Chertkovsky, Natalya V <natalya.v.chertkovsky@wv.gov>

RE: EXT :Re: Re: Re: Re: ATK (1 of 3) TV permit renewal / SM03

2 messages

Foor, SueEllen [US] (DS) <sueellen.foor@ngc.com> Thu, Nov 14, 2024 at 11:06 AM
To: "Chertkovsky, Natalya V" <natalya.v.chertkovsky@wv.gov>

Natalya,

I apologize for the delay in returning this to you. I had visitors on site Mon-Wed this week.

I only found one thing in the draft that needed corrected. In Section 8.1.1. there is a line missing in the Material Usage table. I entered the missing line in the attachment in red. It is for source Z-13S.

Thank you.

Sue Ellen Foor

Sr. Prin. Engineer EHS

Northrop Grumman Defense Systems

ABL Operations

210 State Route 956

Rocket Center, WV 26726

Phone: 304-726-5506

Cell: 240-727-5581

Fax: 304-726-5562

sueellen.foor@ngc.com

From: Chertkovsky, Natalya V <natalya.v.chertkovsky@wv.gov>
Sent: Thursday, November 7, 2024 5:20 PM
To: Foor, SueEllen [US] (DS) <sueellen.foor@ngc.com>
Subject: EXT :Re: Re: Re: Re: ATK (1 of 3) TV permit renewal / SM03

Hello, Sue Ellen,

Please, find attached draft TV permit and a fact sheet for the Part 1 of 3 renewal and SM03 for your review.

We didn't remove unit 2-11S from the permit at this point, because it still has requirements in the R13 permit. We removed the rest of the units you requested because they were not associated with R13 permits.

Please, get back to me by November 14, 2024 (or sooner) if you have any questions or comments.

We plan to go out to notice in the week of November 18, 2024.

Thank you for your cooperation,

Sincerely,

Natalya Chertkovsky

On Thu, Oct 31, 2024 at 12:10 PM Chertkovsky, Natalya V <natalya.v.chertkovsky@wv.gov> wrote:

> No problem! So, items 2-11S, B-95S, B-102S, J-11S, 2-7C (54C) and J-7S all need to be removed from the table and from the permit (total 6 items)? Thank you!
>
> On Thu, Oct 31, 2024 at 11:55 AM Foor, SueEllen [US] (DS) <sueellen.foor@ngc.com> wrote:
>
> > Sorry about that. I thought I did a strike through along with the red. The red should all be removed.
> >
> > ---
> >
> > **From:** Chertkovsky, Natalya V <natalya.v.chertkovsky@wv.gov>
> > **Sent:** Thursday, October 31, 2024 11:42 AM
> > **To:** Foor, SueEllen [US] (DS) <sueellen.foor@ngc.com>
> > **Subject:** EXT :Re: Re: Re: ATK (1 of 3) TV permit renewal / SM03
> >
> > Only J-7S is shown as strikethrough in the Equipment Table
> >
> > On Thu, Oct 31, 2024 at 11:39 AM Chertkovsky, Natalya V <natalya.v.chertkovsky@wv.gov> wrote:
> >
> > > Sue Ellen, a quick question:
> > >
> > > Why the following items are in "red" - do they need to be removed from the Equipment Table:
> > >
> > > 2-11S, B-95S, B-102S, J-11S, 2-7C (54C)
> > >
> > > On Thu, Oct 31, 2024 at 11:15 AM Chertkovsky, Natalya V <natalya.v.chertkovsky@wv.gov> wrote:
> > >
> > > > Sue Ellen,
> > > >
> > > > Thank you so much for your quick review and comments!
> > > >
> > > > Natalya
> > > >
> > > > On Thu, Oct 31, 2024 at 10:28 AM Foor, SueEllen [US] (DS) <sueellen.foor@ngc.com> wrote:
> > > >
> > > > > Natalya,
> > > > >
> > > > > I have no problem with doing that. I did go into 3.1.9 and 3.2.4 and added the Plant 4 source ID numbers from Section 11 because they were not included.
> > > > >
> > > > > I also updated a few sources in the equipment table that have been removed since the application was submitted in January. Only 1 of those (2-11S) was mentioned in 3.1.9 and 3.2.4 and I crossed it out in those paragraphs.
> > > > >
> > > > > It makes more sense to have those requirements just once in the facility wide requirements. FYI – you had 2.0 Facility Wide Requirements. That should be 3.0 and I marked it in red.
> > > > >
> > > > > Please see my marked up copy that I attached.

From: Chertkovsky, Natalya V <natalya.v.chertkovsky@wv.gov>
Sent: Tuesday, October 29, 2024 12:34 PM
To: Foor, SueEllen [US] (DS) <sueellen.foor@ngc.com>
Subject: EXT :Re: Re: ATK (1 of 3) TV permit renewal / SM03

Hello Sue Ellen,

Just wanted to ask for your quick opinion, please.

I was planning to "clean-up" sections 8 and 12 of the permit to get rid of some of the Subpart GG duplicate requirements (like 8.1.3, 8.1.4, 8.1.5, 12.1.3, 12.1.4, 12.1.5; 8.4.3 and 12.4.4; 8.5.2 and 12.5.2) already included with the facility-wide section 3.0 under conditions 3.1.9, 3.4.5 and 3.5.10 (respectively), but I'm not sure if it'll be helpful for you, or you rather prefer to keep these requirements separately in their own sections?

I attached the draft permit with strikethrough requirements I was thinking to remove for your quick look.

(I also strikethrough standard requirements (like "Record of maintenance..." and "Record of Malfunctions of air pollution control equipment" etc.) to remove them from individual sections and move/combine with facility-wide section requirements.)

Please, let me know what you think.

Thank you!

Natalya

On Thu, Oct 24, 2024 at 1:21 PM Chertkovsky, Natalya V <natalya.v.chertkovsky@wv.gov> wrote:

> Thank you, Sue Ellen!
>
> I see that the huge PTE numbers for CO, VOC, SO2, TSP and NOx indeed came from the (3 of 3) renewal application.
>
> Did you mean all the PTE changes included in permit R13-3651 / part 1 of 3 SM03 were included (in question 3) - thank you.
>
> How about PTE changes in question 2 (revisions for part 3 of 3) - were they included as well?

On Thu, Oct 24, 2024 at 11:23 AM Foor, SueEllen [US] (DS) <sueellen.foor@ngc.com> wrote:

> Natalya,
>
> Sorry it took a bit to get back to you on this. A couple things came up at work and I was trying to do some training with a new person on a Navy report and she will be out next week before it is due.
>
> I have attached an updated table. It includes all of the changes for the permits referenced in your question 3.

The reason they looked so different is that when Jill did the update for the Part 3 application and updated all of the boilers, she inadvertently added the cumulative totals for the criteria pollutants for the boilers rather than dividing them per boiler in the table. Our PTE table is set up to match our SLEIS points and when she copied the boiler numbers for example, she used 37.86 tons of CO for each of the 10 boilers rather than 3.786. That is what changed the totals so drastically.

Please use this table for all 3 parts (if you can go back and add it to the Part 3 file and replace the other one.

Thank you.

Have a great weekend.

From: Chertkovsky, Natalya V <natalya.v.chertkovsky@wv.gov>
Sent: Wednesday, October 23, 2024 3:54 PM
To: Foor, SueEllen [US] (DS) <sueellen.foor@ngc.com>
Subject: EXT :Re: ATK (1 of 3) TV permit renewal / SM03

Hello, Sue Ellen,

Just wanted to follow up on my email last week.

Thank you!

Natalya

On Thu, Oct 17, 2024 at 5:04 PM Chertkovsky, Natalya V <natalya.v.chertkovsky@wv.gov> wrote:

> Sounds good, thank you, Sue Ellen!
>
> On Thu, Oct 17, 2024 at 4:25 PM Foor, SueEllen [US] (DS) <sueellen.foor@ngc.com> wrote:
>
> > Natalya,
> >
> > I am working on this, but I had some other obligations that needed to be completed today. I will work on it early next week and get it back to you on Monday or Tuesday.
> >
> > It did include the Plant 4 numbers, however, the numbers that were included, were changed prior to completion of the permit so the numbers will be different.
> >
> > Sue Ellen
> >
> > ---
> >
> > **From:** Chertkovsky, Natalya V <natalya.v.chertkovsky@wv.gov>
> > **Sent:** Wednesday, October 16, 2024 5:48 PM
> > **To:** Foor, SueEllen [US] (DS) <sueellen.foor@ngc.com>
> > **Subject:** EXT :ATK (1 of 3) TV permit renewal / SM03
> >
> > Hello Sue Ellen,
> >
> > I'm working on your (Part 1 of 3) TV permit renewal/SM03 applications, and have few questions:
> >
> > 1) I noticed the PTE table for criteria pollutants in the (Part 3 of 3) renewal application is very different compared to the (Part 1 of 3) renewal application, and I assumed the (Part 3 of 3) PTE numbers are more up to date since it was filed after

(Part 1 of 3) renewal application was filed - is it correct?

2) Did the PTE table in the (Part 3 of 3) application include PTE changes from (Part 1 of 3) MM01, SM01 and SM02 /MM02?

3) I assumed PTE changes from R13-3651 (SM03 will be based on this permit) were not included with the renewal applications PTE tables yet. Based on the EE for the R13-3651 there is 8.02 TPY increase in PTE for HAPs. Which HAP is it? We need to keep track of any HAP that can get close to 10 TPY threshold.

Thank you in advance for your help,

Sincerely,

Natalya Chertkovsky

DPPermitRenewal2025(1 of 3) - SEF 11-14-24.docx
1130K

Chertkovsky, Natalya V <natalya.v.chertkovsky@wv.gov> Thu, Nov 14, 2024 at 12:13 PM
To: "Foor, SueEllen [US] (DS)" <sueellen.foor@ngc.com>

Hello Sue Ellen,
Thank you for your timely comments!
I added Z-13S since it was a part of R13-3334B and was missing.
We will go out to notice with the permit next week.
Sincerely,
Natalya Chertkovsky
[Quoted text hidden]

West Virginia Department of Environmental Protection

Harold D. Ward
Cabinet Secretary

Permit to Operate

Pursuant to
Title V
of the Clean Air Act

Issued to:
Alliant Techsystems Operations LLC
Allegany Ballistics Laboratory
R30-05700011-2025 (1 of 3)

Laura M. Crowder
Director, Division of Air Quality

Issued: [Date of issuance] • *Effective: [Equals issue date plus two weeks]*
Expiration: [5 years after issuance date] • *Renewal Application Due: [6 months prior to expiration]*

Permit Number: **R30-05700011-2025 (1 of 3)**
Permittee: **Alliant Techsystems Operations LLC**
Facility Name: **Allegany Ballistics Laboratory**
Permittee Mailing Address: **210 State Route 956, Rocket Center, WV 26726-3548**

This permit is issued in accordance with the West Virginia Air Pollution Control Act (West Virginia Code §§ 22-5-1 et seq.) and 45CSR30 — Requirements for Operating Permits. The permittee identified at the above-referenced facility is authorized to operate the stationary sources of air pollutants identified herein in accordance with all terms and conditions of this permit.

Facility Location:	Rocket Center, Mineral County, West Virginia
Facility Mailing Address:	210 State Route 956, Rocket Center, WV 26726-3548
Telephone Number:	(304) 726 - 5506
Type of Business Entity:	LLC
Facility Description:	Fabrication of both steel and composite structure rocket motor and warhead cases, production of propellants and explosives which are loaded into above cases and all associated case preparation and testing for motors
SIC Codes:	Primary - 3764, Secondary – 3089
UTM Coordinates:	686.47 km Easting • 4381.25 km Northing • Zone 17

Permit Writer: Natalya Chertkovsky-Veselova

Any person whose interest may be affected, including, but not necessarily limited to, the applicant and any person who participated in the public comment process, by a permit issued, modified or denied by the Secretary may appeal such action of the Secretary to the Air Quality Board pursuant to article one [§§ 22B-1-1 et seq.], Chapter 22B of the Code of West Virginia. West Virginia Code §22-5-14.

Issuance of this Title V Operating Permit does not supersede or invalidate any existing permits under 45CSR13, 14 or 19, although all applicable requirements from such permits governing the facility's operation and compliance have been incorporated into the Title V Operating Permit.

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1.0. Emission Units and Active R13, R14, and R19 Permits

1.1. Emission Units

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity	Control Device
001 Ingredient Preparation – Plant 1					
1-1S	1-1E	Sweco Shaker-262	1981	500 lb/hr	None
1-2S	1-2E	Blender/Dryer Condenser Vacuum Pump-262	1963	Variable	1-8C: Condenser
1-3S (25s)	1-3E (23e)	Grinder-262	1981	500 lb/hr	1-1C: Dust Control Filter
1-4S (26s)	1-4E (24e)	Nitrate Ester Sparge-352 (original)	1988(1)	1200 lb/hr lacquer	1-2C: Cryogenic Recovery
1-4S (26s)	1-13E	Nitrate Ester Sparge-352 (secondary)	2016(1)	1200 lb/hr lacquer	1-10C: Cryogenic Recovery
1-5S	VI*	Chemical Mixing Area-373	1993	Variable	1-3C: Carbon bed
1-6S	VI*	Parts Cleaning-373	1993	Variable	1-3C: Carbon bed
1-7S	1-5E	Sweco Shaker-374	1997	700 lb/hr	None
1-8S (41s)	1-6E (41e)	Blender/Dryer Condenser Vacuum Pump-374	2002	Variable	1-9C: Condenser
1-9S (40s)	1-7E (40e)	Grinder Mill-374	1993	700 lb/hr	1-4C: Dust Control Filter
1-10S	1-8E	RDX Drain Table-374	2002	Variable	None
1-11S (44s)	1-9E (44e)	Handling System-384	1994	Variable	1-5C: Dust Control Filter (HEPA)
1-12S (48s)	1-12E (48e)	Weighing System-384	1995	Variable	1-6C: Dust Control Filter (HEPA)
1-13S	1-10E	Heptane Storage Tank-384	1995	500 gallons	None

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity	Control Device
1-14S (45s/47s)	1-10/11E (45e/47e)	Mix Bowl-384	1995	500 lb	1-7C: Condenser
1-15S	1-10E	Attritor-384	1995	500 lb	None
1-16S	VI*	3-Roll Mill-384	1995	NA	None
1-17S	VI*	Electric Drying Oven-271	Early 80s	Variable	None
1-18S	VI*	Electric Drying Oven-271	Early 80s	Variable	None
002 Chamber Preparation – Plant 1					
2-11S (54s)	2-9E (54e)	Walk-In Spray Booth-167	1980	Variable	2-7C (54c): Fabric filter
2-8S	VI*	Progressive Blasting Systems Grit Blaster-420	1999	200 lb/hr	2-1C: Cyclone dust collector
2-10S	VI*	Two Roll Mill-420	1999	NA	None
2-12S	2-10E	Fume Hood for CBL-420	1999	Variable	None
2-13S	2-11E	Case Bond Liner Spray Booths-420	1999	Variable	2-5C: Fabric filters
2-14S	2-11E	Case Bond Liner Spray Booths-420	1999	Variable	2-6C: Fabric filters
2-15S	2-12E	Drying Oven-420	1999	Variable	None
2-16S	2-13E	Actrel Degreaser-420	1999	355 gal	None
2-17S	2-14E	Actrel Solvent Recovery Still System-420	1999	50 gal/hr	None
2-18S	2-15E	Stencil Booth-420 Bay 3	2010	Variable	2-8C: Fabric filters
2-19S	2-16E	Crossdraft Paint Booth – B432	2021	N/A	2-9C 3-Stage Filtration
2-20S	2-17E	Crossdraft Paint Booth – B432	2021	N/A	2-9C 3-Stage Filtration
003 Mixing & Casting Operations – Plant 1					
3-1S	VI*	50 Gallon Mixer-302	1964	50 gallons	None
3-2S	VI*	Casting Pits-308	1964	50 gallons	None
3-4S	VI*	Casting Pits-356	1990	150 gallons	None
3-5S	VI*	Linear Casting Line	1980	150 gallons	None
3-6S	NDV**	300 Gallon Mixer-375	2012	300 gallons	None
005 Propellant Machining – Plant 1					
5-1S	VI*	Drilling/machining equipment-410	1996	NA	None

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity	Control Device
006 Loading/Inspection/Final Assembly – Plant 1					
6-1S	NE***	X-Ray equipment-180	1981	Variable	None
6-2S	NE***	X-Ray equipment-360	1991	Variable	None
6-3S	6-1E	XO-Mat X-Ray Developer System-360	1991	Variable	None
6-4S (144s)	6-2E (144e)	Paint Booth-364	1995	Variable	6-1C: Fabric filter
6-5S	6-3E	Exhaust Hood-369	1995	Variable	None
6-13S	6-10E	Large & Small Temperature Chambers-369	1995	NA	None
6-14S	6-11E	Large & Small Temperature Chambers-369	1995	NA	None
6-6S (152s)	6-4E (152e)	Paint Booth-392	1995	Variable	6-2C: Fabric filter
6-7S (153s)	6-5E (153e)	Paint Booth-392	1995	Variable	6-3C: Fabric filter
6-8S (154s)	6-6E (154e)	Paint Booth-392	1995	Variable	6-4C: Fabric filter
6-9S (155s)	6-7E (155e)	Paint Booth-392	1995	Variable	6-5C: Fabric filter
6-10S	6-8E	Teflon Spray Booth-412	1997	Variable	6-6C: Fabric filter
6-11S	6-8E	Teflon Drying Oven-412	1997	3 mm BTU/hr	None
6-12S	6-9E	Decontamination Oven-412	1997	1.5 mm BTU/hr	None
007 Mold Parts Cleanup – Plant 1					
7-1S (10s)	7-1E	Parts Washer-151	Pre-1970	36 gallons	None
7-2S (11s)	7-2E	Parts Washer-151	Pre-1970	35 gallons	None
7-3S	7-3E	Parts Washer-407 (6 pans)	1997	125 gallons (6)	None
7-4S	7-3E	Parts Washer-407	1997	35 gallons	None
7-5S	7-3E	Parts Washer-407 (2 pans)	1997	52 gallons	None
7-6S	7-4E	Acetone Recovery Unit	1997	5.5 gal/hr	None
00C Gas Generator Fabrication – Plant 1					
C-1S	C-1E	Cellulose Acetate Machine-420B2	2000	NA	None
C-2S	C-2E	Weigh-Out and Mixing Hood-180	2000 - moved in 2012	Variable	None
C-3S	VI*	Inhibiting Area-180	2000 - moved in 2012	Variable	None
C-4S	VI*	Vacuum Pump-180	2000 - moved in 2012	Variable	None

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity	Control Device
00E Ingredient Preparation – Plant 2					
E-1S (15s)	VI*	Gustafson Grinder System-2003	1978	500 lb/hr	E-1C: Mikro-D Pulsaire dust collector
E-2S	VI*	Mikro Airlock Grinder System-2003	1978	500 lb/hr	E-2C: Mikro-D Pulsaire dust collector
E-3S	VI*	Walk-In Freezer-2015	Pre-80s	Variable	None
E-4S	VI*	Walk-In Freezer-2015	Pre-80s	Variable	None
00F Chamber Preparation – Plant 2					
F-1S	F-1E	Binks Chemlok/Sparrow Spray Booth-2014	Pre-80s	Variable	F-1C: Fabric filters
F-2S	F-21E	Slinger-2014	1999	Variable	None
F-3S	VI*	3-Roll Mill-2014	Pre 80s	Variable	None
F-4S	F-2E	Curing/Drying Oven #3-2014	1994	Variable	None
F-5S	F-3E	Binks Paint Booth-2014	1994	Variable	F-2C: Fabric filters
F-6S	F-4E	Small Actrel Solvent Distillation Units-2014	1995	8 gal/hr	None
F-7S (16s)	F-5E (16e)	Vertical Spray Booth – Paint [Intermediate (Sparrow) Line] – 2014	1978	Variable	F-3C: Fabric filters
F-8S	F-6E	Trinco DP850 Grit Blast Cabinet-2014 Intermediate (Sparrow) Line] –2014	1978	Variable	F-4C: Cyclone dust collector
F-9S	F-7E	Actrel Degreaser [Intermediate (Sparrow) Line] –2014	1995	17 gal/min	None
F-10S	F-8E	Drying Oven #1 [Intermediate (Sparrow) Line] –2014	1978	Variable	None
F-11S	F-8E	Drying Oven #4 [Intermediate (Sparrow) Line] –2014	1978	Variable	None
F-12S (7s)	F-9E (7e)	Case Bondliner Paint Booth [Intermediate (Sparrow) Line] – 2014	1978	Variable	F-5C: Fabric filters
F-13S	F-10E	Drying Oven #2 [Intermediate (Sparrow) Line] –2014	1978	Variable	None
F-14S	VI*	Ross Mixer-5 gallon [Intermediate (Sparrow) Line] –2014	1980	5 gallon	None
F-15S	VI*	Ross Mixer-1 gallon [Intermediate (Sparrow) Line] –2014	1968	1 gallon	None
F-16S	VI*	Cowles Dissolver/Mixer/Disperer [Intermediate (Sparrow) Line] – 2014	1968	5 gallon	None

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity	Control Device
F-17S	F-11E	Vertical Spray Booth – Alodine [Intermediate (Sparrow) Line] – 2014	1978	Variable	F-6C: Demister
F-18S	VI*	Benchtop Electric Curing Oven #7 [Intermediate (Sparrow) Line] – 2014	1968	Variable	None
F-19S	F-12E	Mold Release Spray Booth [Intermediate (Sparrow) Line] – 2014	1988	Variable	F-7C: Fabric filters
F-20S	F-13E	DeVilbiss Horizontal Spray Booth-2014	1980	Variable	F-8C: Fabric filter
F-21S (27s)	F-14E (25e)	Zero Mfg. Grit Blaster (Large Motor Line) –2014	1988	500 lb/hr grit	F-9C: Cyclone dust collector
F-22S	F-15E	Actrel Degreaser (Large Motor Line) –2014	1995	17 gal/min	None
F-23S (29s)	F-16E (27e)	Binks Vertical Internal Paint Booth (Large Motor Line) –2014	1988	Variable	F-10C: Fabric filter
F-24S (31s)	F-17E (29e)	Paint/Degreaser Drying Room/Oven #5 (Large Motor Line) –2014	1988	Variable	None
F-25S (30s)	F-18E (28e)	Binks Vertical Paint Booth (Large Motor Line) –2014	1988	Variable	F-11C: Fabric filter
F-26S	F-19E	Actrel Vacuum Still & Storage Tank (Large Motor Line) –2014	1995	60 gal/hr	None
F-27S	F-20E	Drying Oven #6-2014	1980	Variable	None
		00G Mixing & Casting Operations – Plant 2			
G-2S		Mixer-300 gallon-2000	1968	300 gallon	None
G-3S		Casting Pit-2000	1968	300 gallon	None
G-4S	G-2E	Feed Hopper Exhaust Hood-2000	1968	Variable	G-1C: Fabric filter
		00I Disassembly/Machining – Plant 2			
I-1S	VI*	Propellant Machining System	1968	Variable	None
		00J Loading/Inspection/Final Assembly – Plant 2			
J-1S	VI*	Varian X-Ray equipment-2010	1990	Variable	None
J-2S	OS****	Kodak XO-Mats X-Ray Processor-2010	1990	Variable	None
J-3S	J-1E	Drying Oven-2011	1980	Variable	None
J-4S (8s)	J-2E (8e)	Interior Coating Spray Line-2011	1980	Variable	J-1C: Fabric filter
J-5S	J-3E	Vacuum Test System-2011	1980	Variable	None

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity	Control Device
J-8S	J-5E	Stenciling Booth-2031	2000	Variable	J-3C: Fabric filters
J-9S	J-6E	Drying Oven-2031	2000	Variable	None
J-10S	J-7E	Stenciling Conveyor-2011	1978	Variable	J-4C: Fabric filter

00K Mold Parts Cleanup – Plant 2

K-1S	OS****	Parts Washer-8203	1978	NA	None
K-3S (9s)	K-1E (9e)	Parts Washer-8203	1978	56 gallons	None
K-4S	OS****	Parts Washer-8203	1978	NA	None
K-5S (14s)	K-2E (14e)	Solvent Recovery System-8203	2001	5 gal/hr	None

00Z GMLRS Rocket Motor Chamber Preparation – Plant 1

Z-1S	Fugitive	Mandrel Release Coating Table	2017	N/A	None
Z-2S	Fugitive	Adapter Degreasing Table	2017	N/A	None
Z-5S	Fugitive	Interior Degreasing Exhaust & Drying	2017	N/A	None
Z-7S	Z-7E	Chemlok/Bondliner Mixing Hood	2017	N/A	None
Z-8S	Z-8E	Chemlok/Bondliner Application Booth	2017	1 gal/hr	Z-2C
Z-9S	Z-9E	Chemlok/Drying Station	2017	N/A	Z-5C
Z-10S	Fugitive	Insulator Prep Exhaust	2017	N/A	None
Z-11S	Z-11E	Oven for Insulator Drying	2017	N/A	None
Z-12S	Z-12E	Chemlok/Bondliner Mixing Hood	2017	N/A	None
Z-13S	Z-13E	Chemlok/Bondliner Application Booth	2017	1 gal/hr	Z-3C
Z-14S	Z-14E	Bondliner Drying Station	2017	N/A	None
Z-15S	Z-15E	Case Machining	2017	2 units/hr	Z-4C
Z-16S	Fugitive	End Closure Adapter Wiping Station	2017	N/A	None

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity	Control Device
00Z GMLRS Rocket Motor Manufacture – Plant 3, Building 3040					
P3-1S	P3-1E	Heptane Wash Tank	2018	80 gallons	None
P3-2S	P3-2E	Heptane Wash Tank	2018	80 gallons	None
P3-3S	P3-3E	IPA Wash Tank	2018	80 gallons	None
P3-4S	Fugitive	Ignite/Nozzle Assembly Work Area	2018	N/A	None
P3-5S	N/A	Final Assembly Work Area	2018	N/A	None
P3-6S	N/A	Disassembly Work Area	2018	N/A	None
00Z GMLRS Rocket Motor Manufacture – Plant 3, Building 3030					
P3-10S	N/A	Mixer	2018	300 gallons	C1 & Vac. Pump
Aerospace product - Plant 4 Building 4020					
P4-1S	P4-1E	Booth 1 - Downdraft Paint Booth - in BLDG 4020 w/ hot water air make-up heating system and integrated heat recovery system	2024	N/A	P4-1C 3-Stage Filtration
P4-2S	P4-2E	Booth 2 - Downdraft Paint Booth - in BLDG 4020 w/ hot water air make-up heating system and integrated heat recovery system	2024	N/A	P4-2C 3-Stage Filtration
P4-3S	P4-3E	Booth 3- Downdraft Paint Booth - in BLDG 4020 w/ hot water air make-up heating system and integrated heat recovery system	2024	N/A	P4-3C 3-Stage Filtration
P4-4S	P4-4E	Booth 4 - Downdraft Paint Booth - in BLDG 4020 w/ hot water air make- up heating system and integrated heat recovery system	2024	N/A	P4-4C 3-Stage Filtration
P4-5S	P4-5E	Paint Mixing Booth 1 - in BLDG 4020	2024	N/A	N/A
P4-6S	P4-6E	Paint Mixing Booth 2 - in BLDG 4020	2024	N/A	N/A
P4-7S	P4-7E	Paint Mixing Booth 3 - in BLDG 4020	2024	N/A	N/A

Control Devices

Control Device ID	Emission Point ID	Control Device Description	Year Installed / Modified	Design Capacity	Comments
1-1C	1-3E	Dust Control Filter	1981	75-97.5% (PM-RDX)	
1-2C	1-4E	Cryogenic Recovery for sparging operation	1988	80% (Methylene chloride)	
1-10C	1-13E	Cryogenic Recovery for sparging operation	2015	91% (Methylene chloride)	
1-3C	VI*	Carbon bed for material transfer hood	1993	unknown	
1-4C	1-7E	Dust Control Filter	1993	99.9% (PM-RDX)	
1-5C	1-9E	Dust Control Filter (HEPA)	1994	99.9%+ (Pb)	
1-6C	1-12E	Dust Control Filter (HEPA)	1994	99.9%+ (Pb)	
1-7C	1-10/11E	Condenser	1995	unknown	
1-8C	1-2E	Condenser	1981	unknown	
1-9C	1-6E	Condenser	2001	90% (IPA/water)	
2-1C	VI*	Cyclone dust collector grit blaster	1999	unknown	
2-5C	2-11E	Fabric filters for bondliner booth	1999	90% (PM)	
2-6C	2-11E	Fabric filters for bondliner booth	1999	90% (PM)	
2-7C (54c)	2-9E	Fabric filter for paint booth	1980	90% (PM)	
2-8C	2-15E	Fabric filter for paint booth	2010	90% (PM)	
6-1C	6-2E	Fabric filter for paint booth	1995	90% (PM)	
6-2C	6-4E	Fabric filter for paint booth	1995	90% (PM)	
6-3C	6-5E	Fabric filter for paint booth	1995	90% (PM)	
6-4C	6-6E	Fabric filter for paint booth	1995	90% (PM)	
6-5C	6-7E	Fabric filter for paint booth	1995	90% (PM)	
6-6C	6-8E	Fabric filter for Teflon spray booth	1997	90% (PM)	
E-1C	VI*	Mikro-D Pulsaire dust collector for AP	1978	99.9% (PM)	
E-2C	VI*	Mikro-D Pulsaire dust collector for AP	1978	99.9% (PM)	
F-1C	F-1E	Fabric filters for bondliner booth	1978	unknown	
F-2C	F-3E	Fabric filters for paint booth	1994	unknown	
F-3C	F-5E	Fabric filters for paint booth	1978	unknown	
F-4C	F-6E	Cyclone dust collector for grit blaster	1978	99.9% (PM)	F-5C
F-5C	F-9E	Fabric filters for bondliner booth	1978	unknown	
F-6C	F-11E	Demister for alodine process	1978	unknown	
F-7C	F-12E	Fabric filters for paint booth	1988	unknown	

Control Device ID	Emission Point ID	Control Device Description	Year Installed / Modified	Design Capacity	Comments
F-8C	F-13E	Fabric filter for paint booth	1980	unknown	
F-9C	F-14E	Cyclone dust collector for grit blaster	1988	99.9% (PM)	
F-10C	F-16E	Fabric filters bondliner booth	1988	90% (PM)	
F-11C	F-18E	Fabric filters for paint booth	1988	90% (PM)	
G-1C	G-2E	Fabric filter for solid ingredient feed hopper	1968	unknown	
J-1C	J-2E	Fabric filter for bondliner booth	1980	90% (PM)	
J-3C	J-5E	Fabric filters for paint booth	2000	90% (PM)	
J-4C	J-7E	Fabric filter for Stencilling Conveyor	2000	90% (PM)	
Z-1C	Z-3E	Global Finishing Solutions Wave Filter	2017	90% (PM)	
Z-2C	Z-8E	Global Finishing Solutions Wave Filter	2017	90% (PM)	
Z-3C	Z-13E	Global Finishing Solutions Wave Filter	2017	90% (PM)	
Z-4C	Z-14E	Aget Manufacturing Company Model: 30SN100-PL-SP Dry Cyclone Collector with 13.5 oz. Napped Polypropylene Sateen Fabric Filter with Cab-O-Sil preload powder	2017	99.9% (PM)	
Z-5C	Z-9E	Global Finishing Solutions Wave Filter	2017	90% (PM)	
C1	VI*	Ruwac wet separator	2018	99.9%	
Vac. Pump	VI*	Vacuum Pump	2018	> 95% (VOC)	
P4-1C	P4-1E	3-Stage Filtration	2024	95% (PM)	
P4-2C	P4-2E	3-Stage Filtration	2024	95% (PM)	
P4-3C	P4-3E	3-Stage Filtration	2024	95% (PM)	
P4-4C	P4-4E	3-Stage Filtration	2024	95% (PM)	

(1) A second methylene chloride emission control system (1-10C, 1-13E) was added in 2015.
* VI stands for "Vents inside of building"
** NDV – Stands for “No direct vent”
*** NE – Stands for “No emissions”
**** OS – Stands for “Out of service”

1.2. Active R13, R14, and R19 Permits

The underlying authority for any conditions from R13, R14, and/or R19 permits contained in this operating permit is cited using the original permit number (e.g. R13-1234). The current applicable version of such permit(s) is listed below.

Permit Number	Date of Issuance
R13-1455A	July 18, 2001
R13-0898C	May 27, 2016
R13-1694B	November 17, 2003
R13-2037A	July 26, 2001
R13-2246A	October 14, 2003
R13-1782A	July 19, 2001
R13-1798B	February 17, 2011
R13-0401B	May 23, 2001
R13-1047B	March 04, 2002
R13-3334B	November 17, 2023
R13-3408A	May 26, 2020
R13-3534A	January 19, 2024
R13-3651	July 23, 2024

2.0. General Conditions

2.1. Definitions

2.1.1. All references to the "West Virginia Air Pollution Control Act" or the "Air Pollution Control Act" mean those provisions contained in W.Va. Code §§ 22-5-1 to 22-5-18.

2.1.2. The "Clean Air Act" means those provisions contained in 42 U.S.C. §§ 7401 to 7671q, and regulations promulgated thereunder.

2.1.3. "Secretary" means the Secretary of the Department of Environmental Protection or other person to whom the Secretary has delegated authority or duties pursuant to W.Va. Code §§ 22-1-6 or 22-1-8 (45CSR§30-2.39.). The Director of the Division of Air Quality is the Secretary's designated representative for the purposes of this permit.

2.1.4. Unless otherwise specified in a permit condition or underlying rule or regulation, all references to a "rolling yearly total" shall mean the sum of the monthly data, values or parameters being measured, monitored, or recorded, at any given time for the previous twelve (12) consecutive calendar months.

2.2. Acronyms

CAAA	Clean Air Act Amendments	**NSPS**	New Source Performance Standards
CBI	Confidential Business Information	**PM**	Particulate Matter
CEM	Continuous Emission Monitor	**PM_{10}**	Particulate Matter less than 10μm in diameter
CES	Certified Emission Statement	**pph**	Pounds per Hour
C.F.R. *or* CFR	Code of Federal Regulations	**ppm**	Parts per Million
CO	Carbon Monoxide	**PSD**	Prevention of Significant Deterioration
C.S.R. *or* CSR	Codes of State Rules	**psi**	Pounds per Square Inch
DAQ	Division of Air Quality	**SIC**	Standard Industrial Classification
DEP	Department of Environmental Protection	**SIP**	State Implementation Plan
FOIA	Freedom of Information Act	**SO_2**	Sulfur Dioxide
HAP	Hazardous Air Pollutant	**TAP**	Toxic Air Pollutant
HON	Hazardous Organic NESHAP	**TPY**	Tons per Year
HP	Horsepower	**TRS**	Total Reduced Sulfur
lbs/hr *or* lb/hr	Pounds per Hour	**TSP**	Total Suspended Particulate
LDAR	Leak Detection and Repair	**USEPA**	United States Environmental Protection Agency
m	Thousand	**UTM**	Universal Transverse Mercator
MACT	Maximum Achievable Control Technology	**VEE**	Visual Emissions Evaluation
mm	Million	**VOC**	Volatile Organic Compounds
mmBtu/hr	Million British Thermal Units per Hour		
$mmft^3$/hr *or* mmcf/hr	Million Cubic Feet Burned per Hour		
NA *or* N/A	Not Applicable		
NAAQS	National Ambient Air Quality Standards		
NESHAPS	National Emissions Standards for Hazardous Air Pollutants		
NO_x	Nitrogen Oxides		

2.3. Permit Expiration and Renewal

2.3.1. Permit duration. This permit is issued for a fixed term of five (5) years and shall expire on the date specified on the cover of this permit, except as provided in 45CSR§30-6.3.b. and 45CSR§30-6.3.c.
[45CSR§30-5.1.b.]

2.3.2. A permit renewal application is timely if it is submitted at least six (6) months prior to the date of permit expiration.
[45CSR§30-4.1.a.3.]

2.3.3. Permit expiration terminates the source's right to operate unless a timely and complete renewal application has been submitted consistent with 45CSR§30-6.2. and 45CSR§30-4.1.a.3.
[45CSR§30-6.3.b.]

2.3.4. If the Secretary fails to take final action to deny or approve a timely and complete permit application before the end of the term of the previous permit, the permit shall not expire until the renewal permit has been issued or denied, and any permit shield granted for the permit shall continue in effect during that time.
[45CSR§30-6.3.c.]

2.4. Permit Actions

2.4.1. This permit may be modified, revoked, reopened and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.
[45CSR§30-5.1.f.3.]

2.5. Reopening for Cause

2.5.1. This permit shall be reopened and revised under any of the following circumstances:

a. Additional applicable requirements under the Clean Air Act or the Secretary's legislative rules become applicable to a major source with a remaining permit term of three (3) or more years. Such a reopening shall be completed not later than eighteen (18) months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended pursuant to 45CSR§§30-6.6.a.1.A. or B.

b. Additional requirements (including excess emissions requirements) become applicable to an affected source under Title IV of the Clean Air Act (Acid Deposition Control) or other legislative rules of the Secretary. Upon approval by U.S. EPA, excess emissions offset plans shall be incorporated into the permit.

c. The Secretary or U.S. EPA determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.

d. The Secretary or U.S. EPA determines that the permit must be revised or revoked and reissued to assure compliance with the applicable requirements.

[45CSR§30-6.6.a.]

2.6. Administrative Permit Amendments

2.6.1. The permittee may request an administrative permit amendment as defined in and according to the procedures specified in 45CSR§30-6.4.
[45CSR§30-6.4.]

2.7. Minor Permit Modifications

2.7.1. The permittee may request a minor permit modification as defined in and according to the procedures specified in 45CSR§30-6.5.a.
[45CSR§30-6.5.a.]

2.8. Significant Permit Modification

2.8.1. The permittee may request a significant permit modification, in accordance with 45CSR§30-6.5.b., for permit modifications that do not qualify for minor permit modifications or as administrative amendments.
[45CSR§30-6.5.b.]

2.9. Emissions Trading

2.9.1. No permit revision shall be required, under any approved economic incentives, marketable permits, emissions trading, and other similar programs or processes for changes that are provided for in the permit and that are in accordance with all applicable requirements.
[45CSR§30-5.1.h.]

2.10. Off-Permit Changes

2.10.1. Except as provided below, a facility may make any change in its operations or emissions that is not addressed nor prohibited in its permit and which is not considered to be construction nor modification under any rule promulgated by the Secretary without obtaining an amendment or modification of its permit. Such changes shall be subject to the following requirements and restrictions:

a. The change must meet all applicable requirements and may not violate any existing permit term or condition.

b. The permittee must provide a written notice of the change to the Secretary and to U.S. EPA within two (2) business days following the date of the change. Such written notice shall describe each such change, including the date, any change in emissions, pollutants emitted, and any applicable requirement that would apply as a result of the change.

c. The change shall not qualify for the permit shield.

d. The permittee shall keep records describing all changes made at the source that result in emissions of regulated air pollutants, but not otherwise regulated under the permit, and the emissions resulting from those changes.

e. No permittee may make any change subject to any requirement under Title IV of the Clean Air Act (Acid Deposition Control) pursuant to the provisions of 45CSR§30-5.9.

f. No permittee may make any changes which would require preconstruction review under any provision of Title I of the Clean Air Act (including 45CSR14 and 45CSR19) pursuant to the provisions of 45CSR§30-5.9.

[45CSR§30-5.9.]

2.11. Operational Flexibility

2.11.1. The permittee may make changes within the facility as provided by § 502(b)(10) of the Clean Air Act. Such operational flexibility shall be provided in the permit in conformance with the permit application and applicable requirements. No such changes shall be a modification under any rule or any provision of Title I of the Clean Air Act (including 45CSR14 and 45CSR19) promulgated by the Secretary in accordance with Title I of the Clean Air Act and the change shall not result in a level of emissions exceeding the emissions allowable under the permit.
[45CSR§30-5.8]

2.11.2. Before making a change under 45CSR§30-5.8., the permittee shall provide advance written notice to the Secretary and to U.S. EPA, describing the change to be made, the date on which the change will occur, any changes in emissions, and any permit terms and conditions that are affected. The permittee shall thereafter maintain a copy of the notice with the permit, and the Secretary shall place a copy with the permit in the public file. The written notice shall be provided to the Secretary and U.S. EPA at least seven (7) days prior to the date that the change is to be made, except that this period may be shortened or eliminated as necessary for a change that must be implemented more quickly to address unanticipated conditions posing a significant health, safety, or environmental hazard. If less than seven (7) days notice is provided because of a need to respond more quickly to such unanticipated conditions, the permittee shall provide notice to the Secretary and U.S. EPA as soon as possible after learning of the need to make the change.
[45CSR§30-5.8.a.]

2.11.3. The permit shield shall not apply to changes made under 45CSR§30-5.8., except those provided for in 45CSR§30-5.8.d. However, the protection of the permit shield will continue to apply to operations and emissions that are not affected by the change, provided that the permittee complies with the terms and conditions of the permit applicable to such operations and emissions. The permit shield may be reinstated for emissions and operations affected by the change:

a. If subsequent changes cause the facility's operations and emissions to revert to those authorized in the permit and the permittee resumes compliance with the terms and conditions of the permit, or

b. If the permittee obtains final approval of a significant modification to the permit to incorporate the change in the permit.

[45CSR§30-5.8.c.]

2.11.4. "Section 502(b)(10) changes" are changes that contravene an express permit term. Such changes do not include changes that would violate applicable requirements or contravene enforceable permit terms and conditions that are monitoring (including test methods), recordkeeping, reporting, or compliance certification requirements.
[45CSR§30-2.40]

2.12. Reasonably Anticipated Operating Scenarios

2.12.1. The following are terms and conditions for reasonably anticipated operating scenarios identified in this permit.

a. Contemporaneously with making a change from one operating scenario to another, the permittee shall record in a log at the permitted facility a record of the scenario under which it is operating and to document the change in reports submitted pursuant to the terms of this permit and 45CSR30.

b. The permit shield shall extend to all terms and conditions under each such operating scenario; and

c. The terms and conditions of each such alternative scenario shall meet all applicable requirements and the requirements of 45CSR30.

[45CSR§30-5.1.i.]

2.13. Duty to Comply

2.13.1. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the West Virginia Code and the Clean Air Act and is grounds for enforcement action by the Secretary or USEPA; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.
[45CSR§30-5.1.f.1.]

2.14. Inspection and Entry

2.14.1. The permittee shall allow any authorized representative of the Secretary, upon the presentation of credentials and other documents as may be required by law, to perform the following:

a. At all reasonable times (including all times in which the facility is in operation) enter upon the permittee's premises where a source is located or emissions related activity is conducted, or where records must be kept under the conditions of this permit;

b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

c. Inspect at reasonable times (including all times in which the facility is in operation) any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit;

d. Sample or monitor at reasonable times substances or parameters to determine compliance with the permit or applicable requirements or ascertain the amounts and types of air pollutants discharged.

[45CSR§30-5.3.b.]

2.15. Schedule of Compliance

2.15.1. For sources subject to a compliance schedule, certified progress reports shall be submitted consistent with the applicable schedule of compliance set forth in this permit and 45CSR§30-4.3.h., but at least every six (6) months, and no greater than once a month, and shall include the following:

a. Dates for achieving the activities, milestones, or compliance required in the schedule of compliance, and dates when such activities, milestones or compliance were achieved; and

b. An explanation of why any dates in the schedule of compliance were not or will not be met, and any preventative or corrective measure adopted.

[45CSR§30-5.3.d.]

2.16. Need to Halt or Reduce Activity not a Defense

2.16.1. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. However, nothing in this paragraph shall be construed as precluding consideration of a need to halt or reduce activity as a mitigating factor in determining penalties for noncompliance if the health, safety, or environmental impacts of halting or reducing operations would be more serious than the impacts of continued operations.
[45CSR§30-5.1.f.2.]

2.17. Reserved

2.18. Federally-Enforceable Requirements

2.18.1. All terms and conditions in this permit, including any provisions designed to limit a source's potential to emit and excepting those provisions that are specifically designated in the permit as "State-enforceable only", are enforceable by the Secretary, USEPA, and citizens under the Clean Air Act.
[45CSR§30-5.2.a.]

2.18.2. Those provisions specifically designated in the permit as “State-enforceable only” shall become “Federally-enforceable” requirements upon SIP approval by the USEPA.

2.19. Duty to Provide Information

2.19.1. The permittee shall furnish to the Secretary within a reasonable time any information the Secretary may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Secretary copies of records required to be kept by the permittee. For information claimed to be confidential, the permittee shall furnish such records to the Secretary along with a claim of confidentiality in accordance with 45CSR31. If confidential information is to be sent to USEPA, the permittee shall directly provide such information to USEPA along with a claim of confidentiality in accordance with 40 C.F.R. Part 2.
[45CSR§30-5.1.f.5.]

2.20. Duty to Supplement and Correct Information

2.20.1. Upon becoming aware of a failure to submit any relevant facts or a submittal of incorrect information in any permit application, the permittee shall promptly submit to the Secretary such supplemental facts or corrected information.
[45CSR§30-4.2.]

2.21. Permit Shield

2.21.1. Compliance with the conditions of this permit shall be deemed compliance with any applicable requirements as of the date of permit issuance provided that such applicable requirements are included and are specifically identified in this permit or the Secretary has determined that other requirements specifically identified are not applicable to the source and this permit includes such a determination or a concise summary thereof.
[45CSR§30-5.6.a.]

2.21.2. Nothing in this permit shall alter or affect the following:

a. The liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance; or

b. The applicable requirements of the Code of West Virginia and Title IV of the Clean Air Act (Acid Deposition Control), consistent with § 408 (a) of the Clean Air Act.

c. The authority of the Administrator of U.S. EPA to require information under § 114 of the Clean Air Act or to issue emergency orders under § 303 of the Clean Air Act.

[45CSR§30-5.6.c.]

2.22. Credible Evidence

2.22.1. Nothing in this permit shall alter or affect the ability of any person to establish compliance with, or a violation of, any applicable requirement through the use of credible evidence to the extent authorized by law. Nothing in this permit shall be construed to waive any defenses otherwise available to the permittee including but not limited to any challenge to the credible evidence rule in the context of any future proceeding.
[45CSR§30-5.3.e.3.B.]

2.23. Severability

2.23.1. The provisions of this permit are severable. If any provision of this permit, or the application of any provision of this permit to any circumstance is held invalid by a court of competent jurisdiction, the remaining permit terms and conditions or their application to other circumstances shall remain in full force and effect.
[45CSR§30-5.1.e.]

2.24. Property Rights

2.24.1. This permit does not convey any property rights of any sort or any exclusive privilege.
[45CSR§30-5.1.f.4]

2.25. Acid Deposition Control

2.25.1. Emissions shall not exceed any allowances that the source lawfully holds under Title IV of the Clean Air Act (Acid Deposition Control) or rules of the Secretary promulgated thereunder.

a. No permit revision shall be required for increases in emissions that are authorized by allowances acquired pursuant to the acid deposition control program, provided that such increases do not require a permit revision under any other applicable requirement.

b. No limit shall be placed on the number of allowances held by the source. The source may not, however, use allowances as a defense to noncompliance with any other applicable requirement.

c. Any such allowance shall be accounted for according to the procedures established in rules promulgated under Title IV of the Clean Air Act.

[45CSR§30-5.1.d.]

2.25.2. Where applicable requirements of the Clean Air Act are more stringent than any applicable requirement of regulations promulgated under Title IV of the Clean Air Act (Acid Deposition Control), both provisions shall be incorporated into the permit and shall be enforceable by the Secretary and U. S. EPA.
[45CSR§30-5.1.a.2.]

3.0. Facility-Wide Requirements

3.1. Limitations and Standards

3.1.1. **Open burning.** The open burning of refuse by any person is prohibited except as noted in 45CSR§6-3.1. **[45CSR§6-3.1.]**

3.1.2. **Open burning exemptions.** The exemptions listed in 45CSR§6-3.1 are subject to the following stipulation: Upon notification by the Secretary, no person shall cause or allow any form of open burning during existing or predicted periods of atmospheric stagnation. Notification shall be made by such means as the Secretary may deem necessary and feasible. **[45CSR§6-3.2.]**

3.1.3. **Asbestos.** The permittee is responsible for thoroughly inspecting the facility, or part of the facility, prior to commencement of demolition or renovation for the presence of asbestos and complying with 40 C.F.R. § 61.145, 40 C.F.R. § 61.148, and 40 C.F.R. § 61.150. The permittee, owner, or operator must notify the Secretary at least ten (10) working days prior to the commencement of any asbestos removal on the forms prescribed by the Secretary if the permittee is subject to the notification requirements of 40 C.F.R. § 61.145(b)(3)(i). The USEPA, the Division of Waste Management and the Bureau for Public Health - Environmental Health require a copy of this notice to be sent to them. **[40 C.F.R. §61.145(b) and 45CSR34]**

3.1.4. **Odor.** No person shall cause, suffer, allow or permit the discharge of air pollutants which cause or contribute to an objectionable odor at any location occupied by the public. **[45CSR§4-3.1 State-Enforceable only.]**

3.1.5. **Standby plan for reducing emissions.** When requested by the Secretary, the permittee shall prepare standby plans for reducing the emissions of air pollutants in accordance with the objectives set forth in Tables I, II, and III of 45CSR11. **[45CSR§11-5.2]**

3.1.6. **Emission inventory.** The permittee is responsible for submitting, on an annual basis, an emission inventory in accordance with the submittal requirements of the Division of Air Quality. **[W.Va. Code § 22-5-4(a)(15)]**

3.1.7. **Ozone-depleting substances.** For those facilities performing maintenance, service, repair or disposal of appliances, the permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 C.F.R. Part 82, Subpart F, except as provided for Motor Vehicle Air Conditioners (MVACs) in Subpart B:

a. Persons opening appliances for maintenance, service, repair, or disposal must comply with the prohibitions and required practices pursuant to 40 C.F.R. §§ 82.154 and 82.156.

b. Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 C.F.R. § 82.158.

c. Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 C.F.R. § 82.161.

[40 C.F.R. 82, Subpart F]

3.1.8. **Risk Management Plan.** Should this stationary source, as defined in 40 C.F.R. § 68.3, become subject to Part 68, then the owner or operator shall submit a risk management plan (RMP) by the date specified in 40 C.F.R. § 68.10 and shall certify compliance with the requirements of Part 68 as part of the annual compliance certification as required by 40 C.F.R. Part 70 or 71.
[40 C.F.R. 68]

3.1.9. The permitted facility (Sources ID 2-11S, 2-19S, 2-20S, F-5S, F-7S, F-20S, F-25S, 6-4S, 6-6S, 6-7S, 6-8S, 6-9S, J-8S, J-10S, 2-18S, Z-3S, Z-8S, Z-9S, Z-13S, P4-1S, P4-2S, P4-3S, and P4-4S) shall comply with all the applicable standard provisions of the 40CFR63 Subpart GG National Emission Standards for Aerospace Manufacturing and Rework Facilities, provided, however, that compliance with any more stringent limitations set forth under Requirements of Sections 4.0 through 8.0, Sections 11.0 and 12.0 of this Permit, is demonstrated:

§ 63.744 Standards: Cleaning operations.

(a) Housekeeping measures. Each owner or operator of a new or existing cleaning operation subject to this subpart shall comply with the requirements in these paragraphs unless the cleaning solvent used is identified in Table 1 of this section or meets the definition of "Non-HAP material" in 63.742. The requirements of this section do not apply to spent cleaning solvents, and solvent-laden applicators that are subject to and handled and stored in compliance with 40 CFR parts 262 through 268 (including the air emission control requirements in 40 CFR part 265, subpart CC).

(1) Place used solvent-laden cloth, paper, or any other absorbent applicators used for cleaning in bags or other closed containers. Ensure that these bags and containers are kept closed at all times except when depositing or removing these materials from the container. Use bags and containers of such design so as to contain the vapors of the cleaning solvent. Cotton-tipped swabs used for very small cleaning operations are exempt from this requirement.

(2) Store fresh and spent cleaning solvents, except semi-aqueous solvent cleaners, used in aerospace cleaning operations in closed containers.

(3) Conduct the handling and transfer of cleaning solvents to or from enclosed systems, vats, waste containers, and other cleaning operation equipment that hold or store fresh or spent cleaning solvents in such a manner that minimizes spills.

(b) Hand-wipe cleaning. Each owner or operator of a new or existing hand-wipe cleaning operation (excluding cleaning of spray gun equipment performed in accordance with paragraph (c) of this section) subject to this subpart shall use cleaning solvents that meet one of the requirements specified in paragraphs (b)(1), (b)(2), and (b)(3) of this section. Cleaning solvent solutions that contain HAP and VOC below the de minimis levels specified in § 63.741(f) are exempt from the requirements in paragraphs (b)(1), (b)(2), and (b)(3) of this section.

(1) Meet one of the composition requirements in Table 1 of this section;

(2) Have a composite vapor pressure of 45 mm Hg (24.1 in. H_2O) or less at 20 °C (68 °F); or

(3) Demonstrate that the volume of hand-wipe solvents used in cleaning operations has been reduced by at least 60% from a baseline adjusted for production. The baseline shall be established as part of

an approved alternative plan administered by the State. Demonstrate that the volume of hand-wipe cleaning solvents used in cleaning operations has been reduced by at least 60 percent from a baseline adjusted for production. The baseline shall be calculated using data from 1996 and 1997, or as otherwise agreed upon by the Administrator or delegated State Authority. The baseline shall be approved by the Administrator or delegated State Authority and shall be included as part of the facility's title V or part 70 permit.

(c) Spray gun cleaning. Each owner or operator of a new or existing spray gun cleaning operation subject to this subpart in which spray guns are used for the application of coatings or any other materials that require the spray guns to be cleaned shall use one or more of the techniques, or their equivalent, specified in paragraphs (c)(1) through (c)(4) of this section. Spray gun cleaning operations using cleaning solvent solutions that contain HAP and VOC below the de minimis levels specified in § 63.741(f) are exempt from the requirements in paragraphs (c)(1) through (c)(4) of this section.

(1) (i) Enclosed system. Clean the spray gun in an enclosed system that is closed at all times except when inserting or removing the spray gun. Cleaning shall consist of forcing solvent through the gun.

(ii) If leaks are found during the monthly inspection required in § 63.751(a), repairs shall be made as soon as practicable, but no later than 15 days after the leak was found. If the leak is not repaired by the 15th day after detection, the cleaning solvent shall be removed, and the enclosed cleaner shall be shut down until the leak is repaired or its use is permanently discontinued.

(2) Nonatomized cleaning. Clean the spray gun by placing cleaning solvent in the pressure pot and forcing it through the gun with the atomizing cap in place. No atomizing air is to be used. Direct the cleaning solvent from the spray gun into a vat, drum, or other waste container that is closed when not in use.

(3) Disassembled spray gun cleaning. Disassemble the spray gun and clean the components by hand in a vat, which shall remain closed at all times except when in use. Alternatively, soak the components in a vat, which shall remain closed during the soaking period and when not inserting or removing components.

(4) Atomizing cleaning. Clean the spray gun by forcing the cleaning solvent through the gun and direct the resulting atomized spray into a waste container that is fitted with a device designed to capture the atomized cleaning solvent emissions.

(5) Cleaning of the nozzle tips of automated spray equipment systems, except for robotic systems that can be programmed to spray into a closed container, shall be exempt from the requirements of paragraph (c) of this section.

(e) Exempt cleaning operations. The following cleaning operations are exempt from the requirements of paragraph (b) of this section:

(1) Cleaning during the manufacture, assembly, installation, maintenance, or testing of components of breathing oxygen systems that are exposed to the breathing oxygen;

(2) Cleaning during the manufacture, assembly, installation, maintenance, or testing of parts, subassemblies, or assemblies that are exposed to strong oxidizers or reducers (e.g., nitrogen tetroxide, liquid oxygen, or hydrazine);

(3) Cleaning and surface activation prior to adhesive bonding;

(4) Cleaning of electronic parts and assemblies containing electronic parts;

(5) Cleaning of aircraft and ground support equipment fluid systems that are exposed to the fluid, including air-to-air heat exchangers and hydraulic fluid systems;

(6) Cleaning of fuel cells, fuel tanks, and confined spaces;

(7) Surface cleaning of solar cells, coated optics, and thermal control surfaces;

(8) Cleaning during fabrication, assembly, installation, and maintenance of upholstery, curtains, carpet, and other textile materials used in the interior of the aircraft;

(9) Cleaning of metallic and nonmetallic materials used in honeycomb cores during the manufacture or maintenance of these cores, and cleaning of the completed cores used in the manufacture of aerospace vehicles or components;

(10) Cleaning of aircraft transparencies, polycarbonate, or glass substrates;

(11) Cleaning and cleaning solvent usage associated with research and development, quality control, and laboratory testing;

(12) Cleaning operations, using nonflamable liquids, conducted within five feet of energized electrical systems. Energized electrical systems means any AC or DC electrical circuit on an assembled aircraft once electrical power is connected, including interior passenger and cargo areas, wheel wells and tail sections; and

(13) Cleaning operations identified as essential uses under the Montreal Protocol for which the Administrator has allocated essential use allowances or exemptions in 40 CFR 82.4.

Table 1 Composition Requirements for Approved Cleaning Solvents

Cleaning solvent type	Composition requirements
Aqueous.....	Cleaning solvents in which water is the primary ingredient (≥ 80 percent of must be water). Detergents, surfactants, and bioenzyme mixtures and nutrients may be combined with the water along with a variety of additives, such as organic solvents (e.g., high boiling point alcohols), builders, inhibitors, emulsifiers, pH buffers, and antifoaming agents. Aqueous solutions must have a flash point greater than 93 °C (200° F) (as reported by the manufacturer), and the solution must be miscible with water.
Hydrocarbon-based.....	Cleaners that are composed of photochemically reactive hydrocarbons and/or oxygenated hydrocarbons and have a maximum vapor pressure of 7 mm Hg at 20 °C (3.75 in. H_2O and 68 °F). These cleaners also contain no HAP.

§63.745 Standards: Primer, topcoat, and specialty coating application operations.

(a) Each owner or operator of a new or existing primer, topcoat, or specialty coating application operation subject to this subpart shall comply with the requirements specified in paragraph (c) of this section for those coatings that are uncontrolled (no control device is used to reduce organic HAP emissions from the operation), and in paragraph (d) of this section for those coatings that are controlled (organic HAP emissions from the operation are reduced by the use of a control device). Aerospace equipment that is no longer operational, intended for public display, and not easily capable of being moved is exempt from the requirements of this section.

(b) Each owner or operator shall conduct the handling and transfer of primers, topcoats, and specialty coatings to or from containers, tanks, vats, vessels, and piping systems in such a manner that minimizes spills.

(c) *Uncontrolled coatings—organic HAP and VOC content levels*. Each owner or operator shall comply with the organic HAP and VOC content limits specified in paragraphs (c)(1) through (6) of this section for those coatings that are uncontrolled.

(5) Organic HAP emissions from specialty coatings shall be limited to an organic HAP content level of no more than the HAP content limit specified in Table 1 of this section for each applicable specialty coating type.

(6) VOC emissions from specialty coatings shall be limited to a VOC content level of no more than the VOC content limit specified in Table 1 of this section for each applicable specialty coating type.

(d) *Controlled coatings—control system requirements.* Each control system shall reduce the operation's organic HAP and VOC emissions to the atmosphere by 81% or greater, taking into account capture and destruction or removal efficiencies, as determined using the procedures in §63.750(g) when a carbon adsorber is used and in §63.750(h) when a control device other than a carbon adsorber is used.

§ 63.748 Standards: Handling and storage of waste.

(a) The owner or operator of each facility subject to this subpart that produces a waste that contains organic HAP from aerospace primer, topcoat, specialty coating, chemical milling maskant, or chemical depainting operations must be handled and stored as specified in paragraph (a)(1) or (a)(2) of this section. The requirements of paragraphs (a)(1) and (a)(2) of this section do not apply to spent wastes that contain organic HAP that are subject to and handled and stored in compliance with 40 CFR parts 262 through 268 (including the air emission control requirements in 40 CFR part 265, subpart CC).

(1) Conduct the handling and transfer of the waste to or from containers, tanks, vats, vessels, and piping systems in such a manner that minimizes spills.

(2) Store all waste that contains organic HAP in closed containers.

[45CSR34, 40 C.F.R. 63, Subpart GG; 45CSR13, R13-2037, B.7; 45CSR13, R13-3334, 4.1.3, 4.1.4, 4.1.5; 45CSR13, R13-3534, 4.1.3, 4.1.4, 4.1.5; 45CSR13, R13-3651, 4.1.3, 4.1.4, 4.1.5]

3.1.10. The pertinent sections of 45CSR7 applicable to this facility include, but are not limited to, the following:

No person shall cause, suffer, allow or permit emission of smoke and/or particulate matter into the open air from any process source operation which is greater than twenty (20) percent opacity, except as noted in subsections 3.2, 3.3, 3.4, 3.5, 3.6, and 3.7. **[45CSR§7-3.1]**

The provisions of 45CSR§7-3.1 shall not apply to smoke and/or particulate matter emitted from any process source operation which is less than forty (40) percent opacity for any period or periods aggregating no more than five (5) minutes in any sixty (60) minute period.
[45CSR§7-3.2]

No person shall cause, suffer, allow or permit visible emissions from any storage structure(s) associated with any manufacturing process(es) that pursuant to 45CSR§7-5.1 is required to have a full enclosure and be equipped with a particulate matter control device.
[45CSR§7-3.7]

No person shall cause, suffer, allow or permit particulate matter to be vented into the open air from any type source operation or duplicate source operation, or from all air pollution control equipment installed on any type source operation or duplicate source operation in excess of the quantity specified under the appropriate source operation type in Table 45-7A found at the end of 45CSR7.
[45CSR§7-4.1]

Any stack serving any process source operation or air pollution control equipment on any process source operation shall contain flow straightening devices or a vertical run of sufficient length to establish flow patterns consistent with acceptable stack sampling procedures.
[45CSR§7-4.12]

No person shall cause, suffer, allow or permit any manufacturing process or storage structure generating fugitive particulate matter to operate that is not equipped with a system, which may include, but not be limited to, process equipment design, control equipment design or operation and maintenance procedures, to minimize the emissions of fugitive particulate matter. To minimize means such system shall be installed, maintained and operated to ensure the lowest fugitive particulate matter emissions reasonably achievable.
[45CSR§7-5.1]

The owner or operator of a plant shall maintain particulate matter control of the plant premises, and plant owned, leased or controlled access roads, by paving, application of asphalt, chemical dust suppressants or other suitable dust control measures. Good operating practices shall be implemented and when necessary particulate matter suppressants shall be applied in relation to stockpiling and general material handling to minimize particulate matter generation and atmospheric entrainment.
[45CSR§7-5.2]

At such reasonable times as the Director may designate, the operator of any manufacturing process source operation may be required to conduct or have conducted stack tests to determine the particulate matter loading in exhaust gases. Such tests shall be conducted in such manner as the Director may specify and be filed on forms and in a manner acceptable to the Director. The Director, or his duly authorized representative, may at his option witness or conduct such stack tests. Should the Director exercise his option to conduct such tests, the operator will provide all the necessary sampling connections and sampling ports to be located in such manner as the Director may require, power for test equipment, and the required safety equipment such as scaffolding, railings and ladders to comply with generally accepted good safety practices.
[45CSR§7-8.1]

The Director, or his duly authorized representative, may conduct such other tests as he or she may deem necessary to evaluate air pollution emissions.
[45CSR§7-8.2]

[45CSR13, R13-0401, B.6; R13-1047, B.4; R13-1455, B.5; R13-1694, B.5; R13-1782, B.6; R13-1798, B.6; R13-2037, B.5; R13-2246, B.2; R13-3334, 4.1.2; R13-3534, 4.1.2; R13-3651, 4.1.2]

3.1.11. The pertinent sections of 45CSR13 applicable to this facility include, but are not limited to, the following:
§45-13-6.1
At the time a stationary source is alleged to be in compliance with an applicable emission standard and at reasonable times to be determined by the Director thereafter, appropriate tests consisting of visual determinations or conventional in-stack measurements or such other tests the Director may specify shall be conducted to determine compliance.
[45CSR13, R13-0401, B.7; R13-1047, B.4; R13-1455, B.6; R13-1694, B.6; R13-1782, B.7; R13-1798, B.7; R13-2037, B.6 & R13-2246, B.6]

3.1.12. **Operation and Maintenance of Air Pollution Control Equipment.** The permittee shall, to the extent practicable, install, maintain, and operate all pollution control equipment listed in Section 1.1 and associated monitoring equipment in a manner consistent with safety and good air pollution control practices for minimizing emissions, or comply with any more stringent limits set forth in this permit or as set forth by any State rule, Federal regulation, or alternative control plan approved by the Secretary.
[45CSR§13-5.10; 45CSR13, R13-0898, 4.1.3; 45CSR13, R13-3334, 4.1.6; 45CSR13, R13-3408, 5.1.2; 45CSR13, R13-3534, 4.1.6; 45CSR13, R13-3651, 4.1.6]

3.2. Monitoring Requirements

3.2.1. Compliance with Section 3 of 45CSR7 (Requirement 3.1.10 of this Permit) shall be determined by conducting visual emission observations in accordance with Method 22 of 40 CFR 60, Appendix A for the Emission Points 1-3E, 1-7E, F-6E, F-11E, F-14E subject to 45CSR7, and units emitting directly into the open air from points other than stack outlet (including visible fugitive dust emissions that leave the plant site boundaries).

Visual emission observations shall be conducted monthly during periods of facility operation to determine if the unit has visible emissions using procedures outlined in 40CFR60 Appendix A, Method 22.

If sources of visible emissions are identified, the permittee shall conduct an Opacity Evaluation as outlined in 45CSR§7A-2.1.a, b, within 24 hour period unless the permittee can demonstrate a valid reason that the time frame should be extended. A 45CSR§7A-2.1.a, b evaluation shall not be required if the visible emission condition is corrected in a timely manner and the units are operated at normal operating conditions with no visible emissions being observed.

Anytime when not in compliance with the opacity limit per 45CSR§7-3.1 for any emission point, reporting as per Requirement 3.5.11 shall be initiated, and for this emission point, Method 22 checks shall revert to a weekly frequency for a minimum of 4 consecutive weeks. If in compliance, then monthly Method 22 checks shall be conducted.

Compliance with this Requirement will assure compliance with requirement 3.3.4.f.
[45CSR§30-5.1.c]

3.2.2. Compliance with Section 3 of 45CSR7 (Requirement 3.1.10 of this Permit) for paint booths and related equipment (Emission Points 2-9E, 2-10E, 2-11E, 2-15E, F-1E, F-3E, F-5E, F-9E, F-12E, F-13E, F-16E, F-18E, G-2E, 6-2E, 6-4E, 6-5E, 6-6E, 6-7E, 6-8E, J-2E, J-5E, J-7E) shall be determined by conducting fabric filter checks prior to each use of the equipment. These checks shall include review to ensure filters are properly fitted to the unit, that no holes exist, and that the filters are not overloaded. Any changes made to filters during the checks or any filter replacements shall be recorded. (See attachment D as a sample form).
[45CSR§30-5.1.c, 45CSR13, R13-1798, A.7]

3.2.3. Compliance with Section 3 of 45CSR7 (Requirement 3.1.10 of this Permit) for handling areas (Emission Points 1-9E and 1-12E) shall be determined by use of properly maintained HEPA filters (as per Requirement 4.4.5), and utilizing manometers to ensure proper operation of the filters prior to each use of equipment. Permittee shall keep records of manometer checks and any necessary corrective actions (including filter replacements).
[45CSR§30-5.1.c]

3.2.4. The permitted facility (Sources ID 2-11S, 2-19S, 2-20S, F-5S, F-7S, F-20S, F-25S, 6-4S, 6-6S, 6-7S, 6-8S, 6-9S, J-8S, J-10S, 2-18S, Z-3S, Z-8S, Z-9S, Z-13S, P4-1S, P4-2S, P4-3S, and P4-4S) shall comply with all the applicable standard provisions of the 40CFR63 Subpart GG National Emission Standards for Aerospace Manufacturing and Rework Facilities, provided, however, that compliance with any more stringent limitations set forth under Requirements of Sections 4.0 through 8.0, Section 11.0 and Section 12.0 of this Permit, is demonstrated:

§ 63.751 Monitoring requirements.

(a) Enclosed spray gun cleaners. Each owner or operator using an enclosed spray gun cleaner under § 63.744(c)(1) (Section 3.1.9. of this Permit) shall visually inspect the seals and all other potential sources of leaks associated with each enclosed gun spray cleaner system at least once per month. Each inspection shall occur while the system is in operation.

[45CSR34, 40 C.F.R. 63, Subpart GG; 45CSR13, R13-2037, B.7]

3.3. Testing Requirements

3.3.1. **Stack testing.** As per provisions set forth in this permit or as otherwise required by the Secretary, in accordance with the West Virginia Code, underlying regulations, permits and orders, the permittee shall conduct test(s) to determine compliance with the emission limitations set forth in this permit and/or established or set forth in underlying documents. The Secretary, or his duly authorized representative, may at his option witness or conduct such test(s). Should the Secretary exercise his option to conduct such test(s), the operator shall provide all necessary sampling connections and sampling ports to be located in such manner as the Secretary may require, power for test equipment and the required safety equipment, such as scaffolding, railings and ladders, to comply with generally accepted good safety practices. Such tests shall be conducted in accordance with the methods and procedures set forth in this permit or as otherwise approved or specified by the Secretary in accordance with the following:

a. The Secretary may on a source-specific basis approve or specify additional testing or alternative testing to the test methods specified in the permit for demonstrating compliance with 40 C.F.R. Parts 60, 61, and 63, if applicable, in accordance with the Secretary's delegated authority and any established equivalency determination methods which are applicable.

b. The Secretary may on a source-specific basis approve or specify additional testing or alternative testing to the test methods specified in the permit for demonstrating compliance with applicable requirements which do not involve federal delegation. In specifying or approving such alternative testing to the test methods, the Secretary, to the extent possible, shall utilize the same equivalency criteria as would be used in approving such changes under Section 3.3.1.a. of this permit. If a testing method is specified or approved which effectively replaces a test method specified in the permit, the permit shall be revised in accordance with 45CSR§30-6.4 or 45CSR§30-6.5 as applicable.

c. All periodic tests to determine mass emission limits from or air pollutant concentrations in discharge stacks and such other tests as specified in this permit shall be conducted in accordance with an approved test protocol. Unless previously approved, such protocols shall be submitted to the Secretary in writing at least thirty (30) days prior to any testing and shall contain the information set forth by the Secretary. In addition, the permittee shall notify the Secretary at least fifteen (15) days prior to any testing so the Secretary may have the opportunity to observe such tests. This notification shall include the actual date and time during which the test will be conducted and, if appropriate, verification that the tests will fully conform to a referenced protocol previously approved by the Secretary.

d. The permittee shall submit a report of the results of the stack test within 60 days of completion of the test. The test report shall provide the information necessary to document the objectives of the test and to determine whether proper procedures were used to accomplish these objectives. The report shall include the following: the certification described in paragraph 3.5.1; a statement of compliance status, also signed by a responsible official; and, a summary of conditions which form the basis for the compliance status evaluation. The summary of conditions shall include the following:

1. The permit or rule evaluated, with the citation number and language.

2. The result of the test for each permit or rule condition.

3. A statement of compliance or non-compliance with each permit or rule condition.

[WV Code §§ 22-5-4(a)(15-16) and 45CSR13]

3.3.2. A test protocol (as per Requirement 3.3.1.c.) shall include detailing on the proposed test methods, the date and the time the proposed testing is to take place, as well as identifying the sampling locations and other relevant information.
[45CSR13, R13-1455, B.8; R13-1694, B.8; **R13-0401, B.9; R13-1798, B.9; R13-1782, B.9; R13-2037, B.9]**

3.3.3. Test results shall be submitted to the Secretary no more than sixty (60) days after the date the testing takes place.
[45CSR13, R13-1455, B.8; R13-1694, **B.8**; **R13-0401, B.9; R13-1798, B.9; R13-1782, B.9; R13-2037, B.9]**

3.3.4. Tests that are required by the Director to determine compliance with the emission limitations set forth in this permit shall be conducted in accordance with the methods as set forth below. The Director may require a different test method or approve an alternative method in light of any new technology advancements that may occur. Compliance testing shall be conducted at 100% of the peak load unless otherwise specified by the Director.

a. Tests to determine compliance with PM emission limits shall be conducted in accordance with Method 5, 5A, 5B, 5C, 5D, 5E, 5F, 5G, or 5H as set forth in 40 CFR 60, Appendix A.

b. Tests to determine compliance with SO_2 emission limits shall be conducted in accordance with Method 6, 6A, 6B, or 6C as set forth in 40 CFR 60, Appendix A.

c. Tests to determine compliance with CO emission limits shall be conducted in accordance with Method 10, 10A, or 10B as set forth in 40 CFR 60, Appendix A.

d. Tests to determine compliance with NO_x emission limits shall be conducted in accordance with Method 7, 7A, 7B, 7C, 7D, or 7E as set forth in 40 CFR 60, Appendix A.

e. Tests to determine compliance with VOC emission limits shall be conducted in accordance with Method 25, or 25A as set forth in 40 CFR 60, Appendix A.

f. Tests to determine compliance with Opacity of emissions shall be conducted in accordance with Method 9 as set forth in 40 CFR 60, Appendix A.

g. Tests to determine compliance with HAP emission limits shall be conducted in accordance with 40 CFR 63.

[45CSR13, R13-1455, B.7; R13-1694, B.7; R13-0401, B.8; R13-1798, B.8; R13-1782, B.8; R13-2037, B.8]

3.4. Recordkeeping Requirements

3.4.1. **Monitoring information.** The permittee shall keep records of monitoring information that include the following:

a. The date, place as defined in this permit and time of sampling or measurements;

b. The date(s) analyses were performed;

c. The company or entity that performed the analyses;

d. The analytical techniques or methods used;

e. The results of the analyses; and

f. The operating conditions existing at the time of sampling or measurement.

[45CSR§30-5.1.c.2.A; 45CSR13, R13-3534, 4.4.1; 45CSR13, R13-3651, 4.4.1]

3.4.2. **Retention of records.** The permittee shall retain records of all required monitoring data and support information for a period of at least five (5) years from the date of monitoring sample, measurement, report, application, or record creation date. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit. Where appropriate, records may be maintained in computerized form in lieu of the above records.
[45CSR§30-5.1.c.2.B.]

3.4.3. **Odors.** For the purposes of 45CSR4, the permittee shall maintain a record of all odor complaints received, any investigation performed in response to such a complaint, and any responsive action(s) taken.
[45CSR§30-5.1.c. State-Enforceable only.]

3.4.4. A record of each visible emission observation and opacity evaluation per Requirement 3.2.1, and also of monitoring required under conditions 3.2.2 and 3.2.3, shall be maintained on site for and shall be made available to the Director or his/her duly authorized representative upon request. Said records shall include, the date, time, name of emission unit, the applicable visible emission requirement, the results of the check, what action(s), if any, was/were taken, and the name of the observer.
[45CSR§30-5.1.c.]

3.4.5. The permitted facility (as indicated in Requirement 3.1.9) shall comply with all the applicable recordkeeping provisions of the 40CFR63 Subpart GG National Emission Standards for Aerospace Manufacturing and Rework Facilities, provided, however, that compliance with any more stringent limitations set forth under Requirements of Sections 4.0 through 8.0, Sections 11.0 and 12.0 of this Permit, is demonstrated:

§ 63.752 Recordkeeping requirements.

b) Cleaning operation. Each owner or operator of a new or existing cleaning operation subject to this subpart shall record the information specified in paragraphs (b)(1) through (b)(5) of this section, as appropriate.

(1) The name, vapor pressure, and documentation showing the organic HAP constituents of each cleaning solvent used for affected cleaning operations at the facility.

(2) For each cleaning solvent used in hand-wipe cleaning operations that complies with the composition requirements specified in § 63.744(b)(1) (Section 3.1.9 of this Permit) or for semi-aqueous cleaning solvents used for flush cleaning operations:

(i) The name of each cleaning solvent used;

(ii) All data and calculations that demonstrate that the cleaning solvent complies with one

of the composition requirements; and

(iii) Annual records of the volume of each solvent used, as determined from facility purchase records or usage records.

(3) For each cleaning solvent used in hand-wipe cleaning operations that does not comply with the composition requirements in § 63.744(b)(1) (Section 3.1.9 of this Permit**)**, but does comply with the vapor pressure requirement in § 63.744(b)(2) (Section 3.1.9 of this Permit):

(i) The name of each cleaning solvent used;

(ii) The composite vapor pressure of each cleaning solvent used;

(iii) All vapor pressure test results, if appropriate, data, and calculations used to determine the composite vapor pressure of each cleaning solvent; and

(iv) The amount (in gallons) of each cleaning solvent used each month at each operation.

(4) For each cleaning solvent used for the exempt hand-wipe cleaning operations specified in § 63.744(e)(Section 3.1.9 of this Permit), that does not conform to the vapor pressure or composition requirements of § 63.744(b) (Section 3.1.9 of this Permit):

(i) The identity and amount (in gallons) of each cleaning solvent used each month at each operation; and

(ii) A list of the processes set forth in § 63.744(e) (Section 3.1.9 of this Permit), to which the cleaning operation applies.

(5) A record of all leaks from enclosed spray gun cleaners identified pursuant to § 63.751(a) (Section 3.2.4 of this Permit) that includes for each leak found:

(i) Source identification;

(ii) Date leak was discovered; and

(iii) Date leak was repaired.

[45CSR34, 40 C.F.R. 63, Subpart GG; and 45CSR13, R13-2037, B.7; 45CSR13, R13-3334, 4.4.4; 45CSR13, R13-3534, 4.4.4; 45CSR13, R13-3651, 4.4.4]

3.4.6. Reserved.

3.4.7. To demonstrate compliance with the Requirement 3.1.10 (45CSR§7-5.1) the company shall keep records of maintenance and operations of fugitive dust control systems for the Emission Point 1-2E, 1-3E, 2-15E, 6-8E (Spray Booth), F-1E, F-3E, F-11E, F-12E, F-13E, G-2E, J-5E, J-7E, VI (Control Device ID 2-1C, E-1C, E-2C), P4-1E, P4-2E, P4-3E, P4-4E.

[45CSR§30-5.1.c]

3.4.8. **Record of Maintenance of Air Pollution Control Equipment.** For all pollution control equipment listed in Section 1.1, the permittee shall maintain accurate records of all required pollution control equipment inspection and/or preventative maintenance procedures.

[45CSR13, R13-0898, 4.4.2; 45CSR13, R13-3334, 4.4.2; 45CSR13, R13-3408, 5.3.1; 45CSR13, R13-3534, 4.4.2; 45CSR13, R13-3651, 4.4.2]

3.4.9. **Record of Malfunctions of Air Pollution Control Equipment.** For all air pollution control equipment listed in Section 1.1, the permittee shall maintain records of the occurrence and duration of any malfunction or operational shutdown of the air pollution control equipment during which excess emissions occur. For each such case, the following information shall be recorded:

a. The equipment involved.

b. Steps taken to minimize emissions during the event.

c. The duration of the event.

d. The estimated increase in emissions during the event.

For each such case associated with an equipment malfunction, the additional information shall also be recorded:

e. The cause of the malfunction.

f. Steps taken to correct the malfunction.

g. Any changes or modifications to equipment or procedures that would help prevent future recurrences of the malfunction.

[45CSR13, R13-0898, 4.4.3; 45CSR13, R13-3334, 4.4.3; 45CSR13, R13-3408, 5.3.2; 45CSR13, R13-3534, 4.4.3; 45CSR13, R13-3651, 4.4.3]

3.5. Reporting Requirements

3.5.1. **Responsible official.** Any application form, report, or compliance certification required by this permit to be submitted to the DAQ and/or USEPA shall contain a certification by the responsible official that states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete.
[45CSR§§30-4.4. *and* 5.1.c.3.D.]

3.5.2. A permittee may request confidential treatment for the submission of reporting required under 45CSR§30-5.1.c.3. pursuant to the limitations and procedures of W.Va. Code § 22-5-10 and 45CSR31.
[45CSR§30-5.1.c.3.E.]

3.5.3. Except for the electronic submittal of the annual compliance certification and semi-annual monitoring reports to the DAQ and USEPA as required in 3.5.5 and 3.5.6 below, all notices, requests, demands, submissions and other communications required or permitted to be made to the Secretary of DEP and/or USEPA shall be made in writing and shall be deemed to have been duly given when delivered by hand, or mailed first class or by private carrier with postage prepaid to the address(es), or submitted in electronic format by e-mail as set forth below or to such other person or address as the Secretary of the Department of Environmental Protection may designate:

DAQ: **US EPA:**

Director	Section Chief
WVDEP	U. S. Environmental Protection Agency, Region III
Division of Air Quality	Enforcement and Compliance Assurance Division
601 57th Street SE	Air, RCRA and Toxics Branch (3ED21)
Charleston, WV 25304	Four Penn Center
	1600 John F. Kennedy Boulevard
	Philadelphia, PA 19103-2852

DAQ Compliance and Enforcement[1]:
DEPAirQualityReports@wv.gov

[1]For all self-monitoring reports (MACT, GACT, NSPS, etc.), stack tests and protocols, Notice of Compliance Status reports, Initial Notifications, etc.

3.5.4. **Fees.** The permittee shall pay fees on an annual basis in accordance with 45CSR§30-8. **[45CSR§30-8.]**

3.5.5. **Compliance certification.** The permittee shall certify compliance with the conditions of this permit on the forms provided by the DAQ. In addition to the annual compliance certification, the permittee may be required to submit certifications more frequently under an applicable requirement of this permit. The annual certification shall be submitted to the DAQ and USEPA on or before March 15 of each year, and shall certify compliance for the period ending December 31. The permittee shall maintain a copy of the certification on site for five (5) years from submittal of the certification. The annual certification shall be submitted in electronic format by e-mail to the following addresses:

DAQ:	**US EPA:**
DEPAirQualityReports@wv.gov	R3_APD_Permits@epa.gov

[45CSR§30-5.3.e.]

3.5.6. **Semi-annual monitoring reports.** The permittee shall submit reports of any required monitoring on or before September 15 for the reporting period January 1 to June 30 and on or before March 15 for the reporting period July 1 to December 31. All instances of deviation from permit requirements must be clearly identified in such reports. All required reports must be certified by a responsible official consistent with 45CSR§30-4.4. The semi-annual monitoring reports shall be submitted in electronic format by e-mail to the following address:

DAQ:
DEPAirQualityReports@wv.gov

[45CSR§30-5.1.c.3.A.]

3.5.7. **Reserved.**

3.5.8. **Deviations.**

a. In addition to monitoring reports required by this permit, the permittee shall promptly submit supplemental reports and notices in accordance with the following:

1. Reserved.

2. Any deviation that poses an imminent and substantial danger to public health, safety, or the environment shall be reported to the Secretary immediately by telephone or email. A written report of such deviation, which shall include the probable cause of such deviation, and any corrective actions or preventative measures taken, shall be submitted by the responsible official within ten (10) days of the deviation.

3. Deviations for which more frequent reporting is required under this permit shall be reported on the more frequent basis.

4. All reports of deviations shall identify the probable cause of the deviation and any corrective actions or preventative measures taken.

[45CSR§30-5.1.c.3.C.]

b. The permittee shall, in the reporting of deviations from permit requirements, including those attributable to upset conditions as defined in this permit, report the probable cause of such deviations and any corrective actions or preventive measures taken in accordance with any rules of the Secretary.
[45CSR§30-5.1.c.3.B.]

3.5.9. **New applicable requirements.** If any applicable requirement is promulgated during the term of this permit, the permittee will meet such requirements on a timely basis, or in accordance with a more detailed schedule if required by the applicable requirement.
[45CSR§30-4.3.h.1.B.]

3.5.10. The permitted facility (as indicated in Requirement 3.1.9) shall comply with all the applicable reporting provisions of the 40CFR63 Subpart GG National Emission Standards for Aerospace Manufacturing and Rework Facilities, provided, however, that compliance with any more stringent limitations set forth under Requirements of Sections 4.0 through 8.0, Sections 11.0 and 12.0 of this Permit, is demonstrated:

§ 63.753 Reporting requirements.

(b) Cleaning operation. Each owner or operator of a cleaning operation subject to this subpart shall submit the following information:

(1) Semiannual reports occurring every 6 months from the date of the notification of compliance status that identify:

(i) Any instance where a noncompliant cleaning solvent is used for a non-exempt hand-wipe cleaning operation;

(ii) A list of any new cleaning solvents used for hand-wipe cleaning in the previous 6 months and, as appropriate, their composite vapor pressure or notification that they comply with the composition requirements specified in § 63.744(b)(1) (Section 3.1.9 of this Permit);

(iii) Any instance where a noncompliant spray gun cleaning method is used;

(iv) Any instance where a leaking enclosed spray gun cleaner remains unrepaired and in use for more than 15 days; and

(v) If the operations have been in compliance for the semiannual period, a statement that the cleaning operations have been in compliance with the applicable standards. Sources shall also submit a statement of compliance signed by a responsible company official certifying that the facility is in compliance with all applicable requirements.

[45CSR34, 40 C.F.R. 63, Subpart GG; 45CSR13, R13-2037, B.7; 45CSR13, R13-2037, 4.5.2.; 45CSR13, R13-3334, 4.5.2; 45CSR13, R13-3534, 4.5.2]

3.5.11. Upon observing any visible emissions during an Opacity Evaluation as per Requirement 3.2.1 in excess of twenty percent (20%) opacity (but less than forty percent (40%) opacity) for any period or periods aggregating more than five (5) minutes in any sixty (60) minute period, or upon observing any visible emissions in excess of forty percent (40%) opacity, the Company shall submit a written report (including day and time of the observation, observation results, and corrective actions taken (if any)), certified by a responsible official, to the Director of the Division of Air Quality within ten (10) days after taking said reading. **[45CSR§30-5.1.c]**

3.6. Compliance Plan

3.6.1. None.

3.7. Permit Shield

3.7.1. The permittee is hereby granted a permit shield in accordance with 45CSR§30-5.6. The permit shield applies provided the permittee operates in accordance with the information contained within this permit.

3.7.2. The following requirements specifically identified are not applicable to the source based on the determinations set forth below. The permit shield shall apply to the following requirements provided the conditions of the determinations are met.

(a) 45CSR21– Regulation to Prevent and Control Air Pollution from the Emission of Volatile Organic Compounds. The facility is not located in a county that is currently subject to 45CSR21, and is therefore currently exempt from this regulation.

(b) 40CFR63, Subpart PPP – National Emission Standards for Polyether Polyol Production. The facility manufactures Terathane Polyethylene Glycol Block Copolymer (TPEG), which is a Polyether Polyol. However, the operation is exempted from this MACT because there are no HAPs used or generated during the manufacturing operation.

(c) 40CFR63, Subpart GGGGG – National Emission Standards for Site Remediation. The facility currently has two sites under remediation for groundwater contamination. These sites are both CERCLA ("Superfund") sites and are thus exempt from the MACT requirements. The facility also has a third site, commonly referred to as Plant 2, which is currently being investigated under the RCRA corrective action program, that could potentially require some form of active groundwater remediation or treatment within the next five to ten years. This site would also be exempted since it is being managed under a RCRA corrective action.

(d) 40CFR63, Subpart WWWW – National Emission Standards for Reinforced Plastic Composites Manufacturing. The facility manufactures composite based rocket motor chambers and aircraft components. However, the facility is exempt from this MACT because none of the resin or fiber systems used, contain HAPs.

4.0. Ingredient Preparation Requirements (Plant 1 (Group 001) and Plant 2 (Group 00E))

4.1. Limitations and Standards

4.1.1. Maximum Cyclotrimethylene Trinitramine (RDX) and Cyclotetramethylene Tetranitramine (HMX) production from sources 1-3S, 1-8S and 1-9S in Buildings 262 and 374 shall not exceed 3668 tons/year. Compliance with the production limit shall be determined using a rolling yearly total. A rolling yearly total shall mean the sum of the production of (RDX) and (HMX) at any given time for the previous twelve (12) consecutive calendar months.
[45CSR13, R13-1455, A.1]

4.1.2. Emissions of particulate matter from the filter vent, Emission Point ID 1-7E, used to control emission from the fluid energy, shall not exceed one (1) lb/hr of particulate matter (RDX and HMX).

Emission Point ID	Pollutant	Hourly Emissions (Lb/Hr)
1-7E RDX Grinding Mill-374	PM (Cyclotrimethylene Trinitramine (RDX) and Cyclotetramethylene Tetranitramine (HMX))	1

[45CSR13, R13-1455, A.2]

4.1.3. Emissions of VOC from the blender/dryer condenser vent, Emission Point ID 1-6E, shall not exceed 0.73 lbm/hr.

Emission Point ID	Pollutant	Hourly Emissions (Lb/Hr)
1-6E Blender/Dryer Condenser Vacuum Pump-374	VOC	0.73

[45CSR13, R13-1455, A.3]

4.1.4. The fluid energy mill, permitted under R13-0621 (Source 1-3S), shall be utilized for production only when the fluid energy mill permitted, under R13-1455 (Source 1-9S), is not operating.
[45CSR13, R13-1455, A.4]

4.1.5. Emissions of particulate matter from Emission Point ID 1-9E and 1-12E, the discharge vents of the filter units used to control emissions from the handling and weighing area, shall not exceed 1.0 lb/hr of lead citrate or lead sesquioxide per emission point and shall be controlled at all times using the Dust Control Filter Systems (ID# 1-5C and 1-6C).

Emission Point ID	Pollutant	Hourly Emissions (Lb/Hr)
1-9E	Lead Citrate or Lead Sesquioxide (PM)	1
1-12E	Lead Citrate or Lead Sesquioxide (PM)	1

[45CSR13, R13-1694, A.1]

4.1.6. Emissions of Heptane (VOC) from Emission Point ID 1-10E, shall not exceed 2.0 lb/hr.

Emission Point ID	Pollutant	Hourly Emissions (Lb/Hr)
1-10E Mix Bowl-384	Heptane (VOC)	2

[45CSR13, R13-1694, A.2]

4.1.7. After all liquid VOC has been evaporated from the mix bowl, Emission Point 1-10E shall be valved shut and Emission Point 1-11E (the condenser) is opened. The mix bowl shall then be evacuated to remove the VOC vapors in the free volume of the mix bowl and associated plumbing and the VOC vapors shall pass through the condenser. Emissions of VOC from Emission Point ID 1-11E (the condenser) shall not exceed 2.0 lb/hr.

Emission Point ID	Pollutant	Hourly Emissions (Lb/Hr)
1-11E Condenser 1-7C	VOC	2

[45CSR13, R13-1694, A.3]

4.1.8. The VOC evaporation process from the mix bowl, source 1-14S, shall operate a maximum of 2,080 hr/yr.
[45CSR13, R13-1694, A.4]

4.1.9. A maximum of 500 pounds/batch of lead salt paste utilizing 250 pounds/batch of lead citrate or lead sesquioxide shall be charged per batch.
[45CSR13, R13-1694, A.5]

4.1.10. To determine compliance with Requirement 4.1.5, the permittee shall be subject to announced and unannounced enforcement and compliance inspections. These inspections shall be performed by the Director or his/her duly authorized representative.
[45CSR13, R13-1694, B.1]

4.1.11. Liquid Nitrate Ester Solution Sparging operations shall be in accordance with the following:

a. The methylene chloride emission control system (consisting of two cryogenic recovery systems), referenced in Mr. G. H. Moody's letter of December 19, 1986 (see Attachment 1), shall be in operation during sparging operations in the Liquid Nitrate Ester Solution Facility (Emission Point 1-4E or 1-13E, Control Device ID 1-2C or 1-10C - Cryogenic Recovery System at building 352) at all times, excepting only periods of emergency repairs for the control equipment and unanticipated control equipment failure for reasons beyond the reasonable control of the permittee, and should achieve a minimum recovery of 80% of the VOC released by the sparging operation;

b. In the event that the control equipment is inoperable, the production unit shall be shut down as expeditiously as possible. Recognizing the potentially reactive nature of the production units products, however, in-process material may continue to be processed;

c. The permittee shall not begin operation of the production unit when the control equipment is not in operation without being granted a variance by the Director;

d. Additionally, only one cryogenic recovery system may be run in recovery mode at any time. Any concurrent use would be limited to use of one unit in defrost mode and one unit in recovery mode; and

e. For all periods in which control equipment or measures are inoperable or malfunctioning, the permittee shall not operate the related production equipment unless the Company is granted a variance pursuant to 45CSR§27-12.1.

[45CSR13, R13-0898, 4.1.1]

4.1.12. The aggregate annual methylene chloride emission limit from sparging operations, as controlled by 1-2C and 1-10C, and as emitted through vent ID# 1-4E and 1-13E, is 3,990 pounds per a rolling twelve month period. **[45CSR13, R13-0898, 4.1.2]**

4.1.13. (1) The Gustafson Grinder System, Source E-1S, located in Building 2003, shall be operated with the cyclone collector and dust collector systems at all times.
(2) Production shall not exceed 1,456 tons per year.

[45CSR13, R13-0401, A.6]

4.2. Monitoring Requirements

4.2.1. None.

4.3. Testing Requirements

4.3.1. To determine compliance with the emission limitation as set forth in Requirements 4.1.2, 4.1.3, 4.1.5, 4.1.6 and 4.1.7 above, test(s) shall be conducted in accordance with Requirements 3.3.1 and 3.3.2 contained herein. **[45CSR§30-5.1.c, 45CSR13, R13-1455, B.2, 45CSR13, R13-1694, B.3]**

4.3.2. Upon the Director's request, the permittee shall submit to the Director a detailed plan and test protocol for approval of methods to demonstrate compliance with the emission limits set forth in Requirement 4.1.12. The Director reserves the right to require the application of any specific valid test or emissions monitoring methods for the determination of TAP emissions from this source. **[45CSR13, R13-0898, 4.3.1]**

4.4. Recordkeeping Requirements

4.4.1. For the purpose of determining compliance with the maximum production limit set forth in Requirement 4.1.1, and also with emission limits set forth in Requirements 4.1.2, 4.1.3 and 4.1.5, the applicant shall maintain a monthly record of the amount of production of Cyclotrimethylene Trininitramine (RDX) and Cyclotetramethylene Tetranitramine (HMX), and total monthly production of both (RDX and HMX) in tons, and also add the monthly production to get a yearly total production in a manner similar to Attachment A of the Permit R13-1455A, and also calculate pounds of VOC emitted, from each emission point, to the atmosphere on a monthly basis. Such calculations for Emission Point 1-6E shall be based upon accurate determinations or tests to establish condenser efficiency. Said records shall be maintained on site for a period of at least five (5) years and upon request of the Director or his/her duly authorized representative shall be certified and made available to the Division of Air Quality. **[45CSR13, R13-1455, B.1 and 45CSR§30-5.1.c]**

4.4.2. For the purpose of determining compliance with the conditions set forth in Requirements 4.1.4, the permittee shall maintain records of the operating times on a daily basis (start time and end time) of source 1-3S and source 1-9S, in a manner similar to Attachment B of the Permit R13-1455A. **[45CSR13, R13-1455, B.3]**

4.4.3. For the purpose of determining compliance with the provisions set forth in Requirements 4.1.6, 4.1.7, 4.1.8 and 4.1.9 above, the permittee shall maintain a record which at a minimum contains the following information (as per Attachment A of the Permit R13-1694A):

a) date and the hours operated each day,

b) the quantity weighed of lead citrate or lead sesquioxide each day in the handling area,

c) the pounds of VOC emitted, from each emission point, to the atmosphere each day. Such determination shall be based upon accurate determinations or tests to establish condenser efficiency.

Said record shall be maintained on site for a period of at least five years and shall be certified and made available to the Director or his/her duly authorized representative upon request.

[45CSR13, R13-1694, B.2]

4.4.4. To determine compliance with the production limits set forth Requirement 4.1.13, the permittee shall keep records of the amount of production on a rolling yearly total. A rolling yearly total shall mean the amount of production at any given time for the previous twelve (12) consecutive calendar months. This information, shall be recorded in a manner that, at a minimum, contains the same information as Attachment B of the Permit R13-0401B (Production of Gustafson Grinder System in Building 2003): monthly records of Gustafson Grinder System rolling yearly production (in tons per year), and shall be kept on site for a period of five years and certified records shall be made available for inspection by the Director or a duly authorized representative of the Director upon request.
[45CSR13, R13-0401, B.4]

4.4.5. To demonstrate compliance with the Requirements 4.1.2, 4.1.5 and 4.1.13 the permittee shall conduct an annual preventative maintenance inspection/cleaning/replacement/refurbishment of the bags, filters, bag connection, and dust hoppers, as appropriate, of the baghouses and HEPA Filter Systems at each emission point specified, in order to ensure proper operation of the control devices. Records shall be maintained on site stating the date and time of each control device annual preventative maintenance activity, the results and all corrective actions taken.
[45CSR§30-5.1.c]

4.4.6. To demonstrate compliance with the Requirement 4.1.12 the permittee shall maintain records of the amounts of methylene chloride sparged per batch as well as the quantity of methylene chloride recovered and drummed for reuse. These records shall be used to determine losses of methylene chloride. Compliance with the annual emission limit shall be demonstrated using a rolling yearly total. Rolling yearly total means the sum of methylene chloride emissions generated by the sparging operations over the previous twelve (12) consecutive calendar months. Records shall be maintained on site and shall be certified and made available to the Director or his/her duly authorized representative upon request.
[45CSR13, R13-0898, 4.2.2]

4.4.7. To demonstrate compliance with the Requirements 4.1.11, the permittee shall maintain records of the sparging operations and Cryogenic Recovery system operation and maintenance.
[45CSR13, R13-0898, 4.2.1]

4.5. Reporting Requirements

4.5.1. Upon the discovery of any Toxic Air Pollutant (as defined under 45CSR27) not addressed in this Permit and the emissions of which is not known as of the issuance date, the permittee shall notify the Director in writing within fifteen (15) days of such discovery. Unless the Director determines these emissions to be insignificant,

the permittee shall submit a compliance program for control of such emissions within sixty (60) days of the date of notification. Upon a determination by the Director that the proposed compliance program represents BAT, the Director shall, in his or her discretion, consider such program for a consent order and shall determine the conditions to be met for approval and entry of such consent order.
[45CSR13, R13-0898, 4.5.1]

4.6. Compliance Plan

4.6.1. None.

5.0. Chamber Preparation Requirements (Plant 1 (Group 002) and Plant 2 (Group 00F))

5.1. Limitations and Standards

5.1.1. The emissions, from Emission Point 2-9E, to the atmosphere shall not exceed the following emission rates:

Emission Point ID	Pollutant	Emission Rate	
		lb/hr	lb/yr
2-9E Walk-In Spray Booth-167	Particulate Matter (PM)	0.408	41.09
	Volatile Organic Compound (VOC)	9.27	1120.2
	Hazardous Air Pollutant (HAP)	3.16	450.19

[45CSR13, R13-2037, A.1]

5.1.2. Control Device 2-7C, to be utilized for the purpose of controlling particulate matter emissions from Emission Point 2-9E, shall consist of a Research Products Corp. Series 3000 RP Paint Arrestors Filter, or other filter of comparable control efficiency.
[45CSR13, R13-2037, A.2]

5.1.3. For the purpose of determining compliance with Requirement 5.1.2 above, the permittee will be subject to announced and unannounced compliance and enforcement inspection by the Director or his/her duly authorized representative. If at any time the permittee fails to comply with the conditions as set forth in Requirement 5.1.2 above, the permittee shall notify the Director or his/her duly authorized representative of such non-compliance and may be subject to civil and/or criminal penalties for each violation.
[45CSR13, R13-2037, B.3]

5.1.4. Particulate Matter (PM_{10}) and Volatile Organic Compound (VOC) emissions from the rocket motor chamber preparation process, Building 420, shall not exceed the hourly and annual limitations specified below:

Emission Point I.D.	Source Vented through this Point	Maximum PM10 Emission Limitation		Maximum VOC Emission Limitation	
		(lb/hr)	(lb/yr)	(lb/hr)	(lb/yr)
2-10E Fume Hood for CBL-420	Exhaust Hood (2-12S) - for ingredient mixing of casebond liner mixtures and housing dip coating components for interior tooling for Hellfire motors.	Neg.	Neg.	0.67 (2)	450 (2)
2-11E Case Bond Liner Spray Booths-420	Common duct for spray booths applying casebond liner mixtures: - Booth 2-13S - 1st casebond liner mixture to be applied: Neoprene rubber based lacquer - Booth 2-14S - 2nd casebond liner mixture to be applied: Formvar or Butvar resin lacquer	0.012 (1)	14.6 (1)	3.7 (3)	7750 (3)
2-12E Drying Oven - 420	Neoprene and Formvar or Butvar Drying Oven (2-15S)	0	0	0.19 (4)	53.3 (4)
Total		0.012	14.6	4.6	8253

(1) Emissions after controls. Controlled particulate emissions are calculated based on 40% overspray and a 90% control device removal efficiency. The control device is a filter bank of 6 disposable polyester fiber filters.

(2) VOC emissions from exhaust hood 2-12S are based on the following assumptions:
- Two percent (2%) by weight of the volatile ingredients for the making of casebond liner stock solution and lacquers is lost through the hood during weigh out and mixing operations
- Forty-five percent (45%) by weight of the volatile ingredients from the dip coating of Hellfire rods is lost through the hood exhaust. Five percent (5%) by weight is lost through the oven. The remaining 50% is collected for waste disposal.
- One hundred percent (100%) by weight of the MEK used for nozzle and insulator bonding is lost through the exhaust hood.

(3) VOC emissions from the two (2) spray booths are based on the following assumptions:
- Spray Booths 2-13S (Neoprene) and 2-14S (Butvar) -Twenty five percent (25%) by weight of the n-propyl bromide used for cleanup is emitted. The remaining material will be collected for reuse or waste disposal.
- Spray Booth 2-14S (Formvar) - Fifty percent (50%) by weight of the Toluene/Ethanol (60/40) used for cleanup of formvar spray equipment is emitted. The remaining material will be collected for reuse or waste disposal.

(4) Five percent (5%) by weight of the volatile ingredients from the dip coating of Hellfire rods is lost through the oven.

[45CSR13, R13-2246, A.1]

5.1.5. Emissions to the atmosphere from the Case Bond Liner Booth (Sparrow Line), source F-12S, through emission point F-9E, located in Building 2014, shall be limited as follows:

Emission Point ID	Pollutant	Emission Limit	
		lb/hr	ton/yr
F-9E Case Bondliner Paint Booth (Intermediate Line) - 2014	VOC	6.0	0.5
	HAP	2.0	0.5
	PM	No Hourly Limit	0.1

[45CSR13, R13-0401, A.4.]

5.1.6. Emissions to the atmosphere from the Sparrow Vertical Paint Booth, source F-7S, through emission point F-5E, located in Building 2014, shall be limited as follows:

Emission Point ID	Pollutant	Emission Limit	
		lb/hr	ton/yr
F-5E Vertical Spray Booth - Paint (Intermediate Line) - 2014	VOC	6.0	1.0
	HAP	2.0	1.0
	PM	No Hourly Limit	0.1

[45CSR13, R13-0401, A.7]

5.1.7. Emissions from the permitted facilities shall not exceed the following limitations:

Emission Point ID	Pollutant	Emission Rate
		lb/hr
F-14E - Abrasive Blaster	Particulate Matter	0.1

Emission Point ID	Pollutant	Emission Rate	
		lb/hr	TPY
F-16E - Internal Spray Booth	Volatile Organic Compounds (VOC)	3.00	0.20
	Particulate Matter (PM)	0.10	0.10

Potential HAPs which may be included in bondliner ingredients include: dimethyl formamide, ethyl benzene, formaldehyde, hexane, methanol, methyl ethyl ketone (MEK), methyl isobutyl ketone (MIBK), methylene diphenyl diisocyanate (MDI), toluene, toluene diisocyanate (TDI), trichlorobenzene-1,2,4, xylene, and chromium or lead compounds. No specific VOC-HAP shall be emitted in a quantity greater than 2.0 lb/hr.

Emission Point	Pollutant	Emission Rate	
		lb/hr	TPY
F-18E - Paint Spray Booth	Volatile Organic Compounds (VOC)	3.00	0.50
	Particulate Matter (PM)	0.10	0.10

Potential HAPs which may be included in paint ingredients include: dimethyl formamide, ethyl benzene, formaldehyde, hexane, methanol, methyl ethyl ketone (MEK), methyl isobutyl ketone (MIBK), methylene diphenyl diisocyanate (MDI), toluene, toluene diisocyanate (TDI), trichlorobenzene-1,2,4, xylene, and chromium or lead compounds. No single HAP species shall be emitted in a quantity greater than 2.0 lb/hr. If other HAPs are used, notification to the Division of Air Quality shall be made within 30 days.

Emission Point	Pollutant	Emission Rate	
		lb/hr	TPY
F-17E - Paint Dry Room	Volatile Organic Compounds (VOC)	0.3	0.05
	Particulate Matter (PM)	0.01	0.01

Potential HAPs which may be included in paint ingredients include: dimethyl formamide, ethyl benzene, formaldehyde, hexane, methanol, methyl ethyl ketone (MEK), methyl isobutyl ketone (MIBK), methylene diphenyl diisocyanate (MDI), toluene, toluene diisocyanate (TDI), trichlorobenzene-1,2,4, xylene, and chromium or lead compounds. No single HAP species shall be emitted in a quantity greater than 2.0 lb/hr. If other HAPs are used, notification to the Division of Air Quality shall be made within 30 days.
[45CSR13, R13-1047, A.1]

5.2. Monitoring Requirements

5.2.1. None.

5.3. Testing Requirements

5.3.1. To determine compliance with the emission limitation as set forth in Requirement 5.1.1 above, test(s) shall be conducted in accordance with Requirements 3.3.1 and 3.3.2 contained herein.
[45CSR§30-5.1.c & 45CSR13, R13-2037, B.2]

5.4. Recordkeeping Requirements

5.4.1. For the purpose of determining compliance with emission limitations set forth in Requirements 5.1.1 (Emission Point 2-9E), 5.1.5 (Emission Point F-9E), 5.1.6 (Emission Point F-5E), 5.1.7 (Emission Points F-16E and F-18E) above, the permittee shall maintain monthly and yearly records. Compliance with the hourly emission rates shall be determined using the average hourly emission rate for each month. Compliance with the annual emission rates shall be determined using a rolling yearly total. A rolling yearly total shall mean the total emission rates emitted at any given time for the previous twelve (12) consecutive calendar months. Said records shall be maintained in a manner similar to: 1) Attachment A of the Permit R13-2037A (Monthly Usage/ VOC Emissions/ PM Emissions Report) and shall include types and amounts of coating materials sprayed each month (in gallons), hours of operation, VOC content (in lbs VOC/gal), VOC emissions (in lbs and in lbs/hr) per each coating, PM content (in lbs PM/gal), PM emissions (in lbs and lbs/hr) per each coating, and total of VOC and PM emissions (in lbs and in lbs/hr) for all coatings, 2) Attachment C of the Permit R13-2037A (Annual VOC Emissions/ PM Emissions Report) and shall include records of VOC and PM emissions (in lbs) on a monthly basis and total annual VOC and PM emissions, and 3) Attachment E of the Permit R13-2037A (Annual HAP emissions Report) and shall include records of VOC HAPs and PM HAPs annual emissions (in lbs/yr) and a sum of VOC HAPs and PM HAPs annual emissions. Said records shall be maintained on site by the permittee for a period of at least five (5) years. Said records shall be made available and certified upon request of the Director or his or her duly authorized representative.
[45CSR13, R13-2037, B.1, R13-0401, B.3, R13-1047, B.1 and 45CSR§30-5.1.c]

5.4.2. For the purpose of determining compliance with the PM_{10} limitations set forth in Requirements 5.1.4. (Emission Point 2-11E) the company shall maintain a filter replacement logsheet for the casebond filter bank. For the purpose of determining compliance with the PM limitations set forth in Requirements 5.1.1. (Emission Point 2-9E), 5.1.5. (Emission Point F-9E), 5.1.6. (Emission Point F-5E) and 5.1.7. (Emission Point F-16E and F-18E) the company shall maintain a filter replacement logsheet for the filter bank. An example logsheet is given in Attachment 1of the Permit R13-2246A (Filter Replacement Logsheet) and it includes filter change-out date and comments (about old/new filters, etc.). This logsheet shall be maintained on site for a period of five (5) years. Certified copies of the logsheet shall be made available to the Director or his duly-authorized representative upon request.
[45CSR13, R13-2246, B.3 and 45CSR§30-5.1.c]

5.4.3. For the purpose of determining compliance with the PM_{10} and VOC limitations set forth in Requirement 5.1.4., the company shall maintain daily coating usage records on spray booths 2-13S and 2-14S which collectively emit through emission point 2-11E. Daily and year-to-date (YTD) VOC emissions shall be calculated on a monthly basis using these records. Because PM_{10} emissions after controls are relatively small, these emissions shall be calculated only once a year. Example logsheets are given in Attachment 2 of the Permit R13-2246A (Daily Spray Booth Logsheets) and for each booth include the following: date, program/contract, start time, end time, number of units sprayed, hours operated, grams sprayed per unit, total daily usage (in lb/day), peak hourly usage (in lb/hr), year-to-date usage (in lbs). These logsheets shall be maintained on site for a period of five (5) years. Certified copies of the logsheets shall be made available to the Director or his duly-authorized representative upon request.
[45CSR13, R13-2246, B.4]

5.4.4. For the purpose of determining compliance with the emission limitations set forth in Requirement 5.1.4, the company shall maintain a daily record of batch production. These records shall be used to calculate exhaust hood (Emission Point 2-10E) and drying oven (Emission Point 2-12E) VOC emissions. Because the VOC emissions are relatively small, these emissions shall be calculated only once a year. Example logsheets (Daily and YTD Batch Count Sheets) are given in Attachment 3 of the Permit R13-2246A, and include for each Hellfire Cases, Hellfire Rods (Mixing), Hellfire Rods (Dip Coating), Predator Cases, SFW Cases and TOW-2 Cases the following information: record date, number of batches daily and number of batches year-to-date for Formvar or Butvar Stock Solution (FSS/ BSS), Neoprene Stock Solution (NSS), Phenolic Resin Stock Solution (PRS), Formar or Butvar Lacquer (FL/BL), Neoprene Lacquer (NL), MEK for wipe cleaning nozzles (MEK), Spray Gun Cleanup with NPB and/or Spray Gun Cleanup with Toluene/Ethanol (60/40).

These logsheet shall be maintained on site for a period of five (5) years. Certified copies of the logsheets shall be made available to the Director or his duly-authorized representative upon request.
[45CSR13, R13-2246, B.5]

5.4.5. As per Requirement 5.4.1 and 5.4.3 above, VOC and/or HAP emission calculations shall be performed based on coating usage records and material safety data sheets information, assuming that 100 percent of all VOCs (both non-HAP and HAP) are emitted to the atmosphere.
[45CSR§30-5.1.c]

5.4.6. To demonstrate compliance with the Emission Point F-17E VOC emission limit set forth in Requirement 5.1.7, the permittee shall perform monthly calculations based on coating usage records (as per Requirement 5.4.1) for the coating booth F-23S (Emission Point F-16E) and paint spray booth F-25S (Emission Point F-18E).
[45CSR§30-5.1.c]

5.4.7. To demonstrate compliance with the Emission Point F-14E PM emission limit set forth in Requirement 5.1.7, and also to reduce PM emissions from the Emission Point F-6E, the permittee shall conduct an annual preventative maintenance inspection / cleaning / replacement / refurbishment of the bags, bag connection, and dust hoppers, as appropriate, of the baghouses at each emission point specified, in order to ensure proper operation of the Cyclone Dust Collectors F-4C and F-9C. Records shall be maintained on site stating the date and time of each baghouse's annual preventative maintenance activity, the results of the annual preventative maintenance activity, and all corrective actions taken.
[45CSR§30-5.1.c]

5.5. Reporting Requirements

5.5.1. None.

5.6. Compliance Plan

5.6.1. None.

6.0. Loading/Inspection/Final Assembly Requirements (Plant 1 (Group 006) and Plant 2 (Group 00J))

6.1. Limitations and Standards

6.1.1. Emissions to the atmosphere from each paint spray booth shall not exceed the following emission rates:

Source ID	Emission Point ID	VOC Emission Rates		Particulate Matter Emission Rates	
		lb/hr	TPY	lb/hr	TPY
6-4S Paint Spray Booth	6-2E	1	2.01	0.1	0.1

Area	Emission Point ID	VOC Emission Rates		Particulate Matter Emission Rates		Hazardous Air Pollutants	
		lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
Paint Spray Booth [6-6S]	6-4E	3.00	4.35	3.00	0.10	1.90	2.00
Paint Spray Booth [6-7S]	6-5E						
Paint Spray Booth [6-8S]	6-6E						
Paint Spray Booth [6-9S]	6-7E						

For the purpose of this Permit, VOCs shall have the meaning of "any organic compound which participates in atmospheric photochemical reactions", that is, any organic compound other than those the EPA Administration has designated as having negligible photochemical reactivity. Negligible photochemical reactive materials include: methane, ethane, methyl chloroform, methylene chloride, and some freons.
[45CSR13, R13-1782, A.1 and 45CSR13, R13-1798, A.1]

6.1.2 The minimum particulate collection efficiency of the filters used in the spray booth exhaust stack shall be 90% (Control Device ID 6-1C, 6-2C, 6-3C, 6-4C, 6-5C - Emission Points 6-2E, 6-4E, 6-5E, 6-6E, 6-7E).
[45CSR13, R13-1782, A.2 and 45CSR13, R13-1798, A.3]

6.1.3 Coatings to be utilized shall comply with 45CSR27.
No coating or solvent containing any hazardous air pollutant, as defined by West Virginia Legislative Rule 45CSR13, Section 15.1 and listed in Table 45-13A or any toxic air pollutant (TAP), as defined by West Virginia Legislative Rule 45CSR27, Section 2.10, shall be used without prior approval of the Director of the Division of Air Quality.
[45CSR13, R13-1782, A.3 and 45CSR13, R13-1798, A.4 and 5]

6.1.4 For the purpose of determining compliance with the minimum efficiency limit as set forth in Requirement 6.1.2. the permittee may be required by the Director or his/her duly authorized representative to provide any information deemed necessary to obtain the particulate collection efficiency of the filters used in the spray booth exhaust stack.
[45CSR13, R13-1782, B.3 and 45CSR13, R13-1798, B.3]

6.1.5 For the purpose of determining compliance with Requirement 6.1.3, the permittee will be subject to announced and unannounced compliance and enforcement inspection by the Director or his/her duly authorized representative. If at any time the permittee fails to comply with the limits as set forth in 45CSR27 - Table A, the permittee shall notify the Director of such accedence and may be required at the Director's request to employ a BAT (Best Available Technology) plan to all chemical processing units emitting toxic air pollutants.
[45CSR13, R13-1782, B.4 and 45CSR13, R13-1798, B.4]

6.1.6 Emissions to the atmosphere from the Interior Coating Spray Line, Source J-4S, through Emission Point J-2E, located in Building 2011, shall be limited as follows:

Emission Point ID	Pollutant	Emission Limit	
		lb/hr	ton/yr
J-2E Interior Coating Spray Line - 2011	VOC	6	0.5
	HAP	2	0.5
	PM	No Hourly Limit	0.1

[45CSR13, R13-0401, A.5]

6.1.7 The following are the known HAPs to be emitted from the source:

Antimony Compounds
Chromium Compounds
Ethyl Benzene
Formaldehyde
Glycol Ethers
Hexane
Isocyanates (HDI, MDI, TDI)
Lead Compounds
Methanol
MIBK
Phenol
Styrene
Toluene
Xylene

Use of any surface coating containing any constituent identified in Section 112(b) of the 1990 Clean Air Act Amendments as a HAP and not listed above shall be in accordance with the following:

a. The permittee shall notify the Director in writing of the surface coating to be used and the HAP(s) contained therein within thirty (30) days of the initial use of the surface coating. Additionally, an MSDS sheet for the surface coating shall be supplied at this time to the Director.

b. An estimate of emissions associated with the use of the surface coating shall be determined and incorporated into the record keeping requirements contained herein.

c. Compliance with the annual emission limits shall be determined using rolling yearly totals.

For the purposes of this permit, surface coatings shall be defined as a material applied onto, or impregnated into, a substrate for protective, decorative, or functional purposes. For the purpose of this permit, coatings shall be defined as stains, thinners, solvents, sealers, varnishes, paints, primers, catalysts, acrylics, lacquers, or any substance involved in spray booth operations, cleaning, or maintenance.

[45CSR13, R13-1798, A.2]

6.1.8 The maximum number of painted units is 480 units per year. Compliance with the annual usage shall be determined using a twelve (12) month rolling total. A twelve (12) month rolling total shall mean the sum of units painted at any given time for the previous twelve (12) consecutive months.
[45CSR13, R13-1798, A.6]

6.2. Monitoring Requirements

6.2.1. None.

6.3. Testing Requirements

6.3.1. To determine compliance with the emission limitations as set forth in Requirement 6.1.1 above test(s) shall be conducted in accordance with Requirements 3.3.1 and 3.3.2 contained herein.
[45CSR13, R13-1782, B.2 and 45CSR13, R13-1798, B.2]

6.4. Recordkeeping Requirements

6.4.1. For the purpose of determining compliance with emission limitations set forth in Requirement 6.1.1 (Emission Points 6-4E, 6-5E, 6-6E and 6-7E and VOC emission limits for Emission Point ID 6-2E) the company shall maintain daily, monthly, and yearly records. Compliance with the emission limits shall be determined using a rolling yearly total. A rolling yearly total shall mean the sum of each pollutant emitted at any given time for the previous twelve (12) consecutive calender months. Records shall be maintained in a manner as provided in Attachment A, B and C of this permit. Said records shall be maintained on site by the permittee for a period of at least five (5) years. Said records shall be made available and certified upon request of the Director or his or her duly authorized representative.
[45CSR13, R13-1782, B.1 and 45CSR13, R13-1798, B.1]

6.4.2. To determine compliance with the emission limits set forth in Requirement 6.1.6 (Emission Point J-2E), the permittee shall keep records of the hourly and annually emission rates. Compliance with the hourly emission rates shall be determined using the average hourly emission rate for each month. Compliance with the annual emission rates shall be determined using a rolling yearly total. A rolling yearly total shall mean the total emission rates emitted at any given time for the previous twelve (12) consecutive calender months. This information shall be kept on site for a period of five years and certified records shall be made available for inspection by the Director or a duly authorized representative of the Director upon request.
[45CSR13, R13-0401, B.3]

6.4.3. As per Requirement 6.4.1 and 6.4.2 above, VOC and/or HAP emission calculations shall be performed based on coating usage records and material safety data sheets information, assuming that 100 percent of all VOCs (both non-HAP and HAP) are emitted to the atmosphere).
[45CSR§30-5.1.c]

6.4.4. For the purpose of determining compliance with the PM_{10} limitations set forth in Requirements 6.1.1 (Emission Points 6-2E, 6-4E, 6-5E, 6-6E and 6-7E) and 6.1.6 (Emission Point J-2E) the company shall maintain a filter replacement logsheet for the Fabric Filters (filter change-out date and comments about old/new filters, etc.). An example logsheet is given in Attachment 1 to the Permit R13-2246A.
[45CSR§30-5.1.c]

6.5. Reporting Requirements

6.5.1. None.

6.6. Compliance Plan

6.6.1. None.

7.0. Mold Parts Cleanup Requirements (Plant 1 (Group 007) and Plant 2 (Group 00K))

7.1. Limitations and Standards

7.1.1. Heptane usage from the Mold Parts Wash Tanks, sources 10s (7-1S) and 11s (7-2S), in Building 151 and the Mold Parts Wash Tank, source 9s (K-3S), in building 8203, shall be limited to a combined total of 25,000 pounds per year (4,381.3 gallons).
[45CSR13, R13-0401, A.1]

7.1.2. The total combined heptane (VOC) emissions from sources 7-1S, 7-2S, and K-3S shall not exceed 12.5 tons per year.

Source ID	Emission Point ID	Heptane (VOC) Emission Limit, tons/yr
7-1S Parts Washer-151	7-1E	12.5
7-2S Parts Washer-151	7-2E	
K-3S Parts Washers-8203	K-1E	

[45CSR13, R13-0401, A.2]

7.1.3. The permittee may install the solvent recovery system, source K-5S in either Building 8203 or Building 151.
[45CSR13, R13-0401, A.3]

7.2. Monitoring Requirements

7.2.1. None.

7.3. Testing Requirements

7.3.1. None.

7.4. Recordkeeping Requirements

7.4.1. To determine compliance with heptane usage limits set forth in Requirement 7.1.1, the permittee shall keep records of the amount of heptane used using a rolling yearly total. A rolling yearly total shall mean the sum of the usage of heptane at any given time for the previous twelve (12) consecutive calender months. This information, shall be recorded in a manner that, at a minimum, contains the same information as Attachment A of the Permit R13-0401B (Heptane Usage in Buildings 151 and 8203): on a monthly basis record a yearly total of heptane usage for building 151 and for building 8203 (in gallons), and shall be kept on site for a period of five years and certified records shall be made available for inspection by the Director or a duly authorized representative of the Director upon request.
[45CSR13, R13-0401, B.1]

7.4.2. To determine compliance with the heptane (VOC) emission limit set forth in Requirement 7.1.2, a calculation shall be made utilizing the information required by Requirement 7.4.1 and information contained in the material safety data sheet for heptane, assuming that 100 percent of all heptane used is emitted to the atmosphere. This information, shall be kept on site for a period of five years and certified records shall be made available for inspection by the Director or a duly authorized representative of the Director upon request.
[45CSR13, R13-0401, B.2]

7.5. Reporting Requirements

7.5.1. None.

7.6. Compliance Plan

7.6.1. None.

8.0. GMLRS Rocket Motor Chamber Preparation Requirements – Plant 1 [emission point ID(s): Z-3E, Z-4E, Z-7E, Z-8E, Z-9E, Z-11E, Z-12E, Z-13E, Z-14E, Z-15E]

8.1. Limitations and Standards

8.1.1. VOCs and volatile HAP emissions from manufacturing of composite rocket motor casing in Building 256 shall not exceed 31.59 tons of VOCs per year with a daily VOC emission rate not to be exceeded of 243.1 lb per operating day; and total HAPs shall not exceed 5.84 tons of HAP per year. The permittee is permitted to operate the rocket motor casing line in Building 256 at the ABL in accordance with the following limitations as specified below:

(a) The permittee shall not exceed the following usage/losses limits by material for the denoted emission source except for application booths and mixing hoods. For application booth Z-8S, and Z-13S, the permittee may apply either of the noted material (specialty coatings) in either application booth given that compliance with the daily and annual limits are maintained for the respective materials (Chemlok and/or Bondliner (BL)). For the mixing hoods (Z-7S and Z-12S), the permittee may switch of the denoted coatings between the two hoods given that both compounds are not mixed in the same hood at the same time and that the compliance with the daily and annual limits are maintained for the respective materials (Chemlok and/or Bondliner (BL)). Compliance with the annual limits in the following table shall be demonstrated using a 12-month rolling total basis.

Table 8.1.1.a. Material Usage/Losses Limits				
Emission Source	Emission Point	Material	Usage/Loses Limits	
			Daily Limit (gal/day)	Annual Limit (gal/yr)
Z-1S	Fugitive	Frekote 700-NC	5	1,257
Z-2S	Fugitive	IPA	2	488
		MEK	1	244
Z-5S	Z-5E	IPA	8	1,853
Z-6S	Z-6E	IPA	2	98
Z-7S	Z-7E	Chemlok 205	2	49
		Chemlok 234	4	61
Z-8S	Z-8E	Chemlok 205	4	580
		Chemlok 234	2	630
		MEK	2	325
		Toluene	1	325
Z-9S	Z-9E	Chemlok 205	1	31
		Chemlok 234	1	33
Z-10S	Z-10E	IPA	8	1,853
Z-11S	Z-11E	IPA	1	98
Z-12S	Z-12E	BL-004	1	47
Z-13S	Z-13E	BL-004	4	784

Table 8.1.1.a. Material Usage/Losses Limits				
Emission Source	Emission Point	Material	Usage/Loses Limits	
			Daily Limit (gal/day)	Annual Limit (gal/yr)
Z-13S	Z-13E	Toluene	2	325
Z-14S	Z-14E	BL-004	1	41
Z-16S	Fugitive	IPA	2	488

(b) The all coatings applied are to be compliant with the VOC and HAP content limitation of Subpart GG of 40 CFR 63 and requirements for Condition 3.1.9 as applicable.

(c) All cleaning operations and activities associated with this manufacturing operation are compliant with the requirements of Condition 3.1.9 as applicable.

(d) This permit does not restrict or limit the use of acetone.

[45CSR13, R13-3334, 4.1.1.]

8.1.2. PM, PM_{10} and PM HAP emissions from the application of primer or specialty coatings for the manufacturing of composite rocket motor casing in Building 256 shall not exceed 0.09 lb/operating day and 0.50 TPY. For purposes of limiting the facility's emissions to the above-mentioned limits, the following conditions are established:

a. When primer or specialty coatings are being applied, each application booth (Z-8S, Z-13S) in which the coating is being applied in shall be operated in a manner that filter PM from the overspray of the coating is effectively captured by the filter media for the respective application booth. The filter media used in each application booth shall have a minimum filterable PM collection rating of 90% or greater. The permittee shall replace the filter media in accordance with the manufacturer's specifications.
[45CSR§7-5.1]

b. Compliance with the annual limitation of this condition will be satisfied by compliance with the requirements of this condition and compliance with the primer and specialty coating usage limitation of Condition 8.1.1 of this permit.

c. The drying station identified as Z-9S shall be equipped with an exhaust system that effectively captures the exhaust from the drying station and routes this stream to control device Z-5C before being released to the atmosphere at all times when components are in the drying station. Control device Z-5C shall be equipped with a filtration media that has a minimum collection efficiency of 90% or greater of filterable PM.
[45CSR§7-5.1.]

d. Exhaust of each case machining operation shall be captured and routed to the control device Z-4C before being released to the atmosphere at all time when any of the machining operations is in use. Control Device Z-4C shall be installed and maintained so as to achieve a minimum of 80% efficiency for filterable PM. The permittee shall replace the afterfilter media of this control device in accordance with the manufacturer's specifications.

[45CSR§7-5.1.]

e. PM emissions from the case machining operations shall not exceed 0.09 lb/hr.

f. Emission points Z-8E, Z-9E, Z-13E, Z-15E shall not exhibit visible emissions in excess of 20% opacity on a 6-minute average basis.
[45CSR§7-3.1]

[45CSR13, R13-3334, 4.1.2.]

