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MDA H

Wear, Benjamin, NMENV

From: Rice, William J [wjrice@lanl.gov]
Sent: Tuesday, October 04, 2011 4:55 PM
To: Wear, Benjamin, NMENV
Cc: Cobrain, Dave, NMENV; Worth, Edwin; Goldberg, Mitchell S
Subject: RE: Cost Questions
Attachments: Email response for NMED_10-4-2011.pdf

Ben

I have attached a response to your questions on the cost estimates for the TA54 CMEs. Hopefully this provides the information that you are needing, but if not, please do not hesitate to let us know.

Also, Mitch Goldberg (Goldberg@lanl.gov and 505.231.8779) will be taking over as the project lead for the TA54 MDAs, therefore please include Mitch on all future comments or questions.

Thanks.

Jarrett Rice
wjrice@lanl.gov
 phone: (505) 665-3874
 cell: (505) 500-5673

From: Wear, Benjamin, NMENV [<mailto:Benjamin.Wear@state.nm.us>]
Sent: Thursday, September 29, 2011 10:19 AM
To: Rice, William J
Cc: Cobrain, Dave, NMENV
Subject: RE: Cost Questions

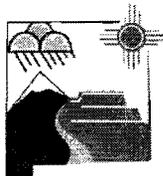
Jarrett,

Sorry I missed your call.

NMED needs a written explanation regarding these taxes so that we do not misinterpret anything, as can easily happen from phone conversations or meetings. Please provide a written explanation of the taxes, as well as more information on the "labor factor" applied.

Thanks,

NMED
 New Mexico
 Environment
 Department



Ben Wear
 Hazardous Waste Bureau
 2905 Rodeo Park Dr. East Bldg. 1
 Santa Fe, NM 87505
 (505) 476-6041

From: Wear, Benjamin, NMENV
Sent: Wednesday, September 28, 2011 5:17 PM
To: Jarrett Rice



Cc: Cobrain, Dave
Subject: Cost Questions

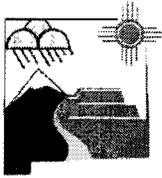
Hi Jarrett,

In reviewing the TA-54 CMEs and looking over the cost estimates, we were wondering if you could provide an explanation of the applicable taxes. We understand the NMGRT, but are wondering about the G&A tax, infrastructure tax and the AD tax.

We may have other questions in the future, but explanations of the above will help with our evaluation.

Thanks,

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Mexico
Environment
Department



Ben Wear
Hazardous Waste Bureau
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Ben Wear
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2905 Rodeo Park Dr. East Bldg. 1
Santa Fe, NM 87505
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Response:

The taxes you reference are not taxes, but the indirect costs (burdens) assigned to direct costs incurred at LANL. These costs are governed by LANL's Cost Accounting Disclosure Statement that approved by NNSA. Indirect Costs are charged to an overhead pool and then distributed to direct projects based upon a proration or customer usage. Overhead pools include: organizational or Associate Directorate (AD) support; infrastructure support; and general and administrative (G&A) support.

AD Support: Cost incurred for management of a directorate (management/administration, training, distributed support staff (financial office, procurement, safety and health, property services, security, human resources, etc.).

Infrastructure Support: institutional facilities, utilities, communication/networks, roads/grounds, phones, etc.

G&A: Director & Offices (Legal, Ethics/Audits, Government Affairs, Prime Contract Office, Community Affairs, Chief Information Office, Operations (emergency management, etc.), Laboratory Directed Research & Development.

Labor Factor - The rough-order-magnitude (ROM) level Labor Factor is a parametric used to account for site specific labor needs. A calculator is used to weigh specific elements of field work to account for the additional time needed to institute those activities. Weighting is based on historical data and activities

include items such as craft availability, weather conditions, types of schedules worked (2nd/3rd shifts), proximity to material storage areas, job site congestion, and security and OSHA requirements. A labor factor is applied to the direct construction job hours as a percentage of additional time needed to fulfill the site specific needs of the project. For example, a labor factor of 1 is for an experienced craft to perform their work within a workshop. To perform that work elsewhere would require additional time to travel, setup, perform work with whatever restrictions there are, then return and close out for the day. A factor of 1.82 states that 82% more hours will be needed to work at the specific site and to fulfill the compliance needs to work at that site. A 1 hour job (within the confines of a workshop) will now take 1.82 hours to perform at that site.

For the TA-54 CMEs, the labor factor allocates additional labor hours for TA-54's location (drive time, entrance requirements), outdoor working conditions (temperature, wind/dust/mud/snow), potential safety hazards (ventilation, fire hazards, jobsite congestion, and fall protection in the case of deep excavation), and some respirator use. The labor factor is calculated, but the basis is from historical costs. The intention is that, at the ROM level, there is a large amount of uncertainty, and this is an effort (similar to craft distributions) to account for specific labor needs regarding the specific site where the work will be performed.

the posts, and mix and place concrete and also includes any equipment costs for performing the excavation.

