

## SmERT

### Week 1 Team/Client Meeting Agenda

6/24/2014  
Tuesday, 11:30 A.M.  
Senior Design Suite

#### Discussion Points

- Specific project goals: what *must* be completed
- Obtain contacts from manufacturers for machines
- Shop key
- Timeline/schedule: dates for specific goals
- Secondary goals: what should be completed if time remains
- Review team contract
- Other information/resources/manuals for machines

#### Action Items to Be Reviewed

- N/A

## SmERT

### Week 1 Team/Client Meeting Minutes

6/24/2014  
Tuesday, 11:30 A.M.  
Senior Design Suite

- Dr Cordon will provide
  - Receipts for all bottles
  - List of the bottles needed
  - List of current bottles in SmERF
  - Contact information for current gas bottle provider
  - Any user information for the black tower (CIA Machine)
  - Request a shop key for SmERF
- Budget around a few thousand
  - Will depend on cost for purchasing bottles
  - We need to come up with price estimates for purchasing bottles
- Layout of SmERF
  - Black tower will need to be mobile along with gas bottles
- Actions to be completed by end of summer
  - Design and build a cart for the gas bottles
  - Detailed design review containing projected costs, and plans for the project moving forward
- We need to look into OSHA regulations pertaining to gas bottles

#### Projects:

1. CIA Machine
  - a. Get it ready for use by December
  - b. Cart for gas bottles
  - c. Get correct gas bottles and fittings
  - d. Pull out CO analyzer and send it back to get fixed
  - e. Detailed Design review with costs and plans
2. Ford Equipment
  - a. Get it up and running
3. Work on other projects in the SmERF

## SmERT

### Week 2 Team/Client Meeting Agenda

7/1/2014

Tuesday, 11:30 A.M.

Senior Design Suite

#### Discussion Points

- Where have you been? -Pete
- Who to contact about purchasing OSHA regulations on gas bottles, unless we have it already
- Make\review project goals
- Specs to reach goals
- Oxarc contact\receipts for rentals. Should we buy instead?
- Discuss new action items
- Snapshot day
- Current Oxarc receipt

#### Action Items to Be Reviewed

- Contacting CAI sales rep
- OSHA regulations on gas bottles
- Inventory gases

## SmERT

### Week 2 Team/Client Meeting Minutes

7/1/2014

Tuesday, 11:30 A.M.

Senior Design Suite and SmERF

- Environmental Health and Safety (EHS)
  - They have OSHA regulations information
  - We need to contact them
    - Explain to them what we are doing
    - Ask about making a cart
- Oxarc Contact is Rob or the branch manager 208-743-6571
- Oxarc Receipts
  - Talk to Debbie Foster
    - She is the account tech for NIAD
- Additional bottles are in the SmERFet which is next to SmERF
- Snapshot Day
  - Copy items from our logbooks
  - Provide specs from EHS for cart
- Need proper regulators
  - Inventory all regulators and fittings
  - Check that fittings are on proper bottles
- Create abbreviated instructions sheet for black tower
- Goal – have cart built by end of summer
  - EHS specs
- Dr. Cordon
  - Email Oxarc about bottles
    - Cc us to take over communications
  - Email Debbie Foster

#### Projects:

1. Determine prices to purchase bottles
2. Figure out regulators
3. Create instructions for black tower

## SmERT

### Week 3 Team/Client Meeting Agenda

7/8/2014

Tuesday, 11:30 A.M.

Senior Design Suite

Note: Kyle will be attending wiki meeting, Jake will take meeting minutes

#### Discussion Points

- When do we get logbooks and portfolio back
- EHS regulations
- Cart specifications\design ideas
  - Can cart be stationary?
  - Extruded T- slot
- Can we test tower without the CO analyzer

#### Action Items to Be Reviewed

- Snapshot

## SmERT

### Week 3 Team/Client Meeting Minutes

7/8/2014

Tuesday, 11:30 A.M.

