

WRK OF ARKANSAS LLC & WRK OF OKLAHOMA

# S.A.F.E. ANALYST TRAINING 2022

*S.A.F.E. Analyst Certification Training*



## **Training 2022 Includes:**

- S.A.F.E. Fly-In Reference Manual-2022 - 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!*

**Aug 22-26, 2022**  
**WRK of Arkansas LLC, 153**  
**92nd W, Lonoke AR 72086**  
**Lonoke, Arkansas USA**

## REGISTRATION

PREREGISTRATION PRIOR TO AUGUST 15, 2022 IS STRONGLY RECOMMENDED TO BE ASSURED OF ACCOMMODATIONS

**CLASS REGISTRATION FEE — US\$3000** *Pre-registration prior to August 15, 2022—US\$3000 10% Discount for additional registrants from same organization.*

Check, money order, purchase order, or Credit Card accepted—cash preferred payable to WRK of Arkansas LLC in advance or at on-site registration.

### Pre-register by e-mailing your

Name, Address, email, Phone, & Organization to  
**whitney3451@att.net** and/or  
**dgardisser@icloud.com**

Phones: +1(405) 714-0095 or +1(501) 676-1762

Send questions about class to either of the above email addresses.

**If flying to Arkansas-Arrival airport—Little Rock AR (KLIT)**

## CARLISLE ARKANSAS - LODGING IN LONOKE ARKANSAS ~ 10 MIN FROM CARLISLE AND/OR WRK OF ARKANSAS LLC

Make your own reservations ASAP.

### Hampton Inn & Suites

240 Brownsville Loop, Lonoke AR 72086  
(501) 676-0602 (\$107)

### Holiday Inn Express

104 Dee Dee Lane, Lonoke AR 72086  
(501) 676-7800 (\$120)

### Best Western Plus

102 Dee Dee Lane, Lonoke AR 72086  
(501) 676-8880 (\$114)

### Days Inn by Wyndham

105 Dee Dee Lane, Lonoke AR 72086  
(501) 676-5138 (\$70)

The Application Technology Specialists

WRK OF ARKANSAS LLC & WRK OF OKLAHOMA



## WRK OF ARKANSAS LLC & WRK OF OKLAHOMA

|                      |                  |
|----------------------|------------------|
| ) Canopy deposition  | ) Plot           |
| ) Swath displacement | ) Histogram      |
| ) Output discussion  | ) Est. GPA       |
| ) Examples           | ) % Area covered |
| ) VMD, V.1, V.9      |                  |

**1:00 pm DropletScan™ V2\_6 (Windows 10)**

**2:30 pm Break** (Coffee, sodas, and water provided)

**2:45 pm Analysis Center Setup & Discussion WRK Hangar**

Layout and functioning analysis center (Discussion)

) Unpack analysis equipment (2 sets of string analysis equipment and 2 DropletScan™ analysis units)

|                       |                                   |
|-----------------------|-----------------------------------|
| ) Program Overview    | ) Analyze Existing Files          |
| ) System Setup        | ) Printed Reports                 |
| ) Test Data           | ) Spectrometer Compatible systems |
| ) String Analysis     |                                   |
| ) Swath Determination |                                   |

**4:05 pm Accupat String Analysis Introduction**

|                    |                          |
|--------------------|--------------------------|
| ) Program Overview | ) Swath Determination    |
| ) System Setup     | ) Analyze Existing Files |
| ) Test Data        | ) Printed Reports        |
| ) Data Entry       |                          |

**4:30 Hands-On Applications WRK Hangar**

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

) Card analysis— (2 DropletScan™ units)  
2 teams will analyze cards from previous fly-ins  
Produce DropletScan™ report printouts

**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 4, FRIDAY, AUGUST 26, 2022**

**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
- ) DropletScan analyses
- ) 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 Hangar**

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 Hangar**

- ) 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**

Note: Dates are firm but some pgm content & presenters may vary.



