Subject: Re: UCSC Baskin Eng Rm 206/207/208 Comments to GLP Plans
From: Bob Vitale <rvitale@soe.ucsc.edu>
Date: Tue, 30 Oct 2007 12:10:40 -0700
To: Nader Pourmand <pourmand@stanford.edu>, marting@GLPsf.com, pwb@soe.ucsc.edu
CC: dricker@ucsc.edu, cecilia@GLPsf.com, DASilva@isecinc.com
Message-ID: <472781B0.5000603@soe.ucsc.edu>
User-Agent: Mozilla Thunderbird 0.8 (Windows/20040913)
X-Accept-Language: en-us, en
MIME-Version: 1.0
References: <40BAF14C80F7C8498F09D331087D6066240948@glp8.glpsf.com>
<p06230925c34c5a88c403@[10.0.1.10]>
In-Reply-To: <p06230925c34c5a88c403@[10.0.1.10]>
Content-Type: text/plain; charset=ISO-8859-1; format=flowed
Content-Transfer-Encoding: 7bit

All,

Below is my reply to GPL (Martin) & Dr. Pourmand's responses. I also labeled each response with who made it and when. Comment number sequence corrected, there were 2 each number (6) comments.

Comments still open to address:
GLP --
(1a) ISEC casework drawings - no comment made by GLP.
(1b) Milli-Que mounting bracket detail info

Dr. Pourmand & Vitale --
(5d) 208V outlet on N-W corner of BE-208. What is this for?

Dr. Berman & Pourmand--
(1c) further input on deep sink drawer for dirty glassware and waste.

thanks, Bob

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10/29/07 - Nader Pourmand
Hi Bob & Martin,
Bob has kindly covered everything nicely. Please see my responses to Martin questions in Green.
Best,
Nader
=========
At 8:42 PM -0700 10/29/07, <marting@GLPsf.com> wrote:
> Bob,
> My responses are attached in RED.
> Martin
>
> -----Original Message-----
> From: Bob Vitale [mailto:rvitale@soe.ucsc.edu]
> Sent: Monday, October 29, 2007 7:27 PM
> To: Nader Pourmand; Phillip Berman
> Cc: Bob Vitale; Martin Gicklhorn; dricker@ucsc.edu; Cecilia Eng; debie Silva - ISEC Lab Furniture Specialist
> Subject: UCSC Baskin Eng Rm 206/207/208 Comments to GLP Plans
>
> Prof Pourmand and Berman,
>
> Below is a summary of comments for the architect to address. Please let me know if you agree or not. I am ccing the Architect for advanced information.

-Bob

----------DRAFT Comments to GLP Plans --------------
Comments to GLP plans for BE-206, 207 & 208.
The plan reviewed is dated 10/3/07 consisting of 8 sheets.

Room Names:
BE-206 -NP-1 main lab
BE-207 -NP-2 sequencing room
BE-208 -NP-3 bioelectronic room

GPL Response (10/29/07): Room Names will be changed as noted above:

(1) Casework Plans
(a) General comment - Revised casework layout to reflect ISEC drawings of 10/23/07. These are posted at:

http://wiki.soe.ucsc.edu/bin/view/Facilities/BE206Complex#Lab%20Layout%20and%20Plans

(b) Water filter (RO/DI) filter shelf & connection In BE-206, North island bench near sink area; add shelf unit to North side of 'umbilical' or pipe drop to accommodate a millipour water filter system near sink. Ideally the filter shelf would go on the size of the 'umbilical' or piping service chase. The water filter system will need 120V/15A power and a DI connection. This was a recommendation by Prof Berman.

GPL Response (10/29/07): Milli-Q units are typically bracket mounted and the Fisher Hamilton umbilical is strong enough to support the bracket. Will that be acceptable? Bob, please advice.

Vitale Response (10/30/07): Can you provide details or point us at this bracket. We may try it out in Berman lab to determine suitability. For now put on drawing, shelf or bracket to be determined by UCSC.

(c) Dish/Waste Drawer near sinks

For both sink areas, change shelved cabinets on left side to be a large drawer with plastic liner. The drawer would hold dirty glassware or waste. This was a recommendation by Prof Berman.

GPL Response (10/29/07): Would this be one deep drawer (from counter-top to just above the floor? If there is such a configuration in Baskin at this time, could someone e-mail us a digital photo thereof? Bob, please advice.

