**MUSE Basis of Estimate**

**BC-404 Plastic Scintillators WBS 7**

I. General Information

Task Name: Scintillator Purchase

Unique ID Number

Date of Estimate: 12/19/2015

Estimate Generator: Steffen Strauch

Cost Category:

X M&S

SWF

Comments: Scintillator geometries for TOF wall and veto detector are reasonably well established and price is based on vendor quote. The scintillators for the beam monitor are for a new design and the price is estimated from similar items.

Vendor Quote Number if Applicable: Saint Gobain, QUO-41709-Z2C2Z8 (11/20/2015)

Drawing Reference Number or Attachment:

Costing Method: Vendor quote

Total Task Cost: $104,846

Total Contingency: $10,097

II. Cost Estimate Breakdown

Cost of each element, along with justification

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Item | QTY | Description | Unit Price USD | Total Price USD |
| 1 | 36 | BC-404, 3 cm x 6 cm x 120 cm | $590 | $21,240 |
| 2 | 56 | BC-404, 6 cm x 6 cm x 220 cm | $1,262 | $70,672 |
| 4 | 8 | BC-404, Wedge 6 cm x 10 cm | $196 | $1,568 |
| 5 | 2 | BC-404, 5 cm x 5 cm x 20 cm | $300 | $600 |
| 6 | 15 | BC-404, 1.2 cm x 0.3 cm x 20 cm | $200 | $3,000 |
| 5 |  | 8% SC Tax |  | $7,766 |
|  |  | **Total** |  | **$104,846** |

Scintillator items 1-2 are for the two TOF walls, item 4 is for the veto detector and items 5-6 are for the beam monitor.

III. Contingency and risk analysis

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Item | Technical | Design | Cost | Schedule | Contingency |
| BC404 for TOF walls and veto | 1 | 0 | 1 | 6 | 9% |
| BC404 for beam monitor | 4 | 4 | 4 | 6 | 26% |

IV. Time Estimates and contingency on time

Time estimate is (optimistic+pessimistic+4\*most-likely)/6.

Sigma is (pessimistic-optimistic)/6.

Be sure to indicate if work days or calendar days.



Comments: Time estimate based on manufacturers estimated lead-time of 8 – 10 weeks after receipt of order.

