

## Dassault Falcon Jet Corporation – Little Rock

Dassault Falcon Jet Corporation is an international company that sells and services custom business jets. The family of Falcon jets produced by the Corporation includes four tri-jets – the Falcon 50EX, 900C, 900EX and the 7X. The company also makes two twin engine jets – the Falcon 2000 and the 2000EX. Dassault Falcon Jet - Little Rock (DFJ-LIT), with approximately 700,000 square feet and 1900 employees, is the company's main completion center for Falcon jets worldwide. In fact, Dassault's Little Rock facility is the corporation's biggest plant, even larger than the main assembly plant at Bordeaux-Merignac, France.

DFJ – LIT has a history of environmental awareness. It is currently one of five Arkansas industries to have achieved membership in the U.S. Environmental Protection Agency's (EPA) National Environmental Performance Track program ([www.epa.gov/performancetrack](http://www.epa.gov/performancetrack)). EPA's Performance Track program recognizes companies for their environmental stewardship and continuing commitment to the reduction of waste, energy and resources. The members of the Performance Track go beyond state and federal regulatory requirements. They are America's environmental leaders in pollution prevention. The Performance Track program started in the summer of 2000 and currently has more than 400 facility members nationwide.

The following quote, derived from the company's 2003 annual Environmental Status Report, provides insight into the goals and benefits of the company's environmental program. "Many large corporations have discovered environmental performance is a key to maintaining competitive viability. The environmental function has become an essential part of developing a production strategy. Compliance and performance are viewed as a valuable asset and instrumental to sustaining a positive corporate image."

DFJ-LIT has been recognized by the International Organization for Standardization and is a certified ISO 14001 facility. ISO 14001 is a type of Environmental Management System (EMS). The facility received the Arkansas Environmental Federation's (AEF) Diamond Award in 2000 for the company's history of environmental improvements. In 2005, DFJ-LIT received the Arkansas Department of Environmental Quality's (ADEQ) first Environmental Stewardship Award, nicknamed the ENVY, for its outstanding pollution prevention and waste minimization efforts. From 1993 to 2005, DFJ-LIT achieved significant reductions in its regulated water use, hazardous waste, volatile organic compound (VOC) emissions, and hazardous air pollutant (HAP) emissions.

- From 1993 through 2005, HAP emissions per aircraft were reduced by 90 percent.
- From 1993 through 2005, VOC emissions per aircraft were reduced by 74 percent.

- From 1993 through 2005, the volume of hazardous waste generated per aircraft was reduced by 60 percent.
- From 1993 through 2005, the volume of federally regulated wastewater requiring pre-treatment was reduced by 92 percent.

Solid waste, energy and noise are also recognized as forms of pollution by DFJ-LIT. Through its “green lights” program, the company realized a three-year goal to replace standard mercury bearing fluorescent light tubes, facility-wide, with low or no-mercury tubes. The lighting conversion eliminated approximately 9,500 mg of mercury and 800 pounds of regulated Universal Waste bulbs each year, a 90 percent reduction. The climate control and air handling variables are centrally managed via a computerized HVAC control system. Each regulated waste is evaluated for its “energy recovery” potential and an energy tracking program has been established. Solid waste has been reduced through source reduction and recycling and the facility restricts the hours in which engine tests are conducted to avoid disturbing its residential neighbors.

An in-house study of the facility’s hazardous waste generation concluded that a significant portion of the hazardous waste was due to the use of multiple polymers in pre-treatment operations. As a result, the company changed to a single, less voluminous and more efficient polymer. The study also identified a paint bay maintenance waste that became mixed with paint waste. This maintenance waste was segregated and de-watered, resulting in a major reduction in regulated waste volume. The residual water was processed through pre-treatment on-site.

DFJ-LIT is classified as a Metal Finisher under the Clean Water Act. Regulated operations are subject to stringent federal effluent guidelines and water usage is carefully monitored. Following an in-house analysis of regulated inputs, significant changes were implemented. These included installation of re-circulating chiller units on the plating “clear clad” system and “heat treat” units. Both changes replaced thermostatically controlled free-flow cooling water. The volume of water required for paint bay waterfalls operation was reduced by installing an improved solenoid system. In addition, new “dry” paint filtration technology was introduced and the existing “wet” equipment was scheduled for retrofitting in order to achieve major reductions in regulated effluent volume.

Accidental spills of jet fuel and hydraulic fluids are currently addressed with a non-hazardous absorbent that has an intrinsic Btu value. The contaminated material is then disposed of via fuel blending at a TSD (treatment, storage and disposal) facility. The company achieved a 62 percent reduction in hazardous spill waste by implementing a bioremediation response method. Using this technique, a microbial material is applied to various hydrocarbon spills resulting in the conversion of hydrocarbons into carbon dioxide (CO<sub>2</sub>) and water.

Hazardous waste generated from the solvent blend employed in four parts washers was completely eliminated, a 100 percent reduction. One unit was replaced with a non-hazardous, frozen CO<sub>2</sub> parts cleaning system. Spent solvent from the remaining

washers is now incorporated as an external product component, resulting in the elimination of the entire waste stream.

Performance Track members continually look for ways to improve their environmental performance. Dassault's Little Rock facility has committed to improvements in four areas for 2006.

The first goal is to reduce the volume of UV clearcoat by replacing the current hand spray application with a controlled environment, high tech, automated application system. Based on pilot tests, projected results are improved finish, materials usage reduction, reduced re-work, and corresponding reductions in hazardous waste volume, VOC and HAP emissions. (status: in progress)

The second goal is to reduce the usage of bulk MPK and Acetone. Bulk MPK and Acetone are employed ubiquitously throughout the facility for the cleaning and preparation of surfaces and in the pre-paint preparatory stages. Reduction in usage will result in a corresponding reduction in hazardous waste and air emissions. (status: in progress)

The third goal is to conduct an evaluation of opportunities to reduce total facility HAP emissions via materials substitution, as opposed to reduction, as applicable to current operations. This program will also consider new product availability and/or changes that have occurred in operations or the prevailing work environment. The proposed reductions will be in addition to those that will result from material commitments one and two. (status: in progress)

Goal four is to eliminate the discharge of total toxics associated with federally regulated (Metal Finishing) industrial wastewater discharge. DFJ-LIT has experienced significant success in minimizing water usage in production areas subject to federal Metal Finishing Standards. This success has resulted in a subsequent challenge in addressing the increased toxics concentrations (particularly cadmium, cyanide, and TTO) in the wastewater. The company plans to restructure the facility waste water pre-treatment system to include an evaporation process that will result in zero discharge to the POTW. Projections indicate increased energy costs associated with the evaporator operation will be more than offset by the reduced pre-treatment operating expenses. (status: project complete. Unit installed, operational and zero discharge achieved.)

Community involvement is also an element of ISO 14001 and the Performance Track. "Dassault Falcon Jet - Little Rock puts considerable effort into being a good neighbor in central Arkansas. The Corporation supports a variety of organizations and charities that aim to benefit the health, education and development of people in the community" said Pete Christiansen, Manager of Environmental Affairs for the Little Rock facility. "In addition, many employees volunteer their time to serve on committees and in community programs. These activities range from coaching youth athletics and making and selling teddy bears to benefit underprivileged children to serving on advisory boards

or committees for local universities, the Arkansas Environmental Federation (AEF), Little Rock National Airport, and the City” said Christiansen.

The information in this article was obtained from the EPA Performance Track web site and company representatives. For more information contact Pete Christiansen, Environmental Affairs Manager, at 501-210-0147.



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