Cornell University Environmental Health and Safety	**Fast Facts: Emergency Generator and Fire Pump Projects** *Clean Air Act/Petroleum Bulk Storage*	Guidance

1. Who Is This Guidance For?

This guidance is for personnel responsible for projects involving acquisition and installation of emergency generators and fire pumps.

2. Why Should You Care?

There are numerous regulations governing emissions from stationary combustion engines and storage of petroleum products that impact emergency generators and fire pumps. This includes engines used at both large and small facilities.

3. What Do You Need to Know and Do?

1. In general, **only new** emergency generators and fire pumps shall be supplied. If a used engine is proposed for a project, an environmental regulatory compliance review should be conducted prior to committing to the used engine to ensure compliance with regulatory requirements.
2. EHS needs to be notified of the generator/fire pump project during the planning stages to ensure
    a. NYSDEC petroleum bulk storage registration requirements and NFPA requirements are satisfied
        - NYSDEC requires a minimum **30-DAY NOTIFICATION PRIOR TO INSTALLATION OR REMOVAL** of petroleum tanks. Coordinate notice through EHS
        - Cornell standards require petroleum tank **LEAK TEST AFTER INSTALLATION and PRIOR TO FILLING**. Ensure this is included in the project scope.
    b. All tanks and associated piping shall be **INSTALLED ABOVE-GROUND** unless otherwise approved by EHS and Facilities Engineering
    c. EPA Spill Prevention Control and Countermeasure (SPCC) plans are created or updated if required
    d. Environmental notifications and permits are submitted if necessary
3. All generators/fire pumps shall be supplied with a **non-resettable hour meter**.
4. Fuel tanks for permanent petroleum fuel fired emergency generators and fire pumps shall be double-walled, alarmed and properly marked. Remote fill ports must be equipped with visual and audible alarms and respective identifying signage.
5. All **diesel supplied** to test and operate diesel-fired engines **must meet the following specification (40CFR Part 60 Subpart IIII)** and contractor shall provide EHS certification that fuel meets specification.
    a. Ultra-low Sulfur Diesel (ULSD) only. Sulfur content must not exceed 15 ppm.
    b. Cetane index or aromatic content as follows:
        - Minimum cetane index of 40; or
        - Maximum aromatic content of 35 volume percent.

6. **Submit to project, EHS, and Facilities Management (Maintenance Management) equipment information** listed below. This information must be submitted as soon as the specific equipment being delivered to Cornell is identified.

   (Where product cut sheets are used for the information, the information for the particular engine being supplied shall be clearly indicated when cut sheets present data for multiple models)

   a. Engine make/model
   b. Engine model year
   c. Engine year manufactured
   d. Engine Horse-Power
   e. Cylinder displacement (per cylinder and total displacement)
   f. Engine Serial Number
   g. Generator make/model
   h. Generator Serial Number
   i. Engine certification of compliance with New Source Performance Standards, 40CFR Part 60 Subpart IIII (for compression ignition engines) or Subpart JJJJ (for spark ignition engines). This may be referred to as the "certificate of conformity".
   j. Fuel type
   k. Fuel tank capacity
   l. Battery type, make, model, number of batteries with data sheets showing
      - Individual battery total weight
      - Electrolyte content per battery (either wt% of total battery, mass per battery, or volume per battery)
      - Safety Data Sheet (SDS) for electrolyte
      - SDS sheet for battery

7. **Submit to project and Facilities Management (Maintenance Management)**
   a. Manufacturer's Operation and Maintenance manual
      - One copy (electronic or hard copy) to be delivered to Maintenance Management.
      - One copy (hard copy) to be provided at the emergency generator/fire pump in a location where it won't be impacted by the elements (rain, snow, sun, heat, cold). The location of this copy shall be provided to Maintenance Management and the Facilities Management Central Zone.
   b. Manufacturer's Warrantee

8. **Requirements for operating new system prior to turning over to Cornell**
   a. **Tank integrity test must be performed per Cornell standards after tank delivery and installation and prior to putting liquid product in tank.**
   b. Liquid fuel (such as diesel) fired engines **must have a spill kit available** in the immediate area prior to putting product in the fuel tank.
   c. Generator/engine may only be run for testing/maintenance and emergencies (only power supply interruptions or in response to fire (fire pumps)).
   d. Record hour meter readings (date, start reading, stop reading) each time engine is run. Note whether engine is run for testing, maintenance, or for emergency.
   e. Engine may not be run for more than 100 hours per year for testing/maintenance.
   f. Engine may not be run for more than 500 hours per year total, including testing/maintenance and emergencies.
   g. Submit log of hour meter readings to EHS and Facilities Management (Maintenance Management) for the prior calendar month within 10 days of the

start of the new month. If the engine is not run during a calendar month following initial start-up, submit a 'report' stating so.

9. Additional Resources

a. Cornell University Facilities Engineering Design and Construction Standards: 263213 Emergency Power Systems
b. Cornell University Facilities Engineering Design and Construction Standards: 231300 Petroleum Tanks