Everett Ship Repair

Notice of Construction Application for Order of Approval for Upland Blast and Spray Area and Third Dry Dock at Everett, Washington Facility

This Notice of Construction Application for Order of Approval submittal consists of several documents, listed below:

A. Notice of Construction Application for Order of Approval Form 50-125P
B. Additional Notice of Construction Application Requirements
    a. SPRAY COATING OPERATIONS
    b. BAGHOUSES AND CARTRIDGE-TYPE DUST COLLECTORS
C. Project Description
D. Vendor and Manufacturer Information
E. Emissions Estimate
F. State Environmental Policy Act (SEPA) Addendum
G. Meteorological and Dispersion Modeling Protocol and Results Report

Questions or requests for additional information can be directed to:

Marie E. Piper

Cascade Environmental Management

316 SE Pioneer Way, #294

Oak Harbor, WA 98277

(360) 672-0088

MarieatCascade@gmail.com

Jon Shaton

Everett Ship Repair

2730 Federal Ave

Everett, WA 98201

Phone: (360) 322-4562

JonS@everettshiprepair.com

Date submitted to Puget Sound Clean Air Agency: September 26, 2025

CASCADE ENVIRONMENTAL MANAGEMENT

Attachment A

Notice of Construction Application for Order of Approval Form 50-125P

AGENCY USE ONLY	NOC#:	REG#:	Date Fee Pd:	Eng. Assigned:

PUGET SOUND
Clean Air Agency

1904 3rd Ave #105, Seattle, WA 98101
206-343-8800
pscleanair.gov

NOTICE OF CONSTRUCTION APPLICATION FOR ORDER OF APPROVAL

The following information must be submitted as part of this application packet before an Agency engineer is assigned to review your project.

SECTION 1. FACILITY INFORMATION

Business Name
Everett Ship Repair, LLC

Equipment Installation Address	City	State	Zip
2730 Federal Ave.	Everett	WA	98201

Is the business registered with the Agency at this equipment installation address?

☒ Yes. Current Registration or AOP No. 30287 ☐ No, not registered ☐ Unknown

Business Owner Name
Ice Cap, LLC

Business Mailing Address	City	State	Zip
5400 Cameron Rd	Freeland	WA	98249

Type of Business
Marine Construction and Repair.

Is the installation address located within the city limits?

☒ Yes ☐ No

NAICS Code	NAICS Description
336611	Ship Building and Repairing

Contact Name (for this application)	Phone	Email
Jon Shaton	251-605-8808	jons@everettshiprepair.com

Description for Agency Website

Provide a 1-2 sentence simple description of this project. See examples www.pscleanair.gov/176

Addition of third dry dock and an uplands paint/blast enclosure.

SECTION 2: REQUIRED APPLICATION PACKET ATTACHMENTS

1) **Process flow diagram**
☒ YES, attached. ☐ NO, not attached. This application is incomplete

2) **Emission estimate**. Emission rate increases for all pollutants.
☒ YES, attached. ☐ NO, not attached. This application is incomplete.

3) **Environmental Checklist** (or a determination made by another Agency under the State Environmental Policy Act) www.pscleanair.gov/DocumentCenter/View/170
☒ YES, attached. ☐ NO, not attached. This application is incomplete.

SECTION 2: REQUIRED APPLICATION PACKET ATTACHMENTS (CONT)

4) Attach **equipment form**(s) applicable to your operation. Forms are available online at www.pscleanair.gov/179
☒ YES, attached. ☐ NO, not attached. This application is incomplete.

5) **Detailed Project Description**
The project description must include a detailed description of the project, a list of process and control equipment to be installed or modified, a description of how the proposed project will impact your existing operations (if applicable), and measures that will be taken to minimize air emissions.

Detailed description of the proposed project included in packet?
☒ YES, attached. ☐ NO, not attached. This application is incomplete.

6) **$3,000 filing fee** (nonrefundable)
☐ PAY BY CHECK – Attached and made payable to **Puget Sound Clean Air Agency**
☒ PAY BY CREDIT – Accounting technician will contact person identified below for payment information

Contact Name:	Contact Email:	Contact Number:
Ginger Turner	gingert@everettshiprepair.com	425-609-3775

SECTION 3: PROCESS AND CONTROL EQUIPMENT (attach additional pages if necessary)

Process Equipment		Does this equipment have air pollution control equipment?	**Air Pollution Control Equipment**	
# of Units	Equipment Type & Design Capacity		# of Units	Equipment Type
	See attached	☐ Yes ☐ No		
	Technical Support	☐ Yes ☐ No		
	Document	☐ Yes ☐ No		
		☐ Yes ☐ No		

SECTION 4: CERTIFICATION STATEMENT

I, the undersigned, certify that the information contained in this application and the accompanying forms, plans, specifications, and supplemental data described herein is, to the best of my knowledge, accurate and complete.

Jon Shaton Digitally signed by Jon Shaton Date: 2025.09.26 15:49:39 -07'00'
Signature _____ Date

Jon Shaton
Printed Name _____ Title

SECTION 5: APPLICATION SUBMITTAL

EMAIL application and attachments to:
NOC@pscleanair.gov

-OR-

MAIL application, payment, and attachments to:
Puget Sound Clean Air Agency
ATTN: NOC Application Submittal
1904 3rd Ave, Suite 105 - Seattle, WA 98101

Attachment B

Additional Notice of Construction Application Requirements
for
SPRAY COATING OPERATIONS

and

ABRASIVE BLASTING

and

BAGHOUSES AND CARTRIDGE-TYPE DUST COLLECTORS

PUGET SOUND
Clean Air Agency

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206-343-8800
pscleanair.gov

NOC APPLICATION SUPPLEMENTAL FORM

Spray Coating Operations

This application is for activities or equipment that is:

- ☒ New (including existing, unpermitted equipment)
- ☐ Physical or operational modification of existing equipment
- ☐ Relocation of existing equipment

This application is for activities or equipment that is:

- ☐ Aerospace
- ☐ Wood furniture
- ☐ Motor vehicles
- ☒ Other, please describe: Marine vessels, parts, and modules.

Note: Spray coating operations for motor vehicles may instead qualify for the General Order of Approval - Automotive Refinishing Operations Spray Booths. www.pscleanair.gov/AutobodyGeneralOrder

Hours of operation per day: 20 Hours of operation per year: 7300

Spray Coating area is:

- ☐ Spray booth/room
- ☒ Outdoor spray area, describe enclosure: Enclosure for blasting and coating operations on uplands area of facility.
- ☐ Prep area
- ☐ Other, please describe: _____

Design Specifications

Volume of enclosure (cubic feet): <70,275

Exhaust flow rate (cfm): 20,000 - 40,000

Make: Big Top Manufacturing or equivalent Model: Custom fabric structure with Conex units

Exhaust System Overspray Control

☒ Dry filter system:

Dry filter make: N/A Dry filter model: Merv 16

Manometer or differential pressure gauge installed: ☒ Yes ☐ No

☐ Water wash system:

Water flow rate (feet/minute): _____

Flow meter installed: ☒ Yes ☐ No

Form 50-114 | 03/20

Spray Gun Parameters

Type of spray equipment:

- ☒ Air-assisted airless
- ☒ Airless; specify viscosity of coatings: when recommended by manufacturer
- ☐ Electrostatic
- ☒ High volume low pressure (HVLP)
- ☐ Low volume low pressure (LVLP)
- ☐ Other, please describe: _____

Stack Parameters

☐ Stack information is specified on NOC Application Supplemental Form for proposed control device

☒ Stack information specified below:

Stack damper/rain guard:

☐ None ☐ Hexagonal ☐ Stack within stack ☐ Butterfly ☐ Inverted Cone

☒ Other (specify): Varies, above options only

Stack diameter (inches): 28 Stack height above ground (feet): 35

Building Dimensions of project location:

Building Height (highest point of roof) (feet): 25

Building Width (feet): 40 Building Length (feet) 80

Required Attachments

1. Table (Excel file preferred) containing proposed annual usage (gallons/year) of each coating, solvents and other VOC containing materials. Coatings, solvents, and VOC containing materials must be identified with manufacturer, name, product ID, and VOC content (lb/gal)
2. Safety Data Sheets (SDS) for each coating to be applied.
3. Environmental Data Sheets (EDS), Product Data Sheets (PDS), or SDS which show the VOC content (lb/gal) of each coatings and solvents to be applied or used during surface preparation and surface coating **Unchanged from current permit.**

PUGET SOUND
Clean Air Agency

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pscleanair.gov

NOC APPLICATION SUPPLEMENTAL FORM

Baghouse, Cartridge-Type Dust Collector, and Fabric Filter

This baghouse or cartridge-type dust collector is:

- ☒ New (including existing, unpermitted equipment)
- ☐ A replacement of an existing baghouse or cartridge-type dust collector
- ☐ A substantial alteration of an existing baghouse or cartridge-type dust collector
- ☐ Relocation

Specify the source of the particulate matter being controlled: Dry Dock #3 (DD-3) - Hercules

Hours of operation per day: 20 Hours of operation per year: 7300

Inlet Gas Stream Characteristics

Inlet Flowrate (acfm): 40,000 - 80,000

Inlet Particulate Concentration (gr/dscf): varies

Temperature Range of Inlet Gas Stream (°F): 45 - 100

Moisture Range of Inlet Gas Stream (%): <50%

Outlet Gas Stream Characteristics

Outlet Flowrate (acfm): 40,000 - 80,000

Outlet Particulate Concentration (gr/dscf): 0.0002

Temperature Range of Outlet Gas Stream (°F): 45 - 100

Moisture Range of Outlet Gas Stream (%): <50%

Design Specifications

Make: Rapid Prep, Blast One, or equivalent Model: 40000 CFM electric (qty. 1 or 2 at a time)

Filter Fabric Material: Spunbond Polyester / PTFE Membrane

Filter Cleaning Method:

- ☐ Mechanically shaken
- ☐ Manually shaken
- ☐ Reverse air
- ☒ Pulse-jet
- ☐ Other: _____

Air to Cloth Ratio (acfm/ft2): ~5.14:1 to ~6.23:1 (varies with make/model)

Baghouse Fan Configuration

- ☒ Induced draft
- ☐ Forced draft
- ☐ Other: _____

Stack Parameters

Exhaust stack parameters (Leave blank for non-ventilated spray areas):

Stack diameter (inches): 36 Stack height above ground (feet): 75

Building Dimensions of project location:

Building Height (highest point of roof) (feet): 67

Building Width (feet): 170.5 Building Length (feet) 820

Stack damper/rain guard:

☐ None ☐ Hexagonal ☐ Stack within stack ☐ Butterfly ☐ Inverted Cone

☒ Other (specify): May vary, but will use one of the above.

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NOC APPLICATION SUPPLEMENTAL FORM

Baghouse, Cartridge-Type Dust Collector, and Fabric Filter

This baghouse or cartridge-type dust collector is:

- ☒ New (including existing, unpermitted equipment)
- ☐ A replacement of an existing baghouse or cartridge-type dust collector
- ☐ A substantial alteration of an existing baghouse or cartridge-type dust collector
- ☐ Relocation

Specify the source of the particulate matter being controlled: Paint Spray and Abrasive Blasting Tent

Hours of operation per day: 20 Hours of operation per year: 7300

Inlet Gas Stream Characteristics

Inlet Flowrate (acfm): 20,000 - 40,000

Inlet Particulate Concentration (gr/dscf): varies

Temperature Range of Inlet Gas Stream (°F): 45 - 100

Moisture Range of Inlet Gas Stream (%): <50%

Outlet Gas Stream Characteristics

Outlet Flowrate (acfm): 20,000 - 40,000

Outlet Particulate Concentration (gr/dscf): 0.0002

Temperature Range of Outlet Gas Stream (°F): 45 - 100

Moisture Range of Outlet Gas Stream (%): <50%

Design Specifications

Make: Rapid Prep, Blast One, or equivalent Model: 20000 - 40000 CFM electric

Filter Fabric Material: Spunbond Polyester / PTFE Membrane

Filter Cleaning Method:

- ☐ Mechanically shaken
- ☐ Manually shaken
- ☐ Reverse air
- ☒ Pulse-jet
- ☐ Other: _____

Air to Cloth Ratio (acfm/ft2): ~5.14:1 to ~6.92:1 (varies with make/model)

Baghouse Fan Configuration

- ☒ Induced draft
- ☐ Forced draft
- ☐ Other: _____

Stack Parameters

Exhaust stack parameters (Leave blank for non-ventilated spray areas):

Stack diameter (inches): 28 Stack height above ground (feet): 35

Building Dimensions of project location:

Building Height (highest point of roof) (feet): 25

Building Width (feet): 40 Building Length (feet) 80

Stack damper/rain guard:

☐ None ☐ Hexagonal ☐ Stack within stack ☐ Butterfly ☐ Inverted Cone

☒ Other (specify): May vary, but will use one of the above.

Attachment C

Project Description

TECHNICAL SUPPORT DOCUMENT
FOR
NOTICE OF CONSTRUCTION APPLICATION FOR ORDER OF APPROVAL
FOR
UPLAND BLAST AND SPRAY AREA AND THIRD DRY DOCK
AT
EVERETT SHIP REPAIR

PROJECT DESCRIPTION

Everett Ship Repair (ESR) is located on a former shipyard site at 2730 Federal Avenue in Everett, Washington. A site location and vicinity aerial view is attached as Figure 1. The facility layout is attached as Figure 2.

Shipyard services encompass repair, overhaul, and construction on vessels and vessel modules. Shipbuilding and repair operations include abrasive blasting, spray, brush, and roller coating, welding, grinding, pressure washing, hydroblasting, heavy lift barge vessel hauling and launching (dry docks) and supporting activities. Currently, abrasive blasting and surface coating operations are conducted on the two dry docks with enclosures and air pollution control. **ESR is proposing to conduct some of their blasting and surface coating operations in an enclosure located on the upland area of their facility using the same types of blasting grit, coatings, and air pollution controls as currently used on the dry docks. A third dry dock is also proposed using the same types of blasting grit, coatings, and air pollution controls as currently used on the existing dry docks.**

Proposed Equipment

The primary emission sources are abrasive blasting and surface coating operations which are controlled via enclosures equipped with electric dust collectors with a minimum of MERV 16 filtration. The proposed dust collectors range in size from 20,000 CFM to 80,000 CFM, depending upon the project and location.

Abrasive blasting equipment includes storage hoppers, blast pots, blast nozzles, and dust collectors. Size and quantities of equipment are project dependent. Abrasive blasting media will include garnet, glass, steel shot, and steel grit. **No increase in the existing permit limits and conditions for abrasive blasting is needed.**

As with the existing operations, surface coating equipment may include spray guns, spray pumps, rollers, and brushes. **No increase in the existing permit limits and conditions for surface coating is needed.**

For modeling purposes, it is expected that 10% of the abrasive blasting and surface coating operations will be conducted in the upland enclosure with the remaining 90% conducted on the dry docks. It is also assumed 45% of the abrasive blasting and surface coating operations will be conducted on the new, larger dry dock (DD-3) with 22.5% of the abrasive blasting and surface coating operations being conducted on each existing dry dock, DD-1 and DD-2.

As currently done, the above equipment is also served by 1600 cfm, 540 bhp diesel-fired air compressors.

Figure 3 provides a process flow diagram for the equipment and operations.

The State Environmental Policy Act (SEPA) addendum (Port of Everett SEPA No. 2025-04) is attached and provides further details on the third dry dock and upland blast and spray area enclosure.

Estimated Hours of Operation

Operations could be in use up to 20 hours per day, 7 days per week, and 52 weeks per year. For estimating potential to emit, operations are assumed to occur 8,760 hours per year.

Estimated Installation Date

Immediately upon approval.

Best Available Control Technology (BACT)

Recent BACT determinations for abrasive blasting at similar shipyards stipulate 100% containment enclosures with dust collectors providing negative air in the local work area, with dust collectors using MERV 16 filters.

Table 1 provides a summary from a recent BACT determination for abrasive blasting for ESR.

Table 1. Summary of BACT Conditions for Abrasive Blasting

Pollutant	Emissions Limitation
PM TAC	• 99.97% reduction for 0.5 micron particle or larger and no visible emissions • No visible emissions from enclosure containing abrasive blasting • Abrasive material must not contain manganese, arsenic, cadmium or lead or any individual compound containing manganese greater than 1.35% percent by weight; arsenic, cadmium or lead in amounts greater than 0.1 percent by weight; or total chromium in amounts greater than 0.08 percent by weight

Source: Puget Sound Clean Air Agency, NOC Worksheet No. 11922.

The control of volatile organic compounds (VOCs) and volatile organic hazardous air pollutants (VOHAPs) from surface coating activities typically involve minimizing and limiting the VOC content of the marine coatings used. The Shipbuilding and Repair (Surface Coating) NESHAP (40 CFR Part 63, Subpart II) applies to major sources of hazardous air pollutants (HAPs). The rule limits the quantity of VOHAPs in the coating depending upon the category of the marine coating. This NESHAP does not apply to this facility as ESR will maintain Synthetic Minor Source status.

While many of the proposed coatings/thinners are the same as coatings/thinners used in other area shipyards, ESR is also proposing and continues to use several “substitute” coatings/thinners in order to maintain ethylbenzene impacts within Acceptable Source Impact Levels (ASILs).

Overspray is proposed to be controlled by 100% containment enclosures with dust collectors using MERV 16 filters.

Table 2 provides an excerpt from a recent BACT determination summary for spray coating for ESR. Furthermore, it is expected ESR’s current permit conditions, established in 2020 and 2022, still represent BACT and would be carried forward with the permit for these additional work areas.

Table 2. Summary of BACT Conditions for Spray Coating

Permitting Action	BACT for Spray-coating Operations
NC#11330 (2017) NC#11263 NC#11313 NC#11264 (2016) NC#11195 (2016) NC#10918 (2016) NC#10267 (2015)	▪ The spray coating operations shall be conducted in a complete enclosure such that all the air exhausted from the enclosure shall be controlled by a filtration system ▪ Enclosure vented to filtration system with minimum arrestance efficiency of 98.0 percent ▪ Use of higher transfer efficiency spray application equipment unless coating product data sheet specifies application of high solids coating requires use of airless spray guns. Airless spray guns are allowed under 9.16(d) if low viscosity and high solids coatings preclude the use of higher transfer efficiency spray equipment ▪ Best management practices for collecting and minimizing evaporation of VOC/organic toxic air contaminants – includes use of closed containers, capture of solvents used for spray gun cleaning, etc. ▪ Coatings shall comply with VOHAP limits in 40 CFR Part 63, Subpart II

Source: Puget Sound Clean Air Agency, NOC Worksheet No. 11922.

Toxics Best Available Control Technology (t-BACT)

Previous ambient air impact analyses of the facility indicate concerns with ethylbenzene and xylene emissions with standard marine coatings and thinners, and hexavalent chromium from abrasive blasting. While there are no control technologies specific to toxic air pollutant (TAP) emissions from shipyard surface coating operations, this facility would continue to use "substitute" coatings and thinners, where possible, to maintain ethylbenzene and xylene emissions below existing permit limits. And hexavalent chromium emissions based on abrasive blasting grit usage would remain below existing permit limits.

Emissions Estimate

Abrasive Blasting

At this time, all abrasive blasting is done on vessels on the dry docks moored at ESR's dock. The BACT determination dictates all abrasive blasting to be performed in 100% containment enclosures with dust collectors providing negative air in the local work area. Dust collectors use MERV 16 filters. This operation is unchanged with respect to maximum permitted grit usage, grit types, and emissions. These current permit conditions are expected to be brought forward as conditions for the third dry dock and the new painting/abrasive blasting tent.

Surface Coating

At this time, all surface coating is done on vessels on the dry docks moored at ESR's dock. The latest BACT determination in 2022 stipulated all surface coating operations to be performed in 100% containment enclosures with negative air in the local work area. Filter assemblies use MERV 16 filters with MD-18F paint arrestor pre-filters. ESR tracks coating and thinner usage to maintain HAP emissions within Synthetic Minor Source status and TAP emissions to meet Small Quantity Emission Rates (SQERs) and Ambient Source Impact Levels (ASILs). Emissions from coating operations are unchanged from existing operations and the 2022 permitting of the second dry dock. The current permit conditions are expected to be brought forward as conditions for the third dry dock and the new upland painting/abrasive blasting tent.

Emissions Stack Parameters

Currently all emissions are vented through the dust collectors and ducted to permanent stacks on each dry dock. The DD-1 stack is 65' high with an unobstructed vertical exhaust and the DD-2 stack is 38' high with an unobstructed vertical exhaust. The proposed upland painting/abrasive blasting tent (PBT-1) stack is proposed to be 35' high with an unobstructed vertical exhaust. The proposed third dry dock (DD-3) stack is proposed to be 75' high with an unobstructed vertical exhaust. Figure 2 shows the stack locations for all three dry docks and PBT-1.

Dispersion Modeling

The dispersion modeling that represents ESR accompanies this application and technical support document. The modeling includes emission rates from all three dry docks and the upland painting/abrasive blasting tent operating simultaneously so as to represent a worst-case scenario. Additionally, project type and size variations can call for larger baghouses with increased exhaust flow rates. Hence, two emissions scenarios were modeled for the baghouses – one for a minimum baghouse CFM and another for a maximum baghouse CFM.

The 8,760 hours per year Potential to Emit emission rates for hexavalent chromium, ethylbenzene, and xylene and the respective modeled impacts as compared with Ambient Source Impact Levels are provided in Table 3. Ambient impacts remain below the respective ASILs.

