SWEPT UNDER THE PSU RUG - PART II[1]

Demotion of Safety Culture in Lab Relocations: from sewage to biohazards, Penn State denies its role in creating unsafe move conditions--from the top-down

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By: April Hile (ERLennox)
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On August 18th, 2016, the timetable for the demolition of the former Chemical Engineering building, Fenske Laboratory, was moved up significantly to September 23rd---only 36 days later---from a now-contested planned exit date between October 31st, 2016 and January 2017. Despite capital raised for the demolition and reconstruction costs of this building totaling in excess of $144M and another $5.4M set aside for temporary space expenses alone, minimal support was provided to laboratories to meet the demands of relocation to temporary space; faculty were mandated to use their personal time, federally-supported research personnel, and research incentive funds to accomplish the move. Support provided by the Office of Physical Plant was highly constrained, a request for support specifically to meet safety constraints was denied by the Chemical Engineering Department Head, and support otherwise was highly insufficient.

As a result, two month-long experiments were ruined; students and staff were exposed to hazardous conditions including weeks of 15-24-hour days of intense physical labor and exposure to chemical and biological hazards. Staff member repercussions included but were not limited to mental breakdown, depression, and physical symptoms like severe weight loss, vomiting, and aspiration. A visiting scholar's 6-month visit, meant to foster collaborative research, was completely disrupted by the effort to move and relocate. A faculty member's sabbatical was delayed, subsequently limiting his sought-after input on a $40M National Laboratory research proposal, which was ultimately not awarded.

Despite these outcomes, the Office of Ethics & Compliance (OEC), reporting directly to the Provost, ruled that allegations of an expedited timeline, hazardous environment, and lack of support were unfounded. In turn, OEC contends that the blame is solely based on the failures of individual faculty researchers. This conclusion was reached by cherrypicking e-mail contents, blaming faculty, and limiting their request for information solely to the subject of the timeline of the move. A general absence of emails communicating the timeline for 2.5 months beyond "Fall 2016" was ignored. E-mails indicating a later timeline were also "discounted" because they were later contradicted by the aforementioned August 15th e-mail entitled "Moving to Greenberg has been moved up" with the first mention of a September 23rd move-out date. The college provided the department's overburdened dual-functioning building supervisor and safety officer with recognition as a "staff star" and, after further safety violations in 2018, a staff performance award.

Ultimately, decisions made by administrators and leaders at every level---throughout departments, the college, the Office of Environmental Health & Safety, the Office of the Physical Plant, the Office of Ethics & Compliance, and the Provost---all, at minimum, point to a

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safety culture that does NOT approach the minimum guidelines set forth by the Association of Public and Land-Grant Universities (APLU). In fact, in lieu of safety culture is a culture of endangerment that is propagated by a focus on denial, minimization, blame--at minimum. I hold the opinion that Penn State was negligent in its duty to provide a safe work environment. Looking toward the relocation of the chemical engineering department into the new Chemical & Biomedical Engineering (CEBME) building in 2019 (over the forthcoming weeks and months), the outlook, therefore, does not look promising.

While there may be some changes to safety procedure and even gestures of support that would seem positive taken at face value, I contend that they are not. Offset by the insistence, including by OEC, that no failures having been made by the department or university--just individual labs--during the 2016 Fenske evacuation, any subsequent improvements would merely point to the university's awareness that safety standards of the Fenske evacuation were woefully underwhelming--if not outright negligent--but nonetheless a preference to "sweep under the rug" past failures. This reflects the university's pattern to increase the university's ability to negate liability by pushing more responsibility onto faculty rather than focus on meaningful mechanisms towards stakeholder engagement, support, safety, etc.

To me, Penn State's actions reflect a post-Sandusky era that tragically have devolved to legally "protecting" the university by preserving administrators and public perception--rather than serving the majority of Penn State stakeholders and preserving the university mission or values of integrity and personal responsibility that were once synonymous with Penn State. Herein, I first provide a rebuttal of OEC's denial of Dr. Curtis' allegations of expedited timelines and lack of support. Secondly, I provide the outcomes that I hope arise from this exposė of Penn State's safety culture.

Around campus, people often half-joke that Penn State has two seasons: football and construction. One might presume that Penn State would have an agile team of well-trained, competent employees to support and facilitate moves---in the same way that it has a well-trained team of student athletes---but one would be presuming wrong. As a lab technician in CurtisLab during the 2016 Fenske evacuation, I, herein, counter the Office of Ethics' & Compliance's (OEC's) findings that deemed allegations of lack of support and an expedited timeline to be unfounded. In addition to some personal accounts, I provide significant documentation in support of my response including extensive e-mail documentation, pictures, video, and twitter posts.

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BACKGROUND

The demolition of Fenske Laboratory had been a long time coming. Recently, at a conference, I ran into a faculty member of another Big Ten university, who vividly recalled Fenske Lab as a deterrent to his selection of Penn State as his choice university--decades ago. Recurring rumors spanning the last decade planned for its demolition and reconstruction. It wasn't until the Fenske building was, quoting Onward State, "singled out and labeled "substandard and a threat to our continued accreditation" by ABET" that it seemed things finally came to fruition.

On April 19th, 2016, chemical engineering (ChE) Department Head Phil Savage provided a synopsis of "Department Goals & Focus Areas for 2016-17" that specifically noted "Maintain excellent safety record while transferring to swing space". So-called swing space denoted three-year "temporary" space in four different locations on- and off- central campus for dozens of labs and offices. The laboratories came with a complex range of safety risks with faculty research ranging from the biologically-focused that required the care to maintain living organisms while preserving biocontainment to more traditional chemistry-focused (e.g. catalysis) that required extreme caution in handling explosive gases and toxic and/or reactive chemicals. Throughout research areas, there were requirements for huge volumes of fragile and/or large equipment to be packed and moved and the associated interruption to research spanned weeks if not months. There were also large and small "bunkers" from Fenske's historic days as the Petroleum Research Laboratory (PRL) that housed decades' old records and equipment---even including WWII-era gas cylinders (that predated Fenske Lab itself; my account).

Again, the goal herein will not be to chronicle the relocation nor to detail its every hazardous situation and safety violation; these were already succinctly recapped in Dr. Curtis' October 5th, 2016 email that has gone unaddressed for more than 2.5 years. Instead, this will focus on addressing the university's systemic unsafe practices illustrated by the Fenske evacuation with special attention to the broader implications to the department's relocation back into the newly-constructed Chemical and Biomedical Engineering (CEBME) building in 2019. For more extensive references, the following resources are available and will be referenced to supplement arguments herein:

1. "the Real Cost of Fenske move" email for a recap by Dr. Wayne Curtis immediately following the move;

2. Fenske Evacuation Playlist - ~20 minutes of video footage that shows footage of the state of Fenske “before” and “after” the evacuation, generally spanning less than one month
3. An extensive (52-slide) supplemental slideset highlighting the litany of contradicting and loosely-defined communications related to deadline of move-out (hence evacuation)
4. this extensive (48 page) supplemental document of email excerpts relevant to the move spanning years; and
5. twitter hashtags #bestOfOPP, #fenskeDemolition, & #PSUabsurdity, #GreenergMove, #GreenbergExitOrEvac

ALLEGATIONS, OEC FINDINGS, & A REBUTTAL

On October 5th, 2016, following the move-out of Fenske, Dr. Wayne Curtis, a Professor of Chemical Engineering entering his 28th year of service to the university, summarized his lab’s experience to the then-College of Engineering Dean Amr in “the Real Cost of Fenske Move” email. This included many of the above safety violations, the department’s insufficient support, and specifically cited denial of support by the ChE Department Head Phil Savage, which led directly to non-compliance with biosafety protocols; despite Curtis’ indictment of Savage, Dean Amr’s only response was to “pass the buck”, forwarding the e-mail to Savage and Senior Associate Dean Anthony Atchley (to-be-interim Dean of the College) without follow-up. Unsurprisingly, neither Savage nor Atchley responded. Curtis later shared the same e-mail with the Office of Ethics & Compliance (OEC). In an official memo dated November 30th, 2017 (non-move-specific allegations redacted [for now]), Chief Ethics & Compliance Officer Regis Becker responded, summarizing Curtis’ two allegations (relevant to the move) accurately but concluded that both were unfounded. Curtis’ two allegations were summarized as follows:

1. The move of the Department of Chemical Engineering labs, including specifically the Curtis Lab, was sudden and expedited resulting in significant complications for the Curtis Lab.
2. The move of the Curtis Lab was negatively impacted by a lack of planning, resources, and support from the department. As a result, you and Curtis Lab students worked over 2,000 uncompensated hours, and employees and students were exposed to potentially hazardous or dangerous chemicals and raw sewage.

Below I will refute the Office of Ethics & Compliance’s conclusion by providing their response incrementally, but ultimately in full and sequentially. Excerpts 1-4 constitute OEC’s response to the first allegation; excerpts 5-10 constitute OEC’s response to the latter. While OEC alleges that their investigation was both an “independent review” and “thorough review of the information and documentation provided to us”, that hardly seems the case based on this

limited request for documents (i.e. only about timeline) and cherry-picking of emails and even sentence fragments within them.