8.2. Monitoring Requirements

8.2.1. The permittee for paint booths and related equipment (Emission Points Z-8E, Z-9E, and Z-13E) shall conduct fabric filter checks prior to each use of the equipment. These checks shall include review to ensure filters are properly fitted to the unit, that no holes exist, and that the filters are not overloaded. Any changes made to filters during the checks or any filter replacements shall be recorded. Records of such inspections and maintenance performed as result of any inspection shall be maintained in accordance with Condition 3.4.2 of this permit.
[45CSR13, R13-3334, 4.2.1.]

8.2.2. For the purpose of determining compliance with the PM limitations set forth in Condition 8.1.2, the permittee shall maintain a daily record of the either manometer reading or other differential pressure instrument across the filter element or control device for Emission Points Z-8E, Z-9E, and Z-13E, and Z-15E. Should a daily reading indicate filter media or other maintenance is required to restore proper operation of the respective control device, the permittee shall take a second reading once the element(s) has been replaced or when the requirement maintenance is complete. The permittee shall calibrate the manometer or other differential pressure instrument at least once every calendar year in accordance with the instrument manufacturer's procedures and specifications. Such records shall be maintained in accordance with Condition 3.4.2 of this permit.
[45CSR13, R13-3334, 4.2.2.]

8.2.3. For the purpose of determining compliance with the PM limitations set forth in Condition 8.1.2, the permittee shall maintain a continuous parameter monitoring system that monitors the differential pressure across Control Device Z-15E. Such a system shall continuously measure the differential pressure (pressure drop across) Control Device Z-15E. This system shall provide a visual and audible alarm to all operators in the case machining area. The permittee shall calibrate the manometer or other differential pressure instrument of this system at least once every calendar year in accordance with the instrument manufacturer's procedures and specifications. The permittee shall perform preventative maintenance and conduct a verification check on the continuously monitoring system at least once per calendar. Records all instances that the system alarm activated, corrective action taken for the instance, and maintenance performed on the system shall be maintained in accordance with Condition 3.4.2 of this permit.
[45CSR13, R13-3334, 4.2.3.]

8.2.4. For the purpose of determining compliance with the VOC and HAP emission limits set forth in Condition 8.1.1 the permittee shall maintain daily records of usage/losses of materials identified in Table 8.1.1.a of this permit by emission source for each operating day. By no later than the 15th of preceding month, the permittee shall determine the 12-month rolling total of the material usages/losses of each emission point in Table 8.1.1.a. Such records shall be maintained in accordance with Condition 3.4.2 of this permit.
[45CSR13, R13-3334, 4.2.4]

8.3. Testing Requirements

8.3.1. Reserved

8.4. Recordkeeping Requirements

8.4.1. Reserved.

8.5. Reporting Requirements

8.5.1. Any exceedance(s) of the allowable visible emission requirement for any emission source discovered during observation using 45CSR§7A must be reported in writing to the Director of the Division of Air Quality as soon as practicable, but within ten (10) calendar days, of the occurrence and shall include, at a minimum, the following information: the results of the visible determination of opacity of emissions, the cause or suspected cause of the violation(s), and any corrective measures taken or planned.
[45CSR13, R13-3334, 4.5.1]

8.6. Compliance Plan

8.6.1. None

9.0. GMLRS Rocket Motor Manufacture Requirements – Plant 3, Bldg. 3040 (Emission Unit IDs P3-1S, P3-2S and P3-3S).

9.1. Limitations and Standards

9.1.1. The following limitations and requirements are specific to the wash tanks identified as P3-1S, P3-2S, and P3-3S.

a. Total VOC emissions from P3-1S, P3-2S, and P3-3S shall not exceed 20.88 tons per year.

b. Compliance with the above VOC limit is satisfied if the actual usage of heptane is equal to or less than 7,000 gallons and actual usage of isopropyl alcohol (IPA) is equal to or less than 1,856 gallons during any consecutive 12-month rolling period.

c. To minimize fugitive VOC emissions from these wash tanks, the permittee shall keep the tanks covered at all times when not in use. Such covers shall consist of a conductive plastic sheeting with a minimum thickness of 3/16 of an inch and extends past the opening of the vessel with no gaps in the opening.

d. The permittee shall only use heptane or isopropyl alcohol in the wash tanks.

[45CSR13, R13-3408, 4.1.1]

9.1.2. The following limitations and requirements are specific to the activities performed in Disassembly Work Areas.

a. VOC emissions due to the hand-wiping of components during the disassembly process step shall not exceed 6.49 tons per year.

b. Compliance with the above limit is satisfied when actual usage of isopropyl alcohol (IPA) is equal to or less than 750 gallons and actual usage of heptane is equal to or less than 1,406 gallons during any consecutive 12-month rolling period.

[45CSR13, R13-3408, 4.1.2]

9.1.3. The following limitations and requirements are specific to the activities performed in the Igniter/Nozzle Assembly and Final Assembly Work Areas.

a. VOC emissions due to the final assembly process step shall not exceed 2.17 tons per year.

b. Compliance with the above limit is satisfied when actual usage of isopropyl alcohol (IPA) is equal to or less than 4,331 gallons during any consecutive 12-month rolling period.

c. VOC emissions due to the application of packaging stenciling inks shall not exceed 1.06 tons per year.

d. HAP emissions due to the application of packaging stenciling inks shall not exceed 0.19 tons per year.

[45CSR13, R13-3408, 4.1.3]

9.2. Monitoring Requirements

9.2.1. The permittee shall monitor and record the actual usage of heptane and isopropyl alcohol used in each of the process areas; Wash Tanks, Disassembly Area, Igniter/Nozzle Assembly and Final Assembly Work Areas each calendar month and 12-month rolling total usage of each solvent for each area to demonstrate compliance with the VOC limits in Conditions 9.1.1, 9.1.2, and 9.1.3. Such records shall be maintained in accordance with Condition 3.4.2.
[45CSR13, R13-3408, 4.2.1]

9.2.2. The permittee shall determine, on a monthly basis, the VOC and total HAP emissions emitted due to application of stencil inks to packaging crates to demonstrate compliance with the VOC and HAP emission limits in items c. and d. of Condition 9.1.3. Such records shall include the amount of each coating applied, VOC content of each coating applied, and total HAP content of each coating applied during the corresponding month. All records shall be maintained in accordance with Condition 3.4.2.
[45CSR13, R13-3408, 4.2.2]

9.3. Testing Requirements

9.3.1. None.

9.4. Recordkeeping Requirements

9.4.1. None.

9.5. Reporting Requirements

9.5.1. None.

9.6. Compliance Plan

9.6.1. None.

10.0. GMLRS Rocket Motor Manufacture Requirements– Plant 3, Bldg. 3030 (Emission Unit ID P3-10S).

10.1. Limitations and Standards

10.1.1. The following limitations and requirements are specific to the mixer identified as P3-10S.

a. The permittee shall install and operate a portable control device identified as C1 to capture fugitive PM while introducing aluminum powder to the mixer. This portable control device shall be maintained and operated in accordance with the manufacturer's written maintenance and operating procedures. **[45CSR§7-5.1]**

b. The vacuum pump for the mixer shall be equipped and maintained with a liquid seal to minimize emissions from the mixer.

c. The mixer, which includes the structure it is located within and the vent for the vacuum pump, shall not exhibit any visible emissions. The vacuum pump shall be maintained and operated in accordance with the manufacturer's written maintenance and operating procedures. **[45CSR§7-3.1]**

d. VOC emissions due to cleaning the mixer shall not exceed 1.57 tons per year.

e. Compliance with the VOC limit in item d. of this condition shall be satisfied through actual usage of QED cleaning solvent at 500 gallons or less during any consecutive 12-month period.

[45CSR13, R13-3408, 5.1.1]

10.2. Monitoring Requirements

10.2.1. The permittee shall monitor and record the amount of solvent used each month to clean the mixer and maintain a 12-month rolling total of solvent consumed. Such records shall be maintained in accordance with Condition 3.4.2. **[45CSR13, R13-3408, 5.2.1]**

10.3. Testing Requirements

10.3.1. None.

10.4. Recordkeeping Requirements

10.4.1. The permittee shall record all instances that the portable control device identified as C1 was not operated during the charging of aluminum powder into the mixer. Such records shall include date, time, and reason the device was not operated. These records shall be maintained in accordance Condition 3.4.2. **[45CSR13, R13-3408, 5.3.3]**

10.5. Reporting Requirements

10.5.1. None.

10.6. Compliance Plan

10.6.1. None.

11.0. Requirements for Plant 4 Downdraft Paint Booths (Emission Unit IDs: P4-1S through P4-4S) and Mixing Paint Booths (Emission Unit IDs: P4-5S through P4-7S)

11.1. Limitations and Standards

11.1.1. VOCs and volatile HAP emissions from manufacturing of the aerospace product in Building 4020 shall not exceed 14.77 tons of VOCs per year and total HAPs shall not exceed 8.03 tons of HAP per year. The permittee is permitted to operate this missile component manufacturing line in Building 4020 at the ABL in accordance with the following limitations as specified below:

(a) The permittee shall not exceed the following usage limits by material for the denoted emission point. Compliance with the annual limits in the following table shall be demonstrated using a 12-month rolling total basis.

Table 11.1.1.a. Material Usage/Losses Limits

Emission Point	Material	Daily Usage (ounces/day)	Annual Usage (gal/yr)
Booth 1			
P4-1E	Toluene	96	57
P4-1E	Isopropyl Alcohol (IPA)	96	57
P4-1E	ZEP Industrial Alkaline Cleaner (BZ7407)	48	28
P4-1E	PR-182 or PR-188	24	15
P4-1E	PR-2001 B-2 or PR-1826 Class B	108	54
P4-1E	PR-1764 B-2	144	85
P4-1E	MIL-C-8514 (Randolph or SW)	72	43
P4-1E	TS12983 Primer or MIL-PRF-23377K (PPG or Chemsol)	180	106
Booths 2 and 3			
P4-2E and P4-3E	SS4155 Primer	24	24
P4-2E and P4-3E	PR-9921	9,216	5,400
P4-2E and P4-3E	Isopropyl Alcohol (IPA)	3,072	1800
Booth 4			
P4-4E	Dowsil Q1-2650	48	15

Table 11.1.1.a. Material Usage/Losses Limits			
Emission Point	**Material**	**Daily Usage (ounces/day)**	**Annual Usage (gal/yr)**
P4-4E	MIL-PRF-23377K (PPG or Chemsol)	180	106
P4-4E	MIL-P-85285 #36375 - H	192	113
P4-4E	MIL-P-85285 #33538 - H	48	29
P4-4E	MIL-P-85285 #30117 - SW	48	29
P4-4E	Enthone 50-700R/20-A/AD-2002	48	29
P4-4E	MIL-P-85285 #35109 - C	48	29

(b) All coatings applied are to be compliant with the VOC and HAP content limitation of Subpart GG of 40CFR63 and requirements for Condition 3.1.9 as applicable.

(c) All cleaning operations and activities associated with this manufacturing operation are compliant with the requirements of Condition 3.1.9 as applicable.

(d) The usage limits for Booths 2 and 3 are combined.

[45CSR13, R13-3651, 4.1.1]

11.1.2. PM, PM_{10}, $PM_{2.5}$ and PM HAP emissions from the application of primer or specialty coatings and sanding activities needed to manufacture aerospace component systems in Building 4020 shall not exceed 0.04 TPY. For purposes of limiting the facility's emissions to the above-mentioned limits, the following conditions are established:

(a) When coatings are being applied or during sanding activities, each paint booth (P4-1S, P4-2S, P4-3S, and P4-4S) shall be operated in a manner that filterable PM from the overspray of the coating and PM (dust) from any sanding activities is effectively captured by the filter media for the respective application booth. The filter media used in each application booth shall have a minimum filterable PM collection rating of 95% or greater. The permittee shall replace the filter media in accordance with the manufacturer's specifications.
[45CSR§7-5.1]

(b) Compliance with the annual limitation of this condition will be satisfied by compliance with the requirements of this condition and compliance with the primer and specialty coating usage limitation of Condition 11.1.1 of this permit.

(c) Emission points P4-1E, P4-2E, P4-3E and P4-4E shall not exhibit visible emissions in excess of 20% opacity on a 6-minute average basis.
[45CSR§7-3.1]

[45CSR13, R13-3651, 4.1.2]

11.2. Monitoring Requirements

11.2.1. For the purpose of determining compliance with the PM limitations set forth in Condition 11.1.2, the permittee shall maintain a daily record of either the manometer reading or other differential pressure instrument across each of the three filter element stages for Emission Points P4-1E, P4-2E, P4-3E and P4-4E for each operating day. Should a daily reading indicate filter media or other maintenance is required to restore proper operation of the respective control device, the permittee shall take a second reading once the element(s) has been replaced or when the required maintenance activity is complete. The permittee shall calibrate the manometer or other differential pressure instrument at least once every calendar year in accordance with the instrument manufacturer's procedures and specifications. Such records shall be maintained in accordance with Condition 3.4.2 of this permit.
[45CSR13, R13-3651, 4.2.1]

11.2.2. For the purpose of determining compliance with the VOC and HAP emission limits set forth in Condition 11.1.1 the permittee shall maintain daily records of usage of the materials identified in Table 11.1.1.a of this permit by emission source for each operating day. By no later than the 15th of preceding month, the permittee shall determine the 12-month rolling total of the material usages of each emission point in Table 11.1.1.a. Such records shall be maintained in accordance with Condition 3.4.2 of this permit.
[45CSR13, R13-3651, 4.2.2]

11.2.3. To determine compliance with the opacity limits of Condition 11.1.2.c, the permittee shall conduct visible emission checks and/or opacity monitoring and recordkeeping of Emission Points P4-1E, P4-2E, P-4-3E, and P4-4E.

The visible emission check shall determine the presence or absence of visible emissions. At a minimum, the observer must be trained and knowledgeable regarding the effects of background contrast, ambient lighting, observer position relative to lighting, wind, and the presence of uncombined water (condensing water vapor) on the visibility of emissions. This training may be obtained from written materials found in the References 1 and 2 from 40 CFR Part 60, Appendix A, Method 22 or from the lecture portion of the 40 CFR Part 60, Appendix A, Method 9 certification course.

The permittee shall verify compliance with Condition 11.1.2.c by taking visual observations using U.S. EPA Method 22 for one minute once per every quarter. Should the permittee observe visible emissions from a respective emission point during the one-minute observation, then the permittee shall continue the observation for an additional five minutes. If the cumulative time that visible emissions are observed exceeds 70 seconds, the permittee shall conduct a Method 9 observation to demonstrate compliance with the opacity standard of Condition 11.1.2.c within 5 days of the initial Method 22 observation. Records of these observations and any corrective actions shall be maintained in accordance with Conditions 3.4.2 of this permit.

[45CSR§7-8.1; 45CSR13, R13-3651, 4.2.3]

11.3. Testing Requirements

11.3.1. Reserved

11.4. Recordkeeping Requirements

11.4.1. None.

11.5. Reporting Requirements

11.5.1. Any exceedance(s) of the allowable visible emission requirement for any emission source discovered during observation using 45CSR7A must be reported in writing to the Director of the Division of Air Quality as soon as practicable, but within ten (10) calendar days, of the occurrence and shall include, at a minimum, the following information: the results of the visible determination of opacity of emissions, the cause or suspected cause of the violation(s), and any corrective measures taken or planned.

[45CSR13, R13-3651, 4.5.1]

11.6. Compliance Plan

11.6.1. None.

12.0. Requirements for Crossdraft Paint Booths – B432 (2-19S) & B432 (2-20S)

12.1. Limitations and Standards

12.1.1. VOCs and volatile HAP emissions from manufacturing of the missile component system in Building 432 shall not exceed 3.00 tons of VOCs per year and total HAPs shall not exceed 2.11 tons of HAP per year. The permittee is permitted to operate this missile component manufacturing line in Building 432 at the ABL in accordance with the following limitations as specified below:

(a) The permittee shall not exceed the following usage limits by material for the denoted emission point. Compliance with the annual limits in the following table shall be demonstrated using a 12-month rolling total basis.

Table 12.1.1.a. Material Usage/Losses Limits

Emission Point	Material	Daily Usage (ounces/day)	Annual Usage (gal/yr)
2-16E	ZEP Industrial Alkaline Cleaner (BZ7407)	96	12
2-16E	Toluene	192	23
2-16E	PR-182 or PR-188	24	3
2-16E	PR-2001 B-2 or PR-1826 Class B	24	3
2-16E	MIL-C-8514 (Randolph or SW)	144	17
2-16E	TS12983 Primer	240	29
2-16E	Dowsil Q1-2650	48	6
2-16E	MIL-PRF-23377K (PPG or Chemsol)	144	17
2-16E	MIL-P-85285 #36375 - H	384	45
2-16E	MIL-P-85285 #33538 - H	96	12
2-16E	MIL-P-85285 #30117 - SW	96	12
2-16E	MIL-P-85285 #37038 - H	96	12
2-16E	MIL-P-85285 #38913 - C	96	2
2-16E	MIL-P-85285 #34230 - C	96	2
2-16E	MIL-P-85285 #35109 - C	96	2
2-17E	SS4155 Primer	48	6
2-17E	PR-9921	512	720

Table 12.1.1.a. Material Usage/Losses Limits			
Emission Point	**Material**	**Daily Usage (ounces/day)**	**Annual Usage (gal/yr)**
2-17E	Isopropyl Alcohol (IPA)	1,920	225

(b) The all coatings applied are to be compliant with the VOC and HAP content limitation of Subpart GG of 40 CFR 63 and requirements for Condition 12.1.4 as applicable.

(c) All cleaning operations and activities associated with this manufacturing operation are compliant with the requirements of Condition 12.1.3 as applicable.

[45CSR13, R13-3534, 4.1.1]

12.1.2. PM, PM_{10}, and PM HAP emissions from the application of primer or specialty coatings for the manufacturing of the missile component system in Building 432 shall not exceed 0.04 TPY. For purposes of limiting the facility's emissions to the above-mentioned limits, the following conditions are established:

a. When coatings are being applied or during sanding activities, each paint booth (2-19S, 2-20S) shall be operated in a manner that filterable PM from the overspray of the coating and PM (dust) from any sanding activities is effectively captured by the filter media for the respective application booth. The filter media used in each application booth shall have a minimum filterable PM collection rating of 95% or greater. The permittee shall replace the filter media in accordance with the manufacturer's specifications.
[45CSR§7-5.1.]

b. Compliance with the annual limitation of this condition will be satisfied by compliance with the requirements of this condition and compliance with the primer and specialty coating usage limitation of Condition 12.1.1 of this permit.

c. Emission points 2-16E and 2-17E shall not exhibit visible emissions in excess of 20% opacity on a 6-minute average basis.
[45CSR§7-3.1]

[45CSR13, R13-3534, 4.1.2]

12.2. Monitoring Requirements

12.2.1. The permittee for paint booths and related equipment (Emission Units 2-19S and 2-20S; Emission Points 2-16E and 2-17E) shall conduct fabric filter checks prior to each use of the equipment. These checks shall include review to ensure filters are properly fitted to the unit, that no holes exist, and that the filters are not overloaded. Any changes made to filters during the checks or any filter replacements shall be recorded. Records of such inspections and maintenance performed as result of any inspection shall be maintained in accordance with Condition 3.4.2 of this permit.
[45CSR13, R13-3534, 4.2.1]

12.2.2. For the purpose of determining compliance with the PM limitations set forth in Condition 12.1.2, the permittee shall maintain a daily record of the either manometer reading or other differential pressure instrument across the filter element or control device for Emission Units 2-19S and 2-20S. Should a daily

reading indicate filter media or other maintenance is required to restore proper operation of the respective control device, the permittee shall take a second reading once the element(s) has been replaced or when the requirement maintenance is complete. The permittee shall calibrate the manometer or other differential pressure instrument at least once every calendar year in accordance with the instrument manufacturer's procedures and specifications. Such records shall be maintained in accordance with Condition 3.4.2 of this permit.
[45CSR13, R13-3534, 4.2.2]

12.2.3. For the purpose of determining compliance with the VOC and HAP emission limits set forth in Condition 12.1.1 the permittee shall maintain daily records of usage of the materials identified in Table 12.1.1.a of this permit by emission source for each operating day. By no later than the 15th of preceding month, the permittee shall determine the 12-month rolling total of the material usages of each emission point in Table 12.1.1.a Such records shall be maintained in accordance with Condition 3.4.2 of this permit.
[45CSR13, R13-3534, 4.2.3]

12.3. Testing Requirements

12.3.1. Reserved.

12.4. Recordkeeping Requirements

12.4.1. Reserved.

12.5. Reporting Requirements

12.5.1. Any exceedance(s) of the allowable visible emission requirement for any emission source discovered during observations using 45CSR§7A must be reported in writing to the Director of the Division of Air Quality as soon as practicable, but within ten (10) calendar days of the occurrence and shall include, at a minimum, the following information: the results of the visible determination of opacity of emissions, the cause or suspected cause of the violation(s), and any corrective measures taken or planned.
[45CSR13, R13-3534, 4.5.1]

12.6. Compliance Plan

12.6.1. None.

ATTACHMENT 1

HERCULES

Hercules Incorporated
Aerospace Products Group
Allegany Ballistics Laboratory
P. O. Box 210
Rocket Center, WV 26726
(304) 726-5000

December 19, 1986

Director
West Virginia Air Pollution Control Commission
1558 Washington Street, East
Charleston, West Virginia 25311

Attention: Mr. Steve Anderson

Dear Sir:

Construction Permit Application No. 898

This letter confirms the discussions on December 18, 1986, between Messrs. Carl Beard II and Steve Anderson of the West Virginia Air Pollution Control Commission (WVAPCC) and Messrs. Ted Rissell and Dave McBride of Hercules Incorporated/Allegany Ballistics Laboratory (HI/ABL) concerning the construction permit for a nitrate ester sparge facility.

HI/ABL will provide an emission control system on the air effluent stream, containing methylene chloride, from the nitrate ester sparge facility as a part of the construction package. This system will be operational at the start of facility sparging operations. The system will utilize a low temperature refrigeration system to condense and recover volatile organic chemicals (VOC) from the effluent stream. A design operating temperature of -40°F. will be used for the condenser. A copy of literature from Edwards Engineering Corporation, a potential recovery system supplier, is attached. The system will be designed and sized to achieve a minimum recovery of 80% of the VOC released by the sparging operation.

This unit is recognized as constituting a technology development and, as such, Hercules/ABL understands that system testing and documentation after start-up will be required to demonstrate degree of VOC recovery actually achieved. We would plan to measure system performance by material balance. The quantity of methylene chloride stripped from the nitrate ester solutions and the quantity recovered will be measured by weighing on a routine basis during any prescribed demonstration period.

Ancillary process items relating to process safety are currently in study and design. While these items will be part of the total system, they will not influence the VOC recovery operation or efficiency.

Very truly yours,

G. H. Moody
Vice President and Resident Manager

DAMcBride:beh(1993B)
Attachment

ATTACHMENT A

Alliant Techsystems, Inc.
ATK Missile Subsystems & Controls Division
057-00011 R13-1798B and R13-1782A

MATERIAL USAGE

Date	Material Name /ID	# Units Painted	VOC	Solids	Total HAP	Amount Used	Time Used	Total VOC	Total PM	Total HAP
			Content (lb/gal)			(gals)	(Hrs)	Emissions (lb/hr)		
Monthly Totals										
(For 6-4E, 6-5E, 6-6E, 6-7E) **Permit Limit:-**								3.00	3.00	1.90
(For 6-2E) **Permit Limit:-**								1.0	0.1	

ATTACHMENT B

Alliant Techsystems, Inc.
ATK Missile Subsystems & Controls Division
057-00011

12-MONTH ROLLING AVERAGES

Month	Emissions for R13-1798B			Emissions for R13- 1782A		#Units Painted
	VOC (tpm)	PM (tpm)	HAP (tpm)	VOC (tpm)	PM (tpm)	(Monthly total)
1	January					
2	February					
3	March					
4	April					
5	May					
6	June					
7	July					
8	August					
9	September					
10	October					
11	November					
12	December					
13	January					
14	February					
12-month rolling averages (tpy):						
Permit Limit (tpy):	4.35	0.10	2.00	2.01	0.1	480 units

ATTACHMENT C

Alliant Techsystems, Inc.
ATK Missile Subsystems & Controls Division
057-00011 R13-1798B

Speciated HAP Emissions

Month: _____ Year: _____		
Hazardous Air Pollutant:	Monthly HAP Emissions :	Yearly* HAP Emissions (TPY):
Permit Limit is 2.00 TPY on an aggregate basis		
Antimony Compounds		
Chromium Compounds		
Ethylbenzene		
Formaldehyde		
Glycol Ethers		
n-Hexane		
HDI		
Lead Compounds		
MDI		
Methanol		
Methyl Isobutyl Ketone (MIBK)		
Phenol		
Styrene		
TDI		
Toluene		
Xylene		
Aggregate HAP Emissions		

*Calculated on Twelve (12) Month Rolling Total

ATTACHMENT D

Alliant Techsystems, Inc.
ATK Missile Subsystems & Controls Division
057-00011 R13-1798B

FILTER MAINTENANCE:

Date Filter Checked				Date Filter Changed	Filter ID Changed	Comments:
Filter Booth 6-2C	Filter Booth 6-3C	Filter Booth 6-4C	Filter Booth 6-5C			

RE: EXT :Re: Re: Re: ATK (1 of 3) TV permit renewal / SM03

3 messages

Foor, SueEllen [US] (DS) <sueellen.foor@ngc.com> Thu, Oct 31, 2024 at 11:55 AM
To: "Chertkovsky, Natalya V" <natalya.v.chertkovsky@wv.gov>

Sorry about that. I thought I did a strike through along with the red. The red should all be removed.

From: Chertkovsky, Natalya V <natalya.v.chertkovsky@wv.gov>
Sent: Thursday, October 31, 2024 11:42 AM
To: Foor, SueEllen [US] (DS) <sueellen.foor@ngc.com>
Subject: EXT :Re: Re: Re: ATK (1 of 3) TV permit renewal / SM03

Only J-7S is shown as strikethrough in the Equipment Table

On Thu, Oct 31, 2024 at 11:39 AM Chertkovsky, Natalya V <natalya.v.chertkovsky@wv.gov> wrote:

> Sue Ellen, a quick question:
>
> Why the following items are in "red" - do they need to be removed from the Equipment Table:
>
> 2-11S, B-95S, B-102S, J-11S, 2-7C (54C)

On Thu, Oct 31, 2024 at 11:15 AM Chertkovsky, Natalya V <natalya.v.chertkovsky@wv.gov> wrote:

> Sue Ellen,
>
> Thank you so much for your quick review and comments!
>
> Natalya

On Thu, Oct 31, 2024 at 10:28 AM Foor, SueEllen [US] (DS) <sueellen.foor@ngc.com> wrote:

> Natalya,
>
> I have no problem with doing that. I did go into 3.1.9 and 3.2.4 and added the Plant 4 source ID numbers from Section 11 because they were not included.
>
> I also updated a few sources in the equipment table that have been removed since the application was submitted in January. Only 1 of those (2-11S) was mentioned in 3.1.9 and 3.2.4 and I crossed it out in those paragraphs.
>
> It makes more sense to have those requirements just once in the facility wide requirements. FYI – you had 2.0 Facility Wide Requirements. That should be 3.0 and I marked it in red.
>
> Please see my marked up copy that I attached.
>
> ---
>
> **From:** Chertkovsky, Natalya V <natalya.v.chertkovsky@wv.gov>
> **Sent:** Tuesday, October 29, 2024 12:34 PM

To: Foor, SueEllen [US] (DS) <sueellen.foor@ngc.com>
Subject: EXT :Re: Re: ATK (1 of 3) TV permit renewal / SM03

Hello Sue Ellen,

Just wanted to ask for your quick opinion, please.

I was planning to "clean-up" sections 8 and 12 of the permit to get rid of some of the Subpart GG duplicate requirements (like 8.1.3, 8.1.4, 8.1.5, 12.1.3, 12.1.4, 12.1.5; 8.4.3 and 12.4.4; 8.5.2 and 12.5.2) already included with the facility-wide section 3.0 under conditions 3.1.9, 3.4.5 and 3.5.10 (respectively), but I'm not sure if it'll be helpful for you, or you rather prefer to keep these requirements separately in their own sections?

I attached the draft permit with strikethrough requirements I was thinking to remove for your quick look.

(I also strikethrough standard requirements (like "Record of maintenance..." and "Record of Malfunctions of air pollution control equipment" etc.) to remove them from individual sections and move/combine with facility-wide section requirements.)

Please, let me know what you think.

Thank you!

Natalya

On Thu, Oct 24, 2024 at 1:21 PM Chertkovsky, Natalya V <natalya.v.chertkovsky@wv.gov> wrote:

> Thank you, Sue Ellen!
>
> I see that the huge PTE numbers for CO, VOC, SO2, TSP and NOx indeed came from the (3 of 3) renewal application.
>
> Did you mean all the PTE changes included in permit R13-3651 / part 1 of 3 SM03 were included (in question 3) - thank you.
>
> How about PTE changes in question 2 (revisions for part 3 of 3) - were they included as well?

On Thu, Oct 24, 2024 at 11:23 AM Foor, SueEllen [US] (DS) <sueellen.foor@ngc.com> wrote:

> Natalya,
>
> Sorry it took a bit to get back to you on this. A couple things came up at work and I was trying to do some training with a new person on a Navy report and she will be out next week before it is due.
>
> I have attached an updated table. It includes all of the changes for the permits referenced in your question 3.
>
> The reason they looked so different is that when Jill did the update for the Part 3 application and updated all of the boilers, she inadvertently added the cumulative totals for the criteria pollutants for the boilers rather than dividing them per boiler in the table. Our PTE table is set up to match our SLEIS points and when she copied the boiler numbers for example, she used 37.86 tons of CO for each of the 10 boilers rather than 3.786. That is what changed the totals so drastically.

Please use this table for all 3 parts (if you can go back and add it to the Part 3 file and replace the other one.

Thank you.

Have a great weekend.

From: Chertkovsky, Natalya V <natalya.v.chertkovsky@wv.gov>
Sent: Wednesday, October 23, 2024 3:54 PM
To: Foor, SueEllen [US] (DS) <sueellen.foor@ngc.com>
Subject: EXT :Re: ATK (1 of 3) TV permit renewal / SM03

Hello, Sue Ellen,

Just wanted to follow up on my email last week.

Thank you!

Natalya

On Thu, Oct 17, 2024 at 5:04 PM Chertkovsky, Natalya V <natalya.v.chertkovsky@wv.gov> wrote:

> Sounds good, thank you, Sue Ellen!
>
> On Thu, Oct 17, 2024 at 4:25 PM Foor, SueEllen [US] (DS) <sueellen.foor@ngc.com> wrote:
>
> > Natalya,
> >
> > I am working on this, but I had some other obligations that needed to be completed today. I will work on it early next week and get it back to you on Monday or Tuesday.
> >
> > It did include the Plant 4 numbers, however, the numbers that were included, were changed prior to completion of the permit so the numbers will be different.
> >
> > Sue Ellen
> >
> > ---
> >
> > **From:** Chertkovsky, Natalya V <natalya.v.chertkovsky@wv.gov>
> > **Sent:** Wednesday, October 16, 2024 5:48 PM
> > **To:** Foor, SueEllen [US] (DS) <sueellen.foor@ngc.com>
> > **Subject:** EXT :ATK (1 of 3) TV permit renewal / SM03
> >
> > Hello Sue Ellen,
> >
> > I'm working on your (Part 1 of 3) TV permit renewal/SM03 applications, and have few questions:
> >
> > 1) I noticed the PTE table for criteria pollutants in the (Part 3 of 3) renewal application is very different compared to the (Part 1 of 3) renewal application, and I assumed the (Part 3 of 3) PTE numbers are more up to date since it was filed after (Part 1 of 3) renewal application was filed - is it correct?
> >
> > 2) Did the PTE table in the (Part 3 of 3) application include PTE changes from (Part 1 of 3) MM01, SM01 and SM02 /MM02?
> >
> > 3) I assumed PTE changes from R13-3651 (SM03 will be based on this permit) were not included with the renewal applications PTE tables yet. Based on the EE for the R13-3651 there is 8.02 TPY increase in PTE for HAPs. Which HAP is it? We need to keep track of any HAP that can get close to 10 TPY threshold.

Thank you in advance for your help,

Sincerely,

Natalya Chertkovsky

Chertkovsky, Natalya V <natalya.v.chertkovsky@wv.gov> Thu, Oct 31, 2024 at 12:10 PM
To: "Foor, SueEllen [US] (DS)" <sueellen.foor@ngc.com>

No problem! So, items 2-11S, B-95S, B-102S, J-11S, 2-7C (54C) and J-7S all need to be removed from the table and from the permit (total 6 items)? Thank you!

[Quoted text hidden]

Chertkovsky, Natalya V <natalya.v.chertkovsky@wv.gov> Thu, Nov 7, 2024 at 5:19 PM
To: "Foor, SueEllen [US] (DS)" <sueellen.foor@ngc.com>

Hello, Sue Ellen,
Please, find attached draft TV permit and a fact sheet for the Part 1 of 3 renewal and SM03 for your review.
We didn't remove unit 2-11S from the permit at this point, because it still has requirements in the R13 permit. We removed the rest of the units you requested because they were not associated with R13 permits.
Please, get back to me by November 14, 2024 (or sooner) if you have any questions or comments.
We plan to go out to notice in the week of November 18, 2024.
Thank you for your cooperation,
Sincerely,
Natalya Chertkovsky

[Quoted text hidden]

2 attachments

DPFactSheetRenewal2025(1 of 3).docx
98K

DPPermitRenewal2025(1 of 3).docx
1131K

West Virginia Department of Environmental Protection
Division of Air Quality

Fact Sheet

For Draft/Proposed Renewal Permitting Action Under 45CSR30 and Title V of the Clean Air Act

Permit Number: **R30-05700011-2025 (1 of 3)**
Application Received: **January 10, 2024 (renewal) / November 30, 2023 (SM03)**
Plant Identification Number: **057-00011**
Permittee: **Alliant Techsystems Operations LLC**
Facility Name: **Allegany Ballistics Laboratory**
Mailing Address: **210 State Route 956, Rocket Center, WV 26726-3548**

Physical Location:	Rocket Center, Mineral County, West Virginia
UTM Coordinates:	686.47 km Easting • 4381.25 km Northing • Zone 17
Directions:	Left on plant access road from State Route 956 at the North Branch of the Potomac River

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Facility Description
SIC Codes: Primary - 3764, Secondary – 3089

Fabrication of both steel and composite structure rocket motor and warhead cases, production of propellants and explosives which are loaded into above cases and all associated case preparation and testing for motors.

The facility is located at four plants - Plant 1, Plant 2, Plant 3 and Plant 4. For Title V Permit purposes, the facility operations were divided into the following Parts:

Part 1 - Motor Manufacturing,

Part 2 - Composites Manufacturing and Metal Fabrication,

Part 3 - Miscellaneous Units.

This Permit covers Part 1 of the facility - Motor Manufacturing operations.

Significant Modification SM03 is included with this renewal permitting action and is based on recently issued permit R13-3651. It covers the construction of Plant 4, which includes installation and operation of a new Aerospace Production Line for manufacturing of an aerospace product.

Emissions Summary

Plantwide Emissions Summary [Tons per Year]

Regulated Pollutants	Potential Emissions	2023 Actual Emissions
Carbon Monoxide (CO)	84.72	20.63
Nitrogen Oxides (NO_X)	63.34	23.76
Particulate Matter ($PM_{2.5}$)	6.42	4.01
Particulate Matter (PM_{10})	17.97	7.89
Total Particulate Matter (TSP)	30.62	7.93
Sulfur Dioxide (SO_2)	28.97	0.23
Volatile Organic Compounds (VOC)	197.25	29.58

PM_{10} and $PM_{2.5}$ are components of TSP.

Hazardous Air Pollutants	Potential Emissions	2023 Actual Emissions
Acetonitrile	0.27	0.01
Antimony compounds*	0.01	< 0.01
Benzene	0.37	0.15
Bis (2-Ethylheyl) Phthalate	0.20	0.02
Cadmium compounds*	< 0.01	< 0.01
Chloroform	0.10	0.05
Chromium*	0.01	< 0.01
Chromium compounds (not identified) *	0.14	0.02
Cobalt*	< 0.01	< 0.01
Dioctyl phthalate	0.20	0.03
Ethyl benzene	0.62	0.26
Formaldehyde	0.03	< 0.01
Glycol ether compounds	0.06	< 0.01
Hexane	0.80	0.08
Hydrochloric Acid	6.44	3.65
Lead*	< 0.01	< 0.01

Hazardous Air Pollutants	Potential Emissions	2023 Actual Emissions
Lead compounds*	1.98	0.27
Mercury*	< 0.01	< 0.01
Methanol	1.81	0.15
Methyl isobutyl ketone (MIBK)	2.06	0.48
Methylene chloride	2.0	1.09
Naphthalene	0.02	< 0.01
Nickel*	< 0.01	< 0.01
Phenol	0.16	< 0.01
Strontium chromate*	< 0.01	< 0.01
Styrene	0.37	0.02
Toluene	10.79	1.56
Trichloroethylene (TCE)	0.13	0
Xylenes (Mixed Isomers)	18.63	1.28
Zinc chromate*	< 0.01	< 0.01
Other (not specified)	0.1	0.04
Total HAPs	47.29	< 9.29

** Component of TSP emissions in Plantwide Emission Summary table above*

Some of the above HAPs may be counted as PM or VOCs.

Title V Program Applicability Basis

This facility has the potential to emit 197.25 TPY of VOC, 10.79 TPY of Toluene, 18.63 TPY of Xylene and 47.29 TPY of aggregate HAPs. Due to this facility's potential to emit over 100 tons per year of criteria pollutant, over 10 tons per year of a single HAP, and over 25 tons per year of aggregate HAPs, Alliant Techsystems Operations LLC is required to have an operating permit pursuant to Title V of the Federal Clean Air Act as amended and 45CSR30.

Legal and Factual Basis for Permit Conditions

The State and Federally-enforceable conditions of the Title V Operating Permits are based upon the requirements of the State of West Virginia Operating Permit Rule 45CSR30 for the purposes of Title V of the Federal Clean Air Act and the underlying applicable requirements in other state and federal rules.

This facility has been found to be subject to the following applicable rules:

Federal and State:	45CSR6	Open burning prohibited.
	45CSR7	Fugitive dust, particulate matter, and visible emissions
	45CSR11	Standby plans for emergency episodes.
	45CSR13	Pre-construction permits
	WV Code § 22-5-4 (a) (15)	The Secretary can request any pertinent information such as annual emission inventory reporting.

	45CSR30	Operating permit requirement.
	45CSR34	Emission Standards For Hazardous Air Pollutants
	40 C.F.R. Part 61	Asbestos inspection and removal
	40 C.F.R. 63, Subpart GG	Aerospace manufacturing and Rework Facilities
	40 C.F.R. Part 61, Subpart M	Asbestos inspection and removal
	40 C.F.R. Part 82, Subpart F	Ozone depleting substances
State Only:	45CSR4	No objectionable odors.

Each State and Federally-enforceable condition of the Title V Operating Permit references the specific relevant requirements of 45CSR30 or the applicable requirement upon which it is based. Any condition of the Title V permit that is enforceable by the State but is not Federally-enforceable is identified in the Title V permit as such.

The Secretary's authority to require standards under 40 C.F.R. Part 60 (NSPS), 40 C.F.R. Part 61 (NESHAPs), and 40 C.F.R. Part 63 (NESHAPs MACT) is provided in West Virginia Code §§ 22-5-1 *et seq.,* 45CSR16, 45CSR34 and 45CSR30.

Active Permits/Consent Orders

Permit or Consent Order Number	Date of Issuance	Permit Determinations or Amendments That Affect the Permit *(if any)*
R13-1455A	July 18, 2001	
R13-0898C	May 27, 2016	
R13-1694B	November 17, 2003	
R13-2037A	July 26, 2001	
R13-2246A	October 14, 2003	
R13-1782A	July 19, 2001	
R13-1798B	February 17, 2011	
R13-0401B	May 23, 2001	
R13-1047B	March 04, 2002	
R13-3334B	November 17, 2023	
R13-3408A	May 26, 2020	
R13-3534A	January 19, 2024	
R13-3651	July 23, 2024	

Conditions from this facility's Rule 13 permit(s) governing construction-related specifications and timing requirements will not be included in the Title V Operating Permit but will remain independently enforceable under the applicable Rule 13 permit(s). All other conditions from this facility's Rule 13 permit(s) governing the source's operation and compliance have been incorporated into this Title V permit in accordance with the "General Requirement Comparison Table," which may be downloaded from DAQ's website.

Determinations and Justifications

The following changes to the permit including those covered by Significant Modification SM03 (based on permit R13-3651) were included with this renewal permitting action:

1. Emission Units Table 1.1 – added Plant 4 equipment: 4 Downdraft Paint Booths 1 through 4 with control devices P4-1C through P4-4C (Emission Units P4-1S through P4-4S) and 3 Paint Mixing Booths 1 through 3 (Emission Units P4-5S through P4-7S). Also, Process Heaters P3-7S, P3-8S and P3-9S were removed, because they were moved to the part 3 of 3 permit per changes approved under R13-3408A. Also, the following equipment was removed from the table and from the permit, because it was removed from the facility: B-95S, B-102S, J-11S, J-7S and control devices J-2C and J-5C.

2. Active R13, R14, and R19 Permits Table 1.2 – added R13-3651 issued on July 23, 2024.

3. Boilerplate - revised conditions 3.1.6, 3.3.1 and 3.3.1.b.

4. Section 3.1 – added "Operation and Maintenance of Air Pollution Control Equipment" requirement (condition 3.1.12), and removed identical repeated requirements 4.1.14, 8.1.6, 10.1.2 and 12.1.6 for permit streamlining purposes.

5. Section 3.4 – added "Record of Maintenance of Air Pollution Control Equipment" and "Record of Malfunctions of Air Pollution Control Equipment" requirements (conditions 3.4.8 and 3.4.9 respectively), and identical repeated requirements 4.4.8, 4.4.9, 8.4.1, 8.4.2, 10.4.1, 10.4.2, 12.4.2 and 12.4.3 were removed for permit streamlining purposes.

6. Sections 8.0 and 12.0 were cleaned up to remove some duplicate conditions already contained in the facility-wide requirements of Section 3.0:

- conditions 8.1.3, 8.1.4, 8.1.5, 12.1.3, 12.1.4 and 12.1.5 (40 C.F.R. §§63.744, 63.745 and 63.748) were removed because identical conditions were already included in the facility-wide limitations and standards requirement 3.1.9 (citations for the conditions from the underlying permits R13-3334 and R13-3534 were already included);

- conditions 8.4.3 and 12.4.4 (40 C.F.R. §63.752) were removed because an identical condition was already included in the facility-wide recordkeeping requirement 3.4.5 (citations for the conditions from the underlying permits R13-3334 and R13-3534 were already included);

- condition 12.4.1 (Record of Monitoring) was removed because identical facility-wide recordkeeping requirement 3.4.1 was included in the permit (citation for the underlying permit R13-3534 condition was already included);

- conditions 8.5.2 and 12.5.2 (40 C.F.R. §63.753) were removed because identical condition 3.5.10 was already included in the permit (citations for the conditions from the underlying permits R13-3334 and R13-3534 were already included);

7. Old Section 11.0 – this section ("GMLRS Rocket Motor Manufacture Process Heaters Requirements (Plant 3, Bldg. 3030A)") was removed from this permit (part 1 of 3), because requirements for Process Heaters P3-7S, P3-8S and P3-9S were moved to part 3 of 3 permit (Section 4.0) per changes approved under R13-3408A.

8. New Section 11.0 - added requirements for Plant 4 based on permit R13-3651 including 45CSR7 and 40 C.F.R. 63, Subpart GG applicable conditions.

    - 45CSR7 is applicable to the manufacturing process source operation because it has PTE for PM emissions. Since each Downdraft Paint Booth (Emission Units P4-1S through P4-4S) is equipped with filter media (control devices P4-1C through P4-4C) with minimum filterable PM collection rating of 95% (condition 11.1.2.a), the total hourly filterable PM emissions from the manufacturing process are reduced to 0.5 lbs/hr (below the allowable rate per 45CSR§7-4.1 and Table 45-7A). Also, 20% opacity limit (45CSR§7-3.1) is applicable and included under condition 11.1.2.c.

- 40 C.F.R. 63, Subpart GG is applicable to the aerospace production line at Plant 4 since it is a part of an aerospace manufacturing facility which is a major source of HAPs (per 40 C.F.R. §63.741(a)). Spray booths, cleaning and coating operations are affected sources per 40 C.F.R.§63.741(c).

- Some of the requirements identical to the requirements of the underlying permit R13-3651 were already included with (or were moved to) the facility-wide section of this permit: condition 3.1.9 (40 C.F.R. §§63.744, 63.745 and 63.748, citations for the underlying requirements 4.1.3, 4.1.4 and 4.1.5 were added), condition 3.1.12 (citation for the underlying requirement 4.1.5 was added), conditions 3.4.1, 3.4.8 and 3.4.9 (citations for the underlying requirements 4.4.1, 4.4.2 and 4.4.3 were added), condition 3.4.5 (40 C.F.R. §63.752, citation for the underlying requirement 4.4.4 was added) and condition 3.5.10 (40 C.F.R. §63.753, citation for the underlying requirement 4.5.2 was added).

Non-Applicability Determinations

The following requirements have been determined not to be applicable to the subject facility due to the following:

1. The following requirements have been determined not to be applicable to the subject facility due to the following (included with the current Permit Shield, condition 3.7.2):

   - 45CSR21– Regulation to Prevent and Control Air Pollution from the Emission of Volatile Organic Compounds. The facility is not located in a county that is currently subject to 45CSR21 and is therefore currently exempt from this regulation.

   - 40CFR63, Subpart PPP – National Emission Standards for Polyether Polyol Production. The facility manufactures Terathane Polyethylene Glycol Block Copolymer (TPEG), which is a Polyether Polyol. However, the operation is exempted from this MACT because there are no HAPs used or generated during the manufacturing operation.

   - 40CFR63, Subpart GGGGG – National Emission Standards for Site Remediation. The facility currently has two sites under remediation for groundwater contamination. These sites are both CERCLA ("Superfund") sites and are thus exempt from the MACT requirements. The facility also has a third site, commonly referred to as Plant 2, which is currently being investigated under the RCRA corrective action program, that could potentially require some form of active groundwater remediation or treatment within the next five to ten years. This site would also be exempted since it is being managed under a RCRA corrective action.

   - 40CFR63, Subpart WWWW – National Emission Standards for Reinforced Plastic Composites Manufacturing. The facility manufactures composite based rocket motor chambers and aircraft components. However, the facility is exempt from this MACT because none of the resin or fiber systems used, contain HAPs.

2. CAM Rule (40 C.F.R. 64) - the Alliant Techsystems Operations LLC, Allegany Ballistics Laboratory Motor Manufacturing Facility (Part 1 of 3) does not own or operate a subject pollutant specific emissions unit as defined in 40 C.F.R. §64.1, because all plant control devices either have potential pre-control device annual emissions of applicable regulated air pollutants that are less than major source threshold, and thus are exempt per 40 C.F.R. §64.2(a)(3), or are already subject to a Title V permit that specifies a continuous compliance determination method as defined in 40 C.F.R. §64.1, and thus are exempt from CAM requirements per 40 C.F.R. §64.2(b)(1)(vi), or are not subject to a regulated air pollutant emission limitation or standard, and thus are not subject to CAM requirements per 40 C.F.R. §64.2(a)(1). There were no new PSEU units added during Significant Modification SM01, SM02, SM03, minor modifications MM01, MM02 and the renewal:

   - SM01 – two paint booths (Emission Unit IDs 2-19S and 2-20S) were added with PM emission limits (23 lbs/yr and 7 lbs/yr respectively) and control devices (filters 2-9C and 2-10C) with minimum of 95% control efficiency for PM. Based on the efficiency of the filters, before control device emissions for the paint booths 2-19S and 2-20S were estimated at 460 lbs/yr and 140 lbs/yr (respectively). These emissions

are significantly lower than major source threshold of 100 TPY. Therefore, they are exempt from requirements of CAM per 40 C.F.R. §64.2(a)(3);

- SM02 / MM02 – CAM is not applicable because there were no new PSEUs added to the facility during these modifications;

- SM03 - out of 7 new Paint Booths, 4 Paint Booths (Emission Units P4-1S through P4-4S) have control devices (P4-1C through P4-4C) with minimum efficiency of 95% for PM emissions. Estimated total PM emissions after control devices are 83.57 lbs/yr, and before control devices - maximum of 0.84 TPY of PM (which is less than major source threshold of 100 TPY). Therefore, they are exempt from requirements of CAM per 40 C.F.R. §64.2(a)(3);

- MM01 – CAM is not applicable because there were no new PSEUs added, and emissions from the existing units were not increased.

Request for Variances or Alternatives
None.

Insignificant Activities
Insignificant emission unit(s) and activities are identified in the Title V application.

Comment Period
Beginning Date: (Date of Notice Publication)
Ending Date: (Publication Date PLUS 30 Days)

Point of Contact
All written comments should be addressed to the following individual and office:

Natalya V. Chertkovsky-Veselova
West Virginia Department of Environmental Protection
Division of Air Quality
601 57th Street SE
Charleston, WV 25304
Phone: 304/926-0499 ext. 41250
natalya.v.chertkovsky@wv.gov

Procedure for Requesting Public Hearing
During the public comment period, any interested person may submit written comments on the draft permit and may request a public hearing, if no public hearing has already been scheduled. A request for public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing. The Secretary shall grant such a request for a hearing if he/she concludes that a public hearing is appropriate. Any public hearing shall be held in the general area in which the facility is located.

Response to Comments (Statement of Basis)
(**Choose**) Not applicable.
OR
Describe response to comments that are received and/or document any changes to the final permit from the draft/proposed permit.

West Virginia Department of Environmental Protection

Harold D. Ward
Cabinet Secretary

Permit to Operate

Pursuant to
Title V
of the Clean Air Act

Issued to:
Alliant Techsystems Operations LLC
Allegany Ballistics Laboratory
R30-05700011-2025 (1 of 3)

Laura M. Crowder
Director, Division of Air Quality

Issued: [Date of issuance] • *Effective: [Equals issue date plus two weeks]*
Expiration: [5 years after issuance date] • *Renewal Application Due: [6 months prior to expiration]*

Permit Number: **R30-05700011-2025 (1 of 3)**
Permittee: **Alliant Techsystems Operations LLC**
Facility Name: **Allegany Ballistics Laboratory**
Permittee Mailing Address: **210 State Route 956, Rocket Center, WV 26726-3548**

This permit is issued in accordance with the West Virginia Air Pollution Control Act (West Virginia Code §§ 22-5-1 et seq.) and 45CSR30 — Requirements for Operating Permits. The permittee identified at the above-referenced facility is authorized to operate the stationary sources of air pollutants identified herein in accordance with all terms and conditions of this permit.

Facility Location:	Rocket Center, Mineral County, West Virginia
Facility Mailing Address:	210 State Route 956, Rocket Center, WV 26726-3548
Telephone Number:	(304) 726 - 5506
Type of Business Entity:	LLC
Facility Description:	Fabrication of both steel and composite structure rocket motor and warhead cases, production of propellants and explosives which are loaded into above cases and all associated case preparation and testing for motors
SIC Codes:	Primary - 3764, Secondary – 3089
UTM Coordinates:	686.47 km Easting • 4381.25 km Northing • Zone 17

Permit Writer: Natalya Chertkovsky-Veselova

Any person whose interest may be affected, including, but not necessarily limited to, the applicant and any person who participated in the public comment process, by a permit issued, modified or denied by the Secretary may appeal such action of the Secretary to the Air Quality Board pursuant to article one [§§ 22B-1-1 et seq.], Chapter 22B of the Code of West Virginia. West Virginia Code §22-5-14.

Issuance of this Title V Operating Permit does not supersede or invalidate any existing permits under 45CSR13, 14 or 19, although all applicable requirements from such permits governing the facility's operation and compliance have been incorporated into the Title V Operating Permit.

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1.0. Emission Units and Active R13, R14, and R19 Permits

1.1. Emission Units

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity	Control Device
001 Ingredient Preparation – Plant 1					
1-1S	1-1E	Sweco Shaker-262	1981	500 lb/hr	None
1-2S	1-2E	Blender/Dryer Condenser Vacuum Pump-262	1963	Variable	1-8C: Condenser
1-3S (25s)	1-3E (23e)	Grinder-262	1981	500 lb/hr	1-1C: Dust Control Filter
1-4S (26s)	1-4E (24e)	Nitrate Ester Sparge-352 (original)	1988(1)	1200 lb/hr lacquer	1-2C: Cryogenic Recovery
1-4S (26s)	1-13E	Nitrate Ester Sparge-352 (secondary)	2016(1)	1200 lb/hr lacquer	1-10C: Cryogenic Recovery
1-5S	VI*	Chemical Mixing Area-373	1993	Variable	1-3C: Carbon bed
1-6S	VI*	Parts Cleaning-373	1993	Variable	1-3C: Carbon bed
1-7S	1-5E	Sweco Shaker-374	1997	700 lb/hr	None
1-8S (41s)	1-6E (41e)	Blender/Dryer Condenser Vacuum Pump-374	2002	Variable	1-9C: Condenser
1-9S (40s)	1-7E (40e)	Grinder Mill-374	1993	700 lb/hr	1-4C: Dust Control Filter
1-10S	1-8E	RDX Drain Table-374	2002	Variable	None
1-11S (44s)	1-9E (44e)	Handling System-384	1994	Variable	1-5C: Dust Control Filter (HEPA)
1-12S (48s)	1-12E (48e)	Weighing System-384	1995	Variable	1-6C: Dust Control Filter (HEPA)
1-13S	1-10E	Heptane Storage Tank-384	1995	500 gallons	None

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity	Control Device
1-14S (45s/47s)	1-10/11E (45e/47e)	Mix Bowl-384	1995	500 lb	1-7C: Condenser
1-15S	1-10E	Attritor-384	1995	500 lb	None
1-16S	VI*	3-Roll Mill-384	1995	NA	None
1-17S	VI*	Electric Drying Oven-271	Early 80s	Variable	None
1-18S	VI*	Electric Drying Oven-271	Early 80s	Variable	None
002 Chamber Preparation – Plant 1					
2-11S (54s)	2-9E (54e)	Walk-In Spray Booth-167	1980	Variable	2-7C (54c): Fabric filter
2-8S	VI*	Progressive Blasting Systems Grit Blaster-420	1999	200 lb/hr	2-1C: Cyclone dust collector
2-10S	VI*	Two Roll Mill-420	1999	NA	None
2-12S	2-10E	Fume Hood for CBL-420	1999	Variable	None
2-13S	2-11E	Case Bond Liner Spray Booths-420	1999	Variable	2-5C: Fabric filters
2-14S	2-11E	Case Bond Liner Spray Booths-420	1999	Variable	2-6C: Fabric filters
2-15S	2-12E	Drying Oven-420	1999	Variable	None
2-16S	2-13E	Actrel Degreaser-420	1999	355 gal	None
2-17S	2-14E	Actrel Solvent Recovery Still System-420	1999	50 gal/hr	None
2-18S	2-15E	Stencil Booth-420 Bay 3	2010	Variable	2-8C: Fabric filters
2-19S	2-16E	Crossdraft Paint Booth – B432	2021	N/A	2-9C 3-Stage Filtration
2-20S	2-17E	Crossdraft Paint Booth – B432	2021	N/A	2-9C 3-Stage Filtration
003 Mixing & Casting Operations – Plant 1					
3-1S	VI*	50 Gallon Mixer-302	1964	50 gallons	None
3-2S	VI*	Casting Pits-308	1964	50 gallons	None
3-4S	VI*	Casting Pits-356	1990	150 gallons	None
3-5S	VI*	Linear Casting Line	1980	150 gallons	None
3-6S	NDV**	300 Gallon Mixer-375	2012	300 gallons	None
005 Propellant Machining – Plant 1					
5-1S	VI*	Drilling/machining equipment-410	1996	NA	None

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity	Control Device
006 Loading/Inspection/Final Assembly – Plant 1					
6-1S	NE***	X-Ray equipment-180	1981	Variable	None
6-2S	NE***	X-Ray equipment-360	1991	Variable	None
6-3S	6-1E	XO-Mat X-Ray Developer System-360	1991	Variable	None
6-4S (144s)	6-2E (144e)	Paint Booth-364	1995	Variable	6-1C: Fabric filter
6-5S	6-3E	Exhaust Hood-369	1995	Variable	None
6-13S	6-10E	Large & Small Temperature Chambers-369	1995	NA	None
6-14S	6-11E	Large & Small Temperature Chambers-369	1995	NA	None
6-6S (152s)	6-4E (152e)	Paint Booth-392	1995	Variable	6-2C: Fabric filter
6-7S (153s)	6-5E (153e)	Paint Booth-392	1995	Variable	6-3C: Fabric filter
6-8S (154s)	6-6E (154e)	Paint Booth-392	1995	Variable	6-4C: Fabric filter
6-9S (155s)	6-7E (155e)	Paint Booth-392	1995	Variable	6-5C: Fabric filter
6-10S	6-8E	Teflon Spray Booth-412	1997	Variable	6-6C: Fabric filter
6-11S	6-8E	Teflon Drying Oven-412	1997	3 mm BTU/hr	None
6-12S	6-9E	Decontamination Oven-412	1997	1.5 mm BTU/hr	None
007 Mold Parts Cleanup – Plant 1					
7-1S (10s)	7-1E	Parts Washer-151	Pre-1970	36 gallons	None
7-2S (11s)	7-2E	Parts Washer-151	Pre-1970	35 gallons	None
7-3S	7-3E	Parts Washer-407 (6 pans)	1997	125 gallons (6)	None
7-4S	7-3E	Parts Washer-407	1997	35 gallons	None
7-5S	7-3E	Parts Washer-407 (2 pans)	1997	52 gallons	None
7-6S	7-4E	Acetone Recovery Unit	1997	5.5 gal/hr	None
00C Gas Generator Fabrication – Plant 1					
C-1S	C-1E	Cellulose Acetate Machine-420B2	2000	NA	None
C-2S	C-2E	Weigh-Out and Mixing Hood-180	2000 - moved in 2012	Variable	None
C-3S	VI*	Inhibiting Area-180	2000 - moved in 2012	Variable	None
C-4S	VI*	Vacuum Pump-180	2000 - moved in 2012	Variable	None

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity	Control Device
00E Ingredient Preparation – Plant 2					
E-1S (15s)	VI*	Gustafson Grinder System-2003	1978	500 lb/hr	E-1C: Mikro-D Pulsaire dust collector
E-2S	VI*	Mikro Airlock Grinder System-2003	1978	500 lb/hr	E-2C: Mikro-D Pulsaire dust collector
E-3S	VI*	Walk-In Freezer-2015	Pre-80s	Variable	None
E-4S	VI*	Walk-In Freezer-2015	Pre-80s	Variable	None
00F Chamber Preparation – Plant 2					
F-1S	F-1E	Binks Chemlok/Sparrow Spray Booth-2014	Pre-80s	Variable	F-1C: Fabric filters
F-2S	F-21E	Slinger-2014	1999	Variable	None
F-3S	VI*	3-Roll Mill-2014	Pre 80s	Variable	None
F-4S	F-2E	Curing/Drying Oven #3-2014	1994	Variable	None
F-5S	F-3E	Binks Paint Booth-2014	1994	Variable	F-2C: Fabric filters
F-6S	F-4E	Small Actrel Solvent Distillation Units-2014	1995	8 gal/hr	None
F-7S (16s)	F-5E (16e)	Vertical Spray Booth – Paint [Intermediate (Sparrow) Line] – 2014	1978	Variable	F-3C: Fabric filters
F-8S	F-6E	Trinco DP850 Grit Blast Cabinet-2014 Intermediate (Sparrow) Line] –2014	1978	Variable	F-4C: Cyclone dust collector
F-9S	F-7E	Actrel Degreaser [Intermediate (Sparrow) Line] –2014	1995	17 gal/min	None
F-10S	F-8E	Drying Oven #1 [Intermediate (Sparrow) Line] –2014	1978	Variable	None
F-11S	F-8E	Drying Oven #4 [Intermediate (Sparrow) Line] –2014	1978	Variable	None
F-12S (7s)	F-9E (7e)	Case Bondliner Paint Booth [Intermediate (Sparrow) Line] – 2014	1978	Variable	F-5C: Fabric filters
F-13S	F-10E	Drying Oven #2 [Intermediate (Sparrow) Line] –2014	1978	Variable	None
F-14S	VI*	Ross Mixer-5 gallon [Intermediate (Sparrow) Line] –2014	1980	5 gallon	None
F-15S	VI*	Ross Mixer-1 gallon [Intermediate (Sparrow) Line] –2014	1968	1 gallon	None
F-16S	VI*	Cowles Dissolver/Mixer/Disperer [Intermediate (Sparrow) Line] – 2014	1968	5 gallon	None

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity	Control Device
F-17S	F-11E	Vertical Spray Booth – Alodine [Intermediate (Sparrow) Line] – 2014	1978	Variable	F-6C: Demister
F-18S	VI*	Benchtop Electric Curing Oven #7 [Intermediate (Sparrow) Line] – 2014	1968	Variable	None
F-19S	F-12E	Mold Release Spray Booth [Intermediate (Sparrow) Line] – 2014	1988	Variable	F-7C: Fabric filters
F-20S	F-13E	DeVilbiss Horizontal Spray Booth-2014	1980	Variable	F-8C: Fabric filter
F-21S (27s)	F-14E (25e)	Zero Mfg. Grit Blaster (Large Motor Line) –2014	1988	500 lb/hr grit	F-9C: Cyclone dust collector
F-22S	F-15E	Actrel Degreaser (Large Motor Line) –2014	1995	17 gal/min	None
F-23S (29s)	F-16E (27e)	Binks Vertical Internal Paint Booth (Large Motor Line) –2014	1988	Variable	F-10C: Fabric filter
F-24S (31s)	F-17E (29e)	Paint/Degreaser Drying Room/Oven #5 (Large Motor Line) –2014	1988	Variable	None
F-25S (30s)	F-18E (28e)	Binks Vertical Paint Booth (Large Motor Line) –2014	1988	Variable	F-11C: Fabric filter
F-26S	F-19E	Actrel Vacuum Still & Storage Tank (Large Motor Line) –2014	1995	60 gal/hr	None
F-27S	F-20E	Drying Oven #6-2014	1980	Variable	None
		00G Mixing & Casting Operations – Plant 2			
G-2S		Mixer-300 gallon-2000	1968	300 gallon	None
G-3S		Casting Pit-2000	1968	300 gallon	None
G-4S	G-2E	Feed Hopper Exhaust Hood-2000	1968	Variable	G-1C: Fabric filter
		00I Disassembly/Machining – Plant 2			
I-1S	VI*	Propellant Machining System	1968	Variable	None
		00J Loading/Inspection/Final Assembly – Plant 2			
J-1S	VI*	Varian X-Ray equipment-2010	1990	Variable	None
J-2S	OS****	Kodak XO-Mats X-Ray Processor-2010	1990	Variable	None
J-3S	J-1E	Drying Oven-2011	1980	Variable	None
J-4S (8s)	J-2E (8e)	Interior Coating Spray Line-2011	1980	Variable	J-1C: Fabric filter
J-5S	J-3E	Vacuum Test System-2011	1980	Variable	None

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity	Control Device
J-8S	J-5E	Stenciling Booth-2031	2000	Variable	J-3C: Fabric filters
J-9S	J-6E	Drying Oven-2031	2000	Variable	None
J-10S	J-7E	Stenciling Conveyor-2011	1978	Variable	J-4C: Fabric filter

00K Mold Parts Cleanup – Plant 2

K-1S	OS****	Parts Washer-8203	1978	NA	None
K-3S (9s)	K-1E (9e)	Parts Washer-8203	1978	56 gallons	None
K-4S	OS****	Parts Washer-8203	1978	NA	None
K-5S (14s)	K-2E (14e)	Solvent Recovery System-8203	2001	5 gal/hr	None

00Z GMLRS Rocket Motor Chamber Preparation – Plant 1

Z-1S	Fugitive	Mandrel Release Coating Table	2017	N/A	None
Z-2S	Fugitive	Adapter Degreasing Table	2017	N/A	None
Z-5S	Fugitive	Interior Degreasing Exhaust & Drying	2017	N/A	None
Z-7S	Z-7E	Chemlok/Bondliner Mixing Hood	2017	N/A	None
Z-8S	Z-8E	Chemlok/Bondliner Application Booth	2017	1 gal/hr	Z-2C
Z-9S	Z-9E	Chemlok/Drying Station	2017	N/A	Z-5C
Z-10S	Fugitive	Insulator Prep Exhaust	2017	N/A	None
Z-11S	Z-11E	Oven for Insulator Drying	2017	N/A	None
Z-12S	Z-12E	Chemlok/Bondliner Mixing Hood	2017	N/A	None
Z-13S	Z-13E	Chemlok/Bondliner Application Booth	2017	1 gal/hr	Z-3C
Z-14S	Z-14E	Bondliner Drying Station	2017	N/A	None
Z-15S	Z-15E	Case Machining	2017	2 units/hr	Z-4C
Z-16S	Fugitive	End Closure Adapter Wiping Station	2017	N/A	None

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity	Control Device
00Z GMLRS Rocket Motor Manufacture – Plant 3, Building 3040					
P3-1S	P3-1E	Heptane Wash Tank	2018	80 gallons	None
P3-2S	P3-2E	Heptane Wash Tank	2018	80 gallons	None
P3-3S	P3-3E	IPA Wash Tank	2018	80 gallons	None
P3-4S	Fugitive	Ignite/Nozzle Assembly Work Area	2018	N/A	None
P3-5S	N/A	Final Assembly Work Area	2018	N/A	None
P3-6S	N/A	Disassembly Work Area	2018	N/A	None
00Z GMLRS Rocket Motor Manufacture – Plant 3, Building 3030					
P3-10S	N/A	Mixer	2018	300 gallons	C1 & Vac. Pump
Aerospace product - Plant 4 Building 4020					
P4-1S	P4-1E	Booth 1 - Downdraft Paint Booth - in BLDG 4020 w/ hot water air make-up heating system and integrated heat recovery system	2024	N/A	P4-1C 3-Stage Filtration
P4-2S	P4-2E	Booth 2 - Downdraft Paint Booth - in BLDG 4020 w/ hot water air make-up heating system and integrated heat recovery system	2024	N/A	P4-2C 3-Stage Filtration
P4-3S	P4-3E	Booth 3- Downdraft Paint Booth - in BLDG 4020 w/ hot water air make-up heating system and integrated heat recovery system	2024	N/A	P4-3C 3-Stage Filtration
P4-4S	P4-4E	Booth 4 - Downdraft Paint Booth - in BLDG 4020 w/ hot water air make- up heating system and integrated heat recovery system	2024	N/A	P4-4C 3-Stage Filtration
P4-5S	P4-5E	Paint Mixing Booth 1 - in BLDG 4020	2024	N/A	N/A
P4-6S	P4-6E	Paint Mixing Booth 2 - in BLDG 4020	2024	N/A	N/A
P4-7S	P4-7E	Paint Mixing Booth 3 - in BLDG 4020	2024	N/A	N/A

Control Devices

Control Device ID	Emission Point ID	Control Device Description	Year Installed / Modified	Design Capacity	Comments
1-1C	1-3E	Dust Control Filter	1981	75-97.5% (PM-RDX)	
1-2C	1-4E	Cryogenic Recovery for sparging operation	1988	80% (Methylene chloride)	
1-10C	1-13E	Cryogenic Recovery for sparging operation	2015	91% (Methylene chloride)	
1-3C	VI*	Carbon bed for material transfer hood	1993	unknown	
1-4C	1-7E	Dust Control Filter	1993	99.9% (PM-RDX)	
1-5C	1-9E	Dust Control Filter (HEPA)	1994	99.9%+ (Pb)	
1-6C	1-12E	Dust Control Filter (HEPA)	1994	99.9%+ (Pb)	
1-7C	1-10/11E	Condenser	1995	unknown	
1-8C	1-2E	Condenser	1981	unknown	
1-9C	1-6E	Condenser	2001	90% (IPA/water)	
2-1C	VI*	Cyclone dust collector grit blaster	1999	unknown	
2-5C	2-11E	Fabric filters for bondliner booth	1999	90% (PM)	
2-6C	2-11E	Fabric filters for bondliner booth	1999	90% (PM)	
2-7C (54c)	2-9E	Fabric filter for paint booth	1980	90% (PM)	
2-8C	2-15E	Fabric filter for paint booth	2010	90% (PM)	
6-1C	6-2E	Fabric filter for paint booth	1995	90% (PM)	
6-2C	6-4E	Fabric filter for paint booth	1995	90% (PM)	
6-3C	6-5E	Fabric filter for paint booth	1995	90% (PM)	
6-4C	6-6E	Fabric filter for paint booth	1995	90% (PM)	
6-5C	6-7E	Fabric filter for paint booth	1995	90% (PM)	
6-6C	6-8E	Fabric filter for Teflon spray booth	1997	90% (PM)	
E-1C	VI*	Mikro-D Pulsaire dust collector for AP	1978	99.9% (PM)	
E-2C	VI*	Mikro-D Pulsaire dust collector for AP	1978	99.9% (PM)	
F-1C	F-1E	Fabric filters for bondliner booth	1978	unknown	
F-2C	F-3E	Fabric filters for paint booth	1994	unknown	
F-3C	F-5E	Fabric filters for paint booth	1978	unknown	
F-4C	F-6E	Cyclone dust collector for grit blaster	1978	99.9% (PM)	F-5C
F-5C	F-9E	Fabric filters for bondliner booth	1978	unknown	
F-6C	F-11E	Demister for alodine process	1978	unknown	
F-7C	F-12E	Fabric filters for paint booth	1988	unknown	

Control Device ID	Emission Point ID	Control Device Description	Year Installed / Modified	Design Capacity	Comments
F-8C	F-13E	Fabric filter for paint booth	1980	unknown	
F-9C	F-14E	Cyclone dust collector for grit blaster	1988	99.9% (PM)	
F-10C	F-16E	Fabric filters bondliner booth	1988	90% (PM)	
F-11C	F-18E	Fabric filters for paint booth	1988	90% (PM)	
G-1C	G-2E	Fabric filter for solid ingredient feed hopper	1968	unknown	
J-1C	J-2E	Fabric filter for bondliner booth	1980	90% (PM)	
J-3C	J-5E	Fabric filters for paint booth	2000	90% (PM)	
J-4C	J-7E	Fabric filter for Stencilling Conveyor	2000	90% (PM)	
Z-1C	Z-3E	Global Finishing Solutions Wave Filter	2017	90% (PM)	
Z-2C	Z-8E	Global Finishing Solutions Wave Filter	2017	90% (PM)	
Z-3C	Z-13E	Global Finishing Solutions Wave Filter	2017	90% (PM)	
Z-4C	Z-14E	Aget Manufacturing Company Model: 30SN100-PL-SP Dry Cyclone Collector with 13.5 oz. Napped Polypropylene Sateen Fabric Filter with Cab-O-Sil preload powder	2017	99.9% (PM)	
Z-5C	Z-9E	Global Finishing Solutions Wave Filter	2017	90% (PM)	
C1	VI*	Ruwac wet separator	2018	99.9%	
Vac. Pump	VI*	Vacuum Pump	2018	> 95% (VOC)	
P4-1C	P4-1E	3-Stage Filtration	2024	95% (PM)	
P4-2C	P4-2E	3-Stage Filtration	2024	95% (PM)	
P4-3C	P4-3E	3-Stage Filtration	2024	95% (PM)	
P4-4C	P4-4E	3-Stage Filtration	2024	95% (PM)	

(1) A second methylene chloride emission control system (1-10C, 1-13E) was added in 2015.
* VI stands for "Vents inside of building"
** NDV – Stands for “No direct vent”
*** NE – Stands for “No emissions”
**** OS – Stands for “Out of service”

1.2. Active R13, R14, and R19 Permits

The underlying authority for any conditions from R13, R14, and/or R19 permits contained in this operating permit is cited using the original permit number (e.g. R13-1234). The current applicable version of such permit(s) is listed below.

Permit Number	Date of Issuance
R13-1455A	July 18, 2001
R13-0898C	May 27, 2016
R13-1694B	November 17, 2003
R13-2037A	July 26, 2001
R13-2246A	October 14, 2003
R13-1782A	July 19, 2001
R13-1798B	February 17, 2011
R13-0401B	May 23, 2001
R13-1047B	March 04, 2002
R13-3334B	November 17, 2023
R13-3408A	May 26, 2020
R13-3534A	January 19, 2024
R13-3651	July 23, 2024

2.0. General Conditions

2.1. Definitions

2.1.1. All references to the "West Virginia Air Pollution Control Act" or the "Air Pollution Control Act" mean those provisions contained in W.Va. Code §§ 22-5-1 to 22-5-18.

2.1.2. The "Clean Air Act" means those provisions contained in 42 U.S.C. §§ 7401 to 7671q, and regulations promulgated thereunder.

2.1.3. "Secretary" means the Secretary of the Department of Environmental Protection or other person to whom the Secretary has delegated authority or duties pursuant to W.Va. Code §§ 22-1-6 or 22-1-8 (45CSR§30-2.39.). The Director of the Division of Air Quality is the Secretary's designated representative for the purposes of this permit.

2.1.4. Unless otherwise specified in a permit condition or underlying rule or regulation, all references to a "rolling yearly total" shall mean the sum of the monthly data, values or parameters being measured, monitored, or recorded, at any given time for the previous twelve (12) consecutive calendar months.

2.2. Acronyms

CAAA	Clean Air Act Amendments	**NSPS**	New Source Performance Standards
CBI	Confidential Business Information	**PM**	Particulate Matter
CEM	Continuous Emission Monitor	**PM_{10}**	Particulate Matter less than 10μm in diameter
CES	Certified Emission Statement	**pph**	Pounds per Hour
C.F.R. *or* CFR	Code of Federal Regulations	**ppm**	Parts per Million
CO	Carbon Monoxide	**PSD**	Prevention of Significant Deterioration
C.S.R. *or* CSR	Codes of State Rules	**psi**	Pounds per Square Inch
DAQ	Division of Air Quality	**SIC**	Standard Industrial Classification
DEP	Department of Environmental Protection	**SIP**	State Implementation Plan
FOIA	Freedom of Information Act	**SO_2**	Sulfur Dioxide
HAP	Hazardous Air Pollutant	**TAP**	Toxic Air Pollutant
HON	Hazardous Organic NESHAP	**TPY**	Tons per Year
HP	Horsepower	**TRS**	Total Reduced Sulfur
lbs/hr *or* lb/hr	Pounds per Hour	**TSP**	Total Suspended Particulate
LDAR	Leak Detection and Repair	**USEPA**	United States Environmental Protection Agency
m	Thousand	**UTM**	Universal Transverse Mercator
MACT	Maximum Achievable Control Technology	**VEE**	Visual Emissions Evaluation
mm	Million	**VOC**	Volatile Organic Compounds
mmBtu/hr	Million British Thermal Units per Hour		
$mmft^3$/hr *or* mmcf/hr	Million Cubic Feet Burned per Hour		
NA *or* N/A	Not Applicable		
NAAQS	National Ambient Air Quality Standards		
NESHAPS	National Emissions Standards for Hazardous Air Pollutants		
NO_x	Nitrogen Oxides		

2.3. Permit Expiration and Renewal

2.3.1. Permit duration. This permit is issued for a fixed term of five (5) years and shall expire on the date specified on the cover of this permit, except as provided in 45CSR§30-6.3.b. and 45CSR§30-6.3.c.
[45CSR§30-5.1.b.]

2.3.2. A permit renewal application is timely if it is submitted at least six (6) months prior to the date of permit expiration.
[45CSR§30-4.1.a.3.]

2.3.3. Permit expiration terminates the source's right to operate unless a timely and complete renewal application has been submitted consistent with 45CSR§30-6.2. and 45CSR§30-4.1.a.3.
[45CSR§30-6.3.b.]

2.3.4. If the Secretary fails to take final action to deny or approve a timely and complete permit application before the end of the term of the previous permit, the permit shall not expire until the renewal permit has been issued or denied, and any permit shield granted for the permit shall continue in effect during that time.
[45CSR§30-6.3.c.]

2.4. Permit Actions

2.4.1. This permit may be modified, revoked, reopened and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.
[45CSR§30-5.1.f.3.]

2.5. Reopening for Cause

2.5.1. This permit shall be reopened and revised under any of the following circumstances:

a. Additional applicable requirements under the Clean Air Act or the Secretary's legislative rules become applicable to a major source with a remaining permit term of three (3) or more years. Such a reopening shall be completed not later than eighteen (18) months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended pursuant to 45CSR§§30-6.6.a.1.A. or B.

b. Additional requirements (including excess emissions requirements) become applicable to an affected source under Title IV of the Clean Air Act (Acid Deposition Control) or other legislative rules of the Secretary. Upon approval by U.S. EPA, excess emissions offset plans shall be incorporated into the permit.

c. The Secretary or U.S. EPA determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.

d. The Secretary or U.S. EPA determines that the permit must be revised or revoked and reissued to assure compliance with the applicable requirements.

[45CSR§30-6.6.a.]

2.6. Administrative Permit Amendments

2.6.1. The permittee may request an administrative permit amendment as defined in and according to the procedures specified in 45CSR§30-6.4.
[45CSR§30-6.4.]

2.7. Minor Permit Modifications

2.7.1. The permittee may request a minor permit modification as defined in and according to the procedures specified in 45CSR§30-6.5.a.
[45CSR§30-6.5.a.]

2.8. Significant Permit Modification

2.8.1. The permittee may request a significant permit modification, in accordance with 45CSR§30-6.5.b., for permit modifications that do not qualify for minor permit modifications or as administrative amendments.
[45CSR§30-6.5.b.]

2.9. Emissions Trading

2.9.1. No permit revision shall be required, under any approved economic incentives, marketable permits, emissions trading, and other similar programs or processes for changes that are provided for in the permit and that are in accordance with all applicable requirements.
[45CSR§30-5.1.h.]

2.10. Off-Permit Changes

2.10.1. Except as provided below, a facility may make any change in its operations or emissions that is not addressed nor prohibited in its permit and which is not considered to be construction nor modification under any rule promulgated by the Secretary without obtaining an amendment or modification of its permit. Such changes shall be subject to the following requirements and restrictions:

a. The change must meet all applicable requirements and may not violate any existing permit term or condition.

b. The permittee must provide a written notice of the change to the Secretary and to U.S. EPA within two (2) business days following the date of the change. Such written notice shall describe each such change, including the date, any change in emissions, pollutants emitted, and any applicable requirement that would apply as a result of the change.

c. The change shall not qualify for the permit shield.

d. The permittee shall keep records describing all changes made at the source that result in emissions of regulated air pollutants, but not otherwise regulated under the permit, and the emissions resulting from those changes.

e. No permittee may make any change subject to any requirement under Title IV of the Clean Air Act (Acid Deposition Control) pursuant to the provisions of 45CSR§30-5.9.

f. No permittee may make any changes which would require preconstruction review under any provision of Title I of the Clean Air Act (including 45CSR14 and 45CSR19) pursuant to the provisions of 45CSR§30-5.9.

[45CSR§30-5.9.]

2.11. Operational Flexibility

2.11.1. The permittee may make changes within the facility as provided by § 502(b)(10) of the Clean Air Act. Such operational flexibility shall be provided in the permit in conformance with the permit application and applicable requirements. No such changes shall be a modification under any rule or any provision of Title I of the Clean Air Act (including 45CSR14 and 45CSR19) promulgated by the Secretary in accordance with Title I of the Clean Air Act and the change shall not result in a level of emissions exceeding the emissions allowable under the permit.
[45CSR§30-5.8]

2.11.2. Before making a change under 45CSR§30-5.8., the permittee shall provide advance written notice to the Secretary and to U.S. EPA, describing the change to be made, the date on which the change will occur, any changes in emissions, and any permit terms and conditions that are affected. The permittee shall thereafter maintain a copy of the notice with the permit, and the Secretary shall place a copy with the permit in the public file. The written notice shall be provided to the Secretary and U.S. EPA at least seven (7) days prior to the date that the change is to be made, except that this period may be shortened or eliminated as necessary for a change that must be implemented more quickly to address unanticipated conditions posing a significant health, safety, or environmental hazard. If less than seven (7) days notice is provided because of a need to respond more quickly to such unanticipated conditions, the permittee shall provide notice to the Secretary and U.S. EPA as soon as possible after learning of the need to make the change.
[45CSR§30-5.8.a.]

2.11.3. The permit shield shall not apply to changes made under 45CSR§30-5.8., except those provided for in 45CSR§30-5.8.d. However, the protection of the permit shield will continue to apply to operations and emissions that are not affected by the change, provided that the permittee complies with the terms and conditions of the permit applicable to such operations and emissions. The permit shield may be reinstated for emissions and operations affected by the change:

a. If subsequent changes cause the facility's operations and emissions to revert to those authorized in the permit and the permittee resumes compliance with the terms and conditions of the permit, or

b. If the permittee obtains final approval of a significant modification to the permit to incorporate the change in the permit.

[45CSR§30-5.8.c.]

2.11.4. "Section 502(b)(10) changes" are changes that contravene an express permit term. Such changes do not include changes that would violate applicable requirements or contravene enforceable permit terms and conditions that are monitoring (including test methods), recordkeeping, reporting, or compliance certification requirements.
[45CSR§30-2.40]

2.12. Reasonably Anticipated Operating Scenarios

2.12.1. The following are terms and conditions for reasonably anticipated operating scenarios identified in this permit.

a. Contemporaneously with making a change from one operating scenario to another, the permittee shall record in a log at the permitted facility a record of the scenario under which it is operating and to document the change in reports submitted pursuant to the terms of this permit and 45CSR30.

b. The permit shield shall extend to all terms and conditions under each such operating scenario; and

c. The terms and conditions of each such alternative scenario shall meet all applicable requirements and the requirements of 45CSR30.

[45CSR§30-5.1.i.]

2.13. Duty to Comply

2.13.1. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the West Virginia Code and the Clean Air Act and is grounds for enforcement action by the Secretary or USEPA; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.
[45CSR§30-5.1.f.1.]

2.14. Inspection and Entry

2.14.1. The permittee shall allow any authorized representative of the Secretary, upon the presentation of credentials and other documents as may be required by law, to perform the following:

a. At all reasonable times (including all times in which the facility is in operation) enter upon the permittee's premises where a source is located or emissions related activity is conducted, or where records must be kept under the conditions of this permit;

b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

c. Inspect at reasonable times (including all times in which the facility is in operation) any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit;

d. Sample or monitor at reasonable times substances or parameters to determine compliance with the permit or applicable requirements or ascertain the amounts and types of air pollutants discharged.

[45CSR§30-5.3.b.]

2.15. Schedule of Compliance

2.15.1. For sources subject to a compliance schedule, certified progress reports shall be submitted consistent with the applicable schedule of compliance set forth in this permit and 45CSR§30-4.3.h., but at least every six (6) months, and no greater than once a month, and shall include the following:

a. Dates for achieving the activities, milestones, or compliance required in the schedule of compliance, and dates when such activities, milestones or compliance were achieved; and

b. An explanation of why any dates in the schedule of compliance were not or will not be met, and any preventative or corrective measure adopted.

[45CSR§30-5.3.d.]

2.16. Need to Halt or Reduce Activity not a Defense

2.16.1. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. However, nothing in this paragraph shall be construed as precluding consideration of a need to halt or reduce activity as a mitigating factor in determining penalties for noncompliance if the health, safety, or environmental impacts of halting or reducing operations would be more serious than the impacts of continued operations.
[45CSR§30-5.1.f.2.]

2.17. Reserved

2.18. Federally-Enforceable Requirements

2.18.1. All terms and conditions in this permit, including any provisions designed to limit a source's potential to emit and excepting those provisions that are specifically designated in the permit as "State-enforceable only", are enforceable by the Secretary, USEPA, and citizens under the Clean Air Act.
[45CSR§30-5.2.a.]

2.18.2. Those provisions specifically designated in the permit as “State-enforceable only” shall become “Federally-enforceable” requirements upon SIP approval by the USEPA.

2.19. Duty to Provide Information

2.19.1. The permittee shall furnish to the Secretary within a reasonable time any information the Secretary may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Secretary copies of records required to be kept by the permittee. For information claimed to be confidential, the permittee shall furnish such records to the Secretary along with a claim of confidentiality in accordance with 45CSR31. If confidential information is to be sent to USEPA, the permittee shall directly provide such information to USEPA along with a claim of confidentiality in accordance with 40 C.F.R. Part 2.
[45CSR§30-5.1.f.5.]

2.20. Duty to Supplement and Correct Information

2.20.1. Upon becoming aware of a failure to submit any relevant facts or a submittal of incorrect information in any permit application, the permittee shall promptly submit to the Secretary such supplemental facts or corrected information.
[45CSR§30-4.2.]

2.21. Permit Shield

2.21.1. Compliance with the conditions of this permit shall be deemed compliance with any applicable requirements as of the date of permit issuance provided that such applicable requirements are included and are specifically identified in this permit or the Secretary has determined that other requirements specifically identified are not applicable to the source and this permit includes such a determination or a concise summary thereof.
[45CSR§30-5.6.a.]

2.21.2. Nothing in this permit shall alter or affect the following:

a. The liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance; or

b. The applicable requirements of the Code of West Virginia and Title IV of the Clean Air Act (Acid Deposition Control), consistent with § 408 (a) of the Clean Air Act.

c. The authority of the Administrator of U.S. EPA to require information under § 114 of the Clean Air Act or to issue emergency orders under § 303 of the Clean Air Act.

[45CSR§30-5.6.c.]

2.22. Credible Evidence

2.22.1. Nothing in this permit shall alter or affect the ability of any person to establish compliance with, or a violation of, any applicable requirement through the use of credible evidence to the extent authorized by law. Nothing in this permit shall be construed to waive any defenses otherwise available to the permittee including but not limited to any challenge to the credible evidence rule in the context of any future proceeding.
[45CSR§30-5.3.e.3.B.]

2.23. Severability

2.23.1. The provisions of this permit are severable. If any provision of this permit, or the application of any provision of this permit to any circumstance is held invalid by a court of competent jurisdiction, the remaining permit terms and conditions or their application to other circumstances shall remain in full force and effect.
[45CSR§30-5.1.e.]

2.24. Property Rights

2.24.1. This permit does not convey any property rights of any sort or any exclusive privilege.
[45CSR§30-5.1.f.4]

2.25. Acid Deposition Control

2.25.1. Emissions shall not exceed any allowances that the source lawfully holds under Title IV of the Clean Air Act (Acid Deposition Control) or rules of the Secretary promulgated thereunder.

a. No permit revision shall be required for increases in emissions that are authorized by allowances acquired pursuant to the acid deposition control program, provided that such increases do not require a permit revision under any other applicable requirement.

b. No limit shall be placed on the number of allowances held by the source. The source may not, however, use allowances as a defense to noncompliance with any other applicable requirement.

c. Any such allowance shall be accounted for according to the procedures established in rules promulgated under Title IV of the Clean Air Act.

[45CSR§30-5.1.d.]

2.25.2. Where applicable requirements of the Clean Air Act are more stringent than any applicable requirement of regulations promulgated under Title IV of the Clean Air Act (Acid Deposition Control), both provisions shall be incorporated into the permit and shall be enforceable by the Secretary and U. S. EPA.
[45CSR§30-5.1.a.2.]

3.0. Facility-Wide Requirements

3.1. Limitations and Standards

3.1.1. **Open burning.** The open burning of refuse by any person is prohibited except as noted in 45CSR§6-3.1. **[45CSR§6-3.1.]**

3.1.2. **Open burning exemptions.** The exemptions listed in 45CSR§6-3.1 are subject to the following stipulation: Upon notification by the Secretary, no person shall cause or allow any form of open burning during existing or predicted periods of atmospheric stagnation. Notification shall be made by such means as the Secretary may deem necessary and feasible. **[45CSR§6-3.2.]**

3.1.3. **Asbestos.** The permittee is responsible for thoroughly inspecting the facility, or part of the facility, prior to commencement of demolition or renovation for the presence of asbestos and complying with 40 C.F.R. § 61.145, 40 C.F.R. § 61.148, and 40 C.F.R. § 61.150. The permittee, owner, or operator must notify the Secretary at least ten (10) working days prior to the commencement of any asbestos removal on the forms prescribed by the Secretary if the permittee is subject to the notification requirements of 40 C.F.R. § 61.145(b)(3)(i). The USEPA, the Division of Waste Management and the Bureau for Public Health - Environmental Health require a copy of this notice to be sent to them. **[40 C.F.R. §61.145(b) and 45CSR34]**

3.1.4. **Odor.** No person shall cause, suffer, allow or permit the discharge of air pollutants which cause or contribute to an objectionable odor at any location occupied by the public. **[45CSR§4-3.1 State-Enforceable only.]**

3.1.5. **Standby plan for reducing emissions.** When requested by the Secretary, the permittee shall prepare standby plans for reducing the emissions of air pollutants in accordance with the objectives set forth in Tables I, II, and III of 45CSR11. **[45CSR§11-5.2]**

3.1.6. **Emission inventory.** The permittee is responsible for submitting, on an annual basis, an emission inventory in accordance with the submittal requirements of the Division of Air Quality. **[W.Va. Code § 22-5-4(a)(15)]**

3.1.7. **Ozone-depleting substances.** For those facilities performing maintenance, service, repair or disposal of appliances, the permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 C.F.R. Part 82, Subpart F, except as provided for Motor Vehicle Air Conditioners (MVACs) in Subpart B:

a. Persons opening appliances for maintenance, service, repair, or disposal must comply with the prohibitions and required practices pursuant to 40 C.F.R. §§ 82.154 and 82.156.

b. Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 C.F.R. § 82.158.

c. Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 C.F.R. § 82.161.

[40 C.F.R. 82, Subpart F]

3.1.8. **Risk Management Plan.** Should this stationary source, as defined in 40 C.F.R. § 68.3, become subject to Part 68, then the owner or operator shall submit a risk management plan (RMP) by the date specified in 40 C.F.R. § 68.10 and shall certify compliance with the requirements of Part 68 as part of the annual compliance certification as required by 40 C.F.R. Part 70 or 71.
[40 C.F.R. 68]

3.1.9. The permitted facility (Sources ID 2-11S, 2-19S, 2-20S, F-5S, F-7S, F-20S, F-25S, 6-4S, 6-6S, 6-7S, 6-8S, 6-9S, J-8S, J-10S, 2-18S, Z-3S, Z-8S, Z-9S, Z-13S, P4-1S, P4-2S, P4-3S, and P4-4S) shall comply with all the applicable standard provisions of the 40CFR63 Subpart GG National Emission Standards for Aerospace Manufacturing and Rework Facilities, provided, however, that compliance with any more stringent limitations set forth under Requirements of Sections 4.0 through 8.0, Sections 11.0 and 12.0 of this Permit, is demonstrated:

§ 63.744 Standards: Cleaning operations.

(a) Housekeeping measures. Each owner or operator of a new or existing cleaning operation subject to this subpart shall comply with the requirements in these paragraphs unless the cleaning solvent used is identified in Table 1 of this section or meets the definition of "Non-HAP material" in 63.742. The requirements of this section do not apply to spent cleaning solvents, and solvent-laden applicators that are subject to and handled and stored in compliance with 40 CFR parts 262 through 268 (including the air emission control requirements in 40 CFR part 265, subpart CC).

(1) Place used solvent-laden cloth, paper, or any other absorbent applicators used for cleaning in bags or other closed containers. Ensure that these bags and containers are kept closed at all times except when depositing or removing these materials from the container. Use bags and containers of such design so as to contain the vapors of the cleaning solvent. Cotton-tipped swabs used for very small cleaning operations are exempt from this requirement.

(2) Store fresh and spent cleaning solvents, except semi-aqueous solvent cleaners, used in aerospace cleaning operations in closed containers.

(3) Conduct the handling and transfer of cleaning solvents to or from enclosed systems, vats, waste containers, and other cleaning operation equipment that hold or store fresh or spent cleaning solvents in such a manner that minimizes spills.

(b) Hand-wipe cleaning. Each owner or operator of a new or existing hand-wipe cleaning operation (excluding cleaning of spray gun equipment performed in accordance with paragraph (c) of this section) subject to this subpart shall use cleaning solvents that meet one of the requirements specified in paragraphs (b)(1), (b)(2), and (b)(3) of this section. Cleaning solvent solutions that contain HAP and VOC below the de minimis levels specified in § 63.741(f) are exempt from the requirements in paragraphs (b)(1), (b)(2), and (b)(3) of this section.

(1) Meet one of the composition requirements in Table 1 of this section;

(2) Have a composite vapor pressure of 45 mm Hg (24.1 in. H_2O) or less at 20 °C (68 °F); or

(3) Demonstrate that the volume of hand-wipe solvents used in cleaning operations has been reduced by at least 60% from a baseline adjusted for production. The baseline shall be established as part of

an approved alternative plan administered by the State. Demonstrate that the volume of hand-wipe cleaning solvents used in cleaning operations has been reduced by at least 60 percent from a baseline adjusted for production. The baseline shall be calculated using data from 1996 and 1997, or as otherwise agreed upon by the Administrator or delegated State Authority. The baseline shall be approved by the Administrator or delegated State Authority and shall be included as part of the facility's title V or part 70 permit.

(c) Spray gun cleaning. Each owner or operator of a new or existing spray gun cleaning operation subject to this subpart in which spray guns are used for the application of coatings or any other materials that require the spray guns to be cleaned shall use one or more of the techniques, or their equivalent, specified in paragraphs (c)(1) through (c)(4) of this section. Spray gun cleaning operations using cleaning solvent solutions that contain HAP and VOC below the de minimis levels specified in § 63.741(f) are exempt from the requirements in paragraphs (c)(1) through (c)(4) of this section.

(1) (i) Enclosed system. Clean the spray gun in an enclosed system that is closed at all times except when inserting or removing the spray gun. Cleaning shall consist of forcing solvent through the gun.

(ii) If leaks are found during the monthly inspection required in § 63.751(a), repairs shall be made as soon as practicable, but no later than 15 days after the leak was found. If the leak is not repaired by the 15th day after detection, the cleaning solvent shall be removed, and the enclosed cleaner shall be shut down until the leak is repaired or its use is permanently discontinued.

(2) Nonatomized cleaning. Clean the spray gun by placing cleaning solvent in the pressure pot and forcing it through the gun with the atomizing cap in place. No atomizing air is to be used. Direct the cleaning solvent from the spray gun into a vat, drum, or other waste container that is closed when not in use.

(3) Disassembled spray gun cleaning. Disassemble the spray gun and clean the components by hand in a vat, which shall remain closed at all times except when in use. Alternatively, soak the components in a vat, which shall remain closed during the soaking period and when not inserting or removing components.

(4) Atomizing cleaning. Clean the spray gun by forcing the cleaning solvent through the gun and direct the resulting atomized spray into a waste container that is fitted with a device designed to capture the atomized cleaning solvent emissions.

(5) Cleaning of the nozzle tips of automated spray equipment systems, except for robotic systems that can be programmed to spray into a closed container, shall be exempt from the requirements of paragraph (c) of this section.

(e) Exempt cleaning operations. The following cleaning operations are exempt from the requirements of paragraph (b) of this section:

(1) Cleaning during the manufacture, assembly, installation, maintenance, or testing of components of breathing oxygen systems that are exposed to the breathing oxygen;

(2) Cleaning during the manufacture, assembly, installation, maintenance, or testing of parts, subassemblies, or assemblies that are exposed to strong oxidizers or reducers (e.g., nitrogen tetroxide, liquid oxygen, or hydrazine);

(3) Cleaning and surface activation prior to adhesive bonding;

(4) Cleaning of electronic parts and assemblies containing electronic parts;

(5) Cleaning of aircraft and ground support equipment fluid systems that are exposed to the fluid, including air-to-air heat exchangers and hydraulic fluid systems;

(6) Cleaning of fuel cells, fuel tanks, and confined spaces;

(7) Surface cleaning of solar cells, coated optics, and thermal control surfaces;

(8) Cleaning during fabrication, assembly, installation, and maintenance of upholstery, curtains, carpet, and other textile materials used in the interior of the aircraft;

(9) Cleaning of metallic and nonmetallic materials used in honeycomb cores during the manufacture or maintenance of these cores, and cleaning of the completed cores used in the manufacture of aerospace vehicles or components;

(10) Cleaning of aircraft transparencies, polycarbonate, or glass substrates;

(11) Cleaning and cleaning solvent usage associated with research and development, quality control, and laboratory testing;

(12) Cleaning operations, using nonflamable liquids, conducted within five feet of energized electrical systems. Energized electrical systems means any AC or DC electrical circuit on an assembled aircraft once electrical power is connected, including interior passenger and cargo areas, wheel wells and tail sections; and

(13) Cleaning operations identified as essential uses under the Montreal Protocol for which the Administrator has allocated essential use allowances or exemptions in 40 CFR 82.4.

Table 1 Composition Requirements for Approved Cleaning Solvents

Cleaning solvent type	Composition requirements
Aqueous.....	Cleaning solvents in which water is the primary ingredient (≥ 80 percent of must be water). Detergents, surfactants, and bioenzyme mixtures and nutrients may be combined with the water along with a variety of additives, such as organic solvents (e.g., high boiling point alcohols), builders, inhibitors, emulsifiers, pH buffers, and antifoaming agents. Aqueous solutions must have a flash point greater than 93 °C (200° F) (as reported by the manufacturer), and the solution must be miscible with water.
Hydrocarbon-based.....	Cleaners that are composed of photochemically reactive hydrocarbons and/or oxygenated hydrocarbons and have a maximum vapor pressure of 7 mm Hg at 20 °C (3.75 in. H_2O and 68 °F). These cleaners also contain no HAP.

§63.745 Standards: Primer, topcoat, and specialty coating application operations.

(a) Each owner or operator of a new or existing primer, topcoat, or specialty coating application operation subject to this subpart shall comply with the requirements specified in paragraph (c) of this section for those coatings that are uncontrolled (no control device is used to reduce organic HAP emissions from the operation), and in paragraph (d) of this section for those coatings that are controlled (organic HAP emissions from the operation are reduced by the use of a control device). Aerospace equipment that is no longer operational, intended for public display, and not easily capable of being moved is exempt from the requirements of this section.

(b) Each owner or operator shall conduct the handling and transfer of primers, topcoats, and specialty coatings to or from containers, tanks, vats, vessels, and piping systems in such a manner that minimizes spills.

(c) *Uncontrolled coatings—organic HAP and VOC content levels*. Each owner or operator shall comply with the organic HAP and VOC content limits specified in paragraphs (c)(1) through (6) of this section for those coatings that are uncontrolled.

(5) Organic HAP emissions from specialty coatings shall be limited to an organic HAP content level of no more than the HAP content limit specified in Table 1 of this section for each applicable specialty coating type.

(6) VOC emissions from specialty coatings shall be limited to a VOC content level of no more than the VOC content limit specified in Table 1 of this section for each applicable specialty coating type.

(d) *Controlled coatings—control system requirements.* Each control system shall reduce the operation's organic HAP and VOC emissions to the atmosphere by 81% or greater, taking into account capture and destruction or removal efficiencies, as determined using the procedures in §63.750(g) when a carbon adsorber is used and in §63.750(h) when a control device other than a carbon adsorber is used.

§ 63.748 Standards: Handling and storage of waste.

(a) The owner or operator of each facility subject to this subpart that produces a waste that contains organic HAP from aerospace primer, topcoat, specialty coating, chemical milling maskant, or chemical depainting operations must be handled and stored as specified in paragraph (a)(1) or (a)(2) of this section. The requirements of paragraphs (a)(1) and (a)(2) of this section do not apply to spent wastes that contain organic HAP that are subject to and handled and stored in compliance with 40 CFR parts 262 through 268 (including the air emission control requirements in 40 CFR part 265, subpart CC).

(1) Conduct the handling and transfer of the waste to or from containers, tanks, vats, vessels, and piping systems in such a manner that minimizes spills.

(2) Store all waste that contains organic HAP in closed containers.

[45CSR34, 40 C.F.R. 63, Subpart GG; 45CSR13, R13-2037, B.7; 45CSR13, R13-3334, 4.1.3, 4.1.4, 4.1.5; 45CSR13, R13-3534, 4.1.3, 4.1.4, 4.1.5; 45CSR13, R13-3651, 4.1.3, 4.1.4, 4.1.5]

3.1.10. The pertinent sections of 45CSR7 applicable to this facility include, but are not limited to, the following:

No person shall cause, suffer, allow or permit emission of smoke and/or particulate matter into the open air from any process source operation which is greater than twenty (20) percent opacity, except as noted in subsections 3.2, 3.3, 3.4, 3.5, 3.6, and 3.7. **[45CSR§7-3.1]**

The provisions of 45CSR§7-3.1 shall not apply to smoke and/or particulate matter emitted from any process source operation which is less than forty (40) percent opacity for any period or periods aggregating no more than five (5) minutes in any sixty (60) minute period.
[45CSR§7-3.2]

No person shall cause, suffer, allow or permit visible emissions from any storage structure(s) associated with any manufacturing process(es) that pursuant to 45CSR§7-5.1 is required to have a full enclosure and be equipped with a particulate matter control device.
[45CSR§7-3.7]

No person shall cause, suffer, allow or permit particulate matter to be vented into the open air from any type source operation or duplicate source operation, or from all air pollution control equipment installed on any type source operation or duplicate source operation in excess of the quantity specified under the appropriate source operation type in Table 45-7A found at the end of 45CSR7.
[45CSR§7-4.1]

Any stack serving any process source operation or air pollution control equipment on any process source operation shall contain flow straightening devices or a vertical run of sufficient length to establish flow patterns consistent with acceptable stack sampling procedures.
[45CSR§7-4.12]

No person shall cause, suffer, allow or permit any manufacturing process or storage structure generating fugitive particulate matter to operate that is not equipped with a system, which may include, but not be limited to, process equipment design, control equipment design or operation and maintenance procedures, to minimize the emissions of fugitive particulate matter. To minimize means such system shall be installed, maintained and operated to ensure the lowest fugitive particulate matter emissions reasonably achievable.
[45CSR§7-5.1]

The owner or operator of a plant shall maintain particulate matter control of the plant premises, and plant owned, leased or controlled access roads, by paving, application of asphalt, chemical dust suppressants or other suitable dust control measures. Good operating practices shall be implemented and when necessary particulate matter suppressants shall be applied in relation to stockpiling and general material handling to minimize particulate matter generation and atmospheric entrainment.
[45CSR§7-5.2]

At such reasonable times as the Director may designate, the operator of any manufacturing process source operation may be required to conduct or have conducted stack tests to determine the particulate matter loading in exhaust gases. Such tests shall be conducted in such manner as the Director may specify and be filed on forms and in a manner acceptable to the Director. The Director, or his duly authorized representative, may at his option witness or conduct such stack tests. Should the Director exercise his option to conduct such tests, the operator will provide all the necessary sampling connections and sampling ports to be located in such manner as the Director may require, power for test equipment, and the required safety equipment such as scaffolding, railings and ladders to comply with generally accepted good safety practices.
[45CSR§7-8.1]

The Director, or his duly authorized representative, may conduct such other tests as he or she may deem necessary to evaluate air pollution emissions.
[45CSR§7-8.2]

[45CSR13, R13-0401, B.6; R13-1047, B.4; R13-1455, B.5; R13-1694, B.5; R13-1782, B.6; R13-1798, B.6; R13-2037, B.5; R13-2246, B.2; R13-3334, 4.1.2; R13-3534, 4.1.2; R13-3651, 4.1.2]

3.1.11. The pertinent sections of 45CSR13 applicable to this facility include, but are not limited to, the following:
§45-13-6.1
At the time a stationary source is alleged to be in compliance with an applicable emission standard and at reasonable times to be determined by the Director thereafter, appropriate tests consisting of visual determinations or conventional in-stack measurements or such other tests the Director may specify shall be conducted to determine compliance.
[45CSR13, R13-0401, B.7; R13-1047, B.4; R13-1455, B.6; R13-1694, B.6; R13-1782, B.7; R13-1798, B.7; R13-2037, B.6 & R13-2246, B.6]

3.1.12. **Operation and Maintenance of Air Pollution Control Equipment.** The permittee shall, to the extent practicable, install, maintain, and operate all pollution control equipment listed in Section 1.1 and associated monitoring equipment in a manner consistent with safety and good air pollution control practices for minimizing emissions, or comply with any more stringent limits set forth in this permit or as set forth by any State rule, Federal regulation, or alternative control plan approved by the Secretary.
[45CSR§13-5.10; 45CSR13, R13-0898, 4.1.3; 45CSR13, R13-3334, 4.1.6; 45CSR13, R13-3408, 5.1.2; 45CSR13, R13-3534, 4.1.6; 45CSR13, R13-3651, 4.1.6]

3.2. Monitoring Requirements

3.2.1. Compliance with Section 3 of 45CSR7 (Requirement 3.1.10 of this Permit) shall be determined by conducting visual emission observations in accordance with Method 22 of 40 CFR 60, Appendix A for the Emission Points 1-3E, 1-7E, F-6E, F-11E, F-14E subject to 45CSR7, and units emitting directly into the open air from points other than stack outlet (including visible fugitive dust emissions that leave the plant site boundaries).

Visual emission observations shall be conducted monthly during periods of facility operation to determine if the unit has visible emissions using procedures outlined in 40CFR60 Appendix A, Method 22.

If sources of visible emissions are identified, the permittee shall conduct an Opacity Evaluation as outlined in 45CSR§7A-2.1.a, b, within 24 hour period unless the permittee can demonstrate a valid reason that the time frame should be extended. A 45CSR§7A-2.1.a, b evaluation shall not be required if the visible emission condition is corrected in a timely manner and the units are operated at normal operating conditions with no visible emissions being observed.

Anytime when not in compliance with the opacity limit per 45CSR§7-3.1 for any emission point, reporting as per Requirement 3.5.11 shall be initiated, and for this emission point, Method 22 checks shall revert to a weekly frequency for a minimum of 4 consecutive weeks. If in compliance, then monthly Method 22 checks shall be conducted.

Compliance with this Requirement will assure compliance with requirement 3.3.4.f.
[45CSR§30-5.1.c]

3.2.2. Compliance with Section 3 of 45CSR7 (Requirement 3.1.10 of this Permit) for paint booths and related equipment (Emission Points 2-9E, 2-10E, 2-11E, 2-15E, F-1E, F-3E, F-5E, F-9E, F-12E, F-13E, F-16E, F-18E, G-2E, 6-2E, 6-4E, 6-5E, 6-6E, 6-7E, 6-8E, J-2E, J-5E, J-7E) shall be determined by conducting fabric filter checks prior to each use of the equipment. These checks shall include review to ensure filters are properly fitted to the unit, that no holes exist, and that the filters are not overloaded. Any changes made to filters during the checks or any filter replacements shall be recorded. (See attachment D as a sample form).
[45CSR§30-5.1.c, 45CSR13, R13-1798, A.7]

3.2.3. Compliance with Section 3 of 45CSR7 (Requirement 3.1.10 of this Permit) for handling areas (Emission Points 1-9E and 1-12E) shall be determined by use of properly maintained HEPA filters (as per Requirement 4.4.5), and utilizing manometers to ensure proper operation of the filters prior to each use of equipment. Permittee shall keep records of manometer checks and any necessary corrective actions (including filter replacements).
[45CSR§30-5.1.c]

3.2.4. The permitted facility (Sources ID 2-11S, 2-19S, 2-20S, F-5S, F-7S, F-20S, F-25S, 6-4S, 6-6S, 6-7S, 6-8S, 6-9S, J-8S, J-10S, 2-18S, Z-3S, Z-8S, Z-9S, Z-13S, P4-1S, P4-2S, P4-3S, and P4-4S) shall comply with all the applicable standard provisions of the 40CFR63 Subpart GG National Emission Standards for Aerospace Manufacturing and Rework Facilities, provided, however, that compliance with any more stringent limitations set forth under Requirements of Sections 4.0 through 8.0, Section 11.0 and Section 12.0 of this Permit, is demonstrated:

§ 63.751 Monitoring requirements.

(a) Enclosed spray gun cleaners. Each owner or operator using an enclosed spray gun cleaner under § 63.744(c)(1) (Section 3.1.9. of this Permit) shall visually inspect the seals and all other potential sources of leaks associated with each enclosed gun spray cleaner system at least once per month. Each inspection shall occur while the system is in operation.

[45CSR34, 40 C.F.R. 63, Subpart GG; 45CSR13, R13-2037, B.7]

3.3. Testing Requirements

3.3.1. **Stack testing.** As per provisions set forth in this permit or as otherwise required by the Secretary, in accordance with the West Virginia Code, underlying regulations, permits and orders, the permittee shall conduct test(s) to determine compliance with the emission limitations set forth in this permit and/or established or set forth in underlying documents. The Secretary, or his duly authorized representative, may at his option witness or conduct such test(s). Should the Secretary exercise his option to conduct such test(s), the operator shall provide all necessary sampling connections and sampling ports to be located in such manner as the Secretary may require, power for test equipment and the required safety equipment, such as scaffolding, railings and ladders, to comply with generally accepted good safety practices. Such tests shall be conducted in accordance with the methods and procedures set forth in this permit or as otherwise approved or specified by the Secretary in accordance with the following:

a. The Secretary may on a source-specific basis approve or specify additional testing or alternative testing to the test methods specified in the permit for demonstrating compliance with 40 C.F.R. Parts 60, 61, and 63, if applicable, in accordance with the Secretary's delegated authority and any established equivalency determination methods which are applicable.

b. The Secretary may on a source-specific basis approve or specify additional testing or alternative testing to the test methods specified in the permit for demonstrating compliance with applicable requirements which do not involve federal delegation. In specifying or approving such alternative testing to the test methods, the Secretary, to the extent possible, shall utilize the same equivalency criteria as would be used in approving such changes under Section 3.3.1.a. of this permit. If a testing method is specified or approved which effectively replaces a test method specified in the permit, the permit shall be revised in accordance with 45CSR§30-6.4 or 45CSR§30-6.5 as applicable.

c. All periodic tests to determine mass emission limits from or air pollutant concentrations in discharge stacks and such other tests as specified in this permit shall be conducted in accordance with an approved test protocol. Unless previously approved, such protocols shall be submitted to the Secretary in writing at least thirty (30) days prior to any testing and shall contain the information set forth by the Secretary. In addition, the permittee shall notify the Secretary at least fifteen (15) days prior to any testing so the Secretary may have the opportunity to observe such tests. This notification shall include the actual date and time during which the test will be conducted and, if appropriate, verification that the tests will fully conform to a referenced protocol previously approved by the Secretary.

d. The permittee shall submit a report of the results of the stack test within 60 days of completion of the test. The test report shall provide the information necessary to document the objectives of the test and to determine whether proper procedures were used to accomplish these objectives. The report shall include the following: the certification described in paragraph 3.5.1; a statement of compliance status, also signed by a responsible official; and, a summary of conditions which form the basis for the compliance status evaluation. The summary of conditions shall include the following:

1. The permit or rule evaluated, with the citation number and language.

2. The result of the test for each permit or rule condition.

3. A statement of compliance or non-compliance with each permit or rule condition.

[WV Code §§ 22-5-4(a)(15-16) and 45CSR13]

3.3.2. A test protocol (as per Requirement 3.3.1.c.) shall include detailing on the proposed test methods, the date and the time the proposed testing is to take place, as well as identifying the sampling locations and other relevant information.
[45CSR13, R13-1455, B.8; R13-1694, B.8; **R13-0401, B.9; R13-1798, B.9; R13-1782, B.9; R13-2037, B.9]**

3.3.3. Test results shall be submitted to the Secretary no more than sixty (60) days after the date the testing takes place.
[45CSR13, R13-1455, B.8; R13-1694, **B.8**; **R13-0401, B.9; R13-1798, B.9; R13-1782, B.9; R13-2037, B.9]**

3.3.4. Tests that are required by the Director to determine compliance with the emission limitations set forth in this permit shall be conducted in accordance with the methods as set forth below. The Director may require a different test method or approve an alternative method in light of any new technology advancements that may occur. Compliance testing shall be conducted at 100% of the peak load unless otherwise specified by the Director.

a. Tests to determine compliance with PM emission limits shall be conducted in accordance with Method 5, 5A, 5B, 5C, 5D, 5E, 5F, 5G, or 5H as set forth in 40 CFR 60, Appendix A.

b. Tests to determine compliance with SO_2 emission limits shall be conducted in accordance with Method 6, 6A, 6B, or 6C as set forth in 40 CFR 60, Appendix A.

c. Tests to determine compliance with CO emission limits shall be conducted in accordance with Method 10, 10A, or 10B as set forth in 40 CFR 60, Appendix A.

d. Tests to determine compliance with NO_x emission limits shall be conducted in accordance with Method 7, 7A, 7B, 7C, 7D, or 7E as set forth in 40 CFR 60, Appendix A.

e. Tests to determine compliance with VOC emission limits shall be conducted in accordance with Method 25, or 25A as set forth in 40 CFR 60, Appendix A.

f. Tests to determine compliance with Opacity of emissions shall be conducted in accordance with Method 9 as set forth in 40 CFR 60, Appendix A.

g. Tests to determine compliance with HAP emission limits shall be conducted in accordance with 40 CFR 63.

[45CSR13, R13-1455, B.7; R13-1694, B.7; R13-0401, B.8; R13-1798, B.8; R13-1782, B.8; R13-2037, B.8]

3.4. Recordkeeping Requirements

3.4.1. **Monitoring information.** The permittee shall keep records of monitoring information that include the following:

a. The date, place as defined in this permit and time of sampling or measurements;

b. The date(s) analyses were performed;

c. The company or entity that performed the analyses;

d. The analytical techniques or methods used;

e. The results of the analyses; and

f. The operating conditions existing at the time of sampling or measurement.

[45CSR§30-5.1.c.2.A; 45CSR13, R13-3534, 4.4.1; 45CSR13, R13-3651, 4.4.1]

3.4.2. **Retention of records.** The permittee shall retain records of all required monitoring data and support information for a period of at least five (5) years from the date of monitoring sample, measurement, report, application, or record creation date. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit. Where appropriate, records may be maintained in computerized form in lieu of the above records.
[45CSR§30-5.1.c.2.B.]

3.4.3. **Odors.** For the purposes of 45CSR4, the permittee shall maintain a record of all odor complaints received, any investigation performed in response to such a complaint, and any responsive action(s) taken.
[45CSR§30-5.1.c. State-Enforceable only.]

3.4.4. A record of each visible emission observation and opacity evaluation per Requirement 3.2.1, and also of monitoring required under conditions 3.2.2 and 3.2.3, shall be maintained on site for and shall be made available to the Director or his/her duly authorized representative upon request. Said records shall include, the date, time, name of emission unit, the applicable visible emission requirement, the results of the check, what action(s), if any, was/were taken, and the name of the observer.
[45CSR§30-5.1.c.]

3.4.5. The permitted facility (as indicated in Requirement 3.1.9) shall comply with all the applicable recordkeeping provisions of the 40CFR63 Subpart GG National Emission Standards for Aerospace Manufacturing and Rework Facilities, provided, however, that compliance with any more stringent limitations set forth under Requirements of Sections 4.0 through 8.0, Sections 11.0 and 12.0 of this Permit, is demonstrated:

§ 63.752 Recordkeeping requirements.

b) Cleaning operation. Each owner or operator of a new or existing cleaning operation subject to this subpart shall record the information specified in paragraphs (b)(1) through (b)(5) of this section, as appropriate.

(1) The name, vapor pressure, and documentation showing the organic HAP constituents of each cleaning solvent used for affected cleaning operations at the facility.

(2) For each cleaning solvent used in hand-wipe cleaning operations that complies with the composition requirements specified in § 63.744(b)(1) (Section 3.1.9 of this Permit) or for semi-aqueous cleaning solvents used for flush cleaning operations:

(i) The name of each cleaning solvent used;

(ii) All data and calculations that demonstrate that the cleaning solvent complies with one

of the composition requirements; and

(iii) Annual records of the volume of each solvent used, as determined from facility purchase records or usage records.

(3) For each cleaning solvent used in hand-wipe cleaning operations that does not comply with the composition requirements in § 63.744(b)(1) (Section 3.1.9 of this Permit**)**, but does comply with the vapor pressure requirement in § 63.744(b)(2) (Section 3.1.9 of this Permit):

(i) The name of each cleaning solvent used;

(ii) The composite vapor pressure of each cleaning solvent used;

(iii) All vapor pressure test results, if appropriate, data, and calculations used to determine the composite vapor pressure of each cleaning solvent; and

(iv) The amount (in gallons) of each cleaning solvent used each month at each operation.

(4) For each cleaning solvent used for the exempt hand-wipe cleaning operations specified in § 63.744(e)(Section 3.1.9 of this Permit), that does not conform to the vapor pressure or composition requirements of § 63.744(b) (Section 3.1.9 of this Permit):

(i) The identity and amount (in gallons) of each cleaning solvent used each month at each operation; and

(ii) A list of the processes set forth in § 63.744(e) (Section 3.1.9 of this Permit), to which the cleaning operation applies.

(5) A record of all leaks from enclosed spray gun cleaners identified pursuant to § 63.751(a) (Section 3.2.4 of this Permit) that includes for each leak found:

(i) Source identification;

(ii) Date leak was discovered; and

(iii) Date leak was repaired.

[45CSR34, 40 C.F.R. 63, Subpart GG; and 45CSR13, R13-2037, B.7; 45CSR13, R13-3334, 4.4.4; 45CSR13, R13-3534, 4.4.4; 45CSR13, R13-3651, 4.4.4]

3.4.6. Reserved.

3.4.7. To demonstrate compliance with the Requirement 3.1.10 (45CSR§7-5.1) the company shall keep records of maintenance and operations of fugitive dust control systems for the Emission Point 1-2E, 1-3E, 2-15E, 6-8E (Spray Booth), F-1E, F-3E, F-11E, F-12E, F-13E, G-2E, J-5E, J-7E, VI (Control Device ID 2-1C, E-1C, E-2C), P4-1E, P4-2E, P4-3E, P4-4E.

[45CSR§30-5.1.c]

3.4.8. **Record of Maintenance of Air Pollution Control Equipment.** For all pollution control equipment listed in Section 1.1, the permittee shall maintain accurate records of all required pollution control equipment inspection and/or preventative maintenance procedures.

[45CSR13, R13-0898, 4.4.2; 45CSR13, R13-3334, 4.4.2; 45CSR13, R13-3408, 5.3.1; 45CSR13, R13-3534, 4.4.2; 45CSR13, R13-3651, 4.4.2]

3.4.9. **Record of Malfunctions of Air Pollution Control Equipment.** For all air pollution control equipment listed in Section 1.1, the permittee shall maintain records of the occurrence and duration of any malfunction or operational shutdown of the air pollution control equipment during which excess emissions occur. For each such case, the following information shall be recorded:

a. The equipment involved.

b. Steps taken to minimize emissions during the event.

c. The duration of the event.

d. The estimated increase in emissions during the event.

For each such case associated with an equipment malfunction, the additional information shall also be recorded:

e. The cause of the malfunction.

f. Steps taken to correct the malfunction.

g. Any changes or modifications to equipment or procedures that would help prevent future recurrences of the malfunction.

[45CSR13, R13-0898, 4.4.3; 45CSR13, R13-3334, 4.4.3; 45CSR13, R13-3408, 5.3.2; 45CSR13, R13-3534, 4.4.3; 45CSR13, R13-3651, 4.4.3]

3.5. Reporting Requirements

3.5.1. **Responsible official.** Any application form, report, or compliance certification required by this permit to be submitted to the DAQ and/or USEPA shall contain a certification by the responsible official that states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete.
[45CSR§§30-4.4. *and* 5.1.c.3.D.]

3.5.2. A permittee may request confidential treatment for the submission of reporting required under 45CSR§30-5.1.c.3. pursuant to the limitations and procedures of W.Va. Code § 22-5-10 and 45CSR31.
[45CSR§30-5.1.c.3.E.]

3.5.3. Except for the electronic submittal of the annual compliance certification and semi-annual monitoring reports to the DAQ and USEPA as required in 3.5.5 and 3.5.6 below, all notices, requests, demands, submissions and other communications required or permitted to be made to the Secretary of DEP and/or USEPA shall be made in writing and shall be deemed to have been duly given when delivered by hand, or mailed first class or by private carrier with postage prepaid to the address(es), or submitted in electronic format by e-mail as set forth below or to such other person or address as the Secretary of the Department of Environmental Protection may designate:

DAQ: **US EPA:**

Director	Section Chief
WVDEP	U. S. Environmental Protection Agency, Region III
Division of Air Quality	Enforcement and Compliance Assurance Division
601 57th Street SE	Air, RCRA and Toxics Branch (3ED21)
Charleston, WV 25304	Four Penn Center
	1600 John F. Kennedy Boulevard
	Philadelphia, PA 19103-2852

DAQ Compliance and Enforcement[1]:
DEPAirQualityReports@wv.gov

[1]For all self-monitoring reports (MACT, GACT, NSPS, etc.), stack tests and protocols, Notice of Compliance Status reports, Initial Notifications, etc.

3.5.4. **Fees.** The permittee shall pay fees on an annual basis in accordance with 45CSR§30-8. **[45CSR§30-8.]**

3.5.5. **Compliance certification.** The permittee shall certify compliance with the conditions of this permit on the forms provided by the DAQ. In addition to the annual compliance certification, the permittee may be required to submit certifications more frequently under an applicable requirement of this permit. The annual certification shall be submitted to the DAQ and USEPA on or before March 15 of each year, and shall certify compliance for the period ending December 31. The permittee shall maintain a copy of the certification on site for five (5) years from submittal of the certification. The annual certification shall be submitted in electronic format by e-mail to the following addresses:

DAQ:	**US EPA:**
DEPAirQualityReports@wv.gov	R3_APD_Permits@epa.gov

[45CSR§30-5.3.e.]

3.5.6. **Semi-annual monitoring reports.** The permittee shall submit reports of any required monitoring on or before September 15 for the reporting period January 1 to June 30 and on or before March 15 for the reporting period July 1 to December 31. All instances of deviation from permit requirements must be clearly identified in such reports. All required reports must be certified by a responsible official consistent with 45CSR§30-4.4. The semi-annual monitoring reports shall be submitted in electronic format by e-mail to the following address:

DAQ:
DEPAirQualityReports@wv.gov

[45CSR§30-5.1.c.3.A.]

3.5.7. **Reserved.**

3.5.8. **Deviations.**

a. In addition to monitoring reports required by this permit, the permittee shall promptly submit supplemental reports and notices in accordance with the following:

1. Reserved.

2. Any deviation that poses an imminent and substantial danger to public health, safety, or the environment shall be reported to the Secretary immediately by telephone or email. A written report of such deviation, which shall include the probable cause of such deviation, and any corrective actions or preventative measures taken, shall be submitted by the responsible official within ten (10) days of the deviation.

3. Deviations for which more frequent reporting is required under this permit shall be reported on the more frequent basis.

4. All reports of deviations shall identify the probable cause of the deviation and any corrective actions or preventative measures taken.

[45CSR§30-5.1.c.3.C.]

b. The permittee shall, in the reporting of deviations from permit requirements, including those attributable to upset conditions as defined in this permit, report the probable cause of such deviations and any corrective actions or preventive measures taken in accordance with any rules of the Secretary.
[45CSR§30-5.1.c.3.B.]

3.5.9. **New applicable requirements.** If any applicable requirement is promulgated during the term of this permit, the permittee will meet such requirements on a timely basis, or in accordance with a more detailed schedule if required by the applicable requirement.
[45CSR§30-4.3.h.1.B.]

3.5.10. The permitted facility (as indicated in Requirement 3.1.9) shall comply with all the applicable reporting provisions of the 40CFR63 Subpart GG National Emission Standards for Aerospace Manufacturing and Rework Facilities, provided, however, that compliance with any more stringent limitations set forth under Requirements of Sections 4.0 through 8.0, Sections 11.0 and 12.0 of this Permit, is demonstrated:

§ 63.753 Reporting requirements.

(b) Cleaning operation. Each owner or operator of a cleaning operation subject to this subpart shall submit the following information:

(1) Semiannual reports occurring every 6 months from the date of the notification of compliance status that identify:

(i) Any instance where a noncompliant cleaning solvent is used for a non-exempt hand-wipe cleaning operation;

(ii) A list of any new cleaning solvents used for hand-wipe cleaning in the previous 6 months and, as appropriate, their composite vapor pressure or notification that they comply with the composition requirements specified in § 63.744(b)(1) (Section 3.1.9 of this Permit);

(iii) Any instance where a noncompliant spray gun cleaning method is used;

(iv) Any instance where a leaking enclosed spray gun cleaner remains unrepaired and in use for more than 15 days; and

(v) If the operations have been in compliance for the semiannual period, a statement that the cleaning operations have been in compliance with the applicable standards. Sources shall also submit a statement of compliance signed by a responsible company official certifying that the facility is in compliance with all applicable requirements.

[45CSR34, 40 C.F.R. 63, Subpart GG; 45CSR13, R13-2037, B.7; 45CSR13, R13-2037, 4.5.2.; 45CSR13, R13-3334, 4.5.2; 45CSR13, R13-3534, 4.5.2]

3.5.11. Upon observing any visible emissions during an Opacity Evaluation as per Requirement 3.2.1 in excess of twenty percent (20%) opacity (but less than forty percent (40%) opacity) for any period or periods aggregating more than five (5) minutes in any sixty (60) minute period, or upon observing any visible emissions in excess of forty percent (40%) opacity, the Company shall submit a written report (including day and time of the observation, observation results, and corrective actions taken (if any)), certified by a responsible official, to the Director of the Division of Air Quality within ten (10) days after taking said reading. **[45CSR§30-5.1.c]**

3.6. Compliance Plan

3.6.1. None.

3.7. Permit Shield

3.7.1. The permittee is hereby granted a permit shield in accordance with 45CSR§30-5.6. The permit shield applies provided the permittee operates in accordance with the information contained within this permit.

3.7.2. The following requirements specifically identified are not applicable to the source based on the determinations set forth below. The permit shield shall apply to the following requirements provided the conditions of the determinations are met.

(a) 45CSR21– Regulation to Prevent and Control Air Pollution from the Emission of Volatile Organic Compounds. The facility is not located in a county that is currently subject to 45CSR21, and is therefore currently exempt from this regulation.

(b) 40CFR63, Subpart PPP – National Emission Standards for Polyether Polyol Production. The facility manufactures Terathane Polyethylene Glycol Block Copolymer (TPEG), which is a Polyether Polyol. However, the operation is exempted from this MACT because there are no HAPs used or generated during the manufacturing operation.

(c) 40CFR63, Subpart GGGGG – National Emission Standards for Site Remediation. The facility currently has two sites under remediation for groundwater contamination. These sites are both CERCLA ("Superfund") sites and are thus exempt from the MACT requirements. The facility also has a third site, commonly referred to as Plant 2, which is currently being investigated under the RCRA corrective action program, that could potentially require some form of active groundwater remediation or treatment within the next five to ten years. This site would also be exempted since it is being managed under a RCRA corrective action.