Vitale Response (10/30/07): There is no configuration in BE at this time. Dr. Berman recommended it based upon his experience in the new labs. We need to discuss more with Drs. Berman and Pourmand about this suggestion and see what ISEC can do. My initial recommendation is to retain the shallow drawer on top (for incidental storage) and instead of a shelved cabinet below, install a deep drawer with plastic liner. An another idea is to have a shelved cabinet but with sliding trays with plastic containers attached to them. The plastic containers could be loaded with dirty glassware and hauled away for cleaning.

(d) Shelves in BE-208
wall shelves in BE-208 above the 'L-shape" bench should be 3 layers and 24in wide. Dr. Pourmand intends to put some of the PCR machines on these shelves.

GPL Response (10/29/07): OK, we will provide what is requested.

(2) Plumbing/Piping Issues
--BE-206

(a) DI water connection for Ultra-Pure Filter (Millipour System) A connection is shown as Note P5. P5 states the connection is to be below the sink but really we want it above the sink and to the North side of the pipe drop service (similar to other labs).

Connections placed in other labs used a 'slip' connection to the valve and we then needed to remove this connection and insert a threaded connection. We could do the same (slip connector which is then removed) or specify this connection to be threaded to mate with filter system. See note under casework for filter shelf.

GPL Response (10/29/07): We would normally ask for an in-line valve below the sink (where it is accessible for service) with tubing run from the valve below the sink to a hole in the side of the umbilical where the tubing would emerge and then connect to the Milli-Q Unit. Is that what you are asking for or do you actually want an exposed valve at the side of the umbilical? Bob, please advice.

Vitale Response (10/30/07): We would like the DI water to run similar to the other labs, where the special service piping comes out of the ceiling down the side of the umbilical to an in-line valve. So yes, an exposed valve at side of the umbilical. Please use the same valve type as found in the other labs (with slip connection). We have a solution that replaces the output side of the valve with a threaded connector for the Milli-Q unit.

(b) BE-206 North Wall
Ensure Air and Vac on the wall remain and are no longer removed. Add Natural Gas to fixture location. This is for accessible lab bench (see accessibility issues).

GPL Response (10/29/07): Air and Vac will be relocated to accessible tables and Nat Gas will be added.

--BE-207 no known issues

--BE-208
(c) CO2 piping
Adjustment of supply piping is needed for new location of CO2 cylinders, which is more westward along the Southern wall.

GPL Response (10/29/07): CO2 Piping will be adjusted to new cylinder location.

(3) Accessibility Issues - Workstations
(a) BE-206 Lab bench
Relocate the lab bench shown on North Wall of BE-206 to that shown in ISEC drawings of 10/23/07. Lab bench should be listed as adjustable height, not fixed mounted and accessible. Ensure Air and Vac on the wall remain and are no longer removed. Add Natural Gas to fixture location. Ensure the 3 services (A/V/G) are placed within reach of the adjustable height bench.

GPL Response (10/29/07): Will do.

(b) BE-206 Desk/Workstation

Ensure workstation shown in North-East corner of BE-206 is listed as adjustable height and accessible.

GPL Response (10/29/07): Do you mean the desk at the N-W corner of the room? If so, since the desk is only 30" high, it does not need to be adjustable in height to be accessible. I suggest leaving it fixed in height. Bob, please advice.

Vitale Response (10/30/07): Yes the workstation is in the North-East corner. The recommendation for adjustable height is to accommodate a wide variety of people, not just those in wheelchairs. If we have someone who is taller or long legged, the adjustable height workstation would be useful.

(c) BE-206 Fume Hood
Revise the diagram to show ADA fume hood.

GPL Response (10/29/07): Will do.

(d) BE-206 Sinks
Provide note that sinks are to be installed without pernmant affixment (e.g. epoxy/cement) so they can can be replaced with shallower version at later date to meet knee space requirements for accessibility.

GPL Response (10/29/07): Will add note to install sink with black silicone sealant.

(4) Voice connections
Comment- Review placement of voice jacks, per suggestion of Prof Berman.

--BE-206
(a) GLP plan dated 10/3/07 shows voice/data jack on North wall location relocated to where updated ISEC drawings show the glass storage cabinets. Request Re-position the voice/data connections to fit ADA height adjustable lab bench location on ISEC plans dated 10/23/07.