Senior Design Suite and SmERF

- Cart needs to be mobile to be used in other engine bays
- If we use t-slot tubes we need to be able to push on the bottom of the cart to avoid the cart twisting

#### Projects:

1. Give logbook to DR Cordon next Tuesday 7/15
2. Learn about CAI Tower
3. Cart design next Tuesday
4. Design Review
  - a. Conceptual
  - b. Power Point
5. Milestones and Deliverables
  - a. Cart design
  - b. Bottles and new ones (Buy vs Rent)
  - c. Regulators
  - d. Users Guide
  - e. Ideas for projects after CAI Tower

## SmERT

### Week 4 Team/Client Meeting Agenda

7/15/2014  
Tuesday, 11:30 A.M.  
Senior Design Suite

#### Discussion Points

- Schedule Time for Design review
- Discuss cart design sketches
- Discuss Milestones
- Ask about next project options
  - Dyno
  - Fuel cart project finish
- Shop Layout- Where do you want the Tower and bottles to go?
- Cart Budget

#### Action Items to Be Reviewed

- Go over cart specifications
- Show list of bottles

## SmERT

### Week 4 Team/Client Meeting Minutes

7/15/2014

Tuesday, 11:30 A.M.

Senior Design Suite and SmERF

- Design Review
  - Scheduled for July 29<sup>th</sup> at 11:30am in mindworks
  - Have a CAD model of the cart
- Cart design notes
  - Make cart that holds 10 gas bottles
  - Use 4 360 degree casters
  - Can bring the welder to the SmERF when we build cart
  - Can use the paint booth on the cart
  - Try to make it fit between wall and paint booth
  - Put a master lock on the bottom gates
  - Make the specifications measureable
    - Musts and should
    - Rank priorities
  - Consider which direction regulators will point
  - What to do with hoses
  - Possibly make inserts for different bottle base diameters
  - Stagger the bottles
    - Try to make it easy to see all regulators from one side
- Reference guides
  - Make them iteratively as the tower comes online
  - Guides on how to use calibration
  - Guides on how to use gas divider
- Budget
  - Design cart to cost around \$800 max
  - Casters will be expensive
    - Worth paying more on casters so they roll nicely
  - Steel can be purchased from facilities
    - FAX900
    - Activity Code CORDFA
    - Get a receipt
    - Let Molly know about purchase
      - Give Molly an estimate of the cost
    - Make sure facilities has activity code



Projects:

- Ask CAI if we will use any of the calibration gases faster than the others?
- 2<sup>nd</sup> project can be related to engine testing, and making a new engine stand possibly
- Call Oxarc and Norco to get quotes on renting and purchasing bottles
  - Ask about getting all the same size bottles
  - Want the nitrogen bottle to be as large as possible

## SmERT

### Week 5 Team/Client Meeting Agenda

7/22/2014

Tuesday, 11:30 A.M.

Senior Design Suite

#### Discussion Points

- Cart ideas/CAD models
- Cart specifications list
- Norco quote status
- Oxarc quote status
- What size gas bottles to use
- What is the span for NOx analyzer (need to know which concentration of NO to order)

## SmERT

### Week 5 Team/Client Meeting Minutes

7/22/2014

Tuesday, 11:30 A.M.

Senior Design Suite and SmERF

- Cart design notes
  - 2 swivel casters and 2 fixed casters
    - All locking
    - 8 inch caster wheels (height of casters 9.5 inches)
    - Plate mounting casters
  - Add gate only if it fits the design well (low priority)
  - Possibly add an x-brace down middle of cart
- Client approved design, the next step is to show it to E.H.S for their approval at this stage
- Gas quote status
  - Purity of oxygen is 99.993% compressed oxygen
  - Size
    - May be limited to what companies are legally allowed to ship
    - Ask CAI for recommendations for sizes
    - Want as much FID and Nitrogen as possible

#### Projects:

- Get initial approval from E.H.S on our cart design

## SmERT

### Week 6 Team/Client Meeting Agenda

7/29/2014  
Tuesday, 11:30 A.M.  
Senior Design Suite

#### Discussion Points

- Design Review Power Point Slide Questions
  - Project needs
  - Constraints
  - Deliverables (Design Task?)
  - CO Analyzer Slide
  - Project Learning Slide
  - Risks and Problems
- When are the other presentations
  - Where are they posted
  - How many do we need to attend
- Logbooks and portfolio

#### Action Items to Be Reviewed

- Oxarc quote status
- Norco quote status

## SmERT

### Week 6 Team/Client Meeting Minutes

7/29/2014

Tuesday, 11:30 A.M.