(d) 40CFR63, Subpart WWWW – National Emission Standards for Reinforced Plastic Composites Manufacturing. The facility manufactures composite based rocket motor chambers and aircraft components. However, the facility is exempt from this MACT because none of the resin or fiber systems used, contain HAPs.

4.0. Ingredient Preparation Requirements (Plant 1 (Group 001) and Plant 2 (Group 00E))

4.1. Limitations and Standards

4.1.1. Maximum Cyclotrimethylene Trinitramine (RDX) and Cyclotetramethylene Tetranitramine (HMX) production from sources 1-3S, 1-8S and 1-9S in Buildings 262 and 374 shall not exceed 3668 tons/year. Compliance with the production limit shall be determined using a rolling yearly total. A rolling yearly total shall mean the sum of the production of (RDX) and (HMX) at any given time for the previous twelve (12) consecutive calendar months.
[45CSR13, R13-1455, A.1]

4.1.2. Emissions of particulate matter from the filter vent, Emission Point ID 1-7E, used to control emission from the fluid energy, shall not exceed one (1) lb/hr of particulate matter (RDX and HMX).

Emission Point ID	Pollutant	Hourly Emissions (Lb/Hr)
1-7E RDX Grinding Mill-374	PM (Cyclotrimethylene Trinitramine (RDX) and Cyclotetramethylene Tetranitramine (HMX))	1

[45CSR13, R13-1455, A.2]

4.1.3. Emissions of VOC from the blender/dryer condenser vent, Emission Point ID 1-6E, shall not exceed 0.73 lbm/hr.

Emission Point ID	Pollutant	Hourly Emissions (Lb/Hr)
1-6E Blender/Dryer Condenser Vacuum Pump-374	VOC	0.73

[45CSR13, R13-1455, A.3]

4.1.4. The fluid energy mill, permitted under R13-0621 (Source 1-3S), shall be utilized for production only when the fluid energy mill permitted, under R13-1455 (Source 1-9S), is not operating.
[45CSR13, R13-1455, A.4]

4.1.5. Emissions of particulate matter from Emission Point ID 1-9E and 1-12E, the discharge vents of the filter units used to control emissions from the handling and weighing area, shall not exceed 1.0 lb/hr of lead citrate or lead sesquioxide per emission point and shall be controlled at all times using the Dust Control Filter Systems (ID# 1-5C and 1-6C).

Emission Point ID	Pollutant	Hourly Emissions (Lb/Hr)
1-9E	Lead Citrate or Lead Sesquioxide (PM)	1
1-12E	Lead Citrate or Lead Sesquioxide (PM)	1

[45CSR13, R13-1694, A.1]

4.1.6. Emissions of Heptane (VOC) from Emission Point ID 1-10E, shall not exceed 2.0 lb/hr.

Emission Point ID	Pollutant	Hourly Emissions (Lb/Hr)
1-10E Mix Bowl-384	Heptane (VOC)	2

[45CSR13, R13-1694, A.2]

4.1.7. After all liquid VOC has been evaporated from the mix bowl, Emission Point 1-10E shall be valved shut and Emission Point 1-11E (the condenser) is opened. The mix bowl shall then be evacuated to remove the VOC vapors in the free volume of the mix bowl and associated plumbing and the VOC vapors shall pass through the condenser. Emissions of VOC from Emission Point ID 1-11E (the condenser) shall not exceed 2.0 lb/hr.

Emission Point ID	Pollutant	Hourly Emissions (Lb/Hr)
1-11E Condenser 1-7C	VOC	2

[45CSR13, R13-1694, A.3]

4.1.8. The VOC evaporation process from the mix bowl, source 1-14S, shall operate a maximum of 2,080 hr/yr.
[45CSR13, R13-1694, A.4]

4.1.9. A maximum of 500 pounds/batch of lead salt paste utilizing 250 pounds/batch of lead citrate or lead sesquioxide shall be charged per batch.
[45CSR13, R13-1694, A.5]

4.1.10. To determine compliance with Requirement 4.1.5, the permittee shall be subject to announced and unannounced enforcement and compliance inspections. These inspections shall be performed by the Director or his/her duly authorized representative.
[45CSR13, R13-1694, B.1]

4.1.11. Liquid Nitrate Ester Solution Sparging operations shall be in accordance with the following:

a. The methylene chloride emission control system (consisting of two cryogenic recovery systems), referenced in Mr. G. H. Moody's letter of December 19, 1986 (see Attachment 1), shall be in operation during sparging operations in the Liquid Nitrate Ester Solution Facility (Emission Point 1-4E or 1-13E, Control Device ID 1-2C or 1-10C - Cryogenic Recovery System at building 352) at all times, excepting only periods of emergency repairs for the control equipment and unanticipated control equipment failure for reasons beyond the reasonable control of the permittee, and should achieve a minimum recovery of 80% of the VOC released by the sparging operation;

b. In the event that the control equipment is inoperable, the production unit shall be shut down as expeditiously as possible. Recognizing the potentially reactive nature of the production units products, however, in-process material may continue to be processed;

c. The permittee shall not begin operation of the production unit when the control equipment is not in operation without being granted a variance by the Director;

d. Additionally, only one cryogenic recovery system may be run in recovery mode at any time. Any concurrent use would be limited to use of one unit in defrost mode and one unit in recovery mode; and

e. For all periods in which control equipment or measures are inoperable or malfunctioning, the permittee shall not operate the related production equipment unless the Company is granted a variance pursuant to 45CSR§27-12.1.

[45CSR13, R13-0898, 4.1.1]

4.1.12. The aggregate annual methylene chloride emission limit from sparging operations, as controlled by 1-2C and 1-10C, and as emitted through vent ID# 1-4E and 1-13E, is 3,990 pounds per a rolling twelve month period. **[45CSR13, R13-0898, 4.1.2]**

4.1.13. (1) The Gustafson Grinder System, Source E-1S, located in Building 2003, shall be operated with the cyclone collector and dust collector systems at all times.
(2) Production shall not exceed 1,456 tons per year.

[45CSR13, R13-0401, A.6]

4.2. Monitoring Requirements

4.2.1. None.

4.3. Testing Requirements

4.3.1. To determine compliance with the emission limitation as set forth in Requirements 4.1.2, 4.1.3, 4.1.5, 4.1.6 and 4.1.7 above, test(s) shall be conducted in accordance with Requirements 3.3.1 and 3.3.2 contained herein. **[45CSR§30-5.1.c, 45CSR13, R13-1455, B.2, 45CSR13, R13-1694, B.3]**

4.3.2. Upon the Director's request, the permittee shall submit to the Director a detailed plan and test protocol for approval of methods to demonstrate compliance with the emission limits set forth in Requirement 4.1.12. The Director reserves the right to require the application of any specific valid test or emissions monitoring methods for the determination of TAP emissions from this source. **[45CSR13, R13-0898, 4.3.1]**

4.4. Recordkeeping Requirements

4.4.1. For the purpose of determining compliance with the maximum production limit set forth in Requirement 4.1.1, and also with emission limits set forth in Requirements 4.1.2, 4.1.3 and 4.1.5, the applicant shall maintain a monthly record of the amount of production of Cyclotrimethylene Trininitramine (RDX) and Cyclotetramethylene Tetranitramine (HMX), and total monthly production of both (RDX and HMX) in tons, and also add the monthly production to get a yearly total production in a manner similar to Attachment A of the Permit R13-1455A, and also calculate pounds of VOC emitted, from each emission point, to the atmosphere on a monthly basis. Such calculations for Emission Point 1-6E shall be based upon accurate determinations or tests to establish condenser efficiency. Said records shall be maintained on site for a period of at least five (5) years and upon request of the Director or his/her duly authorized representative shall be certified and made available to the Division of Air Quality. **[45CSR13, R13-1455, B.1 and 45CSR§30-5.1.c]**

4.4.2. For the purpose of determining compliance with the conditions set forth in Requirements 4.1.4, the permittee shall maintain records of the operating times on a daily basis (start time and end time) of source 1-3S and source 1-9S, in a manner similar to Attachment B of the Permit R13-1455A. **[45CSR13, R13-1455, B.3]**

4.4.3. For the purpose of determining compliance with the provisions set forth in Requirements 4.1.6, 4.1.7, 4.1.8 and 4.1.9 above, the permittee shall maintain a record which at a minimum contains the following information (as per Attachment A of the Permit R13-1694A):

a) date and the hours operated each day,

b) the quantity weighed of lead citrate or lead sesquioxide each day in the handling area,

c) the pounds of VOC emitted, from each emission point, to the atmosphere each day. Such determination shall be based upon accurate determinations or tests to establish condenser efficiency.

Said record shall be maintained on site for a period of at least five years and shall be certified and made available to the Director or his/her duly authorized representative upon request.

[45CSR13, R13-1694, B.2]

4.4.4. To determine compliance with the production limits set forth Requirement 4.1.13, the permittee shall keep records of the amount of production on a rolling yearly total. A rolling yearly total shall mean the amount of production at any given time for the previous twelve (12) consecutive calendar months. This information, shall be recorded in a manner that, at a minimum, contains the same information as Attachment B of the Permit R13-0401B (Production of Gustafson Grinder System in Building 2003): monthly records of Gustafson Grinder System rolling yearly production (in tons per year), and shall be kept on site for a period of five years and certified records shall be made available for inspection by the Director or a duly authorized representative of the Director upon request.
[45CSR13, R13-0401, B.4]

4.4.5. To demonstrate compliance with the Requirements 4.1.2, 4.1.5 and 4.1.13 the permittee shall conduct an annual preventative maintenance inspection/cleaning/replacement/refurbishment of the bags, filters, bag connection, and dust hoppers, as appropriate, of the baghouses and HEPA Filter Systems at each emission point specified, in order to ensure proper operation of the control devices. Records shall be maintained on site stating the date and time of each control device annual preventative maintenance activity, the results and all corrective actions taken.
[45CSR§30-5.1.c]

4.4.6. To demonstrate compliance with the Requirement 4.1.12 the permittee shall maintain records of the amounts of methylene chloride sparged per batch as well as the quantity of methylene chloride recovered and drummed for reuse. These records shall be used to determine losses of methylene chloride. Compliance with the annual emission limit shall be demonstrated using a rolling yearly total. Rolling yearly total means the sum of methylene chloride emissions generated by the sparging operations over the previous twelve (12) consecutive calendar months. Records shall be maintained on site and shall be certified and made available to the Director or his/her duly authorized representative upon request.
[45CSR13, R13-0898, 4.2.2]

4.4.7. To demonstrate compliance with the Requirements 4.1.11, the permittee shall maintain records of the sparging operations and Cryogenic Recovery system operation and maintenance.
[45CSR13, R13-0898, 4.2.1]

4.5. Reporting Requirements

4.5.1. Upon the discovery of any Toxic Air Pollutant (as defined under 45CSR27) not addressed in this Permit and the emissions of which is not known as of the issuance date, the permittee shall notify the Director in writing within fifteen (15) days of such discovery. Unless the Director determines these emissions to be insignificant,

the permittee shall submit a compliance program for control of such emissions within sixty (60) days of the date of notification. Upon a determination by the Director that the proposed compliance program represents BAT, the Director shall, in his or her discretion, consider such program for a consent order and shall determine the conditions to be met for approval and entry of such consent order.
[45CSR13, R13-0898, 4.5.1]

4.6. Compliance Plan

4.6.1. None.

5.0. Chamber Preparation Requirements (Plant 1 (Group 002) and Plant 2 (Group 00F))

5.1. Limitations and Standards

5.1.1. The emissions, from Emission Point 2-9E, to the atmosphere shall not exceed the following emission rates:

Emission Point ID	Pollutant	Emission Rate	
		lb/hr	lb/yr
2-9E Walk-In Spray Booth-167	Particulate Matter (PM)	0.408	41.09
	Volatile Organic Compound (VOC)	9.27	1120.2
	Hazardous Air Pollutant (HAP)	3.16	450.19

[45CSR13, R13-2037, A.1]

5.1.2. Control Device 2-7C, to be utilized for the purpose of controlling particulate matter emissions from Emission Point 2-9E, shall consist of a Research Products Corp. Series 3000 RP Paint Arrestors Filter, or other filter of comparable control efficiency.
[45CSR13, R13-2037, A.2]

5.1.3. For the purpose of determining compliance with Requirement 5.1.2 above, the permittee will be subject to announced and unannounced compliance and enforcement inspection by the Director or his/her duly authorized representative. If at any time the permittee fails to comply with the conditions as set forth in Requirement 5.1.2 above, the permittee shall notify the Director or his/her duly authorized representative of such non-compliance and may be subject to civil and/or criminal penalties for each violation.
[45CSR13, R13-2037, B.3]

5.1.4. Particulate Matter (PM_{10}) and Volatile Organic Compound (VOC) emissions from the rocket motor chamber preparation process, Building 420, shall not exceed the hourly and annual limitations specified below:

Emission Point I.D.	Source Vented through this Point	Maximum PM10 Emission Limitation		Maximum VOC Emission Limitation	
		(lb/hr)	(lb/yr)	(lb/hr)	(lb/yr)
2-10E Fume Hood for CBL-420	Exhaust Hood (2-12S) - for ingredient mixing of casebond liner mixtures and housing dip coating components for interior tooling for Hellfire motors.	Neg.	Neg.	0.67 (2)	450 (2)
2-11E Case Bond Liner Spray Booths-420	Common duct for spray booths applying casebond liner mixtures: - Booth 2-13S - 1st casebond liner mixture to be applied: Neoprene rubber based lacquer - Booth 2-14S - 2nd casebond liner mixture to be applied: Formvar or Butvar resin lacquer	0.012 (1)	14.6 (1)	3.7 (3)	7750 (3)
2-12E Drying Oven - 420	Neoprene and Formvar or Butvar Drying Oven (2-15S)	0	0	0.19 (4)	53.3 (4)
Total		0.012	14.6	4.6	8253

(1) Emissions after controls. Controlled particulate emissions are calculated based on 40% overspray and a 90% control device removal efficiency. The control device is a filter bank of 6 disposable polyester fiber filters.

(2) VOC emissions from exhaust hood 2-12S are based on the following assumptions:
- Two percent (2%) by weight of the volatile ingredients for the making of casebond liner stock solution and lacquers is lost through the hood during weigh out and mixing operations
- Forty-five percent (45%) by weight of the volatile ingredients from the dip coating of Hellfire rods is lost through the hood exhaust. Five percent (5%) by weight is lost through the oven. The remaining 50% is collected for waste disposal.
- One hundred percent (100%) by weight of the MEK used for nozzle and insulator bonding is lost through the exhaust hood.

(3) VOC emissions from the two (2) spray booths are based on the following assumptions:
- Spray Booths 2-13S (Neoprene) and 2-14S (Butvar) -Twenty five percent (25%) by weight of the n-propyl bromide used for cleanup is emitted. The remaining material will be collected for reuse or waste disposal.
- Spray Booth 2-14S (Formvar) - Fifty percent (50%) by weight of the Toluene/Ethanol (60/40) used for cleanup of formvar spray equipment is emitted. The remaining material will be collected for reuse or waste disposal.

(4) Five percent (5%) by weight of the volatile ingredients from the dip coating of Hellfire rods is lost through the oven.

[45CSR13, R13-2246, A.1]

5.1.5. Emissions to the atmosphere from the Case Bond Liner Booth (Sparrow Line), source F-12S, through emission point F-9E, located in Building 2014, shall be limited as follows:

Emission Point ID	Pollutant	Emission Limit	
		lb/hr	ton/yr
F-9E Case Bondliner Paint Booth (Intermediate Line) - 2014	VOC	6.0	0.5
	HAP	2.0	0.5
	PM	No Hourly Limit	0.1

[45CSR13, R13-0401, A.4.]

5.1.6. Emissions to the atmosphere from the Sparrow Vertical Paint Booth, source F-7S, through emission point F-5E, located in Building 2014, shall be limited as follows:

Emission Point ID	Pollutant	Emission Limit	
		lb/hr	ton/yr
F-5E Vertical Spray Booth - Paint (Intermediate Line) - 2014	VOC	6.0	1.0
	HAP	2.0	1.0
	PM	No Hourly Limit	0.1

[45CSR13, R13-0401, A.7]

5.1.7. Emissions from the permitted facilities shall not exceed the following limitations:

Emission Point ID	Pollutant	Emission Rate
		lb/hr
F-14E - Abrasive Blaster	Particulate Matter	0.1

Emission Point ID	Pollutant	Emission Rate	
		lb/hr	TPY
F-16E - Internal Spray Booth	Volatile Organic Compounds (VOC)	3.00	0.20
	Particulate Matter (PM)	0.10	0.10

Potential HAPs which may be included in bondliner ingredients include: dimethyl formamide, ethyl benzene, formaldehyde, hexane, methanol, methyl ethyl ketone (MEK), methyl isobutyl ketone (MIBK), methylene diphenyl diisocyanate (MDI), toluene, toluene diisocyanate (TDI), trichlorobenzene-1,2,4, xylene, and chromium or lead compounds. No specific VOC-HAP shall be emitted in a quantity greater than 2.0 lb/hr.

Emission Point	Pollutant	Emission Rate	
		lb/hr	TPY
F-18E - Paint Spray Booth	Volatile Organic Compounds (VOC)	3.00	0.50
	Particulate Matter (PM)	0.10	0.10

Potential HAPs which may be included in paint ingredients include: dimethyl formamide, ethyl benzene, formaldehyde, hexane, methanol, methyl ethyl ketone (MEK), methyl isobutyl ketone (MIBK), methylene diphenyl diisocyanate (MDI), toluene, toluene diisocyanate (TDI), trichlorobenzene-1,2,4, xylene, and chromium or lead compounds. No single HAP species shall be emitted in a quantity greater than 2.0 lb/hr. If other HAPs are used, notification to the Division of Air Quality shall be made within 30 days.

Emission Point	Pollutant	Emission Rate	
		lb/hr	TPY
F-17E - Paint Dry Room	Volatile Organic Compounds (VOC)	0.3	0.05
	Particulate Matter (PM)	0.01	0.01

Potential HAPs which may be included in paint ingredients include: dimethyl formamide, ethyl benzene, formaldehyde, hexane, methanol, methyl ethyl ketone (MEK), methyl isobutyl ketone (MIBK), methylene diphenyl diisocyanate (MDI), toluene, toluene diisocyanate (TDI), trichlorobenzene-1,2,4, xylene, and chromium or lead compounds. No single HAP species shall be emitted in a quantity greater than 2.0 lb/hr. If other HAPs are used, notification to the Division of Air Quality shall be made within 30 days.
[45CSR13, R13-1047, A.1]

5.2. Monitoring Requirements

5.2.1. None.

5.3. Testing Requirements

5.3.1. To determine compliance with the emission limitation as set forth in Requirement 5.1.1 above, test(s) shall be conducted in accordance with Requirements 3.3.1 and 3.3.2 contained herein.
[45CSR§30-5.1.c & 45CSR13, R13-2037, B.2]

5.4. Recordkeeping Requirements

5.4.1. For the purpose of determining compliance with emission limitations set forth in Requirements 5.1.1 (Emission Point 2-9E), 5.1.5 (Emission Point F-9E), 5.1.6 (Emission Point F-5E), 5.1.7 (Emission Points F-16E and F-18E) above, the permittee shall maintain monthly and yearly records. Compliance with the hourly emission rates shall be determined using the average hourly emission rate for each month. Compliance with the annual emission rates shall be determined using a rolling yearly total. A rolling yearly total shall mean the total emission rates emitted at any given time for the previous twelve (12) consecutive calendar months. Said records shall be maintained in a manner similar to: 1) Attachment A of the Permit R13-2037A (Monthly Usage/ VOC Emissions/ PM Emissions Report) and shall include types and amounts of coating materials sprayed each month (in gallons), hours of operation, VOC content (in lbs VOC/gal), VOC emissions (in lbs and in lbs/hr) per each coating, PM content (in lbs PM/gal), PM emissions (in lbs and lbs/hr) per each coating, and total of VOC and PM emissions (in lbs and in lbs/hr) for all coatings, 2) Attachment C of the Permit R13-2037A (Annual VOC Emissions/ PM Emissions Report) and shall include records of VOC and PM emissions (in lbs) on a monthly basis and total annual VOC and PM emissions, and 3) Attachment E of the Permit R13-2037A (Annual HAP emissions Report) and shall include records of VOC HAPs and PM HAPs annual emissions (in lbs/yr) and a sum of VOC HAPs and PM HAPs annual emissions. Said records shall be maintained on site by the permittee for a period of at least five (5) years. Said records shall be made available and certified upon request of the Director or his or her duly authorized representative.
[45CSR13, R13-2037, B.1, R13-0401, B.3, R13-1047, B.1 and 45CSR§30-5.1.c]

5.4.2. For the purpose of determining compliance with the PM_{10} limitations set forth in Requirements 5.1.4. (Emission Point 2-11E) the company shall maintain a filter replacement logsheet for the casebond filter bank. For the purpose of determining compliance with the PM limitations set forth in Requirements 5.1.1. (Emission Point 2-9E), 5.1.5. (Emission Point F-9E), 5.1.6. (Emission Point F-5E) and 5.1.7. (Emission Point F-16E and F-18E) the company shall maintain a filter replacement logsheet for the filter bank. An example logsheet is given in Attachment 1of the Permit R13-2246A (Filter Replacement Logsheet) and it includes filter change-out date and comments (about old/new filters, etc.). This logsheet shall be maintained on site for a period of five (5) years. Certified copies of the logsheet shall be made available to the Director or his duly-authorized representative upon request.
[45CSR13, R13-2246, B.3 and 45CSR§30-5.1.c]

5.4.3. For the purpose of determining compliance with the PM_{10} and VOC limitations set forth in Requirement 5.1.4., the company shall maintain daily coating usage records on spray booths 2-13S and 2-14S which collectively emit through emission point 2-11E. Daily and year-to-date (YTD) VOC emissions shall be calculated on a monthly basis using these records. Because PM_{10} emissions after controls are relatively small, these emissions shall be calculated only once a year. Example logsheets are given in Attachment 2 of the Permit R13-2246A (Daily Spray Booth Logsheets) and for each booth include the following: date, program/contract, start time, end time, number of units sprayed, hours operated, grams sprayed per unit, total daily usage (in lb/day), peak hourly usage (in lb/hr), year-to-date usage (in lbs). These logsheets shall be maintained on site for a period of five (5) years. Certified copies of the logsheets shall be made available to the Director or his duly-authorized representative upon request.
[45CSR13, R13-2246, B.4]

5.4.4. For the purpose of determining compliance with the emission limitations set forth in Requirement 5.1.4, the company shall maintain a daily record of batch production. These records shall be used to calculate exhaust hood (Emission Point 2-10E) and drying oven (Emission Point 2-12E) VOC emissions. Because the VOC emissions are relatively small, these emissions shall be calculated only once a year. Example logsheets (Daily and YTD Batch Count Sheets) are given in Attachment 3 of the Permit R13-2246A, and include for each Hellfire Cases, Hellfire Rods (Mixing), Hellfire Rods (Dip Coating), Predator Cases, SFW Cases and TOW-2 Cases the following information: record date, number of batches daily and number of batches year-to-date for Formvar or Butvar Stock Solution (FSS/ BSS), Neoprene Stock Solution (NSS), Phenolic Resin Stock Solution (PRS), Formar or Butvar Lacquer (FL/BL), Neoprene Lacquer (NL), MEK for wipe cleaning nozzles (MEK), Spray Gun Cleanup with NPB and/or Spray Gun Cleanup with Toluene/Ethanol (60/40).

These logsheet shall be maintained on site for a period of five (5) years. Certified copies of the logsheets shall be made available to the Director or his duly-authorized representative upon request.
[45CSR13, R13-2246, B.5]

5.4.5. As per Requirement 5.4.1 and 5.4.3 above, VOC and/or HAP emission calculations shall be performed based on coating usage records and material safety data sheets information, assuming that 100 percent of all VOCs (both non-HAP and HAP) are emitted to the atmosphere.
[45CSR§30-5.1.c]

5.4.6. To demonstrate compliance with the Emission Point F-17E VOC emission limit set forth in Requirement 5.1.7, the permittee shall perform monthly calculations based on coating usage records (as per Requirement 5.4.1) for the coating booth F-23S (Emission Point F-16E) and paint spray booth F-25S (Emission Point F-18E).
[45CSR§30-5.1.c]

5.4.7. To demonstrate compliance with the Emission Point F-14E PM emission limit set forth in Requirement 5.1.7, and also to reduce PM emissions from the Emission Point F-6E, the permittee shall conduct an annual preventative maintenance inspection / cleaning / replacement / refurbishment of the bags, bag connection, and dust hoppers, as appropriate, of the baghouses at each emission point specified, in order to ensure proper operation of the Cyclone Dust Collectors F-4C and F-9C. Records shall be maintained on site stating the date and time of each baghouse's annual preventative maintenance activity, the results of the annual preventative maintenance activity, and all corrective actions taken.
[45CSR§30-5.1.c]

5.5. Reporting Requirements

5.5.1. None.

5.6. Compliance Plan

5.6.1. None.

6.0. Loading/Inspection/Final Assembly Requirements (Plant 1 (Group 006) and Plant 2 (Group 00J))

6.1. Limitations and Standards

6.1.1. Emissions to the atmosphere from each paint spray booth shall not exceed the following emission rates:

Source ID	Emission Point ID	VOC Emission Rates		Particulate Matter Emission Rates	
		lb/hr	TPY	lb/hr	TPY
6-4S Paint Spray Booth	6-2E	1	2.01	0.1	0.1

Area	Emission Point ID	VOC Emission Rates		Particulate Matter Emission Rates		Hazardous Air Pollutants	
		lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
Paint Spray Booth [6-6S]	6-4E	3.00	4.35	3.00	0.10	1.90	2.00
Paint Spray Booth [6-7S]	6-5E						
Paint Spray Booth [6-8S]	6-6E						
Paint Spray Booth [6-9S]	6-7E						

For the purpose of this Permit, VOCs shall have the meaning of "any organic compound which participates in atmospheric photochemical reactions", that is, any organic compound other than those the EPA Administration has designated as having negligible photochemical reactivity. Negligible photochemical reactive materials include: methane, ethane, methyl chloroform, methylene chloride, and some freons.
[45CSR13, R13-1782, A.1 and 45CSR13, R13-1798, A.1]

6.1.2 The minimum particulate collection efficiency of the filters used in the spray booth exhaust stack shall be 90% (Control Device ID 6-1C, 6-2C, 6-3C, 6-4C, 6-5C - Emission Points 6-2E, 6-4E, 6-5E, 6-6E, 6-7E).
[45CSR13, R13-1782, A.2 and 45CSR13, R13-1798, A.3]

6.1.3 Coatings to be utilized shall comply with 45CSR27.
No coating or solvent containing any hazardous air pollutant, as defined by West Virginia Legislative Rule 45CSR13, Section 15.1 and listed in Table 45-13A or any toxic air pollutant (TAP), as defined by West Virginia Legislative Rule 45CSR27, Section 2.10, shall be used without prior approval of the Director of the Division of Air Quality.
[45CSR13, R13-1782, A.3 and 45CSR13, R13-1798, A.4 and 5]

6.1.4 For the purpose of determining compliance with the minimum efficiency limit as set forth in Requirement 6.1.2. the permittee may be required by the Director or his/her duly authorized representative to provide any information deemed necessary to obtain the particulate collection efficiency of the filters used in the spray booth exhaust stack.
[45CSR13, R13-1782, B.3 and 45CSR13, R13-1798, B.3]

6.1.5 For the purpose of determining compliance with Requirement 6.1.3, the permittee will be subject to announced and unannounced compliance and enforcement inspection by the Director or his/her duly authorized representative. If at any time the permittee fails to comply with the limits as set forth in 45CSR27 - Table A, the permittee shall notify the Director of such accedence and may be required at the Director's request to employ a BAT (Best Available Technology) plan to all chemical processing units emitting toxic air pollutants.
[45CSR13, R13-1782, B.4 and 45CSR13, R13-1798, B.4]

6.1.6 Emissions to the atmosphere from the Interior Coating Spray Line, Source J-4S, through Emission Point J-2E, located in Building 2011, shall be limited as follows:

Emission Point ID	Pollutant	Emission Limit	
		lb/hr	ton/yr
J-2E Interior Coating Spray Line - 2011	VOC	6	0.5
	HAP	2	0.5
	PM	No Hourly Limit	0.1

[45CSR13, R13-0401, A.5]

6.1.7 The following are the known HAPs to be emitted from the source:

Antimony Compounds
Chromium Compounds
Ethyl Benzene
Formaldehyde
Glycol Ethers
Hexane
Isocyanates (HDI, MDI, TDI)
Lead Compounds
Methanol
MIBK
Phenol
Styrene
Toluene
Xylene

Use of any surface coating containing any constituent identified in Section 112(b) of the 1990 Clean Air Act Amendments as a HAP and not listed above shall be in accordance with the following:

a. The permittee shall notify the Director in writing of the surface coating to be used and the HAP(s) contained therein within thirty (30) days of the initial use of the surface coating. Additionally, an MSDS sheet for the surface coating shall be supplied at this time to the Director.

b. An estimate of emissions associated with the use of the surface coating shall be determined and incorporated into the record keeping requirements contained herein.

c. Compliance with the annual emission limits shall be determined using rolling yearly totals.

For the purposes of this permit, surface coatings shall be defined as a material applied onto, or impregnated into, a substrate for protective, decorative, or functional purposes. For the purpose of this permit, coatings shall be defined as stains, thinners, solvents, sealers, varnishes, paints, primers, catalysts, acrylics, lacquers, or any substance involved in spray booth operations, cleaning, or maintenance.

[45CSR13, R13-1798, A.2]

6.1.8 The maximum number of painted units is 480 units per year. Compliance with the annual usage shall be determined using a twelve (12) month rolling total. A twelve (12) month rolling total shall mean the sum of units painted at any given time for the previous twelve (12) consecutive months.
[45CSR13, R13-1798, A.6]

6.2. Monitoring Requirements

6.2.1. None.

6.3. Testing Requirements

6.3.1. To determine compliance with the emission limitations as set forth in Requirement 6.1.1 above test(s) shall be conducted in accordance with Requirements 3.3.1 and 3.3.2 contained herein.
[45CSR13, R13-1782, B.2 and 45CSR13, R13-1798, B.2]

6.4. Recordkeeping Requirements

6.4.1. For the purpose of determining compliance with emission limitations set forth in Requirement 6.1.1 (Emission Points 6-4E, 6-5E, 6-6E and 6-7E and VOC emission limits for Emission Point ID 6-2E) the company shall maintain daily, monthly, and yearly records. Compliance with the emission limits shall be determined using a rolling yearly total. A rolling yearly total shall mean the sum of each pollutant emitted at any given time for the previous twelve (12) consecutive calender months. Records shall be maintained in a manner as provided in Attachment A, B and C of this permit. Said records shall be maintained on site by the permittee for a period of at least five (5) years. Said records shall be made available and certified upon request of the Director or his or her duly authorized representative.
[45CSR13, R13-1782, B.1 and 45CSR13, R13-1798, B.1]

6.4.2. To determine compliance with the emission limits set forth in Requirement 6.1.6 (Emission Point J-2E), the permittee shall keep records of the hourly and annually emission rates. Compliance with the hourly emission rates shall be determined using the average hourly emission rate for each month. Compliance with the annual emission rates shall be determined using a rolling yearly total. A rolling yearly total shall mean the total emission rates emitted at any given time for the previous twelve (12) consecutive calender months. This information shall be kept on site for a period of five years and certified records shall be made available for inspection by the Director or a duly authorized representative of the Director upon request.
[45CSR13, R13-0401, B.3]

6.4.3. As per Requirement 6.4.1 and 6.4.2 above, VOC and/or HAP emission calculations shall be performed based on coating usage records and material safety data sheets information, assuming that 100 percent of all VOCs (both non-HAP and HAP) are emitted to the atmosphere).
[45CSR§30-5.1.c]

6.4.4. For the purpose of determining compliance with the PM_{10} limitations set forth in Requirements 6.1.1 (Emission Points 6-2E, 6-4E, 6-5E, 6-6E and 6-7E) and 6.1.6 (Emission Point J-2E) the company shall maintain a filter replacement logsheet for the Fabric Filters (filter change-out date and comments about old/new filters, etc.). An example logsheet is given in Attachment 1 to the Permit R13-2246A.
[45CSR§30-5.1.c]

6.5. Reporting Requirements

6.5.1. None.

6.6. Compliance Plan

6.6.1. None.

7.0. Mold Parts Cleanup Requirements (Plant 1 (Group 007) and Plant 2 (Group 00K))

7.1. Limitations and Standards

7.1.1. Heptane usage from the Mold Parts Wash Tanks, sources 10s (7-1S) and 11s (7-2S), in Building 151 and the Mold Parts Wash Tank, source 9s (K-3S), in building 8203, shall be limited to a combined total of 25,000 pounds per year (4,381.3 gallons).
[45CSR13, R13-0401, A.1]

7.1.2. The total combined heptane (VOC) emissions from sources 7-1S, 7-2S, and K-3S shall not exceed 12.5 tons per year.

Source ID	Emission Point ID	Heptane (VOC) Emission Limit, tons/yr
7-1S Parts Washer-151	7-1E	12.5
7-2S Parts Washer-151	7-2E	
K-3S Parts Washers-8203	K-1E	

[45CSR13, R13-0401, A.2]

7.1.3. The permittee may install the solvent recovery system, source K-5S in either Building 8203 or Building 151.
[45CSR13, R13-0401, A.3]

7.2. Monitoring Requirements

7.2.1. None.

7.3. Testing Requirements

7.3.1. None.

7.4. Recordkeeping Requirements

7.4.1. To determine compliance with heptane usage limits set forth in Requirement 7.1.1, the permittee shall keep records of the amount of heptane used using a rolling yearly total. A rolling yearly total shall mean the sum of the usage of heptane at any given time for the previous twelve (12) consecutive calender months. This information, shall be recorded in a manner that, at a minimum, contains the same information as Attachment A of the Permit R13-0401B (Heptane Usage in Buildings 151 and 8203): on a monthly basis record a yearly total of heptane usage for building 151 and for building 8203 (in gallons), and shall be kept on site for a period of five years and certified records shall be made available for inspection by the Director or a duly authorized representative of the Director upon request.
[45CSR13, R13-0401, B.1]

7.4.2. To determine compliance with the heptane (VOC) emission limit set forth in Requirement 7.1.2, a calculation shall be made utilizing the information required by Requirement 7.4.1 and information contained in the material safety data sheet for heptane, assuming that 100 percent of all heptane used is emitted to the atmosphere. This information, shall be kept on site for a period of five years and certified records shall be made available for inspection by the Director or a duly authorized representative of the Director upon request.
[45CSR13, R13-0401, B.2]

7.5. Reporting Requirements

7.5.1. None.

7.6. Compliance Plan

7.6.1. None.

8.0. GMLRS Rocket Motor Chamber Preparation Requirements – Plant 1 [emission point ID(s): Z-3E, Z-4E, Z-7E, Z-8E, Z-9E, Z-11E, Z-12E, Z-13E, Z-14E, Z-15E]

8.1. Limitations and Standards

8.1.1. VOCs and volatile HAP emissions from manufacturing of composite rocket motor casing in Building 256 shall not exceed 31.59 tons of VOCs per year with a daily VOC emission rate not to be exceeded of 243.1 lb per operating day; and total HAPs shall not exceed 5.84 tons of HAP per year. The permittee is permitted to operate the rocket motor casing line in Building 256 at the ABL in accordance with the following limitations as specified below:

(a) The permittee shall not exceed the following usage/losses limits by material for the denoted emission source except for application booths and mixing hoods. For application booth Z-8S, and Z-13S, the permittee may apply either of the noted material (specialty coatings) in either application booth given that compliance with the daily and annual limits are maintained for the respective materials (Chemlok and/or Bondliner (BL)). For the mixing hoods (Z-7S and Z-12S), the permittee may switch of the denoted coatings between the two hoods given that both compounds are not mixed in the same hood at the same time and that the compliance with the daily and annual limits are maintained for the respective materials (Chemlok and/or Bondliner (BL)). Compliance with the annual limits in the following table shall be demonstrated using a 12-month rolling total basis.

Table 8.1.1.a. Material Usage/Losses Limits				
Emission Source	Emission Point	Material	Usage/Loses Limits	
			Daily Limit (gal/day)	Annual Limit (gal/yr)
Z-1S	Fugitive	Frekote 700-NC	5	1,257
Z-2S	Fugitive	IPA	2	488
		MEK	1	244
Z-5S	Z-5E	IPA	8	1,853
Z-6S	Z-6E	IPA	2	98
Z-7S	Z-7E	Chemlok 205	2	49
		Chemlok 234	4	61
Z-8S	Z-8E	Chemlok 205	4	580
		Chemlok 234	2	630
		MEK	2	325
		Toluene	1	325
Z-9S	Z-9E	Chemlok 205	1	31
		Chemlok 234	1	33
Z-10S	Z-10E	IPA	8	1,853
Z-11S	Z-11E	IPA	1	98
Z-12S	Z-12E	BL-004	1	47
Z-13S	Z-13E	BL-004	4	784

Table 8.1.1.a. Material Usage/Losses Limits				
Emission Source	Emission Point	Material	Usage/Loses Limits	
			Daily Limit (gal/day)	Annual Limit (gal/yr)
Z-14S	Z-14E	BL-004	1	41
Z-16S	Fugitive	IPA	2	488

(b) The all coatings applied are to be compliant with the VOC and HAP content limitation of Subpart GG of 40 CFR 63 and requirements for Condition 3.1.9 as applicable.

(c) All cleaning operations and activities associated with this manufacturing operation are compliant with the requirements of Condition 3.1.9 as applicable.

(d) This permit does not restrict or limit the use of acetone.

[45CSR13, R13-3334, 4.1.1.]

8.1.2. PM, PM_{10} and PM HAP emissions from the application of primer or specialty coatings for the manufacturing of composite rocket motor casing in Building 256 shall not exceed 0.09 lb/operating day and 0.50 TPY. For purposes of limiting the facility's emissions to the above-mentioned limits, the following conditions are established:

a. When primer or specialty coatings are being applied, each application booth (Z-8S, Z-13S) in which the coating is being applied in shall be operated in a manner that filter PM from the overspray of the coating is effectively captured by the filter media for the respective application booth. The filter media used in each application booth shall have a minimum filterable PM collection rating of 90% or greater. The permittee shall replace the filter media in accordance with the manufacturer's specifications.
[45CSR§7-5.1]

b. Compliance with the annual limitation of this condition will be satisfied by compliance with the requirements of this condition and compliance with the primer and specialty coating usage limitation of Condition 8.1.1 of this permit.

c. The drying station identified as Z-9S shall be equipped with an exhaust system that effectively captures the exhaust from the drying station and routes this stream to control device Z-5C before being released to the atmosphere at all times when components are in the drying station. Control device Z-5C shall be equipped with a filtration media that has a minimum collection efficiency of 90% or greater of filterable PM.
[45CSR§7-5.1.]

d. Exhaust of each case machining operation shall be captured and routed to the control device Z-4C before being released to the atmosphere at all time when any of the machining operations is in use. Control Device Z-4C shall be installed and maintained so as to achieve a minimum of 80% efficiency for filterable PM. The permittee shall replace the afterfilter media of this control device in accordance with the manufacturer's specifications.
[45CSR§7-5.1.]

e. PM emissions from the case machining operations shall not exceed 0.09 lb/hr.

f. Emission points Z-8E, Z-9E, Z-13E, Z-15E shall not exhibit visible emissions in excess of 20% opacity on a 6-minute average basis.
[45CSR§7-3.1]

[45CSR13, R13-3334, 4.1.2.]

8.2. Monitoring Requirements

8.2.1. The permittee for paint booths and related equipment (Emission Points Z-8E, Z-9E, and Z-13E) shall conduct fabric filter checks prior to each use of the equipment. These checks shall include review to ensure filters are properly fitted to the unit, that no holes exist, and that the filters are not overloaded. Any changes made to filters during the checks or any filter replacements shall be recorded. Records of such inspections and maintenance performed as result of any inspection shall be maintained in accordance with Condition 3.4.2 of this permit.
[45CSR13, R13-3334, 4.2.1.]

8.2.2. For the purpose of determining compliance with the PM limitations set forth in Condition 8.1.2, the permittee shall maintain a daily record of the either manometer reading or other differential pressure instrument across the filter element or control device for Emission Points Z-8E, Z-9E, and Z-13E, and Z-15E. Should a daily reading indicate filter media or other maintenance is required to restore proper operation of the respective control device, the permittee shall take a second reading once the element(s) has been replaced or when the requirement maintenance is complete. The permittee shall calibrate the manometer or other differential pressure instrument at least once every calendar year in accordance with the instrument manufacturer's procedures and specifications. Such records shall be maintained in accordance with Condition 3.4.2 of this permit.
[45CSR13, R13-3334, 4.2.2.]

8.2.3. For the purpose of determining compliance with the PM limitations set forth in Condition 8.1.2, the permittee shall maintain a continuous parameter monitoring system that monitors the differential pressure across Control Device Z-15E. Such a system shall continuously measure the differential pressure (pressure drop across) Control Device Z-15E. This system shall provide a visual and audible alarm to all operators in the case machining area. The permittee shall calibrate the manometer or other differential pressure instrument of this system at least once every calendar year in accordance with the instrument manufacturer's procedures and specifications. The permittee shall perform preventative maintenance and conduct a verification check on the continuously monitoring system at least once per calendar. Records all instances that the system alarm activated, corrective action taken for the instance, and maintenance performed on the system shall be maintained in accordance with Condition 3.4.2 of this permit.
[45CSR13, R13-3334, 4.2.3.]

8.2.4. For the purpose of determining compliance with the VOC and HAP emission limits set forth in Condition 8.1.1 the permittee shall maintain daily records of usage/losses of materials identified in Table 8.1.1.a of this permit by emission source for each operating day. By no later than the 15th of preceding month, the permittee shall determine the 12-month rolling total of the material usages/losses of each emission point in Table 8.1.1.a. Such records shall be maintained in accordance with Condition 3.4.2 of this permit.
[45CSR13, R13-3334, 4.2.4]

8.3. Testing Requirements

8.3.1. Reserved

8.4. Recordkeeping Requirements

8.4.1. Reserved.

8.5. Reporting Requirements

8.5.1. Any exceedance(s) of the allowable visible emission requirement for any emission source discovered during observation using 45CSR§7A must be reported in writing to the Director of the Division of Air Quality as soon as practicable, but within ten (10) calendar days, of the occurrence and shall include, at a minimum, the following information: the results of the visible determination of opacity of emissions, the cause or suspected cause of the violation(s), and any corrective measures taken or planned.
[45CSR13, R13-3334, 4.5.1]

8.6. Compliance Plan

8.6.1. None

9.0. GMLRS Rocket Motor Manufacture Requirements – Plant 3, Bldg. 3040 (Emission Unit IDs P3-1S, P3-2S and P3-3S).

9.1. Limitations and Standards

9.1.1. The following limitations and requirements are specific to the wash tanks identified as P3-1S, P3-2S, and P3-3S.

a. Total VOC emissions from P3-1S, P3-2S, and P3-3S shall not exceed 20.88 tons per year.

b. Compliance with the above VOC limit is satisfied if the actual usage of heptane is equal to or less than 7,000 gallons and actual usage of isopropyl alcohol (IPA) is equal to or less than 1,856 gallons during any consecutive 12-month rolling period.

c. To minimize fugitive VOC emissions from these wash tanks, the permittee shall keep the tanks covered at all times when not in use. Such covers shall consist of a conductive plastic sheeting with a minimum thickness of 3/16 of an inch and extends past the opening of the vessel with no gaps in the opening.

d. The permittee shall only use heptane or isopropyl alcohol in the wash tanks.

[45CSR13, R13-3408, 4.1.1]

9.1.2. The following limitations and requirements are specific to the activities performed in Disassembly Work Areas.

a. VOC emissions due to the hand-wiping of components during the disassembly process step shall not exceed 6.49 tons per year.

b. Compliance with the above limit is satisfied when actual usage of isopropyl alcohol (IPA) is equal to or less than 750 gallons and actual usage of heptane is equal to or less than 1,406 gallons during any consecutive 12-month rolling period.

[45CSR13, R13-3408, 4.1.2]

9.1.3. The following limitations and requirements are specific to the activities performed in the Igniter/Nozzle Assembly and Final Assembly Work Areas.

a. VOC emissions due to the final assembly process step shall not exceed 2.17 tons per year.

b. Compliance with the above limit is satisfied when actual usage of isopropyl alcohol (IPA) is equal to or less than 4,331 gallons during any consecutive 12-month rolling period.

c. VOC emissions due to the application of packaging stenciling inks shall not exceed 1.06 tons per year.

d. HAP emissions due to the application of packaging stenciling inks shall not exceed 0.19 tons per year.

[45CSR13, R13-3408, 4.1.3]

9.2. Monitoring Requirements

9.2.1. The permittee shall monitor and record the actual usage of heptane and isopropyl alcohol used in each of the process areas; Wash Tanks, Disassembly Area, Igniter/Nozzle Assembly and Final Assembly Work Areas each calendar month and 12-month rolling total usage of each solvent for each area to demonstrate compliance with the VOC limits in Conditions 9.1.1, 9.1.2, and 9.1.3. Such records shall be maintained in accordance with Condition 3.4.2.
[45CSR13, R13-3408, 4.2.1]

9.2.2. The permittee shall determine, on a monthly basis, the VOC and total HAP emissions emitted due to application of stencil inks to packaging crates to demonstrate compliance with the VOC and HAP emission limits in items c. and d. of Condition 9.1.3. Such records shall include the amount of each coating applied, VOC content of each coating applied, and total HAP content of each coating applied during the corresponding month. All records shall be maintained in accordance with Condition 3.4.2.
[45CSR13, R13-3408, 4.2.2]

9.3. Testing Requirements

9.3.1. None.

9.4. Recordkeeping Requirements

9.4.1. None.

9.5. Reporting Requirements

9.5.1. None.

9.6. Compliance Plan

9.6.1. None.

10.0. GMLRS Rocket Motor Manufacture Requirements– Plant 3, Bldg. 3030 (Emission Unit ID P3-10S).

10.1. Limitations and Standards

10.1.1. The following limitations and requirements are specific to the mixer identified as P3-10S.

a. The permittee shall install and operate a portable control device identified as C1 to capture fugitive PM while introducing aluminum powder to the mixer. This portable control device shall be maintained and operated in accordance with the manufacturer's written maintenance and operating procedures. **[45CSR§7-5.1]**

b. The vacuum pump for the mixer shall be equipped and maintained with a liquid seal to minimize emissions from the mixer.

c. The mixer, which includes the structure it is located within and the vent for the vacuum pump, shall not exhibit any visible emissions. The vacuum pump shall be maintained and operated in accordance with the manufacturer's written maintenance and operating procedures. **[45CSR§7-3.1]**

d. VOC emissions due to cleaning the mixer shall not exceed 1.57 tons per year.

e. Compliance with the VOC limit in item d. of this condition shall be satisfied through actual usage of QED cleaning solvent at 500 gallons or less during any consecutive 12-month period.

[45CSR13, R13-3408, 5.1.1]

10.2. Monitoring Requirements

10.2.1. The permittee shall monitor and record the amount of solvent used each month to clean the mixer and maintain a 12-month rolling total of solvent consumed. Such records shall be maintained in accordance with Condition 3.4.2. **[45CSR13, R13-3408, 5.2.1]**

10.3. Testing Requirements

10.3.1. None.

10.4. Recordkeeping Requirements

10.4.1. The permittee shall record all instances that the portable control device identified as C1 was not operated during the charging of aluminum powder into the mixer. Such records shall include date, time, and reason the device was not operated. These records shall be maintained in accordance Condition 3.4.2. **[45CSR13, R13-3408, 5.3.3]**

10.5. Reporting Requirements

10.5.1. None.

10.6. Compliance Plan

10.6.1. None.

11.0. Requirements for Plant 4 Downdraft Paint Booths (Emission Unit IDs: P4-1S through P4-4S) and Mixing Paint Booths (Emission Unit IDs: P4-5S through P4-7S)

11.1. Limitations and Standards

11.1.1. VOCs and volatile HAP emissions from manufacturing of the aerospace product in Building 4020 shall not exceed 14.77 tons of VOCs per year and total HAPs shall not exceed 8.03 tons of HAP per year. The permittee is permitted to operate this missile component manufacturing line in Building 4020 at the ABL in accordance with the following limitations as specified below:

(a) The permittee shall not exceed the following usage limits by material for the denoted emission point. Compliance with the annual limits in the following table shall be demonstrated using a 12-month rolling total basis.

Table 11.1.1.a. Material Usage/Losses Limits

Emission Point	Material	Daily Usage (ounces/day)	Annual Usage (gal/yr)
Booth 1			
P4-1E	Toluene	96	57
P4-1E	Isopropyl Alcohol (IPA)	96	57
P4-1E	ZEP Industrial Alkaline Cleaner (BZ7407)	48	28
P4-1E	PR-182 or PR-188	24	15
P4-1E	PR-2001 B-2 or PR-1826 Class B	108	54
P4-1E	PR-1764 B-2	144	85
P4-1E	MIL-C-8514 (Randolph or SW)	72	43
P4-1E	TS12983 Primer or MIL-PRF-23377K (PPG or Chemsol)	180	106
Booths 2 and 3			
P4-2E and P4-3E	SS4155 Primer	24	24
P4-2E and P4-3E	PR-9921	9,216	5,400
P4-2E and P4-3E	Isopropyl Alcohol (IPA)	3,072	1800
Booth 4			
P4-4E	Dowsil Q1-2650	48	15

Table 11.1.1.a. Material Usage/Losses Limits			
Emission Point	**Material**	**Daily Usage (ounces/day)**	**Annual Usage (gal/yr)**
P4-4E	MIL-PRF-23377K (PPG or Chemsol)	180	106
P4-4E	MIL-P-85285 #36375 - H	192	113
P4-4E	MIL-P-85285 #33538 - H	48	29
P4-4E	MIL-P-85285 #30117 - SW	48	29
P4-4E	Enthone 50-700R/20-A/AD-2002	48	29
P4-4E	MIL-P-85285 #35109 - C	48	29

(b) All coatings applied are to be compliant with the VOC and HAP content limitation of Subpart GG of 40CFR63 and requirements for Condition 3.1.9 as applicable.

(c) All cleaning operations and activities associated with this manufacturing operation are compliant with the requirements of Condition 3.1.9 as applicable.

(d) The usage limits for Booths 2 and 3 are combined.

[45CSR13, R13-3651, 4.1.1]

11.1.2. PM, PM_{10}, $PM_{2.5}$ and PM HAP emissions from the application of primer or specialty coatings and sanding activities needed to manufacture aerospace component systems in Building 4020 shall not exceed 0.04 TPY. For purposes of limiting the facility's emissions to the above-mentioned limits, the following conditions are established:

(a) When coatings are being applied or during sanding activities, each paint booth (P4-1S, P4-2S, P4-3S, and P4-4S) shall be operated in a manner that filterable PM from the overspray of the coating and PM (dust) from any sanding activities is effectively captured by the filter media for the respective application booth. The filter media used in each application booth shall have a minimum filterable PM collection rating of 95% or greater. The permittee shall replace the filter media in accordance with the manufacturer's specifications.
[45CSR§7-5.1]

(b) Compliance with the annual limitation of this condition will be satisfied by compliance with the requirements of this condition and compliance with the primer and specialty coating usage limitation of Condition 11.1.1 of this permit.

(c) Emission points P4-1E, P4-2E, P4-3E and P4-4E shall not exhibit visible emissions in excess of 20% opacity on a 6-minute average basis.
[45CSR§7-3.1]

[45CSR13, R13-3651, 4.1.2]

11.2. Monitoring Requirements

11.2.1. For the purpose of determining compliance with the PM limitations set forth in Condition 11.1.2, the permittee shall maintain a daily record of either the manometer reading or other differential pressure instrument across each of the three filter element stages for Emission Points P4-1E, P4-2E, P4-3E and P4-4E for each operating day. Should a daily reading indicate filter media or other maintenance is required to restore proper operation of the respective control device, the permittee shall take a second reading once the element(s) has been replaced or when the required maintenance activity is complete. The permittee shall calibrate the manometer or other differential pressure instrument at least once every calendar year in accordance with the instrument manufacturer's procedures and specifications. Such records shall be maintained in accordance with Condition 3.4.2 of this permit.
[45CSR13, R13-3651, 4.2.1]

11.2.2. For the purpose of determining compliance with the VOC and HAP emission limits set forth in Condition 11.1.1 the permittee shall maintain daily records of usage of the materials identified in Table 11.1.1.a of this permit by emission source for each operating day. By no later than the 15th of preceding month, the permittee shall determine the 12-month rolling total of the material usages of each emission point in Table 11.1.1.a. Such records shall be maintained in accordance with Condition 3.4.2 of this permit.
[45CSR13, R13-3651, 4.2.2]

11.2.3. To determine compliance with the opacity limits of Condition 11.1.2.c, the permittee shall conduct visible emission checks and/or opacity monitoring and recordkeeping of Emission Points P4-1E, P4-2E, P-4-3E, and P4-4E.

The visible emission check shall determine the presence or absence of visible emissions. At a minimum, the observer must be trained and knowledgeable regarding the effects of background contrast, ambient lighting, observer position relative to lighting, wind, and the presence of uncombined water (condensing water vapor) on the visibility of emissions. This training may be obtained from written materials found in the References 1 and 2 from 40 CFR Part 60, Appendix A, Method 22 or from the lecture portion of the 40 CFR Part 60, Appendix A, Method 9 certification course.

The permittee shall verify compliance with Condition 11.1.2.c by taking visual observations using U.S. EPA Method 22 for one minute once per every quarter. Should the permittee observe visible emissions from a respective emission point during the one-minute observation, then the permittee shall continue the observation for an additional five minutes. If the cumulative time that visible emissions are observed exceeds 70 seconds, the permittee shall conduct a Method 9 observation to demonstrate compliance with the opacity standard of Condition 11.1.2.c within 5 days of the initial Method 22 observation. Records of these observations and any corrective actions shall be maintained in accordance with Conditions 3.4.2 of this permit.

[45CSR§7-8.1; 45CSR13, R13-3651, 4.2.3]

11.3. Testing Requirements

11.3.1. Reserved

11.4. Recordkeeping Requirements

11.4.1. None.

11.5. Reporting Requirements

11.5.1. Any exceedance(s) of the allowable visible emission requirement for any emission source discovered during observation using 45CSR7A must be reported in writing to the Director of the Division of Air Quality as soon as practicable, but within ten (10) calendar days, of the occurrence and shall include, at a minimum, the following information: the results of the visible determination of opacity of emissions, the cause or suspected cause of the violation(s), and any corrective measures taken or planned.

[45CSR13, R13-3651, 4.5.1]

11.6. Compliance Plan

11.6.1. None.

12.0. Requirements for Crossdraft Paint Booths – B432 (2-19S) & B432 (2-20S)

12.1. Limitations and Standards

12.1.1. VOCs and volatile HAP emissions from manufacturing of the missile component system in Building 432 shall not exceed 3.00 tons of VOCs per year and total HAPs shall not exceed 2.11 tons of HAP per year. The permittee is permitted to operate this missile component manufacturing line in Building 432 at the ABL in accordance with the following limitations as specified below:

(a) The permittee shall not exceed the following usage limits by material for the denoted emission point. Compliance with the annual limits in the following table shall be demonstrated using a 12-month rolling total basis.

Table 12.1.1.a. Material Usage/Losses Limits

Emission Point	Material	Daily Usage (ounces/day)	Annual Usage (gal/yr)
2-16E	ZEP Industrial Alkaline Cleaner (BZ7407)	96	12
2-16E	Toluene	192	23
2-16E	PR-182 or PR-188	24	3
2-16E	PR-2001 B-2 or PR-1826 Class B	24	3
2-16E	MIL-C-8514 (Randolph or SW)	144	17
2-16E	TS12983 Primer	240	29
2-16E	Dowsil Q1-2650	48	6
2-16E	MIL-PRF-23377K (PPG or Chemsol)	144	17
2-16E	MIL-P-85285 #36375 - H	384	45
2-16E	MIL-P-85285 #33538 - H	96	12
2-16E	MIL-P-85285 #30117 - SW	96	12
2-16E	MIL-P-85285 #37038 - H	96	12
2-16E	MIL-P-85285 #38913 - C	96	2
2-16E	MIL-P-85285 #34230 - C	96	2
2-16E	MIL-P-85285 #35109 - C	96	2
2-17E	SS4155 Primer	48	6
2-17E	PR-9921	512	720

Table 12.1.1.a. Material Usage/Losses Limits			
Emission Point	**Material**	**Daily Usage (ounces/day)**	**Annual Usage (gal/yr)**
2-17E	Isopropyl Alcohol (IPA)	1,920	225

(b) The all coatings applied are to be compliant with the VOC and HAP content limitation of Subpart GG of 40 CFR 63 and requirements for Condition 12.1.4 as applicable.

(c) All cleaning operations and activities associated with this manufacturing operation are compliant with the requirements of Condition 12.1.3 as applicable.

[45CSR13, R13-3534, 4.1.1]

12.1.2. PM, PM_{10}, and PM HAP emissions from the application of primer or specialty coatings for the manufacturing of the missile component system in Building 432 shall not exceed 0.04 TPY. For purposes of limiting the facility's emissions to the above-mentioned limits, the following conditions are established:

a. When coatings are being applied or during sanding activities, each paint booth (2-19S, 2-20S) shall be operated in a manner that filterable PM from the overspray of the coating and PM (dust) from any sanding activities is effectively captured by the filter media for the respective application booth. The filter media used in each application booth shall have a minimum filterable PM collection rating of 95% or greater. The permittee shall replace the filter media in accordance with the manufacturer's specifications.
[45CSR§7-5.1.]

b. Compliance with the annual limitation of this condition will be satisfied by compliance with the requirements of this condition and compliance with the primer and specialty coating usage limitation of Condition 12.1.1 of this permit.

c. Emission points 2-16E and 2-17E shall not exhibit visible emissions in excess of 20% opacity on a 6-minute average basis.
[45CSR§7-3.1]

[45CSR13, R13-3534, 4.1.2]

12.2. Monitoring Requirements

12.2.1. The permittee for paint booths and related equipment (Emission Units 2-19S and 2-20S; Emission Points 2-16E and 2-17E) shall conduct fabric filter checks prior to each use of the equipment. These checks shall include review to ensure filters are properly fitted to the unit, that no holes exist, and that the filters are not overloaded. Any changes made to filters during the checks or any filter replacements shall be recorded. Records of such inspections and maintenance performed as result of any inspection shall be maintained in accordance with Condition 3.4.2 of this permit.
[45CSR13, R13-3534, 4.2.1]

12.2.2. For the purpose of determining compliance with the PM limitations set forth in Condition 12.1.2, the permittee shall maintain a daily record of the either manometer reading or other differential pressure instrument across the filter element or control device for Emission Units 2-19S and 2-20S. Should a daily

reading indicate filter media or other maintenance is required to restore proper operation of the respective control device, the permittee shall take a second reading once the element(s) has been replaced or when the requirement maintenance is complete. The permittee shall calibrate the manometer or other differential pressure instrument at least once every calendar year in accordance with the instrument manufacturer's procedures and specifications. Such records shall be maintained in accordance with Condition 3.4.2 of this permit.
[45CSR13, R13-3534, 4.2.2]

12.2.3. For the purpose of determining compliance with the VOC and HAP emission limits set forth in Condition 12.1.1 the permittee shall maintain daily records of usage of the materials identified in Table 12.1.1.a of this permit by emission source for each operating day. By no later than the 15th of preceding month, the permittee shall determine the 12-month rolling total of the material usages of each emission point in Table 12.1.1.a Such records shall be maintained in accordance with Condition 3.4.2 of this permit.
[45CSR13, R13-3534, 4.2.3]

12.3. Testing Requirements

12.3.1. Reserved.

12.4. Recordkeeping Requirements

12.4.1. Reserved.

12.5. Reporting Requirements

12.5.1. Any exceedance(s) of the allowable visible emission requirement for any emission source discovered during observations using 45CSR§7A must be reported in writing to the Director of the Division of Air Quality as soon as practicable, but within ten (10) calendar days of the occurrence and shall include, at a minimum, the following information: the results of the visible determination of opacity of emissions, the cause or suspected cause of the violation(s), and any corrective measures taken or planned.
[45CSR13, R13-3534, 4.5.1]

12.6. Compliance Plan

12.6.1. None.

ATTACHMENT 1

HERCULES

Hercules Incorporated
Aerospace Products Group
Allegany Ballistics Laboratory
P. O. Box 210
Rocket Center, WV 26726
(304) 726-5000

December 19, 1986

Director
West Virginia Air Pollution Control Commission
1558 Washington Street, East
Charleston, West Virginia 25311

Attention: Mr. Steve Anderson

Dear Sir:

Construction Permit Application No. 898

This letter confirms the discussions on December 18, 1986, between Messrs. Carl Beard II and Steve Anderson of the West Virginia Air Pollution Control Commission (WVAPCC) and Messrs. Ted Rissell and Dave McBride of Hercules Incorporated/Allegany Ballistics Laboratory (HI/ABL) concerning the construction permit for a nitrate ester sparge facility.

HI/ABL will provide an emission control system on the air effluent stream, containing methylene chloride, from the nitrate ester sparge facility as a part of the construction package. This system will be operational at the start of facility sparging operations. The system will utilize a low temperature refrigeration system to condense and recover volatile organic chemicals (VOC) from the effluent stream. A design operating temperature of -40°F. will be used for the condenser. A copy of literature from Edwards Engineering Corporation, a potential recovery system supplier, is attached. The system will be designed and sized to achieve a minimum recovery of 80% of the VOC released by the sparging operation.

This unit is recognized as constituting a technology development and, as such, Hercules/ABL understands that system testing and documentation after start-up will be required to demonstrate degree of VOC recovery actually achieved. We would plan to measure system performance by material balance. The quantity of methylene chloride stripped from the nitrate ester solutions and the quantity recovered will be measured by weighing on a routine basis during any prescribed demonstration period.

Ancillary process items relating to process safety are currently in study and design. While these items will be part of the total system, they will not influence the VOC recovery operation or efficiency.

Very truly yours,

G. H. Moody
Vice President and Resident Manager

DAMcBride:beh(1993B)
Attachment

ATTACHMENT A

Alliant Techsystems, Inc.
ATK Missile Subsystems & Controls Division
057-00011 R13-1798B and R13-1782A

MATERIAL USAGE

Date	Material Name /ID	# Units Painted	VOC	Solids	Total HAP	Amount Used	Time Used	Total VOC	Total PM	Total HAP
			Content (lb/gal)			(gals)	(Hrs)	Emissions (lb/hr)		
Monthly Totals										
(For 6-4E, 6-5E, 6-6E, 6-7E) **Permit Limit:-**								3.00	3.00	1.90
(For 6-2E) **Permit Limit:-**								1.0	0.1	

ATTACHMENT B

Alliant Techsystems, Inc.
ATK Missile Subsystems & Controls Division
057-00011

12-MONTH ROLLING AVERAGES

Month	Emissions for R13-1798B			Emissions for R13- 1782A		#Units Painted
	VOC (tpm)	PM (tpm)	HAP (tpm)	VOC (tpm)	PM (tpm)	(Monthly total)
1	January					
2	February					
3	March					
4	April					
5	May					
6	June					
7	July					
8	August					
9	September					
10	October					
11	November					
12	December					
13	January					
14	February					
12-month rolling averages (tpy):						
Permit Limit (tpy):	4.35	0.10	2.00	2.01	0.1	480 units

ATTACHMENT C

Alliant Techsystems, Inc.
ATK Missile Subsystems & Controls Division
057-00011 R13-1798B

Speciated HAP Emissions

Month: _____ Year: _____		
Hazardous Air Pollutant:	Monthly HAP Emissions :	Yearly* HAP Emissions (TPY):
Permit Limit is 2.00 TPY on an aggregate basis		
Antimony Compounds		
Chromium Compounds		
Ethylbenzene		
Formaldehyde		
Glycol Ethers		
n-Hexane		
HDI		
Lead Compounds		
MDI		
Methanol		
Methyl Isobutyl Ketone (MIBK)		
Phenol		
Styrene		
TDI		
Toluene		
Xylene		
Aggregate HAP Emissions		

*Calculated on Twelve (12) Month Rolling Total

ATTACHMENT D

Alliant Techsystems, Inc.
ATK Missile Subsystems & Controls Division
057-00011 R13-1798B

FILTER MAINTENANCE:

Date Filter Checked				Date Filter Changed	Filter ID Changed	Comments:
Filter Booth 6-2C	Filter Booth 6-3C	Filter Booth 6-4C	Filter Booth 6-5C			

Chertkovsky, Natalya V <natalya.v.chertkovsky@wv.gov>

RE: EXT :Re: Re: Re: Re: ATK (1 of 3) TV permit renewal / SM03

2 messages

Foor, SueEllen [US] (DS) <sueellen.foor@ngc.com> Mon, Oct 28, 2024 at 9:23 AM
To: "Chertkovsky, Natalya V" <natalya.v.chertkovsky@wv.gov>

Correct.

From: Chertkovsky, Natalya V <natalya.v.chertkovsky@wv.gov>
Sent: Thursday, October 24, 2024 3:08 PM
To: Foor, SueEllen [US] (DS) <sueellen.foor@ngc.com>
Subject: EXT :Re: Re: Re: Re: ATK (1 of 3) TV permit renewal / SM03

Ok, thank you!

So, Toluene decreased for about 20 TPY due to a typo (before R13-3651), and Xylene increased for 13.34 TPY as the result of added paint booths(included in R13-3651) - did I get it right?

On Thu, Oct 24, 2024 at 2:31 PM Foor, SueEllen [US] (DS) <sueellen.foor@ngc.com> wrote:

> I went back through and relooked at all of the permit info that I had in my tables when I updated it. For some reason, I had 30 tons per year for toluene. I'm not sure where I had overcalculated that one in the past. The actual toluene PTE should only be 10.79 TPY. In addition, the xylene TPY increased from 5.29 TPY to 18.63 due to updated calculations that were included in R13-3651. Those 2 items account for that change.
>
> ---
>
> **From:** Chertkovsky, Natalya V <natalya.v.chertkovsky@wv.gov>
> **Sent:** Thursday, October 24, 2024 1:45 PM
> **To:** Foor, SueEllen [US] (DS) <sueellen.foor@ngc.com>
> **Subject:** EXT :Re: Re: Re: ATK (1 of 3) TV permit renewal / SM03
>
> Sue Ellen, thank you!
>
> I looked at the updated table - looks better, but I have another quick question.
>
> Based on the EE for the R13-3651 there is 8.02 TPY increase in PTE for HAPs.
>
> Based on previous permit renewals (but before R13-3651 / SM03 changes) total facility-wide HAP PTE was estimated at 56.63 TPY. Then the increase of 8.02 TPY doesn't add up if total HAP PTE is shown at 47.07 TPY in the updated table.
>
> Please, clarify.
>
> On Thu, Oct 24, 2024 at 1:26 PM Foor, SueEllen [US] (DS) <sueellen.foor@ngc.com> wrote:
>
> > Yes. This is the most up to date version and includes all the recent permits and mods. Please use it for all parts of the permit.
> >
> > ---
> >
> > **From:** Chertkovsky, Natalya V <natalya.v.chertkovsky@wv.gov>
> > **Sent:** Thursday, October 24, 2024 1:21 PM
> > **To:** Foor, SueEllen [US] (DS) <sueellen.foor@ngc.com>
> > **Subject:** EXT :Re: Re: ATK (1 of 3) TV permit renewal / SM03

Thank you, Sue Ellen!

I see that the huge PTE numbers for CO, VOC, SO2, TSP and NOx indeed came from the (3 of 3) renewal application.

Did you mean all the PTE changes included in permit R13-3651 / part 1 of 3 SM03 were included (in question 3) - thank you.

How about PTE changes in question 2 (revisions for part 3 of 3) - were they included as well?

On Thu, Oct 24, 2024 at 11:23 AM Foor, SueEllen [US] (DS) <sueellen.foor@ngc.com> wrote:

> Natalya,
>
> Sorry it took a bit to get back to you on this. A couple things came up at work and I was trying to do some training with a new person on a Navy report and she will be out next week before it is due.
>
> I have attached an updated table. It includes all of the changes for the permits referenced in your question 3.
>
> The reason they looked so different is that when Jill did the update for the Part 3 application and updated all of the boilers, she inadvertently added the cumulative totals for the criteria pollutants for the boilers rather than dividing them per boiler in the table. Our PTE table is set up to match our SLEIS points and when she copied the boiler numbers for example, she used 37.86 tons of CO for each of the 10 boilers rather than 3.786. That is what changed the totals so drastically.
>
> Please use this table for all 3 parts (if you can go back and add it to the Part 3 file and replace the other one.
>
> Thank you.
>
> Have a great weekend.
>
> ---
>
> **From:** Chertkovsky, Natalya V <natalya.v.chertkovsky@wv.gov>
> **Sent:** Wednesday, October 23, 2024 3:54 PM
> **To:** Foor, SueEllen [US] (DS) <sueellen.foor@ngc.com>
> **Subject:** EXT :Re: ATK (1 of 3) TV permit renewal / SM03
>
> Hello, Sue Ellen,
>
> Just wanted to follow up on my email last week.
>
> Thank you!
>
> Natalya
>
> On Thu, Oct 17, 2024 at 5:04 PM Chertkovsky, Natalya V <natalya.v.chertkovsky@wv.gov> wrote:
>
> > Sounds good, thank you, Sue Ellen!
> >
> > On Thu, Oct 17, 2024 at 4:25 PM Foor, SueEllen [US] (DS) <sueellen.foor@ngc.com> wrote:
> >
> > > Natalya,

I am working on this, but I had some other obligations that needed to be completed today. I will work on it early next week and get it back to you on Monday or Tuesday.

It did include the Plant 4 numbers, however, the numbers that were included, were changed prior to completion of the permit so the numbers will be different.

Sue Ellen

From: Chertkovsky, Natalya V <natalya.v.chertkovsky@wv.gov>
Sent: Wednesday, October 16, 2024 5:48 PM
To: Foor, SueEllen [US] (DS) <sueellen.foor@ngc.com>
Subject: EXT :ATK (1 of 3) TV permit renewal / SM03

Hello Sue Ellen,

I'm working on your (Part 1 of 3) TV permit renewal/SM03 applications, and have few questions:

1) I noticed the PTE table for criteria pollutants in the (Part 3 of 3) renewal application is very different compared to the (Part 1 of 3) renewal application, and I assumed the (Part 3 of 3) PTE numbers are more up to date since it was filed after (Part 1 of 3) renewal application was filed - is it correct?

2) Did the PTE table in the (Part 3 of 3) application include PTE changes from (Part 1 of 3) MM01, SM01 and SM02 /MM02?

3) I assumed PTE changes from R13-3651 (SM03 will be based on this permit) were not included with the renewal applications PTE tables yet. Based on the EE for the R13-3651 there is 8.02 TPY increase in PTE for HAPs. Which HAP is it? We need to keep track of any HAP that can get close to 10 TPY threshold.

Thank you in advance for your help,

Sincerely,

Natalya Chertkovsky

Chertkovsky, Natalya V <natalya.v.chertkovsky@wv.gov> Mon, Oct 28, 2024 at 2:08 PM
To: "Foor, SueEllen [US] (DS)" <sueellen.foor@ngc.com>

Thank you!
[Quoted text hidden]

RE: EXT :Re: ATK (1 of 3) TV permit renewal / SM03

3 messages

Foor, SueEllen [US] (DS) <sueellen.foor@ngc.com> Thu, Oct 24, 2024 at 11:23 AM
To: "Chertkovsky, Natalya V" <natalya.v.chertkovsky@wv.gov>

Natalya,

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The reason they looked so different is that when Jill did the update for the Part 3 application and updated all of the boilers, she inadvertently added the cumulative totals for the criteria pollutants for the boilers rather than dividing them per boiler in the table. Our PTE table is set up to match our SLEIS points and when she copied the boiler numbers for example, she used 37.86 tons of CO for each of the 10 boilers rather than 3.786. That is what changed the totals so drastically.

Please use this table for all 3 parts (if you can go back and add it to the Part 3 file and replace the other one.

Thank you.

Have a great weekend.

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Sent: Wednesday, October 23, 2024 3:54 PM
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Subject: EXT :Re: ATK (1 of 3) TV permit renewal / SM03

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Thank you!

Natalya

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>
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Sue Ellen

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Sent: Wednesday, October 16, 2024 5:48 PM
To: Foor, SueEllen [US] (DS) <sueellen.foor@ngc.com>
Subject: EXT :ATK (1 of 3) TV permit renewal / SM03

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1) I noticed the PTE table for criteria pollutants in the (Part 3 of 3) renewal application is very different compared to the (Part 1 of 3) renewal application, and I assumed the (Part 3 of 3) PTE numbers are more up to date since it was filed after (Part 1 of 3) renewal application was filed - is it correct?

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3) I assumed PTE changes from R13-3651 (SM03 will be based on this permit) were not included with the renewal applications PTE tables yet. Based on the EE for the R13-3651 there is 8.02 TPY increase in PTE for HAPs. Which HAP is it? We need to keep track of any HAP that can get close to 10 TPY threshold.

Thank you in advance for your help,

Sincerely,

Natalya Chertkovsky

Plantwide Emissions Summary 2023 - Updated Oct 2024.docx
22K

Chertkovsky, Natalya V <natalya.v.chertkovsky@wv.gov> Thu, Oct 24, 2024 at 1:21 PM
To: "Foor, SueEllen [US] (DS)" <sueellen.foor@ngc.com>

Thank you, Sue Ellen!
I see that the huge PTE numbers for CO, VOC, SO2, TSP and NOx indeed came from the (3 of 3) renewal application.
Did you mean all the PTE changes included in permit R13-3651 / part 1 of 3 SM03 were included (in question 3) - thank you.
How about PTE changes in question 2 (revisions for part 3 of 3) - were they included as well?

[Quoted text hidden]

Chertkovsky, Natalya V <natalya.v.chertkovsky@wv.gov> Tue, Oct 29, 2024 at 12:34 PM
To: "Foor, SueEllen [US] (DS)" <sueellen.foor@ngc.com>

Hello Sue Ellen,

Just wanted to ask for your quick opinion, please.

I was planning to "clean-up" sections 8 and 12 of the permit to get rid of some of the Subpart GG duplicate requirements (like 8.1.3, 8.1.4, 8.1.5, 12.1.3, 12.1.4, 12.1.5; 8.4.3 and 12.4.4; 8.5.2 and 12.5.2) already included with the facility-wide section 3.0 under conditions 3.1.9, 3.4.5 and 3.5.10 (respectively), but I'm not sure if it'll be helpful for you, or you rather prefer to keep these requirements separately in their own sections?

I attached the draft permit with strikethrough requirements I was thinking to remove for your quick look.
(I also strikethrough standard requirements (like "Record of maintenance..." and "Record of Malfunctions of air pollution control equipment" etc.) to remove them from individual sections and move/combine with facility-wide section requirements.)

Please, let me know what you think.

Thank you!

Natalya
[Quoted text hidden]

DPPermitRenewal2025(1 of 3).docx
1161K

Plantwide Emissions Summary [Tons per Year]

Regulated Pollutants	Potential Emissions	2023 Actual Emissions
Carbon Monoxide (CO)	84.72	20.63
Nitrogen Oxides (NO_X)	63.34	23.76
Particulate Matter ($PM_{2.5}$)[1]	6.42	4
Particulate Matter uncontrolled (PM_{10})	17.97	7.86
Total Particulate Matter **controlled** or uncontrolled? (TSP)	30.62	7.93
Sulfur Dioxide (SO_2)	28.97	0.22
Volatile Organic Compounds (VOC)	197.25	29.57

$PM_{2.5}$ and PM_{10} are components of TSP.

[2]For HAPs that are also considered PM or VOCs, emissions should be included in both the HAPs section and the Criteria Pollutants section.

Hazardous Air Pollutants	Potential Emissions	2023 Actual Emissions
Acetonitrile	0.27	0.02
Benzene	0.37	0.139
Cadmium compounds*	9.9E-04	2.40E-04
Chloroform	0.096	0.025
Chromium*	1.2E-03	3.00E-04
Chromium compounds (not identified)*	0.136	0.012
Cobalt*	5.8E-05	1.83E-05
Dioctyl phthalate [bis(ethyhexyl) phthalate]	0.20	0.022
Ethyl benzene	0.62	0.23
Formaldehyde	0.029	0.0015
Glycol ether compounds	0.06	0.004
Hexane	0.80	0.07

Hydrochloric Acid	6.44	3.308
Lead *	9.8E-04	3.30E-05
Lead compounds*	1.98	0.215
Mercury*	2.0E-04	5.70E-05
Methanol	1.81	0.14
Methyl isobutyl ketone	2.06	0.42
Methylene chloride	1.995	1.95
Naphthalene	0.02	0.004
Nickel*	1.7E-03	4.60E-04
Phenol	0.16	0.002
Strontium chromate*	0.0029	0.0002
Styrene	0.37	0.02
Toluene	10.79	1.78
Trichloroethylene	0.125	0
Xylene	18.63	0.97
Zinc chromate*	4.7E-04	1.00E-06
Other (not specified)	0.1	0.04
Total	**47.07**	**9.38**
* Component of TSP emissions in Plantwide Emission Summary table above		

Some of the above HAPs may be counted as PM or VOCs.

Changes to PTE table
Criteria pollutants updated to reflect updates of permit limits from R13-3334B and R13-3186D and addition of R13-3534A and R13-3561.
Updated Actuals to 2023 actuals (based on AEI and CES)
Metal species updated with boiler changes in R13-3186.

West Virginia Department of Environmental Protection

Harold D. Ward
Cabinet Secretary

Permit to Operate

Pursuant to
Title V
of the Clean Air Act

Issued to:
Alliant Techsystems Operations LLC
Allegany Ballistics Laboratory
R30-05700011-2025 (1 of 3)

Laura M. Crowder
Director, Division of Air Quality

Issued: [Date of issuance] • *Effective: [Equals issue date plus two weeks]*
Expiration: [5 years after issuance date] • *Renewal Application Due: [6 months prior to expiration]*

Permit Number: **R30-05700011-2025 (1 of 3)**
Permittee: **Alliant Techsystems Operations LLC**
Facility Name: **Allegany Ballistics Laboratory**
Permittee Mailing Address: **210 State Route 956, Rocket Center, WV 26726-3548**

This permit is issued in accordance with the West Virginia Air Pollution Control Act (West Virginia Code §§ 22-5-1 et seq.) and 45CSR30 — Requirements for Operating Permits. The permittee identified at the above-referenced facility is authorized to operate the stationary sources of air pollutants identified herein in accordance with all terms and conditions of this permit.

Facility Location:	Rocket Center, Mineral County, West Virginia
Facility Mailing Address:	210 State Route 956, Rocket Center, WV 26726-3548
Telephone Number:	(304) 726 - 5506
Type of Business Entity:	LLC
Facility Description:	Fabrication of both steel and composite structure rocket motor and warhead cases, production of propellants and explosives which are loaded into above cases and all associated case preparation and testing for motors
SIC Codes:	Primary - 3764, Secondary – 3089
UTM Coordinates:	686.47 km Easting • 4381.25 km Northing • Zone 17

Permit Writer: Natalya Chertkovsky-Veselova

Any person whose interest may be affected, including, but not necessarily limited to, the applicant and any person who participated in the public comment process, by a permit issued, modified or denied by the Secretary may appeal such action of the Secretary to the Air Quality Board pursuant to article one [§§ 22B-1-1 et seq.], Chapter 22B of the Code of West Virginia. West Virginia Code §22-5-14.

Issuance of this Title V Operating Permit does not supersede or invalidate any existing permits under 45CSR13, 14 or 19, although all applicable requirements from such permits governing the facility's operation and compliance have been incorporated into the Title V Operating Permit.

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1.0. Emission Units and Active R13, R14, and R19 Permits

1.1. Emission Units

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity	Control Device
001 Ingredient Preparation – Plant 1					
1-1S	1-1E	Sweco Shaker-262	1981	500 lb/hr	None
1-2S	1-2E	Blender/Dryer Condenser Vacuum Pump-262	1963	Variable	1-8C: Condenser
1-3S (25s)	1-3E (23e)	Grinder-262	1981	500 lb/hr	1-1C: Dust Control Filter
1-4S (26s)	1-4E (24e)	Nitrate Ester Sparge-352 (original)	1988(1)	1200 lb/hr lacquer	1-2C: Cryogenic Recovery
1-4S (26s)	1-13E	Nitrate Ester Sparge-352 (secondary)	2016(1)	1200 lb/hr lacquer	1-10C: Cryogenic Recovery
1-5S	VI*	Chemical Mixing Area-373	1993	Variable	1-3C: Carbon bed
1-6S	VI*	Parts Cleaning-373	1993	Variable	1-3C: Carbon bed
1-7S	1-5E	Sweco Shaker-374	1997	700 lb/hr	None
1-8S (41s)	1-6E (41e)	Blender/Dryer Condenser Vacuum Pump-374	2002	Variable	1-9C: Condenser
1-9S (40s)	1-7E (40e)	Grinder Mill-374	1993	700 lb/hr	1-4C: Dust Control Filter
1-10S	1-8E	RDX Drain Table-374	2002	Variable	None
1-11S (44s)	1-9E (44e)	Handling System-384	1994	Variable	1-5C: Dust Control Filter (HEPA)
1-12S (48s)	1-12E (48e)	Weighing System-384	1995	Variable	1-6C: Dust Control Filter (HEPA)
1-13S	1-10E	Heptane Storage Tank-384	1995	500 gallons	None

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity	Control Device
1-14S (45s/47s)	1-10/11E (45e/47e)	Mix Bowl-384	1995	500 lb	1-7C: Condenser
1-15S	1-10E	Attritor-384	1995	500 lb	None
1-16S	VI*	3-Roll Mill-384	1995	NA	None
1-17S	VI*	Electric Drying Oven-271	Early 80s	Variable	None
1-18S	VI*	Electric Drying Oven-271	Early 80s	Variable	None
002 Chamber Preparation – Plant 1					
2-11S (54s)	2-9E (54e)	Walk-In Spray Booth-167	1980	Variable	2-7C (54c): Fabric filter
2-8S	VI*	Progressive Blasting Systems Grit Blaster-420	1999	200 lb/hr	2-1C: Cyclone dust collector
2-10S	VI*	Two Roll Mill-420	1999	NA	None
2-12S	2-10E	Fume Hood for CBL-420	1999	Variable	None
2-13S	2-11E	Case Bond Liner Spray Booths-420	1999	Variable	2-5C: Fabric filters
2-14S	2-11E	Case Bond Liner Spray Booths-420	1999	Variable	2-6C: Fabric filters
2-15S	2-12E	Drying Oven-420	1999	Variable	None
2-16S	2-13E	Actrel Degreaser-420	1999	355 gal	None
2-17S	2-14E	Actrel Solvent Recovery Still System-420	1999	50 gal/hr	None
2-18S	2-15E	Stencil Booth-420 Bay 3	2010	Variable	2-8C: Fabric filters
2-19S	2-16E	Crossdraft Paint Booth – B432	2021	N/A	2-9C 3-Stage Filtration
2-20S	2-17E	Crossdraft Paint Booth – B432	2021	N/A	2-9C 3-Stage Filtration
003 Mixing & Casting Operations – Plant 1					
3-1S	VI*	50 Gallon Mixer-302	1964	50 gallons	None
3-2S	VI*	Casting Pits-308	1964	50 gallons	None
3-4S	VI*	Casting Pits-356	1990	150 gallons	None
3-5S	VI*	Linear Casting Line	1980	150 gallons	None
3-6S	NDV**	300 Gallon Mixer-375	2012	300 gallons	None
005 Propellant Machining – Plant 1					
5-1S	VI*	Drilling/machining equipment-410	1996	NA	None

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity	Control Device
006 Loading/Inspection/Final Assembly – Plant 1					
6-1S	NE***	X-Ray equipment-180	1981	Variable	None
6-2S	NE***	X-Ray equipment-360	1991	Variable	None
6-3S	6-1E	XO-Mat X-Ray Developer System-360	1991	Variable	None
6-4S (144s)	6-2E (144e)	Paint Booth-364	1995	Variable	6-1C: Fabric filter
6-5S	6-3E	Exhaust Hood-369	1995	Variable	None
6-13S	6-10E	Large & Small Temperature Chambers-369	1995	NA	None
6-14S	6-11E	Large & Small Temperature Chambers-369	1995	NA	None
6-6S (152s)	6-4E (152e)	Paint Booth-392	1995	Variable	6-2C: Fabric filter
6-7S (153s)	6-5E (153e)	Paint Booth-392	1995	Variable	6-3C: Fabric filter
6-8S (154s)	6-6E (154e)	Paint Booth-392	1995	Variable	6-4C: Fabric filter
6-9S (155s)	6-7E (155e)	Paint Booth-392	1995	Variable	6-5C: Fabric filter
6-10S	6-8E	Teflon Spray Booth-412	1997	Variable	6-6C: Fabric filter
6-11S	6-8E	Teflon Drying Oven-412	1997	3 mm BTU/hr	None
6-12S	6-9E	Decontamination Oven-412	1997	1.5 mm BTU/hr	None
007 Mold Parts Cleanup – Plant 1					
7-1S (10s)	7-1E	Parts Washer-151	Pre-1970	36 gallons	None
7-2S (11s)	7-2E	Parts Washer-151	Pre-1970	35 gallons	None
7-3S	7-3E	Parts Washer-407 (6 pans)	1997	125 gallons (6)	None
7-4S	7-3E	Parts Washer-407	1997	35 gallons	None
7-5S	7-3E	Parts Washer-407 (2 pans)	1997	52 gallons	None
7-6S	7-4E	Acetone Recovery Unit	1997	5.5 gal/hr	None
00C Gas Generator Fabrication – Plant 1					
C-1S	C-1E	Cellulose Acetate Machine-420B2	2000	NA	None
C-2S	C-2E	Weigh-Out and Mixing Hood-180	2000 - moved in 2012	Variable	None
C-3S	VI*	Inhibiting Area-180	2000 - moved in 2012	Variable	None
C-4S	VI*	Vacuum Pump-180	2000 - moved in 2012	Variable	None

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity	Control Device
00E Ingredient Preparation – Plant 2					
E-1S (15s)	VI*	Gustafson Grinder System-2003	1978	500 lb/hr	E-1C: Mikro-D Pulsaire dust collector
E-2S	VI*	Mikro Airlock Grinder System-2003	1978	500 lb/hr	E-2C: Mikro-D Pulsaire dust collector
E-3S	VI*	Walk-In Freezer-2015	Pre-80s	Variable	None
E-4S	VI*	Walk-In Freezer-2015	Pre-80s	Variable	None
00F Chamber Preparation – Plant 2					
F-1S	F-1E	Binks Chemlok/Sparrow Spray Booth-2014	Pre-80s	Variable	F-1C: Fabric filters
F-2S	F-21E	Slinger-2014	1999	Variable	None
F-3S	VI*	3-Roll Mill-2014	Pre 80s	Variable	None
F-4S	F-2E	Curing/Drying Oven #3-2014	1994	Variable	None
F-5S	F-3E	Binks Paint Booth-2014	1994	Variable	F-2C: Fabric filters
F-6S	F-4E	Small Actrel Solvent Distillation Units-2014	1995	8 gal/hr	None
F-7S (16s)	F-5E (16e)	Vertical Spray Booth – Paint [Intermediate (Sparrow) Line] – 2014	1978	Variable	F-3C: Fabric filters
F-8S	F-6E	Trinco DP850 Grit Blast Cabinet-2014 Intermediate (Sparrow) Line] –2014	1978	Variable	F-4C: Cyclone dust collector
F-9S	F-7E	Actrel Degreaser [Intermediate (Sparrow) Line] –2014	1995	17 gal/min	None
F-10S	F-8E	Drying Oven #1 [Intermediate (Sparrow) Line] –2014	1978	Variable	None
F-11S	F-8E	Drying Oven #4 [Intermediate (Sparrow) Line] –2014	1978	Variable	None
F-12S (7s)	F-9E (7e)	Case Bondliner Paint Booth [Intermediate (Sparrow) Line] – 2014	1978	Variable	F-5C: Fabric filters
F-13S	F-10E	Drying Oven #2 [Intermediate (Sparrow) Line] –2014	1978	Variable	None
F-14S	VI*	Ross Mixer-5 gallon [Intermediate (Sparrow) Line] –2014	1980	5 gallon	None
F-15S	VI*	Ross Mixer-1 gallon [Intermediate (Sparrow) Line] –2014	1968	1 gallon	None
F-16S	VI*	Cowles Dissolver/Mixer/Disperer [Intermediate (Sparrow) Line] – 2014	1968	5 gallon	None

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity	Control Device
F-17S	F-11E	Vertical Spray Booth – Alodine [Intermediate (Sparrow) Line] – 2014	1978	Variable	F-6C: Demister
F-18S	VI*	Benchtop Electric Curing Oven #7 [Intermediate (Sparrow) Line] – 2014	1968	Variable	None
F-19S	F-12E	Mold Release Spray Booth [Intermediate (Sparrow) Line] – 2014	1988	Variable	F-7C: Fabric filters
F-20S	F-13E	DeVilbiss Horizontal Spray Booth-2014	1980	Variable	F-8C: Fabric filter
F-21S (27s)	F-14E (25e)	Zero Mfg. Grit Blaster (Large Motor Line) –2014	1988	500 lb/hr grit	F-9C: Cyclone dust collector
F-22S	F-15E	Actrel Degreaser (Large Motor Line) –2014	1995	17 gal/min	None
F-23S (29s)	F-16E (27e)	Binks Vertical Internal Paint Booth (Large Motor Line) –2014	1988	Variable	F-10C: Fabric filter
F-24S (31s)	F-17E (29e)	Paint/Degreaser Drying Room/Oven #5 (Large Motor Line) –2014	1988	Variable	None
F-25S (30s)	F-18E (28e)	Binks Vertical Paint Booth (Large Motor Line) –2014	1988	Variable	F-11C: Fabric filter
F-26S	F-19E	Actrel Vacuum Still & Storage Tank (Large Motor Line) –2014	1995	60 gal/hr	None
F-27S	F-20E	Drying Oven #6-2014	1980	Variable	None
00G Mixing & Casting Operations – Plant 2					
G-2S		Mixer-300 gallon-2000	1968	300 gallon	None
G-3S		Casting Pit-2000	1968	300 gallon	None
G-4S	G-2E	Feed Hopper Exhaust Hood-2000	1968	Variable	G-1C: Fabric filter
00I Disassembly/Machining – Plant 2					
I-1S	VI*	Propellant Machining System	1968	Variable	None
00J Loading/Inspection/Final Assembly – Plant 2					
J-1S	VI*	Varian X-Ray equipment-2010	1990	Variable	None
J-2S	OS****	Kodak XO-Mats X-Ray Processor-2010	1990	Variable	None
J-3S	J-1E	Drying Oven-2011	1980	Variable	None
J-4S (8s)	J-2E (8e)	Interior Coating Spray Line-2011	1980	Variable	J-1C: Fabric filter
J-5S	J-3E	Vacuum Test System-2011	1980	Variable	None

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity	Control Device
J-7S	J-4E	Automated Case Painting System-368 Annex	2000 – moved in 2012	Variable	J-2C: Fabric filters
J-8S	J-5E	Stenciling Booth-2031	2000	Variable	J-3C: Fabric filters
J-9S	J-6E	Drying Oven-2031	2000	Variable	None
J-10S	J-7E	Stenciling Conveyor-2011	1978	Variable	J-4C: Fabric filter
B-95S	B-27E	Pittsburgh Spray Booth-2031	2000 – moved in 2012	Variable	B-11C
B-102S	B-34E	Pittsburgh Spray Booth-2031	2008 – moved in 2012	Variable	B-14C
J-11S	J-8E	Stenciling Booth 2039	2012	Variable	J-5C: Fabric filter

00K Mold Parts Cleanup – Plant 2

K-1S	OS****	Parts Washer-8203	1978	NA	None
K-3S (9s)	K-1E (9e)	Parts Washer-8203	1978	56 gallons	None
K-4S	OS****	Parts Washer-8203	1978	NA	None
K-5S (14s)	K-2E (14e)	Solvent Recovery System-8203	2001	5 gal/hr	None

00Z GMLRS Rocket Motor Chamber Preparation – Plant 1

Z-1S	Fugitive	Mandrel Release Coating Table	2017	N/A	None
Z-2S	Fugitive	Adapter Degreasing Table	2017	N/A	None
Z-5S	Fugitive	Interior Degreasing Exhaust & Drying	2017	N/A	None
Z-7S	Z-7E	Chemlok/Bondliner Mixing Hood	2017	N/A	None
Z-8S	Z-8E	Chemlok/Bondliner Application Booth	2017	1 gal/hr	Z-2C
Z-9S	Z-9E	Chemlok/Drying Station	2017	N/A	Z-5C
Z-10S	Fugitive	Insulator Prep Exhaust	2017	N/A	None
Z-11S	Z-11E	Oven for Insulator Drying	2017	N/A	None
Z-12S	Z-12E	Chemlok/Bondliner Mixing Hood	2017	N/A	None
Z-13S	Z-13E	Chemlok/Bondliner Application Booth	2017	1 gal/hr	Z-3C
Z-14S	Z-14E	Bondliner Drying Station	2017	N/A	None

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity	Control Device
Z-15S	Z-15E	Case Machining	2017	2 units/hr	Z-4C
Z-16S	Fugitive	End Closure Adapter Wiping Station	2017	N/A	None
00Z GMLRS Rocket Motor Manufacture – Plant 3, Building 3040					
P3-1S	P3-1E	Heptane Wash Tank	2018	80 gallons	None
P3-2S	P3-2E	Heptane Wash Tank	2018	80 gallons	None
P3-3S	P3-3E	IPA Wash Tank	2018	80 gallons	None
P3-4S	Fugitive	Ignite/Nozzle Assembly Work Area	2018	N/A	None
P3-5S	N/A	Final Assembly Work Area	2018	N/A	None
P3-6S	N/A	Disassembly Work Area	2018	N/A	None
~~**00Z GMLRS Rocket Motor Manufacture – Plant 3, Building 3030A**~~					
~~P3-7S~~	~~P3-7E~~	~~Process Heater Unit #7~~	~~2018~~	~~0.5 MMBtu/hr~~	~~None~~
~~P3-8S~~	~~P3-8E~~	~~Process Heater Unit #8~~	~~2018~~	~~0.5 MMBtu/hr~~	~~None~~
~~P3-9S~~	~~P3-9E~~	~~Process Heater Unit #9~~	~~2018~~	~~0.5 MMBtu/hr~~	~~None~~
00Z GMLRS Rocket Motor Manufacture – Plant 3, Building 3030					
P3-10S	N/A	Mixer	2018	300 gallons	C1 & Vac. Pump
Aerospace product - Plant 4 Building 4020					
P4-1S	P4-1E	Booth 1 - Downdraft Paint Booth - in BLDG 4020 w/ hot water air make-up heating system and integrated heat recovery system	2024	N/A	P4-1C 3-Stage Filtration
P4-2S	P4-2E	Booth 2 - Downdraft Paint Booth - in BLDG 4020 w/ hot water air make-up heating system and integrated heat recovery system	2024	N/A	P4-2C 3-Stage Filtration
P4-3S	P4-3E	Booth 3- Downdraft Paint Booth - in BLDG 4020 w/ hot water air make-up heating system and integrated heat recovery system	2024	N/A	P4-3C 3-Stage Filtration
P4-4S	P4-4E	Booth 4 - Downdraft Paint Booth - in BLDG 4020 w/ hot water air make- up heating system and	2024	N/A	P4-4C 3-Stage Filtration

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity	Control Device
P4-5S	P4-5E	Paint Mixing Booth 1 - in BLDG 4020	2024	N/A	N/A
P4-6S	P4-6E	Paint Mixing Booth 2 - in BLDG 4020	2024	N/A	N/A
P4-7S	P4-7E	Paint Mixing Booth 3 - in BLDG 4020	2024	N/A	N/A

Control Devices

Control Device ID	Emission Point ID	Control Device Description	Year Installed / Modified	Design Capacity	Comments
1-1C	1-3E	Dust Control Filter	1981	75-97.5% (PM-RDX)	
1-2C	1-4E	Cryogenic Recovery for sparging operation	1988	80% (Methylene chloride)	
1-10C	1-13E	Cryogenic Recovery for sparging operation	2015	91% (Methylene chloride)	
1-3C	VI*	Carbon bed for material transfer hood	1993	unknown	
1-4C	1-7E	Dust Control Filter	1993	99.9% (PM-RDX)	
1-5C	1-9E	Dust Control Filter (HEPA)	1994	99.9%+ (Pb)	
1-6C	1-12E	Dust Control Filter (HEPA)	1994	99.9%+ (Pb)	
1-7C	1-10/11E	Condenser	1995	unknown	
1-8C	1-2E	Condenser	1981	unknown	
1-9C	1-6E	Condenser	2001	90% (IPA/water)	
2-1C	VI*	Cyclone dust collector grit blaster	1999	unknown	
2-5C	2-11E	Fabric filters for bondliner booth	1999	90% (PM)	
2-6C	2-11E	Fabric filters for bondliner booth	1999	90% (PM)	
2-7C (54c)	2-9E	Fabric filter for paint booth	1980	90% (PM)	
2-8C	2-15E	Fabric filter for paint booth	2010	90% (PM)	
6-1C	6-2E	Fabric filter for paint booth	1995	90% (PM)	
6-2C	6-4E	Fabric filter for paint booth	1995	90% (PM)	
6-3C	6-5E	Fabric filter for paint booth	1995	90% (PM)	
6-4C	6-6E	Fabric filter for paint booth	1995	90% (PM)	
6-5C	6-7E	Fabric filter for paint booth	1995	90% (PM)	
6-6C	6-8E	Fabric filter for Teflon spray booth	1997	90% (PM)	
E-1C	VI*	Mikro-D Pulsaire dust collector for AP	1978	99.9% (PM)	

Control Device ID	Emission Point ID	Control Device Description	Year Installed / Modified	Design Capacity	Comments
E-2C	VI*	Mikro-D Pulsaire dust collector for AP	1978	99.9% (PM)	
F-1C	F-1E	Fabric filters for bondliner booth	1978	unknown	
F-2C	F-3E	Fabric filters for paint booth	1994	unknown	
F-3C	F-5E	Fabric filters for paint booth	1978	unknown	
F-4C	F-6E	Cyclone dust collector for grit blaster	1978	99.9% (PM)	F-5C
F-5C	F-9E	Fabric filters for bondliner booth	1978	unknown	
F-6C	F-11E	Demister for alodine process	1978	unknown	
F-7C	F-12E	Fabric filters for paint booth	1988	unknown	
F-8C	F-13E	Fabric filter for paint booth	1980	unknown	
F-9C	F-14E	Cyclone dust collector for grit blaster	1988	99.9% (PM)	
F-10C	F-16E	Fabric filters bondliner booth	1988	90% (PM)	
F-11C	F-18E	Fabric filters for paint booth	1988	90% (PM)	
G-1C	G-2E	Fabric filter for solid ingredient feed hopper	1968	unknown	
J-1C	J-2E	Fabric filter for bondliner booth	1980	90% (PM)	
J-2C	J-4E	Fabric filters for paint booth	2000	90% (PM)	
J-3C	J-5E	Fabric filters for paint booth	2000	90% (PM)	
J-4C	J-7E	Fabric filter for Stencilling Conveyor	2000	90% (PM)	
J-5C	J-8E	Fabric filter for Stenciling Booth 2039	2012	90% (PM)	
Z-1C	Z-3E	Global Finishing Solutions Wave Filter	2017	90% (PM)	
Z-2C	Z-8E	Global Finishing Solutions Wave Filter	2017	90% (PM)	
Z-3C	Z-13E	Global Finishing Solutions Wave Filter	2017	90% (PM)	
Z-4C	Z-14E	Aget Manufacturing Company Model: 30SN100-PL-SP Dry Cyclone Collector with 13.5 oz. Napped Polypropylene Sateen Fabric Filter with Cab-O-Sil preload powder	2017	99.9% (PM)	
Z-5C	Z-9E	Global Finishing Solutions Wave Filter	2017	90% (PM)	
C1	VI*	Ruwac wet separator	2018	99.9%	
Vac. Pump	VI*	Vacuum Pump	2018	> 95% (VOC)	
P4-1C	P4-1E	3-Stage Filtration	2024	95% (PM)	

Control Device ID	Emission Point ID	Control Device Description	Year Installed / Modified	Design Capacity	Comments
P4-2C	P4-2E	3-Stage Filtration	2024	95% (PM)	
P4-3C	P4-3E	3-Stage Filtration	2024	95% (PM)	
P4-4C	P4-4E	3-Stage Filtration	2024	95% (PM)	

(1) A second methylene chloride emission control system (1-10C, 1-13E) was added in 2015.
* VI stands for "Vents inside of building"
** NDV – Stands for "No direct vent"
*** NE – Stands for "No emissions"
**** OS – Stands for "Out of service"

1.2. Active R13, R14, and R19 Permits

The underlying authority for any conditions from R13, R14, and/or R19 permits contained in this operating permit is cited using the original permit number (e.g. R13-1234). The current applicable version of such permit(s) is listed below.

Permit Number	Date of Issuance
R13-1455A	07/18/2001
R13-0898C	05/27/2016
R13-1694B	11/17/2003
R13-2037A	07/26/2001
R13-2246A	10/14/03
R13-1782A	07/19/2001
R13-1798B	02/17/2011
R13-0401B	05/23/2001
R13-1047B	03/04/2002
R13-3334B	November 17, 2023
R13-3408	10/12/2018
R13-3534A	January 19, 2024
R13-3651	July 23, 2024

1.0 General Conditions

2.1. Definitions

2.1.1. All references to the "West Virginia Air Pollution Control Act" or the "Air Pollution Control Act" mean those provisions contained in W.Va. Code §§ 22-5-1 to 22-5-18.

2.1.2. The "Clean Air Act" means those provisions contained in 42 U.S.C. §§ 7401 to 7671q, and regulations promulgated thereunder.

2.1.3. "Secretary" means the Secretary of the Department of Environmental Protection or other person to whom the Secretary has delegated authority or duties pursuant to W.Va. Code §§ 22-1-6 or 22-1-8 (45CSR§30-2.39.). The Director of the Division of Air Quality is the Secretary's designated representative for the purposes of this permit.

2.1.4. Unless otherwise specified in a permit condition or underlying rule or regulation, all references to a "rolling yearly total" shall mean the sum of the monthly data, values or parameters being measured, monitored, or recorded, at any given time for the previous twelve (12) consecutive calendar months.

2.2. Acronyms

CAAA	Clean Air Act Amendments	**NSPS**	New Source Performance Standards
CBI	Confidential Business Information	**PM**	Particulate Matter
CEM	Continuous Emission Monitor	**PM_{10}**	Particulate Matter less than 10μm in diameter
CES	Certified Emission Statement	**pph**	Pounds per Hour
C.F.R. *or* CFR	Code of Federal Regulations	**ppm**	Parts per Million
CO	Carbon Monoxide	**PSD**	Prevention of Significant Deterioration
C.S.R. *or* CSR	Codes of State Rules	**psi**	Pounds per Square Inch
DAQ	Division of Air Quality	**SIC**	Standard Industrial Classification
DEP	Department of Environmental Protection	**SIP**	State Implementation Plan
FOIA	Freedom of Information Act	**SO_2**	Sulfur Dioxide
HAP	Hazardous Air Pollutant	**TAP**	Toxic Air Pollutant
HON	Hazardous Organic NESHAP	**TPY**	Tons per Year
HP	Horsepower	**TRS**	Total Reduced Sulfur
lbs/hr *or* lb/hr	Pounds per Hour	**TSP**	Total Suspended Particulate
LDAR	Leak Detection and Repair	**USEPA**	United States Environmental Protection Agency
m	Thousand	**UTM**	Universal Transverse Mercator
MACT	Maximum Achievable Control Technology	**VEE**	Visual Emissions Evaluation
mm	Million	**VOC**	Volatile Organic Compounds
mmBtu/hr	Million British Thermal Units per Hour		
$mmft^3$/hr *or* mmcf/hr	Million Cubic Feet Burned per Hour		
NA *or* N/A	Not Applicable		
NAAQS	National Ambient Air Quality Standards		
NESHAPS	National Emissions Standards for Hazardous Air Pollutants		
NO_x	Nitrogen Oxides		

2.3. Permit Expiration and Renewal

2.3.1. Permit duration. This permit is issued for a fixed term of five (5) years and shall expire on the date specified on the cover of this permit, except as provided in 45CSR§30-6.3.b. and 45CSR§30-6.3.c.
[45CSR§30-5.1.b.]

2.3.2. A permit renewal application is timely if it is submitted at least six (6) months prior to the date of permit expiration.
[45CSR§30-4.1.a.3.]

2.3.3. Permit expiration terminates the source's right to operate unless a timely and complete renewal application has been submitted consistent with 45CSR§30-6.2. and 45CSR§30-4.1.a.3.
[45CSR§30-6.3.b.]

2.3.4. If the Secretary fails to take final action to deny or approve a timely and complete permit application before the end of the term of the previous permit, the permit shall not expire until the renewal permit has been issued or denied, and any permit shield granted for the permit shall continue in effect during that time.
[45CSR§30-6.3.c.]

2.4. Permit Actions

2.4.1. This permit may be modified, revoked, reopened and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.
[45CSR§30-5.1.f.3.]

2.5. Reopening for Cause

2.5.1. This permit shall be reopened and revised under any of the following circumstances:

a. Additional applicable requirements under the Clean Air Act or the Secretary's legislative rules become applicable to a major source with a remaining permit term of three (3) or more years. Such a reopening shall be completed not later than eighteen (18) months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended pursuant to 45CSR§§30-6.6.a.1.A. or B.

b. Additional requirements (including excess emissions requirements) become applicable to an affected source under Title IV of the Clean Air Act (Acid Deposition Control) or other legislative rules of the Secretary. Upon approval by U.S. EPA, excess emissions offset plans shall be incorporated into the permit.

c. The Secretary or U.S. EPA determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.

d. The Secretary or U.S. EPA determines that the permit must be revised or revoked and reissued to assure compliance with the applicable requirements.

[45CSR§30-6.6.a.]

2.6. Administrative Permit Amendments

2.6.1. The permittee may request an administrative permit amendment as defined in and according to the procedures specified in 45CSR§30-6.4.
[45CSR§30-6.4.]

2.7. Minor Permit Modifications

2.7.1. The permittee may request a minor permit modification as defined in and according to the procedures specified in 45CSR§30-6.5.a.
[45CSR§30-6.5.a.]

2.8. Significant Permit Modification

2.8.1. The permittee may request a significant permit modification, in accordance with 45CSR§30-6.5.b., for permit modifications that do not qualify for minor permit modifications or as administrative amendments.
[45CSR§30-6.5.b.]

2.9. Emissions Trading

2.9.1. No permit revision shall be required, under any approved economic incentives, marketable permits, emissions trading, and other similar programs or processes for changes that are provided for in the permit and that are in accordance with all applicable requirements.
[45CSR§30-5.1.h.]

2.10. Off-Permit Changes

2.10.1. Except as provided below, a facility may make any change in its operations or emissions that is not addressed nor prohibited in its permit and which is not considered to be construction nor modification under any rule promulgated by the Secretary without obtaining an amendment or modification of its permit. Such changes shall be subject to the following requirements and restrictions:

a. The change must meet all applicable requirements and may not violate any existing permit term or condition.

b. The permittee must provide a written notice of the change to the Secretary and to U.S. EPA within two (2) business days following the date of the change. Such written notice shall describe each such change, including the date, any change in emissions, pollutants emitted, and any applicable requirement that would apply as a result of the change.

c. The change shall not qualify for the permit shield.

d. The permittee shall keep records describing all changes made at the source that result in emissions of regulated air pollutants, but not otherwise regulated under the permit, and the emissions resulting from those changes.

e. No permittee may make any change subject to any requirement under Title IV of the Clean Air Act (Acid Deposition Control) pursuant to the provisions of 45CSR§30-5.9.

f. No permittee may make any changes which would require preconstruction review under any provision of Title I of the Clean Air Act (including 45CSR14 and 45CSR19) pursuant to the provisions of 45CSR§30-5.9.

[45CSR§30-5.9.]

2.11. Operational Flexibility

2.11.1. The permittee may make changes within the facility as provided by § 502(b)(10) of the Clean Air Act. Such operational flexibility shall be provided in the permit in conformance with the permit application and applicable requirements. No such changes shall be a modification under any rule or any provision of Title I of the Clean Air Act (including 45CSR14 and 45CSR19) promulgated by the Secretary in accordance with Title I of the Clean Air Act and the change shall not result in a level of emissions exceeding the emissions allowable under the permit.
[45CSR§30-5.8]

2.11.2. Before making a change under 45CSR§30-5.8., the permittee shall provide advance written notice to the Secretary and to U.S. EPA, describing the change to be made, the date on which the change will occur, any changes in emissions, and any permit terms and conditions that are affected. The permittee shall thereafter maintain a copy of the notice with the permit, and the Secretary shall place a copy with the permit in the public file. The written notice shall be provided to the Secretary and U.S. EPA at least seven (7) days prior to the date that the change is to be made, except that this period may be shortened or eliminated as necessary for a change that must be implemented more quickly to address unanticipated conditions posing a significant health, safety, or environmental hazard. If less than seven (7) days notice is provided because of a need to respond more quickly to such unanticipated conditions, the permittee shall provide notice to the Secretary and U.S. EPA as soon as possible after learning of the need to make the change.
[45CSR§30-5.8.a.]

2.11.3. The permit shield shall not apply to changes made under 45CSR§30-5.8., except those provided for in 45CSR§30-5.8.d. However, the protection of the permit shield will continue to apply to operations and emissions that are not affected by the change, provided that the permittee complies with the terms and conditions of the permit applicable to such operations and emissions. The permit shield may be reinstated for emissions and operations affected by the change:

a. If subsequent changes cause the facility's operations and emissions to revert to those authorized in the permit and the permittee resumes compliance with the terms and conditions of the permit, or

b. If the permittee obtains final approval of a significant modification to the permit to incorporate the change in the permit.

[45CSR§30-5.8.c.]

2.11.4. "Section 502(b)(10) changes" are changes that contravene an express permit term. Such changes do not include changes that would violate applicable requirements or contravene enforceable permit terms and conditions that are monitoring (including test methods), recordkeeping, reporting, or compliance certification requirements.
[45CSR§30-2.40]

2.12. Reasonably Anticipated Operating Scenarios

2.12.1. The following are terms and conditions for reasonably anticipated operating scenarios identified in this permit.

a. Contemporaneously with making a change from one operating scenario to another, the permittee shall record in a log at the permitted facility a record of the scenario under which it is operating and to document the change in reports submitted pursuant to the terms of this permit and 45CSR30.

b. The permit shield shall extend to all terms and conditions under each such operating scenario; and

c. The terms and conditions of each such alternative scenario shall meet all applicable requirements and the requirements of 45CSR30.

[45CSR§30-5.1.i.]

2.13. Duty to Comply

2.13.1. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the West Virginia Code and the Clean Air Act and is grounds for enforcement action by the Secretary or USEPA; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.
[45CSR§30-5.1.f.1.]

2.14. Inspection and Entry

2.14.1. The permittee shall allow any authorized representative of the Secretary, upon the presentation of credentials and other documents as may be required by law, to perform the following:

a. At all reasonable times (including all times in which the facility is in operation) enter upon the permittee's premises where a source is located or emissions related activity is conducted, or where records must be kept under the conditions of this permit;

b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

c. Inspect at reasonable times (including all times in which the facility is in operation) any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit;

d. Sample or monitor at reasonable times substances or parameters to determine compliance with the permit or applicable requirements or ascertain the amounts and types of air pollutants discharged.

[45CSR§30-5.3.b.]

2.15. Schedule of Compliance

2.15.1. For sources subject to a compliance schedule, certified progress reports shall be submitted consistent with the applicable schedule of compliance set forth in this permit and 45CSR§30-4.3.h., but at least every six (6) months, and no greater than once a month, and shall include the following:

a. Dates for achieving the activities, milestones, or compliance required in the schedule of compliance, and dates when such activities, milestones or compliance were achieved; and

b. An explanation of why any dates in the schedule of compliance were not or will not be met, and any preventative or corrective measure adopted.

[45CSR§30-5.3.d.]

2.16. Need to Halt or Reduce Activity not a Defense

2.16.1. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. However, nothing in this paragraph shall be construed as precluding consideration of a need to halt or reduce activity as a mitigating factor in determining penalties for noncompliance if the health, safety, or environmental impacts of halting or reducing operations would be more serious than the impacts of continued operations.
[45CSR§30-5.1.f.2.]

2.17. Reserved

2.18. Federally-Enforceable Requirements

2.18.1. All terms and conditions in this permit, including any provisions designed to limit a source's potential to emit and excepting those provisions that are specifically designated in the permit as "State-enforceable only", are enforceable by the Secretary, USEPA, and citizens under the Clean Air Act.
[45CSR§30-5.2.a.]

2.18.2. Those provisions specifically designated in the permit as “State-enforceable only” shall become “Federally-enforceable” requirements upon SIP approval by the USEPA.

2.19. Duty to Provide Information

2.19.1. The permittee shall furnish to the Secretary within a reasonable time any information the Secretary may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Secretary copies of records required to be kept by the permittee. For information claimed to be confidential, the permittee shall furnish such records to the Secretary along with a claim of confidentiality in accordance with 45CSR31. If confidential information is to be sent to USEPA, the permittee shall directly provide such information to USEPA along with a claim of confidentiality in accordance with 40 C.F.R. Part 2.
[45CSR§30-5.1.f.5.]

2.20. Duty to Supplement and Correct Information

2.20.1. Upon becoming aware of a failure to submit any relevant facts or a submittal of incorrect information in any permit application, the permittee shall promptly submit to the Secretary such supplemental facts or corrected information.
[45CSR§30-4.2.]

2.21. Permit Shield

2.21.1. Compliance with the conditions of this permit shall be deemed compliance with any applicable requirements as of the date of permit issuance provided that such applicable requirements are included and are specifically identified in this permit or the Secretary has determined that other requirements specifically identified are not applicable to the source and this permit includes such a determination or a concise summary thereof.
[45CSR§30-5.6.a.]

2.21.2. Nothing in this permit shall alter or affect the following:

a. The liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance; or

b. The applicable requirements of the Code of West Virginia and Title IV of the Clean Air Act (Acid Deposition Control), consistent with § 408 (a) of the Clean Air Act.

c. The authority of the Administrator of U.S. EPA to require information under § 114 of the Clean Air Act or to issue emergency orders under § 303 of the Clean Air Act.

[45CSR§30-5.6.c.]

2.22. Credible Evidence

2.22.1. Nothing in this permit shall alter or affect the ability of any person to establish compliance with, or a violation of, any applicable requirement through the use of credible evidence to the extent authorized by law. Nothing in this permit shall be construed to waive any defenses otherwise available to the permittee including but not limited to any challenge to the credible evidence rule in the context of any future proceeding.
[45CSR§30-5.3.e.3.B.]

2.23. Severability

2.23.1. The provisions of this permit are severable. If any provision of this permit, or the application of any provision of this permit to any circumstance is held invalid by a court of competent jurisdiction, the remaining permit terms and conditions or their application to other circumstances shall remain in full force and effect.
[45CSR§30-5.1.e.]

2.24. Property Rights

2.24.1. This permit does not convey any property rights of any sort or any exclusive privilege.
[45CSR§30-5.1.f.4]

2.25. Acid Deposition Control

2.25.1. Emissions shall not exceed any allowances that the source lawfully holds under Title IV of the Clean Air Act (Acid Deposition Control) or rules of the Secretary promulgated thereunder.

a. No permit revision shall be required for increases in emissions that are authorized by allowances acquired pursuant to the acid deposition control program, provided that such increases do not require a permit revision under any other applicable requirement.

b. No limit shall be placed on the number of allowances held by the source. The source may not, however, use allowances as a defense to noncompliance with any other applicable requirement.

c. Any such allowance shall be accounted for according to the procedures established in rules promulgated under Title IV of the Clean Air Act.

[45CSR§30-5.1.d.]

2.25.2. Where applicable requirements of the Clean Air Act are more stringent than any applicable requirement of regulations promulgated under Title IV of the Clean Air Act (Acid Deposition Control), both provisions shall be incorporated into the permit and shall be enforceable by the Secretary and U. S. EPA.
[45CSR§30-5.1.a.2.]

2.0 Facility-Wide Requirements

3.1. Limitations and Standards

3.1.1. **Open burning.** The open burning of refuse by any person is prohibited except as noted in 45CSR§6-3.1. **[45CSR§6-3.1.]**

3.1.2. **Open burning exemptions.** The exemptions listed in 45CSR§6-3.1 are subject to the following stipulation: Upon notification by the Secretary, no person shall cause or allow any form of open burning during existing or predicted periods of atmospheric stagnation. Notification shall be made by such means as the Secretary may deem necessary and feasible. **[45CSR§6-3.2.]**

3.1.3. **Asbestos.** The permittee is responsible for thoroughly inspecting the facility, or part of the facility, prior to commencement of demolition or renovation for the presence of asbestos and complying with 40 C.F.R. § 61.145, 40 C.F.R. § 61.148, and 40 C.F.R. § 61.150. The permittee, owner, or operator must notify the Secretary at least ten (10) working days prior to the commencement of any asbestos removal on the forms prescribed by the Secretary if the permittee is subject to the notification requirements of 40 C.F.R. § 61.145(b)(3)(i). The USEPA, the Division of Waste Management and the Bureau for Public Health - Environmental Health require a copy of this notice to be sent to them. **[40 C.F.R. §61.145(b) and 45CSR34]**

3.1.4. **Odor.** No person shall cause, suffer, allow or permit the discharge of air pollutants which cause or contribute to an objectionable odor at any location occupied by the public. **[45CSR§4-3.1 State-Enforceable only.]**

3.1.5. **Standby plan for reducing emissions.** When requested by the Secretary, the permittee shall prepare standby plans for reducing the emissions of air pollutants in accordance with the objectives set forth in Tables I, II, and III of 45CSR11. **[45CSR§11-5.2]**

3.1.6. **Emission inventory.** The permittee is responsible for submitting, on an annual basis, an emission inventory in accordance with the submittal requirements of the Division of Air Quality. **[W.Va. Code § 22-5-4(a)(15)]**

3.1.7. **Ozone-depleting substances.** For those facilities performing maintenance, service, repair or disposal of appliances, the permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 C.F.R. Part 82, Subpart F, except as provided for Motor Vehicle Air Conditioners (MVACs) in Subpart B:

a. Persons opening appliances for maintenance, service, repair, or disposal must comply with the prohibitions and required practices pursuant to 40 C.F.R. §§ 82.154 and 82.156.

b. Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 C.F.R. § 82.158.

c. Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 C.F.R. § 82.161.

[40 C.F.R. 82, Subpart F]

3.1.8. **Risk Management Plan.** Should this stationary source, as defined in 40 C.F.R. § 68.3, become subject to Part 68, then the owner or operator shall submit a risk management plan (RMP) by the date specified in 40 C.F.R. § 68.10 and shall certify compliance with the requirements of Part 68 as part of the annual compliance certification as required by 40 C.F.R. Part 70 or 71.
[40 C.F.R. 68]

3.1.9. The permitted facility (Sources ID 2-11S, 2-19S, 2-20S, F-5S, F-7S, F-20S, F-25S, 6-4S, 6-6S, 6-7S, 6-8S, 6-9S, J-7S, J-8S, J-10S, J-11S, 2-18S, Z-3S, Z-8S, Z-9S, and Z-13S) shall comply with all the applicable standard provisions of the 40CFR63 Subpart GG National Emission Standards for Aerospace Manufacturing and Rework Facilities, provided, however, that compliance with any more stringent limitations set forth under Requirements of Sections 4.0 through 8.0, Sections 11.0 and 12 of this Permit, is demonstrated:

§ 63.744 Standards: Cleaning operations.

(a) Housekeeping measures. Each owner or operator of a new or existing cleaning operation subject to this subpart shall comply with the requirements in these paragraphs unless the cleaning solvent used is identified in Table 1 of this section or meets the definition of "Non-HAP material" in 63.742. The requirements of this section do not apply to spent cleaning solvents, and solvent-laden applicators that are subject to and handled and stored in compliance with 40 CFR parts 262 through 268 (including the air emission control requirements in 40 CFR part 265, subpart CC).

(1) Place used solvent-laden cloth, paper, or any other absorbent applicators used for cleaning in bags or other closed containers. Ensure that these bags and containers are kept closed at all times except when depositing or removing these materials from the container. Use bags and containers of such design so as to contain the vapors of the cleaning solvent. Cotton-tipped swabs used for very small cleaning operations are exempt from this requirement.

(2) Store fresh and spent cleaning solvents, except semi-aqueous solvent cleaners, used in aerospace cleaning operations in closed containers.

(3) Conduct the handling and transfer of cleaning solvents to or from enclosed systems, vats, waste containers, and other cleaning operation equipment that hold or store fresh or spent cleaning solvents in such a manner that minimizes spills.

(b) Hand-wipe cleaning. Each owner or operator of a new or existing hand-wipe cleaning operation (excluding cleaning of spray gun equipment performed in accordance with paragraph (c) of this section) subject to this subpart shall use cleaning solvents that meet one of the requirements specified in paragraphs (b)(1), (b)(2), and (b)(3) of this section. Cleaning solvent solutions that contain HAP and VOC below the de minimis levels specified in § 63.741(f) are exempt from the requirements in paragraphs (b)(1), (b)(2), and (b)(3) of this section.

(1) Meet one of the composition requirements in Table 1 of this section;

(2) Have a composite vapor pressure of 45 mm Hg (24.1 in. H_2O) or less at 20 °C (68 °F); or

(3) Demonstrate that the volume of hand-wipe solvents used in cleaning operations has been reduced by at least 60% from a baseline adjusted for production. The baseline shall be established as part of an approved alternative plan administered by the State. Demonstrate that the volume of hand-wipe

cleaning solvents used in cleaning operations has been reduced by at least 60 percent from a baseline adjusted for production. The baseline shall be calculated using data from 1996 and 1997, or as otherwise agreed upon by the Administrator or delegated State Authority. The baseline shall be approved by the Administrator or delegated State Authority and shall be included as part of the facility's title V or part 70 permit.

(c) Spray gun cleaning. Each owner or operator of a new or existing spray gun cleaning operation subject to this subpart in which spray guns are used for the application of coatings or any other materials that require the spray guns to be cleaned shall use one or more of the techniques, or their equivalent, specified in paragraphs (c)(1) through (c)(4) of this section. Spray gun cleaning operations using cleaning solvent solutions that contain HAP and VOC below the de minimis levels specified in § 63.741(f) are exempt from the requirements in paragraphs (c)(1) through (c)(4) of this section.

(1) (i) Enclosed system. Clean the spray gun in an enclosed system that is closed at all times except when inserting or removing the spray gun. Cleaning shall consist of forcing solvent through the gun.

(ii) If leaks are found during the monthly inspection required in § 63.751(a), repairs shall be made as soon as practicable, but no later than 15 days after the leak was found. If the leak is not repaired by the 15th day after detection, the cleaning solvent shall be removed, and the enclosed cleaner shall be shut down until the leak is repaired or its use is permanently discontinued.

(2) Nonatomized cleaning. Clean the spray gun by placing cleaning solvent in the pressure pot and forcing it through the gun with the atomizing cap in place. No atomizing air is to be used. Direct the cleaning solvent from the spray gun into a vat, drum, or other waste container that is closed when not in use.

(3) Disassembled spray gun cleaning. Disassemble the spray gun and clean the components by hand in a vat, which shall remain closed at all times except when in use. Alternatively, soak the components in a vat, which shall remain closed during the soaking period and when not inserting or removing components.

(4) Atomizing cleaning. Clean the spray gun by forcing the cleaning solvent through the gun and direct the resulting atomized spray into a waste container that is fitted with a device designed to capture the atomized cleaning solvent emissions.

(5) Cleaning of the nozzle tips of automated spray equipment systems, except for robotic systems that can be programmed to spray into a closed container, shall be exempt from the requirements of paragraph (c) of this section.

(e) Exempt cleaning operations. The following cleaning operations are exempt from the requirements of paragraph (b) of this section:

(1) Cleaning during the manufacture, assembly, installation, maintenance, or testing of components of breathing oxygen systems that are exposed to the breathing oxygen;

(2) Cleaning during the manufacture, assembly, installation, maintenance, or testing of parts, subassemblies, or assemblies that are exposed to strong oxidizers or reducers (e.g., nitrogen tetroxide, liquid oxygen, or hydrazine);

(3) Cleaning and surface activation prior to adhesive bonding;

(4) Cleaning of electronic parts and assemblies containing electronic parts;

(5) Cleaning of aircraft and ground support equipment fluid systems that are exposed to the fluid, including air-to-air heat exchangers and hydraulic fluid systems;

(6) Cleaning of fuel cells, fuel tanks, and confined spaces;

(7) Surface cleaning of solar cells, coated optics, and thermal control surfaces;

(8) Cleaning during fabrication, assembly, installation, and maintenance of upholstery, curtains, carpet, and other textile materials used in the interior of the aircraft;

(9) Cleaning of metallic and nonmetallic materials used in honeycomb cores during the manufacture or maintenance of these cores, and cleaning of the completed cores used in the manufacture of aerospace vehicles or components;

(10) Cleaning of aircraft transparencies, polycarbonate, or glass substrates;

(11) Cleaning and cleaning solvent usage associated with research and development, quality control, and laboratory testing;

(12) Cleaning operations, using nonflamable liquids, conducted within five feet of energized electrical systems. Energized electrical systems means any AC or DC electrical circuit on an assembled aircraft once electrical power is connected, including interior passenger and cargo areas, wheel wells and tail sections; and

(13) Cleaning operations identified as essential uses under the Montreal Protocol for which the Administrator has allocated essential use allowances or exemptions in 40 CFR 82.4.

Table 1 Composition Requirements for Approved Cleaning Solvents

Cleaning solvent type	Composition requirements
Aqueous.....	Cleaning solvents in which water is the primary ingredient ($\geq$ 80 percent of must be water). Detergents, surfactants, and bioenzyme mixtures and nutrients may be combined with the water along with a variety of additives, such as organic solvents (e.g., high boiling point alcohols), builders, inhibitors, emulsifiers, pH buffers, and antifoaming agents. Aqueous solutions must have a flash point greater than 93 °C (200° F) (as reported by the manufacturer), and the solution must be miscible with water.
Hydrocarbon-based.....	Cleaners that are composed of photochemically reactive hydrocarbons and/or oxygenated hydrocarbons and have a maximum vapor pressure of 7 mm Hg at 20 °C (3.75 in. H_2O and 68 °F). These cleaners also contain no HAP.

