

DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: On-site Inspection

N214761040

FACILITY: KERKAU MFG		SRN / ID: N2147
LOCATION: 910 TRUMAN PKY, BAY CITY		DISTRICT: Bay City
CITY: BAY CITY		COUNTY: BAY
CONTACT: Bryan Schindler , Plant Manager		ACTIVITY DATE: 12/03/2021
STAFF: Kathy Brewer	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: On site inspection to determine compliance with PTI 137-96B and air regulations at Syn minor. Coatings line and associated pollution controls and material handling		
RESOLVED COMPLAINTS:		

Kerkau machines and coats pipe flanges for the oil and gas, chemical processing, and auto industries. Coatings are applied as protective coating for the parts.

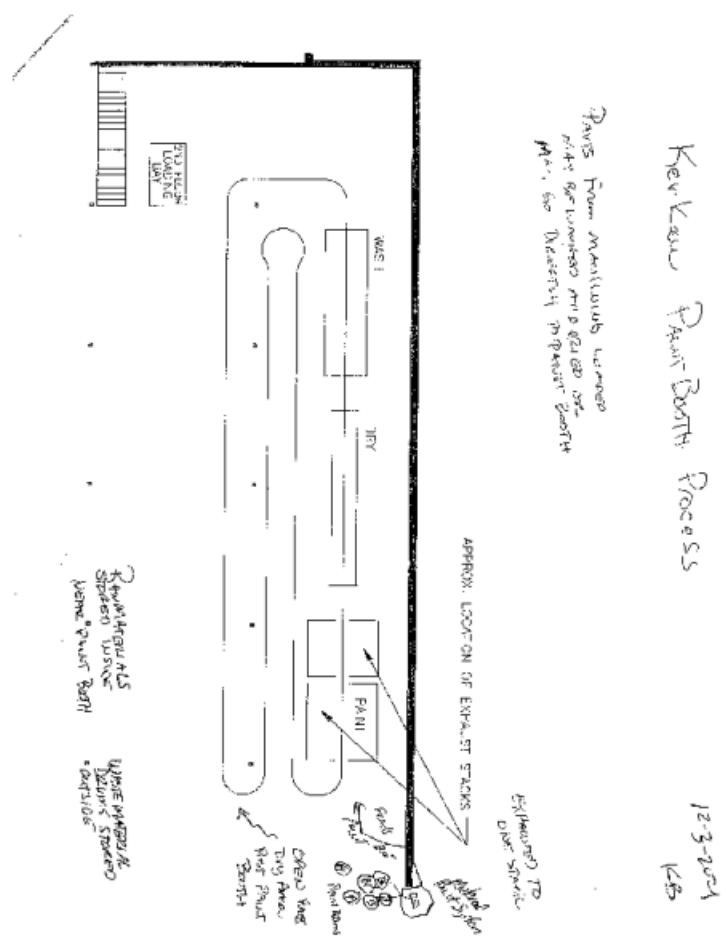
The process uses paint approved in PTI #137-96B or similar paint per Rule 285 allowed exemptions.

The facility has determined that EUCOATING/FGFACILITY is not subject to the Area Source MACT for miscellaneous surface coating operations 40 CFR Part 63 Subpart HHHHHH

The facility is currently operating one shift each day. MAERS reported emissions for 2020 were 8.7 tons VOC.

During the inspection the EUCOATING process, raw and waste material storage areas, and on site paint usage records and emission calculations were reviewed. At the time of the inspection Kerkau appeared to be in compliance with the requirements of PTI 137-96B.

The facility does need to submit a PTI application to correct the stack information from the two listed to the single stack that exists. The facility should also only record coatings with >3.5 lbs VOC/gal as Low Use Coatings.



EU-COATING

Process Description

Parts are loaded on to hangers. The parts coating line has a vertical hot water rinse followed by a drying section. The water rinse is optional and was not in use during the inspection. The washing and drying portion of the coating line vent to atmospheres. There are no additives used in the wash or drying process.

After passing through the drying area the parts travel through an electrostatic paint booth with two robotic paint applicators. The paint booth area has hanging fabric filters and is exhausted to one of two cartridge fabric filters. The two vents combine into one exhaust that emits out SVCOATING1. SVCOATING2 was removed when the current paint booth was automated.

