

## OLYMPIC REGION CLEAN AIR AGENCY

2940 Limited Lane NW - Olympia, Washington 98502 - 360-539-7610 – Fax 360-491-6308

### FORM 1- NOTICE OF CONSTRUCTION

TO CONSTRUCT - INSTALL - ESTABLISH OR MODIFY AN AIR CONTAMINANT SOURCE

**Form 1 Instructions:**

1. Please complete all the fields below. **This NOC application is considered incomplete until signed.**
2. If the application contains any confidential business information, please complete a Request of Confidentiality of Records ([www.orcaa.org/forms](http://www.orcaa.org/forms)).
3. Duty to Correction Application: An applicant has the duty to supplement or correct an application. Any applicant who fails to submit any relevant facts or who has submitted incorrect information in a permit application must, upon becoming aware of such failure or incorrect submittal, promptly submit supplementary factors or corrected information.

<b>Business Name:</b> <b>Raven's Brew Coffee, Inc.</b>	<b>For ORCAA use only</b> File No: <u>239</u> County No: <u>67</u> Source No: <u>96</u> Application No: <u>24.NOC.1638</u>
<b>Mailing Address:</b> PO BOX 13199 Olympia, WA 98508-3199	Date Received: <div style="text-align: center; color: red; font-weight: bold; font-size: 1.2em;">                     Received                      FEB 15 2024                       ORCAA                 </div>
<b>Physical Address of Project or New Source:</b> 3035 A 37th Ave SW Tumwater, WA 98512	
<b>Billing Address:</b> PO BOX 13199 Olympia, WA 98508-3199	
<b>Project or Equipment to be installed/established:</b>  Loring coffee roasting machine	
Anticipated startup date: <u>04</u> / <u>01</u> / <u>2024</u> Is facility currently registered with ORCAA? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
This project must meet the requirements of the State Environmental Policy Act (SEPA) before ORCAA can issue final approval. Indicate the SEPA compliance option: <input type="checkbox"/> SEPA was satisfied by _____ (government agency) on ___/___/___ (date) - Include a copy of the SEPA determination <input type="checkbox"/> SEPA threshold determination by _____ (government agency) is pending - Include a copy of the environmental checklist <input checked="" type="checkbox"/> ORCAA is the only government agency requiring a permit - Include ORCAA Environmental Checklist <input checked="" type="checkbox"/> This project is exempt from SEPA per <u>RCW 43.</u> _____ (WAC citation).	
<b>Name of Owner of Business:</b> JUDY HOLMAN	<b>Agency Use Only</b>
Title: <u>VICE PRESIDENT</u>	
Email: <u>judyh@ravensbrew.com</u>	Phone: <u>360-570-7903</u>
<b>Authorized Representative for Application (if different than owner):</b> CHAD OLSON	
Title: <u>OPERATIONS MANAGER</u>	
Email: <u>chado@ravensbrew.com</u>	Phone: <u>360-706-2082</u>
I hereby certify that the information contained in this application is, to the best of my knowledge, complete and correct.	
<b>Signature of Owner or Authorized Representative: (sign in Blue Ink)</b>	
	Date: <u>2-15-24</u>
<b>IMPORTANT:</b> Do not send via email or other electronic means. ORCAA must receive Original, hardcopy, signed application and payment prior to processing application.	

**OLYMPIC REGION CLEAN AIR AGENCY**

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**FORM 29  
COFFEE ROASTER**

Please fill out a separate form for each roaster.

<b>GENERAL INFORMATION</b>	
Company Name: Raven's Brew Coffee Phone: 360-570-7903 Email: accounting@ravensbrew.com	Operating Schedule: 12-16 minutes/batch, 15-20 batches/day, 5 days/wk
<b>ROASTER INFORMATION</b>	
Manufacturer: LORING SMART ROAST	Model & Serial No: s70 Peregrine SN#002934
Maximum capacity: 154 lbs/batch	<input checked="" type="checkbox"/> Water quench <input checked="" type="checkbox"/> Air quench
Maximum heat input rating: 620,000 Btu/hr	ACFM _____ degrees F <i>A?</i>
Are the beans processed in a cyclone (chaff collector) before roasting? <u>no</u> , but they are during roasting	
<b>AFTERBURNER/OXIDIZER (enter Manufacturer &amp; Model)</b> N/A The Loring Roaster has a built in afterburner	
<input checked="" type="checkbox"/> Thermal _____	Type of fuel: <input checked="" type="checkbox"/> Nat. Gas <input type="checkbox"/> Propane <input type="checkbox"/> Other _____
<input type="checkbox"/> Catalytic _____	Maximum heat input rating: 620,000 Btu/hr
<b>Afterburner/Oxidizer Characteristics</b>	<b>Stack Parameters</b>
Average residence time _____ seconds	Height: 13 ft
Operating chamber temperature: _____ degrees F	Velocity: _____ ft/min
Maximum chamber temperature: _____ degrees F	Diameter: 10 inches
Flow rate: _____ ACFM	Gas temperature: _____ degrees F <i>A?</i>
Minutes into roast when roast is up to temperature: <u>2 - 4 minutes</u> when the temperature begins to climb	
Minutes into roast when afterburner is up to temperature: <u>2-4 min</u>	
Minutes into roast when beans are dropped to the cooling tray: <u>13-17</u>	
How is the roaster cyclone vented? <input checked="" type="checkbox"/> recirculated to roaster <input type="checkbox"/> through afterburner	
Where does the bean cooling take place? <u>built in cooling tray</u>	
How is the bean cooling process vented? : <input type="checkbox"/> through afterburner <input checked="" type="checkbox"/> through separate stack <input type="checkbox"/> vented inside	
<input type="checkbox"/> Other (explain) _____	
<b>Attach the following information:</b>	
<input type="checkbox"/> <b>Fees:</b> ORCAA shall not commence processing of a NOC until it has received a NOC processing fee. Work exceeding the base-fee hours of five hours will be billed based on actual cost to complete the review. -See <a href="https://www.orcaa.org/services/fee-schedules/">https://www.orcaa.org/services/fee-schedules/</a> for an up-to-date list of fees	
<input checked="" type="checkbox"/> <b>O&amp;M Plan:</b> Description of the procedures for operation and maintenance of the roaster and control equipment (i.e. cleaning schedule, temperature monitoring, calibration, etc.)	
<input checked="" type="checkbox"/> <b>Flow diagram:</b> Provide a flow diagram showing all roaster components. Indicate all vents and other points where gaseous or particulate pollutants are emitted.	
<input checked="" type="checkbox"/> <b>Site Map:</b> Provide a scaled site map that shows property boundaries, outlines of all existing or planned buildings, specific locations of the coffee roaster vents and other exhaust stacks. The site map should also indicate the predominant wind direction and the location of the nearest occupied building located off the facility property.	
<input checked="" type="checkbox"/> <b>Elevation Drawing:</b> Provide at least one elevation drawing (to scale) showing the location and height of the exhaust stack.	



# LORING

The Smarter Way to Roast

## LORING™ S70 Peregrine™

Automated 70 kg Roaster

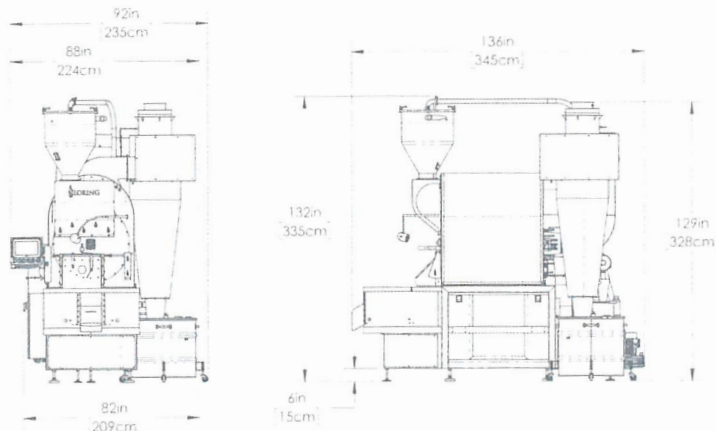


### INCLUDES

- Touchscreen interface
- Green bean vacuum lift
- Automation software with auto-charge and discharge of beans
- High speed cooling tray with paddle stirring
- Green bean cart with scale
- 14-70 kg batch capacity

### OPTIONAL

- Destoner
- Cooler tray auto-discharge gate



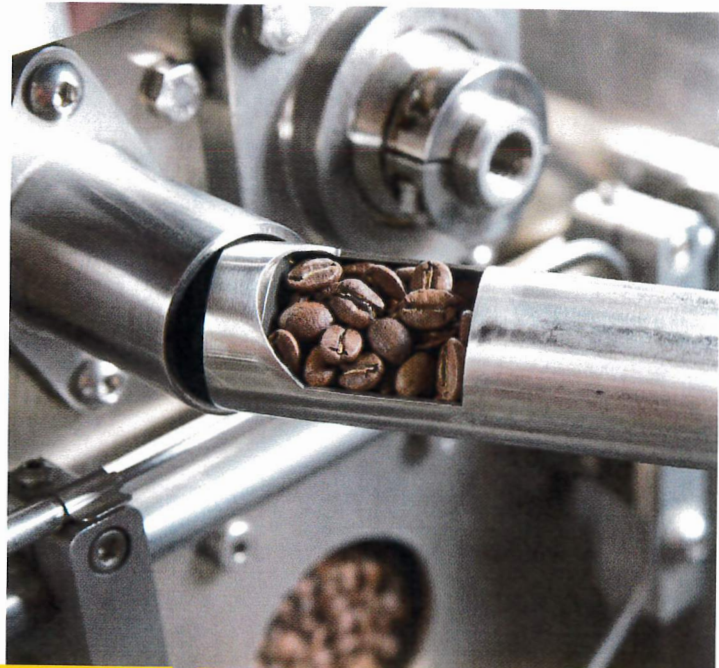
### ROASTER SPECIFICATIONS

Maximum Batch Size	154 lb (70 kg)
Minimum Batch Size	30.8 lb (14 kg)
Nominal Electrical Power	8.6 kW
Peak Electrical Power	17.5 kW
Maximum BTU Rating	620,000 BTU/h (156,000 kcal/h)
Stack Temp Continuous	1,400°F (760°C)
Stack Temp Intermittent	1,550°F (843°C)
Stack Max Flow	107 dscfm (182 dsm <sup>3</sup> /h)
Stack Max Flow (Peak Air Cool)	950 dscfm (1,614 dsm <sup>3</sup> /h)
Stack Duct Diameter (Minimum)*	10 in (254 mm)
Cooler Vent Max Flow	2,180 scfm (3,704 sm <sup>3</sup> /h)
Cooler Duct Diameter*	10 in (254 mm)
Water Supply	1 GPM (4 liter/min)
Water Pressure	50 psi (345 kPa)
Compressed Air Flow	4 CFM (0.1 m <sup>3</sup> /h)
Compressed Air Pressure	80 psi (552 kPa)
Natural Gas Pressure	4-7 in WC (1.0-1.7 kPa)
Propane Gas Pressure	11-13 in WC (2.7-3.2 kPa)
Weight	3,900 lb (1,769 kg)

\*Larger stack diameters may be required based upon stack geometry

# SUPERIOR IS OUR STANDARD.

Engineered for a roasting experience like no other, every Loring machine gives you unmatched quality, unheard-of efficiency, and unparalleled control.



## UNMATCHED QUALITY.

- Designed and made in U.S.A.
- Constructed by skilled craftsmen.
- Stainless steel construction.
- ISO 9001:2015 certified.

## UNPARALLELED CONTROL.

- Touch screen and PID provide operation of burner and fan speeds.
- Profiles can be saved and repeated consistently.
- Fully automated roasting process.

## UNHEARD-OF EFFICIENCY.

- Single burner roasts beans and incinerates smoke.
- High-speed cooling tray reduces cooling time while protecting beans.
- Up to 80% fuel-savings and reduction of greenhouse gases in every roast, compared to conventional roasters.