**OPERATION SAFE ANALYST CERTIFICATION TRAINING**

# ARRIVAL & REGISTRATION

MONDAY, AUG 22, 2022

4:00-6:00pm Pre-registration—come by WRK to pick up packet and preliminary exam materials. *WRK Hangar 153 92nd W, Lonoke, AR 72086*  
Call Dennis if arriving after 6pm. +1 (501) 676-1762

DAY 1, TUESDAY, AUG 23, 2022

7:30 am Registration Training Office—WRK - Hangar  
Coffee and Breakfast sandwiches each day

8:00 am Introductions  
    ) Staff, guests, hosts, and attendees  
    ) Agenda review  
    ) Notebook and Flash Drive content

|   |  |
|---|--|
| ) Preparations for a calibration workshop | ) Protocol                                   |
| ) Safety                                  | ) String system components                   |
| ) Etiquette                               | ) Setups PA, Drift, Swath displacement cards |
| ) Analyst liabilities                     |  |

8:30am Fly-In Preparation WRK Hangar

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

11:30 am Morning Wrap & Discussion WRK Hangar  
12:00 pm Lunch (Lunch Provided) Catered lunch—WRK Hangar

|   |                         |
|---|-------------------------|
| ) Witness Cards, Novartis, Oil, Kromecote Samples | ) Drop size             |
| ) Limitations                                     | ) Computer requirements |
| ) Spread factors                                  | ) Applications          |
| ) Image and paper quality                         | ) PA enhancements       |
|   | ) Drift                 |

## DAY 2, WEDNESDAY, AUG 24, 2022

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**

- |                                     |   |   |
|-------------------------------------|---|---|
| <i>Booms</i>                        | ) | Vortex generators   |
| ) Type                              | ) | Fairings  |
| ) Location                          | ) | <i>Aircraft Review</i>                                    |
| ) Length                            | ) | Spray system component review                             |
| ) Nozzles attachments               | ) | Cockpit   |
| ) Hangers                           | ) | Flow controllers (A & B styles)                           |
| ) Half boom shut off                | ) | GPS   |
| ) Tapered booms                     | ) | Racetrack   |
| ) Bleed lines                       | ) | Back and forth  |
| <i>Nozzle Types</i>                 | ) | Quick racetrack   |
| ) Sheet                             | ) | Reverse racetrack   |
| ) Straight stream                   | ) | Expand  |
| ) Hollow cone                       | ) | Squeeze   |
| ) Rotary                            | ) | Calibration   |
| ) Check valves                      | ) | Spreadsheet - ACCALIB                                     |
| ) Identification (type, size, etc.) | ) | USDA/ARS Model(s) review                                  |
| <i>Aerodynamics</i>                 | ) | AgDrift   |
| ) Ground effect                     | ) | WRK Granular system equipment, setup, and software review |
| ) Prop wash                         |   |   |
| ) Vortices                          |   |   |
| ) Obstruction                       |   |   |
| ) Wing tips                         |   |   |

10:00 am **Break** (Coffee, sodas, and water provided) **WRK Hangar**

10:20 am **Nozzle models for aircraft setups** - (Students bring laptops for interactive learning –and reference)

12:00 pm **Lunch** (Lunch provided) **Catered**

## PROGRAM PRESENTERS



**Richard W. Whitney, Ph.D.**  
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 Stillwater, OK 74074 USA  
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 whitney3451@att.net

**Dennis R. Gardisser, Ph.D., P.E.**  
 153 92nd West  
 Lonoke, AR 72086 USA  
 Mobile: (501) 676-1762  
 dgardisser@icloud.com  
 www.wrkofar.net



## DAY 3, THURSDAY, AUGUST 25, 2022

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

- ) 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.  
 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
- ) DropletScan analyses
- ) Print outs & Pilot consultations

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

**1:00 pm**     **Activities Resume**  
 ) Practice on software  
 ) Or unless Weather causes cessation of operations

**7:00 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