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OEC Response to first move-related allegation

OEC Excerpt #1 - Planning Timeline

[OEC:] Our review of the records and files available, including correspondence and materials provided to you as part of the move planning process, document that the planning for the move of Department of Chemical Engineering labs from Fenske to Greenberg was part of a long term planning project, with initial discussions dating back nearly 18 months prior to the actual move date [September 23rd, 2016].

Indeed, discussions beginning to coordinate the relocation began well beyond a year in advance; however, so too did the requests for adequate support and facilities as well as warnings of the potential detrimental impact to research if risks were not mitigated. The safety debacle that was the Fenske evacuation and move into Greenberg was completely foreseen, forewarned by ChE faculty, and entirely preventable but were simply minimized, ignored, and/or treated with a laissez-faire “not my problem” approach by Penn State research “leadership”. Adequate spaces throughout the university that were vacant and requested were ultimately not made available. This points to a trend of Penn State politics that results in underutilized facilities, both at great cost to tuition and taxpayer (i.e. supporting federally-sponsored research) dollars.

The three systemic problems to be addressed as a result are how:

1. how academic politics hamper full-utilization of both federal research dollars (e.g. direct cost equipment and facilities overhead) and capital campaign donations;
2. how faculty's research is highly vulnerable and subject to Penn State politics and a department head's ability to be a proactive--if not outright aggressive--in advocating for faculty needs, and;
3. to provide support that is equitable rather than merely equal. Pragmatically, the converse--providing support that is equal rather than equitable--is discriminatory against and /or negligent to faculty who have above average space / capabilities needs.

Proactive measures by chemical engineering faculty Drs. Curtis & Wood are evidenced by their repeated efforts to seek support up to nearly 2 years in advance of the actual relocation with requests for adequate temporary space within Huck Institutes, the Department of Agricultural Engineering, Tyson Horticulture Building, and the Millenium Science complex made to no avail (see "Proactive Requests For Adequate Temporary Space & Under-utilized University Space"). On November 13th, 2014, Dr. Curtis wrote to former Director of Huck Institutes Peter Hudson, copying his own department head Phil Savage, to request facilities access to Huck's convirons and greenhouses that sit atop the Life Sciences Building. On October 12th, 2015, Wayne Curtis wrote to the former College of Engineering Dean Amr Elnashai asking for additional support to address the specific needs of his chemical engineering lab because of the interdisciplinary scope of his research also emphasizing life sciences and agriculture. In subsequent exchanges and especially in redress to Phil Savage who said "you will have lab space in Greenberg and it will be set up to meet your needs (as is the case with all other faculty).", Wayne further clarified on the 18th,

> *"You are not understanding what I am suggesting; (or how Penn State often works). The issues is not a matter of wanting to have permanent alternative space to the new building, … but temporary space that will actually be functional[.] Something that is 'time tested' but mediocre can often be better than a temporary fix. As an example, a half-assed 'permanent fix' that physical plan[t] set up initially in Fenske growth chamber to grow plants… had a failure which resulted in freezing all of my cultures overnight about 2 months after we moved in. [...] I had to abandon about 5 research papers mid-stream that time … (not so much as an apology …) As another example, they mis-wired a 220C outlet for my centrifuge in room 225 Fenske that literally knocked me on my back when I plugged it in. Several months later, my centrifuge died …. [sic] which was … [sic] "my problem" till I managed to write a grant to purchase another $20,000 unit. I am trying to be optimistic about how things will be handled in association with a whole building move. I find it hard to believe that physical plant will do better with a temporary fix"*

On June 7th, 2016, Wayne Curtis again proactively emailed to report a meeting with Department of Biological Engineering Paul Heinemann to discuss the possibility of a courtesy appointment in association with use of under-utilized departmental space including convirons, or incubators capable of simulating atmospheric conditions via control of gradient light, humidity, and carbon dioxide supplementation, that could support his research. A subsequent meeting was held on June 17th, where Heineman admitted that there was a vacant conviron, but ultimately, this request too came to no avail.

On February 26th, 2016, more than 6 months prior to relocation, Dr. Wood, another faculty researcher with a heavy biological / life sciences focus, similarly encouragingly wrote to Department Head Phil Savage to no avail,

> *I know of at least two large labs in the MSC [Millenium Science Complex Building] that have quit this year from just my collaborators. I am not convinced that this is anything more than politics (space not available is clearly different from space will not be made available to Ch E). Seems far less expensive to just use space that clearly exists. We need to stand up and demand it rather than just acquiescing to all of this nonsense. The Dean made the decision to tear Fenske down so the Administration needs to find space.Thanks for all of your hard work.*

Dr. Wood makes an astute point: university research facilities are often poorly utilized, in turn, representing poor utilization of both tuition dollars and taxpayer dollars provided through federal research overhead. This point was also iterated by Dr. Curtis in a meeting called “Curtis Group Needs” on October 22nd, 2015 when he provided a slideset to Brian Hayes, the Office of Physical Plant supervisor tasked with facilitating the move, Roger Dunlap, the chemical engineering building & safety supervisor & move coordinator, and Phil Savage, the chemical engineering department head. This slideset highlighted the added needs of Dr. Curtis’ biological experimental lab (slides 2-9), provided a “snapshot of (embarrassing) current situation of space use”, (slides 15, 18-22) and proposed the “Idea of ‘borrowing or upgrading space more permanently’” (slides 12, 18-23). These under-utilized spaces include those previously requested including Huck Institutes convirons and walk-in incubators, Wartik Laboratory incubators that were being used for storage, and growth chambers in the Tyson (horticulture) building where “not a single one [was] running … and discussion with dept [sic] head … no one seems to know if any of them function”.

Despite their significant efforts, the requests by Drs. Curtis and Wood fell on deaf ears. They were both forced to move to inadequate Greenberg temporary space (see "Swing Space" Supplies & Basic Infrastructure Not Provided, Subsidized, Or Just Insufficient"). CurtisLab was particularly devastated because it had to move into the Greenberg space before it was ready because of the accelerated demolition of Fenske that was ongoing (September 7th, 2016 drilling) while we packed. Even after the relocation, the problem of underutilized space in the university persists.

CurtisLab was the only lab given space without a ceiling (i.e. open duct work) despite being the lab most impacted my dust because of its growth of biological organisms requiring aseptic work in laminar flow hoods. Dr. Curtis' space had varied and chronic issues that persisted for months---until Dr. Curtis returned early from his sabbatical to diagnose and solve the issues personally (see slides 18-19); the issues of temperature "control" in his walk-in plant growth incubator, in fact, nearly froze all of CurtisLab's plant research and ongoing experiments twice that had taken months to procure (i.e. including APHIS permits & international shipment / handy carry), maintain, and grow (see "Swing Space" Supplies & Basic Infrastructure Not Provided, Subsidized, Or Just Insufficient", "Growth Chambers / Stop Gap Solution For Late-ordered Percivals"). Because neither Barton Marlow or OPP were apparently responsible for building the space to suit Curtis Lab's research needs, this meant Dr. Curtis had to personally facilitate the installment of adequate infrastructure in Greenberg to maintain his research. This included buying materials and retrieving necessary equipment with his personal vehicle (see Personal Vehicle Use & No Parking Permit Provided) after multiple requests for these were ignored or denied. He also trained and supervised students in basic carpentry for the installation of adequate cabinetry out of necessity because it was "out of scope" for Barton Marlow and OPP while the halftime shopkeep was on vacation or chronically unreachable (see Carpentry / Infrastructure Build-Out). Dr. Curtis also had to build a "stop-gap" solution for growth chambers prior to leaving for his sabbatical because the Percival growth chambers that were ordered were not be available by September 23rd, the accelerated Fenske evacuation / Greenberg "swing space" move-in deadline (see "Greenberg "Swing Space" Not Ready / On-time"). This was because OPP Supervisor Brian Hayes didn't order Percival Growth Chambers until August 5th even though Dr. Curtis initially provided the order specifications on June 22nd, then again on July 22nd and August 5th when Brian Hayes "lost" the information two more times (See "Growth Chambers / Stop Gap Solution For Late-ordered Percivals").

Perhaps the most ludicrous in a parade of building inadequacies in Greenberg was the Department Head Savage's passive-aggressive assignment of Curtis to a windowless basement office in Greenberg with a giant beam in the dead-center of it and admonishment for switching offices despite Barton Marlow being amenable (see 12' X 12' Office Without Beam In Dead Center Of It). The trend continued with refusal to provide his non-student lab members (i.e. lab technicians, visiting scholars) with cubicle space (see Office Space Politics). Again, Dr. Curtis at the time of the move was one of the senior-most faculty in the department in his 28th year of university service, a Penn State alumni and legacy himself, and a father of four Penn Staters. Frankly, it was quite the "Go Fenske Yourself".