§63.745 Standards: Primer, topcoat, and specialty coating application operations.

(a) Each owner or operator of a new or existing primer, topcoat, or specialty coating application operation subject to this subpart shall comply with the requirements specified in paragraph (c) of this section for those coatings that are uncontrolled (no control device is used to reduce organic HAP emissions from the operation), and in paragraph (d) of this section for those coatings that are controlled (organic HAP emissions from the operation are reduced by the use of a control device). Aerospace equipment that is no longer operational, intended for public display, and not easily capable of being moved is exempt from the requirements of this section.

(b) Each owner or operator shall conduct the handling and transfer of primers, topcoats, and specialty coatings to or from containers, tanks, vats, vessels, and piping systems in such a manner that minimizes spills.

(c) *Uncontrolled coatings—organic HAP and VOC content levels*. Each owner or operator shall comply with the organic HAP and VOC content limits specified in paragraphs (c)(1) through (6) of this section for those coatings that are uncontrolled.

(5) Organic HAP emissions from specialty coatings shall be limited to an organic HAP content level of no more than the HAP content limit specified in Table 1 of this section for each applicable specialty coating type.

(6) VOC emissions from specialty coatings shall be limited to a VOC content level of no more than the VOC content limit specified in Table 1 of this section for each applicable specialty coating type.

(d) *Controlled coatings—control system requirements.* Each control system shall reduce the operation's organic HAP and VOC emissions to the atmosphere by 81% or greater, taking into account capture and destruction or removal efficiencies, as determined using the procedures in §63.750(g) when a carbon adsorber is used and in §63.750(h) when a control device other than a carbon adsorber is used.

§ 63.748 Standards: Handling and storage of waste.

(a) The owner or operator of each facility subject to this subpart that produces a waste that contains organic HAP from aerospace primer, topcoat, specialty coating, chemical milling maskant, or chemical depainting operations must be handled and stored as specified in paragraph (a)(1) or (a)(2) of this section. The requirements of paragraphs (a)(1) and (a)(2) of this section do not apply to spent wastes that contain organic HAP that are subject to and handled and stored in compliance with 40 CFR parts 262 through 268 (including the air emission control requirements in 40 CFR part 265, subpart CC).

(1) Conduct the handling and transfer of the waste to or from containers, tanks, vats, vessels, and piping systems in such a manner that minimizes spills.

(2) Store all waste that contains organic HAP in closed containers.

[45CSR34, 40 C.F.R. 63, Subpart GG; 45CSR13, R13-2037, B.7; 45CSR13, R13-3334, 4.1.3, 4.1.4, 4.1.5; 45CSR13, R13-3534, 4.1.3, 4.1.4, 4.1.5; 45CSR13, R13-3551, 4.1.3, 4.1.4, 4.1.5]

3.1.10. The pertinent sections of 45CSR7 applicable to this facility include, but are not limited to, the following:

No person shall cause, suffer, allow or permit emission of smoke and/or particulate matter into the open air from any process source operation which is greater than twenty (20) percent opacity, except as noted in subsections 3.2, 3.3, 3.4, 3.5, 3.6, and 3.7. **[45CSR§7-3.1]**

The provisions of 45CSR§7-3.1 shall not apply to smoke and/or particulate matter emitted from any process source operation which is less than forty (40) percent opacity for any period or periods aggregating no more than five (5) minutes in any sixty (60) minute period.
[45CSR§7-3.2]

No person shall cause, suffer, allow or permit visible emissions from any storage structure(s) associated with any manufacturing process(es) that pursuant to 45CSR§7-5.1 is required to have a full enclosure and be equipped with a particulate matter control device.
[45CSR§7-3.7]

No person shall cause, suffer, allow or permit particulate matter to be vented into the open air from any type source operation or duplicate source operation, or from all air pollution control equipment installed on any type source operation or duplicate source operation in excess of the quantity specified under the appropriate source operation type in Table 45-7A found at the end of 45CSR7.
[45CSR§7-4.1]

Any stack serving any process source operation or air pollution control equipment on any process source operation shall contain flow straightening devices or a vertical run of sufficient length to establish flow patterns consistent with acceptable stack sampling procedures.
[45CSR§7-4.12]

No person shall cause, suffer, allow or permit any manufacturing process or storage structure generating fugitive particulate matter to operate that is not equipped with a system, which may include, but not be limited to, process equipment design, control equipment design or operation and maintenance procedures, to minimize the emissions of fugitive particulate matter. To minimize means such system shall be installed, maintained and operated to ensure the lowest fugitive particulate matter emissions reasonably achievable.
[45CSR§7-5.1]

The owner or operator of a plant shall maintain particulate matter control of the plant premises, and plant owned, leased or controlled access roads, by paving, application of asphalt, chemical dust suppressants or other suitable dust control measures. Good operating practices shall be implemented and when necessary particulate matter suppressants shall be applied in relation to stockpiling and general material handling to minimize particulate matter generation and atmospheric entrainment.
[45CSR§7-5.2]

At such reasonable times as the Director may designate, the operator of any manufacturing process source operation may be required to conduct or have conducted stack tests to determine the particulate matter loading in exhaust gases. Such tests shall be conducted in such manner as the Director may specify and be filed on forms and in a manner acceptable to the Director. The Director, or his duly authorized representative, may at his option witness or conduct such stack tests. Should the Director exercise his option to conduct such tests, the operator will provide all the necessary sampling connections and sampling ports to be located in such manner as the Director may require, power for test equipment, and the required safety equipment such as scaffolding, railings and ladders to comply with generally accepted good safety practices.
[45CSR§7-8.1]

The Director, or his duly authorized representative, may conduct such other tests as he or she may deem necessary to evaluate air pollution emissions.
[45CSR§7-8.2]

[45CSR13, R13-0401, B.6; R13-1047, B.4; R13-1455, B.5; R13-1694, B.5; R13-1782, B.6; R13-1798, B.6; R13-2037, B.5; R13-2246, B.2; R13-3334, 4.1.2; R13-3534, 4.1.2]

3.1.11. The pertinent sections of 45CSR13 applicable to this facility include, but are not limited to, the following:
§45-13-6.1
At the time a stationary source is alleged to be in compliance with an applicable emission standard and at reasonable times to be determined by the Director thereafter, appropriate tests consisting of visual determinations or conventional in-stack measurements or such other tests the Director may specify shall be conducted to determine compliance.
[45CSR13, R13-0401, B.7; R13-1047, B.4; R13-1455, B.6; R13-1694, B.6; R13-1782, B.7; R13-1798, B.7; R13-2037, B.6 & R13-2246, B.6]

3.1.12. **Operation and Maintenance of Air Pollution Control Equipment.** The permittee shall, to the extent practicable, install, maintain, and operate all pollution control equipment listed in Section 1.1 and associated monitoring equipment in a manner consistent with safety and good air pollution control practices for minimizing emissions, or comply with any more stringent limits set forth in this permit or as set forth by any State rule, Federal regulation, or alternative control plan approved by the Secretary.
[45CSR§13-5.10; 45CSR13, R13-0898, 4.1.3; 45CSR13, R13-3334, 4.1.6; 45CSR13, R13-3408, 5.1.2; 45CSR13, R13-3534, 4.1.6; 45CSR13, R13-3651, 4.1.5]

3.2. Monitoring Requirements

3.2.1. Compliance with Section 3 of 45CSR7 (Requirement 3.1.10 of this Permit) shall be determined by conducting visual emission observations in accordance with Method 22 of 40 CFR 60, Appendix A for the Emission 1-3E, 1-7E, F-6E, F-11E, F-14E subject to 45CSR7, and units emitting directly into the open air from points other than stack outlet (including visible fugitive dust emissions that leave the plant site boundaries).

Visual emission observations shall be conducted monthly during periods of facility operation to determine if the unit has visible emissions using procedures outlined in 40CFR60 Appendix A, Method 22.

If sources of visible emissions are identified, the permittee shall conduct an Opacity Evaluation as outlined in 45CSR§7A-2.1.a, b, within 24 hour period unless the permittee can demonstrate a valid reason that the time frame should be extended. A 45CSR§7A-2.1.a, b evaluation shall not be required if the visible emission condition is corrected in a timely manner and the units are operated at normal operating conditions with no visible emissions being observed.

Anytime when not in compliance with the opacity limit per 45CSR§7-3.1 for any emission point, reporting as per Requirement 3.5.11 shall be initiated, and for this emission point, Method 22 checks shall revert to a weekly frequency for a minimum of 4 consecutive weeks. If in compliance, then monthly Method 22 checks shall be conducted.

Compliance with this Requirement will assure compliance with requirement 3.3.4.f.
[45CSR§30-5.1.c]

3.2.2. Compliance with Section 3 of 45CSR7 (Requirement 3.1.10 of this Permit) for paint booths and related equipment (Emission Points 2-9E, 2-10E, 2-11E, 2-15E, F-1E, F-3E, F-5E, F-9E, F-12E, F-13E, F-16E, F-18E, G-2E, 6-2E, 6-4E, 6-5E, 6-6E, 6-7E, 6-8E, J-2E, J-4E, J-5E, J-7E and J-8E) shall be determined by conducting fabric filter checks prior to each use of the equipment. These checks shall include review to ensure filters are properly fitted to the unit, that no holes exist, and that the filters are not overloaded. Any changes made to filters during the checks or any filter replacements shall be recorded. (See attachment D as a sample form).
[45CSR§30-5.1.c, 45CSR13, R13-1798, A.7]

3.2.3. Compliance with Section 3 of 45CSR7 (Requirement 3.1.10 of this Permit) for handling areas (Emission Points 1-9E and 1-12E) shall be determined by use of properly maintained HEPA filters (as per Requirement 4.4.5), and utilizing manometers to ensure proper operation of the filters prior to each use of equipment. Permittee shall keep records of manometer checks and any necessary corrective actions (including filter replacements).
[45CSR§30-5.1.c]

3.2.4. The permitted facility (Sources ID 2-11S, 2-19S, 2-20S, F-5S, F-7S, F-20S, F-25S, 6-4S, 6-6S, 6-7S, 6-8S, 6-9S, J-7S, J-8S, J-10S, J-11S, 2-18S, Z-3S, Z-8S, Z-9S, and Z-13S) shall comply with all the applicable standard provisions of the 40CFR63 Subpart GG National Emission Standards for Aerospace Manufacturing and Rework Facilities, provided, however, that compliance with any more stringent limitations set forth under Requirements of Sections 4.0. through 8.0. and Section 12 of this Permit, is demonstrated:

§ 63.751 Monitoring requirements.

(a) Enclosed spray gun cleaners. Each owner or operator using an enclosed spray gun cleaner under § 63.744(c)(1) (Section 3.1.9. of this Permit) shall visually inspect the seals and all other potential sources of leaks associated with each enclosed gun spray cleaner system at least once per month. Each inspection shall occur while the system is in operation.

[45CSR34, 40 C.F.R. 63, Subpart GG; 45CSR13, R13-2037, B.7]

3.3. Testing Requirements

3.3.1. **Stack testing.** As per provisions set forth in this permit or as otherwise required by the Secretary, in accordance with the West Virginia Code, underlying regulations, permits and orders, the permittee shall conduct test(s) to determine compliance with the emission limitations set forth in this permit and/or established or set forth in underlying documents. The Secretary, or his duly authorized representative, may at his option witness or conduct such test(s). Should the Secretary exercise his option to conduct such test(s), the operator shall provide all necessary sampling connections and sampling ports to be located in such manner as the Secretary may require, power for test equipment and the required safety equipment, such as scaffolding, railings and ladders, to comply with generally accepted good safety practices. Such tests shall be conducted in accordance with the methods and procedures set forth in this permit or as otherwise approved or specified by the Secretary in accordance with the following:

a. The Secretary may on a source-specific basis approve or specify additional testing or alternative testing to the test methods specified in the permit for demonstrating compliance with 40 C.F.R. Parts 60, 61, and 63, if applicable, in accordance with the Secretary's delegated authority and any established equivalency determination methods which are applicable.

b. The Secretary may on a source-specific basis approve or specify additional testing or alternative testing to the test methods specified in the permit for demonstrating compliance with applicable requirements which do not involve federal delegation. In specifying or approving such alternative testing to the test methods, the Secretary, to the extent possible, shall utilize the same equivalency criteria as would be used in approving such changes under Section 3.3.1.a. of this permit. If a testing method is specified or approved which effectively replaces a test method specified in the permit, the permit shall be revised in accordance with 45CSR§30-6.4 or 45CSR§30-6.5 as applicable.

c. All periodic tests to determine mass emission limits from or air pollutant concentrations in discharge stacks and such other tests as specified in this permit shall be conducted in accordance with an approved test protocol. Unless previously approved, such protocols shall be submitted to the Secretary in writing at least thirty (30) days prior to any testing and shall contain the information set forth by the Secretary. In addition, the permittee shall notify the Secretary at least fifteen (15) days prior to any testing so the Secretary may have the opportunity to observe such tests. This notification shall include the actual date and time during which the test will be conducted and, if appropriate, verification that the tests will fully conform to a referenced protocol previously approved by the Secretary.

d. The permittee shall submit a report of the results of the stack test within 60 days of completion of the test. The test report shall provide the information necessary to document the objectives of the test and to determine whether proper procedures were used to accomplish these objectives. The report shall include the following: the certification described in paragraph 3.5.1; a statement of compliance status, also signed by a responsible official; and, a summary of conditions which form the basis for the compliance status evaluation. The summary of conditions shall include the following:

1. The permit or rule evaluated, with the citation number and language.

2. The result of the test for each permit or rule condition.

3. A statement of compliance or non-compliance with each permit or rule condition.

[WV Code §§ 22-5-4(a)(15-16) and 45CSR13]

3.3.2. A test protocol (as per Requirement 3.3.1.c.) shall include detailing on the proposed test methods, the date and the time the proposed testing is to take place, as well as identifying the sampling locations and other relevant information.
[45CSR13, R13-1455, B.8; R13-1694, B.8; **R13-0401, B.9; R13-1798, B.9; R13-1782, B.9; R13-2037, B.9]**

3.3.3. Test results shall be submitted to the Secretary no more than sixty (60) days after the date the testing takes place.
[45CSR13, R13-1455, B.8; R13-1694, **B.8**; **R13-0401, B.9; R13-1798, B.9; R13-1782, B.9; R13-2037, B.9]**

3.3.4. Tests that are required by the Director to determine compliance with the emission limitations set forth in this permit shall be conducted in accordance with the methods as set forth below. The Director may require a different test method or approve an alternative method in light of any new technology advancements that may occur. Compliance testing shall be conducted at 100% of the peak load unless otherwise specified by the Director.

a. Tests to determine compliance with PM emission limits shall be conducted in accordance with Method 5, 5A, 5B, 5C, 5D, 5E, 5F, 5G, or 5H as set forth in 40 CFR 60, Appendix A.

b. Tests to determine compliance with SO_2 emission limits shall be conducted in accordance with Method 6, 6A, 6B, or 6C as set forth in 40 CFR 60, Appendix A.

c. Tests to determine compliance with CO emission limits shall be conducted in accordance with Method 10, 10A, or 10B as set forth in 40 CFR 60, Appendix A.

d. Tests to determine compliance with NO_x emission limits shall be conducted in accordance with Method 7, 7A, 7B, 7C, 7D, or 7E as set forth in 40 CFR 60, Appendix A.

e. Tests to determine compliance with VOC emission limits shall be conducted in accordance with Method 25, or 25A as set forth in 40 CFR 60, Appendix A.

f. Tests to determine compliance with Opacity of emissions shall be conducted in accordance with Method 9 as set forth in 40 CFR 60, Appendix A.

g. Tests to determine compliance with HAP emission limits shall be conducted in accordance with 40 CFR 63.

[45CSR13, R13-1455, B.7; R13-1694, B.7; R13-0401, B.8; R13-1798, B.8; R13-1782, B.8; R13-2037, B.8]

3.4. Recordkeeping Requirements

3.4.1. **Monitoring information.** The permittee shall keep records of monitoring information that include the following:

a. The date, place as defined in this permit and time of sampling or measurements;

b. The date(s) analyses were performed;

c. The company or entity that performed the analyses;

d. The analytical techniques or methods used;

e. The results of the analyses; and

f. The operating conditions existing at the time of sampling or measurement.

[45CSR§30-5.1.c.2.A; 45CSR13, R13-3534, 4.4.1; 45CSR13, R13-3651, 4.4.1]

3.4.2. **Retention of records.** The permittee shall retain records of all required monitoring data and support information for a period of at least five (5) years from the date of monitoring sample, measurement, report, application, or record creation date. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit. Where appropriate, records may be maintained in computerized form in lieu of the above records.
[45CSR§30-5.1.c.2.B.]

3.4.3. **Odors.** For the purposes of 45CSR4, the permittee shall maintain a record of all odor complaints received, any investigation performed in response to such a complaint, and any responsive action(s) taken.
[45CSR§30-5.1.c. State-Enforceable only.]

A record of each visible emission observation and opacity evaluation per Requirement 3.2.1, and also of monitoring required under conditions 3.2.2 and 3.2.3, shall be maintained on site for and shall be made available to the Director or his/her duly authorized representative upon request. Said records shall include, the date, time, name of emission unit, the applicable visible emission requirement, the results of the check, what action(s), if any, was/were taken, and the name of the observer.
[45CSR§30-5.1.c.]

3.4.5. The permitted facility (as indicated in Requirement 3.1.9) shall comply with all the applicable recordkeeping provisions of the 40CFR63 Subpart GG National Emission Standards for Aerospace Manufacturing and Rework Facilities, provided, however, that compliance with any more stringent limitations set forth under Requirements of Sections 4.0 through 8.0, Sections 11.0 and 12.0 of this Permit, is demonstrated:

§ 63.752 Recordkeeping requirements.

b) Cleaning operation. Each owner or operator of a new or existing cleaning operation subject to this subpart shall record the information specified in paragraphs (b)(1) through (b)(5) of this section, as appropriate.

(1) The name, vapor pressure, and documentation showing the organic HAP constituents of each cleaning solvent used for affected cleaning operations at the facility.

(2) For each cleaning solvent used in hand-wipe cleaning operations that complies with the composition requirements specified in § 63.744(b)(1) (Section 3.1.9 of this Permit) or for semi-aqueous cleaning solvents used for flush cleaning operations:

(i) The name of each cleaning solvent used;

(ii) All data and calculations that demonstrate that the cleaning solvent complies with one

of the composition requirements; and

(iii) Annual records of the volume of each solvent used, as determined from facility purchase records or usage records.

(3) For each cleaning solvent used in hand-wipe cleaning operations that does not comply with the composition requirements in § 63.744(b)(1) (Section 3.1.9 of this Permit**)**, but does comply with the vapor pressure requirement in § 63.744(b)(2) (Section 3.1.9 of this Permit):

(i) The name of each cleaning solvent used;

(ii) The composite vapor pressure of each cleaning solvent used;

(iii) All vapor pressure test results, if appropriate, data, and calculations used to determine the composite vapor pressure of each cleaning solvent; and

(iv) The amount (in gallons) of each cleaning solvent used each month at each operation.

(4) For each cleaning solvent used for the exempt hand-wipe cleaning operations specified in § 63.744(e)(Section 3.1.9 of this Permit), that does not conform to the vapor pressure or composition requirements of § 63.744(b) (Section 3.1.9 of this Permit):

(i) The identity and amount (in gallons) of each cleaning solvent used each month at each operation; and

(ii) A list of the processes set forth in § 63.744(e) (Section 3.1.9 of this Permit), to which the cleaning operation applies.

(5) A record of all leaks from enclosed spray gun cleaners identified pursuant to § 63.751(a) (Section 3.2.4 of this Permit) that includes for each leak found:

(i) Source identification;

(ii) Date leak was discovered; and

(iii) Date leak was repaired.

[45CSR34, 40 C.F.R. 63, Subpart GG; and 45CSR13, R13-2037, B.7; 45CSR13, R13-3334, 4.4.4; 45CSR13, R13-3534, 4.4.4; 45CSR13, R13-3651, 4.4.4]

3.4.6. Reserved.

3.4.7. To demonstrate compliance with the Requirement 3.1.10 (45CSR§7-5.1) the company shall keep records of maintenance and operations of fugitive dust control systems for the Emission Point 1-2E, 1-3E, 2-15E, 6-8E (Spray Booth), F-1E, F-3E, F-11E, F-12E, F-13E, G-2E, J-4E, J-5E, J-7E, J-8E, VI (Control Device ID 2-1C, E-1C, E-2C), P4-1E, P4-2E, P4-3E, P4-4E.

[45CSR§30-5.1.c]

3.4.8. **Record of Maintenance of Air Pollution Control Equipment.** For all pollution control equipment listed in Section 1.1, the permittee shall maintain accurate records of all required pollution control equipment inspection and/or preventative maintenance procedures.

[45CSR13, R13-0898, 4.4.2; 45CSR13, R13-3334, 4.4.2; 45CSR13, R13-3408, 5.3.1; 45CSR13, R13-3534, 4.4.2; 45CSR13, R13-3651, 4.4.2]

3.4.9. **Record of Malfunctions of Air Pollution Control Equipment.** For all air pollution control equipment listed in Section 1.1, the permittee shall maintain records of the occurrence and duration of any malfunction or operational shutdown of the air pollution control equipment during which excess emissions occur. For each such case, the following information shall be recorded:

a. The equipment involved.

b. Steps taken to minimize emissions during the event.

c. The duration of the event.

d. The estimated increase in emissions during the event.

For each such case associated with an equipment malfunction, the additional information shall also be recorded:

e. The cause of the malfunction.

f. Steps taken to correct the malfunction.

g. Any changes or modifications to equipment or procedures that would help prevent future recurrences of the malfunction.

[45CSR13, R13-0898, 4.4.3; 45CSR13, R13-3334, 4.4.3; 45CSR13, R13-3408, 5.3.2; 45CSR13, R13-3534, 4.4.3; 45CSR13, R13-3651, 4.4.3]

3.5. Reporting Requirements

3.5.1. **Responsible official.** Any application form, report, or compliance certification required by this permit to be submitted to the DAQ and/or USEPA shall contain a certification by the responsible official that states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete.
[45CSR§§30-4.4. *and* 5.1.c.3.D.]

3.5.2. A permittee may request confidential treatment for the submission of reporting required under 45CSR§30-5.1.c.3. pursuant to the limitations and procedures of W.Va. Code § 22-5-10 and 45CSR31.
[45CSR§30-5.1.c.3.E.]

3.5.3. Except for the electronic submittal of the annual compliance certification and semi-annual monitoring reports to the DAQ and USEPA as required in 3.5.5 and 3.5.6 below, all notices, requests, demands, submissions and other communications required or permitted to be made to the Secretary of DEP and/or USEPA shall be made in writing and shall be deemed to have been duly given when delivered by hand, or mailed first class or by private carrier with postage prepaid to the address(es), or submitted in electronic format by e-mail as set forth below or to such other person or address as the Secretary of the Department of Environmental Protection may designate:

DAQ:	**US EPA:**
Director	Section Chief

WVDEP Division of Air Quality 601 57th Street SE Charleston, WV 25304	U. S. Environmental Protection Agency, Region III Enforcement and Compliance Assurance Division Air, RCRA and Toxics Branch (3ED21) Four Penn Center 1600 John F. Kennedy Boulevard Philadelphia, PA 19103-2852

DAQ Compliance and Enforcement[1]:
DEPAirQualityReports@wv.gov

[1]For all self-monitoring reports (MACT, GACT, NSPS, etc.), stack tests and protocols, Notice of Compliance Status reports, Initial Notifications, etc.

3.5.4. **Fees.** The permittee shall pay fees on an annual basis in accordance with 45CSR§30-8.
[45CSR§30-8.]

3.5.5. **Compliance certification.** The permittee shall certify compliance with the conditions of this permit on the forms provided by the DAQ. In addition to the annual compliance certification, the permittee may be required to submit certifications more frequently under an applicable requirement of this permit. The annual certification shall be submitted to the DAQ and USEPA on or before March 15 of each year, and shall certify compliance for the period ending December 31. The permittee shall maintain a copy of the certification on site for five (5) years from submittal of the certification. The annual certification shall be submitted in electronic format by e-mail to the following addresses:

DAQ:	**US EPA:**
DEPAirQualityReports@wv.gov	R3_APD_Permits@epa.gov

[45CSR§30-5.3.e.]

3.5.6. **Semi-annual monitoring reports.** The permittee shall submit reports of any required monitoring on or before September 15 for the reporting period January 1 to June 30 and on or before March 15 for the reporting period July 1 to December 31. All instances of deviation from permit requirements must be clearly identified in such reports. All required reports must be certified by a responsible official consistent with 45CSR§30-4.4. The semi-annual monitoring reports shall be submitted in electronic format by e-mail to the following address:

DAQ:
DEPAirQualityReports@wv.gov

[45CSR§30-5.1.c.3.A.]

3.5.7. **Reserved.**

3.5.8. **Deviations.**

a. In addition to monitoring reports required by this permit, the permittee shall promptly submit supplemental reports and notices in accordance with the following:

1. Reserved.

2. Any deviation that poses an imminent and substantial danger to public health, safety, or the environment shall be reported to the Secretary immediately by telephone or email. A written report of such deviation, which shall include the probable cause of such deviation, and any corrective actions or preventative measures taken, shall be submitted by the responsible official within ten (10) days of the deviation.

3. Deviations for which more frequent reporting is required under this permit shall be reported on the more frequent basis.

4. All reports of deviations shall identify the probable cause of the deviation and any corrective actions or preventative measures taken.

[45CSR§30-5.1.c.3.C.]

b. The permittee shall, in the reporting of deviations from permit requirements, including those attributable to upset conditions as defined in this permit, report the probable cause of such deviations and any corrective actions or preventive measures taken in accordance with any rules of the Secretary.
[45CSR§30-5.1.c.3.B.]

3.5.9. **New applicable requirements.** If any applicable requirement is promulgated during the term of this permit, the permittee will meet such requirements on a timely basis, or in accordance with a more detailed schedule if required by the applicable requirement.
[45CSR§30-4.3.h.1.B.]

3.5.10. The permitted facility (as indicated in Requirement 3.1.9) shall comply with all the applicable reporting provisions of the 40CFR63 Subpart GG National Emission Standards for Aerospace Manufacturing and Rework Facilities, provided, however, that compliance with any more stringent limitations set forth under Requirements of Sections 4.0 through 8.0, Sections 11 and 12 of this Permit, is demonstrated:

§ 63.753 Reporting requirements.

(b) Cleaning operation. Each owner or operator of a cleaning operation subject to this subpart shall submit the following information:

(1) Semiannual reports occurring every 6 months from the date of the notification of compliance status that identify:

(i) Any instance where a noncompliant cleaning solvent is used for a non-exempt hand-wipe cleaning operation;

(ii) A list of any new cleaning solvents used for hand-wipe cleaning in the previous 6 months and, as appropriate, their composite vapor pressure or notification that they comply with the composition requirements specified in § 63.744(b)(1) (Section 3.1.9 of this Permit);

(iii) Any instance where a noncompliant spray gun cleaning method is used;

(iv) Any instance where a leaking enclosed spray gun cleaner remains unrepaired and in use for more than 15 days; and

(v) If the operations have been in compliance for the semiannual period, a statement that the cleaning operations have been in compliance with the applicable standards. Sources shall also submit a statement of compliance signed by a responsible company official certifying that the facility is in compliance with all applicable requirements.

[45CSR34, 40 C.F.R. 63, Subpart GG; 45CSR13, R13-2037, B.7; 45CSR13, R13-2037, 4.5.2.; 45CSR13, R13-3334, 4.5.2; 45CSR13, R13-3534, 4.5.2]

3.5.11. Upon observing any visible emissions during an Opacity Evaluation as per Requirement 3.2.1 in excess of twenty percent (20%) opacity (but less than forty percent (40%) opacity) for any period or periods aggregating more than five (5) minutes in any sixty (60) minute period, or upon observing any visible emissions in excess of forty percent (40%) opacity, the Company shall submit a written report (including day and time of the observation, observation results, and corrective actions taken (if any)), certified by a responsible official, to the Director of the Division of Air Quality within ten (10) days after taking said reading. **[45CSR§30-5.1.c.]**

3.6. Compliance Plan

3.6.1. None.

3.7. Permit Shield

3.7.1. The permittee is hereby granted a permit shield in accordance with 45CSR§30-5.6. The permit shield applies provided the permittee operates in accordance with the information contained within this permit.

3.7.2. The following requirements specifically identified are not applicable to the source based on the determinations set forth below. The permit shield shall apply to the following requirements provided the conditions of the determinations are met.

(a) 45CSR21– Regulation to Prevent and Control Air Pollution from the Emission of Volatile Organic Compounds. The facility is not located in a county that is currently subject to 45CSR21, and is therefore currently exempt from this regulation.

(b) 40CFR63, Subpart PPP – National Emission Standards for Polyether Polyol Production. The facility manufactures Terathane Polyethylene Glycol Block Copolymer (TPEG), which is a Polyether Polyol. However, the operation is exempted from this MACT because there are no HAPs used or generated during the manufacturing operation.

(c) 40CFR63, Subpart GGGGG – National Emission Standards for Site Remediation. The facility currently has two sites under remediation for groundwater contamination. These sites are both CERCLA ("Superfund") sites and are thus exempt from the MACT requirements. The facility also has a third site, commonly referred to as Plant 2, which is currently being investigated under the RCRA corrective action program, that could potentially require some form of active groundwater remediation or treatment within the next five to ten years. This site would also be exempted since it is being managed under a RCRA corrective action.

(d) 40CFR63, Subpart WWWW – National Emission Standards for Reinforced Plastic Composites Manufacturing. The facility manufactures composite based rocket motor chambers and aircraft components. However, the facility is exempt from this MACT because none of the resin or fiber systems used, contain HAPs.

4.0. Ingredient Preparation Requirements (Plant 1 (Group 001) and Plant 2 (Group 00E))

4.1. Limitations and Standards

4.1.1. Maximum Cyclotrimethylene Trinitramine (RDX) and Cyclotetramethylene Tetranitramine (HMX) production from sources 1-3S, 1-8S and 1-9S in Buildings 262 and 374 shall not exceed 3668 tons/year. Compliance with the production limit shall be determined using a rolling yearly total. A rolling yearly total shall mean the sum of the production of (RDX) and (HMX) at any given time for the previous twelve (12) consecutive calendar months.
[45CSR13, R13-1455, A.1]

4.1.2. Emissions of particulate matter from the filter vent, Emission Point ID 1-7E, used to control emission from the fluid energy, shall not exceed one (1) lb/hr of particulate matter (RDX and HMX).

Emission Point ID	Pollutant	Hourly Emissions (Lb/Hr)
1-7E RDX Grinding Mill-374	PM (Cyclotrimethylene Trinitramine (RDX) and Cyclotetramethylene Tetranitramine (HMX))	1

[45CSR13, R13-1455, A.2]

4.1.3. Emissions of VOC from the blender/dryer condenser vent, Emission Point ID 1-6E, shall not exceed 0.73 lbm/hr.

Emission Point ID	Pollutant	Hourly Emissions (Lb/Hr)
1-6E Blender/Dryer Condenser Vacuum Pump-374	VOC	0.73

[45CSR13, R13-1455, A.3]

4.1.4. The fluid energy mill, permitted under R13-0621 (Source 1-3S), shall be utilized for production only when the fluid energy mill permitted, under R13-1455 (Source 1-9S), is not operating.
[45CSR13, R13-1455, A.4]

4.1.5. Emissions of particulate matter from Emission Point ID 1-9E and 1-12E, the discharge vents of the filter units used to control emissions from the handling and weighing area, shall not exceed 1.0 lb/hr of lead citrate or lead sesquioxide per emission point and shall be controlled at all times using the Dust Control Filter Systems (ID# 1-5C and 1-6C).

Emission Point ID	Pollutant	Hourly Emissions (Lb/Hr)
1-9E	Lead Citrate or Lead Sesquioxide (PM)	1
1-12E	Lead Citrate or Lead Sesquioxide (PM)	1

[45CSR13, R13-1694, A.1]

4.1.6. Emissions of Heptane (VOC) from Emission Point ID 1-10E, shall not exceed 2.0 lb/hr.

Emission Point ID	Pollutant	Hourly Emissions (Lb/Hr)
1-10E Mix Bowl-384	Heptane (VOC)	2

[45CSR13, R13-1694, A.2]

4.1.7. After all liquid VOC has been evaporated from the mix bowl, Emission Point 1-10E shall be valved shut and Emission Point 1-11E (the condenser) is opened. The mix bowl shall then be evacuated to remove the VOC vapors in the free volume of the mix bowl and associated plumbing and the VOC vapors shall pass through the condenser. Emissions of VOC from Emission Point ID 1-11E (the condenser) shall not exceed 2.0 lb/hr.

Emission Point ID	Pollutant	Hourly Emissions (Lb/Hr)
1-11E Condenser 1-7C	VOC	2

[45CSR13, R13-1694, A.3]

4.1.8. The VOC evaporation process from the mix bowl, source 1-14S, shall operate a maximum of 2,080 hr/yr.
[45CSR13, R13-1694, A.4]

4.1.9. A maximum of 500 pounds/batch of lead salt paste utilizing 250 pounds/batch of lead citrate or lead sesquioxide shall be charged per batch.
[45CSR13, R13-1694, A.5]

4.1.10. To determine compliance with Requirement 4.1.5, the permittee shall be subject to announced and unannounced enforcement and compliance inspections. These inspections shall be performed by the Director or his/her duly authorized representative.
[45CSR13, R13-1694, B.1]

4.1.11. Liquid Nitrate Ester Solution Sparging operations shall be in accordance with the following:

a. The methylene chloride emission control system (consisting of two cryogenic recovery systems), referenced in Mr. G. H. Moody's letter of December 19, 1986 (see Attachment 1), shall be in operation during sparging operations in the Liquid Nitrate Ester Solution Facility (Emission Point 1-4E or 1-13E, Control Device ID 1-2C or 1-10C - Cryogenic Recovery System at building 352) at all times, excepting only periods of emergency repairs for the control equipment and unanticipated control equipment failure for reasons beyond the reasonable control of the permittee, and should achieve a minimum recovery of 80% of the VOC released by the sparging operation;

b. In the event that the control equipment is inoperable, the production unit shall be shut down as expeditiously as possible. Recognizing the potentially reactive nature of the production units products, however, in-process material may continue to be processed;

c. The permittee shall not begin operation of the production unit when the control equipment is not in operation without being granted a variance by the Director;

d. Additionally, only one cryogenic recovery system may be run in recovery mode at any time. Any concurrent use would be limited to use of one unit in defrost mode and one unit in recovery mode; and

e. For all periods in which control equipment or measures are inoperable or malfunctioning, the permittee shall not operate the related production equipment unless the Company is granted a variance pursuant to 45CSR§27-12.1.

[45CSR13, R13-0898, 4.1.1]

4.1.12. The aggregate annual methylene chloride emission limit from sparging operations, as controlled by 1-2C and 1-10C, and as emitted through vent ID# 1-4E and 1-13E, is 3,990 pounds per a rolling twelve month period. **[45CSR13, R13-0898, 4.1.2]**

4.1.13. (1) The Gustafson Grinder System, Source E-1S, located in Building 2003, shall be operated with the cyclone collector and dust collector systems at all times.
(2) Production shall not exceed 1,456 tons per year.

[45CSR13, R13-0401, A.6]

~~4.1.14. **Operation and Maintenance of Air Pollution Control Equipment.** The permittee shall, to the extent practicable, install, maintain, and operate all pollution control equipment listed in Section 1.0 of R13-0898 and associated monitoring equipment in a manner consistent with safety and good air pollution control practices for minimizing emissions, or comply with any more stringent limits set forth in this permit or as set forth by any State rule, Federal regulation, or alternative control plan approved by the Secretary. **[45CSR§13-5.11., 45CSR13, R13-0898, 4.1.3]**~~

4.2. Monitoring Requirements

4.2.1. None.

4.3. Testing Requirements

4.3.1. To determine compliance with the emission limitation as set forth in Requirements 4.1.2, 4.1.3, 4.1.5, 4.1.6 and 4.1.7 above, test(s) shall be conducted in accordance with Requirements 3.3.1 and 3.3.2 contained herein. **[45CSR§30-5.1.c, 45CSR13, R13-1455, B.2, 45CSR13, R13-1694, B.3]**

4.3.2. Upon the Director's request, the permittee shall submit to the Director a detailed plan and test protocol for approval of methods to demonstrate compliance with the emission limits set forth in Requirement 4.1.12. The Director reserves the right to require the application of any specific valid test or emissions monitoring methods for the determination of TAP emissions from this source. **[45CSR13, R13-0898, 4.3.1]**

4.4. Recordkeeping Requirements

4.4.1. For the purpose of determining compliance with the maximum production limit set forth in Requirement 4.1.1, and also with emission limits set forth in Requirements 4.1.2, 4.1.3 and 4.1.5, the applicant shall maintain a monthly record of the amount of production of Cyclotrimethylene Trininitramine (RDX) and Cyclotetramethylene Tetranitramine (HMX), and total monthly production of both (RDX and HMX) in tons, and also add the monthly production to get a yearly total production in a manner similar to Attachment A of the Permit R13-1455A, and also calculate pounds of VOC emitted, from each emission point, to the atmosphere on a monthly basis. Such calculations for Emission Point 1-6E shall be based upon accurate determinations or tests to establish condenser efficiency. Said records shall be maintained on site for a period

of at least five (5) years and upon request of the Director or his/her duly authorized representative shall be certified and made available to the Division of Air Quality.
[45CSR13, R13-1455, B.1 and 45CSR§30-5.1.c]

4.4.2. For the purpose of determining compliance with the conditions set forth in Requirements 4.1.4, the permittee shall maintain records of the operating times on a daily basis (start time and end time) of source 1-3S and source 1-9S, in a manner similar to Attachment B of the Permit R13-1455A.
[45CSR13, R13-1455, B.3]

4.4.3. For the purpose of determining compliance with the provisions set forth in Requirements 4.1.6, 4.1.7, 4.1.8 and 4.1.9 above, the permittee shall maintain a record which at a minimum contains the following information (as per Attachment A of the Permit R13-1694A):

a) date and the hours operated each day,

b) the quantity weighed of lead citrate or lead sesquioxide each day in the handling area,

c) the pounds of VOC emitted, from each emission point, to the atmosphere each day. Such determination shall be based upon accurate determinations or tests to establish condenser efficiency.

Said record shall be maintained on site for a period of at least five years and shall be certified and made available to the Director or his/her duly authorized representative upon request.

[45CSR13, R13-1694, B.2]

4.4.4. To determine compliance with the production limits set forth Requirement 4.1.13, the permittee shall keep records of the amount of production on a rolling yearly total. A rolling yearly total shall mean the amount of production at any given time for the previous twelve (12) consecutive calendar months. This information, shall be recorded in a manner that, at a minimum, contains the same information as Attachment B of the Permit R13-0401B (Production of Gustafson Grinder System in Building 2003): monthly records of Gustafson Grinder System rolling yearly production (in tons per year), and shall be kept on site for a period of five years and certified records shall be made available for inspection by the Director or a duly authorized representative of the Director upon request.
[45CSR13, R13-0401, B.4]

4.4.5. To demonstrate compliance with the Requirements 4.1.2, 4.1.5 and 4.1.13 the permittee shall conduct an annual preventative maintenance inspection/cleaning/replacement/refurbishment of the bags, filters, bag connection, and dust hoppers, as appropriate, of the baghouses and HEPA Filter Systems at each emission point specified, in order to ensure proper operation of the control devices. Records shall be maintained on site stating the date and time of each control device annual preventative maintenance activity, the results and all corrective actions taken.
[45CSR§30-5.1.c]

4.4.6. To demonstrate compliance with the Requirement 4.1.12 the permittee shall maintain records of the amounts of methylene chloride sparged per batch as well as the quantity of methylene chloride recovered and drummed for reuse. These records shall be used to determine losses of methylene chloride. Compliance with the annual emission limit shall be demonstrated using a rolling yearly total. Rolling yearly total means the sum of methylene chloride emissions generated by the sparging operations over the previous twelve (12) consecutive calendar months. Records shall be maintained on site and shall be certified and made available to the Director or his/her duly authorized representative upon request.
[45CSR13, R13-0898, 4.2.2]

4.4.7. To demonstrate compliance with the Requirements 4.1.11, the permittee shall maintain records of the sparging operations and Cryogenic Recovery system operation and maintenance.
[45CSR13, R13-0898, 4.2.1]

~~4.4.8. **Record of Maintenance of Air Pollution Control Equipment.** For all pollution control equipment listed in Section 1.0 of R13-0898, the permittee shall maintain accurate records of all required pollution control equipment inspection and/or preventative maintenance procedures.~~
~~**[45CSR13, R13-0898, 4.4.2]**~~

~~4.4.9. **Record of Malfunctions of Air Pollution Control Equipment.** For all air pollution control equipment listed in Section 1.0 of R13-0898, the permittee shall maintain records of the occurrence and duration of any malfunction or operational shutdown of the air pollution control equipment during which excess emissions occur. For each such case, the following information shall be recorded:~~

~~a. The equipment involved.~~

~~b. Steps taken to minimize emissions during the event.~~

~~c. The duration of the event.~~

~~d. The estimated increase in emissions during the event.~~

~~For each such case associated with an equipment malfunction, the additional information shall also be recorded:~~

~~e. The cause of the malfunction.~~

~~f. Steps taken to correct the malfunction.~~

~~g. Any changes or modifications to equipment or procedures that would help prevent future recurrences of the malfunction.~~

~~**[45CSR13, R13-0898, 4.4.3]**~~

4.5. Reporting Requirements

4.5.1. Upon the discovery of any Toxic Air Pollutant (as defined under 45CSR27) not addressed in this Permit and the emissions of which is not known as of the issuance date, the permittee shall notify the Director in writing within fifteen (15) days of such discovery. Unless the Director determines these emissions to be insignificant, the permittee shall submit a compliance program for control of such emissions within sixty (60) days of the date of notification. Upon a determination by the Director that the proposed compliance program represents BAT, the Director shall, in his or her discretion, consider such program for a consent order and shall determine the conditions to be met for approval and entry of such consent order.
[45CSR13, R13-0898, 4.5.1]

4.6. Compliance Plan

4.6.1. None.

5.1. Chamber Preparation Requirements (Plant 1 (Group 002) and Plant 2 (Group 00F))

5.1. Limitations and Standards

5.1.1. The emissions, from Emission Point 2-9E, to the atmosphere shall not exceed the following emission rates:

Emission Point ID	Pollutant	Emission Rate	
		lb/hr	lb/yr
2-9E Walk-In Spray Booth-167	Particulate Matter (PM)	0.408	41.09
	Volatile Organic Compound (VOC)	9.27	1120.2
	Hazardous Air Pollutant (HAP)	3.16	450.19

[45CSR13, R13-2037, A.1]

5.1.2. Control Device 2-7C, to be utilized for the purpose of controlling particulate matter emissions from Emission Point 2-9E, shall consist of a Research Products Corp. Series 3000 RP Paint Arrestors Filter, or other filter of comparable control efficiency.
[45CSR13, R13-2037, A.2]

5.1.3. For the purpose of determining compliance with Requirement 5.1.2 above, the permittee will be subject to announced and unannounced compliance and enforcement inspection by the Director or his/her duly authorized representative. If at any time the permittee fails to comply with the conditions as set forth in Requirement 5.1.2 above, the permittee shall notify the Director or his/her duly authorized representative of such non-compliance and may be subject to civil and/or criminal penalties for each violation.
[45CSR13, R13-2037, B.3]

5.1.4. Particulate Matter (PM_{10}) and Volatile Organic Compound (VOC) emissions from the rocket motor chamber preparation process, Building 420, shall not exceed the hourly and annual limitations specified below:

Emission Point I.D.	Source Vented through this Point	Maximum PM10 Emission Limitation		Maximum VOC Emission Limitation	
		(lb/hr)	(lb/yr)	(lb/hr)	(lb/yr)
2-10E Fume Hood for CBL-420	Exhaust Hood (2-12S) - for ingredient mixing of casebond liner mixtures and housing dip coating components for interior tooling for Hellfire motors.	Neg.	Neg.	0.67 (2)	450 (2)
2-11E Case Bond Liner Spray Booths-420	Common duct for spray booths applying casebond liner mixtures: - Booth 2-13S - 1st casebond liner mixture to be applied: Neoprene rubber based lacquer - Booth 2-14S - 2nd casebond liner mixture to be applied: Formvar or Butvar resin lacquer	0.012 (1)	14.6 (1)	3.7 (3)	7750 (3)
2-12E Drying Oven - 420	Neoprene and Formvar or Butvar Drying Oven (2-15S)	0	0	0.19 (4)	53.3 (4)
Total		0.012	14.6	4.6	8253

(1) Emissions after controls. Controlled particulate emissions are calculated based on 40% overspray and a 90% control device removal efficiency. The control device is a filter bank of 6 disposable polyester fiber filters.

(2) VOC emissions from exhaust hood 2-12S are based on the following assumptions:
- Two percent (2%) by weight of the volatile ingredients for the making of casebond liner stock solution and lacquers is lost through the hood during weigh out and mixing operations
- Forty-five percent (45%) by weight of the volatile ingredients from the dip coating of Hellfire rods is lost through the hood exhaust. Five percent (5%) by weight is lost through the oven. The remaining 50% is collected for waste disposal.
- One hundred percent (100%) by weight of the MEK used for nozzle and insulator bonding is lost through the exhaust hood.

(3) VOC emissions from the two (2) spray booths are based on the following assumptions:
- Spray Booths 2-13S (Neoprene) and 2-14S (Butvar) -Twenty five percent (25%) by weight of the n-propyl bromide used for cleanup is emitted. The remaining material will be collected for reuse or waste disposal.
- Spray Booth 2-14S (Formvar) - Fifty percent (50%) by weight of the Toluene/Ethanol (60/40) used for cleanup of formvar spray equipment is emitted. The remaining material will be collected for reuse or waste disposal.

(4) Five percent (5%) by weight of the volatile ingredients from the dip coating of Hellfire rods is lost through the oven.

[45CSR13, R13-2246, A.1]

5.1.5. Emissions to the atmosphere from the Case Bond Liner Booth (Sparrow Line), source F-12S, through emission point F-9E, located in Building 2014, shall be limited as follows:

Emission Point ID	Pollutant	Emission Limit	
		lb/hr	ton/yr
F-9E Case Bondliner Paint Booth (Intermediate Line) - 2014	VOC	6.0	0.5
	HAP	2.0	0.5
	PM	No Hourly Limit	0.1

[45CSR13, R13-0401, A.4.]

5.1.6. Emissions to the atmosphere from the Sparrow Vertical Paint Booth, source F-7S, through emission point F-5E, located in Building 2014, shall be limited as follows:

Emission Point ID	Pollutant	Emission Limit	
		lb/hr	ton/yr
F-5E Vertical Spray Booth - Paint (Intermediate Line) - 2014	VOC	6.0	1.0
	HAP	2.0	1.0
	PM	No Hourly Limit	0.1

[45CSR13, R13-0401, A.7]

5.1.7. Emissions from the permitted facilities shall not exceed the following limitations:

Emission Point ID	Pollutant	Emission Rate
		lb/hr
F-14E - Abrasive Blaster	Particulate Matter	0.1

Emission Point ID	Pollutant	Emission Rate	
		lb/hr	TPY
F-16E - Internal Spray Booth	Volatile Organic Compounds (VOC)	3.00	0.20
	Particulate Matter (PM)	0.10	0.10

Potential HAPs which may be included in bondliner ingredients include: dimethyl formamide, ethyl benzene, formaldehyde, hexane, methanol, methyl ethyl ketone (MEK), methyl isobutyl ketone (MIBK), methylene diphenyl diisocyanate (MDI), toluene, toluene diisocyanate (TDI), trichlorobenzene-1,2,4, xylene, and chromium or lead compounds. No specific VOC-HAP shall be emitted in a quantity greater than 2.0 lb/hr.

Emission Point	Pollutant	Emission Rate	
		lb/hr	TPY
F-18E - Paint Spray Booth	Volatile Organic Compounds (VOC)	3.00	0.50
	Particulate Matter (PM)	0.10	0.10

Potential HAPs which may be included in paint ingredients include: dimethyl formamide, ethyl benzene, formaldehyde, hexane, methanol, methyl ethyl ketone (MEK), methyl isobutyl ketone (MIBK), methylene diphenyl diisocyanate (MDI), toluene, toluene diisocyanate (TDI), trichlorobenzene-1,2,4, xylene, and chromium or lead compounds. No single HAP species shall be emitted in a quantity greater than 2.0 lb/hr. If other HAPs are used, notification to the Division of Air Quality shall be made within 30 days.

Emission Point	Pollutant	Emission Rate	
		lb/hr	TPY
F-17E - Paint Dry Room	Volatile Organic Compounds (VOC)	0.3	0.05
	Particulate Matter (PM)	0.01	0.01

Potential HAPs which may be included in paint ingredients include: dimethyl formamide, ethyl benzene, formaldehyde, hexane, methanol, methyl ethyl ketone (MEK), methyl isobutyl ketone (MIBK), methylene diphenyl diisocyanate (MDI), toluene, toluene diisocyanate (TDI), trichlorobenzene-1,2,4, xylene, and chromium or lead compounds. No single HAP species shall be emitted in a quantity greater than 2.0 lb/hr. If other HAPs are used, notification to the Division of Air Quality shall be made within 30 days.
[45CSR13, R13-1047, A.1]

5.2. Monitoring Requirements

5.2.1. None.

5.3. Testing Requirements

5.3.1. To determine compliance with the emission limitation as set forth in Requirement 5.1.1 above, test(s) shall be conducted in accordance with Requirements 3.3.1 and 3.3.2 contained herein.
[45CSR§30-5.1.c & 45CSR13, R13-2037, B.2]

5.4. Recordkeeping Requirements

5.4.1. For the purpose of determining compliance with emission limitations set forth in Requirements 5.1.1 (Emission Point 2-9E), 5.1.5 (Emission Point F-9E), 5.1.6 (Emission Point F-5E), 5.1.7 (Emission Points F-16E and F-18E) above, the permittee shall maintain monthly and yearly records. Compliance with the hourly emission rates shall be determined using the average hourly emission rate for each month. Compliance with the annual emission rates shall be determined using a rolling yearly total. A rolling yearly total shall mean the total emission rates emitted at any given time for the previous twelve (12) consecutive calendar months. Said records shall be maintained in a manner similar to: 1) Attachment A of the Permit R13-2037A (Monthly Usage/ VOC Emissions/ PM Emissions Report) and shall include types and amounts of coating materials sprayed each month (in gallons), hours of operation, VOC content (in lbs VOC/gal), VOC emissions (in lbs and in lbs/hr) per each coating, PM content (in lbs PM/gal), PM emissions (in lbs and lbs/hr) per each coating, and total of VOC and PM emissions (in lbs and in lbs/hr) for all coatings, 2) Attachment C of the Permit R13-2037A (Annual VOC Emissions/ PM Emissions Report) and shall include records of VOC and PM emissions (in lbs) on a monthly basis and total annual VOC and PM emissions, and 3) Attachment E of the Permit R13-2037A (Annual HAP emissions Report) and shall include records of VOC HAPs and PM HAPs annual emissions (in lbs/yr) and a sum of VOC HAPs and PM HAPs annual emissions. Said records shall be maintained on site by the permittee for a period of at least five (5) years. Said records shall be made available and certified upon request of the Director or his or her duly authorized representative.
[45CSR13, R13-2037, B.1, R13-0401, B.3, R13-1047, B.1 and 45CSR§30-5.1.c]

5.4.2. For the purpose of determining compliance with the PM_{10} limitations set forth in Requirements 5.1.4. (Emission Point 2-11E) the company shall maintain a filter replacement logsheet for the casebond filter bank. For the purpose of determining compliance with the PM limitations set forth in Requirements 5.1.1. (Emission Point 2-9E), 5.1.5. (Emission Point F-9E), 5.1.6. (Emission Point F-5E) and 5.1.7. (Emission Point F-16E and F-18E) the company shall maintain a filter replacement logsheet for the filter bank. An example logsheet is given in Attachment 1of the Permit R13-2246A (Filter Replacement Logsheet) and it includes filter change-out date and comments (about old/new filters, etc.). This logsheet shall be maintained on site for a period of five (5) years. Certified copies of the logsheet shall be made available to the Director or his duly-authorized representative upon request.
[45CSR13, R13-2246, B.3 and 45CSR§30-5.1.c]

5.4.3. For the purpose of determining compliance with the PM_{10} and VOC limitations set forth in Requirement 5.1.4., the company shall maintain daily coating usage records on spray booths 2-13S and 2-14S which collectively emit through emission point 2-11E. Daily and year-to-date (YTD) VOC emissions shall be calculated on a monthly basis using these records. Because PM_{10} emissions after controls are relatively small, these emissions shall be calculated only once a year. Example logsheets are given in Attachment 2 of the Permit R13-2246A (Daily Spray Booth Logsheets) and for each booth include the following: date, program/contract, start time, end time, number of units sprayed, hours operated, grams sprayed per unit, total daily usage (in lb/day), peak hourly usage (in lb/hr), year-to-date usage (in lbs). These logsheets shall be maintained on site for a period of five (5) years. Certified copies of the logsheets shall be made available to the Director or his duly-authorized representative upon request.
[45CSR13, R13-2246, B.4]

5.4.4. For the purpose of determining compliance with the emission limitations set forth in Requirement 5.1.4, the company shall maintain a daily record of batch production. These records shall be used to calculate exhaust hood (Emission Point 2-10E) and drying oven (Emission Point 2-12E) VOC emissions. Because the VOC emissions are relatively small, these emissions shall be calculated only once a year. Example logsheets (Daily and YTD Batch Count Sheets) are given in Attachment 3 of the Permit R13-2246A, and include for each Hellfire Cases, Hellfire Rods (Mixing), Hellfire Rods (Dip Coating), Predator Cases, SFW Cases and TOW-2 Cases the following information: record date, number of batches daily and number of batches year-to-date for Formvar or Butvar Stock Solution (FSS/ BSS), Neoprene Stock Solution (NSS), Phenolic Resin Stock Solution (PRS), Formar or Butvar Lacquer (FL/BL), Neoprene Lacquer (NL), MEK for wipe cleaning nozzles (MEK), Spray Gun Cleanup with NPB and/or Spray Gun Cleanup with Toluene/Ethanol (60/40).

These logsheet shall be maintained on site for a period of five (5) years. Certified copies of the logsheets shall be made available to the Director or his duly-authorized representative upon request.
[45CSR13, R13-2246, B.5]

5.4.5. As per Requirement 5.4.1 and 5.4.3 above, VOC and/or HAP emission calculations shall be performed based on coating usage records and material safety data sheets information, assuming that 100 percent of all VOCs (both non-HAP and HAP) are emitted to the atmosphere.
[45CSR§30-5.1.c]

5.4.6. To demonstrate compliance with the Emission Point F-17E VOC emission limit set forth in Requirement 5.1.7, the permittee shall perform monthly calculations based on coating usage records (as per Requirement 5.4.1) for the coating booth F-23S (Emission Point F-16E) and paint spray booth F-25S (Emission Point F-18E).
[45CSR§30-5.1.c]

5.4.7. To demonstrate compliance with the Emission Point F-14E PM emission limit set forth in Requirement 5.1.7, and also to reduce PM emissions from the Emission Point F-6E, the permittee shall conduct an annual preventative maintenance inspection / cleaning / replacement / refurbishment of the bags, bag connection, and dust hoppers, as appropriate, of the baghouses at each emission point specified, in order to ensure proper operation of the Cyclone Dust Collectors F-4C and F-9C. Records shall be maintained on site stating the date and time of each baghouse's annual preventative maintenance activity, the results of the annual preventative maintenance activity, and all corrective actions taken.
[45CSR§30-5.1.c]

5.4.8.

5.5. Reporting Requirements

5.5.1. None.

5.6. Compliance Plan

5.6.1. None.

6.0. Loading/Inspection/Final Assembly Requirements (Plant 1 (Group 006) and Plant 2 (Group 00J))

6.1. Limitations and Standards

6.1.1. Emissions to the atmosphere from each paint spray booth shall not exceed the following emission rates:

Source ID	Emission Point ID	VOC Emission Rates		Particulate Matter Emission Rates	
		lb/hr	TPY	lb/hr	TPY
6-4S Paint Spray Booth	6-2E	1	2.01	0.1	0.1

Area	Emission Point ID	VOC Emission Rates		Particulate Matter Emission Rates		Hazardous Air Pollutants	
		lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
Paint Spray Booth [6-6S]	6-4E	3.00	4.35	3.00	0.10	1.90	2.00
Paint Spray Booth [6-7S]	6-5E						
Paint Spray Booth [6-8S]	6-6E						
Paint Spray Booth [6-9S]	6-7E						

For the purpose of this Permit, VOCs shall have the meaning of "any organic compound which participates in atmospheric photochemical reactions", that is, any organic compound other than those the EPA Administration has designated as having negligible photochemical reactivity. Negligible photochemical reactive materials include: methane, ethane, methyl chloroform, methylene chloride, and some freons.
[45CSR13, R13-1782, A.1 and 45CSR13, R13-1798, A.1]

6.1.2 The minimum particulate collection efficiency of the filters used in the spray booth exhaust stack shall be 90% (Control Device ID 6-1C, 6-2C, 6-3C, 6-4C, 6-5C - Emission Points 6-2E, 6-4E, 6-5E, 6-6E, 6-7E).
[45CSR13, R13-1782, A.2 and 45CSR13, R13-1798, A.3]

6.1.3 Coatings to be utilized shall comply with 45CSR27.
No coating or solvent containing any hazardous air pollutant, as defined by West Virginia Legislative Rule 45CSR13, Section 15.1 and listed in Table 45-13A or any toxic air pollutant (TAP), as defined by West Virginia Legislative Rule 45CSR27, Section 2.10, shall be used without prior approval of the Director of the Division of Air Quality.
[45CSR13, R13-1782, A.3 and 45CSR13, R13-1798, A.4 and 5]

6.1.4 For the purpose of determining compliance with the minimum efficiency limit as set forth in Requirement 6.1.2. the permittee may be required by the Director or his/her duly authorized representative to provide any information deemed necessary to obtain the particulate collection efficiency of the filters used in the spray booth exhaust stack.
[45CSR13, R13-1782, B.3 and 45CSR13, R13-1798, B.3]

6.1.5 For the purpose of determining compliance with Requirement 6.1.3, the permittee will be subject to announced and unannounced compliance and enforcement inspection by the Director or his/her duly authorized representative. If at any time the permittee fails to comply with the limits as set forth in 45CSR27 - Table A, the permittee shall notify the Director of such accedence and may be required at the Director's request to employ a BAT (Best Available Technology) plan to all chemical processing units emitting toxic air pollutants.
[45CSR13, R13-1782, B.4 and 45CSR13, R13-1798, B.4]

6.1.6 Emissions to the atmosphere from the Interior Coating Spray Line, Source J-4S, through Emission Point J-2E, located in Building 2011, shall be limited as follows:

Emission Point ID	Pollutant	Emission Limit	
		lb/hr	ton/yr
J-2E Interior Coating Spray Line - 2011	VOC	6	0.5
	HAP	2	0.5
	PM	No Hourly Limit	0.1

[45CSR13, R13-0401, A.5]

6.1.7 The following are the known HAPs to be emitted from the source:

Antimony Compounds
Chromium Compounds
Ethyl Benzene
Formaldehyde
Glycol Ethers
Hexane
Isocyanates (HDI, MDI, TDI)
Lead Compounds
Methanol
MIBK
Phenol
Styrene
Toluene
Xylene

Use of any surface coating containing any constituent identified in Section 112(b) of the 1990 Clean Air Act Amendments as a HAP and not listed above shall be in accordance with the following:

a. The permittee shall notify the Director in writing of the surface coating to be used and the HAP(s) contained therein within thirty (30) days of the initial use of the surface coating. Additionally, an MSDS sheet for the surface coating shall be supplied at this time to the Director.

b. An estimate of emissions associated with the use of the surface coating shall be determined and incorporated into the record keeping requirements contained herein.

c. Compliance with the annual emission limits shall be determined using rolling yearly totals.

For the purposes of this permit, surface coatings shall be defined as a material applied onto, or impregnated into, a substrate for protective, decorative, or functional purposes. For the purpose of this permit, coatings shall be defined as stains, thinners, solvents, sealers, varnishes, paints, primers, catalysts, acrylics, lacquers, or any substance involved in spray booth operations, cleaning, or maintenance.

[45CSR13, R13-1798, A.2]

6.1.8 The maximum number of painted units is 480 units per year. Compliance with the annual usage shall be determined using a twelve (12) month rolling total. A twelve (12) month rolling total shall mean the sum of units painted at any given time for the previous twelve (12) consecutive months.
[45CSR13, R13-1798, A.6]

6.2. Monitoring Requirements

6.2.1. None.

6.3. Testing Requirements

6.3.1. To determine compliance with the emission limitations as set forth in Requirement 6.1.1 above test(s) shall be conducted in accordance with Requirements 3.3.1 and 3.3.2 contained herein.
[45CSR13, R13-1782, B.2 and 45CSR13, R13-1798, B.2]

6.4. Recordkeeping Requirements

6.4.1. For the purpose of determining compliance with emission limitations set forth in Requirement 6.1.1 (Emission Points 6-4E, 6-5E, 6-6E and 6-7E and VOC emission limits for Emission Point ID 6-2E) the company shall maintain daily, monthly, and yearly records. Compliance with the emission limits shall be determined using a rolling yearly total. A rolling yearly total shall mean the sum of each pollutant emitted at any given time for the previous twelve (12) consecutive calender months. Records shall be maintained in a manner as provided in Attachment A, B and C of this permit. Said records shall be maintained on site by the permittee for a period of at least five (5) years. Said records shall be made available and certified upon request of the Director or his or her duly authorized representative.
[45CSR13, R13-1782, B.1 and 45CSR13, R13-1798, B.1]

6.4.2. To determine compliance with the emission limits set forth in Requirement 6.1.6 (Emission Point J-2E), the permittee shall keep records of the hourly and annually emission rates. Compliance with the hourly emission rates shall be determined using the average hourly emission rate for each month. Compliance with the annual emission rates shall be determined using a rolling yearly total. A rolling yearly total shall mean the total emission rates emitted at any given time for the previous twelve (12) consecutive calender months. This information shall be kept on site for a period of five years and certified records shall be made available for inspection by the Director or a duly authorized representative of the Director upon request.
[45CSR13, R13-0401, B.3]

6.4.3. As per Requirement 6.4.1 and 6.4.2 above, VOC and/or HAP emission calculations shall be performed based on coating usage records and material safety data sheets information, assuming that 100 percent of all VOCs (both non-HAP and HAP) are emitted to the atmosphere).
[45CSR§30-5.1.c]

6.4.4. For the purpose of determining compliance with the PM_{10} limitations set forth in Requirements 6.1.1 (Emission Points 6-2E, 6-4E, 6-5E, 6-6E and 6-7E) and 6.1.6 (Emission Point J-2E) the company shall maintain a filter replacement logsheet for the Fabric Filters (filter change-out date and comments about old/new filters, etc.). An example logsheet is given in Attachment 1 to the Permit R13-2246A.
[45CSR§30-5.1.c]

6.5. Reporting Requirements

6.5.1. None.

6.6. Compliance Plan

6.6.1. None.

7.0. Mold Parts Cleanup Requirements (Plant 1 (Group 007) and Plant 2 (Group 00K))

7.1. Limitations and Standards

7.1.1. Heptane usage from the Mold Parts Wash Tanks, sources 10s (7-1S) and 11s (7-2S), in Building 151 and the Mold Parts Wash Tank, source 9s (K-3S), in building 8203, shall be limited to a combined total of 25,000 pounds per year (4,381.3 gallons).
[45CSR13, R13-0401, A.1]

7.1.2. The total combined heptane (VOC) emissions from sources 7-1S, 7-2S, and K-3S shall not exceed 12.5 tons per year.

Source ID	Emission Point ID	Heptane (VOC) Emission Limit, tons/yr
7-1S Parts Washer-151	7-1E	12.5
7-2S Parts Washer-151	7-2E	
K-3S Parts Washers-8203	K-1E	

[45CSR13, R13-0401, A.2]

7.1.3. The permittee may install the solvent recovery system, source K-5S in either Building 8203 or Building 151.
[45CSR13, R13-0401, A.3]

7.2. Monitoring Requirements

7.2.1. None.

7.3. Testing Requirements

7.3.1. None.

7.4. Recordkeeping Requirements

7.4.1. To determine compliance with heptane usage limits set forth in Requirement 7.1.1, the permittee shall keep records of the amount of heptane used using a rolling yearly total. A rolling yearly total shall mean the sum of the usage of heptane at any given time for the previous twelve (12) consecutive calender months. This information, shall be recorded in a manner that, at a minimum, contains the same information as Attachment A of the Permit R13-0401B (Heptane Usage in Buildings 151 and 8203): on a monthly basis record a yearly total of heptane usage for building 151 and for building 8203 (in gallons), and shall be kept on site for a period of five years and certified records shall be made available for inspection by the Director or a duly authorized representative of the Director upon request.
[45CSR13, R13-0401, B.1]

7.4.2. To determine compliance with the heptane (VOC) emission limit set forth in Requirement 7.1.2, a calculation shall be made utilizing the information required by Requirement 7.4.1 and information contained in the material safety data sheet for heptane, assuming that 100 percent of all heptane used is emitted to the atmosphere. This information, shall be kept on site for a period of five years and certified records shall be made available for inspection by the Director or a duly authorized representative of the Director upon request.
[45CSR13, R13-0401, B.2]

7.5. Reporting Requirements

7.5.1. None.

7.6. Compliance Plan

7.6.1. None.

8.0. GMLRS Rocket Motor Chamber Preparation Requirements – Plant 1 [emission point ID(s): Z-3E, Z-4E, Z-7E, Z-8E, Z-9E, Z-11E, Z-12E, Z-13E, Z-14E, Z-15E]

8.1. Limitations and Standards

8.1.1. VOCs and volatile HAP emissions from manufacturing of composite rocket motor casing in Building 256 shall not exceed 31.59 tons of VOCs per year with a daily VOC emission rate not to be exceeded of 243.1 lb per operating day; and total HAPs shall not exceed 5.84 tons of HAP per year. The permittee is permitted to operate the rocket motor casing line in Building 256 at the ABL in accordance with the following limitations as specified below:

(a) The permittee shall not exceed the following usage/losses limits by material for the denoted emission source except for application booths and mixing hoods. For application booth Z-8S, and Z-13S, the permittee may apply either of the noted material (specialty coatings) in either application booth given that compliance with the daily and annual limits are maintained for the respective materials (Chemlok and/or Bondliner (BL)). For the mixing hoods (Z-7S and Z-12S), the permittee may switch of the denoted coatings between the two hoods given that both compounds are not mixed in the same hood at the same time and that the compliance with the daily and annual limits are maintained for the respective materials (Chemlok and/or Bondliner (BL)). Compliance with the annual limits in the following table shall be demonstrated using a 12-month rolling total basis.

Table 8.1.1.a. Material Usage/Losses Limits				
Emission Source	Emission Point	Material	Usage/Loses Limits	
			Daily Limit (gal/day)	Annual Limit (gal/yr)
Z-1S	Fugitive	Frekote 700-NC	5	1,257
Z-2S	Fugitive	IPA	2	488
		MEK	1	244
Z-5S	Z-5E	IPA	8	1,853
Z-6S	Z-6E	IPA	2	98
Z-7S	Z-7E	Chemlok 205	2	49
		Chemlok 234	4	61
Z-8S	Z-8E	Chemlok 205	4	580
		Chemlok 234	2	630
		MEK	2	325
		Toluene	1	325
Z-9S	Z-9E	Chemlok 205	1	31
		Chemlok 234	1	33
Z-10S	Z-10E	IPA	8	1,853
Z-11S	Z-11E	IPA	1	98
Z-12S	Z-12E	BL-004	1	47
Z-13S	Z-13E	BL-004	4	784

Table 8.1.1.a. Material Usage/Losses Limits				
Emission Source	Emission Point	Material	Usage/Loses Limits	
			Daily Limit (gal/day)	Annual Limit (gal/yr)
Z-14S	Z-14E	BL-004	1	41
Z-16S	Fugitive	IPA	2	488

(b) The all coatings applied are to be compliant with the VOC and HAP content limitation of Subpart GG of 40 CFR 63 and requirements for Condition 8.1.4 as applicable.

(c) All cleaning operations and activities associated with this manufacturing operation are compliant with the requirements of Condition 8.1.3 as applicable.

(d) This permit does not restrict or limit the use of acetone.

[45CSR13, R13-3334, 4.1.1.]

8.1.2. PM, PM_{10} and PM HAP emissions from the application of primer or specialty coatings for the manufacturing of composite rocket motor casing in Building 256 shall not exceed 0.09 lb/operating day and 0.50 TPY. For purposes of limiting the facility's emissions to the above-mentioned limits, the following conditions are established:

a. When primer or specialty coatings are being applied, each application booth (Z-8S, Z-13S) in which the coating is being applied in shall be operated in a manner that filter PM from the overspray of the coating is effectively captured by the filter media for the respective application booth. The filter media used in each application booth shall have a minimum filterable PM collection rating of 90% or greater. The permittee shall replace the filter media in accordance with the manufacturer's specifications.
[45CSR§7-5.1]

b. Compliance with the annual limitation of this condition will be satisfied by compliance with the requirements of this condition and compliance with the primer and specialty coating usage limitation of Condition 8.1.1 of this permit.

c. The drying station identified as Z-9S shall be equipped with an exhaust system that effectively captures the exhaust from the drying station and routes this stream to control device Z-5C before being released to the atmosphere at all times when components are in the drying station. Control device Z-5C shall be equipped with a filtration media that has a minimum collection efficiency of 90% or greater of filterable PM.
[45CSR§7-5.1.]

d. Exhaust of each case machining operation shall be captured and routed to the control device Z-4C before being released to the atmosphere at all time when any of the machining operations is in use. Control Device Z-4C shall be installed and maintained so as to achieve a minimum of 80% efficiency for filterable PM. The permittee shall replace the afterfilter media of this control device in accordance with the manufacturer's specifications.
[45CSR§7-5.1.]

e. PM emissions from the case machining operations shall not exceed 0.09 lb/hr.

f. Emission points Z-8E, Z-9E, Z-13E, Z-15E shall not exhibit visible emissions in excess of 20% opacity on a 6-minute average basis.
[45CSR§7-3.1]

[45CSR13, R13-3334, 4.1.2.]

~~8.1.3. The permittee shall comply with all applicable standards from the Cleaning Operation section of 40 CFR 63 Subpart GG – National Emission Standards for Aerospace Manufacturing and Rework Facilities, provided, however, that compliance with any more stringent limitations set forth under Requirements of Section 8.0 of this permit is demonstrated:~~

~~**§ 63.744 Standards: Cleaning operations**~~

~~(a) Housekeeping measures. The permittee shall comply with the requirements in the subparagraphs (a)(1) through (a)(3) unless the cleaning solvent used is identified in Table 8.1.3.a or contains HAP and VOC below the de minimis levels specified in 40 CFR §63.741(f).~~

~~**Table 8.1.3.a. – Composition Requirements for Approved Cleaning Solvents**~~	
~~Cleaning solvent type~~	~~Composition requirements~~
~~Aqueous~~	~~Cleaning solvents in which water is the primary ingredient (≥80 percent of cleaning solvent solution as applied must be water). Detergents, surfactants, and bioenzyme mixtures and nutrients may be combined with the water along with a variety of additives, such as organic solvents (e.g., high boiling point alcohols), builders, saponifiers, inhibitors, emulsifiers, pH buffers, and antifoaming agents. Aqueous solutions must have a flash point greater than 93 °C (200 °F) (as reported by the manufacturer), and the solution must be miscible with water.~~
~~Hydrocarbon-based~~	~~Cleaners that are composed of photochemically reactive hydrocarbons and/or oxygenated hydrocarbons and have a maximum vapor pressure of 7 mm Hg at 20 °C (3.75 in. H_2O and 68 °F). These cleaners also contain no HAP.~~

~~(1) Place cleaning solvent laden cloth, paper, or any other absorbent applicators used for cleaning in bags or other closed containers upon completing their use. Ensure that these bags and containers are kept closed at all times except when depositing or removing these materials from the container. Use bags and containers of such design so as to contain the vapors of the cleaning solvent. Cotton-tipped swabs used for very small cleaning operations are exempt from this requirement.~~

~~(2) Store fresh and spent cleaning solvents, except semi-aqueous solvent cleaners, used in aerospace cleaning operations in closed containers.~~

~~(3) Conduct the handling and transfer of cleaning solvents to or from enclosed systems, vats, waste containers, and other cleaning operation equipment that hold or store fresh or spent cleaning solvents in such a manner that minimizes spills.~~

~~(b) Hand-wipe cleaning. The permittee (excluding cleaning of spray gun equipment performed in accordance with paragraph (c) of this condition) shall use cleaning solvents that meet one of the requirements specified in the following paragraphs (b)(1), (b)(2), and (b)(3). Cleaning solvent solutions that contain HAP and VOC~~

~~below the de minimis levels specified in §63.741(f) are exempt from the requirements in paragraphs (b)(1), (b)(2), and (b)(3) of this condition (excluding cleaning of spray gun equipment performed in accordance with the following paragraph (c) of this condition).~~

~~(1) Meet one of the composition requirements in Table 1 of this section (Table 8.1.3.a);~~

~~(2) Have a composite vapor pressure of 45 mm Hg (24.1 in. H_2O) or less at 20 °C (68 °F); or~~

~~(3) Demonstrate that the volume of hand-wipe solvents used in cleaning operations has been reduced by at least 60% from a baseline adjusted for production. The baseline shall be established as part of an approved alternative plan administered by the State. Demonstrate that the volume of hand-wipe cleaning solvents used in cleaning operations has been reduced by at least 60 percent from a baseline adjusted for production. The baseline shall be calculated using data from 1996 and 1997, or as otherwise agreed upon by the Administrator or delegated State Authority. The baseline shall be approved by the Administrator or delegated State Authority and shall be included as part of the facility's title V or part 70 permit.~~

~~(c) Spray gun cleaning. The permittee subject to this subpart in which spray guns are used for the application of coatings or any other materials that require the spray guns to be cleaned shall use one or more of the techniques, or their equivalent, specified in the following paragraphs (c)(1) through (c)(4). Spray gun cleaning operations using cleaning solvent solutions that contain HAP and VOC below the de minimis levels specified in §63.741(f) are exempt from the requirements in paragraphs (c)(1) through (c)(4) of this condition.~~

~~(1)(i) Enclosed system. Clean the spray gun in an enclosed system that is closed at all times except when inserting or removing the spray gun. Cleaning shall consist of forcing solvent through the gun.~~

~~(1)(ii) If leaks are found during the monthly inspection required in §63.751(a), repairs shall be made as soon as practicable, but no later than 15 days after the leak was found. If the leak is not repaired by the 15th day after detection, the cleaning solvent shall be removed, and the enclosed cleaner shall be shut down until the leak is repaired or its use is permanently discontinued.~~

~~(2) Nonatomized cleaning. Clean the spray gun by placing cleaning solvent in the pressure pot and forcing it through the gun with the atomizing cap in place. No atomizing air is to be used. Direct the cleaning solvent from the spray gun into a vat, drum, or other waste container that is closed when not in use.~~

~~(3) Disassembled spray gun cleaning. Disassemble the spray gun and clean the components by hand in a vat, which shall remain closed at all times except when in use. Alternatively, soak the components in a vat, which shall remain closed during the soaking period and when not inserting or removing components.~~

~~(4) Atomizing cleaning. Clean the spray gun by forcing the cleaning solvent through the gun and direct the resulting atomized spray into a waste container that is fitted with a device designed to capture the atomized cleaning solvent emissions.~~

~~(5) Cleaning of the nozzle tips of automated spray equipment systems, except for robotic systems that can be programmed to spray into a closed container, shall be exempt from the requirements of paragraph (c) of this section.~~

~~(e) Exempt cleaning operations. The following cleaning operations are exempt from the requirements of paragraph (b) of this condition:~~

~~(1) Cleaning during the manufacture, assembly, installation, maintenance, or testing of components of breathing oxygen systems that are exposed to the breathing oxygen;~~

~~(2) Cleaning during the manufacture, assembly, installation, maintenance, or testing of parts, subassemblies, or assemblies that are exposed to strong oxidizers or reducers (e.g., nitrogen tetroxide, liquid oxygen, or hydrazine);~~

~~(3) Cleaning and surface activation prior to adhesive bonding;~~

~~(4) Cleaning of electronic parts and assemblies containing electronic parts;~~

~~(5) Cleaning of aircraft and ground support equipment fluid systems that are exposed to the fluid, including air-to-air heat exchangers and hydraulic fluid systems;~~

~~(6) Cleaning of fuel cells, fuel tanks, and confined spaces;~~

~~(7) Surface cleaning of solar cells, coated optics, and thermal control surfaces;~~

~~(8) Cleaning during fabrication, assembly, installation, and maintenance of upholstery, curtains, carpet, and other textile materials used in the interior of the aircraft;~~

~~(9) Cleaning of metallic and nonmetallic materials used in honeycomb cores during the manufacture or maintenance of these cores, and cleaning of the completed cores used in the manufacture of aerospace vehicles or components;~~

~~(10) Cleaning of aircraft transparencies, polycarbonate, or glass substrates;~~

~~(11) Cleaning and cleaning solvent usage associated with research and development, quality control, and laboratory testing;~~

~~(12) Cleaning operations, using non-flammable liquids, conducted within five feet of energized electrical systems. Energized electrical systems means any AC or DC electrical circuit on an assembled aircraft once electrical power is connected, including interior passenger and cargo areas, wheel wells and tail sections; and~~

~~(13) Cleaning operations identified as essential uses under the Montreal Protocol for which the Administrator has allocated essential use allowances or exemptions in 40 CFR 82.4.~~

~~[45CSR13, R13-3334, 4.1.3; 40CFR§§63.744(a)(1) through (3), (b), (c), and (e); 45CSR34]~~

~~8.1.4. The permittee shall comply with all applicable standards from the primer, topcoat, and specialty coating application operations section of 40 CFR 63 Subpart GG – National Emission Standards for Aerospace Manufacturing and Rework Facilities, provided, however, that compliance with any more stringent limitations set forth under Requirements of Section 8.0 of this permit is demonstrated:~~

~~§63.745 Standards: Primer, topcoat, and specialty coating application operations.~~

~~(a) The permittee subpart shall comply with the requirements specified in paragraph (c) of this condition for those coatings that are uncontrolled (no control device is used to reduce organic HAP emissions from the operation).~~

~~(b) The permittee shall conduct the handling and transfer of primers, topcoats, and specialty coatings to or from containers, tanks, vats, vessels, and piping systems in such a manner that minimizes spills.~~

~~(c) *Uncontrolled coatings – organic HAP and VOC content levels*. The permittee shall comply with the organic HAP and VOC content limits specified in the following paragraphs (c)(5) and (c)(6) of this condition for those coatings that are uncontrolled.~~

~~(c)(5) Organic HAP emissions from specialty coatings shall be limited to an organic HAP content level of no more than the HAP content limit specified in Table 1 Specialty Coating HAP and VOC Content Limits of 40 CFR §63.745 for each applicable specialty coating type.~~

~~(c)(6) VOC emissions from specialty coatings shall be limited to a VOC content level of no more than the VOC content limit specified in Table 1 Specialty Coating HAP and VOC Content Limits of 40 CFR §63.745 for each applicable specialty coating type.~~

~~[45CSR13, R13-3334, 4.1.4; 40CFR§§63.745(a), (b), (c)(5), and (c)(6); 45CSR34]~~

8.1.5. ~~In the event that the manufacturing of composite rocket motor casing in Building 256 produces a waste that contains HAP, the permittee shall conduct the handling and transfer of the waste to or from containers, tanks, vats, vessels, and piping systems in such a manner that minimizes spills; except as provided in 40 CFR §63.741(e). The permittee shall use closed containers to store all waste that contains organic HAP at the facility.~~
~~[40CFR§63.748(a), (a)(1) and (a)(2); 45CSR34; 45CSR13, R13-3334, 4.1.5.]~~

8.1.6. ~~**Operation and Maintenance of Air Pollution Control Equipment.** The permittee shall, to the extent practicable, install, maintain, and operate all pollution control equipment listed in Section 1.0 and associated monitoring equipment in a manner consistent with safety and good air pollution control practices for minimizing emissions, or comply with any more stringent limits set forth in this permit or as set forth by any State rule, Federal regulation, or alternative control plan approved by the Secretary.~~
~~[45CSR§13-5.11. 45CSR13, R13-3334, 4.1.6]~~

8.2. Monitoring Requirements

8.2.1. The permittee for paint booths and related equipment (Emission Points Z-8E, Z-9E, and Z-13E) shall conduct fabric filter checks prior to each use of the equipment. These checks shall include review to ensure filters are properly fitted to the unit, that no holes exist, and that the filters are not overloaded. Any changes made to filters during the checks or any filter replacements shall be recorded. Records of such inspections and maintenance performed as result of any inspection shall be maintained in accordance with Condition 3.4.2 of this permit.
[45CSR13, R13-3334, 4.2.1.]

8.2.2. For the purpose of determining compliance with the PM limitations set forth in Condition 8.1.2, the permittee shall maintain a daily record of the either manometer reading or other differential pressure instrument across the filter element or control device for Emission Points Z-8E, Z-9E, and Z-13E, and Z-15E. Should a daily reading indicate filter media or other maintenance is required to restore proper operation of the respective control device, the permittee shall take a second reading once the element(s) has been replaced or when the requirement maintenance is complete. The permittee shall calibrate the manometer or other differential pressure instrument at least once every calendar year in accordance with the instrument manufacturer's procedures and specifications. Such records shall be maintained in accordance with Condition 3.4.2 of this permit.
[45CSR13, R13-3334, 4.2.2.]

8.2.3. For the purpose of determining compliance with the PM limitations set forth in Condition 8.1.2, the permittee shall maintain a continuous parameter monitoring system that monitors the differential pressure across Control Device Z-15E. Such a system shall continuously measure the differential pressure (pressure drop across) Control Device Z-15E. This system shall provide a visual and audible alarm to all operators in the case machining area. The permittee shall calibrate the manometer or other differential pressure instrument of this system at least once every calendar year in accordance with the instrument manufacturer's procedures and specifications. The permittee shall perform preventative maintenance and conduct a verification check

on the continuously monitoring system at least once per calendar. Records all instances that the system alarm activated, corrective action taken for the instance, and maintenance performed on the system shall be maintained in accordance with Condition 3.4.2 of this permit.
[45CSR13, R13-3334, 4.2.3.]

8.2.4. For the purpose of determining compliance with the VOC and HAP emission limits set forth in Condition 8.1.1 the permittee shall maintain daily records of usage/losses of materials identified in Table 8.1.1.a of this permit by emission source for each operating day. By no later than the 15th of preceding month, the permittee shall determine the 12-month rolling total of the material usages/losses of each emission point in Table 8.1.1.a. Such records shall be maintained in accordance with Condition 3.4.2 of this permit.
[45CSR13, R13-3334, 4.2.4]

8.3. Testing Requirements

8.3.1. Reserved

8.4. Recordkeeping Requirements

8.4.1. Reserved.
~~**Record of Maintenance of Air Pollution Control Equipment.** For all pollution control equipment listed in Section 1.1, the permittee shall maintain accurate records of all required pollution control equipment inspection and/or preventative maintenance procedures.~~
~~**[45CSR13, R13-3334, 4.4.2]**~~

8.4.2. ~~**Record of Malfunctions of Air Pollution Control Equipment.** For all air pollution control equipment listed in Section 1.1, the permittee shall maintain records of the occurrence and duration of any malfunction or operational shutdown of the air pollution control equipment during which excess emissions occur. For each such case, the following information shall be recorded:~~

~~a. The equipment involved.~~

~~b. Steps taken to minimize emissions during the event.~~

~~c. The duration of the event.~~

~~d. The estimated increase in emissions during the event.~~

~~For each such case associated with an equipment malfunction, the additional information shall also be recorded:~~

~~e. The cause of the malfunction.~~

~~f. Steps taken to correct the malfunction.~~

~~g. Any changes or modifications to equipment or procedures that would help prevent future recurrences of the malfunction.~~

~~**[45CSR13, R13-3334, 4.4.3]**~~

8.4.3. ~~The permitted facility shall comply with all the applicable recordkeeping provisions of the 40 CFR 63 Subpart GG National Emission Standards for Aerospace Manufacturing and Rework Facilities, provided, however, that compliance with any more stringent limitations set forth under Requirements of Section 8.4. of this permit, is demonstrated:~~

~~§ 63.752 Recordkeeping requirements.~~

~~(b) Cleaning operation. Each owner or operator of a new or existing cleaning operation subject to this subpart shall record the information specified in paragraphs (b)(1) through (b)(5) of this section, as appropriate.~~

~~(1) The name, vapor pressure, and documentation showing the organic HAP constituents of each cleaning solvent used for affected cleaning operations at the facility.~~

~~(2) For each cleaning solvent used in hand-wipe cleaning operations that complies with the composition requirements specified in §63.744(b)(1) or for semi-aqueous cleaning solvents used for flush cleaning operations:~~

~~(i) The name of each cleaning solvent used;~~

~~(ii) All data and calculations that demonstrate that the cleaning solvent complies with one of the composition requirements; and~~

~~(iii) Annual records of the volume of each solvent used, as determined from facility purchase records or usage records.~~

~~(3) For each cleaning solvent used in hand-wipe cleaning operations that does not comply with the composition requirements in §63.744(b)(1), but does comply with the vapor pressure requirement in §63.744(b)(2):~~

~~(i) The name of each cleaning solvent used;~~

~~(ii) The composite vapor pressure of each cleaning solvent used;~~

~~(iii) All vapor pressure test results, if appropriate, data, and calculations used to determine the composite vapor pressure of each cleaning solvent; and~~

~~(iv) The amount (in gallons) of each cleaning solvent used each month at each operation.~~

~~(4) For each cleaning solvent used for the exempt hand-wipe cleaning operations specified in §63.744(e), that does not conform to the vapor pressure or composition requirements of §63.744(b):~~

~~(i) The identity and amount (in gallons) of each cleaning solvent used each month at each operation; and~~

~~(ii) A list of the processes set forth in §63.744(e), to which the cleaning operation applies.~~

~~(5) A record of all leaks from enclosed spray gun cleaners identified pursuant to §63.751(a) that includes for each leak found:~~

~~(i) Source id/entification;~~

~~(ii) Date leak was discovered; and~~

~~(iii) Date leak was repaired.~~

~~**[45CSR13, R13-3334, 4.4.4; 40CFR§63.752(b); 45CSR34]**~~

8.5. Reporting Requirements

8.5.1. Any exceedance(s) of the allowable visible emission requirement for any emission source discovered during observation using 45CSR§7A must be reported in writing to the Director of the Division of Air Quality as soon as practicable, but within ten (10) calendar days, of the occurrence and shall include, at a minimum, the following information: the results of the visible determination of opacity of emissions, the cause or suspected cause of the violation(s), and any corrective measures taken or planned.
[45CSR13, R13-3334, 4.5.1]

~~8.5.2. The permitted facility shall comply with all applicable reporting provisions of 40 CFR 63 Subpart GG – National Emission Standards for Aerospace Manufacturing and Rework Facilities, provided, however, that compliance with any more stringent limitations set forth under Requirements of Section 8.0 of this Permit, is demonstrated:~~

~~**§ 63.753 Reporting requirements.**~~

~~(b) Cleaning operation. Each owner or operator of a cleaning operation subject to this subpart shall submit the following information:~~

~~(1) Semiannual reports occurring every 6 months from the date of the notification of compliance status that identify:~~

~~(i) Any instance where a noncompliant cleaning solvent is used for a non-exempt hand-wipe cleaning operation;~~

~~(ii) A list of any new cleaning solvents used for hand-wipe cleaning in the previous 6 months and, as appropriate, their composite vapor pressure or notification that they comply with the composition requirements specified in §63.744(b)(1) (Section 8.1.3 of this Permit);~~

~~(iii) Any instance where a noncompliant spray-gun cleaning method is used;~~

~~(iv) Any instance where a leaking enclosed spray-gun cleaner remains unrepaired and in use for more than 15 days; and~~

~~(v) If the operations have been in compliance for the semiannual period, a statement that the cleaning operations have been in compliance with the applicable standards. Sources shall also submit a statement of compliance signed by a responsible company official certifying that the facility is in compliance with all applicable requirements.~~

~~**[45CSR13, R13-3334, 4.5.2]**~~

8.6. Compliance Plan

8.6.1. None

9.0. GMLRS Rocket Motor Manufacture Requirements – Plant 3, Bldg. 3040 (Emission Unit IDs P3-1S, P3-2S and P3-3S).

9.1. Limitations and Standards

9.1.1. The following limitations and requirements are specific to the wash tanks identified as P3-1S, P3-2S, and P3-3S.

a. Total VOC emissions from P3-1S, P3-2S, and P3-3S shall not exceed 20.88 tons per year.

b. Compliance with the above VOC limit is satisfied if the actual usage of heptane is equal to or less than 7,000 gallons and actual usage of isopropyl alcohol (IPA) is equal to or less than 1,856 gallons during any consecutive 12-month rolling period.

c. To minimize fugitive VOC emissions from these wash tanks, the permittee shall keep the tanks covered at all times when not in use. Such covers shall consist of a conductive plastic sheeting with a minimum thickness of 3/16 of an inch and extends past the opening of the vessel with no gaps in the opening.

d. The permittee shall only use heptane or isopropyl alcohol in the wash tanks.

[45CSR13, R13-3408, 4.1.1]

9.1.2. The following limitations and requirements are specific to the activities performed in Disassembly Work Areas.

a. VOC emissions due to the hand-wiping of components during the disassembly process step shall not exceed 6.49 tons per year.

b. Compliance with the above limit is satisfied when actual usage of isopropyl alcohol (IPA) is equal to or less than 750 gallons and actual usage of heptane is equal to or less than 1,406 gallons during any consecutive 12-month rolling period.

[45CSR13, R13-3408, 4.1.2]

9.1.3. The following limitations and requirements are specific to the activities performed in the Igniter/Nozzle Assembly and Final Assembly Work Areas.

a. VOC emissions due to the final assembly process step shall not exceed 2.17 tons per year.

b. Compliance with the above limit is satisfied when actual usage of isopropyl alcohol (IPA) is equal to or less than 4,331 gallons during any consecutive 12-month rolling period.

c. VOC emissions due to the application of packaging stenciling inks shall not exceed 1.06 tons per year.

d. HAP emissions due to the application of packaging stenciling inks shall not exceed 0.19 tons per year.

[45CSR13, R13-3408, 4.1.3]

9.2. Monitoring Requirements

9.2.1. The permittee shall monitor and record the actual usage of heptane and isopropyl alcohol used in each of the process areas; Wash Tanks, Disassembly Area, Igniter/Nozzle Assembly and Final Assembly Work Areas each calendar month and 12-month rolling total usage of each solvent for each area to demonstrate compliance with the VOC limits in Conditions 9.1.1, 9.1.2, and 9.1.3. Such records shall be maintained in accordance with Condition 3.4.2.
[45CSR13, R13-3408, 4.2.1]

9.2.2. The permittee shall determine, on a monthly basis, the VOC and total HAP emissions emitted due to application of stencil inks to packaging crates to demonstrate compliance with the VOC and HAP emission limits in items c. and d. of Condition 9.1.3. Such records shall include the amount of each coating applied, VOC content of each coating applied, and total HAP content of each coating applied during the corresponding month. All records shall be maintained in accordance with Condition 3.4.2.
[45CSR13, R13-3408, 4.2.2]

9.3. Testing Requirements

9.3.1. None.

9.4. Recordkeeping Requirements

9.3.1. None.

9.5. Reporting Requirements

9.3.1. None.

9.6. Compliance Plan

9.3.1. None.

10.0. GMLRS Rocket Motor Manufacture Requirements– Plant 3, Bldg. 3030 (Emission Unit ID P3-10S).

10.1. Limitations and Standards

10.1.1. The following limitations and requirements are specific to the mixer identified as P3-10S.

a. The permittee shall install and operate a portable control device identified as C1 to capture fugitive PM while introducing aluminum powder to the mixer. This portable control device shall be maintained and operated in accordance with the manufacturer's written maintenance and operating procedures. **[45CSR§7-5.1]**

b. The vacuum pump for the mixer shall be equipped and maintained with a liquid seal to minimize emissions from the mixer.

c. The mixer, which includes the structure it is located within and the vent for the vacuum pump, shall not exhibit any visible emissions. The vacuum pump shall be maintained and operated in accordance with the manufacturer's written maintenance and operating procedures. **[45CSR§7-3.1]**

d. VOC emissions due to cleaning the mixer shall not exceed 1.57 tons per year.

e. Compliance with the VOC limit in item d. of this condition shall be satisfied through actual usage of QED cleaning solvent at 500 gallons or less during any consecutive 12-month period.

[45CSR13, R13-3408, 5.1.1]

~~10.1.2. **Operation and Maintenance of Air Pollution Control Equipment.** The permittee shall, to the extent practicable, install, maintain, and operate all pollution control equipment listed in Section 1.0 and associated monitoring equipment in a manner consistent with safety and good air pollution control practices for minimizing emissions, or comply with any more stringent limits set forth in this permit or as set forth by any State rule, Federal regulation, or alternative control plan approved by the Secretary. **[45CSR§13-5.10 and 45CSR13, R13-3408, 5.1.2]**~~

10.2. Monitoring Requirements

10.2.1. The permittee shall monitor and record the amount of solvent used each month to clean the mixer and maintain a 12-month rolling total of solvent consumed. Such records shall be maintained in accordance with Condition 3.4.2.

[45CSR13, R13-3408, 5.2.1]

10.3. Testing Requirements

10.3.1. None.

10.4. Recordkeeping Requirements

10.4.1. ~~**Record of Maintenance of Air Pollution Control Equipment.** For all pollution control equipment listed in Section 1.1, the permittee shall maintain accurate records of all required pollution control equipment inspection and/or preventative maintenance procedures.~~
~~**[45CSR13, R13-3408, 5.3.1]**~~

10.4.2. ~~**Record of Malfunctions of Air Pollution Control Equipment.** For all air pollution control equipment listed in Section 1.1, the permittee shall maintain records of the occurrence and duration of any malfunction or operational shutdown of the air pollution control equipment during which excess emissions occur. For each such case, the following information shall be recorded:~~

~~a. The equipment involved.~~

~~b. Steps taken to minimize emissions during the event.~~

~~c. The duration of the event.~~

~~d. The estimated increase in emissions during the event.~~

~~For each such case associated with an equipment malfunction, the additional information shall also be recorded:~~

~~e. The cause of the malfunction.~~

~~f. Steps taken to correct the malfunction.~~

~~g. Any changes or modifications to equipment or procedures that would help prevent future recurrences of the malfunction.~~

~~**[45CSR13, R13-3408, 5.3.2]**~~

~~10.4.3.~~ The permittee shall record all instances that the portable control device identified as C1 was not operated during the charging of aluminum powder into the mixer. Such records shall include date, time, and reason the device was not operated. These records shall be maintained in accordance Condition 3.4.2.
[45CSR13, R13-3408, 5.3.3]

10.5. Reporting Requirements

10.5.1. None.

10.6. Compliance Plan

10.6.1. None.

11.0. Requirements for Plant 4 Downdraft Paint Booths (Emission Unit IDs: P4-1S through P4-4S) and Mixing Paint Booths (Emission Unit IDs: P4-5S through P4-7S)

11.1. Limitations and Standards

11.1.1. VOCs and volatile HAP emissions from manufacturing of the aerospace product in Building 4020 shall not exceed 14.77 tons of VOCs per year and total HAPs shall not exceed 8.03 tons of HAP per year. The permittee is permitted to operate this missile component manufacturing line in Building 4020 at the ABL in accordance with the following limitations as specified below:

(a) The permittee shall not exceed the following usage limits by material for the denoted emission point. Compliance with the annual limits in the following table shall be demonstrated using a 12-month rolling total basis.

Table 11.1.1.a. Material Usage/Losses Limits

Emission Point	Material	Daily Usage (ounces/day)	Annual Usage (gal/yr)
Booth 1			
P4-1E	Toluene	96	57
P4-1E	Isopropyl Alcohol (IPA)	96	57
P4-1E	ZEP Industrial Alkaline Cleaner (BZ7407)	48	28
P4-1E	PR-182 or PR-188	24	15
P4-1E	PR-2001 B-2 or PR-1826 Class B	108	54
P4-1E	PR-1764 B-2	144	85
P4-1E	MIL-C-8514 (Randolph or SW)	72	43
P4-1E	TS12983 Primer or MIL-PRF-23377K (PPG or Chemsol)	180	106
Booths 2 and 3			
P4-2E and P4-3E	SS4155 Primer	24	24
P4-2E and P4-3E	PR-9921	9,216	5,400
P4-2E and P4-3E	Isopropyl Alcohol (IPA)	3,072	1800
Booth 4			
P4-4E	Dowsil Q1-2650	48	15

Table 11.1.1.a. Material Usage/Losses Limits			
Emission Point	**Material**	**Daily Usage (ounces/day)**	**Annual Usage (gal/yr)**
P4-4E	MIL-PRF-23377K (PPG or Chemsol)	180	106
P4-4E	MIL-P-85285 #36375 - H	192	113
P4-4E	MIL-P-85285 #33538 - H	48	29
P4-4E	MIL-P-85285 #30117 - SW	48	29
P4-4E	Enthone 50-700R/20-A/AD-2002	48	29
P4-4E	MIL-P-85285 #35109 - C	48	29

(b) The all coatings applied are to be compliant with the VOC and HAP content limitation of Subpart GG of 40CFR63 and requirements for Condition 11.1.4 as applicable.

(c) All cleaning operations and activities associated with this manufacturing operation are compliant with the requirements of Condition 11.1.3 as applicable.

(d) The usage limits for Booths 2 and 3 are combined.

[45CSR13, R13-3651, 4.1.1]

11.1.2. PM, PM_{10}, $PM_{2.5}$ and PM HAP emissions from the application of primer or specialty coatings and sanding activities needed to manufacture aerospace component systems in Building 4020 shall not exceed 0.04 TPY. For purposes of limiting the facility's emissions to the above-mentioned limits, the following conditions are established:

(a) When coatings are being applied or during sanding activities, each paint booth (P4-1S, P4-2S, P4-3S, and P4-4S) shall be operated in a manner that filterable PM from the overspray of the coating and PM (dust) from any sanding activities is effectively captured by the filter media for the respective application booth. The filter media used in each application booth shall have a minimum filterable PM collection rating of 95% or greater. The permittee shall replace the filter media in accordance with the manufacturer's specifications.
[45CSR§7-5.1]

(b) Compliance with the annual limitation of this condition will be satisfied by compliance with the requirements of this condition and compliance with the primer and specialty coating usage limitation of Condition 11.1.1 of this permit.

(c) Emission points P4-1E, P4-2E, P4-3E and P4-4E shall not exhibit visible emissions in excess of 20% opacity on a 6-minute average basis.
[45CSR§7-3.1]

[45CSR13, R13-3651, 4.1.2]

11.1.3. The permittee shall comply with all applicable standard from the Cleaning Operation section of 40CFR63 Subpart GG – National Emission Standards for Aerospace Manufacturing and Rework Facilities, provided, however, that compliance with any more stringent limitations set forth under Requirements of Sections 11.0 of this permit is demonstrated:

§ 63.744 Standards: Cleaning operations

(a) Housekeeping measures. The permittee shall comply with the requirements in the subparagraphs (a)(1) through (a)(3) unless the cleaning solvent used is identified in Table 11.1.3.a or contains HAP and VOC below the de minimis levels specified in 40CFR§63.741(f).

Table 11.1.3.a. – Composition Requirements for Approved Cleaning Solvents

Cleaning solvent type	Composition requirements
Aqueous	Cleaning solvents in which water is the primary ingredient (≥80 percent of cleaning solvent solution as applied must be water). Detergents, surfactants, and bioenzyme mixtures and nutrients may be combined with the water along with a variety of additives, such as organic solvents (e.g., high boiling point alcohols), builders, saponifiers, inhibitors, emulsifiers, pH buffers, and antifoaming agents. Aqueous solutions must have a flash point greater than 93 °C (200 °F) (as reported by the manufacturer), and the solution must be miscible with water.
Hydrocarbon-based	Cleaners that are composed of photochemically reactive hydrocarbons and/or oxygenated hydrocarbons and have a maximum vapor pressure of 7 mm Hg at 20 °C (3.75 in. H2O and 68 °F). These cleaners also contain no HAP.

(1) Place cleaning solvent-laden cloth, paper, or any other absorbent applicators used for cleaning in bags or other closed containers upon completing their use. Ensure that these bags and containers are kept closed at all times except when depositing or removing these materials from the container. Use bags and containers of such design so as to contain the vapors of the cleaning solvent. Cotton-tipped swabs used for very small cleaning operations are exempt from this requirement.

(2) Store fresh and spent cleaning solvents, except semi-aqueous solvent cleaners, used in aerospace cleaning operations in closed containers.

(3) Conduct the handling and transfer of cleaning solvents to or from enclosed systems, vats, waste containers, and other cleaning operation equipment that hold or store fresh or spent cleaning solvents in such a manner that minimizes spills.

(b) Hand-wipe cleaning. The permittee (excluding cleaning of spray gun equipment performed in accordance with paragraph (c) of this condition) shall use cleaning solvents that meet one of the requirements specified in follow paragraphs (b)(1), (b)(2), and (b)(3). Cleaning solvent solutions that contain HAP and VOC below the de minimis levels specified in § 63.741(f) are exempt from the requirements in paragraphs (b)(1), (b)(2), and (b)(3) of this condition (excluding cleaning of spray gun equipment performed in accordance with following paragraph (c) of this condition).

(1) Meet one of the composition requirements in Table 11.1.3.a of this section;

(2) Have a composite vapor pressure of 45 mm Hg (24.1 in. H_2O) or less at 20 °C (68 °F); or

(3) Demonstrate that the volume of hand-wipe solvents used in cleaning operations has been reduced by at least 60% from a baseline adjusted for production. The baseline shall be established as part of an approved alternative plan administered by the State. Demonstrate that the volume of hand-wipe cleaning solvents used in cleaning operations has been reduced by at least 60 percent from a baseline adjusted for production. The baseline shall be calculated using data from 1996 and 1997, or as otherwise agreed upon by the Administrator or delegated State Authority. The baseline shall be approved by the Administrator or delegated State Authority and shall be included as part of the facility's title V or part 70 permit.

(c) Spray gun cleaning. The permittee subject to this subpart in which spray guns are used for the application of coatings or any other materials that require the spray guns to be cleaned shall use one or more of the techniques, or their equivalent, specified in following paragraphs (c)(1) through (c)(4). Spray gun cleaning operations using cleaning solvent solutions that contain HAP and VOC below the de minimis levels specified in § 63.741(f) are exempt from the requirements in paragraphs (c)(1) through (c)(4) of this condition.

(1)(i) Enclosed system. Clean the spray gun in an enclosed system that is closed at all times except when inserting or removing the spray gun. Cleaning shall consist of forcing solvent through the gun.

(1)(ii) If leaks are found during the monthly inspection required in § 63.751(a), repairs shall be made as soon as practicable, but no later than 15 days after the leak was found. If the leak is not repaired by the 15th day after detection, the cleaning solvent shall be removed, and the enclosed cleaner shall be shut down until the leak is repaired or its use is permanently discontinued.

(2) Nonatomized cleaning. Clean the spray gun by placing cleaning solvent in the pressure pot and forcing it through the gun with the atomizing cap in place. No atomizing air is to be used. Direct the cleaning solvent from the spray gun into a vat, drum, or other waste container that is closed when not in use.

(3) Disassembled spray gun cleaning. Disassemble the spray gun and clean the components by hand in a vat, which shall remain closed at all times except when in use. Alternatively, soak the components in a vat, which shall remain closed during the soaking period and when not inserting or removing components.

(4) Atomizing cleaning. Clean the spray gun by forcing the cleaning solvent through the gun and direct the resulting atomized spray into a waste container that is fitted with a device designed to capture the atomized cleaning solvent emissions.

(5) Cleaning of the nozzle tips of automated spray equipment systems, except for robotic systems that can be programmed to spray into a closed container, shall be exempt from the requirements of paragraph (c) of this section.

(e) Exempt cleaning operations. The following cleaning operations are exempt from the requirements of paragraph (b) of this condition:

(1) Cleaning during the manufacture, assembly, installation, maintenance, or testing of components of breathing oxygen systems that are exposed to the breathing oxygen;

(2) Cleaning during the manufacture, assembly, installation, maintenance, or testing of parts, subassemblies, or assemblies that are exposed to strong oxidizers or reducers (e.g., nitrogen tetroxide, liquid oxygen, or hydrazine);

(3) Cleaning and surface activation prior to adhesive bonding;

(4) Cleaning of electronic parts and assemblies containing electronic parts;

(5) Cleaning of aircraft and ground support equipment fluid systems that are exposed to the fluid, including air-to-air heat exchangers and hydraulic fluid systems;

(6) Cleaning of fuel cells, fuel tanks, and confined spaces;

(7) Surface cleaning of solar cells, coated optics, and thermal control surfaces;

(8) Cleaning during fabrication, assembly, installation, and maintenance of upholstery, curtains, carpet, and other textile materials used in the interior of the aircraft;

(9) Cleaning of metallic and nonmetallic materials used in honeycomb cores during the manufacture or maintenance of these cores, and cleaning of the completed cores used in the manufacture of aerospace vehicles or components;

(10) Cleaning of aircraft transparencies, polycarbonate, or glass substrates;

(11) Cleaning and cleaning solvent usage associated with research and development, quality control, and laboratory testing;

(12) Cleaning operations, using non-flammable liquids, conducted within five feet of energized electrical systems. Energized electrical systems means any AC or DC electrical circuit on an assembled aircraft once electrical power is connected, including interior passenger and cargo areas, wheel wells and tail sections; and

(13) Cleaning operations identified as essential uses under the Montreal Protocol for which the Administrator has allocated essential use allowances or exemptions in 40 CFR §82.4.

[45CSR13, R13-3651, 4.1.3]

11.1.4. The permittee shall comply with all applicable standards from the primer, topcoat, and specialty coating application operations section of 40CFR63 Subpart GG – National Emission Standards for Aerospace Manufacturing and Rework Facilities, provided, however, that compliance with any more stringent limitations set forth under Requirements of Sections 11.0 of this permit is demonstrated:

~~**§63.745 Standards: Primer, topcoat, and specialty coating application operations.**~~

~~(a) The permittee subpart shall comply with the requirements specified in paragraph (c) of this condition for those coatings that are uncontrolled (no control device is used to reduce organic HAP emissions from the operation).~~

~~(b) The permittee shall conduct the handling and transfer of primers, topcoats, and specialty coatings to or from containers, tanks, vats, vessels, and piping systems in such a manner that minimizes spills.~~

~~*(c) Uncontrolled coatings – organic HAP and VOC content levels*. The permittee shall comply with the organic HAP and VOC content limits specified in following paragraphs (c)(1) and (c)(2) of this condition for those coatings that are uncontrolled.~~

~~(c)(1) Organic HAP emissions from specialty coatings shall be limited to an organic HAP content level of no more than the HAP content limit specified in Table 1 Specialty Coating HAP and VOC Content Limits of 40CFR§63.745 for each applicable specialty coating type.~~

~~(c)(2) VOC emissions from specialty coatings shall be limited to a VOC content level of no more than the VOC content limit specified in Table 1 Specialty Coating HAP and VOC Content Limits of 40CFR§63.745 for each applicable specialty coating type.~~

~~**[45CSR13, R13-3651, 4.1.4]**~~

~~11.1.5. In the event that the manufacturing of aerospace product or component for a aerospace product in Building 256 produces a waste that contains HAP, the permittee shall conduct the handling and transfer of the waste to or from containers, tanks, vats, vessels, and piping systems in such a manner that minimizes spills; except as provided in 40CFR§63.741(e). The permittee shall use closed containers to store all waste that contains organic HAP at the facility.~~
~~**[40CFR§63.748(a), (a)(1) and (a)(2), and 45CSR34; 45CSR13, R13-3651, 4.1.5]**~~

11.2. Monitoring Requirements

11.2.1. For the purpose of determining compliance with the PM limitations set forth in Condition 11.1.2, the permittee shall maintain a daily record of the either manometer reading or other differential pressure instrument across the each of the three filter element stages for Emission Points P4-1E, P4-2E, P4-3E and P4-4E for each operating day. Should a daily reading indicate filter media or other maintenance is required to restore proper operation of the respective control device, the permittee shall take a second reading once the element(s) has been replaced or when the requirement maintenance activity is complete. The permittee shall calibrate the manometer or other differential pressure instrument at least once every calendar year in accordance with the instrument manufacturer's procedures and specifications. Such records shall be maintained in accordance with Condition 3.4.2 of this permit.
[45CSR13, R13-3651, 4.2.1]

11.2.2. For the purpose of determining compliance with the VOC and HAP emission limits set forth in Condition 11.1.1 the permittee shall maintain daily records of usage of the materials identified in Table 11.1.1.a of this permit by emission source for each operating day. By no later than the 15th of preceding month, the permittee shall determine the 12-month rolling total of the material usages of each emission point in Table 11.1.1.a. Such records shall be maintained in accordance with Condition 3.4.2 of this permit.
[45CSR13, R13-3651, 4.2.2]

11.2.3. To determine compliance with the opacity limits of Condition 11.1.2.c, the permittee shall conduct visible emission checks and/or opacity monitoring and recordkeeping of Emission Points P4-1E, P4-2E, P-4-3E, and P4-4E.

The visible emission check shall determine the presence or absence of visible emissions. At a minimum, the observer must be trained and knowledgeable regarding the effects of background contrast, ambient lighting, observer position relative to lighting, wind, and the presence of uncombined water (condensing water vapor) on the visibility of emissions. This training may be obtained from written materials found in the References 1 and 2 from 40 CFR Part 60, Appendix A, Method 22 or from the lecture portion of the 40 CFR Part 60, Appendix A, Method 9 certification course.

The permittee shall verify compliance with Condition 11.1.2.c by taking visual observations using U.S. EPA Method 22 for one minute once per every quarter. Should the permittee observe visible emissions from a respective emission point during the one-minute observation, then the permittee shall continue the observation for an additional five minutes. If the cumulative time that visible emissions are observed exceeds 70 seconds, the permittee shall conduct a Method 9 observation to demonstrate compliance with the opacity standard of Condition 11.1.2.c within 5 days of the initial Method 22 observation. Records of these observations and any corrective actions shall be maintained in accordance with Conditions 3.4.2 of this permit.

[45CSR§7-8.1; 45CSR13, R13-3651, 4.2.3]

11.3. Testing Requirements

11.3.1. Reserved

11.4. Recordkeeping Requirements

11.4.1. None.

~~**Record of Monitoring.** The permittee shall keep records of monitoring information that include the following:~~

~~a. The date, place as defined in this permit, and time of sampling or measurements.~~

~~b. The date(s) analyses were performed.~~

~~c. The company or entity that performed the analyses.~~

~~d. The analytical techniques or methods used.~~

~~e. The results of the analyses; and~~

~~f. The operating conditions existing at the time of sampling or measurement.~~

~~**[45CSR13, R13-3651, 4.4.1]**~~

11.5. Reporting Requirements

11.5.1. Any exceedance(s) of the allowable visible emission requirement for any emission source discovered

during observation using 45CSR§7A must be reported in writing to the Director of the Division of Air Quality as soon as practicable, but within ten (10) calendar days, of the occurrence and shall include, at a minimum, the following information: the results of the visible determination of opacity of emissions, the cause or suspected cause of the violation(s), and any corrective measures taken or planned.

[45CSR13, R13-3651, 4.5.1]

~~11.5.2. The permitted facility shall comply with all applicable reporting provisions of 40CFR63 Subpart GG – National Emission Standards for Aerospace Manufacturing and Rework Facilities, provided, however, that compliance with any more stringent limitations set forth under Requirements of Sections 11.0 of this Permit, is demonstrated:~~

~~(a) Cleaning operation. Each owner or operator of a cleaning operation subject to this subpart shall submit the following information:~~
~~**[40CFR§63.753(b)]**~~

~~(1) Semiannual reports occurring every 6 months from the date of the notification of compliance status that identify:~~
~~**[40CFR§63.753(b)(1)]**~~

~~(i) Any instance where a noncompliant cleaning solvent is used for a non-exempt hand-wipe cleaning operation;~~
~~**[40CFR§63.753(b)(1)(i)]**~~

~~(ii) A list of any new cleaning solvents used for hand wipe cleaning in the previous 6 months and, as appropriate, their composite vapor pressure or notification that they comply with the composition requirements specified in §63.744(b)(1) (Section 3.1.9 of this Permit);~~
~~**[40CFR§63.753(b)(1)(ii)]**~~

~~(iii) Any instance where a noncompliant spray gun cleaning method is used;~~
~~**[40CFR§63.753(b)(1)(iii)]**~~

~~(iv) Any instance where a leaking enclosed spray gun cleaner remains unrepaired and in use for more than 15 days; and~~
~~**[40CFR§63.753(b)(1)(iv)]**~~

~~(v) If the operations have been in compliance for the semiannual period, a statement that the cleaning operations have been in compliance with the applicable standards. Sources shall also submit a statement of compliance signed by a responsible company official certifying that the facility is in compliance with all applicable requirements.~~
~~**[40CFR§63.753(b)(1)(v)]**~~

~~**[45CSR13, R13-3651, 4.5.2]**~~

11.6. Compliance Plan

11.6.1. None.

12.0. Requirements for Crossdraft Paint Booths – B432 (2-19S) & B432 (2-20S)

12.1. Limitations and Standards

12.1.1. VOCs and volatile HAP emissions from manufacturing of the missile component system in Building 432 shall not exceed 3.00 tons of VOCs per year and total HAPs shall not exceed 2.11 tons of HAP per year. The permittee is permitted to operate this missile component manufacturing line in Building 432 at the ABL in accordance with the following limitations as specified below:

(a) The permittee shall not exceed the following usage limits by material for the denoted emission point. Compliance with the annual limits in the following table shall be demonstrated using a 12-month rolling total basis.

Table 12.1.1.a. Material Usage/Losses Limits

Emission Point	Material	Daily Usage (ounces/day)	Annual Usage (gal/yr)
2-16E	ZEP Industrial Alkaline Cleaner (BZ7407)	96	12
2-16E	Toluene	192	23
2-16E	PR-182 or PR-188	24	3
2-16E	PR-2001 B-2 or PR-1826 Class B	24	3
2-16E	MIL-C-8514 (Randolph or SW)	144	17
2-16E	TS12983 Primer	240	29
2-16E	Dowsil Q1-2650	48	6
2-16E	MIL-PRF-23377K (PPG or Chemsol)	144	17
2-16E	MIL-P-85285 #36375 - H	384	45
2-16E	MIL-P-85285 #33538 - H	96	12
2-16E	MIL-P-85285 #30117 - SW	96	12
2-16E	MIL-P-85285 #37038 - H	96	12
2-16E	MIL-P-85285 #38913 - C	96	2
2-16E	MIL-P-85285 #34230 - C	96	2
2-16E	MIL-P-85285 #35109 - C	96	2
2-17E	SS4155 Primer	48	6
2-17E	PR-9921	512	720

Table 12.1.1.a. Material Usage/Losses Limits			
Emission Point	**Material**	**Daily Usage (ounces/day)**	**Annual Usage (gal/yr)**
2-17E	Isopropyl Alcohol (IPA)	1,920	225

(b) The all coatings applied are to be compliant with the VOC and HAP content limitation of Subpart GG of 40 CFR 63 and requirements for Condition 12.1.4 as applicable.

(c) All cleaning operations and activities associated with this manufacturing operation are compliant with the requirements of Condition 12.1.3 as applicable.

[45CSR13, R13-3534, 4.1.1]

12.1.2. PM, PM_{10} and PM HAP emissions from the application of primer or specialty coatings for the manufacturing of the missile component system in Building 432 shall not exceed 0.04 TPY. For purposes of limiting the facility's emissions to the above-mentioned limits, the following conditions are established:

a. When coatings are being applied or during sanding activities, each paint booth (2-19S, 2-20S) shall be operated in a manner that filterable PM from the overspray of the coating and PM (dust) from any sanding activities is effectively captured by the filter media for the respective application booth. The filter media used in each application booth shall have a minimum filterable PM collection rating of 95% or greater. The permittee shall replace the filter media in accordance with the manufacturer's specifications.
[45CSR§7-5.1.]

b. Compliance with the annual limitation of this condition will be satisfied by compliance with the requirements of this condition and compliance with the primer and specialty coating usage limitation of Condition 12.1.1 of this permit.

c. Emission points 2-16E and 2-17E shall not exhibit visible emissions in excess of 20% opacity on a 6-minute average basis.
[45CSR§7-3.1]

[45CSR13, R13-3534, 4.1.2]

~~12.1.3. The permittee shall comply with all applicable standards from the Cleaning Operation section of 40 CFR 63 Subpart GG – National Emission Standards for Aerospace Manufacturing and Rework Facilities, provided, however, that compliance with any more stringent limitations set forth under Requirements of Section 12.0 of this permit is demonstrated:~~

~~**§63.744 Standards: Cleaning operations**~~

~~(a) Housekeeping measures. The permittee shall comply with the requirements in the subparagraphs (a)(1) through (a)(3) unless the cleaning solvent used is identified in Table 12.1.3.a or contains HAP and VOC below the de minimis levels specified in 40 CFR §63.741(f).~~

Table 12.1.3.a. - Composition Requirements for Approved Cleaning Solvents	
Cleaning solvent type	Composition requirements
Aqueous	Cleaning solvents in which water is the primary ingredient (≥80 percent of cleaning solvent solution as applied must be water). Detergents, surfactants, and bioenzyme mixtures and nutrients may be combined with the water along with a variety of additives, such as organic solvents (e.g., high boiling point alcohols), builders, saponifiers, inhibitors, emulsifiers, pH buffers, and antifoaming agents. Aqueous solutions must have a flash point greater than 93 °C (200 °F) (as reported by the manufacturer), and the solution must be miscible with water.
Hydrocarbon-based	Cleaners that are composed of photochemically reactive hydrocarbons and/or oxygenated hydrocarbons and have a maximum vapor pressure of 7 mm Hg at 20 °C (3.75 in. H_2O and 68 °F). These cleaners also contain no HAP.

(1) Place cleaning solvent laden cloth, paper, or any other absorbent applicators used for cleaning in bags or other closed containers upon completing their use. Ensure that these bags and containers are kept closed at all times except when depositing or removing these materials from the container. Use bags and containers of such design so as to contain the vapors of the cleaning solvent. Cotton-tipped swabs used for very small cleaning operations are exempt from this requirement.

(2) Store fresh and spent cleaning solvents, except semi-aqueous solvent cleaners, used in aerospace cleaning operations in closed containers.

(3) Conduct the handling and transfer of cleaning solvents to or from enclosed systems, vats, waste containers, and other cleaning operation equipment that hold or store fresh or spent cleaning solvents in such a manner that minimizes spills.

(b) Hand-wipe cleaning. The permittee (excluding cleaning of spray gun equipment performed in accordance with paragraph (c) of this condition) shall use cleaning solvents that meet one of the requirements specified in the following paragraphs (b)(1), (b)(2), and (b)(3). Cleaning solvent solutions that contain HAP and VOC below the de minimis levels specified in §63.741(f) are exempt from the requirements in paragraphs (b)(1), (b)(2), and (b)(3) of this condition (excluding cleaning of spray gun equipment performed in accordance with the following paragraph (c) of this condition).

(1) Meet one of the composition requirements in Table 1 of this section (Table 12.1.3.a);

(2) Have a composite vapor pressure of 45 mm Hg (24.1 in. H_2O) or less at 20 °C (68 °F); or

(3) Demonstrate that the volume of hand-wipe solvents used in cleaning operations has been reduced by at least 60% from a baseline adjusted for production. The baseline shall be established as part of an approved alternative plan administered by the State. Demonstrate that the volume of hand-wipe cleaning solvents used in cleaning operations has been reduced by at least 60 percent from a baseline adjusted for production. The baseline shall be calculated using data from 1996 and 1997, or as otherwise agreed upon by the Administrator or delegated State Authority. The baseline shall be approved by the Administrator or delegated State Authority and shall be included as part of the facility's title V or part 70 permit.

(c) Spray gun cleaning. The permittee subject to this subpart in which spray guns are used for the application of coatings or any other materials that require the spray guns to be cleaned shall use one or more of the techniques, or their equivalent, specified in the following paragraphs (c)(1) through (c)(4).

~~Spray gun cleaning operations using cleaning solvent solutions that contain HAP and VOC below the de minimis levels specified in §63.741(f) are exempt from the requirements in paragraphs (c)(1) through (c)(4) of this condition.~~

~~(1)(i) Enclosed system. Clean the spray gun in an enclosed system that is closed at all times except when inserting or removing the spray gun. Cleaning shall consist of forcing solvent through the gun.~~

~~(1)(ii) If leaks are found during the monthly inspection required in §63.751(a), repairs shall be made as soon as practicable, but no later than 15 days after the leak was found. If the leak is not repaired by the 15th day after detection, the cleaning solvent shall be removed, and the enclosed cleaner shall be shut down until the leak is repaired or its use is permanently discontinued.~~

~~(2) Nonatomized cleaning. Clean the spray gun by placing cleaning solvent in the pressure pot and forcing it through the gun with the atomizing cap in place. No atomizing air is to be used. Direct the cleaning solvent from the spray gun into a vat, drum, or other waste container that is closed when not in use.~~

~~(3) Disassembled spray gun cleaning. Disassemble the spray gun and clean the components by hand in a vat, which shall remain closed at all times except when in use. Alternatively, soak the components in a vat, which shall remain closed during the soaking period and when not inserting or removing components.~~

~~(4) Atomizing cleaning. Clean the spray gun by forcing the cleaning solvent through the gun and direct the resulting atomized spray into a waste container that is fitted with a device designed to capture the atomized cleaning solvent emissions.~~

~~(5) Cleaning of the nozzle tips of automated spray equipment systems, except for robotic systems that can be programmed to spray into a closed container, shall be exempt from the requirements of paragraph (c) of this section.~~

~~(e) Exempt cleaning operations. The following cleaning operations are exempt from the requirements of paragraph (b) of this condition:~~

~~(1) Cleaning during the manufacture, assembly, installation, maintenance, or testing of components of breathing oxygen systems that are exposed to the breathing oxygen;~~

~~(2) Cleaning during the manufacture, assembly, installation, maintenance, or testing of parts, subassemblies, or assemblies that are exposed to strong oxidizers or reducers (e.g., nitrogen tetroxide, liquid oxygen, or hydrazine);~~

~~(3) Cleaning and surface activation prior to adhesive bonding;~~

~~(4) Cleaning of electronic parts and assemblies containing electronic parts;~~

~~(5) Cleaning of aircraft and ground support equipment fluid systems that are exposed to the fluid, including air-to-air heat exchangers and hydraulic fluid systems;~~

~~(6) Cleaning of fuel cells, fuel tanks, and confined spaces;~~

~~(7) Surface cleaning of solar cells, coated optics, and thermal control surfaces;~~

~~(8) Cleaning during fabrication, assembly, installation, and maintenance of upholstery, curtains, carpet, and other textile materials used in the interior of the aircraft;~~

~~(9) Cleaning of metallic and nonmetallic materials used in honeycomb cores during the manufacture or maintenance of these cores, and cleaning of the completed cores used in the manufacture of aerospace vehicles or components;~~

~~(10) Cleaning of aircraft transparencies, polycarbonate, or glass substrates;~~

~~(11) Cleaning and cleaning solvent usage associated with research and development, quality control, and laboratory testing;~~

~~(12) Cleaning operations, using non flammable liquids, conducted within five feet of energized electrical systems. Energized electrical systems means any AC or DC electrical circuit on an assembled aircraft once electrical power is connected, including interior passenger and cargo areas, wheel wells and tail sections; and~~

~~(13) Cleaning operations identified as essential uses under the Montreal Protocol for which the Administrator has allocated essential use allowances or exemptions in 40 CFR 82.4.~~

~~45CSR13, R13-3534, 4.1.3; 40CFR§63.744(a)(1) through (3), (b), (c), and (e); 45CSR34]~~

~~12.1.4. The permittee shall comply with all applicable standards from the primer, topcoat, and specially coating application operations section of 40 CFR 63 Subpart GG – National Emission Standards for Aerospace Manufacturing and Rework Facilities, provided, however, that compliance with any more stringent limitations set forth under Requirements of Section 12.0 of this permit is demonstrated:~~

~~§63.745 Standards: Primer, topcoat, and specialty coating application operations.~~

~~(a) The permittee subpart shall comply with the requirements specified in paragraph (c) of this condition for those coatings that are uncontrolled (no control device is used to reduce organic HAP emissions from the operation).~~

~~(b) The permittee shall conduct the handling and transfer of primers, topcoats, and specialty coatings to or from containers, tanks, vats, vessels, and piping systems in such a manner that minimizes spills.~~

~~(c) *Uncontrolled coatings – organic HAP and VOC content levels*. The permittee shall comply with the organic HAP and VOC content limits specified in the following paragraphs (c)(5) and (c)(6) of this condition for those coatings that are uncontrolled.~~

~~(c)(5) Organic HAP emissions from specialty coatings shall be limited to an organic HAP content level of no more than the HAP content limit specified in Table 1 Specialty Coating HAP and VOC Content Limits of 40 CFR §63.745 for each applicable specialty coating type.~~

~~(c)(6) VOC emissions from specialty coatings shall be limited to a VOC content level of no more than the VOC content limit specified in Table 1 Specialty Coating HAP and VOC Content Limits of 40 CFR §63.745 for each applicable specialty coating type.~~

~~[45CSR13, R13-3534, 4.1.4; 40CFR§63.745(a), (b), (c)(5), and (c)(6); 45CSR34]~~

~~12.1.5. In the event that the manufacturing of composite rocket motor casing in Building 256 produces a waste that contains HAP, the permittee shall conduct the handling and transfer of the waste to or from containers, tanks, vats, vessels, and piping systems in such a manner that minimizes spills; except as provided in 40 CFR §63.741(e). The permittee shall use closed containers to store all waste that contains organic HAP at the facility.~~**~~[45CSR13, R13-3534, 4.1.5 and 40CFR§§63.748(a), (a)(1) and (a)(2); 45CSR34]~~**

~~12.1.6. **Operation and Maintenance of Air Pollution Control Equipment.** The permittee shall, to the extent practicable, install, maintain, and operate all pollution control equipment listed in Section 1.0 and associated monitoring equipment in a manner consistent with safety and good air pollution control practices for minimizing emissions, or comply with any more stringent limits set forth in this permit or as set forth by any State rule, Federal regulation, or alternative control plan approved by the Secretary.~~
~~**[45CSR§13-5.10., 45CSR13, R13-3534, 4.1.6]**~~

12.2. Monitoring Requirements

12.2.1. The permittee for paint booths and related equipment (Emission Units 2-19S and 2-20S; Emission Points 2-16E and 2-17E) shall conduct fabric filter checks prior to each use of the equipment. These checks shall include review to ensure filters are properly fitted to the unit, that no holes exist, and that the filters are not overloaded. Any changes made to filters during the checks or any filter replacements shall be recorded. Records of such inspections and maintenance performed as result of any inspection shall be maintained in accordance with Condition 3.4.2 of this permit.
[45CSR13, R13-3534, 4.2.1]

12.2.2. For the purpose of determining compliance with the PM limitations set forth in Condition 12.1.2, the permittee shall maintain a daily record of the either manometer reading or other differential pressure instrument across the filter element or control device for Emission Units 2-19S and 2-20S. Should a daily reading indicate filter media or other maintenance is required to restore proper operation of the respective control device, the permittee shall take a second reading once the element(s) has been replaced or when the requirement maintenance is complete. The permittee shall calibrate the manometer or other differential pressure instrument at least once every calendar year in accordance with the instrument manufacturer's procedures and specifications. Such records shall be maintained in accordance with Condition 3.4.2 of this permit.
[45CSR13, R13-3534, 4.2.2]

12.2.3. For the purpose of determining compliance with the VOC and HAP emission limits set forth in Condition 12.1.1 the permittee shall maintain daily records of usage of the materials identified in Table 12.1.1.a of this permit by emission source for each operating day. By no later than the 15th of preceding month, the permittee shall determine the 12-month rolling total of the material usages of each emission point in Table 12.1.1.a Such records shall be maintained in accordance with Condition 3.4.2 of this permit.
[45CSR13, R13-3534, 4.2.3]

12.3. Testing Requirements

12.3.1. Reserved.

12.4. Recordkeeping Requirements

12.4.1. Reserved.

~~**Record of Monitoring.** The permittee shall keep records of monitoring information that include the following:~~
~~a. The date, place as defined in this permit, and time of sampling or measurements;~~
~~b. The date(s) analyses were performed;~~
~~c. The company or entity that performed the analyses;~~
~~d. The analytical techniques or methods used;~~
~~e. The results of the analyses; and~~
~~f. The operating conditions existing at the time of sampling or measurement.~~

[45CSR13, R13-3534, 4.4.1]

12.4.2. **Record of Maintenance of Air Pollution Control Equipment.** For all pollution control equipment listed in Section 1.1, the permittee shall maintain accurate records of all required pollution control equipment inspection and/or preventative maintenance procedures.
[45CSR13, R13-3534, 4.4.2]

12.4.3. **Record of Malfunctions of Air Pollution Control Equipment.** For all air pollution control equipment listed in Section 1.1, the permittee shall maintain records of the occurrence and duration of any malfunction or operational shutdown of the air pollution control equipment during which excess emissions occur. For each such case, the following information shall be recorded:

a. The equipment involved.
b. Steps taken to minimize emissions during the event.
c. The duration of the event.
d. The estimated increase in emissions during the event.