GPL Response (10/29/07): Will do.

(b) An existing voice jack is located on East wall where fume hood will be placed. Recommend is voice jack be moved to the Southern end of East wall (end of bench area).

GPL Response (10/29/07): Will do.

(c) Existing voice jack at South-West corner of room appears to be in a good spot.

--BE-207
(d) Voice & data jacks on North-West area of wall should be moved to center of North wall raceway. The present location will be covered by tall glass cabinets.

GPL Response (10/29/07): Will do.

(e) Voice jack on West wall near doorway appears to be in an ok position.

--BE-208
(f) Voice jacks at L-shaped bench and on North wall near room entry appear to be ok positions.

(5) Data/Network & Low Voltage Alarm connections
--BE-206
(a) remove low voltage alarm wiring from Eastern wall (near fume hood). Relocate (1) as shown in GPL plan to Southern wall and 2 others to BE-208 freezer area.

GPL Response (10/29/07): Will do.

--BE-207
(b)Add fiber optic faceplate jack to BE-207 instrument room. Location on Eastern wall, midway between North & South. Fiber faceplate should not be in the wire mold as the exit path for patch cable needs some protection. Recommend putting it on the wall above wire mold.

GPL Response (10/29/07): Will do but accessibility normally requires elevation to be 48" or below.

Vitale Response (10/30/07): Fiber patch connections are typically made/installed by UCSC staff networking personnel who are need to work in many cramped areas where accessibility is not provided. The chief concern here is to orientate the faceplate to avoid fiber cable/connector damage. Our typical fiber face plates do a pretty good job.

--BE-208;
(c) Install 5 low voltage alarm circuits for refrigs on South wall.

GPL Response (10/29/07): Will do.

(d) Install 4 alarm circuits for refrig/freezers under L shape bench.

GPL Response (10/29/07): Will do. Can you confirm that a 208v 3 Phase power receptacle is required at the north wall of this room? What is it for?

Vitale Response (10/30/07): Good question - this could be a mistake. My wiki notes show Randy Porter recorded on 7/20/07 his interpretation of meeting minutes with Dr. Pourmand and his researchers stating that 208V power would be required in North-West Corner. However Randy did not ID what equipment this is for and I don't recall it either. We will need to know the amp rating and plug type for this. I don't see anything in my notes that

indicate 3 phase power is required. I will ask Dr. Pourmand.

(e) Add 2 each two outlet network jacks to South Wall near ceiling. One above Freezer/incubator; one above large/small freezer. These will be used for remote monitoring and recording of the freezers and incubator temperatures.

GPL Response (10/29/07): Do you mean to add low voltage alarm circuits or do you really want network jacks? Bob, please advice.

Vitale Response (10/30/07): In addition to the low voltage alarm circuits, we may install monitoring of the refrig/freezers/incubators via the computer network. This would provide researchers the ability to monitor remotely the environmental aspects of the refrigs. The alarm system just provides an alarm of low temp. The network system would actually record temperatures over time. This is useful when researchers need to know or have evidence of what temperatures their samples have been kept at. Our computer network is on UPS power with portions on standby power.

(6) Electrical Power receptacles
General comment: EP plugs should be listed as optional standby power.
Emergency power is another type of power only available for life/safety systems. Baskin Engineering has two generators and backup power systems.

GPL Response (10/29/07): Will do. We will show all temp controlled equip (refrigerators, freezers and incubators to be on "standby power".

--BE-206 -- Main Lab
(a) Convert existing EP power plugs on East Wall (near fume hood) to standard power with a power strip/raceway. Power should NOT be on standby source as there are no long term backup power required here.
There may be needs for small UPS systems for computers and instruments but those should be handled by portable 2KV or less UPS systems.

GPL Response (10/29/07): Will do.

(b) Keep the 120V/20A EP source with low volt alarm circuit on South-West corner. This may be used for table top incubator.

GPL Response (10/29/07): Why is some power on EP and some on Standby Power? Shouldn't all temp controlled equipment be on Standby Power? If not, please explain the logic to follow. Due to limitted EP (or "UPS") power.

Vitale Response (10/30/07): You are correct, my typo. The location should be labeled standby power not EP.

--BE-207
(c) Move electrical recepts on western end of North wall wiremold towards center. This location will be covered over by glass cabinets.
Fire Marshall typically requests receptacles be removed when covered over.

GPL Response (10/29/07): Will do.