This persistence of poor space use continued to be evidenced several months after this move debacle when CurtisLab was under award negotiations for its current DARPA Insect Allies cooperative agreement. Curtis requested space once again in under-utilized convirons, again from the Huck Institutes, but now making the request directly to Vice President for Research Neil Sharkey and with DARPA's funding to support the request. Dr. Curtis recalls that these six convirons to have cost $3M ($500,000 for each conviron) of NSF funding from when he presided on the building committee of the Life Sciences Building. Towards that request, Dr. Curtis and I prepared a new slideset (3 slides removed conveying unpublished scope of research) that showed photographs dating back three years that annually showed *at least* one of the convirons to sit vacant (slides 8-11). This slideset was also shared on June 6th, 2017 when Dr. Curtis took a meeting with Vice President of Research Neil Sharkey. Still, Curtis' request was denied again with the claim by then-Director Peter Hudson that they were "in continual use". As you can see by comparing the photo taken on May 31st, 2017 (slide 8) and the photos taken 13 days later on June 13th, 2017 (slide 27), two *Theobroma cacao* (chocolate) trees were added (by the Guiltinan Lab) to the conviron of empty shelves to stipulate their full and continual utilization. Obvious from the trees' maturity, they were doing well enough in their former home, likely the adjacent greenhouses, that these two trees alone neither required conviron use nor represented the full utilization of the convirons. This indicates that taxpayer and tuition dollars continue to subsidize the cost of these facilities whether utilized efficiently, as political pawns, or for academics to "mark their territory".

> OEC Excerpt #2 - Consistently informed of Fall 2016
> *Beginning in April 2015, faculty, including you, were consistently informed that the move from Fenske to Greenberg would occur during Fall 2016.*

Let's start with what faculty were informed of in April 2015 when Dept. Head Phil Savage wrote a concise email that provided a GANTT chart from Barton Marlow the construction contractor that provided a timeline of the construction of Fenske Lab's replacement, the "Chemical Engineering / Biomedical Engineering Building".

DATE OF COMMUNICATION	SENDER	TIMELINE OF MOVE COMMUNICATED
April 6th, 2015	Dept. Head Savage	"our move **in late 2016"**
April 6th, 2015	Barton Marlow	GANTT chart indicating groundbreaking in later Q1 2017
April 6th, 2015	Barton Marlow	GANTT chart indicating start of construction of building Chemical Engineering / Biomedical Engineering Building: November 9th, 2016;"Construction" prior to groundbreaking is presumably demolition.

Nothing in this April 2015 communication indicated "Fall 2016". Bear in mind also that we packed while demolition (as seen in this September 7th video) was occuring so one could certainly take "late 2016" to include dates after November 9th. Additionally, asbestos abatement also had to occur in order to widen the roof exit enough to transport several large pieces of equipment out of the building for crane removal. Also worthy of note is that while these were the times communicated as early as April 2015, the actual timeline of demolition and groundbreaking were significantly sooner. As noted in the supplement (see Building Entry / Exit: Access & Safety), excavation of the buildings foundation was so advanced that critical building points of entry / exit while lab tenants were still evacuating were blocked off for demolition. Further the groundbreaking ceremony occurred on January 20th, 2017 rather than late Q1 2017 (likely March 1) as the GANTT chart indicates. This represents an acceleration of at least 38 days from the timeline communicated in April 2015. I would also like to note numerous sections in the supplement where the cost of supplies (see "Swing Space" Supplies & Basic Infrastructure Not Provided, Subsidized, Or Just Insufficient"), critical support for the move was denied because "was not in the project budget". You know what was in the project budget though? A groundbreaking ceremony that afforded cake, hors d'oeuvres, gold-colored ceremonial shovels for dozens. I reiterate that Penn State's actions speak to a priority of public perception over safety and the university's mission and values.

With regard to OEC's contention that faculty were consistently informed of a Fall 2016 timeline of the move, I offer the following table as a synopsis of what was communicated. The

underlined portions indicate when a timelime was noted as not being firm or final; the boldface type indicates specific dates provided. This is also displayed via this powerpoint containing snip-its of the emails referenced below for more visual communication.

DATE OF COMMUNICATION	SENDER	TIMELINE OF MOVE COMMUNICATED (some quotes re-formatted with/out boldface and/or underline)
May 26th, 2016	Move Coordinator Roger Dunlap	"Greenberg – **September"**
June 1st, 2016	Dept. Head Savage	"We do not yet have a date for the move to Greenberg to begin, but most labs will probably move to Greenberg **in the Fall."**
June 1st, 2016	Dept. Head Savage	"The ChE department will move to temporary lab space **this summer and fall"**
August 11th, 2016	Wayne Curtis	"I need some solid timeframes that are NOT WISHFUL THINKING [sic] or GUESTIMATES [sic]… In passing yesterday, you now mentioned that Early October is when I should be planning for the full moveout [sic] of Fenske… Based on observation of plans, execution and being realistic, I still feel that a Nove-Jan time-rame [sic] for a functional move is realistic. What assurance (not hope) is there of a real time frame for a functional move?"
August 15th, 2016	Move Coordinator Roger Dunlap	"Occupancy of Greenberg 1st floor early October… We should have all occupants out of **Fenske no later than the end of October.** We will firm up dates as we get closer.They would like to have all items out of the ground floor west wing Fenske by September 14."
August 16th, 2016	Move Coordinator Roger Dunlap	"pilot plant storage… as of yesterday he is trying to get it **changed to end of September.** Will try to get a firm date"
August 18th, 2016	Move Coordinator Roger Dunlap	"**Moving to Greenberg has been moved up…** I just came from a meeting regarding Greenberg. It looks like we will occupy starting September 12th. They want Fenske to be empty **by September 23rd"**
August 18th, 2016	Move Coordinator Roger Dunlap	"You [sic] lab is scheduled to **move 9/19 through 9/23"**
August 18th, 2016	Wayne Curtis	"Accelerated Lab Move schedule" email title that was never disputed despite multiple direct response by Roger Dunlap with Savage CC'd
August 25th, 2016	Barton Marlow	"Our ultimate goal is to have completely **vacated** the Fenske Building by **9/23/2016**. Efforts are being made to secure labor crews, with overtime shifts as needed, to ensure that this goal can be met."

September 13th, 2016	Dept. Head Savage	"I believe your lab was scheduled to move **yesterday, today, and tomorrow**. Items that are ready to move will be moved as scheduled". Note that Greenberg didn't have certification of occupancy until September 12th and functional autoclaves until much later.

Dr. Curtis similarly summarized his experience with communication of timeline in an email directly to OEC on October 20th, 2017, saying

> *The plan seemed to be setting an artificial date in August, at which time they [contractors] had not even started the renovation of a 'blank' room for my laboratory (as noted below). Therefore, you cannot evaluate the move out plan ... without examining the renovation execution allowing for things to be moved in. The nature of our work is living things in month+ long experiments ... I can not simply turn things off, box them to storage and set up when things are ready. I asked for the dates on the move multiple times a week from both Roger Dunlop and and Phil Savage all summer long. (and had been trying to get plans in motion for over a year - meeting with Dean Achtley, and Peter Hudson; even identified unused labs that could 'stop gap' but was denied). In trying to decifer who was managing things ... I concludded that Phil deferred to Roger, and Roger "did what he was told". No matter how urgently I pressed them for details, I could rarely even get a guess (or willingness to press for a better guess).*
>
> OEC Excerpt #3 - short quotes without context
>
> *In an email dated August 18, 2016, you indicated that "sooner is better" with regards to the move and indicated that the possibility of moving on September 12th would "be a tremendous help."*

Meanwhile, OEC's "sooner the better" and "be a tremendous help" quotes are better understood in their full context--rather than cherry-picked phrases from two consecutive sentences. Here are those two sentences:

> *A move in Sept [sic] would probably mean deferring going to PNNL [his sabbatical] till [sic] after ... [sic] rather than returning for the move. This would mean SOONER is BETTER. You noted that 9/12 might even be possible ... and even if we could do that as a pre-functional move and setup phase as noted below, that would be a tremendous help.*

Now, of course, OEC in the process of their "thorough" and "independent review" clearly made no attempt to understand the meaning of "pre-functional move" even though the prefix "pre" implies ONLY an initial step. If OEC had asked for clarification on the meaning of "pre-functional" and "functional" moves, they could have obtained these excerpts from Dr. Curtis' email on September 6th:

> Email 1: *Keep in mind that although we have major plans for Sept 10 move ... THE MOVE WILL NOT BE COMPLETED DURING THAT WEEKEND. This is definitely NOT a one shot move. We have no choice but to be continuing to keep*

> *the lab functional in Fenske throughout this protracted move. As we continue to note that this will be successive moving of elements of the lab to verify we can keep different types of things alive ... (microbial, plant, algae) the capabilities are not in place at Greenburg [sic] to do that. Noting that without Percivals, we are doing twice the culture work to back things up in other buildings as well …*

Again, OPP's delay in ordering the Percival growth chambers as well as the burden put onto Dr. Curtis to fabricate a "stop-gap" solution is well-documented in the supplement (see Growth Chambers / Stop Gap Solution For Late-ordered Percivals).

