



May 24, 2015

Jeanie Bourke, CEO/LPI/Plan Reviewer

City of Portland  
Planning & Urban Development / Inspections Division  
389 Congress St. Rm 315  
Portland, ME 04101

Re: Building Permit Application  
Zootility Tools  
170 Anderson Street

Dear Jeanie,

In support of Zootility Tools' application for Building Permit approval please accept this supplemental letter that addresses the "Fire Department's Requirements" for the submission. We have noted EXIT, Travel Distance and Dead End criteria / location on the submitted plans. The remaining requirements are noted below.

Contact info for Applicant and Architect

Applicant:  
Zootility Tools  
c/o John Gardiner  
170 Anderson Street  
Portland, ME 04101  
office: 207-887-9509  
mobile: 207-272-8797  
john@zootilitytools.com

Architect & Authorized agent for the Applicant:  
Garrison Consulting  
Matthew Winch, Architect  
41 Edgewood Ave  
Portland, ME 04103  
(207) 450-0750  
[matthewwinch@earthlink.net](mailto:matthewwinch@earthlink.net)

**Summary of work:**

Renovation of existing Unit #3 tenant space to provide new 10'-0" interior partitions throughout the space. New finished spaces will include a defined manufacturing area, a "Tumbler Room" to house a noisy piece of finish equipment, a separated loading dock, an enlarged accessory office area and a new bathroom / shower. As part of the original shell core work proposed to be completed there was a demising wall shown between Unit #2 and Unit #3.

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41 Edgewood Avenue Portland, ME 04103  
(207) 450-0750  
matthewwinch@earthlink.net

This demising wall was never constructed. Current plans now incorporate these two spaces as one single user tenant space

**Square Footage info:**

Renovation / expansion within existing - 63,193SF footprint.

Existing Zootility Tools space – 3,520SF

Total completed Zootility Tools space – 7,000 SF +/-

**Fire Protection:**

The existing building has a supervised NFPA 13 sprinkler system, rated EXIT access corridors and a monitored fire alarm system. Sprinkler drops will be provided per NFPA 13 where new finished ceilings are proposed within the existing building volume

**Life Safety Plan:**

Given the rather straightforward nature of the plan submittal, life safety information has been shown on the plan. Travel distances (dead end, common path and Max Travel) are noted well under requirements and on the floor plan itself. Existing EXIT sign emergency lighting and fire alarm device locations are noted. New EXIT sign emergency lighting and fire alarm devices are also indicated. Smoke detectors and fire extinguishers are not required.

NFPA 101 and IBC 2009 Code Summary (IBC Items in **BOLD**):

Use Type – Manufacturing / **Factory – 1**

Occupant Load (Based on 100SF gross per person) – 60 calculated, 18 to 25 actual / **Same as NFPA**. Reduction in occupant load for actual based on various equipment used in manufacturing.

Means of Egress – 2 required, 4 provided / **2 Required, 4 provided**

Means of Egress Components:

Doors – not less than 32", all doors provided 36" openings / **Same as NFPA**.

Stairs – NA

Hallways – 8'-0" (existing width), 42" allowed for spaces under 50 person capacity / **36" allowed for spaces under 50 persons, 44" for all corridors over 50 persons..**

Means of egress remoteness 1/3 diagonal of 115'-0" (38'-0"), 53'-0" provided / **Not Applicable**.

Travel Distance:

MAX Travel – 250'-0" allowable, 103'-6" provided / **250'-0" allowable, 103'-6" provided**

Common Path – 100'-0" allowable, 72'-0" provided / **100'-0" allowable, 72'-0" provided**

Dead end Corridor – 50'-0" allowable, 23'-0" provided / **50'-0" allowable, 23'-0"**

**provided**

Illumination of Means of Egress – Existing artificial lighting provides the minimum requirements / **Same as NFPA**.

Sprinkler Systems: 40.3.2 of NFPA does not require a sprinkler system / **IBC requires a sprinkler system for all F-1 Occupancies over 12,000 sf of fire area**. As noted in the summary above, a full NFPA 13 system is currently present in the building.

Emergency Lighting – Required

Protection of vertical openings – Required, but Not Applicable / **Same as NFPA**

Detection, Alarm and Communication – Required. An addressable system is currently present in building.

Portable fire extinguishers are not required – However 2 are provided (one at front door, one at EXIT access corridor near the rear egress door) / **Same as NFPA**

Corridors / **EXIT Passageways** – Exits that lead to a corridor serving as an exit access corridor or exit passage way shall be constructed with a 1HR fire resistance rating. **Same as NFPA**.