Senior Design Suite and SmERF

- Design Review on 7/31/14, at 11:30 am in Mindworks
- Other team design review times
  - Vision Quest 8/8/2014, at 12:00 pm in EP 324A
  - Hybrid sometime during week of 8/4-8/8/2014
- Turn in logbooks 7/31/2014, right after design review
- Design review presentation
  - Needs slide
    - Explain that this project is an improvement in infrastructure
    - Address the problem statement
  - Constraints Slide
    - Talk about the budget
    - Time frame to complete project
    - Resources to complete project
    - EHS approval
  - CO Analyzer slide
    - Talk about any troubles that may occur when trying to get it running
  - Project learning slide
    - Talk about information that was new to our team
    - What we have learned about the CAI tower (what it does, how its used, EHS regulations)
  - Risks and problems slide
    - Mention that we are still waiting on quotes from oxarc
    - Lack of documentation for the CAI tower
- Possibly phone conference with CAI to get some training on how to use the tower
- Gas Status
  - We are waiting for Oxarc to send us a quote
  - Waiting for CAI to tell us about Vehicle grade nitrogen
  - We have a quote from Norco

## SmERT

### Design Review Notes

7/31/2014  
Thursday, 11:30 A.M.  
Idea Works

- Competitor Cart capacity limiting factor?
  - Casters or cart design
- What are our bottle weights exactly?
  - Can we get away with modifying a cart that already exists?
- Look into non-mobile stands (~\$200 used), and pallet jack (\$179) to move stand
- Make a how to guide for loading and unloading Cart concept
- Perform an impact analysis for cart coming to an abrupt stop
- Confirm that casters can handle concrete and asphalt
  - What is the best coating for this
- 1/8" straps welded across cart concept three to help with deflection
- Add a bar underneath the cart to help if cart is ever moved with a fork lift
- Possibly use a bigger tube with thinner walls to achieve the same strength?
- Purchase existing cart and modify it to hold two more bottles on the front above the casters
- We can keep the correct bottles from oxarc and get new bottles from norco
- If we purchase a bottle it is called a customer owned tank and it can be refilled by anyone
  - Ask Norco how customer owned bottles are refilled?
- Ask Norco and oxarc about the turnaround for the specialty gases?
- Call Oxarc and tell them we want to return bottles, ask about the status of the quote
  - This may get oxarc to finally give us the quote
- Determine the rental charge vs the time to use up bottles
  - Decide which bottles are worth buying and which ones should be rented
- If cart can hold ten bottles add an extra FID bottle?
- Do we have to have straps or can we use chains to hold bottles?
  - Compliance issues
  - Talk to EHS about this
- When we make instruction manuals, talk about the removal of the regulators
  - Indicate where regulators go
- Ask CAI if we can mix gases in cylinders
- Design Review PowerPoint slide 6
  - Ask about combining bottles
  - Send back 4 bottles
    - FID Mix 40% H2/60% N2 (there are two of these bottles)
    - 90ppm C3H8 (propane) balance N2
    - 4500ppm CO 21% O2 Bal N2 (send back if CAI says it won't work with the new range)

- Ask CAI about 4500ppm CO 21% O2 Bal N2, is it good with the new range?

## SmERT

### Week 7 Team/Client Meeting Agenda

8/4/2014

Tuesday, 11:30 A.M.

Senior Design Suite

#### Discussion Points

- Oxarc
  - If Oxarc won't pick them up until next week, should we wait until next semester?
- Order gases from NORCO
  - How do we pay for them?
- Review decision matrix
  - Weighting of categories
  - Final cart decision
- Is there anything else we need to do before the end of the semester
- What to do when CO Analyzer comes in?