> Email 2: *We need these items till we have the full functional move ...Which as noted below CANNOT be completed on the Sept 10th weekend.*

But OEC not only didn't make any attempt at being thorough but they also chose to completely ignore email contents that did not support their supposition that Curtis' allegations were unfounded (see slides 41-51 of supplemental powerpoint). Here are examples of excerpts OEC ignored from the four emails that Dr. Curtis provided when prompted to "forward any emails, notes, meeting minutes, etc. which created your expectations/understanding of [ONLY] the timeframe for the move from Fenske to Greenberg". OEC ignored this August 15th email in which Dr. Curtis elaborated on his tentative sabbatical plans relative to plans for a staggered, protracted relocation effort:

> *Start there [PNNL] as soon as paperwork might allow (Sept) - noting a week of getting organized (outside lab) would not be the worst thing to happen. Fly back to PSU for a week to facilitate the move when the [Greenberg] renovation is done ... [sic] promised in Mid [sic] October ... [sic] and while delays are very frequent here ... [sic] since they are scheduling demolition of building in Nov., that is likely to keep this on track.*

OEC ignored Dr. Curtis' additional August 11th communication with his sabbatical site that noted that respective demolition and construction teams were not yet in agreement on a building timeline as well as both the move coordinator and department head being inaccessible.

> *I am trying to get them on a conservative (locked in) plan, which would allow me to use PLAN A, (come ASAP, and then take the Nov-Dec time frame to complete the move). In part this seems only rational to assume the laboratories will not be move-in ready in less than 2 months !!!! (Yet this is what they are insisting needs to be the case for demolition to be on time). If they are truly going to push for this move earlier, I would either have to fly back to facilitate the move, or simply stay till it is done, then head there. At the moment, both the facilities person in charge of this move, and the department head are MIA !! I am doing all I can to nail them down to deal with the inconsistency of the two different contractors (builders versus demolition - who are clearly not on the same page).*

OEC Excerpt #4 - timeframe opinion v. evidence

Although you had shared your opinion in an earlier email on August 11, 2016 that, "a Nov-Jan time-frame [sic] for a functional move is realistic," there is no evidence to show that this timeframe was ever considered as an option by those planning the move. Thus this allegation is unfounded.

My rebuttal to excerpt #2 I believe speaks sufficiently to the communication to timeline. Again, this powerpoint visually provides a visual representation of timeline communication. These emails provided to OEC regarding move allegations (also in powerpoint) showcase the email contents that OEC ignored to reach their conclusions, which I personally deem as biased and irresponsible. I will only add here that it is rather unusual to me that an Office of Ethics and Compliance discounts determination of what is realistic--as if pragmatism has no bearing on safety compliance.

In closing of my rebuttal to OEC's finding related to the first move-related allegation, I reiterate the extremity to which the move indeed was sudden and expedited. Prior to August 18th when a move-out deadline of September 23rd was communicated for the first time, the only prior date (i.e. date not season or month) of October 31st was only mentioned three days prior, on August 15th. Thus, in that mere ~72 hour window, the move-out deadline of 77 days was more than halved to an evacuation deadline of only 36 days. The change from October 31st to September 23rd represented a relocation acceleration by 41 days. An acceleration of roughly 40 days is echoed in the acceleration of groundbreaking that was first planned for late Q1 2017 but actually occuring on January 20th, 2017. Counter to OEC's findings, the acceleration of the timeline indeed was sudden. Complications that arose as a result of the acceleration of the timeline were abundant and likely best noted throughout the supplemental document and particularly in subsections, Building Entry / Exit: Access & Safety Entry / Exit and Burden To Personnel & Faculty > Hours / Personnel Welfare.

OEC Response to second move-related allegation

OEC Excerpt #5 - moving responsibilities

[OEC:] In preparing for the move, each faculty member was informed of his/her responsibilities and that the Office of Physical Plant (OPP) would be responsible for providing labor to conduct the physical move.

Indeed, faculty were informed of their respective responsibilities of the move. In an inter-faculty email exchange on May 27th, 2016, Department Head Phil Savage explained,

> *It would be great if someone else would pack things for us, but regrettably that is not in the project budget and the department does not have funds to cover it. Of*

> *course, any PI is welcome to use discretionary funds (e.g., RIF, salary savings, endowed funds) to cover that cost if that is a priority for their lab.*

The ethics and compliance issue pertinent to moving responsibilities, however, is not one of communication. The ethical issue is one that asks what level of responsibility, reasonable timelines, and associated support will promote safety and ensure compliance with biosafety, safe workplace practices, etc. In the case of laboratory relocations, the responsibilities, both financial and logistical, displaced onto faculty were and remain, in my opinion, so burdensome to labs that it is exploitative and endangering. It bears total disregard for the welfare of faculty and their personnel, disrupts research, and subsequently can have detrimental career impacts. In the case of the Fenske evacuation, these impacts were further exacerbated by the accelerated timeline of the move. In fairness, however, when I expressed similar sentiments when being pre-interviewed by Penn State counsel (on another university matter; Part III), they advised me to refrain from being so “hyperbolic” in assessments involving another faculty member.

Below I articulate the burden of these “moving responsibilities”--when not matched with commensurate support--by breaking them down into two themes: (1) financial and (2) physical / logistical.

1. Financial Burden: The university financially forces faculty into a corner. Faculty cannot task their federally-supported researchers to assist with packing / moving (e.g. graduate students, postdocs) without misappropriating research funds (i.e. using research funds to support moving costs). This concern--and even a precedent of financial packing support--was explicitly raised to Department Head Savage via a department-wide email from Dr. Enrique Gomez. Further, while the researchers are employees with often the most knowledge of lab workspaces, packing priorities, and lab-specific safety hazards, they are also expensive personnel to support, especially when relegated to using “RIF, salary savings, endowed funds”. Lack of financial support, therefore, pressures faculty to accomplish the move (1) through their own physical effort at risk to their own welfare, (2) by misappropriating funds, (3) by relying on “volunteer” effort, and/or (4) by depleting Research Incentive Funds that are meant to promote research--not provide basic infrastructure. This was also alluded to in Gomez’s email when he said, “I would then give graduate students the option to "supervise" or pack anything they really care about

on their "own" time.". The subsection of the supplemental document entitled "Move Costs, Volunteerism, & Compensation" provides further references.

2. Logistical & Physical Burden: While OPP laborer's effort was NOT insignificant, there effort is highly limited to, optimistically, one-tenth of the move's effort because the so-called "physical move" does NOT include packing, decontaminating, designating materials for storage or temporary space use, disassembly and protective wrapping of large and/or delicate equipment. Dr. Curtis emphasized this point simply on September 12th, writing: "ONE CANNOT SIMPLY SCHEDULE A MOVE CREW [...] For every hour of a move crew of 4, there is at least 10-20 hours of effort required on our end to have that prepared." OPP is principally limited by (1) technical / biosafety knowlege gap, (2) lack of familiarity with building and equipment, and (3) union regulations e.g. cannot perform work that requires tools other than a leatherman. In the case of the Fenske evacuation, OPP's role was further limited by the Greenberg "temporary space" not having its certification of occupancy except for the designated last 12 days of the move, meaning that their responsibility was ONLY to transport materials between buildings--and necessarily to even place equipment in designated areas of the lab. The subsections of the supplemental document entitled "(Non-opp) Moves Of Equipment (E.G. Delicate, Biosafety)", "Faculty Burden: Planning & Presence Requirements", and " "Best" of OPP" provides further references.

As estimated in Dr. Curtis' "real cost of the Fenske move e-mail", there were approximately 2,120 unpaid personnel hours in the move-out from Fenske alone (i.e. this estimate does NOT include unpacking since October 1st). The fully-burdened (i.e. inclusive of fringe benefits; no overhead on RIF) cost of these unpaid hours at the time of the Fenske-Greenberg move would conservatively have been $31,871.99[2]. On February 2nd, 2019, I compiled a request with signatures verifying the estimates for 17 of the listed 19 personnel (including myself) to request compensation from Penn State. Penn State's Labor Relations responded that they would not compensate personnel without an itemized list of effort/hours, then reached out to only one person on that list: the post-graduate wage payroll employee who had a mental breakdown, thereby presumably representing their greatest liability.

[2] I nearly single-handedly generated the DARPA Insect Allies $7M cost proposal; I know how Penn State's budgets work. Assumptions were $10 for students/ employees who offered <100 hours of effort and $15/hour for those above. These hourly rates are highly conservative based on the working conditions of the move as well as both rates being less than half the hourly rate of an OPP laborer. Overtime, for which there would have been considerable, was not a part of these estimates. Dr. Curtis' monthly salary and visiting scholar Dr. Mohandass' fellowship cost were known quantities.