The process uses paint approved in PTI #137-96B or similar paint per Rule 285 allowed exemption. Each paint VOC and HAP content is determined per SDS and additional manufacturer supplied information. Currently paint is supplied by Sherwin Williams. The facility has determined they can use a paint offered by PPG per a Rule 285 exemption as an option.

Drums of black or blue paint are connected to an automated pump that meters each paint amount used. Operators record the metered paint gallons for each paint used daily. At the time of the inspection the meter reading was 1.79 gallons black paint used.

Acetone is also connected to the automated pump and is sent through the painting application line at the end of each day or if there is a paint color change. The used acetone from the paint application lines is directed into a container inside the paint booth by the robotic applicator. A single drum of acetone is also located near the paint line for small parts cleaning. Acetone use is calculated based on acetone purchased.

Paint and acetone are stored inside near the paint application booth. Waste paint and acetone is stored outside in a covered waste storage area.

Paint booth application hanging fabric filters and exhaust vent cartridge filters are changed daily. Used filters are placed in a soaking container prior to disposal. Safetykleen and Clean Harbors are contracted to dispose of the waste material from the paint application process.

Recent coating line changes have reduced overspray and waste by over 100 gallons/month.

Emissions

The emission limits and emission records review findings during the inspection are below.

Parameter & Limit	February 2021	July 2021	October 2021
<p>SC I.1 VOCs</p> <p>Limit 25.5 tpy</p> <p>12 month rolling at end of each month</p>	<p>12 month rolling (as of 2/28/2021)</p> <p>Black paint: 8.540036 tons of VOCs</p> <p>Blue paint: 0.424038 tons of VOCs</p> <p>Acetone – no VOCs</p>	<p>12 month rolling (as of 7/31/2021)</p> <p>Black paint: 7.228304 tons of VOCs</p> <p>Blue paint: 0.329208 tons of VOCs</p> <p>Acetone – no VOCs</p>	<p>12 month rolling (as of 10/31/2021)</p> <p>Black paint: 7.349816 tons of VOCs</p> <p>Blue paint: 0.319464 tons of VOCs</p> <p>Acetone – no VOCs</p>
<p>SC I.2 VOCs</p> <p>Limit 3.5 lb/gal minus water as applied. Daily volume weighted average</p>	<p>Operating day average last week of July 2021</p> <p>Black paint: 3.32 lb/gal VOCs</p> <p>Less exempt solvent acetone (no water used)</p>	<p>Operating day average last week of July 2021</p> <p>Black paint: 3.32 lb/gal VOCs</p> <p>Less exempt solvent acetone (no water used)</p>	<p>Operating day average last week of July 2021</p> <p>Black paint: 3.32 lb/gal VOCs</p> <p>Less exempt solvent acetone (no water used)</p>

	<p>Blue paint:</p> <p>3.48 lb/gal VOCs Less exempt solvent acetone (no water used)</p> <p>These are constants – never any changes.</p>	<p>Blue paint:</p> <p>3.48 lb/gal VOCs Less exempt solvent acetone (no water used)</p> <p>These are constants – never any changes.</p>	<p>Blue paint:</p> <p>3.48 lb/gal VOCs Less exempt solvent acetone (no water used)</p> <p>These are constants – never any changes.</p>
<p>SC I.3 Acetone (Cas #67-64-1) 1,000 lbs/year.</p> <p>12 month rolling at end of each month</p> <p>(KB edit 6.55 lbs acetone/gal or 152 gallons)</p>	<p>used as of 2/28/2021</p> <p>(12 month rolling)</p> <p>Acetone – 76.5 gallons</p>	<p>used as of 7/31/2021</p> <p>(12 month rolling)</p> <p>Acetone – 78 gallons</p>	<p>used as of 10/31/2021</p> <p>(12 month rolling)</p> <p>Acetone – 78 gallons</p>

The facility records review found no periods of noncompliance with the PTI 137-96B emission limits for EUCOATINGS.

Material limits

There are no material limits in PTI 137-96B.

Process/Operational limits

SC III.1 requires the facility to capture all waste coatings, store them in closed containers, and dispose of in compliance with applicable regulations. The facility robotic paint system stores waste paint and paint line cleaning acetone in containers inside the paint booth area. Waste acetone for small part cleaning is stored in a covered drum near the paint booth area. Full waste drums are stored in a covered waste storage area outside the building. Records of waste disposal pick up for March and July 2021 are attached. No waste pick up occurred in February or October 2021.