#### Action Items to Be Reviewed

- Discuss presentation notes



## SmERT

### Week 7 Team/Client Meeting Minutes

8/5/2014

Tuesday, 11:30 A.M.

Senior Design Suite and SmERF

- Ordering bottles
  - Will go through Debbie at NIATT
  - Talk to Norco to see if they can just bill the department or if we need to come with a credit card
  - Purchase the tanks and gas from Norco
- Returning bottles
  - Schedule a time with Oxarc to have them pick up the bottles
  - If they cant do it this week then just do it when fall semester begins
- Weighting bottles
  - The steam plant has a scale
  - Need to contact Scot about using scale
- Decision Matrix
  - Weighting of categories was approved by client
  - Consider convenience in the easy to use category
  - Effect on timeline is included in the labor category
- Because our project is infrastructure getting the CAI tower running is number one priority, everything else is secondary
- Pallet Jack discussion
  - You usually can pick type of material for tires
  - Can be tough to move if there is any gravel, this needs to be considered because SmERF is right next to gravel parking lot
  - Pallet Jack would spend most of its time in the machine shop, so it might be inconvenient when it is needed in the SmERF
- Buy existing cart and modify it
  - Add larger caster and spacers to increase ground clearance so that it will be fork lift compatible
  - Casters are the limiting factor for existing carts
- Combining gases
  - Talk with suppliers about combining gases, can we achieve the proper ranges?
- Put eight bottles on a cart and have the ninth bottle sit along the wall by the analyzer?
- Regulators
  - Want pressure type
  - Some regulators are for corrosive gases and others aren't, so we need to figure out which regulator goes with which cylinder
  - Label the regulators so they are put on the correct cylinders

## SmERT

### Week 8 Team/Client Meeting Agenda

9/8/2014

Monday, 3:30 P.M.

Senior Design Suite

#### Discussion Points

- Status of CO Analyzer
  - RGA form costs
  - How do we pay for it
- Oxarc Quote
  - Still waiting
- MECO Cart and modify
- Data on bottle weights and diameters
- Waiting on oxarc to pick up bottles
- Ordering bottles
- Figure out team client meeting time
  - Where is Phil?

## SmERT

### Week 8 Team/Client Meeting Minutes

9/8/2014

Monday, 3:30 P.M.

Senior Design Suite and SmERF

- Mentor status
  - Phil isn't in the program, Dr. Cordon will look for a mentor to supervise any work we need done
- Next project options
  - Ford equipment
  - Toyota 3sGTE engine
    - Get a water brake up and running for the dyno
    - Create tutorials on how to use it
    - Possibly add a standalone computer for the engine
  - Gas turbine
- Instructor team meeting time confirmed for Monday at 3:30pm

#### Projects:

- Talk to Pete at CAI about charges for CO Analyzer being waved
  - Get a new quote
- Send Dr. Cordon information about cart
- Call oxarc to have bottles returned
- Ask Norco about lead times for bottles

## SmERT

### Week 9 Team/Client Meeting Agenda

9/15/2014

Monday, 3:30 P.M.

Senior Design Suite

#### Discussion Points

- Status of Meco cart
- Gas cylinder funding status
- Oxarc pick up
  - Wednesday or Thursday
- Second project decision
  - R-6 Motor rebuild and test
    - Rory says it needs \$500, is this an option
  - Gas Turbine
  - Water Brake
  - Ford equipment
- CAI Bill status (CO Analyzer)
- Lead times for NORCO gas cylinders
- Review timeline changes
- Mentor status

## SmERT

### Week 9 Team/Client Meeting Minutes

9/15/2014

Monday, 3:30 P.M.

Senior Design Suite and SmERF

- No mentor has been assigned
- Dr. Cordon has the information for the Meco cart
  - It will be ordered by Wednesday
  - Should arrive Friday or early next week
- Gas cylinder funding
  - May start out renting bottles and purchase them later
- Oxarc pick up
  - Ask Russ to unlock the smerf on Wednesday and Thursday
- Still waiting on Pete at CAI to respond about CO Analyzer bill
- Norco
  - Bottles will be ordered through Norlab in Boise
  - No lead times were given
- Work on zero air generator
  - What does it need to be operational
- Figure out what dry compressed air is
  - Will our water trap suffice or do we need something else?