I followed up with an individual request and itemized list on April 28th, 2019 that is still “under review”. Even though Dr. Curtis, with whom I worked side-by-side corroborated the hours, Labor Relations does not even offer a timeline for review. Presumably, Penn State’s protracted review is weighing the liability of not paying me as legally obligated for work performed or compensating me for my effort, including 269.5 overtime hours (by my calculations) in a mere 46 days, which would essentially make them financially admit that CurtisLab was overburdened. Had Penn State not reclassified me as ineligible for re-hire by stating that I was neither employed (hence trespassing despite later paying me [Rebecca Mason, personal communication]) nor an educational volunteer, a policy allowing domestic persons to volunteer to conduct research as easily as international persons might, Penn State may have been able to argue that my move effort was “professional development”--the legal distinction from “work” that allows Penn State graduate students to not unionize as employees. Moreover, had the chemical engineering staff not favored me as a topic of scuttlebutt, purporting that I was homeless because I was in Fenske so frequently, (as confirmed by former chemical engineering staff member who “broke ranks” to make sure I wouldn’t be at-risk during asbestos abatement), then Penn State might also be able to argue that I worked these hours without their knowledge and ergo was a “safety liability”. Obvious from supplement subsection, Hours / Personnel Burden (among others), where the department head and departmental safety supervisor are copied frequently on emails in which hours of effort well beyond 8 hours/day are indicated for multiple personnel, it would be incredibly difficult for Penn State also to argue that this was done without consent or in violation of safety policies.

> OEC Excerpt #6 - boxes, inexpensive
>
> *[OEC:] In the weeks leading up to the September 12th move, you indicated in emails that a group of students and "dumpster boxes" would be used in the move. In an email dated August 15, 2016, you stated, "I have been and can continue to make this move as inexpensive as possible [sic.] through assistance of students, hundreds of hours of nights and weekends, even picking up hundreds of boxes needed for this from cardboard recycle ..... Depending upon the final detail of EAST/WEST wing, much of the remainder till the actual Greenburg [sic] move could be done without a work crew. "*

As noted above (in regards to faculty’s financial burden), no financial resources were provided to support the move beyond inter-building transport which puts pressure on faculty to conduct the move as cheaply as possible. Even Dr. Curtis was considered “on sabbatical” during the move and subsequently paid 50% of his salary. The OEC’s accusation, therefore, that Dr.

Curtis made a “unilateral decision to use students and self-obtained, discarded boxes to facilitate the move of your lab” when so many requests for support and supplies were denied is absurd. On July 27th, 2016--after Savage’s May 27th comment that, “It would be great if someone else would pack things for us, but regrettably that is not in the project budget” and prior to the email that OEC chose to reference--, Dr. Curtis informed the department head and building / safety supervisor that,

> *Half a dozen of us worked the past 7 hours, running all the autoclaves in the building continuously ... Just keeping you in the loop as this prepping for move and general condensation of materials has easily consumed 1000 hrs of effort .... and much of it being provided by volunteers around the lab !!! Any 'delays' on our part are certainly not due to lack of effort*

This sentiment was echoed on September 12th when Dr. Curtis wrote,

> *In my opinion, this level of support for a move is an order of magnitude less than what is reasonable. What is keeping me going, is that I understand (and support) the need to keep every bit of financial resources we can ... for the building that is the Departments [sic] future.*

As for the boxes,on September 7th, I asked Roger,

> *“Can you order boxes for office paper? I had managed to save some of the boxes that we get printer paper in but it would be really helpful to have those size boxes for all the stuff in filing cabinets.”*

Roger responded,

> *“Unfortunately no, The only ones I can get are what have been on the dock.”*

On September 2nd, Dr. Curtis in one of his nearly daily emails to coordinate the move instructed,

> *“Getting some more boxes from the Creamery ... particularly thin large boxes is something we might want to make sure we do this evening (Ben, will your van be available for that)”*

For further reference of the lack of financial support for the move and lack of moving supplies, please reference the subsections of the supplemental document “Lack Of Boxes, Materials, Crates, Dollies, Moving Carts, Etc.”, “Move Costs, Volunteerism, & Compensation”, “Lacking “Temporary” Space Infrastructure And/Or Support To Build-to-suit”, “Swing Space” Supplies & Basic Infrastructure Not Provided, Subsidized, Or Just Insufficient”t, and, for a comprehensive list, “the Real Cost of Fenske Move” e-mail.

OEC Excerpt #7 - not ready for OPP

[OEC:] At the time of the actual move, OPP staff pre-approved for overtime were scheduled to assist on September 11, 2016, however, the Curtis Lab did not have items ready to be moved and the crew was canceled.

The absurdity of this response from OEC barely dignifies a response. I will simply reiterate the physical & logistical burden prescribed to faculty and reiterate the supplemental documents subsections of "(Non-opp) Moves Of Equipment (E.G. Delicate, Biosafety)", "Faculty Burden: Planning & Presence Requirements", and ""Best" of OPP" for further reference. Specific to that event, on September 12th, 2016, Wayne wrote an e-mail to Phil and Roger describing, "the weekend move was as close to a complete disaster as one could imagine". There are so many egregious failures detailed therein that, that it's not worthwhile to recapitulate beyond providing the hyperlink.

OEC Excerpt #8 - EH&S not utilized

[OEC:] In an email dated May 26, 2016, lab assistants working in Chemical Engineering labs, including Curtis Lab assistant(s), were instructed to contact the University's Office for Environmental, Health and Safety (EHS) prior to June 10, 2016 for assistance with handling chemicals during the move. Despite this directive, neither you nor your lab staff followed these instructions and did not seek EHS assistance until day 2 of the move.

Yes, there was an e-mail inviting all labs to contact EH&S for chemical handling on June 10th---but it wasn't discovered until the November 30, 2017 memo). It's curious that EH&S in its walkthroughs with other labs took no onus to ensure that they did a walkthrough of CurtisLab, which occupied roughly 6,000 square feet of Fenske Lab and had some degree of occupancy in every wing and almost every level of the building. Similarly, it's bizarre that the safety supervisor / facility coordinator is apparently not delegated any of the "move responsibility" that adequate safety training be communicated and provided to everyone. My lack of knowledge of this training was relayed by my e-mail on September 13th to Roger, in which I indicated that the only EH&S training provided was for graduate students, saying

> *can you catch me up to speed on chemical handling/safety since I will be the one facilitating that? I missed the memo earlier since I'm not a grad student.*

Notably, CurtisLab had no chemical engineering graduate students at the time of the move. Those who helped support the move were [1] myself, a wage payroll laboratory technician, [2] Ben Geveke, a post-graduate student building his resume while studying for GREs, [3] Ramya Mohandass, a preeminent visiting scholar from India who had her planned collaborative research trip delayed, [4] Tina Lai, a plant biology graduate student in CurtisLab not privy to the

chemical engineering graduate listserv, [5] numerous undergraduate students, and [6] Wayne Curtis. With the move well under way, Roger simply responded concisely,

> *Use the plastic totes , segregated based on compatibility, Use [sic] bubble wrap where you think it is needed.*

Penn State's approach to safety during the Fenske evacuation was little more than P.L.E.A.S.E.: Provide Legal Exculpation And Sign Everything.

> OEC Excerpt #9 - no evidence of dangerous or hazardous exposure
> *[OEC:] Our review has discovered no evidence of any exposure to dangerous or hazardous chemicals or raw sewage.*

Really? Because the picture of sewage at one of the few remaining entry/exit points was hyperlinked in "the Real Cost of Fenske Move" email. But, there's also video footage of that same sewage drain. And in fact, one of my most vivid memories highlighting the move came when I realized that the pungent, putrid smell was that of sewage--coming from a drain that had backed up early in the demolition pilon drilling and splattered onto the concrete platform that CurtisLab and Barton Marlow employees trapsed across all day as we removed materials from the bunkers. This drain was not only at one of the few remaining entry/exit points but directly adjacent to the loading dock, where Roger Dunlap's (safety supervisor / move coordinator) office was located. The memory is particularly vivid for another reason in my mind, however; that day was compounded by other bad news for me: the department indicated that I--unlike my male counterpart--would not be offered compensation from the department despite prior verbal agreement to the contrary. I vividly remember the moment when I looked down at my worn, unsalvageable Aasic sneakers, thinking to myself, "How the Fenske am I going to afford new shoes?". I'll give this to OEC though: perhaps it wasn't raw. Maybe biological oxidation had accomplished some level of partial pasteurization. Congratulations, you got me.

There's also this video footage of this biosafety cabinet hovering over central campus via crane that wasn't decontaminated. Dr. Curtis' complaint to the Office of Ethics & Compliance also stated,

> *What is worse is the consequences of not having the requested support... I continued my marathon of 20+ hr days, and prepared one of the biocoontainment hoods by a scraping of the biohazard materials from the phlem catch etc, and sprayed down with antiseptic + high intensity (ozone producing) UV light treatment ....Unfortunately, the next morning a crane crew arrived early, and in that several hour window that I was not personally supervising, the WRONG biocontainment hood that had not been decontaminated was partially disassembled by OPP*

> *movers, crane hoisted out of the back of Fenske and taken across campus in the prime hours of student activity ! [before anyone realized they had extricated the cabinet from 222 rather than 225]*

E-mail excerpts also showcase that autoclaves were not setup and ready for use until after more (decontaminated) hoods were moved into new "swing space" (reference "Autoclaves, Biosafety, Shared Equipment")--despite Dr. Curtis' warning that "No Biomaterials can be moved to Greenburg until there is functional biosafety hoods in my lab…Confirm that Autoclaves are functional - also a biocontainment requirement" in the "Critical Timing and Needs" email to which Savage responded that "many of the things out of scope"

Furthermore, if OEC were truly going to conduct a "thorough review", they could have done what I did to assess the sheer volume of chemical and biohazards: called the Heritage Thermal subcontractor that picked up all chemical and hazardous waste from satellite areas. He indicated that his company maintains

> *"scans from the month of the Fenske cleanout… [though] there also may not be full inventoried waste because we didn't have everyone in the building submit their waste into the system, we just told them they could leave it at those satellite areas".*

He also remembered removing the cylinders from the bunker (personal communication) and indicated that Penn State's own EH&S would have record of them that he transported to the on-campus hazardous waste depot.