SC III.2 requires the facility to handle all VOC or HAP containing materials in manner that minimizes fugitive emissions. Raw materials are stored in a fireproof metal cabinet near the

paint booth area. The facility robotic paint system stores waste paint and paint line cleaning acetone in containers inside the paint booth area. Acetone for small part cleaning occurs near a covered acetone waste drum near the paint booth area.

The facility records review found no periods of noncompliance with the PTI 137-96B Process/Operational limits.

Design/Equipment parameters

SC IV.1 does not allow the permittee to operate EUCOATING unless exhaust filters are installed and operated properly. The paint booth area has hanging fabric filters and exhausts to one of two cartridge fabric filters. Paint booth application hanging fabric filters and exhaust vent cartridge filters are changed daily. The facility has operators complete a daily paint checklist. Current job duties from the paint booth list daily filter changes as a required task. An example daily checklist from October 2020 is attached.

Monthly PM is also conducted on the paint booth. A monthly PM checklist from March 2021 is attached

SC IV.2 requires EUCOATING to use electrostatic applicators or equivalent. The EUCOATING paint booth used electrostatic applicators.

The facility records review found no periods of noncompliance with the PTI 137-96B design/equipment parameters.

Testing

SC V.1 requires VOC content of any coating as applied be determined using Method 24 or as approved by AQD District supervisor. The facility uses manufacturer formulation data as submitted with PTI application information or as part of a R285 exemption. The manufacturer formulation data was used to authorize the EUCOATINGS PTI-137-96B process and may be used to show compliance with the PTI 137-96B testing requirements. Kerkau indicated that they may perform Method 24 testing on the paint from PPG that they plan to use in the future to verify the supplier information.

SDS sheets and Environmental Data sheets with formulation data were reviewed. Environmental Data Sheets for Sherwin Williams and PPG paints are attached.

Monitoring/Recordkeeping

SC VI.1 requires monthly calculations be performed. A review of records for February, July and October 2021 found calculations required each month are completed.

SC VI.2 requires the facility maintain current coating and solvent manufacturer chemical composition. The facility uses Acetone, Sherwin Williams F88LL4, Sherwin Williams F88LL7, and may use PPGDM19264.

SC VI.3 requires the facility to keep daily material use and recycle information as well as VOC content and emissions. The operators record the material use information daily. No material is recycled. Only two coatings are used with constant VOC content and emission rate. Calculations

are performed weekly or monthly to determine VOC emissions. Emissions are based on total used and no reduction in emission is applied for exhaust through filters. During the inspection the use records and emission calculations for February 2021 were reviewed in detail.

SC VI.4 requires the facility to keep monthly acetone use and emission information. The facility keeps and maintains all required information. During the inspection the use records and emission calculations for February 2021 were reviewed in detail.

Below is a summary of monitoring and record keeping reviewed.

Parameter	February 2021	July 2021	October 2021
SC III.1 Waste coating disposal amount	1,200 lbs picked up 3/30/2021 (paint booth dust, water)	3,500 lbs picked up 7/12/2021 (paint booth dust, water)	None (due to Covid 19)
SC VI.3 (a) Gallons each material used and recycled	used as of 2/28/2021 (12 month rolling) Black paint – 5,144.6 gallons Blue paint – 243.7 gallons Acetone – 76.5 gallons NONE RECYCLED	used as of 07/31/2021 (12 month rolling) Black paint – 4354.4 gallons Blue paint – 189.2 gallons Acetone – 78 gallons NONE RECYCLED	used as of 10/31/2021 (12 month rolling) Black paint – 4427.6 gallons Blue paint – 183.6 gallons Acetone – 78 gallons NONE RECYCLED
(b) VOC content minus water and with water as applied.	Black paint VOC content is: 35.6% by weight (LB/Gal) less exempt solvent acetone (no water used)	Black paint VOC content is: 35.6% by weight (LB/Gal) less exempt solvent acetone (no water used)	Black paint VOC content is: 35.6% by weight (LB/Gal) less exempt solvent acetone (no water used)