## Contact Us

### Loring Smart Roast, Inc.

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### JAPAN, TAIWAN

DCS CO., LTD  
Osaka, Japan  
+81 798 35 2980  
info@dcservice.co.jp

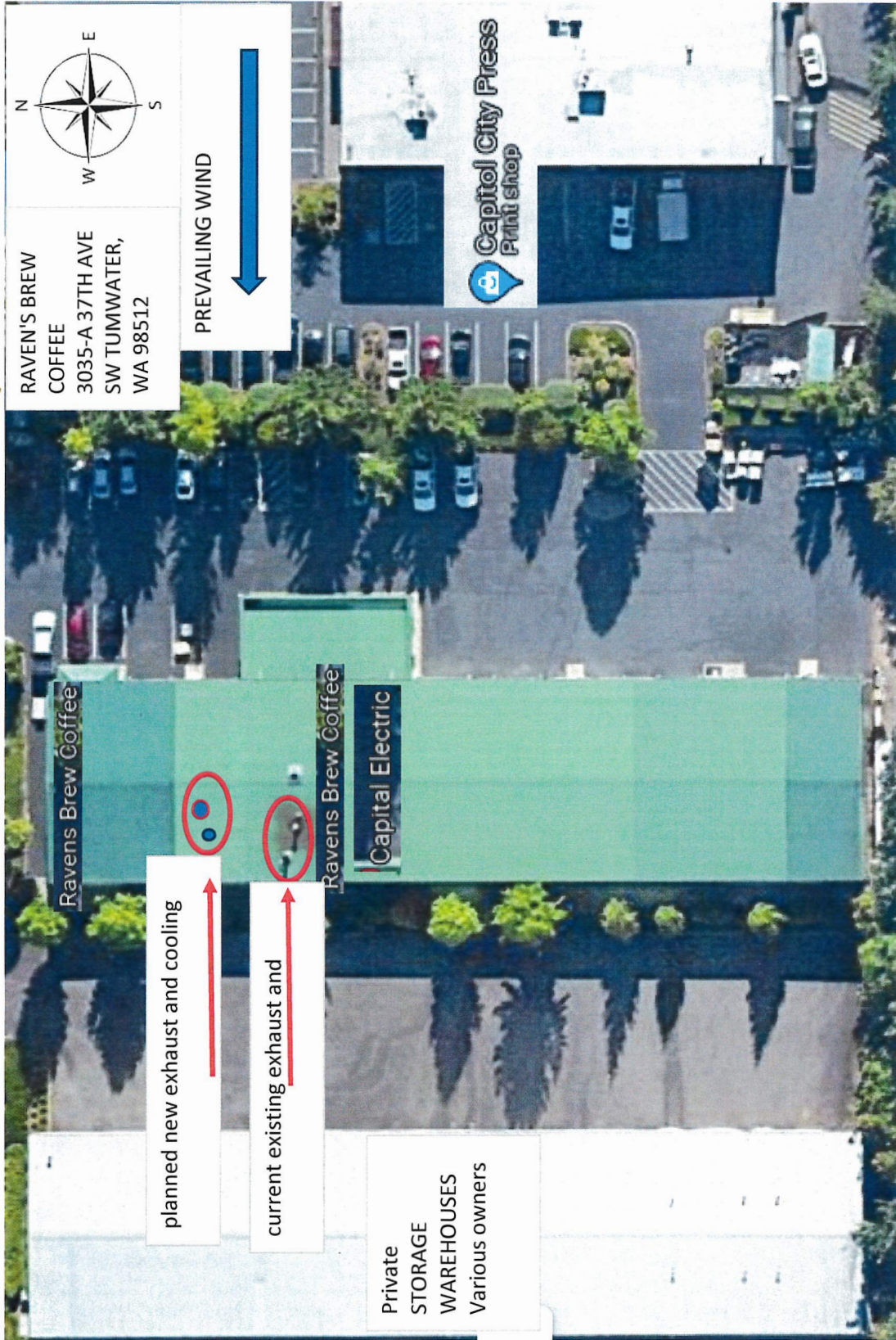
### Europe, UK, Middle East

THE COFFEE ROASTING  
COMPANY APS  
Copenhagen, Denmark  
+45 3023 8775  
jht@thefactorycoffee.eu

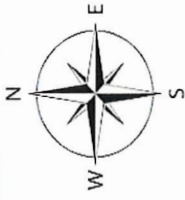
SCHEDULE A DEMO OR REQUEST A QUOTE AT [LORING.COM](http://LORING.COM)



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The following are trademarks of Loring Smart Roast, Inc.: Loring, The Smarter Way to Roast, S7 Nighthawk, S15 Falcon, S35 Kestrel, S70 Peregrine and the flame symbol. 1002697 Rev. D



RAVEN'S BREW  
COFFEE  
3035-A 37TH AVE  
SW TUMWATER,  
WA 98512



PREVAILING WIND



planned new exhaust and cooling

current existing exhaust and

Private  
STORAGE  
WAREHOUSES  
Various owners

Ravens Brew Coffee

Ravens Brew Coffee

Capital Electric

Capitol City Press  
Print shop

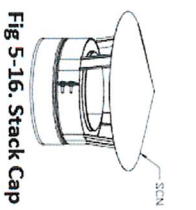


Fig 5-16. Stack Cap

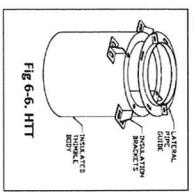


Fig 6-6, HTT

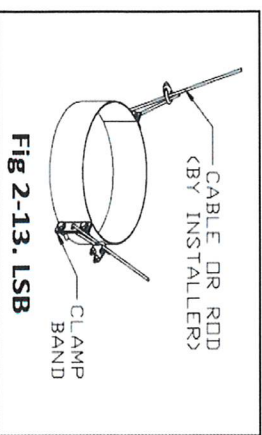
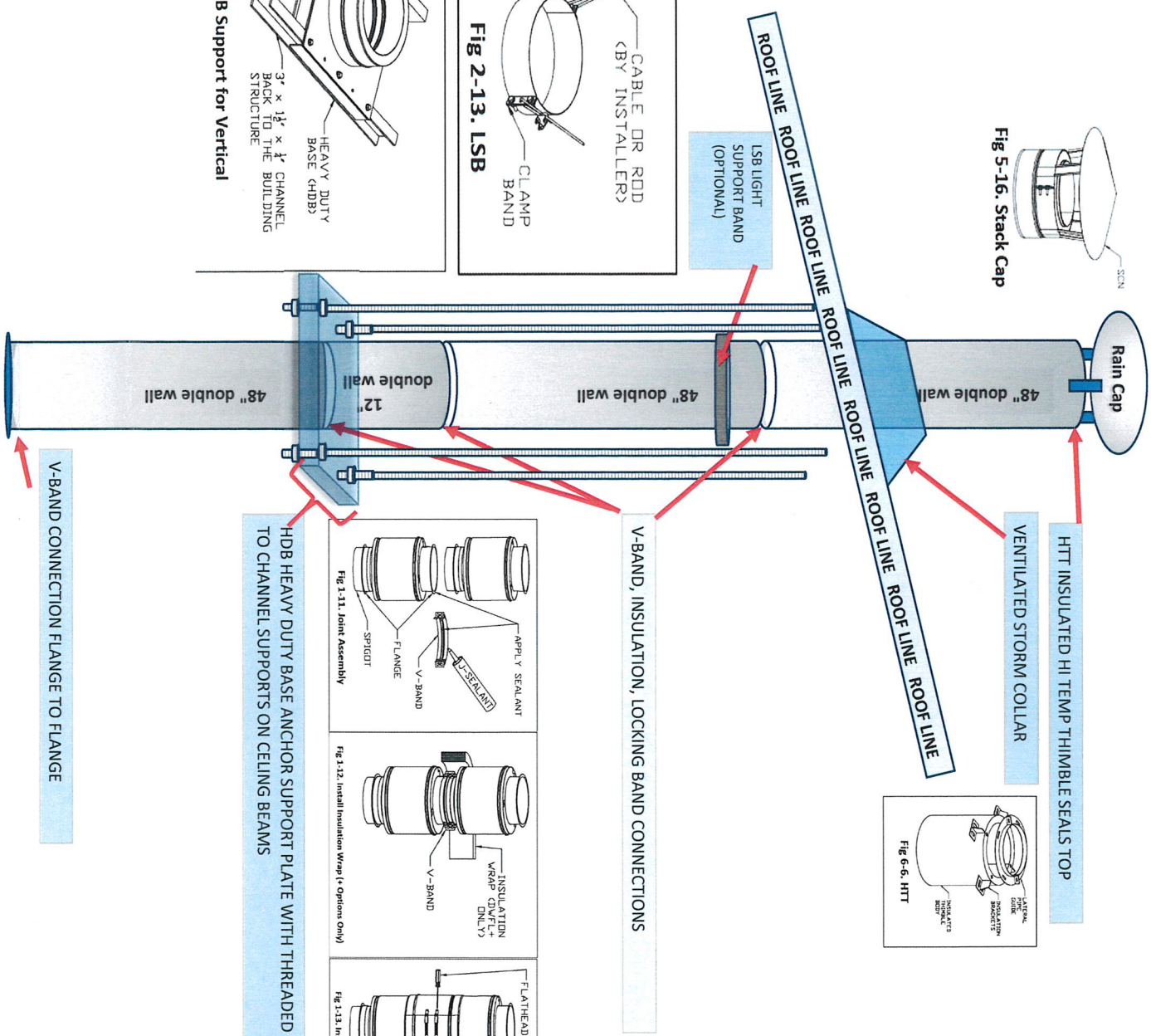


Fig 2-13. LSB

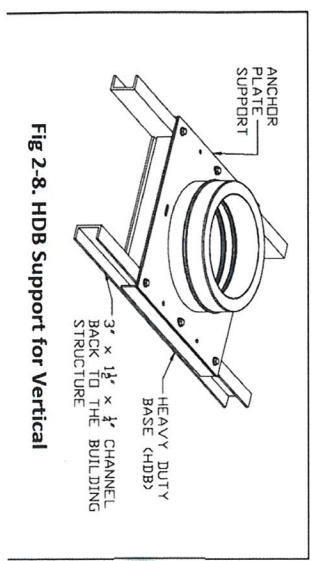
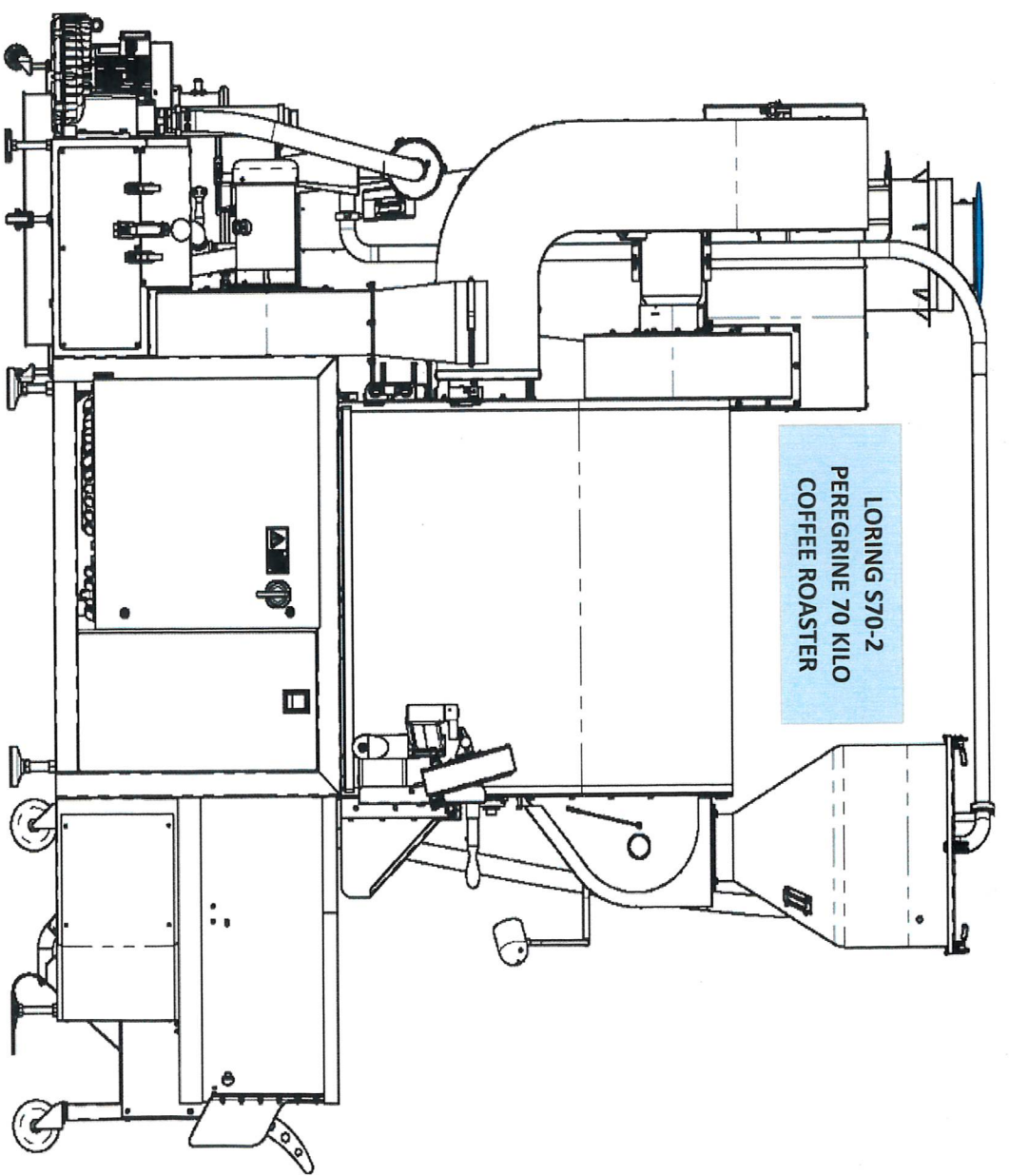


