

## The VMFA-115 Rainmakers of SEA: *Now you can know the rest of the story*

By David Reade

For those members of the VMF/VMF(AW)/VMFA -115 Reunion Association, that were assigned to VMFA-115 based in Da Nang, there has been an enduring mystery surrounding classified flights flown by the squadron between August and October 1966.

Although most of the squadron members at the time saw things, overheard fleeting conversations or felt that something spooky was going on (unusual for the tempo of flight operations at that time), no one knew exactly what was going on until quite recently; when it was disclosed that VMFA-115 had participated in one of the most secret flight operations of the Vietnam War – Rainmaking ! As it turns out, VMFA-115 had participated in a top secret project that explored the possibility of utilizing cloud seeding as a weapon of war. VMFA-115 had participated in “*Project Popeye*”.

### *Project Popeye*

Project Popeye (1966) was a secret geophysical / weather modification experimental program to test the feasibility of extending the rainy monsoon season in Southeast Asia, in an effort to hamper or impede North Vietnamese infiltration into the south along the Ho Chi Minh trail network, by muddying up the trail system and making key vehicle route sections impassable. This project, utilizing cloud seeding technology developed by the US Naval Weapons Center in China Lake, California, was to extend the duration of the regional monsoon season and increase its normal rainfall to soften or muddy up road surfaces, create landslides along roadways, washout river crossing and generally maintained soften soil conditions beyond the normal rainy season. The project’s ultimate goal was to extend the existing monsoon season by 30 to 45 days and if possible, increase the annual monsoon rainfall averages by upwards of 20-30%.



US Marine F-4B Phantoms of VMFA-115 and VMFA-323 on the flight-line at Da Nang (circa 1966)

**Note:** *Project Popeye (1966) was the experimental precursor to the operational phase of tactical weather modification in Southeast Asia called “Operation Popeye” (1967-1972) that spawn a number of other tactical cloud seeding application missions in SEA.*

Although the internet will suggest or infer that Project Popeye was based at Udorn Thailand, the reality is that the Project was run out of Da Nang with support elements in Ubon, Thailand and Pleiku – under the technical and

supervisory control of personnel from NWC China Lake. NWC China Lake provided all the various technical cloud seeding personnel, training, direction, supervisory and leadership for the project as well as conducted all of the scientific analysis and design, manufacture (*fabrication*) of the seeding dispensers, canisters and seeding agents.

Several of VMFA-115's F-4B Phantom jets were used as the primary seeding aircraft for Project Popeye, flown by a small select group of three pilots and three RIOs from the squadron. The flight crews would fly the seeding or rainmaking missions and then assess the reaction of the clouds to the cloud seeding runs. One of the squadron's "Rainmaking" crews is believed to have included Squadron Executive Officer / Pilot Maj. Matthew B. (*Buck*) Peck and RIO Capt. James Ellis.



*The Ho Chi Minh Trail that winds it's way down through Laos, Cambodia into South Vietnam.*

For the project, the F-4B were equipped with a modified version of an A-6 photoflash ejector, coupled with Silver iodide seeding flares known as "Wimpy" – in keeping with the Popeye cartoon theme. Developed by China Lake, the Wimpy system comprised 40mm aluminum photoflash – type cartridges made up of pyrotechnic Silver iodide seeding material. The cartridge dispensers were incorporated into a specially-designed aerodynamic launching / dispensing canister developed specifically for high-speed jets.

Most flights were flown in the early afternoon from Da Nang, conducted under the guise of the Air – to – Air Hot Pad flight operations, that were maintained at the north end of the north runway at

Da Nang. This was far away from squadron's normal flight activities further down or about the midway point down the flight line. Each mission ran about 4.5 to 5 hours in duration.

**Note:** *having been run through the Squadron's air-to-air Hot Pad (5 – minute ready alert scramble) duty, for another command, records of the squadron's cloud seeding flights were not maintained in the regular squadron reports and furthered help hide the weather modification project to those not authorized. In fact, the Project Popeye mission is not even mentioned in the Squadron's official history, despite Popeye's declassification in 1974.*

Most of the project's cloud seeding flights were conducted over a wide area of the Se Kong River watershed (*Valley*) east of the Bolovens Plateau, in the panhandle region of Laos. The experiment's targets were cold cumulus clouds at altitudes between 14,000 (4267m) and 19,000 feet (5791m) that were seeded with Silver iodide smoke. One of the first experimental seeding flights saw seeded clouds drift over the border into Vietnam and dump heavy rains over a wide area. A US Special Forces A-camp, located in the heart of VC territory along the border, recorded approximately 9-inches of rain over a 4-hour period.



Under this experimental seeding project, China Lake conducted 56 experimental cloud seeding flights, where 48 of the missions were deemed successful equating to an 85.7% success rate of seeded clouds producing significant rainfall.

The perceived technical success of this pilot project, supported the authorization of the operational phase of the tactical weather modification program in SEA. Operation Popeye began in March 1967, but this time without VMFA-115. Under this new program, the primary seeding missions were flown by specialized C-130 Hercules transport aircraft manned by flight crew elements of the USAF's 54<sup>th</sup> Weather Reconnaissance Squadron - supported by RF-4C Phantom jets from the USAF's 14th Tactical Reconnaissance Squadron based at Udorn.

**Editor's Note:** *David Reade (P-3 Publications) is an aviation historian living in Atlantic Canada. He accidentally came across this aspect of VMFA-115's service in Southeast Asia while research a book on the history of hurricane hunting aircraft and a subsequent article on the unrealized history of weather modification and weaponized weather. Reade provided this article on the VMFA-115 Rainmakers to the VMF/VMF(AW)/VMFA -115 Reunion Association for their own use and distribution.*