Table 3. Modeling Summary for Everett Ship Repair

Toxic Air Pollutant	Averaging Period	Emission Rate for Averaging Period (lb/hr)	Maximum Impact for Higher CFM (ug/m^3)	Maximum Impact for Lower CFM (ug/m^3)	ASIL (ug/m^3)
Hexavalent Chromium	Annual	3.14E-07	2.64E-06	3.76E-06	4.00E-06
Ethylbenzene	Annual	6.17E-06	2.60E-01	3.70E-01	4.00E-01
Xylene	24-Hour	1.37E+00	7.08E+00	1.05E+01	2.20E+02

Additional details regarding the dispersion modeling analyses are found in the attached *Meteorological and Dispersion Modeling Protocol and Results Report.*

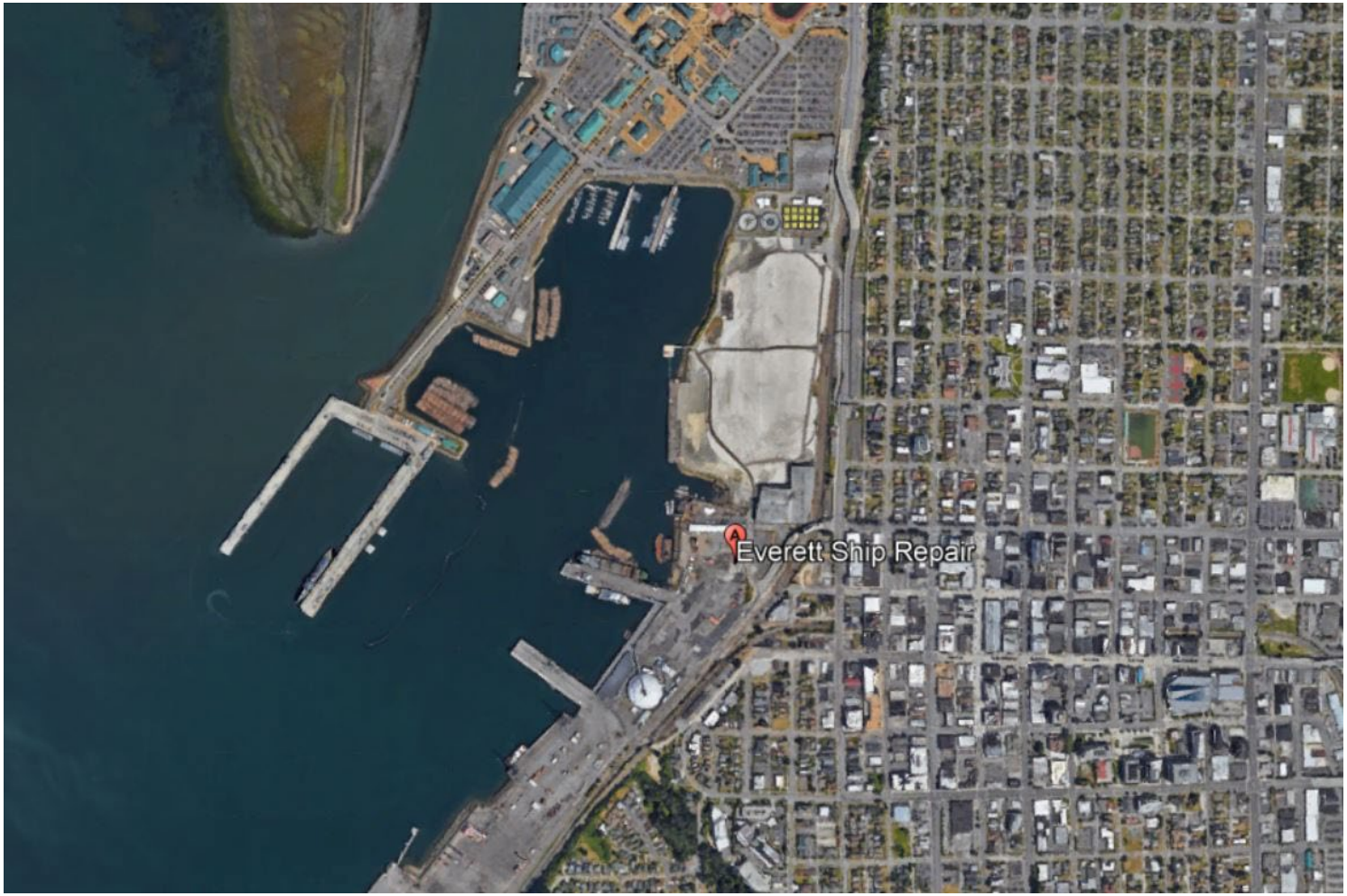


Figure 1. Site Location and Vicinity Aerial for Everett Ship Repair

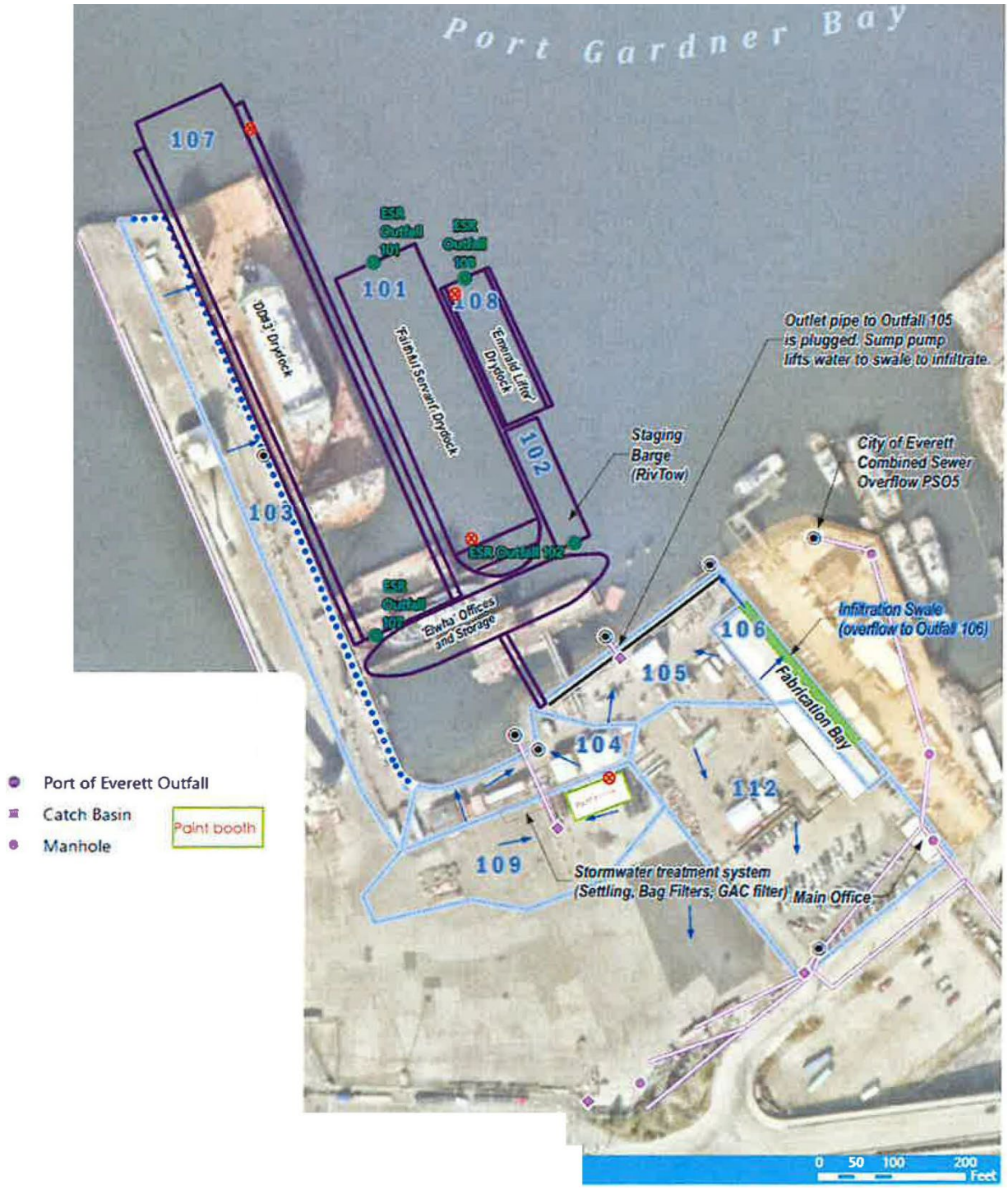


Figure 2. Everett Ship Repair Site Layout

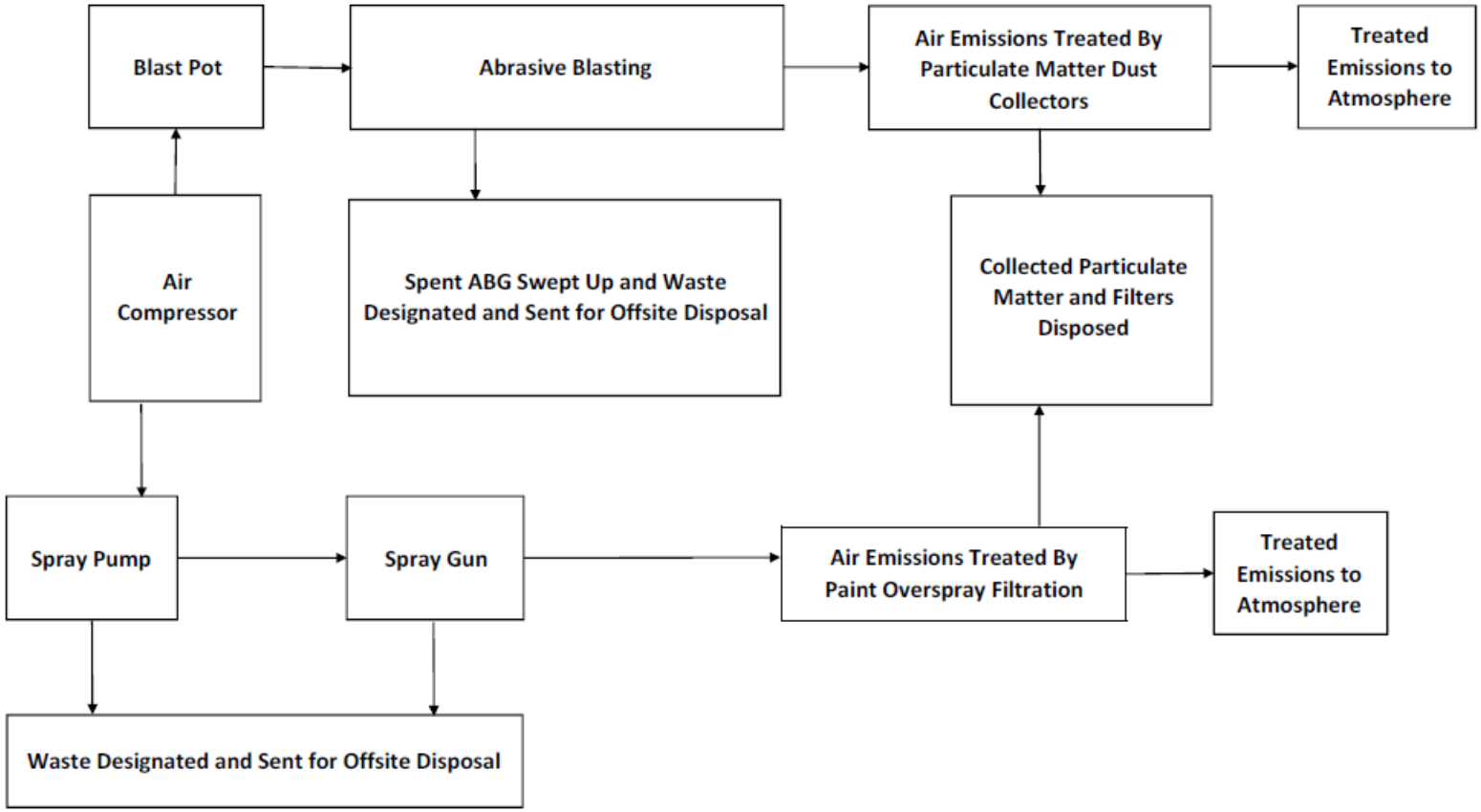
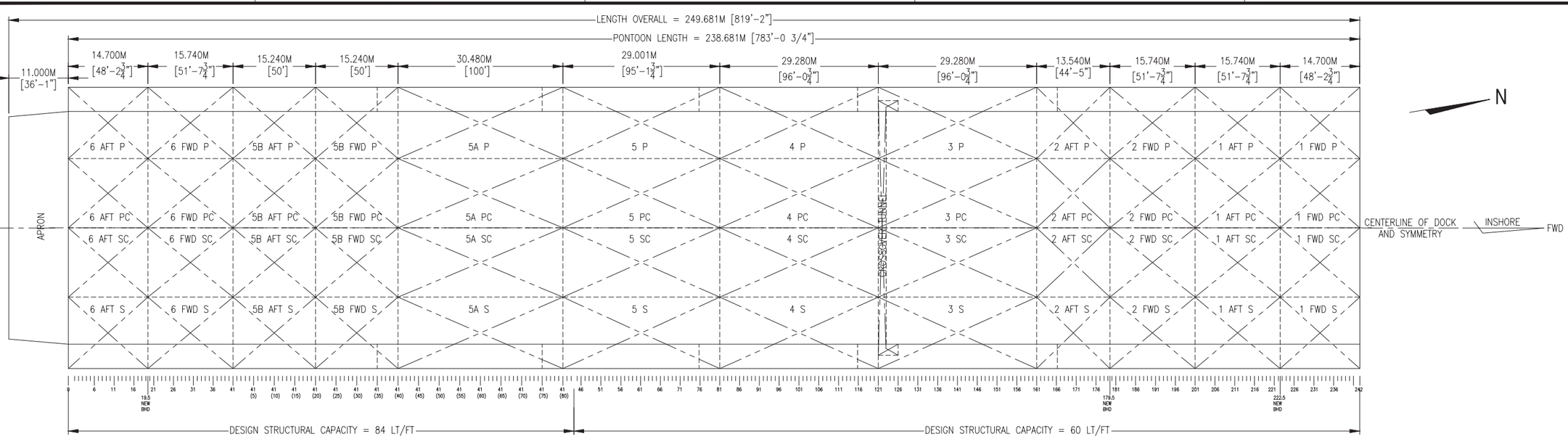


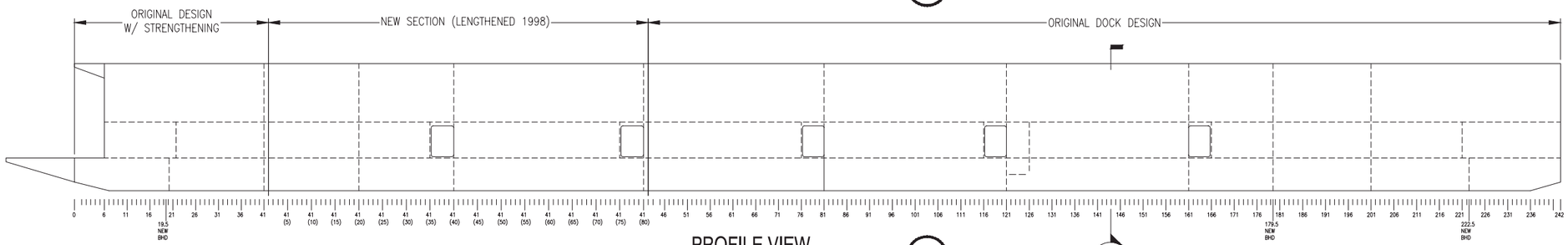
Figure 3. Process Flow Diagram for Blasting and Coating Operations

Attachment D

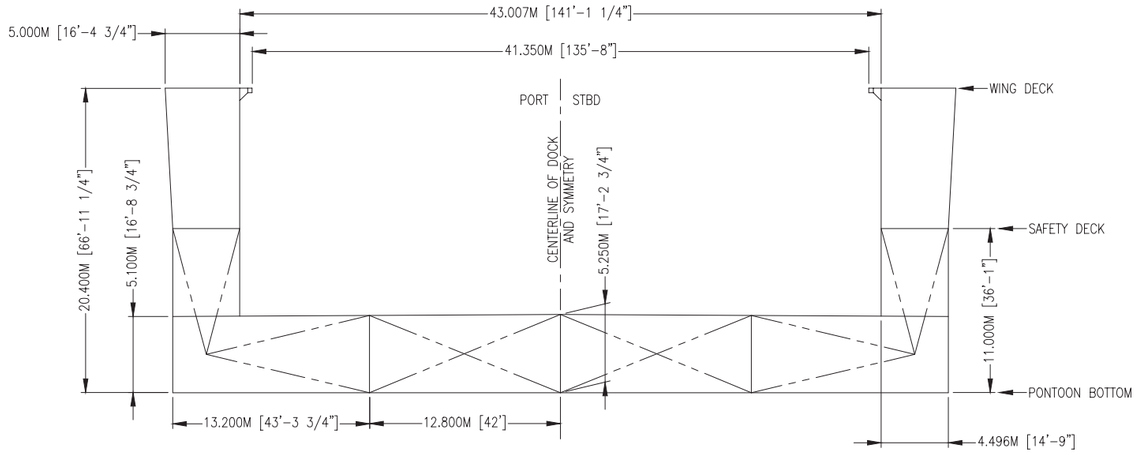
Vendor and Manufacturer Information



PLAN VIEW
SCALE 1 : 400 — C1



PROFILE VIEW
SCALE 1 : 400 — B1



SECTION
SCALE 1 : 200 — A-001 — A1

GENERAL

DELIVERED	11/18/83
SHIPYARD	KAWASAKI HEAVY INDUSTRIES, LTD., SAKAIDE WORKS, JAPAN
LENGTHENED	5/10/98 TO 11/30/98
SHIPYARD	NATIONAL STEEL AND SHIPBUILDING COMPANY
CLASSIFICATION –	✠ABS A1 FLOATING DRY DOCK
DOCK WEIGHT	17,328 LT
VCG	25.03 FT

LIFTING CAPACITY

NAVY CERTIFIED RATED CAPACITY (18 INCHES FREEBOARD)	35,000 LT
BUOYANT CAPACITY	48.3 LT/FT
ABS RATED LIFTING CAPACITY (12 INCHES FREEBOARD)	37,000 LT

1 : 400 — 0 5.0 10.000 20.000M

1 : 200 — 0 5.000 10.000M

HEGER DRY DOCK, Inc.
DRY DOCK ENGINEERS
DESIGN, INSPECTION AND CERTIFICATION
531 CONCORD STREET
HOLLISTON, MA 01746
(508) 429-1800

APPR | DATE | DESCRIPTION | SYM

SEAL

DES – | DRW JJB | CHK –
CHIEF ENG. WALEED SAYED
DATE: 10/06/2016

CLIENT NAME AND ADDRESS: NASSCO SAN DIEGO, CA

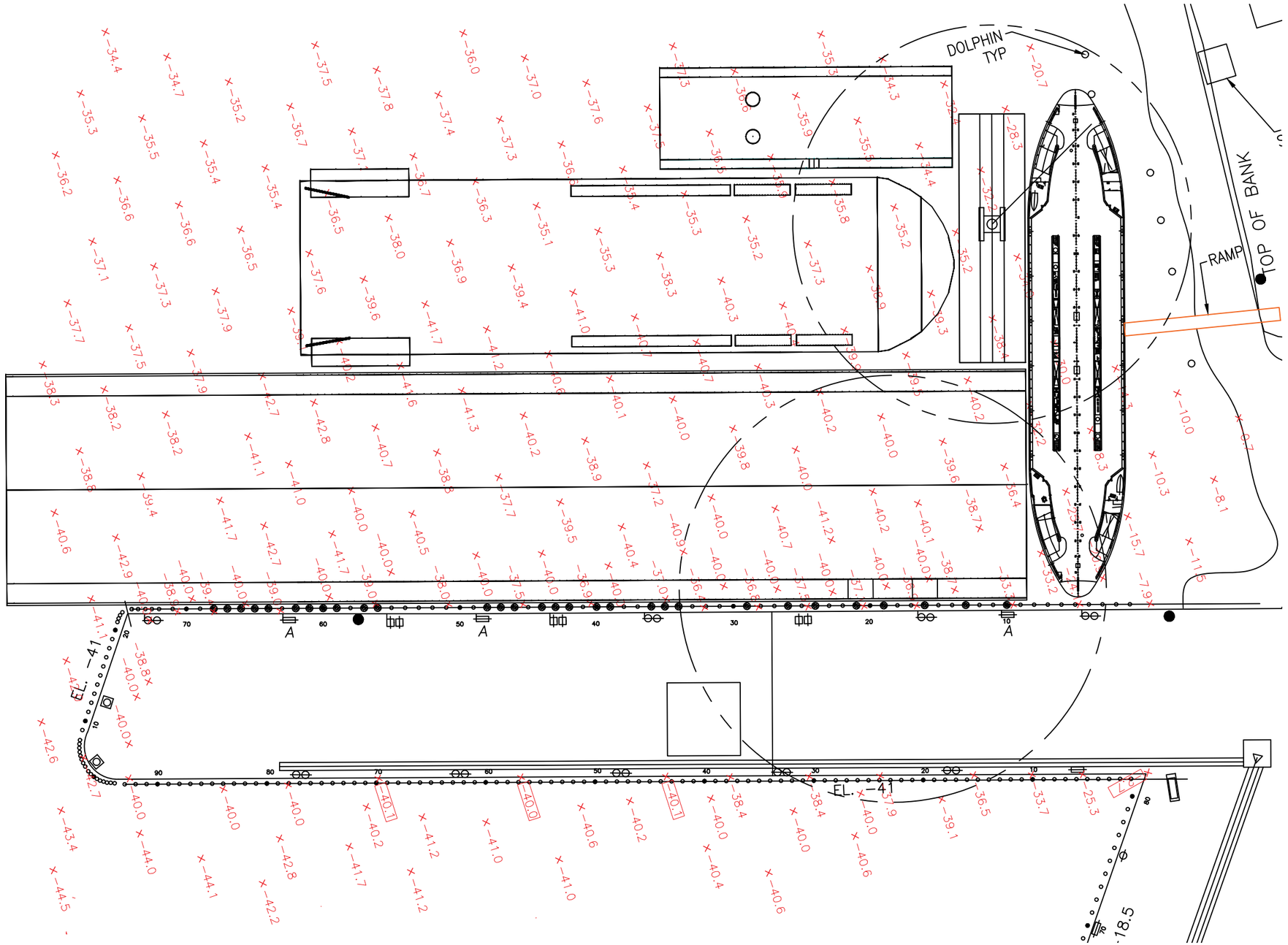
PROJECT TITLE: DEVELOP OVERHAUL SPECIFICATION FOR FLOATING DRY DOCK

DRAWING TITLE: GENERAL ARRANGEMENT

SCALE: AS NOTED
PROJECT NO.: 3966-D
CONSTR. CONTR. NO.