## SmERT

### Week 10 Team/Client Meeting Agenda

9/22/2014

Monday, 3:30 P.M.

Senior Design Suite

#### Discussion Points

- Zero air generator
  - Location
  - Filter
  - Air supply
- Oxarc pick up
  - Never came
  - Will schedule another pick up!
- CO analyzer new bill, will shop on receipt of payment
- Design review
- Next snapshot
- Gas bottles
- R-6 motor status
- Logbook reviews

## SmERT

### Week 10 Team/Client Meeting Minutes

9/22/2014

Monday, 3:30 P.M.

Senior Design Suite and SmERF

- Zero air generator
  - Put it over in corner by control room
  - Mount on wall, can have facilities put in studs or we can do it ourselves with a hammer drill
- Oxarc
  - Still hasn't picked up the bottles
  - We will schedule another pick up
  - We are going to talk to Russ and see if he has a different contact at Oxarc
- CO analyzer
  - Will be payed for this week
- Design review
  - Plans for our next steps
    - Run analyzer
    - Create instruction manuals
  - Recap project
  - R6 engine
- Gas cart
  - It will be delivered to the HEV by 9/22 or 9/23
- R6
  - Rory will purchase parts
- Logbooks
  - Collected a week after our design review
- Gas bottle status will be ordered this week
- Projects for this week
  - Assemble cart
  - Mount zero air generator

## SmERT

### Week 11 Team/Client Meeting Agenda

9/29/2014

Monday, 3:30 P.M.

Senior Design Suite

#### Discussion Points

- Design review time (Does Thursday at 3:30 pm in mindworks work)
- Meco Cart Status (was it delivered)
- CO Analyzer status
- Gas bottles status
- R6, have parts been ordered?
- Zero Air generator



## SmERT

### Week 11 Team/Client Meeting Minutes

9/29/2014

Monday, 3:30 P.M.

Senior Design Suite and SmERF

- Design Review time scheduled for Thursday October 2 at 3:30 pm in mindworks
- Meco Cart
  - It is on campus
  - It will be delivered to GJ 120 sometime this week
- CO Analyzer
  - Has been paid for and is being shipped back to us
- R6 parts haven't been ordered yet
  - Dr. Cordon is going to talk to Rory about getting parts ordered
- Gas bottles
  - Order hasn't been made yet
  - Order will be made this week
- CAI tower
  - Get a plastic cover for the analyzer
- Zero air generator
  - Hammer drill will be in SmERF 9/30

#### Project:

- Put the FTIR units onto their carts

## SmERT

### Week 12 Team/Client Meeting Agenda

10/6/2014

Monday, 3:30 P.M.

Senior Design Suite

#### Discussion Points

- Design Review follow-up
  - Engine to test
- Waiting on CO Analyzer
- Gas bottles status
- Zero Air generator and tank mounting
  - Facilities lead time?
  - May attempt ourselves again...
- FTIR on stands
- Tower cover options
- Extra gas cylinder wall mount?
- Regulator/cylinder cap storage on cart

## SmERT

### Week 12 Team/Client Meeting Minutes

10/6/2014  
Monday, 3:30 P.M.  
Senior Design Suite and SmERF

- Decided not to do the R6 engine rebuild
- CO analyzer will arrive Thursday 10/9
- Gas bottles
  - In progress, Norco is looking up all info
  - Norco is figuring out a timeline
- We can learn how to run tower without calibration gases
  - Create user manuals
- Zero Air generator
  - Go to hardware store and look for better mounts
    - Lead mounts
    - Anchors
    - Lag screws
- Plastic cover for tower
  - 2 or 4 mm will work
  - A larger cover is preferred to make it easier to remove and put on
- Wallmount for bottle is in the SmERFet
- Build shelves for on cart for regulators
  - EHS will have to approve

Project:

## SmERT

### Week 13 Team/Client Meeting Agenda

10/13/2014  
Monday, 3:30 P.M.  
Senior Design Suite

#### Discussion Points

- CO analyzer is back in tower
- Zero air generator
  - Will try new mounts this week
- Snapshot day
- Logbooks
- Gas bottle status
- FTIR are on stands

## SmERT

### Week 13 Team/Client Meeting Minutes

10/13/2014

Monday, 3:30 P.M.

