, S. ½, Bays 10 and 14
***ACM white and brown stove insulation** in 6'x3'x3' stove	Poor	Friable	(Could not locate item)
BLACKSMITH BUILDING			
2'x3' Electrical panel w/ **ACM black terminal components and ACM black backing board components** (Sample # 50000-KEKU-134 and 134)	Fair	Non-Friable	Interior
ACM black 1'x2' electrical panel terminal components (in dryer) (Sample # 50000-KEKU-137)	Fair	Non-Friable	Interior
***ACM white 12" fibrous gasket material**	Poor	Friable	Exterior (Loose on Beach below SE Corner of Building)
GENERATOR HOUSE			
Large 3'x4' electrical panel w/ **ACM white fibrous panel backing paper** w/ non-ACM tan mastic and w/ **ACM brown electrical panel terminal components** (Sample # 50000-KEKU-162, 162QA, and 163)	Fair	Friable	Loose on Ground
ACM tan 10" OD pipe flange gasket w/ rust (on generator exhaust pipe) (Sample # 50000-KEKU-165)	Poor	Non-Friable	Mezzanine

SUMMARY OF ASBESTOS-CONTAINING MATERIALS KEKU CANNERY			
ASBESTOS MATERIAL DESCRIPTION	**CON. (Condition)**	**MATERIAL TYPE (Friable vs. Non-Friable)**	**LOCATION**
ACM hard gray 8" OD paper gasket w/ **white fibrous interior** (on ground by stairs) (Sample # 50000-KEKU-166)	Poor	Friable	Interior
Small electrical panels or electrical switchgear panels w/ assumed ACM internal components	Fair-Poor	Non-Friable	Throughout
Electrical panels or electrical switchgears panels w/ assumed ACM internal components	Fair-Poor	Non-Friable	Throughout
Large (2'x4') electrical panels w/ assumed ACM internal components	Fair-Poor	Non-Friable	Throughout
Large (2'x2'x6') electrical switchgear panels w/ assumed ACM internal components	Fair-Poor	Non-Friable	Throughout
1'x1'x1' Charging unit w/ assumed ACM internal components	Poor	Non-Friable	Throughout
***ACM pipe patch insulation** on Generator 2	Fair	Friable	Interior, on Generator 2
***ACM 4" OD exhaust pipe TSI**	Fair	Friable	Interior, on Generator 3
*1'x1'x6" Box of **ACM rope gaskets**	Fair	Friable	Interior NE Corner
*Large 2'x4'x6" boxes of **ACM motor gaskets**	Fair	Non-Friable	Interior Mezzanine
*Small 1'x2'x6" boxes of **ACM motor gaskets**	Fair	Non-Friable	Interior Mezzanine
*3'x6'x4' Generators w/ **ACM motor gaskets**	Fair	Non-Friable	Interior

KEY: ACM = asbestos containing material, **ACU** = air conditioning unit, **CAB** = cement asbestos board, **EA** = each, **LF** = linear feet, **OD** = outside diameter, **SF** = square feet, **TSI** = thermal system insulation

*Materials sampled and identified as ACM by previous survey.

1.4 OPINIONS AND RECOMMENDATIONS

EHSI recommends that any impacted ACM and assumed ACM identified in paragraph 1.3 be removed and disposed of prior to renovations or demolition.

Any suspect materials not identified as having been surveyed in this report must be treated as an ACM until determined otherwise by a Certified Asbestos Building Inspector and NVLAP certified laboratory.

The US Occupational Safety and Health Administration (OSHA) requires employers to conduct a hazard assessment and take appropriate worker protection precautions whenever building

materials are disturbed that have detectable quantities of lead. For any work planned that is likely to disturb the LCP; the employer should perform an initial exposure assessment to determine if personal protective measures and work practices are required.

EHSI inspected a representative number of each type of fluorescent fixture for PCB-containing ballasts. Fluorescent light fixtures were found with magnetic ballasts without the “NO PCB” notation. All magnetic fluorescent light ballasts that will be disturbed during any future renovation or demolition project that are not marked as “NO PCB” or “PCB Free” are assumed to contain greater than fifty parts per million (≥ 50 ppm) PCB-dielectric oil and must be disposed of as a Toxic Substance Control Act (TSCA) waste in accordance with 40 CFR Part 761, subpart D. All electronic ballasts and magnetic light ballasts marked as “NO PCBs” may be disposed of as general construction debris. In addition, all fluorescent light tubes contain mercury and any light tubes disturbed by renovations or demolition should either be re-used or disposed/recycled as EPA Universal Waste in accordance with the regulations. A Summary of ballasts and Hg-containing light tubes is provided in Table 5.

Three (3) small oil-containing transformers were found in the Cannery Building, one (1) small transformer in the Warehouse Building, and two (2) small transformers plus one (1) large transformer were found in the Generator House. Any oil-containing transformers are assumed to have PCB-containing dielectric-oil at ≥ 50 ppm, unless specifically labeled as PCB Free or unless documentation is provided indicating the PCB-containing oil has been drained, flushed, tested and replaced. Oil from PCB-containing transformers must be disposed of in accordance with the above regulation. This labeling and/or documentation were not available at the time of the inspection.

1.5 LIMITATIONS/DISCLAIMER

This report does **not** represent a comprehensive hazardous materials investigation for the subject property. This investigation has been conducted by EHSI under a specific scope of work authorized by E & E for a specific purpose. This report and accompanying appendices include the supporting information for this executive summary. Materials located inside electrified or potentially electrified equipment, concealed behind plumbing walls, above "hard lid" ceilings, or that would require the demolition of concrete walls, ceilings, floors, chases or crawl spaces for access were also not sampled.

2.0 LIMITED HAZARDOUS MATERIALS SURVEY REPORT

2.1 BACKGROUND

Ecology and Environment, Inc. (E & E), is under contract with the U.S. Environmental Protection Agency (EPA), to conduct a Targeted Brownfield Assessment (TBA) of the Keku Cannery (Cannery) site, located in Kake, Alaska. In conjunction with that project E & E contracted EHS-International, Inc. (EHSI), a hazardous materials and industrial hygiene consulting firm, to conduct a Limited Hazardous Materials Survey of the Cannery. Refer to Appendices C and D for EHSI and laboratory credentials. The intent of the survey is to specifically identify and quantify both friable and non-friable asbestos-containing materials (ACM), lead containing paint (LCP), lead-containing building materials (LCM), mercury (Hg)-containing thermostats, light fixtures with Hg-containing fluorescent light tubes and/or polychlorinated biphenyl (PCB)-containing light ballasts, and PCB-containing transformers.

This Limited Hazardous Materials Survey Report meets the National Emission Standards for Hazardous Air Pollutants (NESHAP) Pre-demolition Inspection requirements as cited in Clean Air Act regulations.

From May 9th-12th, 2016, EHSI conducted a Limited Hazardous Materials (ACM, LCP, LCM, Hg, and PCBs) Survey of the Cannery.

2.2 BUILDING DESCRIPTION

The Cannery site is located at 540 Keku Road, in Kake, Alaska. The Cannery is comprised of multiple structures which were reportedly originally constructed in 1912, with several additions throughout its operation. At the time of construction, the Cannery was owned and operated by the Sanborn Cutting Company. The Cannery went through several ownership exchanges until it was purchased by a native cooperation in 1949 and operated as the Keku Cannery until it was permanently closed in 1977. On December 9th, 1997, the National Parks Service listed the Cannery a National Historic Landmark. The Cannery is currently involved in a TBA being conducted through the EPA and undergoing a restoration to become a multi-use facility and tourist destination. The Cannery site was once home to numerous structures, though most have deteriorated and/or have been removed from the site; the scope of this survey covers five (5) structures including the Cannery Building, Warehouse, Generator House, Blacksmith Building, and Blacksmith Shop. The buildings included in this scope are described below, and their locations on the site are depicted on the provided Site Plan, included in Appendix E.

Main Cannery Building

The Main Cannery Building is composed of several smaller conjoined structures. The building was originally constructed in 1912, with several additions occurring throughout its operation, and encompasses approximately 35,000 square feet. The primary construction is a wood-framed, two-story structure, on a wood piling foundation, with wood support columns. The floors consist of wood planks, plywood, and poured concrete. The walls and ceilings consist of exposed wood beams and framing, plywood, and corrugated metal. The exterior of the

building primarily consists of bat and board siding with many corrugated metal patches. The roof consists of corrugated metal on wood shingles on wood decking. Window systems for the Cannery include operable and inoperable wood sashed windows with wood muntins. The building currently has old abandoned wiring throughout, with new temporary power wiring added to facility building restoration. The facility currently does not have operable heating systems or hot or cold running water, though some abandoned water lines were observed with Thermal System Insulation (TSI). The Cannery Building is host to several distinct areas which include the Boiler House, Diesel House, Canning Room, Cannery Warehouse, Restrooms, Machine Shop, Egg Room, and Fish House.

Warehouse

The Warehouse is located to the east of the Main Cannery Building and is connected to the Main Cannery Building by an elevated crossover bridge which housed the mechanized can track. The building was originally constructed in the early 1930's and encompasses approximately 15,360 square feet. The Warehouse is a one-story structure with a loft space and is constructed with wood framing on wood timber support columns on a concrete piling foundation. The interior finishes include wood beam flooring, exposed wall and ceiling beams and framing. The exterior of the building is clad in corrugated metal siding and has corrugated metal roofing, metal sashed windows with metal muntins, and sliding wood and metal panel doors. The Warehouse includes two fenced-in storage areas as well as a standalone wood framed room for equipment and flammable material storage. The building currently has abandoned wiring throughout, and like the cannery building, wiring for temporary power and lighting has been added to facilitate current uses and activities. The facility currently does not have operable hot or cold running water or heating systems.

Generator House

The Generator House is located north of the Warehouse and northeast of the Main Cannery Building. This building was constructed after 1945 and encompasses approximately 1,008 square feet. Its purpose was to house the generators and electrical equipment for the site. The construction of the building is a single story wood-framed structure with a slab-on-grade foundation. The floor consists of a concrete pad. The walls and ceilings are exposed wood beams. The exterior of the building consists of corrugated metal siding and corrugated metal roofing. Window systems include operable and inoperable wood framed windows with wood muntins. The building currently has abandoned wiring throughout and houses several large electrical panels and switchgears. The building does not have operable hot or cold running water or heating systems.

Blacksmith Building

The Blacksmith building was constructed in 1967 and is located directly east of the Main Cannery Building. Construction of this building consists of wood-framing on a wood piling foundation and encompasses approximately 357 square feet. Interior finishes include plywood floors, plywood and unfinished GWB walls, and exposed wood-framed ceilings. The exterior finished include painted wood siding and corrugated fiberglass hipped roof. Historically the building housed the fisherman's wash facilities. The building currently does not have operable hot or cold running water, or a heating system. During inspection, TSI was not observed on water lines.

Blacksmith Shop

The Blacksmith Shop was constructed in 1967 and is located directly north of the Blacksmith building. Construction of this building consists of wood-framing on a wood piling foundation and encompasses approximately 625 square feet. Interior finishes include plywood and wood plank floors, exposed wood framing walls and ceiling. The exterior finished include painted wood siding, wood shingle roof, and operable wood sash with wood muntin windows.

2.3 SAMPLING METHODOLOGY

2.3.1 Asbestos-Containing Materials

The EHSI field inspectors are asbestos Building Inspectors, certified under the requirements of the United States Environmental Protection Agency (USEPA) AHERA regulation 40 Code of Federal Regulations (CFR) 763, Subpart E. Copies of their certificates are provided in Appendix C. The number of bulk samples collected and their locations are based on the AHERA regulation and the guidelines provided by the USEPA Document 560/5-85-030a, October 1985, *Asbestos in Buildings: Simplified Sampling Scheme for Friable Surfacing Materials*.

EHSI collected samples and obtained analytical data for suspect ACM identified in the facility. Once collected, each bulk sample was sealed in an unadulterated plastic bag to eliminate the possibility of cross-contamination. "Chain-of-Custody (CoC)" tracking was followed to maintain sample integrity during handling and data reporting at EHSI and the analytical laboratory. As specified in 40 CFR Chapter 1 (1-1-87 edition) Part 763, Subpart F, and Appendix A, each sample was analyzed using polarized light microscopy (PLM) / dispersion staining techniques, in accordance with USEPA Method 600/R-93/116. Samples were analyzed for asbestos content by Seattle Asbestos Test, LLC (SAT) located in Bellevue, Washington. SAT participates in the NVLAP. Only materials containing more than 1% total asbestos were classified as "asbestos-containing" based on USEPA regulations.

Samples in the report labeled as ##QA are split quality assurance (QA) samples. These split samples were collected at a rate of 1 in 20, and represent a specific material from a given location. The split QA samples were submitted to, NVL Laboratories, Inc. (NVL) in Seattle, WA, another NVLAP laboratory. Copies of both laboratories' NVLAP certifications are included in Appendix D.

