WRK OF ARKANSAS

S.A.F.E. ANALYST TRAINING 2023

S.A.F.E. Analyst Certification Training

SELF-REGULATING APPLICATION & FLIGHT EFFICIENCY

OPERATION S.A.F.E.®

Training 2023 Includes:

• S.A.F.E. Fly-In Reference Manual-2023 - USB Edition

• Information-Packed digital storage device

• Hands-On practice and Classroom Instruction

• Actual fly-in, "real world" situations to practice skills

International students encouraged to participate!

**Septemper 4-8, 2023
WRK of Arkansas LLC, 153
92nd W, Lonoke AR 72086
Lonoke, Arkansas USA**

OPERATION SAFE ANALYST CERTIFICATION TRAINING

ARRIVAL & REGISTRATION

MONDAY, SEP 4 2023

4:00-6:00pm   Pre-registration—come by WRK to pick up packet and preliminary exam materials. *WRK Conference center 153 92nd W, Lonoke, AR 72086* Call Dennis if arriving after 6pm. +1 (501) 676-1762
All times/schedule may be adjusted as deemed necessary by class.

DAY 1, TUESDAY, SEP 5, 2023

7:30 am   Registration   Training Office—WRK - Conference center

Coffee and Breakfast sandwiches each day

8:00 am   Introductions
- Staff, guests, hosts, and attendees
- Agenda review

- Preparations for a calibration workshop
- Safety
- Etiquette
- Analyst liabilities

- Protocol
- String system components
- Setups PA, Drift, Swath displacement cards

- Notebook and Flash Drive content

8:30am   Fly-In Preparation   WRK Conference center

9:30 am   Break   (Coffee, Sodas, Water provided)

10:00 am   Field Equipment Layouts   Airport grounds
- Field equipment setup review and layout
- Drift setups
- Pattern setups

- Witness Cards, Novartis, Oil, Kromecote Samples
- Limitations
- Spread factors
- Image and paper quality

- Drop size
- Computer requirements
- Applications
- PA enhancements
- Drift

WRK
The Application Technology Specialists

WRK OF ARKANSAS

PAASS

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WRK OF ARKANSAS

- Canopy deposition
- Swath displacement
- Output discussion
- Examples
- VMD, V.1, V.9

- Plot
- Histogram
- Est. GPA
- % Area covered

11:30 am   **Morning Wrap & Discussion**   **WRK Conference center**

12:00 pm   **Lunch**   (Lunch Provided)   **Catered lunch—WRK Conference center**

1:00 pm   **Classroom discussion continues.**

- Program Overview
- System Setup
- Test Data
- String Analysis
- Swath Determination

- Analyze Existing Files
- Printed Reports
- Spectrometer Compatible systems

2:05 pm   **Accupat Software and DropFlight Introduction**

- Program Overview
- System Setup
- Test Data
- Data Entry

- Swath Determination
- Analyze Existing Files
- Printed Reports

4:30   **Hands-On Applications**   **WRK Conference center**

- *(String analysis— (2 string analysis units)*
  2 teams will analyze strings from previous fly-ins.
  Obtain printouts (Passes, Average, Overlapped swaths)
- Card analysis   2 teams will analyze cards from previous fly-ins

5:30 pm   **Free Time to practice and catch up**

~6:30 pm   **Dinner**   (Dinner provided)   **LTBD—Class will vote (Mex, Fish, or BBQ)**

DAY 2, WEDNESDAY, SEP 6, 2023

8:00 am   Setup Equipment   (Students)   Meet at WRK Hangar

- Flight-line Collector & Data Systems
- Drift Tower - Flight Path discussion

8:30 am   Discussion of Aircraft Setup

Booms
- Type
- Location
- Length
- Nozzles attachments
- Hangers
- Half boom shut off
- Tapered booms
- Bleed lines

Nozzle Types
- Sheet
- Straight stream
- Hollow cone
- Rotary
- Check valves
- Identification (type, size, etc.)

