

APF Dome Shipping 3/10/05

Present: Donna, Saladin, Myra, Jennifer, Roe, Matt, Deb

Brief rundown of dome construction in Australia.

6 containers: 3 - 40' (8 ft tall) and 3 - high cubes (10.6 ft tall).

To truck up Mt.: Short tractors, sliding wheels. Deb checked, Matson has got.

If parts don't fit together – how do we determine if something happened during shipping or a result of poor construction? EOS performs test fits in yard. Now, they are doing test fitting in factory, and in yard. Matt confident that these problems won't occur.

Painted steel assemblies. Containers will be packed, but some shifting may occur. Very robust parts mean that even shifting will likely cause not damage. Fiberglass not packed with steel parts.

EOS – responsible for getting containers to port at Sydney. Trucking and insurance.

We take ownership in Sydney: sea shipping, insurance, and trucking to Mt. Ham.

If there is a time lag btwn arrival and assembly – open containers right away to check for damage.

Do we have verbal recommendation from anyone who has received a dome from EOS?

No, not per se. But the re-construction of the dome after Stromlo fire with identical parts was a strong recommendation.

Shipment is duty free – dome is owned by USNO. Proper paperwork very, very important so shipment doesn't get held up at customs. Good customs agent and freight forwarder, plus marine surveying person in Australia, of utmost importance.

Secondary mirror in France – EOST responsible for shipping, but be aware of possible problems in customs.

David Ng – knows of specified freight forwarder. He should come to the next meeting.

Values:

\$4 million telescope. To replace: \$5-6 million.

\$1.85 million for dome. Same replacement cost.

Designated person will do marine surveying and certificates for us. Mark Elfick at EOS is point person. 61-2-6222-7950.

Timing. Advance notice. Routing. These are all essential to find out about.

Containers owned by EOS – they are responsible for their fate after emptied. Mt Hamilton use? Packing materials: wood and steel braces. Will be easy to get rid of. Will we own scrap steel? Contract says they will clean up their mess, so they probably own all packing materials, but if we can use, may be happy for us to keep and dispose of as we will. Deb/Matt will find out.

Ready to assemble when they arrive? Depends on contractor. Matt reviewing site evaluation, 2 weeks to getting RFB out. 2 months after that to choose contractor and begin work.

Containers will be stored at periphery of helipad, fenced and gated. Locked containers. 1-3 months. Insurance will disengage at that point.  
Rotor wash, etc.: make sure ground conditions are favorable w/FAA. The helipad area is quite huge, and should present no problems, containers will be well out of the way.

When is date going to be solid? (For locking policy.) How much advance notice? For insurance, 3-4 weeks. 1-2 weeks of overhead to get on ship. We will notify Saladin as soon as we have a solid idea of shipping date.

Loaded weight? 16 tons approx per container.  
Value: approx equal per container? Evenly divided, probably – will ask EOS.  
Road to Mt. Ham bear weight? 80,000lbs is limit. Deb will make sure, but it shouldn't be a problem.  
Might be able to get away with small crane. Matt checking w/King and Peninsula.  
Crane company will have their own insurance.

16 week construction phase. Lick personnel will support. Insurance issues with rented equipment? We will assume liability, but we will not sign standard form re indemnity (purchasing, Roe and Donna).

Does EOS prefer to market an assembly service? They have such a service, but complicated re labor and who is responsible for what. US vs. Australian labor laws? Decided against.

Specialty research equipment, not building, so make it all easier on us re: regulatory hassles.

Matt would be only person traveling to Australia to observe loading of containers. But he is hoping to avoid that. Trusts that EOS knows its business; plus having a marine surveyor there is key.

For insurance, name: APF Enclosure  
Matt email 5 photos to Jennifer. This will be good for underwriters in London. 1 inside containers, 1 finished dome, 1 partly under construction, 1 partly loaded.

Panels fiberglass, frame steel. Some aluminum. Electronics – air ship or in Pelican watertight cases in fiberglass container. 19” x 26” x 6’ rack. Pack individual components in cases. 30-40K for electronics. Insurance may have preference for air shipping. DHL 2-day. Marine survey, manuals, software – all via DHL/Fed Ex.

Insurance re flatbed truck, operator and damage to dome components. Mt Ham is UC property. Limit re: value on that policy? Make sure all rules apply to this shipment.

Shipping of pieces to Lick – flatbed w/small crane on site during receiving.

Spectrograph – we ship, self-insured. \$1.8 million. Worth more now, glass from Germany, Japan, costs up.\$2.1 million now.

EOST – responsible for getting mirror to us for testing. \$60-70K. We measure, then ship to coating facility or EOST in AZ.