SHEET 1 OF 13

G-001



PLAN 1-4A

ESR YARD LAYOUT
SCALE: 1:1000

VESSEL	FREEBOARD
EMERALD LIFTER	*1'–0"*
RIVTOW	*9'–0"*
FAITHFUL SERVANT	*1'–0"*
DD#3	*1'–0"*
ELWHA	*~5'–8"*

REVISIONS

REV	ZONE	DESCRIPTION	BY	DATE
-	-	-	-	--/--/--

GENERAL NOTES

1. _____
2. _____

RESERVATIONS

No.	DESCRIPTION
1	

REFERENCES

No.	DWG No.	TITLE

Everett Ship Repair
2730 Federal Avenue
Everett, WA 98201
Office: (425) 609-3675
Web: everettshiprepair.com

TITLE
ESR YARD LAYOUT
WITH BUILDER AND BATHYMETRY

DWN BY	DATE	CHK BY	DATE	APV BY	DATE
DES	6/4/2025	__	__/__/2024	__	__/__/2024

SCALE	PROJECT NO	OFFICIAL NO
AS NOTED	_	_

DWG NO	REV	SHEET
_	P	1 of 1

RAPID PREP

FILT-AIRE 20,000 CFM DUST COLLECTOR

FEATURES

- **AIR VOLUME** 20,000 ACFM at - 10" W.G.
- **POWER SOURCE** 50 HP, TEFC motor with all controls in a NEMA 4 weather-proof enclosure
- **FRAME** Extreme heavy-duty steel frame with 6” x 12” fork lift pockets and certified 4 point overhead lifting frame. 6 heavy-duty drop and pin legs.
- **FILTRATION** 36 easy access filter cartridges, polyester/cellulose blend (80/20) high efficiency cartridges, air to cloth ratio 2.3/1, air to filter ratio 476 ACF, 8,800 square feet of filter media.
- **FILTER CLEANING** Continuous pulse jet filter cleaning.
- **FAN** Cincinnati Fan class III construction, belt driven with “Quick Adjuster” system. Fan includes heavy-duty outlet damper, inspection doors and drain valve.
- **MATERIAL DISCHARGE** 2 drum loading stations. 2 easy-access drum covers with cam style raising and lowering system to allow safe changing of drums. Isolation valves to close off discharge points included at each loading station. Isolation valves to close off discharge points included at each loading station.
- **AIR INLETS** 4-16" hose inlet connections at 5 ft. from the ground, with quick connections. Includes 2-16" caps for unused inlets.

STANDARD EQUIPMENT

- Paint – one color (custom lettering available)
- Sp-3 surface preparation, 2 coats of primer and a finish coat of industrial enamel
- Warranty – 1 year on all non-wear parts

OPTIONS

- 75 HP motor = 20,000 ACFM at 14" W.G.
- Soft start motor starter
- Quiet Cube package (90 Dba)
- Explosion proof options
- Pneumatic vibrators
- Inlet and outlet connections

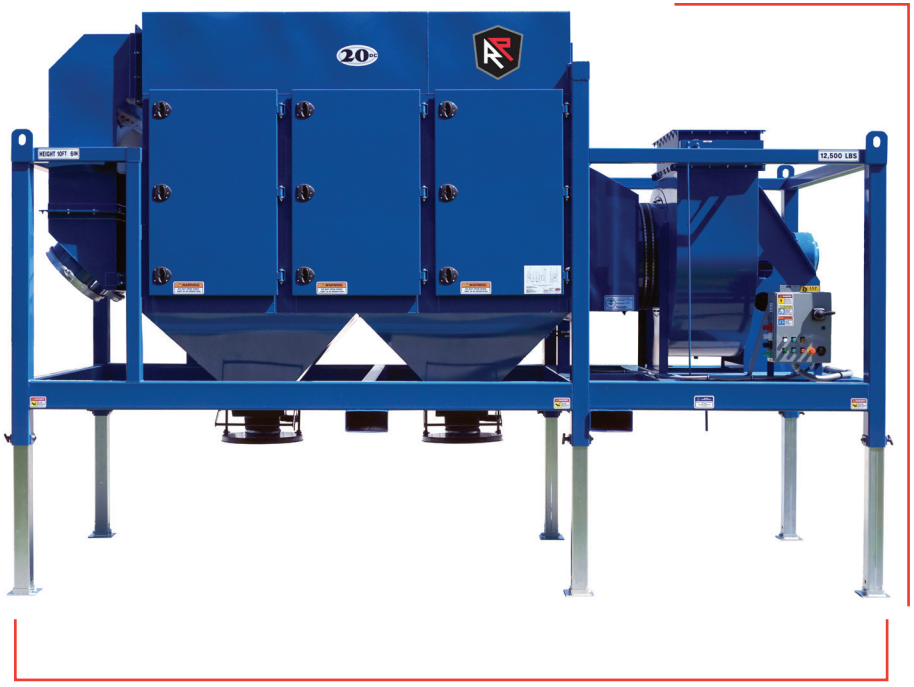
Service Centers: North Kingstown, RI || Suffolk, VA || El Cajon, CA || Lakewood, WA || 877.529.2124 || www.rapidprep.com

RAPID PREP

FILT-AIRE 20,000 CFM DUST COLLECTOR

Weight – 12,500 lbs.

Raised Height – 171"



Length – 247"

Stowed Height – 129"

Width – 98"

TECHNICAL DATA

FILTER CARTRIDGE SPECIFICATIONS

ITEM NUMBER: 1568906

Dimensions:	**Height:**	**26”**
	Outside Diameter:	**12.750”**
	Inside Diameter:	**8.375”**
Top End Cap:	**Material:**	**Electro Galvanized (22 ga)**
	Style:	**Open**
Bottom End cap:	**Material:**	**Electro Galvanized (22 ga)**
	Style:	**Open**
Gasket:	**1/2" x 1/2" x 10.25" ID Neoprene applied to one end**	
Inner Retainer:	**Electro galvanized expanded metal 3/8" x 5/8" (9.53 mm x 15.88 mm) 72% open area**	
Outer Retainer:	**Electro galvanized expanded metal 3/8" x 5/8" (9.53 mm x 15.88 mm) 72% open area**	
Filter Media Area:	**108 ft²**	
Media Type:	**Spunbond Polyester / PTFE Membrane**	
Permeability:	**7 cfm/ft² @ 0.5" w.g.**	
Maximum Temperature:	**180° F (82.22° C)**	

PARTICLE EFFICIENCY BY WEIGHT. TEST DUST: AC FINE

PARTICLE SIZE:	**0.3 micron----------**	**99.98%**
	0.5 micron----------	**99.99%**
	1.0 micron----------	**100 %**

RAPID PREP

P40-E DUST COLLECTOR

FEATURES

- AIRFLOW RATE: 40,000 CFM @ 16" Wg (fan curve between 26,000 and 56,000 CFM)
- EFFICIENCY: 99.9% @ 2 micron or .015 grains/acf
- FILTER ELEMENTS: Pleated polyester cartridge, vertical arrangement
- NUMBER OF ELEMENTS: 240
- FILTER MEDIA AREA: 7,200 sq. ft.
- AIR TO CLOTH RATIO: 5.56 @ 40,000 CFM
- CLEANING OF ELEMENT: Pulse-Jet / 35 CFM @ 80 PSI, Class IV, Type B, spark resistant construction, Adjustable outlet louver system (opt.)
- DUCTING CONNECT: 3 x 24" dia. inlets at rear of unit
- TYPE OF MOTOR: 125 HP Electric // 230/460 – 3 Ph.
- DUST REMOVAL: Hydraulic drive screw / 55 gallon drum with waste
- AIR REQUIREMENT: 35 CFM @ 80 PSI
- TRAILER MOUNTED DIMS: 8' W x 32' L x 10.5' T, tandem axle, pintle tow
- WEIGHT: 20,500 lbs
- LIFT DIAGRAMS: Spreader bar lift carriage system, engineered to NAVSEA requirements (opt.)

BLASTONE
SUPERIOR PERFORMANCE

20 DC CYCLONE

Standard Features

Filtration 27 top loading cartridges
Filter Cleaning Timed cycle reverse air pulse
Air Inlets Four 20" inlet ports, minimum two in use
Air to Cloth Ratio 2.85:1 at 20,000 cfm
Filter Media 7,020 sq. ft. moisture resistant cellulose resin material (standard)
Efficiency 99.8% at 0.5 micron particle after initial dust load MERV 12 initial rating
Material Discharge Hydraulic powered auger
Dimensions 131"H x 99"W x 339"L
Engine Cummins 2.8 L
Fan Non-Overloading, Spark Resisting
Air Flow Rates 20,000 cfm @ 12" w.c.
Fuel Consumption 4.8 Gallon per hour
Fuel Storage 60 gallons
Electrical System 12V dc
Weight 13,000 lbs. actual
Brakes Electric
Paint ETI Gray
Warranty One Year or 1500 hours
Whichever occurs first limited

Options

Diesel Powered
Liquid Cooled Tier 4 85hp
Electric Powered
60 HP 480 VAC 3 PH
Bi-powered
Filter
Standard Qx Media 80/20 Blend
SB (Spun Bonded Polyester)MERV 12 initial rating
SBTX (HEPA Equivalent)
HEPA Secondary Final Filter
Filter Restriction Warning Light
Pulse System Onboard Air Compressor
Waste Removal
Gravity Dump
Electric Powered Auger
Hydraulic Powered Auger
Vibrator – Air Powered
Vibrator – Electric Powered
Frame Con iguration
Skid With Gravity Dump
Skid With Auger Discharge
Trailer With Auger Discharge
Crane Pick Points
Fork Lift Pockets
Frame Level Duct Storage
Hopper Con iguration
Two additional inlets at rear
Quick release inlet connectors and clamps
Hitch 2 5/16" Ball coupler
Pintle Lunette
Jack Heavy Duty Jack
Fuel Large Fuel Fill
Grease Gun
Tie Down Points
Dryer Air Dryer
Paint Custom Company Color

BLASTONE
SUPERIOR PERFORMANCE

40 DC Cyclone

Standard Features

Filtration 60 top loading cartridges
Filter Cleaning Timed cycle reverse air pulse
Air Inlets Six 20" inlet ports, minimum two in use
Air to Cloth Ratio 2.56:1 at 40,000 cfm
Filter Media 15,600 sq. ft. moisture resistant cellulose resin material (standard)
Efficiency 99.8% at 0.5 micron particle after initial dust load
MERV 12 initial rating
Material Discharge Hydraulic powered auger
Dimensions 142"H x 96"W x 384"L
Engine Cummins 4.5L
Fan Non-Overloading, Spark Resisting
Air Flow Rates 40,000 cfm @ 12" w.c.
Fuel Consumption 7.5 Gallon per hour
Fuel Storage 120 gallons
Electrical System 12V dc
Weight 20,000 lbs. actual
Brakes Electric
Paint ETI Gray
Warranty One Year or 1500 hours
Whichever occurs first limited

Options

Diesel Powered
Liquid Cooled FT4 160 HP
Electric Powered
150 HP 480 VAC 3 PH
Filter
Standard Qx Media 80/20 Blend
SB (Spun Bonded Polyester)MERV 12 initial rating
SBTX (HEPA Equivalent)
HEPA Secondary Final Filter
Filter Restriction Warning Light
Pulse System
Onboard Air Compressor
Waste Removal
Gravity Dump
Electric Powered Auger
Hydraulic Powered Auger
Vibrator – Air Powered
Vibrator – Electric Powered
Frame Configuration
Skid With Gravity Dump
Skid With Auger Discharge
Trailer With Auger Discharge
Crane Pick Points
Fork Lift Pockets
Hopper Configuration
Quick release inlet connectors and clamps
Hitch
Pintle Lunette
Storage Storage Boxes
Jack Heavy Duty Jack
Fuel Large Fuel Fill
Grease Gun
Tie Down Points
Dryer Air Dryer
Paint Custom Company Color

marieatcascade@gmail.com

From: Luke Gooden <Luke.Gooden@blastone.com>
Sent: Friday, September 26, 2025 2:38 PM
To: marieatcascade@gmail.com; BradW@everettshiprepair.com
Cc: Courtney Ness; Brad Schreck; Colin Gallagher; Philip Gooden; jons@everettshiprepair.com
Subject: RE: CFM and Air Exchanges

Importance: High

Hello Marie,

Apologies for the delay. The MERV16 filters we supply are 107 Square feet each. They are a custom build with a slightly higher pleat count (140 pleats), so do not fit into the standard configurations on the spec sheet.

So by my calculations:
20,000 CFM Dust Collector, 27 filters, 2889 sq.ft., 6.92:1 air to cloth ratio
40,000 CFM Dust Collector , 60 filters, 6420 sq.ft., 6.23:1 air to cloth ratio

Regards,

Luke Gooden
Account Manager
Luke.Gooden@blastone.com

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BlastOne International, L.A. Office:

From: marieatcascade@gmail.com <marieatcascade@gmail.com>
Sent: Friday, September 26, 2025 1:09 PM
To: Luke Gooden <Luke.Gooden@blastone.com>; BradW@everettshiprepair.com
Cc: Courtney Ness <courtney.ness@blastone.com>; Brad Schreck <brad.schreck@blastone.com>; Colin Gallagher <colin.gallagher@blastone.com>; Philip Gooden <Philip.Gooden@blastone.com>; jons@everettshiprepair.com
Subject: RE: CFM and Air Exchanges

Thanks, Luke! Let me know which filters go with the DC20 and DC40 units as soon as you can. I can calculate the air-to-cloth ratio from there, based on the chart and you specifying the number of cartridges that go with each unit.

Cheers!

Marie

From: Luke Gooden <Luke.Gooden@blastone.com>
Sent: Friday, September 26, 2025 10:01 AM
To: marieatcascade@gmail.com; BradW@everettshiprepair.com
Cc: Courtney Ness <courtney.ness@blastone.com>; Brad Schreck <brad.schreck@blastone.com>; Colin Gallagher <colin.gallagher@blastone.com>; Philip Gooden <Philip.Gooden@blastone.com>; jons@everettshiprepair.com
Subject: RE: CFM and Air Exchanges

Hello Marie,

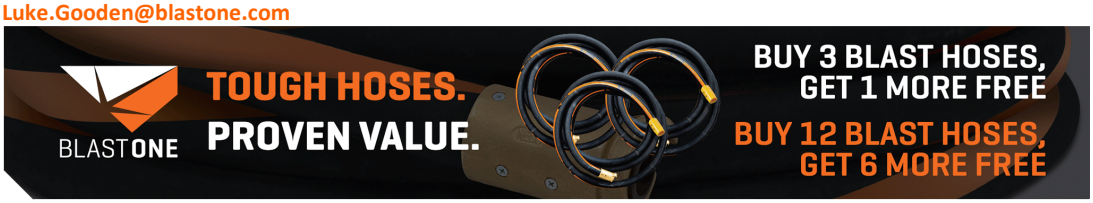
I have spoken to the manufacturer and have some updated information. The MERV16 HEPA equivalent filters are made of spunbound filter media with ePTFE coating and achieve a higher filtration efficiency than standard 80/20 cellulose/polyester or Ultraweb filters. This filter media is completely different and does not experience nearly as much filter blinding/clogging as cellulose/polyester or Ultraweb filters do, enabling them to be cleaned more effectively via pulse-jet cleaning and maintaining more airflow throughout the life of the filter – keeping a high percentage of effective filter area.

Due to the increased efficiency and better dust release characteristics, they have less pleats and therefore significantly less filter area per cartridge. Therefore the air to cloth ratio will be increased. I am waiting for a response with the specific numbers and will let you know.

The 20K units use 27 filters. The 40K units use 60 filters. I've attached the spec sheet for the 40K as well as an example of a spec sheet for the MERV16 filters.

Regards,

Luke Gooden
Account Manager
Luke.Gooden@blastone.com



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BlastOne International, L.A. Office:

From: marieatcascade@gmail.com <marieatcascade@gmail.com>
Sent: Friday, September 26, 2025 11:51 AM
To: Luke Gooden <Luke.Gooden@blastone.com>; BradW@everettshiprepair.com
Cc: Courtney Ness <courtney.ness@blastone.com>; Brad Schreck <brad.schreck@blastone.com>; Colin Gallagher <colin.gallagher@blastone.com>; Philip Gooden <Philip.Gooden@blastone.com>; jons@everettshiprepair.com
Subject: RE: CFM and Air Exchanges

Thanks, Luke. But are you sure about the same air-to-cloth ratio. Don't the MERV 16 filters have a greater surface area for particulate capture? Could you send the filter spec sheet for the MERV 16 filters that are used in the 20K and 45K units? (You sent the MERV 15 sheet.) And how many filters/cartridges are needed in each unit?

Instructions, Parts

XTR™ 5 and XTR™ 7 Airless Spray Gun

312145K

EN

For use with protective coating materials.

XTR 5

5000 psi (35 MPa, 345 bar) Maximum Working Pressure

XTR 7

7250 psi (50 MPa, 500 bar) Maximum Working Pressure

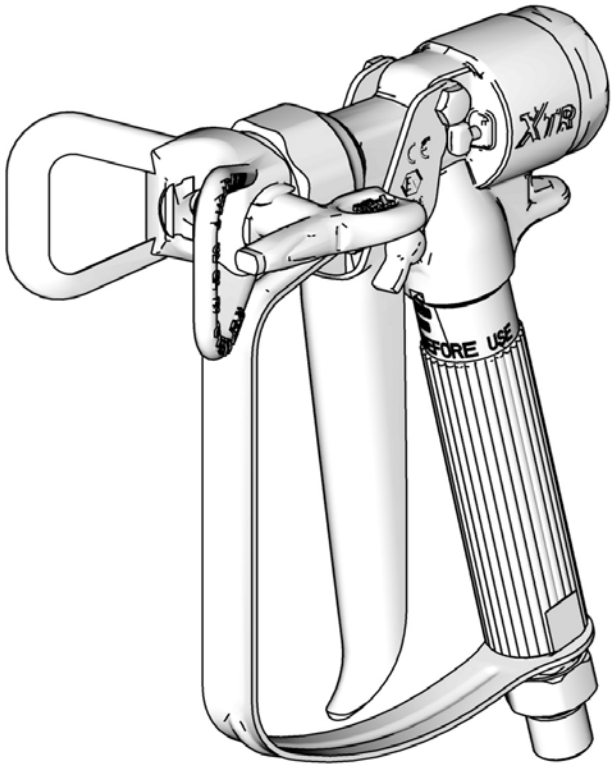
See page **Parts**, page 14, for model information.

Important Safety Instructions

Read all warnings and instructions in this manual and in your sprayer instruction manual before using the equipment. Save all instructions.

Important Medical Information

Read the medical alert card provided with the gun. It contains injection injury treatment information for a doctor. Keep it with you when operating the equipment.



ti5045b

CE Ex II 2 G Ex h T6 Gb

PROVEN QUALITY. LEADING TECHNOLOGY.

Contents

Warnings

The following warnings are for the setup, use, grounding, maintenance, and repair of this equipment. The exclamation point symbol alerts you to a general warning and the hazard symbols refer to procedure-specific risks. When these symbols appear in the body of this manual or on warning labels, refer back to these Warnings. Product-specific hazard symbols and warnings not covered in this section may appear throughout the body of this manual where applicable.

⚠ WARNING

SKIN INJECTION HAZARD

High-pressure fluid from gun, hose leaks, or ruptured components will pierce skin. This may look like just a cut, but it is a serious injury that can result in amputation. **Get immediate surgical treatment.**

- Do not spray without tip guard and trigger guard installed.
- Engage trigger lock when not spraying.
- Do not point gun at anyone or at any part of the body.
- Do not put your hand over the spray tip.
- Do not stop or deflect leaks with your hand, body, glove, or rag.
- Follow the **Pressure Relief Procedure** when you stop spraying and before cleaning, checking, or servicing equipment.
- Tighten all fluid connections before operating the equipment.
- Check hoses and couplings daily. Replace worn or damaged parts immediately.

