

**Minor Modification to a Covered Source**  
**Review Summary**

**Application No.** 0024-10

**Permit No.:** 0024-04-C

**Facility Title:** Alsco – American Linen Division  
Two (2) 400 hp boilers  
2771 Wai Wai Loop  
Honolulu, Hawaii 96819

**Mailing Address:** Alsco – American Linen Division  
2771 Wai Wai Loop  
Honolulu, Hawaii 96819

**Responsible Official:** Mr. Brian Arkle  
General Manager  
Ph: 834-7503

**Plant Manager:** Mr. Romel Marcelino  
Chief Engineer  
Ph. 834-7500

**Consultant:** Jim Morrow  
Ph. 942-9096

**Application Date:** March 4, 2014

**Proposed Project:**

SICC 7211 (Power Laundries, Family and Commercial)

This is an application for a minor modification of Covered Source Permit No. 0024-04-C issued on June 13, 2012. The applicant is requesting to incorporate the requirements of 40 Code of Federal Regulations (CFR) Part 63, Subpart JJJJJJ, into the existing covered source permit for the existing 400 HP Cleaver Brooks boiler since it is an applicable requirement. Also, the applicant is requesting to define the 400 HP Cleaver Brooks boiler as a “limited-use boiler” as defined in Subpart JJJJJJ. In addition, the applicant is requesting to correct the existing Subpart JJJJJJ permit language and requirements for the 400 HP Superior boiler. An application fee of \$100.00 for a minor modification to a covered source (non-toxic, nonmajor) was submitted and processed.

This modification is considered a minor modification since it:

- (1) Does not increase the emissions of any air pollutant above the permitted emission limits;
- (2) Does not result in or increase the emissions of any air pollutant not limited by permit to levels equal to or above:
  - (A) 500 pounds per year of a hazardous air pollutant;

## PROPOSED

- (B) Twenty-five (25) percent of significant amounts of emission as defined in Section 11-60.1-1, paragraph (1) in the definition of “significant”;
  - (C) Five (5) tons per year of carbon monoxide; or
  - (D) Two (2) tons per year of each regulated air pollutant other than carbon monoxide;
- (3) Does not violate any applicable requirement;
  - (4) Does not involve significant changes to existing monitoring requirements or any relaxation or significant change to existing reporting or recordkeeping requirements in the permit. Any change to the existing monitoring, reporting, or recordkeeping requirements that reduces the enforceability of the permit is considered a significant change;
  - (5) Does not require or change a case-by-case determination of an emission limitation or other standard, a source-specific determination for temporary sources of ambient impacts, or a visibility or increment analysis;
  - (6) Does not seek to establish or change a permit term or condition for which there is no corresponding underlying applicable requirement, and that the source has assumed to avoid an applicable requirement to which the source would otherwise be subject. Such terms and conditions include:
    - (A) A federally enforceable emissions cap assumed to avoid classification as a modification pursuant to any provision of Title I of the Act or subchapter 7; and
    - (B) An alternative emissions limit approved pursuant to regulations promulgated pursuant to Section 112(i)(5) of the Act or Subchapter 9; and
  - (7) Is not a modification pursuant to any provision of Title I of the Act.

### Equipment Description:

<u>Unit No.</u>	<u>Description</u>	<u>Fuel Used</u>
1	classified as existing boiler per 40 CFR Part 63, Subpart JJJJJJ, limited-use boiler, used as backup only 400 HP Cleaver Brooks steam boiler, model no. CB-400, serial no. L-65130, 16.8 MMBtu/hr, manufactured in 1978.	Fuel oil no. 2 = 122.26 gal/hr SNG = 16,738 scf/hr
2	classified as new boiler per 40 CFR Part 63, Subpart JJJJJJ 400 HP Superior steam boiler, model no. 7-5-2000-S150-PF-GA2, serial no. 17003, 16.8 MMBtu/hr, manufactured in 2011. Maximum design capacity = 13,800 lb/hr of steam.	Fuel oil no. 2 = 119.6 gal/hr SNG = 16,409 scf/hr

### Air Pollution Controls:

1. SO<sub>2</sub> – ultra low sulfur fuel oil or SNG
2. NO<sub>x</sub> – burner design, maintenance and proper operating conditions
3. PM – low ash(metal) content of low sulfur fuel oil and SNG. Also proper combustion to assure maximum oxidation of fuels to CO<sub>2</sub> and H<sub>2</sub>O.
4. CO – proper combustion to assure maximum oxidation of carbon to CO<sub>2</sub>.
5. VOC – proper combustion to assure maximum oxidation of carbon and hydrogen to CO<sub>2</sub> and H<sub>2</sub>O.