For each such case associated with an equipment malfunction, the additional information shall also be recorded:

e. The cause of the malfunction.
f. Steps taken to correct the malfunction.
g. Any changes or modifications to equipment or procedures that would help prevent future recurrences of the malfunction.

[45CSR13, R13-3534, 4.4.3]

12.4.4. The permitted facility shall comply with all the applicable recordkeeping provisions of the 40CFR63 Subpart GG National Emission Standards for Aerospace Manufacturing and Rework Facilities, provided, however, that compliance with any more stringent limitations set forth under Requirements of Section 12.4 of this permit, is demonstrated.

§ 63.752 Recordkeeping requirements.

(b) Cleaning operation. Each owner or operator of a new or existing cleaning operation subject to this subpart shall record the information specified in paragraphs (b)(1) through (b)(5) of this section, as appropriate.

(1) The name, vapor pressure, and documentation showing the organic HAP constituents of each cleaning solvent used for affected cleaning operations at the facility.

(2) For each cleaning solvent used in hand wipe cleaning operations that complies with the composition requirements specified in §63.744(b)(1) or for semi aqueous cleaning solvents used for flush cleaning operations:

(i) The name of each cleaning solvent used;

(ii) All data and calculations that demonstrate that the cleaning solvent complies with one of the composition requirements; and

(iii) Annual records of the volume of each solvent used, as determined from facility purchase records or usage records.

(3) For each cleaning solvent used in hand wipe cleaning operations that does not comply with the composition requirements in §63.744(b)(1), but does comply with the vapor

~~pressure requirement in §63.744(b)(2):~~

~~(i) The name of each cleaning solvent used;~~

~~(ii) The composite vapor pressure of each cleaning solvent used;~~

~~(iii) All vapor pressure test results, if appropriate, data, and calculations used to determine the composite vapor pressure of each cleaning solvent; and~~

~~(iv) The amount (in gallons) of each cleaning solvent used each month at each operation.~~

~~(4) For each cleaning solvent used for the exempt hand-wipe cleaning operations specified in §63.744(e), that does not conform to the vapor pressure or composition requirements of §63.744(b):~~

~~(i) The identity and amount (in gallons) of each cleaning solvent used each month at each operation; and~~

~~(ii) A list of the processes set forth in §63.744(e), to which the cleaning operation applies.~~

~~(5) A record of all leaks from enclosed spray gun cleaners identified pursuant to §63.751(a) that includes for each leak found:~~

~~(i) Source identification;~~

~~(ii) Date leak was discovered; and~~

~~(iii) Date leak was repaired.~~

~~**[45CSR13, R13-3534, 4.4.4 and 40CFR§63.752(b); 45CSR34]**~~

12.5. Reporting Requirements

12.5.1. Any exceedance(s) of the allowable visible emission requirement for any emission source discovered during observations using 45CSR§7A must be reported in writing to the Director of the Division of Air Quality as soon as practicable, but within ten (10) calendar days of the occurrence and shall include, at a minimum, the following information: the results of the visible determination of opacity of emissions, the cause or suspected cause of the violation(s), and any corrective measures taken or planned.
[45CSR13, R13-3534, 4.5.1]

~~12.5.2. The permitted facility shall comply with all applicable reporting provisions of 40 CFR 63 Subpart GG – National Emission Standards for Aerospace Manufacturing and Rework Facilities, provided, however, that compliance with any more stringent limitations set forth under Requirements of Section 12.0 of this Permit, is demonstrated:~~

~~**§ 63.753 Reporting requirements.**~~

~~(b) Cleaning operation. Each owner or operator of a cleaning operation subject to this subpart shall submit the following information:~~

~~(1) Semiannual reports occurring every 6 months from the date of the notification of compliance status that identify:~~

~~(i) Any instance where a noncompliant cleaning solvent is used for a non exempt hand wipe cleaning operation;~~

~~(ii) A list of any new cleaning solvents used for hand wipe cleaning in the previous 6 months and, as appropriate, their composite vapor pressure or notification that they comply with the composition requirements specified in §63.744(b)(1) (Section 12.1.3 of this Permit);~~

~~(iii) Any instance where a noncompliant spray gun cleaning method is used;~~

~~(iv) Any instance where a leaking enclosed spray gun cleaner remains unrepaired and in use for more than 15 days; and~~

~~(v) If the operations have been in compliance for the semiannual period, a statement that the cleaning operations have been in compliance with the applicable standards. Sources shall also submit a statement of compliance signed by a responsible company official certifying that the facility is in compliance with all applicable requirements.~~

~~[45CSR13, R13-3534, 4.5.2; 40CFR§63.753(b); 45CSR34]~~

12.6. Compliance Plan

12.6.1. None.

ATTACHMENT 1

HERCULES

Hercules Incorporated
Aerospace Products Group
Allegany Ballistics Laboratory
P. O. Box 210
Rocket Center, WV 26726
(304) 726-5000

December 19, 1986

Director
West Virginia Air Pollution Control Commission
1558 Washington Street, East
Charleston, West Virginia 25311

Attention: Mr. Steve Anderson

Dear Sir:

Construction Permit Application No. 898

This letter confirms the discussions on December 18, 1986, between Messrs. Carl Beard II and Steve Anderson of the West Virginia Air Pollution Control Commission (WVAPCC) and Messrs. Ted Rissell and Dave McBride of Hercules Incorporated/Allegany Ballistics Laboratory (HI/ABL) concerning the construction permit for a nitrate ester sparge facility.

HI/ABL will provide an emission control system on the air effluent stream, containing methylene chloride, from the nitrate ester sparge facility as a part of the construction package. This system will be operational at the start of facility sparging operations. The system will utilize a low temperature refrigeration system to condense and recover volatile organic chemicals (VOC) from the effluent stream. A design operating temperature of -40°F. will be used for the condenser. A copy of literature from Edwards Engineering Corporation, a potential recovery system supplier, is attached. The system will be designed and sized to achieve a minimum recovery of 80% of the VOC released by the sparging operation.

This unit is recognized as constituting a technology development and, as such, Hercules/ABL understands that system testing and documentation after start-up will be required to demonstrate degree of VOC recovery actually achieved. We would plan to measure system performance by material balance. The quantity of methylene chloride stripped from the nitrate ester solutions and the quantity recovered will be measured by weighing on a routine basis during any prescribed demonstration period.

Ancillary process items relating to process safety are currently in study and design. While these items will be part of the total system, they will not influence the VOC recovery operation or efficiency.

Very truly yours,

G. H. Moody
Vice President and Resident Manager

DAMcBride:beh(1993B)
Attachment

ATTACHMENT A

Alliant Techsystems, Inc.
ATK Missile Subsystems & Controls Division
057-00011 R13-1798B and R13-1782A

MATERIAL USAGE

Date	Material Name /ID	# Units Painted	VOC	Solids	Total HAP	Amount Used	Time Used	Total VOC	Total PM	Total HAP
			Content (lb/gal)			(gals)	(Hrs)	Emissions (lb/hr)		
Monthly Totals										
(For 6-4E, 6-5E, 6-6E, 6-7E) **Permit Limit:-**								3.00	3.00	1.90
(For 6-2E) **Permit Limit:-**								1.0	0.1	

ATTACHMENT B

Alliant Techsystems, Inc.
ATK Missile Subsystems & Controls Division
057-00011

12-MONTH ROLLING AVERAGES

Month	Emissions for R13-1798B			Emissions for R13- 1782A		#Units Painted
	VOC (tpm)	PM (tpm)	HAP (tpm)	VOC (tpm)	PM (tpm)	(Monthly total)
1	January					
2	February					
3	March					
4	April					
5	May					
6	June					
7	July					
8	August					
9	September					
10	October					
11	November					
12	December					
13	January					
14	February					
12-month rolling averages (tpy):						
Permit Limit (tpy):	4.35	0.10	2.00	2.01	0.1	480 units

ATTACHMENT C

Alliant Techsystems, Inc.
ATK Missile Subsystems & Controls Division
057-00011 R13-1798B

Speciated HAP Emissions

Month: _____ Year: _____		
Hazardous Air Pollutant:	Monthly HAP Emissions :	Yearly* HAP Emissions (TPY):
Permit Limit is 2.00 TPY on an aggregate basis		
Antimony Compounds		
Chromium Compounds		
Ethylbenzene		
Formaldehyde		
Glycol Ethers		
n-Hexane		
HDI		
Lead Compounds		
MDI		
Methanol		
Methyl Isobutyl Ketone (MIBK)		
Phenol		
Styrene		
TDI		
Toluene		
Xylene		
Aggregate HAP Emissions		

*Calculated on Twelve (12) Month Rolling Total

ATTACHMENT D

Alliant Techsystems, Inc.
ATK Missile Subsystems & Controls Division
057-00011 R13-1798B

FILTER MAINTENANCE:

Date Filter Checked				Date Filter Changed	Filter ID Changed	Comments:
Filter Booth 6-2C	Filter Booth 6-3C	Filter Booth 6-4C	Filter Booth 6-5C			

Completeness Determination, Northrop Grumman (Alliant Techsystems Operations - ABL Operations), Application No. R30-05700011-2024 (Part 1 of 3)

1 message

Chertkovsky, Natalya V <natalya.v.chertkovsky@wv.gov> Wed, May 8, 2024 at 3:07 PM
To: bill.hixon@ngc.com, "Foor, SueEllen [US] (DS)" <sueellen.foor@ngc.com>

Your Title V renewal application for a permit to operate the above referenced facility was received by this Division on January 10, 2024. After review of said application, it has been determined that the application is administratively complete as submitted. Therefore, the above referenced facility qualifies for an Application Shield.

The applicant has the duty to supplement or correct the application. Any applicant who fails to submit any relevant facts or who has submitted incorrect information in a permit application shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary facts or corrected information. In addition, an applicant shall provide additional information as necessary to address any requirements that become applicable to the source after the date it filed a complete application but prior to release of a draft permit.

The submittal of a complete application shall not affect the requirement that any source have all **preconstruction permits** required under the rules of the Division.

If during the processing of this application it is determined that additional information is necessary to evaluate or take final action on this application, a request for such information will be made in writing with a reasonable deadline for a response. Until which time as your renewal permit is issued or denied, please continue to operate this facility in accordance with 45CSR30, section 6.3.c. which states: *If the Secretary fails to take final action to deny or approve a timely and complete permit application before the end of the term of the previous permit, the permit shall not expire until the renewal permit has been issued or denied, and any permit shield granted for the permit shall continue in effect during that time.* This protection shall cease to apply if, subsequent to the completeness determination made pursuant to paragraph 6.1.d. of 45CSR30 and as required by paragraph 4.1.b., the applicant fails to submit by the deadline specified in writing any additional information identified as being needed to process the application.

Please remember, **failure of the applicant to timely submit information required or requested to process the application may cause the Application Shield to be revoked.** Should you have any questions regarding this determination, please contact me.

Sincerely,

Natalya V. Chertkovsky-Veselova,
WV DEP DAQ
TV Permit Engineer
304 926 0499 x 41250

Received
January 10, 2024
WV DEP/Div of Air Quality

Table of Contents

Document	Paper or Electronic Submittal?
Cover Letter	Pdf file
Title V Permit Application Checklist	Pdf file
Title V Permit Renewal Application Form	Pdf file
Attachment A: Site Location Map	Pdf file
Attachment B: Plot Plan	Pdf file
Attachment C: Process Flow Diagrams	Pdf file
Attachment D: Title V Equipment Table	Pdf file
Attachment E: Emission Unit Forms	Pdf file
Attachment G: Air Pollution Control Device Forms	Pdf file
Attachment H: Compliance Assurance Monitoring (CAM) Form	Pdf file
Facility Information	Pdf file
Process Description with NAICS	Pdf file
List of Active Permits	Pdf file
Facility Wide Emissions Summary	Pdf file
List of Insignificant Activities	Pdf file

Division of Air Quality Permit Application Submittal

Please find attached a permit application for : Northrop Grumman (Alliant Techsystems Operations - ABL Operations)

[Company Name; Facility Location]

- DAQ Facility ID (for existing facilities only): 057-00011
- Current 45CSR13 and 45CSR30 (Title V) permits associated with this process (for existing facilities only): R30-05700011-2019 Part 1

- Type of NSR Application (check all that apply):
  - ☐ Construction
  - ☐ Modification
  - ☐ Class I Administrative Update
  - ☐ Class II Administrative Update
  - ☐ Relocation
  - ☐ Temporary
  - ☐ Permit Determination

- Type of 45CSR30 (TITLE V) Application:
  - ☐ Title V Initial
  - ☑ Title V Renewal
  - ☐ Administrative Amendment**
  - ☐ Minor Modification**
  - ☐ Significant Modification**
  - ☐ Off Permit Change

****If the box above is checked, include the Title V revision information as ATTACHMENT S to the combined NSR/Title V application.**

- Payment Type:
  - ☑ Credit Card (Instructions to pay by credit card will be sent in the Application Status email.)
  - ☐ Check (Make checks payable to: WVDEP – Division of Air Quality)
    Mail checks to:
    WVDEP – DAQ – Permitting
    Attn: NSR Permitting Secretary
    601 57th Street, SE
    Charleston, WV 25304

Please wait until DAQ emails you the Facility ID Number and Permit Application Number. Please add these identifiers to your check or cover letter with your check.

- If the permit writer has any questions, please contact (all that apply):
  - ☐ Responsible Official/Authorized Representative
    - Name:
    - Email:
    - Phone Number:
  - ☑ Company Contact
    - Name: Sue Ellen Foor
    - Email: sueellen.foor@ngc.com
    - Phone Number: 304-726-5506 (office); 240-727-5581 (cell)
  - ☐ Consultant
    - Name:
    - Email:
    - Phone Number:

Northrop Grumman Corporation
Defense Systems Group
Alliant Techsystems Operations LLC
ABL Operations
210 State Route 956
Rocket Center. WV 26726

January 10, 2024

Laura Crowder, Director
WV Department of Environmental Protection
Division of Air Quality
601 – 57th Street
Charleston, WV 25304

Alliant Techsystems Operations LLC
Allegany Ballistics Laboratory
WVDAQ ID# 057-00011

REFERENCE: Permit R30-05700011-2019 Part 1 of 3 (Issued July 16, 2019)

SUBJECT: Title V Permit Renewal Application

Dear Director Crowder:

NGSC – Alliant Techsystems Operations LLC – Allegany Ballistics Laboratory hereby submits the enclosed application for renewal of the referenced Title V permit. We believe the enclosed renewal application contains the appropriate elements as indicated by the DAQ's "Title V Permit Application Checklist for Administrative Completeness".

Should you have additional questions regarding this submittal please contact Sue Ellen Foor, Environmental Engineer, at 304-726-5506 or sueellen.foor@ngc.com; or Jill Clayton, Environmental Engineer, at 304-726-7984 or jill.clayton@ngc.com.

Respectfully,

Sue Ellen Foor

Sue Ellen Foor
Environmental Engineer
NGSC-Alliant Techsystems Operations LLC
Allegany Ballistics Laboratory

Cc: Chris Scanlan

Sue Ellen Foor
Environmental Engineer
Alliant Techsystems Operations LLC
Allegany Ballistics Laboratory

cc: Chris Scanlan

TITLE V PERMIT APPLICATION CHECKLIST
FOR ADMINISTRATIVE COMPLETENESS

A complete application is demonstrated when all the information required below is properly prepared, completed and attached. The items listed below are required information which must be submitted with a Title V permit application. Any submittal will be considered incomplete if the required information is not included.	
☒	Application signed by a Responsible Official as defined in 45CSR§30-2.38 ("*Section 6: Certification of Information*" page signed and dated)
☒	Table of Contents (should be included, but not required for administrative completeness)
☒	Facility information
☒	Description of process and products, including NAICS and SIC codes, and including alternative operating scenarios
☒	Area map showing plant location
☒	Plot plan showing buildings and process areas
☒	Process flow diagram(s), showing all emission units, control equipment, emission points, and their relationships
☐	Identification of all applicable requirements with a description of the compliance status, the methods used for demonstrating compliance, and a Schedule of Compliance Form (ATTACHMENT F) for all requirements for which the source is not in compliance
☒	Listing of all active permits and consent orders (if applicable)
☒	Facility-wide emissions summary
☒	Identification of Insignificant Activities
☒	ATTACHMENT D - Title V Equipment Table completed for all emission units at the facility except those designated as insignificant activities
☒	ATTACHMENT E - Emission Unit Form completed for each emission unit listed in the Title V Equipment Table (ATTACHMENT D) and a Schedule of Compliance Form (ATTACHMENT F) for all requirements for which the emission unit is not in compliance
☒	ATTACHMENT G - Air Pollution Control Device Form completed for each control device listed in the Title V Equipment Table (ATTACHMENT D)
☒	ATTACHMENT H – Compliance Assurance Monitoring (CAM) Plan Form completed for each control device for which the "Is the device subject to CAM?" question is answered "Yes" on the Air Pollution Control Device Form (ATTACHMENT G)
☐	Confidential Information submitted in accordance with 45CSR31

WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF AIR QUALITY
601 57th Street SE
Charleston, WV 25304
Phone: (304) 926-0475
www.dep.wv.gov/daq

INITIAL/RENEWAL TITLE V PERMIT APPLICATION - GENERAL FORMS

Section 1: General Information

1. **Name of Applicant (As registered with the WV Secretary of State's Office):**
Alliant Techsystems Operations LLC

2. Facility Name or Location:
Allegany Ballistics Laboratory

3. DAQ Plant ID No.:
0 5 7 — 0 0 0 1 1

4. Federal Employer ID No. (FEIN):
2 7 4 0 2 6 9 0 8

5. **Permit Application Type:**

- ☐ Initial Permit — When did operations commence? MM/DD/1946
- ☒ Permit Renewal — What is the expiration date of the existing permit? 07/16/2024
- ☐ Update to Initial/Renewal Permit Application

6. Type of Business Entity:

- ☒ Corporation
- ☐ Governmental Agency
- ☐ LLC
- ☐ Partnership
- ☐ Limited Partnership

7. Is the Applicant the:

- ☐ Owner
- ☐ Operator
- ☒ Both

If the Applicant is not both the owner and operator, please provide the name and address of the other party.
Naval Sea Systems Command (NAVSEA)
1333 Isaac Hull Ave. SE – Washington Naval Yard
Washington, DC 20376

8. Number of onsite employees:
~1,650

9. Governmental Code: Facility is owned by the Navy and operated by Alliant Techsystems.

- ☐ Privately owned and operated; 0
- ☐ Federally owned and operated; 1
- ☐ State government owned and operated; 2
- ☐ County government owned and operated; 3
- ☐ Municipality government owned and operated; 4
- ☐ District government owned and operated; 5

10. Business Confidentiality Claims

Does this application include confidential information (per 45CSR31)? ☐ Yes ☒ No

If yes, identify each segment of information on each page that is submitted as confidential, and provide justification for each segment claimed confidential, including the criteria under 45CSR§31-4.1, and in accordance with the DAQ's *"PRECAUTIONARY NOTICE-CLAIMS OF CONFIDENTIALITY"* guidance.

11. Mailing Address		
Street or P.O. Box: 210 State Route 956		
City: Rocket Center	**State:** WV	**Zip: 26726-3548**
Telephone Number: (304) 726-5506	**Fax Number:** (304) 726-5562	

12. Facility Location		
Street: 210 State Route 956	**City:** Rocket Center	**County:** Mineral
UTM Easting: 686.47 km	**UTM Northing:** 4,381.25 km	**Zone:** ☒ 17 or ☐ 18
Directions: Turn left off of WV State Route 956 onto plant access road just after crossing bridge into West Virginia from Maryland.		
Portable Source? ☐ Yes ☒ No		
Is facility located within a nonattainment area? ☐ Yes ☒ No		**If yes, for what air pollutants?**
Is facility located within 50 miles of another state? ☒ Yes ☐ No		**If yes, name the affected state(s).** MD, PA, VA
Is facility located within 100 km of a Class I Area[1]? ☒ Yes ☐ No **If no, do emissions impact a Class I Area[1]?** ☐ Yes ☐ No		**If yes, name the area(s).** Dolly Sods, Otter Creek, Shenandoah National Park

[1] *Class I areas include Dolly Sods and Otter Creek Wilderness Areas in West Virginia, and Shenandoah National Park and James River Face Wilderness Area in Virginia.*

13. Contact Information		
Responsible Official: Bill Hixon		**Title:** Director – Operations Support - ABL Operations
Street or P.O. Box: 210 State Route 956		
City: Rocket Center	**State:** WV	**Zip: 26726-3548**
Telephone Number: (304) 726-5558	**Fax Number:** (304) 726-5183	
E-mail address: bill.hixon@ngc.com		

Environmental Contact: Sue Ellen Foor, Jill Clayton, or Geoff Frech		**Title:** Environmental Engineer
Street or P.O. Box: 210 State Route 956		
City: Rocket Center	**State:** WV	**Zip: 26726-3548**
Telephone Number: (304) 726-5506 (304) 726-7984, (304) 726-7611	**Fax Number:** (304) 726-5562	
E-mail address: sueellen.foor@ngc.com , jill.clayton@ngc.com , geoffrey.frech@ngc.com		

Application Preparer: Sue Ellen Foor / Jill Clayton / Geoff Frech		**Title:** Environmental Engineer
Company: Alliant Techsystems Operations LLC Allegany Ballistics Laboratory (ABL)		
Street or P.O. Box: 210 State Route 956		
City: Rocket Center	**State:** WV	**Zip: 26726-3548**
Telephone Number: (304) 726-5506 (304) 726-7984, (304) 726-7611	**Fax Number:** (304) 726-5562	
E-mail address: : sueellen.foor@ngc.com , jill.clayton@ngc.com , geoffrey.frech@ngc.com		

14. Facility Description

List all processes, products, NAICS and SIC codes for normal operation, in order of priority. Also list any process, products, NAICS and SIC codes associated with any alternative operating scenarios if different from those listed for normal operation.

Process	Products	NAICS	SIC
Rocket Motor Manufacture	Rocket motors, metal rocket cases, composite rocket cases	336415	3764
F-22 Composites Manufacturing	Pivot shafts and obturator plates for F-22	336413	3728
Electronic Fuzing and Ammunition	Medium caliber ammunition (not loaded), proximity switches, and multiple fuze products for DoD	332995	3489

NOTE: Part 1 of this permit covers only the rocket motor manufacturing minus the case manufacture in composites or metal fabrication areas.

Provide a general description of operations.

Naval Industrial Reserve Ordnance Plant (NIROP)/Allegany Ballistics Laboratory (ABL) is a facility which is operated by Alliant Techsystems Operations LLC (Northrup Grumman Systems Corporation-NGSC) (headquarters in Falls Church, VA) under the NGSC Missile Products Group. The majority of the facility is owned by the U.S. Navy and is operated by NGIS under a facilities use contract (~1530 acres designated as Plant 1). 57 acres is owned and operated by NGSC and is designated as Plant 2. Approximately 500 acres of Plant 1 are developed. Plant 3 is a 41acre area designated as Plant 3 dedicated to production of GMLRS rocket motors. Construction is ongoing on 29 acres designated as Plant 4 to be used as a LAP facility to build all-up rounds. The remaining acreage is currently undeveloped. All property is contiguous with internal roads to reach each separate area.

Operations at the plant include:

- metal fabrication of rocket motor and warhead cases;
- metal fabrication of tank ammunition training rounds;
- manufacture of composite material rocket motor and warhead cases;
- manufacture of composite material aircraft components;
- preparation of cases for addition of explosives;
- mixing, casting, curing, and associated operations with propellants and explosives;
- static firing of rocket motors;
- open burning of waste propellants and explosives;
- development and production of laser firing devices;
- analytical and research & development laboratories;
- explosive loading and packing operations for tank ammunition;
- x-ray testing; and
- maintenance and utility operations.

In addition, to these operations, the site is also home to the Robert C. Byrd Institute for Machining and office space for IBM.

15. Provide an **Area Map** showing plant location as **ATTACHMENT A.**

16. Provide a **Plot Plan(s)**, e.g. scaled map(s) and/or sketch(es) showing the location of the property on which the stationary source(s) is located as **ATTACHMENT B**. For instructions, refer to "Plot Plan - Guidelines."

17. Provide a detailed **Process Flow Diagram(s)** showing each process or emissions unit as **ATTACHMENT C**. Process Flow Diagrams should show all emission units, control equipment, emission points, and their relationships.

Section 2: Applicable Requirements

18. Applicable Requirements Summary	
Instructions: Mark all applicable requirements.	
☒ SIP	☐ FIP
☒ Minor source NSR (45CSR13)	☐ PSD (45CSR14)
☒ NESHAP (45CSR34)	☐ Nonattainment NSR (45CSR19)
☒ Section 111 NSPS	☒ Section 112(d) MACT standards
☐ Section 112(g) Case-by-case MACT	☐ 112(r) RMP
☐ Section 112(i) Early reduction of HAP	☐ Consumer/commercial prod. reqts., section 183(e)
☐ Section 129 Standards/Reqts.	☒ Stratospheric ozone (Title VI)
☐ Tank vessel reqt., section 183(f)	☐ Emissions cap 45CSR§30-2.6.1
☐ NAAQS, increments or visibility (temp. sources)	☒ 45CSR27 State enforceable only rule
☒ 45CSR4 State enforceable only rule	☐ Acid Rain (Title IV, 45CSR33)
☐ Emissions Trading and Banking (45CSR28)	☐ Compliance Assurance Monitoring (40CFR64)
☐ CAIR NO_x Annual Trading Program (45CSR39)	☐ CAIR NO_x Ozone Season Trading Program (45CSR40)
☐ CAIR SO_2 Trading Program (45CSR41)	

19. Non Applicability Determinations

List all requirements which the source has determined not applicable and for which a permit shield is requested. The listing shall also include the rule citation and the reason why the shield applies.

45CSR21– Regulation to Prevent and Control Air Pollution from the Emission of Volatile Organic Compounds. The facility is not located in a county that is currently subject to 45CSR21, and is therefore currently exempt from this regulation.

40CFR63, Subpart PPP – National Emission Standards for Polyether Polyol Production. The facility manufactures Terathane Polyethylene Glycol Block Copolymer (TPEG), which is a Polyether Polyol. However, the operation is exempted from this MACT because there are no HAPs used or generated during the manufacturing operation.

40CFR63, Subpart GGGGG – National Emission Standards for Site Remediation. The facility currently has one site under remediation for groundwater contamination. This site is a Superfund site and is thus exempt from the MACT requirements. The facility also has a second site, which will begin remediation as part of a RCRA corrective action program within the next year. This second site would also be exempted since it is being conducted under a RCRA corrective action permit. In addition, neither site would generate emissions of more than 1 megagram per year of HAPs.

40CFR63, Subpart PPPPP – National Emission Standards for Hazardous Air Pollutants from Engine Test Sells/Stands (05/27/03)- This rule applies to the X-Range Static Rocket Motor Firing facility (Group 00Q). However, per 40CFR63.9290(b) & (d)(2) it is exempt from the requirements of this Subpart due to facility was existing source on May 14, 2002 (partially modified in summer of 2002, Source Q-3S) and also, it is used exclusively for rocket motors testing.

40CFR63, Subpart WWWWW – National Emission Standards for Reinforced Plastic Composites Manufacturing. The facility manufactures composite based rocket motor chambers and aircraft components. However, the facility is exempt from this MACT because none of the resin or fiber systems used, contain HAPs.

☒ Permit Shield

19. Non Applicability Determinations *(Continued)* - *Attach additional pages as necessary.*

List all requirements which the source has determined not applicable and for which a permit shield is requested. The listing shall also include the rule citation and the reason why the shield applies.

See above.

☒ Permit Shield

20. Facility-Wide Applicable Requirements

List all facility-wide applicable requirements. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*).

45CSR6-3.1. & 3.2. Open burning & open burning exemptions.

40CFR61 Subpart M - 61.145, 61.148, and 61.150 Asbestos.

45CSR4-3.1. [State-Enforceable only.] Odors.

45CSR11-5.2. Standby plan for reducing emissions.

WV Code § 22-5-4(a)(14) Emission inventory.

40 CFR Part 82, Subpart F Ozone-depleting substances.

40 CFR Part 68 Risk Management Plan.

40CFR63, Subpart GG – National Emission Standards for Aerospace Manufacturing Operations.

45CSR7-3.7. Visible emissions from any storage structures.

45CSR7-5.1. & 5.2. Fugitive particulate matter.

45CSR7-4.12. Stack flow straightening devices or a sufficient vertical run.

45CSR§30-5.1.c. Monthly visible emissions checks.

WV Code § 22-5-4(a)(15) and 45CSR13 Stack testing.

45CSR§30-5.1.c.2.A. Monitoring information.

45CSR§30-5.1.c.2.B. Retention of records.

45CSR§§30-4.4. and 5.1.c.3.D. Responsible official.

45CSR31, 45CSR§30-5.1.c.3.E. Confidential business information.

45CSR§30-8. Certified emissions statement.

45CSR§30-5.3.e. Compliance certification.

45CSR§30-5.1.c.3.A. Semi-annual monitoring reports.

45CSR§30-5.7. Emergencies.

45CSR§30-5.1.c.3. Deviations.

45CSR§30-4.3.h.1.B. New applicable requirement.

45CSR§42-3.1. Reporting of greenhouse gas emissions above the *de minimis* threshold

☒ Permit Shield

For all facility-wide applicable requirements listed above, provide monitoring/testing / recordkeeping / reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number and/or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

45CSR6-3.1. & 3.2. Open burning & open burning exemptions – Compliance is demonstrated by Condition#s 3.1.1 & 3.1.2.

40CFR61 Subpart M - 61.145, 61.148, and 61.150 Asbestos – Compliance is demonstrated by Condition# 3.1.3.

45CSR4-3.1.; 45CSR§30-5.1.c. Odors – Compliance is demonstrated by Condition#s 3.1.4 & 3.4.3.

45CSR11-5.2. Standby plan for reducing emissions – Compliance is demonstrated by Condition# 3.1.5.

WV Code § 22-5-4(a)(14) Emission inventory – Compliance is demonstrated by Condition# 3.1.6.

40 CFR Part 82, Subpart F Ozone-depleting substances – Compliance is demonstrated by Condition# 3.1.7.

40 CFR Part 68 Risk Management Plan – Compliance is demonstrated by Condition# 3.1.8.

40CFR63, Subpart GG – National Emission Standards for Aerospace Manufacturing Operations – Compliance is demonstrated by Condition#s 3.1.9; 3.2.4; 3.4.5-3.4.6; 3.5.10.

45CSR7-3.7; 45CSR7-5.1. & 5.2.; 45CSR§30-5.1.c. Visible emissions from any storage structures and Fugitive particulate matter– Compliance is demonstrated by Condition#s 3.1.10; 3.1.11; 3.2.1; 3.2.2; 3.2.3; 3.4.7

45CSR§30-5.1.c. Visible emissions checks – Compliance is demonstrated by Condition# 3.2.1; 3.4.4; 3.5.11

45CSR7-4.12. Stack flow straightening devices or a sufficient vertical run – Compliance is demonstrated by Condition#s 3.1.10.

WV Code § 22-5-4(a)(15) and 45CSR13 Stack testing – Compliance is demonstrated by Condition#s 3.1.11; 3.3.1-3.3.4.

45CSR§30-5.1.c.2.A. Monitoring information – Compliance is demonstrated by Condition# 3.4.1.

45CSR§30-5.1.c.2.B. Retention of records – Compliance is demonstrated by Condition# 3.4.2.

45CSR§§30-4.4 and 5.1.c.3.D. Responsible official – Compliance is demonstrated by Condition# 3.5.1.

45CSR31, 45CSR§30-5.1.c.3.E. Confidential business information– Compliance is demonstrated by Condition# 3.5.2.

45CSR§30-8. Certified emissions statement – Compliance is demonstrated by Condition# 3.5.4.

45CSR§30-5.3.e. Compliance certification – Compliance is demonstrated by Condition# 3.5.5.

45CSR§30-5.1.c.3.A. Semi-annual monitoring reports – Compliance is demonstrated by Condition# 3.5.6.

45CSR§30-5.7. Emergencies – Compliance is demonstrated by Condition# 3.5.7.

45CSR§30-5.1.c.3. Deviations – Compliance is demonstrated by Condition# 3.5.8.

45CSR30-4.3.h.1.B. New applicable requirement – Compliance is demonstrated by Condition# 3.5.9.

45CSR§42-3.1. Reporting of greenhouse gas emissions above the *de minimis* threshold - Compliance is demonstrated by Conditions# 3.1.12; 3.5.12.

Are you in compliance with all facility-wide applicable requirements? ☒ Yes ☐ No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

20. Facility-Wide Applicable Requirements *(Continued)* - *Attach additional pages as necessary.*
List all facility-wide applicable requirements. For each applicable requirement, include the rule citation and/or permit with the condition number.
☒ Permit Shield
For all facility-wide applicable requirements listed above, provide monitoring/testing/recordkeeping/ reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number and/or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)
Are you in compliance with all facility-wide applicable requirements? ☒ Yes ☐ No If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

21. Active Permits/Consent Orders		
Permit or Consent Order Number	Date of Issuance MM/DD/YYYY	List any Permit Determinations that Affect the Permit *(if any)*
R13-0401B	05/23/2001	
R13-0898C	05/27/2016	
R13-1047B	03/04/2002	
R13-1455A	07/18/2001	
R13-1694B	11/17/2003	
R13-1782A	07/19/2001	
R13-1798B	02/07/2011	
R13-2037A	07/26/2001	
R13-2246A	10/14/2003	
R13-3334B	11/17/2023	
R13-3408A	05/26/2020	
R13-3534	01/07/2022	R-13-3534A (Pending)
R13-3651	Pending	
	/ /	

22. Inactive Permits/Obsolete Permit Conditions		
Permit Number	Date of Issuance	Permit Condition Number
	MM/DD/YYYY	
	/ /	

Section 3: Facility-Wide Emissions

23. Facility-Wide Emissions Summary [Tons per Year]	
Criteria Pollutants	Potential Emissions
Carbon Monoxide (CO)	81.44
Nitrogen Oxides (NO_X)	59.51
Lead (Pb)	1.98
Particulate Matter ($PM_{2.5}$)[1]	6.42
Particulate Matter (PM_{10})[1]	17.97
Total Particulate Matter (TSP)	30.62
Sulfur Dioxide (SO_2)	29.95
Volatile Organic Compounds (VOC)	181.25
Hazardous Air Pollutants[2]	Potential Emissions
Acetonitrile	0.27
Benzene	0.37
Cadmium compounds*	9.9E-04
Chloroform	0.096
Chromium*	1.2E-03
Chromium compounds (not identified)*	0.136
Cobalt*	5.8E-03
Dioctyl phthalate	0.85
Ethyl benzene	0.62
Formaldehyde	0.029
Glycol ether compounds	0.06
Hexane	0.80
Hydrochloric Acid	6.44
Lead *	1.98
Lead compounds*	9.8E-04
Mercury*	2.0E-04
Methanol	1.81

Methyl isobutyl ketone	3.73
Methylene chloride	1.995
Nickel*	1.7E-03
Phenol	0.16
Strontium chromate*	0.0029
Toluene	30.89
Trichloroethylene	0.125
Xylene	5.29
Zinc chromate*	4.7E-04
Other (not specified)	0.1
Total HAPs	**55.76**
Regulated Pollutants other than Criteria and HAP	Potential Emissions

[1] $PM_{2.5}$ and PM_{10} are components of TSP.
[2] For HAPs that are also considered PM or VOCs, emissions should be included in both the HAPs section and the Criteria Pollutants section.

Section 4: Insignificant Activities

24. Insignificant Activities (Check all that apply)		
☒	1.	Air compressors and pneumatically operated equipment, including hand tools.
☐	2.	Air contaminant detectors or recorders, combustion controllers or shutoffs.
☒	3.	Any consumer product used in the same manner as in normal consumer use, provided the use results in a duration and frequency of exposure which are not greater than those experienced by consumer, and which may include, but not be limited to, personal use items; janitorial cleaning supplies, office supplies and supplies to maintain copying equipment.
☒	4.	Bathroom/toilet vent emissions.
☒	5.	Batteries and battery charging stations, except at battery manufacturing plants.
☒	6.	Bench-scale laboratory equipment used for physical or chemical analysis, but not lab fume hoods or vents. Many lab fume hoods or vents might qualify for treatment as insignificant (depending on the applicable SIP) or be grouped together for purposes of description.
☐	7.	Blacksmith forges.
☒	8.	Boiler water treatment operations, not including cooling towers.
☒	9.	Brazing, soldering or welding equipment used as an auxiliary to the principal equipment at the source.
☐	10.	CO_2 lasers, used only on metals and other materials which do not emit HAP in the process.
☒	11.	Combustion emissions from propulsion of mobile sources, except for vessel emissions from Outer Continental Shelf sources.
☐	12.	Combustion units designed and used exclusively for comfort heating that use liquid petroleum gas or natural gas as fuel.
☒	13.	Comfort air conditioning or ventilation systems not used to remove air contaminants generated by or released from specific units of equipment.
☒	14.	Demineralized water tanks and demineralizer vents.
☒	15.	Drop hammers or hydraulic presses for forging or metalworking.
☒	16.	Electric or steam-heated drying ovens and autoclaves, but not the emissions from the articles or substances being processed in the ovens or autoclaves or the boilers delivering the steam.
☐	17.	Emergency (backup) electrical generators at residential locations.
☒	18.	Emergency road flares.
☒	19.	Emission units which do not have any applicable requirements and which emit criteria pollutants (CO, NO_x, SO_2, VOC and PM) into the atmosphere at a rate of less than 1 pound per hour and less than 10,000 pounds per year aggregate total for each criteria pollutant from all emission units. Please specify all emission units for which this exemption applies along with the quantity of criteria pollutants emitted on an hourly and annual basis: Gasoline and diesel small storage tanks – VOC < 1.0 lb/hr & <0.1 tpy Gasoline and diesel fuel dispensing pumps – VOC < 1.0 lb/hr & <0.1 tpy _____ _____ _____ _____ _____ _____ _____

24. Insignificant Activities (Check all that apply)		
☐	20.	Emission units which do not have any applicable requirements and which emit hazardous air pollutants into the atmosphere at a rate of less than 0.1 pounds per hour and less than 1,000 pounds per year aggregate total for all HAPs from all emission sources. This limitation cannot be used for any source which emits dioxin/furans nor for toxic air pollutants as per 45CSR27. Please specify all emission units for which this exemption applies along with the quantity of hazardous air pollutants emitted on an hourly and annual basis: _____ _____ _____ _____ _____
☒	21.	Environmental chambers not using hazardous air pollutant (HAP) gases.
☒	22.	Equipment on the premises of industrial and manufacturing operations used solely for the purpose of preparing food for human consumption.
☐	23.	Equipment used exclusively to slaughter animals, but not including other equipment at slaughterhouses, such as rendering cookers, boilers, heating plants, incinerators, and electrical power generating equipment.
☒	24.	Equipment used for quality control/assurance or inspection purposes, including sampling equipment used to withdraw materials for analysis.
☒	25.	Equipment used for surface coating, painting, dipping or spray operations, except those that will emit VOC or HAP.
☒	26.	Fire suppression systems.
☒	27.	Firefighting equipment and the equipment used to train firefighters.
☐	28.	Flares used solely to indicate danger to the public.
☒	29.	Fugitive emission related to movement of passenger vehicle provided the emissions are not counted for applicability purposes and any required fugitive dust control plan or its equivalent is submitted.
☒	30.	Hand-held applicator equipment for hot melt adhesives with no VOC in the adhesive formulation.
☒	31.	Hand-held equipment for buffing, polishing, cutting, drilling, sawing, grinding, turning or machining wood, metal or plastic.
☒	32.	Humidity chambers.
☒	33.	Hydraulic and hydrostatic testing equipment.
☐	34.	Indoor or outdoor kerosene heaters.
☒	35.	Internal combustion engines used for landscaping purposes.
☒	36.	Laser trimmers using dust collection to prevent fugitive emissions.
☒	37.	Laundry activities, except for dry-cleaning and steam boilers.
☒	38.	Natural gas pressure regulator vents, excluding venting at oil and gas production facilities.
☒	39.	Oxygen scavenging (de-aeration) of water.
☐	40.	Ozone generators.

24. Insignificant Activities (Check all that apply)		
☒	41.	Plant maintenance and upkeep activities (e.g., grounds-keeping, general repairs, cleaning, painting, welding, plumbing, re-tarring roofs, installing insulation, and paving parking lots) provided these activities are not conducted as part of a manufacturing process, are not related to the source's primary business activity, and not otherwise triggering a permit modification. (Cleaning and painting activities qualify if they are not subject to VOC or HAP control requirements. Asphalt batch plant owners/operators must still get a permit if otherwise requested.)
☒	42.	Portable electrical generators that can be moved by hand from one location to another. "Moved by Hand" means that it can be moved without the assistance of any motorized or non-motorized vehicle, conveyance, or device.
☒	43.	Process water filtration systems and demineralizers.
☒	44.	Repair or maintenance shop activities not related to the source's primary business activity, not including emissions from surface coating or de-greasing (solvent metal cleaning) activities, and not otherwise triggering a permit modification.
☒	45.	Repairs or maintenance where no structural repairs are made and where no new air pollutant emitting facilities are installed or modified.
☒	46.	Routing calibration and maintenance of laboratory equipment or other analytical instruments.
☐	47.	Salt baths using nonvolatile salts that do not result in emissions of any regulated air pollutants. Shock chambers.
☐	48.	Shock chambers.
☐	49.	Solar simulators.
☒	50.	Space heaters operating by direct heat transfer.
☒	51.	Steam cleaning operations.
☒	52.	Steam leaks.
☒	53.	Steam sterilizers.
☒	54.	Steam vents and safety relief valves.
☐	55.	Storage tanks, reservoirs, and pumping and handling equipment of any size containing soaps, vegetable oil, grease, animal fat, and nonvolatile aqueous salt solutions, provided appropriate lids and covers are utilized.
☒	56.	Storage tanks, vessels, and containers holding or storing liquid substances that will not emit any VOC or HAP. Exemptions for storage tanks containing petroleum liquids or other volatile organic liquids should be based on size limits such as storage tank capacity and vapor pressure of liquids stored and are not appropriate for this list.
☐	57.	Such other sources or activities as the Director may determine.
☒	58.	Tobacco smoking rooms and areas.
☐	59.	Vents from continuous emissions monitors and other analyzers.

Section 5: Emission Units, Control Devices, and Emission Points

25. Equipment Table
Fill out the **Title V Equipment Table** and provide it as **ATTACHMENT D**.
26. Emission Units
For each emission unit listed in the **Title V Equipment Table**, fill out and provide an **Emission Unit Form** as **ATTACHMENT E**.
For each emission unit not in compliance with an applicable requirement, fill out a **Schedule of Compliance Form** as **ATTACHMENT F**.
27. Control Devices
For each control device listed in the **Title V Equipment Table**, fill out and provide an **Air Pollution Control Device Form** as **ATTACHMENT G**.
For any control device that is required on an emission unit in order to meet a standard or limitation for which the potential pre-control device emissions of an applicable regulated air pollutant is greater than or equal to the Title V Major Source Threshold Level, refer to the **Compliance Assurance Monitoring (CAM) Form(s)** for CAM applicability. Fill out and provide these forms, if applicable, for each Pollutant Specific Emission Unit (PSEU) as **ATTACHMENT H**.

Section 6: Certification of Information

28. Certification of Truth, Accuracy and Completeness and Certification of Compliance

*Note: This Certification must be signed by a responsible official. The **original**, signed in **blue ink**, must be submitted with the application. Applications without an **original** signed certification will be considered as incomplete.*

a. Certification of Truth, Accuracy and Completeness

I certify that I am a responsible official (as defined at 45CSR§30-2.38) and am accordingly authorized to make this submission on behalf of the owners or operators of the source described in this document and its attachments. I certify under penalty of law that I have personally examined and am familiar with the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine and/or imprisonment.

b. Compliance Certification

Except for requirements identified in the Title V Application for which compliance is not achieved, I, the undersigned hereby certify that, based on information and belief formed after reasonable inquiry, all air contaminant sources identified in this application are in compliance with all applicable requirements.

Responsible official (type or print)

Name: Bill Hixon	Title: Director Operations Support

Responsible official's signature:

Signature: _____ Signature Date: 1/10/2024

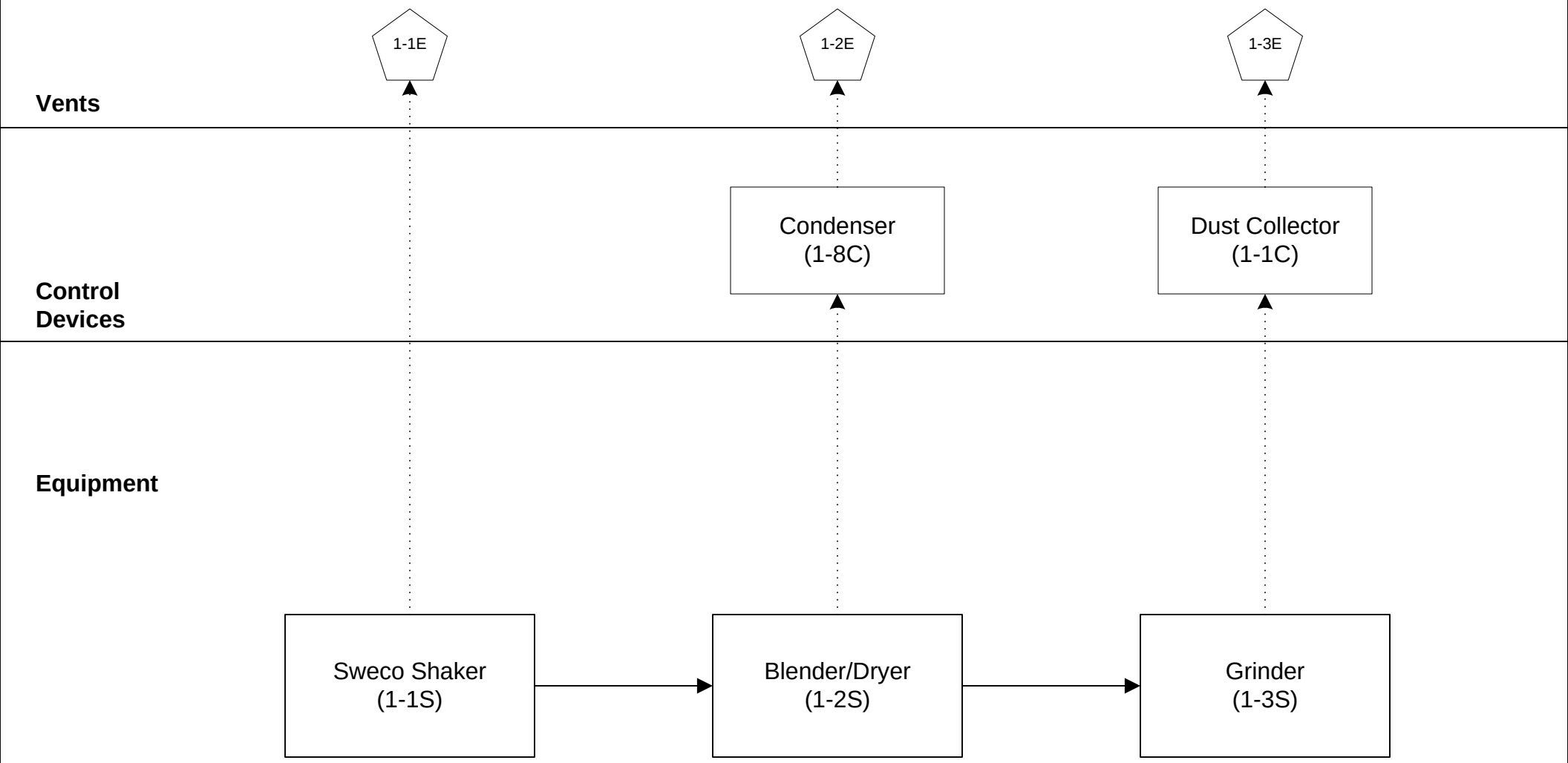
(Must be signed and dated in blue ink)

Note: Please check all applicable attachments included with this permit application:

☒	ATTACHMENT A: Area Map
☒	ATTACHMENT B: Plot Plan(s)
☒	ATTACHMENT C: Process Flow Diagram(s)
☒	ATTACHMENT D: Equipment Table
☒	ATTACHMENT E: Emission Unit Form(s)
☐	ATTACHMENT F: Schedule of Compliance Form(s)
☒	ATTACHMENT G: Air Pollution Control Device Form(s)
☒	ATTACHMENT H: Compliance Assurance Monitoring (CAM) Form(s)

All of the required forms and additional information can be found and downloaded from, the DEP website at www.dep.wv.gov/daq, requested by phone (304) 926-0475, and/or obtained through the mail.

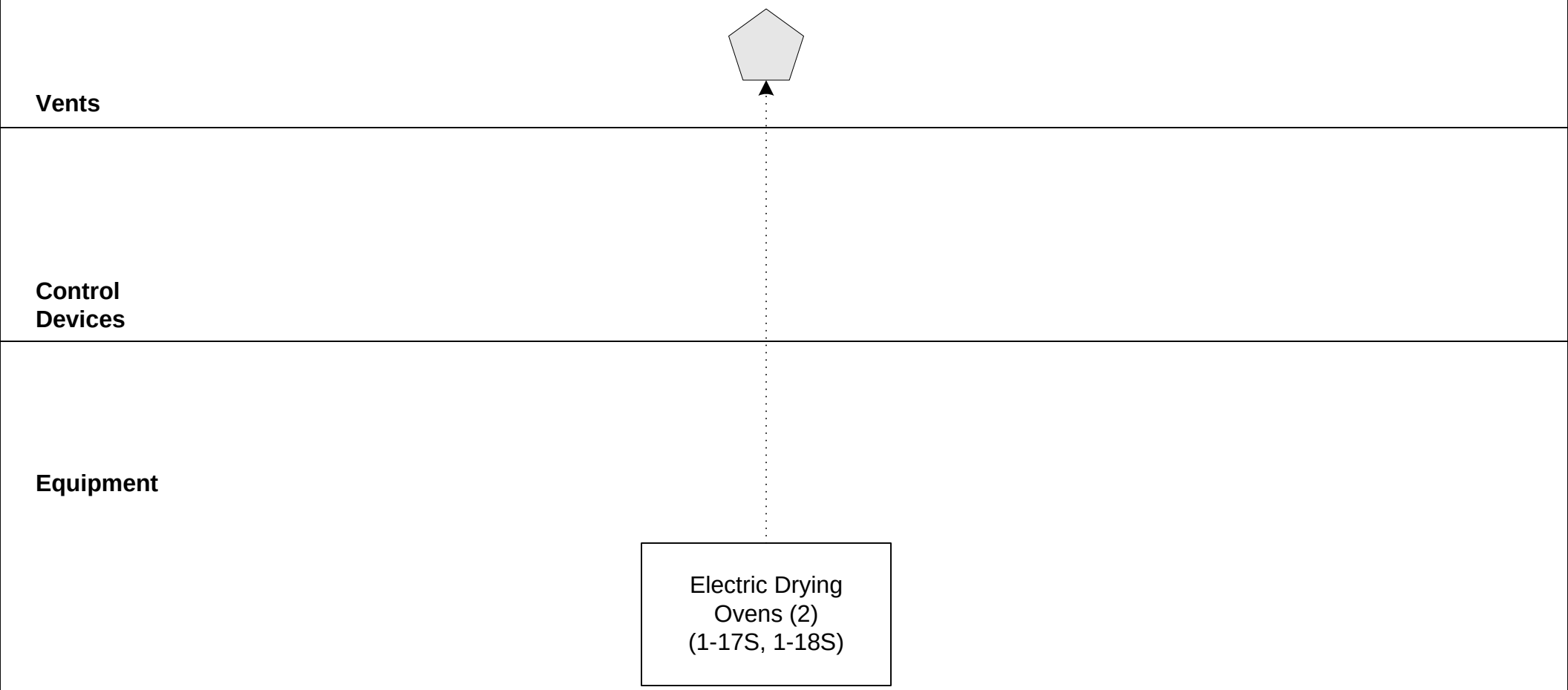
Building 262 Process Flow
(Nitramine Grinding)



Allegany Ballistics Laboratory
Operated by Alliant Techsystems Operations LLC
Rocket Center, WV 26726

Vents Inside Building
Process Flow
Emissions Stream

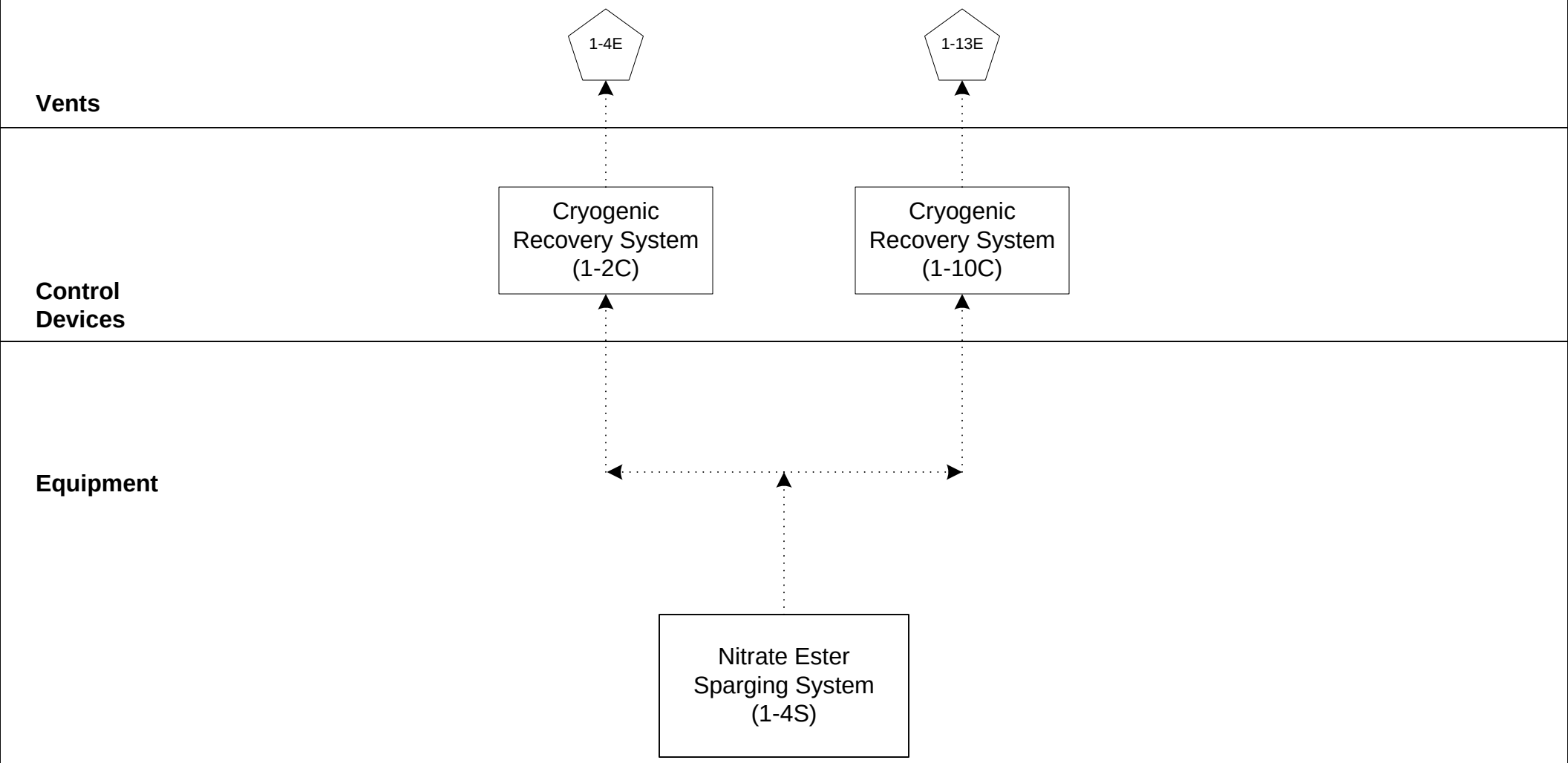
Building 271 Process Flow
(Ingredient Preparation)



Allegany Ballistics Laboratory
Operated by Alliant Techsystems Operations LLC
Rocket Center, WV 26726

Vents Inside Building
Process Flow
Emissions Stream

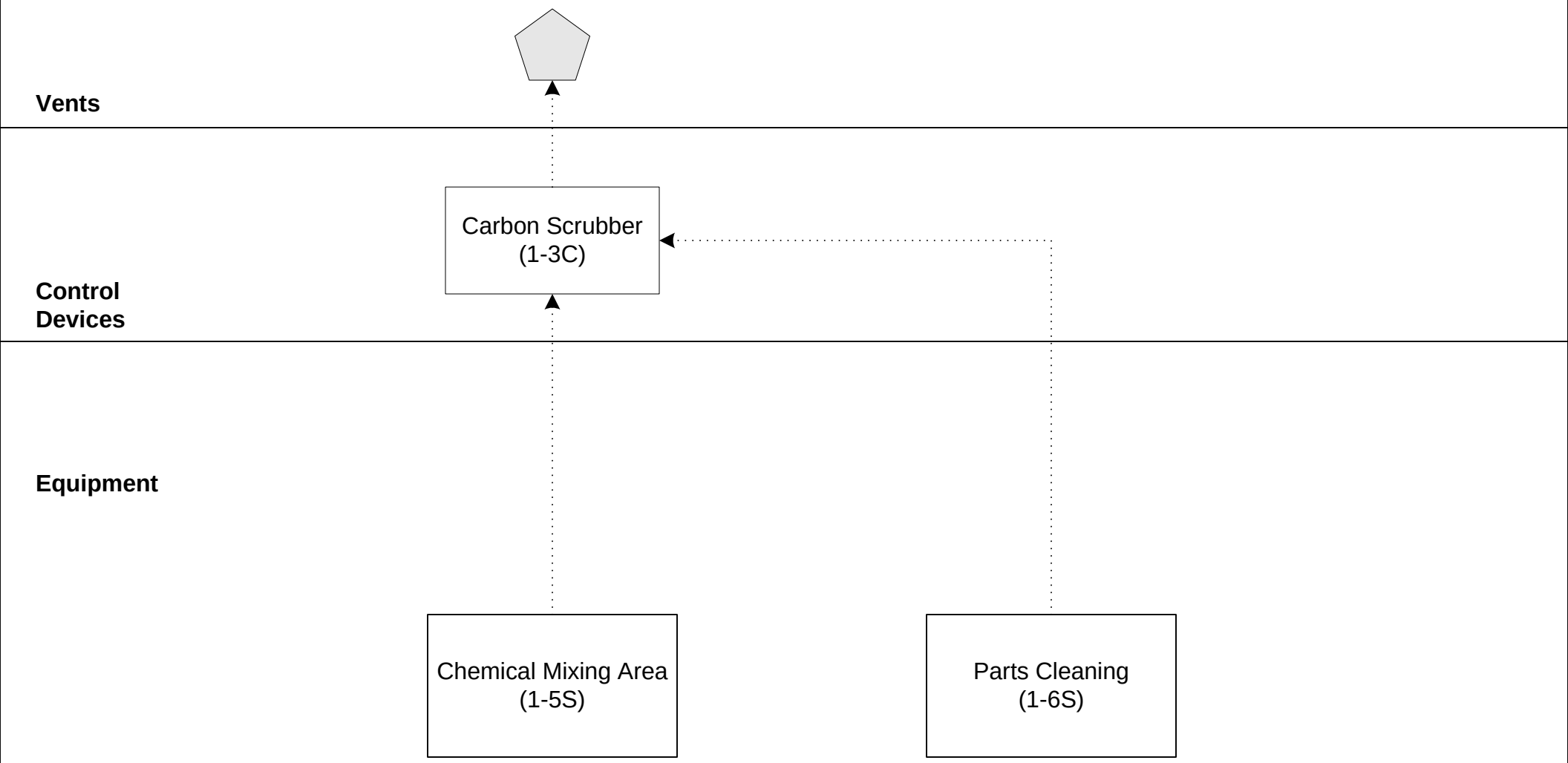
Building 352 Process Flow
(Nitrate Ester Sparging)



Allegany Ballistics Laboratory
Operated by Alliant Techsystems Operations LLC
Rocket Center, WV 26726

Vents Inside Building
Process Flow
Emissions Stream

Building 373 Process Flow (Ingredient Preparation)



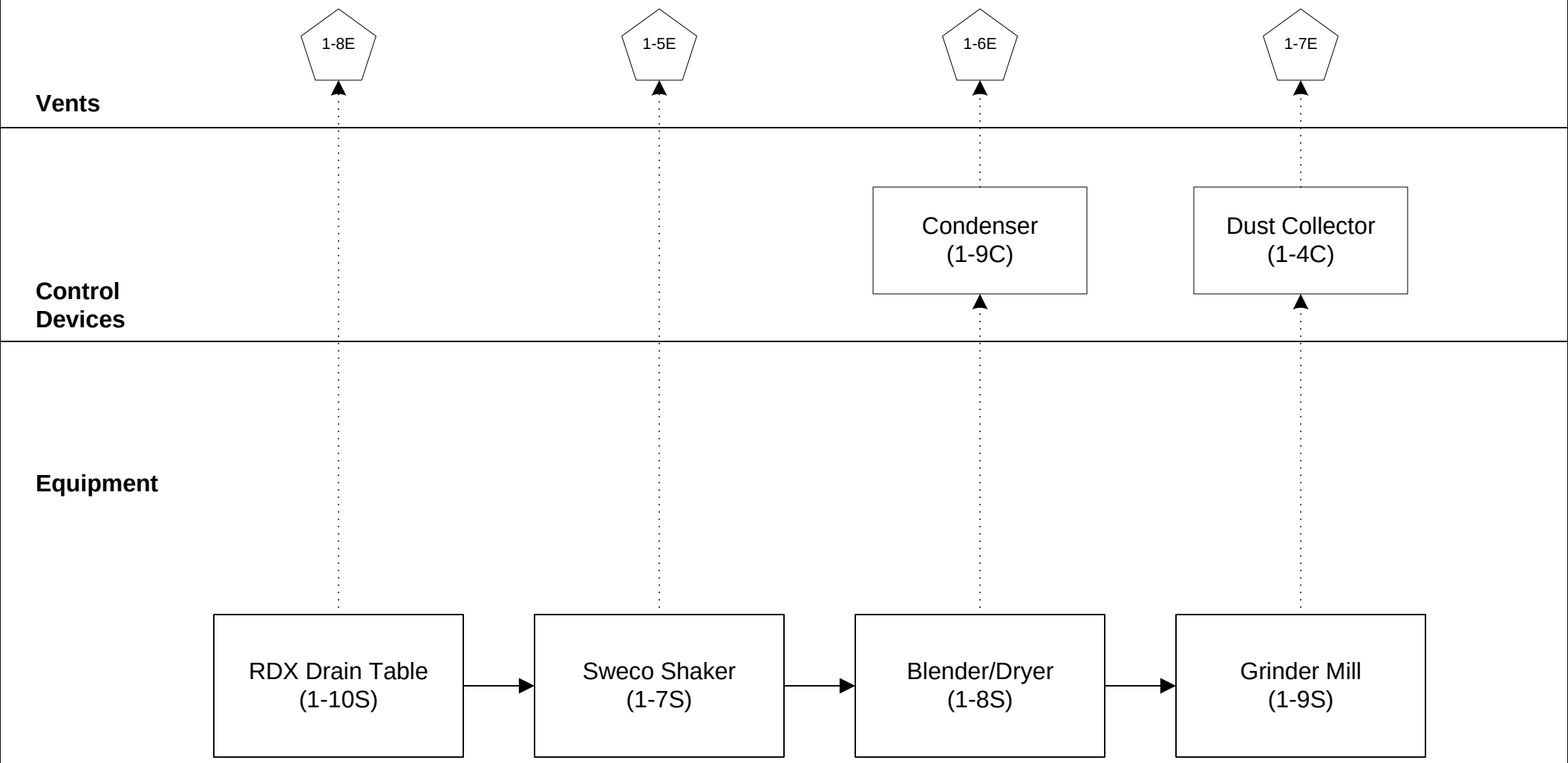
Allegany Ballistics Laboratory
Operated by Alliant Techsystems
Operations LLC
Rocket Center, WV 26726

Vents Inside Building

Process Flow

Emissions Stream

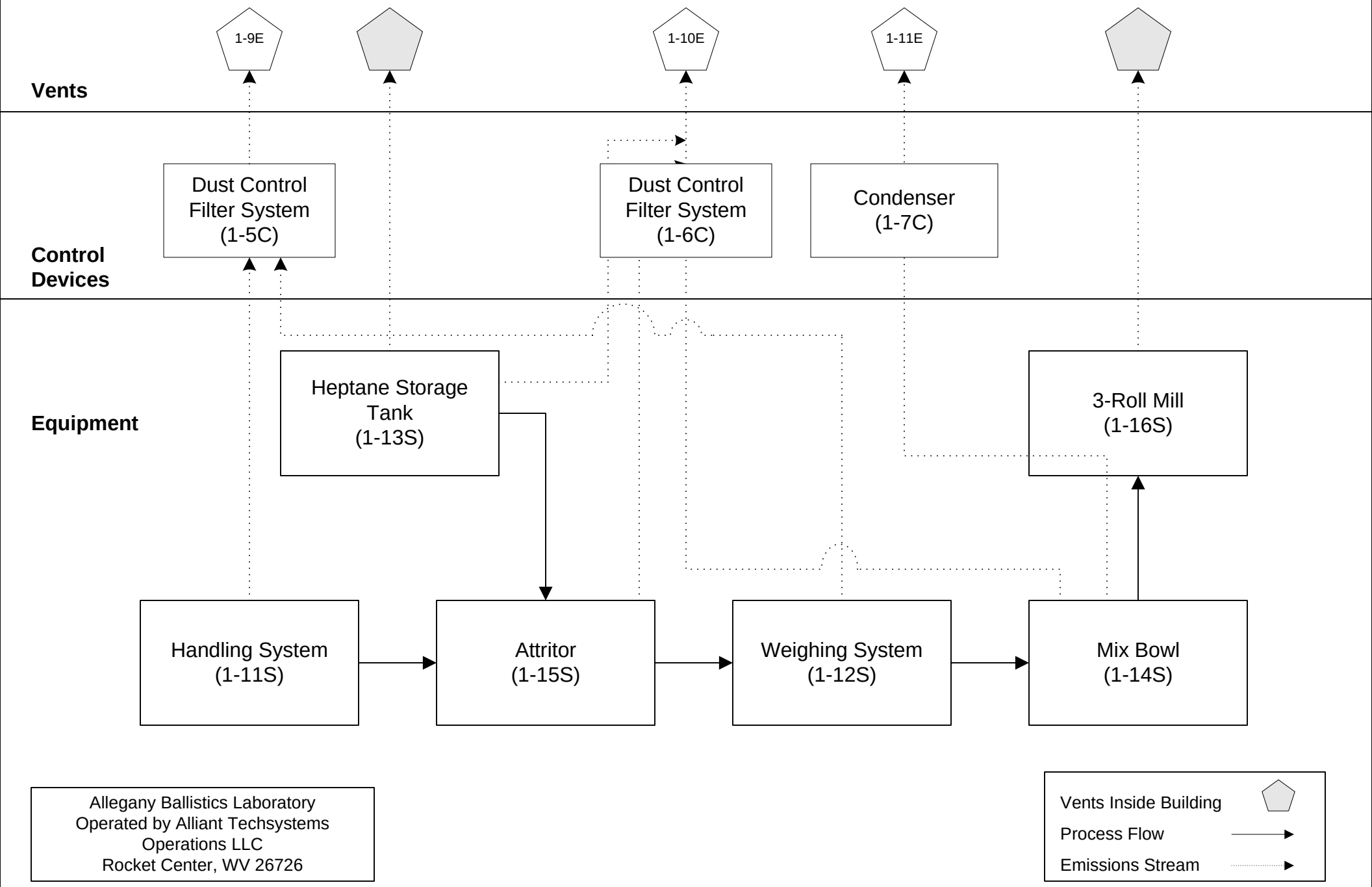
Building 374 Process Flow (Nitramine Grinding)



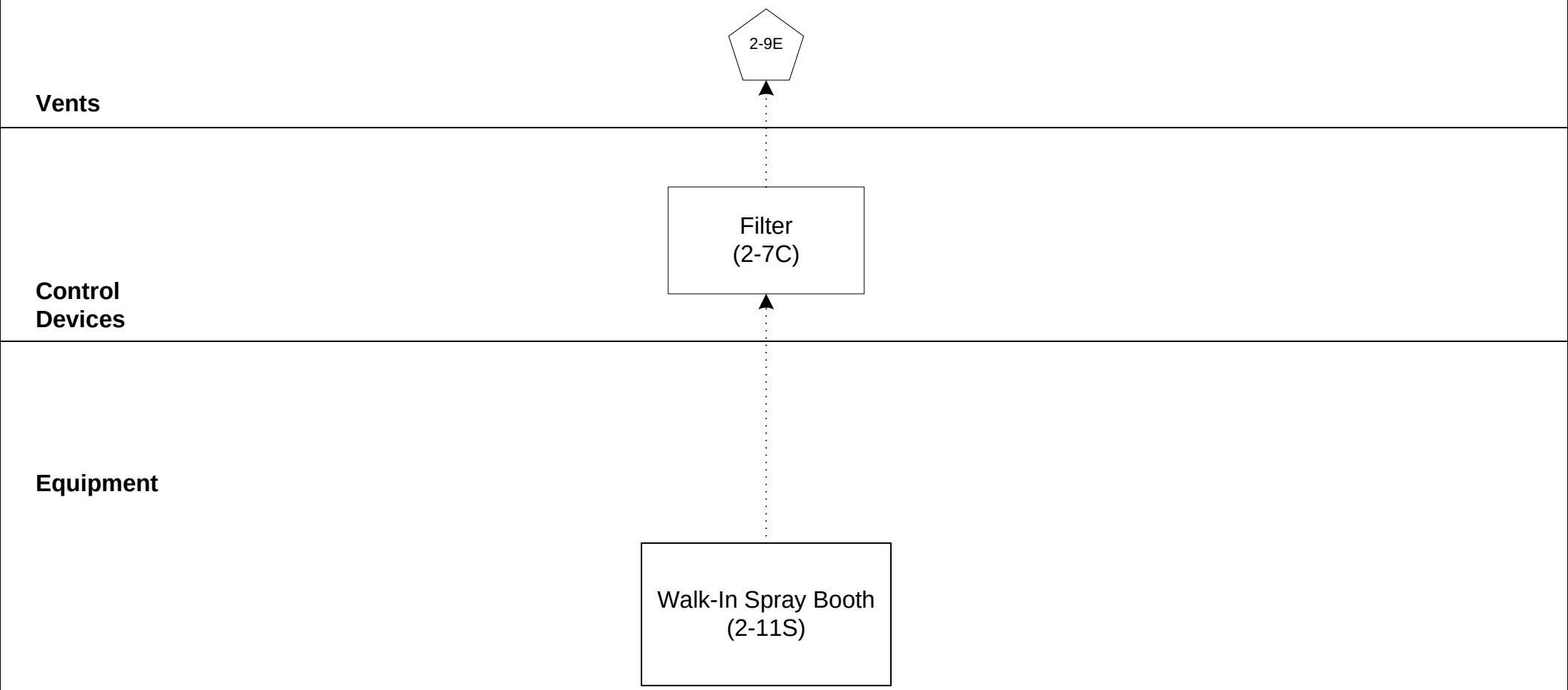
Allegany Ballistics Laboratory
Operated by Alliant Techsystems Operations LLC
Rocket Center, WV 26726

Vents Inside Building
Process Flow
Emissions Stream

Building 384 Process Flow
(Metal Salt Paste Production)



Building 167 Chamber Preparation Process Flow



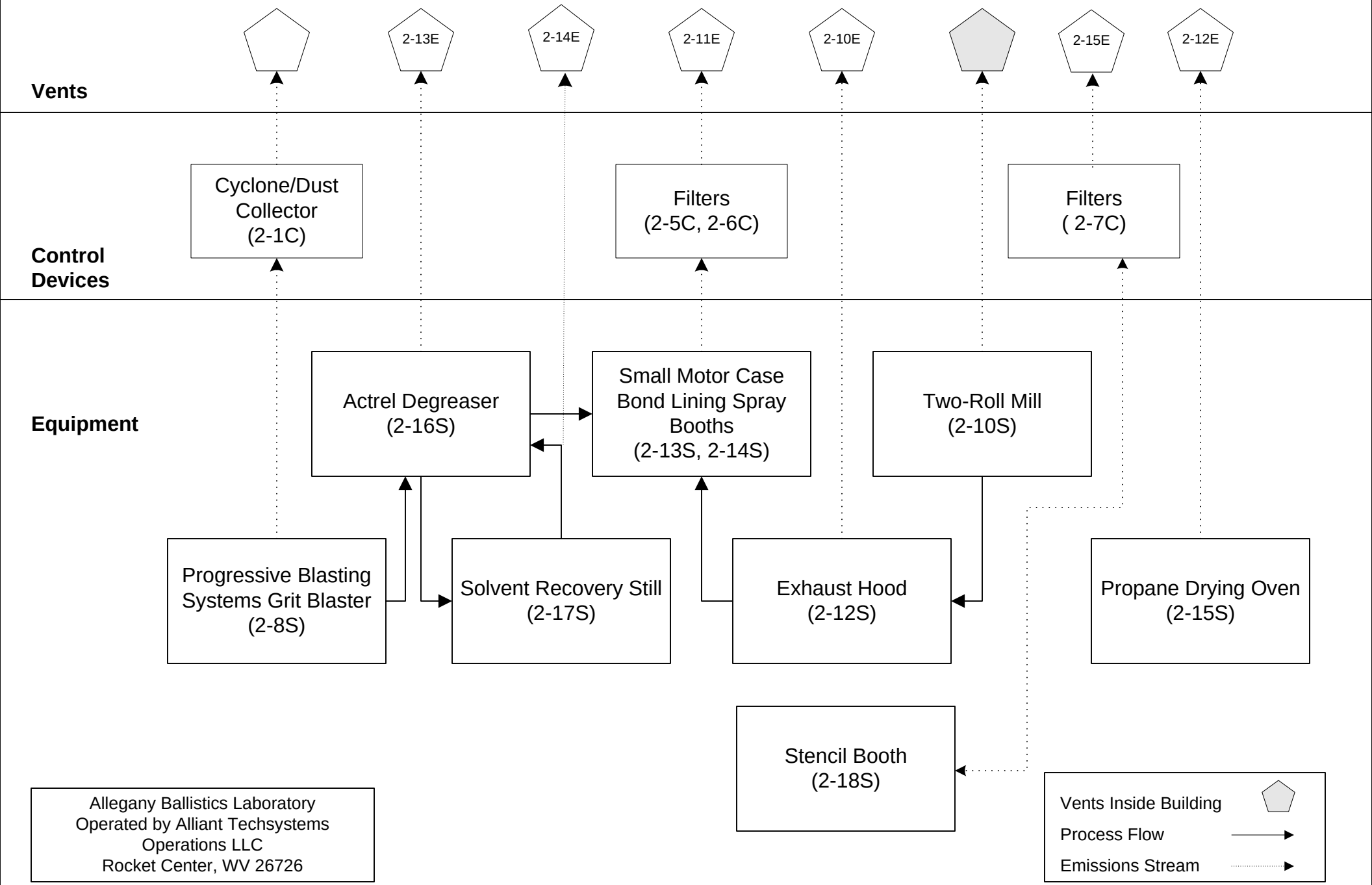
Allegany Ballistics Laboratory
Operated by Alliant Techsystems Operations LLC
Rocket Center, WV 26726

Vents Inside Building

Process Flow

Emissions Stream

Building 420 Process Flow (Chamber Preparation)



Allegany Ballistics Laboratory
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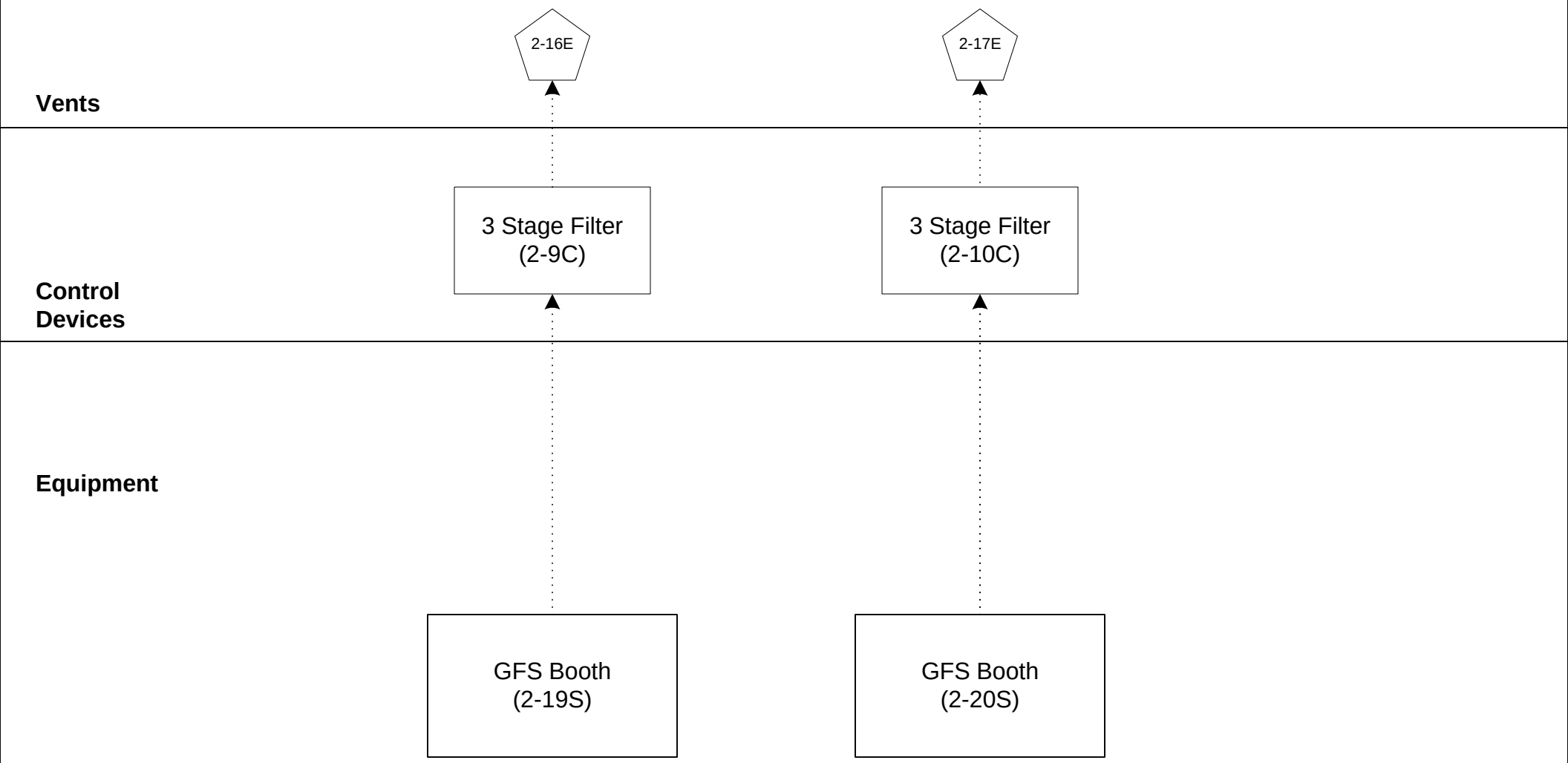
Rocket Center, WV 26726

Building 432 Process Flow
(AARGM Assembly)



Allegany Ballistics Laboratory
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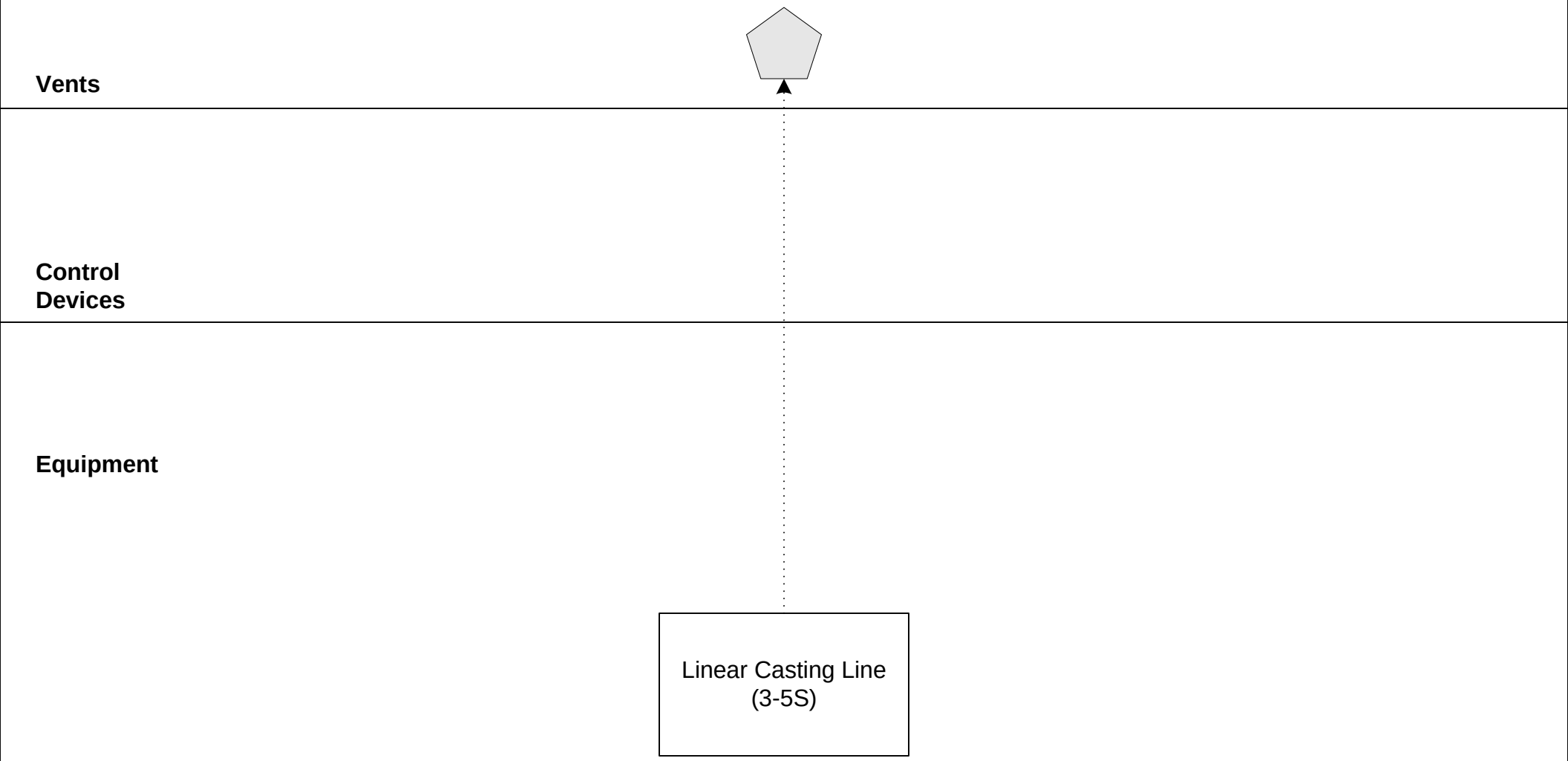
Rocket Center, WV 26726

Vents Inside Building
Process Flow
Emissions Stream

Building 226 Process Flow
(Linear Casting)



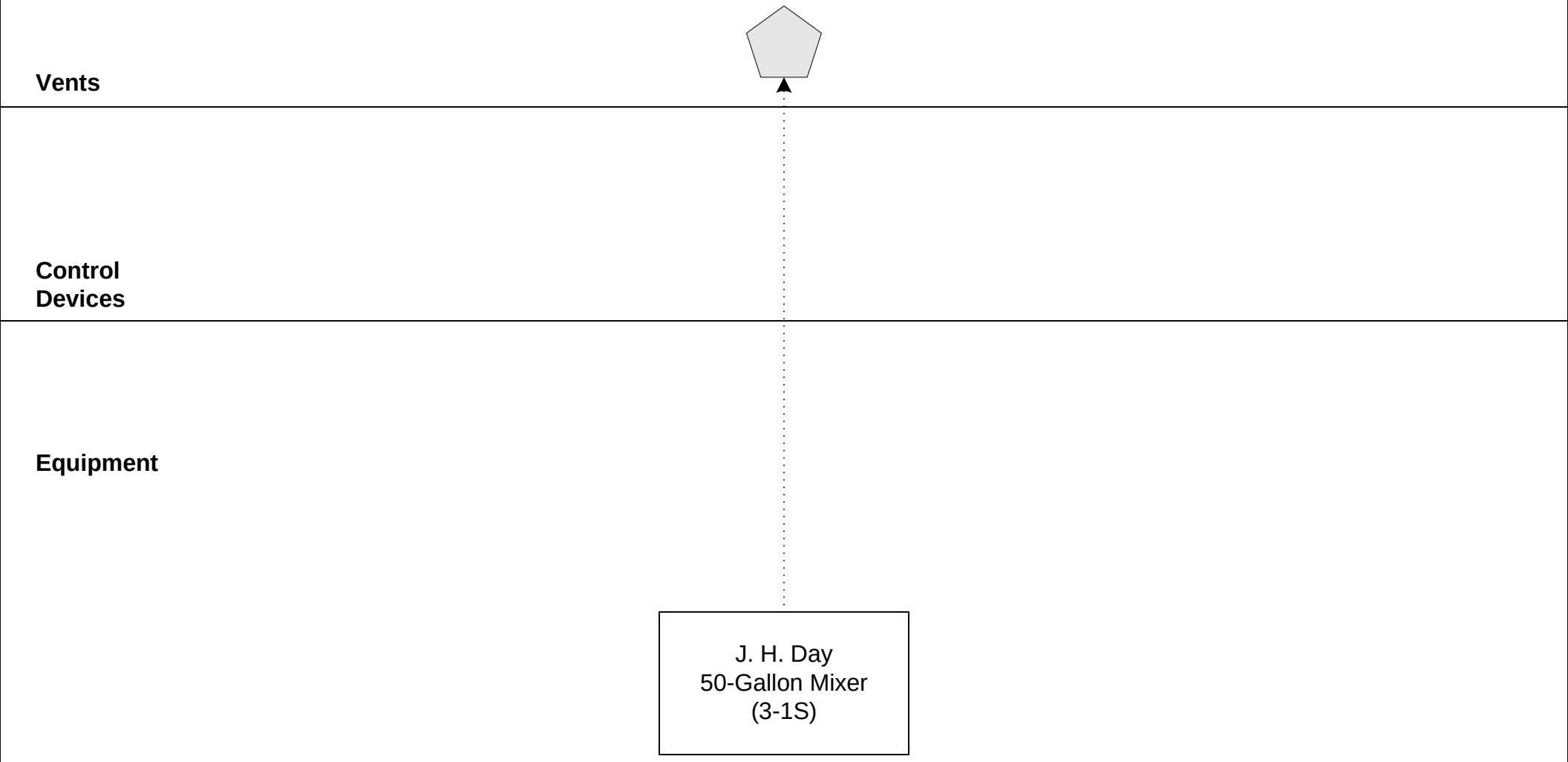
Allegany Ballistics Laboratory
Operated by Alliant Techsystems Operations LLC
Rocket Center, WV 26726

Vents Inside Building

Process Flow

Emissions Stream

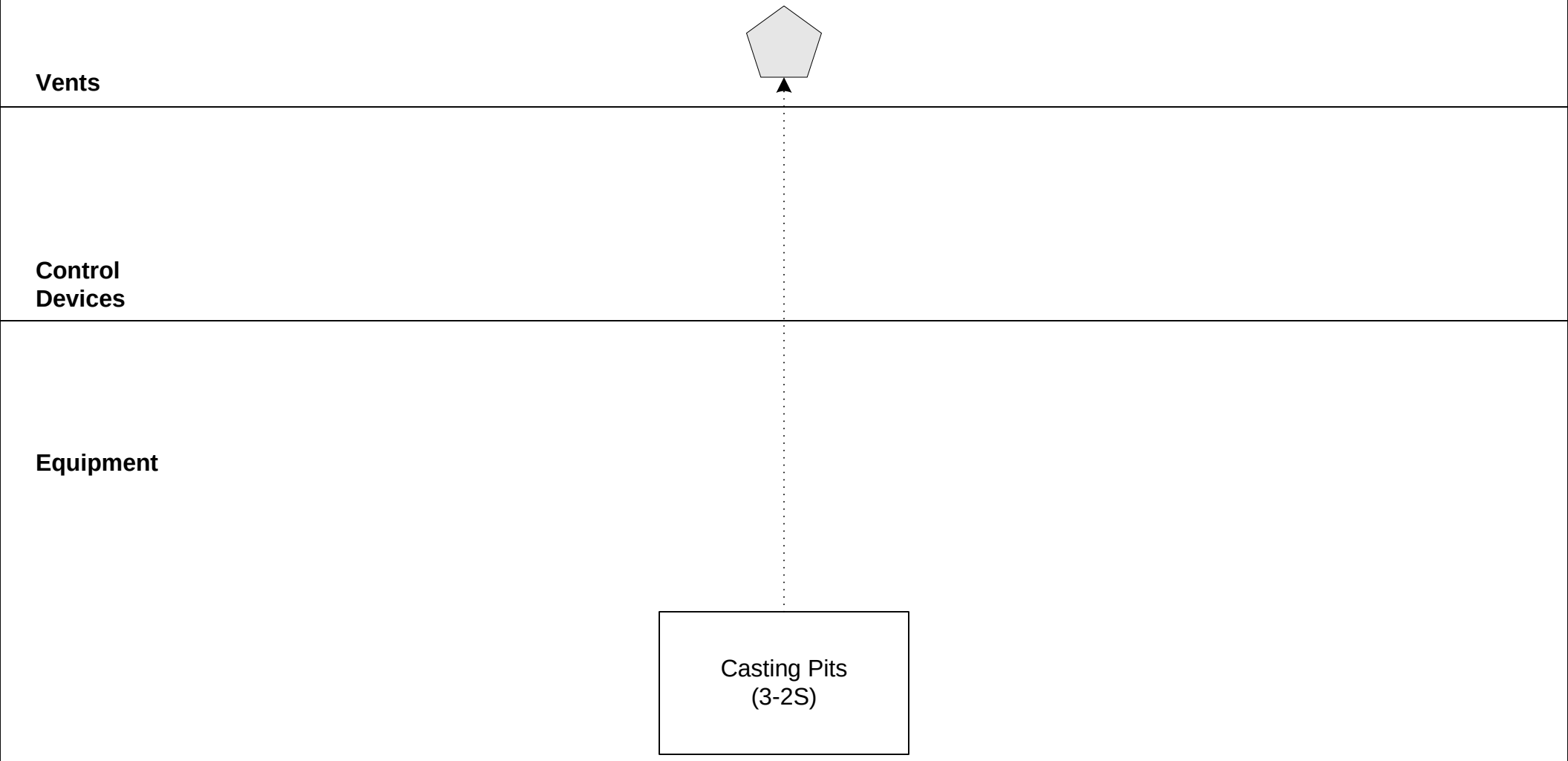
Building 302 Process Flow (Mixing)



Allegany Ballistics Laboratory
Operated by Alliant Techsystems Operations LLC
Rocket Center, WV 26726

Vents Inside Building
Process Flow
Emissions Stream

Building 308 Process Flow (Casting)



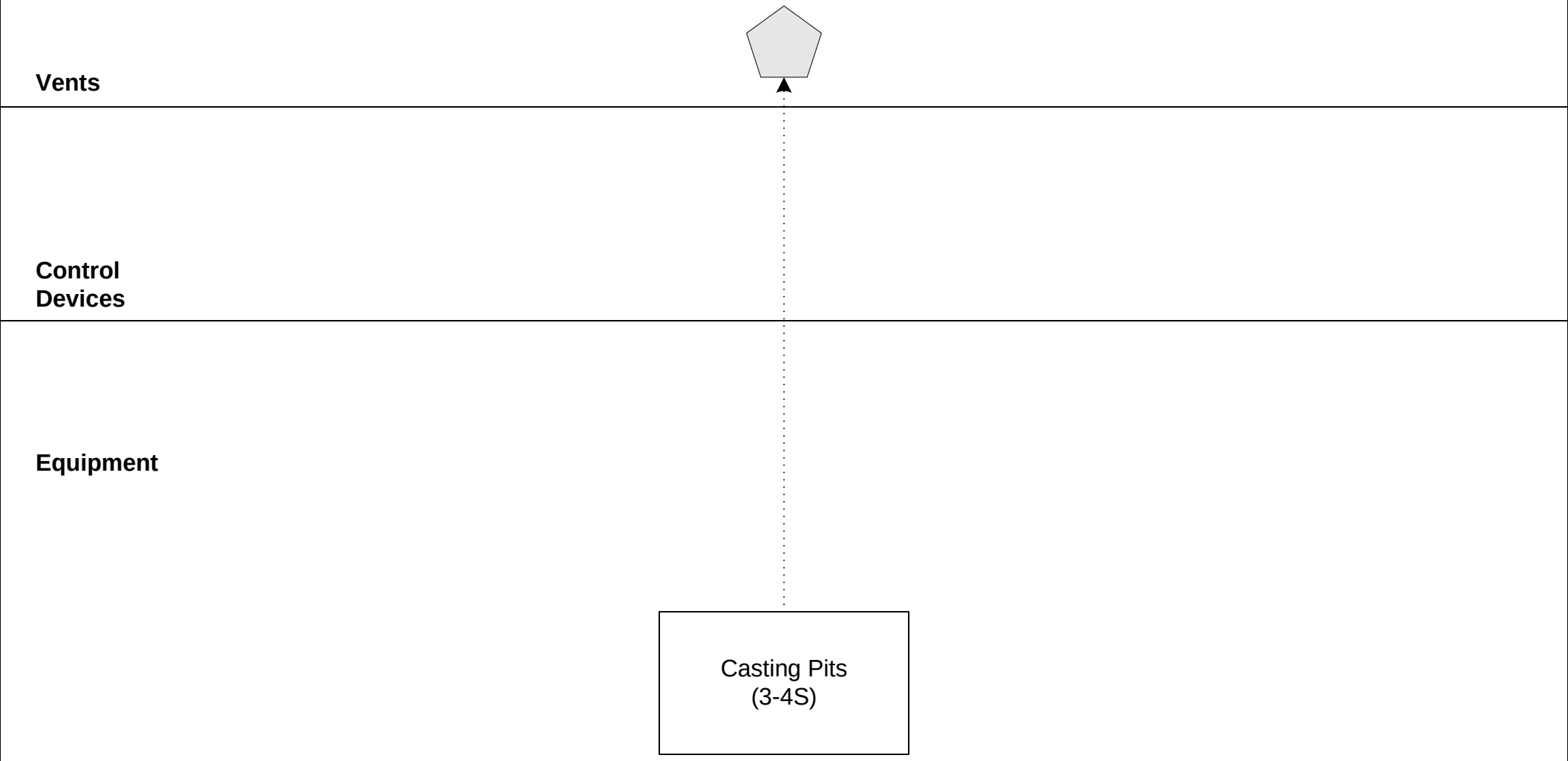
Allegany Ballistics Laboratory
Operated by Alliant Techsystems Operations LLC
Rocket Center, WV 26726

Vents Inside Building

Process Flow

Emissions Stream

Building 356 Process Flow (Casting)



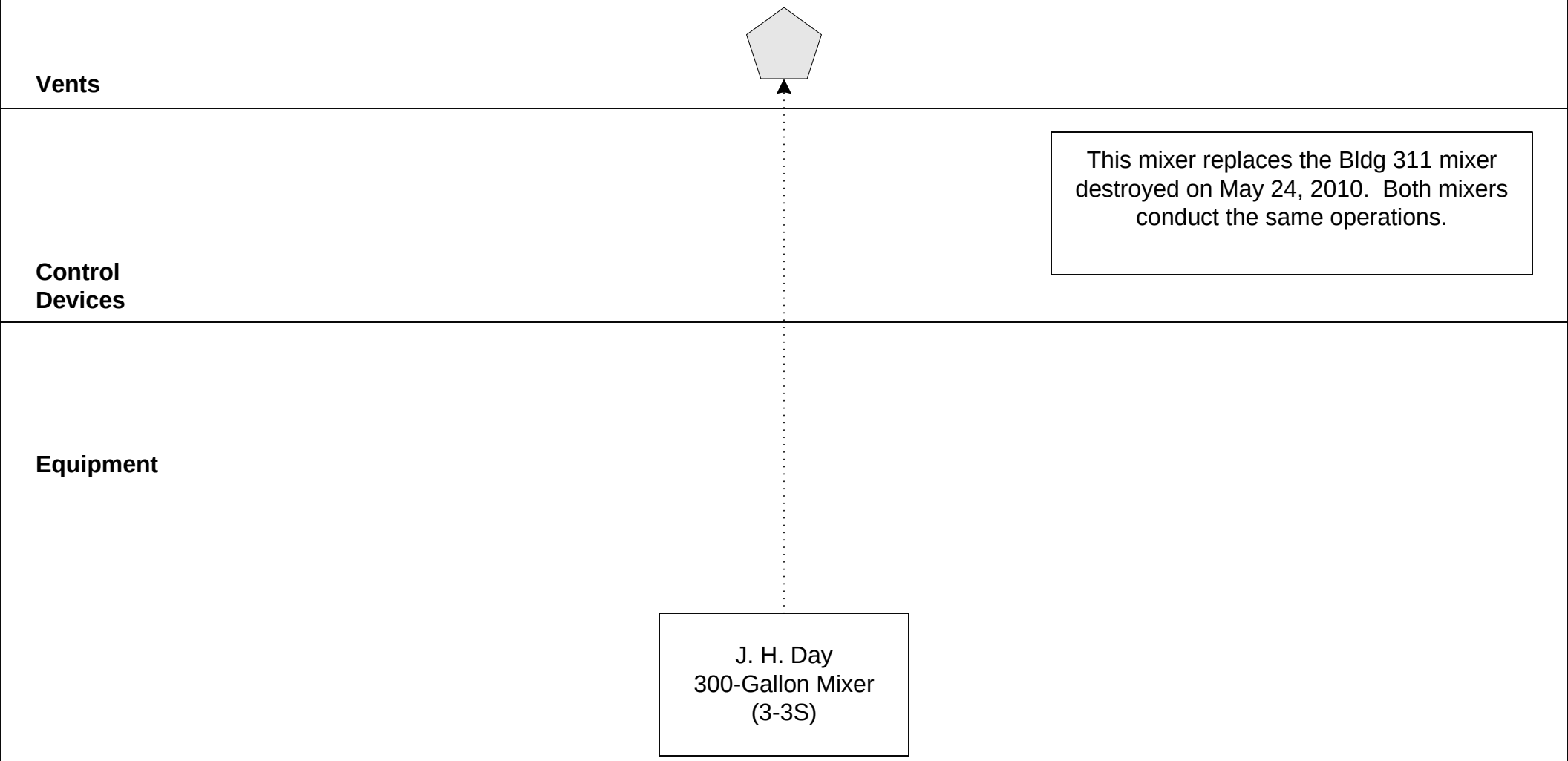
Allegany Ballistics Laboratory
Operated by Alliant Techsystems Operations LLC
Rocket Center, WV 26726

Vents Inside Building

Process Flow

Emissions Stream

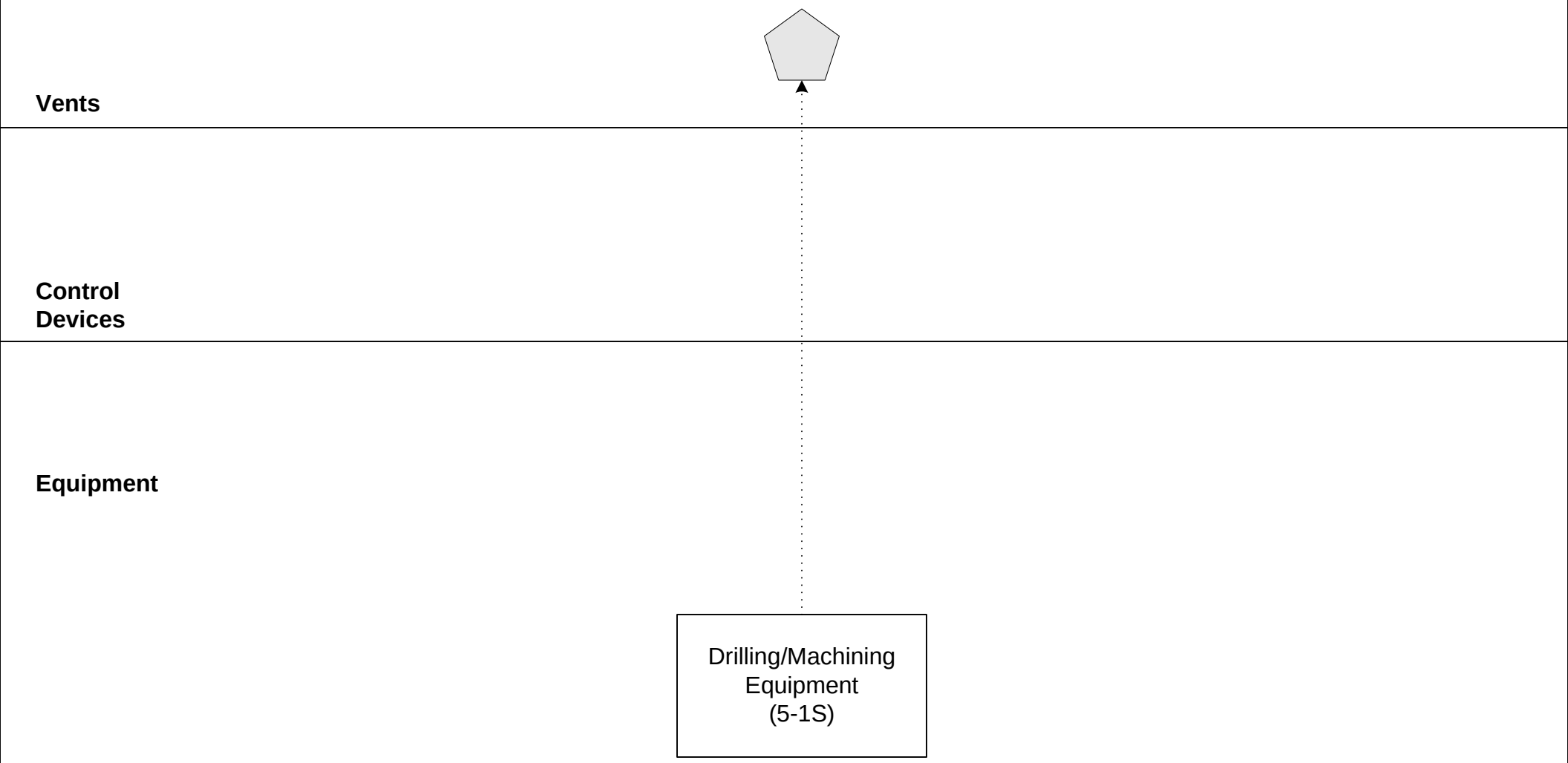
Building 375 Process Flow (Mixing)



Allegany Ballistics Laboratory
Operated by Alliant Techsystems Operations LLC
Rocket Center, WV 26726

Vents Inside Building
Process Flow
Emissions Stream

Building 410 Process Flow
(Propellant Machining)



Allegany Ballistics Laboratory
Operated by Alliant Techsystems Operations LLC
Rocket Center, WV 26726

Vents Inside Building

Process Flow

Emissions Stream

Building 180 Process Flow
(X-Ray Operations)

Vents

Control Devices

Equipment

Varian X-Ray
Machine
(6-1S)
[Closed System]

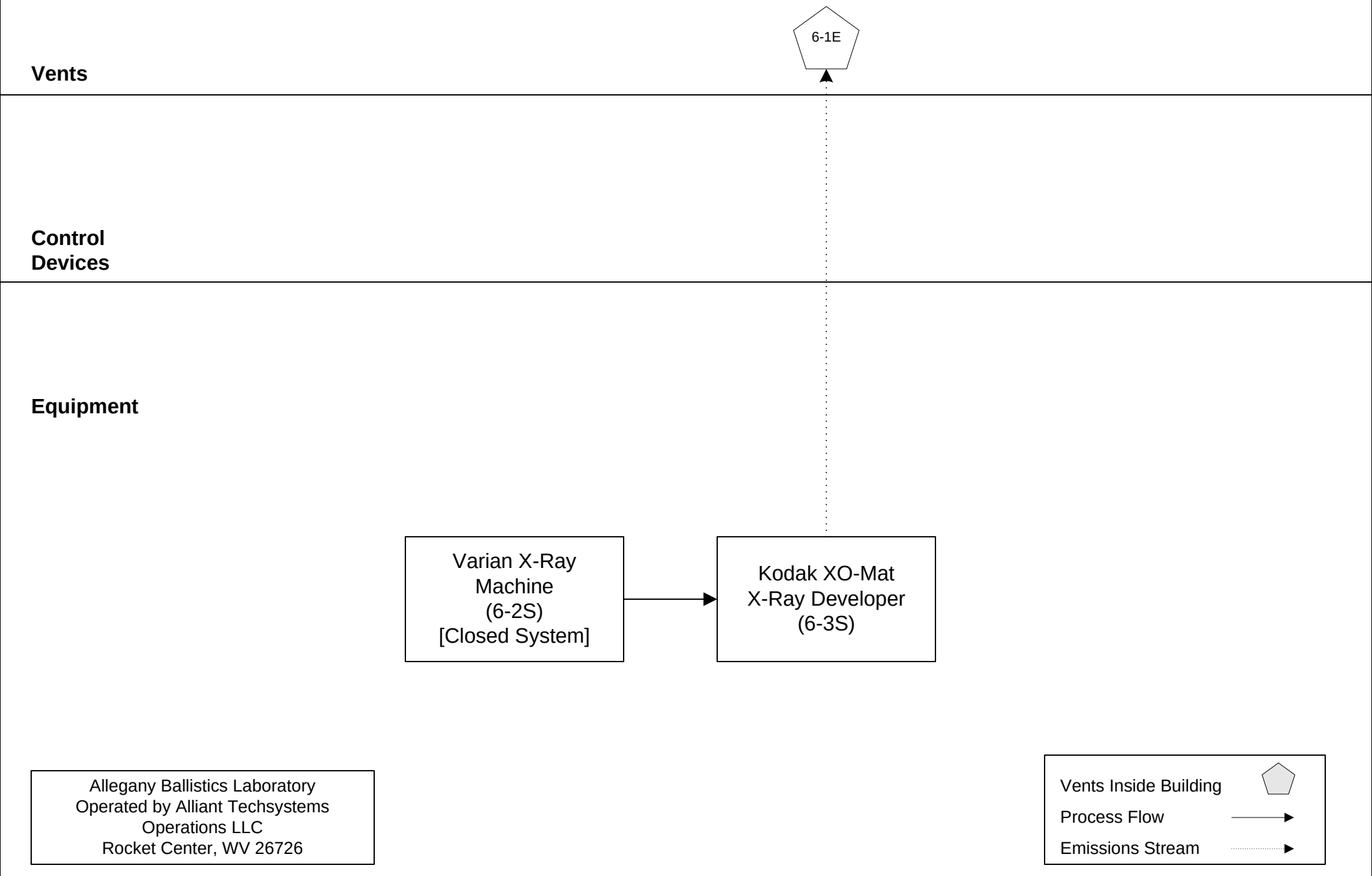
Allegany Ballistics Laboratory
Operated by Alliant Techsystems
Operations LLC
Rocket Center, WV 26726

Vents Inside Building

Process Flow

Emissions Stream

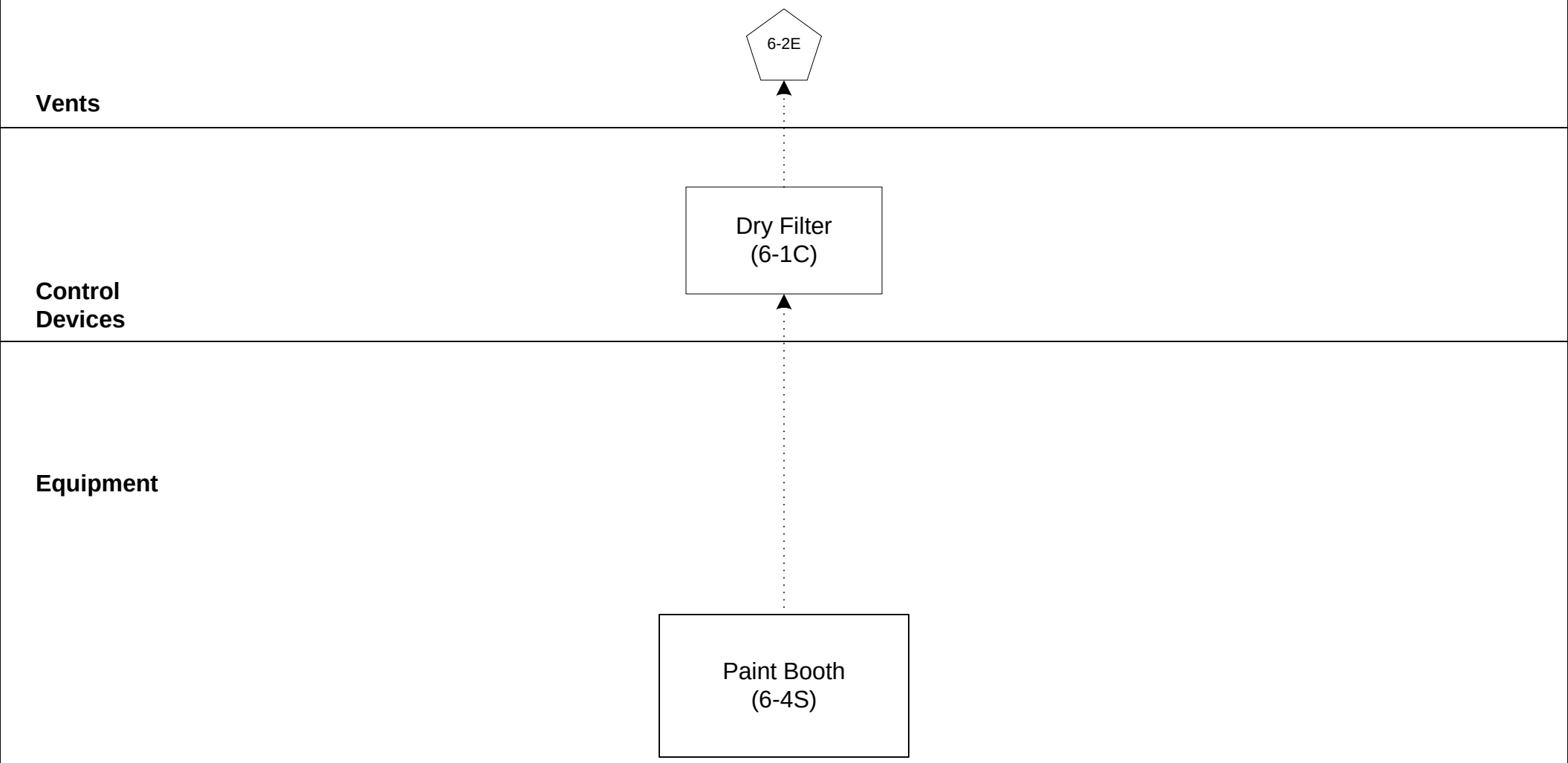
Building 360 Process Flow
(X-Ray Operations)



Allegany Ballistics Laboratory
Operated by Alliant Techsystems Operations LLC
Rocket Center, WV 26726

Vents Inside Building
Process Flow
Emissions Stream

Building 364 Process Flow (Final Assembly)



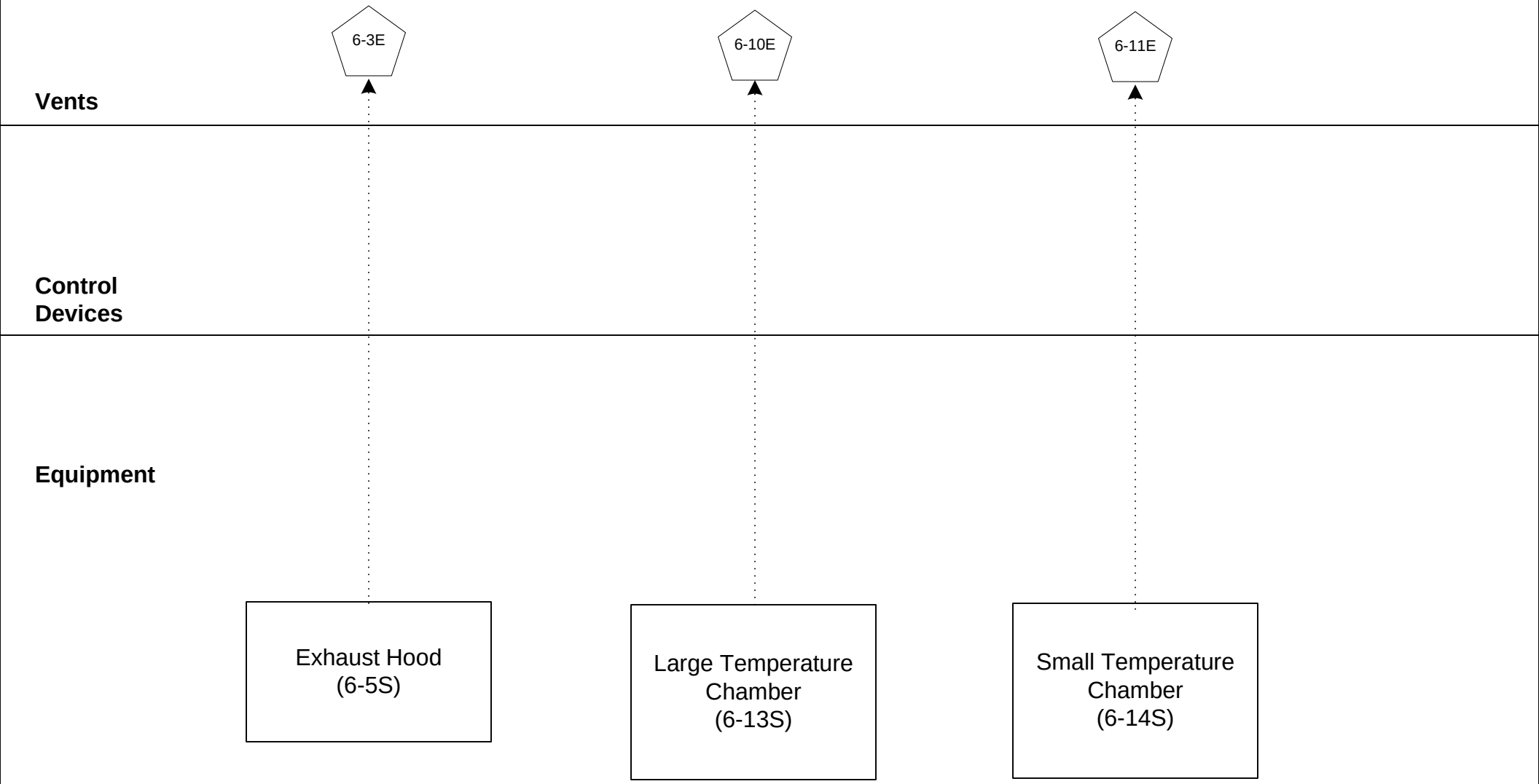
Allegany Ballistics Laboratory
Operated by Alliant Techsystems
Operations LLC
Rocket Center, WV 26726

Vents Inside Building

Process Flow

Emissions Stream

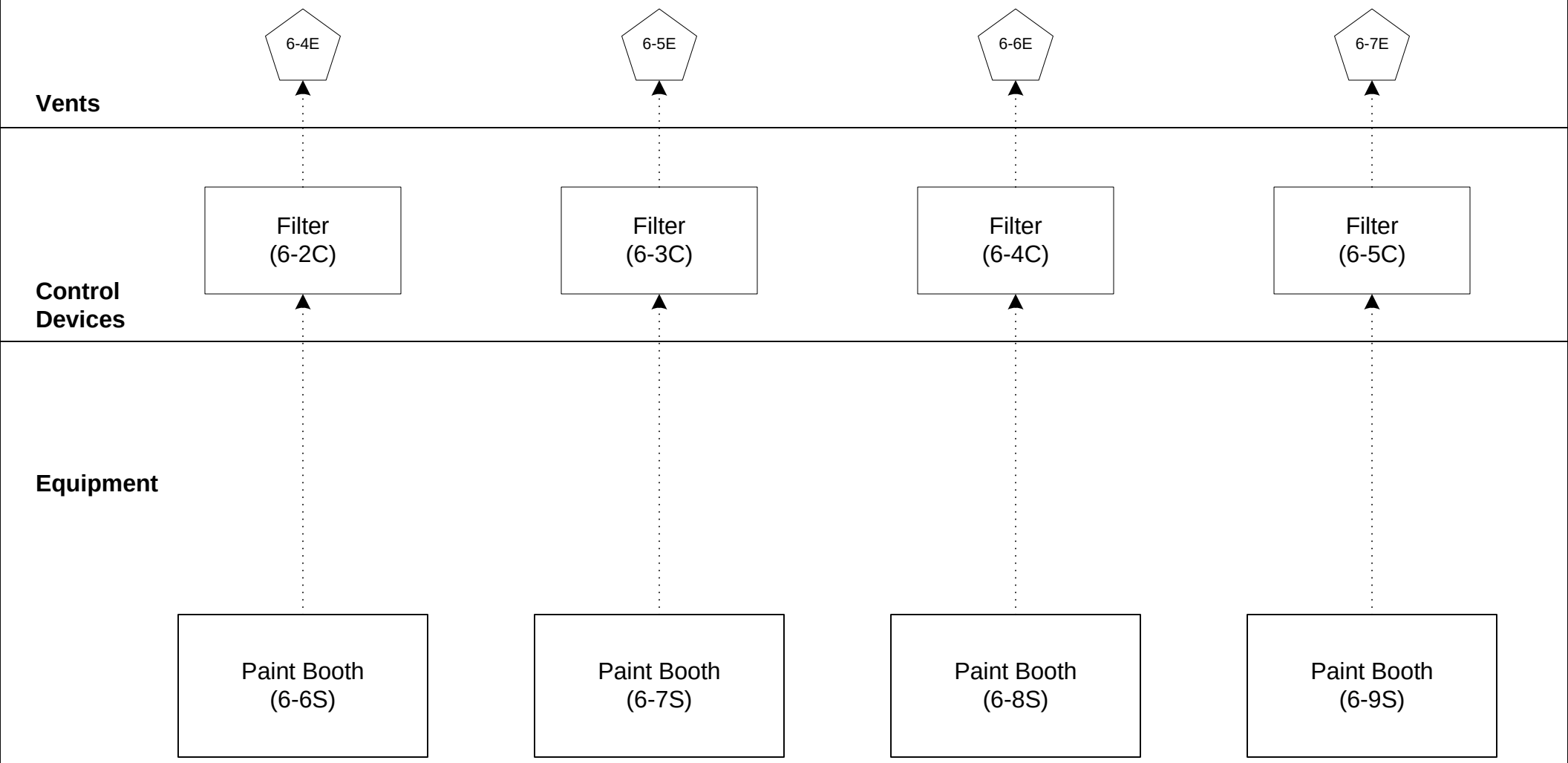
Building 369 Process Flow
(Classified Final Assembly)



Allegany Ballistics Laboratory
Operated by Alliant Techsystems Operations LLC
Rocket Center, WV 26726

Vents Inside Building
Process Flow
Emissions Stream

Building 392 Process Flow (Final Assembly)



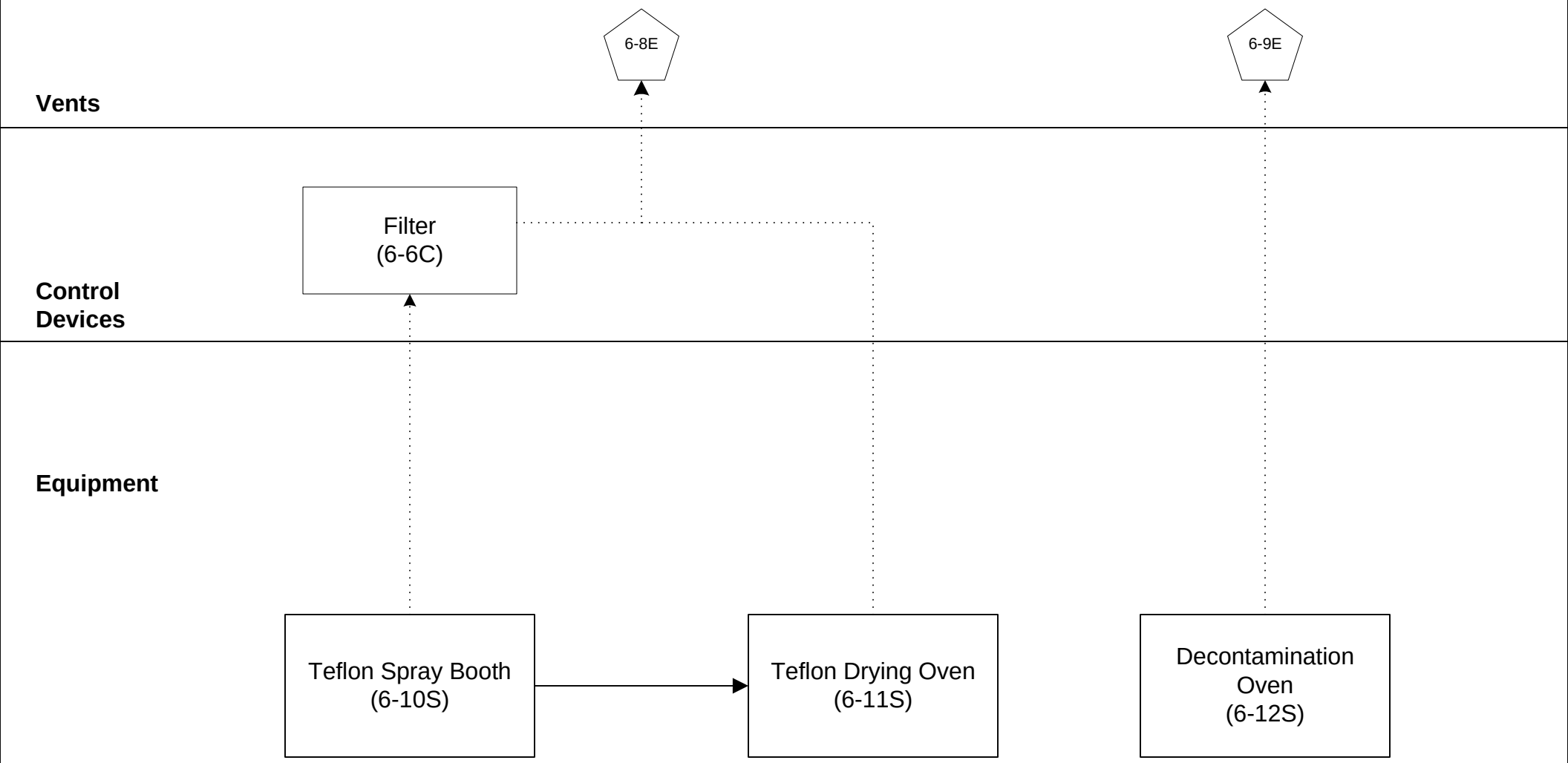
Allegany Ballistics Laboratory
Operated by Alliant Techsystems Operations LLC
Rocket Center, WV 26726

Vents Inside Building

Process Flow

Emissions Stream

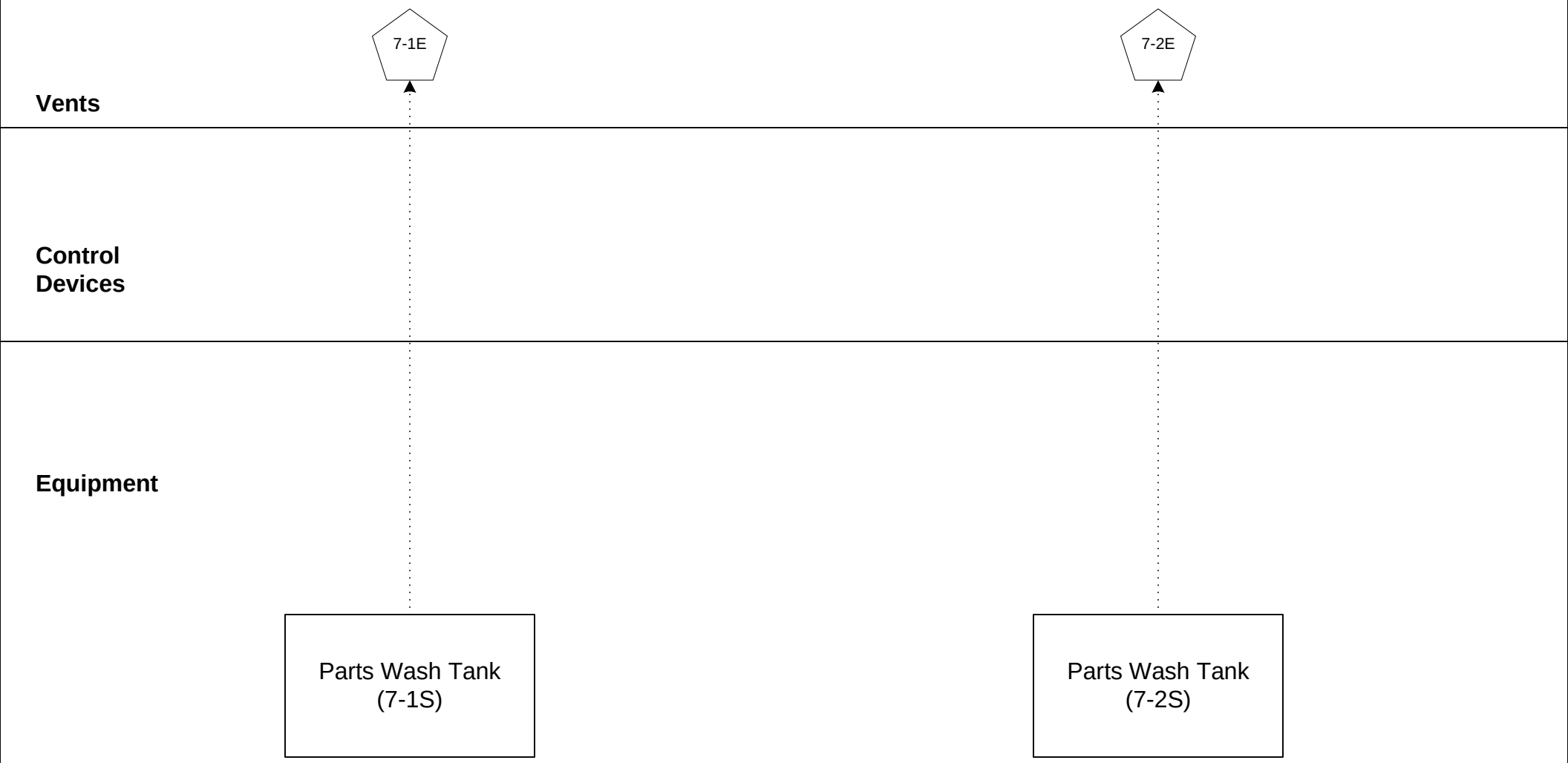
Building 412 Process Flow (Teflon Coating)



Allegany Ballistics Laboratory
Operated by Alliant Techsystems Operations LLC
Rocket Center, WV 26726

Vents Inside Building
Process Flow
Emissions Stream

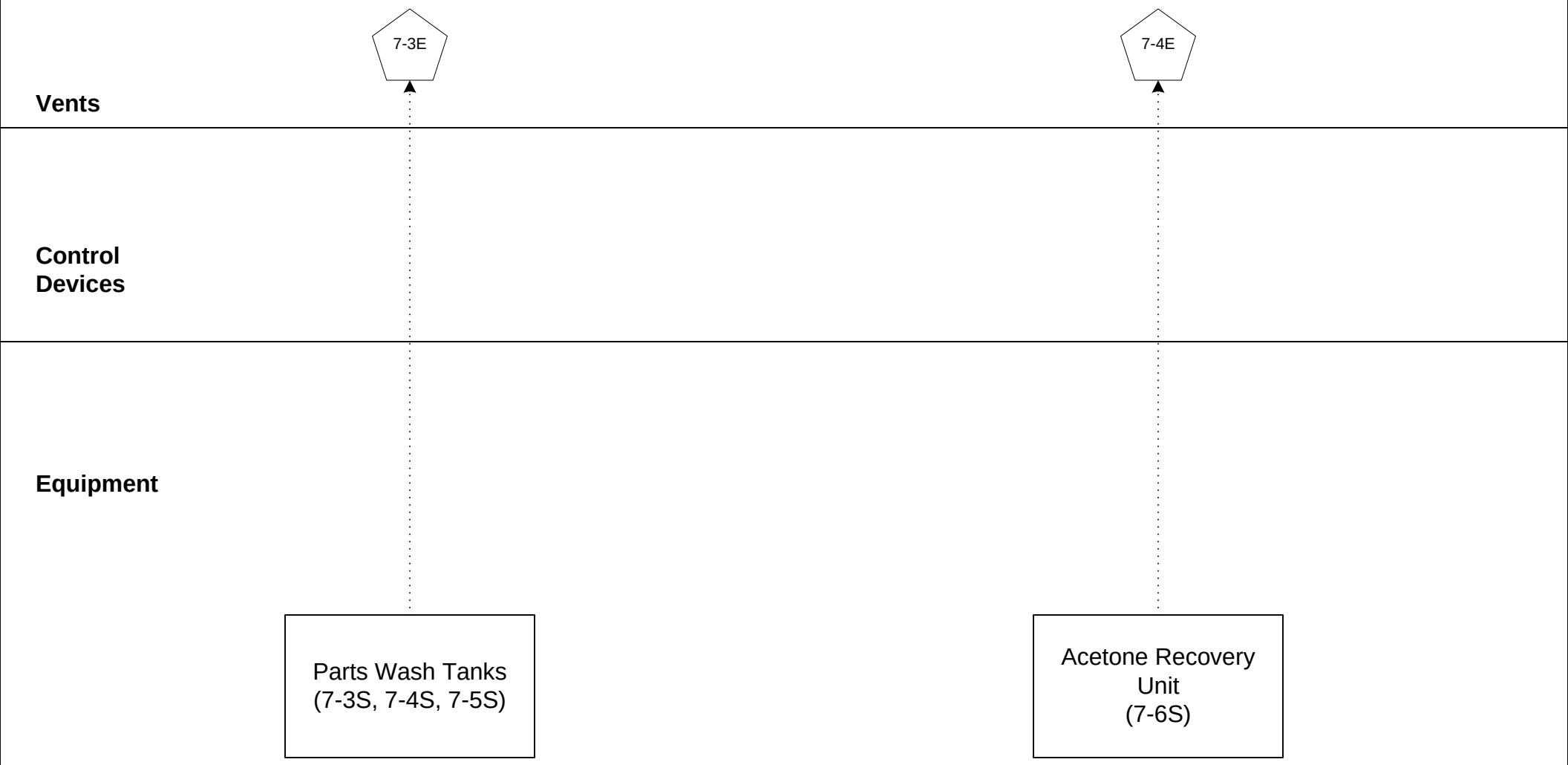
Building 151 Process Flow
(Parts Clean-Up)



Allegany Ballistics Laboratory
Operated by Alliant Techsystems Operations LLC
Rocket Center, WV 26726

Vents Inside Building
Process Flow
Emissions Stream

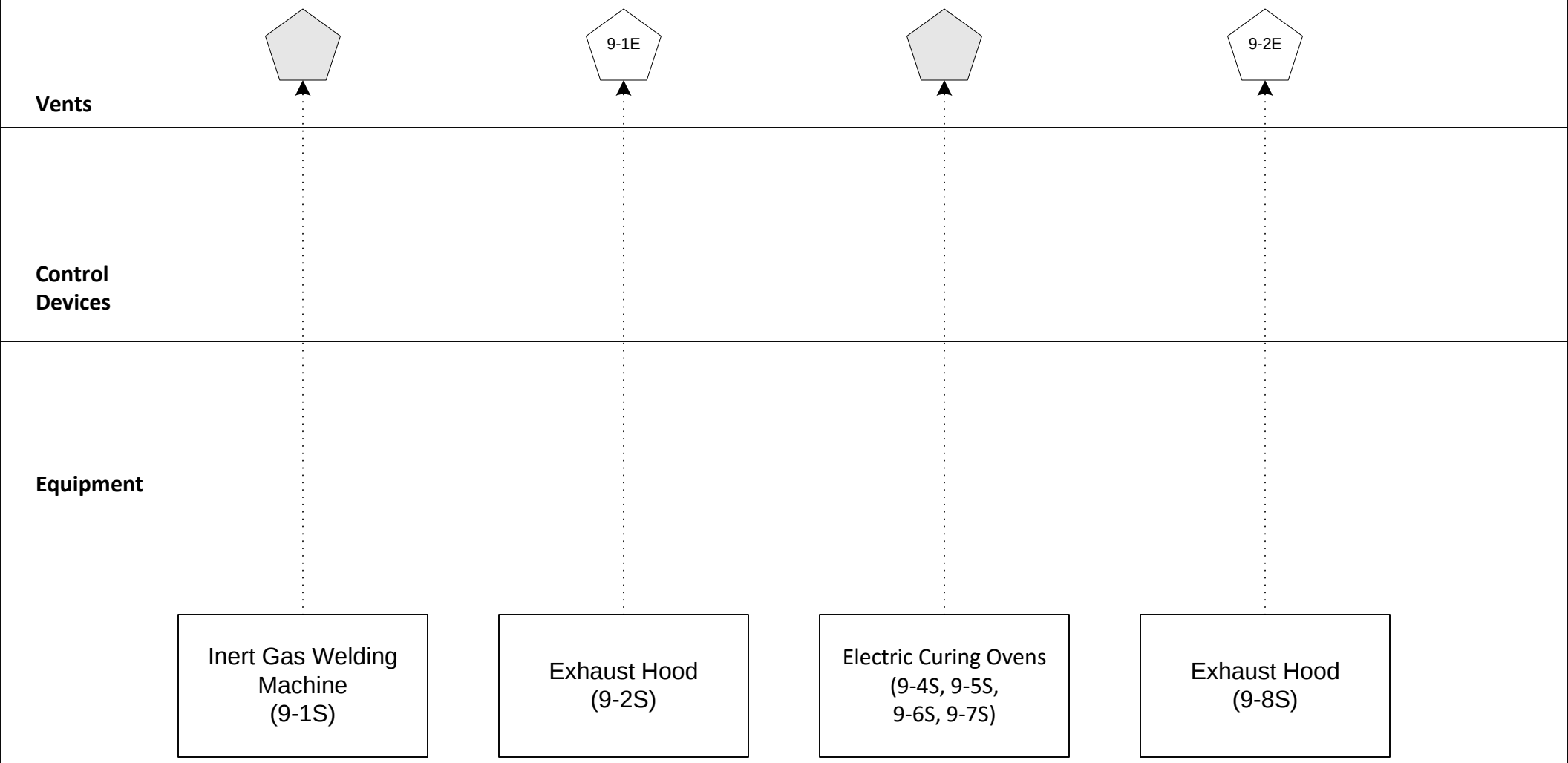
Building 407 Process Flow
(Parts Clean-Up)



Allegany Ballistics Laboratory
Operated by Alliant Techsystems Operations LLC
Rocket Center, WV 26726

Vents Inside Building
Process Flow
Emissions Stream

Building 8 Process Flow
(Laser Products Dev.)