2.3.2 Lead-Containing Paint/Lead-Containing Materials

EHSI used a Niton Model XLp x-ray fluorescence (XRF) Spectrum Analyzer to measure lead content on interior and exterior paint coatings and other suspect LCM. EHSI inspectors are certified by the manufacturer under whose "General License" the instrument is operated. Copies of their training certifications along with USEPA Lead Assessor certifications for Alaska are provided in Appendix C. Measurements were representative of all layers of paint and/or LCM. A summary of Lead Paint XRF results are provided in Table 3. The XRF was calibrated each day prior to use, every four hours thereafter and at the end of a day's use. Bulk quality assurance samples were taken from a representative number of LCP and LCM based on condition, quantity and positive result of the XRF screening, and sent to NVL under CoC control for Atomic Absorption Spectroscopy (AAS) analysis (USEPA Method-7000B). NVL is an accredited laboratory for AAS by the American Industrial Hygiene Association

(AIHA) under the Environmental Lead Laboratory Accreditation Program (ELLAP). Copies of laboratory reports and field data forms and CoC for lead are in Appendix B. A copy of NVL's lab certification is provided in Appendix D.

2.4 SAMPLING RESULTS

2.4.1 Asbestos-Containing Materials

One hundred sixty-six (166) bulk samples of suspect ACM were collected as part of the survey. Nine (9) of those samples were split for quality assurance analyses. Limited destructive inspection was conducted as part of the current survey to identify hidden and/or concealed materials. Copies of the asbestos analytical laboratory results are included in Appendix A. Asbestos and lead sample location drawings for the current survey are provided in Appendix E. Asbestos sampling information including: sample number, material description, sample location, and analytical results are summarized in Table 1. The ACM and assumed ACM identified during this survey, including the friability, condition, quantity and location of the material is summarized in Table 2. Suspect materials and/or equipment/systems not sampled were assumed to be or contain ACM. The "Key" provided at the end of Table 1 provides definition for acronyms.

TABLE 1
SUMMARY OF ASBESTOS BULK SAMPLING AND ANALYTICAL RESULTS
KEKU CANNERY

SAMPLE NUMBER	SAMPLE LOCATION	MATERIAL DESCRIPTION	ASBESTOS %	TYPE OF ASBESTOS
CANNERY BUILDING				
50000-KEKU-01	**Exterior on Beach Below and 12' North of Women's Restrooms**	**Red 24" OD pipe flange gasket**	**4%**	**Chrysotile**
50000-KEKU-02	**Exterior on Beach Below SE Corner of Restrooms**	Layer 1: Trace green 12" OD flange gasket Layer 2: Copper interior **Layer 3: Brown paper gasket interior**	L1: ND L2: ND **L3: 50%**	N/A N/A **Chrysotile**
50000-KEKU-03	**Exterior on Beach Below SE Corner of Restrooms**	Layer 1: Trace green 6" OD flange gasket Layer 2: Copper interior **Layer 3: Brown paper gasket interior**	L1: ND L2: ND **L3: 48%**	N/A N/A **Chrysotile**
50000-KEKU-04	Exterior on Beach Below NE Corner of Machine Shop	Hard black components	ND	N/A

TABLE 1 SUMMARY OF ASBESTOS BULK SAMPLING AND ANALYTICAL RESULTS KEKU CANNERY				
SAMPLE NUMBER	**SAMPLE LOCATION**	**MATERIAL DESCRIPTION**	**ASBESTOS %**	**TYPE OF ASBESTOS**
50000-KEKU-05	**Exterior on Beach Below Center of Machine Shop**	**Hard gray 8" OD gasket w/ fibrous interior**	**15%**	**Chrysotile**
50000-KEKU-06	Exterior on Beach Below Center of Machine Shop	Hard gray plastic-like gasket (6"x24")	ND	N/A
50000-KEKU-07	Mezzanine above Egg Room	Layer 1: Black woven fibrous insulation Layer 2: Black asphaltic insulation Layer 3: Black asphaltic insulation with black woven fibrous insulation Layer 4: Black rubbery insulation Layer 5: Metal wire core (on wiring to motor)	L1: ND L2: ND L3: ND L4: ND L5: ND	N/A N/A N/A N/A N/A
50000-KEKU-08	Mezzanine above Machine Shop	Light gray-white window glazing putty (on 3'x2½' and 2'x4¼' wood-framed windows)	ND	N/A
50000-KEKU-09	Mezzanine above Machine Shop	Layer 1: Brown loose SVF Layer 2: Brown fibrous mesh backing	L1: ND L2: ND	N/A N/A
50000-KEKU-10	Mezzanine above Machine Shop	Red paper board material (loose on ground)	ND	N/A
50000-KEKU-11	Mezzanine above Machine Shop	Black paper board material (loose on ground)	ND	N/A
50000-KEKU-12	Mezzanine above Machine Shop	Layer 1: Trace red coating Layer 2: Black asphaltic and woven fibrous wire wrap Layer 3: Black rubbery insulation Layer 4: Metal wire core (on old knob and tube wiring)	L1: ND L2: ND L3: ND L4: ND	N/A N/A N/A N/A

TABLE 1 SUMMARY OF ASBESTOS BULK SAMPLING AND ANALYTICAL RESULTS KEKU CANNERY				
SAMPLE NUMBER	**SAMPLE LOCATION**	**MATERIAL DESCRIPTION**	**ASBESTOS %**	**TYPE OF ASBESTOS**
50000-KEKU-13	Mezzanine above Machine Shop	Layer 1: Trace red coating Layer 2: White woven fibrous wire wrap Layer 3: Black rubbery insulation Layer 4: Metal wire core Layer 5: White ceramic knob (on old knob and tube wiring)	L1: ND L2: ND L3: ND L4: ND L5: ND	N/A N/A N/A N/A N/A
50000-KEKU-14	Mezzanine above Machine Shop	Layer 1: Trace black asphaltic and woven fibrous wire wrap Layer 2: Black rubbery insulation Layer 3: Metal wire core (on old knob and tube wiring)	L1: ND L2: ND L3: ND	N/A N/A N/A
50000-KEKU-15	Mezzanine above Machine Shop	Layer 1: White woven fibrous wire wrap Layer 2: Black rubbery insulation Layer 3: Metal wire core (on old knob and tube wiring)	L1: ND L2: ND L3: ND	N/A N/A N/A
50000-KEKU-15QA	Mezzanine above Machine Shop	Layer 1: White woven fibrous wire wrap Layer 2: Black rubbery insulation on metal wire core (on old knob and tube wiring)	L1: ND L2: ND	N/A N/A
50000-KEKU-16	Mezzanine above Machine Shop	Layer 1: Larger black asphaltic and woven fibrous outer wire wrap Layer 2: White woven fibrous wire wrapping Layer 3: Black rubbery insulation Layer 4: Metal wire core (on old knob and tube wiring)	L1: ND L2: ND L3: ND L4: ND	N/A N/A N/A N/A
50000-KEKU-17	Mezzanine above Machine Shop	Layer 1: Large black asphaltic wire wrap Layer 2: White fibrous wire wrap (found sporadically on all small diameter wires)	L1: ND L2: ND	N/A N/A
50000-KEKU-18	Mezzanine above Canning Room W. ½	Layer 1: Brown paper insulation w/ black mastic Layer 2: White/tan woven fibers	L1: ND L2: ND	N/A N/A
50000-KEKU-19	Mezzanine above Canning	Layer 1: Black soft elastic material	L1: ND	N/A

TABLE 1 SUMMARY OF ASBESTOS BULK SAMPLING AND ANALYTICAL RESULTS KEKU CANNERY				
SAMPLE NUMBER	**SAMPLE LOCATION**	**MATERIAL DESCRIPTION**	**ASBESTOS %**	**TYPE OF ASBESTOS**
	Room W. ½	Layer 2: Silver coating Layer 3: Large black asphaltic and woven fibrous wire wrap Layer 4: Brown woven wire insulation Layer 5: Red rubbery wire insulation Layer 6: Metal wire core Layer 7: White rubbery wire insulation Layer 8: Metal wire core Layer 9: Black rubbery wire insulation Layer 10: Metal wire core (old abandoned wiring)	L2: ND L3: ND L4: ND L5: ND L6: ND L7: ND L8: ND L9: ND L10: ND	N/A N/A N/A N/A N/A N/A N/A N/A N/A
50000-KEKU-20	**Mezzanine above Canning Room W. ½**	**Hard black fibrous Bakelite™ backing board component** (in old abandoned electrical switchgear panel)	**6%**	**Chrysotile**
50000-KEKU-21	Mezzanine above Canning Room W. ½	Hard black/gray Bakelite™ backing board component (in old abandoned electrical switchgear panel)	ND	N/A
50000-KEKU-22	Mezzanine above Canning Room W. ½	Red paper insulation/spacer components (in old abandoned electrical switchgear panel)	ND	N/A
50000-KEKU-23	Mezzanine above Canning Room E. ½	Black 5” OD pipe coupler	ND	N/A
50000-KEKU-24	1st Floor, Machine Shop	Light gray/white window glazing putty (on 3¼’x5’ operable wood-framed windows)	ND	N/A
50000-KEKU-25	1st Floor, Fish House	Layer 1: Light gray window glazing putty w/ paint Layer 2: White window glazing putty w/ paint (on 3¼’x3’ inoperable wood-framed windows)	L1: ND L2: ND	N/A N/A
50000-KEKU-26	1st Floor, Office	Light gray/white window glazing putty (on 2½’x5’ operable wood-framed windows)	ND	N/A

TABLE 1 SUMMARY OF ASBESTOS BULK SAMPLING AND ANALYTICAL RESULTS KEKU CANNERY				
SAMPLE NUMBER	**SAMPLE LOCATION**	**MATERIAL DESCRIPTION**	**ASBESTOS %**	**TYPE OF ASBESTOS**
50000-KEKU-27	1st Floor, Office	Layer 1: Light gray/white window glazing putty w/ paint Layer 2: Tan patching putty w/ trace paint (on 3¼'x4½' inoperable wood-framed windows)	L1: ND L2: ND	N/A N/A
50000-KEKU-28	1st Floor, Boiler House W. Wall	Light gray/white window glazing putty w/ paint (on 2½'x2½' inoperable wood-framed windows)	ND	N/A
50000-KEKU-29	1st Floor, Women's Restroom	Hard white/beige window glazing putty (on 2¾'x2¼' operable wood-framed windows)	ND	N/A
50000-KEKU-30[1]	1st Floor, Boiler House N. Wall Exterior	White/light gray window glazing putty w/ trace paint (on 2¾'x2¼' inoperable wood-framed windows)	**Original: 2%** PC: 0.5%[1]	**Chrysotile** Chrysotile[1]
50000-KEKU-30QA[1]	1st Floor, Boiler House N. Wall Exterior	White/light gray window glazing putty w/ paint (on 2¾'x2¼' inoperable wood-framed windows)	**Original: 2%** PC: 0.5%	**Chrysotile** Chrysotile
50000-KEKU-31	1st Floor, Machine Shop	Black asphaltic vapor barrier (in wood-framed wood siding walls)	ND	N/A
50000-KEKU-32	1st Floor, Machine Shop	Black asphaltic vapor barrier (in wood-framed wood siding walls)	ND	N/A
50000-KEKU-33	1st Floor, Wash Room	Layer 1: Poured light weight concrete flooring Layer 2: Beige concrete subflooring material (on wood)	L1: ND L2: ND	N/A N/A
50000-KEKU-34	1st Floor, Wash Room	Layer 1: Poured light weight concrete flooring Layer 2: Beige concrete subflooring material (on wood)	L1: ND L2: ND	N/A N/A
50000-KEKU-35	1st Floor, Wash Room	Layer 1: Poured light weight concrete flooring Layer 2: Beige concrete subflooring material (on wood)	L1: ND L2: ND	N/A N/A
50000-KEKU-36	1st Floor, Wash Room	Fiberboard strip (on floor)	ND	N/A

TABLE 1 SUMMARY OF ASBESTOS BULK SAMPLING AND ANALYTICAL RESULTS KEKU CANNERY				
SAMPLE NUMBER	**SAMPLE LOCATION**	**MATERIAL DESCRIPTION**	**ASBESTOS %**	**TYPE OF ASBESTOS**
50000-KEKU-37	1st Floor, Wash Room	Gray concrete/sealant cove base w/ paint (along entire perimeter of room)	ND	N/A
50000-KEKU-38	**1st Floor, Wash Room**	**Gray caulking/sealant** (on gutter in room)	**4%**	**Chrysotile**
50000-KEKU-39	1st Floor, Fish House, Fish Sorting Bay 6	Layer 1: Gray caulking w/ white paint Layer 2: Wood (at every seam between wood boards)	L1: ND L2: ND	N/A N/A
50000-KEKU-40	1st Floor, Fish House, Fish Sorting Bay 2	Layer 1: White caulking w/ white paint Layer 2: Trace wood (at every seam between wood boards)	L1: ND L2: ND	N/A N/A
50000-KEKU-41	1st Floor, Fish House, Fish Sorting Bay 1	Hard gray caulking/sealant w/ paint (at all floor seams between wood)	ND	N/A
50000-KEKU-41QA	1st Floor, Fish House, Fish Sorting Bay 1	Hard gray caulking/sealant w/ paint (at all floor seams between wood)	ND	N/A
50000-KEKU-42	1st Floor, Fish House, Fish Sorting Bay 1	Layer 1: White caulking/ sealant w/ paint Layer 2: Wood (at all wall seams between wood)	L1: ND L2: ND	N/A N/A
50000-KEKU-43	1st Floor, Fish House	Multi-layered 2' wide beige rubber conveyor belt w/ beige, green, and tan woven fibrous layers	ND	N/A
50000-KEKU-44	1st Floor, Fish House, between Fish Sorting Bays 1 & 2	Gray concrete patch w/ paint (in hole in top of wall between bays)	ND	N/A
50000-KEKU-45	1st Floor, Fish House, Fish Sorting Bay 3	Layer 1: Gray caulking/ sealant w/ paint Layer 2: Wood (at all floor and wall seams between wood)	L1: ND L2: ND	N/A N/A
50000-KEKU-46	1st Floor, Fish House, Fish Sorting Bay 3	Beige caulking/sealant w/ paint (at some patches of floor and wall seams between bays)	ND	N/A
50000-KEKU-47	1st Floor, Fish House	Silver/gray pipe dope (on fittings of blue painted waterline)	ND	N/A