FIRE AND EXPLOSION HAZARD

Flammable fumes, such as solvent and paint fumes, in **work area** can ignite or explode. Paint or solvent flowing through the equipment can cause static sparking. To help prevent fire and explosion:

- Use equipment only in well-ventilated area.
- Eliminate all ignition sources; such as pilot lights, cigarettes, portable electric lamps, and plastic drop cloths (potential static sparking).
- Ground all equipment in the work area. See **Grounding** instructions.
- Never spray or flush solvent at high pressure.
- Keep work area free of debris, including solvent, rags and gasoline.
- Do not plug or unplug power cords, or turn power or light switches on or off when flammable fumes are present.
- Use only grounded hoses.
- Hold gun firmly to side of grounded pail when triggering into pail. Do not use pail liners unless they are anti-static or conductive.
- **Stop operation immediately** if static sparking occurs or you feel a shock**.** Do not use equipment until you identify and correct the problem.
- Keep a working fire extinguisher in the work area.

⚠ WARNING

EQUIPMENT MISUSE HAZARD

Misuse can cause death or serious injury.

- Do not operate the unit when fatigued or under the influence of drugs or alcohol.
- Do not exceed the maximum working pressure or temperature rating of the lowest rated system component. See **Technical Specifications** in all equipment manuals.
- Use fluids and solvents that are compatible with equipment wetted parts. See **Technical Specifications** in all equipment manuals. Read fluid and solvent manufacturer's warnings. For complete information about your material, request Safety Data Sheets (SDSs) from distributor or retailer.
- Do not leave the work area while equipment is energized or under pressure.
- Turn off all equipment and follow the **Pressure Relief Procedure** when equipment is not in use.
- Check equipment daily. Repair or replace worn or damaged parts immediately with genuine manufacturer's replacement parts only.
- Do not alter or modify equipment. Alterations or modifications may void agency approvals and create safety hazards.
- Make sure all equipment is rated and approved for the environment in which you are using it.
- Use equipment only for its intended purpose. Call your distributor for information.
- Route hoses and cables away from traffic areas, sharp edges, moving parts, and hot surfaces.
- Do not kink or over bend hoses or use hoses to pull equipment.
- Keep children and animals away from work area.
- Comply with all applicable safety regulations.

PRESSURIZED ALUMINUM PARTS HAZARD

Use of fluids that are incompatible with aluminum in pressurized equipment can cause serious chemical reaction and equipment rupture. Failure to follow this warning can result in death, serious injury, or property damage.

- Do not use 1,1,1-trichloroethane, methylene chloride, other halogenated hydrocarbon solvents or fluids containing such solvents.
- Do not use chlorine bleach.
- Many other fluids may contain chemicals that can react with aluminum. Contact your material supplier for compatibility.

TOXIC FLUID OR FUMES HAZARD

Toxic fluids or fumes can cause serious injury or death if splashed in the eyes or on skin, inhaled or swallowed.

- Read Safety Data Sheets (SDSs) for handling instructions and to know the specific hazards of the fluids you are using, including the effects of long-term exposure.
- When spraying, servicing equipment, or when in the work area, always keep work area well-ventilated and always wear appropriate personal protective equipment. See **PERSONAL PROTECTIVE EQUIPMENT** warnings in this manual.
- Store hazardous fluid in approved containers, and dispose of it according to applicable guidelines.

BURN HAZARD

Equipment surfaces and fluid that is heated can become very hot during operation. To avoid severe burns:

- Do not touch hot fluid or equipment.

⚠ WARNING

RECOIL HAZARD

Gun may recoil when triggered. If you are not standing securely, you could fall and be seriously injured.

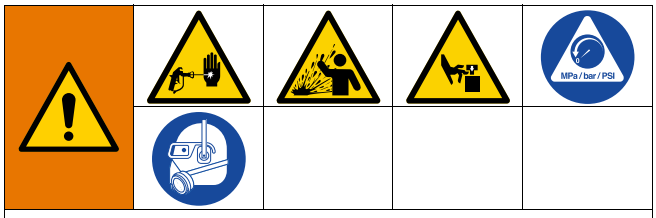
PERSONAL PROTECTIVE EQUIPMENT

Always wear appropriate personal protective equipment and cover all skin when spraying, servicing equipment, or when in the work area. Protective equipment helps prevent serious injury, including long-term exposure; inhalation of toxic fumes, mists or vapors; allergic reaction; burns; eye injury and hearing loss. This protective equipment includes but is not limited to:

- A properly fitting respirator, which may include a supplied-air respirator, chemically impermeable gloves, protective clothing and foot coverings as recommended by the fluid manufacturer and local regulatory authority.
- Protective eyewear and hearing protection.

Pressure Relief Procedure

Follow the Pressure Relief Procedure whenever you see this symbol.



This equipment stays pressurized until pressure is manually relieved. To help prevent serious injury from pressurized fluid, such as skin injection, splashing fluid and moving parts, follow the Pressure Relief Procedure when you stop spraying and before cleaning, checking, or servicing the equipment.

1. Engage the trigger lock.
2. Shut off the pump.
3. Disengage the trigger lock.
4. Hold a metal part of the gun firmly to a grounded metal pail. Trigger the gun to relieve pressure.
5. Engage the trigger lock.
6. Open the fluid drain valve over a waste container (see **System Requirements**, page 7). Leave drain valve open.

If pressure is not fully relieved:

- Spray tip is clogged. For RAC tip, see **Cleaning Tips/Clearing Clogs**, page 9. For flat tip, slowly loosen tip guard retaining nut to relieve pressure. Remove and clean the tip.
- Hose is clogged. Slowly loosen hose end coupling to relieve pressure. Clean the hose obstruction.

Grounding

The equipment must be grounded to reduce the risk of static sparking. Static sparking can cause fumes to ignite or explode. Grounding provides an escape wire for the electric current.

Check your local electrical code and pump or sprayer manual for detailed grounding instructions.

Spray gun: ground through connection to a properly grounded fluid hose and pump.

Fluid hose: use only electrically conductive hoses with a maximum of 500 ft. (150 m) combined hose length to ensure grounding continuity. Check electrical resistance of hoses. If total resistance to ground exceeds 29 megohms, replace hose immediately.

Fluid supply container: follow local code.

Object being sprayed: follow local code.

Solvent pails used when flushing: follow local code. Use only conductive metal pails, placed on a grounded surface. Do not place the pail on a nonconductive surface, such as paper or cardboard, which interrupts grounding continuity.

To maintain grounding continuity when flushing or relieving pressure: hold metal part of the spray gun/dispense valve firmly to the side of a grounded metal pail, then trigger the gun/valve.

System Requirements

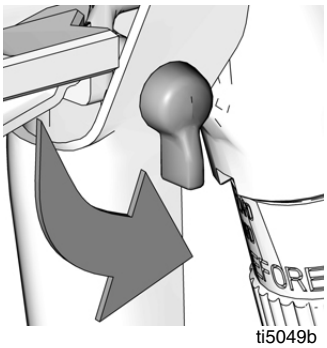
- Install a bleed-type master air valve on a pneumatic pump air supply line to relieve air trapped between this valve and pump after air regulator is shut off. Trapped air can cause the pump to cycle unexpectedly.
- Install a fluid drain valve between the pump and gun to relieve pressure in displacement pump, hose, and gun. Triggering to relieve pressure may not be sufficient. See the **Pressure Relief Procedure**, page 6.

Gun Trigger Lock

To prevent injury when the gun is not in use, always engage the gun's trigger lock if unit is being shut down or left unattended. A wallet-sized warning card with important injection treatment information is included with the gun. Additional cards are available at no charge. Provide a card to all operators.

The trigger lock must move freely, and easily snap into the locked position. If the trigger lock is damaged or movement is restricted, replace with new trigger kit (16) immediately.

Trigger Locked
(no spray)



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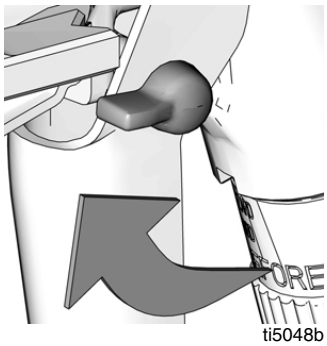
Trigger Unlocked
(spray)



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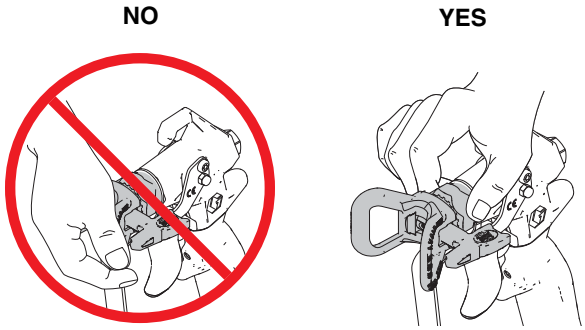
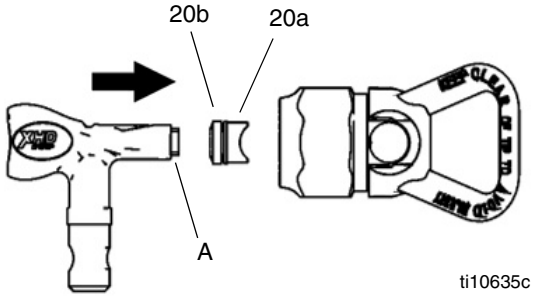
Spray Tip Installation

To avoid serious injury from skin injection, do not put your hand in front of the spray tip when installing or removing the spray tip and tip guard.

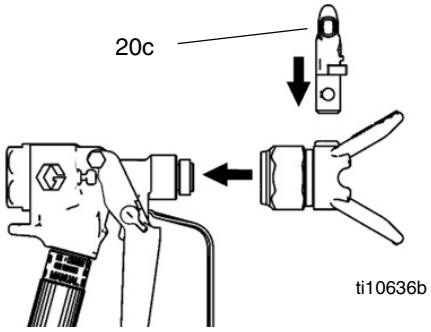


RAC Tip

1. Follow the **Pressure Relief Procedure**, page 6. Engage the trigger lock.
2. Snap gasket (20b) on fluid seal (20a). Use tool (A) to insert gasket and seal into housing, seal first. Tip the tool to remove it when seal is in place.

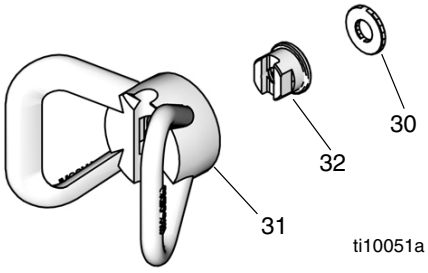


3. Install tip cylinder (20c) as shown. Turn 90° counterclockwise to spray position, so the arrow faces forward. Install assembled RAC onto spray gun.

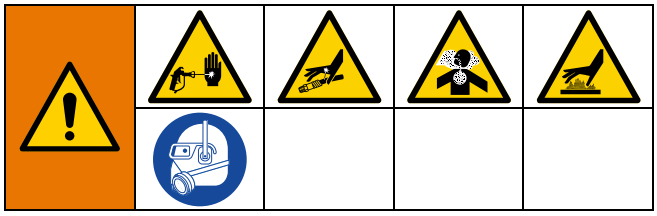


Flat Tip

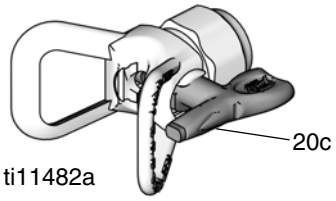
1. Follow the **Pressure Relief Procedure**, page 6. Engage the trigger lock.
2. Insert tip (32) and gasket (30) into back of guard (31).
3. Install the guard over the end of the gun.



Operation



1. Connect a grounded fluid hose.
2. Without spray tip attached, flush the pump. Use the lowest pressure possible.
3. Prime. Refer to the sprayer manual.
4. Follow the **Pressure Relief Procedure**, page 6.
5. Install the spray tip and tip guard.
6. RAC tips only: In spray position, arrow on tip cylinder (20c) faces forward.



7. Hold the gun perpendicular and approximately 12 inches (304 mm) from the surface. Wear gloves if the fluid temperature exceeds 110°F (43°C).
8. Move the gun first, then pull the gun trigger to spray onto test paper.
   a. Adjust the fluid pressure until spray is completely atomized.
   b. If adjusting the pressure does not give a good spray pattern, follow **Pressure Relief Procedure**, page 6, then try another tip size.
9. Trigger the gun full-open or full-close.

Adjusting Spray Pattern

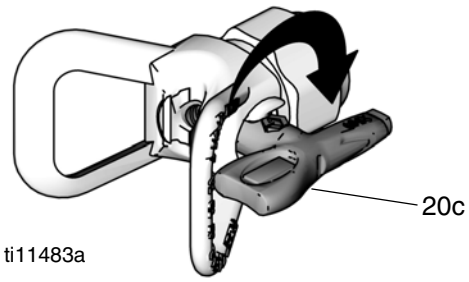
The spray tip orifice and spray angle determine pattern coverage and size. When you need more coverage, use a larger spray tip rather than increasing fluid pressure.

1. Follow the **Pressure Relief Procedure**, page 6. Engage the trigger lock.
2. Loosen tip guard retaining nut.
3. Align the guard horizontally to spray a horizontal pattern. Align guard vertically to spray a vertical pattern.
4. Tighten the nut.

Cleaning Tips/Clearing Clogs

NOTE: Clean the tip guard at the end of each workday.

1. Follow the **Pressure Relief Procedure**, page 6. Engage the trigger lock.
2. Clean the spray tip.
   a. RAC tips: Rotate tip 180° so arrow on tip cylinder (20c) faces backward. Disengage the trigger lock. Trigger the gun into a pail or onto the ground to remove clog. Engage the trigger lock. Rotate tip 180° back to spray position.



   b. Flat tips: Remove tip and clean with a solvent-soaked brush.
3. If the RAC tip is still clogged:
   a. Shut off sprayer and disconnect power source.
   b. Open the fluid drain valve (see **System Requirements**, page 7) to relieve pressure.
   c. Remove and clean the spray tip.

Maintenance

Failure to clean or replace the filter or damaged handle bore can result in serious injury.

Before performing any maintenance on the gun, read all warnings in this manual and relieve pressure.

Flushing

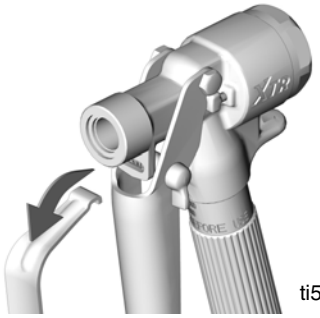
Flush the pump and gun before fluid can dry in it. If available, use flushing procedure provided in your pump manual instead of this procedure.

1. Follow the **Pressure Relief Procedure**, page 6. Engage the trigger lock.
2. Remove the spray tip and guard from gun. Clean with solvent.
3. Put the pump intake in a grounded pail of compatible solvent.
4. Start the pump at its lowest pressure.
5. Disengage trigger lock, then trigger the gun into the paint pail. When solvent appears, release trigger.
6. Trigger the gun into solvent pail. Circulate fluid until the system is thoroughly flushed.
7. Follow the **Pressure Relief Procedure**, page 6. Engage the trigger lock.

Cleaning and Replacing Filter

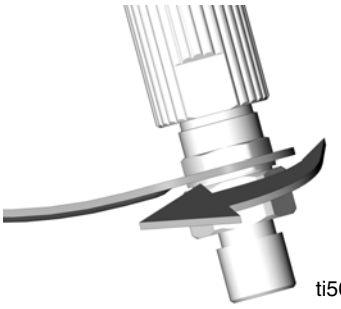
(Not applicable for XTR510, XTR706, and 17V677)

1. Follow the **Pressure Relief Procedure**, page 6. Engage the trigger lock.
2. Disconnect the trigger guard from the gun body by pushing up on the guard hook and pulling it out of the notch.



ti5052a

3. The trigger guard beneath the gun handle can then be used as a wrench to loosen the nut.



ti5054a

4. When the alignment notches are no longer engaged, use your hand to twist the handle and remove it from the gun head.
5. Remove the filter.
6. Clean the filter using a soft brush.
7. Replace the filter.
8. Apply a light coating of grease to the threads and then attach.
9. Use the trigger guard to tighten the nut.
10. Reattach the trigger guard to the gun.

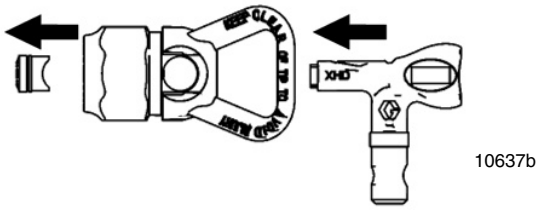
Cleanup

Flush the gun after each work shift and store in a dry location. Do not leave the gun or any parts in water or cleaning solvents.

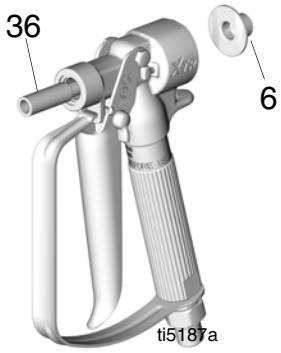
Repair

Disassembly

1. Follow the **Pressure Relief Procedure**, page 6. Engage the trigger lock.
2. Disconnect the fluid hose. Remove the RAC tip guard and tip (19 and 20a–20c) or flat tip guard and tip (30, 31, and 32).
3. RAC tip only: Use tool to push gasket and seal out the back of the housing.



4. Using a wrench, remove the cap (4) with spring (5) (releases spring tension on needle).
5. Remove the valve seat (10) and gasket (9).
6. While holding the needle (36), use tool to remove the needle retainer (6).



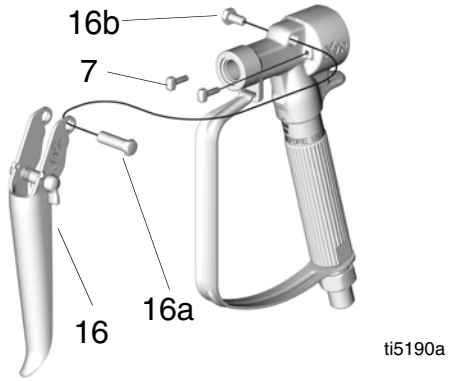
7. Pull the needle (8) out.
8. Using a socket wrench, remove the seal retainer (2) from the back of the gun. Use a pick to remove the gasket (3).
9. Clean and replace parts as needed.

Trigger Removal

NOTE: To avoid losing parts, be ready for two actuator pins (7) to fall out of the gun body when the trigger (16) is removed.

XTR 7 Guns

1. Using a wrench, remove screw (16b) from the pivot pin (16a).
2. Slide the pivot pin (16a) out of the gun body, and remove the trigger (16).
3. Before reinstalling the trigger, grease the actuator pins (7) and the pivot pin (16a).



XTR 5 Guns

1. Using a socket wrench, remove screw (16c) from each side of the gun body and remove the trigger.
2. Before reinstalling the trigger, grease the actuator pins (7).

Assembly

1. Press a new gasket (3*) into the gun body. Lightly grease the seal retainer (2*) and install. Torque to 48–72 in-lb (5–8 N•m).
2. Lightly grease and replace the needle (8*). Press the needle through the seal retainer.

NOTICE

Use only tool (36) and fingers to tighten the needle. Do not overtighten or breakage may occur.