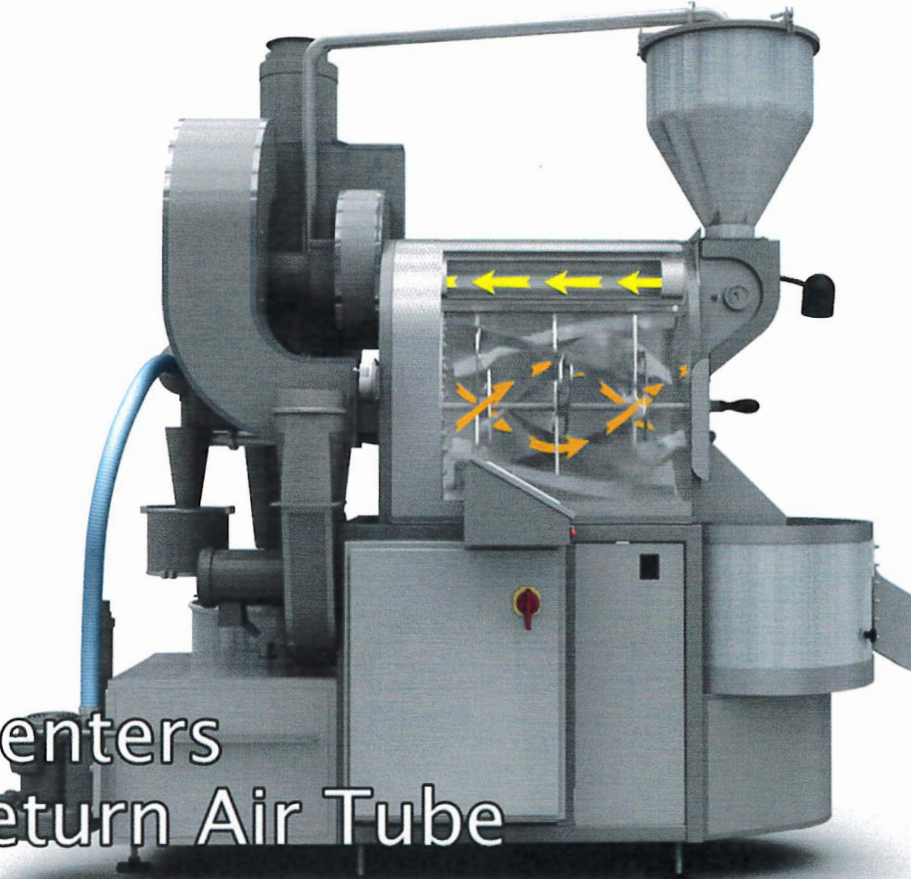
Fig 2-8. HDB Support for Vertical



LORING S70-2  
PEREGRINE 70 KILO  
COFFEE ROASTER



Hot air is dispersed evenly through the Roasting Chamber



Then enters the Return Air Tube

## ORCAA FLOW DIAGRAM

Introduction & Purpose: **Flow diagram:** Provide a flow diagram showing all roaster components. Indicate all vents and other points where gaseous or particulate pollutants are emitted.



Loring offers Live Support  
Mon-Fri, 8am-5pm US Pacific!  
Call: +1 707 526 7215 x217  
Email: [support@loring.com](mailto:support@loring.com)

<https://youtu.be/miFbXyiPkzw?feature=shared>

## Loring Roaster Airflow Explained

YouTube · Loring Smart Roast · May 11, 2016

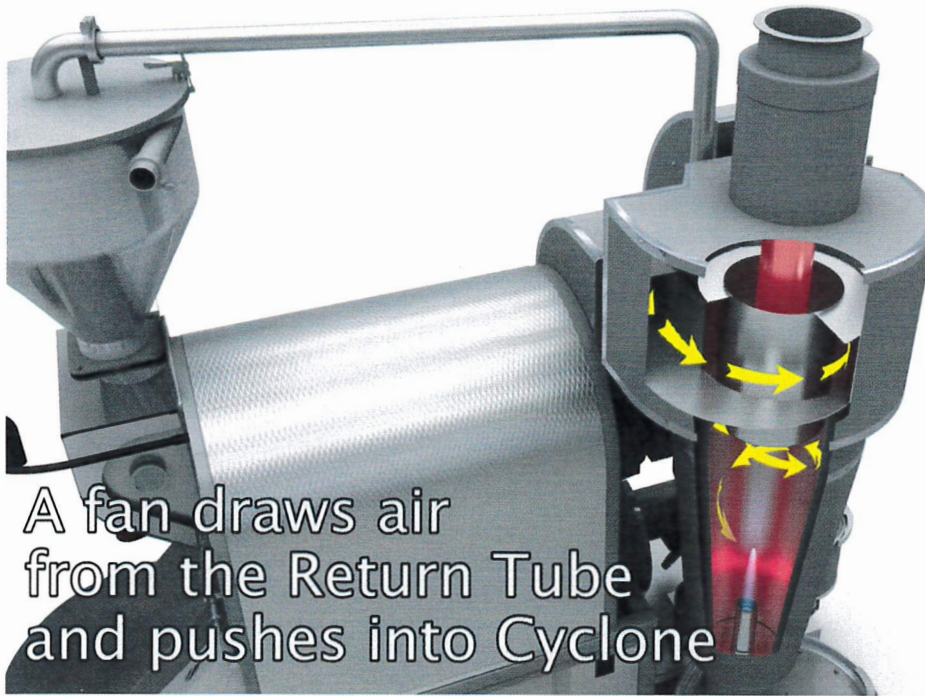


1



Burner supplies heat to the Roaster







Chaff drops into  
the Chaff Barrel



The Return Air  
is reheated and  
sent back to the  
Roasting Chamber



## ORCAA OPERATION AND MAINTENANCE PLAN

Introduction & Purpose: The owner or operator shall devise, implement and update when necessary, an Operations and Maintenance (O&M) plan for assuring good operating condition and repair of the coffee roasters and related equipment. The plan shall be based on manufacturer recommendations and shall address the following items specifically:

- a. Proper training of designated operators.
- b. Operating procedures/training including:
  - i. Weigh coffee to ensure proper batch size.
  - ii. Attend roaster full time while roasting.
  - iii. Maintain proper roaster temperature, time, air flow, roast exit and destoning.
  - iv. maintenance and cleaning



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 Email: [support@loring.com](mailto:support@loring.com)

### Operation and Maintenance plan:

RAVEN'S BREW COFFEE  
 3035-A 37<sup>TH</sup> AVE SW  
 TUMWATER, WA 98512

Raven's Brew roasts using TWO Loring Smart Roast Coffee Roasting machines located at our Tumwater, WA Roastery. Current plans are to roast using both machines in an alternating pattern, either for balanced duty cycle or to allow respective downtime so each machine can have longer maintenance tasks performed without added stress of only having one machine. See below for specifications and operating details.

- a. Proper training of designated operators.

This roaster is being installed in Feb/March 2024. After final City of Tumwater inspections, a Loring Smart Roast consultant will arrive to inspect our installation, start the machine, and train select RBC staff how to operate and maintain the Coffee Roaster.

Expected to be present for, "Operation & maintenance training" will be RBC Staff members Dan Weaver, Derek Warner, Presley Bracken and John Krupp." Select RBC members will train subsequent RBC staff on operation & maintenance of the machine. Loring has provided a printed Operations manual as well which is located in the electrical panel of the roaster. This manual has been saved on the Raven's Brew server network also.

Loring provides full support for operations, maintenance, product updates and parts using an online portal system.

- b. RBC Operating procedures and training include:
  - i. Weighing coffee to ensure proper batch size and recipe portions.

- ii. Attending roaster full time while roasting. The roaster operator shall not leave the immediate roasting area where they cannot access control panel. If they must step away from the area a trained substitute operator must stand in until that person returns.
- iii. Maintaining proper roaster temperature and air flow.
  - i. Follow start up sequence per manufacturer's specifications.
  - ii. Follow cool down and shut down procedures per Loring Smart Roast specifications.
  - iii. Follow daily, weekly, monthly maintenance procedures per Loring Smart Roast specifications as explained in the Loring Smart Roast printed maintenance manual and RBC cleaning and maintenance log.
    1. Follow the Raven's Brew Maintenance Schedule
    2. Document maintenance on RBC log and communicate maintenance with Operations Dept.
  - iv. Work with Operation's Department on long-term interval or as needed maintenance & repair.
  - v. Operations Department, update Loring Smart Roast printed maintenance manual with updated materials and new release information from Loring Smart Roast. Contact Loring Smart Roast for Product updates.

Daily, Weekly, Monthly, Yearly and "As needed" Maintenance Schedule, Loring Smart Roast S70 Peregrine Coffee Roaster

Note: This schedule is also a part of the weekly facility maintenance printed schedule sheet.

