PERMIT TO CONSTRUCT EVALUATION
(Abrasive Blasting, Dust collector, Title V Revision)

OWNER/OPERATOR: ROHR, INC. OPERATING AS GOODRICH AEROSTRUCTURES

FACILITY ID: 800113

EQUIPMENT LOCATION: 8200 ARLINGTON AVE., RIVERSIDE, CA 92503

MAILING ADDRESS: SAME AS ABOVE

Title V Permit Revision Application:
A/N: 551297

PERMITS TO CONSTRUCT

EQUIPMENT DESCRIPTION:

Equipment	ID No.	Connected To	Source Type/ Monitoring Unit	Emissions	Conditions
Process 9: ABRASIVE BLASTING					
ABRASIVE BLASTING, ROOM, ZERO/CLEMCO, MAXIMUM AIR PRESSURE OF 100 PSIG, MAXIMUM 7/16 INCH INSIDE DIAMETER, WITH: 10 FT: HEIGHT, 14 FT LENGTH, 10 FT WIDTH ABRASIVE BLASTING NOZZLE, FOUR, DIAMTER 0.44 IN; 100 PSIG Reference:A/N: 551298	D278	C279, C284		PM: (9) [**RULE:1140, 2-1-1980:** RULE 1140, 8-2-1985; **RULE 405, 2-7-1986**]	D323.1, E448.2
DUST COLLECTOR, WITH PULSE JET CLEANING SYSTEM, ZERO/CLEMCO, CDF-6, EACH CARTRIDGES 14 IN DIA. X 26 IN L, 12 CARTRIDGE, 3024 SQ. FT., 12 CARTRIDGE, WITH 6000 CFM BLOWER. Reference:A/N: 551295	C279	D278, C282		PM: (9) [RULE 404, 2-7-1986]	A63.21, C6.27, D322.2, E102.1, H23.14, K67.1
FILTER, HEPA, THREE, WITDTH, 11.5 IN; HEIGHT: 1 FT, LENGTH: 1 FT. Reference:A/N: 551295	C282	C279		PM: (9) [RULE 404, 2-7-1986]	A63.21, C6.26, D322.2, E175.2, H23.14,

					K67.1
CYCLONE, ZERO/CLEMCO, MODEL 4000, 3'-6" DIA. X 2'-10" H.	C284	D278, C280			
DUST COLLECTOR, WITH PULSE JET CLEANING SYSTEM, ZERO/CLEMCO, MODEL CDF-4, 8 CARTRIDGE, EACH CARTRIDGES 14 IN DIA. X 26 IN L, 2016 SQ. FT, WITH 4000 CFM BLOWER. Reference: A/N: 551299	C280	C284, C283		PM: (9) [RULE 404, 2-7-1986]	A63.21, C6.27, E102.1, E175.2, H23.14, K67.1
FILTER, HEPA, TWO, WITDTH, 11.5 IN; HEIGHT: 1 FT, LENGTH: 1 FT. Reference:A/N: 551299	C283	C280		PM: (9) [RULE 404, 2-7-1986]	A63.21, C6.26, D322.2, E175.2, H23.14, K67.1

Abrasive Blasting Conditions:

D323.1 The operator shall conduct an inspection for visible emissions from all stacks and other emission points of this equipment whenever there is a public complaint of visible emissions, whenever visible emissions are observed, and on an annual basis, at least, unless the equipment did not operate during the entire annual period. The routine annual inspection shall be conducted while the equipment is in operation and during daylight hours.

If any visible emissions (not including condensed water vapor) are detected that last more than three minutes in any one hour, the operator shall verify and certify within 24 hours that the equipment causing the emission and any associated air pollution control equipment are operating normally according to their design and standard procedures and under the same conditions under which compliance was achieved in the past, and either;

1) Take corrective action(s) that eliminate the visible emissions within 24 hours and report the visible emissions as a potential deviation in accordance with the reporting requirements in Section K of this permit; or

2) Have a Carb-certified smoke reader determine compliance with the opacity standard, using EPA Method 9 or the procedures in the CARB manual "Visible Emissions Evaluation", within three business days and report any deviations to AQMD.