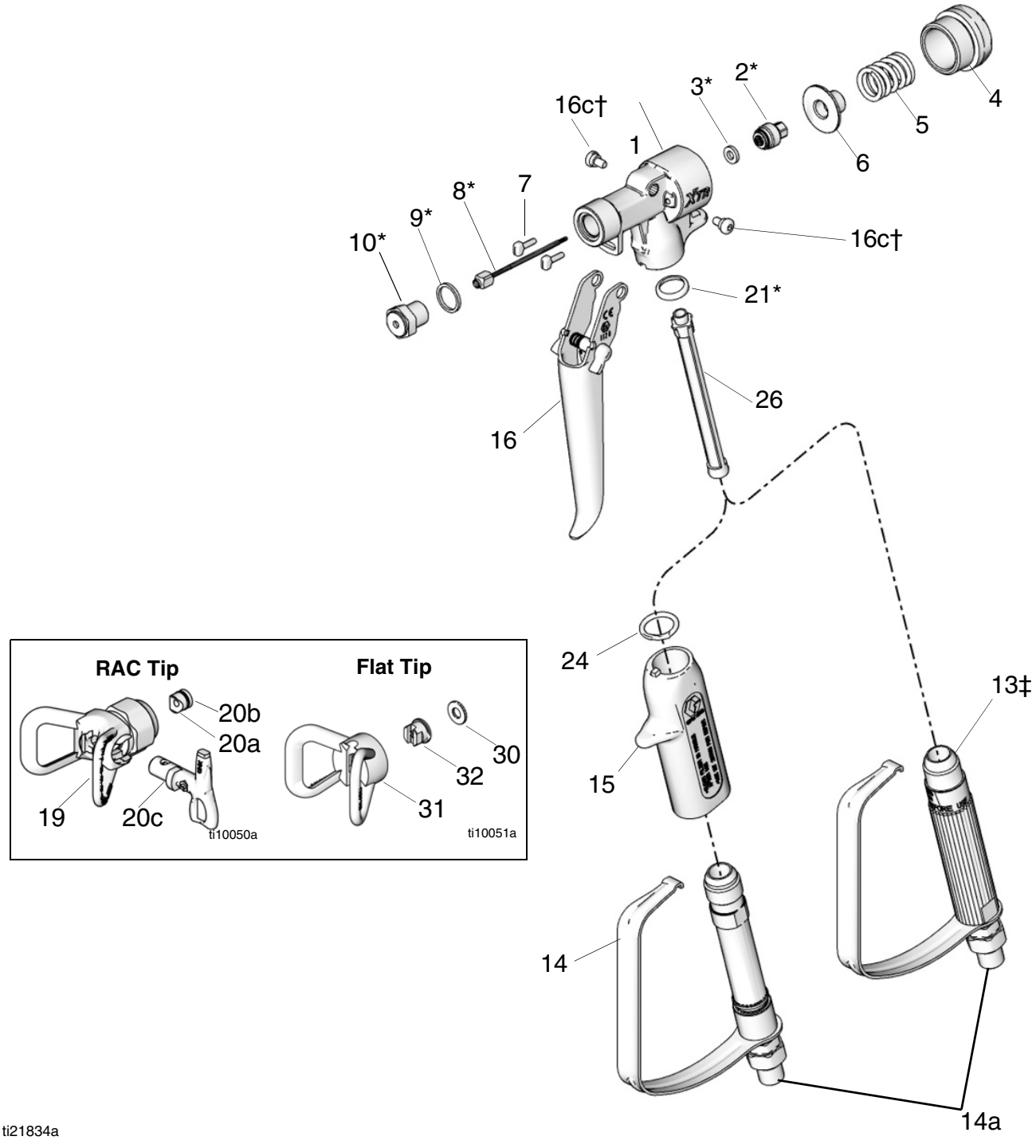
3. Apply light-strength Loctite™ to needle threads. Holding the needle with too (36*), install needle retainer (6). Tighten until it bottoms out. Do not overtighten.
4. Lightly grease valve seat (10*) threads. Squeeze the trigger to retract the needle and install gasket (9*) and valve seat (10*). Torque valve seat to 26–32 ft-lb (34–43 N•m).
5. Grease and install the spring (5) and cap (4). Tighten the cap to 10–13 ft-lb (8–10 N•m).

Test Gun Before Using

1. Engage the trigger lock. Connect the fluid hose to the gun.
2. Start and prime the pump.
3. Disengage the trigger lock and trigger the gun into a metal waste container.
4. Release the trigger. The gun should immediately stop spraying and there should be no leaks. If there is a problem, follow the **Pressure Relief Procedure**, page 6. Check through the **Assembly** procedure and correct any problem.
5. Install the tip and tip guard before regular use.

Parts

XTR5


16c†
3*
2*
4
5
6
1
8*
7
9*
10*
16c†
21*
26
16
24
13‡
15
14
14a
RAC Tip
Flat Tip
20b
20a
19
20c
ti10050a
30
32
31
ti10051a
ti21834a

Ref.	Part	Description	Quantity						
			XTR500	XTR501	XTR502	XTR503	XTR504	XTR505	XTR510
1	15J771	BODY, gun	1	1	1	1	1	1	1
2*	245881	SEAL, retainer assembly	1	1	1	1	1	1	1
3*	---	GASKET	1	1	1	1	1	1	1
4	15K000	CAP, end	1	1	1	1	1	1	1
5	117350	SPRING	1	1	1	1	1	1	1
6	15E088	RETAINER, needle	1	1	1	1	1	1	1
7	15E085	PIN, actuator	2	2	2	2	2	2	2
8*	248591	NEEDLE	1	1	1	1	1	1	1
9*	156766	GASKET	1	1	1	1	1	1	1
10*	245858	SEAT, valve	1	1	1	1	1	1	1
13‡	255275	HANDLE; includes trigger guard and swivel	1	1			1	1	1
14	248952	HANDLE KIT			1	1			
14a★	---	SWIVEL							
15	276997	HANDLE SLEEVE, insulated			1	1			
16†	287449	TRIGGER KIT, 4-finger, straight; includes 16c	1	1			1		1
	287451	TRIGGER KIT, 4-finger, curved; includes 16c			1				
	287450	TRIGGER KIT, 2-finger; includes 16c				1		1	
16c†	117602	SCREW, shoulder, #8-32	2	2	2	2	2	2	2
19	XHD001	GUARD, RAC tip	1		1	1	1	1	1
20	XHDxxx	SWITCH, RAC tip; 519 size included			1	1	1	1	
	XHDxxx	SWITCH, RAC tip; 519 size							1
20a✓	---	SEAL, fluid			1	1	1	1	1
20b✓	---	GASKET			1	1	1	1	1
20c	---	TIP, spray, XHD RAC			1	1	1	1	1
21*	179733	SEAL, sleeve	1	1	1	1	1	1	1
24	119740	O-RING			1	1			
26	287032	FILTER, 60 mesh included with gun	1	1	1	1	1	1	
	287034	FILTER, 60 mesh and 100 mesh combo	1	1	1	1	1	1	
29▲	222385	TAG, warning (not shown)	1	1	1	1	1	1	1
30	166969	GASKET		1					
31	220251	GUARD, flat tip		1					
32	163519	TIP, flat		1					
36*	194744	TOOL, repair, packing	1	1	1	1	1	1	1

--- *Not for sale.*

▲ *Replacement Danger and Warning labels, tags, and cards are available at no cost.*

* *Parts included in Repair Kit 248837, purchased separately.*

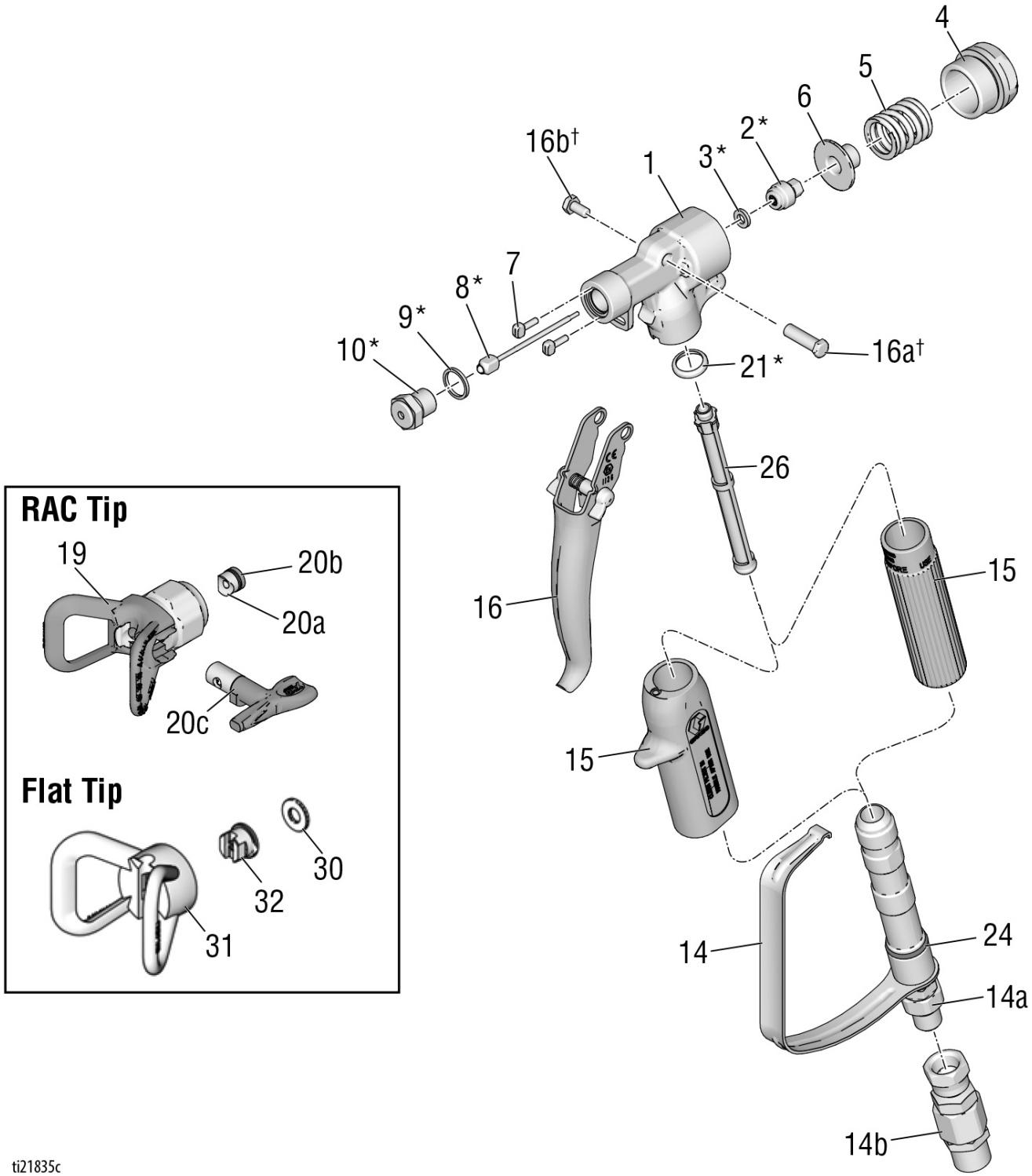
† *Trigger kit (16) includes mounting hardware for either XTR5 or XTR7 gun.*

‡ *Handle is not pressure rated for use with the XTR 7. For an XTR 7, order handle 248952 and sleeve 276997 or 15E083 depending on your model.*

✓ *Included in OneSeal™ Repair Kit XHD010 (5 each per package, purchase separately).*

★ *Do not remove swivel. If the swivel needs to be replaced, order replacement handle kit 248952.*

XTR7


RAC Tip
19
20b
20a
20c
Flat Tip
30
32
31
4
5
6
2*
16b†
1
3*
7
8*
9*
10*
21*
16a†
26
16
15
15
14
24
14a
14b
ti21835c

Ref.	Part	Description	Quantity							
			XTR700	XTR701	XTR702	XTR703	XTR704	XTR705	XTR706	17V677
1	15E178	BODY, gun	1	1	1	1	1	1		
	17V381	BODY, gun							1	1
2*	245881	SEAL, retainer assembly	1	1	1	1	1	1	1	1
3*	---	GASKET	1	1	1	1	1	1	1	1
4	15A864	CAP, end	1	1	1	1	1	1	1	1
5	117350	SPRING	1	1	1	1	1	1	1	1
6	15E088	RETAINER, needle	1	1	1	1	1	1	1	1
7	15E085	PIN, actuator	2	2	2	2	2	2	2	2
8*	248591	NEEDLE	1	1	1	1	1	1	1	1
9*	156766	GASKET	1	1	1	1	1	1	1	1
10*	245858	SEAT, valve	1	1	1	1	1	1	1	1
14	248952	KIT, repair, handle	1	1	1	1	1	1		
	17V749	KIT, repair, handle							1	1
14a★	---	SWIVEL								
14b	17G980	SWIVEL							1	1
15	276997	HANDLE SLEEVE, insulated			1	1			1	1
	15E083	HANDLE SLEEVE, round	1	1			1	1		
16	287449	TRIGGER KIT, 4-finger, straight; includes 16a and 16b	1	1			1			
	287451	TRIGGER KIT, 4-finger, curved; includes 16a and 16b			1				1	1
	287450	TRIGGER KIT, 2-finger; includes 16a and 16b				1		1		
16a†	192272	PIN, pivot	1	1	1	1	1	1	1	1
16b†	203953	SCREW, cap, #10-24	1	1	1	1	1	1	1	1
19	XHD001	GUARD, RAC tip	1		1	1	1	1	1	1
20	XHDxxx	SWITCH, RAC tip; 519 size included			1	1	1	1		
		SWITCH, RAC tip: 523 size included								1
		SWITCH, RAC tip: 531 size included							1	1
20a✓	---	SEAL, fluid			1	1	1	1	1	1
20b✓	---	GASKET			1	1	1	1	1	1
20c	---	TIP, spray, XHD RAC			1	1	1	1	1	1
21*	179733	SEAL, sleeve	1	1	1	1	1	1	1	1
24**	119740	O-RING	1	1	1	1	1	1	1	1
26	287032	FILTER, 60 mesh included with gun	1	1	1	1	1	1		
	287034	FILTER, 60 mesh and 100 mesh combo	1	1	1	1	1	1		

Ref.	Part	Description	Quantity							
			XTR700	XTR701	XTR702	XTR703	XTR704	XTR705	XTR706	17V677
29▲	222385	TAG, warning (not shown)	1	1	1	1	1	1	1	1
30	166969	GASKET		1						
31	220251	GUARD, flat tip		1						
32	163519	TIP, flat		1						
36*	194744	TOOL, repair, packing	1	1	1	1	1	1	1	1

--- Not for sale.

▲ Replacement Danger and Warning labels, tags, and cards are available at no cost.

** Parts included in Repair Kit 248837, purchased separately.*

★ Do not remove swivel. If the swivel needs to be replaced, order replacement handle kit 248952.

† Trigger Kit (16) includes mounting hardware for either the XTR5 or XTR7 gun.

✓ Included in OneSeal™ Repair Kit XHD010 (5 each per package, purchase separately).

*** Included in Handle Repair Kits 248952 and 17V749.*

Technical Specifications

XTR5 and XTR7 Airless Spray Gun		
	US	**Metric**
Maximum working pressure (XTR5)	5000 psi	35 MPa, 345 bar
Maximum working pressure (XTR7)	7250 psi	50 MPa, 500 bar
Maximum fluid operating temperature	160°F	71°C
Noise (dBa)		
Maximum sound pressure	84.3 dBa at 6000 psi (41 MPa, 414 bar)	
Sound power	95.7 dBa at 6000 psi (41 MPa, 414 bar)	
Sound pressure measured using the HD519 tip and water. *Sound power tested per ISO-9614-2.*		
Inlet/Outlet Sizes		
Fluid inlet size	1/4 npsm (m) or 3/8 NPT (XTR706)	
Fluid orifice size	0.090 in.	2.3 mm
Materials of Construction		
Wetted materials on all models	Aluminum, stainless steel, acetal, polyethylene, nylon, polypropylene, carbide, polyurethane, solvent-resistant o-rings	
Notes		
All trademarks or registered trademarks are the property of their respective owners.		

Graco Standard Warranty

Graco warrants all equipment referenced in this document which is manufactured by Graco and bearing its name to be free from defects in material and workmanship on the date of sale to the original purchaser for use. With the exception of any special, extended, or limited warranty published by Graco, Graco will, for a period of twelve months from the date of sale, repair or replace any part of the equipment determined by Graco to be defective. This warranty applies only when the equipment is installed, operated and maintained in accordance with Graco's written recommendations.

This warranty does not cover, and Graco shall not be liable for general wear and tear, or any malfunction, damage or wear caused by faulty installation, misapplication, abrasion, corrosion, inadequate or improper maintenance, negligence, accident, tampering, or substitution of non-Graco component parts. Nor shall Graco be liable for malfunction, damage or wear caused by the incompatibility of Graco equipment with structures, accessories, equipment or materials not supplied by Graco, or the improper design, manufacture, installation, operation or maintenance of structures, accessories, equipment or materials not supplied by Graco.

This warranty is conditioned upon the prepaid return of the equipment claimed to be defective to an authorized Graco distributor for verification of the claimed defect. If the claimed defect is verified, Graco will repair or replace free of charge any defective parts. The equipment will be returned to the original purchaser transportation prepaid. If inspection of the equipment does not disclose any defect in material or workmanship, repairs will be made at a reasonable charge, which charges may include the costs of parts, labor, and transportation.

THIS WARRANTY IS EXCLUSIVE, AND IS IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO WARRANTY OF MERCHANTABILITY OR WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE.

Graco's sole obligation and buyer's sole remedy for any breach of warranty shall be as set forth above. The buyer agrees that no other remedy (including, but not limited to, incidental or consequential damages for lost profits, lost sales, injury to person or property, or any other incidental or consequential loss) shall be available. Any action for breach of warranty must be brought within two (2) years of the date of sale.

GRACO MAKES NO WARRANTY, AND DISCLAIMS ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, IN CONNECTION WITH ACCESSORIES, EQUIPMENT, MATERIALS OR COMPONENTS SOLD BUT NOT MANUFACTURED BY GRACO. These items sold, but not manufactured by Graco (such as electric motors, switches, hose, etc.), are subject to the warranty, if any, of their manufacturer. Graco will provide purchaser with reasonable assistance in making any claim for breach of these warranties.

In no event will Graco be liable for indirect, incidental, special or consequential damages resulting from Graco supplying equipment hereunder, or the furnishing, performance, or use of any products or other goods sold hereto, whether due to a breach of contract, breach of warranty, the negligence of Graco, or otherwise.

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Phone: 612-623-6921 or Toll Free: 1-800-328-0211 Fax: 612-378-3505

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Graco reserves the right to make changes at any time without notice.

Original instructions. This manual contains English. MM 312145
Graco Headquarters: Minneapolis
International Offices: Belgium, China, Japan, Korea

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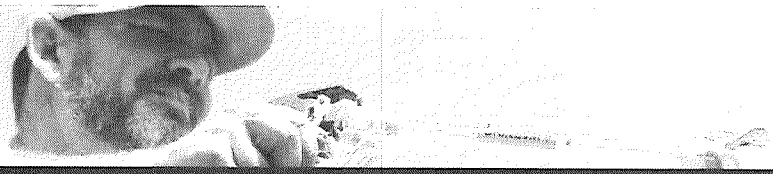
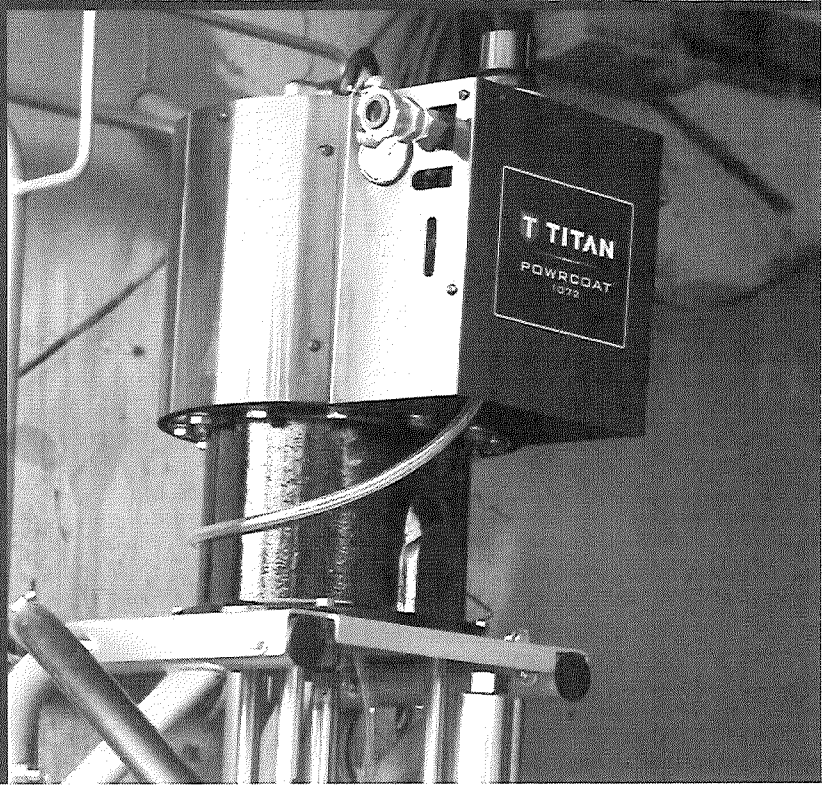
www.graco.com
Revision K, September 2018



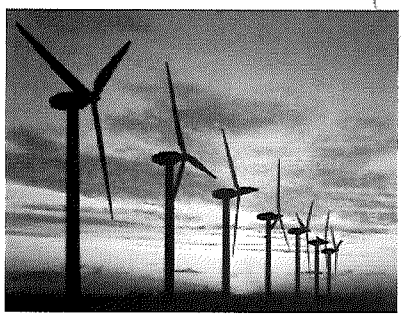
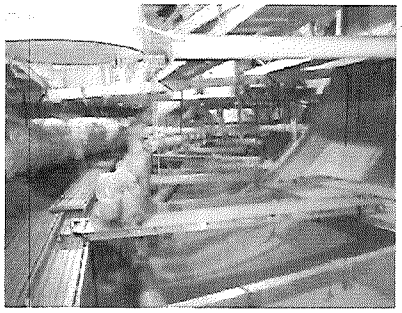
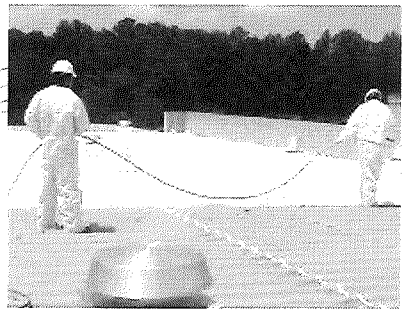
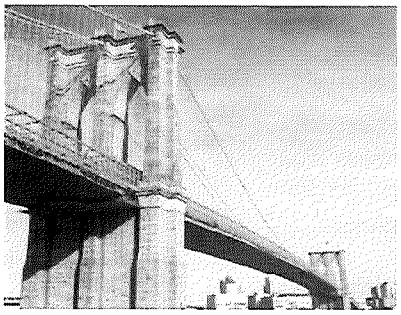
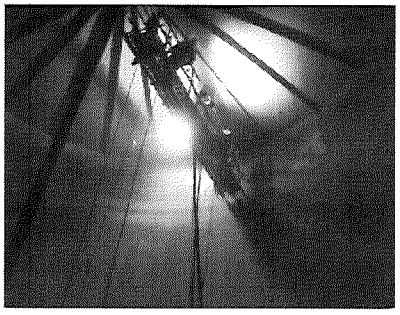
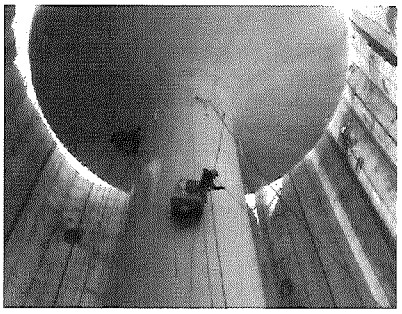
TITAN®

HIGH PERFORMANCE
PROTECTIVE COATINGS



POWRCOAT™ SERIES

The durability, reliability, and ease of operation that you need are built in to each unit. Severe Service™ means twice the life with half the maintenance. PowrCoat Sprayers have been used throughout the world, providing their owners with dependable, efficient operation.