TABLE 1 SUMMARY OF ASBESTOS BULK SAMPLING AND ANALYTICAL RESULTS KEKU CANNERY				
SAMPLE NUMBER	**SAMPLE LOCATION**	**MATERIAL DESCRIPTION**	**ASBESTOS %**	**TYPE OF ASBESTOS**
50000-KEKU-48	1st Floor, Fish House	Tan and gray pipe dope (on fittings of unpainted waterline)	ND	N/A
50000-KEKU-49	1st Floor, Fish House	Layer 1: Hard gray terminal component Layer 2: Black asphaltic material (in small electrical switchgear panel)	L1: ND L2: ND	N/A N/A
50000-KEKU-50	1st Floor, Fish House	Layer 1: Silver foil Layer 2: Gray brittle material debris (on floor)	L1: ND L2: ND	N/A N/A
50000-KEKU-51	**1st Floor, Egg Room**	**Black asphaltic wrap** (on copper piping in ACU)	**3%**	**Chrysotile**
50000-KEKU-52	**1st Floor, Egg Room**	**Black 1'x1' gaskets** (on motor in ACU)	**5%**	**Chrysotile**
50000-KEKU-53	**1st Floor, Egg Room Storage**	**Gray penetration sealant** (at all penetrations for ACU)	**5%**	**Chrysotile**
50000-KEKU-54	1st Floor, Canning Room W. ½	6" OD white fibrous TSI on pipe run	ND	N/A
50000-KEKU-55	1st Floor, Canning Room E. ½	6" OD white fibrous TSI on pipe run	ND	N/A
50000-KEKU-56	1st Floor, Canning Room E. ½	6" OD white fibrous TSI on pipe run (debris on ground)	ND	N/A
50000-KEKU-57	1st Floor, Canning Room W. ½	Layer 1: Blue paint Layer 2: Trace silver paint Layer 3: Red 8" OD flange gasket	L1: ND L2: ND L3: ND	N/A N/A N/A
50000-KEKU-58	**1st Floor, Canning Room E. ½**	**White 8" OD flange gasket** w/ blue paint	**36%**	**Chrysotile**
50000-KEKU-59	**1st Floor, Canning Room E. ½**	**Tan fibrous 12" OD gaskets** (on vacuum pump)	**32%**	**Chrysotile**
50000-KEKU-60	1st Floor, Canning Room E. ½	Beige/white pipe dope w/ paint (on pipe fitting to vacuum pump)	ND	N/A
50000-KEKU-61	1st Floor, Warehouse N. Wall	Gray electrical component (in small electrical switchgear panels)	ND	N/A
50000-KEKU-62	1st Floor, Warehouse N. Wall	Tan/gray paper insulating component (in small electrical switchgear panels)	ND	N/A

TABLE 1 SUMMARY OF ASBESTOS BULK SAMPLING AND ANALYTICAL RESULTS KEKU CANNERY				
SAMPLE NUMBER	**SAMPLE LOCATION**	**MATERIAL DESCRIPTION**	**ASBESTOS %**	**TYPE OF ASBESTOS**
50000-KEKU-63	1st Floor, Warehouse N. Wall	Layer 1: Black electrical components Layer 2: Metal (in small electrical switchgear panels)	L1: ND L2: ND	N/A N/A
50000-KEKU-64	1st Floor, Women's Restroom	Gray sink drain gaskets (on ceramic sinks)	ND	N/A
50000-KEKU-65	1st Floor, Women's Restroom	Layer 1: White coating w/ red paint Layer 2: Glass ply-flooring Layer 3: Wood decking	L1: ND L2: ND L3: ND	N/A N/A N/A
50000-KEKU-66	1st Floor, Women's Restroom	Layer 1: White coating w/ red paint Layer 2: Glass-ply flooring	L1: ND L2: ND	N/A N/A
50000-KEKU-67	1st Floor, Women's Restroom Shower	Layer 1: White coating w/ red paint Layer 2: Glass-ply flooring	L1: ND L2: ND	N/A N/A
50000-KEKU-68	1st Floor, Women's Restroom under Floor in Hatch	Black poured concrete material (on concrete pad)	ND	N/A
50000-KEKU-69	1st Floor, Women's Restroom under Floor Hatch	Black poured concrete material (on concrete pad)	ND	N/A
50000-KEKU-70	1st Floor, Diesel Room	Layer 1: Brown SVF Layer 2: Brown fibrous backing Layer 3: White mastic (on wood table)	L1: ND L2: ND L3: ND	N/A N/A N/A
50000-KEKU-71	1st Floor, Boiler House Storage (On Old Abandoned Generator)	White 24" transmission gasket w/ trace green paint	ND	N/A
50000-KEKU-72	**1st Floor, Boiler House Storage (On Old Abandoned Generator)**	**Red/gray 3'x1' fibrous head gaskets**	**66%**	**Chrysotile**

TABLE 1 SUMMARY OF ASBESTOS BULK SAMPLING AND ANALYTICAL RESULTS KEKU CANNERY				
SAMPLE NUMBER	**SAMPLE LOCATION**	**MATERIAL DESCRIPTION**	**ASBESTOS %**	**TYPE OF ASBESTOS**
50000-KEKU-72QA	**1st Floor, Boiler House Storage (On Old Abandoned Generator)**	**Layer 1: Red 3'x1' fibrous head gaskets Layer 2: Gray 3'x1' fibrous head gasket material with yellow mastic**	**L1: 55% L2: 59%**	**Chrysotile Chrysotile**
50000-KEKU-73	1st Floor, Boiler House Storage (On Old Abandoned Generator)	Dark gray 8" OD fuel tank gasket	ND	N/A
50000-KEKU-74	1st Floor, Boiler House Storage (On Old Abandoned Generator)	Black fibrous hose material w/ green paint	ND	N/A
50000-KEKU-75	1st Floor, Boiler House, Retort 1	Layer 1: Black 4½' retort door gasket Layer 2: Black asphaltic material w/ white fibrous woven core	L1: ND L2: ND	N/A N/A
50000-KEKU-76	1st Floor, Boiler House, Retort 2	1" Thick multi-layered gasket (black rubber, red rubber, w/ white fiber interior layers)	ND	N/A
50000-KEKU-77	1st Floor, Boiler House, Retort 4	Layer 1: Silver paint Layer 2: Black asphaltic material Layer 3: 1" Thick multi-layered gasket w/ white woven fibrous core	L1: ND L2: ND L3: ND	N/A N/A N/A
50000-KEKU-78	1st Floor, Boiler House, Retort 5	Layer 1: Silver paint Layer 2: Black asphaltic material Layer 3: 1" Thick multi-layered gasket w/ white woven fibrous core	L1: ND L2: ND L3: ND	N/A N/A N/A
50000-KEKU-79	1st Floor, Boiler House, Retort 6	Layer 1: Silver paint/coating Layer 2: Black asphaltic coating	L1: ND L2: ND	N/A N/A
50000-KEKU-80	1st Floor, Boiler House, Retorts 1-6	Layer 1: Silver paint Layer 2: Black rubber regulator gasket w/ white fibrous interior	L1: ND L2: ND	N/A N/A

TABLE 1 SUMMARY OF ASBESTOS BULK SAMPLING AND ANALYTICAL RESULTS KEKU CANNERY				
SAMPLE NUMBER	**SAMPLE LOCATION**	**MATERIAL DESCRIPTION**	**ASBESTOS %**	**TYPE OF ASBESTOS**
50000-KEKU-81	1st Floor, Boiler House, Retort 2	Layer 1: Silver paint Layer 2: Black pipe dope (on all pipe fittings to each retort)	L1: ND L2: ND	N/A N/A
50000-KEKU-81QA	1st Floor, Boiler House, Retort 2	Layer 1: Silver paint Layer 2: Black pipe dope (on all pipe fittings to each retort)	L1: ND L2: ND	N/A N/A
50000-KEKU-82	**1st Floor, Boiler House, in Writing Desk**	Layer 1: Tan material **Layer 2: 16" OD white woven fibrous double layered gasket** Layer 3: White mastic	L1: ND **L2: 15%** L3: ND	N/A **Chrysotile** N/A
50000-KEKU-83	1st Floor, Boiler House, Retort 4	Layer 1: Silver paint/coating Layer 2: Black paint/coating	L1: ND L2: ND	N/A N/A
50000-KEKU-84	1st Floor, Boiler House, Retort 1	Layer 1: Silver paint/coating Layer 2: Black paint/coating	L1: ND L2: ND	N/A N/A
50000-KEKU-85	1st Floor, Boiler House	Brown backing board components (in small electrical panel)	ND	N/A
50000-KEKU-86	**1st Floor, Boiler House**	**Layer 1: 6" and 8" OD white/silvery gray fibrous pipe flange gasket** Layer 2: Black brittle material w/ paint (on tank between Boiler 2 and 1)	**L1: 65%** L2: ND	**Chrysotile** N/A
50000-KEKU-87	**1st Floor, Boiler House**	Layer 1: Silver paint **Layer 2: Tan fibrous hatch gasket** (on tank between Boiler 2 and 1)	L1: ND **L2: 64%**	N/A **Chrysotile**
50000-KEKU-88	1st Floor, Boiler House, Boiler 1	Layer 1: Red brick Layer 2: Gray mortar (exterior wall of Boiler 1)	L1: ND L2: ND	N/A N/A
50000-KEKU-89	1st Floor, Boiler House, Boiler 1	Layer 1: Beige refractory brick Layer 2: Red mortar (interior of Boiler 1)	L1: ND L2: ND	N/A N/A
50000-KEKU-90	1st Floor, Boiler House, Boiler 1	Layer 1: Off-white refractory brick Layer 2: Gray mortar Layer 3: Gray fibrous packing material (interior of Boiler 1)	L1: ND L2: ND L3: ND	N/A N/A N/A
50000-KEKU-91	1st Floor, Boiler House, Boiler 2	Layer 1: Gray concrete packing material Layer 2: Tan refractory brick (around top of Boiler 2)	L1: ND L2: ND	N/A N/A

TABLE 1 SUMMARY OF ASBESTOS BULK SAMPLING AND ANALYTICAL RESULTS KEKU CANNERY				
SAMPLE NUMBER	**SAMPLE LOCATION**	**MATERIAL DESCRIPTION**	**ASBESTOS %**	**TYPE OF ASBESTOS**
50000-KEKU-92	1st Floor, Boiler House, Boiler 2	Layer 1: Gray concrete packing material Layer 2: Tan refractory brick (around top of Boiler 2)	L1: ND L2: ND	N/A N/A
50000-KEKU-93	1st Floor, Boiler House, Boiler 2	Layer 1: Silver paint/coating Layer 2: Metal	L1: ND L2: ND	N/A N/A
50000-KEKU-94	**1st Floor, Boiler House, Boiler 3**	**White fibrous insulation board material** (in north end interior of Boiler 3)	**65%**	**Chrysotile**
50000-KEKU-95	1st Floor, Boiler House, Boiler 3	Layer 1: Tan refractory brick Layer 2: Red mortar (interior)	L1: ND L2: ND	N/A N/A
50000-KEKU-96	1st Floor, Boiler House, Boiler 3	Layer 1: Tan sealant on beige refractory brick Layer 2: Reddish/tan sealant (interior on south end of Boiler 3 by door)	L1: ND L2: ND	N/A N/A
50000-KEKU-97[2]	1st Floor, Boiler House	Gray sink caulking/putty (on large loose abandoned sink)	**Original: 2%** PC: 0.5%[1]	**Chrysotile** Chrysotile[1]
50000-KEKU-98	Roof, SW Corner by Egg Room	Black asphaltic tar sealant (on metal roofing)	ND	N/A
50000-KEKU-99[3]	Mezzanine, above Canning Room W. ½	Layer 1: Black outer coating Layer 2: Brown fibrous outer wire wrap Layer 3: Tan paper wire insulation Layer 4: Black, white, red woven fibrous wire coatings Layer 5: Black rubbery wire insulation Layer 6: Metal wire core	L1: Original: 2% PC: 0.25% L2: ND L3: ND L4: ND L5: ND L6: ND	Chrysotile Chrysotile N/A N/A N/A N/A N/A
50000-KEKU-100	**Mezzanine, above Canning Room E. ½**	**CAB siding debris** (on floor)	**15%**	**Chrysotile**
50000-KEKU-144	1st Floor, Canning Room W. ½	Layer 1: Gray concrete floor seam sealant Layer 2: Brown fibrous crack filler	L1: ND L2: ND	N/A N/A

