

10/06/19 - UTEAP Game Plan

Attendees: Marc Wasserman, Mathleen, Cory, Teresa, Mike, Risto

Meeting Goal:

- Continue developing Budget (DUE AT THE END OF THIS WEEK)
- Develop WBS for LFETS (Risto)
- Continue revising UTEAP proposals (All LFETS)
- Joining forces with TSAR to figure out how to make sure our tasks/equipment are aligned

NOTES:

- **NEXT STEPS**
 - Refine UTEAP proposals (Cory, Teresa, Marc, Mike)
 - Be sure to make a timeline (look at TSAR 2019/2020 proposal as reference, and former LFETS proposal as reference)
 - Include Base 11 Challenge timeline as well (Nov - March)
 - Make unicorn budgets
 - What tools/materials do we need
 - Check in with Andrew about clarity on pre-made budgets from last year
 - Figure what needs to get done
 - Who do we need to talk to
 - Eric Thomas: What the latest design was for the engine
 - Jacob Tiller: Where is he on redesign for the pintle injector
 - PI Letter Confirmation

9/29/19 - UTEAP Game Plan

Attendees: Marc Wasserman, Mathleen, Cory, Teresa

Meeting Goal:

Set up a road map for getting proposal things done

NOTES:

Roadmap

- Week of Sep 30th (DUE SUNDAY OCTOBER 6th)
 - Teams together
 - PIs agree to be PIs
 - Preliminary budgets
 - Resumes
 - Team listing
 - Proposal outlined rough draft
 - Review LFE/TS technical elements for accuracy in proposals
 - Figure out weekly LFETS meetings
- Week of October 7th
 - Budgets finalized and to the DRAs
 - Letters of support done
- Week of October 14th
 - Final reports
 - Friday October 18th: Proposals due, sent by DRAs (NOT US!)

November 1, 2019: We hear back

8/20/19 - Jacob Tiller Braindump

Attendees: Marc Wasserman, Jacob Tiller

Meeting Goal:

Ask Jacob a bunch of question about where stuff is and who is working on it.

NOTES:

- Where stuff is?
 - Fuel side tubing is on bottom 2 shelves of wire racks along with tanks
 - Should be able to put back together using PID diagram
 - Stand
 - Julio has it
 - Jacob's notes: don't bother updating the CAD for the stand
 - Do keep PID updated with hardware changes
- TSAR
 - Is a thing
- Bert
 - Has Jacob's brother's contact info
 - Supposed to take charge of getting the last 2 done
 - Ordering new pressurant valves (expensive)
 - Miscellaneous fittings
- Jacob's brother
 - Has most of the tubes done
 - There are 2 tubes that need to be redone
- Julio
 - Doing blast plate & structure
- Eric Thomas
 - Engine, injector
- Adam
 - Injector
 - Sam Hasinghouse? Did some research on why or why not to do pyrotechnic igniter

Questions:

- Is dirt OK?
 - Yes, as far as Jacob knows
- Getting gases/liquids?
 - Julio can help
- Liquid N2/LOX
 - Commercial gas supply companies
 - See what the lowest quantity available is
 - PSU safety requirements for transporting LOX/LN2
- Is there insurance?
 - Yes, as part of base11
 - May need to submit some paperwork to Base11 ahead of static fire (talk to Risto)

To Do (mostly Marc, for now):

- ✓ Ask Risto about how insurance works + Base11 deadlines & paperwork around static fire
- ✓ Ask Bert to contact Jacob's brother (or get info) + need to circle back on what happened to the valves order from beginning of summer
- ✓ Follow up with Eric Thomas about how to support him on engine design for interim heat sink engine
- ✓ Ask Darshanika if she has updates/clarity on Evergreen site for testing
- ❑ Need to write procedures for test stand testing + MFV testing
- ❑ Figure out when test stand will be welded up & schedule time to do assembly
- ❑ Research how to LOX clean parts (check back with Jacob later on this)
- ❑ Start up a project tracker
- ❑ Set up reoccurring LFETS meetings
- ❑ Recruiting!

YYYY-MM-DD (Heading 1)

Attendees:

Agenda

Local ToC

Meating Notes

Meeting about what to have on meeting notes

UTEAP meeting time

Integration with Ecosystem Client

Updates

- Parts Orders
 - Budget items
 - Hardware order and cost estimates up
 - EH40 valves (\$2355)
 - Engine hardware needs identified (NPT sizes specifically)
 - If all ½" then: [AN816-8D](#) for fuel and [SS-2404-08-08](#) for LOX

Action items

2019-07-06

Attendees: Jacob, Markus, Maynard

Jitsi: Bert, Risto

Agenda

Test Stand Status:

- Igniter
- Main Propellant Valves
- Engine
- Injector
 - Final design integration with engine
 - manufacturing
- Stand Construction
 - Pipes
 - Valves and parts
- Location
 - Where
 - etc

Work Plan

Whose doing what?

Meeting Notes

Test Stand Status:

- Igniter
 - Discuss with Adam
 - Tuesday?
- Main Propellant Valves
 - Rough manufacture of LOX Bracket
 - 2 piece of design
 - Some holes need to be drilled, fine tuning
 - Test the valves
 - Need to attach the sensors
 - Mounting magnet to the end of the shaft
 - LOX valve bracket
 - Write test plan

- Cycle the valves
 - Crack, open, shut
 - Pressure test
 - 1000 psi pressure test
 - Cryo test
 - Need arduino code help for valve positions
 - Bert to assist
- Injector
 - Final design integration with engine
 - Jacob and MEric to work together on Tuesday afternoon for design
 - Manufacturing
 - Need to finalize the design and then send out for manufacturing
- Stand Construction
 - Pipes
 - Going to Jacob's brother
 - Bert to help so Jacob doesn't forget anything
 - Valves and parts
 - Either 1xEH30 and 2xEH40 or 3xEH40, 200\$ difference
 - Will change the tubing layout as they introduce a new 90 degree elbow and offset
 - HPRV's are in
 - How hold nitrogen
 - Installing electrical, TSAR
 - Assembly
 - Blast shield, installing thrust plate (Julio)w
 - Plumbing through shield to plate
 - Might need hardware
 - Expanded PTFE and Al foil insulation
- Location
 - Where
 - etc

Work Plan

Whose doing what?

- Jacob:
 - Work with MEric on Injector and Engine interface and design
 - Take Pipe and fittings to brother
 - Coordinate with TSAR on what they have left

- Marc W.
 - Main Propellant Valves:
 - Finish building
 - Testing
- Bert
 - Quote for valves (Tuesday)
 - PTFE quotes (Tuesday)
 - Fittings quotes (first part on tuesday)
 - Build in stuff for the stand
- Risto
 - Talk to project management student

Updates

Action items

- Review these two docs Wednesday @6:30pm
 - **Hot Fire States Doc**
 - <https://docs.google.com/document/d/13SPINZAvGmTZ4O5FgD7hcwBWz4BpSVdIIW04iZIShIU/edit?usp=sharing>
 - **Valve State Spreadsheet**
 - <https://docs.google.com/spreadsheets/d/1QqkSXnuAoU5UN6OuNEzDhb nVPEhBth2woa4ExyKV2DM/edit?usp=sharing>
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