Daily:

- Machine 'walkaround'
- Empty Chaff barrel
- Check Bearing squeak
- Dust off roaster, vacuum
- Clean green elevator vacuum filters
- Clean cooling tray screen holes with brush and air blast  
(do this w/o removing screen which will done monthly)
- Clean underside of chaff barrel lid including recessed area around spray head

Bi Weekly

- cooler duct cleanout
- green vacuum chamber cleanout

Monthly

- Clean cooler duct
- Remove cooling tray screen, clean bottom, remove debris, clean foundation bars, stirring paddles
- Test cyclone spray nozzle
- Clean Cooler fan wheel and inside of housing
- Inspect cooler fan stack using removable "S" tube section
- Inspect Combustion blower filters

- Lube purge gate bushings
- Inspect behind drum screen

6mo – Year

- Inspect, repair Combustion blower filters

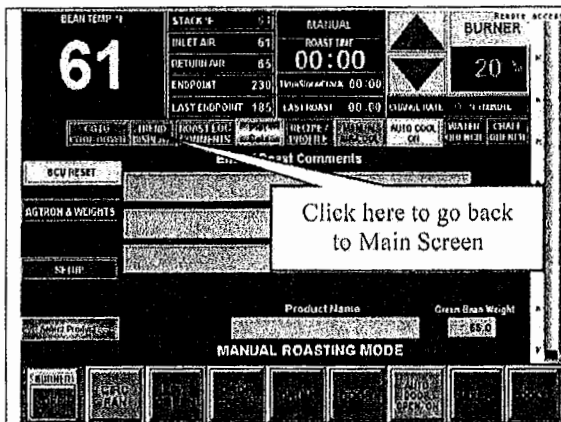
Yearly / As needed

- Drum screen. Remove, check for buildup behind drum screen, vacuum, **CHECK GAP**
- Purge gate bushings, lubricate
- Green bean hopper. Remove, inspect, clean
- Drum Bearings. Inspect, **CHECK GAP**
- Cooler vent ducting cleanout

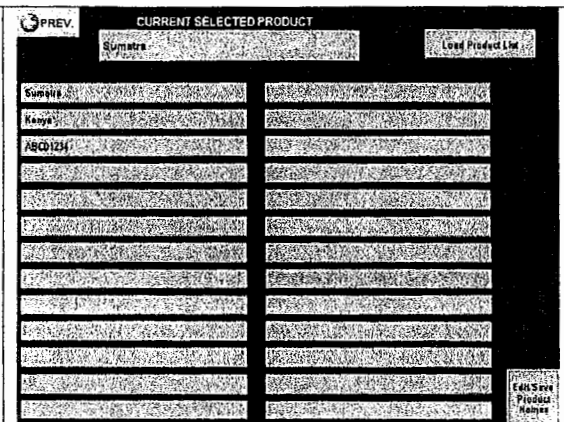
**Table 1.1: Equipment Specification**

Equipment	Specifications
Roaster	<ul style="list-style-type: none"> <li>▪ Model: Loring S70-2 Peregrine</li> <li>▪ Maximum Capacity: 154 lbs./batch</li> <li>▪ Temperature: varies by roast</li> <li>▪ Maximum heat input: 600,000 Btu/ hr.</li> <li>▪ Airflow: 966 acfm</li> <li>▪ Fuel: propane or natural gas</li> <li>▪ Time: varies by roast; typically 12-16 minutes</li> </ul> Serial Number: 002934

The Loring S70 Peregrine utilizes a design unique from other roasters. It uses a single burner to roast the beans and act as an afterburner. The burner is located inside a cyclone. First, the cyclone separates the heat into an incineration zone and a cooler roast temperature zone. The roast temperature air is then extracted from the top of the cyclone and brought into the roast chamber. The roast chamber heats the beans and then returns the air back to the cyclone. Smoke and chaff are removed in the cyclone, the air is reheated, and the cycle begins again. This process eliminates the need for an afterburner.



Picture 008



Picture 009

## MANUAL MODE: STARTING A ROAST

- A roast may be started at any time after the door is closed from the previous roast, It can be started during “POST-ROAST” or you can wait and start it once the machine has entered “IDLE”.
- Select the name of the product you are about to roast from the list of product names you entered under the “SELECT PRODUCT” button of the “ROAST LOG COMMENTS” tab. It will now appear on the main “MANUAL ROAST” screen (see Picture 007,008,009).
- At this time, you may also select a “BASELINE” if you want to monitor the roast progress relative to one from memory. You will be able to view the actual (current) bean temp. as it progresses, on top of the graph of the historical baseline on the “PLOT SCREEN” accessed by a tab on the main screen (see Picture 010). You can actually roast by manually adjusting the burner from this screen to keep the roast on track. The red line on the plot represents the actual process value (bean temperature) and the white LINE is the historical graph of a roast from memory. While in this screen you may use the “TREND” tab to view a larger version of the normal trend display with most buttons minimized and some missing to make room. Use “PREVIOUS” to return to the normal trend screen.
- To select a baseline from memory touch the purple “RECIPE / PROFILE” button on the main “MANUAL ROAST” screen. Touch the red “BASELINE PLOT” button top center on the screen and it will turn green. Use the “LOAD PROGRAM FROM MEMORY” to select the baseline you want to use and confirm with a “YES”. The baseline will now be available from the “PLOT” tab on the main “MANUAL ROAST” screen.
- The endpoint temperature must be set / changed each time a new value is desired. Touch the “ENDPOINT” digital indicator (see Picture 007) grouped with the other digital temperature indicators at the top of the screen to set the desired endpoint for the new batch. The endpoint you set here will be used to signal the end of roast approach both visually and audibly. It is also used to automatically drop the coffee to the cooler if you roaster has an automatic door and you have “AUTO DOOR” enabled (GREEN) at the bottom of the screen next to the “DOOR” button.
- If in “IDLE” it's usually best to start the burner, if it isn't on, so the temperature will be rising in the roaster, then drop the beans at the desired drop temperature by pushing the “DROP GREEN” button which will turn from red to green while the beans are dropping. If

## RECIPE MODE: STARTING A ROAST

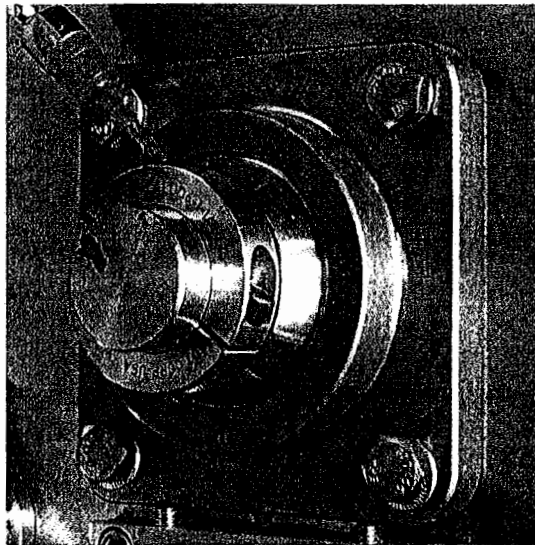
- Click the purple “ROAST / PROFILE” button above the trend screen on the main screen. A new screen will appear allowing you to choose between Burner Recipe, Baseline, and Roast Profile modes. Click the “BURNER / RECIPE” button and it will turn green.
- To select a previously saved recipe, select the red “BURNER RECIPE” button which turns it green. Once the central “LOAD FILE FROM MEMORY” button appears touch it and select your chosen recipe from the drop down list, then confirm it with “YES”.
- While you are in here, you should also select the name of the product you will be running with this recipe. Do so and then push the green “RECIPE / PROFILE RUN” button.
- You will be switched to the “MAIN RECIPE RUN SCREEN” where the name of the current recipe and the current product are listed.
- If your last roast was in recipe mode and you haven't changed modes, you will still be in recipe mode. The same recipe will continue to run, batch after batch, till you load a different one.
- The endpoint temperature is best chosen right after returning to the “MAIN RECIPE RUN SCREEN” after choosing the recipe and the product name. But it can be changed at any time during the roast. Touch the “ENDPOINT” digital indicator grouped with the other digital temperature indicators at the top of the screen to set the desired endpoint for the new batch or change it on the recipe settings screen.
- A roast may be started at any time after the door is closed from the previous roast. It can be started during “POST-ROAST” or you can wait and start it once the machine has entered “IDLE MODE”.
- To start a roast cycle press the green “PRESS TO START RECIPE RUN” button under the digital Bean Temperature indicator.
- The roaster will compare the recipes drop temperature to the current roaster temperature. If the roaster is above it, a yellow flashing text block will ask you to open the roaster door till the temperature drops below the required drop temperature. When it does, you can shut the door and then a “WAITING TO DROP GREEN” message will appear. When the roaster temperature reaches the (recipe specified) drop temperature, the green will drop automatically. The roast timer will start at this time and the drum drive will start automatically if it is not already on.
- Once the green bean drop valve closes, the burner will go to the first burner set point of the recipe. Drop time can be fine-tuned in the setup screen, usually about 15 seconds.



## RECOMMENDED MAINTENANCE

### MAINTENANCE: DAILY

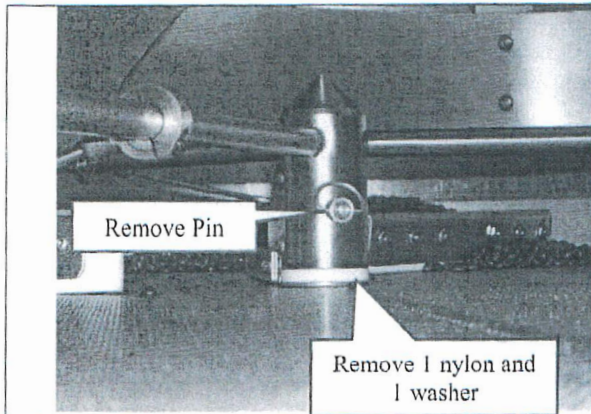
- **Empty the Chaff Barrel** every 15 roasts or so when roasting full batches. Not as often if you are roasting smaller batches. And it should be emptied at the end of the day. The chaff level should never exceed  $2/3$  of the height of the drum.
- **Bearing Squeak** If the front or rear bearing makes a squeaking sound (sometimes this can sound like a paddle rub) use a couple of drops of Radio Shack brand Needle Tip Precision Lubricator (part # 64-2301A), a high temp silicone oil. Apply a 3 or 4 drops of oil between the Black Delron insert and the Stainless Steel Sleeve at the front bearing and/or rear bearing. Do not use grease.



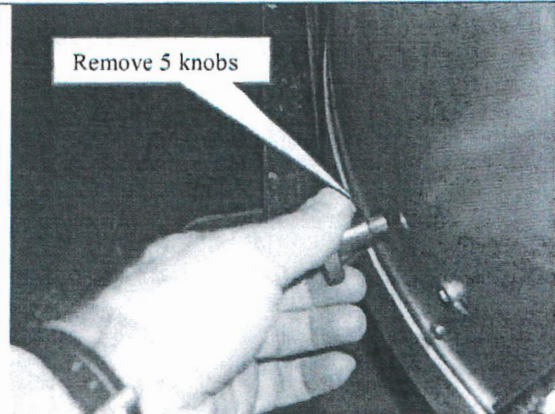
### MAINTENANCE: WEEKLY

#### Cleaning the Cooler Tray

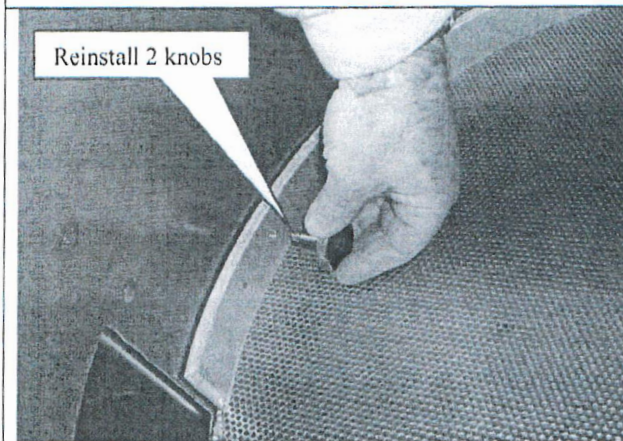
- Turn power off at main disconnect on the front of the enclosure before disassembling the cooler tray.
- Remove the pin from the mixer paddle hub and remove the paddle assembly along with the associated stack of washers (Picture 001).
- Remove the five knobs on the outside of the cooler hopper that secure the screen hold-down stay in place and replace the two front knobs in the same holes but from the inside of the stays. Grasp them both and pull them together and in toward the center of the cooler hopper and the stay will pop out of the slots in the side of the hopper and lift out completely (Picture 002, 003).
- Using a small tool to rotate the screen so that one end of the piano hinge that runs down the center of the screen is centered in the middle of the discharge gate.
- Using this small tool lift the edge of the screen so you can get your hand under the edge, lift up, and the screen will fold down the middle and lift out of the cooler tray (Picture 004, 005)
- You can now vacuum out clean the cooler tray then assemble in reverse order.



