

# Airport Fuel Sampling

## CRC Task Force on Engine Deposits

### General Information

Cleanliness for chemical samples is the key to ensuring accurate analysis.

- Wear new gloves (powder free, nitrile) before touching sampling tools/containers or samples
- Use clean tools and containers for sample collection and storage
- Always follow your company guidelines on Personal Protective Equipment (PPE) usage
- Before use, all bottles and epoxy lined containers require preparation. All containers should be visually inspected to confirm their suitability and serviceability. Epoxy-lined containers should be carefully rinsed at least three (3) times with Clear and Bright jet fuel prior to use.
- All samples should be clearly labeled with the sample location and source, the date and time of sampling, the sample type, the grade of fuel, and a means of identifying who drew the sample (add a short descriptive note if something abnormal is observed)
- Sufficient air space shall be left in each container to allow for thermal expansion of the sample
- Equipment used to draw samples shall be dedicated to aviation fuel. Sampling equipment fabricated from copper or its alloys, galvanized, or zinc-coated equipment shall not be used for sampling jet fuel.
- Determine and dedicate two (2) people to any sampling effort – one person to sample and one person to assist with labeling, notes, and providing containers and supplies as needed.

*Note: This practice helps ensure that clean, good quality samples are collected and that documentation (labels, etc.) is correct*

### Airport Storage Tank Samples

Each airport should determine a designated sample point from which the monthly sample will be taken. The sample should be taken from the same location each month. Preferably, this will be a line sample from a storage receiving tank. A line sample is obtained from the water draw-off valve on a storage tank.

If a sample cannot be collected from the designated sampling location, a sample may be taken within one week from the designated sampling location. If a location is not available (due to maintenance), an alternate similar location may be sampled.

After fuel receipt into storage, operators should observe applicable storage tank settling times. To obtain the line sample, drain fuel at a maximum practical flow rate into a container (bucket, ...) of suitable size to capture the sampling line volume. Again, sample quantity shall be of sufficient size to ensure displacement of sampling line volume. After line displacement, immediately collect the five (5) gallon sample in the epoxy-lined container. Line samples with both water and fuel phases are preferable.

**Packaging for Transport:**

Any samples containing fuel must be properly packaged to meet hazardous material shipping requirements. If there are any questions on shipping, please feel free to contact a member of the sampling support team. Ship to the address provided in the sampling kit.

Lab Contact/Shipping Address:

Field Support Contact:

**Airport Storage Tank Sample Task Card**

Task	Description	Accomplished By
1	Obtain sample kit with epoxy-lined sample container	
2	Visually inspect containers to confirm their suitability and serviceability. Epoxy-lined containers should be carefully rinsed at least three (3) times with Clear and Bright jet fuel prior to use	
3	Ensure storage tank has observed applicable setting time after receipt	
4	Collect storage tank line samples <ul style="list-style-type: none"><li>a) Drain the fuel at the maximum practical flow rate into a suitable container. Sample quantity shall be of sufficient size to ensure displacement of sampling line volume.</li><li>b) After line displacement, immediately collect the five (5) gallon sample in the epoxy-lined container. Line samples with both water and fuel phases are preferable.</li><li>c) Allow for sufficient air space in each container to allow for thermal expansion of the sample</li></ul>	
5	Ensure sampling container cap/lip is properly affixed and sealed, if applicable	
6	Label container: <ul style="list-style-type: none"><li>a) Date and time:</li><li>b) Taken by:</li><li>c) Tank number:</li><li>d) Location:</li><li>e) Type of sample:</li><li>f) Fuel grade:</li></ul>	
7	Send sample to the lab address: <b>XXXXX</b> <b>XXXXX</b> <b>XXXXX</b>  <b>Note:</b> If for any reason the sample(s) cannot be shipped to the lab right away, store the sample(s) in a cool dark place, away from direct sunlight. Please note all the shipping exceptions.	