



## 2022 Secretary of Defense Environmental Awards Environmental Excellence in Weapon Systems Acquisition, Individual/Team Award

Each year since 1962, the Secretary of Defense has honored installations, teams, and individuals for outstanding achievements in Department of Defense (DoD) environmental programs. These accomplishments include outstanding conservation activities, innovative environmental practices, and partnerships that improve quality of life and promote efficiencies without compromising DoD’s mission success. The 2022 Secretary of Defense Environmental Awards cycle encompasses an achievement period from October 1, 2019, through September 30, 2021 (Fiscal Years [FY] 2020-2021). A diverse panel of 53 judges with relevant expertise representing Federal and state agencies, academia, and the private sector evaluated all nominees to select one winner for each of the nine categories. These nine categories cover six subject areas including natural resources conservation, environmental quality, sustainability, environmental restoration, cultural resources management, and environmental excellence in weapon systems acquisition.

### About the Environmental Excellence in Weapon Systems Acquisition, Individual/Team Award

The Environmental Excellence in Weapon Systems Acquisition, Individual/Team award recognizes efforts by individuals or teams to incorporate environment, safety, and occupational health requirements into a weapon systems acquisition program’s system engineering, contracting, and decision-making processes. Adhering to these requirements enhances DoD’s acquisition process by ensuring that weapon systems programs prioritize the safety of personnel and protection of the environment. The 2022 winner of the Environmental Excellence in Weapon Systems Acquisition, Individual/Team award is the *C-130 Program Office and Support Team, Robins Air Force Base, Georgia*.

### About C-130 Program Office and Support Team, Robins Air Force Base, Georgia

The U.S. Air Force issued its original design specification of the C-130 in 1951, and the remarkable C-130 remains in production today. The latest C-130, the C-130J, entered the inventory in February 1999. The weapon system meets warfighter/allied force operational needs by directly supporting the warfighting Combatant Commanders’ airlift mission including transporting payloads into and out of the combat theater without refueling; delivering cargo and personnel via airdrop and airland; augmenting aeromedical evacuation; and performing emergency nuclear transportation and other special missions. Throughout these uses, the C-130 platform continues to focus on improvements to environmental, safety, and health. The C-130 Program Office and Support Team consists of members of the C-130 Program Office, Air Force Life Cycle Management Center/EZVV, 402nd Aircraft Maintenance Group, Lockheed-Martin Aeronautics Company, and MEC Energy Services.



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*The C-130 Program Office and Support Team. Upper left picture (from left to right): Mr. Ryan Thompson, Mr. Kevin Detring, Mr. Alex Stovall, Ms. Heather Kuemmerle, and Ms. Kelly Grubbs. Upper right picture (from left to right): Mr. Mike Forgue, Mr. Scott Ward, Mr. Mike Ballard, Mr. Dallas Rhoad, Mr. Mike Surratt, Mr. Kevin Wilson, Mr. Joshua Gallo, Mr. Todd Lavender, Mr. Hutch Thompson, Mr. Al Lopez, Mr. Brad Gravot, and Mr. Perry Plaxico. Bottom picture (from left to right): Ms. Teresa Finke, Mr. Morgan Russell, Ms. Kelly McNamara, Mr. Dana Allen, Ms. Daniele Johnson, Mr. Tim Clendenin, and Ms. Emily Spilker.*

## Major Accomplishments in FY 2020-2021

- The C-130 Team evaluated over 70 finish systems under an initiative to eliminate the use of hex-chrome in exterior finishing systems. From those efforts, team members identified five chrome-free finishes worthy of implementation. Now that qualification is complete, the Air Force is recommending a single production C-130J be finished on the exterior using one of the chrome-free systems for airworthiness assessment and fleet implementation. Once fully implemented, this will eliminate the use of hex-chrome epoxy primer from C-130J exterior finish systems; reduce by 2,000 pounds each year the Air Force Plant 6 U.S. Environmental Protection Agency and Superfund Amendments and Reauthorization Act reportable hex-chrome; reduce hazardous material issues with life-cycle/maintenance of aircraft painting; and reduce employee exposure to this extremely hazardous material. These efforts will save \$10,000 per year on C-130J production, with a break-even in fewer than 13 years.
- Chromate sealants have been historically used during C-130 production in multiple corrosion prevention applications. The C-130 Team's six-year project to evaluate non-chromate corrosion inhibiting sealants resulted in the implementation of three alternatives. This significantly reduces worker exposure to a harmful carcinogen and detrimental impacts to the environment due to hex-chrome waste by eliminating 13,500 pounds of chromate waste annually and saving \$253,024 per year for the C-130 production line alone.
- The current primer reactivation requires surfaces to be scuff sanded, which increases personnel's risk of exposure to hex-chrome particulate matter. The C-130 Team found and implemented three products on the C-130J production line that eliminated the need for scuff sanding. This has reduced the risk of employee exposure to a harmful carcinogen and eliminated 500 pounds of hazardous chromated waste annually while saving \$551,933 per year, with a break-even in two months.
- The C-130J production interior finish system also contains high levels of hex-chrome, both in the conversion coating and primer. Focusing on newly available non-chrome primers and non-hex-chrome pretreatment combinations, the C-130 Team is working to implement an inner mold line finish stack-up completely free of hex-chrome. Eliminating hex-chrome from C-130J interior finish systems can reduce over 2,100 pounds of hex-chrome per year; reduce hazardous material issues with life-cycle/maintenance of aircraft painting; and reduce employee carcinogen exposure.
- N-Methyl pyrrolidone (NMP) is a high-priority chemical under the Toxic Substances Control Act, resulting in more stringent controls. NMP is used in interior finish systems; however, the C-130 Team identified a replacement material that will eliminate 760 pounds of NMP per year, significantly reducing employee exposure to hazardous materials and eliminating the need for precautions to identify and control its presence.



*A C-130J in the Paint Crib where the new Solvent Borne Non-Chrome Primer is applied.*



*Interior view of a production C-130J with new non-hex chrome finish.*