The operator shall keep the records in accordance with the recordkeeping requirements in Section K of this permit and the following records;

1) Stack or emission point identification
2) Description of any corrective actions taken to abate visible emissions

3) Date and time visible emission was abated, and
4) All visible emissions observation records by operator or a certified smoke reader.

E448.2 THE OPERATOR SHALL COMPLY WITH THE FOLLOWING REQUIREMENTS:

Only aluminum oxide shall be used as an abrasive media.

This equipment shall only be used to blast composite material.

Dust Collector Conditions:

A63.21 The operator shall limit emissions from this equipment as follows:

CONTAMINANT	EMISSION LIMIT
Visible emissions	Less than or equal to 0 Percent Opacity

C6.27 The operator shall use this equipment in such a manner that the differential pressure being monitored, as indicated below, does not exceed 5 inches water column.
To comply with this condition, the operator shall install and maintain a(n) differential pressure gauge to accurately indicate the differential pressure across the cartridge filters.
The operator shall determine and record the parameter being monitored once every 7 days.

D322.2 The operator shall perform an annual inspection of the equipment and filter media for leaks, broken or torn filter media, and improperly installed filter media.

E102.1 The operator shall discharge dust collected in this equipment only into closed containers.

H23.14 This equipment is subject to the applicable requirements of the following rules or regulations:

Contaminant	Rule	Rule Rule/Subpart
PM	District Rule	1155

K67.1 The operator shall keep records, in a manner approved by the District, for the following parameter(s) or item(s);
The name of the person performing the inspection and/or maintenance of the filter media
The date, time and results of the inspection.
The date, time and description of any maintenance or repairs resulting from the inspection.

HEPA Filter Conditions:

A63.21 The operator shall limit emissions from this equipment as follows:

CONTAMINANT	EMISSION LIMIT
Visible emissions	Less than or equal to 0 Percent Opacity

C6.26 The operator shall use this equipment in such a manner that the differential pressure being monitored, as indicated below, does not exceed 2 inches water column.
To comply with this condition, the operator shall install and maintain a(n) differential pressure gauge to accurately indicate the differential pressure across the HEPA filters.
The operator shall determine and record the parameter being monitored once every 7 days.

D322.2 The operator shall perform an annual inspection of the equipment and filter media for leaks, broken or torn filter media, and improperly installed filter media.

E175.2 The operator shall not use this equipment unless all exhaust air passes through the following:
HEPA filters that are individually DOP tested with 0.3 micron particulates and certified to have an efficiency of not less than 99.97%.

H23.14 This equipment is subject to the applicable requirements of the following rules or regulations:

Contaminant	Rule	Rule Rule/Subpart
PM	District Rule	1155

K67.1 The operator shall keep records, in a manner approved by the District, for the following parameter(s) or item(s);
The name of the person performing the inspection and/or maintenance of the filter media
The date, time and results of the inspection.
The date, time and description of any maintenance or repairs resulting from the inspection.

BACKGROUND:

Rohr submitted the above applications for expedited permit processing to construct an abrasive blasting room, vented to a new dust collector and a reclaimer unit with a baghouse both equipped with HEPA filters.

Rohr is a RECLAIM/Title V facility. A Title V renewal permit was issued to this facility on July 6, 2010. A/N 551297 was submitted for RECLAIM/TV Revision. This permit revision is considered a “de minimis significant permit revision” to the Title V renewal permit, as described in the Regulation XXX evaluation.

This project is the 7th permit revision since the issuance of the renewal permit. There are no records of complaints or Notices of Violation issued to the facility during the last two years. However, the facility was issued a Notice to Comply (NC) on 10/23/12 requiring the applicant to submit NOx emissions reports for process units, Rule 219 equipment, and large NOx sources as required by regulation XX, and submit the semi-annual compliance report on time. The applicant complied with the NC and is currently operating in compliance with the applicable rules and regulation.

PROCESS DESCRIPTION:

Rohr manufactures aerospace components for commercial and military aircraft. They perform metal and composite material processing, structural bonding and assembly operations. Manufacturing processes conducted at this location include composite bonding, resin curing, core stabilizing, primer and topcoat spray painting, roller coating, degreasing, solvent cleaning, metal surface preparation, abrasive blasting and tooling preparation.

