

Preventing Catastrophic Wildfires



Long Term Fire Retardant

Idaho Legislature
February 13, 2023

By
Ron Raley

Attachment 3



Background and Experience

Ron Raley

- Firefighter/FAE
- Helitack Captain
- Helibase Mgr
- Air Ops Branch Director
- Air Attack Supervisor
- Burn Boss & TI Rx Fire Mgr
- Type I Ops Chief
- National IC
- Forest Chief & District FMO
- BS Forest Mgt. – HSU
- Licensed Forester
- Society of American Foresters
- Deputy Director FAM California
- Raley's Forestry & Wildfire Mgt
- 35 yrs USFS - 18 yrs Phos-Chek

Long Term Fire Retardant

A formulation that has the ability to create a chain reaction which reduces & inhibits combustion (burning),

Even after the water it originally held has evaporated.

DEMONSTRATION

A lot of science - and a little bit
of magic

PHOS-CHEK® LCE20-Fx Time from initial ignition 00:00 10X Speed



Untreated ↑ ↑ Treated with **PHOS-CHEK® LCE20-Fx**



COMBUSTION OF CELLULOSE FUELS WITH THE PRESENCE OF LT RETARDANT RESULTS IN:

A CONTROLLED DECOMPOSITION OF CELLULOSE FUELS CREATING GRAPHITE LIKE CARBON AND WATER VAPOR - WITHOUT THE EMISSION OF COMBUSTIBLE FRAGMENTS

Long-Term Retardant for Wildland Fire Management

Qualified by US Forest Service in Accordance with Forest Service Specification 5100-304d

These products are evaluated, qualified, and approved for use only at the specified mix ratio with the indicated application equipment.

Consult individual agencies for specific policies relating to long-term retardant use.

Definition: Retardants contain salts that decrease fire intensity and slow advance of the fire, even after the water they contain evaporates.

Chemical	Mix Ratio (pounds concentrate per gallon water)	Qualified Applications ¹					
		Fixed-Wing ²			Helicopter		Ground Applied
		Multi Engine	SEATS	Fixed-Tank	Bucket	Bucket	
Dry Concentrate - Gum-thickened; Permanent or Temporary Base							
Phos-Chek MVP-Fx	0.95 lb/gal	●	●	-	-	●	●
Phos-Chek MVP-F	0.95 lb/gal	●	●	-	-	●	●
Forbess FR-100	1.58 lb/gal	●	●	-	-	●	●
Forbess FR-105M	1.58 lb/gal	○	○	-	-	○	●
Dry Concentrate - Gum-thickened; Temporary Base							
Phos-Chek 259-Fx	1.01 lb/gal	●	●	●	●	●	●
Wet Concentrate - Gum-thickened; Permanent or Temporary Base							
Phos-Chek LC-95A-R	5.5:1	●	●	-	-	●	●
Phos-Chek LC-95A-Fx	5.5:1	●	●	-	-	●	●
Phos-Chek LC-95A-F	5.5:1	●	●	-	-	●	●
Phos-Chek LCE20-Fx	5.2:1	●	●	-	-	●	●
Forbess FR-200	2.4:1	●	●	-	-	●	●
Wet Concentrate - Gum-thickened; Temporary Base							
Phos-Chek LC-95-W	5.5:1	●	●	-	-	●	●

