

**California Environmental Protection Agency
Department of Pesticide Regulation
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**PROTOCOL FOR MONITORING SPINOSAD (GF-120 Fruit Fly Bait) IN
FRUIT FLY AERIAL TREATMENT PROGRAMS
STUDY 216**

AMENDMENT 1

March 2003

The California Department of Food and Agriculture (CDFA) is using a series of aerial applications of spinosad to eradicate a Mexican fruit fly infestation in the Valley Center area of San Diego County. The pesticide product used for these applications is GF-120 NF Naturalyte Fruit Fly Bait (U.S. Environmental Protection Agency Registration Number 62719-498), containing 0.020% spinosad by weight (mixture of spinosyn A and spinosyn D) as the active ingredient. For application, the GF-120 is diluted with water to a tank mix target concentration of 0.0080% by weight of spinosad or 0.363 grams per gallon (g/gal). The spinosad (active ingredient) target application rate was 3.26 $\mu\text{g}/\text{ft}^2$ (0.142 g/acre, or 35.1 $\mu\text{g}/\text{m}^2$)

The Department of Pesticide Regulation (DPR) has completed monitoring of the first four applications. Preliminary results of the monitoring have shown some unusual findings, particularly the detection of malathion in samples collected from the mix/load system during the third and fourth applications.

As a result of the preliminary findings, DPR will implement the following changes to the monitoring protocol, effective with the sixth application.

Mix/Load System – Prior to the fifth application, a single GF-120/water mixture sample was collected for each application. Additional samples will be collected at various points in the mix/load system. Figure 1 shows the current mix/load system. For each application, DPR will collect the following samples:

one composite sample of GF-120 from the 55-gallon drums of each GF-120 lot prior to application (Figure 1, sampling point #1),

one sample of rinsate that flows through the system between Tank 1 and the Loading Manifold (Figure 1, sampling point #2),

one sample of rinsate that flows through the system between Tank 2 and the Loading Manifold (Figure 1, sampling point #2), and

one sample of the rinsate from each aircraft (Figure 1, sampling point #3), and

one sample of the GF-120/water mixture from the nozzles of each aircraft (Figure 1, sampling point #3).

DPR will collect 9 to 11 samples of the mix/load system for each application monitored, depending on the number of lots.

All samples of the mix/load system will be analyzed for spinosad (spinosyns A, D, and breakdown product B), organophosphates, carbamates, and chlorinated hydrocarbons. For the samples from the 55-gallon drums, the system rinsate, and the aircraft rinsate, DPR will collect samples and report preliminary results prior to each application.

Preliminary results show low or no detectable concentrations in all environmental media. Intensive monitoring is no longer necessary. DPR will make the following changes to the monitoring.

Mass Deposition – For each of the first five applications, DPR collected mass deposition samples from 23 sites. Beginning with the sixth application, DPR will collect samples from 10 – 15 sites for each application monitored.

Air – For the second through fifth applications, DPR collected air samples from four sites. This sampling will be discontinued.

Fruit – For the second through fifth applications, DPR collected fruit samples from two sites. This sampling will be discontinued.

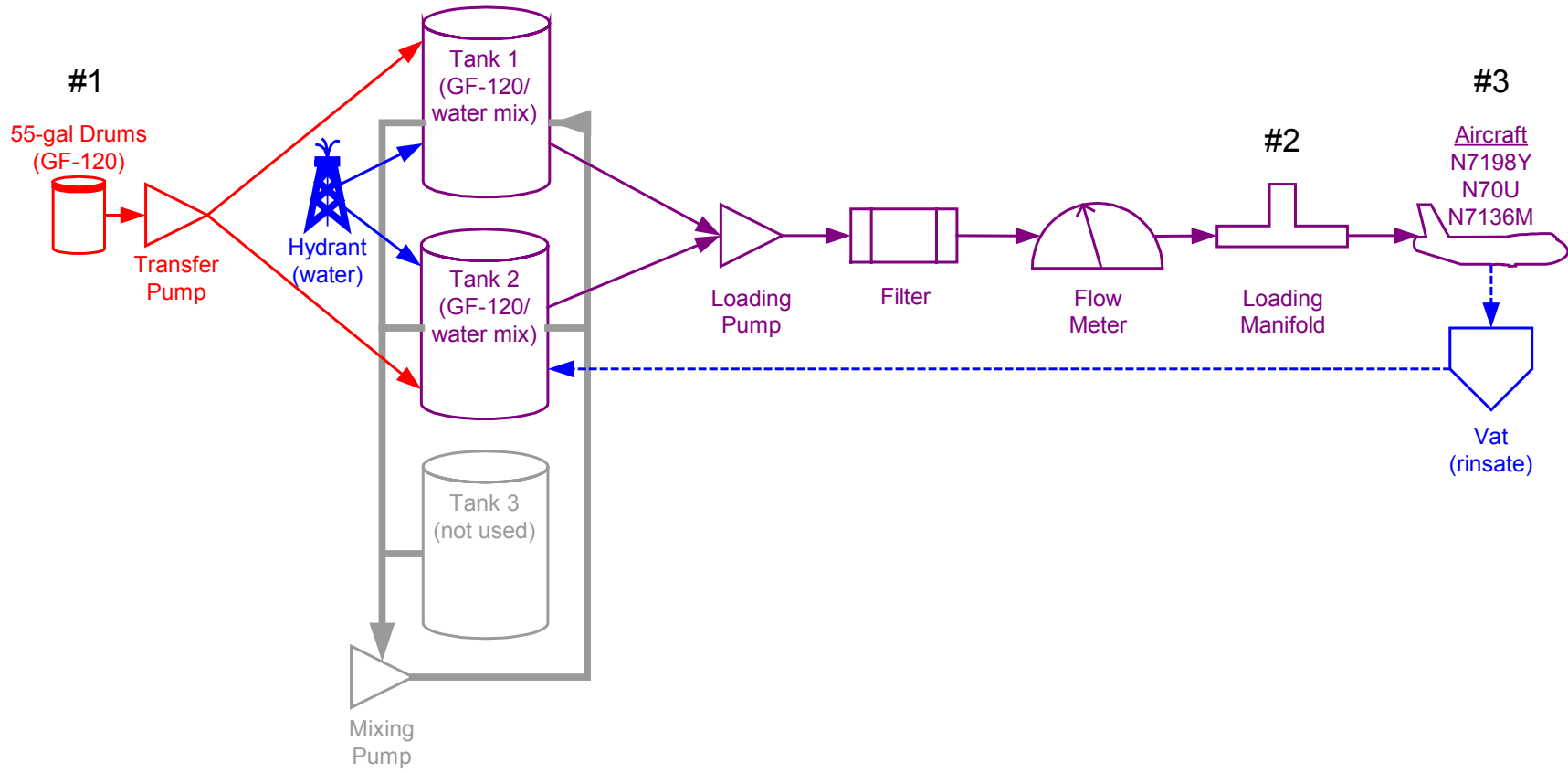
Water – For the first five applications, DPR collected water samples from one surface water site (Keys Creek). This sampling will not change. DPR will collect two water samples for each application monitored.

In addition, DPR will skip all monitoring except the mix/load system for Applications 7, 9, 11, 13, and 15.

All samples will be analyzed for spinosad (spinosyns A, D, and breakdown product B).

All other protocol elements will remain the same.

Figure 1. Mix/load system for the fifth application and later. Sampling points are labeled #1, #2, and #3.



Red shows GF-120
Blue shows water and rinsate
Purple shows GF-120/water mixture