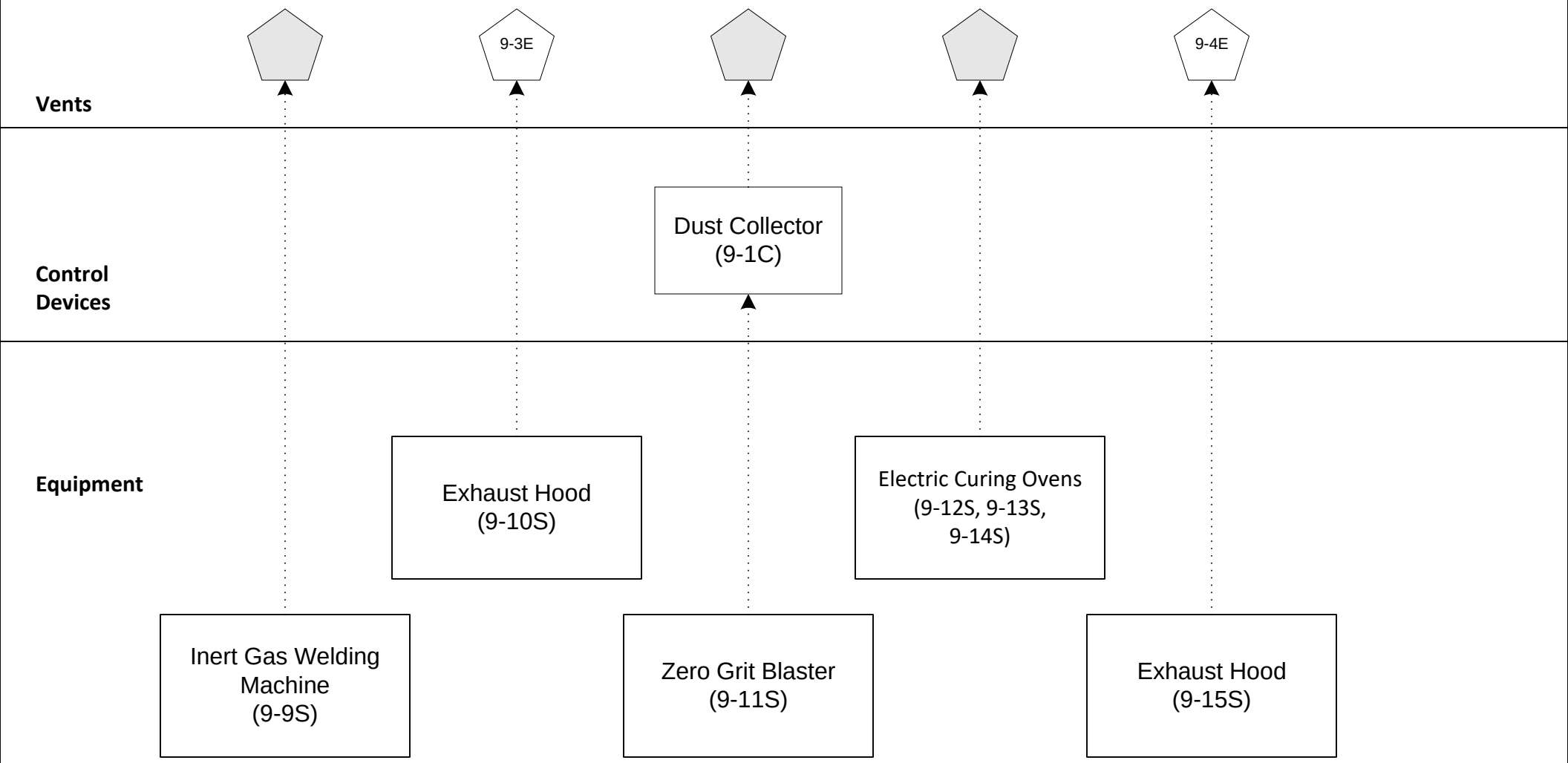
Allegany Ballistics Laboratory
Operated by Alliant Techsystems Operations LLC
Rocket Center, WV 26726

Vents Inside Building

Process Flow

Emissions Stream

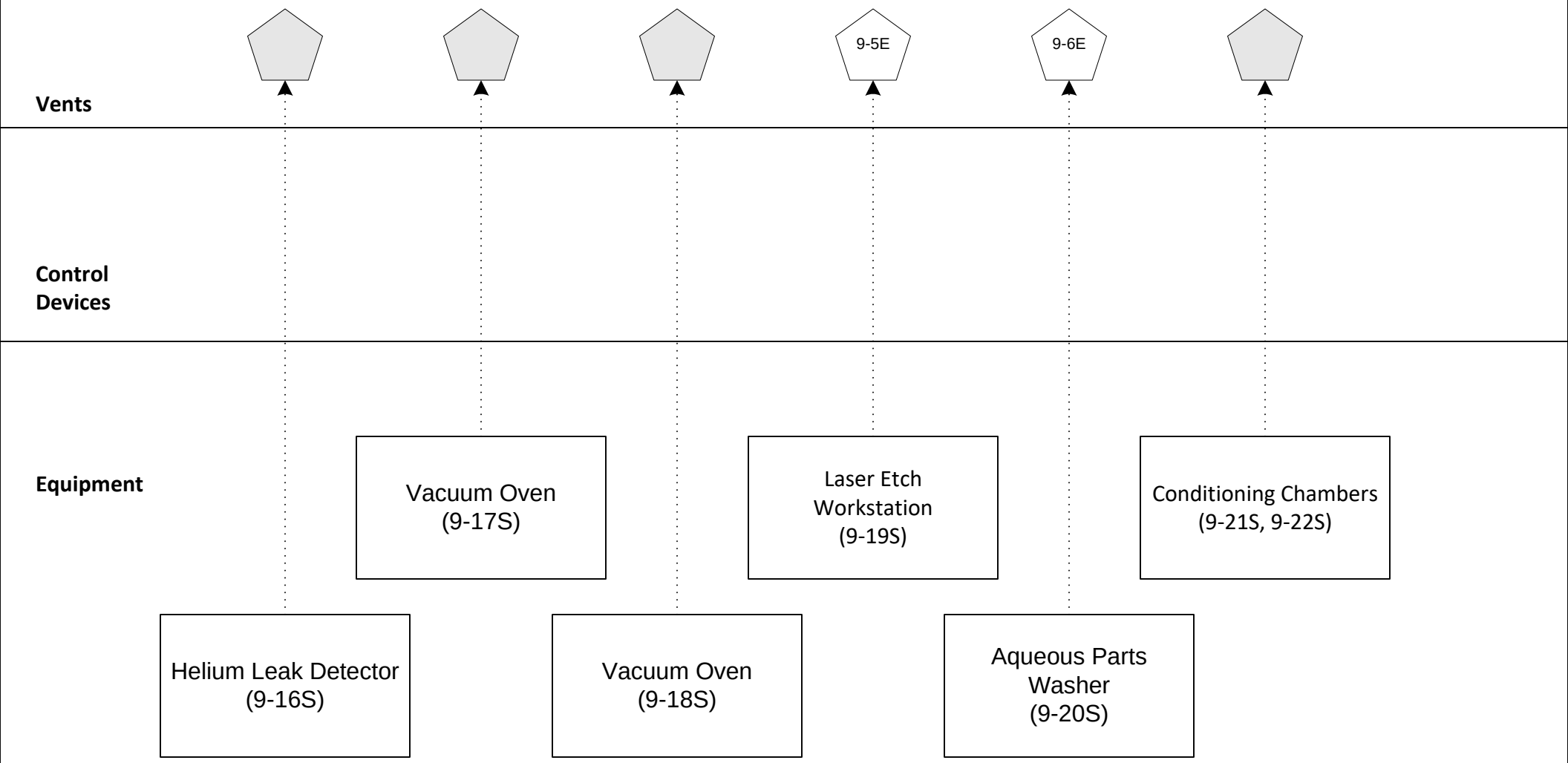
Building 432 Process Flow
(Laser Products Fab.)



Allegany Ballistics Laboratory
Operated by Alliant Techsystems Operations LLC
Rocket Center, WV 26726

Vents Inside Building
Process Flow
Emissions Stream

Building 432 Process Flow
(Laser Products Fab.)



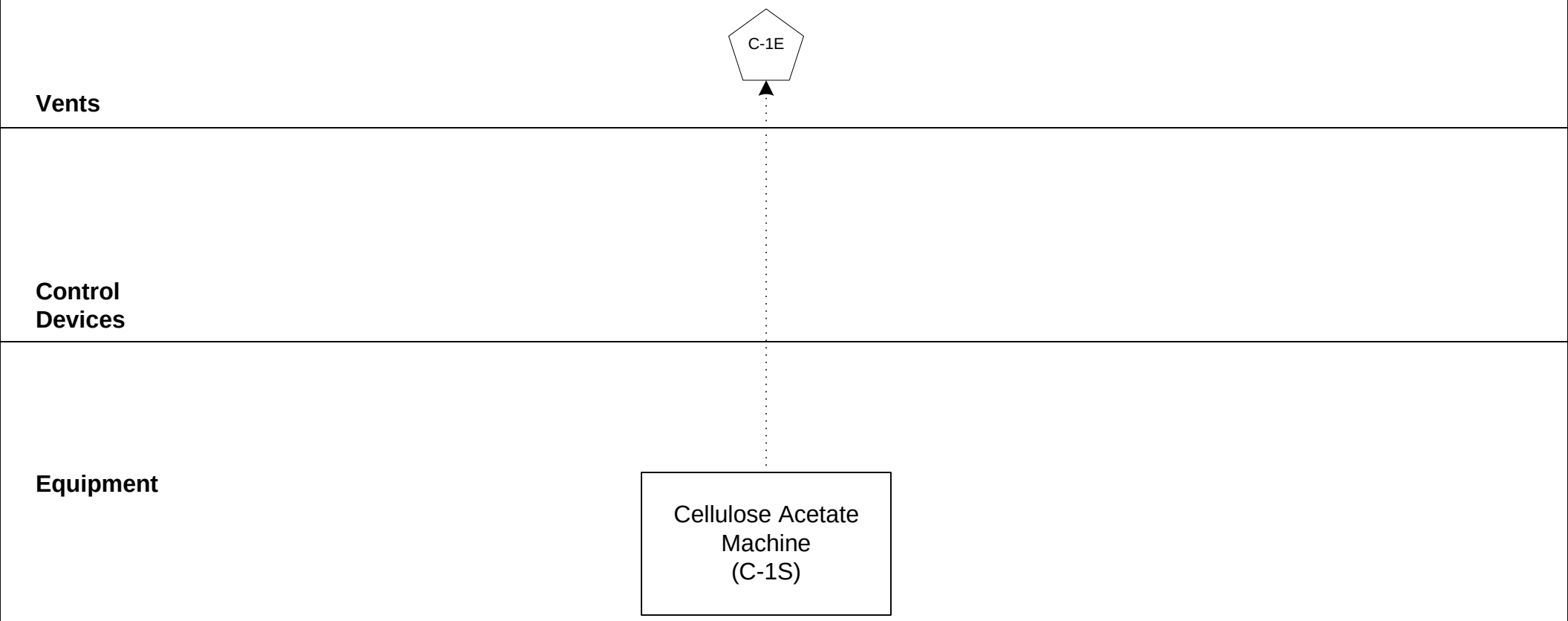
Allegany Ballistics Laboratory
Operated by Alliant Techsystems Operations LLC
Rocket Center, WV 26726

Vents Inside Building

Process Flow

Emissions Stream

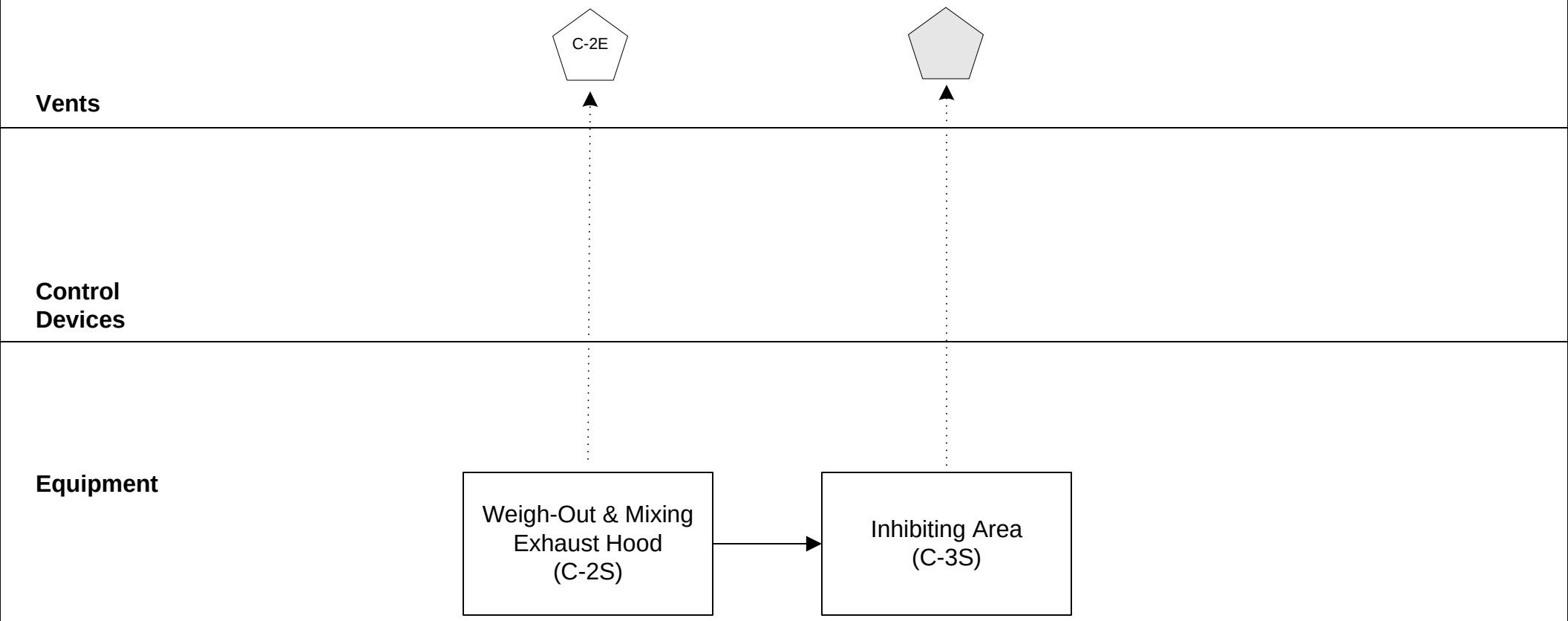
Building 420, Bay 2 Process Flow
(Beaker Fabrication)



Allegany Ballistics Laboratory
Operated by Alliant Techsystems Operations LLC
Rocket Center, WV 26726

Vents Inside Building
Process Flow
Emissions Stream

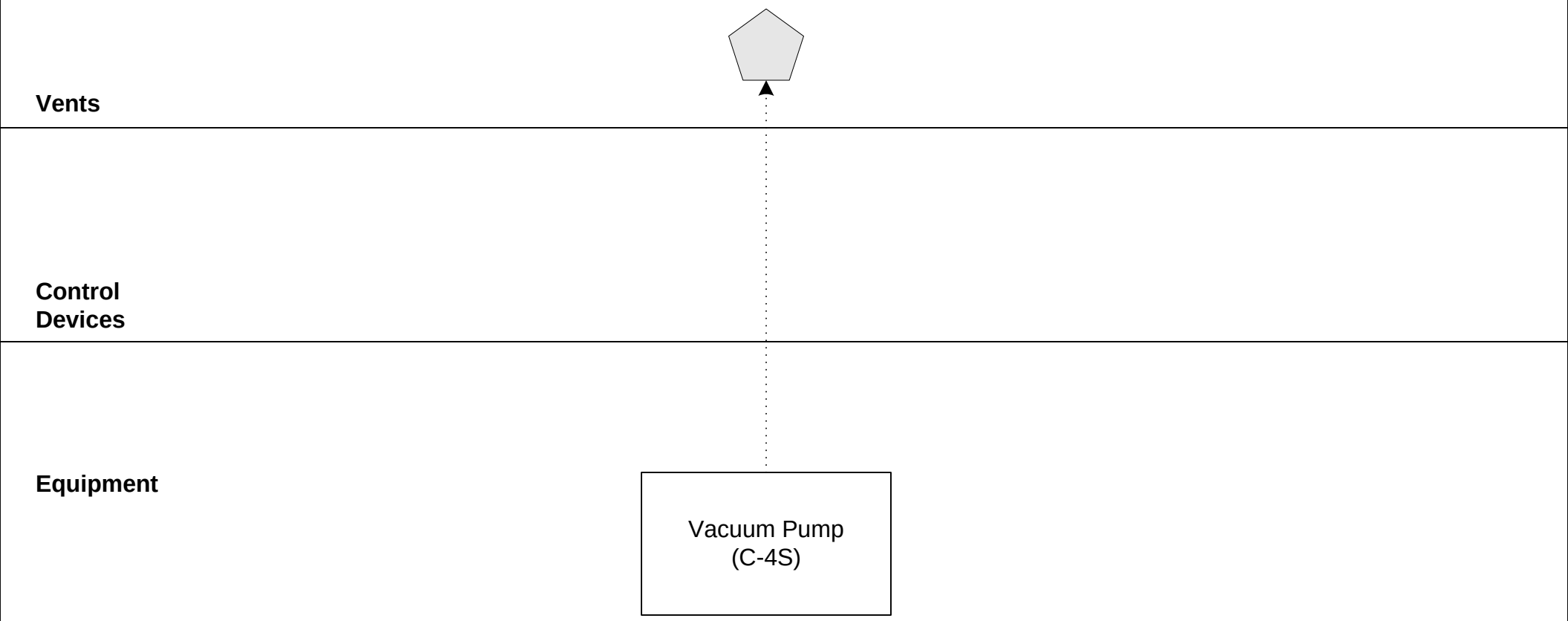
Building 180 Process Flow
(Grain Inhibiting)



Allegany Ballistics Laboratory
Operated by Alliant Techsystems Operations LLC
Rocket Center, WV 26726

Vents Inside Building
Process Flow
Emissions Stream

Building 180 Process Flow
(Conventional Casting)



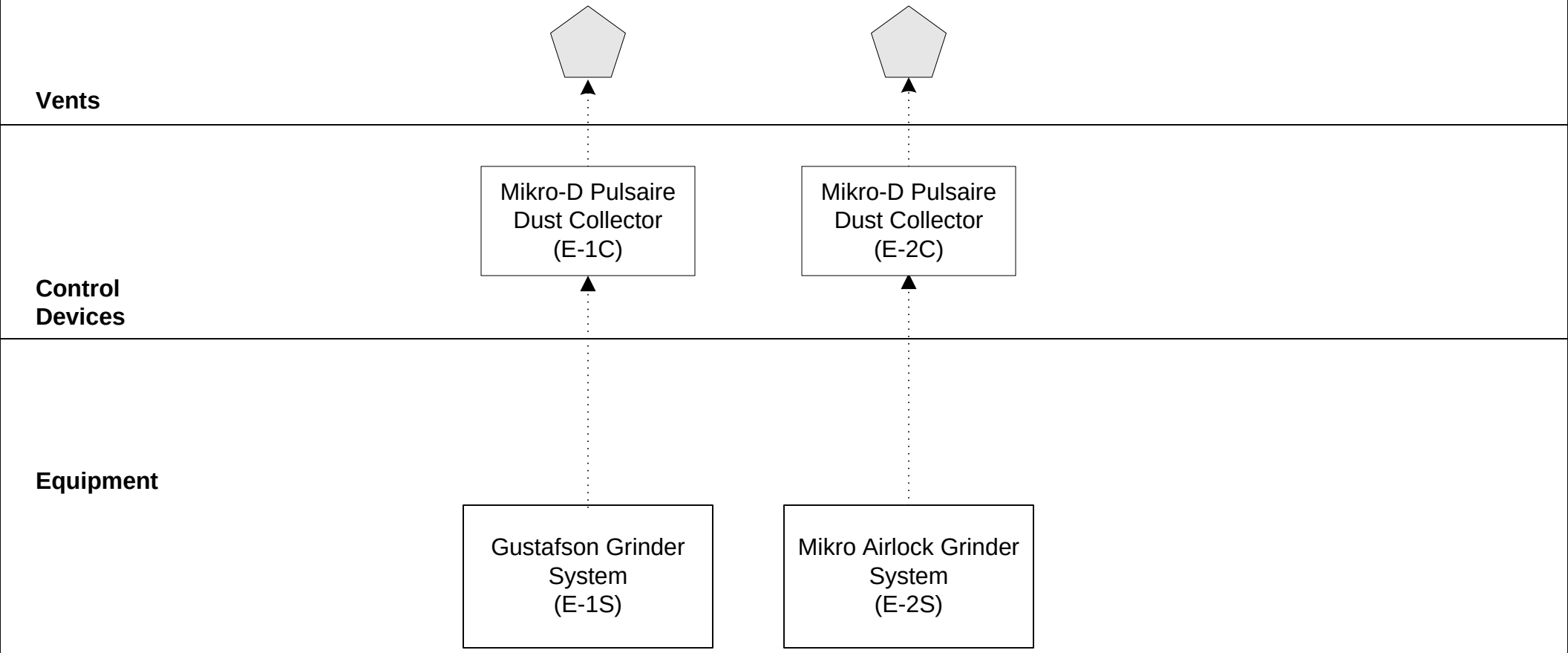
Allegany Ballistics Laboratory
Operated by Alliant Techsystems Operations LLC
Rocket Center, WV 26726

Vents Inside Building

Process Flow

Emissions Stream

Building 2003 Process Flow
(Ammonium Perchlorate Grinding)



Allegany Ballistics Laboratory
Operated by Alliant Techsystems Operations LLC
Rocket Center, WV 26726

Vents Inside Building

Process Flow

Emissions Stream

Building 2015 Process Flow
(Ingredient Preparation)

Vents

Control Devices

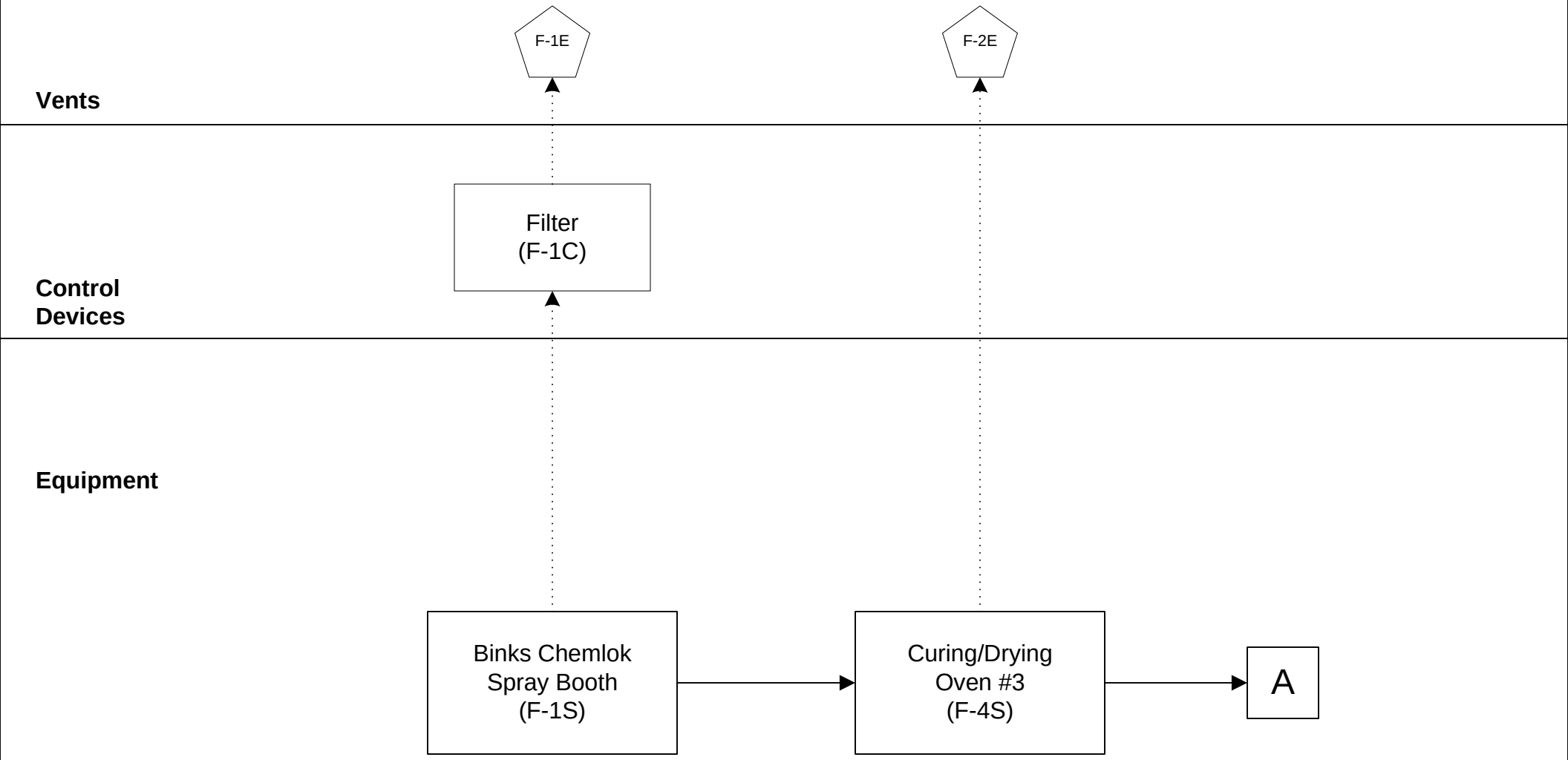
Equipment

Walk-In Freezers (2)
(E-3S, E-4S)
[Closed System]

Allegany Ballistics Laboratory
Operated by Alliant Techsystems
Operations LLC
Rocket Center, WV 26726

Vents Inside Building
Process Flow
Emissions Stream

Building 2014 Process Flow
(Interior Coating)



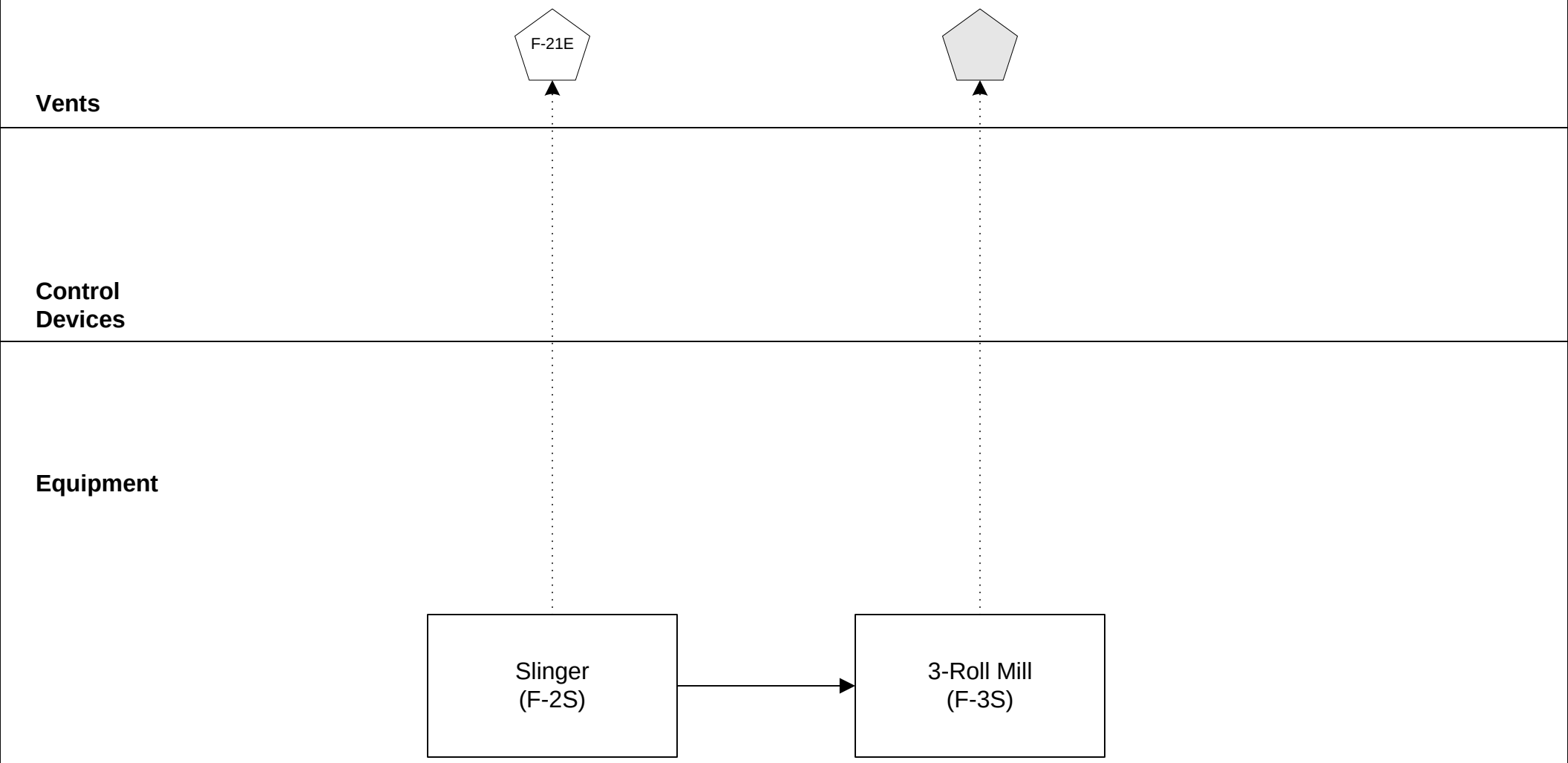
Allegany Ballistics Laboratory
Operated by Alliant Techsystems
Operations LLC
Rocket Center, WV 26726

Vents Inside Building

Process Flow

Emissions Stream

Building 2014 Process Flow
(Slinger Coating Process)



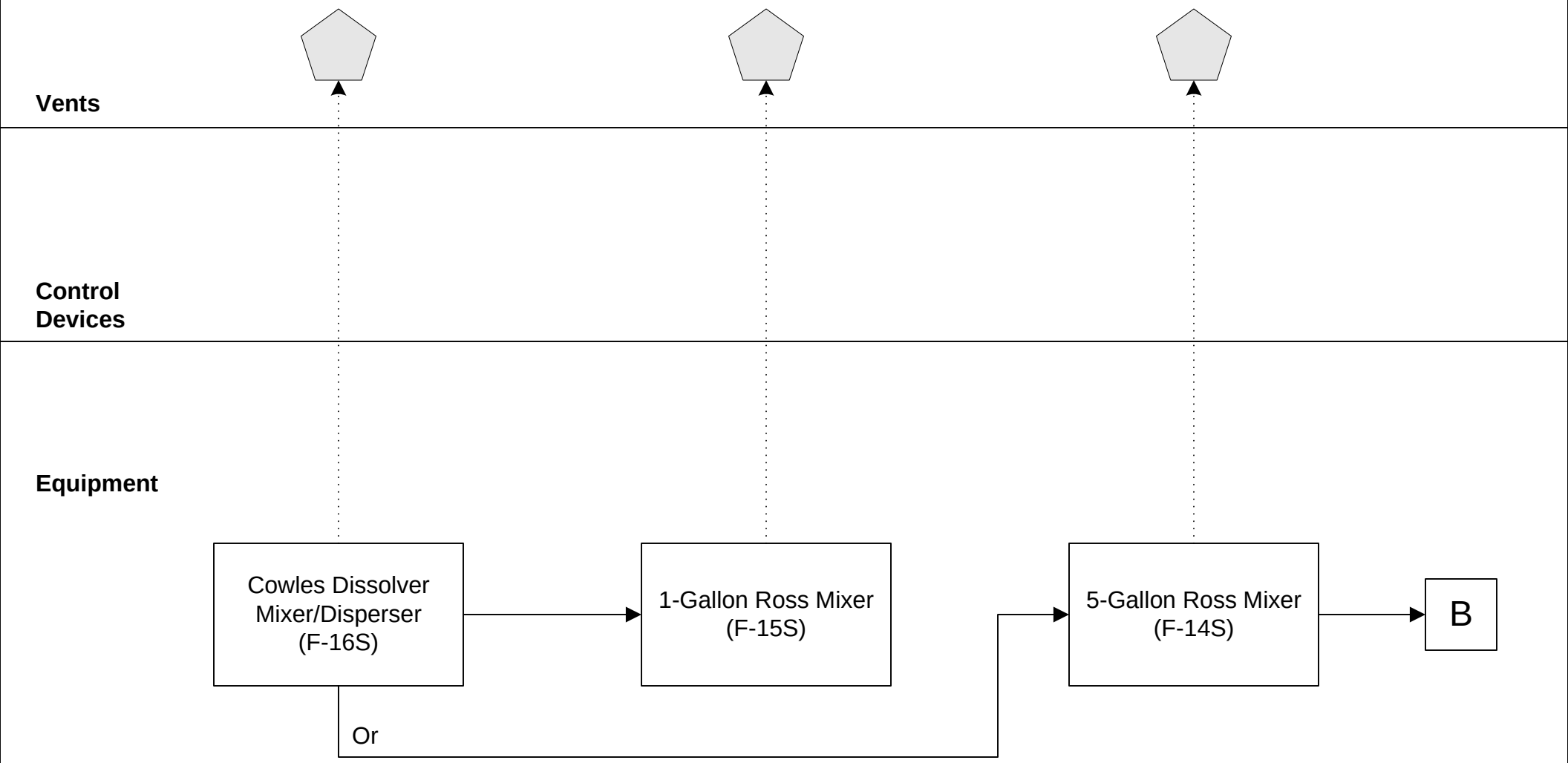
Allegany Ballistics Laboratory
Operated by Alliant Techsystems
Operations LLC
Rocket Center, WV 26726

Vents Inside Building

Process Flow

Emissions Stream

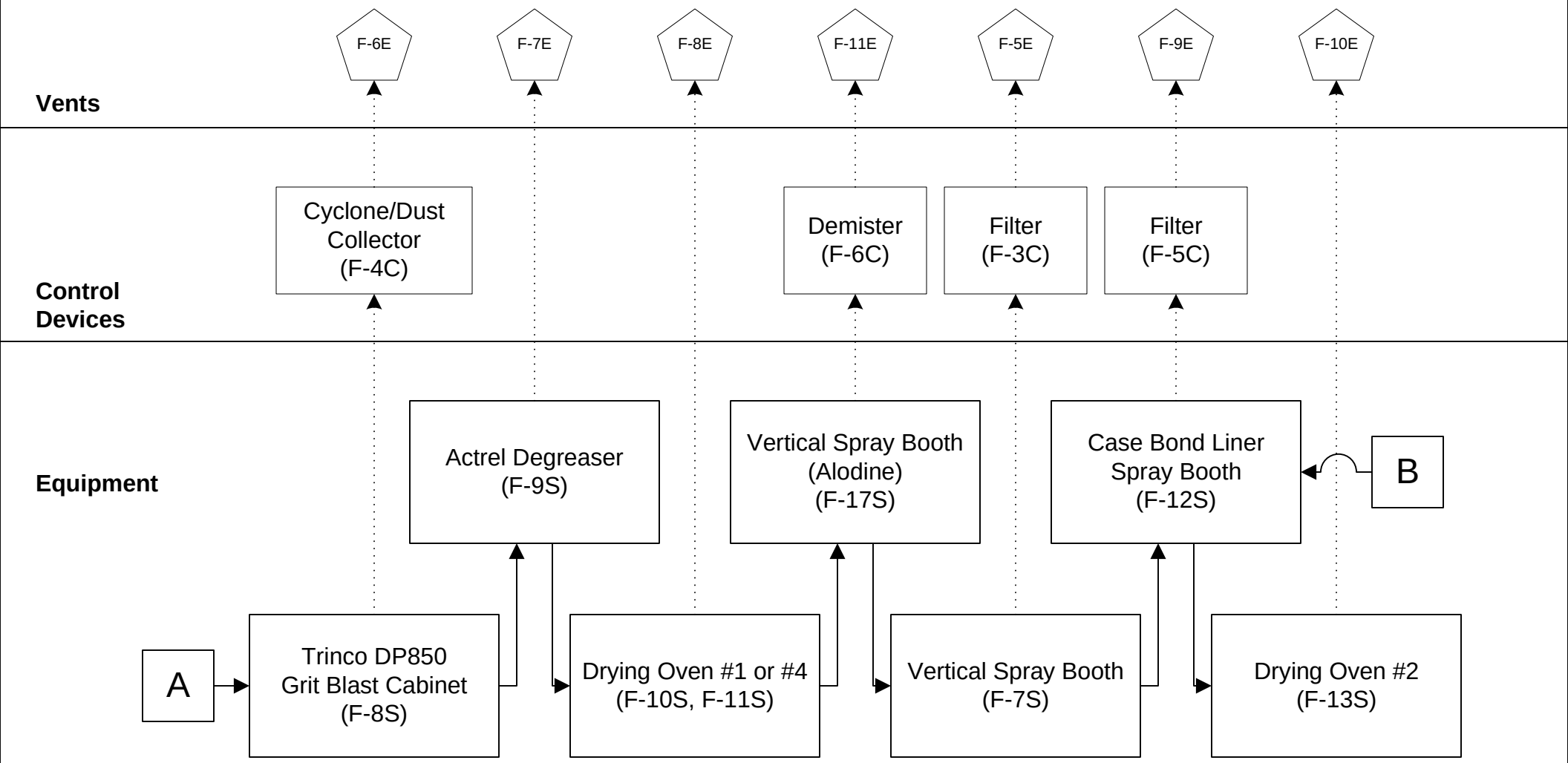
Building 2014 Process Flow
(Bondliner Mixing)



Allegany Ballistics Laboratory
Operated by Alliant Techsystems Operations LLC
Rocket Center, WV 26726

Vents Inside Building
Process Flow
Emissions Stream

Building 2014 Process Flow
[Intermediate (Sparrow) Motor Line]



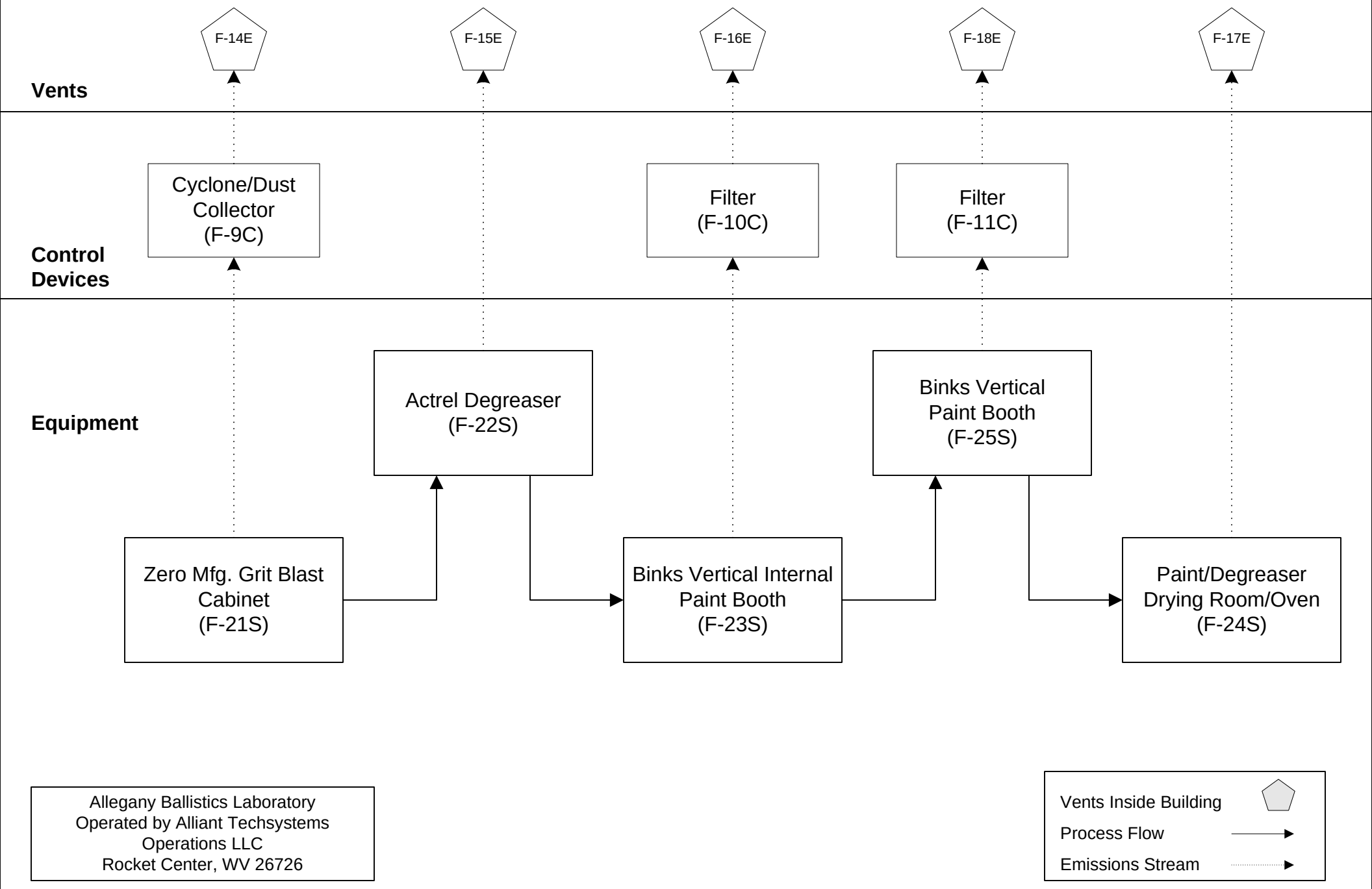
Allegany Ballistics Laboratory
Operated by Alliant Techsystems Operations LLC
Rocket Center, WV 26726

Vents Inside Building

Process Flow

Emissions Stream

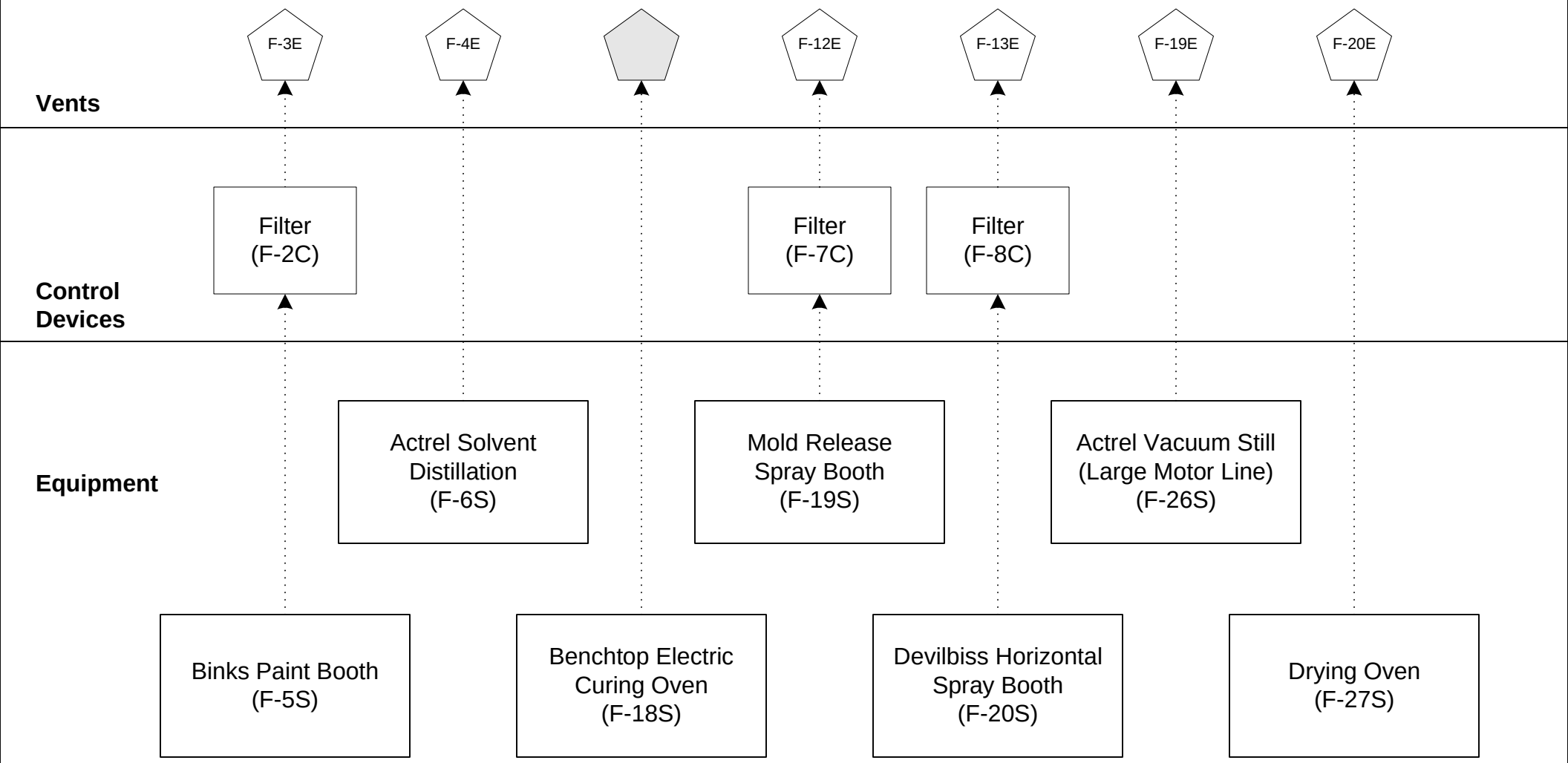
Building 2014 Process Flow
(Large Motor Line)



Allegany Ballistics Laboratory
Operated by Alliant Techsystems Operations LLC
Rocket Center, WV 26726

Vents Inside Building
Process Flow
Emissions Stream

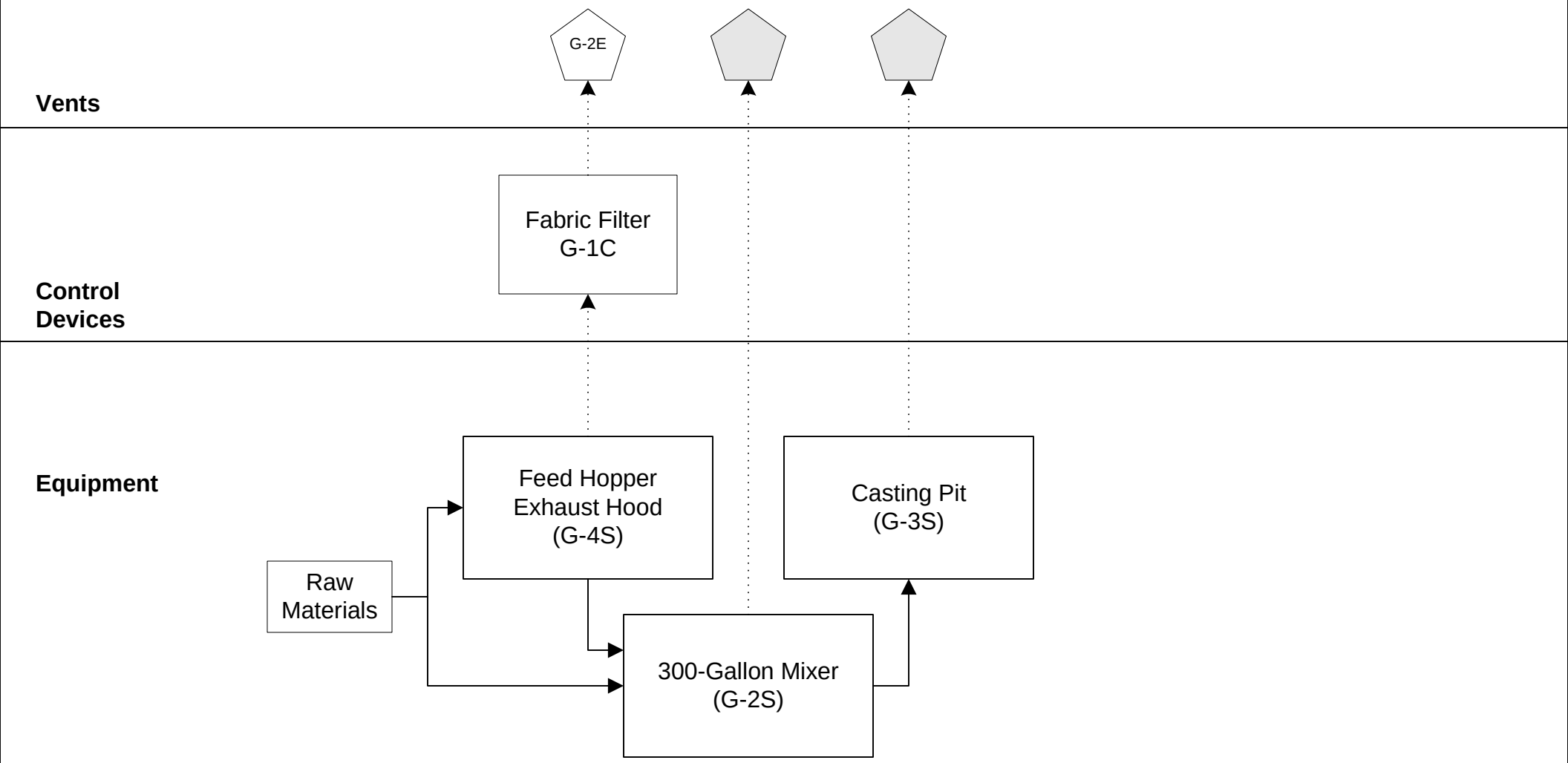
Building 2014 Process Flow (Miscellaneous Units)



Allegany Ballistics Laboratory
Operated by Alliant Techsystems Operations LLC
Rocket Center, WV 26726

Vents Inside Building
Process Flow
Emissions Stream

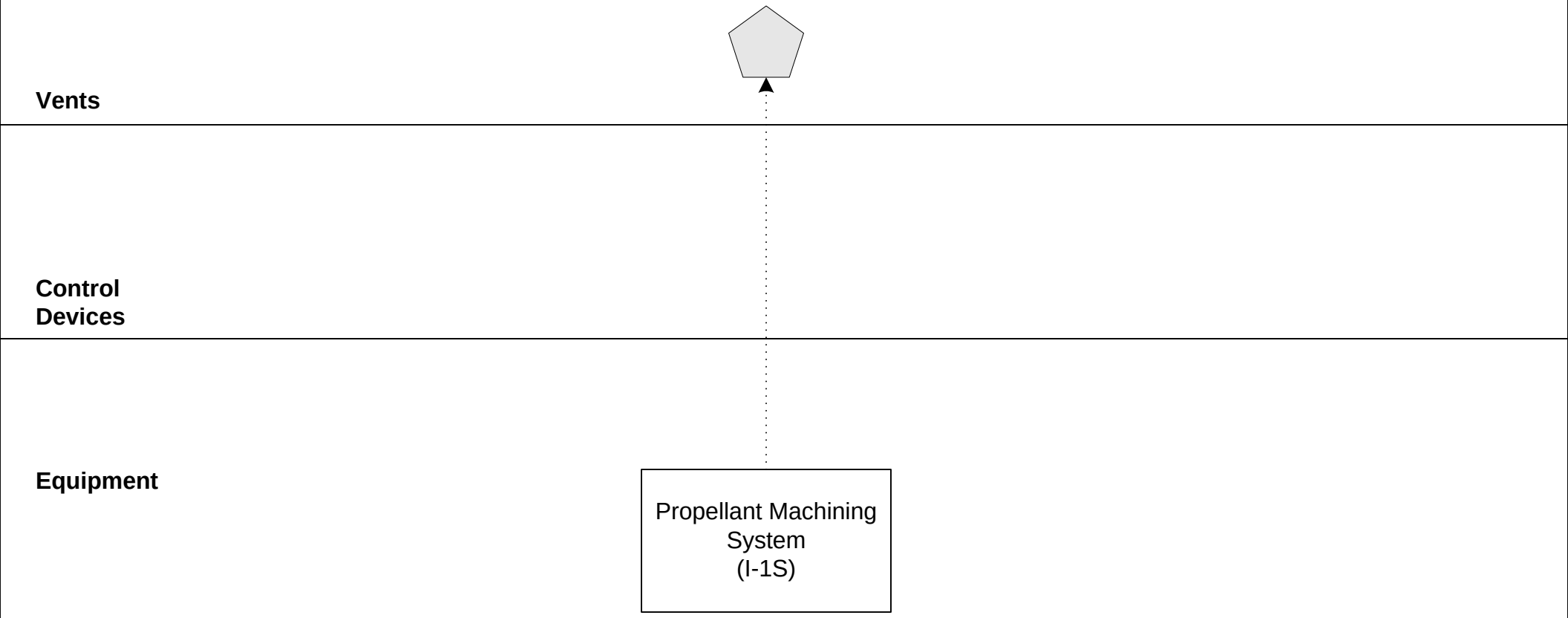
Building 2000 Process Flow (Mixing/Casting)



Allegany Ballistics Laboratory
Operated by Alliant Techsystems
Operations LLC
Rocket Center, WV 26726

Vents Inside Building
Process Flow
Emissions Stream

Building 2008 Process Flow (Disassembly and Machining)



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Operated by Alliant Techsystems Operations LLC
Rocket Center, WV 26726

Vents Inside Building

Process Flow

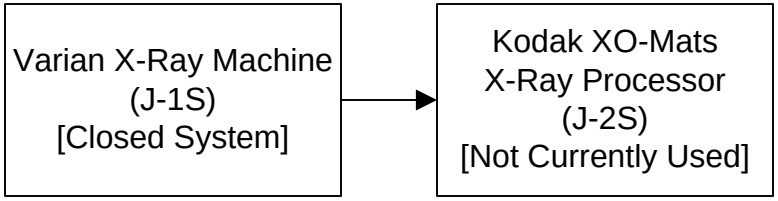
Emissions Stream

Building 2010 Process Flow
(X-Ray Operations)

Vents

Control Devices

Equipment



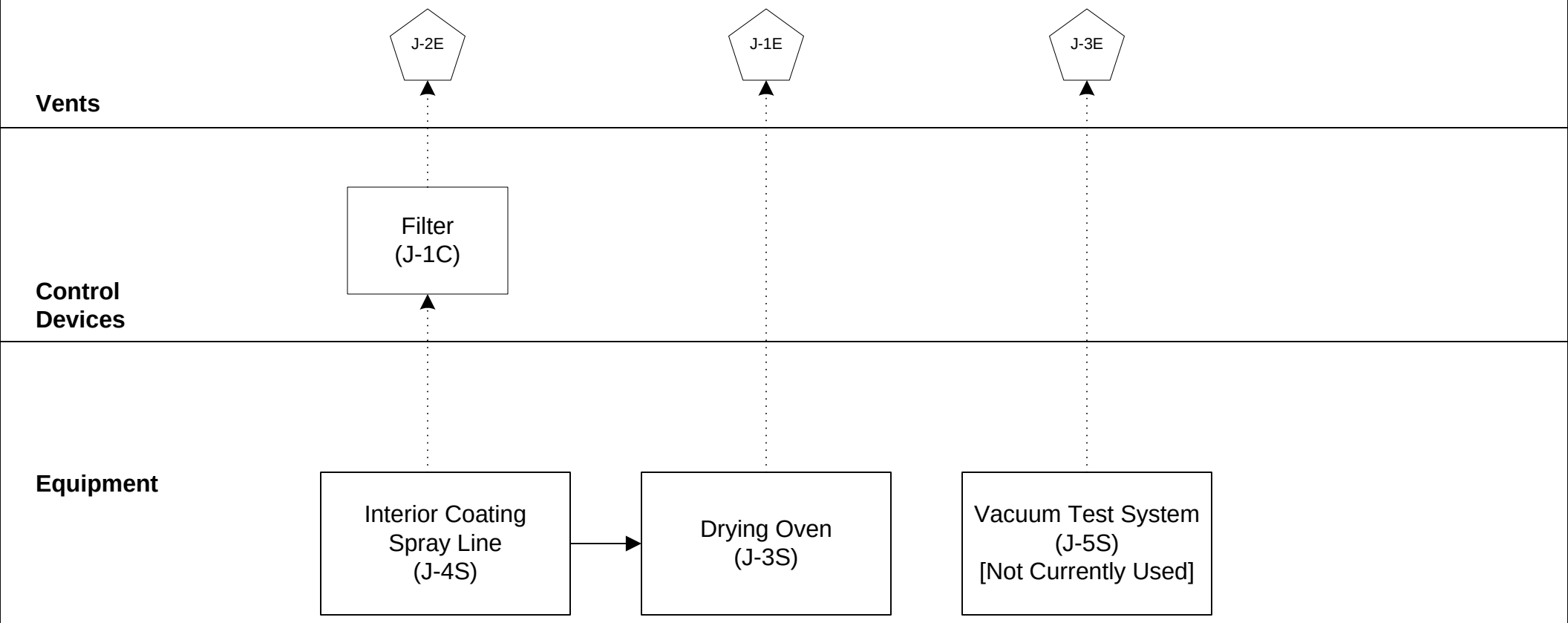
Allegany Ballistics Laboratory
Operated by Alliant Techsystems
Operations LLC
Rocket Center, WV 26726

Vents Inside Building

Process Flow

Emissions Stream

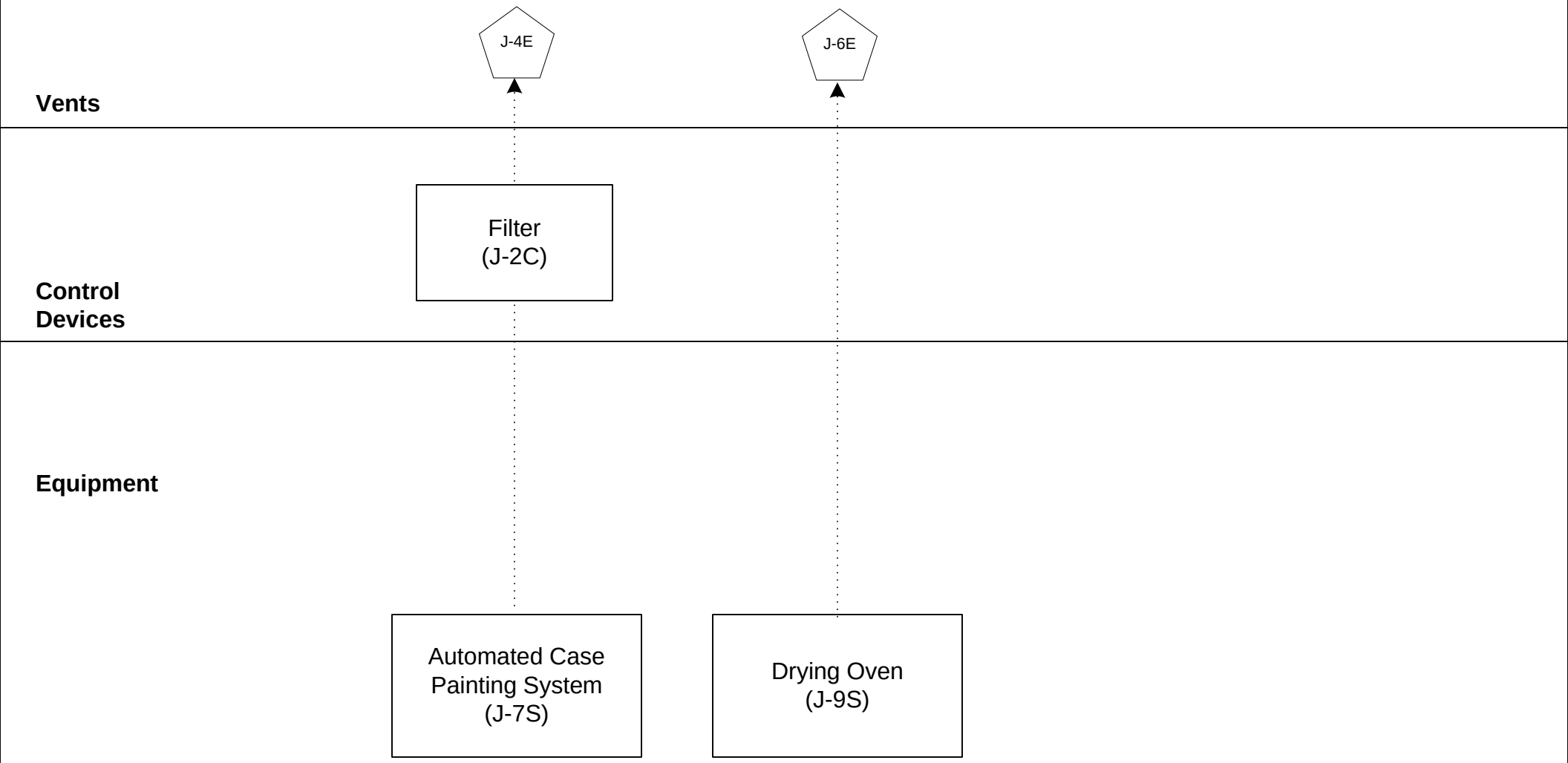
Building 2011 Process Flow
(Final Assembly)



Allegany Ballistics Laboratory
Operated by Alliant Techsystems
Operations LLC
Rocket Center, WV 26726

Vents Inside Building
Process Flow
Emissions Stream

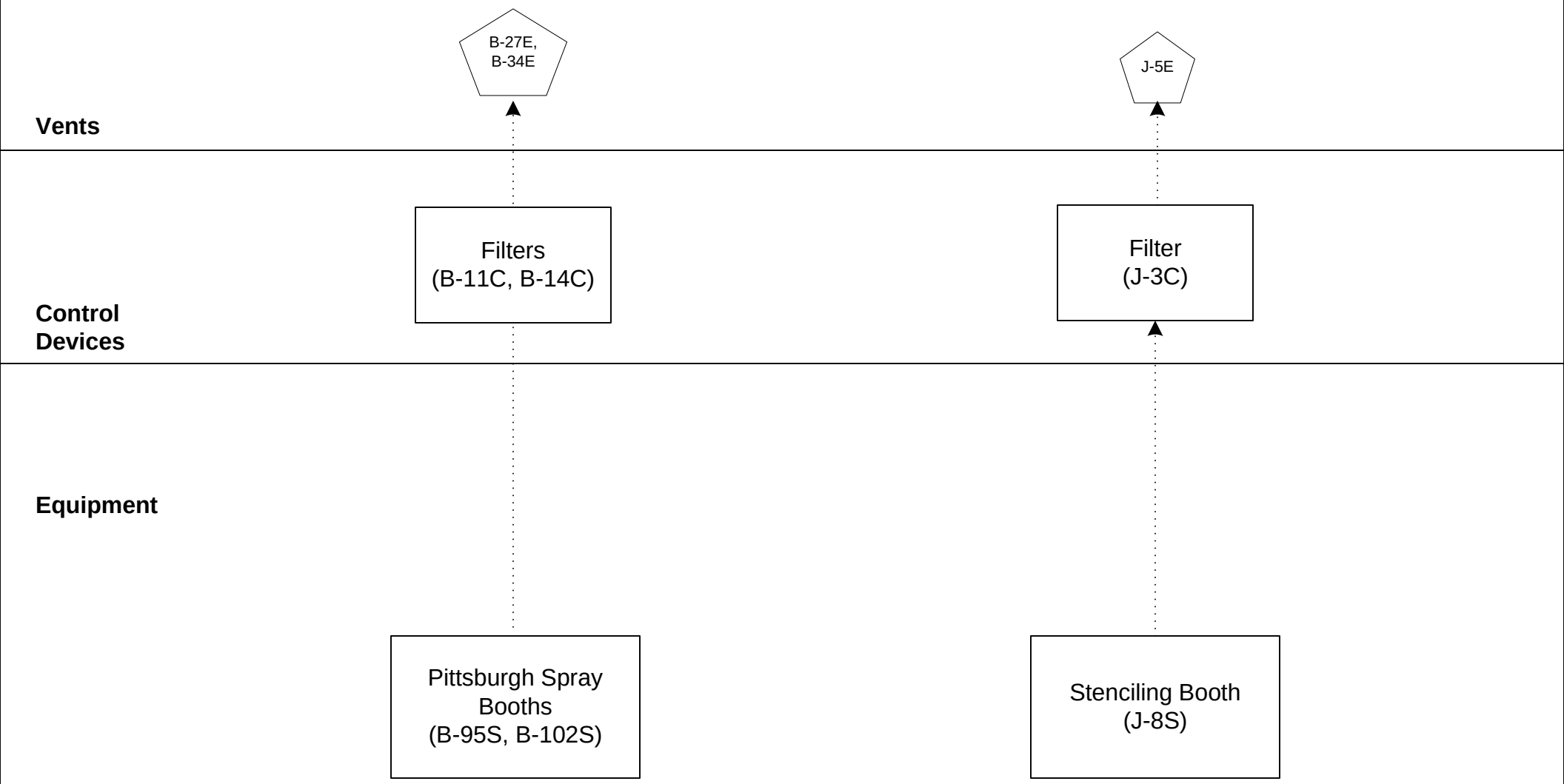
Building 368 Process Flow
(E-4 Load & Pack)



Allegany Ballistics Laboratory
Operated by Alliant Techsystems
Operations LLC
Rocket Center, WV 26726

Vents Inside Building
Process Flow
Emissions Stream

Building 2031 Process Flow
(E-4 Load & Pack)



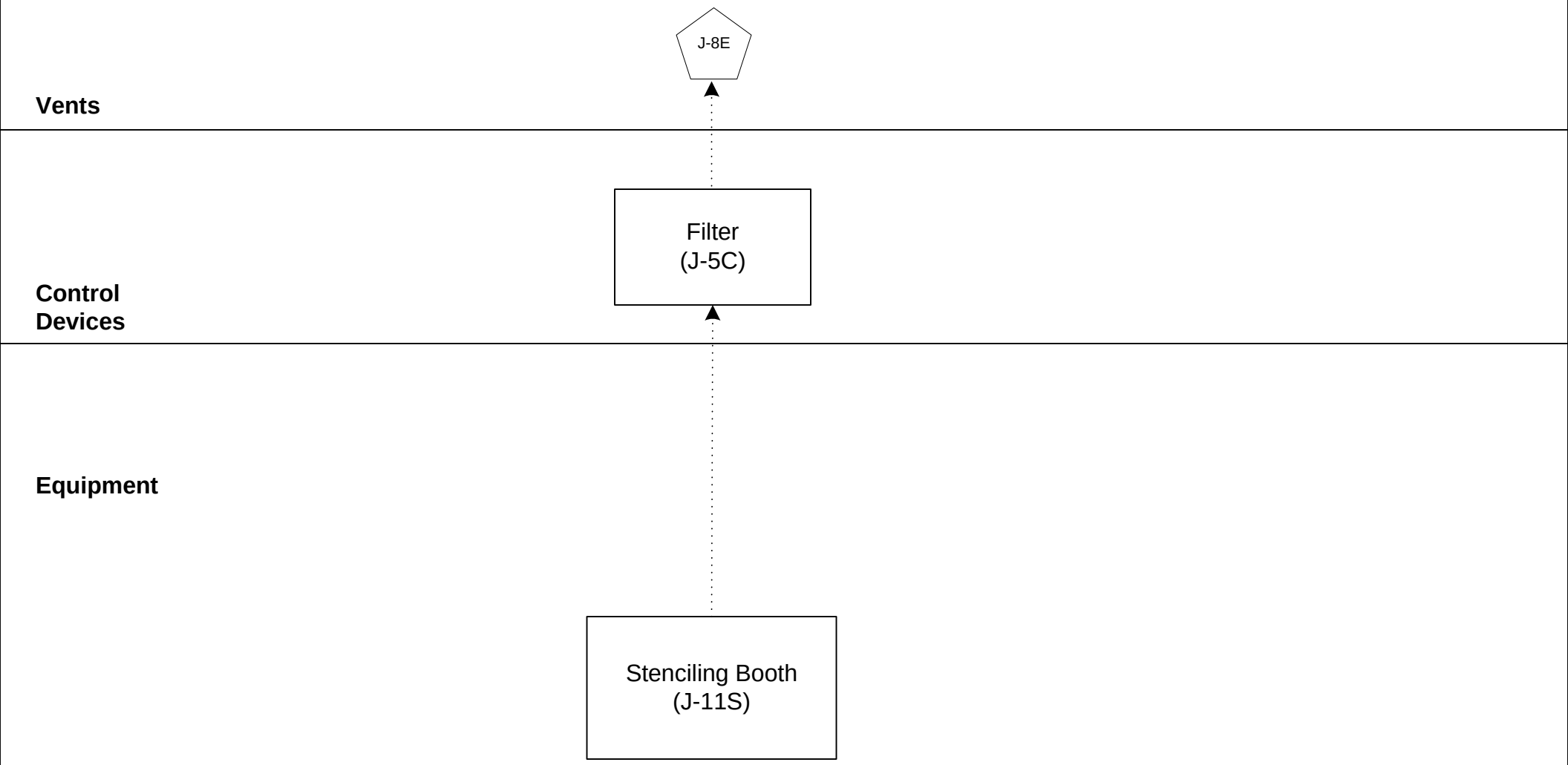
Allegany Ballistics Laboratory
Operated by Alliant Techsystems
Operations LLC
Rocket Center, WV 26726

Vents Inside Building

Process Flow

Emissions Stream

Building 2039 Process Flow



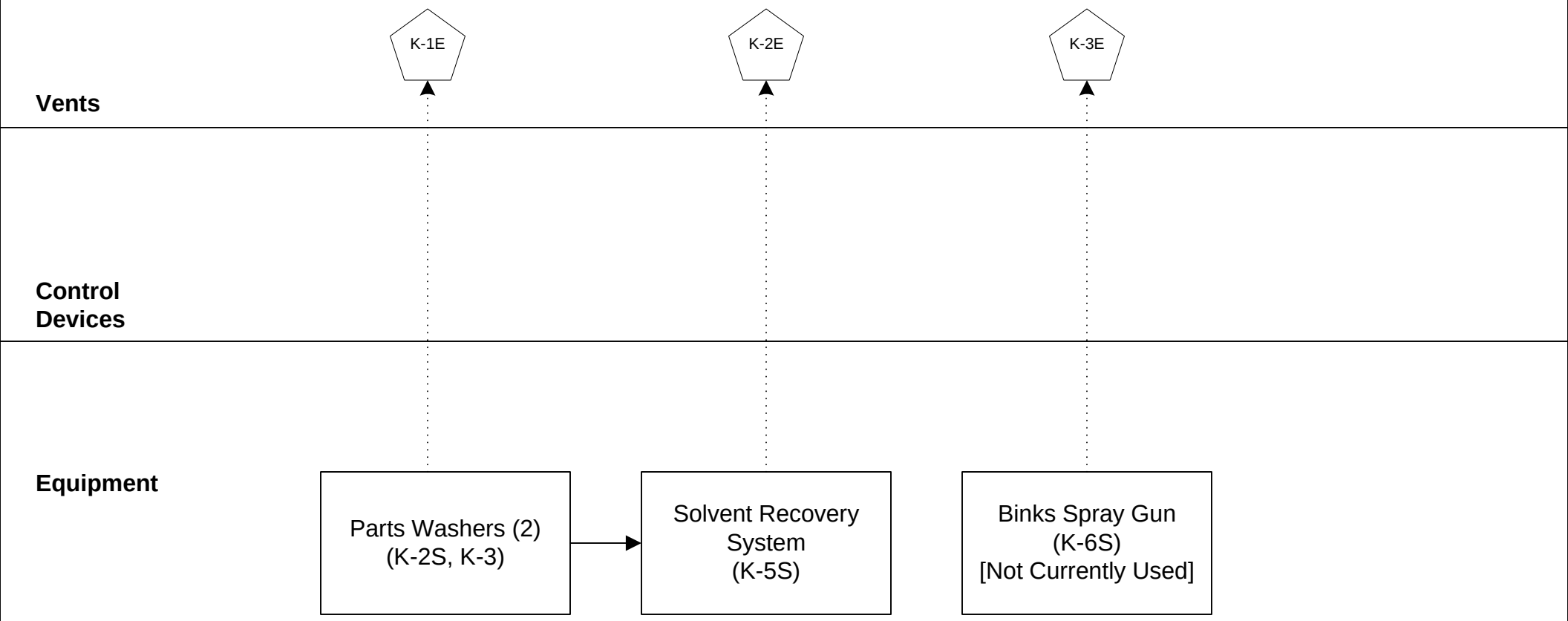
Allegany Ballistics Laboratory
Operated by Alliant Techsystems
Operations LLC
Rocket Center, WV 26726

Vents Inside Building

Process Flow

Emissions Stream

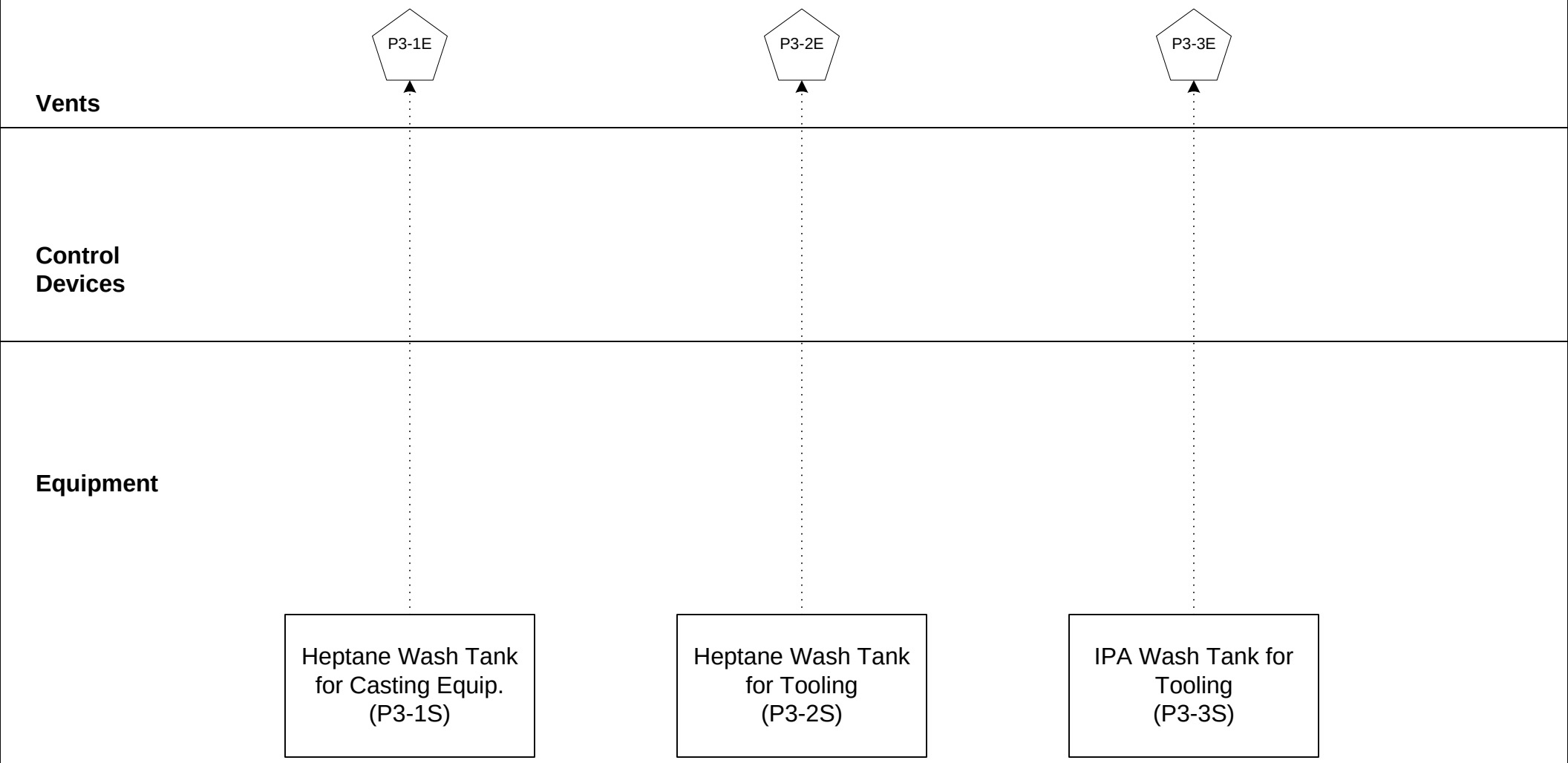
Building 8203 Process Flow
(Parts Clean-Up)



Allegany Ballistics Laboratory
Operated by Alliant Techsystems Operations LLC
Rocket Center, WV 26726

Vents Inside Building
Process Flow
Emissions Stream

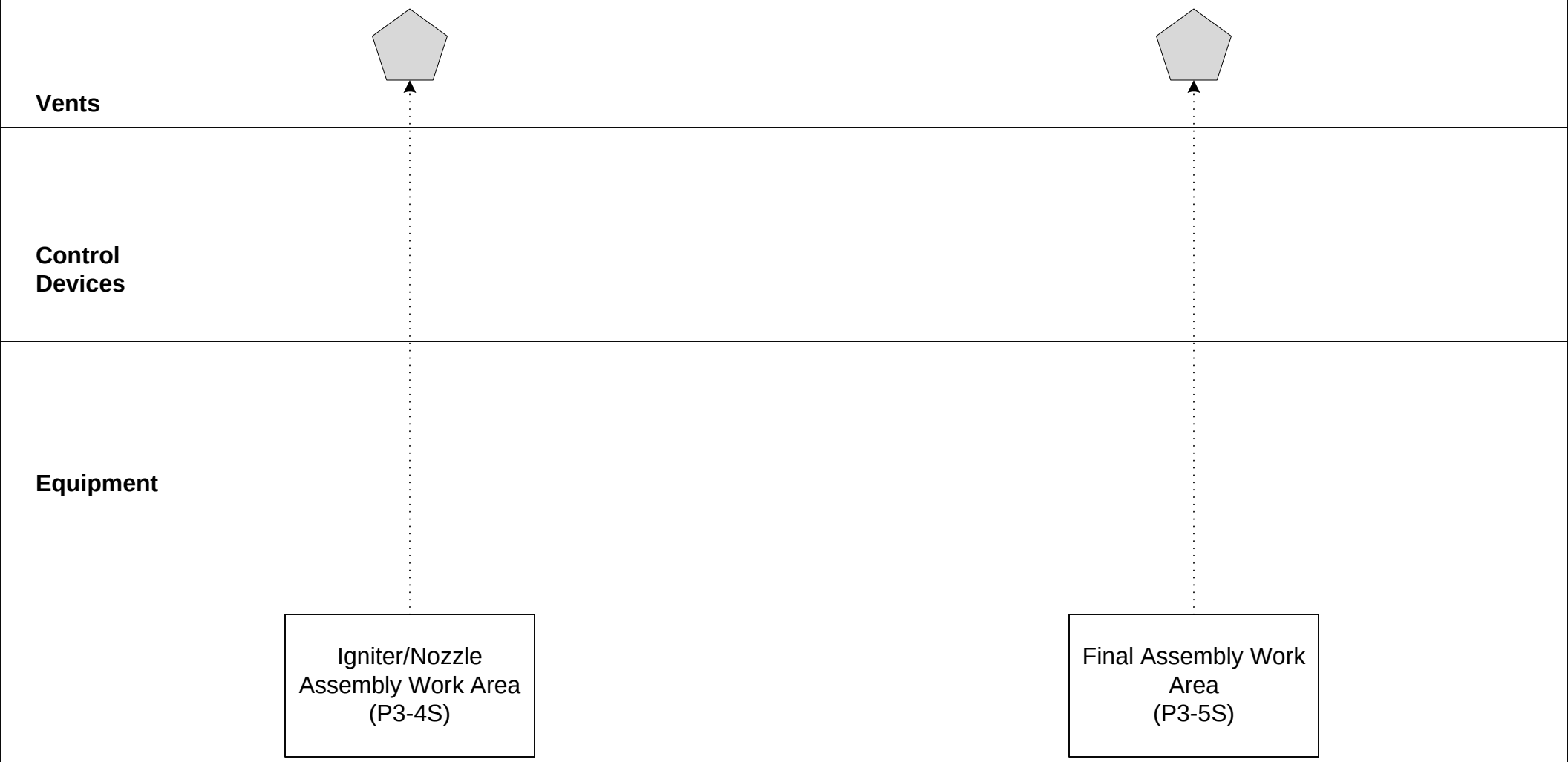
Building 3040 Process Flow
(Tooling & Casting Equipment Clean-Up)



Allegany Ballistics Laboratory
Operated by Alliant Techsystems Operations LLC
Rocket Center, WV 26726

Vents Inside Building
Process Flow
Emissions Stream

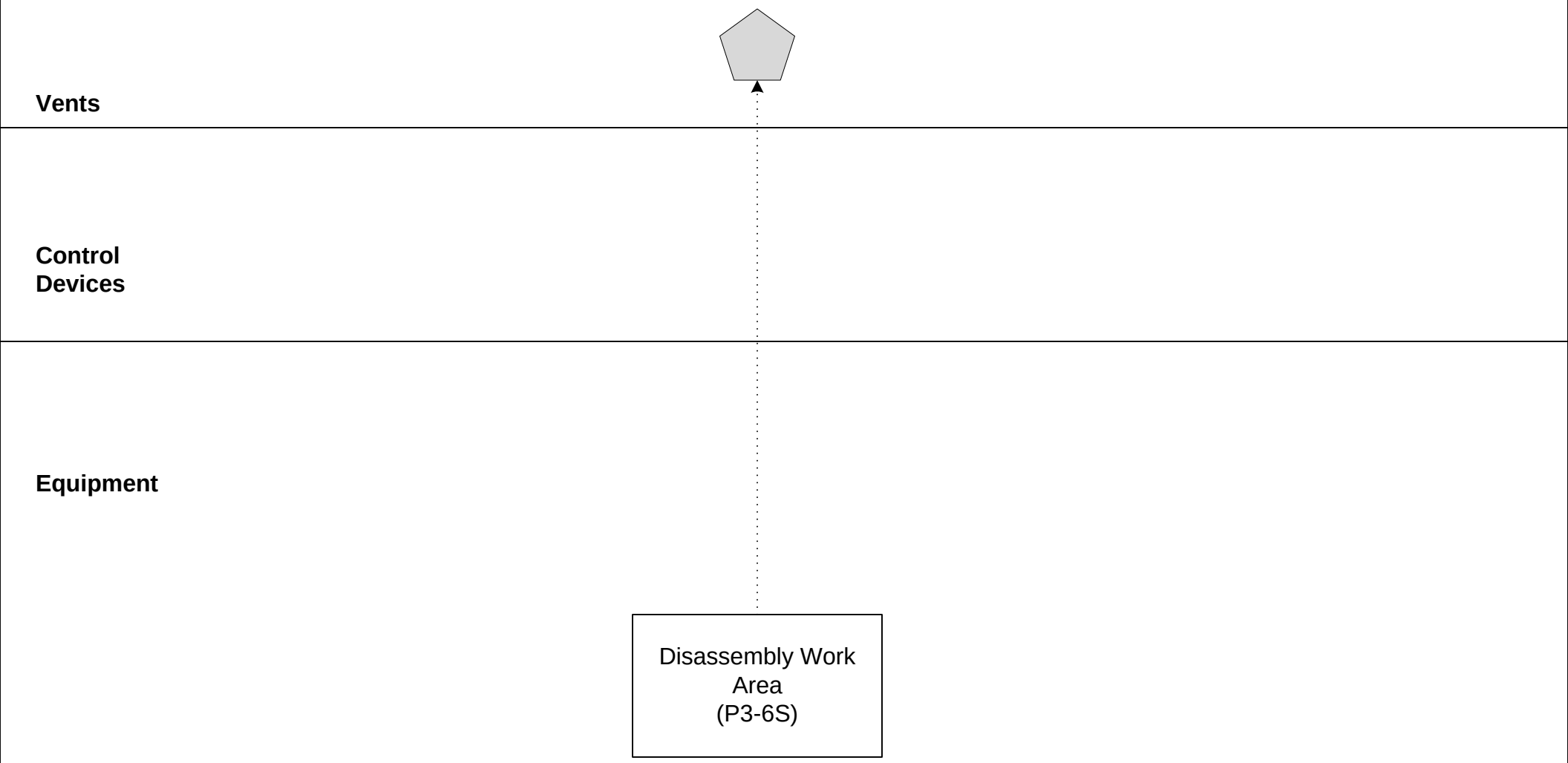
Building 3040 Process Flow
(Igniter/Nozzle Assembly & Final Assembly)



Allegany Ballistics Laboratory
Operated by Alliant Techsystems Operations LLC
Rocket Center, WV 26726

Vents Inside Building
Process Flow
Emissions Stream

Building 3040 Process Flow (Disassembly)



Allegany Ballistics Laboratory
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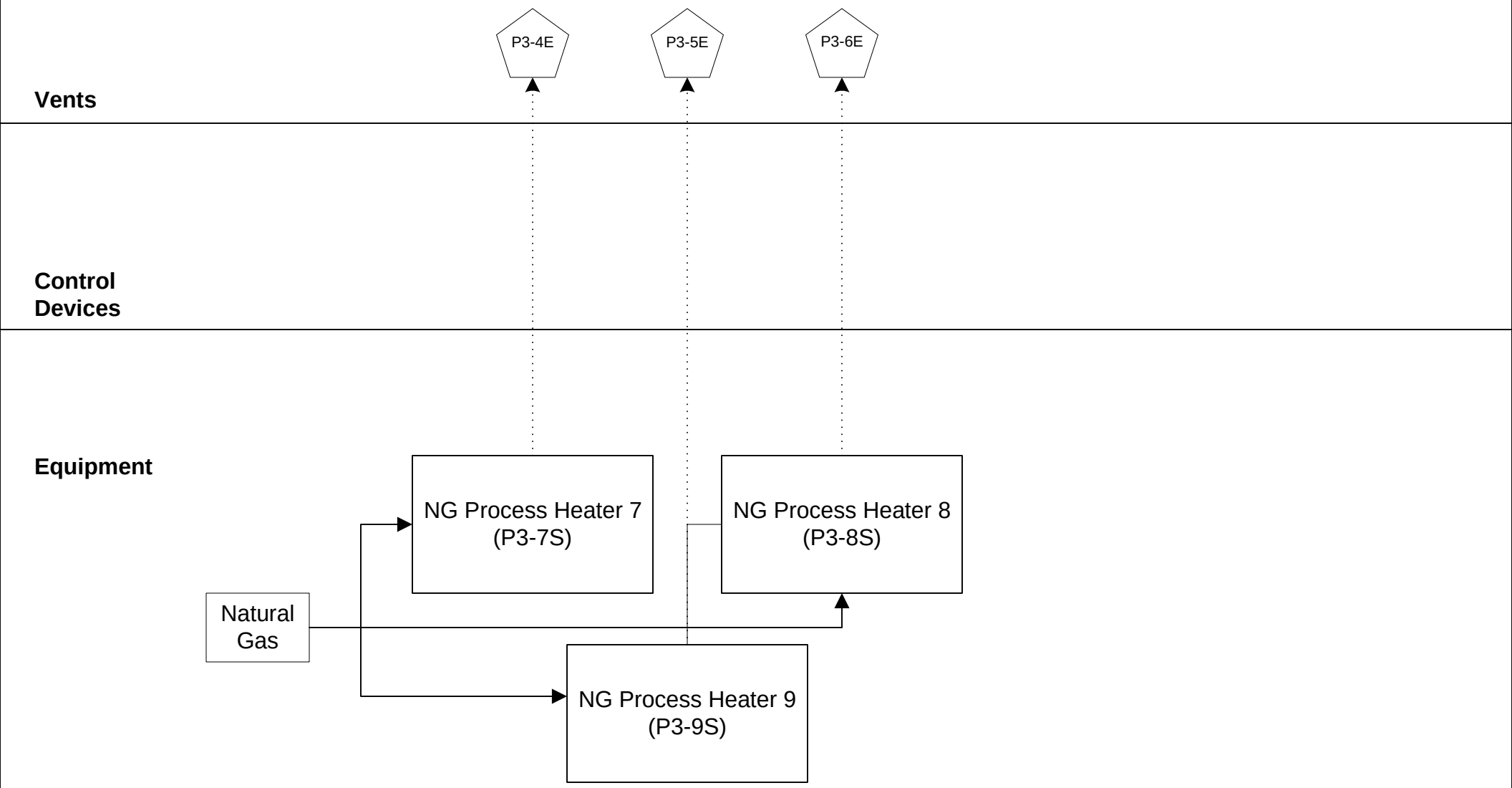
Rocket Center, WV 26726

Vents Inside Building

Process Flow

Emissions Stream

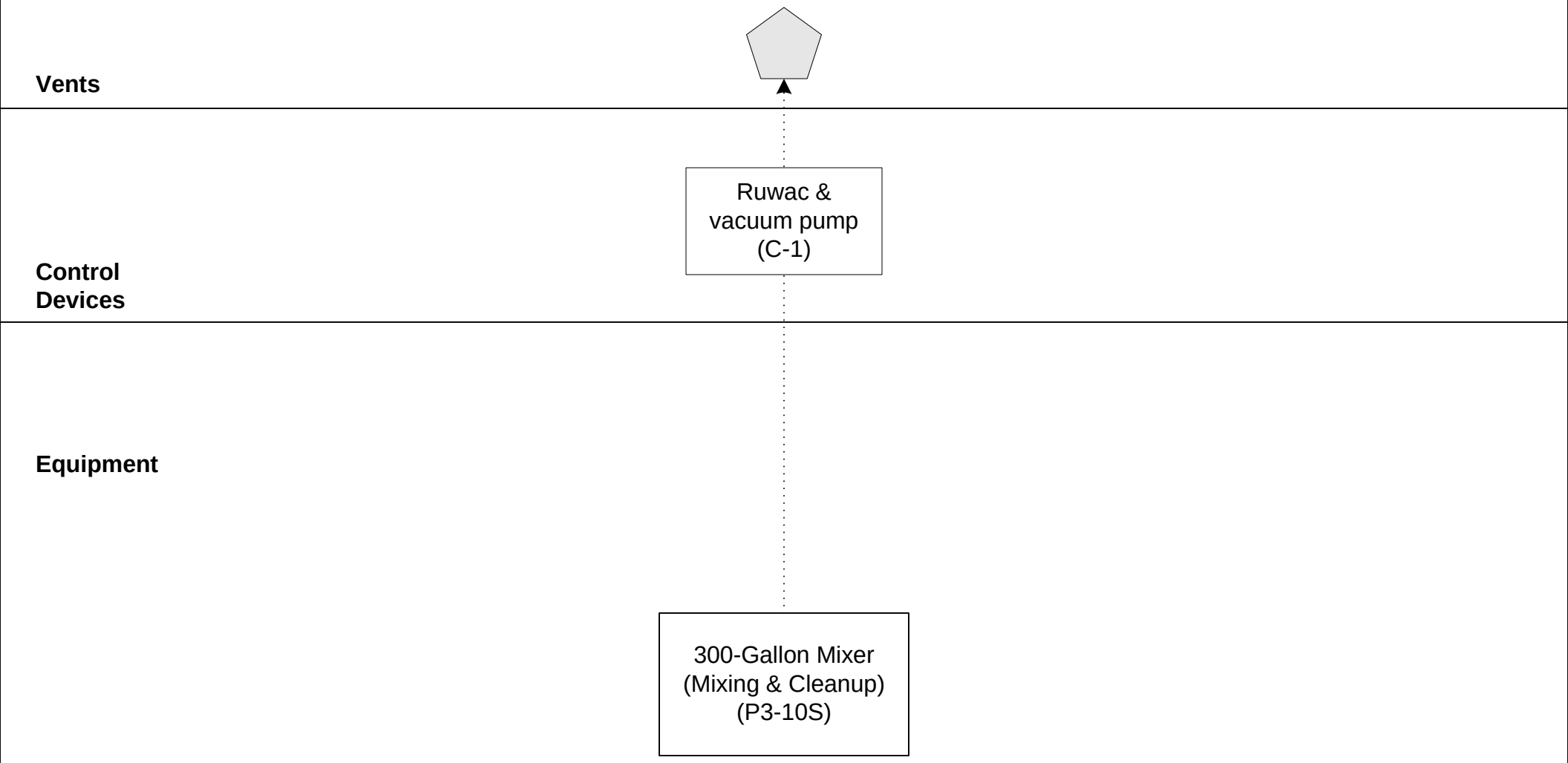
Building 3030A Process Flow
(Plant 3 Cure Bay Process Heaters)



Allegany Ballistics Laboratory
Operated by Alliant Techsystems Operations LLC
Rocket Center, WV 26726

Vents Inside Building
Process Flow
Emissions Stream

Building 3020 Process Flow
(Mixing & Mixer Cleanup)



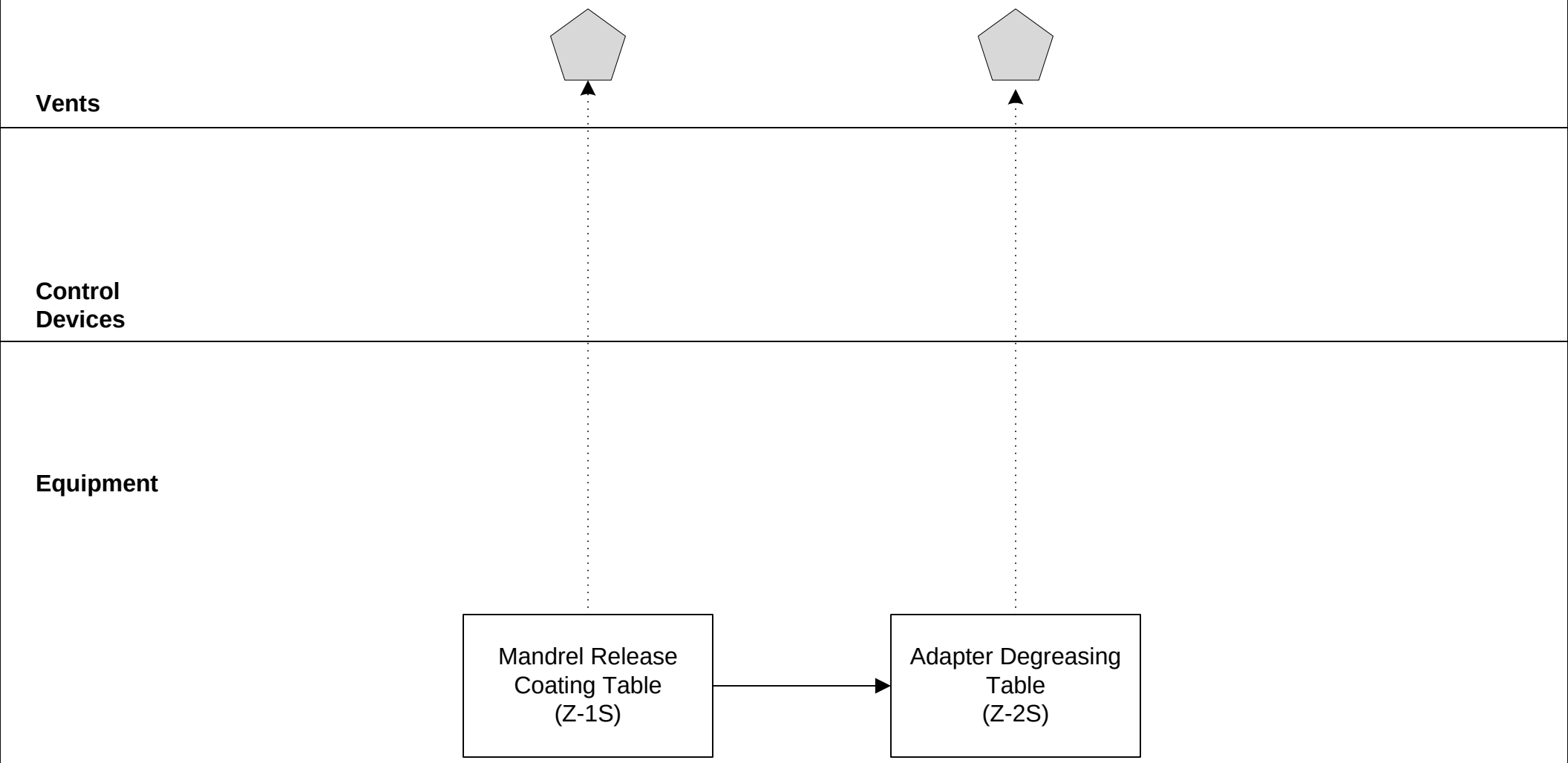
Allegany Ballistics Laboratory
Operated by Alliant Techsystems Operations LLC
Rocket Center, WV 26726

Vents Inside Building

Process Flow

Emissions Stream

Building 256 GMLRS Process Flow (Mandrel Prep & Adapter Prep)



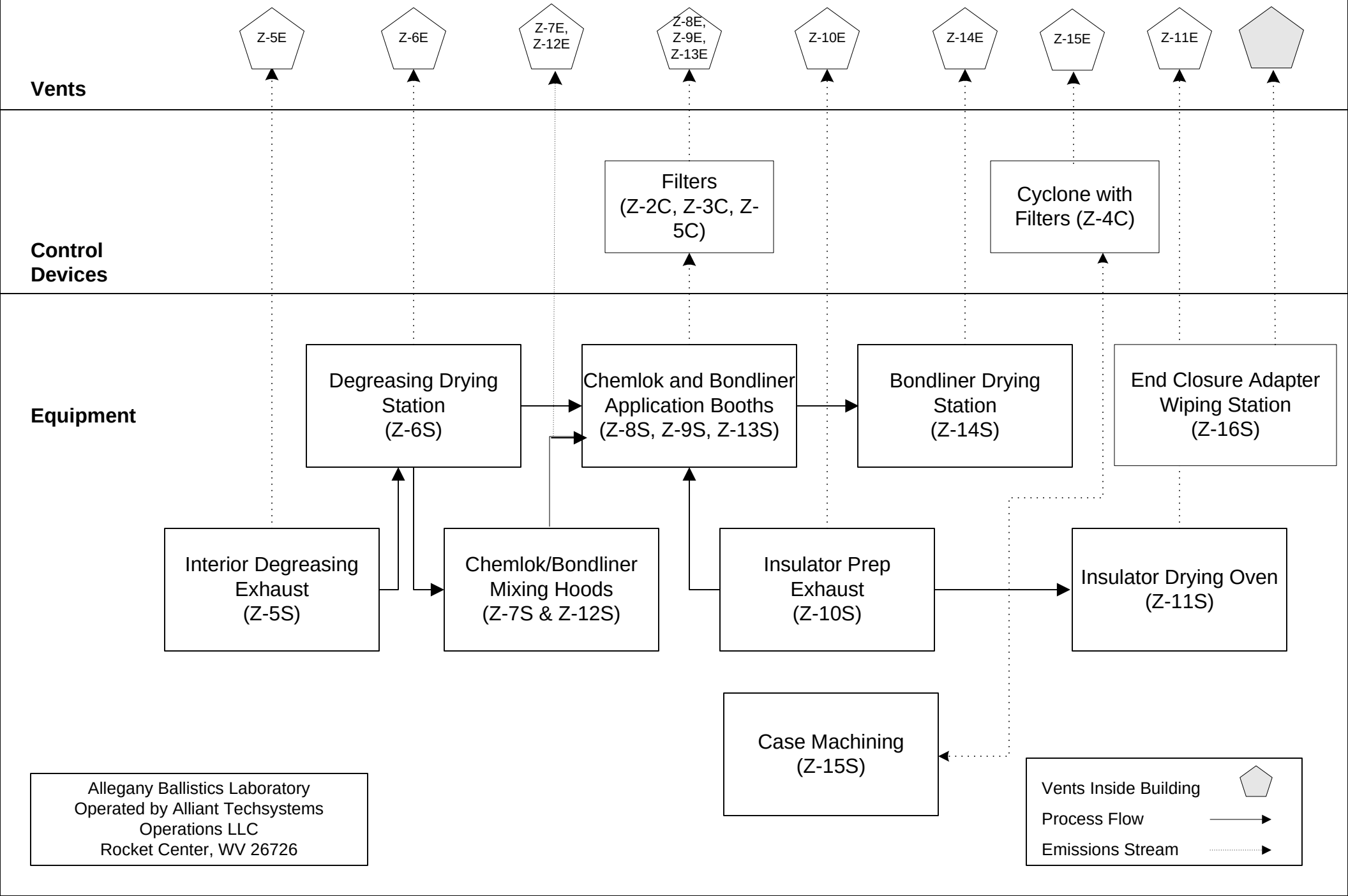
Allegany Ballistics Laboratory
Operated by Alliant Techsystems Operations LLC
Rocket Center, WV 26726

Vents Inside Building

Process Flow

Emissions Stream

Building 256 GMLRS Process Flow (Chamber Preparation)



ATTACHMENT D - Title V Equipment Table

(includes all emission units at the facility except those designated as insignificant activities in Section 4, Item 24 of the General Forms)

Emission Unit ID[1]	Emission Point ID[1]	Emission Unit Description	Year Installed/ Modified	Design Capacity	Control Device[1]
001 Ingredient Preparation – Plant 1					
1-1S	1-1E	Sweco Shaker-262	1981	500 lb/hr	None
1-2S	1-2E	Blender/Dryer Condenser Vacuum Pump-262	1963	Variable	1-8C: Condenser
1-3S (25s)	1-3E (23e)	Grinder-262	1981	500 lb/hr	1-1C: Dust Control Filter
1-4S (26s)	1-4E (24e)	Nitrate Ester Sparge-352 (original)	1988	1200 lb/hr lacquer	1-2C: Cryogenic Recovery
1-4S (26s)	1-13E	Nitrate Ester Sparge-352 (secondary)	2016	1200 lb/hr lacquer	1-10C: Cryogenic Recovery
1-5S	NDV	Chemical Mixing Area-373	1993	Variable	1-3C: Carbon bed
1-6S	NDV	Parts Cleaning-373	1993	Variable	1-3C: Carbon bed
1-7S	1-5E	Sweco Shaker-374	1997	700 lb/hr	None
1-8S (41s)	1-6E (41e)	Blender/Dryer Condenser Vacuum Pump-374	2001	Variable	1-9C: Condenser
1-9S (40s)	1-7E (40e)	Grinder Mill-374	1993	700 lb/hr	1-4C: Dust Control Filter
1-10S	1-8E	RDX Drain Table-374	1997	Variable	None
1-11S (44s)	1-9E (44e)	Handling System-384	1994	Variable	1-5C: Dust Control Filter
1-12S (48s)	1-12E (48e)	Weighing System-384	1995	Variable	1-6C: Dust Control Filter (HEPA)
1-13S	1-10E	Heptane Storage Tank-384	1995	500 gallons	None
1-14S (45s/47s)	1-10/11E (45e/47e)	Mix Bowl-384	1995	500 lb	1-7C: Condenser
1-15S	1-10E	Attritor-384	1995	500 lb	None
1-16S	NDV	3-Roll Mill-384	1995	NA	None
1-17S	NDV	Electric Drying Oven-271	Early 80s	Variable	None
1-18S	NDV	Electric Drying Oven-271	Early 80s	Variable	None
002 Chamber Preparation – Plant 1					
2-11S(54s)	2-9E (54e)	Walk-In Spray Booth-167	1980	Variable	2-7C: Fabric filter
2-8S	NDV*	Progressive Blasting Systems Grit Blaster-420	1999	200 lb/hr	2-1C: Cyclone dust collector
2-10S	NDV	Two Roll Mill-420	1999	NA	None

Emission Unit ID[1]	Emission Point ID[1]	Emission Unit Description	Year Installed/ Modified	Design Capacity	Control Device[1]
2-12S	2-10E	Fume Hood for CBL-420	1999	Variable	None
2-13S	2-11E	Case Bond Liner Spray Booths-420	1999	Variable	2-5C: Fabric filters
2-14S	2-11E	Case Bond Liner Spray Booths-420	1999	Variable	2-6C: Fabric filters
2-15S	2-12E	Drying Oven-420	1999	Variable	None
2-16S	2-13E	Actrel Degreaser-420	1999	355 gal	None
2-17S	2-14E	Actrel Solvent Recovery Still System-420	1999	50 gal/hr	None
2-18S	2-15E	Stencil Booth-420 Bay 3	2010	Variable	2-7C: Fabric filters
2-19S	2-16E	Crossdraft Paint Booth – B432	2021	Varies	2-9C: 3 Stage Filtration
2-20S	2-17E	Crossdraft Paint Booth – B432	2021	Varies	2-10C: 3 Stage Filtration
003 Mixing & Casting Operations - Plant 1					
3-1S	NDV	50 Gallon Mixer-302	1964	50 gallons	None
3-2S	NDV	Casting Pits-308	1964	50 gallons	None
3-4S	NDV	Casting Pits-356	1990	150 gallons	None
3-5S	NDV	Linear Casting Line	1980	150 gallons	None
3-6S	NDV	300 Gallon Mixer-375	2012	300 gallons	None
005 Propellant Machining - Plant 1					
5-1S	NDV	Drilling/machining equipment-410	1996	NA	None
006 Loading/Inspection/Final Assembly - Plant 1					
6-1S	NE	X-Ray equipment-180	1981	Variable	None
6-2S	NE	X-Ray equipment-360	1991	Variable	None
6-3S	6-1E	XO-Mat X-Ray Developer System-360	1991	Variable	None
6-4S (144s)	6-2E (144e)	Paint Booth-364	1995	Variable	6-1C: Fabric filter
6-5S	6-3E	Exhaust Hood-386	1995	Variable	None
6-13S	6-10E	Large & Small Temperature Chambers-386	1995	NA	None
6-14S	6-11E	Large & Small Temperature Chambers-386	1995	NA	None
6-6S (152s)	6-4E (152e)	Paint Booth-392	1995	Variable	6-2C: Fabric filter
6-7S (153s)	6-5E (153e)	Paint Booth-392	1995	Variable	6-3C: Fabric filter

Emission Unit ID[1]	Emission Point ID[1]	Emission Unit Description	Year Installed/ Modified	Design Capacity	Control Device[1]
6-8S (154s)	6-6E (154e)	Paint Booth-392	1995	Variable	6-4C: Fabric filter
6-9S (155s)	6-7E (155e)	Paint Booth-392	1995	Variable	6-5C: Fabric filter
6-10S	6-8E	Teflon Spray Booth-412	1997	Variable	6-6C: Fabric filter
6-11S	6-8E	Teflon Drying Oven-412	1997	3 mm BTU/hr	None
6-12S	6-9E	Decontamination Oven-412	1997	1.5 mm BTU/hr	None
007 Mold Parts Cleanup - Plant 1					
7-1S (10s)	7-1E	Parts Washer-moved from 151 to 407	Pre-1970	36 gallons	None
7-2S (11s)	7-2E	Parts Washer-moved from 151 to 407	Pre-1970	35 gallons	None
7-3S	7-3E	Parts Washer-407 (6 pans)	1997	125 gallons (6)	None
7-4S	7-3E	Parts Washer-407	1997	35 gallons	None
7-5S	7-3E	Parts Washer-407 (2 pans)	1997	52 gallons	None
7-6S	7-4E	Acetone Recovery Unit	1997	5.5 gal/hr	None
00C Gas Generator Fabrication - Plant 1					
C-1S	C-1E	Cellulose Acetate Machine-420B2	2000	NA	None
C-2S	C-2E	Weigh-Out and Mixing Hood-180	2012	Variable	None
C-3S	NDV	Inhibiting Area-180	2012	Variable	None
C-4S	NDV	Vacuum Pump-180	2012	Variable	None
00E Ingredient Preparation - Plant 2					
E-1S (15s)	NDV	Gustafson Grinder System-2003	1978	500 lb/hr	E-1C: Mikro-D Pulsaire dust collector
E-2S	NDV	Mikro Airlock Grinder System-2003	1978	500 lb/hr	E-2C: Mikro-D Pulsaire dust collector
E-3S	NDV	Walk-In Freezer-2015	Pre-80s	Variable	None
E-4S	NDV	Walk-In Freezer-2015	Pre-80s	Variable	None
00F Chamber Preparation - Plant 2					
F-1S	F-1E	Binks Chemlok/Sparrow Spray Booth-2014	Pre-80s	Variable	F-1C: Fabric filters
F-2S	F-21E	Slinger-2014	1999	Variable	None
F-3S	NDV	3-Roll Mill-2014	Pre 80s	Variable	None
F-4S	F-2E	Curing/Drying Oven #3-2014	1994	Variable	None

Emission Unit ID[1]	Emission Point ID[1]	Emission Unit Description	Year Installed/ Modified	Design Capacity	Control Device[1]
F-5S	F-3E	Binks Paint Booth-2014	1994	Variable	F-2C: Fabric filters
F-6S	F-4E	Small Actrel Solvent Distillation Units-2014	1995	8 gal/hr	None
F-7S (16s)	F-5E (16e)	Vertical Spray Booth – Paint [Intermediate (Sparrow) Line] –2014	1978	Variable	F-3C: Fabric filters
F-8S	F-6E	Trinco DP850 Grit Blast Cabinet-2014	1978	Variable	F-4C: Cyclone dust collector
F-9S	F-7E	Actrel Degreaser [Intermediate (Sparrow) Line] –2014	1995	17 gal/min	None
F-10S	F-8E	Drying Oven #1 [Intermediate (Sparrow) Line] –2014	1978	Variable	None
F-11S	F-8E	Drying Oven #4 [Intermediate (Sparrow) Line] –2014	1978	Variable	None
F-12S (7s)	F-9E (7e)	Case Bondliner Paint Booth [Intermediate (Sparrow) Line] –2014	1978	Variable	F-5C: Fabric filters
F-13S	F-10E	Drying Oven #2 [Intermediate (Sparrow) Line] – 2014	1978	Variable	None
F-14S	NDV	Ross Mixer-5 gallon [Intermediate (Sparrow) Line] – 2014	1980	5 gallon	None
F-15S	NDV	Ross Mixer-1 gallon [Intermediate (Sparrow) Line] – 2014	1968	1 gallon	None
F-16S	VI	Cowles Dissolver/Mixer/Disperer [Intermediate (Sparrow) Line] -2014	1968	5 gallon	None
F-17S	F-11E	Vertical Spray Booth – Alodine [Intermediate (Sparrow) Line] –2014	1978	Variable	F-6C: Demister
F-18S	NDV	Benchtop Electric Curing Oven #7 [Intermediate (Sparrow) Line] –2014	1968	Variable	None
F-19S	F-12E	Mold Release Spray Booth [Intermediate (Sparrow) Line] –2014	1988	Variable	F-7C: Fabric filters
F-20S	F-13E	DeVilbiss Horizontal Spray Booth-2014	1980	Variable	F-8C: Fabric filter
F-21S (27s)	F-14E (25e)	Zero Mfg. Grit Blaster (Large Motor Line) –2014	1988	500 lb/hr grit	F-9C: Cyclone dust collector
F-22S	F-15E	Actrel Degreaser (Large Motor Line) –2014	1995	17 gal/min	None
F-23S (29s)	F-16E (27e)	Binks Vertical Internal Paint Booth (Large Motor Line) –2014	1988	Variable	F-10C: Fabric filter
F-24S (31s)	F-17E (29e)	Paint/Degreaser Drying Room/Oven #5 (Large Motor Line) –2014	1988	Variable	None
F-25S (30s)	F-18E (28e)	Binks Vertical Paint Booth (Large Motor Line) –2014	1988	Variable	F-11C: Fabric filter
F-26S	F-19E	Actrel Vacuum Still & Storage Tank (Large Motor Line) –2014	1995	60 gal/hr	None
F-27S	F-20E	Drying Oven #6-2014	1980	Variable	None

Emission Unit ID[1]	Emission Point ID[1]	Emission Unit Description	Year Installed/ Modified	Design Capacity	Control Device[1]
00G Mixing & Casting Operations - Plant 2					
G-2S		Mixer-300 gallon-2000	1968	300 gallon	None
G-3S		Casting Pit-2000	1968	300 gallon	None
G-4S	G-2E	Feed Hopper Exhaust Hood-2000	1968	Variable	G-1C: Fabric filter
00I Disassembly/Machining - Plant 2					
I-1S	I-1S	I-1S	I-1S	I-1S	I-1S
00J Loading/Inspection/Final Assembly - Plant 2					
J-1S	NDV	Varian X-Ray equipment-2010	1990	Variable	None
J-2S	OS	Kodak XO-Mats X-Ray Processor-2010	1990	Variable	None
J-3S	J-1E	Drying Oven-2011	1980	Variable	None
J-4S (8s)	J-2E (8e)	Interior Coating Spray Line-2011	1980	Variable	J-1C: Fabric filter
J-5S	J-3E	Vacuum Test System-2011	1980	Variable	None
J-7S	J-4E	Automated Case Painting System-368 Annex	2000-moved in 2012	Variable	J-2C: Fabric filters
J-8S	J-5E	Stenciling Booth-2031	2000	Variable	J-3C: Fabric filters
J-9S	J-6E	Drying Oven-2031	2000	Variable	None
J-10S	J-7E	Stenciling Conveyor-2011	1978	Variable	J-4C: Fabric filter
B-95S	B-27E	Pittsburgh Spray Booth-2031	2000 – moved in 2012	Variable	B-11C
B-102S	B-34E	Pittsburgh Spray Booth-2031	2008 – moved in 2012	Variable	B-14C
J-11S	J-8E	Stenciling Booth 2039	2012	Variable	J-5C: Fabric filter
00K Mold Parts Cleanup - Plant 2					
K-1S	OS	Parts Washer-8203	1978	NA	None
K-2S(9s)	K-1E (9e)	Parts Washer-8203	1978	56 gallons	None
K-3S (9s)	K-1E (9e)	Parts Washer-8203	1978	56 gallons	None
K-4S	OS	Parts Washer-8203	1978	NA	None
K-5S (14s)	K-2E (14e)	Solvent Recovery System-8203	2001	5 gal/hr	None
00P3 GMLRS Rocket Motor Manufacture – Plant 3					
P3-1S	P3-1E	Heptane Wash Tank (Casting Eq.)	2018	80 gallon	None
P3-2S	P3-2E	Heptane Wash Tank (Tooling)	2018	80 gallon	None

Emission Unit ID[1]	Emission Point ID[1]	Emission Unit Description	Year Installed/ Modified	Design Capacity	Control Device[1]
P3-3S	P3-3E	IPA Wash Tank (Tooling)	2018	80 gallon	None
P3-4S	Fugitive	Igniter/Nozzle Assembly Work Area	2018	3 gal/shift	None
P3-5S	Fugitive	Final Assembly Work Area	2018	2 gal/shift	None
P3-6S	Fugitive	Disassembly Work Area	2018	2 gal/shift	None
P3-7S	P3-4E	NG Process Heater for Cure Bays	2018	0.5 MMBtu	None
P3-8S	P3-5E	NG Process Heater for Cure Bays	2018	0.5 MMBtu	None
P3-9S	P3-6E	NG Process Heater for Cure Bays	2018	0.5 MMBtu	None
P3-10S	Fugitive	Mixer Cleanup (QED)	2018	1 gal/shift	None
00Z GMLRS Chamber Preparation – Plant 1					
Z-1S	Fugitive	Mandrel Release Coating Table	2016	N/A	None
Z-2S	Fugitive	Adapter Degreasing Table	2016	N/A	None
~~Z-3S~~	~~Z-3E~~	~~BR-127 Primer Booth~~	~~2017~~	~~2 gal/hr~~	~~Z-1C~~
~~Z-4S~~	~~Z-4E~~	~~Adapter/BR-127 Oven~~	~~2017~~	~~N/A~~	~~None~~
Z-5S	Z-5E	Interior Degreasing Exhaust	2016	N/A	None
Z-6S	Z-6E	Degreasing Drying Station	2016	N/A	None
Z-7S	Z-7E	Chemlok Mixing Hood	2016	N/A	None
Z-8S	Z-8E	Chemlok Application Booth	2016	1 gal/hr	Z-2C
Z-9S	Z-9E	Chemlok Application Booth	2016	N/A	Z-5C
Z-10S	Z-10E	Insulator Prep Exhaust	2016	N/A	None
Z-11S	Z-11E	Oven for Insulator Drying	2016	N/A	None
Z-12S	Z-12E	Bondliner Mixing Hood	2017	N/A	None
Z-13S	Z-13E	Bondliner Application Booth	2017	1 gal/hr	Z-3C
Z-14S	Z-14E	Bondliner Drying Station	2017	N/A	None
Z-15S	Z-15E	Case Machining	2016	2 units/hr	Z-4C
Z-16S	Fugitive	End Closure Adapter Wiping Station	2016	N/A	None
00P4 AARGM Rocket Motor Final Assembly – Plant 4					
P4-1S	P4-1E	Crossdraft Paint Booth – B4020	2024	Varies	P4-1C: 3 Stage Filtration
P4-2S	P4-2E	Crossdraft Paint Booth – B4020	2024	Varies	P4-2C: 3 Stage Filtration
P4-3S	P4-3E	Crossdraft Paint Booth – B4020	2024	Varies	P4-2C: 3 Stage Filtration

P4-4S	P4-4E	Crossdraft Paint Booth – B4020	2024	Varies	P4-3C: 3 Stage Filtration

[1]For 45CSR13 permitted sources, the numbering system used for the emission points, control devices, and emission units should be consistent with the numbering system used in the 45CSR13 permit. For grandfathered sources, the numbering system should be consistent with registrations or emissions inventory previously submitted to DAQ. For emission points, control devices, and emissions units which have not been previously labeled, use the following 45CSR13 numbering system: 1S, 2S, 3S,... or other appropriate description for emission units; 1C, 2C, 3C,... or other appropriate designation for control devices; 1E, 2E, 3E, ... or other appropriate designation for emission points.