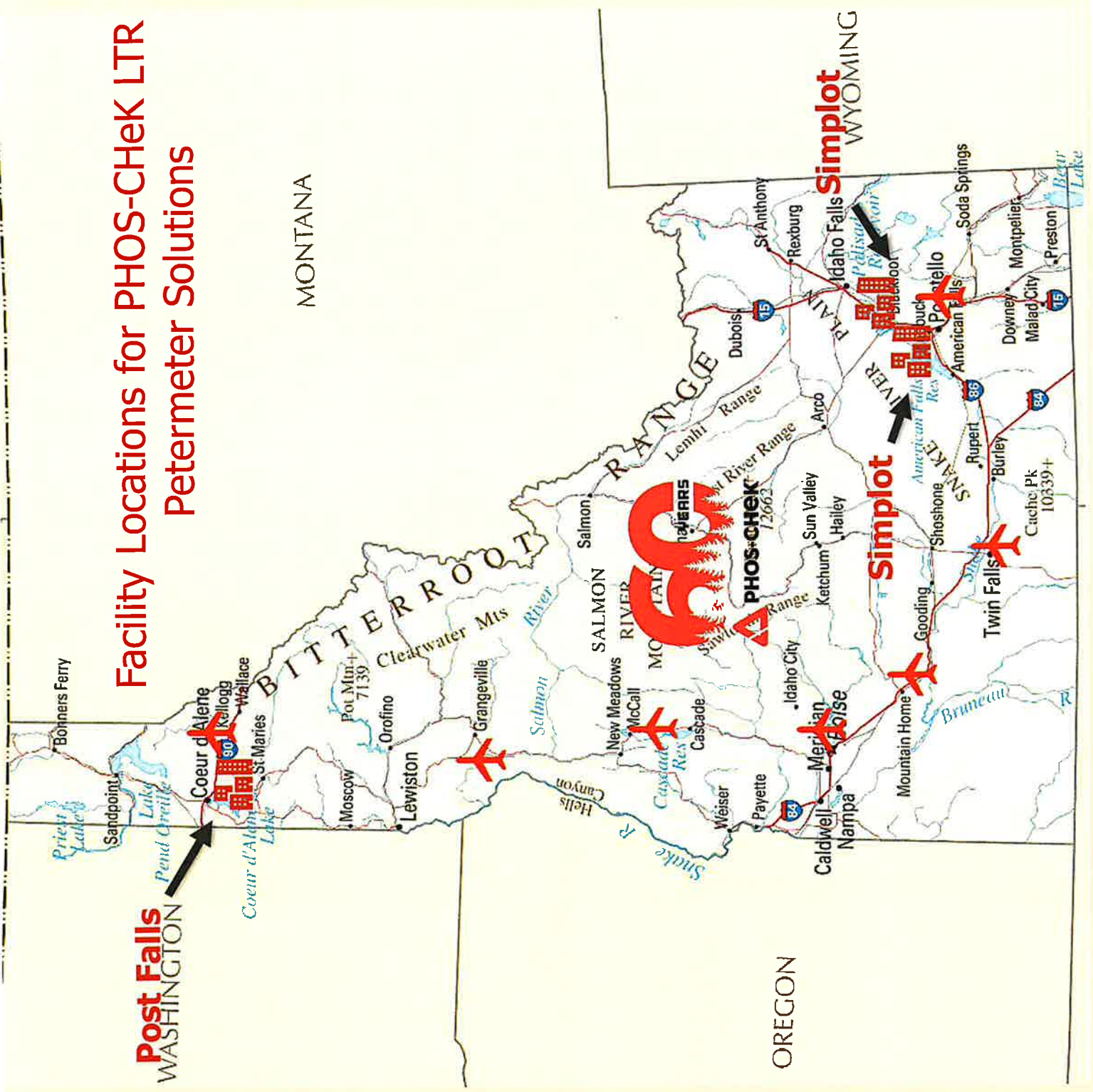
1 - Qualification Notes

- Fully Qualified - Product complies with all requirements of a formal specification.
- Conditionally Qualified - Product complies with all requirements in the specification for laboratory evaluation; a field evaluation is required for full qualification.
- △ Interim Qualified - Product complies with all interim requirements in Appendix A of the specification; final results and a field evaluation is required for full qualification.

2 - Pretreatment category has not been evaluated for durability and weathering.

3 - CAUTION: When switching between Forbess and Phos-Chek products, rinsing the tank and outside of the airtanker is required. Cross-mixing of these products may increase maintenance time and cleaning.

