

LYNDON B. JOHNSON SPACE CENTER
HOUSTON, TEXAS

JUSTIFICATION FOR OTHER THAN FULL AND OPEN COMPETITION
(JFOFC)

1. **Introduction**

The Engineering Directorate's Energy System Division (ESD) at the Johnson Space Center (JSC) provides human-rated, flight certified pyrotechnic devices for the Space Shuttle Program. The ESD has been assigned responsibility for logistics management, manufacture, and certification of these units.

2. **The nature and/or description of the action being approved**

This justification provides the rationale for contracting by other than full and open competition for the delta qualification of the NASA Standard Initiator (NSI) by Universal Propulsion Company (UPCO), production facility for the Goodrich Corporation. The Space Shuttle Orbiter uses the NSIs each flight to initiate various pyrotechnics systems. The NSI is classified as Crit 1/1 for inadvertent operation and Crit 1/1 for failure to function or low pressure output. As such, the hardware must be manufactured by a qualified source. UPCO is already one of the only two qualified sources for NSI. The current relocation of UPCO's manufacturing operations from Phoenix, AZ to Fairfield, CA requires a delta qualification program to validate the manufacturing process at the new facility.

This Delta Qualification program is intended to address the production issues associated with manufacturing a proven and qualified design. It does not intend to qualify a design. The purpose of this program is to qualify the new facility.

3. **Description of the supplies or services required, including an estimated value**

The functional elements to be performed on this contract are the process validation of manufacture and testing of NSIs. No flight hardware is procured on this contract

Estimated cost for the delta qualification is \$400,000.

The proposed period of performance is September 1, 2009 through October 31, 2010.

4. **Statutory authority permitting other than full and open competition**

The statutory authority for this procurement is "Industrial mobilization; engineering, developmental, or research capability; or expert services," pursuant to 10 U.S.C. 2304(c)(3), and implemented by FAR 6.302-3.

5. **Demonstration that the proposed contractor's unique qualifications or the nature of the acquisition requires use of the authority cited**

The statutory authority permitting other than full and open competition is 10 U.S.C. 2304(c)(3). As contemplated by the provisions of FAR 6.302-3, which states, "Industrial mobilization; engineering, developmental, or research capability; or expert services". Goodrich is one of the only two specified and qualified vendors and is one of the only

two off-site vendors to produce this hardware in more than 10 years. The delta qualification effort due to Goodrich's relocation only applies to this specific vendor.

The NASA Standard Initiators were qualified for Human Spaceflight almost 40 years ago and has only been procured from two vendors, Hi-Shear Technology Corporation (HSTC) and Goodrich/UPCO. Currently the only two available sources qualified to produce flight certified NSI per the NASA specification SKB26100066 (Design and Performance Specification for the NASA Standard Initiator) are Goodrich/UPCO in Phoenix, Arizona and Hi-Shear in Torrance, California. It is extremely critical and required by NSTS 08060 to keep at least two qualified vendors for future NSI procurements. The qualification validation of UPCO's NSI production line due to its relocation is a special circumstance and involves only this vendor. UPCO possesses the special tooling, processes and procedures, and personnel necessary to produce and deliver units that meet the demanding requirements of this hardware.

6. **Description of the efforts made to ensure that offers are solicited from as many potential sources as practicable**

A synopsis for this effort was issued on the NASA Acquisition Internet Service on May 5, 2009, to notify industry of this non-competitive action. The synopsis closed on May 19, 2009. No responses were received.

7. **Determination by the Contracting Officer that the anticipated cost to the Government will be fair and reasonable**

Upon approval of this justification, a Request for Proposal will be issued to Goodrich. The proposal will be evaluated and negotiated to obtain a fair and reasonable cost.

8. **Description of the market survey conducted, and the results, or a statement of the reasons a market survey was not conducted**

Market research indicates no other qualified vendors other than Goodrich and Hi-Shear exist. It is in the best interest of the Government to maintain the viability and qualified status of Goodrich/UPCO from a delivery standpoint to assure there is adequate inventory at KSC of this hardware to support the current Shuttle flight schedule and other NASA unmanned missions as well as to provide competitive pricing for future procurement.

9. **Other facts supporting the use of other than full and open competition:**

The purpose of this effort is to maintain a second manufacturer for the NASA Standard Initiator. Previous efforts to qualify a third vendor failed due to the demanding requirements of NSI at -420°F.

10. **The actions the Agency may take to remove or overcome any barriers to competition before any subsequent acquisition for the supplies or services required:**

While NASA will continue to monitor the market place for alternative sources, no other actions are planned. The purpose of this action is to maintain an alternate source in the interest of industrial mobilization.

Title of Procurement: NSI Delta Qualification

Technical Officer:

I certify that the supporting data presented in this justification are accurate and complete.

Keith E. VanTassel, Pyrotechnics Project Manager
for Todd Hinkel

Todd J. Hinkel
Todd J. Hinkel
Group Lead, JSC Pyrotechnics
Energy Conversion Systems Branch / EP3

8/3/9
(Date)

Contracting Officer:

I hereby determine that the anticipated cost to the Government will be fair and reasonable and certify that this justification is accurate and complete to the best of my knowledge and belief.

Ann E. Bronson
Ann E. Bronson
Contracting Officer
Projects Procurement Office

2/16/10
(Date)