The above abrasive blasting system and associated air pollution control equipment dust collectors will be used for the surface preparation of aircraft engine composite parts. Both air pollution control systems are equipped with cartridge and HEPA filters with minimum efficiency of 99.97% on 0.3 micron and DOP tested. The blasting operation is performed by an integrated robotic abrasive blasting system inside the room. Air from the blast room is vented through the main dust collector, and the spent blast media falls through a grated floor of the room and is extracted by suction into a cyclone. Large media is separated for reuse in the abrasive blasting pots. Fines are diverted from the top of the cyclone into the baghouse and HEPA filters. The facility will be using aluminum oxide as abrasive blasting media.

EMISSION CALCULATION:

Operating schedule:
Normal: 16 hrs/day, 6 days/wk, 50 wks/yr
Maximum: 24 hrs/day, 7 day/wk, 50 wks/yr

4 Abrasive Blasting Nozzles each 7/16" @ 100 psi
PM = 2 x PM10

Sand Flow Rate = 940 lb sand/hr
Density: Aluminum Oxide - 160 lb/ft3; Sand - 99 lb/ft3
Aluminum Oxide Flow Rate = 940 x 160/99 = 1519.2 lb Al. Ox/hr per nozzle
Total Flow Rate = 4 nozzles x 1519.2 lb/hr = 6076.8 lb Al Ox/hr
Or: 145,842.4 lb AL Ox/day

Emission Factor = 0.01 lb PM/lb Al Ox
A usage factor of 65% will be assumed, 99% efficiency for cartridge filters, and 99.97% for HEPA filters:

R1, PM = 145,842 lb/day X (0.01 lb PM/ lb abrasive) (0.65) = 947.97 lb/day 39.5lb/hr
R1, PM10 = 473.98 lb/day 19.74 lb/hr

R2, PM = 947.97 lb/day X (1- 0.9997) = 0.284 lb/day 0.011 lb/hr
R2, PM10 = 0.142 lb/day 0.0059 lbs/hr

Rule 404 emission calculation:
Exhaust PM concentration:
= (0.0088 lb/hr x 7000 gr/lb) x (min /6000 ft^3) x (hr /60min) = 0.00017 grains/ ft^3
= (0.0022 lb/hr x 7000 gr/lb) x (min /4000 ft^3) x (hr /60min) = 0.000064 grains/ ft^3

Total CFM for both dust collectors would be:
6000 + 4000 = 10,000 CFM
Rule 404 allowable limit based for 10,000 cfm is 0.0792 grains/ft^3

Rule 405 emissions calculation:
Actual PM emission = 0.011 lb/hr
Rule 405 allowable limit based for a process weight of 6063 lbs/hr is 6.65 lb/hr

Abrasive Blasting Systems

Abrasive Material:	Aluminum Oxide
Nozzle Diameter, Inches:	7/16”
Room Dimensions (W’ X L’ X H’):	10’ x 14’ x 10’
Blower rating, H.P.:	15- H.P.
Total CFM:	6,000 + 4,000= 10,000
No. of Filters:	12 Cartridges (3,024 sq. ft.) +8 Cartridges (2,016 sq.ft) = 20 (5,040 sq.ft.)
No. of Nozzles:	four

Room Cross draft Velocity (CD)
Room Cross Area: 10 W. X 10 H. = 100. Ft^2.
CD = Blower CFM / Area = 10,000 /100 = 100 fpm (should be min 50 ft/min)
In draft Velocity through Air Port (ID):
ID = 10,000/ sq ft of opening
= 10,000/ 10 sq. ft. = 1,000 fpm (should be min 500 ft/min)
Air –to- Cloth Ratio (A/C) = 10,000/5,040 = 1.98 (should be max of 8.0:1)

Dust collector and Abrasive Blasting Room Guideline Review:

	Recommended	Actual	Compliance
A/C Ratio	8:1 Max	1.98:1	Yes
Bag Shaker	PJ/MN	PJ	Yes
Access Door	Yes	Yes	Yes
Closed Container	Yes	Yes	Yes
Pressure Gauge	Yes	Yes	Yes

The abrasive blasting nozzle diameter and maximum air pressure supply at the facility will be the limiting factors for daily usage. No daily limit usage will be required for the abrasive blasting equipment.

