LOT ACCEPTANCE AND QUALITY ASSURANCE PROCEDURES

When To Test - General

Lot Acceptance - Visual Inspection

Product in bulk tankers**.** Check for proper labeling on the truck and that the paperwork to identify the product matches the order. Verify that delivery is from an appropriate location, i.e., HV-R should come from Moreland, LCG-R should come from Pasco. If all paperwork is not in order, confirm, verify, or correct before off-loading.

Dry concentrates in semi-bulk containers, Phos-Bins, bags, etc., and buckets. Make certain that each container is properly labeled with the name and the lot number of the ordered product. Check the paperwork to be sure that it matches the delivery. Verify that delivery is from an appropriate location. If all paperwork is not in order, confirm, verify, or correct before off-loading.

Lot Acceptance - Quality Assurance Testing

Circulate the contents of the tanks thoroughly. Take a one-quart sample from each storage tank when the base is opened in the spring. If plumbing is set up so that all tanks circulate together, then only one sample is needed. Send the samples with the Lot Acceptance form to Wildland Fire Chemical Systems (WFCS) project. For each sample, include the name or number of the tank that it was taken from. Each label should bear the statement “from base storage at opening after recirculation" to aid in identifying the sample.

Take a one-quart sample from each truck/trailer load delivered to the base during the fire season. It is best that the sample be taken via a sampling port, when about half of the concentrate has been transferred to the base tanks from the truck. Send the samples with the Lot Acceptance form to WFCS. Label should include the identification of the tank that the material was pumped into, the shipper number for the delivery, the time and date of the transfer, and the statement “truck delivery sample.”

After final recirculation at base closing, take a one-quart sample from each storage tank. If plumbing is set up so that all tanks circulate together, only one sample is needed. Label with the proper tank designation and “base closing.” Send the samples with the Lot Acceptance form to WFCS.

Quality Control Testing

Sample and test at the base to ensure proper water level adjustment and valve placement during spring setup and installation and when training new employees.

Perform throughout the season to ensure uniform product.

SAMPLE ON RECEIPT

Sampling a Dry Concentrate

Since it is difficult at best to obtain a representative sample from a dry product, an alternate method is used. When a new shipment of bins or bags is received, mark one of the containers with the shipper number, time, and date of receipt. When practical, place the marked container near the mixing operation, so that it can be mixed next. During routine mixing, when the marked container is used, take a sample of the mixed retardant prepared from the powder in that container. Mark the sample with the shipper number, time and date of receipt, and the time and date of mixing. Test and report as described below.

Sampling Wet Concentrate From A Tanker Truck

If transport time is long, (48 hours or more from load to unload), recirculate prior to sampling.

Connect an off-load hose from the valve on the tanker truck to the storage tank. Unless the tanker truck is equipped with an off-load pump, a base pump must be hooked to the truck for efficient transfer. A sample valve installed in the off-load hose will facilitate sampling.

Allow sufficient sample to run through the valve prior to taking a test sample to ensure obtaining the intended sample. The amount of retardant that must flow through the valve will depend on the size of the valve and hose that must be cleared to get fresh material.

The valves on tanker trucks often contain some water from wash down. The first retardant through the valve will already be partially diluted, and if sampled, it will provide incorrectly low values.

If a sample valve has not been installed, the sample must be taken from the end of the transfer hose. This should be done at the end of the transfer rather that at the beginning.

When a tanker arrives with a new shipment of concentrate, two samples should be taken: one for base testing and one to be sent to the WFCS for the Lot Acceptance/Quality Assurance Program.

If any problems are noted with the sample:

Take additional samples of the material, they may be needed by agency and/or suppliers for further testing, and hold for instructions and/or additional testing

Notify appropriate agency personnel of the problem

Notify the supplier of the material.

Sampling Fluid Concentrate from a Tanker Truck

Recirculate the concentrate immediately before sampling.

If the tanker truck has recirculation capability, be sure that the concentrate is recirculated before off-loading.

