Environmental Compliance Plan

Prepared for:

Pro-Mac Machine, Inc.
6156 15th Street East
Bradenton, Florida 34203

Prepared by:

Environmental Engineering Consultants, Inc.
5119 N. Florida Avenue
Tampa, Florida 33603
EEC # 2014035

May 21, 2014

Appendix G. Environmental Compliance Plan

Table of Contents

I.	Overview	Page 3
II.	B-Series Industravac	Page 4
III,	Site Specific Operation and Maintenance Plan	Page 5
	Appendix A - Industravac Dimensional Data	Page 6
	Appendix B – Daily Operational Checklist	Page 8
	Appendix C – Monthly Operational Checklist	Page 9
	Appendix D – Generic Operation and Maintenance Plan from Manufacturer	Page 10

Appendix G. Environmental Compliance Plan

I. Overview

General Information:

Pro-Mac Machines, Inc. will be authorized to operate a beryllium machine shop according to their up-coming air construction permit. They produce high tolerance components manufactured from beryllium and other specialty metals. Equipment used in beryllium machining is a SHARP Model 4328SX, Vertical Milling Machine, as backup contingency vertical milling machines are the Cincinnati Milacron Arrow 500 and the Cincinnati Milacron Arrow 750 and the only lathe to be used is the Cincinnati Milacron Falcon 300.

Dust and chips generated by the SHARP Model 4328SX, Vertical Milling Machine or by one of the other 3 machines are collected by vacuum pickup lines at each tool point, only one machine will operate at a time. Beryllium emissions generated from the machining will be controlled by an emission control system which consists of a Spencer Industravac Model SB-515 vacuum type dust collector with baghouse, cyclone and an inline HEPA filter (99.9% design efficiency) and exhausted through the vent.

II. **B-Series Industravac**

General Information:

The B-Series Industravac is manufactured by The Spencer Turbine Company and was installed by Machine Tool Finance. The Spencer Industravac Model SB-515 vacuum type dust collector consists of baghouse, cyclone, and inline HEPA filter (99.9% design efficiency). Please see Figure 1 in Appendix A for the location of the control devices. The Spencer Industravac operates at a design air flow rate of 600 SCFM.

Specific Information:

Vacuum Producer:	3500 RPM 5, 6, or 7 stages 6” dia. Outlet Standard overhung construction
Motor:	Open drip-proof 1.15 service factor 230 volt 3 phase 60 hertz 3500 RPM, 15 Horsepower
Separator:	75 sq. ft. Filter bag area Cotton sateen filter bag material 29 filter bags Filter bag catalog number 4380-N Manual bag shaker 7.5” cu. Ft. capacity removable dirt can
Available Options:	Cotton Twill Equalizing line with one liner dirt can Discharge silencer Discharge throttling valve
Materials of Construction:	Casing ASTM A569 hot rolled steel Impellers: 5052-H34 Aluminum Shaft: AISI 1045 hot rolled bar steel Finish: Semi-gloss enamel over red oxide primer
Separator:	Shell and dirt can: ASTM A569 hot rolled steel Intake section lining: Abrasive resistant steel Finish: Semi-gloss enamel over red oxide

II. **B-Series Industravac continued:**

General Information continued:

Performance:	Average sound pressure level: 80 dBA at 3 feet Maximum vibration: 1.5 mils peak to peak Average filtration efficiency: 99.9% at 3 Microns

III. Site Specific Operation and Maintenance Plan

The site specific maintenance and inspections are broken down into daily and monthly requirements listed below. The overall or generic Operation and Maintenance Plan is found in Appendix D – Generic Operation and Maintenance Plan and is from page 7 of the Factory Manual. Source is this link; http://www.spencerturbine.com/files/UU4.1.pdf.

Note: These requirements are for only the days and months when Beryllium will be or has been machined.

Daily:	Upon startup the outlets of the vacuum system shall be checked for vacuum flow. All vacuum lines that are not in use shall be plugged. The baghouse and HEPA filter shall be checked daily upon startup by looking through the observation window. Please see Appendix A for Sketch and Appendix B for Daily Operational Checklist.
Monthly	Checks shall be performed by opening the observation door on the baghouse (Appendix A) and visually inspecting the bag collection system. Visually inspect the collection can to determine the remaining capacity. Record these observations in Appendix C – Emission Control System Operation Monthly Checklist.

Appendix A

Industravac Dimensional Data

B–SERIES INDUSTRAVAC DIMENSIONAL DATA

Dimensions Certified For

Installation: SARASOTA, FL

Customer: MACHINE TOOL FINANCE

Customer Order No.: 5469

Spencer Order No.: 311058

By: JWG Date: 10-4-89

B–SERIES INDUSTRAVAC CATALOG NO.: PB-515 MOD

PERFORMANCE DATA

Volume: 600 SCFM

Vacuum: 4.5 In. Hg

Discharge Pressure: 14.7 PSIA

Inlet Temperature: 70 °F

MOTOR DATA

Horsepower: 15

RPM: 3500

Voltage: 230/460 Volts 3 PH 60 Hz

Enclosure: ODP

Frame: 215TY

SEPARATOR DATA

Filter Area: 75 FT²

Filter Bag Quantity: 29

Filter Bag Cat. No.: 4380-N

Filter Bag Material: COTTON TWILL

THE SPENCER TURBINE COMPANY
600 Day Hill Road
Windsor, CT 06095
(203) 688-8361 Telex: 9-9281

7

Figure 1

Appendix B

Daily Operational Checklist

Example

Spencer Vacuum Daily Check List			
Date	Time	Viewer	Site Glass Viewing (Description)

Appendix C

Monthly Operational Checklist

Monthly Operational Checklist

1. Open observation door on baghouse and check condition of bags _____

2. Check remaining capacity of dirt collection can _____

3. Perform all daily operational checks _____

_____ _____

Date Signature

Appendix G. Environmental Compliance Plan

Appendix D

Generic Operation and Maintenance Plan from Manufacturer