TABLE 1 SUMMARY OF ASBESTOS BULK SAMPLING AND ANALYTICAL RESULTS KEKU CANNERY				
SAMPLE NUMBER	**SAMPLE LOCATION**	**MATERIAL DESCRIPTION**	**ASBESTOS %**	**TYPE OF ASBESTOS**
50000-KEKU-145	1st Floor, Canning Room W. ½	Layer 1: Gray concrete fill material (to slope to drain) Layer 2: Clear plastic vapor barrier Layer 3: White concrete fill material Layer 4: Yellow mastic	L1: ND L2: ND L3: ND L4: ND	N/A N/A N/A N/A
50000-KEKU-146	1st Floor, Egg Room Storage	Layer 1: Remnant silver foil Layer 2: Tan paper vapor barrier w/ black mastic Layer 3: Yellow fiberglass insulation Layer 4: Black asphaltic vapor barrier	L1: ND L2: ND L3: ND L4: ND	N/A N/A N/A N/A
50000-KEKU-147	**1st Floor, Canning Room E. ½, Compressor Tank Area**	**Layer 1: Gray hard mudded elbow TSI** **Layer 2: White hard mudded elbow TSI** (abandoned on wall framing)	**L1: 16%** **L2: 8%**	**Chrysotile** **Chrysotile**
50000-KEKU-148	1st Floor, Boiler House SW Area	Layer 1: Gray pipe dope Layer 2: White pipe dope (on old abandoned piping to retort 8; retort 8 no longer present)	L1: ND L2: ND	N/A N/A
50000-KEKU-149	**1st Floor, Boiler House, beneath/on framing of Boiler 3**	**Layer 1: Tiny white ¾" gaskets** Layer 2: Metal core	**L1: 15%** L2: ND	**Chrysotile** N/A
50000-KEKU-150	Exterior NE Corner	Black 3-tab roofing (used as ramp tread)	ND	N/A
50000-KEKU-151	Mezzanine, above Canning Room	Black asphaltic coating (on metal flashing along open top roof drains)	ND	N/A
WAREHOUSE				
50000-KEKU-101	1st Floor, N. ½, W. Wall	White/beige window glazing putty w/ paint (on 5'x5¼' operable metal-framed windows)	ND	N/A
50000-KEKU-102	1st Floor, S. ½, E. Wall	White/beige window glazing putty w/ paint (on 5'x5¼' operable metal-framed windows)	ND	N/A

TABLE 1 SUMMARY OF ASBESTOS BULK SAMPLING AND ANALYTICAL RESULTS KEKU CANNERY				
SAMPLE NUMBER	**SAMPLE LOCATION**	**MATERIAL DESCRIPTION**	**ASBESTOS %**	**TYPE OF ASBESTOS**
50000-KEKU-102QA	1st Floor, S. ½, E. Wall	White/beige window glazing putty w/ paint (on 5'x5¼' operable metal-framed windows)	ND	N/A
50000-KEKU-103	Mezzanine, N. ½, Bay 1	Layer 1: Small old black wire coating with brown woven fibrous wire insulation Layer 2: Black rubbery wire insulation Layer 3: Metal wire core	L1: ND L2: ND L3: ND	N/A N/A N/A
50000-KEKU-104	Mezzanine, N. ½, Bay 1	Layer 1: Small rubber off-white wire coating Layer 2: Metal wire core	L1: ND L2: ND	N/A N/A
50000-KEKU-105	Mezzanine, N. ½, Bay 1	White equipment belt (3"x40')	ND	N/A
50000-KEKU-106	Mezzanine, N. ½, Bay 1	Layer 1: Black rubber motor belt w/ white fibrous interior (1"x6') Layer 2: Pink/white woven fibrous belt material	L1: ND L2: ND	N/A N/A
50000-KEKU-107	Mezzanine, N. ½, Bay 1	Black 6" OD rubber motor gasket w/ paint	ND	N/A
50000-KEKU-108	Mezzanine, N. ½, Bay 1	Layer 1: Small old white wire coating Layer 2: Black rubbery wire insulation Layer 3: Metal wire core	L1: ND L2: ND L3: ND	N/A N/A N/A
50000-KEKU-109	Mezzanine, N. ½, Bay 1	Layer 1: Red woven fibrous motor belt Layer 2: Black/red woven rubbery motor belt interior Layer 3: White woven fibrous motor belt	L1: ND L2: ND L3: ND	N/A N/A N/A
50000-KEKU-110	**Mezzanine, N. ½, Bay 1**	**Black asphaltic sealant** (seeping through roof seam)	**4%**	**Chrysotile**
50000-KEKU-111	Mezzanine, N. ½, Bay 2	Layer 1: Black rubber outer coating Layer 2: White fibrous wire insulation Layer 3: Black & red rubbery wire insulation Layer 4: Metal wire core	L1: ND L2: ND L3: ND L4: ND	N/A N/A N/A N/A

TABLE 1 SUMMARY OF ASBESTOS BULK SAMPLING AND ANALYTICAL RESULTS KEKU CANNERY				
SAMPLE NUMBER	**SAMPLE LOCATION**	**MATERIAL DESCRIPTION**	**ASBESTOS %**	**TYPE OF ASBESTOS**
50000-KEKU-112	1st Floor, N. ½, Bay 1	Layer 1: Red/white equipment belt w/ paint (3"x30') Layer 2: Black mastic	L1: ND L2: ND	N/A N/A
50000-KEKU-113	1st Floor, N. ½, Bay 1	Gray electrical panel fuse terminal component	ND	N/A
50000-KEKU-114	1st Floor, N. ½, Bay 1	Black electrical switch gear panel circuit breaker housing component	ND	N/A
50000-KEKU-115	1st Floor, N. ½, Bay 1	Dark brown electrical switch gear panel circuit breaker housing component	ND	N/A
50000-KEKU-116	1st Floor, N. ½, Bay 1	Green/gray hard paper insulation (in electrical switchgear panel)	ND	N/A
50000-KEKU-117	1st Floor, N. ½, Bay 1	Red 12" OD rubber pipe flange gasket (loose on cabinet)	ND	N/A
50000-KEKU-118	1st Floor, N. ½, Bay 3-4	Layer 1: White/beige window glazing putty w/ paint Layer 2: Green powdery material (on 3'x2¼' windows)	L1: ND L2: ND	N/A N/A
50000-KEKU-119	1st Floor, N. ½, Bay 3-4	White/beige window glazing putty w/ paint (on 3'x2½' wood-framed windows)	ND	N/A
50000-KEKU-120	1st Floor, N. ½, Bay 3-4	White/beige window glazing putty w/ paint (on 3¼'x3' wood-framed windows)	ND	N/A
50000-KEKU-121	1st Floor, N. ½, Center Bay 3	Layer 1: Roll of green belt material Layer 2: White fibrous woven interior	L1: ND L2: ND	N/A N/A
50000-KEKU-122	1st Floor, N. ½, Center Bay 3	Layer 1: Roll of orange/tan belt material Layer 2: Black rubbery belt interior material Layer 3: White fibrous woven interior	L1: ND L2: ND L3: ND	N/A N/A N/A
50000-KEKU-123	**1st Floor, N. ½, Bay 5**	**Layer 1: Outer white fibrous coating** **Layer 2: 4" OD gray CAB pipe w/ paint** (loose in front of boat)	**L1: 65%** **L2: 15%**	**Chrysotile** **Chrysotile**

TABLE 1 SUMMARY OF ASBESTOS BULK SAMPLING AND ANALYTICAL RESULTS KEKU CANNERY				
SAMPLE NUMBER	**SAMPLE LOCATION**	**MATERIAL DESCRIPTION**	**ASBESTOS %**	**TYPE OF ASBESTOS**
50000-KEKU-123QA	**1st Floor, N. ½, Bay 5**	**Layer 1: Outer white fibrous coating** **Layer 2: 4" OD gray CAB pipe** (loose in front of boat)	**L1: 56%** **L2: 22%** **L2: 2%**	**Chrysotile** **Chrysotile** **Crocidolite**
50000-KEKU-124	1st Floor, N. ½, Bay 6	Layer 1: Yellow mastic w/ paint Layer 2: Tan door gasket Layer 3: Tan woven door gasket interior (on 5'x6' loose freezer door)	L1: ND L2: ND L3: ND	N/A N/A N/A
50000-KEKU-125	1st Floor, N. ½, Bay 6	Layer 1: Black asphaltic vapor barrier Layer 2: Black asphaltic tar/ creosote Layer 3: Brown cork freezer door insulation (on 5'x6' loose freezer door)	L1: ND L2: ND L3: ND	N/A N/A N/A
50000-KEKU-126	**1st Floor, S. ½, Bay 9**	**Layer 1: Red/tan 6" OD flange gasket** Layer 2: Black brittle material (on abandoned pump/ motor)	**L1: 65%** L2 ND	**Chrysotile** N/A
50000-KEKU-127	1st Floor, S. ½, Bay 15	Layer 1: Black mastic/coating Layer 2: Wood (between metal door front and wood on 3'x6' loose freezer door)	L1: ND L2: ND	N/A N/A
50000-KEKU-128	1st Floor, S. ½, Bay 15	Layer 1: Black coating Layer 2: Wood fiberboard Layer 3: Black mastic (on all sides of 3'x6' loose freezer door)	L1: ND L2: ND L3: ND	N/A N/A N/A
50000-KEKU-129	1st Floor, S. ½, Bay 14	Layer 1: White ceramic insulator knob Layer 2: Black outer wire wrap Layer 3: White woven fibrous wire wrap Layer 4: Black woven fibrous wire wrap Layer 5: Black rubbery inner wire insulation Layer 6: Metal wire core	L1: ND L2: ND L3: ND L4: ND L5: ND L6: ND	N/A N/A N/A N/A N/A N/A
50000-KEKU-130	Exterior W. Side	Green gravel on black asphaltic sheeting (on wood decking between Cannery Building and Warehouse)	ND	N/A

TABLE 1 SUMMARY OF ASBESTOS BULK SAMPLING AND ANALYTICAL RESULTS KEKU CANNERY				
SAMPLE NUMBER	**SAMPLE LOCATION**	**MATERIAL DESCRIPTION**	**ASBESTOS %**	**TYPE OF ASBESTOS**
BLACKSMITH BUILDING				
50000-KEKU-131	Interior	GWB w/ paper (on door)	ND	N/A
50000-KEKU-132	Interior	GWB w/ paper (wall; no skim coat, no joint compound, no paint)	ND	N/A
50000-KEKU-133	**Interior**	**Black electrical panel terminal component** (2'x3' electrical panel)	**10%**	**Chrysotile**
50000-KEKU-134	**Interior**	**Black electrical panel backing board component** (in 2'x3' electrical panel)	**10%**	**Chrysotile**
50000-KEKU-135	Interior	Layer 1: Yellow foam carpet pad debris Layer 2: White coating on back of carpet pad	L1: ND L2: ND	N/A N/A
50000-KEKU-136	Interior	White powdery debris in dryer and on floor	ND	N/A
50000-KEKU-137	**Interior**	**Black dryer electrical panel terminal component** (in 1'x2' panel)	**3%**	**Chrysotile**
BLACKSMITH SHOP				
50000-KEKU-138	Interior	White window glazing putty (on 3'x2' wood-framed windows)	ND	N/A
50000-KEKU-139	Interior	White powdery material (in wood box)	ND	N/A
50000-KEKU-140	Interior	Layer 1: Black electrical tape Layer 2: White powdery wire wrap Layer 3: Black asphaltic woven fibrous wire wrap Layer 4: Black rubbery wire insulation Layer 5: Metal wire core	L1: ND L2: ND L3: ND L4: ND L5: ND	N/A N/A N/A N/A N/A
50000-KEKU-141	Interior	Layer 1: Black electrical tape Layer 2: Outer black asphaltic fibrous woven wire wrap Layer 3: Black rubbery wire insulation Layer 4: Metal wire core	L1: ND L2: ND L3: ND L4: ND	N/A N/A N/A N/A

TABLE 1 SUMMARY OF ASBESTOS BULK SAMPLING AND ANALYTICAL RESULTS KEKU CANNERY				
SAMPLE NUMBER	**SAMPLE LOCATION**	**MATERIAL DESCRIPTION**	**ASBESTOS %**	**TYPE OF ASBESTOS**
50000-KEKU-142	Interior; electrical in Washers	Layer 1: Black rubber outer coating Layer 2: Brown asphaltic fibrous woven insulation w/ red and black wire wrap/ coating Layer 3: White rubbery wire insulation/coating Layer 4: Metal wire core	L1: ND L2: ND L3: ND L4: ND	N/A N/A N/A N/A
50000-KEKU-143	Exterior, below NW Side of Building on Beach	Layer 1: White rubber belt material Layer 2: Gray rubber belt material Layer 3: White rubber belt material	L1: ND L2: ND L3: ND	N/A N/A N/A
GENERATOR HOUSE				
50000-KEKU-152	Exterior W. Wall	White/beige window glazing putty (on 2½'x3¼' wood-framed windows)	ND	N/A
50000-KEKU-153	Exterior W. Wall	Layer 1: Green paint Layer 2: Trace silver coating/ paint Layer 3: Black asphaltic coating (on corrugated metal siding)	L1: ND L2: ND L3: ND	N/A N/A N/A
50000-KEKU-153QA	Exterior W. Wall	Layer 1: Green paint Layer 2: Silver coating/ paint Layer 3: Black asphaltic coating (on corrugated metal siding)	L1: ND L2: ND L3: ND	N/A N/A N/A
50000-KEKU-154	Exterior E. Wall	White/beige window glazing putty (on 3'x4½' wood-framed windows)	ND	N/A
50000-KEKU-155	Exterior E. Wall	Layer 1: Silver coating/paint Layer 2: Black asphaltic coating (on corrugated metal siding)	L1: ND L2: ND	N/A N/A
50000-KEKU-156	Exterior E. Wall	White/beige window glazing putty (on 3¼'x3' wood-framed windows)	ND	N/A
50000-KEKU-157	Interior	Layer 1: Silver coating/paint Layer 2: Black asphaltic coating (on metal siding)	L1: ND L2: ND	N/A N/A

TABLE 1 SUMMARY OF ASBESTOS BULK SAMPLING AND ANALYTICAL RESULTS KEKU CANNERY				
SAMPLE NUMBER	**SAMPLE LOCATION**	**MATERIAL DESCRIPTION**	**ASBESTOS %**	**TYPE OF ASBESTOS**
50000-KEKU-158	Interior	Layer 1: Small gray wire coating Layer 2: White woven fibrous wire insulation Layer 3: Metal wire core	L1: ND L2: ND L3: ND	N/A N/A N/A
50000-KEKU-159	Interior	Layer 1: Small white wire wrap Layer 2: White woven fibrous wire insulation Layer 3: Metal wire core	L1: ND L2: ND L3: ND	N/A N/A N/A
50000-KEKU-160[3]	Interior	Layer 1: Black asphaltic coating Layer 2: Brown paper wire insulation Layer 3: Black and off-white rubbery wire insulation Layer 4: Metal wire core	L1: Original: 2% PC: 0.25% L2: ND L3: ND L4: ND	Chrysotile N/A N/A N/A
50000-KEKU-161[3]	Interior	Layer 1: Black asphaltic coating (on larger wiring) Layer 2: Brown woven fibrous wire insulation Layer 3: Brown paper wire insulation Layer 4: Red, black, and white woven fibrous wire coatings Layer 5: Black woven fibrous wire wrap Layer 6: Black rubbery wire insulation Layer 7: Metal wire core	L1: Original: 2% PC: 0.25% L2: ND L3: ND L4: ND L5: ND L6: ND L7: ND	Chrysotile N/A N/A N/A N/A N/A N/A
50000-KEKU-162	**Interior (in Large Electrical Panel on Ground)**	**Layer 1: White fibrous backing paper** (in large electrical panel) Layer 2: Tan mastic	**L1: 65%** L2: ND	**Chrysotile** N/A
50000-KEKU-162QA	**Interior (in Large Electrical Panel on Ground)**	**White fibrous backing paper w/ tan mastic w/ trace gray paint** (in large electrical panel)	**59%**	**Chrysotile**

TABLE 1 SUMMARY OF ASBESTOS BULK SAMPLING AND ANALYTICAL RESULTS KEKU CANNERY				
SAMPLE NUMBER	**SAMPLE LOCATION**	**MATERIAL DESCRIPTION**	**ASBESTOS %**	**TYPE OF ASBESTOS**
50000-KEKU-163	**Interior (in Large Electrical Panel on Ground)**	**Brown terminal component** (in large electrical panel)	**10%**	**Chrysotile**
50000-KEKU-164	Interior (in Large Electrical Panel on Ground)	Gray terminal components (in large electrical panel)	ND	N/A
50000-KEKU-165	**Mezzanine**	**Tan 10" OD pipe flange gasket w/ rust** (on generator exhaust pipe)	**65%**	**Chrysotile**
50000-KEKU-166	**Interior**	**Hard gray 8" paper gaskets w/ white fibrous interior** (on ground by stairs)	**65%**	**Chrysotile**

KEY: ACM = asbestos containing material, **ACU** = air conditioning unit, **CAB** = cement asbestos board, **GWB** = gypsum wall board, **ND** = non-detect, **N/A** = not applicable, **OD** = outer diameter, **PC** = Point Count, **SVF** = sheet vinyl flooring, **TSI** = thermal system insulation, **w/** = with

[1] *Point counted sample. Preliminary analytical reports indicated that one (1) sample of white/light gray window glazing putty on 2 3/4'x2 1/4' inoperable windows in the Cannery 1st Floor, Boiler House North Wall Exterior contained approximately 2% chrysotile asbestos. EHSI re-submitted the sample for re-analysis using the more precise EPA "Point Count" method. The "Point Count" analytical method is recommended by the EPA for samples with less than 10% asbestos. Based on the results of that re-analysis, the window glazing putty was determined* ***not*** *to be ACM (e.g., containing < 1% asbestos fibers). Both the "Point Count" re-analysis and the original concentrations are listed in Table 1. Analytical results for all analyses are provided in Appendix A.*

[2] *Point counted sample. Preliminary analytical reports indicated that one (1) sample of gray sink caulking/putty on larger loose abandoned sink in the Cannery 1st Floor, Boiler House, contained approximately 2% chrysotile asbestos. EHSI re-submitted the sample for re-analysis using the more precise EPA "Point Count" method. The "Point Count" analytical method is recommended by the EPA for samples with less than 10% asbestos. Based on the results of that re-analysis, the caulking was determined* ***not*** *to be ACM (e.g., containing < 1% asbestos fibers). Both the "Point Count" re-analysis and the original concentrations are listed in Table 1. Analytical results for all analyses are provided in Appendix A.*

[3] *Point counted sample. Preliminary analytical reports indicated that three (3) samples of black outer/asphaltic coating on knob and tube wiring in the Cannery Building and Generator House contained approximately 2% chrysotile asbestos. EHSI re-submitted the sample for re-analysis using the more precise EPA "Point Count" method. The "Point Count" analytical method is recommended by the EPA for samples with less than 10% asbestos. Based on the results of that re-analysis, the coating was determined* ***not*** *to be ACM (e.g., containing < 1% asbestos fibers). Both the "Point Count" re-analysis and the original concentrations are listed in Table 1. Analytical results for all analyses are provided in Appendix A.*

Table 2 summarizes materials identified by EHSI as containing greater than 1% asbestos fibers during its survey, and un-sampled materials assumed to be ACM. **The Table 2 Summary of Asbestos Containing Materials provides a summary of materials present, but is not intended for bid quantifications. Table 2 may also be utilized for the potential future management and planning of the abatement and maintenance of the remaining ACM and presumed ACM items.**

TABLE 2 SUMMARY OF ASBESTOS-CONTAINING MATERIALS KEKU CANNERY				
ASBESTOS MATERIAL DESCRIPTION	**CON. (Condition)**	**MATERIAL TYPE (Friable vs. Non-Friable)**	**LOCATION**	**QUANTITY**
CANNERY BUILDING				
ACM red 24" OD pipe flange gasket (Sample # 50000-KEKU-01)	Fair-Poor	Non-Friable	Exterior on Beach Below and 12' North of Women's Restrooms	2 EA
Non-ACM green 12" OD flange gasket w/ non-ACM copper interior w/ **ACM brown paper gasket interior** (Sample # 50000-KEKU-02)	Poor	Non-Friable	Exterior on Beach Below SE Corner of Restrooms	1 EA
Non-ACM green 6" OD flange gasket w/ non-ACM copper interior w/ **ACM brown paper gasket interior** (Sample # 50000-KEKU-03)	Poor	Non-Friable	Exterior on Beach Below SE Corner of Restrooms	3 EA
ACM hard gray 8" OD gasket w/ fibrous interior (Sample # 50000-KEKU-05)	Fair	Non-Friable	Exterior on Beach Below Center of Machine Shop	2 EA
ACM hard black fibrous Bakelite™ backing board component w/ non-ACM Gray Bakelite™ backing board component w/ non-ACM red paper insulation/spacer components (in approx. 2'x3' old abandoned electrical panels and electrical switchgear panels) (Sample # 50000-KEKU-20)	Fair	Non-Friable	Mezzanine above Canning Room W. ½, Canning Room W. ½, Egg Room, Machine Shop, Boiler House, and Warehouse	7 EA

TABLE 2 SUMMARY OF ASBESTOS-CONTAINING MATERIALS KEKU CANNERY				
ASBESTOS MATERIAL DESCRIPTION	**CON. (Condition)**	**MATERIAL TYPE (Friable vs. Non-Friable)**	**LOCATION**	**QUANTITY**
ACM hard black fibrous Bakelite™ backing board component w/ non-ACM Gray Bakelite™ backing board component w/ non-ACM red paper insulation/spacer components (in approx. 1'x1' old abandoned small electrical panels and electrical switchgear panel) (Sample # 50000-KEKU-20)	Fair	Non-Friable	Canning Room W. and E. ½, and Egg Room	7 EA
ACM gray caulking/sealant (on gutter) (Sample # 50000-KEKU-38)	Fair	Non-Friable	1st Floor, Wash Room	4 LF
4'x4'x4' ACU w/ **ACM black wrap on copper piping,** w/ **ACM black 1'x1' motor gaskets, and** w/ **ACM gray penetration sealant** at all penetrations for ACU w/ assumed ACM internal components (Samples # 50000-KEKU-51, 52, and 53)	Fair	Non-Friable	1st Floor, Egg Room and Egg Room Storage	1 EA
ACM white 8" OD pipe flange gasket w/ blue paint (Sample # 50000-KEKU-58)	Fair	Non-Friable	1st Floor, Canning Room E. ½	1 EA
ACM tan fibrous 12" OD gaskets (on vacuum pump) (Sample # 50000-KEKU-59)	Fair	Non-Friable	1st Floor, Canning Room E. ½	4 EA
ACM 3'x1' red & gray fibrous head gaskets (on abandoned generator motor) (Samples # 50000-KEKU-72 and 72QA)	Poor	Non-Friable	1st Floor, Boiler House Storage (On Old Abandoned Generator)	2 EA
Non-ACM tan material on **ACM 16" OD white woven fibrous double layered gasket** w/ non-ACM white mastic (loose in writing desk) (Sample # 50000-KEKU-82)	Fair	Friable	1st Floor, Boiler House, in Writing Desk	17 EA
ACM 6" and 8" OD white/silvery gray fibrous pipe flange gaskets w/ non-ACM black brittle material w/ non-ACM paint (on tank between Boiler 2 and 1) (Sample # 50000-KEKU-86)	Fair	Non-Friable	1st Floor, Boiler House	3 EA (6") 1 EA (8")

TABLE 2 SUMMARY OF ASBESTOS-CONTAINING MATERIALS KEKU CANNERY				
ASBESTOS MATERIAL DESCRIPTION	**CON. (Condition)**	**MATERIAL TYPE (Friable vs. Non-Friable)**	**LOCATION**	**QUANTITY**
Non-ACM silver paint on **ACM tan fibrous hatch gasket** (on tank between Boiler 2 and 1) (Sample # 50000-KEKU-87)	Fair	Friable	1st Floor, Boiler House	1 EA
ACM white fibrous insulation board material (on north end interior of Boiler 3) (Sample # 50000-KEKU-94)	Poor	Friable	1st Floor, Boiler House, Boiler 3	50 SF
CAB siding debris (on ground) (Sample # 50000-KEKU-100)	Poor	Friable	Mezzanine, above Canning Room E. ½	1 SF
ACM gray and white hard mudded elbow TSI (abandoned on wall framing) (Sample # 50000-KEKU-147)	Poor	Friable	1st Floor, Canning Room E. ½, Compressor Tank Area	1 EA
ACM tiny white ¾" gaskets w/ non-ACM metal core (Sample # 50000-KEKU-149)	Fair	Non-Friable	1st Floor, Boiler House, Boiler 3	25 EA
Water tank w/ assumed ACM internal components (on tank between Boiler 2 and 1)	Fair	Non-Friable	1st Floor, Boiler House	1 EA
Old small water heater w/ assumed ACM internal components (below hatch in floor)	Poor	Non-Friable	1st Floor, Women's Restroom, Beneath Floor	1 EA
Vacuum pump w/ assumed ACM internal components	Fair	Non-Friable	1st Floor, Canning Room E. ½	1 EA
Small electrical panels or electrical switchgear panels w/ assumed ACM internal components	Fair-Poor	Non-Friable	1st Floor: Fish House, Egg Room, Warehouse, Canning Room E. ½, Boiler House	2 EA
***ACM 6"-12" OD pipe flange gaskets** (on piping associated with Boilers 1, 2, and 3)	Fair	Non-Friable	1st Floor, Boiler House	26 EA
***ACM white fibrous gasket material**	Poor	Friable	N. Exterior, E. Side (Loose on dirt pathway 3' away from building)	1 EA
WAREHOUSE				
ACM black asphaltic sealant (seeping through roof seam) (Sample # 50000-KEKU-110)	Fair	Non-Friable	Mezzanine, N. ½, Bay 1	15,000 SF

TABLE 2 SUMMARY OF ASBESTOS-CONTAINING MATERIALS KEKU CANNERY				
ASBESTOS MATERIAL DESCRIPTION	**CON. (Condition)**	**MATERIAL TYPE (Friable vs. Non-Friable)**	**LOCATION**	**QUANTITY**
ACM white fibrous coating on 4" gray CAB pipe (loose in front of boat) (Sample # 50000-KEKU-123 and 124)	Fair	Friable	1st Floor, N. ½, Bay 5	4 LF
ACM red/ tan 6" OD flange gasket w/ non-ACM black brittle material (on abandoned pump/ motor) (Sample # 50000-KEKU-126)	Poor	Non-Friable	1st Floor, S. ½, Bay 9	5 EA
Old safe w/ assumed ACM insulation/fire coating	Fair	Friable	1st Floor, S. ½, Bay 16 Center	1 EA
1'x1' Small electrical panels or electrical switchgear panels w/ assumed ACM internal components	Fair-Poor	Non-Friable	1st Floor, S. ½, Bays 10 and 14	2 EA
***ACM white and brown stove insulation** in 6'x3'x3' stove	Poor	Friable	(Could not locate item)	1 EA
BLACKSMITH BUILDING				
2'x3' Electrical panel w/ **ACM black terminal components and ACM black backing board components** (Sample # 50000-KEKU-134 and 134)	Fair	Non-Friable	Interior	1 EA
ACM black 1'x2' electrical panel terminal components (in dryer) (Sample # 50000-KEKU-137)	Fair	Non-Friable	Interior	1 EA
***ACM white 12" fibrous gasket material**	Poor	Friable	Exterior (Loose on Beach below SE Corner of Building)	1 EA
GENERATOR HOUSE				
Large 3'x4' electrical panel w/ **ACM white fibrous panel backing paper** w/ non-ACM tan mastic and w/ **ACM brown electrical panel terminal components** (Sample # 50000-KEKU-162, 162QA, and 163)	Fair	Friable	Loose on Ground	3 EA
ACM tan 10" OD pipe flange gasket w/ rust (on generator exhaust pipe) (Sample # 50000-KEKU-165)	Poor	Non-Friable	Mezzanine	16 EA

TABLE 2 SUMMARY OF ASBESTOS-CONTAINING MATERIALS KEKU CANNERY				
ASBESTOS MATERIAL DESCRIPTION	**CON. (Condition)**	**MATERIAL TYPE (Friable vs. Non-Friable)**	**LOCATION**	**QUANTITY**
ACM hard gray 8" OD paper gasket w/ **white fibrous interior** (on ground by stairs) (Sample # 50000-KEKU-166)	Poor	Friable	Interior	9 EA
Small electrical panels or electrical switchgear panels w/ assumed ACM internal components	Fair-Poor	Non-Friable	Throughout	4 EA
Electrical panels or electrical switchgears panels w/ assumed ACM internal components	Fair-Poor	Non-Friable	Throughout	9 EA
Large (2'x4') electrical panels w/ assumed ACM internal components	Fair-Poor	Non-Friable	Throughout	2 EA
Large (2'x2'x6') electrical switchgear panels w/ assumed ACM internal components	Fair-Poor	Non-Friable	Throughout	3 EA
1'x1'x1' Charging unit w/ assumed ACM internal components	Poor	Non-Friable	Throughout	1 EA
***ACM pipe patch insulation** on Generator 2	Fair	Friable	Interior, on Generator 2	2 LF
***ACM 4" OD exhaust pipe TSI**	Fair	Friable	Interior, on Generator 3	6 LF
*1'x1'x6" Box of **ACM rope gaskets**	Fair	Friable	Interior NE Corner	1 EA
*Large 2'x4'x6" boxes of **ACM motor gaskets**	Fair	Non-Friable	Interior Mezzanine	2 EA
*Small 1'x2'x6" boxes of **ACM motor gaskets**	Fair	Non-Friable	Interior Mezzanine	3 EA
*3'x6'x4' Generators w/ **ACM motor gaskets**	Fair	Non-Friable	Interior	4 EA

KEY: ACM = asbestos containing material, **ACU** = air conditioning unit, **CAB** = cement asbestos board, **EA** = each, **LF** = linear feet, **OD** = outside diameter, **SF** = square feet, **TSI** = thermal system insulation

*Materials sampled and identified as ACM by previous survey.

ACM identified in this survey should not be disturbed unless handled by personnel who are properly trained and certified in asbestos work. Demolition and/or renovation activities by contractors may expose concealed suspect ACM. Contractors should be aware of the potential for concealed suspect ACM and have preplanned contingencies for the handling of suspect ACM discovered during renovation and/or demolition work. Any concealed suspect ACM material that was not sampled or was assumed to be ACM and included in this report, must be treated as ACM until proven otherwise by a Certified AHERA Building Inspector and a certified laboratory. Contingency plans should include stopping work on identification of

concealed suspect ACM, evacuation of the area, and sampling by a Certified AHERA Building Inspector.

2.4.2 Lead-Containing Paint and Building Materials

One hundred eighty (180) samples were analyzed for lead using the X-Ray fluorescence (XRF) analyzer. Results marked with "≤LOD" contain less lead than the limit of detection. Sample results ranged from <LOD to 11.3 milligrams lead per square centimeter (mg Pb/cm^2).

Table 3 summarizes XRF lead samples, including sample number, material description, substrate, color, location and analytical results. The "Key" provided at the end of Table 3 provides definition for acronyms.

TABLE 3
XRF SAMPLING
SUMMARY OF PAINTED COMPONENTS AND MATERIALS
KEKU CANNERY

Read #	Building	Room	Component	Substrate	Color	Lead Conc. (mg/cm^2)
1	N/A	N/A	SELF-CALIBRATION	N/A	N/A	3.42
2	N/A	N/A	CALIBRATION	N/A	RED	1.2
3	N/A	N/A	CALIBRATION	N/A	RED	1.0
4	N/A	N/A	CALIBRATION	N/A	RED	1.1
5	GENERATOR HOUSE	EXTERIOR	CORRUGATED SIDING	METAL	LIGHT GREEN	< LOD
6	GENERATOR HOUSE	EXTERIOR	DOUBLE DOOR FRAME	WOOD	LIGHT GREEN	< LOD
7	GENERATOR HOUSE	EXTERIOR	OLD CORRUGATED SIDING	METAL	LIGHT GREEN	< LOD
8	GENERATOR HOUSE	EXTERIOR	WINDOW FRAME	WOOD	WHITE	0.03
9	GENERATOR HOUSE	EXTERIOR	WINDOW TRIM	WOOD	WHITE	0.04
10	GENERATOR HOUSE	EXTERIOR	ROOF FRAMING	WOOD	LIGHT GREEN	0.04
11	GENERATOR HOUSE	EXTERIOR	ROOF OVERHANG	WOOD	LIGHT GREEN	< LOD
12	GENERATOR HOUSE	EXTERIOR	CORRUGATED SIDING	METAL	SILVER	< LOD
13	GENERATOR HOUSE	EXTERIOR	ROOF FRAMING	WOOD	SILVER	< LOD
14	GENERATOR HOUSE	EXTERIOR	CONDUIT	METAL	SILVER	< LOD
15	GENERATOR HOUSE	INTERIOR	DOOR STOP	WOOD	RED	0.05
16	GENERATOR HOUSE	INTERIOR	WALL FRAMING	WOOD	LIGHT GRAY	0.17
17	GENERATOR HOUSE	INTERIOR	WALL FRAMING	WOOD	OFF-WHITE	< LOD

TABLE 3 XRF SAMPLING SUMMARY OF PAINTED COMPONENTS AND MATERIALS KEKU CANNERY						
Read #	**Building**	**Room**	**Component**	**Substrate**	**Color**	**Lead Conc. (mg/cm^2)**
18	GENERATOR HOUSE	INTERIOR	WINDOW TRIM	WOOD	OFF-WHITE	< LOD
19	GENERATOR HOUSE	INTERIOR	WINDOW FRAME	WOOD	OFF-WHITE	< LOD
20	GENERATOR HOUSE	INTERIOR	WALL	WOOD	LIGHT GRAY	< LOD
21	GENERATOR HOUSE	INTERIOR	SWITCHGEAR	METAL	BLACK	< LOD
22	GENERATOR HOUSE	INTERIOR	ELECTRICAL PANEL	METAL	LIGHT GRAY	< LOD
23	GENERATOR HOUSE	INTERIOR	ELECTRICAL PANEL	METAL	DARK GRAY	0.07
24	GENERATOR HOUSE	INTERIOR	CATERPILLAR GENERATOR	METAL	YELLOW	**1.9**
25	GENERATOR HOUSE	INTERIOR	OLD CATERPILLAR GENERATOR	METAL	YELLOW	0.6
26	GENERATOR HOUSE	INTERIOR	OLD CATERPILLAR GENERATOR	METAL	YELLOW	**1.4**
27	GENERATOR HOUSE	INTERIOR	OLD CATERPILLAR GENERATOR	METAL	BLACK	**1.6**
28	GENERATOR HOUSE	INTERIOR	CABINET	WOOD	OFF-WHITE	0.04
29	GENERATOR HOUSE	INTERIOR	ELECTRICAL PANEL	WOOD	WHITE	< LOD
30	GENERATOR HOUSE	INTERIOR	ELECTRICAL PANEL	WOOD	RED	< LOD
31	BLACKSMITH	EXTERIOR	SIDING	WOOD	LIGHT GREEN	0.03
32	BLACKSMITH	EXTERIOR	DOORFRAME	WOOD	OFF-WHITE	0.04
33	BLACKSMITH	EXTERIOR	DOOR STOP	WOOD	OFF-WHITE	< LOD
34	BLACKSMITH	EXTERIOR	DOOR	WOOD	LIGHT GREEN	< LOD
35	BLACKSMITH	EXTERIOR	ROOF FRAMING	WOOD	LIGHT GREEN	< LOD
36	BLACKSMITH	EXTERIOR	CORRUGATED ROOF	METAL	LIGHT GREEN	< LOD
37	BLACKSMITH	INTERIOR	WALL	WOOD	OFF-WHITE	< LOD
38	BLACKSMITH	INTERIOR	DOOR	WOOD	OFF-WHITE	< LOD
39	BLACKSMITH	INTERIOR	ELECTRICAL PANEL	METAL	DARK GRAY	0.03
40	BLACKSMITH	INTERIOR	ROOF FRAMING	WOOD	LIGHT GREEN	< LOD
41	BLACKSMITH	INTERIOR	TABLE	WOOD	OFF-WHITE	< LOD
42	BLACKSMITH	INTERIOR	WASHING MACHINE	METAL	OFF-WHITE	< LOD
43	BLACKSMITH	INTERIOR	DRYER	METAL	OFF-WHITE	< LOD

TABLE 3 XRF SAMPLING SUMMARY OF PAINTED COMPONENTS AND MATERIALS KEKU CANNERY						
Read #	**Building**	**Room**	**Component**	**Substrate**	**Color**	**Lead Conc. (mg/cm^2)**
44	BLACKSMITH	INTERIOR	SHOWER	METAL	OFF-WHITE	< LOD
45	BLACKSMITH	INTERIOR	SHOWER	METAL	GREEN	< LOD
46	BLACKSMITH	INTERIOR	TOILET	CERAMIC	WHITE	**1.1**
47	BLACKSMITH	INTERIOR	FLOOR	WOOD	RED	0.1
48	BLACKSMITH	EXTERIOR	WALL BOX	WOOD	RED ON WHITE	0.05
49	BLACKSMITH SHOP	EXTERIOR	SIDING	WOOD	GREEN	0.09
50	BLACKSMITH SHOP	EXTERIOR	DOOR FRAME	WOOD	RED ON GRAY	0.6
51	CANNERY BUILDING	BOILER HOUSE EXTERIOR	SIDING	WOOD	LIGHT GREEN	0.22
52	CANNERY BUILDING	BOILER HOUSE EXTERIOR	WINDOW TRIM	WOOD	OFF-WHITE	< LOD
53	CANNERY BUILDING	BOILER HOUSE EXTERIOR	WINDOW FRAME	WOOD	OFF-WHITE	< LOD
54	CANNERY BUILDING	BOILER HOUSE EXTERIOR	DOUBLE DOOR	WOOD	RED	0.06
55	CANNERY BUILDING	BOILER HOUSE EXTERIOR	DOUBLE DOOR TRIM	WOOD	OFF-WHITE	0.03
56	CANNERY BUILDING	BOILER HOUSE INTERIOR	WALL	WOOD	LIGHT GRAY	0.14
57	CANNERY BUILDING	BOILER HOUSE INTERIOR	WINDOW TRIM	WOOD	LIGHT GRAY	< LOD
58	CANNERY BUILDING	BOILER HOUSE INTERIOR	WINDOW FRAME	WOOD	LIGHT GRAY	< LOD
59	CANNERY BUILDING	BOILER HOUSE INTERIOR	SUPPORT COLUMN	WOOD	GRAY	0.2
60	CANNERY BUILDING	BOILER HOUSE INTERIOR	SUPPORT COLUMN	WOOD	OFF-WHITE	0.05
61	CANNERY BUILDING	BOILER HOUSE INTERIOR	CABINET	WOOD	GRAY	0.6
62	CANNERY BUILDING	BOILER HOUSE INTERIOR	BOILER 2 SHELL	METAL	BLACK	0.07
63	CANNERY BUILDING	BOILER HOUSE INTERIOR	BOILER 2 FRAMING	METAL	BLACK	< LOD
64	CANNERY BUILDING	BOILER HOUSE INTERIOR	BOILER 2 WATER MAINLINE	METAL	SILVER	0.11
65	CANNERY BUILDING	BOILER HOUSE INTERIOR	BOILER 2 SHELL	METAL	BLACK	< LOD
66	CANNERY BUILDING	BOILER HOUSE INTERIOR	BOILER 2 FACEPLATE	METAL	SILVER	< LOD
67	CANNERY BUILDING	BOILER HOUSE INTERIOR	BOILER 2 SHELL	METAL	SILVER	0.6
68	CANNERY BUILDING	BOILER HOUSE INTERIOR	BOILER 2 CONDUIT	METAL	SILVER	< LOD