Severe Service Fluid Section

Features self-adjusting packings.

Severe Service Piston Rod and Cylinder

Titan's proprietary hard-chrome plating is the hardest and slickest wear surface in the industry.

High Capacity Outlet Filter

Featuring 3 outlet ports, manual pressure relief/recirculation valve and easy-on/off filter element access.

Air Filter, Moisture Separator, Regulator and Lubricator

Included on all PowrCoat models.

Heavy-Duty Frame

Features large 16" pneumatic tires, convenient lift handles, heavy-duty crane hook and high capacity hose rack that holds up to 200 feet of 1/2" hose.

Severe Service™ Pump is Standard

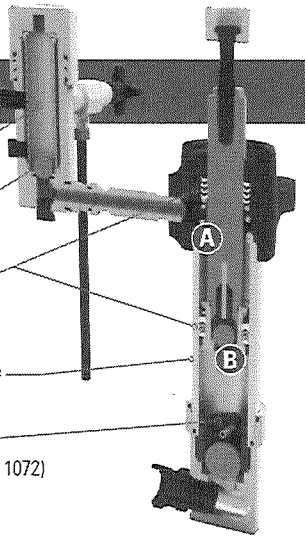
Ⓐ PowrCoat Piston

Engineered to provide unmatched chemical and solvent resistance while creating an ultra-smooth surface, providing less friction and wear.

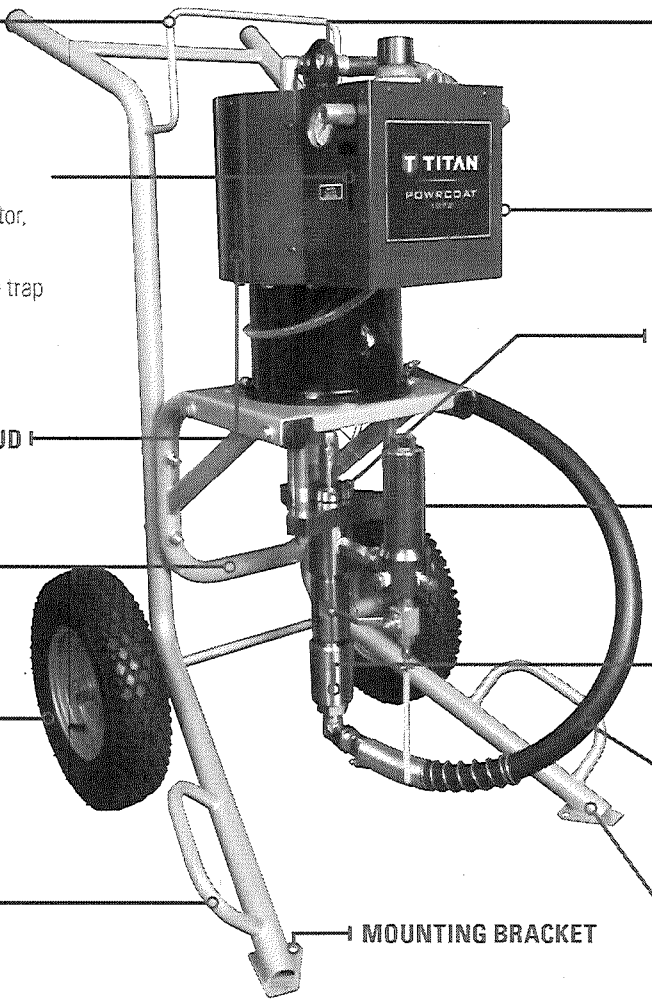
Ⓑ Tungsten Carbide Valve Seats

Provides maximum life and smooth, efficient operation with hardened stainless steel check balls.

*Alternate packing materials are available for specialized applications.



A SPRAYER FOR EVERY APPLICATION



HEAVY-DUTY HOSE WRAP & GUN HOLDER
Holds up to 200' of 1/2" hose.

AIRCARE™ SYSTEM
- Complete FRL (Filter, Regulator, Lubricator) comes standard
- Automatic draining moisture trap
- Easy access air filter and lubrication reservoir

HEAVY-DUTY METAL SHROUD
Protects FRL and air motor.

INTEGRATED WALL MOUNT BRACKET

LARGE, 16" PNEUMATIC TIRES

LIFT HANDLES

HEAVY-DUTY CRANE HOOK

HIGH-EFFICIENCY ANTI-ICING MOTOR

PISTON LUBE™ SYSTEM
Easy access and visual piston lubrication reservoir.

HIGH CAPACITY OUTLET FILTER
Reduces tip plugging.

SEVERE SERVICE™ PUMP

MATERIAL SUCTION FEED ASSEMBLY
5-gallon siphon tube, hose and suction filter screen.

HEAVY-DUTY CART

MOUNTING BRACKET

PowrCoat Technical Data

SPECIFICATIONS	630	730	745	940	960	975	1045	1064	1072
Air Motor Diameter (inches)	6	7	7	9	9	9	10	10	10
Ratio	30:1	30:1	45:1	40:1	60:1	75:1	45:1	64:1	72:1
Stroke Length (inches)	4.0	4.0	4.0	4.0	4.0	4.0	4.75	4.75	4.75
Max. Operating Pressure (PSI)	3480	3000	4500	4000	6000	7500	4500	6400	7200
Max. Air Input Pressure (PSI)	116	100	100	100	100	100	100	100	100
Volume Flow - 60 CPM	1 gal (3.6 l)/min	3 gal (10.7 l)/min	2 gal (7.3 l)/min	3 gal (10.7 l)/min	2 gal (7.3 l)/min	1.5 gal (5.7 l)/min	4 gal (15.2 l)/min	3 gal (11.3 l)/min	3 gal (10.0 l)/min
Approximate Air Requirement Per Gallon of Output @ 100 PSI (6.9 bar) Air Pressure	25.0 SCFM (0.71 m³/min)	28.0 SCFM (0.79 m³/min)	40.0 SCFM (0.79 m³/min)	36.4 SCFM (1.03 m³/min)	53.0 SCFM (1.50 m³/min)	67.9 SCFM (1.92 m³/min)	43.0 SCFM (1.22 m³/min)	57.7 SCFM (1.63 m³/min)	64.9 SCFM (1.84 m³/min)
Max. Recommended Air Volume Requirements (CFM)	40	112	148	145	148	142	172	174	175
Fluid Output Per Cycle (cc)	61	182	114	182	114	95	254	188	167
Cart Part Number	0533630C	0533730C	0533745C	0533940C	0533960C	0533975C	05331045C	05331064C	05331072C
Wall Mount Part Number	0533630W	0533730W	0533745W	0533940W	0533960W	0533975W	05331045W	05331064W	05331072W
55-Gallon Material Suction Feed Assembly Kit (Optional)	0533247 (¾")	103-808 (1")	103-808 (1")	103-808 (1")	103-808 (1")	103-808 (1")	0533259 (1")	0533259 (1")	0533259 (1")

Optional Liquids: Air Care 1qt (311-101), Piston Lube 1qt (700-926)

XTR™ Airless Spray Guns

Rugged Design to Handle the Toughest Protective Coatings

Built for Extreme Conditions

- Compact design allows for easy maneuverability
- XTR-5: maximum fluid pressure of 5000 (345 bar, 34.5 MPa)
- XTR-7: maximum fluid pressure of 7250 (500 bar, 50 MPa)
- Variety of handle and trigger options
- High quality materials and construction

PROVEN QUALITY. LEADING TECHNOLOGY.

GRACO

Genuine Graco Fluid Hoses Make the Difference

Xtreme-Duty™ 4500 psi (310 bar) High Pressure Hose

Part #	Length	Hose Diameter	Female NPSM
H42503	3 ft (0.9 m)	1/4 in (6.4 mm)	1/4 in
H42506	6 ft (1.8 m)	1/4 in (6.4 mm)	1/4 in
H42510	10 ft (3.0 m)	1/4 in (6.4 mm)	1/4 in
H42525	25 ft (7.6 m)	1/4 in (6.4 mm)	1/4 in
H42550	50 ft (15.2 m)	1/4 in (6.4 mm)	1/4 in
H4251X	100 ft (30.5 m)	1/4 in (6.4 mm)	1/4 in
H43803	3 ft (0.9 m)	3/8 in (9.5 mm)	3/8 in
H43806	6 ft (1.8 m)	3/8 in (9.5 mm)	3/8 in
H43810	10 ft (3.0 m)	3/8 in (9.5 mm)	3/8 in
H43825	25 ft (7.6 m)	3/8 in (9.5 mm)	3/8 in
H43850	50 ft (15.2 m)	3/8 in (9.5 mm)	3/8 in
H4381X	100 ft (30.5 m)	3/8 in (9.5 mm)	3/8 in
H45010	10 ft (3.0 m)	1/2 in (12.7 mm)	1/2 in
H45025	25 ft (7.6 m)	1/2 in (12.7 mm)	1/2 in
H45050	50 ft (15.2 m)	1/2 in (12.7 mm)	1/2 in
H4501X	100 ft (30.5 m)	1/2 in (12.7 mm)	1/2 in

Xtreme-Duty 5600 psi (386 bar) High Pressure Hose

Part #	Length	Hose Diameter	Female NPSM
H52503	3 ft (0.9 m)	1/4 in (6.4 mm)	1/4 in
H52506	6 ft (1.8 m)	1/4 in (6.4 mm)	1/4 in
H52510	10 ft (3.0 m)	1/4 in (6.4 mm)	1/4 in
H52525	25 ft (7.6 m)	1/4 in (6.4 mm)	1/4 in
H52550	50 ft (15.2 m)	1/4 in (6.4 mm)	1/4 in
H5251X	100 ft (30.5 m)	1/4 in (6.4 mm)	1/4 in
H53803	3 ft (0.9 m)	3/8 in (9.5 mm)	3/8 in
H53806	6 ft (1.8 m)	3/8 in (9.5 mm)	3/8 in
H53810	10 ft (3.0 m)	3/8 in (9.5 mm)	3/8 in
H53825	25 ft (7.6 m)	3/8 in (9.5 mm)	3/8 in
H53850	50 ft (15.2 m)	3/8 in (9.5 mm)	3/8 in
H5381X	100 ft (30.5 m)	3/8 in (9.5 mm)	3/8 in
H55010	10 ft (3.0 m)	1/2 in (12.7 mm)	1/2 in
H55025	25 ft (7.6 m)	1/2 in (12.7 mm)	1/2 in
H55050	50 ft (15.2 m)	1/2 in (12.7 mm)	1/2 in
H5501X	100 ft (30.5 m)	1/2 in (12.7 mm)	1/2 in

Xtreme-Duty 7250 psi (500 bar) High Pressure Hose

Part #	Length	Hose Diameter	Female NPSM
H72503	3 ft (0.9 m)	1/4 in (6.4 mm)	1/4 in
H72506	6 ft (1.8 m)	1/4 in (6.4 mm)	1/4 in
H72510	10 ft (3.0 m)	1/4 in (6.4 mm)	1/4 in
H72525	25 ft (7.6 m)	1/4 in (6.4 mm)	1/4 in
H72550	50 ft (15.2 m)	1/4 in (6.4 mm)	1/4 in
H7251X	100 ft (30.5 m)	1/4 in (6.4 mm)	1/4 in
H73803	3 ft (0.9 m)	3/8 in (9.5 mm)	3/8 in
H73806	6 ft (1.8 m)	3/8 in (9.5 mm)	3/8 in
H73810	10 ft (3.0 m)	3/8 in (9.5 mm)	3/8 in
H73825	25 ft (7.6 m)	3/8 in (9.5 mm)	3/8 in
H73850	50 ft (15.2 m)	3/8 in (9.5 mm)	3/8 in
H7381X	100 ft (30.5 m)	3/8 in (9.5 mm)	3/8 in
H75010	10 ft (3.0 m)	1/2 in (12.7 mm)	1/2 in
H75025	25 ft (7.6 m)	1/2 in (12.7 mm)	1/2 in
H75050	50 ft (15.2 m)	1/2 in (12.7 mm)	1/2 in
H7501X	100 ft (30.5 m)	1/2 in (12.7 mm)	1/2 in

Lightweight and Ergonomic

Technical Specifications

Maximum fluid working pressure . . . . . **XTR-5:** 5000 psi (345 bar, 34.5 MPa)
XTR-7: 7250 psi (500 bar, 50 MPa)
Fluid orifice . . . . . 0.090 in (2.3 mm)
Fluid inlet . . . . . 1/4 npsm
Maximum fluid temperature . . . . . 160º F (71º C)
Sound pressure . . . . . 84.3dB(A)*
Sound power . . . . . 95.7dB(A)*
Dimensions . . . . . **XTR-5:** Weight 14.5 oz (411 g), Length 4.35 in (111 mm), Height 7.1 in (180 mm)
XTR-7: Weight 24 oz (688 g), Length 4.35 in (111 mm), Height 7.1 in (180 mm)
Wetted parts . . . . . Aluminum, stainless steel, polyethylene, polyurethane, polypropylene, nylon, acetal, carbide, solvent-resistant O-rings
Instruction Manual 312145

* Results are maximum readings taken at 6000 psi (414 bar, 41 MPa), with GHD519 tip, using water. Sound power level was tested to ISO 9614-2.

Ordering Information

XTR-5 Airless Spray Gun
Maximum working pressure: 5000 psi (345 bar, 34.5 MPa)
XTR500 1" round handle, four-finger trigger, no tip
XTR501 1" round handle, four-finger trigger, flat tip*
XTR502 Oval insulated handle, four-finger trigger, XHD RAC tip*
XTR503 Oval insulated handle, two-finger trigger, XHD RAC tip*
XTR504 1" round handle, four-finger trigger, XHD RAC tip*
XTR505 1" round handle, two-finger trigger, XHD RAC tip*

XTR-7 Airless Spray Gun
Maximum working pressure: 7250 psi (500 bar, 50.0 MPa)
XTR700 Round handle, four-finger trigger, no tip
XTR701 Round handle, four-finger trigger, flat tip*
XTR702 Oval insulated handle, four-finger trigger, XHD RAC tip*
XTR703 Oval insulated handle, two-finger trigger, XHD RAC tip*
XTR704 Round handle, four-finger trigger, XHD RAC tip*
XTR705 Round handle, two-finger trigger, XHD RAC tip*
*Includes 519 tip

Accessories
287450 2-finger trigger kit
287449 4-finger round trigger kit
287451 4-finger oval insulation trigger kit
246294 10 in (254 mm) gun extension, 7250 psi (500 bar, 50 MPa)
246295 15 in (380 mm) gun extension, 7250 psi (500 bar, 50 MPa)
246296 18 in (457 mm) gun extension, 7250 psi (500 bar, 50 MPa)
246297 180º spray nozzle, 7/8-14 UNC-2B, 7250 psi (500 bar, 50 MPa)
248837 Gun repair kit, includes gasket, needle and seat
XHD001 XHD RAC Guard
287032 Filter, 60 mesh, included in every gun
287033 Filter, 100 mesh
287034 Filter, 60 and 100 mesh combination

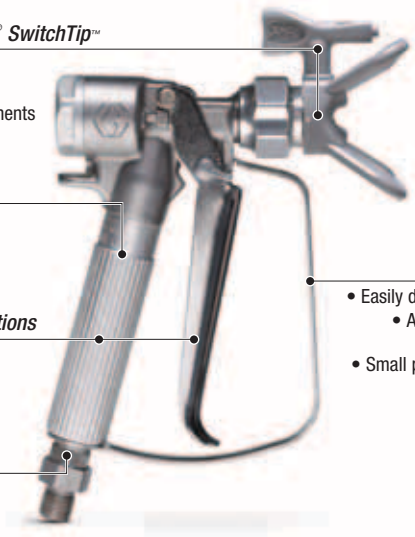
Quality Features for Ultimate Coatings Results

Needle Assembly and XHD™ RAC® SwitchTip™
- Exceptional life, pattern and finish
- Great for high solids coatings
- Factory set needle needs no adjustments

Easy Out™ Gun Filter
- Reduces tip plugs
- Eliminates collapsed filters
- Provides more filtration area

Variety of Handle and Trigger Options
- 2-and 4-finger trigger options
- Oval-insulated or round handle
- Lightweight trigger pull

EasyGlide™ Swivel
- Allows easier gun movement under high pressure



Trigger Guard
- Easily detaches for access to filter
- Acts as a wrench to remove filter from gun handle
- Small profile sprays in tight areas

Call today for product information or to request a demonstration
1-877-844-7226 or visit us at www.graco.com

Attachment E

Emissions Estimate

Surface Coating Example Emissions Estimate - Everett Ship Repair

Material	Color	Type	Quantity	VOCs (Total)	Xylenes as	Ethyl Benzene	n-Butyl Alcohol	Toluene	MIBK	Cumene	1,2-Ethanediamine	Propylene glycol monomethyl ether	Phenol	Methanol	n-Butyl Acetate	1,2,4-Trimethyl Benzene	1,3,5-Trimethyl Benzene	Isopropyl Alcohol	Ethylene glycol monobutyl ether	Solids (assumes all non VOC solid)	PM
					106423 HAP	100414 HAP	71363	108883 HAP	108101 HAP	98828 HAP	107153	107982	108952 HAP	67561 HAP	123864	95636	108678	67630	111762		
			gallons	lbs	lbs	lbs	lbs	lbs	lbs	lbs	lbs	lbs	lbs	lbs	lbs	lbs	lbs	lbs	lbs		lbs
PRIMARY VOC EMISSIONS																					
International																					
INTERLAC 665	GREEN	Finish Coat	2000	7020.00	0.00	20.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	58.74%	8.22
INTERLAC 665	BLACK	Finish Coat	2000	7004.48	0.00	20.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	57.60%	8.06
INTERLAC 665	LIGHT BASE	Finish Coat	2000	7020.00	0.00	20.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	63.72%	8.92
INTERFINE 979	ALL COLORS	Finish Coat	2000	3628.76	0.00	0.00	0.00	4.00	0.00	0.00	0.00	0.00	0.00	2296.00	400.00	0.00	0.00	920.00	0.00	83.40%	11.68
INTERTHANE 990HS	LIGHT BASE	Finish Coat	500	1361.70	10.00	5.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	500.00	10.00	5.00	0.00	0.00	79.60%	2.79
INTERTHANE 990HS	ULTRA DEEP BASE	Finish Coat	500	1365.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	540.00	10.00	5.00	0.00	0.00	76.96%	2.69
INTERTHANE 990HS	WHITE	Finish Coat	500	1361.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	430.00	60.00	0.00	0.00	0.00	78.00%	2.73
INTERTUF 262	BLACK	AC	5000	11897.40	0.00	0.00	4400.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2000.00	1100.00	0.00	0.00	79.92%	27.97
INTERTUF 262	GREY	AC	5000	11672.25	0.00	0.00	4700.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2000.00	750.00	0.00	0.00	80.30%	28.11
INTERTUF 262	OFF WHITE	AC	5000	11900.35	0.00	0.00	4150.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2150.00	900.00	0.00	0.00	80.33%	28.12
INTERZINC 22	GREENISH GREY	AC	500	2042.88	330.00	80.00	70.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2660.00	0.00	80.80%	2.83
Jotun																					
Hardtop Pro	All Colors	Finish Coat	1000	2670.00	270.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1810.00	0.00	0.00	0.00	0.00	77.62%	5.43
Tankguard DW	All Colors	Tank Lining	500	10.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	99.82%	3.49
Tankguard 412	All Colors	Tank Lining	500	637.80	15.00	5.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	90.03%	3.15
Sherwin-Williams																					
Seaguard 5000 HS Epoxy	AC	AF	10000	20468.80	0.00	0.00	10467.00	0.00	0.00	465.20	0.00	0.00	0.00	0.00	3489.00	30000.00	0.00	0.00	0.00	82.40%	57.68
Seaguard P30 Red	AF	AF	500	1396.01	815.85	181.30	362.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	84.60%	2.96
Seaguard P30 Black	AF	AF	500	1375.22	803.70	178.60	446.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	84.60%	2.96
S-W Vinyl Copper	AF	AF	10000	27112.30	0.00	0.00	9895.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	55412.00	0.00	0.00	0.00	0.00	86.30%	60.41
Thinners/Solvents/Cleaners																					
International GTA-220/T-10	Thinner	Thinners	2000	14178.00	299.96	0.00	4259.40	0.00	0.00	139.98	0.00	0.00	0.00	0.00	0.00	3579.50	1379.81	0.00	0.00	0.00%	0.00
Interthane 950	Cleaner	Cleaner	500	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00%	0.00
Jotun Thinner #26	Thinner	Thinners	500	3669.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3669.60	0.00	0.00	0.00	0.00	0.00%	0.00
Sherwin Williams R1K4	Reducer for Vinyl Copper AF	Thinners	1000	6420.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00%	0.00
Sherwin Williams R6K30	Reducer for Seaguard 5000 HS	Thinners	1000	6760.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00%	0.00
Cleaner - Degreaser (1150)	Solvent	Thinners	400	240.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	819.82	92.68%	2.60
TOTAL (gallons)			*52,400*																		
TOTAL, Primary (lbs/yr)				*151212.47*	*2544.51*	*559.90*	*38750.50*	*4.00*	*0.00*	*605.18*	*0.00*	*0.00*	*0.00*	*2296.00*	*66250.60*	*39809.50*	*4139.81*	*3580.00*	*819.82*		
TOTAL, Primary (tpy)				*75.6*	*1.3*	*0.3*	*19.4*	*0.0*	*0.0*	*0.3*	*0.0*	*0.0*	*0.0*	*1.1*	*33.1*	*19.9*	*2.1*	*1.8*	*0.4*		
LIMITED USE																					
INTERSHIELD 300V	ALUMINIUM	AC	1200	3263.30	1752.00	180.00	828.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	72.00	0.00	0.00	0.00	73.70%	6.19
INTERGARD 7500	ALUMINUM	AC	1200	1878.49	1104.00	156.00	312.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	86.70%	7.28
INTERSHIELD 300V	BRONZE	AC	1200	3272.88	1791.42	132.25	841.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	120.23	0.00	0.00	0.00	74.00%	6.22
INTERSPEED 6400NA	AF	AF	2000	6418.68	4860.00	600.00	960.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	82.20%	11.51
TOTAL, Limited Use (gallons)			*5,600*																		
TOTAL, Limited Use (lbs/yr)				*14833.36*	*9507.42*	*1068.25*	*2941.60*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*192.23*	*0.00*	*0.00*	*0.00*		
TOTAL, Limited Use (tpy)				*7.4*	*4.8*	*0.5*	*1.5*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.1*	*0.0*	*0.0*	*0.0*		
TOTAL, (gallons)			**58,000**																		
TOTAL, All (lbs/yr)				**166,046**	**12,052**	**1,628**	**41,692**	**4**	**0**	**605**	**0**	**0**	**0**	**2,296**	**66,251**	**40,002**	**4,140**	**3,580**	**820**		302.0 lbs PM
TOTAL, All (tpy)				**83**	**6**	**1**	**21**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**33**	**20**	**2**	**2**	**0**		0.15 tons PM
MAX SINGLE HAP (tpy)			*6.0*																		
TOTAL HAPS (tpy)			*8.3*																		