If the tanker truck does not have recirculation capability, pump the entire load of concentrate into an empty storage tank and recirculate before sampling.

Connect an off-load hose from the tanker truck valve to the storage tank. Unless the truck has an on board off-load pump, a base pump must be hooked into the system for transfer. A sample valve installed in the off-load hose will facilitate sampling.

Allow sufficient sample to run through the valve prior to taking a test sample to ensure a proper sample. The proper amount will depend on the size of the valve and hose that must be cleared to obtain fresh retardant.

The valves on tanker trucks often contain some water from wash down. The first retardant will already be partially diluted and if sampled, will give erroneous values.

During recirculation and subsequent sampling from base storage, the valve will contain residue of the last material which must be removed prior to sampling.

If a sample is taken during recirculation, be sure that sufficient retardant has been pumped through the system to ensure obtaining a sample of the fresh retardant.

When a tanker arrives with a new shipment of concentrate, two samples should be taken: one for base testing and one to be sent to WFCS for the Lot Acceptance/Quality Assurance Program.

If any problems are noted with the sample:

Take additional samples of the material, they may be needed by agency and/or suppliers for further testing, and hold for instructions and/or additional testing

Notify appropriate agency personnel of the problem.

Notify the supplier of the material.

SAMPLE DURING MIXING

Sampling Not-Storable and Immediate-Use Retardant - In-line Blending

Take samples from a small valve installed on the discharge side of the loading pump or just behind the loading valve.

If you must sample from the end of the hose, collect samples immediately after loading an airtanker to ensure complete removal of old slurry from hose.

Collect samples often enough during mixing operations to make sure that the mixed product meets the requirements for the specific retardant, at least one sample from each airtanker load (base quality control).

If significant deterioration is discovered in stored concentrate or in mixed retardant stored in aircraft for long periods of time:

- Collect a sample of bad material and hold for instructions and/or additional testing
- Notify SDTDC or WFCS.

Sampling Storable Retardant - Eductor Mixing

Recirculate the retardant in the tank after a major mixing operation. Then, collect a sample from a recirculation line or pump.

During mixing operations, collect samples often enough to ensure that the mixed product meets the requirements for the specific retardant.

Use fresh samples taken from the valve or line after the product has been pumped or circulated. Do not use mixed retardant that has been sitting in hoses, pumps, or valves.

If a sample is collected from the end of the hose, be sure that sufficient retardant has been pumped through the hose to ensure a fresh sample, i.e., immediately after filling an airtanker).

If significant deterioration of stored material is discovered:

- Collect a sample of the unsatisfactory material and hold for instructions and/or additional testing
- Notify SDTDC or WFCS.

Sampling Storable Retardant - Batch Mixing

When the dry powder contained in a marked bin or bag is used to make a batch of retardant, take a sample from the sampling port on the batch mixer as the retardant is being transferred to a storage tank.

Allow sufficient retardant to flow through the hose to ensure a fresh sample.

If significant deterioration of mixed material is discovered:

Collect a sample of the unsatisfactory material and hold for instructions and/or additional testing

Notify SDTDC or WFCS.

SAMPLING RETARDANT IN STORAGE

Concentrate or Mixed Retardant

Recirculate tanks every three days and take a sample at least every seven days.

Recirculate the concentrate in the storage tanks prior to sampling.

The valve on a storage tank will contain residue of the last material through it, which may differ from the material currently in the tank. Allow sufficient sample to run through the valve prior to taking a test sample to ensure a proper sample. The proper amount will depend on the size of the valve and hose that must be cleared to get fresh material.

If a sample is collected during recirculation, be certain that sufficient retardant has been pumped through the system to provide a fresh sample.

If any problems are noted with the sample:

Collect additional samples of the material (they may be needed by the agency and/or suppliers for further testing) and hold for instructions and/or additional testing

Notify appropriate agency personnel of the problem.

Notify the supplier of the material.