BE-208
(c) Ensure power plugs under 'L-shape' bench are powered by standby power panel (generator). These will be used to power under bench refrig/freezers. Current GLP plan does not show them as 'EP'.

GPL Response (10/29/07): Will do.

(d) Add two (2) 120V/20amp duplex standby power recpt at +18inches under L-shaped bench on North wall. Total of 4 each 120V/20A standby receiptacles at +18in under L-shaped bench.

GPL Response (10/29/07): Will do.

(e) Change the 208V power on Southwall to be 208V/20amp with L6-20 receptacle using standby power. This is the locking variety. The location should be behind the large

freezer shown. This power is for the -80C freezer

GPL Response (10/29/07): We will make the change and show the receptacle to be a 208V 1 Phase receptacle.

(f) Ensure there are 3 each 120V/20Amp duplex rececteables using standby power on South Wall were the refrig/freezers/incubators are to be located. Locations should be between the 3 smaller refig/freezers (2
locations) and between the refig/freezer and CO2 incubator stack. There are 3 shown on the 10/3/07 GLP plan but positions need adjustment.

GPL Response (10/29/07): We will adjust the locations of the receptacles.

(7) Freezer Spacings in BE-208

Per Dr. Pourmand, "Regarding the size of Freezers/incubator, I will purchase freezers/incubator for UCSC. During my negotiation with Stanford it turns out that I will keep a small research group operating at Stanford and some of my equipment will be remained at Stanford. So, I can buy the models that fits the room."

GPL Response (10/29/07): To my knowledge, there are no available -20 freezers that can be located tight to each other side by side, are only 30"x30" in footprint and would allow the door to swing to 90 degrees open in front of one of them. Locating two larger -20 freezers along this section of wall instead of three smaller ones probably would be a better solution.

Dr. Pourmand Response (10/30/07): You are right standard freezers are 32" width. Side-by-side refrigerator/freezer might be an alternative. If so, we can have two of the side-by-side refrigerator/freezer with following dimensions: W 35 1/2 in, D 32 1/8 in and H 69 3/4 in.

(8) Ceiling Tiles in BE-206 & 208
Please change ceiling tiles in these rooms to be washable type. Same was recently installed in Dr. Berman's BE-288 lab. BSOE can provide the part numbers.

GPL Response (10/29/07): Will do.

(8) OFOI Equipment Listings

--BE-206
(a) Dr. Pourmand states each bench will likely have a small centrifuge, 1 vortex and 1 heat block. All operate at 120V.

GPL Response (10/29/07): OK. Those normally plug into plugstrip "convenience" power so no change is required.

--BE-207

(b) Please show two 4x8 OFOI lab benches with faraday cages against South Wall. The cages may need wired electrical hookups with EMI filters, it is unknown at this time.

GPL Response (10/29/07): How much space will the Faraday Cages need space between them? the available wall space is only about 18' long. Will they work? Does any of the electrical or A/G/V along that wall need to be removed or capped to allow the Faraday Cages to fit along that wall?

Dr. Pourmand Response (10/30/07): These cages are front loaded, either they can be next to each other or with some space in between.

Vitale Response (10/30/07): The A/G/V fixtures along the South wall of BE-207 should be removed and piping capped, to be flush with wall. We don't want the fixtures to interfere with the cages nor worse get damaged by the fixtures to the extent they would leak. I think we can leave the electrical and networking in place as the Faraday Cages are moveable equipment and we may need these later.

--BE-208

(c) Please show 3 under bench refrig/freezers. These should correspond with 120V/20Amp duplex outlet on standby power.

GPL Response (10/29/07): We will show three Under Counter refrigerators/freezers under that benchtop.

(d) BE-208 Shelf Equipment (PCR Machines) Dr. Pourmand will have 7 PCR machines on the shelves above the bench. These are listed as 4ea ABI Model 9700; 3ea ABI Model 9800.

GPL Response (10/29/07): Is this equipment very heavy? Will it all be on the lowest shelf above the benchtop? This particular L-Shaped benchtop is at +41.5" above floor and is 36" deep (front to back)...can you please confirm that those are the dimensions that are wanted?

Dr. Pourmand Response (10/30/07): Each PCR machine is 20 lb and 9.3 X 19.1. They will be on the lowest shelf above the bech. And yes, 36" deep and 41.5" height is just fine.

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