

CHAPTER 6

AIR QUALITY PROCEDURE

1. BACKGROUND AND PURPOSE

The primary process at FGA is to support the Missile Defense Agency's Ground-Based Interceptor Validation of Operational Concept Test Site. Fort Greely also supports U.S. Army, Alaska training activities. FGA's primary products are national security and the provision of maintenance to activities and structures that support soldier training and readiness.

This chapter establishes the procedures and responsibilities for complying with the provisions of Fort Greely Alaska's (FGA) air quality permits and associated requirements. This procedure provides basic instruction only. Active air quality permits should be on hand, at all times, for reference and clarification purposes. FGA currently has a Title V Operating Permit (AQ0238TVP02; effective date 11/28/2008) and two Minor Permits (AQ1077MSS02; effective date 8/15/2008 and AQ0238MSS02; effective date 8/15/2008) issued by the Alaska Department of Environmental Conservation (ADEC). Periodically, the construction and subsequent operation of new stationary emission units (EU) or modification of existing stationary EUs and/or changes in the method of operation may require revisions to existing permits or application preparation for new permits.

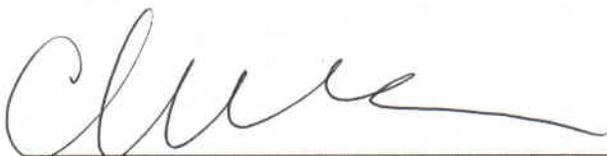
2. SCOPE

This procedure is applicable to all Garrison departments, tenants, or contractors that: (1) construct or operate stationary EUs of air pollution; (2) receive or distribute fuel for combustion in stationary EUs; (3) service or repair refrigeration or fire suppressant equipment containing ozone depleting substances; (4) undertake asbestos-related activities subject to 40 CFR Part 61, Subpart M (National Emission Standards for Hazardous Air Pollutants (NESHAPS)) for Asbestos; (5) undertake activities covered in the FGA's Fugitive Dust Control Plan; (6) undertake open burning; or (7) perform measurements or observations required under FGA's air quality permits.

Any permit condition references included in this procedure refer to conditions in Operating Permit No. AQ0238TVP02 unless an alternate reference is provided.

This procedure does not apply to activities that Doyon Utilities, LLC may undertake at facilities controlled by Doyon Utilities LLC (DU) (privatized EUs).

This procedure does not apply to existing or future EUs within the Missile Defense Complex (MDC).



3. RESPONSIBILITIES

a. FGA Garrison Commander

The Garrison Commander (Commander) is the responsible official for the environmental program at FGA and provides overall policy and guidance associated with environmental compliance. The Commander is the responsible official for the air quality permit for FGA and has ultimate responsibility to ensure permit compliance. The Commander will consult regularly with the Fort Greely Environmental Office (FGAENV) to insure that the installation's environmental policies and procedures are consistent with Federal, state and Army requirements and are properly implemented. The Commander will also consult regularly with all installation tenant organizations and departments and facilitate resolution of conflicts regarding environmental matters that cannot be resolved at lower levels.

b. FGA Directorate of Public Works (DPW) – FGAENV

FGAENV oversees the air quality compliance program and performs monitoring, recordkeeping, and reporting activities associated with air quality permits issued to the Garrison. FGAENV will submit all required reports and documents to appropriate regulatory agencies and serve as FGA's primary point of contact on environmental compliance matters. FGAENV will advise the DPW, tenants, contractors, and other activities of environmental requirements and provide assistance in achieving and maintaining compliance. In the event of non-compliance, FGAENV will seek resolution through the appropriate channels. As the Commander's environmental representative, the FGAENV will be the point of contact for liaison activities with Federal, State, and local regulatory agencies on all environmental compliance matters associated with Garrison and tenant activities.

c. Army Material Command

The Army Material Command manages the FGA Main Cantonment Area POL Facility (FGA POL Facility) and maintains all records of fuel deliveries and disbursements.

d. Installation Activities, Tenants, Contractor and Civilian Personnel at FGA

Except as noted in Section 2 above, all installation activities, tenants, contractors and civilian personnel at FGA will comply with this procedure. This procedure applies to all tenants, contractors and civilian personnel that: (1) maintain and operate EUs regulated under FGA's air quality permits; (2) receive fuel from other than the FGA POL Facility in the main cantonment area to be combusted in stationary EUs; (3) service or repair refrigeration or fire suppressant equipment containing ozone depleting substances; (4) undertake asbestos-related activities subject to 40 CFR Part 61, Subpart M (National Emission Standard for Asbestos); (5) undertake activities covered in FGA's Fugitive Dust Control Plan (Attachment 2); or (6) conduct open burning.

This procedure is not inclusive of all the EU specific air quality requirements specified in Operating Permit No. AQ0238TVP02. Refer to the Operating Permit for clarification and

additional information if any of the activities discussed in this procedure are undertaken by personnel in your section or if specific monitoring, recordkeeping, and reporting (MR&R) as defined in the permit is the responsibility of assigned personnel.

4. OPERATIONS

a. Covered EUs – Existing

The below table provides information on the EUs identified in the Operating Permit and have specific MR&R conditions in the operating permit. EU descriptions and ratings are provided for identification purposes only:

EU ID	SIC	Location	Description of EU	Rating/Size	Installation Date
MSW Combustors					
FGIN01 ¹	65	Mid-Post	MSW Incinerator, Ener Waste	4 tons/day 12/cal/ton	2006
FGOB01 ²	65	Mid-Post	Burn Pit	1 ton/day	Unknown
Insignificant EUs³					
FGBF04	65	Bldg 319	Furnace, Hastings	687,500 btu/hr	1985
FGBF05	65	Bldg 320	Furnace, Dornback	132,000 btu/hr	1992
FGBF06	65	Bldg 320	Furnace, Dornback	230,000 btu/hr	1995
FGBF10	65	Bldg 350	Furnace, Magic Chef	450,000 btu/hr	1995
FGBF25	65	HW Storage (ECC)	Furnace, Weil-McClain	290,000 btu/hr	2003

¹Note: FGIN01 has not been placed into operation or commissioned and there are no plans to do so.

²Note: FGOB01 (the burn pit) was built in the 1960's or 1970's (exact date unknown).

³Note: Insignificant EU are included in this table for informational purposes only. MR&R associated with insignificant EU are discussed in this procedure.

b. New EUs and Modifications to Existing EUs

(1) The Fort Greely Real Estate Source (AQ0238TVP02) – Garrison and Fort Greely Real Estate – DU (AQ1183TVP01) are considered one stationary source for purposes of determining applicability with the modification requirements under 18 AAC 50.302.

(2) No stationary EU may be constructed, installed, or modified prior to informing FGAENV and completion of any required permitting actions. Start of construction, installation, or modification of an EU prior to meeting applicable permitting requirements is a serious issue and could result in enforcement action by ADEC.

(3) Persons planning to construct any new stationary EU must notify FGAENV prior to the initiation of construction and provide the information listed below as soon as possible. Construction cannot be initiated until approved by FGAENV and all necessary ADEC pre-construction permitting actions are completed. Start of construction is specifically

defined in U.S. Environmental Protection Agency white paper guidance and could be something as basic as preparing a cement platform for a new EU.

- type and location of unit (e.g., furnace, genset)
- brand/manufacturer
- rating/size (e.g., hp, btu/hr) – preferably vendor specifications
- fuel consumption rate at full capacity (e.g., 100% load)
- vendor/manufacturer emissions data and certifications
- emission estimates for criteria pollutants and hazardous air pollutants (based on the EU's potential to emit), if available, and
- EU stack height and diameter

c. *Fuel Sulfur Limit*

Fuel Oil Sulfur Content: All fuel oil combusted in EUs at FGA must have a sulfur content not exceeding 0.12% by weight.

d. *Pre-Construction Permit Requirements*

- Monitoring PSD avoidance status (stationary source emissions <250 tons/year) requires consideration of emission changes associated with both Operating Permit Nos. AQ1183TVP01 Fort Greely Real Estate – DU and AQ0238TVP02 Fort Greely Real Estate – Garrison.
- Throughput of no more than 365 tons per rolling 12-month period, and no more than 30.4 tons per calendar month of solid waste may be combusted in EU FGOB01 (Burn Pit).
- Throughput of no greater than 1,400 tons per rolling 12-month period or four tons per day for EU FGIN01 (incinerator).
- Nitrogen oxide emissions are limited to 2.2 tons/year.
- Cease operation of EU ID FGOB01 prior to beginning operation of EU FGIN01.
- Limit solid waste combusted in EU FGIN01 to no more than 1,400 tons per twelve month rolling period and no more than 4 tons/day.
- Monitor and record the daily fuel consumption for EU FGIN01 when operated.
- Monitoring and recordkeeping
 - Monitor and record the amount of solid waste combusted in EU FGOB01 daily and maintain a cumulative twelve-month rolling amount of waste combusted in compliance with Condition 7.2b.
 - Monitor and record the daily and rolling twelve month amount of solid waste combusted in EU FGIN01 in compliance with Condition 7.2c.
- Calculate and maintain records of the monthly and cumulative twelve-month rolling NOx emissions from the EU listed in Table A using available vendor data (alternative methods listed in permit).
- Report in the Operating Report required by Condition 46 the following data:
 - Monthly and twelve-month rolling solid waste amounts combusted in EU FGOB01 in tons/year.

- Daily and twelve-month rolling solid waste amounts combusted in EU FGIN01.
- The EU total 12-month rolling NOx emissions calculated under Condition 7.3.

e. Fugitive Dust Control

FGA's Fugitive Dust Control Plan is provided as Attachment 1. All installation activities, tenants, contractors, or personnel undertaking activities such as: clearing and grubbing; material stockpiling; earthmoving; borrow pit operations; road construction; or maintenance that are potential sources of fugitive dust shall implement the dust suppression measures identified in the plan. Additionally, all construction contracts for projects involving significant clearing and grubbing, earthmoving, borrow pit operations, and/or material stockpiling shall have a requirement for the contractor to prepare and implement an emission control plan. At a minimum, the plans must incorporate the applicable control measures identified in the FGA Fugitive Dust Control Plan and comply with Condition 22 Reasonable Precautions to Prevent Fugitive Dust of AQ0238TVP02. Copies of the plans shall be provided to FGAENV.

f. Insignificant EUs

Insignificant EUs not listed in AQ0238TVP02 shall

- Submit the compliance certification identified in condition 47.
- Comply with the requirements of condition 24.
- Report in the operating report required by condition 46, if an EU is insignificant due to actual emissions less than the thresholds of 18 AAC 50.326(e) and actual emissions become greater than any of those thresholds.
- No MR&R is required for insignificant EU.

g. Asbestos

All installation activities, tenants, contractors, or personnel undertaking asbestos removal, abatement or repair activities shall comply with the requirements outlined in Chapter 7 (Asbestos Removal, Transportation, and Disposal) of the FGA Environmental Procedures Manual.

h. Ozone Depleting Substances

All installation activities, tenants, contractors, or personnel servicing, maintaining, or repairing appliances or equipment containing Class I or II Ozone Depleting Substances shall comply with the applicable provisions of 40 CFR Part 82, Subpart F.

i. Open Burning

Open burning is prohibited at FGA unless specifically authorized by FGAENV, the Fire Department, and the Director of Public Works. Any installation activity, tenant, contractor, or person seeking to perform open burning must submit a written request for authorization to FGAENV.

j. General Operations

All installation activities, tenants, contractors, or personnel operating EUs at FGA shall perform regular maintenance and operate the units in accordance with the manufacturer's recommended practices. Any malfunction or operating situation that may increase emissions shall be reported to FGAENV and, if possible, corrected in a timely manner.

5. SURVEILLANCE

a. Fuel Deliveries

(1) FGA POL Facility: For each delivery of fuel oil to the facility, the operator shall obtain a signed fuel analysis from the supplier. At a minimum, the analysis must include the percent sulfur by weight, density, and heat content (e.g., Btu/lb) of the fuel delivered. The operator shall also record the amount of fuel delivered.

(2) Independent Fuel Deliveries: For each delivery of fuel oil for combustion in stationary EUs that does not originate from or through the FGA POL Facility, the entity receiving the fuel shall obtain a fuel analysis for each fuel delivery. At a minimum, the analysis must include the percent sulfur by weight, density, and heat content of the fuel delivered.

b. Visual Emission Observations – Routine

No incinerators, industrial processes, and fuel burning equipment shall cause or allow visible emissions to reduce visibility through the exhaust effluent by more than 20 percent averaged over any six consecutive minutes.

If the operating hours for EU FGIC01 exceed 420 hours per twelve-month rolling period, visual emission (VE) observations will be performed by FGAENV as follows:

- VE observations will be performed using the method in 40 CFR Part 60, Appendix A-4 (Method 9).
- The initial observation shall be made within 90 days of exceeding 420 operating hours per twelve-month rolling period.
- After the first observation, perform 18-minute observations at least once in each calendar month that the EU operates.
- If after three monthly observations no six-minute average is greater than 15% opacity and no single observation is greater than 20% opacity, the observation frequency may be reduced to semi-annual. Semi-annual observations must be taken between four and seven months after the previous observation.
- If after two semi-annual 18-minute observations no six-minute average is greater than 15% opacity and no single observation is greater than 20% opacity, the observation frequency may be reduced to annual. Annual observations must be taken between 10 and 13 months after the previous observations and consist of at least three 18-minute sets of

observations.

- If during any observation a six-minute average is greater than 15% opacity or a single observation is greater than 20% opacity, the observation frequency shall be increased to monthly in accordance with paragraph 5.b(1) above.

FGA currently conducts annual VE observations on applicable units using Method 9 versus a Smoke/No Smoke Plan.

c. *Operational Monitoring*

FGOB01 (Burn Pit): the operator shall record the daily amounts of solid waste combusted in the burn pit.

d. *Source Testing*

(1) Particulate Matter (EU FGIC01) - If an 18-minute Method 9 VE observation results in an 18-minute average opacity in excess of 15%, FGAENV will within 6 months either:

(i) Direct repairs to the unit and retest the unit to insure that the 18-minute average opacity does not exceed the applicable limit stated above, or

(ii) Conduct a particulate matter source test in accordance with Permit No. AQ1077MSS02.

e. *PM₁₀ Monitoring Station*

FGAENV will operate and maintain the PM₁₀ monitoring station located at FGA in accordance with Permit Nos. AQ0238TVP02 and AQ0238MSS02. Please refer to the applicable permits for specifics regarding the PM₁₀ monitoring.

f. *Fugitive Dust Controls*

FGAENV will conduct periodic inspections to ensure fugitive dust suppression measures are implemented. Surveillance will include monitoring compliance with the FGA Fugitive Dust Control Plan and specific contractor prepared emission control plans.

6. RECORD -KEEPING AND REPORTING

FGAENV will maintain all official records required by FGA's air quality permits. All installation activities, tenants, contractors, or personnel operating permitted EUs at FGA or responsible for surveillance activities described in Paragraph 5 above, shall maintain records and report as follows:

a. Fuel Deliveries

(1) FGA POL Facility

The operator shall maintain fuel delivery records consisting of: dates of delivery, fuel analyses for each delivery, and amounts of fuel delivered. Additionally, the operator shall maintain records of any operator-arranged deliveries made directly (i.e., not through disbursements from POL bulk storage) by the fuel supplier to MDC EUs. The records shall include the dates of delivery, fuel analyses for each delivery and the amount of fuel delivered. The operator shall provide FGAENV with the records and fuel analyses described above by the 10th of each month for the previous month. The operator shall immediately notify FGAENV if any fuel delivery exceeds 0.12% sulfur by weight.

(2) Independent fuel deliveries (Not from FGA POL Facility)

The operator shall maintain fuel delivery records consisting of: dates of delivery, fuel analyses for each delivery and amounts of fuel delivered. The operator shall provide FGAENV with the records and fuel analyses described above by the 10th of each month for the previous month. The operator shall immediately notify FGAENV if any fuel delivery exceeds 0.12% sulfur by weight.

b. Visual Emission Observations

All visual emission observations made under Paragraphs 5.b shall be recorded on the form provided in Permit No. AQ1077MSS02 and retained by FGAENV.

c. Operating Hours (FGIC01)

The operator shall report the monthly operating hours to FGAENV by the 10th of each month for the previous month.

d. Solid Waste (FGOB01)

The operator shall report the daily amounts of solid waste combusted in the burn pit (FGOB01) to FGAENV by the 10th of each month for the previous month.

e. Future EUs

FGAENV will report the planned construction of new EUs to ADEC and provide ADEC with the information described in Paragraph 4(b). Through consultation with ADEC FGAENV will determine what, if any, permit actions are required.

f. Reporting Under Permit Nos. AQ238TVP02, AQ0238MSS02, and AQ1077MSS02

FGAENV will maintain all official records, respond to information requests from ADEC, respond to air quality related complaints, and make, either directly or via the Director of Public Works, all required notifications and reports to ADEC. These reports may include, but are not limited to:

- (1) Semi-annual Facility Operating Reports (August 1 [covers period January 1 – June 20] and February 1 [covers period July 1 – December 31])
- (2) Annual Compliance Certification Reports (March 31 [covers January 1 – December 31 of the previous year])
- (3) Assessable emissions estimates (March 31 each year)
- (4) Administration fees (as required)
- (5) Source test plans and reports (as required)
- (6) Excess emissions and permit deviation reports (as required)
- (7) NESHAPS (asbestos) reports (annually and/or as required)
- (8) Renewal permit application (between April 28, 2012 – April 28, 2013)

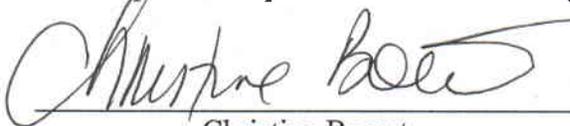
All reports, compliance certifications, or other documents submitted to the department and required under the permit will be signed by the Responsible Official and include the required statement, “Based on information and belief formed after reasonable inquiry, I certify that the statements and information in and attached to this document are true, accurate, and complete.”

7. REFERENCES

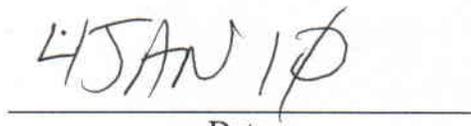
- a. ADEC Air Quality Operating Permit No. AQ0238TVP02
- b. ADEC Air Quality Minor Permit Nos. AQ0238MSS02, AQ1077MSS02

8. APPROVAL

This procedure (Chapter 6 - Air Quality Procedure) is hereby approved. All previous versions of this chapter are superseded and are no longer in effect.



Christine Boerst
Director
Directorate of Public Works



Date

9. ATTACHMENT

Attachment 1 - FGA Fugitive Dust Control Plan