

**MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY  
AIR QUALITY DIVISION**

March 21, 2005

**NEW SOURCE REVIEW PERMIT TO INSTALL  
523-96A**



**ISSUED TO**  
Selfridge Air National Guard

**LOCATED AT**  
127<sup>th</sup> Wing/Environmental Management  
Selfridge, Michigan

**IN THE COUNTY OF**  
Macomb

**STATE REGISTRATION NUMBER**  
F3254

The Air Quality Division has approved this Permit to Install, pursuant to the delegation of authority from the Michigan Department of Environmental Quality. This permit is hereby issued in accordance with and subject to Part 5505(1) of Article II, Chapter I, Part 55 (Air Pollution Control) of P.A. 451 of 1994. Pursuant to Air Pollution Control Rule 336.1201(1), this permit constitutes the permittee's authority to install the identified emission unit(s) in accordance with all administrative rules of the Department and the attached conditions. Operation of the emission unit(s) identified in this Permit to Install is allowed pursuant to Rule 336.1201(6).

DATE OF RECEIPT OF ALL INFORMATION REQUIRED BY RULE 203: <b>January 18, 2005</b>	
DATE PERMIT TO INSTALL APPROVED: <b>March 21, 2005</b>	SIGNATURE:
DATE PERMIT VOIDED:	SIGNATURE:
DATE PERMIT REVOKED:	SIGNATURE:

**PERMIT TO INSTALL**

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**Common Abbreviations / Acronyms**

<b>Common Acronyms</b>		<b>Pollutant/Measurement Abbreviations</b>	
AQD	Air Quality Division	Btu	British Thermal Unit
ANSI	American National Standards Institute	°C	Degrees Celsius
BACT	Best Available Control Technology	CO	Carbon Monoxide
CAA	Clean Air Act	dscf	Dry standard cubic foot
CEM	Continuous Emission Monitoring	dscm	Dry standard cubic meter
CFR	Code of Federal Regulations	°F	Degrees Fahrenheit
COM	Continuous Opacity Monitoring	gr	Grains
EPA	Environmental Protection Agency	Hg	Mercury
EU	Emission Unit	hr	Hour
FG	Flexible Group	H <sub>2</sub> S	Hydrogen Sulfide
GACS	Gallon of Applied Coating Solids	hp	Horsepower
GC	General Condition	lb	Pound
HAP	Hazardous Air Pollutant	m	Meter
HVLP	High Volume Low Pressure *	mg	Milligram
ID	Identification	mm	Millimeter
LAER	Lowest Achievable Emission Rate	MM	Million
MACT	Maximum Achievable Control Technology	MW	Megawatts
MAERS	Michigan Air Emissions Reporting System	NO <sub>x</sub>	Oxides of Nitrogen
MAP	Malfunction Abatement Plan	PM	Particulate Matter
MDEQ	Michigan Department of Environmental Quality	PM-10	Particulate Matter less than 10 microns diameter
MIOSHA	Michigan Occupational Safety & Health Administration	pph	Pound per hour
MSDS	Material Safety Data Sheet	ppm	Parts per million
NESHAP	National Emission Standard for Hazardous Air Pollutants	ppmv	Parts per million by volume
NSPS	New Source Performance Standards	ppmw	Parts per million by weight
NSR	New Source Review	psia	Pounds per square inch absolute
PS	Performance Specification	psig	Pounds per square inch gauge
PSD	Prevention of Significant Deterioration	scf	Standard cubic feet
PTE	Permanent Total Enclosure	sec	Seconds
PTI	Permit to Install	SO <sub>2</sub>	Sulfur Dioxide
RACT	Reasonable Available Control Technology	THC	Total Hydrocarbons
ROP	Renewable Operating Permit	tpy	Tons per year
SC	Special Condition Number	µg	Microgram
SCR	Selective Catalytic Reduction	VOC	Volatile Organic Compounds
SRN	State Registration Number	yr	Year
TAC	Toxic Air Contaminant		
VE	Visible Emissions		

\* For High Volume Low Pressure (HVLP) applicators, the pressure measured at the HVLP gun air cap shall not exceed ten (10) pounds per square inch gauge (psig).