A labor factor was used to increase the project cost on labor because of the remote location of the site or for additional rigor for a site. The basic estimating units generally reflect a normal standard for construction costs. Many special work situations and job conditions may require additional material or labor work hours. The quantities used here are for estimating purposes only and vary slightly from quantities stated within the waste inventory, section 2.3. The actual design and operations costs will vary from these estimates when the corrective measure implementation (CMI) is completed.

F-2.1 Capital Costs

Capital costs include both direct and indirect costs. The capital costs consist of construction and installation costs; equipment costs; land development costs; distributables; and indirect costs, including engineering design costs, legal fees, permitting fees, professional management startup and shakedown costs, and contingency allowances. Detailed estimates of capital costs in calendar year 2010 dollars are provided below and in section 8 tables of the CME report.

The distributable costs include Field Non-Manual, which is calculated as 20% of direct capital labor hours; Craft Distributable–Labor, which is calculated as 25% of direct capital labor hours; and Craft Distributable–Materials, which in this estimate include a \$7 per direct job hour cost to account for the nonlabor costs associated with temporary utilities/services, small tools, consumables, construction equipment not specifically identified in direct work line items, and training costs. For example,

Site Fencing Labor Hours (220) + RCRA Cover Labor Hours (3098) * 20% = 664 hr of Field Non-Manual

Site Fencing Labor Hours (220) + RCRA Cover Labor Hours (3098) = 3,318 hours * 25% = 829 hr of Craft Distributable–Labor

Site Fencing Labor Hours (220) + RCRA Cover Labor Hours (3098) = 3,318 hours * 25% = 829 hr * \$7/hr = \$5,803 which is then burdened with applicable taxes including, NMGRT, G&A, Infrastructure, and AD Support Taxes for a Total Craft Distributable–Material Cost of \$9,929.

The design costs were calculated as 16% of the total direct capital costs. For example,

Site Fence Total (\$77,398) + RCRA Cover Total (\$846,585) + Distributable Total (\$150,751) = \$1,074,734 * 16% = \$171,957 which is then burdened with applicable taxes including, NMGRT, G&A, Infrastructure, and AD Support Taxes for a Total Design Cost of \$250,352.

The professional management costs were calculated as 26% of the total direct capital costs and design. For example,

Site Fence Total (\$77,398) + RCRA Cover Total (\$846,585) + Distributable Total (\$150,751) + Design Total (\$250,352) = \$1,325,086 * 26% = \$344,522 which is then burdened with applicable taxes including, NMGRT, G&A, Infrastructure, and AD Support Taxes for a Total Professional Management Cost of \$754,892.

F-2.4 General Assumptions

The estimates are based on an 8-h work day and 5-d work week. No overtime is included. On-site activities will be conducted under Hazardous Waste Operations and Emergency Response requirements. Safety levels are based on the Occupational Safety and Health Administration regulations in 29 Code of Federal Regulations Part 1910. Most activities are set to safety level D. All appropriate site-related plans (e.g., general safety plan, quality assurance plan, waste management plan, work plan, hoisting and rigging plan, and health and safety plan) will be prepared and submitted by the subcontractor. All plans will be reviewed and approved by the Laboratory as necessary so as not to adversely impact the project schedule.

Labor rates, waste disposal rates, and material pricing were based on 2010 RS Means rates.

The burdens included NMGR applied to total costs at a defined recovery rate of 5.5%, G&A at 38%, Infrastructure at 21.5%, and AD support at 29%.

The project was assumed to be a DOE On-Site not DP project and escalation was not accounted for.

Attachment F-1 is the detailed cost assembly report for the estimates described below.

F-3.0 MDA H ALTERNATIVES

Three corrective measures alternatives, plus the no action alternative, are described below.

F-3.1 Alternative 1: No Action

This alternative involves leaving the site as is. No costs are involved with this alternative.

F-3.2 Alternative 2A: Multilayer Cover and Institutional Controls

This technology includes the following tasks:

- site preparation of the existing soil surface and installation of a multilayer cover (Resource Conservation and Recovery Act [RCRA] Subtitle C cover) over the shafts
- maintenance of the cover and institutional controls for 100 yr
- preparation of an annual long-term monitoring report for 100 yr

F-3.2.1 Assumptions

The following assumptions were used to develop the cost estimate for this technology:

- Area to be covered by the multilayer (RCRA) cover is 0.60 acres.
- Fencing around the site will total 700 ft.
- Construction of the multilayer (RCRA) cover will consist of
 - ❖ site preparation of the existing soil surface and cover preparation, which includes 3 ft of operational cover above the waste material;
 - ❖ a 2-ft layer of compacted natural or amended soil with a maximum saturated hydraulic conductivity of 1×10^{-7} cm/s;