Attachment F

State Environmental Policy Act (SEPA) Checklist

ADOPTION OF EXISTING ENVIRONMENTAL DOCUMENT and ADDENDUM
FOR EVERETT SHIP REPAIR VESSEL AND UPLAND WORK ENCLOSURE ADDITION
SEPA No. 2025-04

ADOPTION OF and ADDENDUM TO (check appropriate box):

☐ DNS ☒ MDNS ☐ EIS ☐ Other

The Port of Everett has prepared this document to adopt previously prepared environmental review documents prepared under the State Environmental Policy Act (SEPA) WAC 197-11-600 and to addend these documents with additional information about the proposal. The additional information does not change the analysis of alternatives or environmental impacts identified in the original documents.

DESCRIPTION OF CURRENT PROPOSAL:
Everett Ship Repair (ESR) proposes to install an upland abrasive blasting and spray painting enclosure and add a third submersible drydock (Hercules) to its operations. The enclosure will be located in the paved uplands area and the Hercules will be moored adjacent to Pier 3, both within property leased by ESR from the Port of Everett. The new drydock has a lifting capacity of 45,000 tons and is approximately 819 feet long (including overhanging apron) by 174 feet wide. The Hercules will be used for similar maintenance and repair work as the existing drydocks such as hull repair, welding, grinding, painting and engine, propeller and rudder repairs. The Hercules will allow for the service of multiple vessels simultaneously at the facility. Therefore, vessel capacity at the site is anticipated to increase from approximately 50 vessels to approximately 65 vessels per year.

PROPONENT:
Everett Ship Repair
2730 Federal Avenue
Everett, WA 98201

LEAD AGENCY:
Port of Everett
1205 Craftsman Way, Suite 200
Everett, WA 98201

LOCATION OF CURRENT PROPOSAL:
The Project is in the southwest quarter of Section 19, Township 29 North, Range 5 East, Willamette Meridian. The approximate street address is 2730 Federal Avenue, Everett,

Washington. Tax Parcel identification numbers 29051900301600 and 29051900302500 within the Port of Everett Marine Terminals.

TITLE OF DOCUMENTS BEING ADOPTED:

1. Mitigated Determination of Non-Significance (MDNS) for Everett Ship Repair, issued January 3, 2020.
2. SEPA Environmental Checklist prepared by Gavin Higgins dated December 30, 2019.
3. SEPA Adoption and Addendum, issued September 15, 2022.

DESCRIPTION OF DOCUMENTS BEING ADOPTED:

The SEPA Environmental Checklist prepared by Gavin Higgins, Everett Ship Repair, analyzed environmental impacts of a shipyard use to perform maintenance and repair of boats and ships on the site. The MDNS determined that, with conditioned mitigation measures, the project would not have a probable significant adverse impact on the environment. An addendum issued in 2022 included the addition of a semisubmersible barge used as a drydock.

TITLE OF DOCUMENTS BEING ADDENDED:

1. MDNS for Everett Ship Repair, issued January 3, 2020.
2. SEPA Environmental Checklist prepared by Gavin Higgins dated December 30, 2019.
3. SEPA Adoption and Addendum, issued September 15, 2022.

DESCRIPTION OF DOCUMENTS BEING ADDENDED:

1. MDNS for Everett Ship Repair is described above.
2. SEPA Environmental Checklist as described above.

AGENCY THAT PREPARED DECISION DOCUMENTS REFERENCED ABOVE:

Port of Everett

DATE ADOPTED DOCUMENTS WERE PREPARED:

Issue dates are provided above.

IF DOCUMENTS BEING ADOPTED or ADDENDED HAVE BEEN CHALLENGED (WAC 197-11-630), PLEASE DESCRIBE:

No challenges were filed against the initial determination.

THESE DOCUMENTS ARE AVAILABLE TO BE READ AT (PLACE/TIME):

These documents and related project information are available at the Port of Everett Administrative Offices at 1205 Craftsman Way, Suite 200, Everett, Washington from 8:00 a.m. to 5:00 p.m., Monday through Friday.

The Port of Everett adopts the SEPA Environmental Checklist prepared by Gavin Higgins and MDNS prepared by the Port of Everett. The attached addendum provides additional project

information and mitigation measures which will be implemented relative to the current proposal (Everett Ship Repair Upland Work Enclosure and third drydock). Analysis of the current proposal does not substantially change the analysis of significant impacts on the existing environmental documents. The current proposal remains subject to securing the necessary permits from other agencies with jurisdiction and compliance with those permit conditions.

NAME OF AGENCY ADOPTING THE DOCUMENTS:
Port of Everett

Contact Person: Laura Gurley, Director of Planning Phone: (425) 388-0720

Copies of this Notice of Adoption and Addendum are being sent to agencies with jurisdiction in accordance with WAC 197.11.630.

Responsible Official: John Klekotka, P.E.

Signature: _____ **Date Issued:** 8/22/25

Position/Title: Chief of Engineering & Construction **Phone:** (425) 388-0715

Address: 1205 Craftsman Way, Suite 200, Everett, WA 98201

Appeals: There is no public comment or appeal period for this Port of Everett SEPA addendum.

SEPA Addendum
Everett Ship Repair Vessel & Upland Work Enclosure Addition

As described in the attached Notice of Adoption and Addendum, the SEPA Responsible Official for the Port of Everett is adopting environmental documents prepared by the Port of Everett. This addendum has been prepared in accordance with WAC 197-11-625 to add information to the existing documents related to the Everett Ship Repair Upland Work Enclosure and third drydock. This information does not substantially change the previous analysis of significant impacts in the existing MDNS. The Everett Ship Repair Upland Work Enclosure and third drydock projects will meet all requirements, restrictions and mitigation measures as dictated through the review processes with the various permit issuing agencies, including Washington Department of Ecology (Ecology), Puget Sound Clean Air Agency (PSCAA), and the City of Everett.

The existing environmental review documents are revised with the information included below and referenced by section numbers in the SEPA Checklist. Text shown in italics presents information being added to the environmental checklist dated December 30, 2019.

A.7. Future Additions, Expansions, or Further Activity:
For addition to this section after the last paragraph.

*Everett Ship Repair is proposing to make two additions to its current plan: 1) Adding an upland abrasive blasting and spray paint enclosure, and 2) adding a third floating submersible drydock (Hercules). This drydock will be moored next to Pier 3 with the existing drydocks moving to the north (see **Exhibit A**, for a layout of the facility and location of the Hercules, and the paint/blast enclosure).*

A.8. Environmental Information Prepared:

- *Revised* Notice of Construction for Approval to Operate application, prepared for PSCAA
- *Revised* Discharge Authorization application, prepared for the City of Everett

A.10. Government Approvals and Permits

- *Revised Ecology NPDES permit*
- *Revised* PSCAA air permit
- *Revised* City of Everett Discharge Authorization
- *Revised* City of Everett Fire Marshall approval
- *City of Everett Building and Shoreline Permits*
- *Revised* Port of Everett approval

A.11. Project Description:
For addition to this section after the last paragraph:

The upland abrasive blasting and spray paint enclosure will be approximately 80 feet long, 40 feet wide, and 25 feet tall. It will consist of two Conex boxes (i.e., cargo containers) that will

have 15-foot double truss roof mounted on top of the Conex boxes. See ***Exhibit B*** *for the proposed structure configuration. The open ends will be covered in 12 mil plastic sheeting. An exhaust stack will be added to the outside of the tent as part of the dust collection and ventilation system with a baghouse/dust collector that will be used during paint and abrasive blasting operations. The location of the paint paint/blast booth can be found in* ***Exhibit A*** *"Site-Layout". ESR's current regulatory authorizations only cover these types of work on the floating drydock. The addition and use of this enclosure will require revisions to regulatory authorizations prior to operations occurring within it.*

This ESR project will add a third submersible drydock to the facility. The Hercules drydock addition will allow ESR to provide much needed repair capacity to the maritime industry. The Hercules will allow ESR to work on larger vessels, including U.S. Navy ships. The Hercules will be used to perform maintenance and repair work including pressure washing, hull repair welding and grinding, painting of hulls and top sides, engine, prop, shaft, and rudder repair and replacement, equipment repair and installation, etc. all similar to those activities performed on ESR's existing drydocks. The Hercules will be moored alongside Pier 3. Haul outs and launches will occur while the dry dock barge is moored at Pier 3. The location of all the drydocks can be seen in **Exhibit A**.

The new dry dock will allow for the service of multiple vessels simultaneously and can service larger vessels at the facility. Therefore, vessel capacity at the site is anticipated to increase from approximately 50 vessels to approximately 65 vessels per year.

These elements will be added to ESR's current Puget Sound Clean Air Agency Permit and National Pollution Discharge Elimination System Permit meeting environmental compliance with Clean Air Act and National Pollution Discharge Elimination System requirements and Best Management Practices. Should it be required, a building permit will be obtained from the City of Everett for the upland painting and blasting facility including review with Everett City Fire Department.

B.2.a. Emissions:
Add this section in the second paragraph:

With the addition of the upland enclosed work structure and the third drydock, the permitted amount of spray coatings and abrasive blasting grit used will not change. The same types of pollution control equipment as to what is being used on the existing drydocks will be used for the enclosure and third drydock and will be reviewed and authorized by PSCAA before construction and operation.

B.2.c. Emissions:
Add to this section to the end of the first paragraph:

The proposed upland enclosed work area will abide by these same measures.

B.3.a.2. Work Over, In or Adjacent to Water:
Revise this section in the first paragraph:

No infrastructure construction would occur over *or in the water. The paint/blast enclosure will be located within 200 feet of the shoreline.* Ship repair work will be performed on the Faithful Servant, the Emerald Lifter, *the Hercules* and pier-side. Access to *the Hercules, Faithful Servant, Riv Tow (staging barge) and Emerald Lifter will be via the retired ferry, Elwha's car port.*

B.3.a.4. Surface Water Withdrawals or Diversions:
Revise this section in the first paragraph:

No. However, submerging the Faithful Servant, and/or Emerald Lifter, *and/or Hercules* will result in temporary movement of surface water within a small portion of Port Gardner Bay, similar to the displacement caused by motion of any larger ship.

B.3.c.1) Water Runoff:
Add to this section to the end of the first paragraph:

The Hercules will have water runoff from the deck from cleaning and hydroblasting, as well as stormwater runoff. All the water on the deck will be contained and will be pumped to the sanitary sewer which falls under ESR's Industrial Wastewater permit issued by Ecology and discharge authorization with the City of Everett.

The paint/blast booth will be fully enclosed and sealed or bermed at the ground level to keep stormwater out and therefore will not affect water runoff.

B.3.d. Proposed measures to reduce or control surface, ground, and runoff water, and drainage pattern impacts

BMPs will be the same as exist currently. Additional BMPs may be added with the required update of the permits

B.S.d. Measures to Preserve or Enhance Wildlife:
Revise this section in the first paragraph:

Screens and strainer baskets are installed on the Faithful Servant, the Emerald Lifter *and the Hercules* to prevent intake of marine debris and marine species with ballast water.

B.6.a. Energy Needs:
Revise this section in the second paragraph: What are the energy needs of the new enclosure? How will equipment used within it be powered?
Add to this to the end of the section:

The Hercules will be powered from existing shore power connection on Pier 3 and the paint/blast booth will also be powered from existing upland electrical infrastructure.

B.7.a.3). Environmental Health, toxic and hazardous chemical:
Add to this section after the second paragraph:

The amount of 1,000 gallons of diesel fuel stored onsite will be increased to approximately 3,500 gallons. Fuel is stored in a double hulled "fuel-cube" container, in the fuel storage area.

B.8.c. Structures on the Site:
Add to this section after the second paragraph:

The Hercules is a submersible drydock with a steel hull and superstructure. Its waterline length is 784 feet (its overall length is 819 feet including the steel apron on one end) and its beam (width) is 174 feet.

The paint/blast booth footprint is 80 feet long, 40 feet wide and 25 feet tall with a 35 feet tall exhaust stack (extending 10 feet above the enclosure).

B.8.i. Resident or Employment Numbers:
Revise this section in the first paragraph:

No one resides on the site. *Employment numbers on site vary, but total employment is estimated at 250 at full capacity.*

B.10.a. Height of Structures, Building Materials:
Add to the section as a new last paragraph:

The height of the Hercules, as measured from the water line, is approximately 67 feet (hull to top of wing wall) and 50 feet from deck level to top of wing wall. The Hercules baghouse/dust collector stack is expected to be less than 75 feet tall (also measured from the water line) and will be supported by the 20-foot-tall light tower on top of the wing wall.

The paint/blast enclosure is approximately 80 feet long, 40 feet wide and 25 feet tall at its highest point. An exhaust stack will be added to the outside of the enclosure as part of the dust collection and ventilation system, with a baghouse/dust collector that will be used during paint and abrasive blasting operations. The baghouse/dust collector stack is expected to be less than 35 feet tall (10 feet taller than the top of the enclosure).

B.10.b. View Impacts:
Add to the section as a new last paragraph:

Views from adjacent properties will not be impacted due to the presence of existing trees, the Terminal Avenue overcrossing, and existing buildings already blocking the view. There is also a

significant elevation difference with the ESR site being at a lower elevation than neighboring properties.

B.16.b. Proposed Utilities:
Revise this section in the second paragraph:

The Faithful Servant, the Emerald Lifter, *and the Hercules* will be connected to shore electrical power by a portable power cord connected to existing electrical service. A temporary conveyance, consisting of a sump pump and flexible hose, will be used to convey wash water from the Faithful Servant, the Emerald Lifter, *and the Hercules* to an existing sanitary sewer lift station at the southeast corner of the site near the Management Office.

Additional Documents:

1. Exhibit A includes the site layout for the third dry-dock (Hercules) on Pier 3.
2. Exhibit B gives the planned dimension and design of the paint/blast booth

Responsible Official: John Klekotka, P.E.

Signature:  **Date Issued:** 8/22/25

Position/Title: Chief of Engineering & Construction **Phone:** (425) 388-0715

Address: 1205 Craftsman Way, Suite 200, Everett, WA 98201

Appeals: There is no public comment or appeal period for this Port of Everett SEPA addendum.

Exhibit A
Site Layout

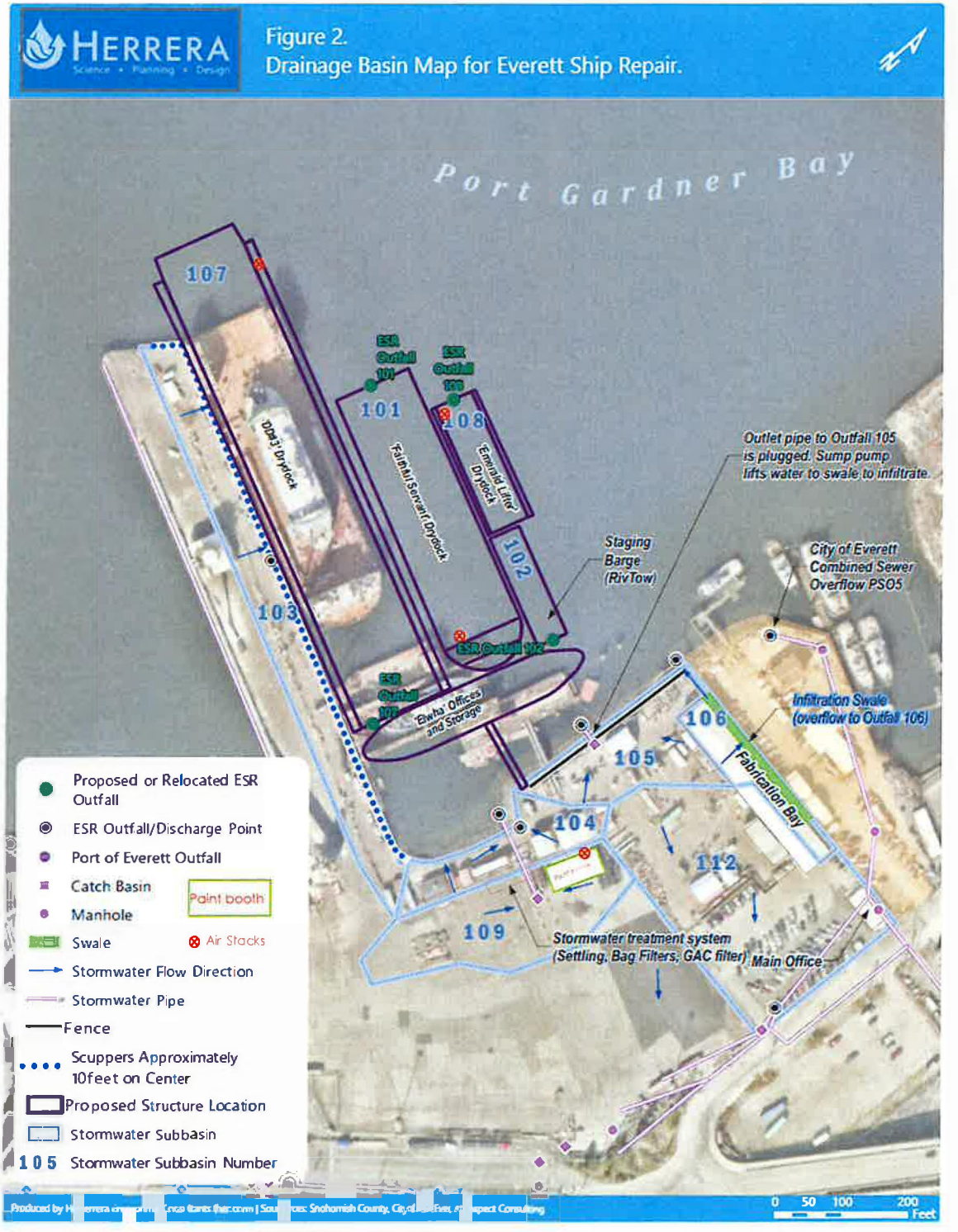
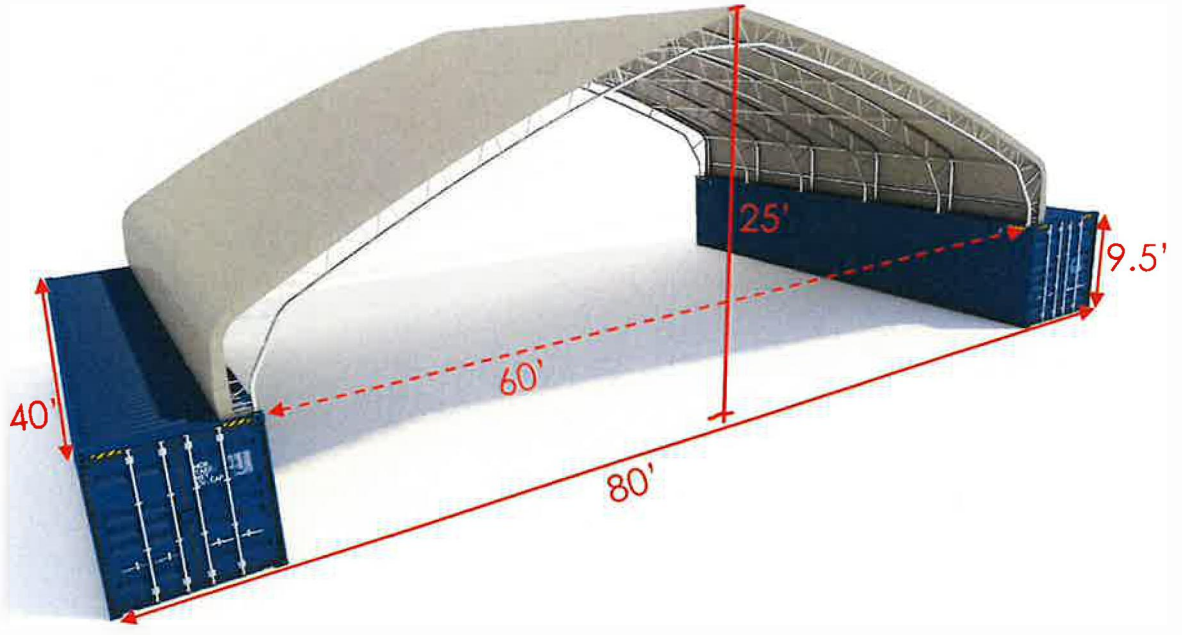


Exhibit B
Paint/Blast Enclosure Dimensions

Double Trussed Paint/Blast Shelter
40 feet length Conex box (cargo container) sides
60 feet covered width between Conex boxes
25 feet tall domed gable
35 feet tall exhaust system not shown (extends 10 feet above roofline)
9.5 feet high Conex box side
Covered square footage is 2,400 ft^2
Overall footprint is 3,200 ft^2
Approximate enclosed volume 70,275 ft^3
Open ends in picture will be fully enclosed with 12 mil plastic sheeting



One Conex box will be for painting operation and the other will be for blasting operations.