**Applicable Requirements:**

Hawaii Administrative Rules (HAR)

- Title 11 Chapter 59 - Ambient Air Quality Standards
- Title 11 Chapter 60.1 - Air Pollution Control
  - Subchapter 1 - General Requirements
  - Subchapter 2 - General Prohibitions
    - HAR 11-60.1-31 Applicability
    - HAR 11-60.1-32 Visible Emissions
    - HAR 11-60.1-38 Sulfur Oxides From Fuel Combustion
  - Subchapter 5 – Covered Sources
  - Subchapter 6 - Fees for Covered Sources, Noncovered Sources & Agricultural Burning
    - HAR 11-60.1-111 Definitions
    - HAR §11-60.1-112 General Fee Provisions for Covered Sources
    - HAR §11-60.1-113 Application Fees for Covered Sources
    - HAR §11-60.1-114 Annual Fees for Covered Sources
    - HAR §11-60.1-115 Basis of Annual Fees for Covered Sources
  - Subchapter 8 – Standards of Performance for Stationary Sources
  - Subchapter 9 – Hazardous Air Pollutant Sources

40 CFR Part 60, Standards of Performance for New Stationary Sources (NSPS), Subpart Dc – Standards of Performance for Small Industrial – Commercial – Institutional Steam Generating Units – Applicable to the 400 HP Superior boiler

40 CFR Part 63, National Emission Standards for Hazardous Air Pollutants for Source Categories, Subpart JJJJJJ, National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers – Applicable to the 400 HP Superior boiler (PM Standard = 0.03 lb/MMBtu) and 400 HP Cleaver Brooks boiler. The 400 HP Superior boiler is classified as a new boiler, and the 400 HP Cleaver Brooks boiler is classified as an existing boiler, based on the dates of construction.

**Non-Applicable Requirements:**

Hawaii Administrative Rules (HAR)

- Title 11 Chapter 60.1 - Air Pollution Control
  - Subchapter 7 – Prevention of Significant Deterioration
  - Subchapter 9 – Hazardous Air Pollutant Sources

40 CFR Part 61 - National Emission Standard for Hazardous Air Pollutants (NESHAPS)

40 CFR Part 52.21 - Prevention of Significant Deterioration of Air Quality

**Prevention of Significant Deterioration (PSD):**

This source is not a major stationary source nor are there modifications proposed that by itself constitute a major stationary source that is subject to PSD review. Therefore, a PSD review is not applicable.

# PROPOSED

## Best Available Control Technology (BACT):

A Best Available Control Technology (BACT) analysis is required for new covered sources or significant modifications to covered sources that have the potential to emit or increase emissions above significant levels as defined in HAR §11-60.1-1. Since this is not a new source nor are any modifications proposed that will cause a significant net increase in emissions, a BACT analysis is not required.

## Compliance Assurance Monitoring (CAM):

Compliance Assurance Monitoring (CAM) is to provide a reasonable assurance that compliance is being achieved with large emissions units that rely on air pollution control device equipment to meet an emissions limit or standard. Pursuant to 40 CFR, Part 64, for CAM to be applicable, the emissions unit must: (1) be located at a major source; (2) be subject to an emissions limit or standard; (3) use a control device to achieve compliance; (4) have potential precontrol emissions that are greater than the major source level [ $>100$  tpy]; and (5) not otherwise be exempt from CAM. CAM is not applicable to the facility since item 1 does not apply.

## Air Emissions Reporting Requirements (AERR):

40 CFR Part 51, Subpart A – Air Emissions Reporting Requirements, is based on the emissions of criteria air pollutants from Type B point sources (as defined in 40 CFR Part 51, Subpart A), that emit at the AERR triggering levels as shown in the table below.

Pollutant	Type B CER Triggering Levels <sup>1</sup> (tpy)	Pollutant	In-house Total Facility Triggering Levels <sup>2</sup> (tpy)	Potential Emissions (tpy)
NO <sub>x</sub>	≥ 100	NO <sub>x</sub>	≥ 25	5.63
SO <sub>x</sub>	≥ 100	SO <sub>x</sub>	≥ 25	2.38
CO	≥ 1000	CO	≥ 250	1.83
PM <sub>10</sub> /PM <sub>2.5</sub>	≥ 100/100	PM <sub>10</sub> /PM <sub>2.5</sub>	≥ 25/25	0.53/0.268
VOC	≥ 100	VOC	≥ 25	1.76
		HAPs	≥ 5	0.73

<sup>1</sup> Based on actual emissions

<sup>2</sup> Based on potential emissions

This facility does not emit at the AERR triggering levels. Therefore, AER requirements are not applicable.

Although AERR for the facility is not triggered, the Clean Air Branch requests annual emissions reporting from those facilities that have facility-wide emissions of a single air pollutant exceeding in-house triggering levels or is a covered source. Annual emissions reporting for the facility will be required for in-house recordkeeping purposes since this is a covered source.

