



**Statement of Work  
 Laundering and Maintenance of C-3 Cleanroom Garb and Covers  
 LIGO-C1201946-v2**

The following documents are incorporated into and made a part this purchase order. Click on the following LIGO Document Control Center (DCC) links to access these documents or go on line to the LIGO Public DCC at <https://dcc.ligo.org/> to access the DCC#.

**1.0 Terms:**

<u>DCC #</u>	<u>Description</u>
<a href="#">C080185-v1</a>	Laser Interferometer Gravitational Wave Observatory (LIGO) Commercial Items or Services Contract General Provisions California Institute of Technology "Institute", LIGO Rev 11/12/08

**2.0 Quality Control:**

<u>DCC #</u>	<u>Description</u>
<a href="#">Q0900001-v4</a>	Advanced LIGO Supplier Quality Requirements, dated 2/10/10, describes following contractor/supplier QA/QC actions for this procurement:
X 3.1 Pre-Award Inspection	3.9 Discrepant Material Storage
3.2 Supplier In Process Quality Control	X 3.10 Quality Records
3.3 In Process Inspection	3.11 Drawing and Specification Change Control
3.4 Pre-Ship Inspection	3.12 Welding Certification
3.5 Receiving Inspection	3.13 End Item Data Package (including Certifications of Compliance)
3.6 Discrepant Material	4.1 Design Verification
3.7 Material Review Action	4.2 Raw Material Procurement
3.8 Material Review Actions at Contractor	4.3 Traceability of Materials
	4.4 Calibration Program
	4.5 Critical Interface
	4.6 Cleanliness
	4.7 Packaging
	4.8 Storage
	4.9 Transport
	4.10 Customs

For the above list the Supplier shall: 1) Identify the corresponding sections/paragraphs in their existing QA/QC system 2) meet or exceed the requirements contained in the attached documents for each area called out.

LIGO prefers to utilize the vendors existing QA/QC programs to the fullest extent possible consistent with the LIGO QA and QC requirements. All bidders are requested to submit a written description/plan of their existing QA/QC system with their quotes. The bidder must also submit QA/QC plans for managing subcontractor work and materials.

In the event that a prospective contractor lacks an existing quality system, the contractor/vendor shall develop and implement a quality assurance program in compliance with requirements negotiated at contract/PO award.

### 3.0 Scope:

This SOW is for the laundering, maintenance and shipping of the C-3 cleanroom items detailed in this package. These C-3 cleanroom items are required for the installation, commissioning, and operation of the Advanced LIGO upgrade of the Laser Interferometer Gravitational-Wave Observatory (LIGO). LIGO is jointly operated by the California Institute of Technology (CalTech or CIT) and the Massachusetts Institute of Technology (MIT) under a National Science Foundation (NSF) grant and includes two observatories. The LIGO Hanford Observatory (LHO) is located in Richland, a city in south-eastern Washington state. The LIGO Livingston Observatory (LLO) is located near Baton Rouge, Louisiana.

The California Institute of Technology (Caltech) is the Buyer for these services.

The Seller is the successful bidder who is awarded this contract. The Seller is welcome to bid on service for one site or any combination of the four LIGO sites (CIT, LHO, LLO, MIT). Seller should plan on providing weekly laundry service at a minimum of the ISO Class 4 standard and on periodic maintenance of C-3 items under conditions of normal wear-and-tear.

The Seller is bidding on a two (2) year contract for the laundering and maintenance of CIT-owned C-3 cleanroom items including garb and covers.

Bids must include the following:

- Fixed rate for specified service(s) at LIGO site(s) using quantities in Tables 1 and 2
- Separate pricing for weekly laundering service per site with shipping cost broken out
- Separate pricing for weekly laundering service by each garb type
- Separate pricing for weekly laundering service by the pound
- Separate pricing for maintenance services  
(Patching, zipper replacement, snap replacement, etc.)

In addition, proposals must include documentation regarding:

- Location of the Seller's cleaning facility nearest to each LIGO site(s)
- Expected turn-around time
- Process flow of C-3 items from receiving at Seller's facility to shipping to Buyer
- Tracking the quantity of items processed
- Documented cleanliness level of spaces where items are sorted/cleaned/dried/packaged
- Garbing protocols for workers
- Detergents/cleaning agents used
- Packaging methods
- Quality assurance/control methods

**3.1** It is the Seller's responsibility to follow these requirements or to propose alternative options to meet the requirements. All alternate approaches must be approved by the Buyer before use.