> OEC Excerpt #10 - unilateral decision, blame / failure of Curtis Lab
> *[OEC conclusion:] Based on the information and evidence obtained, this allegation is unfounded. This situation appears to be the result of your unilateral decision to use students and self-obtained, discarded boxes to facilitate the move of your lab, as well as a failure on the part of the Curtis Lab to follow instructions and utilize offered resources.*

My rebuttal to excerpt #6 addresses the accusation that this was a "unilateral decision".

My rebuttal to excerpt #8 already addresses the accusation that this was a "failure on the part of the Curtis Lab". I will expound further. The members of CurtisLab pushed themselves to the brink: psychologically and physically (reference "Hours / Personnel Welfare") to accomplish the move and protect our own research as well as the legacy of more than one-quarter of a century of cutting-edge biotechnology research. One of my colleagues/ coworkers had a mental breakdown on the intended last day of the move out from Fenske. More recently, he noted during a personal apartment relocation that he felt like he was experiencing PTSD (personal communication). Wayne Curtis vomited and aspirated in the

middle of the night, only to show up on campus hours later, because he did not feel that anyone else was capable and/or would assume the responsibility for the safety of his personnel. I became increasingly depressed including frequent suicidal ideation upon Dr. Curtis' departure to his sabbatical i.e. when I was made more vulnerable to the department in his absence. Reference the subsection Impacts To Research / Careers for other and cascading impacts.

In response to "utilize offered resources", I will point out OEC's most egregious example of bias and an affront to safe practices; it ignored Dr. Curtis' September 13th "critical timing and needs" email that was attached in his original complaint about the move entitled "Clear Denial of Move Support - Resulting in non-Compliance". The contents of the "Critical Timing and Needs" email permeates nearly every section of the supplemental document and was responded with denial of support by Phil Savage (see excerpts in supplement marked with "[Email Phil responded to indicate outside scope of department support]"). I cannot fathom how it is possible to read that email and Savage's response and still deny that "Curtis Lab was negatively impacted by a lack of planning, resources, and support from the department".

* * *

In addition to my refusal of OEC's findings, I offer my supposition: the pattern with Penn State is clear. Negate liability by pushing more responsibility onto faculty. Push more responsibility onto faculty without providing support to create an untenable situation. Let the ends justify the means; dam the collateral damage.

On September 30th, 2016, almost immediately following the Fenske evacuation coincidentally, the College of Engineering's ENGAGE climate survey results were presented in back-to-back town halls by Dr. Sue Rankin (featured in Training Rules documentary) of Rankin & Associates, the consulting group that performed the survey. Relevantly, during the town hall, Rankin observed,

> "*I know looking at data retention, you're losing faculty. You're losing them. They come, but they don't stay*".

Meanwhile, former College of Engineering Safety Officer Josh Troxell noted

> "*some of the numbers that were just presented are above thresholds in the safety world… so we would expect to see increased workers compensation claims and increased safety deficiency and liabilities that some of our other numbers that I've been tracking are starting to show that*".

Almost poetically, the documentary, the *Hunting Ground,* pans over Penn State President Eric Barron from his time at Florida State University as clinical psychologist David Lisak provides a voiceover:

> *"I feel like there's this moral high ground in higher education that is just sitting vacant. What I haven't yet seen, anywhere, that I'm aware of, is a President who has decided that whatever it takes, it has to be done. And that's what leadership is."*

The Hunting Ground was released in 2015. I think you could easily expand "President" to a litany of Penn State titles (e.g. provost, executive vice president, dean, research dean, senior associate dean, department head, safety supervisor) and that voiceover would remain equally valid at Penn State today.

This "sweeping under the rug" is not just a Penn State issue. This is a fundamental issue of the times. Global, societal themes of corruption, anti-establishment politicians, "too big too fail" conglomerates, and corporate greed highlight widespread cynicism, alienation, and disenfranchisement. Disenfranchisement, however, is the antithesis of a solution. Whether the relevant community is a nation or a university, stakeholder enfranchisement is key to creating the society we want to live in. The priority for Penn Staters must be on building the foundational checks and balances on power like effective whistleblower protections, promoting transparency, holding leadership accountable, and vigilant journalism. *Think* 'Enfranchised State University'.

SINCE 2016 FENSKE EVACUATION & 2019 OUTLOOK

Looking at the Association of Public Land Grant Universities role guidelines towards supporting a safety culture, it is abundantly clear that an unsafe culture continues to be propagated at every level. Those who have "swept under the rug" the Fenske evacuation and other safety violations have been rewarded while those who have not remained silent on safety issues and promoted an awareness of safety issues have been retaliated against.

On January 26th, 2017, move coordinator Roger Dunlap was highlighted as a "staff star" in the inaugural Staff Advisory Committee newsletter while "swing space" issues continued to persist for months (revisit "Greenberg "Swing Space" Not Ready / On-time"; slides 18, 19), Dr. Curtis spent nearly a year and more than half of his sabbatical to regain the level of functionality the

lab had maintained in Fenske, research and jobs suffered significant negative impacts (see supplement Impacts to Research and Careers), and others involved in the move like myself continued to be ignored. I don't negate that Dunlap's effort was above average and expectations relative to his typical job functions immense. What I take issue with is that university leadership sees no problem with a safety officer being not only overburdened but also entrusted with his oversight of his own performance as "move coordinator". I take issue with the university then choosing to promote and show appreciation for a safety officer who, despite his efforts, didn't create a safe work environment. Note, however, that my indictment is not emphasized towards Mr. Dunlap whose autonomy was effectively handicapped by the department head (see Phil Savage response to "Critical Timing and Needs" email) but towards the university leadership that rewards him for a "sweeping under the rug" well done.

In May 2017, I filed a "near miss" safety report after tripping in the dark in CurtisLab because the motions sensors that turned the lights on and off in our lab didn't function properly. The lights would turn off after not sensing motion for several minutes but continue not to sense motion while we walked and worked in the lab, leaving us in the dark surrounded by sharps, biohazards, etc. I had requested OPP to fix them several times and OPP came several times. However, every time that they promised the motions sensors were fixed--and once that the motion sensors were so sensitive that they could detect the "blinking of eyelashes"--they weren't. In frustration, one night, I tweeted a video (warning: strong language) demonstrating the persistent issue and filed a "near miss" safety report after tripping (but luckily NOT being significantly injured) in the lab on the way back to the light switch. As part of the safety report, I took immediate corrective action by buying headlamps for CurtisLab members to use in the lab after 5pm (when the issue with the motion sensors would begin)---which were used prior to OPP fixing them. In speaking with an undergraduate with experience in another laboratory located on the opposite side of campus, she had noted to me that the motion sensors were an issue for her there as well. Of course, Penn State didn't use the "near miss" report to be proactive and investigate if the problem was widespread. Instead, the following happened:

1. The department head used my submission of the purchasing form to the building safety officer (such that CurtisLab's Gates Foundation grant would NOT be used to purchase headlamps for building infrastructure failures) to substantiate that I was "insubordinate",
2. On June 13th, 2017--8 days before I was made ineligible for rehire--, the building safety officer summoned me to his office for a new procedure in association with the "near

miss" report I filed. With Human Resources (presumably Rebecca Mason) on his phone, I was requested to submit an "Employee Description of Injury" form (Rebecca Mason's initials appear as a witness to the form). A less naive version of myself should have seen the writing on the wall---that the university was "tying up loose ends" to negate their liability in preparation for rendering me "ineligible for re-hire".

3. When Rebecca Mason informed me of my reclassification as ineligible for re-hire (which is the primary topic slated for Part IV of this series) on June 21st, 2017, the rationale provided to me by her (verbally) was that I was not employed by the university and therefore safety liability / trespassing. I was later paid for my June effort including June 21st. When Dr. Curtis arrived back from Africa on June 22nd, he demanded answers--since I was (as I call it) "un-hired" without his knowledge and to the detriment of his project slated for award 10 days later. When Dr. Curtis rebuffed the idea that I wasn't employed, the department head administrator Laurinda Benner cited that the "near miss" safety report demonstrated violation of "work alone' policy. While this had been noted by former College of Engineering Safety Officer Josh Troxell in a meeting with him on June 6th (i.e. prior to my un-hiring), Troxell also recognized the policy as rampantly violated and wholly unenforced. If this was used as the grounds to "un-hire" me, it would seemingly constitute a choice to discriminately enforce this policy in addition to use of a safety report filed in good faith to retaliate against a whistleblower. Because of at-will termination policies in Pennsylvania, however, no written record of the rationale for my reclassification has been provided as it is not required by any employer. In Pennsylvania, it is my understanding that the onus is on the employee to pursue wrongful termination in order to demand that an employer produce evidence of a rationale for termination (Of course, I wasn't "terminated"; I was made ineligible for re-hire and paid until I was reclassified.)