ATTACHMENT E - Emission Unit Form

Emission Unit Description **Sweco Shaker – Bldg 262 & 374**

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
1-1E / 1-5E	Sweco Shaker – 262 & 374	None

Provide a description of the emission unit (type, method of operation, design parameters, etc.; for engines, please indicate compression or spark ignition, lean or rich, four or two stroke, non-emergency or emergency, certified or not certified, as applicable)

Bldg 262 - Sweco Shaker (ID# 1-1S) - used to screen nitramines into the blender and remove large clumps. Vents to atmosphere through vent ID# 1-1E.

Bldg 374 - Sweco Shaker (ID# 1-7S) - used to screen nitramines into the blender and remove large clumps. Vents to atmosphere through vent ID# 1-5E.

Manufacturer:	**Model number:**	**Serial number:**
Sweco		
Construction date:	**Installation date:**	**Modification date(s):**
1981 / 2002	1981 / 2002	None

Design Capacity (examples: furnaces - tons/hr, tanks – gallons, boilers – MMBtu/hr, engines - hp):
Variable

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
500 lb / hr	1834 TPY	4,160 hours/year

Fuel Usage Data **(fill out all applicable fields) NA**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating:	**Type and Btu/hr rating of burners:**

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data

Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO_X)		
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)		
Particulate Matter (PM_{10})		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO_2)		
Volatile Organic Compounds (VOC)		

Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
NA		

Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
NA		

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Potential emissions are based on permit limits provided for blender/dryer in Bldg 374 under permit R13-1455A.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

There are no underlying applicable requirements associated with this equipment.

_X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

There are no specified monitoring/testing/recordkeeping/ reporting requirements for this equipment.

Are you in compliance with all applicable requirements for this emission unit? _X

_Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description Blender/Dryer – Bldg 262 & 374

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
1-2E / 1-6e	Blender/Dryer – 262 & 374	1-8C / 1-9C

Provide a description of the emission unit (type, method of operation, design parameters, etc.; for engines, please indicate compression or spark ignition, lean or rich, four or two stroke, non-emergency or emergency, certified or not certified, as applicable)

Bldg 262 - Blender/Dryer (ID# 1-2S) - used to remove the water/isopropanol packaging solution from the nitramine material prior to grinding. The blender allows for maximum drying efficiency from the heat which is applied to the unit. The solution that is driven off is condensed and collected for disposal. The condenser vacuum pump vents to atmosphere through vent ID# 1-2E

Bldg 374 - Blender/Dryer (ID# 1-8S) - used to remove the water/isopropanol packaging solution from the nitramine material prior to grinding. The blender allows for maximum drying efficiency from the heat which is applied to the unit. The solution which is driven off is condensed and collected for disposal. The condenser vacuum pump will vent to atmosphere through vent ID# 1-6E. The installation of the dryer took place in 2002. However, the first batch dried in Bldg 374 did not occur until April 10, 2008.

Manufacturer:	**Model number:**	**Serial number:**
Paul O. Abbe	Unknown	N00061 / N00984
Construction date:	**Installation date:**	**Modification date(s):**
1981 / 2002	1981 / 2002	None

Design Capacity (examples: furnaces - tons/hr, tanks – gallons, boilers – MMBtu/hr, engines - hp):
Variable

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
500 lb / hr	1834 TPY	4,160 hours/year

Fuel Usage Data **(fill out all applicable fields) NA**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating:	**Type and Btu/hr rating of burners:**

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data

Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO_X)		
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)		
Particulate Matter (PM_{10})		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO_2)		
Volatile Organic Compounds (VOC)		

Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
None		

Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
NA		

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Potential emissions are based on permit limits provided for blender/dryer in Bldg 374 under permit R13-1455A.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

1. Emission Limits – R30-05700011-2019: 4.1.1., 4.1.3., 4.1.4; 45CSR13, R13-1455A, A.1., A-3., A.4.

__X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

1. Testing – R30-05700011-2019: 3.3.1.-3.3.4., 4.3.1.; 45CSR13, R13-1455A, B.2., B.7., B.8
2. Monitoring &Recordkeeping - R30-05700011-2019: 4.2.1., 4.4.1., 4.4.2,; 45CSR13, R13-1455A, B.1., B.3.; 45CSR30-5.1.c.

Are you in compliance with all applicable requirements for this emission unit? __X__ Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description Nitramine Grinders – Bldg 262 & 374

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
1-3E / 1-7E	Grinder – 262 & 374	1-1C / 1-4C

Provide a description of the emission unit (type, method of operation, design parameters, etc.; for engines, please indicate compression or spark ignition, lean or rich, four or two stroke, non-emergency or emergency, certified or not certified, as applicable)

Bldg 262 - Nitramine Grinder (ID# 1-3S) - used to grind incoming nitramine material to specific particle sizes for various propellant formulations. Vents to atmosphere through vent ID# 1-3E.

Bldg 374 – Nitramine Grinder (ID# 1-9S) - used to grind incoming nitramine material to specific particle sizes for various propellant formulations. Vents to atmosphere through vent ID# 1-7E.
Due to building and equipment issues, this grinder is still not operational (as of June 2008).

Manufacturer:	**Model number:**	**Serial number:**
Mikro Pulsaire Jet-O-Mizer	0304	Unknown
Construction date:	**Installation date:**	**Modification date(s):**
1981 / 1992	1981 / 1992	None

Design Capacity (examples: furnaces - tons/hr, tanks – gallons, boilers – MMBtu/hr, engines - hp):
700 lb nitramine / hour

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
700 lb / hr	1834 TPY	4,160 hours/year

Fuel Usage Data **(fill out all applicable fields) NA**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating:	**Type and Btu/hr rating of burners:**

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data

Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO_X)		
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)		
Particulate Matter (PM_{10})		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO_2)		
Volatile Organic Compounds (VOC)		

Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
NA		

Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
NA		

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Potential emissions are based on production limits provided for grinder in Bldg 374 under permit R13-1455A with an engineering estimate of 1% of the grind total lost to the cyclone system, which is 99.9% efficient.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

1. Emission Limits – R30-05700011-2019: 4.1.1., 4.1.2., 4.1.4; 45CSR13, R13-1455A, A.1., A.2., A.4.
2. Visible Emissions - R30-05700011-2019: 3.1.10; 45CSR§7-3.1. – 7-8.2; 45CSR13, R13-1455A, B.2.

__X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

1. Testing – R30-05700011-2019: 3.3.1-3.3.4., 4.3.1; 45CSR13, R13-1455A, B.2., B.7., B.8.
2. Monitoring & Recordkeeping - R30-05700011-2019: 4.2.1., 4.4.1., 4.4.2.; 45CSR13, R13-1455A, B.1., B.3.; 45CSR30-5.1.c.
3. Visible Emissions – R30-05700011-2019: 3.2.1., 3.4.4.; 45CSR§30-5; 45CSR§7-5.1 & 7-5.2.

Are you in compliance with all applicable requirements for this emission unit? _X_ Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description RDX Drain Table 374

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
1-8E	RDX Drain Table 374	None

Provide a description of the emission unit (type, method of operation, design parameters, etc.; for engines, please indicate compression or spark ignition, lean or rich, four or two stroke, non-emergency or emergency, certified or not certified, as applicable)

RDX Drain Table (ID# 1-10S) - used to drain excess water/isopropanol packaging solution prior to adding material to blender. Vents to atmosphere through vent ID# 1-8E. The water/isopropanol solution is condensed and shipped off site for incineration.

Manufacturer:	**Model number:**	**Serial number:**
Unknown		

Construction date:	**Installation date:**	**Modification date(s):**
2002	2002	None

Design Capacity (examples: furnaces - tons/hr, tanks – gallons, boilers – MMBtu/hr, engines - hp):
Variable

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
500 lb / hr	1834 TPY	4,160 hours/year

Fuel Usage Data **(fill out all applicable fields) NA**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating:	**Type and Btu/hr rating of burners:**

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO_X)		
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)		
Particulate Matter (PM_{10})		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO_2)		
Volatile Organic Compounds (VOC)		
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
NA		
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
NA		

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Potential emissions are based on permit limits provided for blender/dryer in Bldg 374 under permit R13-1455A.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

There are no underlying applicable requirements associated with this equipment.

__X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

There are no specified monitoring/testing/recordkeeping/ reporting requirements for this equipment.

Are you in compliance with all applicable requirements for this emission unit? _X_Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description Nitrate Ester Sparge Line – Bldg 352

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
1-4E / 1-13E	Nitrate ester sparge line	1-2C / 1-10C

Provide a description of the emission unit (type, method of operation, design parameters, etc.; for engines, please indicate compression or spark ignition, lean or rich, four or two stroke, non-emergency or emergency, certified or not certified, as applicable)

Nitrate Ester Sparge (ID# 1-4S) – Nitroglycerin (NG) must be desensitized prior to transportation over the highways. Methylene chloride is added to the NG as a desensitizer. Before the NG can be used for propellant manufacture, the methylene chloride must be removed.

Air is bubbled through the desiccators (shipping and handling containers) to drive off the methylene chloride from the NG and BTTN compositions containing Methylene chloride. Vents to atmosphere through vent ID# 1-4E or 1-13E.
NOTE: The new recovery unit (1-10C – emission point 1-13E) has not been brought online to date.

Manufacturer:	**Model number:**	**Serial number:**
Yoder	None / SVR-6-DCFI	None
Construction date:	**Installation date:**	**Modification date(s):**
01-01-88 / 11-2015	01-01-88 / 05-2016	2001 (changed from Freon 13 to R-23) / New installation

Design Capacity (examples: furnaces - tons/hr, tanks – gallons, boilers – MMBtu/hr, engines - hp):
Dessicator – 2500 lbs lacquer

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
1200 lbs lacquer	125,000 lbs lacquer	8,400 hours/year

Fuel Usage Data **(fill out all applicable fields) NA**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating:	**Type and Btu/hr rating of burners:**

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data

Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO_X)		
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)		
Particulate Matter (PM_{10})		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO_2)		
Volatile Organic Compounds (VOC)		

Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Methylene chloride		1.995

Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
NA		

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Permit limits set in R13-0898C.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

1. Emission Limits – R30-05700011-2019: 4.1.11-4.1.12, 4.1.14; 45CSR13, R13-0898C; 4.1.1. - 4.1.3.; 45CSR13-5.11

__X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

1. Monitoring & Recordkeeping – R30-05700011-2019: 3.4.1., 3.4.2., 4.4.6.-4.4.9., 4.5.1; 45CSR13, R13-0898C: 4.2; 45CSR30-5.1.c.; 45CSR13, R13-0898C: 4.2.1., 4.2.2, 4.4.2., 4.4.3., 4.5.1
2. Testing - R30-05700011-2019: 4.3.2.; 45CSR30-5.1.c.; 45CSR13, R13-0898C: 4.3.1.
3. Maintenance – R30-05700011-2019: 4.4.8.; 45CSR 30-5.1.c.; 45CSR13, R13-0898C: 4.4.2

Are you in compliance with all applicable requirements for this emission unit? _X_ Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description Bldg 373 – Chemical Weigh-Out/Mixing Area and Equipment Cleaning

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
NDV	Chemical Mix Area and Cleanup	1-3C

Provide a description of the emission unit (type, method of operation, design parameters, etc.; for engines, please indicate compression or spark ignition, lean or rich, four or two stroke, non-emergency or emergency, certified or not certified, as applicable)

Chemical Mixing Area (ID# 1-5S) - used to mix/weigh raw materials. Vents inside building.

Parts Cleaning (ID# 1-6S) - used to clean various small parts. Vents inside building.

Manufacturer:	**Model number:**	**Serial number:**
Unknown	Unknown	Unknown
Construction date:	**Installation date:**	**Modification date(s):**
1993	1993	None

Design Capacity (examples: furnaces - tons/hr, tanks – gallons, boilers – MMBtu/hr, engines - hp):
Variable

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
Variable	Variable	8,760 hours/year

Fuel Usage Data **(fill out all applicable fields) NA**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating:	**Type and Btu/hr rating of burners:**

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO_X)		
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)		
Particulate Matter (PM_{10})		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO_2)		
Volatile Organic Compounds (VOC)		
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
NA		

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Area is used for weigh out of materials only. Most materials are not regulated pollutants and there are minimal emissions.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

There are no underlying applicable requirements associated with this equipment.

__X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

There are no specified monitoring/testing/recordkeeping/ reporting requirements for this equipment.

Are you in compliance with all applicable requirements for this emission unit? _X_ Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description Lead Handling and Weighing Stations – Bldg 384

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
1-9E and 1-12E	Lead Weigh Out Lead Handling Station	1-5C and 1-6C

Provide a description of the emission unit (type, method of operation, design parameters, etc.; for engines, please indicate compression or spark ignition, lean or rich, four or two stroke, non-emergency or emergency, certified or not certified, as applicable)

--Handling System (ID# 1-11S) - used to control dust generated from loading lead compounds into drying trays prior to grinding. Vents to atmosphere through vent ID# 1-9E.

--Weighing System (ID# 1-12S) - used to control dust from addition of lead compounds and carbon black to the mix bowl. Vents to atmosphere through vent ID# 1-12E.

Manufacturer:	**Model number:**	**Serial number:**
BLC Industries	02HFL22/2	106204 / 106205
Construction date:	**Installation date:**	**Modification date(s):**
MM/DD/YYYY	MM/DD/YYYY	MM/DD/YYYY

Design Capacity (examples: furnaces - tons/hr, tanks – gallons, boilers – MMBtu/hr, engines - hp):
Variable

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
250 lbs / batch	12.5 TPY	1,092 hours/year

Fuel Usage Data **(fill out all applicable fields) NA**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating:	**Type and Btu/hr rating of burners:**

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data

Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO_X)		
Lead (Pb)	1	Negligible
Particulate Matter ($PM_{2.5}$)		
Particulate Matter (PM_{10})		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO_2)		
Volatile Organic Compounds (VOC)		

Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY

Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
NA		

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Potential emissions are based on engineering estimates.
250 lbs lead / batch x 100 batches = 25,000 lbs of lead weighed or handled
Use 99.99% efficient HEPA filters = 25,000 x 0.001 x 0.001 = 0.025 lbs lead emitted

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

1. Emission Limits – R30-05700011-2019: 4.1.5., 4.1.9.; 45CSR13, R13-1694B, A.1. & A.5.
2. Visible Emissions – R30-05700011-2019: 3.1.10; 45CSR§7-5.1 & 7-5.2.

__X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

1. Monitoring & Recordkeeping – R30-05700011-2019: 3.2.3., 3.4.4., 4.2.1., 4.4.3.; 45CSR13, R13-1694B, A.5, B.1., B.2.; 45CSR§7-4.1.; 45CSR30-5.1.c
2. Testing – R30-05700011-2019: 3.1.11., 3.3.1.-3.3.4., 4.3.1.; 45CSR§7-3.1.; 45CSR30-5.1.c.; 45CSR13, R13-1694B; B.3., B.6., B.7., B.8.
3. Maintenance – R30-05700011-2019: 4.4.5.; 45CSR 30-5.1.c.

Are you in compliance with all applicable requirements for this emission unit? _<u>X</u>_ Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description Heptane Storage Tank – Bldg 384

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
1-10E	Heptane Storage Tank	None

Provide a description of the emission unit (type, method of operation, design parameters, etc.; for engines, please indicate compression or spark ignition, lean or rich, four or two stroke, non-emergency or emergency, certified or not certified, as applicable)
Heptane Storage Tank (ID# 1-13S) - used to store heptane which is used a grinding media in the system. Vents to atmosphere through vent ID# 1-10E.

Manufacturer:	**Model number:**	**Serial number:**
Hull Industries	Unknown	Unknown

Construction date:	**Installation date:**	**Modification date(s):**
1991	1995	None

Design Capacity (examples: furnaces - tons/hr, tanks – gallons, boilers – MMBtu/hr, engines - hp):
500 gallon

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
Variable	2.08 TPY	8,760 hours/year

Fuel Usage Data **(fill out all applicable fields) NA**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating:	**Type and Btu/hr rating of burners:**

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO_X)		
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)		
Particulate Matter (PM_{10})		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO_2)		
Volatile Organic Compounds (VOC)		
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
NA		

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Potential emissions have not been estimated for the tank since it is a closed system.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

There are no underlying applicable requirements associated with this equipment.

__X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

There are no specified monitoring/testing/recordkeeping/ reporting requirements for this equipment.

Are you in compliance with all applicable requirements for this emission unit? _X_Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description Heptane Storage Tank – Bldg 384

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
1-10E & 1-11E	Lead paste mix bowl and attritor.	1-7C

Provide a description of the emission unit (type, method of operation, design parameters, etc.; for engines, please indicate compression or spark ignition, lean or rich, four or two stroke, non-emergency or emergency, certified or not certified, as applicable)

Mix Bowl (ID# 1-14S) - used to remove heptane from ground lead compounds and to mix lead compounds, carbon black and PGA into a paste. Vents to atmosphere through vent ID# 1-10E and 1-11E (condenser).

Attritor (ID# 1-15S) - used to grind lead compounds to specific particle sizes for various propellant formulations. Vents to atmosphere through vent ID# 1-10E.

Manufacturer:	**Model number:**	**Serial number:**
Ross & Son / Szegvari	HDM-40 / 30S	106204 / 901007
Construction date:	**Installation date:**	**Modification date(s):**
1991 / 1991	1995 / 1995	None

Design Capacity (examples: furnaces - tons/hr, tanks – gallons, boilers – MMBtu/hr, engines - hp):
500 lb batch

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
Variable	50,000 lbs	8,760 hours/year

Fuel Usage Data **(fill out all applicable fields) NA**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating:	**Type and Btu/hr rating of burners:**

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data			
Criteria Pollutants	Potential Emissions		
	PPH	TPY	
Carbon Monoxide (CO)			
Nitrogen Oxides (NO_X)			
Lead (Pb)			
Particulate Matter ($PM_{2.5}$)			
Particulate Matter (PM_{10})			
Total Particulate Matter (TSP)			
Sulfur Dioxide (SO_2)			
Volatile Organic Compounds (VOC)	2	2.08	
Hazardous Air Pollutants	Potential Emissions		
	PPH	TPY	
NA			
Regulated Pollutants other than Criteria and HAP	Potential Emissions		
	PPH	TPY	
NA			

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Potential emissions are based on permit limits set in R13-1694A of 2 lb/hr VOC and 2,080 hours of evaporation time. (2 x 2080 = 4160/2000 = 2.08 TPY)

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

1. Emission Limits – R30-05700011-2019: 4.1.6. – 4.1.10.; 45CSR13, R13-1694B, A.2. – A.5., B.1.

__X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

1. Monitoring and Recordkeeping – R30-05700011-2019: 3.4.1., 4.2.1., 4.4.3.; 45CSR13, R13-1694B, B.2.; 45CSR 30-5.1.c.
2. Testing - R30-05700011-2019: 3.1.10., 3.1.11., 3.3.1-3.3.4., 4.3.1. .; 45CSR13, R13-1694B, B.3., B.5., B.6., B.7., B.8.

Are you in compliance with all applicable requirements for this emission unit? _X_ Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description Bldg 384 – Lead Paste Roll Mill

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
NDV	3-Roll Mill	None

Provide a description of the emission unit (type, method of operation, design parameters, etc.; for engines, please indicate compression or spark ignition, lean or rich, four or two stroke, non-emergency or emergency, certified or not certified, as applicable)

3-Roll Mill (ID# 1-16S) - used to roll the paste manufactured in the mix bowl, to remove lumps and insure homogenicity. Vents inside building (no emissions expected).

Manufacturer:	**Model number:**	**Serial number:**
Unknown	Unknown	Unknown
Construction date:	**Installation date:**	**Modification date(s):**
1993	1993	Unknown

Design Capacity (examples: furnaces - tons/hr, tanks – gallons, boilers – MMBtu/hr, engines - hp):
Variable

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
Variable	Variable	8,760 hours/year

Fuel Usage Data **(fill out all applicable fields) NA**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating:	**Type and Btu/hr rating of burners:**

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO_X)		
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)		
Particulate Matter (PM_{10})		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO_2)		
Volatile Organic Compounds (VOC)		
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
NA		
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
NA		

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

The lead paste contains polyglycol adipate, carbon black and lead compound. No volatiles are contained in the paste, therefore there are no VOC emissions. The lead and carbon black are suspended in the paste so there are no particulate emissions either.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

There are no underlying applicable requirements associated with this equipment.

__X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

There are no specified monitoring/testing/recordkeeping/ reporting requirements for this equipment.

Are you in compliance with all applicable requirements for this emission unit? _X_ Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description **Bldg 271 – Electric Drying Ovens (2)**

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
NDV	Electric Drying Ovens	None

Provide a description of the emission unit (type, method of operation, design parameters, etc.; for engines, please indicate compression or spark ignition, lean or rich, four or two stroke, non-emergency or emergency, certified or not certified, as applicable)

Electric Drying Ovens (2) (ID# 1-17S & 1-18S) - used to dry carbon black. Vent inside building.

Manufacturer:	**Model number:**	**Serial number:**
Unknown	Unknown	Unknown
Construction date:	**Installation date:**	**Modification date(s):**
Early 1980's	Unknown	Unknown

Design Capacity (examples: furnaces - tons/hr, tanks – gallons, boilers – MMBtu/hr, engines - hp):
Variable

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
Variable	Variable	8,760 hours/year

Fuel Usage Data **(fill out all applicable fields) NA**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating:	**Type and Btu/hr rating of burners:**

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data

Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO_X)		
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)		
Particulate Matter (PM_{10})		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO_2)		
Volatile Organic Compounds (VOC)		
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
NA		
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
NA		

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

The ovens are used only for removing moisture from carbon black before using it in lead paste production. There are no emissions from the ovens.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

There are no underlying applicable requirements associated with this equipment.

__X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

There are no specified monitoring/testing/recordkeeping/ reporting requirements for this equipment.

Are you in compliance with all applicable requirements for this emission unit? _X_ Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description **Paint Booth – Bldg 167**

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
2-9E	Chamber Prep – Walk-In Booth - 167	2-7C

Provide a description of the emission unit (type, method of operation, design parameters, etc.; for engines, please indicate compression or spark ignition, lean or rich, four or two stroke, non-emergency or emergency, certified or not certified, as applicable)

Walk-In Spray Booth (ID# 2-11S) - used to apply paint to the exterior of empty rocket motor chambers prior to having propellant cast into them. Vents to atmosphere through vent ID# 2-9E.

Manufacturer:	**Model number:**	**Serial number:**
Binks	AF-Automotive	Unknown
Construction date:	**Installation date:**	**Modification date(s):**
1980	1980	None

Design Capacity (examples: furnaces - tons/hr, tanks – gallons, boilers – MMBtu/hr, engines - hp):
Variable

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
Variable	Variable	1.560 hours/year

Fuel Usage Data **(fill out all applicable fields) NA**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating:	**Type and Btu/hr rating of burners:**

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO_X)		
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)		
Particulate Matter (PM_{10})		
Total Particulate Matter (TSP)	0.41	0.2
Sulfur Dioxide (SO_2)		
Volatile Organic Compounds (VOC)	9.27	0.56
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
	3.16	0.23
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
NA		

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Potential emissions are based on the permit limits specified in R13-2037A.
HAPs may include ethyl benzene, glycol ethers, hexane, isocyanates, MEK, methanol, MIBK, phenol, styrene, TCE, toluene, xylene, and zinc, lead, or chromium compounds found in paints, adhesives, primers, and thinners.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

1. Emission Limits – R30-05700011-2019: 5.1.1. – 5.1.3.; 45CSR13, R13-2037A, A.1. , A.2., B-3.
2. Visible Emissions – R30-05700011-2019: 3.1.10; 45CSR§7-3.1. – 7-8.2; 45CSR13, R13-2037A, B.5.
3. Aerospace NESHAP – R30-05700011-2019: 3.1.9.; 45CSR34, 40CFR63, Subpart GG; 45CSR§30-5.1.c.; 45CSR13-R13-2037A 4.1.7.

__X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

1. Monitoring & Recordkeeping – R30-05700011-2019: 3.2.2, 3.4.1., 5.2.1, 5.4.1., 5.4.5; 45CSR§30-5.1.c; 45CSR13, R13-2037A, B.1.,.
2. Testing - R30-05700011-2019: 3.3.1.-3.3.4., 5.3.1. ; 45CSR13, R13-2037A, B.2., B.8. & B.9.
3. Visible Emissions - R30-05700011-2019: 3.1.11., 3.4.4.; 45CSR§30-5.; 45CSR13-2037A B.6.
4. Aerospace NESHAP – R30-05700011-2019: 3.2.4., 3.4.5.; 45CSR34, 40CFR63, Subpart GG; 45CSR 30-5.1.c.; 45CSR13-2037A B.7.

Are you in compliance with all applicable requirements for this emission unit? _X_ Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description **Progressive Blasting Systems Grit Blaster – Bldg 420**

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
NDV	Grit Blaster – Bldg 420	2-1C

Provide a description of the emission unit (type, method of operation, design parameters, etc.; for engines, please indicate compression or spark ignition, lean or rich, four or two stroke, non-emergency or emergency, certified or not certified, as applicable)

Progressive Blasting Systems Grit Blaster (ID# 2-8S) - Used to grit blast empty rocket motor chambers prior to degreasing. Vents inside building.

Manufacturer:	**Model number:**	**Serial number:**
Progressive	Unknown	Unknown
Construction date:	**Installation date:**	**Modification date(s):**
1980	1999	None

Design Capacity (examples: furnaces - tons/hr, tanks – gallons, boilers – MMBtu/hr, engines - hp):
200 lb grit per hour

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
200 lb/hr	Variable	3,120 hours/year

Fuel Usage Data **(fill out all applicable fields) NA**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating:	**Type and Btu/hr rating of burners:**

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO_X)		
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)		
Particulate Matter (PM_{10})		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO_2)		
Volatile Organic Compounds (VOC)		
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
NA		
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
NA		

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

PTE is zero. Grit blaster is totally enclosed in the building with no duct leading to the atmosphere. Unit goes through a 99.9% efficient cyclone separator.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

There are no underlying applicable requirements associated with this equipment.

__X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

There are no specified monitoring/testing/recordkeeping/ reporting requirements for this equipment.

Are you in compliance with all applicable requirements for this emission unit? _X_Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description **Bldg 420 – 2 Roll Mill**

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
NDV	2-Roll Mill for lacquer ingredients	None

Provide a description of the emission unit (type, method of operation, design parameters, etc.; for engines, please indicate compression or spark ignition, lean or rich, four or two stroke, non-emergency or emergency, certified or not certified, as applicable)

Two Roll Mill (ID# 2-10S) – used to mill rubber material used in lacquer solutions to remove any lumps prior to mixing Vents inside building.

Manufacturer:	**Model number:**	**Serial number:**
Unknown	Unknown	Unknown
Construction date:	**Installation date:**	**Modification date(s):**
1999	1999	None

Design Capacity (examples: furnaces - tons/hr, tanks – gallons, boilers – MMBtu/hr, engines - hp):
Variable

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
Variable	Variable	8,760 hours/year

Fuel Usage Data **(fill out all applicable fields) NA**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating:	**Type and Btu/hr rating of burners:**

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO_X)		
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)		
Particulate Matter (PM_{10})		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO_2)		
Volatile Organic Compounds (VOC)		
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
NA		
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
NA		

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Rubber material run through the mill is a powder that is milled to remove lumps. It is handled by hand in small batches (less than 5 lbs). There is no direct vent on the mill.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

There are no underlying applicable requirements associated with this equipment.

__X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

There are no specified monitoring/testing/recordkeeping/ reporting requirements for this equipment.

Are you in compliance with all applicable requirements for this emission unit? _X_ Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description **Fume Hood for CBL Mixing – Bldg 420**

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
2-10E	Fume Hood for CBL – Bldg 420	None

Provide a description of the emission unit (type, method of operation, design parameters, etc.; for engines, please indicate compression or spark ignition, lean or rich, four or two stroke, non-emergency or emergency, certified or not certified, as applicable)

Fume Hood (ID# 2-12S) - used to mix case bond liner (CBL) solutions and also used to house dip pans for dip coating rods with the CBL solutions. Vents to atmosphere through vent t ID# 2-10E.

Manufacturer:	**Model number:**	**Serial number:**
Labconco	Unknown	Unknown
Construction date:	**Installation date:**	**Modification date(s):**
1999	1999	None

Design Capacity (examples: furnaces - tons/hr, tanks – gallons, boilers – MMBtu/hr, engines - hp):
Variable

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
Variable	Variable	1,560 hours/year

Fuel Usage Data **(fill out all applicable fields) NA**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating:	**Type and Btu/hr rating of burners:**

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO_X)		
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)		
Particulate Matter (PM_{10})		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO_2)		
Volatile Organic Compounds (VOC)	0.67	0.225
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Various	0.45	0.151
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
NA		

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

PTEs are based on permit limits in R13-2246A.
HAP PTEs are based on an estimate of ~67% of the emissions being HAPs (from Bondliner formulations). HAPs include MEK, MIBK, TDI, and toluene.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

1. Emission Limits – R30-05700011-2019: 5.1.4.; 45CSR13, R13-2246A, A.1.
2. Visible Emissions – R30-05700011-2019: 3.1.10; 45CSR§7-3.1. – 7-8.2; 45CSR13, R13-2246A, B.2.
3. Aerospace NESHAP – R30-05700011-2019: 3.1.9.; 45CSR34, 40CFR63, Subpart GG; 45CSR§30-5.1.c.

__X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

1. Visible Emissions – R30-05700011-2019: 3.2.2; 45CSR§30-5.
2. Monitoring & Recordkeeping – R30-05700011-2019: 3.4. 5.2.1., 5.4.2., 5.4.4., 45CSR13, R13-2246A, B.3., B.5.; 45CSR§30-5.1.c.
3. Aerospace NESHAP – R30-05700011-2019: 3.2.4., 3.4.5.; 45CSR34, 40CFR63, Subpart GG; 45CSR 30-5.1.c.

Are you in compliance with all applicable requirements for this emission unit? _X_ Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description **Case Bond Liner Spray Booths – Bldg 420**

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
2-11E	Case Bond Liner Spray Booths	2-5C, 2-6C

Provide a description of the emission unit (type, method of operation, design parameters, etc.; for engines, please indicate compression or spark ignition, lean or rich, four or two stroke, non-emergency or emergency, certified or not certified, as applicable)

Case Bond Liner Spray Booths (2) (ID# 2-13S & 2-14S) - are used to spray apply a rubber based adhesive mixture (case bond liner or CBL) on the interior surface of empty rocket motor chambers. Vent to atmosphere through vent ID# 2-11E.

Manufacturer:	**Model number:**	**Serial number:**
Conforming Matrix	Unknown	Unknown
Construction date:	**Installation date:**	**Modification date(s):**
1999	1999	None

Design Capacity (examples: furnaces - tons/hr, tanks – gallons, boilers – MMBtu/hr, engines - hp):
Variable

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
Variable	Variable	8,760 hours/year

Fuel Usage Data **(fill out all applicable fields) NA**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating:	**Type and Btu/hr rating of burners:**

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO_X)		
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)		
Particulate Matter (PM_{10})		
Total Particulate Matter (TSP)	0.012	0.0073
Sulfur Dioxide (SO_2)		
Volatile Organic Compounds (VOC)	3.7	3.875
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Various	2.5	2.6
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
NA		

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

PTEs are based on permit limits in R13-2246A.
HAP PTEs are based on an estimate of ~67% of the emissions being HAPs (from Bondliner formulations). HAPs include MEK, MIBK, TDI, and toluene.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

1. Emission Limits – R30-05700011-2019: 5.1.4.; 45CSR13, R13-2246A, A.1.
2. Visible Emissions – R30-05700011-2019: 3.1.10; 45CSR§7-3.1. – 7-8.2; 45CSR13, R13-2246A, B.2.
3. Aerospace NESHAP – R30-05700011-2019: 3.1.9.; 45CSR34, 40CFR63, Subpart GG; 45CSR§30-5.1.c.

__X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

1. Monitoring & Recordkeeping – R30-05700011-2019; 5.2.1., 5.4.2., 5.4.3., 5.4.5.; 45CSR§30-5.1.c; 45CSR13, R13-2246A, B.3., B.4.
2. Testing - R30-05700011-2019; 3.1.11.; 45CSR13, R13-2246A, B.6.
3. Visible Emissions - R30-05700011-2019: 3.2.2.; 45CSR§30-5.
4. Aerospace NESHAP – R30-05700011-2019: 3.2.4., 3.4.5.; 45CSR34, 40CFR63, Subpart GG; 45CSR 30-5.1.c.

Are you in compliance with all applicable requirements for this emission unit? _X_ Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description **Case Bond Line Drying Oven - 420**

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
2-12E	CBL Drying Oven - 420	None

Provide a description of the emission unit (type, method of operation, design parameters, etc.; for engines, please indicate compression or spark ignition, lean or rich, four or two stroke, non-emergency or emergency, certified or not certified, as applicable)

Drying Oven (ID# 2-15S) - used to dry/cure the case bond liner inside the rocket motor chambers. The oven is propane fired and is vented to the atmosphere through vent ID# 2-12E.

Manufacturer:	**Model number:**	**Serial number:**
Blu-Surf	12815	3476-12815
Construction date:	**Installation date:**	**Modification date(s):**
1999	1999	None

Design Capacity (examples: furnaces - tons/hr, tanks – gallons, boilers – MMBtu/hr, engines - hp):
1 mm BTU/hr

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
Unknown	10,000 gallons propane	3,120 hours/year

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? _X_ Yes ___ No	**If yes, is it?** _X_ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating: 1 mm BTU/hr	**Type and Btu/hr rating of burners:** Maxon Maxiflex – 1 mm BTU/hr

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Propane	0.33 gr/cf	NA	91574 BTU/gal

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		0.0155
Nitrogen Oxides (NO_X)		0.062
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)		
Particulate Matter (PM_{10})		
Total Particulate Matter (TSP)		0.0022
Sulfur Dioxide (SO_2)		
Volatile Organic Compounds (VOC)	0.19	0.0026 (propane) / 0.03
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Various*	0.13	0.02
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
NA		

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

PTEs are based on permit limits in R13-2246A.
HAP PTEs are based on an estimate of ~67% of the emissions being HAPs (from Bondliner formulations). HAPs include MEK, MIBK, TDI, and toluene.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

1. Emission Limits – R30-05700011-2019: 5.1.4.; 45CSR13, R13-2246A, A.1.

__X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

1. Emission Limits – R30-05700011-2019; 5.4.2., 5.4.4.; 45CSR§30-5.1.c; 45CSR13, R13-2246A, B.4., B.5.

Are you in compliance with all applicable requirements for this emission unit? _X_ Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description **Bldg 420 – Actrel Degreaser and Recovery System**

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
2-13E, 2-14E	Actrel Degreaser and Recovery System	None

Provide a description of the emission unit (type, method of operation, design parameters, etc.; for engines, please indicate compression or spark ignition, lean or rich, four or two stroke, non-emergency or emergency, certified or not certified, as applicable)

Actrel Degreaser (ID# 2-16S) – used to degrease rocket motor chambers prior to applying case bond liner using a non-HAP, non-VOC solvent (Actrel). Vents to atmosphere through vent ID# 2-13E.

--Actrel Solvent Recovery Still System (ID# 2-17S) – used to clean and recover used Actrel for reuse in degreasing system. Vents to atmosphere through vent ID# 2-14E.

Manufacturer:	**Model number:**	**Serial number:**
Unknown	Unknown	Unknown
Construction date:	**Installation date:**	**Modification date(s):**
1999	1999	None

Design Capacity (examples: furnaces - tons/hr, tanks – gallons, boilers – MMBtu/hr, engines - hp):
355 gallon tank / 50 gal/hr still

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
50 gal/hr	Variable	8,760 hours/year

Fuel Usage Data **(fill out all applicable fields) NA**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating:	**Type and Btu/hr rating of burners:**

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data

Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO_X)		
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)		
Particulate Matter (PM_{10})		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO_2)		
Volatile Organic Compounds (VOC)		

Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
NA		

Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
NA		

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Actrel does not meet the definition of VOC due to negligible photochemical activity.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

There are no underlying applicable requirements associated with this equipment.

__X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

There are no specified monitoring/testing/recordkeeping/ reporting requirements for this equipment.

Are you in compliance with all applicable requirements for this emission unit? _X_ Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description **Crossdraft Paint Booth – Bldg 432**

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
2-16E	Crossdraft Paint Booth – B432	2-9C

Provide a description of the emission unit (type, method of operation, design parameters, etc.; for engines, please indicate compression or spark ignition, lean or rich, four or two stroke, non-emergency or emergency, certified or not certified, as applicable)

Paint Booth (ID# 2-19S) - used to prepare and paint rocket motors. Vents to atmosphere through vent ID# 2-16E.

Manufacturer:	**Model number:**	**Serial number:**
Global Finishing Solutions (GFS)	ACDW-251019-PSB-3F-S	Unknown
Construction date:	**Installation date:**	**Modification date(s):**
2021	2021	None

Design Capacity (examples: furnaces - tons/hr, tanks – gallons, boilers – MMBtu/hr, engines - hp):
Variable

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
Variable	Variable	8,760 hours/year

Fuel Usage Data **(fill out all applicable fields) NA**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating:	**Type and Btu/hr rating of burners:**

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO_X)		
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)		
Particulate Matter (PM_{10})		
Total Particulate Matter (TSP)	5.77 (aggregate)	0.081
Sulfur Dioxide (SO_2)		
Volatile Organic Compounds (VOC)	17.13 (aggregate)	0.343
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Ethyl benzene. MeOH, Xylene	0.081	0.005
MIBK	2.20	0.066
Toluene	2.73	0.081
Chromium compounds	0.692	0.020
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
NA		

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

PTEs are based on permit limits in R13-3534A. Permit limits are based on daily and annual max usage rates. Hourly emissions are aggregates of several different operations ongoing in the booth, potentially concurrently.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

1. Emission Limits – R30-05700011-2019: 5.1.4.; 45CSR13, R13-3534A, 4.1.
2. Visible Emissions – R30-05700011-2019: 3.1.10; 45CSR§7-3.1. – 7-8.2; 45CSR13, R13-3534A, 4.1.4.
3. Aerospace NESHAP – R30-05700011-2019: 3.1.9.; 45CSR34, 40CFR63, Subpart GG; 45CSR§30-5.1.c.

__X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

1. Monitoring & Recordkeeping – R30-05700011-2019; 5.2.1., 5.4.2., 5.4.3., 5.4.5.; 45CSR§30-5.1.c; 45CSR13, R13-3534A, 4.2., 4.4.
2. Testing - R30-05700011-2019; 3.1.11.; 45CSR13, R13-3534A, 4.3.
3. Visible Emissions - R30-05700011-2019: 3.2.2.; 45CSR§30-5.
4. Aerospace NESHAP – R30-05700011-2019: 3.2.4., 3.4.5.; 45CSR34, 40CFR63, Subpart GG; 45CSR 30-5.1.c.

Are you in compliance with all applicable requirements for this emission unit? _X_ Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description **Crossdraft Paint Booth – Bldg 432**

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
2-17E	Crossdraft Paint Booth – B432	2-10C

Provide a description of the emission unit (type, method of operation, design parameters, etc.; for engines, please indicate compression or spark ignition, lean or rich, four or two stroke, non-emergency or emergency, certified or not certified, as applicable)

Paint Booth (ID# 2-19S) - used to prepare and paint rocket motors. Vents to atmosphere through vent ID# 2-16E.

Manufacturer:	**Model number:**	**Serial number:**
Global Finishing Solutions (GFS)	ACDW-251019-PSB-3F-S	Unknown
Construction date:	**Installation date:**	**Modification date(s):**
2021	2021	None

Design Capacity (examples: furnaces - tons/hr, tanks – gallons, boilers – MMBtu/hr, engines - hp):
Variable

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
Variable	Variable	8,760 hours/year

Fuel Usage Data **(fill out all applicable fields) NA**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating:	**Type and Btu/hr rating of burners:**

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO_X)		
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)		
Particulate Matter (PM_{10})		
Total Particulate Matter (TSP)	3.625 (aggregate)	0.653
Sulfur Dioxide (SO_2)		
Volatile Organic Compounds (VOC)	151.62 (aggregate)	2.65
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Xylene	126.34	1.90
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
NA		

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

PTEs are based on permit limits in R13-3534A. Permit limits are based on daily and annual max usage rates. Hourly emissions are aggregates of several different operations ongoing in the booth, potentially concurrently.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

1. Emission Limits – R30-05700011-2019: 5.1.4.; 45CSR13, R13-3534A, 4.1.
2. Visible Emissions – R30-05700011-2019: 3.1.10; 45CSR§7-3.1. – 7-8.2; 45CSR13, R13-3534A, 4.1.4.
3. Aerospace NESHAP – R30-05700011-2019: 3.1.9.; 45CSR34, 40CFR63, Subpart GG; 45CSR§30-5.1.c.

__X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

1. Monitoring & Recordkeeping – R30-05700011-2019; 5.2.1., 5.4.2., 5.4.3., 5.4.5.; 45CSR§30-5.1.c; 45CSR13, R13-3534A, 4.2., 4.4.
2. Testing - R30-05700011-2019; 3.1.11.; 45CSR13, R13-3534A, 4.3.
3. Visible Emissions - R30-05700011-2019: 3.2.2.; 45CSR§30-5.
4. Aerospace NESHAP – R30-05700011-2019: 3.2.4., 3.4.5.; 45CSR34, 40CFR63, Subpart GG; 45CSR 30-5.1.c.

Are you in compliance with all applicable requirements for this emission unit? _X_ Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description **Propellant Mixers – Bldgs 302, 375, 2000**

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
NDV	Propellant mixers	None

Provide a description of the emission unit (type, method of operation, design parameters, etc.; for engines, please indicate compression or spark ignition, lean or rich, four or two stroke, non-emergency or emergency, certified or not certified, as applicable)

Bldg 302 - 50 Gallon Mixer (ID# 3-1S) - used to mix various propellant or explosive formulations to be cast into rocket motor chambers or warheads. Vents inside building.
Bldg 375 - 300 Gallon Mixer (ID# 3-3S) - used to mix various propellant or explosives formulations to be cast into rocket motor chambers or warheads. Vents inside building
Bldg 2000 - Mixer-300 gallon (ID# G-2S) - used to mix propellant or explosive for rocket motors or warheads. Vents inside building.

Manufacturer:	**Model number:**	**Serial number:**
J.H. Day	Unknown	Unknown
Construction date:	**Installation date:**	**Modification date(s):**
1964 / 1964/ 1968	1964 / 1964/ 1968	None

Design Capacity (examples: furnaces - tons/hr, tanks – gallons, boilers – MMBtu/hr, engines - hp):
50 gal / 150 gal / 300 gal

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
Variable	Variable	8,760 hours/year

Fuel Usage Data **(fill out all applicable fields) NA**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating:	**Type and Btu/hr rating of burners:**

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data

Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO_X)		
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)		
Particulate Matter (PM_{10})		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO_2)		
Volatile Organic Compounds (VOC)	1 / 1 / 1	0.01 / 0.10 / 0.10

Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Toluene	1 / 1 / 1	0.01 / 0.10 / 0.10

Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
NA		

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

PTEs are calculated based on catalyst solutions used in propellant mixes. Potentials are based on an annual maximum number of each mix per building. VOC amounts are taken from mix sheets and multiplied by the number of mixes made.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

1. Visible Emissions – R30-05700011-2019: 3.1.10; 45CSR§7-3.1. – 7-8.2

__X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

1. Visible Emissions - R30-05700011-2019: 3.2.2.; 45CSR§30-5.

Are you in compliance with all applicable requirements for this emission unit? _X_ Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description **Propellant Mixers – Bldgs 308, 356, 226, 2000**

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
NDV	Casting areas	None

Provide a description of the emission unit (type, method of operation, design parameters, etc.; for engines, please indicate compression or spark ignition, lean or rich, four or two stroke, non-emergency or emergency, certified or not certified, as applicable)

Bldg. 308--Casting Pits (ID# 3-2S) - used to add propellant or explosives into empty rocket motor chambers or warheads. Vents inside building.

Bldg. 356--Casting Pits (ID# 3-4S) - used to add propellant or explosives into empty rocket motor chambers or warheads. Vents inside building.

Bldg. 226 - Linear Casting Line (ID# 3-5S) - used to add propellant or explosives into empty rocket motor chambers or warheads on a conveyor system. Vents inside building.

Bldg 2000 --Casting Pit (ID# G-3S) - used to cast mixed propellant or explosive into rocket motor cases or warheads. Vents inside building.

Manufacturer:	**Model number:**	**Serial number:**
Unknown	Unknown	Unknown
Construction date:	**Installation date:**	**Modification date(s):**
1964 / 1990/ 1980 / 1968	1964 / 1990/ 1980 / 1968	None

Design Capacity (examples: furnaces - tons/hr, tanks – gallons, boilers – MMBtu/hr, engines - hp):
Variable

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
Variable	Variable	8,760 hours/year

Fuel Usage Data **(fill out all applicable fields) NA**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating:	**Type and Btu/hr rating of burners:**

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.			
Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO_X)		
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)		
Particulate Matter (PM_{10})		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO_2)		
Volatile Organic Compounds (VOC)		
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
NA		
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
NA		

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Regulated pollutants from curing process are negligible.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

There are no underlying applicable requirements associated with this equipment.

__X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

There are no specified monitoring/testing/recordkeeping/ reporting requirements for this equipment.

Are you in compliance with all applicable requirements for this emission unit? _X_ Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description **Propellant Machining – Bldgs 410, 2008**

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
NDV	Propellant Machining	None

Provide a description of the emission unit (type, method of operation, design parameters, etc.; for engines, please indicate compression or spark ignition, lean or rich, four or two stroke, non-emergency or emergency, certified or not certified, as applicable)

Bldg. 410 - Propellant Machining--Drilling/machining equipment (ID# 5-1S) - used to machine propellant to specific configurations to influence burn patterns and burn rates. Vents inside building.

.

Bldg. 2008 - Disassembly and Machining--Propellant Machining System (ID# I-1S) - used to machine propellant to specific configurations required for proper burning. Vents inside building.

Machining is primarily conducted water wet to reduce friction and temperature.

Manufacturer:	**Model number:**	**Serial number:**
Unknown	Unknown	Unknown
Construction date:	**Installation date:**	**Modification date(s):**
1996 / 1968	1996 / 1968	None

Design Capacity (examples: furnaces - tons/hr, tanks – gallons, boilers – MMBtu/hr, engines - hp):
Variable

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
Variable	Variable	8,760 hours/year

Fuel Usage Data **(fill out all applicable fields) NA**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating:	**Type and Btu/hr rating of burners:**

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data

Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO_X)		
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)		
Particulate Matter (PM_{10})		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO_2)		
Volatile Organic Compounds (VOC)		

Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
NA		

Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
NA		

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Regulated pollutants from machining process are negligible and equipment is vented inside building to pick up any explosives residue.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

There are no underlying applicable requirements associated with this equipment.

__X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

There are no specified monitoring/testing/recordkeeping/ reporting requirements for this equipment.

Are you in compliance with all applicable requirements for this emission unit? _X_ Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description **X-Ray Equipment**

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
6-1E	X-Ray Equipment	None

Provide a description of the emission unit (type, method of operation, design parameters, etc.; for engines, please indicate compression or spark ignition, lean or rich, four or two stroke, non-emergency or emergency, certified or not certified, as applicable)

Bldg. 180 - X-Ray Operations--X-Ray equipment (ID# 6-1S) used to x-ray cured rocket motors for voids, cracks, or other flaws which could affect performance. No expected emissions.

Bldg. 360 - X-Ray Operations
--X-Ray equipment (ID# 6-2S) - used to x-ray cured rocket motors for voids, cracks, or other flaws which could affect performance. No expected emissions.

--XO-Mat X-Ray Developer System (ID# 6-3S) - used to develop x-rays. Vents to atmosphere through vent ID# 6-1E.

Bldg. 2010 - X-Ray Operations--Varian X-Ray equipment (ID# J-1S) - used to x-ray cured rocket motors for voids, cracks, or other flaws which could affect performance. No expected emissions.

Manufacturer:	**Model number:**	**Serial number:**
X-O-Mat	Unknown	Unknown
Construction date:	**Installation date:**	**Modification date(s):**
1981 / 1991 / 1991 / 1990	1981 / 1991 / 1991 / 1990	None

Design Capacity (examples: furnaces - tons/hr, tanks – gallons, boilers – MMBtu/hr, engines - hp):
Variable

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
Variable	Variable	8,760 hours/year

Fuel Usage Data **(fill out all applicable fields) NA**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating:	**Type and Btu/hr rating of burners:**

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.			
Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO_X)		
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)		
Particulate Matter (PM_{10})		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO_2)		
Volatile Organic Compounds (VOC)		
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
NA		
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
NA		

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Based on MSDSs for the processing materials used in the x-ray processing equipment, there should be no regulated pollutants emitted from this water-based chemical system (6-1E). Actual x-raying of units has no expected emissions.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

There are no underlying applicable requirements associated with this equipment.

__X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

There are no specified monitoring/testing/recordkeeping/ reporting requirements for this equipment.

Are you in compliance with all applicable requirements for this emission unit? _X_ Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description **Paint Booth – Bldg 364**

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
6-2E	Final Assembly Paint Booth Bldg 364	6-1C

Provide a description of the emission unit (type, method of operation, design parameters, etc.; for engines, please indicate compression or spark ignition, lean or rich, four or two stroke, non-emergency or emergency, certified or not certified, as applicable)

Paint Booth (ID# 6-4S) - used to stencil or touch-up loaded rocket motors. Vents to atmosphere through vent ID# 6-2E.

Manufacturer:	**Model number:**	**Serial number:**
Binks	83-2448	
Construction date:	**Installation date:**	**Modification date(s):**
01/01/1995	10/01/1995	None

Design Capacity (examples: furnaces - tons/hr, tanks – gallons, boilers – MMBtu/hr, engines - hp):
Variable

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
Variable	Variable	8,760 hours/year

Fuel Usage Data **(fill out all applicable fields) NA**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating:	**Type and Btu/hr rating of burners:**

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO_X)		
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)		
Particulate Matter (PM_{10})		
Total Particulate Matter (TSP)	0.1	0.1
Sulfur Dioxide (SO_2)		
Volatile Organic Compounds (VOC)	1.00	2.01
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
	1.00	2.01
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
NA		

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Potential emissions are based on the permit limits specified in R13-1782A.
HAPs may include ethyl benzene, glycol ethers, hexane, isocyanates, MEK, MIBK, toluene, xylene, and zinc, lead, or chromium compounds found in paints, adhesives, primers, and thinners.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

1. Emission Limits – R30-05700011-2019: 6.1.1. – 6.1.5.; 45CSR13, R13-1782A, A.1. – A.3., B-3., B.4.
2. Visible Emissions – R30-05700011-2019: 3.1.10; 45CSR§7-3.1. – 7-8.2; 45CSR13, R13-1782A, B.6.
3. Aerospace NESHAP – R30-05700011-2019: 3.1.9.; 45CSR34, 40CFR63, Subpart GG; 45CSR 30-5.1.c.

__X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

1. Monitoring & Recordkeeping - R30-05700011-2019: 6.4.1., 6.4.3., 6.4.4.; 45CSR§30-5.1.c; 45CSR13, R13-1782A, B.1.
2. Testing - R30-05700011-2019; 3.1.11., 3.3.1-3.3.4., 6.3.1.; 45CSR13, R13-1782A, B.2., B.7., B.8., B.9.
3. Visible Emissions – R30-05700011-2019: 3.2.2.; 45CSR§30-5.1.c.
4. Aerospace NESHAP – R30-05700011-2019: 3.2.4., 3.4.5.; 45CSR34, 40CFR63, Subpart GG; 45CSR§30-5.1.c.

Are you in compliance with all applicable requirements for this emission unit? _X_ Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description **Plasma Etch Machine**

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
6-3E, 6-10E, and 6-11E	Exhaust Hood and Temperature Chambers - 369	None

Provide a description of the emission unit (type, method of operation, design parameters, etc.; for engines, please indicate compression or spark ignition, lean or rich, four or two stroke, non-emergency or emergency, certified or not certified, as applicable)

Exhaust Hood (ID# 6-5S) - used to exhaust fugitive manufacturing emissions from application of adhesives and sealants. Vents to atmosphere through vent ID# 6-3E.

Large & Small Temperature Chambers (ID# 6-13S & 6-14S) - used to dry parts which have been water rinsed and curing adhesives, sealants and adhesive primers. Vent to atmosphere through vent ID# 6-10E & 6-11E.

Manufacturer:	**Model number:**	**Serial number:**
Unknown	Unknown	Unknown
Construction date:	**Installation date:**	**Modification date(s):**
1995	1995	2005 – Moved from 386 to 369

Design Capacity (examples: furnaces - tons/hr, tanks – gallons, boilers – MMBtu/hr, engines - hp):
Variable

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
Variable	Variable	4,380 hours/year

Fuel Usage Data **(fill out all applicable fields) NA**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating:	**Type and Btu/hr rating of burners:**

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO_X)		
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)		
Particulate Matter (PM_{10})		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO_2)		
Volatile Organic Compounds (VOC)	2	0.1
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
NA		
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
NA		

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Potential to emit is based on maximum production utilizing adhesives and sealants for gun launched ordinance.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

There are no underlying applicable requirements associated with this equipment.

__X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

Are you in compliance with all applicable requirements for this emission unit? _X_ Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description **Paint Booths – Bldg 392**

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
6-4E, -5E, -6E, -7E	Final Assembly Paint Booths Bays 1, 3, and 5	6-2C, -3C, -4C, -5C

Provide a description of the emission unit (type, method of operation, design parameters, etc.; for engines, please indicate compression or spark ignition, lean or rich, four or two stroke, non-emergency or emergency, certified or not certified, as applicable)

Paint Booth (ID# 6-6S) - used to paint the exterior of loaded rocket motors. Vents to atmosphere through vent ID# 6-4E.

--Paint Booth (ID# 6-7S) - used to paint the exterior of loaded rocket motors. Vents to atmosphere through vent ID# 6-5E.

--Paint Booth (ID# 6-8S) - used to paint the exterior of loaded rocket motors. Vents to atmosphere through vent ID# 6-6E.
--Paint Booth (ID# 6-9S) - used to paint the exterior of loaded rocket motors. Vents to atmosphere through vent ID# 6-7E.

Manufacturer:	**Model number:**	**Serial number:**
Binks	83-2448	

Construction date:	**Installation date:**	**Modification date(s):**
01/01/1994	01/01/1995	None

Design Capacity (examples: furnaces - tons/hr, tanks – gallons, boilers – MMBtu/hr, engines - hp):
Variable

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
Variable	Variable	8,760 hours/year

Fuel Usage Data **(fill out all applicable fields) NA**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating:	**Type and Btu/hr rating of burners:**

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data

Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO_X)		
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)		
Particulate Matter (PM_{10})		
Total Particulate Matter (TSP)	3.00	0.1
Sulfur Dioxide (SO_2)		
Volatile Organic Compounds (VOC)	3.00	4.35

Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
	3.00	2.0

Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
NA		

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Potential emissions are based on the permit limits specified in R13-1798A. HAP total of 2.0 TPY is based on 46% of VOC total made up of HAPs.
HAPs will include MEK, MIBK, ethyl benzene, hexane, xylene, toluene, glycol ethers, and chromium compounds found in paints and thinners.

Permit R13-1798A and Title V permit were updated in June 2011 to incorporate changes in lb/hr rates of pollutants. Annual limits remained the same.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

1. Emission Limits – R30-05700011-2019: 6.1.1. – 6.1.5., 6.1.7., 6.1.8.; 45CSR13, R13-1798A, A.1. – A.6., B-3., B.4.
2. Visible Emissions – R30-05700011-2019: 3.1.10; 45CSR§7-3.1. – 7-8.2; 45CSR13, R13-1798A, B.6.
3. Aerospace NESHAP – R30-05700011-2019: 3.1.9.; 45CSR34, 40CFR63, Subpart GG; 45CSR 30-5.1.c.

__X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

1. Monitoring & Recordkeeping - R30-05700011-2019: 6.4.1., 6.4.3., 6.4.4.; 45CSR§30-5.1.c; 45CSR13, R13-1798A, B.1.
2. Testing - R30-05700011-2019; 3.1.11., 3.3.1-3.3.4., 6.3.1.; 45CSR13, R13-1798A, B.2., B.7., B.8., B.9.
3. Visible Emissions – R30-05700011-2019: 3.2.2., 3.4.4.; 45CSR§30-5.1.c.; 45CSR13, R13-1798A A.7.
4. Aerospace NESHAP – R30-05700011-2019: 3.2.4., 3.4.5.; 45CSR34, 40CFR63, Subpart GG; 45CSR§30-5.1.c.

Are you in compliance with all applicable requirements for this emission unit? _X_ Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description **Teflon Booth – Bldg 412**

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
6-8E	Teflon Spray Booth	6-6C

Provide a description of the emission unit (type, method of operation, design parameters, etc.; for engines, please indicate compression or spark ignition, lean or rich, four or two stroke, non-emergency or emergency, certified or not certified, as applicable)

Teflon Spray Booth (ID# 6-10S) - used to apply teflon coating to components prior to use in casting units. Vents to atmosphere through vent ID# 6-8E.

Manufacturer:	**Model number:**	**Serial number:**

Construction date:	**Installation date:**	**Modification date(s):**
1997	1997	None

Design Capacity (examples: furnaces - tons/hr, tanks – gallons, boilers – MMBtu/hr, engines - hp):
Variable

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
Unknown	Unknown	4,380 hours/year

Fuel Usage Data **(fill out all applicable fields) NA**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating:	**Type and Btu/hr rating of burners:**

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO_X)		
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)		
Particulate Matter (PM_{10})		
Total Particulate Matter (TSP)	Neg	Neg
Sulfur Dioxide (SO_2)		
Volatile Organic Compounds (VOC)	Neg	Neg
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
NA		
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Potential emissions are based on the permit limits specified in R13-1798A. HAP total of 2.0 TPY is based on a maximum of 25% of VOC total made up of HAPs.
HAPs may include MEK, MIBK, ethyl benzene, hexane, xylene, toluene, glycol ethers, and chromium compounds found in Teflon primers and thinners.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

1. Visible Emissions – R30-05700011-2019: 3.1.10; 45CSR§7-3.1. – 7-8.2;

__X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

1. Visible Emissions – R30-05700011-2019: 3.2.2., 3.4.4.; 45CSR§30-5.1.c.;

Are you in compliance with all applicable requirements for this emission unit? _X_ Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description **Teflon Drying Oven & Decontamination Oven**

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
6-8E / 6-9E	Teflon Drying Oven Decontamination Oven	None

Provide a description of the emission unit (type, method of operation, design parameters, etc.; for engines, please indicate compression or spark ignition, lean or rich, four or two stroke, non-emergency or emergency, certified or not certified, as applicable)

Teflon Drying Oven (ID# 6-11S) - used for drying teflon coating after application. Vents to atmosphere through vent ID# 6-8E. (2 – 1.5 mm BTU/hr burners)

Decontamination Oven (ID# 6-12S) - used to insure that motor components are free from explosive contamination prior to on-plant machining work or shipment off-site. Vents to atmosphere through vent ID# 6-9E. (1.5 mm BTU/hr burner.)

Manufacturer:	**Model number:**	**Serial number:**
Unknown	Unknown	Unknown
Construction date:	**Installation date:**	**Modification date(s):**
1997	1997	None

Design Capacity (examples: furnaces - tons/hr, tanks – gallons, boilers – MMBtu/hr, engines - hp):
3 @ 1.5 mm BTU/hr

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
34 gallons propane	21,000 gallons propane	416 hours/year

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? _X_ Yes ___ No	**If yes, is it?** _X_ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating:	**Type and Btu/hr rating of burners:** No. 80 RAH eclipse / 1.5 mmBTU each

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Propane	0.33 gr/cf	NA	91574 BTU/gal

Emissions Data

Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	0.1043 / 0.0522	0.022 / 0.011
Nitrogen Oxides (NO_X)	0.4173 / 0.2087	0.087 / 0.0435
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)		
Particulate Matter (PM_{10})		
Total Particulate Matter (TSP)	0.0148 / 0.0074	0.0031 / 0.0016
Sulfur Dioxide (SO_2)	0.001 / 0.0005	0.0002 / 0.0001
Volatile Organic Compounds (VOC)	0.0175 / 0.0088	0.0036 / 0.0018

Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
NA		

Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
NA		

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Potential emissions for both ovens are based on calculations provided in the Permit Determination Forms submitted in 1997.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

There are no underlying applicable requirements associated with this equipment.

__X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

There are no specified monitoring/testing/recordkeeping/ reporting requirements for this equipment.

Are you in compliance with all applicable requirements for this emission unit? _X_ Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description **Parts Washers – Bldg 151 & 8203**

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
7-1E, 7-2E, K-1E, K-2E	Parts Washers – 151 & 8203 & Still	None

Provide a description of the emission unit (type, method of operation, design parameters, etc.; for engines, please indicate compression or spark ignition, lean or rich, four or two stroke, non-emergency or emergency, certified or not certified, as applicable)

Parts Washer (ID# 7-1S) - used to clean propellant from mixing and casting equipment and mold parts using acetone or heptane. Vents to atmosphere through vent ID# 7-1E.

--Parts Washer (ID# 7-2S) - used to clean propellant from mixing and casting equipment and mold parts using acetone or heptane. Vents to atmosphere through vent ID# 7-2E.

Parts Washers (2) (ID# K-2S, K-3S) - used to wash mixing/casting equipment and mold parts. Vent to atmosphere through vent ID# K-1E.

Solvent Recovery System (ID# K-5S) - used to reclaim solvent used for parts cleaning. Vents to atmosphere through vent ID# K-2E.

Manufacturer:	**Model number:**	**Serial number:**
Unknown	Unknown	Unknown
Construction date:	**Installation date:**	**Modification date(s):**
Pre-1970 / 1978 / 2001	Pre-1970 / 1978 / 2001	2001

Design Capacity (examples: furnaces - tons/hr, tanks – gallons, boilers – MMBtu/hr, engines - hp):
36 gal / 35 gal / 56 gal / 56 gal

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
Variable	Variable	8,760 hours/year

Fuel Usage Data **(fill out all applicable fields) NA**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating:	**Type and Btu/hr rating of burners:**

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.			
Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO_X)		
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)		
Particulate Matter (PM_{10})		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO_2)		
Volatile Organic Compounds (VOC)		12.5
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
NA		
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
NA		

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

PTEs are based on permit limits in R13-0401B.
The permit was established with an annual rate only, no hourly rates. The annual 12.5 TPY is a combination of the emissions from both 151 and 8203.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

1. Emission Limits – R30-05700011-2019: 7.1.1., 7.1.2., 7.1.3.; 45CSR13, R13-0401B, A.1, A.2.

__X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

1. Monitoring & Recordkeeping – R30-05700011-2019: 7.4.1., 7.4.2.; 45CSR13, R13-0401B, B.1., B.2.

Are you in compliance with all applicable requirements for this emission unit? _X_ Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description **Acetone Parts Cleaning Tanks and Solvent Recovery Unit**

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
7-3E, 7-4E	Acetone Wash Tanks and Recovery Unit	None

Provide a description of the emission unit (type, method of operation, design parameters, etc.; for engines, please indicate compression or spark ignition, lean or rich, four or two stroke, non-emergency or emergency, certified or not certified, as applicable)

Bldg. 407 - Parts Clean-Up

--Parts Washer (ID# 7-3S) - used to clean propellant from mixing and casting equipment and mold parts using acetone. Vents to atmosphere through vent ID# 7-3E.
--Parts Washer (ID# 7-4S) - used to clean propellant from mixing and casting equipment and mold parts using acetone. Vents to atmosphere through vent ID# 7-3E.
--Parts Washer (ID# 7-5S) - used to clean propellant from mixing and casting equipment and mold parts using acetone. Vents to atmosphere through vent ID# 7-3E.
--Acetone Recovery Unit (ID# 7-6S) - used to recycle used acetone from double base propellant clean up operations. Vents to atmosphere through vent ID# 7-4E.

Manufacturer:	**Model number:**	**Serial number:**
Unknown	Unknown	Unknown
Construction date:	**Installation date:**	**Modification date(s):**
1997	1997	None

Design Capacity (examples: furnaces - tons/hr, tanks – gallons, boilers – MMBtu/hr, engines - hp):
Variable

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
Variable	Variable	8,760 hours/year

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating:	**Type and Btu/hr rating of burners:**

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.			
Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO_X)		
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)		
Particulate Matter (PM_{10})		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO_2)		
Volatile Organic Compounds (VOC)		
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
NA		
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
NA		

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

No regulated pollutants are used in this process. Wash tanks utilize acetone.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

There are no underlying applicable requirements associated with this equipment.

__X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

There are no specified monitoring/testing/recordkeeping/ reporting requirements for this equipment.

Are you in compliance with all applicable requirements for this emission unit? _X_ Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description **Cellulose Acetate Machine**

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
C-1E	Cellulose Acetate Machine	None

Provide a description of the emission unit (type, method of operation, design parameters, etc.; for engines, please indicate compression or spark ignition, lean or rich, four or two stroke, non-emergency or emergency, certified or not certified, as applicable)

Bldg. 420 Bay 2 - Beaker Fabrication

--Cellulose Acetate Machine (ID# C-1S) - used to wrap and form cylinders made from cellulose acetate foil and acetone. Vents to atmosphere through vent ID# C-1E.

Manufacturer:	**Model number:**	**Serial number:**
Unknown		
Construction date:	**Installation date:**	**Modification date(s):**
2000	2000	None

Design Capacity (examples: furnaces - tons/hr, tanks – gallons, boilers – MMBtu/hr, engines - hp):
Variable

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
Variable	Variable	8,760 hours/year

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating:	**Type and Btu/hr rating of burners:**

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data			
Criteria Pollutants	Potential Emissions		
	PPH	TPY	
Carbon Monoxide (CO)			
Nitrogen Oxides (NO_X)			
Lead (Pb)			
Particulate Matter ($PM_{2.5}$)			
Particulate Matter (PM_{10})			
Total Particulate Matter (TSP)			
Sulfur Dioxide (SO_2)			
Volatile Organic Compounds (VOC)			
Hazardous Air Pollutants	Potential Emissions		
	PPH	TPY	
NA			
Regulated Pollutants other than Criteria and HAP	Potential Emissions		
	PPH	TPY	
NA			

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

No regulated pollutants are used in this process.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

There are no underlying applicable requirements associated with this equipment.

__X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

There are no specified monitoring/testing/recordkeeping/ reporting requirements for this equipment.

Are you in compliance with all applicable requirements for this emission unit? _X_ Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description **Gas Generator Manufacturing**

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
C-2E / NDV / NDV	Grain Inhibiting Weigh-Out Hood / Inhibiting Area / Grain Casting Vacuum Pump	None

Provide a description of the emission unit (type, method of operation, design parameters, etc.; for engines, please indicate compression or spark ignition, lean or rich, four or two stroke, non-emergency or emergency, certified or not certified, as applicable)

Bldg. 180 - Grain Inhibiting

--Weigh-Out and Mixing Hood (ID# C-2S) - used to weigh out and mix Stypol, Laminac, Lithopone and styrene (MEKP is added later) and homogenize the mixture. Vents to atmosphere through vent ID# C-2E.
--Inhibiting Area (ID# C-3S) - used when pouring inhibiting mixture into molds. Vents fugitive emissions inside building.
C. Bldg. 180 - Conventional Cast Grain Casting
--Vacuum Pump (ID# C-4S) - used to pull vacuum on conventional cast grains to remove air. Vents inside building.

Manufacturer:	**Model number:**	**Serial number:**
Unknown		
Construction date:	**Installation date:**	**Modification date(s):**
2000	2000	Moved from 356 to 180 in May 2011

Design Capacity (examples: furnaces - tons/hr, tanks – gallons, boilers – MMBtu/hr, engines - hp):
Variable

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
Variable	Variable	2,000 hours/year

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating:	**Type and Btu/hr rating of burners:**

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO_X)		
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)		
Particulate Matter (PM_{10})		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO_2)		
Volatile Organic Compounds (VOC)	0.42	0.421
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Stryrene	0.4158	0.4168
MEKP	0.0336	0.0337
MEK	0.0084	0.0084
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
NA		

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

PTEs based on manufacture of 1000 grains per year to be inhibited, working 5 days per week, 1 shift per day, 50 weeks a year.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

There are no underlying applicable requirements associated with this equipment.

__X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

There are no specified monitoring/testing/recordkeeping/ reporting requirements for this equipment.

Are you in compliance with all applicable requirements for this emission unit? _X_ Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description **Nitramine Grinders – Bldg 262 & 374**

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
NDV	Grinders – 2003	E-1C, E-2C

Provide a description of the emission unit (type, method of operation, design parameters, etc.; for engines, please indicate compression or spark ignition, lean or rich, four or two stroke, non-emergency or emergency, certified or not certified, as applicable)

Bldg. 2003 - Ammonium Perchlorate Grinding

--Gustafson Grinder System (ID# E-1S) - used to grind/blend ammonium perchlorate. Vents inside building.

--Mikro Airlock Grinder System (ID# E-2S) - used to grind/blend ammonium nitrate and ammonium sulfate. Vents inside building.

Manufacturer:	**Model number:**	**Serial number:**
Gustafson / Mikro Airlock	Unknown	Unknown
Construction date:	**Installation date:**	**Modification date(s):**
1978	1978	None

Design Capacity (examples: furnaces - tons/hr, tanks – gallons, boilers – MMBtu/hr, engines - hp):
500 lb / hour

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
500 lb / hr	1456 TPY	5,824 hours/year

Fuel Usage Data **(fill out all applicable fields) NA**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating:	**Type and Btu/hr rating of burners:**

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data

Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO_X)		
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)		
Particulate Matter (PM_{10})	1	0.015
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO_2)		
Volatile Organic Compounds (VOC)		

Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY

Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
NA		

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Potential emissions are based on production limits provided for grinder under permit R13-0401B with an engineering estimate of 1% of the grind total lost to the cyclone system, which is 99.9% efficient. However, the dust collectors vent inside the building.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

1. Production Limits & Controls – R30-05700011-2019: 4.1.13.; 45CSR13, R13-0401B, A.6.

__X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

1. Monitoring & Recordkeeping – R30-05700011-2019: 4.4.4., 4.4.5.; 45CSR13, R13-0401B, B.4.; 45CSR§30.5.1.c.

Are you in compliance with all applicable requirements for this emission unit? ___Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description **Walk-In Storage Freezers**

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
NDV	Walk In Storage Freezers (2)	None

Provide a description of the emission unit (type, method of operation, design parameters, etc.; for engines, please indicate compression or spark ignition, lean or rich, four or two stroke, non-emergency or emergency, certified or not certified, as applicable)

Bldg 2015 - Walk-In Freezers (2) (ID# E-3S & E-4S) - used to store ingredients to maintain product integrity and shelf life. No vents to atmosphere.

Manufacturer:	**Model number:**	**Serial number:**
Unknown		
Construction date:	**Installation date:**	**Modification date(s):**
Pre-1980	Pre-1980	None

Design Capacity (examples: furnaces - tons/hr, tanks – gallons, boilers – MMBtu/hr, engines - hp):
Variable

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
Variable	Variable	8,760 hours/year

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating:	**Type and Btu/hr rating of burners:**

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO_X)		
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)		
Particulate Matter (PM_{10})		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO_2)		
Volatile Organic Compounds (VOC)		
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
NA		
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
NA		

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Freezers are used for closed material storage only. There should be no emissions associated with these units.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

There are no underlying applicable requirements associated with this equipment.

__X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

There are no specified monitoring/testing/recordkeeping/ reporting requirements for this equipment.

Are you in compliance with all applicable requirements for this emission unit? _X_ Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description **Binks Chemlok Spray Booth – Bldg 2014**

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
F-1E	Binks Chemlok Spray Booth - 2014	F-1C

Provide a description of the emission unit (type, method of operation, design parameters, etc.; for engines, please indicate compression or spark ignition, lean or rich, four or two stroke, non-emergency or emergency, certified or not certified, as applicable)

Binks Chemlok/Sparrow Spray Booth (ID# F-1S) - used to coat the interior of empty rocket motor cases with an adhesive material to promote bonding of the propellant to the case. Vents to atmosphere through vent ID# F-1E.

Manufacturer:	**Model number:**	**Serial number:**
Binks	Unknown	Unknown
Construction date:	**Installation date:**	**Modification date(s):**
Pre-1980	Pre-1980	None

Design Capacity (examples: furnaces - tons/hr, tanks – gallons, boilers – MMBtu/hr, engines - hp):
Variable

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
Variable	Variable	4,160 hours/year

Fuel Usage Data **(fill out all applicable fields) NA**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating:	**Type and Btu/hr rating of burners:**

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data			
Criteria Pollutants	Potential Emissions		
	PPH	TPY	
Carbon Monoxide (CO)			
Nitrogen Oxides (NO_X)			
Lead (Pb)			
Particulate Matter ($PM_{2.5}$)			
Particulate Matter (PM_{10})			
Total Particulate Matter (TSP)	0.1	0.1	
Sulfur Dioxide (SO_2)			
Volatile Organic Compounds (VOC)	6	1	
Hazardous Air Pollutants	Potential Emissions		
	PPH	TPY	
Various*	2	1	
Regulated Pollutants other than Criteria and HAP	Potential Emissions		
	PPH	TPY	
NA			

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Potential emissions are based on historical data and permit triggers.
HAPs may include ethyl benzene, formaldehyde, glycol ethers, hexane, isocyanates, MEK, methanol, MIBK, styrene, toluene, trichlorobenzene-1,2,4, xylene, and zinc, lead, or chromium compounds found in paints, adhesives, primers, and thinners.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

1. Visible Emissions – R30-05700011-2019: 3.1.10; 45CSR§7-3.1. – 7-8.2;
2. Aerospace NESHAP – R30-05700011-2019: 3.1.9.; 45CSR34, 40CFR63, Subpart GG; 45CSR 30-5.1.c.

__X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

1. Visible Emissions – R30-05700011-2019: 3.2.2., 3.4.7.; 45CSR§30-5.1.c.
2. Aerospace NESHAP – R30-05700011-2019: 3.2.4., 3.4.5.; 45CSR34, 40CFR63, Subpart GG; 45CSR§30-5.1.c.

Are you in compliance with all applicable requirements for this emission unit? _X_ Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description **Slinger - 2014**

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
F-21E	Slinger - 2014	None

Provide a description of the emission unit (type, method of operation, design parameters, etc.; for engines, please indicate compression or spark ignition, lean or rich, four or two stroke, non-emergency or emergency, certified or not certified, as applicable)

Slinger (ID# F-2S) - used to sling apply non-VOC containing bond liner into rocket motor cases to promote bonding of the propellant to the case. Vents inside building. Toluene is used for cleanup of the equipment and is vented by an elephant trunk and conducted out of the building through vent ID#F-21E.

Manufacturer:	**Model number:**	**Serial number:**
Unknown	Unknown	Unknown
Construction date:	**Installation date:**	**Modification date(s):**
1999	1999	None

Design Capacity (examples: furnaces - tons/hr, tanks – gallons, boilers – MMBtu/hr, engines - hp):
Variable

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
Variable	Variable	4,160 hours/year

Fuel Usage Data **(fill out all applicable fields) NA**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating:	**Type and Btu/hr rating of burners:**

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data			
Criteria Pollutants	Potential Emissions		
	PPH	TPY	
Carbon Monoxide (CO)			
Nitrogen Oxides (NO_X)			
Lead (Pb)			
Particulate Matter ($PM_{2.5}$)			
Particulate Matter (PM_{10})			
Total Particulate Matter (TSP)			
Sulfur Dioxide (SO_2)			
Volatile Organic Compounds (VOC)	2	0.0322	
Hazardous Air Pollutants	Potential Emissions		
	PPH	TPY	
Toluene	2	0.0322	
Regulated Pollutants other than Criteria and HAP	Potential Emissions		
	PPH	TPY	

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

PTE based on estimates of 1 quart toluene per batch cleanup with a maximum of 36 batches per year.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

There are no underlying applicable requirements associated with this equipment.

__X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

There are no specified monitoring/testing/recordkeeping/ reporting requirements for this equipment.

Are you in compliance with all applicable requirements for this emission unit? _X_ Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description **3 Roll Mill - 2014**

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
NDV	3-Roll Mill for lacquer ingredients	None

Provide a description of the emission unit (type, method of operation, design parameters, etc.; for engines, please indicate compression or spark ignition, lean or rich, four or two stroke, non-emergency or emergency, certified or not certified, as applicable)

Roll Mill (ID# F-3S) - used to roll case bond liner mixtures to remove lumps and insure homogenicity. Vents inside building.

Manufacturer:	**Model number:**	**Serial number:**
Unknown	Unknown	Unknown
Construction date:	**Installation date:**	**Modification date(s):**
MM/DD/YYYY	MM/DD/YYYY	MM/DD/YYYY

Design Capacity (examples: furnaces - tons/hr, tanks – gallons, boilers – MMBtu/hr, engines - hp):
Variable

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
Variable	Variable	4,160 hours/year

Fuel Usage Data **(fill out all applicable fields) NA**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating:	**Type and Btu/hr rating of burners:**

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO_X)		
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)		
Particulate Matter (PM_{10})		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO_2)		
Volatile Organic Compounds (VOC)		
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
NA		
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
NA		

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Paste material to be applied to cases is run through the mill to remove lumps. It is handled by hand in small batches (less than 5 gallons). There is no direct vent on the mill and there are no volatiles in the material being milled.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

There are no underlying applicable requirements associated with this equipment.

__X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

There are no specified monitoring/testing/recordkeeping/ reporting requirements for this equipment.

Are you in compliance with all applicable requirements for this emission unit? ___Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description **Drying Ovens 1-4 & 6 – Bldg 2014**

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
F-2E, F-8E, F-10E, F-20E	Drying Oven #3, Drying Oven #1, Drying Oven #4, Drying Oven #2, Drying Oven #6	None

Provide a description of the emission unit (type, method of operation, design parameters, etc.; for engines, please indicate compression or spark ignition, lean or rich, four or two stroke, non-emergency or emergency, certified or not certified, as applicable)

Curing/Drying Oven #3 (ID# F-4S) - used to dry Chemlok sprayed in F-1S. Vents to atmosphere through vent ID# F-2E.
--Drying Oven #1 [Intermediate (Sparrow) Line] (ID# F-10S) - used to dry rocket motor cases after degreasing. Vents to atmosphere through vent ID# F-8E.
--Drying Oven #4 [Intermediate (Sparrow) Line] (ID# F-11S) - used to dry rocket motor cases after degreasing. Vents to atmosphere through vent ID# F-8E.
--Drying Oven #2 [Intermediate (Sparrow) Line] (Medium Line) (ID# F-13S) - used to cure the bondliner sprayed in F-12S. Vents to atmosphere through vent ID# F-10E.
Drying Oven #6 (ID# F-27S) - used to cure cases sprayed with water-based Chemlok in F-1S. Vents to atmosphere through vent ID# F-20E.

Manufacturer:	**Model number:**	**Serial number:**
Unknown	Unknown	Unknown
Construction date:	**Installation date:**	**Modification date(s):**
1994 / 1978/78/78/ 1980	1994 / 1978/78/78/ 1980	None

Design Capacity (examples: furnaces - tons/hr, tanks – gallons, boilers – MMBtu/hr, engines - hp):
Variable

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
Variable	Variable	8,760 hours/year

Fuel Usage Data **(fill out all applicable fields) NA**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating:	**Type and Btu/hr rating of burners:**

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.			
Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO_X)		
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)		
Particulate Matter (PM_{10})		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO_2)		
Volatile Organic Compounds (VOC)	0.6	0.1
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Various*	0.2	0.1
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
NA		

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Potential emissions are based on 10% of the PTE for the lines that supply parts for these ovens.
HAPs may include ethyl benzene, formaldehyde, glycol ethers, hexane, isocyanates, MEK, methanol, MIBK, styrene, toluene, trichlorobenzene-1,2,4, and xylene found in paints, adhesives, primers, and thinners.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

There are no underlying applicable requirements associated with this equipment.

__X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

There are no specified monitoring/testing/recordkeeping/ reporting requirements for this equipment.

Are you in compliance with all applicable requirements for this emission unit? _X_ Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description **Binks Paint Booth – Bldg 2014**

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
F-3E	Binks Paint Booth - 2014	F-2C

Provide a description of the emission unit (type, method of operation, design parameters, etc.; for engines, please indicate compression or spark ignition, lean or rich, four or two stroke, non-emergency or emergency, certified or not certified, as applicable)

Binks Paint Booth (ID# F-5S) - used for touch-up and small painting jobs on rocket motor cases. Primarily used for powder coating of rocket motor cases. Vents to atmosphere through vent ID# F-3E.

Manufacturer:	**Model number:**	**Serial number:**
Binks	Unknown	Unknown
Construction date:	**Installation date:**	**Modification date(s):**
1994	1994	None

Design Capacity (examples: furnaces - tons/hr, tanks – gallons, boilers – MMBtu/hr, engines - hp):
Variable

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
Variable	Variable	8,760 hours/year

Fuel Usage Data **(fill out all applicable fields) NA**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating:	**Type and Btu/hr rating of burners:**

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO_X)		
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)		
Particulate Matter (PM_{10})		
Total Particulate Matter (TSP)	0.1	0.1
Sulfur Dioxide (SO_2)		
Volatile Organic Compounds (VOC)	2.00	0.1
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Various*	2.00	0.1
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
NA		

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Potential emissions are based on historical data.
HAPs may include ethyl benzene, glycol ethers, hexane, isocyanates, MEK, MIBK, toluene, xylene, and zinc, lead, or chromium compounds found in paints, adhesives, primers, and thinners.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

1. Visible Emissions – R30-05700011-2019: 3.1.10; 45CSR§7-3.1. – 7-8.2; 45CSR13, R13-1782A, B.6.
2. Aerospace NESHAP – R30-05700011-2019: 3.1.9.; 45CSR34, 40CFR63, Subpart GG; 45CSR 30-5.1.c.

__X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

1. Visible Emissions – R30-05700011-2019: 3.2.2., 3.4.7.; 45CSR§30-5.1.c.
2. Aerospace NESHAP – R30-05700011-2019: 3.2.4., 3.4.5.; 45CSR34, 40CFR63, Subpart GG; 45CSR§30-5.1.c.

Are you in compliance with all applicable requirements for this emission unit? _X_ Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description **Bldg 2014 – Actrel Degreaser [Intermediate (Sparrow) Line] & Large Motor Line & Recovery System**

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
F-7E, F-15E, F-4E, F-19E	Actrel Degreasers – Sparrow and Large Motor Line & Recovery Units	None

Provide a description of the emission unit (type, method of operation, design parameters, etc.; for engines, please indicate compression or spark ignition, lean or rich, four or two stroke, non-emergency or emergency, certified or not certified, as applicable)

Actrel Degreaser [Intermediate (Sparrow) Line] (ID# F-9S) - used to degrease intermediate size rocket motor cases using a non-VOC, non-HAP solvent. Vents to atmosphere through vent ID# F-7E.
Actrel Degreaser (Large Motor Line) (ID# F-22S) - used to degrease large rocket motor cases using Actrel, a non-VOC, non-HAP material (replaced 1,1,1-trichloroethane (TCA) listed in permit). Vents to atmosphere through vent ID# F-15E.
Small Actrel Solvent Distillation Units (ID# F-6S) - used to reclaim dirty Actrel from the Intermediate (Sparrow) Motor Line degreaser. Vents to atmosphere through vent ID# F-4E.
Actrel Vacuum Still & Storage Tank (Large Motor Line) (ID# F-26S) - used to reclaim dirty Actrel from the degreaser system. Vents to atmosphere through vent ID# F-19E.

Manufacturer:	**Model number:**	**Serial number:**
Unknown	Unknown	Unknown
Construction date:	**Installation date:**	**Modification date(s):**
1995	1995	None

Design Capacity (examples: furnaces - tons/hr, tanks – gallons, boilers – MMBtu/hr, engines - hp):
60 gal/hr still

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
17 gal/min	Variable	8,760 hours/year

Fuel Usage Data **(fill out all applicable fields) NA**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating:	**Type and Btu/hr rating of burners:**

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.			
Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO_X)		
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)		
Particulate Matter (PM_{10})		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO_2)		
Volatile Organic Compounds (VOC)		
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
NA		
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
NA		

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Actrel does not meet the definition of VOC due to negligible photochemical activity.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

There are no underlying applicable requirements associated with this equipment.

__X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

There are no specified monitoring/testing/recordkeeping/ reporting requirements for this equipment.

Are you in compliance with all applicable requirements for this emission unit? _X_ Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description **Vertical Spray Booth – Sparrow Line Bldg 2014**

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
F-5E	Vertical Spray Booth - 2014	F-3C

Provide a description of the emission unit (type, method of operation, design parameters, etc.; for engines, please indicate compression or spark ignition, lean or rich, four or two stroke, non-emergency or emergency, certified or not certified, as applicable)

Vertical Spray Booth [Intermediate (Sparrow) Line] (ID# F-7S) - used to paint the exterior of intermediate size rocket motor cases. Vents to atmosphere through vent ID# F-.5E.

Manufacturer:	**Model number:**	**Serial number:**
Unknown	Unknown	Unknown
Construction date:	**Installation date:**	**Modification date(s):**
1978	1978	None

Design Capacity (examples: furnaces - tons/hr, tanks – gallons, boilers – MMBtu/hr, engines - hp):
Variable

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
Variable	Variable	4,160 hours/year

Fuel Usage Data **(fill out all applicable fields) NA**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating:	**Type and Btu/hr rating of burners:**

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data			
Criteria Pollutants	Potential Emissions		
	PPH	TPY	
Carbon Monoxide (CO)			
Nitrogen Oxides (NO_X)			
Lead (Pb)			
Particulate Matter ($PM_{2.5}$)			
Particulate Matter (PM_{10})			
Total Particulate Matter (TSP)	0.1	0.1	
Sulfur Dioxide (SO_2)			
Volatile Organic Compounds (VOC)			
Hazardous Air Pollutants	Potential Emissions		
	PPH	TPY	
Various*	2	1	
Regulated Pollutants other than Criteria and HAP	Potential Emissions		
	PPH	TPY	
NA			

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Potential emissions are based on permit limits under R13-0401B.
HAPs may include ethyl benzene, glycol ethers, hexane, isocyanates, MEK, MIBK, toluene, xylene, and zinc, lead, or chromium compounds found in paints, adhesives, primers, and thinners.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

1. Emission Limits - R30-05700011-2019: 5.1.6., 45CSR13, R13-0401B, A.7.
2. Visible Emissions – R30-05700011-2019: 3.1.10; 45CSR§7-3.1. – 7-8.2; 45CSR13, R13-1782A, B.6.
3. Aerospace NESHAP – R30-05700011-2019: 3.1.9.; 45CSR34, 40CFR63, Subpart GG; 45CSR 30-5.1.c.

__X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

1. Monitoring & Recordkeeping – R30-05700011-2019: 5.3.1., 5.4.1., 5.4.2.; R13-0401B, B.3.; 45CSR§30-5.1.c.
2. Testing - R30-05700011-2019; 3.1.11., 3.3.1-3.3.4., 5.3.1.; 45CSR§30-5.1.c.
3. Visible Emissions – R30-05700011-2019: 3.2.2., 3.4.7.; 45CSR§30-5.1.c.
4. Aerospace NESHAP – R30-05700011-2019: 3.2.4., 3.4.5.; 45CSR34, 40CFR63, Subpart GG; 45CSR§30-5.1.c.

Are you in compliance with all applicable requirements for this emission unit? _X_ Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description **Trinco DP850 Grit Blaster & Zero Mfg. Grit Blaster – Bldg 2014**

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
F-6E, F-14E	Trinco DP850 Grit Blaster & Zero Mfg. Grit Blaster	2-1C

Provide a description of the emission unit (type, method of operation, design parameters, etc.; for engines, please indicate compression or spark ignition, lean or rich, four or two stroke, non-emergency or emergency, certified or not certified, as applicable)

Trinco DP850 Grit Blast Cabinet (ID# F-8S) - used to grit blast intermediate size rocket motor cases. Vents to atmosphere through vent ID# F-6E.

Zero Mfg. Grit Blaster (Large Motor Line) (ID# F-21S) - used to grit blast large rocket motor cases prior to degreasing. Vents to atmosphere through vent ID# F-14E.

Manufacturer:	**Model number:**	**Serial number:**
Trinco / Zero	Unknown / 4x4x16	Unknown / 38918
Construction date:	**Installation date:**	**Modification date(s):**
1978 / 1988	1978 / 1988	None

Design Capacity (examples: furnaces - tons/hr, tanks – gallons, boilers – MMBtu/hr, engines - hp):
Variable / 200 lb grit per hour

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
200 lb/hr	Variable	4,160 hours/year

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating:	**Type and Btu/hr rating of burners:**

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data

Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO_X)		
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)		
Particulate Matter (PM_{10})		
Total Particulate Matter (TSP)	0.1	0.44
Sulfur Dioxide (SO_2)		
Volatile Organic Compounds (VOC)		

Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
NA		

Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
NA		

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

PTEs are based on permit limits for the Large Motor Line Grit Blaster in R13-1047B.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

1. Emission Limits - R30-05700011-2019: 5.1.7., 45CSR13, R13-1047B, A.1.
2. Visible Emissions – R30-05700011-2019: 3.1.10.; 45CSR§7-3.1. – 7-8.2.

__X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

1. Monitoring & Recordkeeping – R30-05700011-2019: 5.4.7.; 45CSR§30-5.1.c.
2. Visible Emissions – R30-05700011-2019: 3.2.1., 3.2.2., 3.4.7., 5.4.7.; 45CSR§30-5.1.c.

Are you in compliance with all applicable requirements for this emission unit? _X_ Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description **CaseBond Line Booth – Sparrow Line Bldg 2014**

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
F-9E	CBL Booth – Sparrow 2014	F-5C

Provide a description of the emission unit (type, method of operation, design parameters, etc.; for engines, please indicate compression or spark ignition, lean or rich, four or two stroke, non-emergency or emergency, certified or not certified, as applicable)

Case Bondliner Paint Booth [Intermediate (Sparrow) Line] (ID# F-12S) - used to spray case bondliner solution on the interior of rocket motor cases. Vents to atmosphere through vent ID# F-9E.

Manufacturer:	**Model number:**	**Serial number:**
Unknown	Unknown	Unknown
Construction date:	**Installation date:**	**Modification date(s):**
1978	1978	None

Design Capacity (examples: furnaces - tons/hr, tanks – gallons, boilers – MMBtu/hr, engines - hp):
Variable

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
Variable	Variable	4,160 hours/year

Fuel Usage Data **(fill out all applicable fields) NA**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating:	**Type and Btu/hr rating of burners:**

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data			
Criteria Pollutants	Potential Emissions		
	PPH	TPY	
Carbon Monoxide (CO)			
Nitrogen Oxides (NO_X)			
Lead (Pb)			
Particulate Matter ($PM_{2.5}$)			
Particulate Matter (PM_{10})			
Total Particulate Matter (TSP)	0.1	0.1	
Sulfur Dioxide (SO_2)			
Volatile Organic Compounds (VOC)	6	0.5	
Hazardous Air Pollutants	Potential Emissions		
	PPH	TPY	
Various	2	0.5	
Regulated Pollutants other than Criteria and HAP	Potential Emissions		
	PPH	TPY	
NA			

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Potential emissions are based on permit limits under R13-0401B.
HAPs may include ethyl benzene, formaldehyde, glycol ethers, hexane, isocyanates, MEK, methanol, MIBK, styrene, toluene, trichlorobenzene-1,2,4, xylene, and zinc, lead, or chromium compounds found in paints, adhesives, primers, and thinners.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

1. Emission Limits - R30-05700011-2019: 5.1.5., 45CSR13, R13-0401B, A.4.
2. Visible Emissions – R30-05700011-2019: 3.1.10; 45CSR§7-3.1. – 7-8.2; 45CSR13, R13-1782A, B.6.
3. Aerospace NESHAP – R30-05700011-2019: 3.1.9.; 45CSR34, 40CFR63, Subpart GG; 45CSR 30-5.1.c.

__X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

1. Monitoring & Recordkeeping - R30-05700011-2019: 5.4.1., 5.4.2., 5.4.5.; R13-0401B, B.1.; 45CSR§30-5.1.c.
2. Visible Emissions – R30-05700011-2019: 3.2.2., 3.4.7.; 45CSR§30-5.1.c.
3. Aerospace NESHAP – R30-05700011-2019: 3.2.4., 3.4.5.; 45CSR34, 40CFR63, Subpart GG; 45CSR§30-5.1.c.

Are you in compliance with all applicable requirements for this emission unit? ___Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description **Ross Mixers – 5 gallon & 1 gallon & Cowles Dissolver- 2014**		
Emission unit ID number: NDV	**Emission unit name:** Ross Mixer – 5 gallon Ross Mixer – 1 gallon Cowles Dissolver/Mixer	**List any control devices associated with this emission unit:** None

Provide a description of the emission unit (type, method of operation, design parameters, etc.; for engines, please indicate compression or spark ignition, lean or rich, four or two stroke, non-emergency or emergency, certified or not certified, as applicable)

Ross Mixer-5 gallon [Intermediate (Sparrow) Line] (ID# F-14S) - used to mix case bondliner material. Vents inside building.
Ross Mixer-1 gallon [Intermediate (Sparrow) Line] (ID# F-15S) - used to mix case bondliner material. Vents inside building.
Cowles Dissolver/Mixer/Disperer [Intermediate (Sparrow) Line] (ID# F-16S) - used to dissolve neoprene or butvar material in solvent prior to adding to mixer. Vents inside building.

Manufacturer: Ross / Cowles	**Model number:** Unknown	**Serial number:** Unknown
Construction date: 1980 / 1968 / 1968	**Installation date:** 1980 / 1968 / 1968	**Modification date(s):** None

Design Capacity (examples: furnaces - tons/hr, tanks – gallons, boilers – MMBtu/hr, engines - hp):
Variable

Maximum Hourly Throughput: Variable	**Maximum Annual Throughput:** Variable	**Maximum Operating Schedule:** 4,160 hours/year

Fuel Usage Data **(fill out all applicable fields) NA**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating:	**Type and Btu/hr rating of burners:**

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.			
Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO_X)		
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)		
Particulate Matter (PM_{10})		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO_2)		
Volatile Organic Compounds (VOC)		
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
NA		
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
NA		

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

PTE is negligible. Mixers do not vent to the atmosphere and the majority of materials are not regulated pollutants.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

There are no underlying applicable requirements associated with this equipment.

__X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

There are no specified monitoring/testing/recordkeeping/ reporting requirements for this equipment.

Are you in compliance with all applicable requirements for this emission unit? _X_ Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description **Vertical Spray Booth - Alodine [Intermediate (Sparrow) Line]– Bldg 2014**

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
F-11E	Vertical Spray Booth – Alodine - 2014	F-6C

Provide a description of the emission unit (type, method of operation, design parameters, etc.; for engines, please indicate compression or spark ignition, lean or rich, four or two stroke, non-emergency or emergency, certified or not certified, as applicable)

Vertical Spray Booth [Intermediate (Sparrow) Line] (ID# F-17S) - used for Alodine treating (aluminum oxidation) of rocket motor cases. Vents to atmosphere through vent ID# F-11E.

Manufacturer:	**Model number:**	**Serial number:**
Unknown	Unknown	Unknown
Construction date:	**Installation date:**	**Modification date(s):**
1978	1978	None

Design Capacity (examples: furnaces - tons/hr, tanks – gallons, boilers – MMBtu/hr, engines - hp):
Variable

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
Variable	Variable	4,160 hours/year

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating:	**Type and Btu/hr rating of burners:**

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data			
Criteria Pollutants	Potential Emissions		
	PPH	TPY	
Carbon Monoxide (CO)			
Nitrogen Oxides (NO_X)			
Lead (Pb)			
Particulate Matter ($PM_{2.5}$)			
Particulate Matter (PM_{10})			
Total Particulate Matter (TSP)			
Sulfur Dioxide (SO_2)			
Volatile Organic Compounds (VOC)			
Hazardous Air Pollutants	Potential Emissions		
	PPH	TPY	
Regulated Pollutants other than Criteria and HAP	Potential Emissions		
	PPH	TPY	
NA			

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Potential emissions are estimated to be negligible.
HAPs include chromium compounds found in Alodine solution.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

1. Visible Emissions – R30-05700011-2019: 3.1.10; 45CSR§7-3.1. – 7-8.2;

__X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

Visible Emissions – Visible Emissions – R30-05700011-2019: 3.2.2., 3.4.7.; 45CSR§30-5.1.c.

Are you in compliance with all applicable requirements for this emission unit? _X_ Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description **Mold Release Spray Booth – Bldg 2014**

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
F-12E	Mold Release Spray Booth - 2014	F-7C

Provide a description of the emission unit (type, method of operation, design parameters, etc.; for engines, please indicate compression or spark ignition, lean or rich, four or two stroke, non-emergency or emergency, certified or not certified, as applicable)

Mold Release Spray Booth [Intermediate (Sparrow) Line] (ID# F-19S) - used to dip apply water-based mold release to components. Vents to atmosphere through vent ID# F-12E.

Manufacturer:	**Model number:**	**Serial number:**
Unknown	Unknown	Unknown
Construction date:	**Installation date:**	**Modification date(s):**
1988	1988	None

Design Capacity (examples: furnaces - tons/hr, tanks – gallons, boilers – MMBtu/hr, engines - hp):
Variable

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
Variable	Variable	4,160 hours/year

Fuel Usage Data **(fill out all applicable fields) NA**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating:	**Type and Btu/hr rating of burners:**

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data			
Criteria Pollutants	Potential Emissions		
	PPH	TPY	
Carbon Monoxide (CO)			
Nitrogen Oxides (NO_X)			
Lead (Pb)			
Particulate Matter ($PM_{2.5}$)			
Particulate Matter (PM_{10})			
Total Particulate Matter (TSP)	0.1	0.1	
Sulfur Dioxide (SO_2)			
Volatile Organic Compounds (VOC)	6	0.1	
Hazardous Air Pollutants	Potential Emissions		
	PPH	TPY	
Various*	2	0.1	
Regulated Pollutants other than Criteria and HAP	Potential Emissions		
	PPH	TPY	
NA			

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Potential emissions are based on historical data and permit triggers.
HAPs may include ethyl benzene, glycol ethers, hexane, isocyanates, MEK, MIBK, toluene, xylene, and zinc, lead, or chromium compounds found in paints, adhesives, primers, and thinners.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

4. Visible Emissions – R30-05700011-2019: 3.1.10; 45CSR§7-3.1. – 7-8.2.
1. Aerospace NESHAP – R30-05700011-2019: 3.1.9.; 45CSR34, 40CFR63, Subpart GG; 45CSR 30-5.1.c.

__X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

1. Visible Emissions – R30-05700011-2019: 3.2.2., 3.4.7.; 45CSR§30-5.1.c.
2. Aerospace NESHAP – R30-05700011-2019: 3.2.4., 3.4.5.; 45CSR34, 40CFR63, Subpart GG; 45CSR§30-5.1.c.

Are you in compliance with all applicable requirements for this emission unit? _X_ Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description **DeVilbiss Horizontal Spray Booth – Bldg 2014**

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
F-13E	DeVilbiss Horizontal Spray Booth - 2014	F-8C

Provide a description of the emission unit (type, method of operation, design parameters, etc.; for engines, please indicate compression or spark ignition, lean or rich, four or two stroke, non-emergency or emergency, certified or not certified, as applicable)

Devilbiss Horizontal Spray Booth (ID# F-20S) – used to apply stencil markings and ammo bands to components. Vents to atmosphere through vent ID# F-13E.

Manufacturer:	**Model number:**	**Serial number:**
Unknown	Unknown	Unknown
Construction date:	**Installation date:**	**Modification date(s):**
1980	1980	None

Design Capacity (examples: furnaces - tons/hr, tanks – gallons, boilers – MMBtu/hr, engines - hp):
Variable

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
Variable	Variable	4,160 hours/year

Fuel Usage Data **(fill out all applicable fields) NA**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating:	**Type and Btu/hr rating of burners:**

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO_X)		
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)		
Particulate Matter (PM_{10})		
Total Particulate Matter (TSP)	0.1	0.1
Sulfur Dioxide (SO_2)		
Volatile Organic Compounds (VOC)	6	0.1
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Various	2	0.1
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Potential emissions are based on historical data and permit triggers.
HAPs may include ethyl benzene, glycol ethers, hexane, isocyanates, MEK, MIBK, toluene, xylene, and zinc, lead, or chromium compounds found in paints, adhesives, primers, and thinners.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

5. Visible Emissions – R30-05700011-2019: 3.1.10; 45CSR§7-3.1. – 7-8.2; 45CSR13, R13-1782A, B.6.
1. Aerospace NESHAP – R30-05700011-2019: 3.1.9.; 45CSR34, 40CFR63, Subpart GG; 45CSR 30-5.1.c.

__X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

5. Visible Emissions – R30-05700011-2019: 3.2.2., 3.4.7.; 45CSR§30-5.1.c.
1. Aerospace NESHAP – R30-05700011-2019: 3.2.4., 3.4.5.; 45CSR34, 40CFR63, Subpart GG; 45CSR§30-5.1.c.

Are you in compliance with all applicable requirements for this emission unit? _X_ Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description **Binks Vertical Internal Paint Booth (Large Motor Line)- Bldg 2014**

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
F-16E	Binks Vertical Internal Spray Booth - 2014	F-10C

Provide a description of the emission unit (type, method of operation, design parameters, etc.; for engines, please indicate compression or spark ignition, lean or rich, four or two stroke, non-emergency or emergency, certified or not certified, as applicable)

Binks Vertical Internal Paint Booth (Large Motor Line) (ID# F-23S) - used to apply Chemlok to the interior of large rocket motor cases. Vents to atmosphere through vent ID# F-16E.

Manufacturer:	**Model number:**	**Serial number:**
Unknown	Unknown	Unknown
Construction date:	**Installation date:**	**Modification date(s):**
1988	1988	None

Design Capacity (examples: furnaces - tons/hr, tanks – gallons, boilers – MMBtu/hr, engines - hp):
Variable

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
Variable	Variable	8,760 hours/year

Fuel Usage Data **(fill out all applicable fields) NA**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating:	**Type and Btu/hr rating of burners:**

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data			
Criteria Pollutants	Potential Emissions		
	PPH	TPY	
Carbon Monoxide (CO)			
Nitrogen Oxides (NO_X)			
Lead (Pb)			
Particulate Matter ($PM_{2.5}$)			
Particulate Matter (PM_{10})			
Total Particulate Matter (TSP)	0.1	0.1	
Sulfur Dioxide (SO_2)			
Volatile Organic Compounds (VOC)	3	0.05	
Hazardous Air Pollutants	Potential Emissions		
	PPH	TPY	
Various*	3	0.05	
Regulated Pollutants other than Criteria and HAP	Potential Emissions		
	PPH	TPY	
NA			

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Potential emissions are based on permit limits under R13-1047B.
HAPs may include ethyl benzene, glycol ethers, hexane, isocyanates, MEK, methanol, MIBK, styrene, toluene, trichlorobenzene-1,2,4, xylene, and zinc, lead, or chromium compounds found in paints, adhesives, primers, and thinners.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

1. Emission Limits - R30-05700011-2019: 5.1.7., 45CSR13, R13-1047B, A.1.
2. Visible Emissions – R30-05700011-2019: 3.1.10; 45CSR§7-3.1. – 7-8.2; 45CSR13, R13-1782A, B.6.
3. Aerospace NESHAP – R30-05700011-2019: 3.1.9.; 45CSR34, 40CFR63, Subpart GG; 45CSR 30-5.1.c.

__X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

1. Monitoring & Recordkeeping – R30-05700011-2019: 5.3.1., 5.4.1., 5.4.2.; R13-1047B, B.1.; 45CSR§30-5.1.c.
2. Visible Emissions – R30-05700011-2019: 3.2.2., 3.4.7.; 45CSR§30-5.1.c.
3. Aerospace NESHAP – R30-05700011-2019: 3.2.4., 3.4.5.; 45CSR34, 40CFR63, Subpart GG; 45CSR§30-5.1.c.

Are you in compliance with all applicable requirements for this emission unit? _X_ Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description **Paint/Degreaser Drying Room/Oven #5 (Large Motor Line) - 2014**

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
F-17E	Large Motor Line Drying Oven #5	None

Provide a description of the emission unit (type, method of operation, design parameters, etc.; for engines, please indicate compression or spark ignition, lean or rich, four or two stroke, non-emergency or emergency, certified or not certified, as applicable)

Paint/Degreaser Drying Room/Oven #5 (Large Motor Line) (ID# F-24S) - used to dry large rocket motor cases after degreasing with Actrel and painting. Vents to atmosphere through vent ID# F-17E.

Manufacturer:	**Model number:**	**Serial number:**
Unknown	Unknown	Unknown
Construction date:	**Installation date:**	**Modification date(s):**
1988	1988	None

Design Capacity (examples: furnaces - tons/hr, tanks – gallons, boilers – MMBtu/hr, engines - hp):
Variable

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
Variable	Variable	8,760 hours/year

Fuel Usage Data **(fill out all applicable fields) NA**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating:	**Type and Btu/hr rating of burners:**

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data			
Criteria Pollutants	Potential Emissions		
	PPH	TPY	
Carbon Monoxide (CO)			
Nitrogen Oxides (NO_X)			
Lead (Pb)			
Particulate Matter ($PM_{2.5}$)			
Particulate Matter (PM_{10})			
Total Particulate Matter (TSP)	0.01	0.01	
Sulfur Dioxide (SO_2)			
Volatile Organic Compounds (VOC)	0.3	0.05	
Hazardous Air Pollutants	Potential Emissions		
	PPH	TPY	
Various*	0.3	0.05	
Regulated Pollutants other than Criteria and HAP	Potential Emissions		
	PPH	TPY	
NA			

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Potential emissions are based on permit limits under R13-1047B.
HAPs may include ethyl benzene, formaldehyde, glycol ethers, hexane, isocyanates, MEK, methanol, MIBK, styrene, toluene, trichlorobenzene-1,2,4, xylene, and zinc, lead, or chromium compounds found in paints, adhesives, primers, and thinners.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

1. Emission Limits - R30-05700011-2019: 5.1.7., 45CSR13, R13-1047B, A.1.

__X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

1. Monitoring & Recordkeeping – R30-05700011-2019: 5.3.1., 5.4.6.; 45CSR§30-5.1.c.

Are you in compliance with all applicable requirements for this emission unit? _X_ Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description **Binks Vertical Large Motor Spray Booth- Bldg 2014**

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
F-18E	Binks Vertical Large Motor Spray Booth - 2014	F-11C

Provide a description of the emission unit (type, method of operation, design parameters, etc.; for engines, please indicate compression or spark ignition, lean or rich, four or two stroke, non-emergency or emergency, certified or not certified, as applicable)

Binks Vertical Paint Booth (Large Motor Line) (ID# F-25S) - used to paint the exterior of large rocket motor cases. Vents to atmosphere through vent ID# F-18E.

Manufacturer:	**Model number:**	**Serial number:**
Unknown	Unknown	Unknown
Construction date:	**Installation date:**	**Modification date(s):**
1988	1988	None

Design Capacity (examples: furnaces - tons/hr, tanks – gallons, boilers – MMBtu/hr, engines - hp):
Variable

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
Variable	Variable	8,760 hours/year

Fuel Usage Data **(fill out all applicable fields) NA**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating:	**Type and Btu/hr rating of burners:**

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data			
Criteria Pollutants	Potential Emissions		
	PPH	TPY	
Carbon Monoxide (CO)			
Nitrogen Oxides (NO_X)			
Lead (Pb)			
Particulate Matter ($PM_{2.5}$)			
Particulate Matter (PM_{10})			
Total Particulate Matter (TSP)	0.1	0.1	
Sulfur Dioxide (SO_2)	NA	NA	
Volatile Organic Compounds (VOC)	3	0.5	
Hazardous Air Pollutants	Potential Emissions		
	PPH	TPY	
Various*	3	0.5	
Regulated Pollutants other than Criteria and HAP	Potential Emissions		
	PPH	TPY	
NA			

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Potential emissions are based on permit limits under R13-1047B.
HAPs may include ethyl benzene, formaldehyde, glycol ethers, hexane, isocyanates, MEK, methanol, MIBK, styrene, toluene, trichlorobenzene-1,2,4, xylene, and zinc, lead, or chromium compounds found in paints, adhesives, primers, and thinners.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

1. Emission Limits - R30-05700011-2019: 5.1.7., 45CSR13, R13-1047B, A.1.
2. Visible Emissions – R30-05700011-2019: 3.1.10; 45CSR§7-3.1. – 7-8.2.
3. Aerospace NESHAP – R30-05700011-2019: 3.1.9.; 45CSR34, 40CFR63, Subpart GG; 45CSR 30-5.1.c.

__X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

1. Monitoring & Recordkeeping – R30-05700011-2019: 5.3.1., 5.4.1., 5.4.2., 5.4.6.; R13-1047B, B.1.; 45CSR§30-5.1.c.
2. Visible Emissions – R30-05700011-2019: 3.2.2., 3.4.7.; 45CSR§30-5.1.c.
3. Aerospace NESHAP – R30-05700011-2019: 3.2.4., 3.4.5.; 45CSR34, 40CFR63, Subpart GG; 45CSR§30-5.1.c.

Are you in compliance with all applicable requirements for this emission unit? _X_ Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description **Drying Ovens– Bldg 2011**

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
J-1E	Drying Oven - 2011	None

Provide a description of the emission unit (type, method of operation, design parameters, etc.; for engines, please indicate compression or spark ignition, lean or rich, four or two stroke, non-emergency or emergency, certified or not certified, as applicable)

-- Drying Oven (ID# J-3S) - used to dry interior coating. Vents to atmosphere through vent ID# J-1E.

Manufacturer:	**Model number:**	**Serial number:**
Unknown	Unknown	Unknown
Construction date:	**Installation date:**	**Modification date(s):**
1980	1980	None

Design Capacity (examples: furnaces - tons/hr, tanks – gallons, boilers – MMBtu/hr, engines - hp):
Variable

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
Variable	Variable	2,080 hours/year

Fuel Usage Data **(fill out all applicable fields) NA**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating:	**Type and Btu/hr rating of burners:**

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO_X)		
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)		
Particulate Matter (PM_{10})		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO_2)		
Volatile Organic Compounds (VOC)	0.6	0.1
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Various*	0.2	0.1
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
NA		

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Potential emissions are based on 10% of the PTE for the lines that supply parts for these ovens.
HAPs may include ethyl benzene, formaldehyde, glycol ethers, hexane, isocyanates, MEK, methanol, MIBK, styrene, toluene, trichlorobenzene-1,2,4, and xylene found in paints, adhesives, primers, and thinners.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

There are no underlying applicable requirements associated with this equipment.

__X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

There are no specified monitoring/testing/recordkeeping/ reporting requirements for this equipment.

Are you in compliance with all applicable requirements for this emission unit? _X_ Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description **Interior Coating Spray Line – Bldg 2011**

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
J-2E	Interior Coating Spray Line	J-1E

Provide a description of the emission unit (type, method of operation, design parameters, etc.; for engines, please indicate compression or spark ignition, lean or rich, four or two stroke, non-emergency or emergency, certified or not certified, as applicable)

Interior Coating Spray Line (ID# J-4S) - used to spray case bondliner material inside empty ESSM rocket motor chambers. Vents to atmosphere through vent ID# J-2E. (< 1 lb/hr).

Manufacturer:	**Model number:**	**Serial number:**
Unknown	Unknown	Unknown
Construction date:	**Installation date:**	**Modification date(s):**
1980	1980	None

Design Capacity (examples: furnaces - tons/hr, tanks – gallons, boilers – MMBtu/hr, engines - hp):
Variable

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
Variable	Variable	2,080 hours/year

Fuel Usage Data **(fill out all applicable fields) NA**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating:	**Type and Btu/hr rating of burners:**

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO_X)		
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)		
Particulate Matter (PM_{10})		
Total Particulate Matter (TSP)		0.1
Sulfur Dioxide (SO_2)		
Volatile Organic Compounds (VOC)	6	0.5
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Various	2	0.5
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
NA		

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

PTEs are based on permit limits in R13-0401B.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

1. Emission Limits – R30-05700011-2019: 6.1.6.; 45CSR13, R13-0401B, A.5.
2. Visible Emissions – R30-05700011-2019: 3.1.10; 45CSR§7-3.1. – 7-8.2.
3. Aerospace NESHAP – R30-05700011-2019: 3.1.9.; 45CSR34, 40CFR63, Subpart GG; 45CSR 30-5.1.c.

__X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

1. Monitoring & Recordkeeping – R30-05700011-2019; 6.2.1., 6.4.2., 6.4.3., 6.4.4.; 45CSR§30-5.1.c; 45CSR13, R13-0401B, B.3.; 45CSR§30-5.1.c.
2. Visible Emissions - R30-05700011-2019: 3.2.2., 3.4.7.; 45CSR§30-5.1.c.
3. Aerospace NESHAP – R30-05700011-2019: 3.2.4., 3.4.5.; 45CSR34, 40CFR63, Subpart GG; 45CSR§30-5.1.c.

Are you in compliance with all applicable requirements for this emission unit? _X_ Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description **Vacuum Test System– Bldg 2011**

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
J-3E	Vacuum Test System - 2011	None

Provide a description of the emission unit (type, method of operation, design parameters, etc.; for engines, please indicate compression or spark ignition, lean or rich, four or two stroke, non-emergency or emergency, certified or not certified, as applicable)

Vacuum Test System (ID# J-5S) - used to vacuum test SRAM rocket motors. Vents to atmosphere through vent ID# J-3E. This unit was installed for a specific program and is currently out of service.

Manufacturer:	**Model number:**	**Serial number:**
Unknown	Unknown	Unknown
Construction date:	**Installation date:**	**Modification date(s):**
1980	1980	None

Design Capacity (examples: furnaces - tons/hr, tanks – gallons, boilers – MMBtu/hr, engines - hp):
Variable

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
Variable	Variable	2,080 hours/year

Fuel Usage Data **(fill out all applicable fields) NA**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating:	**Type and Btu/hr rating of burners:**

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data			
Criteria Pollutants	Potential Emissions		
	PPH	TPY	
Carbon Monoxide (CO)			
Nitrogen Oxides (NO_X)			
Lead (Pb)			
Particulate Matter ($PM_{2.5}$)			
Particulate Matter (PM_{10})			
Total Particulate Matter (TSP)			
Sulfur Dioxide (SO_2)			
Volatile Organic Compounds (VOC)			
Hazardous Air Pollutants	Potential Emissions		
	PPH	TPY	
Various*			
Regulated Pollutants other than Criteria and HAP	Potential Emissions		
	PPH	TPY	
NA			

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Units are purged with nitrogen in vacuum test. There are no regulated pollutants emitted.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

There are no underlying applicable requirements associated with this equipment.

__X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

There are no specified monitoring/testing/recordkeeping/ reporting requirements for this equipment.

Are you in compliance with all applicable requirements for this emission unit? _X_ Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description **Automated Case Painting System – 368 Annex**

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
J-4E	Automated Case Painting System	J-2C

Provide a description of the emission unit (type, method of operation, design parameters, etc.; for engines, please indicate compression or spark ignition, lean or rich, four or two stroke, non-emergency or emergency, certified or not certified, as applicable)

Automated Case Painting System (ID# J-7S) - used to apply primer and topcoat epoxy paints to assembled tank ammunition rounds. Vents to atmosphere through vent ID# J-4E.

Manufacturer:	**Model number:**	**Serial number:**
Unknown	Unknown	Unknown
Construction date:	**Installation date:**	**Modification date(s):**
2000	2000	None

Design Capacity (examples: furnaces - tons/hr, tanks – gallons, boilers – MMBtu/hr, engines - hp):
Variable

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
Variable	Variable	4,160 hours/year

Fuel Usage Data **(fill out all applicable fields) NA**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating:	**Type and Btu/hr rating of burners:**

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO_X)		
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)		
Particulate Matter (PM_{10})		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO_2)		
Volatile Organic Compounds (VOC)	6	1.21
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Various*	2	1
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
NA		

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Potential emissions are based on calculations for maximum production.
HAPs may include ethyl benzene, glycol ethers, hexane, isocyanates, MEK, MIBK, toluene, xylene, and zinc, lead, or chromium compounds found in paints, adhesives, primers, and thinners.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

1. Visible Emissions – R30-05700011-2019: 3.1.10; 45CSR§7-3.1. – 7-8.2.
2. Aerospace NESHAP – – R30-05700011-2019: 3.1.9.; 45CSR34, 40CFR63, Subpart GG; 45CSR 30-5.1.c.

__X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

1. Visible Emissions – R30-05700011-2019: 3.2.2., 3.4.7.; 45CSR§30-5.1.c.
2. Aerospace NESHAP – R30-05700011-2019: 3.2.4., 3.4.5.; 45CSR34, 40CFR63, Subpart GG; 45CSR§30-5.1.c.

Are you in compliance with all applicable requirements for this emission unit? _X_ Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description **Stenciling Booth – Bldg 2031**

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
J-5E	Stenciling Booth – Bldg 2031	J-3C

Provide a description of the emission unit (type, method of operation, design parameters, etc.; for engines, please indicate compression or spark ignition, lean or rich, four or two stroke, non-emergency or emergency, certified or not certified, as applicable)

Stenciling Booth (ID J-8S) – used to stencil units, crates, etc. as needed. Vents to atmosphere through vent ID# J-5E.

Manufacturer:	**Model number:**	**Serial number:**
Binks	Unknown	Unknown
Construction date:	**Installation date:**	**Modification date(s):**
2000	2000	None

Design Capacity (examples: furnaces - tons/hr, tanks – gallons, boilers – MMBtu/hr, engines - hp):
Variable

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
Variable	Variable	8,760 hours/year

Fuel Usage Data **(fill out all applicable fields) NA**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating:	**Type and Btu/hr rating of burners:**

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO_X)		
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)		
Particulate Matter (PM_{10})		
Total Particulate Matter (TSP)	0.1	0.01
Sulfur Dioxide (SO_2)		
Volatile Organic Compounds (VOC)	2.00	0.1
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Various*	2	0.1
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
NA		

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Potential emissions are based on calculations for maximum production.
HAPs may include ethyl benzene, glycol ethers, hexane, isocyanates, MEK, MIBK, toluene, xylene, and zinc, lead, or chromium compounds found in paints, adhesives, primers, and thinners.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

1. Visible Emissions – R30-05700011-2019: 3.1.10; 45CSR§7-3.1. – 7-8.2;

__X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

1. Visible Emissions – R30-05700011-2019: 3.2.2., 3.4.7.; 45CSR§30-5.1.c.

Are you in compliance with all applicable requirements for this emission unit? _X_ Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description **Stenciling Conveyor – Bldg 2013**

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
J-7E	Stenciling Conveyor – Bldg 2013	J-4C

Provide a description of the emission unit (type, method of operation, design parameters, etc.; for engines, please indicate compression or spark ignition, lean or rich, four or two stroke, non-emergency or emergency, certified or not certified, as applicable)

Stenciling conveyor for minor painting of rocket motors (<0.5 lb/hr) (J-10S). Vents to atmosphere through vent ID# J-7E.

Manufacturer:	**Model number:**	**Serial number:**
Unknown	Unknown	Unknown
Construction date:	**Installation date:**	**Modification date(s):**
1978	1978	Moved from 2011 to 2013 in 2002

Design Capacity (examples: furnaces - tons/hr, tanks – gallons, boilers – MMBtu/hr, engines - hp):
Variable

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
Variable	Variable	8,760 hours/year

Fuel Usage Data **(fill out all applicable fields) NA**

Does this emission unit combust fuel? ___Yes ___ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating:	**Type and Btu/hr rating of burners:**

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO_X)		
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)		
Particulate Matter (PM_{10})		
Total Particulate Matter (TSP)	0.1	0.1
Sulfur Dioxide (SO_2)		
Volatile Organic Compounds (VOC)	1.00	2.01
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
	1.00	2.01
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
NA		

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Potential emissions are based on the permit limits specified in R13-0401A.
HAPs may include ethyl benzene, glycol ethers, hexane, isocyanates, MEK, MIBK, toluene, xylene, and zinc, lead, or chromium compounds found in paints, adhesives, primers, and thinners.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

1. Visible Emissions – R30-05700011-2019: 3.1.10; 45CSR§7-3.1. – 7-8.2
2. Aerospace NESHAP – R30-05700011-2019: 3.1.9.; 45CSR34, 40CFR63, Subpart GG; 45CSR 30-5.1.c.

__X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

1. Visible Emissions – R30-05700011-2019: 3.2.2., 3.4.7.; 45CSR§30-5.1.c.
2. Aerospace NESHAP – R30-05700011-2019: 3.2.4., 3.4.5.; 45CSR34, 40CFR63, Subpart GG; 45CSR§30-5.1.c.

Are you in compliance with all applicable requirements for this emission unit? _X_ Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description **Pittsburgh Spray Booths - 2031**

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
B-27E and B-34E	Pittsburgh Spray Booth-2031 B-95S & B-102S	B-11C, B-14C

Provide a description of the emission unit (type, method of operation, design parameters, etc.; for engines, please indicate compression or spark ignition, lean or rich, four or two stroke, non-emergency or emergency, certified or not certified, as applicable)

Pittsburgh Spray Booths (Room 8) (ID# B-95S & B-102S) – used to apply SS4155 silicone primer to sabots and obturators. Vents to atmosphere through vents ID# B-27E & B-34E. Emissions did not change with addition of the booth. Emissions are split between the two booths. Obturators were previously hand brushed in unit B-95S. The second booth was added to improve efficiency and coating quality. A new booth was needed due to differences in tooling structures for the two different parts to avoid constantly changing tooling between parts.

Manufacturer:	**Model number:**	**Serial number:**
Pittsburgh	1BCD482DF	6123-0700
Construction date:	**Installation date:**	**Modification date(s):**
2000/2008	2000/2008	None

Design Capacity (examples: furnaces - tons/hr, tanks – gallons, boilers – MMBtu/hr, engines - hp):
Variable

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
Variable	Variable	2,080 hours/year

Fuel Usage Data **(fill out all applicable fields) NA**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating:	**Type and Btu/hr rating of burners:**

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data

Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO_X)		
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)		
Particulate Matter (PM_{10})		
Total Particulate Matter (TSP)	0.1	0.003
Sulfur Dioxide (SO_2)		
Volatile Organic Compounds (VOC)	1	0.175

Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY

Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
NA		

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Potential emissions are based on historical data, maximum production rates, and permit triggers.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

1. Visible Emissions – R30-05700011-2019: 3.1.10; 45CSR§7-3.1. – 7-8.2
2. Aerospace NESHAP – R30-05700011-2019: 3.1.9.; 45CSR34, 40CFR63, Subpart GG; 45CSR 30-5.1.c.

__X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

1. Visible Emissions – R30-05700011-2019: 3.2.2., 3.4.7.; 45CSR§30-5.1.c.
2. Aerospace NESHAP – R30-05700011-2019: 3.2.4., 3.4.5.; 45CSR34, 40CFR63, Subpart GG; 45CSR§30-5.1.c.

Are you in compliance with all applicable requirements for this emission unit? _X_ Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description **Plant 3 - Heptane Wash Tanks – Bldg. 3040**

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
P3-1E; P3-2E; P3-3E	Parts Washers – 3040	None

Provide a description of the emission unit (type, method of operation, design parameters, etc.; for engines, please indicate compression or spark ignition, lean or rich, four or two stroke, non-emergency or emergency, certified or not certified, as applicable)

Parts Washer (ID# P3-1S) - used to clean propellant from mixing and casting equipment and mold parts using heptane. Vents to atmosphere through vent ID# P3-1E.

--Parts Washer (ID# P3-2S) - used to clean propellant from mixing and casting equipment and mold parts using heptane. Vents to atmosphere through vent ID# P3-2E.

Parts Washers (2) (ID# P3-3S) - used to degrease mold parts using IPA. Vent to atmosphere through vent ID# P3-3E.