TABLE 3 XRF SAMPLING SUMMARY OF PAINTED COMPONENTS AND MATERIALS KEKU CANNERY						
Read #	**Building**	**Room**	**Component**	**Substrate**	**Color**	**Lead Conc. (mg/cm^2)**
69	CANNERY BUILDING	BOILER HOUSE INTERIOR	BOILER 2 PUMP	METAL	BLUE	0.5
70	CANNERY BUILDING	BOILER HOUSE INTERIOR	BOILER 2 FLUE	METAL	SILVER	< LOD
71	CANNERY BUILDING	BOILER HOUSE INTERIOR	BOILER 2 LADDER	WOOD	SILVER	< LOD
72	CANNERY BUILDING	BOILER HOUSE INTERIOR	BOILER 1 FASCIA	BRICK	LIGHT GRAY	< LOD
73	CANNERY BUILDING	BOILER HOUSE INTERIOR	BOILER 1 FASCIA SUPPORT	WOOD	OFF-WHITE ON SILVER	0.6
74	CANNERY BUILDING	BOILER HOUSE INTERIOR	BOILER 1 FASCIA DOOR	METAL	OFF-WHITE ON SILVER	0.07
75	CANNERY BUILDING	BOILER HOUSE INTERIOR	BOILER 1 FRAME	METAL	OFF-WHITE ON SILVER	0.11
76	CANNERY BUILDING	BOILER HOUSE INTERIOR	BOILER 1 FACEPLATE	METAL	SILVER	0.11
77	CANNERY BUILDING	BOILER HOUSE INTERIOR	BOILER 1 DOOR	METAL	SILVER	< LOD
78	CANNERY BUILDING	BOILER HOUSE INTERIOR	BOILER 1 DOOR HINGE	METAL	BLACK	0.06
79	CANNERY BUILDING	BOILER HOUSE INTERIOR	BOILER 1 DOOR HINGE	METAL	RED	0.16
80	CANNERY BUILDING	BOILER HOUSE INTERIOR	BOILER 3 SHELL	METAL	BLACK	0.05
81	CANNERY BUILDING	BOILER HOUSE INTERIOR	BOILER 3 FASCIA	METAL	SILVER	< LOD
82	CANNERY BUILDING	BOILER HOUSE INTERIOR	BOILER 3 FASCIA	METAL	BLACK	**2.1**
83	CANNERY BUILDING	BOILER HOUSE INTERIOR	BOILER 3 SHELL	METAL	BLACK	**1.3**
84	CANNERY BUILDING	BOILER HOUSE INTERIOR	SUPPORT COLUMN	WOOD	RED	**2.3**
85	CANNERY BUILDING	BOILER HOUSE INTERIOR	TOOL CHEST	WOOD	RED	0.08
86	CANNERY BUILDING	BOILER HOUSE INTERIOR	TOOL CHEST	WOOD	GRAY	0.09
87	CANNERY BUILDING	BOILER HOUSE INTERIOR	EXPANSION CHAMBER	METAL	SILVER	0.4
88	CANNERY BUILDING	BOILER HOUSE INTERIOR	EXPANSION CHAMBER PIPING	METAL	SILVER	0.6
89	CANNERY BUILDING	BOILER HOUSE INTERIOR	ELECTRICAL PANEL	METAL	GRAY	< LOD
90	CANNERY BUILDING	BOILER HOUSE INTERIOR	BOILER 1 OIL TANK	METAL	RED	0.08
91	CANNERY BUILDING	BOILER HOUSE INTERIOR	RETORT 1 DOOR	METAL	SILVER	0.6
92	CANNERY BUILDING	BOILER HOUSE INTERIOR	RETORT 1 DOOR HANDLE	METAL	SILVER	0.06

TABLE 3 XRF SAMPLING SUMMARY OF PAINTED COMPONENTS AND MATERIALS KEKU CANNERY						
Read #	**Building**	**Room**	**Component**	**Substrate**	**Color**	**Lead Conc. (mg/cm^2)**
93	CANNERY BUILDING	BOILER HOUSE INTERIOR	RETORT 1 SHELL	METAL	SILVER	< LOD
94	CANNERY BUILDING	BOILER HOUSE INTERIOR	RETORT 1 PIPING	METAL	SILVER	< LOD
95	N/A	N/A	CALIBRATION	N/A	RED	**1.1**
96	N/A	N/A	CALIBRATION	N/A	RED	**1.0**
97	N/A	N/A	CALIBRATION	N/A	RED	**1.1**
98	CANNERY BUILDING	BOILER HOUSE INTERIOR	RETORT 2 DOOR	METAL	SILVER	< LOD
99	CANNERY BUILDING	BOILER HOUSE INTERIOR	RETORT 2 DOOR	METAL	BLACK	< LOD
100	CANNERY BUILDING	BOILER HOUSE INTERIOR	RETORT 2 SHELL	METAL	SILVER	< LOD
101	CANNERY BUILDING	BOILER HOUSE INTERIOR	RETORT 2 GAUGE PANEL	WOOD	SILVER	0.21
102	CANNERY BUILDING	BOILER HOUSE INTERIOR	SUPPORT COLUMN	WOOD	YELLOW	**11.3**
103	CANNERY BUILDING	BOILER HOUSE INTERIOR	RETORT 4 DOOR	METAL	SILVER	0.05
104	CANNERY BUILDING	BOILER HOUSE INTERIOR	RETORT 4 SHELL	METAL	SILVER	< LOD
105	CANNERY BUILDING	BOILER HOUSE INTERIOR	RETORT 5 INTERIOR SHELL	METAL	SILVER	0.09
106	CANNERY BUILDING	BOILER HOUSE INTERIOR	RETORT 5 SHELL	METAL	SILVER	< LOD
107	CANNERY BUILDING	BOILER HOUSE INTERIOR	RETORT 5 DOOR	METAL	SILVER	0.26
108	CANNERY BUILDING	BOILER HOUSE INTERIOR	RETORT 6 DOOR	METAL	SILVER	< LOD
109	CANNERY BUILDING	BOILER HOUSE INTERIOR	RETORT 6 SHELL	METAL	SILVER	< LOD
110	CANNERY BUILDING	BOILER HOUSE INTERIOR	RETORT7 DOOR	METAL	SILVER	0.06
111	CANNERY BUILDING	BOILER HOUSE INTERIOR	RETORT 7 SHELL	METAL	SILVER	0.27
112	CANNERY BUILDING	BOILER HOUSE INTERIOR	RETORT 7 PIPING	METAL	OFF-WHITE	< LOD
113	CANNERY BUILDING	BOILER HOUSE INTERIOR	FLOOR	WOOD	RED	0.04
114	CANNERY BUILDING	BOILER HOUSE INTERIOR	WALL	WOOD	LIGHT GREEN	0.05
115	CANNERY BUILDING	BOILER HOUSE INTERIOR	DOOR FRAME TRIM	WOOD	DARK GREEN	0.8
116	CANNERY BUILDING	BOILER HOUSE INTERIOR	DOOR FRAME	WOOD	WHITE	< LOD
117	CANNERY BUILDING	BOILER HOUSE EXTERIOR	SIDING	WOOD	DARK GREEN	0.6

TABLE 3 XRF SAMPLING SUMMARY OF PAINTED COMPONENTS AND MATERIALS KEKU CANNERY						
Read #	**Building**	**Room**	**Component**	**Substrate**	**Color**	**Lead Conc. (mg/cm^2)**
118	CANNERY BUILDING	DIESEL HOUSE 1 INTERIOR	FLOOR	WOOD	RED	0.04
119	CANNERY BUILDING	BOILER HOUSE STORAGE INTERIOR	WALL	WOOD	DARK GREEN	0.6
120	CANNERY BUILDING	MEN'S RESTROOM INTERIOR	DOOR	WOOD	WHITE	**2.6**
121	CANNERY BUILDING	MEN'S RESTROOM INTERIOR	DOOR FRAME	WOOD	WHITE	< LOD
122	CANNERY BUILDING	MEN'S RESTROOM EXTERIOR	WALL	WOOD	WHITE	0.07
123	CANNERY BUILDING	MEN'S RESTROOM EXTERIOR	RAILING	WOOD	RED	0.11
124	CANNERY BUILDING	MEN'S RESTROOM EXTERIOR	FLOOR	WOOD	RED	0.03
125	CANNERY BUILDING	MEN'S RESTROOM INTERIOR	URINAL	CERAMIC	WHITE	0.05
126	CANNERY BUILDING	MEN'S RESTROOM INTERIOR	DOOR	WOOD	RED	0.6
127	CANNERY BUILDING	MEN'S RESTROOM INTERIOR	CEILING	WOOD	WHITE	0.07
128	CANNERY BUILDING	MEN'S RESTROOM INTERIOR	WALL	WOOD	WHITE	0.11
129	CANNERY BUILDING	MEN'S RESTROOM INTERIOR	FLOOR	WOOD	RED	< LOD
130	CANNERY BUILDING	MEN'S RESTROOM INTERIOR	FLOOR TRIM	WOOD	RED	0.04
131	CANNERY BUILDING	WOMEN'S RESTROOM INTERIOR	RAILING	WOOD	WHITE	< LOD
132	CANNERY BUILDING	WOMEN'S RESTROOM INTERIOR	MEDICINE CABINET	WOOD	BLUE	0.03
133	CANNERY BUILDING	WOMEN'S RESTROOM INTERIOR	MEDICINE CABINET	WOOD	WHITE	< LOD
134	CANNERY BUILDING	WOMEN'S RESTROOM INTERIOR	SINK	CERAMIC	WHITE	0.04
135	CANNERY BUILDING	WOMEN'S RESTROOM INTERIOR	WASH BASIN	METAL	WHITE	< LOD
136	CANNERY BUILDING	WOMEN'S RESTROOM INTERIOR	SIDING	METAL	LIGHT GREEN	**1.2**
137	CANNERY BUILDING	MEN'S RESTROOM EXTERIOR	LADDER	WOOD	YELLOW	< LOD
138	CANNERY BUILDING	CANNING ROOM E. ½ INTERIOR	SIDING WALL	WOOD	WHITE	0.05

TABLE 3 XRF SAMPLING SUMMARY OF PAINTED COMPONENTS AND MATERIALS KEKU CANNERY						
Read #	**Building**	**Room**	**Component**	**Substrate**	**Color**	**Lead Conc. (mg/cm²)**
139	CANNERY BUILDING	CANNING ROOM E. ½ INTERIOR	STORAGE BOX	WOOD	WHITE	0.05
140	CANNERY BUILDING	CANNING ROOM E. ½ INTERIOR	WALL	WOOD	GRAY	0.3
141	CANNERY BUILDING	CANNING ROOM E. ½ INTERIOR	COMPRESSOR TANK SHELL	METAL	SILVER ON RED	**13.0**
142	CANNERY BUILDING	CANNING ROOM E. ½ INTERIOR	COMPRESSOR TANK PIPING	METAL	TEAL	0.7
143	CANNERY BUILDING	CANNING ROOM E. ½ INTERIOR	COMPRESSOR TANK PIPING	METAL	SILVER	0.06
144	CANNERY BUILDING	CANNING ROOM E. ½ INTERIOR	WATER LINE	METAL	YELLOW	0.4
145	CANNERY BUILDING	CANNING ROOM E. ½ INTERIOR	WATER LINE	METAL	RED	0.3
146	CANNERY BUILDING	CANNING ROOM E. ½ INTERIOR	WATER LINE	METAL	DARK GREEN	0.08
147	CANNERY BUILDING	CANNING ROOM E. ½ INTERIOR	WATER LINE FLANGE	METAL	SILVER	0.09
148	CANNERY BUILDING	CANNING ROOM E. ½ INTERIOR	VACUUM PUMP	METAL	BLUE	**3.1**
149	CANNERY BUILDING	CANNING ROOM E. ½ INTERIOR	VACUUM PUMP PIPING	METAL	SILVER	0.08
150	CANNERY BUILDING	CANNING ROOM E. ½ INTERIOR	VACUUM PUMP GUARD RAIL	METAL	RED	0.3
151	CANNERY BUILDING	CANNING ROOM W. ½ INTERIOR	FLOOR	CONCRETE	RED	< LOD
152	CANNERY BUILDING	CANNING ROOM W. ½ INTERIOR	FISH TROUGH FRAMING	METAL	RED	0.09
153	CANNERY BUILDING	TOOL ROOM INTERIOR	WALL	WOOD	DARK RED	0.1
154	CANNERY BUILDING	TOOL ROOM INTERIOR	CABINET	WOOD	DARK BROWN	0.4
155	CANNERY BUILDING	TOOL ROOM INTERIOR	WALL	WOOD	OFF-WHITE ON RED	0.4
156	CANNERY BUILDING	FISH ROOM INTERIOR	WATER PIPE	METAL	DARK BLUE	0.6
157	CANNERY BUILDING	FISH ROOM INTERIOR	BOARDWALK	WOOD	GRAY	0.16
158	CANNERY BUILDING	FISH ROOM INTERIOR	RAFTER BEAM	WOOD	WHITE	< LOD
159	CANNERY BUILDING	FISH ROOM INTERIOR	FISH SORTER CONVEYOR	METAL	RED	0.5
160	CANNERY BUILDING	FISH ROOM INTERIOR	FISH SORTER CONVEYOR	METAL	WHITE	< LOD
161	CANNERY BUILDING	FISH ROOM INTERIOR	FISH SORTER CONVEYOR	WOOD	WHITE	0.08
162	CANNERY BUILDING	FISH ROOM INTERIOR	FISH SORTER BAY 6 FLOOR	WOOD	WHITE	0.2

