

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

NOTICE 94-LaRC-COLTS

National Environmental Policy Act; Finding of No Significant Impact; Combined Loads Test System at Langley Research Center

AGENCY: National Aeronautics and Space Administration (NASA)

ACTION: Finding of No Significant Impact

SUMMARY: Pursuant to the National Environmental Policy Act of 1969, as amended (NEPA) (42 U.S.C. 4321 *et seq.*), the Council on Environmental Quality Regulations for Implementing the Procedural Provisions of NEPA (40 CFR Parts 1500 - 1508), and NASA's Procedures for Implementing NEPA (14 CFR Subpart 1216.3), NASA has made a Finding of No Significant Impact (FONSI) with respect to the proposed construction and operation of the Combined Loads Test System (COLTS) test facility at the Langley Research Center (LaRC) in the City of Hampton, Virginia. The proposed COLTS test facility at LaRC will be a new facility providing capabilities for testing pressurized airframe structures (e.g., fuselages, wing structures) under combined mechanical (i.e., bending, torsion, shear, and axial) and pressure loads.

DATE: Comments in response to this notice must be received in writing within 30 days of (first date of publication in local newspaper).

ADDRESS: Comments should be addressed to Tricia Romanowski, Environmental Engineer, Office of Environmental Engineering, SEMA, M/S 429, 5 Hunsaker Loop, NASA Langley Research Center, Hampton, Virginia 23681-0001.

The Environmental Assessment (EA) prepared for the proposed COLTS test facility at LaRC which supports this FONSI may be reviewed at:

Hampton Public Library, Main Branch, Reference Department, 4207 Victoria Boulevard, Hampton, Virginia

NASA Headquarters Information Center, Room 1H23, 300 E. Street S.W., Washington, DC

A limited number of copies of the EA are available by contacting Tricia Romanowski, Environmental Engineer, in writing at the address indicated.

FOR FURTHER INFORMATION CONTACT:

Tricia Romanowski, Environmental Engineer, Office of Environmental Engineering, SEMA, M/S 429, 5 Hunsaker Loop, NASA Langley Research Center, Hampton, Virginia 23681-0001; Telephone (804) 864-7020.

SUPPLEMENTARY INFORMATION: NASA has reviewed the EA prepared for the proposed COLTS test facility at LaRC, and has determined that it represents an accurate and adequate analysis of the scope and level of associated environmental impacts. The EA is incorporated by reference in this FONSI.

NASA is proposing to construct and operate a new COLTS test facility within the Building 1256 complex at LaRC. The proposed COLTS test facility will require construction of a new test chamber to house the combined loads test apparatus, rehabilitation and modification of an interior portion (93 meters² (1,000 feet²)) of Building 1256 to house the COLTS control room, and construction of a new electrical substation and hydraulic pump room exterior to Building 1256. The test chamber will be a 24 by 27 meter (80 by 90 foot) pressurized concrete and steel building which will have a test pit extending 4.5 meters (13 feet) below ground. The Micrographics and Engineering Drawing Services personnel and facilities presently occupying Building 1256 will be relocated to available space in two other buildings at LaRC. Parking for COLTS test facility personnel is available in the existing Building 1256 parking lot.

Construction of the proposed action is scheduled to begin in fall 1994, and the new COLTS test facility will be operational in late 1995. The proposed COLTS test facility will be staffed by 4 to 5 permanent NASA employees; an additional 10 to 15 persons may be on site during a test. The operational schedule of the proposed COLTS test facility will depend upon the demand for testing. It is anticipated that each test will last for 3 to 6 months, and it is possible that the test facility may operate 24 hours per day.

Two alternatives to the proposed action were considered: the No-Action Alternative (i.e., no COLTS test facility for combined loads testing) and construction of the COLTS test facility at an alternative location at LaRC. The No-Action Alternative will not provide the needed capabilities for combined loads testing of pressure containing structures to support new aircraft technologies, or for testing the structural integrity of existing aircraft under the Aging Aircraft Program. Construction of the COLTS test facility at an alternative location at LaRC would require all new construction for the COLTS test facility control room and office space and additional infra-structure which would significantly increase construction cost of this alternative.