### 3.2 Anticipated weekly use

Bids for laundry and maintenance service should be based on the numbers in Tables 1 and 2.

**Table 1-Pricing Tiers by Garb Type**

<b>Bouffant Cap</b>	<b>Frock</b>	<b>Shoe Covers</b>	<b>Hood</b>	<b>Coverall</b>	<b>Boots</b>	<b>In-Chamber Boots</b>
<b>60+</b>	<b>80+</b>	<b>120+</b>	<b>210+</b>	<b>210+</b>	<b>210+</b>	<b>60+</b>
<b>60-40</b>	<b>80-60</b>	<b>120-100</b>	<b>210-190</b>	<b>210-190</b>	<b>210-190</b>	<b>60-40</b>
<b>39-20</b>	<b>59-40</b>	<b>99-80</b>	<b>189-170</b>	<b>189-170</b>	<b>189-170</b>	<b>39-20</b>
<b>19-1</b>	<b>39-20</b>	<b>79-60</b>	<b>169-150</b>	<b>169-150</b>	<b>169-150</b>	<b>19-1</b>
	<b>19-1</b>	<b>59-40</b>	<b>149-130</b>	<b>149-130</b>	<b>149-130</b>	
		<b>39-20</b>	<b>139-120</b>	<b>139-120</b>	<b>139-120</b>	
		<b>19-1</b>	<b>119-100</b>	<b>119-100</b>	<b>119-100</b>	
			<b>99-80</b>	<b>99-80</b>	<b>99-80</b>	
			<b>79-60</b>	<b>79-60</b>	<b>79-60</b>	
			<b>59-40</b>	<b>59-40</b>	<b>59-40</b>	
			<b>39-20</b>	<b>39-20</b>	<b>39-20</b>	
			<b>19-1</b>	<b>19-1</b>	<b>19-1</b>	

CIT-LIGO has various C-3 covers that will require laundering on a sporadic basis.

**Table 2-Pricing Tiers by Cover Type**

<b>BSC Door 68" OD</b>	<b>HAM Door 104"OD</b>	<b>BSC Dome 125" OD</b>	<b>Soft Roof ~12'x13'</b>	<b>Support Tube ~4'x15'</b>	<b>Hose/Tube ~1'x15'</b>	<b>Specialty Various</b>
<b>10+</b>	<b>10+</b>	<b>10+</b>	<b>1</b>	<b>10+</b>	<b>10+</b>	<b>10+</b>
<b>9-5</b>	<b>9-5</b>	<b>9-5</b>		<b>9-5</b>	<b>9-5</b>	<b>9-5</b>
<b>4-1</b>	<b>4-1</b>	<b>4-1</b>		<b>4-1</b>	<b>4-1</b>	<b>4-1</b>

### 4.0 Schedule

- Bids due: COB, Friday, 14 March 2012
- Pre-Award Inspection at vendor laundering facilities closest to Cambridge (Boston) MA, Livingston (Baton Rouge) LA, Pasadena (Los Angeles) CA, and Richland WA: Dates to be determined.
- The contract start date will be the execution of a Caltech Purchase Order Contract to the awarded supplier.

## 5.0 Shipping

Deliveries will be made to:

LIGO Hanford Observatory (LHO)  
Attention: Jodi Fauver  
127124 North Route 10  
Richland, WA 99354

LIGO Livingston Observatory (LLO)  
Attention: Rich Riesen  
19100 LIGO Lane  
Livingston, LA 70754

CIT-LIGO  
Attention: Bob Taylor  
40 meter lab  
306 South Holliston  
Pasadena CA 91125

MIT-LASTI  
Attention: Myron MacInnis  
NW 22-295  
185 Albany Street  
Cambridge MA 02139

The Seller is responsible for providing shipping containers and transportation that protects C-3 items from damage and contamination due to the transportation environment (weather, handling, accidents, etc.). Typically, industrial grade plastic totes are adequate for this purpose.

## 6.0 Bid Evaluation Criteria

Bids will be evaluated according to the following criteria:

- Prior experience
- Facility inspection
- Turn-around time including shipping
- Shipping costs
- Flexibility in pricing