Senior Design Suite and SmERF

- Zero air generator
  - Try new mounts, and if they don't work look for other mounts
- Still waiting for Norco to call back with information
  - Joe will email Dr. Cordon any additional information

#### Project:

- Mount zero air generator
- Start system diagrams
  - Dr. Cordon may have diagram of ports

## SmERT

### Week 14 Team/Client Meeting Agenda

10/20/2014  
Monday, 3:30 P.M.  
SmERF

#### Discussion Points

- Meet in the SmERF this week
- Zero air generator/tank installed
- Cart moved to SmERF
- Bottles placed on cart
- Go over basic CAI tower functions/usage
- Norco gasses status
- Weekly tasks?
- Idea on when the dyno will be fixed?
- Idea on when we will have an engine to test?

## SmERT

### Week 14 Team/Client Meeting Minutes

10/20/2014

Monday, 3:30 P.M.

Senior Design Suite and SmERF

- Turned on zero air generator
- Gas bottle status
  - Dr. Cordon is going to Norco sometime this week
- Training information
  - Don't wrap the heated line up
  - Turn the PC off, then the tower
  - Turn all bottles on, then turn the unit on, then computer
    - Then lite the FID (top analyzer)
      - Main – F8 (then let it warm up for one hour)
  - Data is provided in an excel sheet from tower
  - Plug the power cords into different circuit breakers

#### Projects:

- Create system diagram
- Figure out which outlet to plug zero air generator into
- Check to make sure all tower units are working
  - Make a list of question to ask on a conference call with CAI
- Start making user manuals
  - Power up instructions first
  - Label the different analyzers

## SmERT

### Week 15 Team/Client Meeting Agenda

10/27/2014

Monday, 3:30 P.M.

Senior Design Suite

#### Discussion Points

- Norco gasses status
- Idea on when the dyno will be fixed?
- Idea on when we will have an engine to test?
- Cover options for tower
- Ford FTIR email from Dr. Beyerlein
  - Only one power chord
  - Do we want to deal with it?
  - Contact info if we do
  - User manuals, info?
- System diagram
- Instruction manuals
- Plaques for analyzers



## SmERT

### Week 15 Team/Client Meeting Minutes

10/27/2014

Monday, 3:30 P.M.

Senior Design Suite and SmERF

- Calibration gases are in the machine shop
- Dyno should be ready within 2-3 weeks
  - May be able to test tower when hybrid and snowmobile are breaking their engines in
- Cover option
  - Drop cloth
    - Use sticky tape to shape the cloth
    - Add a flap to the cover
  - Find drop cloth on amazon and email link to Dr. Cordon
- FTIR
  - Dr. Cordon will provide email for Ford contact Erik Storhok
  - The missing parts may have been sent to another school
- System diagram
  - Add pictures of how to hook up the tower
  - Indicate which bottle goes to which port
- Regulators
  - Check to see if the all fit
- User manuals
  - Quick reference guides
  - Pictures
  - Initial hookup instructions
  - How to take a measurement
  - Add to wiki and shared drive
  - QR codes for the manuals
- Plaques
  - CNC gold plastic sheets or order from trophy shop

#### Projects:

- Move Zero air generator tank up
  - Keep stem out of the way (it is easy to break off)
  - Add a valve to the stem so the system can keep pressure
- Check to make sure regulators work
- Move bottles to smerf
-

## SmERT

### Week 16 Team/Client Meeting Agenda

11/3/2014

Monday, 3:30 P.M.