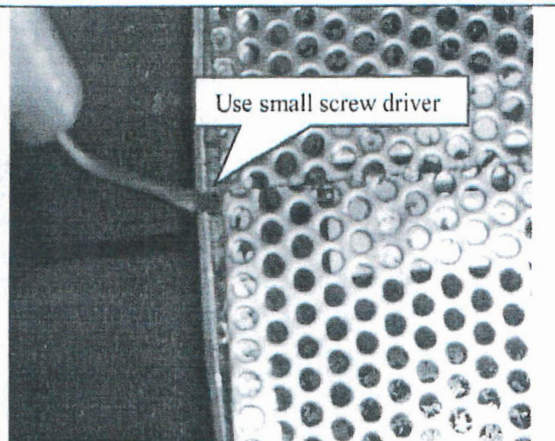
Picture 001



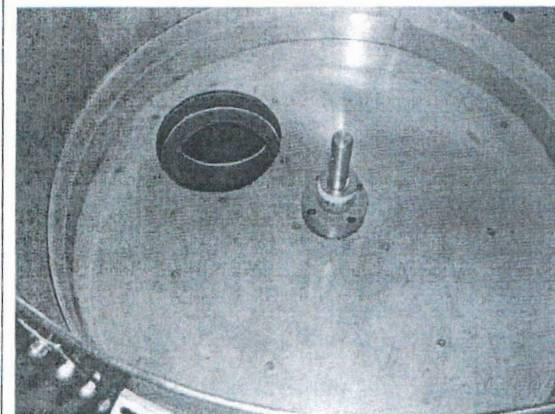
Picture 002



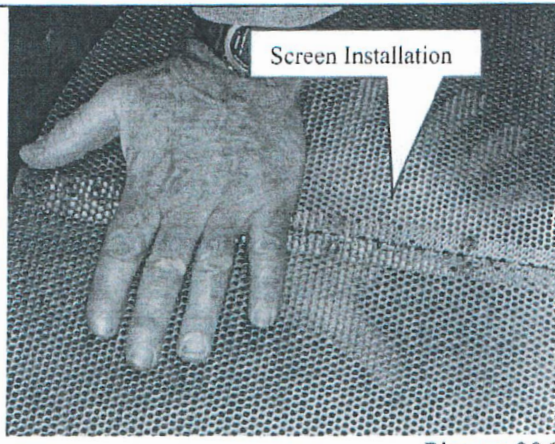
Picture 003



Picture 004



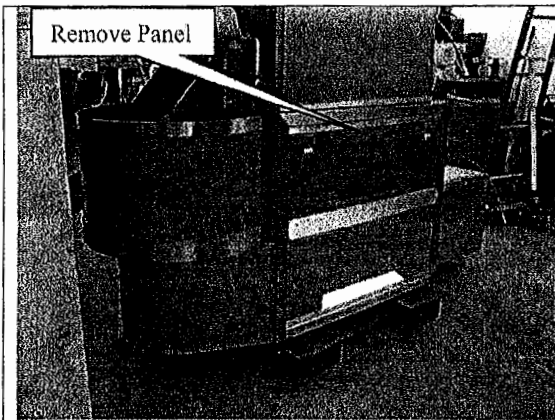
Picture 005



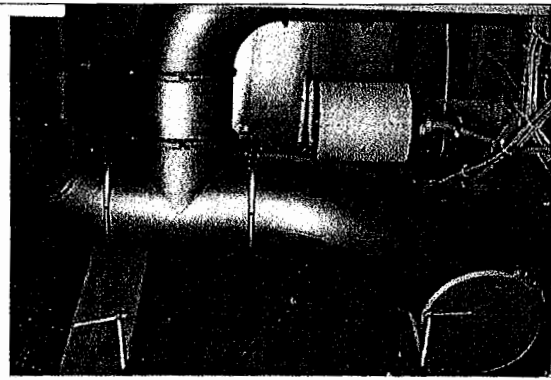
Picture 006

### Cleaning the Cooler Ducting

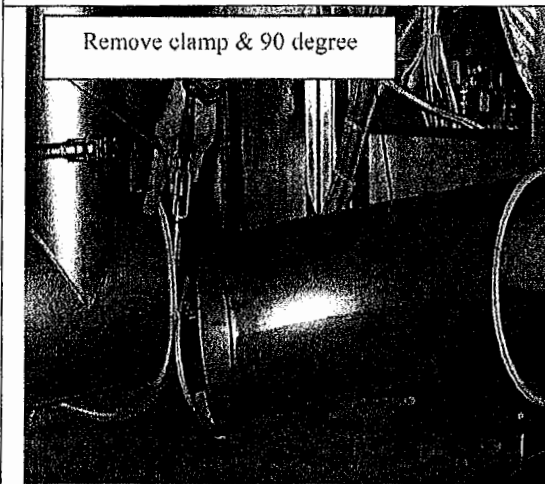
- Lift off the right side panel of the roaster's frame (Picture 007). Make sure ducting is cool and remove the clamp securing the end plate of the long radius 90 degree section of Jacob Tubing (Picture 009). After confirming, no hot embers are present, vacuum out the fines. Note the condition of the vent piping to know when a more thorough cleaning of the ducting will be necessary.



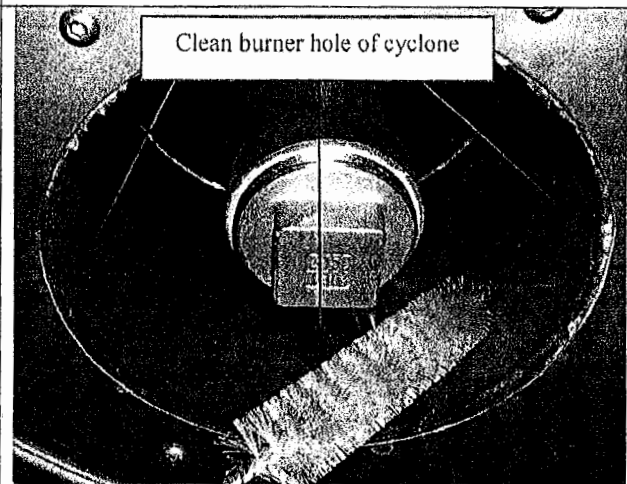
Picture 007



Picture 008



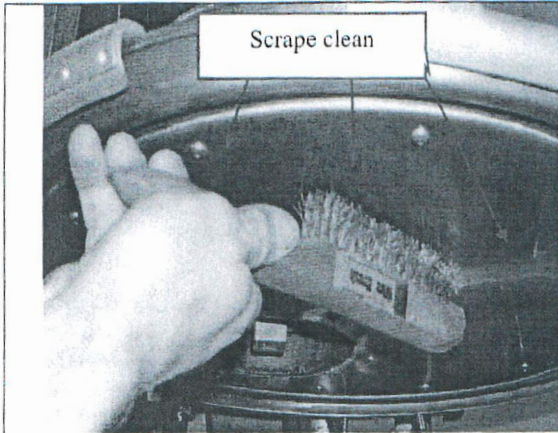
Picture 009



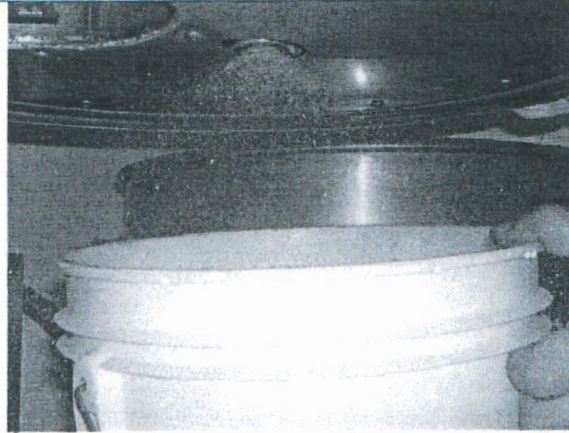
Picture 010

### **Cleaning Under Chaff Barrel Lid**

- Remove the chaff barrel and after emptying the chaff, clean the underside of the barrel lid. Wipe / scrape clean to remove combustible material (Picture 011).
- Use a large bottle brush or similar with stiff bristles or even wire bristles to clean up around the outlet of the cyclone into the chaff drum (Picture 010).
- Check chaff quench spray nozzle. While holding a bucket up close to the spray nozzle, have a 2nd person momentarily touch the "Chaff Quench" button on the Touch Screen. You should see a 120 degrees spray pattern. This nozzle is designed to flow 1 gallon / minute, so it will only take 15 seconds to fill a quart container. (Picture 012)

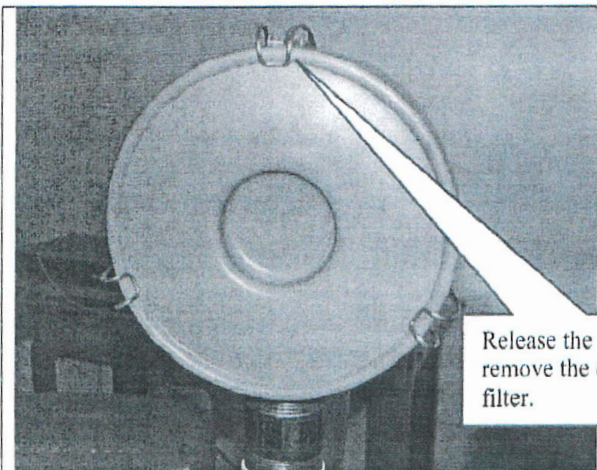


Picture 011

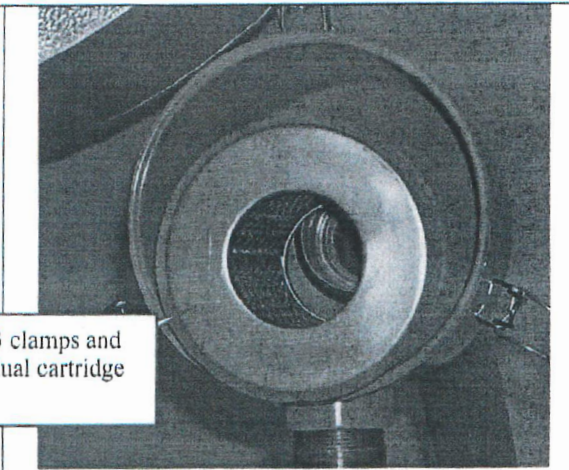


Picture 012

- **Vacuum Elevator Filter** When having trouble lifting beans, chances are that the filter needs cleaning. (Picture 013). To clean the filters release the 3 clamps and remove the dual cartridge filter. (5 x 2 1/2 The outer foam filter around the cartridge can be cleaned in warm water and soap. Clean the inner filter using compressed air from an air compressor blowing from the inside out (Picture 014). Do not blow from the outside in as this will clog the filter. The lower dust collector doesn't contain a filter but will require periodic cleaning.

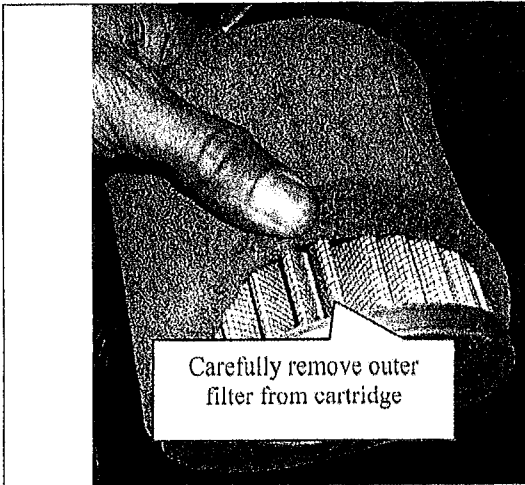


Picture 013



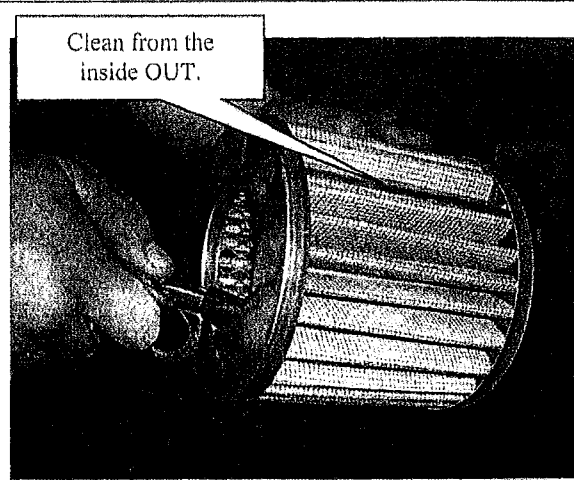
Picture 014

Release the 3 clamps and remove the dual cartridge filter.