Aerodynamics
- Ground effect
- Prop wash
- Vortices
- Obstruction
- Wing tips

- Vortex generators
- Fairings

Aircraft Review
- Spray system component review
- Cockpit
- Flow controllers (A & B styles)
- GPS
  - Racetrack
  - Back and forth
  - Quick racetrack
  - Reverse racetrack
  - Expand
  - Squeeze
  - Calibration
- Spreadsheet - ACCALIB
- USDA/ARS Model(s) review
- AgDrift
- WRK Granular system equipment, setup, and software review

10:00 am   Break   (Coffee, sodas, and water provided)   WRK Conference center

10:20 am   Homework exercise review

12:00 pm   Lunch   (Lunch provided| Catered

PROGRAM PRESENTERS

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DAY 4, FRIDAY, SEPTEMBER 8, 2023

6:00 am **Setup Flightline** (Students) Meet at Carlisle Airport or Location TBD
- ·Flight-line Collector System
- Flight Data System

7:00 am **Operation SAFE Fly-in Commences**
Students will conduct the fly-in and operate all stations.
Teams will rotate duty stations throughout the day, as determined by the Fly-in management.

Station 1 **WRK Hangar**
- Briefing pilots
- Overseeing loading operations
- Flowbrator operations—flow checks discussion

Station 2 **WRK Hangar**
- Flight-line duties
- Field Deposition
- Aircraft configuration measurements

Station 3 **WRK Hangar**
- String analyses—Accupat
- Drop spectrum Scan analyses—DropletScan, Accupat, DropFlight
- Print outs & Pilot consultations

12:00 pm **Lunch Provided** **Carlisle FBO**

1:00 pm **Pattern Analysis—Droplet Analysis/Continues**

7:00 pm **Fly-in Concludes**
Dismantle flight-line and repack equipment (Students)

7:00 pm **School De-brief, Dinner**
LTBD (Location and timing to be Determined)

1:15 pm **Pattern Anomalies** **WRK Conference center**
Fixing aerodynamic pattern problems on fixed and rotary wing aircraft
- Prop wash
- Hangars /obstructions
- Vortices
- Speed
- Height
- Wind direction
- Leaks
- Unexplained pattern problems ?
  Don't always look for the obvious!
- Flowbrator and/or flow checks
- Volume/drop size – what rate to check if operator is doing several tests.?

3:00 pm **Break** (Coffee, sodas, and water provided)

3:20 pm **Wrap Up** **WRK Conference center**
- Review of course material
- Review of procedure for analyst certification by NAAA

4:30 pm **Final Exam and Course Evaluation**
(Passing grade will be mandatory for those wanting to be certified or recertified.)

6:30 pm **Free time & Dinner on your own**

DAY 3, THURSDAY, SEPTEMBER 7, 2023

6:00 am   **Setup Flightline**   (Students)   **Meet at Carlisle Municipal Airport**

- Flight-line System
- Flight Data System
- Drift Tower & Flight path

~7:00 am   **Aircraft Testing will begin**

Students will conduct the pattern testing and operate all stations. Teams will rotate duty stations throughout the day, as determined by the Fly-in management. Team approach may be modified to meet number of students.

Initial duties will be:

Station 1   **Team 1**

Carlisle Airport

- Briefing pilots
- Overseeing loading operations

Station 2   **Team 2**   **Carlisle Airport**

- Flight-line duties
- Aircraft nozzle setup measurements

Station 3   **Team 3**   **WRK Hangar**

- String analyses—Accupat
- DropletScan, Accupat, DropVision analyses
- Print outs & Pilot consultations

12:00 pm   **Lunch**   Avada Diner –Carlisle AR

1:00 pm   **Activities Resume**

- Practice on software
- Or unless Weather causes cessation of operations

?? :00 pm   **Repack Flight-line Equipment**   (Students)

Dinner on your own

~5:30 pm   **Group Discussion & Test Review**

WRK Hangar—Carlisle Airport TBD

- Questions regarding day's operations
- Problems experienced
- Aircraft problems observed and suggested solutions
- General discussion of Analyst needs—how to stay current
- Review of pictures on CD
- Wrap up

TYPICAL S.A.F.E. CLASS ACTIVITIES