Manufacturer:	**Model number:**	**Serial number:**
Unknown	Unknown	Unknown
Construction date:	**Installation date:**	**Modification date(s):**
2018	2018	None

Design Capacity (examples: furnaces - tons/hr, tanks – gallons, boilers – MMBtu/hr, engines - hp):
80 gal each

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
Variable	Variable	4,680 hours/year (1&2) 1,560 hours/year (3)

Fuel Usage Data **(fill out all applicable fields) NA**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating:	**Type and Btu/hr rating of burners:**

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data

Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO_X)		
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)		
Particulate Matter (PM_{10})		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO_2)		
Volatile Organic Compounds (VOC)		20.88

Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY

Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
NA		

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

PTEs are based on permit limits in R13-3408.
The permit was established with an annual rate only, no hourly rates. The annual 20.88 TPY is a combination of the emissions from P3-1E, P3-2E, and P3-3E.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

1. Emission Limits – R30-05700011-2019: XXXX.; 45CSR13, R13-3408, 4.1.1.

__X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

1. Monitoring & Recordkeeping - R30-05700011-2019: XXX..; 45CSR13, R13-3408, 4.2.1.

Are you in compliance with all applicable requirements for this emission unit? _X_ Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description **Plant 3 – Igniter/Nozzle Assembly & Final Assembly Work Areas – Bldg. 3040**		
Emission unit ID number: NDV	**Emission unit name:** Igniter/Nozzle Assembly & Final Assembly Work Areas P3-4S & P3-5S	**List any control devices associated with this emission unit:** None

Provide a description of the emission unit (type, method of operation, design parameters, etc.; for engines, please indicate compression or spark ignition, lean or rich, four or two stroke, non-emergency or emergency, certified or not certified, as applicable)

Open tables where parts are cleaned with either acetone or IPA prior to assembling igniters and nozzles for rocket motors. (P3-4S)
Open tables where parts are cleaned with acetone prior to completing motor assembly or labeling. (P3-5S)
Open tables where crates are stenciled during pack-out operations. (P3-5S)

Manufacturer: Unknown	**Model number:** Unknown	**Serial number:** Unknown
Construction date: 2018	**Installation date:** 2018	**Modification date(s):** None

Design Capacity (examples: furnaces - tons/hr, tanks – gallons, boilers – MMBtu/hr, engines - hp):
Variable

Maximum Hourly Throughput: 24 units/hr	**Maximum Annual Throughput:** 3.23 TPY	**Maximum Operating Schedule:** 2,080 hr/year

Fuel Usage Data **(fill out all applicable fields) NA**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating:	**Type and Btu/hr rating of burners:**

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data

Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO_X)		
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)		
Particulate Matter (PM_{10})		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO_2)		
Volatile Organic Compounds (VOC)		3.23

Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Various VOC HAPs		0.19

Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
NA		

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

PTEs are calculated based on engineering information provided on quantity of IPA used per case multiplied by the maximum number of cases to be manufactured annually and quantity of stencil inks used per crate multiplied by the number of crates annually.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

1. Emission Limits – R30-05700011-2019: XXX.; 45CSR13, R13-3408, 4.1.3.

__X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

1. Monitoring & Recordkeeping - R30-05700011-2019: XXX..; 45CSR§30-5.1.c; 45CSR13, R13-3408, 4.2.1.

Are you in compliance with all applicable requirements for this emission unit? _X_ Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description **Plant 3 – Disassembly Work Area – Bldg. 3040**

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
NDV	Disassembly Work Area P3-6S	None

Provide a description of the emission unit (type, method of operation, design parameters, etc.; for engines, please indicate compression or spark ignition, lean or rich, four or two stroke, non-emergency or emergency, certified or not certified, as applicable)

Open tables were mold parts are removed from cured rocket motors and clean mold parts (from cleaning bay) are readied for reuse for casting. Wipe cleaning is done with either IPA or heptane.

Manufacturer:	**Model number:**	**Serial number:**
Unknown	Unknown	Unknown
Construction date:	**Installation date:**	**Modification date(s):**
2018	2018	None

Design Capacity (examples: furnaces - tons/hr, tanks – gallons, boilers – MMBtu/hr, engines - hp):
Variable

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
24 units/shift	6.49	2,080 hr/year

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating:	**Type and Btu/hr rating of burners:**

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO_X)		
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)		
Particulate Matter (PM_{10})		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO_2)		
Volatile Organic Compounds (VOC)		6.49
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
NA		

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

PTEs are calculated based on engineering information provided on quantity of IPA or heptane used per case multiplied by the maximum number of cases to be manufactured annually.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

1. Emission Limits – R30-05700011-2019: XXX.; 45CSR13, R13-3408, 4.1.2.

__X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

1. Monitoring & Recordkeeping - R30-05700011-2019: XXX..; 45CSR§30-5.1.c; 45CSR13, R13-3408, 4.2.1.

Are you in compliance with all applicable requirements for this emission unit? _X_ Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description **Plant 3 – Process Heaters 7, 8, and 9**

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
NDV	Process Heaters - P3-7S, P3-8S, & P3-9S	None

Provide a description of the emission unit (type, method of operation, design parameters, etc.; for engines, please indicate compression or spark ignition, lean or rich, four or two stroke, non-emergency or emergency, certified or not certified, as applicable)

Three 0.5 mmBTU natural gas boilers to be used to heat propellant curing bays.

Manufacturer:	**Model number:**	**Serial number:**
Camus DynaFlame Hydronic	DF(N,P)H 0501	Unknown
Construction date:	**Installation date:**	**Modification date(s):**
2018	2018	None

Design Capacity (examples: furnaces - tons/hr, tanks – gallons, boilers – MMBtu/hr, engines - hp):
0.5 mmBTU/hr

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
0.5 mmBTU/hr	26.28 106 ft3/hr NG	8,760 hr/year

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? _X_ Yes ___ No	**If yes, is it?** _X_ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating: 0.5 mmBTU/hr / 13.14 hp	**Type and Btu/hr rating of burners:** NG – 0.5 mmBTU/hr

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Natural Gas	NA	NA	1,046 BTU/ft3

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	0.126	1.10
Nitrogen Oxides (NO_X)	0.075	0.66
Lead (Pb)	7.50E-7	6.57E-6
Particulate Matter ($PM_{2.5}$)		
Particulate Matter (PM_{10})	0.011	0.10
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO_2)	9.00E-4	0.01
Volatile Organic Compounds (VOC)	0.024	0.20
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Mercury	3.90E-7	0.0051
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
NA		

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

PTEs are calculated based on AP-42 factors for natural gas.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

1. Emission Limits – R30-05700011-2019: XXX.; 45CSR13, 45CSR2A-3.1.; 45CSR2-11.1; 45CSR10-10.1; R13-3408, 6.1.1.
2. Testing - R30-05700011-2019: XXX.; 40CFR63.7490(b); 40CFR63.45CSR13, R13-3408, 6.1.2.

__X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

1. Monitoring & Recordkeeping - R30-05700011-2019: XXX..; 45CSR13, R13-3334
2. Testing - R30-05700011-2019; XXX.; 45CSR13, R13-3334

Are you in compliance with all applicable requirements for this emission unit? _X_ Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description **Plant 3 – Mixer – Bldg. 3030**

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
NDV	Mixer Cleanup - P3-10S	None

Provide a description of the emission unit (type, method of operation, design parameters, etc.; for engines, please indicate compression or spark ignition, lean or rich, four or two stroke, non-emergency or emergency, certified or not certified, as applicable)

Aluminum powder addition to open mix bowl utilizing Ruwac dust control system and vacuum pump for mixer vacuum cycle.
Open mixer area where mix bowl and mix blades are scraped clean and final wipe cleaned using Electron QED solvent to remove any propellant residue after each batch of propellant that is mixed.

Manufacturer:	**Model number:**	**Serial number:**
NA	NA	NA
Construction date:	**Installation date:**	**Modification date(s):**
2018	2018	None

Design Capacity (examples: furnaces - tons/hr, tanks – gallons, boilers – MMBtu/hr, engines - hp):
Variable

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
1 gal solvent/mix	500 mixes per year	5,824 hr/year

Fuel Usage Data **(fill out all applicable fields) NA**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating:	**Type and Btu/hr rating of burners:**

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data

Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO_X)		
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)		
Particulate Matter (PM_{10})		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO_2)		
Volatile Organic Compounds (VOC)		1.57

Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY

Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
NA		

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

PTEs are calculated based on engineering information provided on quantity of Electron QED to be used per mix multiplied by the number of mixes manufactured annually.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

1. Emission Limits – R30-05700011-2019: XXX.; 45CSR13, R13-3408, 5.1.1.1.
2. Visible Emissions – R30-05700011-2019: 3.1.10; 45CSR§7-3.1. – 7-8.2; 45CSR13, R13-3408, 5.1.1.a.-5.1.1.c.

__X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

1. Monitoring & Recordkeeping - R30-05700011-2019: XXX..; 45CSR§13-5.10; 45CSR13, R13-3408, 3.4.1., 5.1.2., 5.2.1., 5.3.1.-5.3.3.
2. Visible Emissions – R30-05700011-2019: 3.2.2., 3.4.7.; 45CSR13, R13-3408, 5.3.3.

Are you in compliance with all applicable requirements for this emission unit? _X_ Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description **Plant 4 Crossdraft Paint Booth – Bldg 4020**

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
P4-1E	Crossdraft Paint Booth – B4020	P$-1C

Provide a description of the emission unit (type, method of operation, design parameters, etc.; for engines, please indicate compression or spark ignition, lean or rich, four or two stroke, non-emergency or emergency, certified or not certified, as applicable)

Paint Booth (ID# P4-1S) - used to prepare and paint rocket motors. Vents to atmosphere through vent ID# P4-1E.

Manufacturer:	**Model number:**	**Serial number:**
Global Finishing Solutions (GFS)	ACDW-251019-PSB-3F-S	Unknown
Construction date:	**Installation date:**	**Modification date(s):**
2023	2024	None

Design Capacity (examples: furnaces - tons/hr, tanks – gallons, boilers – MMBtu/hr, engines - hp):
Variable

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
Variable	Variable	8,760 hours/year

Fuel Usage Data **(fill out all applicable fields) NA**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating:	**Type and Btu/hr rating of burners:**

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO_X)		
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)		
Particulate Matter (PM_{10})		
Total Particulate Matter (TSP)	0.736 (aggregate)	0.055
Sulfur Dioxide (SO_2)		
Volatile Organic Compounds (VOC)	7.20 (aggregate)	0.534
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Ethyl benzene. MeOH, Xylene	0.059	0.010
MIBK	2.17	0.162
Toluene	2.71	0.203
Chromium compounds	0.289	0.022
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
NA		

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

PTEs are based on permit limits in pending R13-3651. Permit limits are based on daily and annual max usage rates.
Hourly emissions are aggregates of several different operations ongoing in the booth, potentially concurrently.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

1. Emission Limits – R30-05700011-2019: XXX.; Pending 45CSR13, R13-3651, 4.1.
2. Visible Emissions – R30-05700011-2019: 3.1.10; 45CSR§7-3.1. – 7-8.2; Pending 45CSR13, R13-3651, 4.1.4.
3. Aerospace NESHAP – R30-05700011-2019: 3.1.9.; 45CSR34, 40CFR63, Subpart GG; 45CSR§30-5.1.c.

__X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

1. Monitoring & Recordkeeping – R30-05700011-2019; XX.; Pending 45CSR§30-5.1.c; 45CSR13, R13-3651, 4.2., 4.4.
2. Testing - R30-05700011-2019; 3.1.11.; Pending 45CSR13, R13-3651, 4.3.
3. Visible Emissions - R30-05700011-2019: 3.2.2.; 45CSR§30-5.
4. Aerospace NESHAP – R30-05700011-2019: 3.2.4., 3.4.5.; 45CSR34, 40CFR63, Subpart GG; 45CSR 30-5.1.c.

Are you in compliance with all applicable requirements for this emission unit? _X_ Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description **Plant 4 Crossdraft Paint Booth – Bldg 4020**

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
P4-2E	Crossdraft Paint Booth – B4020	P$-2C

Provide a description of the emission unit (type, method of operation, design parameters, etc.; for engines, please indicate compression or spark ignition, lean or rich, four or two stroke, non-emergency or emergency, certified or not certified, as applicable)

Paint Booth (ID# P4-2S) - used to prepare and paint rocket motors. Vents to atmosphere through vent ID# P4-2E.

Manufacturer:	**Model number:**	**Serial number:**
Global Finishing Solutions (GFS)	ACDW-251019-PSB-3F-S	Unknown
Construction date:	**Installation date:**	**Modification date(s):**
2023	2024	None

Design Capacity (examples: furnaces - tons/hr, tanks – gallons, boilers – MMBtu/hr, engines - hp):
Variable

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
Variable	Variable	8,760 hours/year

Fuel Usage Data **(fill out all applicable fields) NA**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating:	**Type and Btu/hr rating of burners:**

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO_X)		
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)		
Particulate Matter (PM_{10})		
Total Particulate Matter (TSP)	43.5 (aggregate)	1.631
Sulfur Dioxide (SO_2)		
Volatile Organic Compounds (VOC)	151.62 (aggregate)	6.634
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Xylene	126.34	4.738
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
NA		

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

PTEs are based on permit limits in pending R13-3651. Permit limits are based on daily and annual max usage rates.
Hourly emissions are aggregates of several different operations ongoing in the booth, potentially concurrently.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

1. Emission Limits – R30-05700011-2019: XXX.; Pending 45CSR13, R13-3651, 4.1.
2. Visible Emissions – R30-05700011-2019: 3.1.10; 45CSR§7-3.1. – 7-8.2; Pending 45CSR13, R13-3651, 4.1.4.
3. Aerospace NESHAP – R30-05700011-2019: 3.1.9.; 45CSR34, 40CFR63, Subpart GG; 45CSR§30-5.1.c.

__X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

1. Monitoring & Recordkeeping – R30-05700011-2019; XX.; Pending 45CSR§30-5.1.c; 45CSR13, R13-3651, 4.2., 4.4.
2. Testing - R30-05700011-2019; 3.1.11.; Pending 45CSR13, R13-3651, 4.3.
3. Visible Emissions - R30-05700011-2019: 3.2.2.; 45CSR§30-5.
4. Aerospace NESHAP – R30-05700011-2019: 3.2.4., 3.4.5.; 45CSR34, 40CFR63, Subpart GG; 45CSR 30-5.1.c.

Are you in compliance with all applicable requirements for this emission unit? _X_ Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description **Plant 4 Crossdraft Paint Booth – Bldg 4020**

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
P4-3E	Crossdraft Paint Booth – B4020	P$-3C

Provide a description of the emission unit (type, method of operation, design parameters, etc.; for engines, please indicate compression or spark ignition, lean or rich, four or two stroke, non-emergency or emergency, certified or not certified, as applicable)

Paint Booth (ID# P4-3S) - used to prepare and paint rocket motors. Vents to atmosphere through vent ID# P4-3E.

Manufacturer:	**Model number:**	**Serial number:**
Global Finishing Solutions (GFS)	ACDW-251019-PSB-3F-S	Unknown
Construction date:	**Installation date:**	**Modification date(s):**
2023	2024	None

Design Capacity (examples: furnaces - tons/hr, tanks – gallons, boilers – MMBtu/hr, engines - hp):
Variable

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
Variable	Variable	8,760 hours/year

Fuel Usage Data **(fill out all applicable fields) NA**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating:	**Type and Btu/hr rating of burners:**

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO_X)		
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)		
Particulate Matter (PM_{10})		
Total Particulate Matter (TSP)	43.5 (aggregate)	1.631
Sulfur Dioxide (SO_2)		
Volatile Organic Compounds (VOC)	151.62 (aggregate)	6.634
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Xylene	126.34	4.738
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
NA		

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

PTEs are based on permit limits in pending R13-3651. Permit limits are based on daily and annual max usage rates.
Hourly emissions are aggregates of several different operations ongoing in the booth, potentially concurrently.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

1. Emission Limits – R30-05700011-2019: XXX.; Pending 45CSR13, R13-3651, 4.1.
2. Visible Emissions – R30-05700011-2019: 3.1.10; 45CSR§7-3.1. – 7-8.2; Pending 45CSR13, R13-3651, 4.1.4.
3. Aerospace NESHAP – R30-05700011-2019: 3.1.9.; 45CSR34, 40CFR63, Subpart GG; 45CSR§30-5.1.c.

__X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

1. Monitoring & Recordkeeping – R30-05700011-2019; XX.; Pending 45CSR§30-5.1.c; 45CSR13, R13-3651, 4.2., 4.4.
2. Testing - R30-05700011-2019; 3.1.11.; Pending 45CSR13, R13-3651, 4.3.
3. Visible Emissions - R30-05700011-2019: 3.2.2.; 45CSR§30-5.
4. Aerospace NESHAP – R30-05700011-2019: 3.2.4., 3.4.5.; 45CSR34, 40CFR63, Subpart GG; 45CSR 30-5.1.c.

Are you in compliance with all applicable requirements for this emission unit? _X_ Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description **Plant 4 Crossdraft Paint Booth – Bldg 4020**

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
P4-4E	Crossdraft Paint Booth – B4020	P$-4C

Provide a description of the emission unit (type, method of operation, design parameters, etc.; for engines, please indicate compression or spark ignition, lean or rich, four or two stroke, non-emergency or emergency, certified or not certified, as applicable)

Paint Booth (ID# P4-4S) - used to prepare and paint rocket motors. Vents to atmosphere through vent ID# P4-4E.

Manufacturer:	**Model number:**	**Serial number:**
Global Finishing Solutions (GFS)	ACDW-251019-PSB-3F-S	Unknown
Construction date:	**Installation date:**	**Modification date(s):**
2023	2024	None

Design Capacity (examples: furnaces - tons/hr, tanks – gallons, boilers – MMBtu/hr, engines - hp):
Variable

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
Variable	Variable	8,760 hours/year

Fuel Usage Data **(fill out all applicable fields) NA**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating:	**Type and Btu/hr rating of burners:**

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO_X)		
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)		
Particulate Matter (PM_{10})		
Total Particulate Matter (TSP)	3.67 (aggregate)	0.149
Sulfur Dioxide (SO_2)		
Volatile Organic Compounds (VOC)	7.42 (aggregate)	0.322
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Ethyl benzene. MeOH, Toluene	0.081	0.005
MIBK	0.06	0.005
Xylene	0.17	0.005
Chromium compounds	0.421	0.031
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
NA		

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

PTEs are based on permit limits in pending R13-3651. Permit limits are based on daily and annual max usage rates.
Hourly emissions are aggregates of several different operations ongoing in the booth, potentially concurrently.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

1. Emission Limits – R30-05700011-2019: XXX.; Pending 45CSR13, R13-3651, 4.1.
2. Visible Emissions – R30-05700011-2019: 3.1.10; 45CSR§7-3.1. – 7-8.2; Pending 45CSR13, R13-3651, 4.1.4.
3. Aerospace NESHAP – R30-05700011-2019: 3.1.9.; 45CSR34, 40CFR63, Subpart GG; 45CSR§30-5.1.c.

__X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

1. Monitoring & Recordkeeping – R30-05700011-2019; XX.; Pending 45CSR§30-5.1.c; 45CSR13, R13-3651, 4.2., 4.4.
2. Testing - R30-05700011-2019; 3.1.11.; Pending 45CSR13, R13-3651, 4.3.
3. Visible Emissions - R30-05700011-2019: 3.2.2.; 45CSR§30-5.
4. Aerospace NESHAP – R30-05700011-2019: 3.2.4., 3.4.5.; 45CSR34, 40CFR63, Subpart GG; 45CSR 30-5.1.c.

Are you in compliance with all applicable requirements for this emission unit? _X_ Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description **GMLRS Mandrel Release Coating Table**

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
NDV	Mandrel Release Coating Table Z-1S	None

Provide a description of the emission unit (type, method of operation, design parameters, etc.; for engines, please indicate compression or spark ignition, lean or rich, four or two stroke, non-emergency or emergency, certified or not certified, as applicable)

Open table where Frekote 700-NC mold release is applied to mandrels prior to winding cases with fiberglass fiber and epoxy resin.

Manufacturer:	**Model number:**	**Serial number:**
Unknown	Unknown	Unknown
Construction date:	**Installation date:**	**Modification date(s):**
2017	2017	None

Design Capacity (examples: furnaces - tons/hr, tanks – gallons, boilers – MMBtu/hr, engines - hp):
Variable

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
4.06 lb/hr	1.58 TPY	780 hours/year

Fuel Usage Data **(fill out all applicable fields) NA**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating:	**Type and Btu/hr rating of burners:**

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data			
Criteria Pollutants	Potential Emissions		
	PPH	TPY	
Carbon Monoxide (CO)			
Nitrogen Oxides (NO_X)			
Lead (Pb)			
Particulate Matter ($PM_{2.5}$)			
Particulate Matter (PM_{10})			
Total Particulate Matter (TSP)			
Sulfur Dioxide (SO_2)			
Volatile Organic Compounds (VOC)	4.06	1.58	
Hazardous Air Pollutants	Potential Emissions		
	PPH	TPY	
Regulated Pollutants other than Criteria and HAP	Potential Emissions		
	PPH	TPY	
NA			

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

PTEs are calculated based on engineering information provided on quantity of Frekote used per case multiplied by the maximum number of cases to be manufactured annually. Permit limits are based on daily and annual max usage rates.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

1. Emission Limits – R30-05700011-2019: 8.1.1. - 8.1.4.a.; 45CSR13, R13-3334B, 4.1.1., 4.1.4.

__X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

1. Monitoring & Recordkeeping - R30-05700011-2019: 8.2.3.; 45CSR13, R13-3334B, 4.2.3.

Are you in compliance with all applicable requirements for this emission unit? _X_ Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description **GMRLS Adapter Degreasing Table**

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
NDV	Adapter Degreasing Table Z-2S	None

Provide a description of the emission unit (type, method of operation, design parameters, etc.; for engines, please indicate compression or spark ignition, lean or rich, four or two stroke, non-emergency or emergency, certified or not certified, as applicable)

Open table where IPA is used to degrease adapter pieces prior to corrosion inhibitor coating. After curing, adapters are wiped with MEK as a quality check.

NOTE: Adapters are currently being processed at a 3rd party contractor's facility and this emission point is not being used. Emission point was added as a place holder for future contracts.

Manufacturer:	**Model number:**	**Serial number:**
Unknown	Unknown	Unknown
Construction date:	**Installation date:**	**Modification date(s):**
TBD	TBD	None

Design Capacity (examples: furnaces - tons/hr, tanks – gallons, boilers – MMBtu/hr, engines - hp):
Variable

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
3.73 lb/hr	0.97 TPY	1,040 hours/year

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating:	**Type and Btu/hr rating of burners:**

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data			
Criteria Pollutants	Potential Emissions		
	PPH	TPY	
Carbon Monoxide (CO)			
Nitrogen Oxides (NO_X)			
Lead (Pb)			
Particulate Matter ($PM_{2.5}$)			
Particulate Matter (PM_{10})			
Total Particulate Matter (TSP)			
Sulfur Dioxide (SO_2)			
Volatile Organic Compounds (VOC)	3.73	0.97	
Hazardous Air Pollutants	Potential Emissions		
	PPH	TPY	
Regulated Pollutants other than Criteria and HAP	Potential Emissions		
	PPH	TPY	
NA			

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

PTEs are calculated based on engineering information provided on quantity of IPA and MEK used per adapter multiplied by the maximum number of adapters coated annually. Permit limits are based on daily and annual max usage rates.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

1. Emission Limits – R30-05700011-2019: 8.1.1. – 8.1.4.b.; 45CSR13, R13-3334B, 4.1.1., 4.1.4.
2. Aerospace NESHAP – R30-05700011-2019: 3.1.9.; 45CSR34, 40CFR63, Subpart GG; 45CSR 30-5.1.c.

__X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

1. Monitoring & Recordkeeping - R30-05700011-2019: 8.2.3.; 45CSR13, R13-3334B, 4.2.3.
2. Aerospace NESHAP – R30-05700011-2019: 3.2.4., 3.4.5.; 45CSR34, 40CFR63, Subpart GG; 45CSR§30-5.1.c.

Are you in compliance with all applicable requirements for this emission unit? _X_ Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description **GMRLS Interior Degreasing Exhaust**

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
Z-5E & Z-6E	Interior Degreasing Exhaust and Drying Station Z-5S & Z-6S	None

Provide a description of the emission unit (type, method of operation, design parameters, etc.; for engines, please indicate compression or spark ignition, lean or rich, four or two stroke, non-emergency or emergency, certified or not certified, as applicable)

Table with an elephant truck exhaust for wipe cleaning and drying of the interior of cases prior to spraying with bondliner.

Manufacturer:	**Model number:**	**Serial number:**
Industrial Air Solutions	Unknown	Unknown
Construction date:	**Installation date:**	**Modification date(s):**
2017	2017	None

Design Capacity (examples: furnaces - tons/hr, tanks – gallons, boilers – MMBtu/hr, engines - hp):
Variable

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
9.97 lb/hr	2.44 TPY	520 hours/year

Fuel Usage Data **(fill out all applicable fields) NA**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating:	**Type and Btu/hr rating of burners:**

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO_X)		
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)		
Particulate Matter (PM_{10})		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO_2)		
Volatile Organic Compounds (VOC)	9.87	2.44
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
NA		

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

PTEs are calculated based on engineering information provided on quantity of IPA used per case multiplied by the maximum number of cases degreased annually. 95% is expected to be lost from the degreasing station (Z-5E) and 5% from the drying station (Z-6E). Permit limits are based on daily and annual max usage rates.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

1. Emission Limits – R30-05700011-2019: 8.1.1. – 8.1.4.d.; 45CSR13, R13-3334B, 4.1.1., 4.1.4.
2. Aerospace NESHAP – R30-05700011-2019: 3.1.9.; 45CSR34, 40CFR63, Subpart GG; 45CSR 30-5.1.c.

__X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

1. Monitoring & Recordkeeping - R30-05700011-2019: 8.2.3..; 45CSR§30-5.1.c; 45CSR13, R13-3334B, 4.2.3.
2. Aerospace NESHAP – R30-05700011-2019: 3.2.4., 3.4.5.; 45CSR34, 40CFR63, Subpart GG; 45CSR§30-5.1.c.

Are you in compliance with all applicable requirements for this emission unit? _X_ Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description **GMRLS Chemlok and Bondliner Mixing Hoods**

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
Z-7E & Z-12E	Chemlok and Bondliner Mix Hoods Z-7S & Z-12S	None

Provide a description of the emission unit (type, method of operation, design parameters, etc.; for engines, please indicate compression or spark ignition, lean or rich, four or two stroke, non-emergency or emergency, certified or not certified, as applicable)

Exhaust hoods used for weighing out and mixing batches of either Chemlok primers (Z-7E) or bondliner (Z-12E).

Manufacturer:	**Model number:**	**Serial number:**
LabConco	Basic 47	Unknown
Construction date:	**Installation date:**	**Modification date(s):**
2017	2017	None

Design Capacity (examples: furnaces - tons/hr, tanks – gallons, boilers – MMBtu/hr, engines - hp):
Variable

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
2.34 gal/hr	1,055 gal/yr	780 hours/year

Fuel Usage Data **(fill out all applicable fields) NA**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating:	**Type and Btu/hr rating of burners:**

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO_X)		
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)		
Particulate Matter (PM_{10})		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO_2)		
Volatile Organic Compounds (VOC)	0.8	0.1
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Various VOC HAPs	0.45	0.06
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
NA		

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

PTEs are calculated based on the number of batches required to be mixed per the quantities needed to be sprayed per case multiplied by the number of cases per year. Permit limits are based on daily and annual max usage rates.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

1. Emission Limits – R30-05700011-2019: 8.1.1. – 8.1.4.e & h.; 45CSR13, R13-3334B, 4.1.1., 4.1.4.
2. Aerospace NESHAP – R30-05700011-2019: 3.1.9.; 45CSR34, 40CFR63, Subpart GG; 45CSR 30-5.1.c.

__X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

1. Monitoring & Recordkeeping - R30-05700011-2019: 8.2.3..; 45CSR§30-5.1.c; 45CSR13, R13-3334B, 8.2.3.
2. Aerospace NESHAP – R30-05700011-2019: 3.2.4., 3.4.5.; 45CSR34, 40CFR63, Subpart GG; 45CSR§30-5.1.c.

Are you in compliance with all applicable requirements for this emission unit? _X_ Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description **GMRLS Chemlok and Bondliner Application Booths**

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
Z-8E, Z-9E, Z-13E, & Z-14E	Chemlok and Bondliner Application Booths & Drying Z-8S, Z-9S, Z-13S, & Z-14S	None

Provide a description of the emission unit (type, method of operation, design parameters, etc.; for engines, please indicate compression or spark ignition, lean or rich, four or two stroke, non-emergency or emergency, certified or not certified, as applicable)

Horizontal spray cabinets with automated spray lances that move through the interior of the cases to apply Chemlok or bondliner mixtures to prepare cases for propellant.

Units will be dried in the booths as well.

Manufacturer:	**Model number:**	**Serial number:**
Pillar	M-1740	Unknown
Construction date:	**Installation date:**	**Modification date(s):**
2017	2017	None

Design Capacity (examples: furnaces - tons/hr, tanks – gallons, boilers – MMBtu/hr, engines - hp):
Variable

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
0.6 gal/hr per line	300 gal/yr per line	780 hours/year per line

Fuel Usage Data **(fill out all applicable fields) NA**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating:	**Type and Btu/hr rating of burners:**

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO_X)		
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)		
Particulate Matter (PM_{10})	0.03	0.01
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO_2)		
Volatile Organic Compounds (VOC)	4.0	3.63
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Various VOC HAPs	3.50	1.81
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
NA		

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

PTEs are calculated based on the volume of material sprayed per case (plus tests) multiplied by the number of cases per year. Permit limits are based on daily and annual max usage rates.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

1. Emission Limits – R30-05700011-2019: 8.1.1. – 8.1.4.f., g., and i., 8.1.5., 8.1.6., 8.1.7..; 45CSR13, R13-3334B, 4.1.1, 4.1.4., 4.1.5., 4.1.6., 4.1.9.
2. Visible Emissions – R30-05700011-2019: 3.1.10; 45CSR§7-3.1. – 7-8.2
3. Aerospace NESHAP – R30-05700011-2019: 3.1.9.; 45CSR34, 40CFR63, Subpart GG; 45CSR 30-5.1.c.

__X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

1. Monitoring & Recordkeeping - R30-05700011-2019: 8.2.1, 8.2.2., 8.2.3..; 45CSR§30-5.1.c; 45CSR13, R13-3334B.
2. Visible Emissions – R30-05700011-2019: 3.2.2., 3.4.7.; 45CSR§30-5.1.c.
3. Aerospace NESHAP – R30-05700011-2019: 3.2.4., 3.4.5.; 45CSR34, 40CFR63, Subpart GG; 45CSR§30-5.1.c.

Are you in compliance with all applicable requirements for this emission unit? _X_ Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description **GMLRS Insulator Prep Exhaust & Drying Oven**

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
NDV & Z-11E	Insulator Prep Exhaust and Drying Oven Z-10S & Z-11S	None

Provide a description of the emission unit (type, method of operation, design parameters, etc.; for engines, please indicate compression or spark ignition, lean or rich, four or two stroke, non-emergency or emergency, certified or not certified, as applicable)

Table with an elephant truck exhaust for IPA wipe cleaning and drying of the insulators in the interior of cases prior to sending cases to be filled with propellant. VOC emissions are estimated to be 95% from the degreasing and 5% from the drying oven (Z-11E).

Manufacturer:	**Model number:**	**Serial number:**
Industrial Air Solutions	Unknown	Unknown
Construction date:	**Installation date:**	**Modification date(s):**
2017	2017	None

Design Capacity (examples: furnaces - tons/hr, tanks – gallons, boilers – MMBtu/hr, engines - hp):
Variable

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
9.87 lb/hr	2.57 TPY	520 hours/year

Fuel Usage Data **(fill out all applicable fields) NA**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating:	**Type and Btu/hr rating of burners:**

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data			
Criteria Pollutants	Potential Emissions		
	PPH	TPY	
Carbon Monoxide (CO)			
Nitrogen Oxides (NO_X)			
Lead (Pb)			
Particulate Matter ($PM_{2.5}$)			
Particulate Matter (PM_{10})			
Total Particulate Matter (TSP)			
Sulfur Dioxide (SO_2)			
Volatile Organic Compounds (VOC)	9.38 / 0.49	2.44 / 0.13	
Hazardous Air Pollutants	Potential Emissions		
	PPH	TPY	
Regulated Pollutants other than Criteria and HAP	Potential Emissions		
	PPH	TPY	
NA			

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

PTEs are calculated based on engineering information provided on quantity of IPA used per case multiplied by the maximum number of cases to be manufactured annually. Permit limits are based on daily and annual max usage rates.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

1. Emission Limits – R30-05700011-2019: 8.1.1. – 8.1.4.; 45CSR13, R13-3334B, 4.1.1., 4.1.4.

__X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

1. Monitoring & Recordkeeping - R30-05700011-2019: 8.2.3..; 45CSR§30-5.1.c; 45CSR13, R13-3334B, 8.2.3.

Are you in compliance with all applicable requirements for this emission unit? _X_ Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description **GMLRS Case Machining**

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
Z-15E	Case Machining Z-14	Z-4C

Provide a description of the emission unit (type, method of operation, design parameters, etc.; for engines, please indicate compression or spark ignition, lean or rich, four or two stroke, non-emergency or emergency, certified or not certified, as applicable)

Machining center used to machine rough ends off of wound cases to prepare them for end closure installation. Throughputs below are based on the total weight of the cases and adapters being machined.

Manufacturer:	**Model number:**	**Serial number:**
Doosan	PUMA 3100 ULY	Unknown
Construction date:	**Installation date:**	**Modification date(s):**
2017	2017	None

Design Capacity (examples: furnaces - tons/hr, tanks – gallons, boilers – MMBtu/hr, engines - hp):
Variable

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
80 lb/hr	120 TPY	6,240 hours/year

Fuel Usage Data **(fill out all applicable fields) NA**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating:	**Type and Btu/hr rating of burners:**

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO_X)		
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)		
Particulate Matter (PM_{10})	0.04	0.122
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO_2)		
Volatile Organic Compounds (VOC)		
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
NA		

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

PTEs are calculated based on engineering information provided on weights of parts before and after machining, multiplied by control device factors, and then multiplied by the maximum number of cases to be manufactured annually. Permit limits are based on daily and annual max usage rates.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

1. Emission Limits – R30-05700011-2019: 8.1.1. – 8.1.4.j., 8.1.5., 8.1.6., 8.1.7.; 45CSR13, R13-3334B, 4.1.1., 4.1.4., 4.1.5., 4.1.6., 4.1.9.
2. Visible Emissions – R30-05700011-2019: 3.1.10; 45CSR§7-3.1. – 7-8.2; 45CSR13, R13-3334

__X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

1. Monitoring & Recordkeeping - R30-05700011-2019: 8.2.1., 8.2.3..; 45CSR§30-5.1.c; 45CSR13, R13-3334B, 4.2.1., 4.2.3.
2. Visible Emissions – R30-05700011-2019: 3.2.2., 3.4.7.; 45CSR§30-5.1.c.

Are you in compliance with all applicable requirements for this emission unit? _X_ Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description **GMRLS End Closure Adapter Wiping Station**

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
NDV	End Closure Adapter Wiping Station Z-16S	None

Provide a description of the emission unit (type, method of operation, design parameters, etc.; for engines, please indicate compression or spark ignition, lean or rich, four or two stroke, non-emergency or emergency, certified or not certified, as applicable)

Open table where IPA is used to degrease adapter pieces prior to applying adhesive to bond them to the completed cases.

Manufacturer:	**Model number:**	**Serial number:**
Unknown	Unknown	Unknown
Construction date:	**Installation date:**	**Modification date(s):**
2017	2017	None

Design Capacity (examples: furnaces - tons/hr, tanks – gallons, boilers – MMBtu/hr, engines - hp):
Variable

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
2.5 lb/hr	0.64 TPY	520 hours/year

Fuel Usage Data **(fill out all applicable fields) NA**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating:	**Type and Btu/hr rating of burners:**

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO_X)		
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)		
Particulate Matter (PM_{10})		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO_2)		
Volatile Organic Compounds (VOC)	2.5	0.64
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
NA		

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

PTEs are calculated based on engineering information provided on quantity of IPA used per unit multiplied by the maximum number of units bonded annually. Permit limits are based on daily and annual max usage rates.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

1. Emission Limits – R30-05700011-2019: 8.1.1. – 8.1.4.k.; 45CSR13, R13-3334B, 4.1.1., 4.1.4.

__X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

1. Monitoring & Recordkeeping - R30-05700011-2019: 8.2.3..; 45CSR§30-5.1.c; 45CSR13, R13-3334B, 4.2.3.

Are you in compliance with all applicable requirements for this emission unit? _X_ Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number:	**List all emission units associated with this control device.**	
1-1C	1-3E	
Manufacturer:	**Model number:**	**Installation date:**
Mikro-Pulsair	16S-6-30	1981

Type of Air Pollution Control Device:

_X__ Baghouse/Fabric Filter ___ Venturi Scrubber ___ Multiclone

___ Carbon Bed Adsorber ___ Packed Tower Scrubber ___ Single Cyclone

___ Carbon Drum(s) ___ Other Wet Scrubber ___ Cyclone Bank

___ Catalytic Incinerator ___ Condenser ___ Settling Chamber

___ Thermal Incinerator ___ Flare ___ Other (describe) _____

___ Wet Plate Electrostatic Precipitator ___ Dry Plate Electrostatic Precipitator

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
Particulate matter	97.5	97.5

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).
Single compartment filter with 16 Dacron fiber bags using timed pulses of compressed air backflowing through filters to clean. Unit runs at ambient pressure and temperature.

Is this device subject to the CAM requirements of 40 C.F.R. 64? ___ Yes _X_ No

If Yes, **Complete ATTACHMENT H**

If No**, Provide justification.**
Potential pre-control device annual emissions of applicable regulated air pollutants are less than major source levels, and thus are exempt per 40 C.F.R. §64.2(a)(3).

Describe the parameters monitored and/or methods used to indicate performance of this control device.
Pressure drop is monitored to determine cleaning cycles. Unit undergoes preventive maintenance annually and collector is replaced if needed.

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number:	**List all emission units associated with this control device.**	
1-2C	1-4E	
Manufacturer:	**Model number:**	**Installation date:**
Edwards Engineering	SVR-6 DCFI	1990

Type of Air Pollution Control Device:

___ Baghouse/Fabric Filter	___ Venturi Scrubber	___ Multiclone
___ Carbon Bed Adsorber	___ Packed Tower Scrubber	___ Single Cyclone
___ Carbon Drum(s)	___ Other Wet Scrubber	___ Cyclone Bank
___ Catalytic Incinerator	_X_ Condenser	___ Settling Chamber
___ Thermal Incinerator	___ Flare	___ Other (describe) _____
___ Wet Plate Electrostatic Precipitator		___ Dry Plate Electrostatic Precipitator

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
Methylene chloride	90	80

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).

This unit operates between -45 F & -70 F. This unit will hold approx. 750lbs of material. Has a sparge air flow of 200 SCFH

Is this device subject to the CAM requirements of 40 C.F.R. 64? ___ Yes _X_ No

If Yes, **Complete ATTACHMENT H**

If No**, Provide justification.**

Potential pre-control device annual emissions of applicable regulated air pollutants are less than major source levels, and thus are exempt per 40 C.F.R. §64.2(a)(3).

Describe the parameters monitored and/or methods used to indicate performance of this control device.

There is a blue light if any of the conditions are not met. Air flow stops to the desiccator, the DP reaches 8 inches of water, the temperature control does not stay at both operating ranges of -45F & -70F and excessive liquid in the NG trap.

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number:	**List all emission units associated with this control device.**	
1-3C	NDV	
Manufacturer:	**Model number:**	**Installation date:**
Unknown	Unknown	1993

Type of Air Pollution Control Device:

___ Baghouse/Fabric Filter	___ Venturi Scrubber	___ Multiclone
_X_ Carbon Bed Adsorber	___ Packed Tower Scrubber	___ Single Cyclone
___ Carbon Drum(s)	___ Other Wet Scrubber	___ Cyclone Bank
___ Catalytic Incinerator	___ Condenser	___ Settling Chamber
___ Thermal Incinerator	___ Flare	___ Other (describe) _____
___ Wet Plate Electrostatic Precipitator		___ Dry Plate Electrostatic Precipitator

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
VOCs	Unknown	Unknown

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).
Design parameters unknown. Unit runs at ambient pressure and temperature.

Is this device subject to the CAM requirements of 40 C.F.R. 64? ___ Yes _X_ No

If Yes, **Complete ATTACHMENT H**

If No**, Provide justification.**
Potential pre-control device annual emissions of applicable regulated air pollutants are less than major source levels, and thus are exempt per 40 C.F.R. §64.2(a)(3).

Describe the parameters monitored and/or methods used to indicate performance of this control device.
Unit undergoes preventive maintenance annually and carbon is replaced if needed.

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number:	**List all emission units associated with this control device.**	
1-4C	1-7E	
Manufacturer:	**Model number:**	**Installation date:**
Mikro-Pulsair	31-4-20	2002

Type of Air Pollution Control Device:

_X__ Baghouse/Fabric Filter	___ Venturi Scrubber	___ Multiclone
___ Carbon Bed Adsorber	___ Packed Tower Scrubber	___ Single Cyclone
___ Carbon Drum(s)	___ Other Wet Scrubber	___ Cyclone Bank
___ Catalytic Incinerator	___ Condenser	___ Settling Chamber
___ Thermal Incinerator	___ Flare	___ Other (describe) _____
___ Wet Plate Electrostatic Precipitator		___ Dry Plate Electrostatic Precipitator

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
Particulate matter	97.5	97.5

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).
Single compartment filter with 23 Dacron fiber bags using timed pulses of compressed air backflowing through filters to clean. Unit runs at ambient pressure and temperature.

Is this device subject to the CAM requirements of 40 C.F.R. 64? ___ Yes _X_ No

If Yes, **Complete ATTACHMENT H**

If No**, Provide justification.**
Potential pre-control device annual emissions of applicable regulated air pollutants are less than major source levels, and thus are exempt per 40 C.F.R. §64.2(a)(3).

Describe the parameters monitored and/or methods used to indicate performance of this control device.
Pressure drop is monitored to determine cleaning cycles. Unit undergoes preventive maintenance annually and collector is replaced if needed.

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number:	**List all emission units associated with this control device.**	
1-5C, 1-6C	1-9E, 1-12E	
Manufacturer:	**Model number:**	**Installation date:**
BLC Industries	Unknown	1994

Type of Air Pollution Control Device:

_X_ Baghouse/Fabric Filter	___ Venturi Scrubber	___ Multiclone
___ Carbon Bed Adsorber	___ Packed Tower Scrubber	___ Single Cyclone
___ Carbon Drum(s)	___ Other Wet Scrubber	___ Cyclone Bank
___ Catalytic Incinerator	___ Condenser	___ Settling Chamber
___ Thermal Incinerator	___ Flare	___ Other (describe) _____
___ Wet Plate Electrostatic Precipitator		___ Dry Plate Electrostatic Precipitator

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
Lead particulate	99.97	99

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).

This unit operates at ambient temperature and pressure with a normal flow of 1150 cfm. Filters are HEPA class with a 99.97% efficiency.

Is this device subject to the CAM requirements of 40 C.F.R. 64? ___ Yes _X_ No

If Yes, **Complete ATTACHMENT H**

If No**, Provide justification.**

Potential pre-control device annual emissions of applicable regulated air pollutants are less than major source levels, and thus are exempt per 40 C.F.R. §64.2(a)(3).

Describe the parameters monitored and/or methods used to indicate performance of this control device.

Manometers are used to determine pressure differential across the filters. Procedures include a manometer check prior to operations.

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number:	**List all emission units associated with this control device.**	
1-7C	1-10E, 1-11E	
Manufacturer:	**Model number:**	**Installation date:**
Unknown	Unknown	1994

Type of Air Pollution Control Device:

___ Baghouse/Fabric Filter	___ Venturi Scrubber	___ Multiclone
___ Carbon Bed Adsorber	___ Packed Tower Scrubber	___ Single Cyclone
___ Carbon Drum(s)	___ Other Wet Scrubber	___ Cyclone Bank
___ Catalytic Incinerator	_X_ Condenser	___ Settling Chamber
___ Thermal Incinerator	___ Flare	___ Other (describe) _____
___ Wet Plate Electrostatic Precipitator		___ Dry Plate Electrostatic Precipitator

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
Heptane	90	80

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).

Unknown.

Is this device subject to the CAM requirements of 40 C.F.R. 64? ___ Yes _X_ No

If Yes, **Complete ATTACHMENT H**

If No**, Provide justification.**

Potential pre-control device annual emissions of applicable regulated air pollutants are less than major source levels, and thus are exempt per 40 C.F.R. §64.2(a)(3).

Describe the parameters monitored and/or methods used to indicate performance of this control device.

Condenser is interlocked to the system. If condenser is not running, system will not evaporate heptane.

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number:	**List all emission units associated with this control device.**	
1-8C, 1-9C	1-2E, 1-6E	
Manufacturer:	**Model number:**	**Installation date:**
Unknown	Unknown	1981 /2002

Type of Air Pollution Control Device:

___ Baghouse/Fabric Filter	___ Venturi Scrubber	___ Multiclone
___ Carbon Bed Adsorber	___ Packed Tower Scrubber	___ Single Cyclone
___ Carbon Drum(s)	___ Other Wet Scrubber	___ Cyclone Bank
___ Catalytic Incinerator	_X_ Condenser	___ Settling Chamber
___ Thermal Incinerator	___ Flare	___ Other (describe) _____
___ Wet Plate Electrostatic Precipitator		___ Dry Plate Electrostatic Precipitator

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
IPA / water	90	90

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).

Single pass shell and tube heat exchanger and water seal vacuum pump.

Is this device subject to the CAM requirements of 40 C.F.R. 64? ___ Yes _X_ No

If Yes, **Complete ATTACHMENT H**

If No**, Provide justification.**

Potential pre-control device annual emissions of applicable regulated air pollutants are less than major source levels, and thus are exempt per 40 C.F.R. §64.2(a)(3).

Describe the parameters monitored and/or methods used to indicate performance of this control device.
Bldg 262 is a visual monitoring before use and Bldg 374 is computer monitored with alarm system tied in will shut down the system if not working properly.

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number:	**List all emission units associated with this control device.**	
1-10C	1-13E	
Manufacturer:	**Model number:**	**Installation date:**
Chiller Solutions	SVR-6 DCFI	2016

Type of Air Pollution Control Device:

___ Baghouse/Fabric Filter ___ Venturi Scrubber ___ Multiclone

___ Carbon Bed Adsorber ___ Packed Tower Scrubber ___ Single Cyclone

___ Carbon Drum(s) ___ Other Wet Scrubber ___ Cyclone Bank

___ Catalytic Incinerator _X_ Condenser ___ Settling Chamber

___ Thermal Incinerator ___ Flare ___ Other (describe) _____

___ Wet Plate Electrostatic Precipitator ___ Dry Plate Electrostatic Precipitator

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
Methylene chloride	90	80

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).

The solvent rich gas stream enters the recovery unit at approximately 80 degrees F and a sparge air flow rate of 240 SCFH. The coil is maintained at -45 to -80 degrees F by liquid nitrogen and a heat exchange fluid. The recovery unit's pressure drop across the coil is 0 to 7.99 inches of water. The solvent is collected in a recovery tank and can hold approximately 150 gallons of solvent.

Is this device subject to the CAM requirements of 40 C.F.R. 64? ___ Yes _X_ No

If Yes, **Complete ATTACHMENT H**

If No**, Provide justification.**

Potential pre-control device annual emissions of applicable regulated air pollutants are less than major source levels, and thus are exempt per 40 C.F.R. §64.2(a)(3).

Describe the parameters monitored and/or methods used to indicate performance of this control device.

The system monitors coil temperature, process gas stream temperature, Coil Pressure drop, and solvent recovery tank levels. Setpoint and interlock limits ensure the system operates as designed. In the event a parameter goes out of normal operating range, the system is shut down and an alarm notifies operators of an issue. Solvent recovery is evaluated by a mass balance of solvent in and solvent out.

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number:	**List all emission units associated with this control device.**	
2-1C	NDV – unit vents inside building	
Manufacturer:	**Model number:**	**Installation date:**
Progressive Blasting	Unknown	1999

Type of Air Pollution Control Device:

_X_ Baghouse/Fabric Filter	___ Venturi Scrubber	___ Multiclone
___ Carbon Bed Adsorber	___ Packed Tower Scrubber	_X__ Single Cyclone
___ Carbon Drum(s)	___ Other Wet Scrubber	___ Cyclone Bank
___ Catalytic Incinerator	___ Condenser	___ Settling Chamber
___ Thermal Incinerator	___ Flare	___ Other (describe) _____
___ Wet Plate Electrostatic Precipitator		___ Dry Plate Electrostatic Precipitator

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
Particulate matter	97.5	97.5

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).
Single cyclone feeding to a 16 oz polyester baghouse with reverse jet cleaning. Unit empties into a drum inside building for cleaning.

Is this device subject to the CAM requirements of 40 C.F.R. 64? ___ Yes _X_ No

If Yes, **Complete ATTACHMENT H**

If No**, Provide justification.**
Potential pre-control device annual emissions of applicable regulated air pollutants are less than major source levels, and thus are exempt per 40 C.F.R. §64.2(a)(3).

Describe the parameters monitored and/or methods used to indicate performance of this control device.
Pressure drop is monitored to determine cleaning cycles. Unit undergoes preventive maintenance annually and collector is replaced if needed.

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number:	**List all emission units associated with this control device.**	
2-5C, 2-6C	2-11E	
Manufacturer:	**Model number:**	**Installation date:**
Various	Unknown	1999

Type of Air Pollution Control Device:

_X__ Baghouse/Fabric Filter	___ Venturi Scrubber	___ Multiclone
___ Carbon Bed Adsorber	___ Packed Tower Scrubber	___ Single Cyclone
___ Carbon Drum(s)	___ Other Wet Scrubber	___ Cyclone Bank
___ Catalytic Incinerator	___ Condenser	___ Settling Chamber
___ Thermal Incinerator	___ Flare	___ Other (describe) _____
___ Wet Plate Electrostatic Precipitator		___ Dry Plate Electrostatic Precipitator

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
Particulate matter	90	90

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).
Booth has a minimum face velocity of 100 fpm at ambient pressure and temperature.
Manometer indicates pressure drop to indicate when filters need changed.

Is this device subject to the CAM requirements of 40 C.F.R. 64? ___ Yes _X_ No

If Yes, **Complete ATTACHMENT H**

If No**, Provide justification.**
Potential pre-control device annual emissions of applicable regulated air pollutants are less than major source levels, and thus are exempt per 40 C.F.R. §64.2(a)(3).

Describe the parameters monitored and/or methods used to indicate performance of this control device.
Manometer indicates pressure drop to indicate when filters need changed.

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number:	**List all emission units associated with this control device.**	
2-7C	2-9E	
Manufacturer:	**Model number:**	**Installation date:**
Various	Unknown	1980

Type of Air Pollution Control Device:

_X__ Baghouse/Fabric Filter ___ Venturi Scrubber ___ Multiclone

___ Carbon Bed Adsorber ___ Packed Tower Scrubber ___ Single Cyclone

___ Carbon Drum(s) ___ Other Wet Scrubber ___ Cyclone Bank

___ Catalytic Incinerator ___ Condenser ___ Settling Chamber

___ Thermal Incinerator ___ Flare ___ Other (describe) _____

___ Wet Plate Electrostatic Precipitator ___ Dry Plate Electrostatic Precipitator

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
Particulate matter	90	90

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).
Booths have a minimum face velocity of 100 fpm at ambient pressure and temperature.
Manometers indicate pressure drop to indicate when filters need changed.

Is this device subject to the CAM requirements of 40 C.F.R. 64? ___ Yes _X_ No

If Yes, **Complete ATTACHMENT H**

If No**, Provide justification.**
Potential pre-control device annual emissions of applicable regulated air pollutants are less than major source levels, and thus are exempt per 40 C.F.R. §64.2(a)(3).

Describe the parameters monitored and/or methods used to indicate performance of this control device.
Manometers indicate pressure drop to indicate when filters need changed.

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number:	**List all emission units associated with this control device.**	
2-9C, 2-10C	2-16E, 2-17E	
Manufacturer:	**Model number:**	**Installation date:**
Global Finishing Solutions	ACDW-251019-PSB-3F-2	2021

Type of Air Pollution Control Device:

_X__ Baghouse/Fabric Filter	___ Venturi Scrubber	___ Multiclone
___ Carbon Bed Adsorber	___ Packed Tower Scrubber	___ Single Cyclone
___ Carbon Drum(s)	___ Other Wet Scrubber	___ Cyclone Bank
___ Catalytic Incinerator	___ Condenser	___ Settling Chamber
___ Thermal Incinerator	___ Flare	___ Other (describe) _____
___ Wet Plate Electrostatic Precipitator		___ Dry Plate Electrostatic Precipitator

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
Particulate matter	95	95.2

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).
Booths have a minimum face velocity of 100 fpm at ambient pressure and temperature.
Manometers indicate pressure drop to indicate when filters need changed.

Is this device subject to the CAM requirements of 40 C.F.R. 64? ___ Yes _X_ No

If Yes, **Complete ATTACHMENT H**

If No**, Provide justification.**
Potential pre-control device annual emissions of applicable regulated air pollutants are less than major source levels, and thus are exempt per 40 C.F.R. §64.2(a)(3).

Describe the parameters monitored and/or methods used to indicate performance of this control device.
Manometers indicate pressure drop to indicate when filters need changed.

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number:	**List all emission units associated with this control device.**	
6-1C, 6-2C, 6-3C, 6-4C, 6-5C, 6-6C	6-2E, 6-4E, 6-5E, 6-6E, 6-7E, 6-8E (Paint booths in Bldg 364, 392, and 412)	
Manufacturer: Various	**Model number:** Unknown	**Installation date:** 1995 / 1997 (6-8E)

Type of Air Pollution Control Device:

_X__ Baghouse/Fabric Filter ___ Venturi Scrubber ___ Multiclone

___ Carbon Bed Adsorber ___ Packed Tower Scrubber ___ Single Cyclone

___ Carbon Drum(s) ___ Other Wet Scrubber ___ Cyclone Bank

___ Catalytic Incinerator ___ Condenser ___ Settling Chamber

___ Thermal Incinerator ___ Flare ___ Other (describe) _____

___ Wet Plate Electrostatic Precipitator ___ Dry Plate Electrostatic Precipitator

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
Particulate matter	90	90

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).
Booths have a minimum face velocity of 100 fpm at ambient pressure and temperature.
Manometers indicate pressure drop to indicate when filters need changed.

Is this device subject to the CAM requirements of 40 C.F.R. 64? ___ Yes _X_ No

If Yes, **Complete ATTACHMENT H**

If No**, Provide justification.**
Potential pre-control device annual emissions of applicable regulated air pollutants are less than major source levels, and thus are exempt per 40 C.F.R. §64.2(a)(3).

Describe the parameters monitored and/or methods used to indicate performance of this control device.
Manometers indicate pressure drop to indicate when filters need changed.

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number:	**List all emission units associated with this control device.**	
B-11C, B-14C	B-27E, B-34E (Pittsburg spray booths in Bldg 2031)	
Manufacturer:	**Model number:**	**Installation date:**
Pittsburgh	Unknown	2000 / 2008

Type of Air Pollution Control Device:

_X__ Baghouse/Fabric Filter	___ Venturi Scrubber	___ Multiclone
___ Carbon Bed Adsorber	___ Packed Tower Scrubber	___ Single Cyclone
___ Carbon Drum(s)	___ Other Wet Scrubber	___ Cyclone Bank
___ Catalytic Incinerator	___ Condenser	___ Settling Chamber
___ Thermal Incinerator	___ Flare	___ Other (describe) _____
___ Wet Plate Electrostatic Precipitator		___ Dry Plate Electrostatic Precipitator

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
Particulate matter	90	90

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).
Booths have a minimum face velocity of 100 fpm at ambient pressure and temperature.
Manometers indicate pressure drop to indicate when filters need changed.

Is this device subject to the CAM requirements of 40 C.F.R. 64? ___ Yes _X_ No

If Yes, **Complete ATTACHMENT H**

If No**, Provide justification.**
Potential pre-control device annual emissions of applicable regulated air pollutants are less than major source levels, and thus are exempt per 40 C.F.R. §64.2(a)(3).

Describe the parameters monitored and/or methods used to indicate performance of this control device.
Manometers indicate pressure drop to indicate when filters need changed.

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number:	**List all emission units associated with this control device.**	
E-1C, E-2C	NDV – units vent inside building	
Manufacturer: Mikro-Pulsaire	**Model number:** 16S-6-30	**Installation date:** 1978

Type of Air Pollution Control Device:

_X__ Baghouse/Fabric Filter	___ Venturi Scrubber	___ Multiclone
___ Carbon Bed Adsorber	___ Packed Tower Scrubber	___ Single Cyclone
___ Carbon Drum(s)	___ Other Wet Scrubber	___ Cyclone Bank
___ Catalytic Incinerator	___ Condenser	___ Settling Chamber
___ Thermal Incinerator	___ Flare	___ Other (describe) _____
___ Wet Plate Electrostatic Precipitator		___ Dry Plate Electrostatic Precipitator

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
Particulate matter	97.5	97.5

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).
Single compartment filter with Dacron fiber bags using timed pulses of compressed air backflowing through filters to clean. Total cloth area of ~112 sqft. Unit runs at ambient pressure and temperature.

Is this device subject to the CAM requirements of 40 C.F.R. 64? ___ Yes _X_ No

If Yes, **Complete ATTACHMENT H**

If No**, Provide justification.**
Potential pre-control device annual emissions of applicable regulated air pollutants are less than major source levels, and thus are exempt per 40 C.F.R. §64.2(a)(3).

Describe the parameters monitored and/or methods used to indicate performance of this control device.
Pressure drop is monitored to determine cleaning cycles. Unit undergoes preventive maintenance annually and collector is replaced if needed.

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number:	**List all emission units associated with this control device.**	
F-1C	F-1E	
Manufacturer:	**Model number:**	**Installation date:**
Various	Unknown	1980

Type of Air Pollution Control Device:

_X__ Baghouse/Fabric Filter	___ Venturi Scrubber	___ Multiclone
___ Carbon Bed Adsorber	___ Packed Tower Scrubber	___ Single Cyclone
___ Carbon Drum(s)	___ Other Wet Scrubber	___ Cyclone Bank
___ Catalytic Incinerator	___ Condenser	___ Settling Chamber
___ Thermal Incinerator	___ Flare	___ Other (describe) _____
___ Wet Plate Electrostatic Precipitator		___ Dry Plate Electrostatic Precipitator

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
Particulate matter	90	90

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).
Booths have a minimum face velocity of 100 fpm at ambient pressure and temperature.
Manometers indicate pressure drop to indicate when filters need changed.

Is this device subject to the CAM requirements of 40 C.F.R. 64? ___ Yes _X_ No

If Yes, **Complete ATTACHMENT H**

If No**, Provide justification.**
Potential pre-control device annual emissions of applicable regulated air pollutants are less than major source levels, and thus are exempt per 40 C.F.R. §64.2(a)(3).

Describe the parameters monitored and/or methods used to indicate performance of this control device.
Manometers indicate pressure drop to indicate when filters need changed.

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number:	**List all emission units associated with this control device.**	
F-2C	F-3E	
Manufacturer:	**Model number:**	**Installation date:**
Various	Unknown	1994

Type of Air Pollution Control Device:

_X__ Baghouse/Fabric Filter ___ Venturi Scrubber ___ Multiclone

___ Carbon Bed Adsorber ___ Packed Tower Scrubber ___ Single Cyclone

___ Carbon Drum(s) ___ Other Wet Scrubber ___ Cyclone Bank

___ Catalytic Incinerator ___ Condenser ___ Settling Chamber

___ Thermal Incinerator ___ Flare ___ Other (describe) _____

___ Wet Plate Electrostatic Precipitator ___ Dry Plate Electrostatic Precipitator

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
Particulate matter	90	90

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).
Booths have a minimum face velocity of 100 fpm at ambient pressure and temperature.
Manometers indicate pressure drop to indicate when filters need changed.

Is this device subject to the CAM requirements of 40 C.F.R. 64? ___ Yes _X_ No

If Yes, **Complete ATTACHMENT H**

If No**, Provide justification.**
Potential pre-control device annual emissions of applicable regulated air pollutants are less than major source levels, and thus are exempt per 40 C.F.R. §64.2(a)(3).

Describe the parameters monitored and/or methods used to indicate performance of this control device.
Manometers indicate pressure drop to indicate when filters need changed.

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number:	**List all emission units associated with this control device.**	
F-3C	F-5E	
Manufacturer:	**Model number:**	**Installation date:**
Various	Unknown	1978

Type of Air Pollution Control Device:

_X__ Baghouse/Fabric Filter	___ Venturi Scrubber	___ Multiclone
___ Carbon Bed Adsorber	___ Packed Tower Scrubber	___ Single Cyclone
___ Carbon Drum(s)	___ Other Wet Scrubber	___ Cyclone Bank
___ Catalytic Incinerator	___ Condenser	___ Settling Chamber
___ Thermal Incinerator	___ Flare	___ Other (describe) _____
___ Wet Plate Electrostatic Precipitator		___ Dry Plate Electrostatic Precipitator

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
Particulate matter	90	90

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).
Booths have a minimum face velocity of 100 fpm at ambient pressure and temperature.
Manometers indicate pressure drop to indicate when filters need changed.

Is this device subject to the CAM requirements of 40 C.F.R. 64? ___ Yes _X_ No

If Yes, **Complete ATTACHMENT H**

If No**, Provide justification.**
Potential pre-control device annual emissions of applicable regulated air pollutants are less than major source levels, and thus are exempt per 40 C.F.R. §64.2(a)(3).

Describe the parameters monitored and/or methods used to indicate performance of this control device.
Manometers indicate pressure drop to indicate when filters need changed.

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number:	**List all emission units associated with this control device.**	
F-4C	F-6E	
Manufacturer:	**Model number:**	**Installation date:**
Progressive Blasting	Unknown	1978

Type of Air Pollution Control Device:

_X_ Baghouse/Fabric Filter ___ Venturi Scrubber ___ Multiclone

___ Carbon Bed Adsorber ___ Packed Tower Scrubber _X__ Single Cyclone

___ Carbon Drum(s) ___ Other Wet Scrubber ___ Cyclone Bank

___ Catalytic Incinerator ___ Condenser ___ Settling Chamber

___ Thermal Incinerator ___ Flare ___ Other (describe) _____

___ Wet Plate Electrostatic Precipitator ___ Dry Plate Electrostatic Precipitator

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
Particulate matter	97.5	97.5

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).
Single cyclone feeding to a 16 oz polyester baghouse with reverse jet cleaning. Unit empties into a drum inside building for cleaning.

Is this device subject to the CAM requirements of 40 C.F.R. 64? ___ Yes _X_ No

If Yes, **Complete ATTACHMENT H**

If No**, Provide justification.**
Potential pre-control device annual emissions of applicable regulated air pollutants are less than major source levels, and thus are exempt per 40 C.F.R. §64.2(a)(3).

Describe the parameters monitored and/or methods used to indicate performance of this control device.
Pressure drop is monitored to determine cleaning cycles. Unit undergoes preventive maintenance annually and collector is replaced if needed.

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: F-5C	**List all emission units associated with this control device.** F-9E	
Manufacturer: Various	**Model number:** Unknown	**Installation date:** 1978

Type of Air Pollution Control Device:

_X__ Baghouse/Fabric Filter ___ Venturi Scrubber ___ Multiclone

___ Carbon Bed Adsorber ___ Packed Tower Scrubber ___ Single Cyclone

___ Carbon Drum(s) ___ Other Wet Scrubber ___ Cyclone Bank

___ Catalytic Incinerator ___ Condenser ___ Settling Chamber

___ Thermal Incinerator ___ Flare ___ Other (describe) _____

___ Wet Plate Electrostatic Precipitator ___ Dry Plate Electrostatic Precipitator

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
Particulate matter	90	90

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).
Booths have a minimum face velocity of 100 fpm at ambient pressure and temperature.
Manometers indicate pressure drop to indicate when filters need changed.

Is this device subject to the CAM requirements of 40 C.F.R. 64? ___ Yes _X_ No

If Yes, **Complete ATTACHMENT H**

If No**, Provide justification.**
Potential pre-control device annual emissions of applicable regulated air pollutants are less than major source levels, and thus are exempt per 40 C.F.R. §64.2(a)(3).

Describe the parameters monitored and/or methods used to indicate performance of this control device.
Manometers indicate pressure drop to indicate when filters need changed.

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number:	**List all emission units associated with this control device.**	
F-7C	F-12E	
Manufacturer:	**Model number:**	**Installation date:**
Various	Unknown	1988

Type of Air Pollution Control Device:

_X__ Baghouse/Fabric Filter ___ Venturi Scrubber ___ Multiclone

___ Carbon Bed Adsorber ___ Packed Tower Scrubber ___ Single Cyclone

___ Carbon Drum(s) ___ Other Wet Scrubber ___ Cyclone Bank

___ Catalytic Incinerator ___ Condenser ___ Settling Chamber

___ Thermal Incinerator ___ Flare ___ Other (describe) _____

___ Wet Plate Electrostatic Precipitator ___ Dry Plate Electrostatic Precipitator

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
Particulate matter	90	90

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).
Booths have a minimum face velocity of 100 fpm at ambient pressure and temperature.
Manometers indicate pressure drop to indicate when filters need changed.

Is this device subject to the CAM requirements of 40 C.F.R. 64? ___ Yes _X_ No

If Yes, **Complete ATTACHMENT H**

If No**, Provide justification.**
Potential pre-control device annual emissions of applicable regulated air pollutants are less than major source levels, and thus are exempt per 40 C.F.R. §64.2(a)(3).

Describe the parameters monitored and/or methods used to indicate performance of this control device.
Manometers indicate pressure drop to indicate when filters need changed.

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number:	**List all emission units associated with this control device.**	
F-8C	F-13E	
Manufacturer:	**Model number:**	**Installation date:**
Various	Unknown	1980

Type of Air Pollution Control Device:

_X__ Baghouse/Fabric Filter	___ Venturi Scrubber	___ Multiclone
___ Carbon Bed Adsorber	___ Packed Tower Scrubber	___ Single Cyclone
___ Carbon Drum(s)	___ Other Wet Scrubber	___ Cyclone Bank
___ Catalytic Incinerator	___ Condenser	___ Settling Chamber
___ Thermal Incinerator	___ Flare	___ Other (describe) _____
___ Wet Plate Electrostatic Precipitator		___ Dry Plate Electrostatic Precipitator

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
Particulate matter	90	90

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).
Booths have a minimum face velocity of 100 fpm at ambient pressure and temperature.
Manometers indicate pressure drop to indicate when filters need changed.

Is this device subject to the CAM requirements of 40 C.F.R. 64? ___ Yes _X_ No

If Yes, **Complete ATTACHMENT H**

If No**, Provide justification.**
Potential pre-control device annual emissions of applicable regulated air pollutants are less than major source levels, and thus are exempt per 40 C.F.R. §64.2(a)(3).

Describe the parameters monitored and/or methods used to indicate performance of this control device.
Manometers indicate pressure drop to indicate when filters need changed.

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number:	**List all emission units associated with this control device.**	
F-9C	F-14E	
Manufacturer:	**Model number:**	**Installation date:**
Zero Manf.	Unknown	1988

Type of Air Pollution Control Device:

_X_ Baghouse/Fabric Filter	___ Venturi Scrubber	___ Multiclone
___ Carbon Bed Adsorber	___ Packed Tower Scrubber	_X__ Single Cyclone
___ Carbon Drum(s)	___ Other Wet Scrubber	___ Cyclone Bank
___ Catalytic Incinerator	___ Condenser	___ Settling Chamber
___ Thermal Incinerator	___ Flare	___ Other (describe) _____
___ Wet Plate Electrostatic Precipitator		___ Dry Plate Electrostatic Precipitator

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
Particulate matter	97.5	97.5

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).
Single cyclone feeding to a dacron baghouse (~1296 sqft) with reverse jet cleaning. Unit empties into a drum inside building for cleaning.

Is this device subject to the CAM requirements of 40 C.F.R. 64? ___ Yes _X_ No

If Yes, **Complete ATTACHMENT H**

If No**, Provide justification.**
Potential pre-control device annual emissions of applicable regulated air pollutants are less than major source levels, and thus are exempt per 40 C.F.R. §64.2(a)(3).

Describe the parameters monitored and/or methods used to indicate performance of this control device.
Pressure drop is monitored to determine cleaning cycles. Unit undergoes preventive maintenance annually and collector is replaced if needed.

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number:	**List all emission units associated with this control device.**	
F-10C	F-16E	
Manufacturer:	**Model number:**	**Installation date:**
Various	Unknown	1988

Type of Air Pollution Control Device:

_X__ Baghouse/Fabric Filter ___ Venturi Scrubber ___ Multiclone

___ Carbon Bed Adsorber ___ Packed Tower Scrubber ___ Single Cyclone

___ Carbon Drum(s) ___ Other Wet Scrubber ___ Cyclone Bank

___ Catalytic Incinerator ___ Condenser ___ Settling Chamber

___ Thermal Incinerator ___ Flare ___ Other (describe) _____

___ Wet Plate Electrostatic Precipitator ___ Dry Plate Electrostatic Precipitator

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
Particulate matter	90	90

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).
Booths have a minimum face velocity of 100 fpm at ambient pressure and temperature.
Manometers indicate pressure drop to indicate when filters need changed.

Is this device subject to the CAM requirements of 40 C.F.R. 64? ___ Yes _X_ No

If Yes, **Complete ATTACHMENT H**

If No**, Provide justification.**
Potential pre-control device annual emissions of applicable regulated air pollutants are less than major source levels, and thus are exempt per 40 C.F.R. §64.2(a)(3).

Describe the parameters monitored and/or methods used to indicate performance of this control device.
Manometers indicate pressure drop to indicate when filters need changed.

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number:	**List all emission units associated with this control device.**	
F-11C	F-18E	
Manufacturer:	**Model number:**	**Installation date:**
Various	Unknown	1988

Type of Air Pollution Control Device:

_X__ Baghouse/Fabric Filter ___ Venturi Scrubber ___ Multiclone

___ Carbon Bed Adsorber ___ Packed Tower Scrubber ___ Single Cyclone

___ Carbon Drum(s) ___ Other Wet Scrubber ___ Cyclone Bank

___ Catalytic Incinerator ___ Condenser ___ Settling Chamber

___ Thermal Incinerator ___ Flare ___ Other (describe) _____

___ Wet Plate Electrostatic Precipitator ___ Dry Plate Electrostatic Precipitator

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
Particulate matter	90	90

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).

Booths have a minimum face velocity of 100 fpm at ambient pressure and temperature.
Manometers indicate pressure drop to indicate when filters need changed.

Is this device subject to the CAM requirements of 40 C.F.R. 64? ___ Yes _X_ No

If Yes, **Complete ATTACHMENT H**

If No**, Provide justification.**

Potential pre-control device annual emissions of applicable regulated air pollutants are less than major source levels, and thus are exempt per 40 C.F.R. §64.2(a)(3).

Describe the parameters monitored and/or methods used to indicate performance of this control device.

Manometers indicate pressure drop to indicate when filters need changed.

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number:	**List all emission units associated with this control device.**	
G-1C	G-2E (Bldg 2000 – Feed Hopper Exhaust)	
Manufacturer:	**Model number:**	**Installation date:**
Unknown	Unknown	1968

Type of Air Pollution Control Device:

_X__ Baghouse/Fabric Filter	___ Venturi Scrubber	___ Multiclone
___ Carbon Bed Adsorber	___ Packed Tower Scrubber	___ Single Cyclone
___ Carbon Drum(s)	___ Other Wet Scrubber	___ Cyclone Bank
___ Catalytic Incinerator	___ Condenser	___ Settling Chamber
___ Thermal Incinerator	___ Flare	___ Other (describe) _____
___ Wet Plate Electrostatic Precipitator		___ Dry Plate Electrostatic Precipitator

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
Particulate matter	90	90

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).
Booths have a minimum face velocity of 100 fpm at ambient pressure and temperature.
Manometers indicate pressure drop to indicate when filters need changed.

Is this device subject to the CAM requirements of 40 C.F.R. 64? ___ Yes _X_ No

If Yes, **Complete ATTACHMENT H**

If No**, Provide justification.**
Potential pre-control device annual emissions of applicable regulated air pollutants are less than major source levels, and thus are exempt per 40 C.F.R. §64.2(a)(3).

Describe the parameters monitored and/or methods used to indicate performance of this control device.
Manometers indicate pressure drop to indicate when filters need changed.

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number:	**List all emission units associated with this control device.**	
G-1C	G-2E (Bldg 2000 – Feed Hopper Exhaust)	
Manufacturer:	**Model number:**	**Installation date:**
Various	Unknown	1968

Type of Air Pollution Control Device:

_X__ Baghouse/Fabric Filter	___ Venturi Scrubber	___ Multiclone
___ Carbon Bed Adsorber	___ Packed Tower Scrubber	___ Single Cyclone
___ Carbon Drum(s)	___ Other Wet Scrubber	___ Cyclone Bank
___ Catalytic Incinerator	___ Condenser	___ Settling Chamber
___ Thermal Incinerator	___ Flare	___ Other (describe) _____
___ Wet Plate Electrostatic Precipitator		___ Dry Plate Electrostatic Precipitator

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
Particulate matter	90	90

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).
Hood has a minimum face velocity of 100 fpm at ambient pressure and temperature.
Manometers indicate pressure drop to indicate when filters need changed.

Is this device subject to the CAM requirements of 40 C.F.R. 64? ___ Yes _X_ No

If Yes, **Complete ATTACHMENT H**

If No**, Provide justification.**
Potential pre-control device annual emissions of applicable regulated air pollutants are less than major source levels, and thus are exempt per 40 C.F.R. §64.2(a)(3).

Describe the parameters monitored and/or methods used to indicate performance of this control device.
Manometers indicate pressure drop to indicate when filters need changed.

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number:	**List all emission units associated with this control device.**	
J-1C, J-2C, J-3C, J-4C	J-2E, J-6-4E, J-5E, J-7E (Paint booths in Bldg 2011S, 368, and 2013)	
Manufacturer:	**Model number:**	**Installation date:**
Various	Unknown	1980 (J-2E) / 2000

Type of Air Pollution Control Device:

_X__ Baghouse/Fabric Filter	___ Venturi Scrubber	___ Multiclone
___ Carbon Bed Adsorber	___ Packed Tower Scrubber	___ Single Cyclone
___ Carbon Drum(s)	___ Other Wet Scrubber	___ Cyclone Bank
___ Catalytic Incinerator	___ Condenser	___ Settling Chamber
___ Thermal Incinerator	___ Flare	___ Other (describe) _____
___ Wet Plate Electrostatic Precipitator		___ Dry Plate Electrostatic Precipitator

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
Particulate matter	90	90

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).
Booths have a minimum face velocity of 100 fpm at ambient pressure and temperature.
Manometers indicate pressure drop to indicate when filters need changed.

Is this device subject to the CAM requirements of 40 C.F.R. 64? ___ Yes _X_ No

If Yes, **Complete ATTACHMENT H**

If No**, Provide justification.**
Potential pre-control device annual emissions of applicable regulated air pollutants are less than major source levels, and thus are exempt per 40 C.F.R. §64.2(a)(3).

Describe the parameters monitored and/or methods used to indicate performance of this control device.
Manometers indicate pressure drop to indicate when filters need changed.

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number:	**List all emission units associated with this control device.**	
P4-1C, P4-2C, P4-3C, P4-4C	P4-1E, P4-2E, P4-3E, P4-4E	
Manufacturer:	**Model number:**	**Installation date:**
Global Finishing Solutions	ACDW-251019-PSB-3F-2	2023

Type of Air Pollution Control Device:

_X__ Baghouse/Fabric Filter	___ Venturi Scrubber	___ Multiclone
___ Carbon Bed Adsorber	___ Packed Tower Scrubber	___ Single Cyclone
___ Carbon Drum(s)	___ Other Wet Scrubber	___ Cyclone Bank
___ Catalytic Incinerator	___ Condenser	___ Settling Chamber
___ Thermal Incinerator	___ Flare	___ Other (describe) _____
___ Wet Plate Electrostatic Precipitator		___ Dry Plate Electrostatic Precipitator

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
Particulate matter	95	95.2

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).

Booths have a minimum face velocity of 100 fpm at ambient pressure and temperature.

Manometers indicate pressure drop to indicate when filters need changed.

Is this device subject to the CAM requirements of 40 C.F.R. 64? ___ Yes _X_ No

If Yes, **Complete ATTACHMENT H**

If No**, Provide justification.**

Potential pre-control device annual emissions of applicable regulated air pollutants are less than major source levels, and thus are exempt per 40 C.F.R. §64.2(a)(3).

Describe the parameters monitored and/or methods used to indicate performance of this control device.

Manometers indicate pressure drop to indicate when filters need changed.

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number:	**List all emission units associated with this control device.**	
Z-2, Z-3, Z-5C	Z-8E, Z-13, Z-9E	
Manufacturer:	**Model number:**	**Installation date:**
Global Finishing Solutions	GFS Wave	2017

Type of Air Pollution Control Device:

_X__ Baghouse/Fabric Filter	___ Venturi Scrubber	___ Multiclone
___ Carbon Bed Adsorber	___ Packed Tower Scrubber	___ Single Cyclone
___ Carbon Drum(s)	___ Other Wet Scrubber	___ Cyclone Bank
___ Catalytic Incinerator	___ Condenser	___ Settling Chamber
___ Thermal Incinerator	___ Flare	___ Other (describe) _____
___ Wet Plate Electrostatic Precipitator		___ Dry Plate Electrostatic Precipitator

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
Particulate matter	99.5	90

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).
Booth has a minimum face velocity of 100 fpm at ambient pressure and temperature.
Manometer indicates pressure drop to indicate when filters need changed.

Is this device subject to the CAM requirements of 40 C.F.R. 64? ___ Yes _X_ No

If Yes, **Complete ATTACHMENT H**

If No**, Provide justification.**
Potential pre-control device annual emissions of applicable regulated air pollutants are less than major source levels, and thus are exempt per 40 C.F.R. §64.2(a)(3).

Describe the parameters monitored and/or methods used to indicate performance of this control device.
Manometer indicates pressure drop to indicate when filters need changed.

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number:	**List all emission units associated with this control device.**	
Z-4C	Z-14E	
Manufacturer:	**Model number:**	**Installation date:**
Aget Manufacturing Company	30SN100-PL-SP	2017

Type of Air Pollution Control Device:

_X_ Baghouse/Fabric Filter	___ Venturi Scrubber	___ Multiclone
___ Carbon Bed Adsorber	___ Packed Tower Scrubber	_X__ Single Cyclone
___ Carbon Drum(s)	___ Other Wet Scrubber	___ Cyclone Bank
___ Catalytic Incinerator	___ Condenser	___ Settling Chamber
___ Thermal Incinerator	___ Flare	___ Other (describe) _____
___ Wet Plate Electrostatic Precipitator		___ Dry Plate Electrostatic Precipitator

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
Particulate matter	97.5	80

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).
Single cyclone feeding to an afterfilter utilizing 13.5 lb napped polypropylene sateen filters with a Cab-O-Sil preload. Unit empties into a drum inside building for cleaning. Drums are emptied as needed and filters are changed out when indicated by indicated pressure drop.

Is this device subject to the CAM requirements of 40 C.F.R. 64? ___ Yes _X_ No

If Yes, **Complete ATTACHMENT H**

If No**, Provide justification.**
Potential pre-control device annual emissions of applicable regulated air pollutants are less than major source levels, and thus are exempt per 40 C.F.R. §64.2(a)(3).

Describe the parameters monitored and/or methods used to indicate performance of this control device.
Pressure drop is monitored to determine cleaning cycles. Unit undergoes preventive maintenance annually and collector is replaced if needed.

ATTACHMENT H - Compliance Assurance Monitoring (CAM) Plan Form

For definitions and information about the CAM rule, please refer to 40 CFR Part 64. Additional information (including guidance documents) may also be found at http://www.epa.gov/ttn/emc/cam.html

CAM APPLICABILITY DETERMINATION

1) Does the facility have a PSEU (Pollutant-Specific Emissions Unit considered separately with respect to **EACH** regulated air pollutant) that is subject to CAM (40 CFR Part 64), which must be addressed in this CAM plan submittal? To determine applicability, a PSEU must meet **all** of the following criteria (*If No, then the remainder of this form need not be completed*): ☐ YES ☒ NO**

a. The PSEU is located at a major source that is required to obtain a Title V permit;

b. The PSEU is subject to an emission limitation or standard for the applicable regulated air pollutant that is NOT exempt;

LIST OF EXEMPT EMISSION LIMITATIONS OR STANDARDS:

- NSPS (40 CFR Part 60) or NESHAP (40 CFR Parts 61 and 63) proposed after 11/15/1990.
- Stratospheric Ozone Protection Requirements.
- Acid Rain Program Requirements.
- Emission Limitations or Standards for which a WVDEP Division of Air Quality Title V permit specifies a continuous compliance determination method, as defined in 40 CFR §64.1.
- An emission cap that meets the requirements specified in 40 CFR §70.4(b)(12).

c. The PSEU uses an add-on control device (as defined in 40 CFR §64.1) to achieve compliance with an emission limitation or standard;

d. The PSEU has potential pre-control device emissions of the applicable regulated air pollutant that are equal to or greater than the Title V Major Source Threshold Levels; AND

e. The PSEU is NOT an exempt backup utility power emissions unit that is municipally-owned.

BASIS OF CAM SUBMITTAL

2) Mark the appropriate box below as to why this CAM plan is being submitted as part of an application for a Title V permit: Not Applicable

☐ RENEWAL APPLICATION. **ALL** PSEUs for which a CAM plan has NOT yet been approved need to be addressed in this CAM plan submittal.

☐ INITIAL APPLICATION (submitted after 4/20/98). **ONLY** large PSEUs (i. e., PSEUs with potential post-control device emissions of an applicable regulated air pollutant that are equal to or greater than Major Source Threshold Levels) need to be addressed in this CAM plan submittal.

☐ SIGNIFICANT MODIFICATION TO LARGE PSEUs. **ONLY** large PSEUs being modified after 4/20/98 need to be addressed in this cam plan submittal. For large PSEUs with an approved CAM plan, Only address the appropriate monitoring requirements affected by the significant modification.

** **Rationale for CAM Exemption:** The Northrop Grumman Systems Corporation - Alliant Techsystems Operations LLC/Allegany Ballistics Laboratory manufacturing facility does not own or operate a subject pollutant-specific emissions unit as defined at 40 C.F.R. §64.1, because all plant control devices either have potential pre-control device annual emissions of applicable regulated air pollutants that are less than major source levels, and thus are exempt per 40 C.F.R. §64.2(a)(3), or are already subject to a Title V permit that specifies a continuous compliance determination method as defined in §64.1, and thus are exempt from CAM requirements per 40 C.F.R. §64.2(b)(1)(vi), or are not subject to a regulated air pollutant emission limitation or standard, and thus are not subject to CAM requirements per 40 C.F.R. §64.2(a)(1)(i).

3) [a] BACKGROUND DATA AND INFORMATION					
Complete the following table for **all** PSEUs that need to be addressed in this CAM plan submittal. This section is to be used to provide background data and information for each PSEU In order to supplement the submittal requirements specified in 40 CFR §64.4. If additional space is needed, attach and label accordingly.					
PSEU DESIGNATION	DESCRIPTION	POLLUTANT	CONTROL DEVICE	[b] EMISSION LIMITATION or STANDARD	[c] MONITORING REQUIREMENT
Not Applicable					
EXAMPLE Boiler No. 1	Wood-Fired Boiler	PM	Multiclone	45CSR§2-4.1.c.; 9.0 lb/hr	Monitor pressure drop across multiclone: Weekly inspection of multiclone

[a] If a control device is common to more than one PSEU, one monitoring plan may be submitted for the control device with the affected PSEUs identified and any conditions that must be maintained or monitored in accordance with 40 CFR §64.3(a). If a single PSEU is controlled by more than one control device similar in design and operation, one monitoring plan for the applicable control devices may be submitted with the applicable control devices identified and any conditions that must be maintained or monitored in accordance with 40 CFR §64.3(a).

[b] Indicate the emission limitation or standard for any applicable requirement that constitutes an emission limitation, emission standard, or standard of performance (as defined in 40 CFR §64.1).

[c] Indicate the monitoring requirements for the PSEU that are required by an applicable regulation or permit condition.

CAM MONITORING APPROACH CRITERIA

Complete this section for **EACH** PSEU that needs to be addressed in this CAM plan submittal. This section may be copied as needed for each PSEU. This section is to be used to provide monitoring data and information for EACH indicator selected for EACH PSEU in order to meet the monitoring design criteria specified in 40 CFR §64.3 and §64.4. if more than two indicators are being selected for a PSEU or if additional space is needed, attach and label accordingly with the appropriate PSEU designation, pollutant, and indicator numbers.

4a) PSEU Designation: Not Applicable	**4b) Pollutant:**	**4c) [a] Indicator No. 1:**	**4d) [a] Indicator No. 2:**
5a) GENERAL CRITERIA Describe the MONITORING APPROACH used to measure the indicators:			
[b] Establish the appropriate INDICATOR RANGE or the procedures for establishing the indicator range which provides a reasonable assurance of compliance:			
5b) PERFORMANCE CRITERIA Provide the SPECIFICATIONS FOR OBTAINING REPRESENTATIVE DATA, such as detector location, installation specifications, and minimum acceptable accuracy:			
[c] For new or modified monitoring equipment, provide VERIFICATION PROCEDURES, including manufacturer's recommendations, TO CONFIRM THE OPERATIONAL STATUS of the monitoring:			
Provide QUALITY ASSURANCE AND QUALITY CONTROL (QA/QC) PRACTICES that are adequate to ensure the continuing validity of the data, (i.e., daily calibrations, visual inspections, routine maintenance, RATA, etc.):			
[d] Provide the MONITORING FREQUENCY:			
Provide the DATA COLLECTION PROCEDURES that will be used:			
Provide the DATA AVERAGING PERIOD for the purpose of determining whether an excursion or exceedance has occurred:			

[a] Describe all indicators to be monitored which satisfies 40 CFR §64.3(a). Indicators of emission control performance for the control device and associated capture system may include measured or predicted emissions (including visible emissions or opacity), process and control device operating parameters that affect control device (and capture system) efficiency or emission rates, or recorded findings of inspection and maintenance activities.

[b] Indicator Ranges may be based on a single maximum or minimum value or at multiple levels that are relevant to distinctly different operating conditions, expressed as a function of process variables, expressed as maintaining the applicable indicator in a particular operational status or designated condition, or established as interdependent between more than one indicator. For CEMS, COMS, or PEMS, include the most recent certification test for the monitor.

[c] The verification for operational status should include procedures for installation, calibration, and operation of the monitoring equipment, conducted in accordance with the manufacturer's recommendations, necessary to confirm the monitoring equipment is operational prior to the commencement of the required monitoring.

[d] Emission units with post-control PTE ≥ 100 percent of the amount classifying the source as a major source (i.e., Large PSEU) must collect four or more values per hour to be averaged. A reduced data collection frequency may be approved in limited circumstances. Other emission units must collect data at least once per 24 hour period.

RATIONALE AND JUSTIFICATION

Complete this section for **EACH** PSEU that needs to be addressed in this CAM plan submittal. This section may be copied as needed for each PSEU. This section is to be used to provide rationale and justification for the selection of EACH indicator and monitoring approach and EACH indicator range in order to meet the submittal requirements specified in 40 CFR §64.4.

6a) PSEU Designation:	6b) Regulated Air Pollutant:
Not Applicable	

7) **INDICATORS AND THE MONITORING APPROACH**: Provide the rationale and justification for the selection of the indicators and the monitoring approach used to measure the indicators. Also provide any data supporting the rationale and justification. Explain the reasons for any differences between the verification of operational status or the quality assurance and control practices proposed, and the manufacturer's recommendations. (If additional space is needed, attach and label accordingly with the appropriate PSEU designation and pollutant):

8) **INDICATOR RANGES**: Provide the rationale and justification for the selection of the indicator ranges. The rationale and justification shall indicate how **EACH** indicator range was selected by either a COMPLIANCE OR PERFORMANCE TEST, a TEST PLAN AND SCHEDULE, or by ENGINEERING ASSESSMENTS. Depending on which method is being used for each indicator range, include the specific information required below for that specific indicator range. (If additional space is needed, attach and label accordingly with the appropriate PSEU designation and pollutant):

- COMPLIANCE OR PERFORMANCE TEST (Indicator ranges determined from control device operating parameter data obtained during a compliance or performance test conducted under regulatory specified conditions or under conditions representative of maximum potential emissions under anticipated operating conditions. Such data may be supplemented by engineering assessments and manufacturer's recommendations). The rationale and justification shall INCLUDE a summary of the compliance or performance test results that were used to determine the indicator range, and documentation indicating that no changes have taken place that could result in a significant change in the control system performance or the selected indicator ranges since the compliance or performance test was conducted.

- TEST PLAN AND SCHEDULE (Indicator ranges will be determined from a proposed implementation plan and schedule for installing, testing, and performing any other appropriate activities prior to use of the monitoring). The rationale and justification shall INCLUDE the proposed implementation plan and schedule that will provide for use of the monitoring as expeditiously as practicable after approval of this CAM plan, except that in no case shall the schedule for completing installation and beginning operation of the monitoring exceed 180 days after approval.

- ENGINEERING ASSESSMENTS (Indicator Ranges or the procedures for establishing indicator ranges are determined from engineering assessments and other data, such as manufacturers' design criteria and historical monitoring data, because factors specific to the type of monitoring, control device, or PSEU make compliance or performance testing unnecessary). The rationale and justification shall INCLUDE documentation demonstrating that compliance testing is not required to establish the indicator range.

RATIONALE AND JUSTIFICATION:

CAM Assessment for ATK Tactical Systems Company LLC / Allegany Ballistics Lab R30-05700011-2009, Part 1 of 3 Title V Renewal Application

Not CAM - already subject to Title V permit continuous compliance determination method as defined in §64.1.

Not CAM - potential pre-control device annual emissions of applicable regulated air pollutants less than major source levels.

Not CAM - not subject to pollutant emission limit or standard.

1.0 Emission Units

Control Devices

Control Device ID	Emission Point ID	Control Device Description	Year Installed / Modified	Design Capacity	Comments
1-1C	1-3E	Dust Control Filter	1981	75-97.5% (PM-RDX)	
1-2C	1-4E	Cryogenic Recovery for sparging operation	1988	80% (Methylene chloride)	
1-10C	1-13E	Cryogenic Recovery for sparging operation	2015	91% (Methylene chloride)	
1-3C	VI	Carbon bed for material transfer hood	1993	unknown	
1-4C	1-7E	Dust Control Filter	1993	99.9% (PM-RDX)	
1-5C	1-9E	Dust Control Filter (HEPA)	1994	99.9%+ (Pb)	
1-6C	1-12E	Dust Control Filter (HEPA)	1994	99.9%+ (Pb)	
1-7C	1-10/11E	Condenser	1995	unknown	
1-8C	1-2E	Condenser	1981	unknown	
1-9C	1-6E	Condenser	2001	90%(IPA/water)	
2-1C	VI	Cyclone dust collector grit blaster	1999	unknown	
2-5C	2-11E	Fabric filters for bondliner booth	1999	90% (PM)	
2-6C	2-11E	Fabric filters for bondliner booth	1999	90% (PM)	
2-7C	2-9E	Fabric filter for paint booth	1980	90% (PM)	
2-9C	2-16E	3 Stage Filtration for paint booth	2021	95.2% (PM)	
2-10C	2-17E	3 Stage Filtration for paint booth	2021	95.2% (PM)	
6-1C	6-2E	Fabric filter for paint booth	1995	90% (PM)	
6-2C	6-4E	Fabric filter for paint booth	1995	90% (PM)	
6-3C	6-5E	Fabric filter for paint booth	1995	90% (PM)	
6-4C	6-6E	Fabric filter for paint booth	1995	90% (PM)	
6-5C	6-7E	Fabric filter for paint booth	1995	90% (PM)	
6-6C	6-8E	Fabric filter for Teflon spray booth	1997	90% (PM)	
6-7C	6-12E	NaOH Neutralization Tank for plasma arc cutter	1995	unknown	
E-1C	VI	Mikro-D Pulsaire dust collector for AP	1978	99.9% (PM)	
E-2C	VI	Mikro-D Pulsaire dust collector for AP	1978	99.9% (PM)	

F-1C	F-1E	Fabric filters for bondliner booth	1978	unknown	
F-2C	F-3E	Fabric filters for paint booth	1994	unknown	
F-3C	F-5E	Fabric filters for paint booth	1978	unknown	
F-4C	F-6E	Cyclone dust collector for grit blaster	1978	99.9% (PM)	
F-5C	F-9E	Fabric filters for bondliner booth	1978	unknown	
F-6C	F-11E	Demister for alodine process	1978	unknown	
F-7C	F-12E	Fabric filters for paint booth	1988	unknown	
F-8C	F-13E	Fabric filter for paint booth	1980	unknown	
F-9C	F-14E	Cyclone dust collector for grit blaster	1988	99.9% (PM)	
F-10C	F-16E	Fabric filters bondliner booth	1988	90% (PM)	
F-11C	F-18E	Fabric filters for paint booth	1988	90% (PM)	
G-1C	G-2E	Fabric filter for solid ingredient feed hopper	1968	unknown	
G-2C	G-4E	Fabric filter for solid ingredient feed hopper	1968	unknown	
J-1C	J-2E	Fabric filter for bondliner booth	1980	90% (PM)	
J-2C	J-4E	Fabric filters for paint booth	2000	90% (PM)	
J-3C	J-5E	Fabric filters for paint booth	2000	90% (PM)	
J-4C	J-7E	Fabric filter for Stencilling Conveyor	2000	90% (PM)	
P4-1C	P4-1E	3 Stage Filtration for paint booth	2024	95.2% (PM)	
P4-2C	P4-2E	3 Stage Filtration for paint booth	2024	95.2% (PM)	
P4-3C	P4-3E	3 Stage Filtration for paint booth	2024	95.2% (PM)	
P4-4C	P4-4E	3 Stage Filtration for paint booth	2024	95.2% (PM)	
Z-1C	Z-3E	Global Finishing Solutions Wave Filter	2017	90% (PM)	
Z-2C	Z-8E	Global Finishing Solutions Wave Filter	2017	90% (PM)	
Z-3C	Z-13E	Global Finishing Solutions Wave Filter	2017	90% (PM)	
Z-4C	Z-14E	Aget Manufacturing Company Model: 30SN100-PL-SP Dry Cyclone Collector	2017	80% (PM)	
		13.5 oz. Napped Polypropylene Sateen Fabric Filter with Cob-O-Sil preload powder	2017	99.93% (PM)	
Z-5C	Z-9E	Global Finishing Solutions Wave Filter	2017	90% (PM)	

Facility Information and Description

List all processes, products, NAICS and SIC codes for normal operation, in order of priority. Also list any process, products, NAICS and SIC codes associated with any alternative operating scenarios if different from those listed for normal operation.

Process	Products	NAICS	SIC
Rocket Motor Manufacture	Rocket motors, metal rocket cases, composite rocket cases	336415	3764
F-22 Composites Manufacturing	Pivot shafts and obturator plates for F-22	336413	3728
Electronic Fuzing and Ammunition	Medium caliber ammunition (not loaded), proximity switches, and multiple fuze products for DoD	332995	3489

NOTE: Part 1 of this permit covers only the rocket motor manufacturing minus the case manufacture in composites or metal fabrication areas.

Provide a general description of operations.

Naval Industrial Reserve Ordnance Plant (NIROP)/Allegany Ballistics Laboratory (ABL) is a facility which is operated by Alliant Techsystems Operations LLC (Northrup Grumman Systems Corporation-NGSC) (headquarters in Falls Church, VA) under the NGSC Missile Products Group. The majority of the facility is owned by the U.S. Navy and is operated by NGIS under a facilities use contract (~1530 acres designated as Plant 1). 57 acres is owned and operated by NGSC and is designated as Plant 2. Approximately 500 acres of Plant 1 are developed. Plant 3 is a 41acre area designated as Plant 3 dedicated to production of GMLRS rocket motors. Construction is ongoing on 29 acres designated as Plant 4 to be used as a LAP facility to build all-up rounds. The remaining acreage is currently undeveloped. All property is contiguous with internal roads to reach each separate area.

Operations at the plant include:

- metal fabrication of rocket motor and warhead cases;
- metal fabrication of tank ammunition training rounds;
- manufacture of composite material rocket motor and warhead cases;
- manufacture of composite material aircraft components;
- preparation of cases for addition of explosives;
- mixing, casting, curing, and associated operations with propellants and explosives;
- static firing of rocket motors;
- open burning of waste propellants and explosives;
- development and production of laser firing devices;
- analytical and research & development laboratories;
- explosive loading and packing operations for tank ammunition;
- x-ray testing; and
- maintenance and utility operations.

In addition, to these operations, the site is also home to the Robert C. Byrd Institute for Machining and office space for IBM.

Active Permits/Consent Orders (Part 1 of 3 only)		
Permit or Consent Order Number	**Date of Issuance MM/DD/YYYY**	**List any Permit Determinations that Affect the Permit *(if any)***
R13-0401B	05/23/2001	
R13-0898C	05/27/2016	
R13-1047B	03/04/2002	
R13-1455A	07/18/2001	
R13-1694B	11/17/2003	
R13-1782A	07/19/2001	
R13-1798B	02/07/2011	
R13-2037A	07/26/2001	
R13-2246A	10/14/2003	
R13-3334B	11/17/2023	
R13-3408A	05/26/2020	
R13-3534	01/07/2022	R-13-3534A (Pending)
R13-3651	Pending	

Plantwide Emissions Summary [Tons per Year]		
Regulated Pollutants	**Potential Emissions**	**2022 Actual Emissions**
Carbon Monoxide (CO)	81.44	22.36
Nitrogen Oxides (NO_X)	59.51	26.28
Particulate Matter ($PM_{2.5}$)[1]	6.42	3.7
Particulate Matter uncontrolled (PM_{10})	17.97	7.29
Total Particulate Matter **controlled** or uncontrolled? (TSP)	30.62	7.32
Sulfur Dioxide (SO_2)	29.95	0.36
Volatile Organic Compounds (VOC)	181.25	33.21

$PM_{2.5}$ and PM_{10} are components of TSP.

[2]For HAPs that are also considered PM or VOCs, emissions should be included in both the HAPs section and the Criteria Pollutants section.

Hazardous Air Pollutants	**Potential Emissions**	**2022 Actual Emissions**
Acetonitrile	0.27	0.020
Benzene	0.37	0.139
Cadmium compounds*	9.9E-04	2.4E-04
Chloroform	0.096	0.025
Chromium*	1.2E-03	3.0E-04
Chromium compounds (not identified)*	0.136	0.012
Cobalt*	5.8E-05	1.83E-05
Dioctyl phthalate	0.85	0.022
Ethyl benzene	0.62	0.23
Formaldehyde	0.029	0.0015
Glycol ether compounds	0.06	0.004
Hexane	0.80	0.07

Hydrochloric Acid	6.44	3.308
Lead *	9.8E-04	3.3E-05
Lead compounds*	1.98	0.215
Mercury*	2.0E-04	5.7E-05
Methanol	1.81	0.14
Methyl isobutyl ketone	3.73	0.42
Methylene chloride	1.995	1.95
Nickel*	1.7E-03	4.6E-04
Phenol	0.16	0.002
Strontium chromate*	0.0029	0.0002
Toluene	30.89	1.78
Trichloroethylene	0.125	0
Xylene	5.29	0.97
Zinc chromate*	4.7E-04	1.0E-06
Other (not specified)	0.1	0.04
Total	**55.76**	**9.35**

* Component of TSP emissions in Plantwide Emission Summary table above

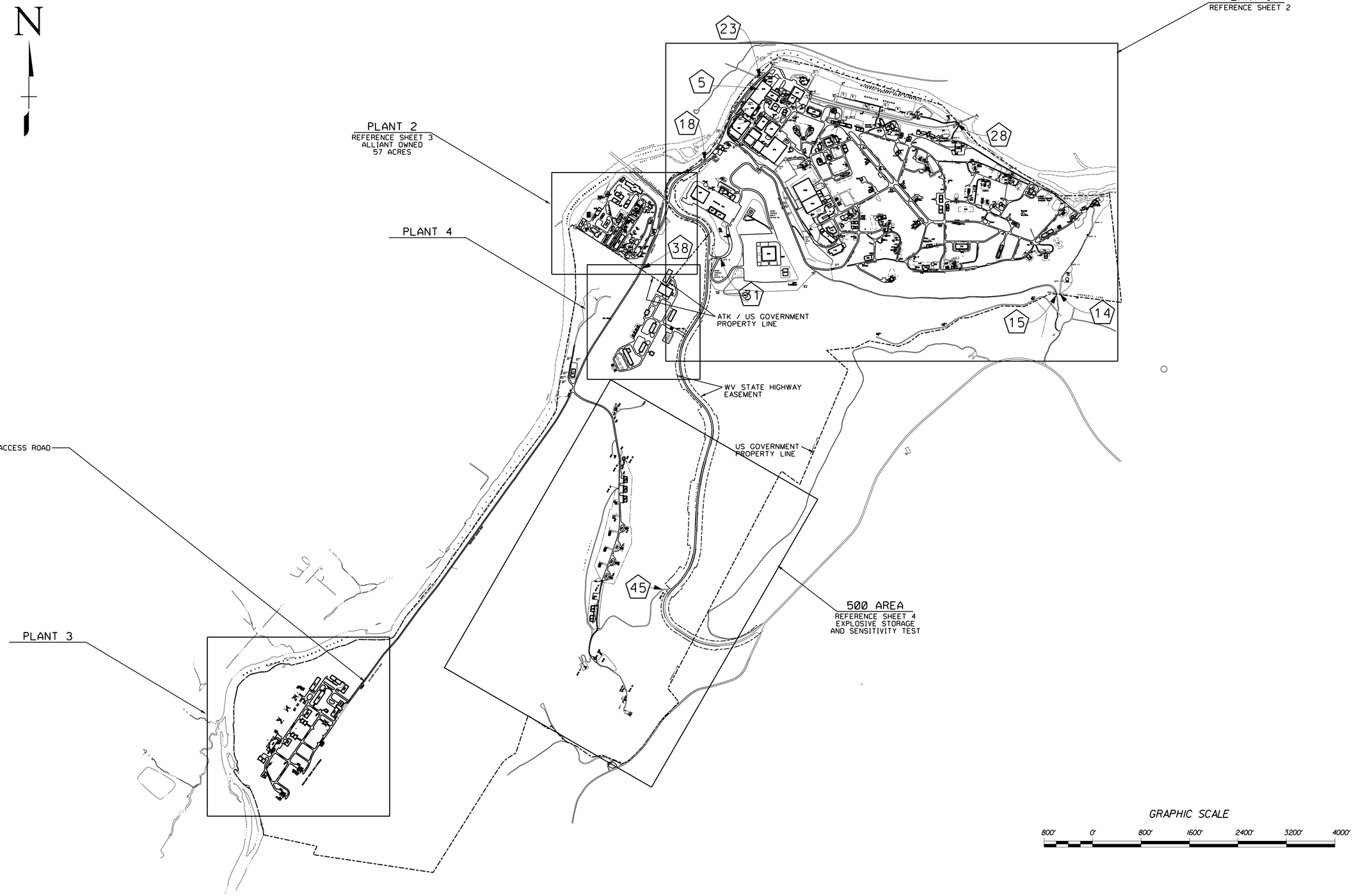
Some of the above HAPs may be counted as PM or VOCs.

Changes to PTE table
Criteria pollutants updated to reflect updates of permit limits from R13-3334B and R13-3186D and addition of R13-3534A and R13-3561.
Updated Actuals to 2022 actuals (based on AEI and CES)
Metal species updated with boiler changes in R13-3186.

Insignificant Activities (Check all that apply)		
☒	1.	Air compressors and pneumatically operated equipment, including hand tools.
☐	2.	Air contaminant detectors or recorders, combustion controllers or shutoffs.
☒	3.	Any consumer product used in the same manner as in normal consumer use, provided the use results in a duration and frequency of exposure which are not greater than those experienced by consumer, and which may include, but not be limited to, personal use items; janitorial cleaning supplies, office supplies and supplies to maintain copying equipment.
☒	4.	Bathroom/toilet vent emissions.
☒	5.	Batteries and battery charging stations, except at battery manufacturing plants.
☒	6.	Bench-scale laboratory equipment used for physical or chemical analysis, but not lab fume hoods or vents. Many lab fume hoods or vents might qualify for treatment as insignificant (depending on the applicable SIP) or be grouped together for purposes of description.
☐	7.	Blacksmith forges.
☒	8.	Boiler water treatment operations, not including cooling towers.
☒	9.	Brazing, soldering or welding equipment used as an auxiliary to the principal equipment at the source.
☐	10.	CO_2 lasers, used only on metals and other materials which do not emit HAP in the process.
☒	11.	Combustion emissions from propulsion of mobile sources, except for vessel emissions from Outer Continental Shelf sources.
☐	12.	Combustion units designed and used exclusively for comfort heating that use liquid petroleum gas or natural gas as fuel.
☒	13.	Comfort air conditioning or ventilation systems not used to remove air contaminants generated by or released from specific units of equipment.
☒	14.	Demineralized water tanks and demineralizer vents.
☒	15.	Drop hammers or hydraulic presses for forging or metalworking.
☒	16.	Electric or steam-heated drying ovens and autoclaves, but not the emissions from the articles or substances being processed in the ovens or autoclaves or the boilers delivering the steam.
☐	17.	Emergency (backup) electrical generators at residential locations.
☒	18.	Emergency road flares.
☒	19.	Emission units which do not have any applicable requirements and which emit criteria pollutants (CO, NO_x, SO_2, VOC and PM) into the atmosphere at a rate of less than 1 pound per hour and less than 10,000 pounds per year aggregate total for each criteria pollutant from all emission units. Please specify all emission units for which this exemption applies along with the quantity of criteria pollutants emitted on an hourly and annual basis: _____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____

Insignificant Activities (Check all that apply)		
☐	20.	Emission units which do not have any applicable requirements and which emit hazardous air pollutants into the atmosphere at a rate of less than 0.1 pounds per hour and less than 1,000 pounds per year aggregate total for all HAPs from all emission sources. This limitation cannot be used for any source which emits dioxin/furans nor for toxic air pollutants as per 45CSR27. Please specify all emission units for which this exemption applies along with the quantity of hazardous air pollutants emitted on an hourly and annual basis: _____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____
☒	21.	Environmental chambers not using hazardous air pollutant (HAP) gases.
☒	22.	Equipment on the premises of industrial and manufacturing operations used solely for the purpose of preparing food for human consumption.
☐	23.	Equipment used exclusively to slaughter animals, but not including other equipment at slaughterhouses, such as rendering cookers, boilers, heating plants, incinerators, and electrical power generating equipment.
☒	24.	Equipment used for quality control/assurance or inspection purposes, including sampling equipment used to withdraw materials for analysis.
☒	25.	Equipment used for surface coating, painting, dipping or spray operations, except those that will emit VOC or HAP.
☒	26.	Fire suppression systems.
☒	27.	Firefighting equipment and the equipment used to train firefighters.
☐	28.	Flares used solely to indicate danger to the public.
☒	29.	Fugitive emission related to movement of passenger vehicle provided the emissions are not counted for applicability purposes and any required fugitive dust control plan or its equivalent is submitted.
☒	30.	Hand-held applicator equipment for hot melt adhesives with no VOC in the adhesive formulation.
☒	31.	Hand-held equipment for buffing, polishing, cutting, drilling, sawing, grinding, turning or machining wood, metal or plastic.
☒	32.	Humidity chambers.
☒	33.	Hydraulic and hydrostatic testing equipment.
☐	34.	Indoor or outdoor kerosene heaters.
☒	35.	Internal combustion engines used for landscaping purposes.
☒	36.	Laser trimmers using dust collection to prevent fugitive emissions.
☒	37.	Laundry activities, except for dry-cleaning and steam boilers.
☒	38.	Natural gas pressure regulator vents, excluding venting at oil and gas production facilities.
☒	39.	Oxygen scavenging (de-aeration) of water.

Insignificant Activities (Check all that apply)		
☐	40.	Ozone generators.
☒	41.	Plant maintenance and upkeep activities (e.g., grounds-keeping, general repairs, cleaning, painting, welding, plumbing, re-tarring roofs, installing insulation, and paving parking lots) provided these activities are not conducted as part of a manufacturing process, are not related to the source's primary business activity, and not otherwise triggering a permit modification. (Cleaning and painting activities qualify if they are not subject to VOC or HAP control requirements. Asphalt batch plant owners/operators must still get a permit if otherwise requested.)
☒	42.	Portable electrical generators that can be moved by hand from one location to another. "Moved by Hand" means that it can be moved without the assistance of any motorized or non-motorized vehicle, conveyance, or device.
☒	43.	Process water filtration systems and demineralizers.
☒	44.	Repair or maintenance shop activities not related to the source's primary business activity, not including emissions from surface coating or de-greasing (solvent metal cleaning) activities, and not otherwise triggering a permit modification.
☒	45.	Repairs or maintenance where no structural repairs are made and where no new air pollutant emitting facilities are installed or modified.
☒	46.	Routing calibration and maintenance of laboratory equipment or other analytical instruments.
☐	47.	Salt baths using nonvolatile salts that do not result in emissions of any regulated air pollutants. Shock chambers.
☐	48.	Shock chambers.
☐	49.	Solar simulators.
☒	50.	Space heaters operating by direct heat transfer.
☒	51.	Steam cleaning operations.
☒	52.	Steam leaks.
☒	53.	Steam sterilizers.
☒	54.	Steam vents and safety relief valves.
☐	55.	Storage tanks, reservoirs, and pumping and handling equipment of any size containing soaps, vegetable oil, grease, animal fat, and nonvolatile aqueous salt solutions, provided appropriate lids and covers are utilized.
☒	56.	Storage tanks, vessels, and containers holding or storing liquid substances that will not emit any VOC or HAP. Exemptions for storage tanks containing petroleum liquids or other volatile organic liquids should be based on size limits such as storage tank capacity and vapor pressure of liquids stored and are not appropriate for this list.
☐	57.	Such other sources or activities as the Director may determine.
☒	58.	Tobacco smoking rooms and areas.
☐	59.	Vents from continuous emissions monitors and other analyzers.



GRAPHIC SCALE

800' 0' 800' 1600' 2400' 3200' 4000'

REVISIONS				
SYM	DESCRIPTION	BY	DATE	CHK
				APPD
				APPD

ALLEGANY BALLISTICS LABORATORY
210 STATE ROUTE 956
ROCKET CENTER, WV 26726

DRAFTER: JK 12/11/2023
CHECKER:
ENGR:
DES SUPV:
AREA SUPV:
SAFETY:

RESERVATION
PLANT LOCATIONS
PLAN

SCALE: 1" = 800'-0"
PROJ. NO. -
BUILDING NO. RSVN
DRAWING PKG
BASE
DRAWING NO.
SIZE: D
T-112-AB-R1

INTERPRET THIS DRAWING IN ACCORDANCE WITH DOD-STD-100

$$time$$ $$dgn$$

PLANT 1
GENERAL MAP
PLAN AND BUILDING LIST

N

NORTH BRANCH POTOMAC RIVER

ALLEGANY COUNTY MARYLAND
MINERAL COUNTY WEST VIRGINIA

BURNING GROUND

PLANT ONE ACCESS ROAD

A STREET

B STREET

C STREET

D STREET

E STREET

E STREET EXTENSION

F STREET

FIRST AVE

SECOND AVE

THIRD AVE

FOURTH AVE

FIFTH STREET

SIXTH STREET

PILOT PLANT ROAD

PILOT PLANT ROAD EXTENSION

G STREET

H STREET

I STREET

RANGE ROAD

PLANT ROAD

RIVER ROAD

BAY ROAD

SOUTH ROAD

RESEARCH LOOP

CIRCLE DRIVE

HOFFMAN LANE

MAIN DRIVE

PARKING LOT

W V ROUTE 956

UPPER TERRACE NORTH ACCESS RD

UPPER TERRACE WEST ACCESS RD

GATE 1 GATE 1A GATE 1B GATE 1C GATE 1D GATE 2 GATE 3 GATE 5 GATE 7 GATE 7A GATE 8 GATE 10 GATE 11 GATE 12 GATE 13 GATE 14 GATE 15 GATE 15A GATE 16 GATE 17 GATE 18 GATE 18A GATE 19 GATE 19A GATE 20 GATE 20A GATE 20B GATE 21 GATE 22 GATE 23 GATE 24 GATE 25 GATE 26 GATE 27 GATE 28 GATE 29 GATE 30 GATE 31 GATE 35 GATE 47 GATE 256-3 GATE 600 GATE 610

SEWAGE LIFT STATION

SEWAGE LIFT STATION

LIQUID CARBON DIOXIDE STORAGE TANK

UGND FUEL TANKS

ABL-1 ABL-2 ABL-3 ABL-4 ABL-5 ABL-6 ABL-7 ABL-8 ABL-10

GRAPHIC SCALE

250′ 0 250′ 500′ 750′ 1000′

1"= 250′-0"

REVISIONS						
SYM	DESCRIPTION	BY	DATE	CHK	APPD	APPD

Orbital ATK
210 STATE ROUTE 956
ROCKET CENTER, WV 26726

DRAFTER: DRB
CHECKER:
ENGR:
DES. SUPV:
AREA SUPV:
SAFETY:

SCALE: 1" = 250.0′
PROJ. NO.
BUILDING NO. | DRAWING PKG
BASE | PLT1
CONTRACTOR DRAWING NO. | SIZE: D
1-112-AB

INTERPRET THIS DRAWING IN ACCORDANCE WITH DOD-STD-100

$$time$$ $$dgn$$

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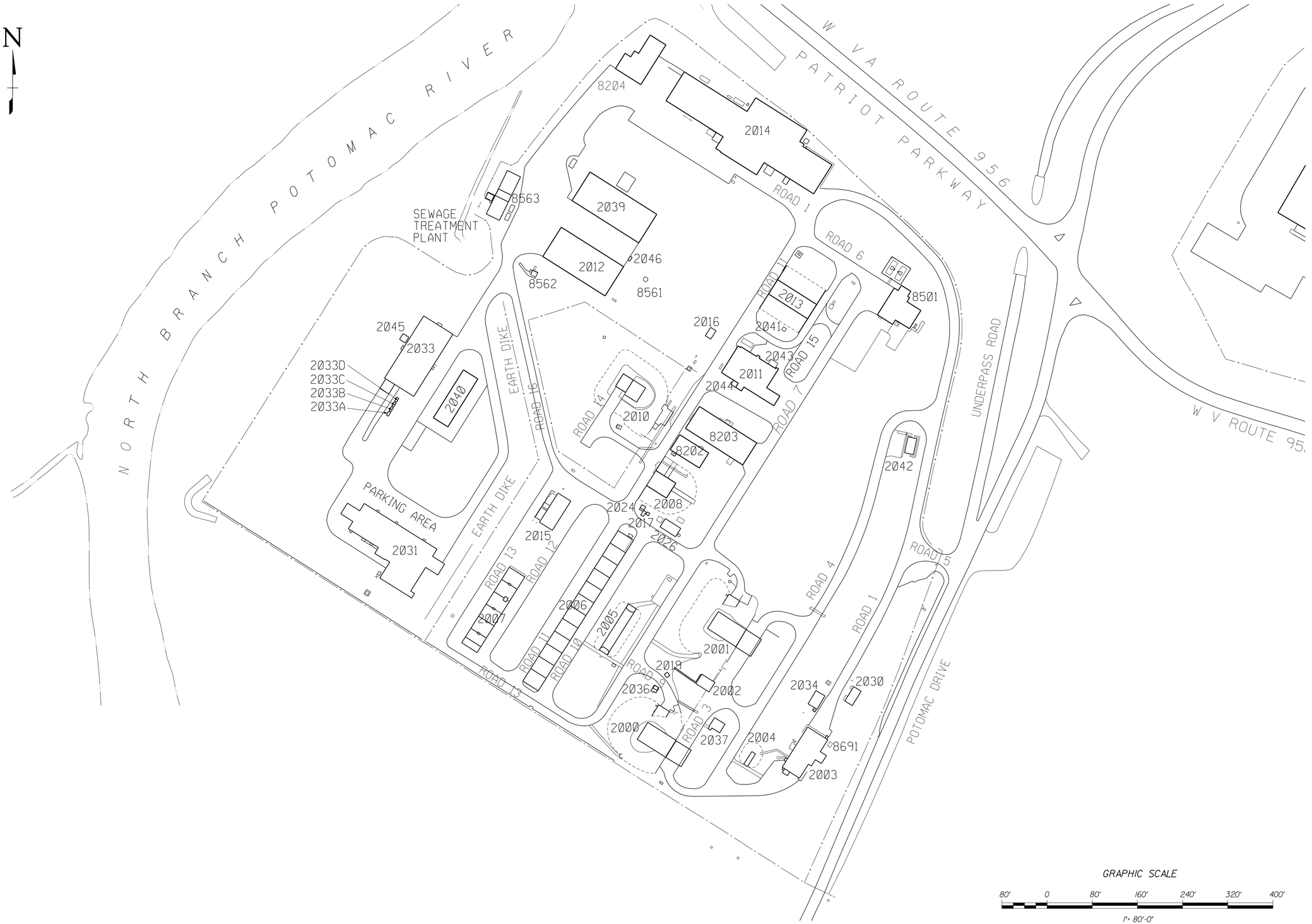

GRAPHIC SCALE

80′ 0 80′ 160′ 240′ 320′ 400′

1"= 80'-0"

REVISIONS					
SYM	DESCRIPTION	BY	DATE	CHK	APPD

Orbital ATK
210 STATE ROUTE 956
ROCKET CENTER, WV 26726

DRAFTER: DRB
CHECKER:
ENGR:
DES SUPV:
AREA SUPV:
SAFETY:

PLANT 2 BUILDINGS AND ROADS GENERAL MAP

SCALE: 1"=80'-0"
PROJ. NO.

BUILDING NO.	DRAWING PKG
BASE	PLT2
CONTRACTOR DRAWING NO.	SIZE: D

2-112-01

INTERPRET THIS DRAWING IN ACCORDANCE WITH DOD-STD-100

$$time$$ $$dgn$$

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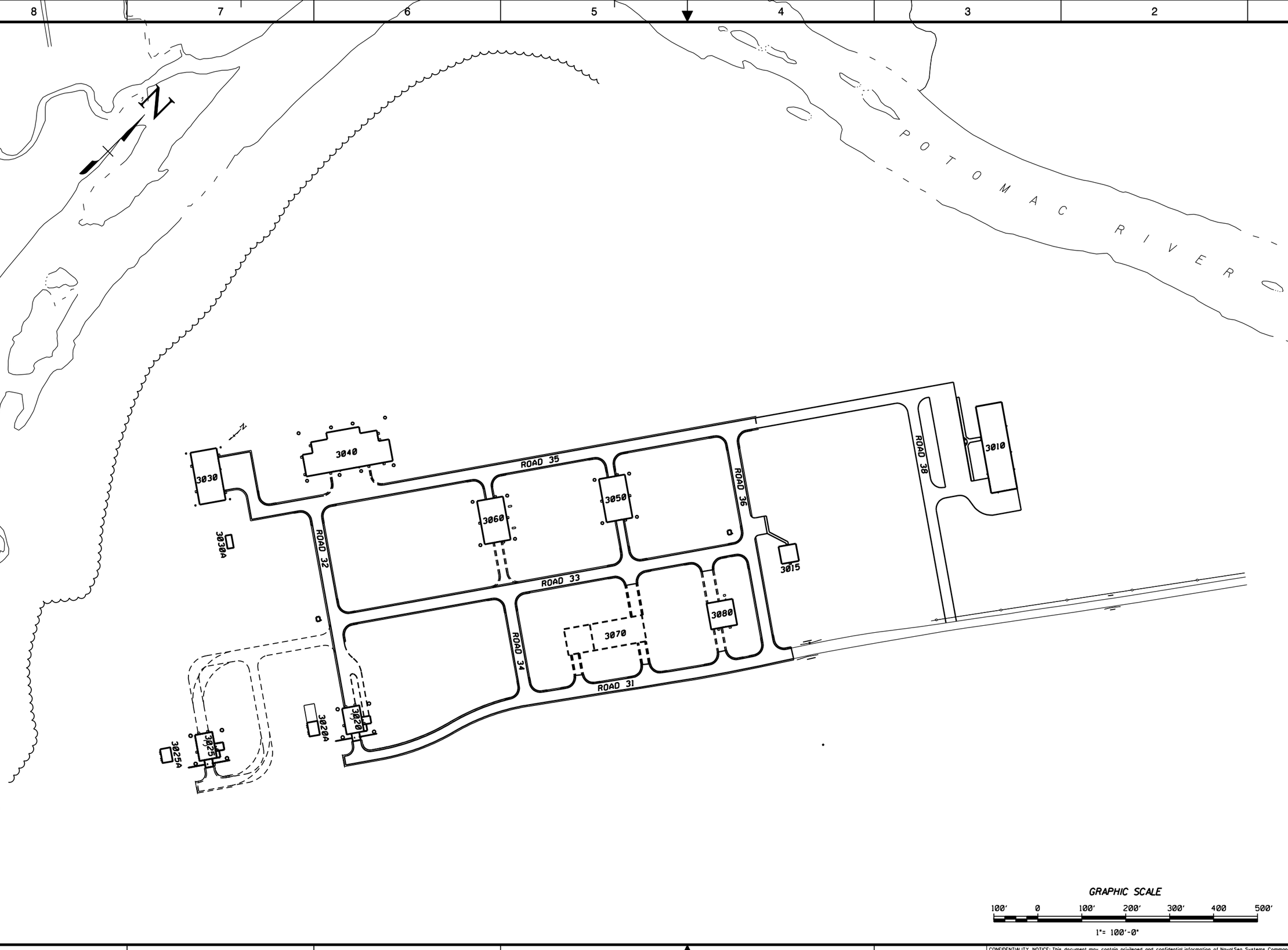


REVISIONS			
SYM	DESCRIPTION	BY	MO/DAY/YR

Orbital ATK
270 STATE ROUTE 956
ROCKET CENTER, WV 26726

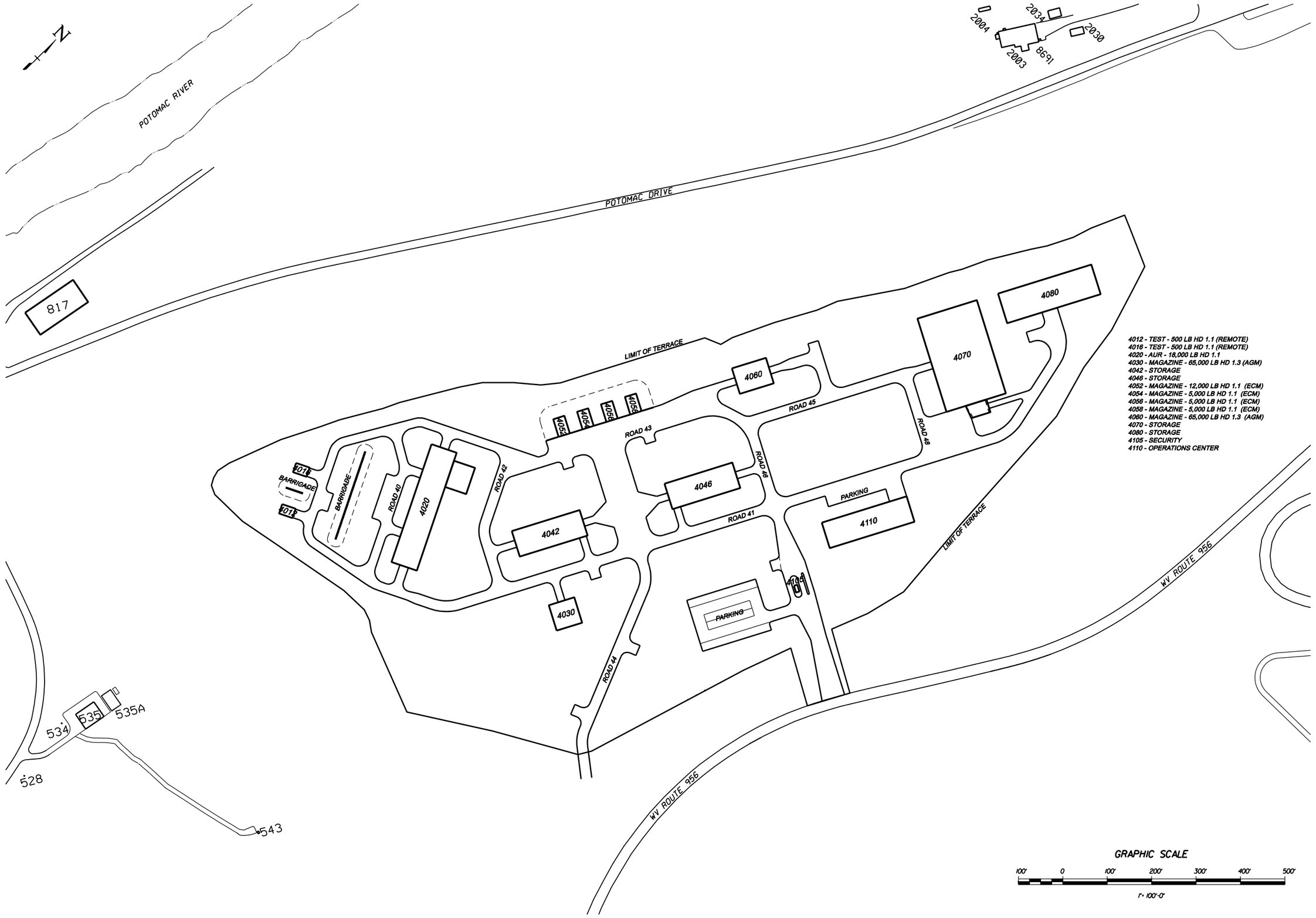
DRAFTER:
CHECKER:
ENGR:
DES SUPV:
AREA SUPV:
SAFETY:

PLANT 3
SITING

SCALE: X
PROJ. NO. X
BUILDING NO. 0001C
DRAWING PKG
SITING
CONTRACTOR DRAWING NO.
SIZE: D
X

INTERPRET THIS DRAWING IN ACCORDANCE WITH DOD-STD-100

$$dgn$$
$$time$$



REVISIONS	BY	MOD #	ECN #	DESCRIPTION	DATE
0-SKHBRIANCE					

ALLEGANY BALLISTICS LABORATORY
210 STATE ROUTE 956
ROCKET CENTER, WV 26726

DRAFTER:
CHECKER:
ENGR:
DES SUPV:
AREA SUPV:
SAFETY:

PLANT 4
SITING PLAN

INTERPRET THIS DRAWING IN ACCORDANCE WITH DOD-STD-100

SCALE: 1" = 100'
PROJ. NO. X
BUILDING NO. PL 4
DRAWING NO. XS101
DRAWING PKG X
SIZE: D

$$dgn$$
$$time$$