Senior Design Suite

#### Discussion Points

- Drop cloth
- Status
  - Zero air tank was moved up
  - Regulator inventory

## SmERT

### Week 16 Team/Client Meeting Minutes

11/3/2014

Monday, 3:30 P.M.

Senior Design Suite and SmERF

- Drop Cloth
  - Dr. Cordon will order
  - Add tape to corners of tower to prevent ripping
- Regulators
  - Inventoried and identified extra regulators and needed regulators

#### Projects

- Regulators
  - Set aside extra regulators
- Tubing
  - Determine how much is needed
  - Look on McMaster carr if more tubing is needed
- Pick out a ball valve for zero air generator and email it to Dr. Cordon

## SmERT

### Week 17 Team/Client Meeting Agenda

11/10/2014  
Monday, 3:30 P.M.  
Senior Design Suite

#### Discussion Points

- Drop cloth
- Valve for zero air line
- Status on air/gas tubing
- Go over how to use fittings for tubing
- Status on regulators
- FTIR equipment
  - Jake emailed Wisconsin Madison
  - Missing several parts (based on email from Eric)
  - Will need to use one machine for parts
  - Trying to track down user manuals/parts list/instructions etc.
- Could we perform a calibration sometime this week?
- Status of system diagram
- Plaques for analyzers
  - Use a label maker
  - Unless you want something more permanent
- Project summary
- Summary of project learning for CAI tower

## SmERT

### Week 17 Team/Client Meeting Minutes

11/10/2014

Monday, 3:30 P.M.

Senior Design Suite and SmERF

- Snowmobile team will be testing starting the week of November 17
  - Hybrid will be testing after that
- Valve and Tubing can be ordered through amazon
- Fittings
  - Swagelok ¼" Farrels
    - They are a one time use
- Regulators
  - See if norco can switch out the fittings
  - Take them to Norco 11/11/14
- FTIR equipment
  - Waiting to hear back from Wisconsin about extra parts
  - Needs the mirrors
  - Trying to track down manuals
- Calibration demo
  - Thursday 11/13/14 at 2:30
- Label makers
  - Ask the ME office if they have one
- Manuals progress
  - Looking good
  - Figure out how to tell the NOW program where to save data
  - Make sure electronic copies are available for manuals

## SmERT

### Week 18 Team/Client Meeting Agenda

11/17/2014  
Monday, 3:30 P.M.  
Senior Design Suite

#### Discussion Points

- Recap of Thursday's meeting
- Found tubing, a valve, and connections
- Will install valve for zero air generator today
- The tower should be ready to go, believe everything is accounted for
- Status on regulators we dropped off at Norco
- Status on cover
- Status on labels for analyzers
- FTIR equipment
  - Sent email to supplier asking for instruction manuals
  - Made contact with University of Wisconsin, Madison over spare parts
  - Still waiting on information
- We heard the motor for the Dyno is broken
- Tasks for this week
- Logbook review forms
- Citizenship forms
- Final snapshot expectations

## SmERT

### Week 18 Team/Client Meeting Minutes

11/17/2014

Monday, 3:30 P.M.

Senior Design Suite and SmERF

- System diagram
  - Change bottle for H to N2, Vehicle emissions grade nitrogen
  - Change 2700ppm CO to be at G
  - Leave spot E as blank
  - Coordinate labels with the regulators
- Move 9<sup>th</sup> bottle to the ground
  - Move bottle number 3 to the ground
  - Put wall mount up
- Regulators
  - Arrived
  - Need to switch out the fitting
  - Jake will swap out the fittings
- Cover
  - Should arrive late this week or next week
- Labels
  - Ask copy center
    - Budget information: kl6310 activity code CORDKL
- FTIR
  - Take picture of inner electronics
  - Unstrap the moving mirrors inside the machine
  - Still waiting to hear from Wisconsin about extra parts
- Citizenship forms
  - Turn in by Friday
- Final snapshot
  - In senior design suite
  - Poster
    - Bring hard copies of all manuals
- Tasks for this week
  - Wallmount
  - Put valve on zero air generator
  - Labels
  - Laminate diagram
  - Citizenship forms
  - regulators