LOCAL COUNTY and probably result in greater adverse environmental impact

The environmental impacts identified as a result of the environmental assessment are as follows. Construction will be performed under a State-approved sediment and erosion control plan prior to construction. The area disturbed by construction will not exceed 5 acres and will not require a National Pollutant Discharge Elimination System (NPDES) permit. The proposed COLTS test facility will not increase the amount of impervious surface at the Building 1256 complex. Drainage from the COLTS test facility (including groundwater collected by the sump in the test

chamber, which is a non-industrial facility) will be discharged to the existing LaRC drainage system. The LaRC NPDES permit application to the Department of Environmental Quality-Water Division will be modified to address the additional discharge point.

Construction of the proposed action will result in minor and temporary fugitive dust emissions which will be controlled by standard construction dust control practices, such as spraying water on disturbed areas. The proposed COLTS test facility will be powered by electricity from Virginia Power and steam from the existing LaRC steam plant. Operation of the test facility will not generate ~~significant~~ ^{substantial} air emissions; the facility will use atmospheric air as the test medium. The test facility will not have a ~~significant~~ ^{substantial} effect on traffic at LaRC.

Construction of the proposed action will produce minor increases in noise levels in the immediate vicinity. Construction noise will attenuate rapidly with distance from the project site, and no off-site noise-sensitive receptors will be impacted by construction noise. Noise sources during operation of the COLTS test facility will be the hydraulic pumps and the pressure release from the failure of a test specimen. LaRC will provide noise attenuation to comply with the LaRC noise standard of 85 dBA for occupied areas at the Center.

The construction contractor will be required to identify any hazardous waste generated during construction and to submit a hazardous waste disposal plan which will be approved by the NASA Contracting Officer prior to construction. Non-hazardous solid waste will be disposed by burning in the existing LaRC refuse-to-steam plant, or in an off-site permitted landfill. Surface soil sampling conducted in 1994 indicated presence of low levels of polynuclear aromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), and pesticides at the project site. The concentrations of PAHs were within the range reported for urban soils. Since PCB levels were below the Toxic Substances Control Act (TSCA) clean-up level of 10 mg/kg, no additional action is required. The site investigation found high levels of lead in the soil. NASA will perform Toxicity Characteristic Leaching Procedure (TCLP) on the soil prior to or after excavation and will treat and dispose contaminated ~~the~~ soil in compliance with the State and Federal regulations. LOCAL

The proposed COLTS test facility will be located in a densely developed area of LaRC, and will not be located in any wetlands. No threatened or endangered species or critical habitats will be affected by the proposed action. The proposed COLTS test facility will be located in an area which is considered to have no cultural resources potential.

The proposed COLTS test facility will be located above the 100-year floodplain elevation, but within the 500-year floodplain elevation. Since the test facility is not a critical action facility under NASA's floodplain regulations (14 CFR Subpart 1216.205), no additional action is necessary. The proposed action will be consistent with the enforceable policies of Virginia's Coastal Resources Management Program. Subpart 1216.2)
Section 1216.202 (4)

There will be no significant impact on local economy from the proposed construction and operation of the COLTS test facility.

No other issues of environmental concern
have been identified

On the basis of the EA for the proposed COLTS test facility at LaRC, and the underlying reference documents, NASA has determined that the environmental impacts associated with this project will not individually or cumulatively have a significant effect on the quality of the environment. The action is consistent with the requirements of the Executive Order 12898 since there will be no disproportionately high or adverse human health effects or environmental effects on minority or low-income population. Therefore, an Environmental Impact Statement (EIS) is not required. NASA will take no final action or authorize construction activities prior to the expiration of the 30-day comment period.

Paul F. Holloway
Director
NASA Langley Research Center

Date

Concurrence:

~~Billie J. McGarvey~~
~~Director, Facilities Engineering Division~~
NASA Headquarters

~~Billie J. McGarvey~~ R.E. Hammond
~~Director, Facilities Engineering Division~~ Environmental Management Division
NASA Headquarters

Date