Attachment G

Meteorological and Dispersion Modeling Protocol and Results Report

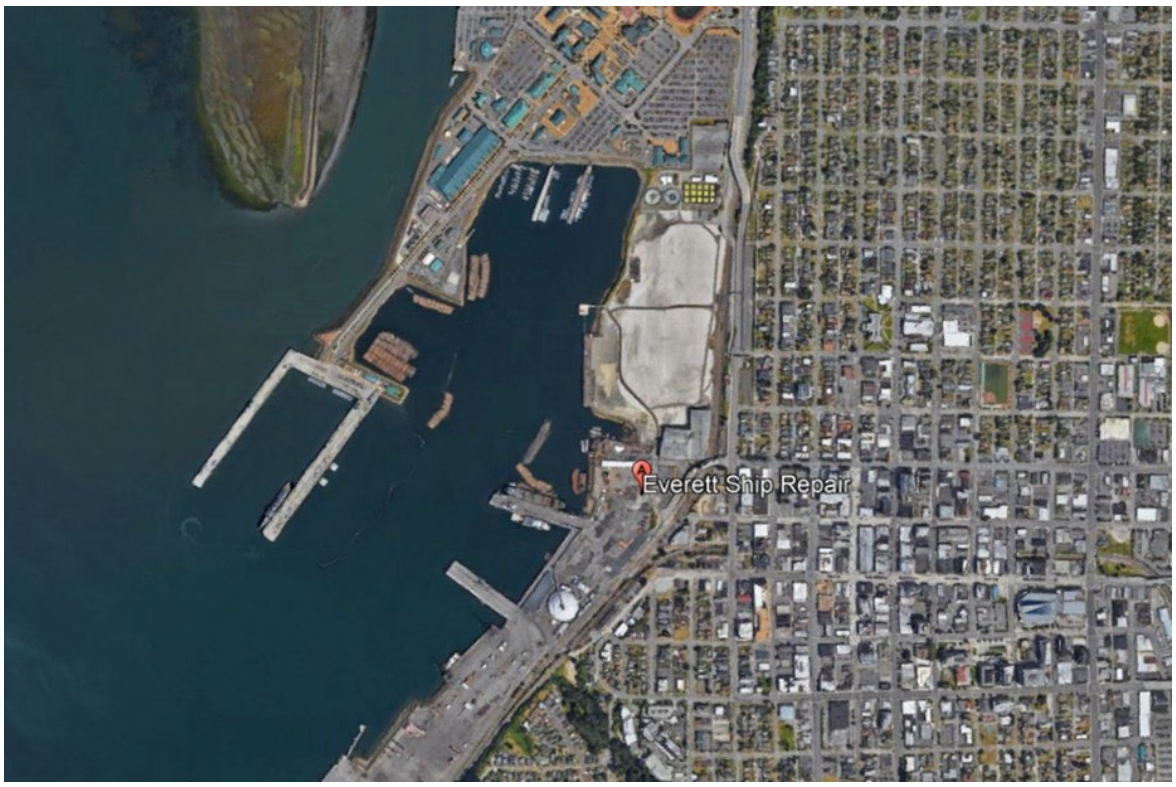
METEOROLOGICAL AND DISPERSION MODELING PROTOCOL AND RESULTS REPORT

FOR

EVERETT SHIP REPAIR, EVERETT WA

Site Location

The site location and vicinity are shown in the aerial view below:



Meteorological Data

The nearest representative NWS meteorological data station to the proposed site is Paine Field in Everett, Washington. AERMOD was run with Quillayute upper air meteorological data.

AERMOD input files produced by AERMET (.SFC and .PFL) for individual years were concatenated into a single 5-year met data file.

CASCADE ENVIRONMENTAL MANAGEMENT

Additional site and met data details are provided below:

Paine Field Met Data Information

Model Versions Used for Met Data Preprocessing

Parameter	Value
AERMET	Version 21112
AERSURFACE	Version 20060

Hourly Surface Station Met Data Information

Parameter	Value
Surface Station Name	SNOHOMISH CO, WA
Latitude, Longitude	47.92326 N, 122.28307 W
Station ID (WBAN)	24222
ASOS Station?	Yes
File Format	NCDC TD-3505 (ISHD)
Base Elevation	184.7 m
Adjustment to Local Time	8 hours
Anemometer Height	10 m

1-Minute & 5-Minute ASOS Wind Data Information

Parameter	Value
AERMINUTE Data Used?	No

Upper Air Station Met Data Information

Parameter	Value
Upper Air Station Name	QUILLAYUTE, WA
Latitude, Longitude	47.95 N, 124.55 W
Station ID (WBAN)	94240
File Format	FSL
Adjustment to Local Time	8 hours

AERSURFACE Parameters

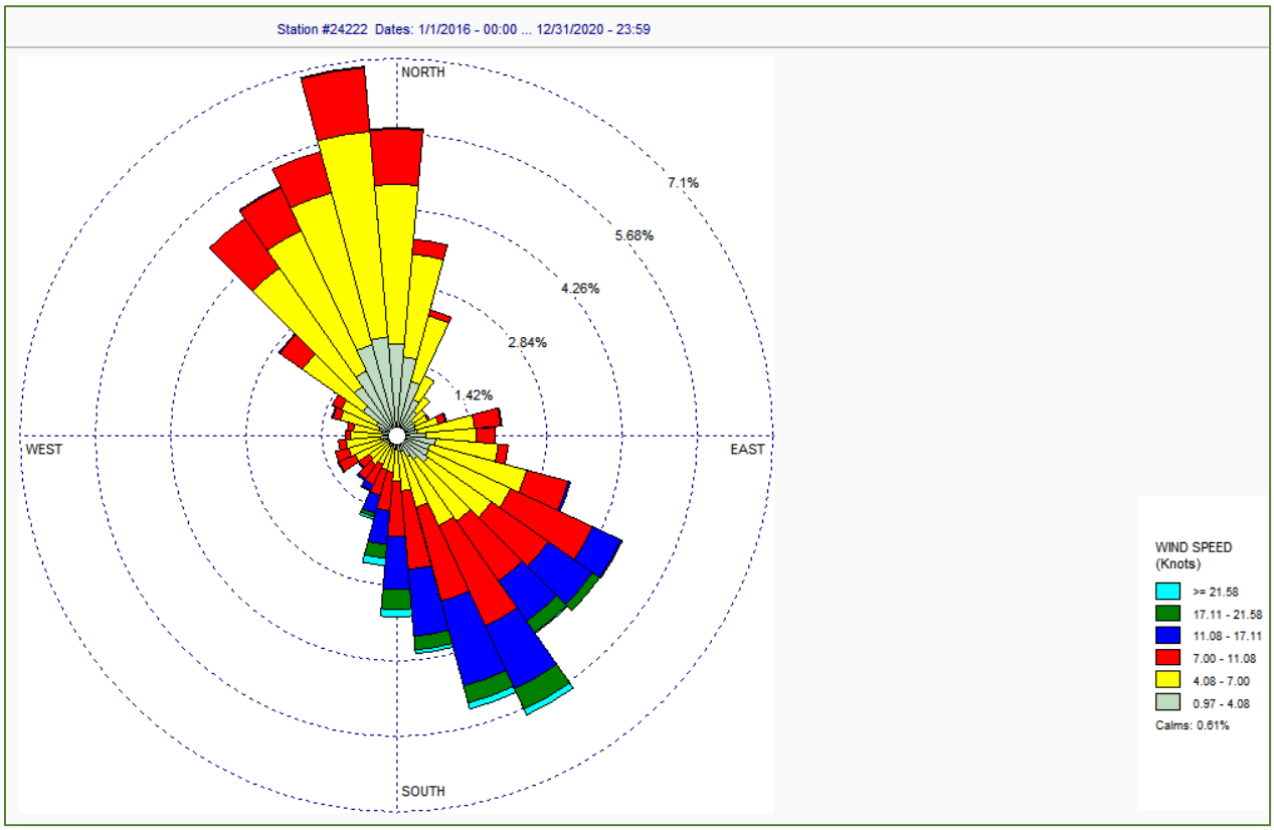
Parameter	Value
Land Use Data File	USGS NLCD 2016 – GeoTIFF Format
Center Lat/Long	47.92326 N, 122.28307 W
Datum	NAD83
Radius for Surface Roughness	1km
Number of Sectors	12 sectors of 30° (starting at 0°)
Period	Monthly
Surface Moisture	Year 2016: Average Year 2017: Average Year 2018: Average Year 2019: Dry Year 2020: Average
Other Settings	Continuous Snow: No Airport Site: Yes Airport Sectors: 5, 6, 7, 8, 9 Arid Region: No

AERMOD Parameters

Parameter	Value
Surface Met Data File	MET2119975_2016_2020.SFC
Profile Met Data File	MET2119975_2016_2020.PFL
Station Base Elevation (MSL)	184.7 m
Surface Station No.	24222
Surface Station Name	SNOHOMISH CO, WA
Start Year	2016
Upper Air Station No.	94240
Upper Air Station Name	QUILLAYUTE, WA
Start Year	2016

Wind Rose

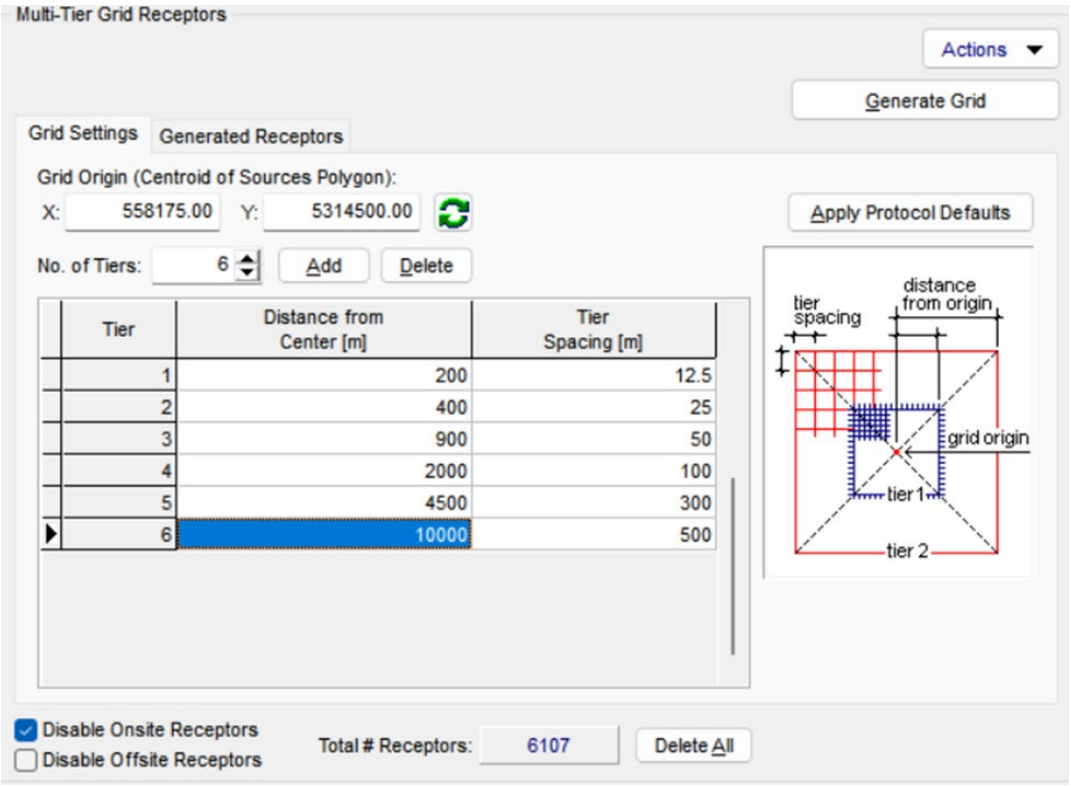
Below is the wind rose for Paine Field surface meteorological data for the years 2016 through 2020.



Dispersion Modeling

AERMOD (version 24142) was run using regulatory default options as well as the following:

- Urban dispersion algorithm.
- Building downwash effects as determined by BPIPPRM from within AERMOD.
- Flagpole receptor height of 1.5 meters for all receptors.
- Elevated terrain heights from NED GEOTIFF data as processed with AERMAP.
- 6,107 grid, and 11 additional property line, receptors as follows:



Emissions and Toxic Air Pollutant (TAP) Ambient Impacts

An increase in the usage of abrasive blasting grit or paint/coatings is not needed, nor requested, for the proposed additions of the third dry dock and the painting/abrasive blasting tent. Therefore, all TAP emissions still remain below their respective Small Quantity Emission Rates (SQERs) except for hexavalent chromium, ethylbenzene, and xylene. Hence, as with previous permit application submittals, the modeling of hexavalent chromium, ethylbenzene, and xylene emissions for ambient impact comparisons with their respective Ambient Source Impact Level (ASIL) is provided.

The three dry docks and the paint/abrasive blasting tent were modeled with AERMOD using the following stack parameters and emissions profiles.

	Dry Dock 1	Dry Dock 2	Dry Dock 3	Painting/Abrasive Blasting Tent
Stack Height (ft)	65	38	75	35
Stack Exit Diameter (ft)	3	2.33	3	2.33
Stack Flow Rate (CFM)	20,000 min 40,000 max	20,000 min 40,000 max	40,000 min 80,000 max	20,000 min 40,000 max
Stack Exit Temperature (°F)	68	68	68	68
Percentage of Emissions (%)	22.5	22.5	45	10

"Building" heights and base elevations were incorporated as follows:

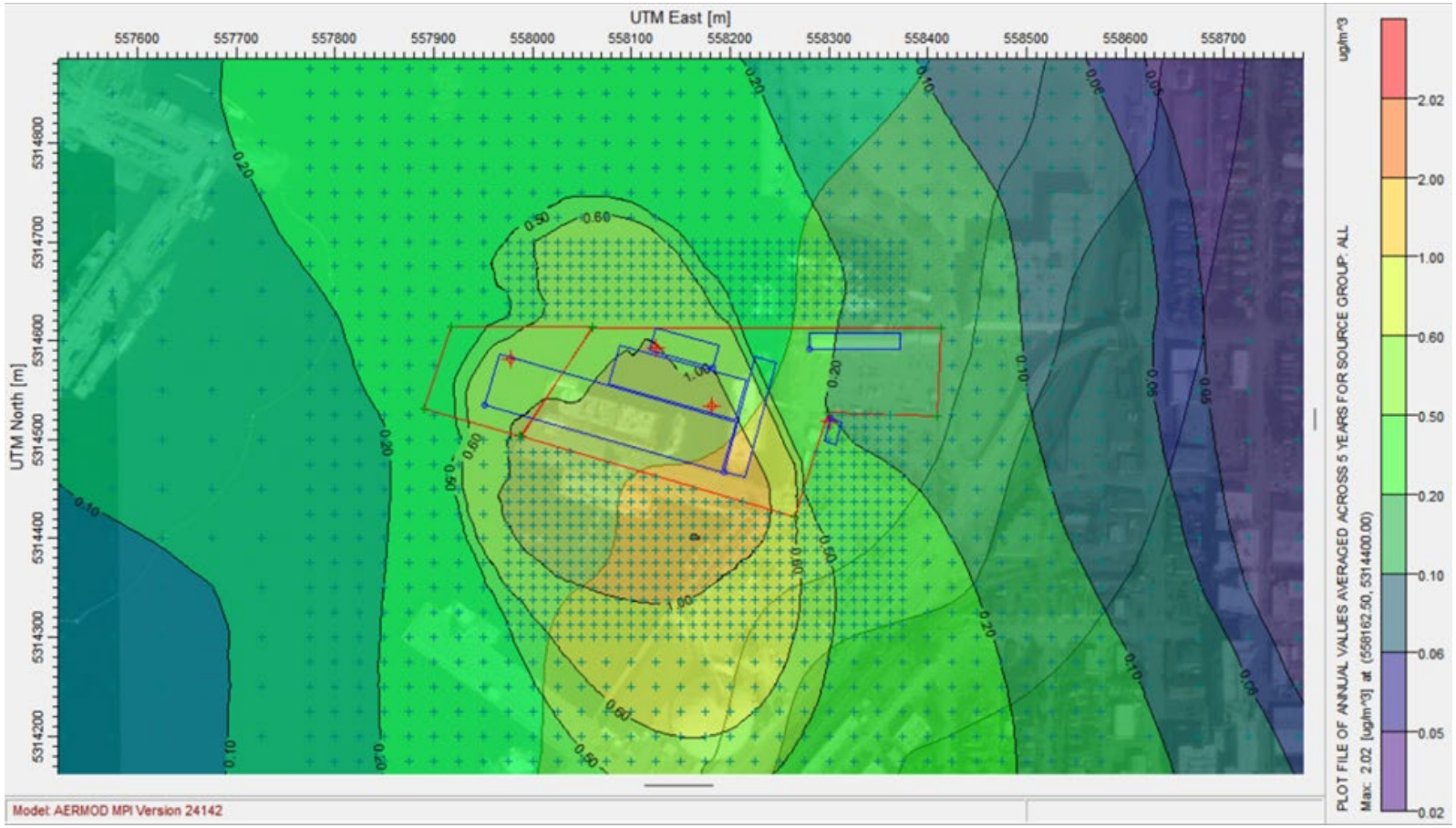
Building List

#	Active	Building Name	Description	Elevation [m]	Tier Height [m]
1	☑	DD_1	Dry Dock 1	0.00	18.29
2	☑	DD_2	Dry Dock 2	0.00	7.32
3	☑	TENT-1	Paint and Blast Tent #1	2.55	7.62
4	☑	FAB	Existing FAB Bldg	1.94	12.19
5	☑	DD-3	Dry Dock 3	0.00	20.42
6	☑	ELWHA	Elwha	1.99	15.24

Project type and size variations can call for larger baghouses with increased exhaust flow rates. Hence, two emissions scenarios were modeled for the baghouses – one for a minimum baghouse CFM and another for a maximum baghouse CFM. The 8,760 hours per year Potential to Emit emission rates for hexavalent chromium, ethylbenzene, and xylene and the respective modeled impacts as compared with Ambient Source Impact Levels are provided below. Ambient impacts remain below the respective ASILs.

Toxic Air Pollutant	**Averaging Period**	**Emission Rate for Averaging Period (lb/hr)**	**Maximum Impact for Higher CFM (ug/m^3)**	**Maximum Impact for Lower CFM (ug/m^3)**	**ASIL (ug/m^3)**
Hexavalent Chromium	Annual	3.14E-07	2.64E-06	3.76E-06	4.00E-06
Ethylbenzene	Annual	6.17E-06	2.60E-01	3.70E-01	4.00E-01
Xylene	24-Hour	1.37E+00	7.08E+00	1.05E+01	2.20E+02

Maximum impacts are located within ESR and the Port of Everett property. An output graphic showing the four stacks, buildings/structures footprints, and the annual impact area is provided below:



Maximum impacts are located within ESR and the Port of Everett property. An output graphic showing the four stacks, buildings/structures footprints, and the 24-hour impact area is provided below: