



POWER GENERATION

ENVIRONMENTAL GUIDELINES



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ACTIVITY DESCRIPTION

The Department of Aviation operates a number of emergency power generators and auxiliary fire pump power units at the airport. These generators can be either fixed (i.e., bolted to the ground) or portable (i.e., on wheels or a trailer). The generators are tested on a regular basis by DEN Life Safety, DEN Electrical, and DEN Fleet staff in order to ensure their proper operation in the event of a power failure. The Department of Aviation owns and operates fixed generators at the following locations:

- West Airfield Electrical Vault (8529 Irvington Way);
- East Airfield Electrical Vault (8732 Allium Street);
- Taxiway WC Electrical Vault (9775 Kewaunee Street);
- Maintenance Support Center, Building A (27500 E. 80th Avenue, Building A);
- Vehicle Maintenance Building;
- A Concourse North and West External;
- All ARFF Stations – One diesel and two natural gas (NG);
- Paint Vehicle Storage Building (NG);
- Lift Station #1;
- Airport Office Building (AOB) (8500 Peña Boulevard), outside the loading dock on the west side;
- Antenna Farm, Tower No. 1 (8713 Quincy Street);
- Antenna Farm, Tower No. 2 (8877 Shawnee Street);
- Pikes Peak Parking Lot (3 units); and
- Fire pump auxiliary power units in AOB, Terminal, and at each Concourse

In addition, portable generators are present throughout DEN but are not assigned an address, because they can be relocated at any time.

Each of the diesel-powered fixed and portable generators has a fuel storage container associated with the generator.

Airport operators, tenants, and contractors may also operate generators such as emergency power generators or auxiliary power units (APUs).

POTENTIAL ENVIRONMENTAL RISKS

The following environmental concerns are associated with these activities:

- Air pollution
- Fuel spills
- Contamination of soils
- Contamination of surface water
- Contamination of groundwater
- Contamination of sanitary sewer system



Potential consequences from performing the activity incorrectly:

- Property damage, personal injury, or damage to the environment
- Regulatory and judicial enforcement actions and related [financial & non-financial] penalties

RECOMMENDED OPERATING CONTROLS

Prohibited Activities

- Spills of any kind shall not be washed into any sewer system or waterway, or onto any soils.

General Considerations

Each airport tenant, contractor, and operator conducting power generation operations is responsible for understanding the applicable regulations and managing their activities accordingly; this Environmental Guideline is meant as guidance and does not supersede any regulations.

Under State of Colorado air quality regulations, the following types of generators are exempt from reporting and permitting requirements:

- Emergency power generators that operates no more than 250 hours/year,
- An engine with manufacturer's site-rated horsepower of less than 50, or
- Engines powering portable drilling rigs

For any generator that does not meet the criteria above, the generator's operator should contact DEN Environmental Services and may be required to prepare and submit an Air Pollutant Emissions Notice (APEN) to the state Air Pollution Control Division.

Each generator operator must submit a tank registration to the State Division of Oil and Public Safety for each generator fuel tank that has a capacity between 660 gallons and 39,999 gallons (see Management of Petroleum Storage Tanks & Containers).

Each generator operator must prepare a Spill Prevention, Control, and Countermeasure (SPCC) Plan if total petroleum aboveground storage capacity (including generator fuel tanks) exceeds 1,320 gallons. A copy of any such SPCC Plan must be submitted to DEN Environmental Services for review (Management of Petroleum Storage Tanks & Containers).

Training Requirements

Employee training programs shall inform personnel at all levels of responsibility who are involved in industrial activities that may impact stormwater runoff. Training shall address topics such as spill response, good housekeeping, and material management practices. Contractor or temporary personnel



shall be informed of plant operation and design features in order to prevent discharges or spills from occurring.

Storage and Materials Management

For City-operated generators, the Department of Aviation stores generator fuel according to its SPCC Plan (see Management of Petroleum Storage Tanks & Containers).

PLANNING REQUIREMENTS

None.

CRITICAL TASKS

For City-operated generators, the Department of Aviation will conduct generator monitoring and recordkeeping according to Section 4 of the state air quality Operating and Maintenance (O&M) Plan.

For City-operated generator tanks, the Department of Aviation will conduct generator monitoring, inspections, and recordkeeping according to the SPCC Plan.

EMERGENCY RESPONSE

If a spill occurs, refer to Environmental Guideline Spill Response.

- Call DEN Communications Center immediately at 303-342-4200 for all spills.

INSPECTION AND MAINTENANCE REQUIREMENTS

For City-operated generators, the Department of Aviation will conduct generator inspection and maintenance according to Section 4 (Maintenance and Operational Testing) of the state air quality O&M Plan.

EXPECTED RECORDS AND OUTPUTS

APEN

- The form covers City-operated generators that are regulated under the City's air quality emissions permit. Each airport operator, tenant, and contractor with a regulated generator should develop its own APEN.

Monthly Rolling Annual Emissions for (current month)

- DEN generator operations (duration of operation and quantity of fuel used) are tracked using this spreadsheet to ensure compliance with state air permit. The spreadsheet is located in the Microsoft Teams Air Permit File Folder.

Spill and release records for any spills



- Responsible party (for the spill) notifies DEN Communications Center at 303-342-4200 and completes spill report.
- Spill reporting forms are available through the DEN Communications Center.

REFERENCES

Contacts

- DEN Communications Center (for spill reporting): 303-342-4200
- DEN Environmental Services (Main Line): 303-342-2730; DIA.Environmental@flydenver.com
- Kim Ohlson, DEN Environmental Services: 303-342-2637; Kim.Ohlson@flydenver.com

Guidance Materials

- Manufacturer's operating and maintenance (O&M) manuals
- DEN Air Permit Operating and Maintenance Plan

Related Environmental Documents

- Management of Petroleum Storage Tanks & Containers
- Spill Response

Applicable Regulations

- State air quality permit (Permit No. 99DE0142)
- State air quality regulations (5 CCR 1001-2, -3, and -5)
- State air quality Operating and Maintenance (O&M) Plan, Section 4 (Emergency Generators)
- Local air quality regulations (D.R.M.C. Title II, Chapter 4 (Air Pollution Control), Article III)
- DEN rules and regulations

Other Documents

- DEN Electrical Vault Fuel Calculator and AOB Emergency Generator Worksheets (contained within the workbook titled "Monthly Rolling Annual Emissions for (current year)" located in the Microsoft Teams Air Permit File Folder.