On January 29th, 2018, Dr. Curtis sent a department wide email highlighting the observation that departmental staff were using an ice machine designated for furnishing laboratory ice for their personal drink cups. Meanwhile, he also indicated that in filing biosafety permits he found that the Greenberg "swing space" autoclaves--with only one of three being setup 4 days prior to the Fenske evacuation deadline had already been a "lowlight" (see Autoclaves, Biosafety, Shared Equipment)--had certification maintained by OPP and the building supervisor that was 6 months expired while EH&S had failed to do any functional testing for biohazard deactivation.

Both of these lapses left the department and multiple laboratories in breach of biosafety compliance. If these were not reported “up-the-chain” to federal agencies, that would constitute yet another breach of safety compliance. Despite this, Roger was again awarded in October 2018 by the College of Engineering with the “Outstanding Staff Award” at the annual Penn State Engineering Alumni Society awards reception.

On the other hand, on May 7th, department head Phil Savage signed off on his official comments to Wayne Curtis’ annual review (of 2017) in which he stated,

> *The paragraphs above outline the positive contributions Wayne has made to advancing the mission of the department. There were also negative contributions to the overall climate and work environment, made primarily by mass email messages that needlessly alarmed our faculty and demoralized both faculty and staff.*

For context, Wayne Curtis did send out several other department-wide emails when deemed fit throughout 2017. This has not been typical of him over his career, now spanning more than three decades, but (per my supposition) is an “organic” reaction to the vacuum of leadership and sensibility in the department’s decision-making since the appointment of Phil Savage as department head. All were critical departmental issues based on safety, non-equitable policies, and the trajectory of the department. Frankly, to officially reprimand a faculty member for communicating freely on issues of safety, fairness, and leadership on a document that is weighed in consideration of job performance is antithetical to academic tenure. Most of these emails are summarized (and hyperlinked) below:

1. Discriminatory enforcement of work alone “policy” that is NOT universally adopted across university (July 11th, 2017 safety meets liability, July 17th, 2017 safety meets liability revisited, July 17th, 2017 Troxell cease & desist, July 25th, 2017 proactive review of safety apps towards better compliance & safety, July 25th Volunteer Labor)
2. Foreign nationals can volunteer in chemical engineering but invocation of unprecedented and unofficially educational volunteerism policy prevents domestic students from doing the same (July 9th, 2017, July 13th, 2017, Phil Savage denied this on July 14th but his responses ran in direct opposition to faculty Drs. Janik & Zydney)
3. Lack of department-wide participation in graduate recruitment (March 20th, 2017)
4. Title IX (see Part I of this series)
5. Unprecedented mechanisms for graduate student assignment that do not prioritize core faculty or funded researchers (November 10th, 2017)
6. New policy of cost-sharing that adversely impacted applied researchers, etc. (March 1st, 2017, April 25th, 2017)
7. Routine, untimely onboarding (and thereby payment) of new graduate students (September 5th, 2017)

8. Recurring concerns over future 2019 relocation (and associated costs) to Fenske replacement / CEBME building (August 28th, 2017 email)
9. General department state of affairs (November 30th, 2017)

Beyond incentives and disincentives that demote unsafe practices (per APLU guidelines), I am left with a recurring thought that seems to epitomize Penn State's approach. Just a handful of days before I was unceremoniously reclassified as "ineligible for re-hire", I was lucky enough to see the other side of CurtisLab's Greenberg Swing Space: the Lasch Football building. I tagged along with a mutual friend that was a Penn State football prospect and took a tour of "the other side of Greenberg"--that left me speechless. It occurs to me now that whether it's the renovated infamous football locker rooms of the Sandusky scandal or Fenske's replacement with the Chemical and Biomedical Engineering building, Penn State acts as if renovation and reconstruction can literally build a "clean slate" for all its prior atrocities. But Penn State's road is being littered with the collateral damage that makes the facade of its vision possible.

WHY THIS APPROACH?

Why am I writing this publicly? Why didn't I write my rebuttal directly to OEC? Why didn't Curtis respond to OEC in the allotted week to provide a rebuttal?
Obvious from my rebuttal, I give no credence to OEC's independence or thoroughness. Any response to them would be as effective as Drs. Wood's and Curtis' requests to obtain facilities access to existing, functional, and adequate underutilized space. In my perception, OEC is solely intended as an extension of the university meant to negate liability and disincentivize those who might speak out.

Note that my paperwork burden associated with Parts I & II (Parts III & IV remain in progress / I might not pursue to favor having a life again) took me months of nights and weekends. The one week deadline is significant only because it speaks to a pattern of research administration, who have been consistently putting an increasing burden on faculty without providing commensurate support. That can only mean one thing to those paying tuition or the federal agencies and donors subsidizing Penn State research: less bang for your buck. Penn State's only effort at leadership is seemingly in "leading" a war of attrition against faculty. Rather than innovative and growing support mechanisms in times of increased competition for research funding, Penn State languishes behind, ostensibly providing less support to faculty today than

was offered 30 years ago (personal communication, Wayne Curtis) despite all the advances of this digital era.

WHAT PENN STATE REACTION DO I FEAR?

Obviously, I fear (in my opinion further) retaliation against myself (e.g. lawsuits) and CurtisLab (e.g. repeat of 2016 evacuation, continued jeopardization of laboratory legacy and research). I'm reminded of Brene Brown's definition of blame: "a way to discharge pain and discomfort". I've made an obvious attempt to provide as much credibility as possible (through overwhelming documentation) because I anticipate being discredited in any myriad of ways (e.g. disgruntled employee, 'hysterical' woman, written-off as litigious or money-seeking).

Another response from Penn State that I would classify as wholly unacceptable are the canned responses that "Penn State takes these issues very seriously". Ample opportunities to take seriously the responsibilities entrusted and opportunity to make things right have been given to members of Penn State at nearly every level--faculty, department head, EH&S, Office of Ethics & Compliance, Dean, Provost, VP & President. None have taken their responsibilities seriously. This slogan *ifyouwill* was also the adopted word choice for universities in their recurring cover-up of sexual assaults as noted in *The Hunting Ground* documentary. I do not want to bear witness to a repeat of history. And finally, further doubling down: certifying that nothing was done wrong and placing blame on individuals--especially those already relegated as collateral. Presumptuously, on behalf of us all, I will state that we have suffered enough.

Presumptively, I expect that Penn State's most likely answer will be something along the lines of Oasis Petroleum's response following the death of one of its subcontractors. Here's John Oliver's synopsis of Oasis Petroleum's response:

> *I should point out Oasis wanted us to say that they did absolutely nothing wrong and also that they've added new safety measures since the accident, essentially saying their system was always fine and that's why they've now completely fixed it.*

WHAT OUTCOMES DO I HOPE FOR?

My main objective is simple: meaningful change. Safety for my friends who need to survive another laboratory relocation and maintain their research to continue to meet their milestone-based research on which their livelihoods depend.

[1] Promoting a safety culture: Penn State is a land grant university. The Association of Public and Land-grant Universities (APLU) sets forth guidelines to promote a safety culture. It needs university leadership with the conviction and work ethic to uphold the safety culture itself and implement those guidelines from the top-down. To name a handful of examples, this would include transparency, admitting wrongdoing, not retaliating against whistleblowers, not awarding those who fail to comply with standards report and/or do not report lack of safety compliance, and taking corrective action to address immediate and root causes.

[2] Moving Cost Line Item in Capital Campaign: Faculty should not have to beg from OPP or an external construction contractor for thousands of dollars of support to relocate when there is a building project budget of over $144M and (or including?) $4.8M “swing space” budget. Require building projects to have a line item that is ample to support the cost of moving---including the effort beyond the “physical move” of packing, decontamination, unpacking, re-assembly, etc.

[3] Make these safety failures (both Parts I & II) a case study / learning opportunity - something beyond an online mandatory CYA training; something that fosters engagement, allows for discussion of complex issues, and builds rapport between faculty and office resources

[4] Accountability Force--not Task Force: Penn State doesn’t need (yet another) task force to determine how to become a safer university. APLU provides (and hopefully this) provide ample actionable items. Listen to Sue Rankin’s speak on her opinion of task forces in higher education:

> *I am sick in higher ed. We collect data. Where does it go? On the shelf. Collect the data, make a nice little task force. [...] on a shelf.[...] I know this works. If you are committed to this, I know you can see change happen. I know it. I’ve seen it happen.*

[5] Full utility of space / taxpayer dollars: Accept proposals for space use on a rolling basis (not once a year as is current practice with Huck Institutes convirons [unless assignment policy has already changed to that which was communicated by Briskar in June 2017]). Enforce that faculty share facilities when possible. As noted in Slide 4, when CurtisLab previously had conviron access, it shared the space (i.e. its algae trickle screen reactors are featured adjacent to another researcher’s corn). Understandably, there are times when biocontainment limitations

may not allow different research to be housed in the same area. To ensure accountability and transparency, make the review of facilities access applications a transparent procedure (for faculty) via open committee review, minutes, etc.