Facility Locations for PHOS-CHEK LTR PETERMETER SOLUTIONS



Post Falls
WASHINGTON

MONTANA

OREGON

Idaho Falls **Simplot**
WYOMING

Innovation in Preventing Roadside Ignitions with Ground Applied Long Term Retardant

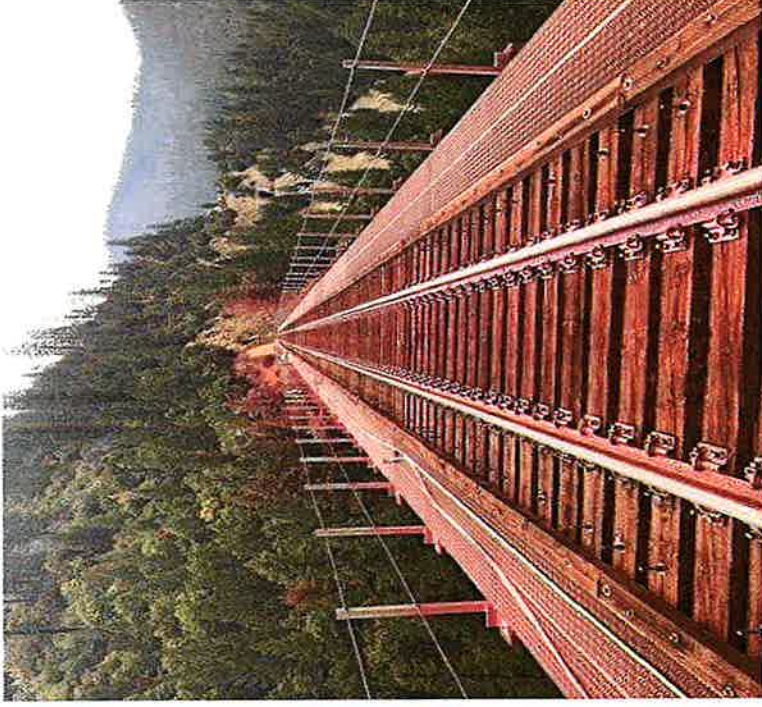


Fire Safe Council
A FIREWISE Community

**Reagan Ranch Santa Barbara
Treated in July 2021
October 2021 Helped Protect Ranch During Alisal Fire**



Protecting Assets w/LTR Ahead of Wildland Fire



Experience. Responsibility. Integrity. / Trusted. Solutions That Save.

Innovation in Wildcat Canyon: Success Continued

County Fire Agency is using PHOS-CHEK LTR as a solution to annually treat 100s of miles of high-risk roadways to help get to 20' of protection (per legislation passed)



Utilities Protecting Infrastructure

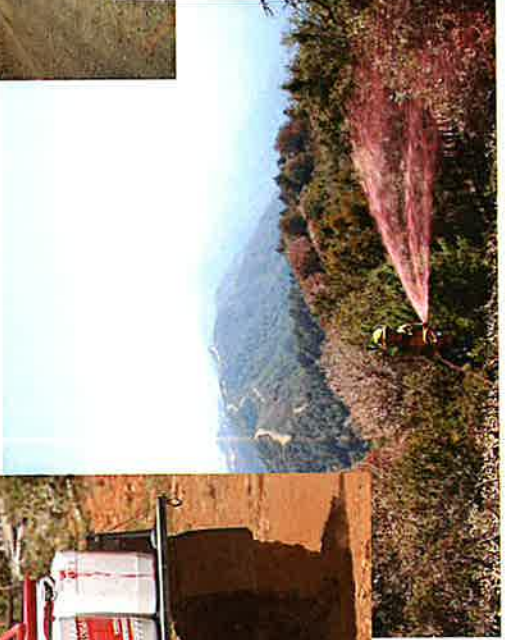
Pre-Treating Utility Poles In Fire Areas protecting assets and enhancing service reliability



6.F



Ground Applied Retardant





Thank You !!

Questions ?

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