Rule 1155 Requirements:

	Required	Actual/ Permit Condition	Compliance
Visible Emissions	0	Yes	Yes
Maintanence	Per Manufacturer Manual	Yes	Yes
Bag Shaker	PJ	PJ	Yes
Capture Velocity	100	100	Yes
Discharged collected material into enclosed container	Yes	Yes	Yes
Monitoring/ Recordkeeping	Weekly	Rule requirement	Yes

RULE ANALYSIS

RULE 212 (c)(1) This section requires a public notice for all new or modified permit units that emit air contaminants located within 1,000 feet from the outer boundary of a school.
No public notice is required since no school is located within 1,000 ft from the above site.

(c)(2) This section requires a public notice for all new or modified facilities that have on-site emission increases exceeding any of the daily maximums as specified by Rule 212(g).
The equipment will not result in on-site emission increases exceeding the daily maximums for any criteria pollutant emissions as specified in Rule 212(g). Therefore, a 30-day public notice period will not be required.

(c)(3) This section requires a public notice for all new or modified permit units with increases in emissions of toxic air contaminants listed in Table I of Rule 1401 resulting in a cancer risk equal or greater than one in a million.
The proposed installation of the abrasive blasting system and air pollution control system will not result in any emission increase that will cause a cancer risk equal or greater than one in a million. Public notice is not required under this section of the rule.

212(g) This section requires a public notice for all new or modified sources that result in emission increases exceeding any of the daily maximums as specified by Rule 212(g).
The proposed installation of the abrasive blasting system and the air pollution control system will not result in an emission increase exceeding the daily maximums.

	Maximum Daily Emissions					
	ROG	**NO_x**	**PM_{10}**	**SO_2**	**CO**	**Pb**
Emission increase	0	0	0.14	0	0	0
MAX Limit (lb/day)	**30**	**40**	**30**	**60**	**220**	**3**
Compliance Status	Yes	Yes	Yes	Yes	Yes	Yes

RULEs 401 & 402: Emissions from the abrasive blasting room will be vented to an air pollution control system dust collector for particulate emission control and reclaimer baghouse equipped with HEPA filters. With the proper operation and maintenance of the air pollution control equipment, compliance with this rule is expected.

Rule 404: The emission calculations indicates that the proposed equipment is expected to comply with the requirements of this rule.

Rule 405: The emission calculations indicate that the proposed equipment is expected to comply with the requirements of this rule.

Rule 1140: The abrasive blasting room is totally enclosed and vented to an air pollution control equipment baghouse and HEPA filters to minimize particulate matter emissions to the atmosphere. Compliance with this rule is expected.

RULE 1155: The abrasive blasting room is totally enclosed and the emissions will be vented to an air pollution control system consisting of a dust collectors and HEPA filters. The dust collectors are tier 2. Permit conditions require the operator to install and operate a pressure gauge with a pressure drop limit; monitor and record the pressure drop across the filters on a weekly basis; and inspect the filters on an annual basis for leaks, broken or torn filter media, and improperly installed filter media. Therefore, the operation of the air pollution control equipment with the above specified conditions will ensure compliance with the Rule.

REGULATION XIII

RULE 1303(a), BEST AVAILABLE CONTROL TECHNOLOGY (BACT)

The abrasive blasting system will be vented to a baghouse and HEPA filters which will satisfy BACT requirements.

RULE 1303(b)(1), MODELING

Controlled hourly PM10 emissions are below the screening threshold of 0.41 lb/hr (0.0059 lb/hr). No further modeling analysis is required. Compliance with this rule is expected.

RULE 1303(b)(2), OFFSET

The proposed installation of the abrasive blasting system will result in negligible PM emission increase. Therefore no offsets will be required for this project.