**Exterior Storage Tank:**

A small exterior nitrogen storage tank is proposed along the northerly side of the building. See the attached specification for the tank. This tank will sit just about 2'-6" off the exterior face of the building and would be enclosed in a screen fence as shown on the attached plans. The tank itself is 5'-0" in diameter and will be over 10'-0" from the northerly property line once installed and in place. NFPA 59 has a requirement that the location of exterior tanks be at 5'-0" from a property line, a piece of criteria that this location more than adequately meets.

Should there be any questions regarding this submission please do not hesitate to contact us.

Thank you for your prompt review of this submission.

Sincerely,



Matthew G Winch  
Principal

# PERMA-CYL® 3000 HP

HIGH PRESSURE – HIGH CAPACITY

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The innovative Perma-Cyl® 3000HP MicroBulk Storage System is the latest addition to the Perma-Cyl product line of fast fill at-site MicroBulk storage vessels. Designed for configuration to any gas application, the Perma-Cyl 3000HP system is flexible to supply service from low pressure liquid nitrogen to high pressure, high flow gas supply. The relief valve setting is 350 psig (24.1 barg), and with our industry-exclusive *configure to order* plumbing you can build your own Perma-Cyl 3000HP system to meet your distribution practice and your customer's needs economically.

The Perma-Cyl 3000HP system comes with all the standard Perma-Cyl system features. Alternatively, this model can be supplied with a vacuum-insulated bottom with drawal connection in the *configure to order* process, keeping the lead time to a minimum.

When filled with the Orca™ MicroBulk Delivery System, the Perma-Cyl 3000HP system is designed for a safe automatic shut-off with no filling losses under normal operating conditions. The Perma-Cyl series is designed to store liquefied gas contents for long periods of time without venting – thus, limiting product losses during periods with little or no use.

## PRODUCT HIGHLIGHTS

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- Fast accurate fills
  - Automatic fill shut-off works with Orca delivery system
  - Top fill circuit to optimize fill time
- Cyl-Tel® Liquid Level Gauge
  - Digital and accurate
  - Telemetry ready for Onsite® and Data Online™
  - Built-in user-selectable scales
- Easy to use instruments and controls
  - Located at user height
  - Single-adjustment metered combo regulator
  - Isolation valves for regulator and level gauge
- Long-life low-maintenance
  - Stainless steel piping and outer vessel
  - Heavy-duty galvanized pallet base
- Any application - Any time
  - Choice of configurations to meet customer needs
  - Easy low-cost installation – outdoors or indoors (local codes permitting)
  - Service: N<sub>2</sub>/Ar/O<sub>2</sub>/CO<sub>2</sub>
  - VIP/MVIP/Python option for LN<sub>2</sub>
  - Optional external pressure builder/vaporizer



Pat. No. 6,799,429

# PERMA-CYL® 3000 HP

HIGH PRESSURE – HIGH CAPACITY

<b>CAPACITIES</b>		
Gross Volume	770 gal	2911 liters
Net Volume	715 gal	2707 liters
<b>Gas Storage Capacity (@ 1 Atm &amp; 68° F / 20° C)*</b>		
Oxygen	82,239 scf	2161 Nm <sup>3</sup>
Nitrogen	66,592 scf	1750 Nm <sup>3</sup>
Argon	80,425 scf	2115 Nm <sup>3</sup>
Carbon Dioxide	52,954 scf	1390 Nm <sup>3</sup>
<b>GENERAL SPECIFICATIONS</b>		
Relief Valve Setting / MAWP	350 psi	24.1 bar
Overall Height w/ Piping	122 in	3099 mm
Width w/ Lab Base	61 in	1549 mm
Tank Diameter	59 in	1499 mm
Tare Weight	3300 lbs	1497 kg
<b>PERFORMANCE</b>		
Normal Evaporation Rate (% per day)**		
Nitrogen	1%	1%
Oxygen & Argon	0.62%	0.62%
Gas Supply Rate		
	1350 scfh	35.4 Nm <sup>3</sup> H
High-Flow Option (side mount)	2000 scfh	52.4 Nm <sup>3</sup> H
<b>CONSTRUCTION</b>		
Design & Manufacturing Code	ASME Sec. VIII Div. 1	
Outer Vessel	Type 304 SS	

**Footnotes:** Specifications subject to change without prior notice.

Patents: 5,787,942 • 5,954,101 • 6,799,429.

\*Values are based on net capacity at 0 psig (0 barg). See inside back page of Chart's MicroBulk Systems Product Catalog (P/N 11926802) for conversion densities.

\*\*Values are based on gross volume.