### GENERAL CONDITIONS

1. The process or process equipment covered by this permit shall not be reconstructed, relocated, or modified, unless a Permit to Install authorizing such action is issued by the Department, except to the extent such action is exempt from the Permit to Install requirements by any applicable rule. **[R336.1201(1)]**
2. If the installation, construction, reconstruction, relocation, or modification of the equipment for which this permit has been approved has not commenced within 18 months, or has been interrupted for 18 months, this permit shall become void unless otherwise authorized by the Department. Furthermore, the permittee or the designated authorized agent shall notify the Department via the Supervisor, Permit Section, Air Quality Division, Michigan Department of Environmental Quality, P.O. Box 30260, Lansing, Michigan 48909, if it is decided not to pursue the installation, construction, reconstruction, relocation, or modification of the equipment allowed by this Permit to Install. **[R336.1201(4)]**
3. If this Permit to Install is issued for a process or process equipment located at a stationary source that is not subject to the Renewable Operating Permit program requirements pursuant to R336.1210, operation of the process or process equipment is allowed by this permit if the equipment performs in accordance with the terms and conditions of this Permit to Install. **[R336.1201(6)(b)]**
4. The Department may, after notice and opportunity for a hearing, revoke this Permit to Install if evidence indicates the process or process equipment is not performing in accordance with the terms and conditions of this permit or is violating the Department's rules or the Clean Air Act. **[R336.1201(8), Section 5510 of Act 451, PA 1994]**
5. The terms and conditions of this Permit to Install shall apply to any person or legal entity that now or hereafter owns or operates the process or process equipment at the location authorized by this Permit to Install. If the new owner or operator submits a written request to the Department pursuant to R336.1219 and the Department approves the request, this permit will be amended to reflect the change of ownership or operational control. The request must include all of the information required by subrules (1)(a), (b), and (c) of R336.1219. The written request shall be sent to the District Supervisor, Air Quality Division, Michigan Department of Environmental Quality. **[R336.1219]**
6. Operation of this equipment shall not result in the emission of an air contaminant which causes injurious effects to human health or safety, animal life, plant life of significant economic value, or property, or which causes unreasonable interference with the comfortable enjoyment of life and property. **[R336.1901]**
7. The permittee shall provide notice of an abnormal condition, start-up, shutdown, or malfunction that results in emissions of a hazardous or toxic air pollutant which continue for more than one hour in excess of any applicable standard or limitation, or emissions of any air contaminant continuing for more than two hours in excess of an applicable standard or limitation, as required in Rule 912, to the Department. The notice shall be provided not later than two business days after start-up, shutdown, or discovery of the abnormal condition or malfunction. Written reports, if required, must be filed with the Department within 10 days after the start-up or shutdown occurred, within 10 days after the abnormal conditions or malfunction has been corrected, or within 30 days of discovery of the abnormal condition or malfunction, whichever is first. The written reports shall include all of the information required in Rule 912(5). **[R336.1912]**
8. Approval of this permit does not exempt the permittee from complying with any future applicable requirements which may be promulgated under Part 55 of 1994 PA 451, as amended or the Federal Clean Air Act.

9. Approval of this permit does not obviate the necessity of obtaining such permits or approvals from other units of government as required by law.
10. Operation of this equipment may be subject to other requirements of Part 55 of 1994 PA 451, as amended and the rules promulgated thereunder.
11. Except as provided in subrules (2) and (3) or unless the special conditions of the Permit to Install include an alternate opacity limit established pursuant to subrule (4) of R336.1301, the permittee shall not cause or permit to be discharged into the outer air from a process or process equipment a visible emission of density greater than the most stringent of the following. The grading of visible emissions shall be determined in accordance with R336.1303. **[R336.1301]**
  - a) A six-minute average of 20 percent opacity, except for one six-minute average per hour of not more than 27 percent opacity.
  - b) A visible emission limit specified by an applicable federal new source performance standard.
  - c) A visible emission limit specified as a condition of this permit to install.
12. Collected air contaminants shall be removed as necessary to maintain the equipment at the required operating efficiency. The collection and disposal of air contaminants shall be performed in a manner so as to minimize the introduction of contaminants to the outer air. Transport of collected air contaminants in Priority I and II areas requires the use of material handling methods specified in R336.1370(2). **[R336.1370]**
13. The Department may require the permittee to conduct acceptable performance tests, at the permittee's expense, in accordance with R336.2001 and R336.2003, under any of the conditions listed in R336.2001. **[R336.2001]**

**SPECIAL CONDITIONS**

**Flexible Group Identification**

<b>Flexible Group ID</b>	<b>Emission Units Included in Flexible Group</b>	<b>Stack Identification</b>
FG-COLDCLEANERS	16 Stationary Cold Cleaners/Parts Cleaners	NA
FG-PAINTBOOTHS	8 Paint Spray Booths	NA
FG-NGHEATERS	All natural gas heating units at the facility	NA
FG-DIESELGENS	All diesel generators at the facility ranging in size from 5 to 500 kW	NA
FG-GASGENS	All gasoline fired generators at the facility ranging in size from 1 to 45 kW	NA
FG-AGE	Stationary aerospace ground equipment consisting of all motorized aircraft support equipment (compressors, hydraulic test stands, and supplementary heating, air conditioning, and lighting units)	NA
FG-TESTCELLS	2 engine testing stands for the F-16 Aircraft engines	NA
FG-FUELSTORAGE	27 storage tanks for storing petroleum products (JP-8, diesel and gasoline)	NA
FG-FACILITY	All process equipment at the facility including equipment covered by other permits, grand-fathered equipment and exempt equipment.	NA
Changes to the equipment described in this table are subject to the requirements of R336.1201, except as allowed by R336.1278 to R336.1290.		

**The following conditions apply to: FG-COLDCLEANERS**

**Emission Limits**

	<b>Pollutant</b>	<b>Equipment</b>	<b>Limit</b>	<b>Time Period</b>	<b>Testing/ Monitoring Method</b>	<b>Applicable Requirement</b>
1.1	VOC	FG-COLDCLEANERS	10 tpy	12-month rolling time period as determined at the end of each calendar month	SC 1.2, 1.3, 1.4	R336.1205(1)(a) and (3), R336.1205(2)

**Material Usage Limits**

- 1.2 The permittee shall not use more than 3,000 gallons of solvent/cleaner in FG-COLDCLEANERS per 12-month rolling time period as determined at the end of each calendar month. The amount of solvent/cleaner used is the amount of solvent/cleaner purchased minus the amount of solvent/cleaner shipped out as waste. **[R336.1205(1)(a) and (3), R336.1205(2)]**
- 1.3 The VOC content of all solvent/cleaner used in FG-COLDCLEANERS shall not exceed 6.70 pounds per gallon, based on a monthly average. **[R336.1205(1)(a) and (3), R336.1205(2)]**

**Process/Operational Limits**

- 1.4 The permittee shall not operate FG-COLDCLEANERS unless all provisions of Rule 707 are met. **[R336.1707]**

**Recordkeeping/Reporting/Notification**

- 1.5 The permittee shall keep the following records FG-COLDCLEANERS:

- a) Monthly and previous 12-month calculations of total solvent/cleaner used.
- b) Average VOC content, in pounds per gallon, calculated on a monthly basis.
- c) Monthly and previous 12-month calculation of each HAP emission rate for each cold cleaner.
- d) Monthly and previous 12-month calculation of aggregate HAP emission rates for all cold cleaners.
- e) Monthly and previous 12-month calculation of VOC emission rate.

The records shall be kept in a format acceptable to the AQD District Supervisor. All records shall be kept on file for a period of at least five years and made available to the Department upon request. **[R336.1205 (1)(a) and (3), R336.1205(2)]**

**The following conditions apply to: FG-PAINTBOOTHS**

**Material Usage Limits**

- 2.1 The permittee shall not use more than 200 gallons of coating and solvent in each paint booth included in FG-PAINTBOOTHS per 12-month rolling time period as determined at the end of each calendar month. **[R336.1205(1)(a) and (3), R336.1205(2)]**
- 2.2 The VOC content of all coatings used in FG-PAINTBOOTHS shall not exceed 6.25 pounds per gallon, based on a monthly average. **[R336.1205(1)(a) and (3), R336.1205(2)]**

**Equipment**

- 2.3 The permittee shall not operate FG-PAINTBOOTHS unless the exhaust filters are in place and operating properly. **[R336.1205]**

**Recordkeeping/Reporting/Notification**

- 2.4 The permittee shall keep a separate written record of the following for each paint booth included in FG-PAINTBOOTHS:
  - a) For each material, maintain the following on a monthly basis:
    1. The identification and the coating category for each coating used.
    2. A current listing of the chemical composition of each coating and reducer used at the facility, including the weight percent of each compound.
    3. The average VOC content in pounds per gallon as applied.
    4. The VOC content in pounds per gallon for each reducers, catalyst, solvents and all other VOC containing material used.
    5. The content in pounds per gallon of each and all HAPs for all coatings, reducers, catalyst, solvent thinners and all other VOC containing material used during the painting process.
    6. The amount in gallons of coating as applied.
  - b) Monthly records of the following for all HAPs:
    1. Monthly and previous 12-month calculation of each HAP emission rate for each paint booth.
    2. Monthly and previous 12-month calculation of aggregate HAP emission rates for all paint booths.
  - c) Monthly and previous 12-month VOC emission calculations

The records shall be kept in a format acceptable to the AQD District Supervisor. All records shall be kept on file for a period of at least five years and made available to the Department upon request. **[R336.1205(1)(a) and (3), R336.1205(2)]**

**The following conditions apply to: FG-NGHEATERS**

**Material Usage Limits**

- 3.1 The total natural gas usage for FG-NGHEATERS shall not exceed 520 million cubic feet per 12-month rolling time period as determined at the end of each calendar month. **[R336.1205(1)(a) and (3), R336.1205(2)]**

**Recordkeeping/Reporting/Notification**

- 3.2 The permittee shall keep, in a satisfactory manner, monthly and previous 12-month natural gas usage records for FG-NGHEATERS, as required by SC 3.1. All records shall be kept on file for a period of at least five years and made available to the Department upon request. **[R336.1205(1)(a) and (3), R336.1205(2)]**

**The following conditions apply to: FG-DIESELGENS**

**Process/Operational Limits**

- 4.1 The annual power output for FG-DIESELGENS shall not exceed 450,000 kilowatt hours per 12-month rolling time period as determined at the end of each calendar month. **[R336.1205(1)(a) and (3), R336.1205(2)]**

**Recordkeeping/Reporting/Notification**

- 4.2 The permittee shall keep, in a satisfactory manner, monthly and previous 12-month power output records for FG-DIESELGENS, as required by SC 4.1. All records shall be kept on file for a period of at least five years and made available to the Department upon request. **[R336.1205(1)(a) and (3), R336.1205(2)]**

**The following conditions apply to: FG-GASGENS**

**Process/Operational Limits**

- 5.1 The annual power output for FG-GASGENS shall not exceed 75,000 kilowatt hours per 12-month rolling time period as determined at the end of each calendar month. **[R336.1205(1)(a) and (3), R336.1205(2)]**

**Recordkeeping/Reporting/Notification**

- 5.2 The permittee shall keep, in a satisfactory manner, monthly and previous 12-month power output records for FG-GASGENS, as required by SC 5.1. All records shall be kept on file for a period of at least five years and made available to the Department upon request. **[R336.1205(1)(a) and (3), R336.1205(2)]**

**The following conditions apply to: FG-AGE**

**Material Usage Limits**

- 6.1 The diesel fuel usage or JP-8 fuel usage for all turbine engines included in FG-AGE shall not exceed 150,000 gallons per 12-month rolling time period as determined at the end of each calendar month. **[R336.1205(1)(a) and (3), R336.1205(2)]**
- 6.2 The diesel fuel usage or JP-8 fuel usage for all reciprocating engines included in FG-AGE shall not exceed 75,000 gallons per 12-month rolling time period as determined at the end of each calendar month. **[R336.1205(1)(a) and (3), R336.1205(2)]**

**Recordkeeping/Reporting/Notification**

- 6.3 The permittee shall keep, in a satisfactory manner, monthly and previous 12-month diesel and JP-8 usage records for FG-AGE, as required by SC 6.1 and 6.2. All records shall be kept on file for a period of at least five years and made available to the Department upon request. **[R336.1205(1)(a) and (3), R336.1205(2)]**

