



# LRAPA Cleaner Air Oregon Technical Assistance Modeling and Risk Assessment Summary

**Facility Name:** J.H. Baxter & Co.

**Source Number:** 200502

## Toxics Emissions Units (TEUs):

TEU Identifier	TEU Name	TEU Description	Max Hourly Throughput	Max Daily Activity	Max. Annual Activity
EU-3	Boiler	1 Natural Gas-Fired Boiler with No. 2 Oil Backup: Johnstone Boiler – 16.8 MMBtu/hr, tangential, fire tube	<ul style="list-style-type: none"> <li>16,800 standard cubic feet of gas</li> <li>97 gallons of fuel oil</li> </ul>	<ul style="list-style-type: none"> <li>403,200 standard cubic feet of gas</li> <li>1,200 gallons of fuel oil</li> </ul>	<ul style="list-style-type: none"> <li>147,168,000 standard cubic feet of gas</li> <li>2,000 gallons of fuel oil</li> </ul>
EU-5	Evaporator	Process Water Treatment System: <ul style="list-style-type: none"> <li>Evaporator (Marley)</li> </ul>	312 gallons	7,500 gallons	2,737,500 gallons

## Nearest Exposure Locations from Boiler (EU-3):

Location Type	Location Identifier	Description	Distance
Residential	Nearest Residence	Use closest residence, straight line from stack	154 meters
Nonresidential Adult	Nearest Worker	Use closest worker, straight line from stack	206 meters
Nonresidential Child	Nearest Residence	Use closest residence, straight line from stack.  Nearest actual nonresidential child would be farther.	154 meters
Acute	Nearest Worker	Use closest worker, straight line from stack	206 meters

**Supporting information:** JH Baxter & Co (200502) Review Report - Emission Detail Sheets

## Nearest Exposure Locations from Evaporator (EU-5):

Location Type	Location Identifier	Description	Distance
Residential	Nearest Residence	Use closest residence, straight line from stack	203 meters
Nonresidential Adult	Nearest Worker	Use closest worker, straight line from stack	149 meters
Nonresidential Child	Nearest Residence	Use closest residence, straight line from stack.  Nearest nonresidential child would be farther.	203 meters
Acute	Nearest Worker	Use closest worker, straight line from stack	149 meters

Supporting information: JH Baxter & Co (200502) Review Report - Emission Detail Sheets

## Risk Assessment Methodology:

Level 1 Risk Assessment using the Department of Environmental Quality (DEQ) Risk Assessment Tool. Meteorological assumptions are those that were used to create Table 5 from OAR 340-245-8050.

## Risk Assessment Results:

Assessment Type	Cancer Risk Per Million People <sup>1</sup>	Chronic Hazard Index (HI) <sup>1</sup>	Acute Hazard Index (HI)
Evaporator	1.5	0.02	0.04
Boiler Fuel Oil	1.0	0.01	0.44
Boiler Natural Gas	9.4E-07	1.1E-07	4.2E-11
Total Facility Risk	2.5	0.03	0.5

1. Cancer risk and Chronic HI are based on nearest residence

**Uncertainty Discussion:** LRAPA used the best available and most health protective emissions information at the time of the risk assessment for emissions from the boiler and evaporator TEUs.

**Permit Conditions – Source Risk Limits:** The results of this risk assessment indicate that all risks at the nearest exposure locations are below the Community Engagement Levels in OAR 340-245-8010 Table 1. The results of this risk assessment indicate that the risks at the nearest exposure location are at the Source Permit Levels in OAR 340-245-8010 Table 1, when the boiler is operated on fuel oil (as a backup fuel to natural gas) to the following maximum annual and daily amounts:

- 2,000 gallons per year fuel oil and 1,200 gallons per day of fuel oil.
- Natural gas was included in the total risk even though it may be excluded from the facility total risk in accordance with the Gas Combustion Exemption in OAR 340-245-0050(5).

Conditions will be placed in the Air Contaminant Discharge Permit (ACDP) for this facility to ensure that risk does not increase above the levels modeled in this risk assessment and will be based on hours of operation and diesel fuel usage as modeled in this risk assessment.