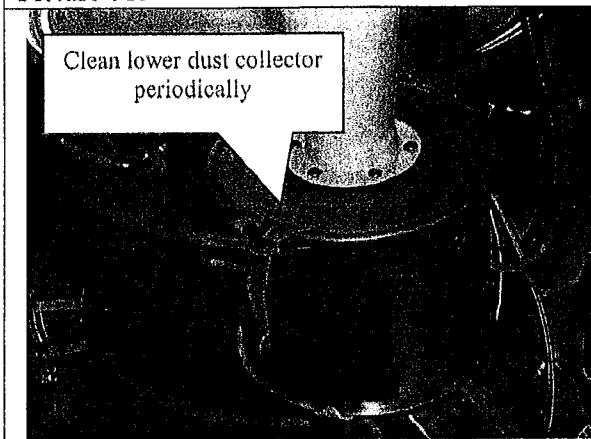
Carefully remove outer filter from cartridge

Picture 015



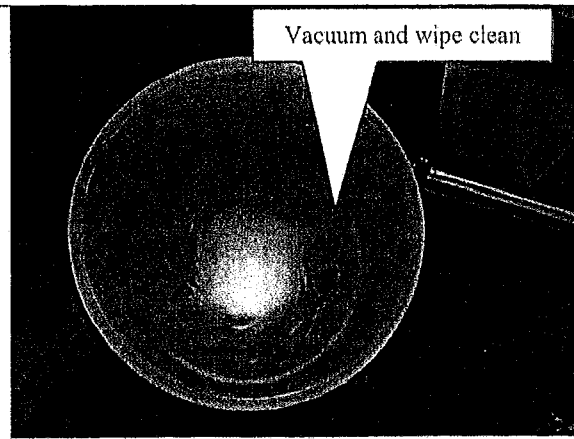
Clean from the inside OUT.

Picture 016



Clean lower dust collector periodically

Picture 017

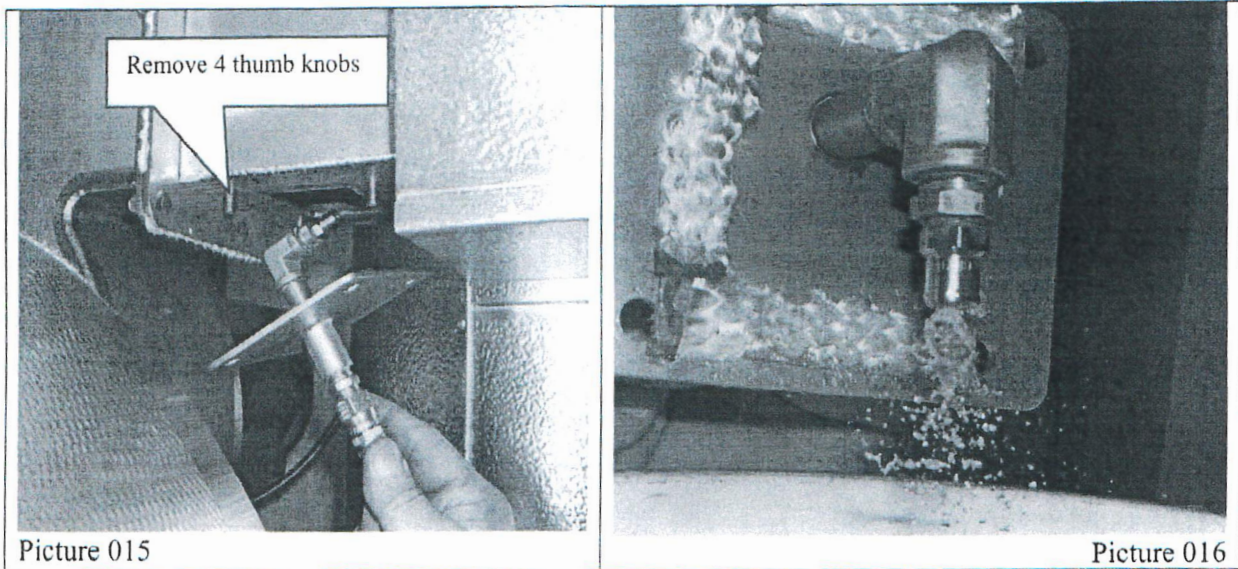


Vacuum and wipe clean

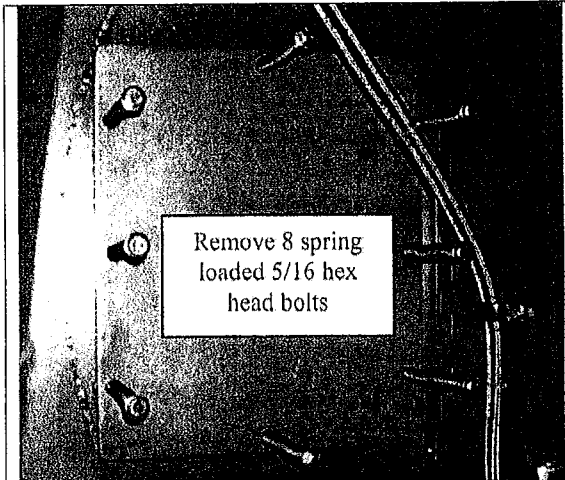
Picture 018

## MAINTENANCE: MONTHLY

- **Cyclone Spay Nozzle** The roast quench spray nozzle is located on the cyclone (Picture 015, 016). Removed with four thumb knobs. Hold it over a quart container and have a 2<sup>nd</sup> person hold the manual quench button (on the touch screen) for 15 seconds. This nozzle is rated ½ gallon/minute and should fill the quart container ½ full. It should project a solid 30 degree conic spray pattern, if not the nozzle may be disassembled for cleaning. Do not loosen the small turbulator vane inside the nozzle tip when cleaning. Once you are satisfied with the spray pattern and the flow rate, remount the nozzle plate with the nozzle oriented into the cyclone and tighten the knobs.

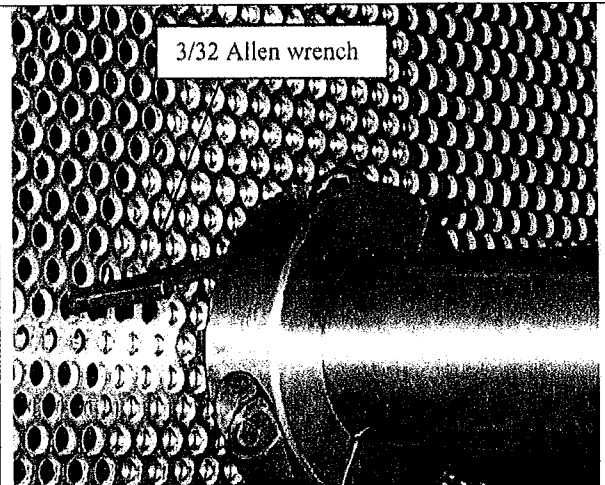


- **Cooler Fan** With the roaster turned off. Disconnect power wires at the Cooler Motor. Remove 8-nyloc nuts, removing one of the top nuts last. Have two people lift the motor and fan wheel assembly clear of the roaster. Clean the fan wheel by scraping. Clean inside the housing as well.
- **Cooler Fan Stack** Inspect the cooler stack vent leaving the roaster and clean as needed.
- **Main Exhaust Stack** It is not necessary to clean the main exhaust stack, inside of the cyclone or the re-circulating ducting from the cyclone into the roaster.
- **Combustion Blower Filters** Use a vacuum to clean the settled dust or a low flow blow nozzle. Changed as needed, (6 months to 1 year).
- **Behind the Drum Screen** Check for buildup of particulate matter behind the drum screen in the back of the drum. With the roaster cool, remove the eight spring loaded 5/16-18 hex head cap screws that secure the inspection plate to the roaster. (Picture 017). Be careful not to damage the gasket material. Reach into the space behind the perforated drum screen and inspect for particulate coffee matter. This can be vacuumed out with a shop vacuum. While the door is off inspect the gap between the screen and the Double Split Collar on the Paddle Shaft. This gap should be approx. 3/32". Suggestion: use the proper size Allen Wrench to feel for the gap (Picture 018).



Remove 8 spring loaded 5/16 hex head bolts

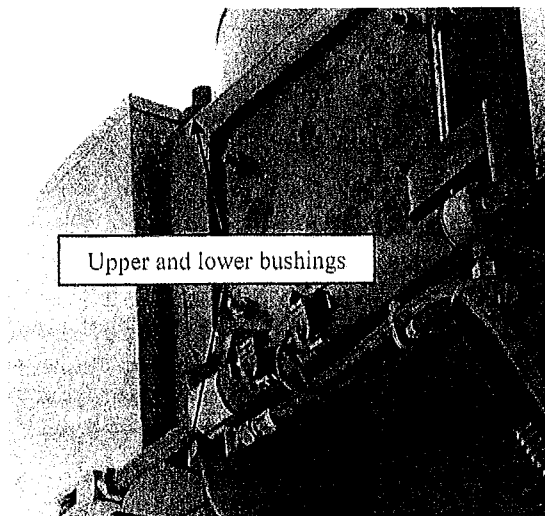
Picture 017



3/32 Allen wrench

Picture 018

- **Purge Gate Bushings** Apply a drop of the Radio Shack brand Needle Tip Precision Lubricator (part # 64-2301A) high temp silicone oil to the bushings of the purge gate. It is located at the top of the cyclone on the back of the roaster. There is an upper and a lower bushing and lubricating them occasionally will assure the gate opens and closes properly. If the purge does not open or close properly it may be these bushings are causing friction. Apply a few drops of oil and work it by hand a dozen times. (picture 19)

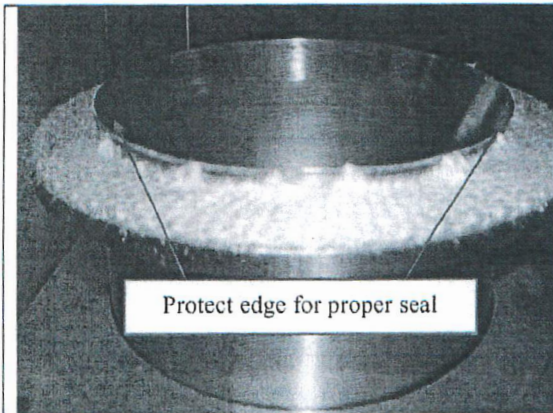


Upper and lower bushings

Picture 019

## MAINTENANCE: ANNUALLY OR AS NEEDED BASED ON YOUR PRODUCTION

- **Green Bean Hopper** Disconnect and remove the green bean hopper vacuum elevator hose. Disconnect the air hose to the green bean hopper. Remove the green bean hopper by removing 4 retaining bolts at the base of the green bean hopper. [Note: remove the vacuum hose or have a 2<sup>nd</sup> person supporting the hose while loosening the mounting bolts. Use extreme caution when setting the green bean receiver down on the funnel shaped door at the bottom of the hopper. The door must retain a vacuum seal to function properly (Picture 020).] Inspect and clean around the funnel shaped door. Inspect and clean inside the mounting hole of the plenum (Picture 021). Reassemble making sure the hi-temp fiberglass gasket is in place at the base of the hopper. Position the hopper for desired vacuum elevator hose location.



Picture 020



Picture 021

- **Drum Bearings** Inspect the Drum Paddle Drive main bearings on both the front and the back of the roaster for wear. If a gap larger than about .040" (forty thousandths) develops between the bearing insert (gray graphite part) and the shaft sleeve it is time to order a new insert.
- **Cooler Vent Ducting** It is important to get to know your roaster so you know how often you need to clean the cooler vent ducting. It can be inspected by removing sections of the duct from under the roaster, but you should also inspect the cooler fan housing, fan wheel, and external ducting by removing the first section of duct above the fan. When the time comes to clean the vent ducting between the fan and the roof cap, the procedure depends on the installation. You may be able to clean down from the roof with a chimney brush, or maybe remove much of the ducting inside and clean it as separate pieces, if quick fit tubing was installed.