TABLE 3 XRF SAMPLING SUMMARY OF PAINTED COMPONENTS AND MATERIALS KEKU CANNERY						
Read #	**Building**	**Room**	**Component**	**Substrate**	**Color**	**Lead Conc. (mg/cm²)**
163	CANNERY BUILDING	FISH ROOM INTERIOR	FISH SORTER BAY 6 WALL	WOOD	WHITE	0.14
164	CANNERY BUILDING	FISH ROOM INTERIOR	FISH SORTER BAY 6 LADDER	WOOD	WHITE	0.06
165	CANNERY BUILDING	FISH ROOM INTERIOR	HEAT EXCHANGER	METAL	RUSTY BLACK	< LOD
166	CANNERY BUILDING	FISH ROOM INTERIOR	ELECTRICAL PANEL	METAL	GRAY	< LOD
167	CANNERY BUILDING	FISH ROOM INTERIOR	ELECTRICAL PANEL	METAL	DARK GREEN	0.14
168	CANNERY BUILDING	EGG ROOM INTERIOR	WALL	WOOD	BLUE	0.17
169	CANNERY BUILDING	EGG ROOM STORAGE INTERIOR	AC UNIT COMPRESSOR TANK	METAL	RED	0.4
170	CANNERY BUILDING	EGG ROOM STORAGE INTERIOR	AC UNIT FRAME	METAL	GRAY	< LOD
171	CANNERY BUILDING	EGG ROOM STORAGE INTERIOR	AC UNIT WALL BACKING	WOOD	WHITE	0.05
172	CANNERY BUILDING	CANNING ROOM E. ½ INTERIOR	COMPRESSOR PUMP	METAL	GREEN	0.6
173	CANNERY BUILDING	CANNERY WAREHOUSE EXTERIOR	ROOF AWNING	WOOD	GREEN	0.4
174	CANNERY BUILDING	CANNING ROOM E. ½ EXTERIOR	ELEVATED WALKWAY	WOOD	WHITE	0.05
175	CANNERY BUILDING	CANNING ROOM E. ½ EXTERIOR	SWITCHGEAR	METAL	GRAY	0.4
176	CANNERY BUILDING	CANNING ROOM E. ½ EXTERIOR	CEILING	WOOD	WHITE	< LOD
177	CANNERY BUILDING	CANNING ROOM E. ½ EXTERIOR	CAN CONVEYOR	METAL	GRAY	< LOD
178	CANNERY BUILDING	CANNING ROOM E. ½ EXTERIOR	DOOR TRIM	WOOD	GREEN	0.23
179	CANNERY BUILDING	MACHINE SHOP INTERIOR	CABINET	WOOD	GREEN	0.13
180	WAREHOUSE	EXTERIOR	CORRUGATE SIDING	METAL	GREEN	0.22
181	WAREHOUSE	EXTERIOR	WINDOW TRIM	METAL	GREEN	0.4
182	WAREHOUSE	INTERIOR	DOOR	WOOD	GREEN	0.9
183	WAREHOUSE	INTERIOR	DOORFRAME	WOOD	GREEN	0.5
184	WAREHOUSE	INTERIOR	CANNING MACHINE	METAL	GREEN	0.15
185	WAREHOUSE	INTERIOR	SUPPORT COLUMN	METAL	YELLOW	0.1
186	WAREHOUSE	INTERIOR	SUPPORT COLUMN	WOOD	YELLOW	0.06

TABLE 3 XRF SAMPLING SUMMARY OF PAINTED COMPONENTS AND MATERIALS KEKU CANNERY						
Read #	**Building**	**Room**	**Component**	**Substrate**	**Color**	**Lead Conc. (mg/cm^2)**
187	WAREHOUSE	INTERIOR	LARGE SLIDING DOOR	WOOD	LIGHT GREEN	0.05
188	N/A	N/A	CALIBRATION	N/A	RED	1.1
189	N/A	N/A	CALIBRATION	N/A	RED	0.9
190	N/A	N/A	CALIBRATION	N/A	RED	0.9
191	N/A	N/A	CALIBRATION	N/A	RED	1.1

Key: N/A = not-applicable,

In addition to the XRF samples, EHSI collected thirteen (13) bulk QA samples for laboratory analysis. Results marked with the "<" symbol are less than the detectable level. Eleven (11) of the bulk samples were reported with detectable levels of Pb, concentrations of Pb in the samples ranged between 0.0490% and 5.3000% Pb by weight. Building materials and paint containing detectable levels of lead are considered regulated by OSHA.

Table 4 summarizes bulk QA lead samples, including sample number, material description, substrate, color, location, and analytical results.

Copies of the analytical laboratory report and field data forms for building materials and lead paint are included in Appendix B of this report. The "Key" provided at the end of Table 4 provides definition for acronyms.

TABLE 4 SUMMARY OF LEAD BULK QA SAMPLING AND ANALYTICAL RESULTS KEKU CANNERY					
SAMPLE NUMBER	**LOCATION**	**COMPONENT**	**SUBSTRATE**	**COLOR**	**RESULTS % Pb by WT**
50000-KEKU-Pb01	Blacksmith's Shop, Exterior South Side	Paint	Wood Siding	White on Army Green	0.3100
50000-KEKU-Pb02	Blacksmith, Exterior East Side	Paint	Wood Siding	Army Green	0.2600
50000-KEKU-Pb03	Generator House, Exterior West Side	Paint	Corrugated Metal Siding	Army Green on Black/ Silver Coating	0.0490
50000-KEKU-Pb04	Cannery, Boiler House Exterior East Side	Paint	Wood Siding	Army Green on Red	0.3100
50000-KEKU-Pb05	Cannery, Boiler House, Boiler #3	Paint	Metal Boiler Shell	Black	1.2000

TABLE 4 SUMMARY OF LEAD BULK QA SAMPLING AND ANALYTICAL RESULTS KEKU CANNERY					
SAMPLE NUMBER	**LOCATION**	**COMPONENT**	**SUBSTRATE**	**COLOR**	**RESULTS % Pb by WT**
50000-KEKU-Pb06	Cannery, Boiler House, Boiler #1	Paint	Brick Boiler Exterior	White	<0.0050
50000-KEKU-Pb07	Cannery, Boiler House, Boiler #1	Brick / Mortar	Brick Boiler Exterior	Red / Gray	<0.0046
50000-KEKU-Pb08	Cannery, Canning Room East ½ Outside Office	Paint	Wood Siding	Gray on White	0.6700
50000-KEKU-Pb09	Cannery, Canning Room East ½	Paint	Wood Support Column	Red on Yellow on Gray	5.3000
50000-KEKU-Pb10	Cannery, Canning Room West ½, Outside Egg Room Storage	Paint	Wood Siding	White	0.1800
50000-KEKU-Pb11	Warehouse, Exterior West Side	Paint	Corrugated Metal Siding	Army Green	0.9200
50000-KEKU-Pb12	Warehouse, Interior North Side	Paint	Metal Can Conveyor	Dark Blue	0.5400
50000-KEKU-Pb13	Warehouse, Exterior West Side	Paint and Metal	Metal Screw Gasket	Green	4.0000

Key: Pb = Lead

EHSI also noted one 1'x1'x2" lead block in the Cannery Building, Boiler House adjacent to the E. side of boiler #3.

OSHA requires employers to conduct a hazard assessment and take appropriate worker protection precautions whenever LCP or LCM is disturbed. If the type of work planned (e.g., cutting/grinding) will disturb the lead-containing paint, the contractor should perform an initial exposure assessment to determine if personal protective measures and work practices are required.

2.4.3 Toxicity Characteristic Leaching Procedure Sampling

LCP debris, dust, chips, sludge, or soil wastes that have a TCLP concentration for lead of greater than 5 mg/L must be managed as a hazardous waste under the Resource Conservation and Recovery Act (RCRA). This waste may be disposed in small quantities (less than 200 pounds per month per site) at a Class I or Class II Municipal Solid Waste Facility (MSWLF) permitted to accept Conditionally Exempt Small Quantity Generator (CESQG) waste. If the volume of waste is greater than 200 pounds per month per site, the waste must be disposed at an EPA authorized treatment, storage, and disposal facility.

Because the potential waste streams will be determined at a later date, a TCLP was not conducted as part of the Limited Hazardous Materials Survey.

2.4.4 Polychlorinated Biphenyls

Ballasts

EHSI inspected all of the fluorescent light fixtures for magnetic (potential PCB-containing) ballasts. EHSI then inspected a representative number (~5%) of each type of fluorescent fixtures with magnetic ballasts for PCB-containing ballasts. During the inspection, all of the fluorescent light fixtures inspected were found to have magnetic ballasts without the "NO PCB" notation. All magnetic fluorescent light ballasts that will be disturbed during any future renovation or maintenance project that are not marked as "NO PCB" or "PCB Free" are assumed to contain greater than fifty parts per million (≥ 50 ppm) PCB-dielectric oil and must be disposed of as a TSCA waste in accordance with 40 CFR part 761, subpart D. All electronic ballasts and magnetic light ballasts marked as "NO PCBs" may be disposed of as general construction and demolition debris. A summary of ballasts and Hg-containing light tubes is provided in Table 5.

Transformers

EHSI looked at each transformer for designation as either an oil-filled or dry type transformer. EHSI observed the following oil-filled transformers within the in-scope areas of the site: three (3) small transformers in the Cannery Building, one (1) small transformer in the Warehouse, and two (2) small transformers plus one (1) large transformer in the Generator House. All oil-filled type transformers are assumed to containing PCB-oil at ≥ 50 ppm PCB-dielectric, unless specifically labeled as PCB Free or unless documentation is provided indicating the PCB-containing oil has been drained, flushed, tested and replaced. Oil from PCB-containing transformers must be disposed of in accordance with 40 CFR part 761. This labeling and/or documentation were not available at the time of the inspection.

2.4.5 Mercury-Containing Fluorescent Light Tubes, Thermostats, and Switches

All fluorescent light tubes quantified in Table 5 are assumed to contain Hg. Hg wastes are regulated as EPA Universal Waste. Hg-containing building materials must be recycled or disposed of as hazardous waste. Hg-containing fluorescent light tubes are quantified in Table 5.

TABLE 5
SUMMARY OF LIGHT FIXTURE INSPECTION RESULTS FOR KEKU CANNERY

LIGHT TYPE	NUMBER OF FIXTURES	NUMBER OF BULBS/TUBES	APPROX. NUMBER OF PCB-CONTAINING BALLASTS
Cannery Building			
1'x8' Mounted light fixture w/ 2 8' bulbs and 1 large magnetic ballast	2	4	2

TABLE 5 SUMMARY OF LIGHT FIXTURE INSPECTION RESULTS FOR KEKU CANNERY			
LIGHT TYPE	**NUMBER OF FIXTURES**	**NUMBER OF BULBS/TUBES**	**APPROX. NUMBER OF PCB-CONTAINING BALLASTS**
6”x8’ Mounted light fixture w/ 2 8’ bulbs and 1 large magnetic ballast	16	32	16
Building Total	**18**	**36**	**18**
Warehouse			
6”x8’ Mounted light fixture w/ 2 8’ bulbs and 1 large magnetic ballast	5	10	5
6”x4’ Hanging light fixture w/ 2 bulbs and 1 magnetic ballast	2	4	2
Building Total	**7**	**14**	**7**
Project Total	**25**	**50**	**25**

Key: N/A = not applicable, **w/** = with

During the on-site inspection six (6) mercury filled thermostats were also found in the Cannery Boiler House and two (2) mercury filled switches on the old conveyor line were found in the Cannery Mezzanine above the Canning Room E. ½. Hg wastes are regulated as EPA Universal Waste. Hg-containing building materials that are not Hg-containing equipment must be recycled or disposed of as hazardous waste.

3.0 LIMITATIONS

This survey was limited to those materials accessible using standard survey methods. Limited representative destructive inspection was accomplished. This survey focused on a subset of the buildings located on the OVK owned, Keku Cannery parcel; those buildings not included in this survey are not understood to be included in ongoing restoration work, and as such, were excluded from the scope of this survey.

This survey was limited to the chemicals and materials identified herein. No effort was made to identify hazardous materials in soil, water, or air, other than those listed herein. Any survey regardless of how extensive can miss concealed materials. Contractors should be aware of the potential that demolition activities may expose concealed suspect ACM and should have preplanned contingencies for handling these materials when discovered during demolition work. Any concealed, suspect ACM material that was not sampled or that was assumed to be ACM by this survey report when encountered must be treated as ACM until sampled by a Certified AHERA Building Inspector and analyzed by a certified laboratory.

4.0 STANDARD OF CARE

The recommendations and conclusions contained in this report represent the professional opinions of EHSI. These opinions are derived in accordance with federal, state, and local environmental and health and safety laws and regulations. This survey was accomplished in accordance with applicable federal, state, and local regulations and industry standards in effect at the time. Other than this, no other warranty is implied or intended.

5.0 CERTIFIED AHERA BUILDING INSPECTORS

The Certified AHERA Building Inspectors listed below surveyed the Keku Cannery Site from May 9th-12th, 2016, in accordance with federal, state, and local requirements.

Rory Peterson
Certified AHERA Building Inspector
Certificate Number 2015-07-28-02
Expiration Date: July 28, 2016

Andrew Wells
Certified AHERA Building Inspector
Certificate Number 2015-07-28-04
Expiration Date: July 28, 2016