[6] Independent OEC: Instead of having an internal Office of Ethics & Compliance that vouches for its own “independent review”, make the Office of Ethics & Compliance an external entity reporting to the Board of Trustees in addition to university administration.

[7] Infrastructure for Lab & Office Relocation: Penn State is a university with an operating budget well over $1 Billion and nearly 300 buildings at University Park campus alone. There’s no pretending that office and laboratory relocations aren’t routine occurrences. Here are specific action items to address:

1. OPP tape measures - I understand that this is something that will fall subject to union negotiations, but please all relevant parties, advocate to add tape measures to the allowable items that OPP laborers are allowed to carry / use.
2. New class of OPP laborers?- I don’t know how feasible this is, but it would make sense to me to either expand the role of OPP laborers to extend to the physical packing--rather than just the physical moving of pre-packed boxes and ready-to-be-moved equipment.
3. Supplies - It should go without saying but there should be an abundance of boxes of varying sizes and shapes as needed made available to accomplish the move as well as pallets, dolleys, crates (that are not falling apart), etc.
4. Qualified move / safety coordinator - Designate (a) professional move coordinator/s that is/are EXPERIENCED in construction, safety practices, and science background as needed / relevant to coordination (e.g. biocontainment, biosafety)
5. EH&S & OPP supervisor presence and oversight - EH&S should provide oversight to the designated safety officer and overall safety effort. The significant burden of maintaining safety compliance when moving research materials should not be ignored and should be supported whether through EH&S, the department, or otherwise. OPP supervisors should be on site periodically, particularly at the more entropic times. Towards a bottoms-up feedback, OPP laborers’ should be encourage to report potential hazards to welfare and safety as they are those who are most reliably involved at the “ground level”.

6. Compensation for all support*- There's no reason to give faculty what essentially amounts to an ultimatum to lose their research, sacrifice their hard-won research incentive funds, sacrifice the welfare of their lab including themselves to accomplish an unreasonable move, and /or enlist federally-sponsored researchers to support the move of their research and risk misappropriation of federal support.
7. Replacement of broken & insurance for untested equipment* - specialty equipment (e.g. biosafety cabinets, COY chamber) should be decontaminated and transported as recommended by manufacturer (e.g. disassembly & reassembly if it can't fit through doorways without potentially tearing $20K plastic 'bubble') at the expense of the department.
8. Minimize disruption to research* - There should be a maximum effort to minimize the disruption to research. Most of the risk to research disruption could be very easily mitigated by reasonable timelines that take into account the academic calendar, adequate, experienced support, labs that are in move-in ready condition, and careful planning of staggered moves that enable a lab to maintain functionality of all necessary capabilities throughout relocation. To some extent, however, disruption is inevitable. The university needs to recognize this and not force faculty to sacrifice their careers and technical reputation. Especially researchers with milestone-based grants where disruptions have the potential to result not just in underperformance but subsequently in discontinued funding and lack of support for personnel, there must be financial support (whether in tuition, additional research incentive funds, or equitable [not equal] move "bonuses").
9. Adequate "temporary" space - Many faculty in the chemical engineering department simply chose not to conduct experimental research for 3 years, never unpacking their "swing space" boxes for the duration of their 3-year stay. For those faculty for whom research downtime is not an option and/or put a premium on research productivity, however, adequate temporary space should be provided and inadequacies that result in negative research impacts need a path for compensation. While the detriment of research impacts can be significant for anyone (including graduate students, staff, and faculty), I imagine that faculty early in the promotion and tenure process could be particularly devastated, noting that they would have to compete among their peers (external to Penn State) who are not subjugated to such a catastrophic relocation for

young investigator / early career awards (that are often instrumental to receiving tenure) and have age cut-offs (i.e. may not survive relocation delays).

10. *Equity not equality - This section is broadly targeted towards the asterixed sections above. I include this because apparently it's not obvious that support should be proportional to need rather than arbitrary, equal, and ultimately inadequate for researchers with greater need. I do NOT understand how it is difficult to grasp that support needs would be substantially greater for an experimentalist rather than a computational person, a faculty member who has been at Penn State for 28 years rather than 10 years, a researcher that has to maintain living organisms rather than one that can temporarily cease and restart research, a researcher that has 6,000 square feet of space rather than less than 2,000 square feet of space, and/or a faculty member that has health risks as opposed to one who does not. I find that equal financial and logistical support--rather than equitable support is both discriminatory towards labs with greater needs and reflects negligence on the university. Below is my most basic attempt (<10 minute effort) to assess the extent of need for support of respective faculty for the Fenske relocation, assigning a tally of the sheer quantity of safety risks and moving constraints. It captures the answers to the most basic questions like:
    - Does the research require move of a laboratory (i.e. experimentalist) or only computers / server / office (i.e. computationalist)?
    - Does the research have biological organisms (i.e. to keep alive)?
    - Does the research have an associated risk of contamination (i.e. of the research) or biocontainment (i.e. to the outside world)?
    - Were volatile gas mixtures and chemicals a key constraint in the moving procedures?
    - Is re-certification of biocontainment hoods needed?
    - Were they relocating from Fenske or from another space (i.e. without ultimatum of demolition, asbestos remediation)?
    - Was there at least 1 full-time person on average per 1,000 sq. ft. of laboratory space?
    - Was the space available for move-in at the time of relocation?
    - Was the relocation feasible (within reason) in 36 days (amount of notice given)?
    - Did faculty intend to conduct research immediately or would they be disengaged (e.g. on sabbatical, not resuming research until return back to CEBME in 3 years)?
    - Are any of the staff members relocating predisposed to physical and/or health risks (e.g. over 50 years old, history of pulmonary embolisms, depression)?

Basic Hardship Assessment Score

	ARMAOU	BORHAN	CURTIS	DANNER	GOMEZ, ESTHER	GOMEZ, ENRIQUE	JANIK	KUMAR	MAKANAS, J.	MAKANAS, C.	MATSOUKAS	MILNER	RIOUX	SALIS	VELEGOL, D.	VRENTAS	WOOD	ZIONEY	ELUCIDATION
FENSKE																			
PI > 5S (OR HEALTH AT RISK)			X	X											X	X	X	X	
SPACE IN FENSKE / PACKING ULTIMATUM	X	X	X		X	X	X	X	X	X	X	X	X		X	X		X	
EXPERIMENTAL			X		X	X		X	X				X	X	X		X	X	
BIOLOGICAL (i.e. living organisms)			X		X			X						X			X	X	
EXPLOSION HAZARDS (e.g. gas mixtures)													X						
SPACE > 1,500 sq. ft.			X					X					X	X			X		
< 1 GRAD STUDENT, STAFF, POSTDOC / 1,000 SQ. FT.			X		X							X							
EFFORT OF MOVE > 1 MO. (I.E. GREATER THAN EXPEDITED TIMETABLE)			X					X					X				X		
CONTAMINATION RISK			X		X			X									X		
-80C FREEZE / THAW RISK			X		X			X						X			X	X	
RELOCATION SPACE																			
MORE STRINGENT BIOSAFETY COMPLIANCE (E.G. IACUC, APHIS, BSL2+)			X		X												X	X	
REQUIRED BIOHOOD RE-CERTIFICATION ($$)			X		X			X						X			X		
EQUIPMENT BROKEN OR EXPERIMENTS TERMINATED EARLY / INTERRUPTION > 1 MO.			X		X			X					X				X		
URGENT NEED TO RESUME EXPERIMENTAL RESEARCH UPON RELOCATION	X		X		X			X					X	X			X	X	
SPECIALTY / EXTENSIVE IT SETUP (e.g. server)	X	X				X			X		X								
CONTAMINATION RISK & OPEN DUCTWORK			X														X		
RELOCATION SPACE NOT READY FOR MOVE-IN			X		X			X											
YEARS OF SERVICE TO PSU																			
TOTAL	3	2	15	1	11	2	2	11	2	2	2	2	7	6	3	2	12	7	

Table 1: *The table to the left makes a very rudimentary assessment of the level of hardship that faculty had in moving. It tallies the number of obstacles--without accounting for degree of difficulty--that each faculty members had in moving. The higher the tally, the greater the hardship. Of the 19 faculty, only 4 had a hardship level over 10 with median and mean values respectively of 2.5 and 5.11. Yet CurtisLab's score was the highest at 15.*

LIST OF ACRONYMS

CoE	College of Engineering
CYA	Cover Your Ass
HR	Human Relations
OEC	Office of Ethics & Compliance
OPP	Office of Physical Plant
OSP	Office of Sponsored Programs
OERA	Office of Engineering Research Administration
PSEAS	Penn State Engineering Alumni Society