## SUGGESTED ITEMS TO HAVE ON HAND FOR REPLACEMENT PARTS...

- Burner tip and electrode
- Teflon Wipers
- Second cooling tray screen
- Drum drive motor
- Cooler paddle motor



S70-1

**DETERMINATION OF NONSIGNIFICANCE (DNS)**

**Description of Proposal:** The applicant is proposing to install and operate coffee roasting equipment in an existing commercial building.

**Proponent:** Ravens Brew Coffee Inc  
3035 A 37<sup>th</sup> Ave SW  
Tumwater, WA 98512

**Location of Proposal:** The project is located at 3035 37<sup>th</sup> Ave SW within Mottman Business Park.

**Lead Agency:** Olympic Air Pollution Control Authority

The lead agency for this proposal has determined that it does not have a probable significant adverse impact on the environment. An Environmental Impact Statement (EIS) is not required under RCW 43.12C.030(2)(c). This decision was made after review of a completed environmental checklist and other information on file with the lead agency. This information is available to the public upon request.

- There is no comment period for this DNS.
- This DNS is issued after using the optional DNS process in WAC 197-11-355. There is no comment period on the DNS.
- This DNS is issued under WAC 197-11-340(2); the lead agency will not act on this proposal for 14 days from the date below.

**Date:** April 11, 2002

**Responsible Official:** Richard Stedman

**Contact Person:** Gordon Lance

**Address:** 909 Sleater-Kinney Rd SE Suite 1  
Lacey, WA 98503  
(360) 438-8768

## OLYMPIC REGION CLEAN AIR AGENCY

2940 Limited Lane NW - Olympia, Washington 98502 - 360-539-7610 - Fax 360-491-6308

### FORM 29 COFFEE ROASTER

Please fill out a separate form for each roaster.

<b>GENERAL INFORMATION</b>	
Company Name: Raven's Brew Coffee, Inc. Phone: 360-570-9143 Email: accounting@ravensbrew.com	Operating Schedule: 12-16 minutes/batch, 7-15 batches/day, 5 days/wk
<b>ROASTER INFORMATION</b>	
Manufacturer: Loring	Model & Serial No: S70 Peregrine / SN TBD
Maximum capacity: 154 lbs/batch	<input checked="" type="checkbox"/> Water quench <input type="checkbox"/> Air quench
Maximum heat input rating: 600,000 Btu/hr	ACFM _____ degrees F _____
Are the beans processed in a cyclone (chaff collector) before roasting? <u>no, this occurs during roasting</u>	
<b>AFTERBURNER/OXIDIZER (enter Manufacturer &amp; Model)</b> n/a the afterburner function is built into the Loring roaster	
<input type="checkbox"/> Thermal _____	Type of fuel: <input type="checkbox"/> Nat. Gas <input type="checkbox"/> Propane <input type="checkbox"/> Other _____
<input type="checkbox"/> Catalytic _____	Maximum heat input rating: _____ Btu/hr
<b>Afterburner/Oxidizer Characteristics</b>	<b>Stack Parameters</b>
Average residence time _____ seconds	Height: _____ ft
Operating chamber temperature: _____ degrees F	Velocity: _____ ft/min
Maximum chamber temperature: _____ degrees F	Diameter: _____ inches
Flow rate: _____ ACFM	Gas temperature: _____ degrees F
Minutes into roast when roast is up to temperature: <u>TBD</u>	
Minutes into roast when afterburner is up to temperature: <u>n/a</u>	
Minutes into roast when beans are dropped to the cooling tray: <u>12-16 min</u>	
How is the roaster cyclone vented? <input checked="" type="checkbox"/> recirculated to roaster <input type="checkbox"/> through afterburner	
Where does the bean cooling take place? <u>cooling tray</u>	
How is the bean cooling process vented? : <input type="checkbox"/> through afterburner <input type="checkbox"/> through separate stack <input type="checkbox"/> vented inside <input type="checkbox"/> Other (explain)	
<b>Attach the following information:</b>	
<input checked="" type="checkbox"/> <b>Fees:</b> ORCAA shall not commence processing of a NOC until it has received a NOC processing fee of \$2,383. Work exceeding the base-fee hours of five hours will be billed based on actual cost to complete the review.	
<input checked="" type="checkbox"/> <b>O&amp;M Plan:</b> Description of the procedures for operation and maintenance of the roaster and control equipment (i.e. cleaning schedule, temperature monitoring, calibration, etc.)	
<input type="checkbox"/> <b>Flow diagram:</b> Provide a flow diagram showing all roaster components. Indicate all vents and other points where gaseous or particulate pollutants are emitted. <u>currently on file</u>	
<input type="checkbox"/> <b>Site Map:</b> Provide a scaled site map that shows property boundaries, outlines of all existing or planned buildings, specific locations of the coffee roaster vents and other exhaust stacks. The site map should also indicate the predominant wind direction and the location of the nearest occupied building located off the facility property. <u>currently on file</u>	
<input type="checkbox"/> <b>Elevation Drawing:</b> Provide at least one elevation drawing (to scale) showing the location and height of the exhaust stack. <u>currently on file</u>	

**DAILY OPERATING AND  
MAINTENANCE INSTRUCTIONS  
FOR PEREGRINE S70  
70 kg BATCH ROASTER**

**IMPORTANT SAFETY INSTRUCTIONS**

- The roaster must be placed on a flat level surface capable of supporting its weight.
- Keep area around roaster clean and dry and clear of obstructions as required by local safety regulations.
- Do not remove safety covers or defeat safety interlocks at any time.
- There are many hot surfaces when the roaster is in operation, use caution around the roaster at all times.
- Never reach inside the roaster drum while it is hot, or with the main power disconnect on, excessive heat and potentially rotating paddle drive could cause severe injury.
- Never reach inside cooler tray when mixer is running or injury may result. The mixer can start automatically never reach inside when power is on.
- All cooler ducting and the cooler fan can be quite hot. Allow to cool before disassembly for cleaning.
- The sample tryer has sharp edges and may be quite hot, handle by wooden handle only.
- Be very careful when wearing loose clothing or having long, unbound (loose) hair around the roaster. Hair and clothes can become caught in moving equipment and cause severe injury.
- Turn off power and close all utility valves when the roaster is not in use.

## START-UP

- Empty the chaff collector drum. Reinstall the chaff drum and be sure that the lever-locking ring is securely latched.
- Be sure all cooler ducting is installed and clamps are latched tight.
- Check to see that the cooling hopper is empty and close the cooler discharge gate.
- Close the roaster door.
- Clean the magnetic grate in the bottom of the green bean cart of any collected debris.
- Open the utility valves for air, water and gas. Caution: the air valve will vent air from it's side port till the valve is fully open, so open it quickly, and do not be alarmed by the escaping air.
- Turn roaster "POWER-ON/OFF" switch to the ON position, momentarily. The power will come on and the switch will spring back to center. The display screen will boot.
- Make the necessary adjustments required to satisfy any fault conditions that may be indicated on the startup screen once it boots.

## WARM-UP

- Push the "BURNER" button in the lower left hand corner of the display screen. The frame of the button will switch to green (see Picture 002). The roaster will automatically purge the system and the burner will ignite in about 2 minutes. When it does the center, of the burner button will turn green and the green "burner on" light will light on the front of the control console (see Picture 003).
- The roaster will begin to warm-up.
- Start the drum paddle drive to keep the air in the drum from stratifying and to bring the indicated bean temp more in line with the return air temp.
- The roaster will warm up to the preset "Idle Mode" (see Picture 004) high temp value, usually around 450 degrees F., and the burner will be turned off by the system. At this time, the roaster will indicate that it is in Idle Mode. By turning the burner on and off between two preset temperatures, the roaster temp can be maintained within a narrow band. If the burner is left on at low fire when the roaster is empty, the temp would continue to climb and the roaster would get too hot. By cycling the burner, the temp is maintained at an appropriate level. The burner will reignite at the Idle Mode low temp setting (based on return air temp). The process takes from 20 to 30 minutes depending on the temp in the room and the target values chosen by the operator on the setup page for Idle Mode High and Low Set point values. See section on the Setup page screen.
- A roast may be started at any time but many roast masters wait for the Idle Mode to "porpoise" a couple of times to fully preheat the roaster so the first roast won't be too much longer than subsequent roasts. This porpoise cycle takes about 10 minutes.
- While roaster is warming, load green bean cart with beans to be roasted. The scale will automatically turn off after three minutes of inactivity. You may deactivate the auto-off feature by holding the Lb/Kg button when turning on the power to the scale. It's easy to forget to turn the scale off in this mode and you can run the batteries down much faster this way.
- Secure the food grade anti static spiral hose to the connector on the green bean cart.

**OLYMPIC REGION CLEAN AIR AGENCY**

2940 Limited Lane NW - Olympia, Washington 98502 - 360-539-7610 – Fax 360-491-6308

**FORM 29  
COFFEE ROASTER**

Please fill out a separate form for each roaster.

<b>GENERAL INFORMATION</b>	
Company Name: Raven's Brew Coffee, Inc. Phone: 360-570-9143 Email: accounting@ravensbrew.com	Operating Schedule: 12-16 minutes/batch, 7-15 batches/day, 5 days/wk
<b>ROASTER INFORMATION</b>	
Manufacturer: Loring	Model & Serial No: S70 Peregrine / SN TBD
Maximum capacity: 154 lbs/batch	<input checked="" type="checkbox"/> Water quench <input type="checkbox"/> Air quench
Maximum heat input rating: 600,000 Btu/hr _____ ACFM _____ degrees F	
Are the beans processed in a cyclone (chaff collector) before roasting? <u>no, this occurs during roasting</u>	
<b>AFTERBURNER/OXIDIZER (enter Manufacturer &amp; Model)</b> n/a the afterburner function is built into the Loring roaster	
<input type="checkbox"/> Thermal _____	Type of fuel: <input type="checkbox"/> Nat. Gas <input type="checkbox"/> Propane <input type="checkbox"/> Other _____
<input type="checkbox"/> Catalytic _____	Maximum heat input rating: _____ Btu/hr
<b>Afterburner/Oxidizer Characteristics</b>	<b>Stack Parameters</b>
Average residence time _____ seconds	Height: _____ ft
Operating chamber temperature: _____ degrees F	Velocity: _____ ft/min
Maximum chamber temperature: _____ degrees F	Diameter: _____ inches
Flow rate: _____ ACFM	Gas temperature: _____ degrees F
Minutes into roast when roast is up to temperature: <u>TBD</u>	
Minutes into roast when afterburner is up to temperature: <u>n/a</u>	
Minutes into roast when beans are dropped to the cooling tray: <u>12-16 min</u>	
How is the roaster cyclone vented? <input checked="" type="checkbox"/> recirculated to roaster <input type="checkbox"/> through afterburner	
Where does the bean cooling take place? <u>cooling tray</u>	
How is the bean cooling process vented? : <input type="checkbox"/> through afterburner <input type="checkbox"/> through separate stack <input type="checkbox"/> vented inside <input type="checkbox"/> Other (explain)	
<b>Attach the following information:</b>	
<input checked="" type="checkbox"/> <b>Fees:</b> ORCAA shall not commence processing of a NOC until it has received a NOC processing fee of \$2,383. Work exceeding the base-fee hours of five hours will be billed based on actual cost to complete the review.	
<input checked="" type="checkbox"/> <b>O&amp;M Plan:</b> Description of the procedures for operation and maintenance of the roaster and control equipment (i.e. cleaning schedule, temperature monitoring, calibration, etc.)	
<input type="checkbox"/> <b>Flow diagram:</b> Provide a flow diagram showing all roaster components. Indicate all vents and other points where gaseous or particulate pollutants are emitted. <u>currently on file</u>	
<input type="checkbox"/> <b>Site Map:</b> Provide a scaled site map that shows property boundaries, outlines of all existing or planned buildings, specific locations of the coffee roaster vents and other exhaust stacks. The site map should also indicate the predominant wind direction and the location of the nearest occupied building located off the facility property. <u>currently on file</u>	
<input type="checkbox"/> <b>Elevation Drawing:</b> Provide at least one elevation drawing (to scale) showing the location and height of the exhaust stack. <u>currently on file</u>	

# OLYMPIC REGION CLEAN AIR AGENCY

2940 Limited Lane NW - Olympia, Washington 98502 - 360-539-7610 – Fax 360-491-6308

## FORM 1- NOTICE OF CONSTRUCTION TO CONSTRUCT - INSTALL - ESTABLISH OR MODIFY AN AIR CONTAMINANT SOURCE

**Form 1 Instructions:**

1. Please complete all the fields below. **This NOC application is considered incomplete until signed.**
2. If the application contains any confidential business information, please complete a Request of Confidentiality of Records ([www.orcaa.org/forms](http://www.orcaa.org/forms)).
3. Duty to Correction Application: An applicant has the duty to supplement or correct an application. Any applicant who fails to submit any relevant facts or who has submitted incorrect information in a permit application must, upon becoming aware of such failure or incorrect submittal, promptly submit supplementary factors or corrected information.