**The following conditions apply to: FG-TESTCELLS**

**Process/Operational Limits**

- 7.1 The permittee shall not operate FG-TESTCELLS for more than 70 hours at the Idle power setting per 12-month rolling time period as determined at the end of each calendar month. **[R336.1205(1)(a) and (3), R336.1205(2)]**
- 7.2 The permittee shall not operate FG-TESTCELLS for more than 100 hours at the Approach/Intermediate/Military power settings per 12-month rolling time period as determined at the end of each calendar month. **[R336.1205(1)(a) and (3), R336.1205(2)]**
- 7.3 The permittee shall not operate FG-TESTCELLS for more than 7 hours at the Afterburner setting per 12-month rolling time period as determined at the end of each calendar month. **[R336.1205(1)(a) and (3), R336.1205(2)]**
- 7.4 The permittee shall not perform more than 568 engine tests in FG-TESTCELLS per 12-month rolling time period as determined at the end of each calendar month. **[R336.1205(1)(a) and (3), R336.1205(2)]**

**Recordkeeping/Reporting/Notification**

- 7.5 The permittee shall keep, in a satisfactory manner, monthly and previous 12-month hours of operation for each power setting, as required by SC 7.1, 7.2 and 7.3. All records shall be kept on file for a period of at least five years and made available to the Department upon request. **[R336.1205(1)(a) and (3), R336.1205(2)]**
- 7.6 The permittee shall keep, in a satisfactory manner, monthly and previous 12-month number of engines tested in FG-TESTCELLS, as required by SC 7.4. All records shall be kept on file for a period of at least five years and made available to the Department upon request. **[R336.1205(1)(a) and (3), R336.1205(2)]**

**The following conditions apply to: FG-FUELSTORAGE**

**Material Usage Limits**

- 8.1 The JP-8 fuel throughput for FG-FUELSTORAGE shall not exceed 55,000,000 gallons per 12-month rolling time period as determined at the end of each calendar month. **[R336.1205(1)(a) and (3), R336.1205(2)]**

**Recordkeeping/Reporting/Notification**

- 8.2 The permittee shall keep, in a satisfactory manner, monthly and previous 12-month JP-8 fuel throughput records for FG-FUELSTORAGE, as required by SC 8.1. All records shall be kept on file for a period of at least five years and made available to the Department upon request. **[R336.1205(1)(a) and (3), R336.1205(2)]**

**The following conditions apply to: FG-FACILITY**

**Emission Limits**

	<b>Pollutant</b>	<b>Equipment</b>	<b>Limit</b>	<b>Time Period</b>	<b>Testing/ Monitoring Method</b>	<b>Applicable Requirement</b>
9.1a	Individual HAPs	FG-FACILITY	9 tpy	12-month rolling time period as determined at the end of each calendar month	SC 9.2	R336.1205(2)
9.1b	Aggregate HAPs	FG-FACILITY	22.5 tpy	12-month rolling time period as determined at the end of each calendar month	SC 9.2	R336.1205(2)
9.1c	NO <sub>x</sub>	FG-FACILITY	83.9 tpy	12-month rolling time period as determined at the end of each calendar month	SC 9.3	R336.1205(1)(a) and (3)
9.1d	CO	FG-FACILITY	80.6 tpy	12-month rolling time period as determined at the end of each calendar month	SC 9.3	R336.1205(1)(a) and (3)
9.1e	SO <sub>2</sub>	FG-FACILITY	4.2 tpy	12-month rolling time period as determined at the end of each calendar month	SC 9.3	R336.1205(1)(a) and (3)
9.1f	PM <sub>10</sub>	FG-FACILITY	19.5 tpy	12-month rolling time period as determined at the end of each calendar month	SC 9.3	R336.1205(1)(a) and (3)
9.1g	VOC	FG-FACILITY	44.2 tpy	12-month rolling time period as determined at the end of each calendar month	SC 9.3	R336.1205(1)(a) and (3)

**Recordkeeping / Reporting / Notification**

9.2 The permittee shall keep, in a satisfactory manner, monthly and previous 12-month individual and aggregate HAP calculation records for FG-FACILITY, as required by SC 9.1a and 9.1b. All records shall be kept on file for a period of at least five years and made available to the Department upon request. **[R336.1205(1)(a) and (3), R336.1205(2)]**

9.3 The permittee shall keep, in a satisfactory manner, monthly and previous 12-month NO<sub>x</sub>, CO, SO<sub>2</sub>, PM<sub>10</sub>, and VOC calculation records for FG-FACILITY, as required by SC 9.1c, 9.1d, 9.1e, 9.1f, and 9.1g. All records shall be kept on file for a period of at least five years and made available to the Department upon request. **[R336.1205(1)(a) and (3), R336.1205(2)]**