## Synthetic Minor:

This source is not a synthetic minor source since individual air pollutant emissions are less than 100 tpy (major source trigger) if this source was to operate 8,760 hr/yr.

## PROPOSED

### Insignificant Activities:

One 10,000 gallon above ground fuel oil storage tank, since it is less than 40,000 gallons in capacity (HAR §11-60.1-82(f)(1))

### Alternative Operating Scenarios:

None proposed in the application.

### Project Emissions:

Total facility potential emissions are based on the 400 HP Superior boiler since the 400 HP Cleaver Brooks boiler is a limited - use boiler used only as a backup to the 400 HP Superior boiler. The potential emissions from the 400 HP Cleaver Brooks boiler would be approximately 10% of the emissions of the 400 HP Superior boiler.

#### Emissions for 400 hp Superior Boiler (Fuel Oil No. 2)

Pollutant	Emission Factor (lb/1000 gal)	Fuel Consumption (gal/hr)	Emissions (lb/hr)	Hours of Operation (hrs/yr)	Annual Fuel Consumption (gal/yr)	Annual Emissions (tons/yr)
NO <sub>x</sub>	16.80	119.6	2.009	5,604	670,000	5.63
CO	5.46	119.6	0.653	5,604	670,000	1.83
SO <sub>2</sub>	7.1 (S=0.05)	119.6	0.849	5,604	670,000	2.38
VOC	5.25	119.6	0.628	5,604	670,000	1.76
PM <sub>10</sub>	1.58	119.6	0.189	5,604	670,000	0.53
PM <sub>2.5</sub>	0.80	119.6	0.096	5,604	670,000	0.268
TSP	2.00	119.6	0.239	5,604	670,000	0.67
Formaldehyde	6.10E-02	119.6	7.29E-03	5,604	670,000	2.04E-02
Arsenic	5.60E-04	119.6	6.69E-05	5,604	670,000	1.88E-04
Beryllium	4.20E-04	119.6	5.02E-05	5,604	670,000	1.41E-04
Cadmium	4.20E-04	119.6	5.02E-05	5,604	670,000	1.41E-04
Chromium	4.20E-04	119.6	5.02E-05	5,604	670,000	1.41E-04
Copper	8.40E-04	119.6	1.00E-04	5,604	670,000	2.81E-04
Mercury	4.20E-04	119.6	5.02E-05	5,604	670,000	1.41E-04
Manganese	8.40E-04	119.6	1.00E-04	5,604	670,000	2.81E-04
Nickel	4.20E-04	119.6	5.02E-05	5,604	670,000	1.41E-04
Lead	1.26E-03	119.6	1.51E-04	5,604	670,000	4.22E-04
Selenium	2.10E-03	119.6	2.51E-01	5,604	670,000	7.04E-01
Zinc	5.60E-04	119.6	6.69E-05	5,604	670,000	1.88E-04
HAPS		119.6		5,604	670,000	0.73

#### Greenhouse Gas Mass & Equivalent Emissions

GHG	Emission Factor Oil (lb/1000 gal)	Fuel Consumption (gal/hr)	GHG Emissions (lb/hr)	GHG Emissions (ton/yr)	GWP	CO <sub>2</sub> e (ton/yr)
CO <sub>2</sub>	22,300	119.55	2,666	11,677	1	11,677
N <sub>2</sub> O	0.26	119.55	0.031	0.14	310	42
CH <sub>4</sub>	0.052	119.55	0.0062	0.027	21	0.57
Total				11,677		11,720

### Ambient Air Quality Assessment (AAQA):

An ambient air quality assessment is not required for a minor modification since there are no emission increases for this proposed modification.

## PROPOSED

### Significant New Permit Conditions:

1. The 400 HP Cleaver Brooks boiler is subject to the provisions of the following federal regulations:
  - a. 40 CFR Part 63, National Emission Standards for Hazardous Air Pollutants for Source Categories, Subpart A, General Provisions; and
  - b. 40 CFR Part 63, National Emission Standards for Hazardous Air Pollutants for Source Categories, Subpart JJJJJJ, National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers.
2. The 400 HP Cleaver Brooks boiler shall be a limited-use boiler as defined in 40 CFR Section 63.11237 with an average annual capacity factor of no more than 10 percent. The annual capacity is means the ratio between the actual heat input to a boiler from the fuels (liquid and gas) burned during a calendar year and the potential heat input to the boiler had it been operated for 8,760 hours during a year at the maximum steady state design heat input capacity.

### Conclusion and Recommendation:

Recommend issuing the minor modification to Covered Source Permit No. 0024-04-C, issued on June 13, 2012. There are no increases in emissions with the proposed modification and the facility would remain in compliance with the State and Federal ambient air quality standards. The permit would incorporate the significant permit conditions listed above and be subject to a 45-day EPA review period.

Reviewer : Darin Lum  
Date: 6/2014