Business Name: Raven's Brew Coffee, Inc.	<b>For ORCAA use only</b>
Mailing Address: 3035 A 37th Ave SW Tumwater, WA 98512	File No: County No: Source No: Application No:
Physical Address of Project or New Source: 3035 A 37th Ave SW Tumwater, WA 98512	Date Received:
Billing Address: 3035 A 37th Ave SW Tumwater, WA 98512	
Are you currently registered with ORCAA? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Project/ Equipment to be installed/established: coffee roaster Loring S70 Peregrine	
Previous business name (if any):	
<p>This project must meet the requirements of the State Environmental Policy Act (SEPA) and applicable building and fire codes before ORCAA can issue final approval. Complete one of the following options.</p> <p><input type="checkbox"/> SEPA was satisfied by _____ (government agency) on ___/___/___ (date). A copy of the final determination and the environmental checklist is enclosed.</p> <p><input type="checkbox"/> SEPA is pending approval by _____ (government agency). A copy of the environmental checklist is enclosed and a copy of the final determination will be forwarded to ORCAA when issued.</p> <p><input checked="" type="checkbox"/> ORCAA is the only government agency requiring a permit. A completed environmental checklist or documentation that the project or new source is/will be in compliance with local building and fire codes is enclosed.</p> <p><input checked="" type="checkbox"/> This project is exempt from SEPA per <u>RCW 43.12C.030(2)(c)</u> (WAC citation).</p>	
Name of Owner of Business: Judith Burkhart	<b>Agency Use Only</b>
Title: Vice President	
Email: judyb@ravensbrew.com	Phone: (360) 819-2855
Application Contact Name (if different than owner): Chad Olson	
Title: Operations Manager	
Email: chado@ravensbrew.com	Phone: 360-250-6488
Facility Operations Contact Name (if different than owner): Dan Weaver	
Title: Operations Assistant	
Email: danw@ravensbrew.com	Phone: 360-951-4595
I hereby certify that the information contained in this application is, to the best of my knowledge, complete and correct.	
Signature of Owner:	Date

**Olympic Region Clean Air Agency (ORCAA)  
Notice of Construction (NOC) Fee Worksheet EZ**

Adopted: May 13, 2015

Effective: May 18, 2015

**Instructions:** Please use the worksheet on the reverse **ONLY** if your proposal includes just **one piece of equipment**. Please use the standard worksheet for other projects that include multiple pieces of equipment or processes. If you need assistance, please contact ORCAA's Office Manager at (360) 539-7610 extension 114.

***What are base-fee hours?***

The base-fee hours is the average number of hours it takes ORCAA to review a complete application. **Any additional work exceeding base-fee hours will be billed at an hourly rate.** Applications that typically require additional fees are those that are incomplete upon receipt, propose unique equipment or processes, are located near residences or sensitive groups, or require public noticing and/or a public hearing.

***Will I be billed any additional fees?***

In addition to your filing fee as indicated above, you may be subject to additional NOC Processing fees for items such as work that exceeds the base-fee hours, and publishing and consulting costs. You will be invoiced for any additional fees prior to the issuance of your final permit. Fees based on an hourly rate will be billed at \$72/hour.

***I have two pieces of equipment that are identical. Do I need to pay an equipment fee for each?***

Equipment or processes may be considered identical and subject to a single fee provided: 1) They are identical in size and capacity; 2) Employ identical air pollution control technology; 3) Use the same fuel types; 4) Are subject to the same performance standards and air regulatory determinations; and 5) May be considered as a single emissions point for the purposes of determining ambient air quality impacts.

**Raven's Brew Coffee, Inc.**

**19190**

DATE	4/14/2016	VENDOR	ORCA801	OLYMPIC REGION CLEAN AIR AGCY	Check No	19190	
INVOICE NUMBER	ORCAA_201604	AMOUNT DUE	2,383.00	DISCOUNT TAKEN	0.00	NETAMOUNT DUE	2,383.00
ACCT NO	FILE # 239	NOTICE OF CONSTRUCTION FEE--NEW COFFEE ROASTER IN EXISTING COMMERCIAL BUILDING					

4/14/2016	TOTAL	2,383.00	0.00	2,383.00
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**Raven's Brew Coffee, Inc.**

3035-A 37th Avenue SW  
Turnwater, WA 98512  
(360) 570-9143

Wells Fargo Bank, N.A.

DATE 4/14/2016

**19190**

TWO THOUSAND THREE HUNDRED EIGHTY-THREE AND 00/100 US DOLLARS

\$ \*\*\*\*\*\$2,383.00



E-ZShield<sup>SM</sup> Check Fraud  
Protection for Business

AMOUNT

PAY  
TO THE  
ORDER  
OF:

OLYMPIC REGION CLEAN AIR AGCY  
2940 B LIMITED LANE NW  
OLYMPIA, WA 98502

AUTHORIZED SIGNATURE



Security features. Details on back.

⑈019190⑈ ⑆125008547⑆ 2526178955⑈



# OLYMPIC REGION CLEAN AIR AGENCY


2940 Limited Lane NW - Olympia, Washington 98502 - 360-539-7610 – Fax 360-491-6308

## FORM 1- NOTICE OF CONSTRUCTION

TO CONSTRUCT - INSTALL - ESTABLISH OR MODIFY AN AIR CONTAMINANT SOURCE

**Form 1 Instructions:**

1. Please complete all the fields below. **This NOC application is considered incomplete until signed.**
2. If the application contains any confidential business information, please complete a Request of Confidentiality of Records ([www.orcaa.org/forms](http://www.orcaa.org/forms)).
3. Duty to Correction Application: An applicant has the duty to supplement or correct an application. Any applicant who fails to submit any relevant facts or who has submitted incorrect information in a permit application must, upon becoming aware of such failure or incorrect submittal, promptly submit supplementary factors or corrected information.

Business Name: Raven's Brew Coffee, Inc.	<b>For ORCAA use only</b>
Mailing Address: 3035 A 37th Ave SW Tumwater, WA 98512	File No: County No: Source No: Application No:
Physical Address of Project or New Source: 3035 A 37th Ave SW Tumwater, WA 98512	Date Received:
Billing Address: 3035 A 37th Ave SW Tumwater, WA 98512	
Are you currently registered with ORCAA? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Project/ Equipment to be installed/established: coffee roaster Loring S70 Peregrine	
Previous business name (if any):	
<p>This project must meet the requirements of the State Environmental Policy Act (SEPA) and applicable building and fire codes before ORCAA can issue final approval. Complete one of the following options.</p> <p><input type="checkbox"/> SEPA was satisfied by _____ (government agency) on ___/___/___ (date). A copy of the final determination and the environmental checklist is enclosed.</p> <p><input type="checkbox"/> SEPA is pending approval by _____ (government agency). A copy of the environmental checklist is enclosed and a copy of the final determination will be forwarded to ORCAA when issued.</p> <p><input checked="" type="checkbox"/> ORCAA is the only government agency requiring a permit. A completed environmental checklist or documentation that the project or new source is/will be in compliance with local building and fire codes is enclosed.</p> <p><input checked="" type="checkbox"/> This project is exempt from SEPA per <u>RCW 43.12C.030(2)(c)</u> (WAC citation).</p>	
Name of Owner of Business: Judith Burkhart	<b>Agency Use Only</b>
Title: Vice President	
Email: judyb@ravensbrew.com	Phone: (360) 819-2855
Application Contact Name (if different than owner): Chad Olson	
Title: Operations Manager	
Email: chado@ravensbrew.com	Phone: 360-250-6488
Facility Operations Contact Name (if different than owner): Dan Weaver	
Title: Operations Assistant	
Email: danw@ravensbrew.com	Phone: 360-951-4595
I hereby certify that the information contained in this application is, to the best of my knowledge, complete and correct.	
Signature of Owner: 	Date: April 14, 2016

PLEASE SEE REVERSE FOR INSTRUCTIONS

FILING FEE Equipment/Process – Choose the ONE that applies below.	Base-Fee Hours	Filing Fee
Asphalt Plant	37	\$ 10,850.00
<i>Boiler (Million Btu/hr heat input at design capacity)</i>		
Less than 10	10	\$ 2,743.00
10 or more but less than 30	12	\$ 2,887.00
30 or more but less than 100	26	\$ 5,255.00
Greater than or equal to 100	70	\$ 13,226.00
<i>Boiler (Million Btu/hr heat input at design capacity) – Temporary (Onsite &lt; 1 year)</i>		
Less than 10	5	\$ 1,371.50
10 or more but less than 30	6	\$ 1,443.50
30 or more but less than 100	13	\$ 2,627.50
Greater than or equal to 100	35	\$ 6,613.00
Change in Conditions per ORCAA Rule 6.1.11 <sup>1</sup>	7	\$ 504.00
Coffee Roaster	5	\$ 2,383.00
<i>Composting Operation (Average material throughput – tons per day)</i>		
Less than 50	13	\$ 2,959.00
50 or more but less than 200	23	\$ 5,039.00
Greater than or equal to 200	34	\$ 10,634.00
Concrete Batch Plant	10	\$ 2,743.00
Control Device Replacement per ORCAA Rule 6.1.10	8	\$ 576.00
Crematory	10	\$ 2,743.00
Dry Cleaner (per machine)	7	\$ 2,527.00
Dry Kilns	13	\$ 2,959.00
Emergency Engine (per engine)	9	\$ 2,671.00
Non-Emergency Engine (per engine)	13	\$ 2,959.00
Gasoline Dispensing Station	8	\$ 2,599.00
Log yard	7	\$ 2,527.00
Printing	7	\$ 2,527.00
Process Equipment ≤20,000 cubic feet per minute at design capacity	8	\$ 2,599.00
Rock Crushing Plant	9	\$ 2,671.00
Soil Remediation	11	\$ 2,815.00
Spray Painting (per operation/booth)	9	\$ 2,671.00
Storage Tanks ≤10,000 gallon total capacity (other than at retail gasoline dispensing stations)	9	\$ 2,671.00
Wastewater Treatment Plant	21	\$ 4,895.00
<b>Equipment/Process not listed above. Please contact ORCAA staff for a determination.</b>		
Other Equipment - Low Complexity	5	\$ 2,383.00
Other Equipment - Medium Complexity	14	\$ 4,391.00
Other Equipment - High Complexity	34	\$ 10,634.00

You may qualify for an adjustment to your filing fee if your proposal falls into one of the categories listed below. Please contact ORCAA for more details.

- Modification per ORCAA Rule 1.4
- Deviation from approved plans per ORCAA Rule 6.1.2(l)
- Significant changes in conditions (that do not fall under ORCAA Rule 6.1.11)

ORCAA USE ONLY - Calculation of Base-Fee Hours

Total base-fee hours = \_\_\_\_\_

If the project qualified for an adjusted filing fee, your base-fee hour total will also be divided by two.