	<p>Blue paint VOC content is: 34.5% by weight (LB/Gal) less exempt solvent acetone (no water used)</p> <p>Acetone – no VOCs</p> <p>These are constants – never any changes.</p>	<p>Blue paint VOC content is: 34.5% by weight (LB/Gal) less exempt solvent acetone (no water used)</p> <p>Acetone – no VOCs</p> <p>These are constants – never any changes.</p>	<p>Blue paint VOC content is: 34.5% by weight (LB/Gal) less exempt solvent acetone (no water used)</p> <p>Acetone – no VOCs</p> <p>These are constants – never any changes.</p>
<p>(c) VOC content volume weighted average as applied.</p>	<p>Black paint VOC content is: 52.3% by volume (g/L) less exempt solvent acetone (no water used)</p> <p>Blue paint VOC content is: 51.9% by volume (g/L) less exempt solvent acetone (no water used)</p> <p>These are constants – never any changes</p>	<p>Black paint VOC content is: 52.3% by volume (g/L) less exempt solvent acetone (no water used)</p> <p>Blue paint VOC content is: 51.9% by volume (g/L) less exempt solvent acetone (no water used)</p> <p>These are constants – never any changes</p>	<p>Black paint VOC content is: 52.3% by volume (g/L) less exempt solvent acetone (no water used)</p> <p>Blue paint VOC content is: 51.9% by volume (g/L) less exempt solvent acetone (no water used)</p> <p>These are constants – never any changes</p>
<p>(d) VOCs Tons per calendar month</p>	<p>VOC tons for February 2021</p> <p>Black paint: 0.543982 tons of VOCs</p> <p>Blue paint: 0.0174 tons of VOCs</p>	<p>VOC tons for July 2021</p> <p>Black paint: 0.745174 tons of VOCs</p> <p>Blue paint: 0.03828 tons of VOCs</p>	<p>VOC tons for October 2021</p> <p>Black paint: 0.699192 tons of VOCs</p> <p>Blue paint: 0.02088 tons of VOCs</p>

	Acetone – no VOCs	Acetone – no VOCs	Acetone – no VOCs
SC VI.4 Gallons or pounds acetone used	6 gallons (month of February 2021)	7.5 gallons (month of July 2021)	7.5 gallons (month of October 2021)
Gallons acetone reclaimed.	N/A – none reclaimed	N/A – none reclaimed	N/A – none reclaimed
Acetone emissions lbs per calendar month (KB EDIT gallons acetone x 6.5 lbs acetone/gallons)	N/A – no VOCs (6x 6.55)=39.3 lbs acetone	N/A – no VOCs (7.5x6.55)= 49.1 lbs acetone	N/A – no VOCs (7.5x6.55)= 49.1 lbs acetone

The facility records review found no periods of noncompliance with the PTI 137-96B monitoring/recordkeeping requirements for EUCOATING.

Reporting

The PTI 137-96B does not contain any reporting requirements

Stack vent

EUCOATING– Vent Stack Requirements

During the inspection SVCOATING1 exhaust vent was viewed and confirmed to be as described in the PTI 137-96B.

Description	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)
SVCOATING1 (Coating Booth #1 stack)	24	43
	24	43

SVCOATING2 (Coating Booth #2 stack)

SVCOATING2 exhaust vent was removed during the change to robotic paint application authorized in PTI 137-19A. The paint booth is exhausted to two cartridge fabric filters, each with their own fan. The two vents are combined and exhausted out SVCOATING1. The PTI should be modified to correctly describe the current vent configuration.

As of December 8, 2021 the facility has communicated with AQD Permit Section and will be submitting a PTI application to make the correction.

FGFACILITY

Emission

The emission limits and emission records review findings during the inspection are below.

Parameter and limits	February 2021	July 2021	October 2021
SC I.1 Each Individual HAP Limit <8.9 tpy 12 month rolling at end of each month	Black paint: Styrene = 0.005249272 Ethylbenzene = 0.002624052 Blue paint: Styrene = 0.000220014 Ethylbenzene = 0.000.000192627 TOTAL: Styrene = 0.005469286 Ethylbenzene = 0.002816679	Black paint: Styrene = 0.004443268 Ethylbenzene = 0.00222105 Blue paint: Styrene = 0.000192984 Ethylbenzene = 0.000096492 TOTAL: Styrene = 0.004636252 Ethylbenzene = 0.002816679	Black paint: Styrene = 0.004517932 Ethylbenzene = 0.002258382 Blue paint: Styrene = 0.000190332 Ethylbenzene = 0.000095166 TOTAL: Styrene = 0.004708264 Ethylbenzene = 0.002353548
SC I.2 Aggregate HAPs Limit 22.4 tpy 12 month rolling at end of each month	Black paint: Styrene + Ethylbenzene = 0.007873324 Blue paint:	Black paint: Styrene + Ethylbenzene = 0.006664318 Blue paint:	Black paint: Styrene + Ethylbenzene = 0.006776314 Blue paint:

	Styrene + Ethylbenzene = 0.000412641 TOTAL: 0.008285965	Styrene + Ethylbenzene = =0.000289476 TOTAL: 0.006953794	Styrene + Ethylbenzene = 0.000285498 TOTAL: 0.007061812
SC VI.3 (a) Gallons low use coating material used *	10 gallons - NONE -(KB edit) (month of February 2021)	22 gallons - NONE -(KB edit) - (month of July 2021)	12 gallons - NONE -(KB edit) - (month of October 2021)
*Low Use Coatings are materials with >3.5 lbs VOC/gallon. Kerkau records and reported Blue paint (Sherwin Williams F88LL4) as a Low Use coating. Per 12-9-2021 email Kerkau uses no Low Use coatings.			

The facility records review found no periods of noncompliance with the PTI 137-96B emission limits for FGFACILITY.

Material limits

There are no material limits in PTI 137-96B.

Process/Operational limits

There are no process or operational or limits in PTI 137-96B for FGFACILITY

Design/Equipment parameters

There are no design or equipment requirements in PTI 137-96B for FGFACILITY

Testing

SC V.1 requires the permittee to determine the HAP content of coatings as received and applied using manufacturer formulation data. The facility determines and uses supplier formulation data as required.

Monitoring/Recordkeeping

SC VI.1 requires monthly calculations be performed. A review of records for February, July and October 2021 found calculations required each month are completed.

SC VI.2 requires the facility to keep monthly material use and reclaim information for each HAP containing material as well as individual HAP and aggregate HAP emissions. The operators record the material use information daily. No material is reclaimed. Only two coatings are used with constant HAP content and emission rate. Calculations are performed weekly or monthly to determine HAP emissions. Emissions are based on total used and no reduction in emission is applied for exhaust through filters. During the inspection the use records and emission calculations for February 2021 were reviewed in detail.

Below is a summary of monitoring and record keeping reviewed.

Parameter	February 2021	July 2021	October 2021
SC VI.2 (a) Gallons or pounds HAP containing material used	used as of 2/28/2021 (12 month rolling) Black paint – 5,144.6 gallons Blue paint – 243.7 gallons	used as of 07/31/2021 (12 month rolling) Black paint – 4354.4 gallons Blue paint – 189.2 gallons	used as of 10/31/2021 (12 month rolling) Black paint – 4427.6 gallons Blue paint – 183.6 gallons
(b) Gallons or pounds HAP containing material reclaimed.	N/A – none reclaimed	N/A – none reclaimed	N/A – none reclaimed
(d) HAPs aggregate lbs per calendar month	Black paint: 1.002762 lbs Blue paint: 0.0306 lbs TOTAL: 1.033362 lbs	Black paint: 1.373634 lbs Blue paint: 0.06732 lbs TOTAL: 1.440954 lbs	Black paint: 1.288872 lbs Blue paint: 0.03672 lbs TOTAL: 1.325592 lbs

SC VI. 3 (a) Gallons low use coating material used *	10 gallons- NONE –(KB edit) (month of February 2021)	22 gallons- NONE –(KB edit) - (month of July 2021)	12 gallons- NONE –(KB edit) - (month of October 2021)
SC VI. 3 (c) Gallons low use coating reclaimed.	N/A – none reclaimed	N/A – none reclaimed	N/A – none reclaimed
<p>Low Use Coatings are materials with >3.5 lbs VOC/gallon. Kerkau records and reported Blue paint (Sherwin Williams F88LL4) as a Low Use coating. Per 12-9-2021 email Kerkau uses no Low Use coatings.</p>			

The facility records review found no periods of noncompliance with the PTI 137-96B monitoring/recordkeeping requirements for FGFACILITY.

Reporting

The PTI 137-96B does not contain any reporting requirements for FGFACILITY

Stack vent

The PTI 137-96B does not contain any reporting requirements for FGFACILITY

NAME  DATE 12/10/2021 SUPERVISOR 