

**DFRC REQUEST FOR ENVIRONMENTAL IMPACT ANALYSIS**

DFRC CONTROL NUMBER  
99-01

INSTRUCTIONS: Section I to be completed by Proponent. Sections II and III to be completed by the Safety, Health & Environmental Office. Continue in Block 19 or attach additional sheets as necessary. Reference appropriate item number(s)

**SECTION I - PROPONENT INFORMATION**

1. TO: Environmental Officer Safety, Health & Environmental Office	2. FROM: (Proponent organization and functional address symbol) Code Y, MS: D1623H	2a. TELEPHONE NO. 2482
---	---	---------------------------

3. TITLE OF PROPOSED ACTION/START DATE  
GTE PEM Tropics B DC-8 Payload Integration 3/6/99

4. PURPOSE AND NEED FOR ACTION ( Describe why you need to take this action.)  
The purpose of this airborne science mission is the loading and performance of in-flight air sampling experiments on the NASA Dryden DC-8 to develop instrument technology, test new instruments, and make modifications based on the flight experiment results. This project is required to collect data for experiments in support of scientific projects serving the NASA , federal, state, and academic scientific communities.

5. DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES (DOPAA) (Provide sufficient details for evaluation of the total action.)  
This project is designed to perform in-flight basic research studies of the Earth's atmosphere. The project will be staged at Dryden to load instruments into the DC-8 airborne science laboratory equipment racks. Limited operation of the payload instruments will occur at Dryden. Additional staging and operation of the payload shall occur at Hilo, Hawaii; Nadi, Fiji; Papeete, Tahiti; Easter Island; San Jose, Costa Rica and in flight between these locations. Airborne research experiments will include the use of Class 3 and Class 4 lasers. A sealed ionizing radiation source will be used for atmospheric monitoring. A small quantity of toxic gas will be used as chemical standards during air sample analysis.

6. PROPONENT Chris Miller	6a. SIGNATURE	6b. DATE 2/8/99
------------------------------	---------------	--------------------

**SECTION II - PRELIMINARY ENVIRONMENTAL ANALYSIS** (Check appropriate box and describe potential environmental effects and mitigations.) (+ = positive effect; 0 = no effect; - = adverse effect; U = Unknown effect)

	+	0	-	U
7. AIR INSTALLATION COMPATIBLE USE ZONE (Noise, accident potential, land use, etc.)		X		
8. AIR QUALITY (Emmissions, attainment status, state implementation plan, etc.)	X		X	
9. WATER RESOURCES (Quality, quantity, source, etc.)		X		
10. SAFETY & OCCUPATIONAL HEALTH (Asbestos/radiation/chemical exposure, explosives safety quantity-distance, etc.)			X	
11. HAZARDOUS MATERIALS/WASTE (Use/storage/generation/solid waste, etc.)			X	
12. BIOLOGICAL RESOURCES (Wetlands/Floodplains, flora, fauna, etc.)		X		
13. CULTURAL RESOURCES (Native American burial sites, archeological, historical etc.)		X		
14. GEOLOGY & SOILS (Topography, minerals, geothermal, Superfund Program, seismicity, etc.)		X		
15. SOCIOECONOMIC (Employment/population projections, school and local fiscal impacts, etc.)	X			
16. OTHER (Potential impacts not addressed above.) None		X		

**SECTION III - ENVIRONMENTAL ANALYSIS DETERMINATAION**

17. <input checked="" type="checkbox"/> PROPOSED ACTION QUALIFIES FOR CATEGORICAL EXCLUSION (CATEX) # 4.2(3) ; OR <input type="checkbox"/> PROPOSED ACTION DOES NOT QUALIFY FOR A CATEX; FURTHER ENVIRONMENTAL ANALYSIS IS REQUIRED.
---

18. SHE OFFICE CERTIFICATION Dan Mullen	18a. SIGNATURE <i>Daniel F. Mullen</i>	18b. DATE 2/25/99
--	---	----------------------

COPY

19. REMARKS: (Continuation sheet. Use additional sheets as necessary)

**AIR QUALITY:** A short-term degradation of air quality may be expected during the operation of the DC-8 aircraft. These emissions will be minor and are well below the diminimus thresholds for non-attainment areas; therefore, a formal conformity determination is not required. Impacts to Air quality from this project are minimal. Positive impacts to air quality may result from this project as resulting meteorological and atmospheric chemistry data is incorporated into air quality management practices.

**SAFETY AND OCCUPATIONAL HEALTH:** A Certified Industrial Hygienist will be in support of this project. All applicable laws, regulations, and standard procedures will be followed for project activities. Hazard risk reduction actions contained in the Project Hazard Reports will be implemented.

Lasers will be operated in accordance with the Laser Safety Plan which is approved by the Dryden Laser Safety Officer (LSO). The LSO will stipulate appropriate requirements in the Laser Safety Permit.

The sealed foil type 5 mCi ionizing radiation source will be handled in accordance with the Radiation Protection Program which is approved by the Dryden Radiation Safety Officer.

Toxic gases will be handled in accordance with applicable guidelines contained in the DC-8 Handbook.

**HAZARDOUS MATERIALS/WASTE:** Hazardous materials/waste will be handled in accordance with applicable regulations.

**SOCIOECONOMIC:** A minor positive impact will result in the local economy from the temporary stay of scientists and researchers.

**MITIGATION MEASURES:** No significant impacts are identified on this project; therefore no mitigation measures are required.

**CONCLUSION:** Based on the above environmental impact analysis, it is concluded that activities occurring at Dryden are categorically excluded actions [NASA 4.2(3)] that do not substantially impact the human environment; therefore, neither an EA nor an EIS is required.

**PROJECT REQUIREMENTS:** In accordance with Executive Order 12114, "Environmental Effects Abroad of Major Federal Actions", and 14 Code of Federal Regulations Part 1216.321, the cognizant Headquarters program official shall determine the environmental effects of this project that occur outside the United States and its territories and possessions (abroad). If it is determined that this project will not have a significant environmental effect abroad, the Headquarters official shall prepare a memorandum for the record which states the reasoning behind such a determination.