RULE 1401: Toxics: Rule 1401 contains the following requirements:

1) ***(d)(1)*** *MICR and Cancer Burden* - The cumulative increase in MICR which is the sum of the calculated MICR values for all toxic air contaminants emitted from the new, relocated or modified permit unit will not result in any of the following:
(A) an increased MICR greater than one in one million (1.0×10^{-6}) at any receptor location, if the permit unit is constructed without T-BACT;
(B) an increased MICR greater than ten in one million (1.0×10^{-5}) at any receptor location, if the permit unit is constructed with T-BACT;
(C) a cancer burden greater than 0.5.

2) ***(d)(2)*** *Chronic Hazard Index* - The cumulative increase in total chronic HI for any target organ system due to total emissions from the new, relocated or modified permit unit will not exceed 1.0 at any receptor location.

3) ***(d)(3)*** *Acute Hazard Index* - The cumulative increase in total acute HI for any target organ system due to total emissions from the new, relocated or modified permit unit will not exceed 1.0 at any receptor location.

The proposed installation of the abrasive blasting system will result not result toxic emission increase. Compliance with this rule is expected.

REGULATION XX-RECLAIM

Rohr, Inc. is a NOx RECLAIM facility. This project will not affect NOx emissions at the facility. This rule is not applicable to this project.

REGULATION XXX

The proposed project is considered as a "de minimis significant permit revision" for non-RECLAIM pollutants and hazardous air pollutants, and a "minor permit revision" for RECLAIM pollutants.

Rule 3000(b)(6) defines a "de minimis significant permit revision" as any Title V permit revision where the cumulative emission increases of non-RECLAIM pollutants or hazardous air pollutants (HAP) from these permit revisions during the term of the permit are not greater than any of the following emission threshold levels:

Air Contaminant	Daily Maximum (lb/day)
HAP	30
VOC	30
NOx	40

Air Contaminant	Daily Maximum (lb/day)
PM10	30
Sox	60
CO	220

To determine if a project is considered as a "de minimis significant permit revision" for non-RECLAIM pollutants or HAPs, emission increases for non-RECLAIM pollutants or HAPs resulting from all permit revisions that are made after the issuance of the Title V renewal permit shall be accumulated and compared to the above threshold levels. This proposed project is the 7th permit revision to the Title V renewal permit issued to this facility on July 6, 2010.

Revision	HAP	VOC	NOx*	PM10	SOx	CO
Previous permit Revisions.	0	0	**1***	0	0	1
7th. Permit Revision Installation of Abrasive Blasting Room vented to a baghouse, reclaimer dust collector, and HEPA filters.	*0*	*0*	**0**	*0*	*0*	*0*
Cumulative Total	0	0	1	0	0	1
Maximum Daily	30	30	40*****	30	60	220

* RECLAIM pollutant, not subject to emission accumulation requirements

\+ Reduced emissions will not be subtracted from Cumulative Total

Since the cumulative emission increases resulting from all permit revisions are not greater than any of the emission threshold levels, this proposed project is considered as a "de minimis significant permit revision" for non-RECLAIM pollutants or HAPs.

RECLAIM Pollutants

Rule 3000(b)(12)(A)(v) defines a "minor permit revision" as any Title V permit revision that does not result in an emission increase of RECLAIM pollutants over the facility starting Allocation plus nontradeable Allocations, or higher Allocation amount which has previously undergone a significant permit revision process.

Since NOx is a RECLAIM pollutant for this facility, a separate analysis shall be made to determine if the proposed permit revision is considered a "minor permit revision" for RECLAIM pollutants. The proposed installation of the abrasive blasting system and air pollution control system will not result in an increase in NOx emissions. As a result, this proposed project is considered as a "minor permit revision" for RECLAIM pollutants.

RECOMMENDATION

The proposed project is expected to comply with all applicable District Rules and Regulations. Since the proposed project is considered as a "de minimis significant permit revision" for non-RECLAIM pollutants and hazardous air pollutants, and a "minor permit revision" for RECLAIM pollutants, it is exempt from the public participation requirements under Rule 3006 (b). A proposed permit incorporating this permit revision will be submitted to EPA for a 45-day review pursuant to Rule 3003(j). If EPA does not raise any objections within the review period, a revised Title V permit will be issued to this facility.