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SUBJECT GW/VZ INTEGRATION OPEN PROJECT MEETING - APRIL 3, 2000

TO Distribution

FROM Michael J. Graham, Groundwater/Vadose Zone Integration Project Manager

DATE April 14, 2000

ATTENDEES

See Attached List

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Attendees
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NEXT GW/VZ INTEGRATION PROJECT OPEN MEETING:

Next Meeting: Monday, April 17, 2000 – 1-3 p.m.
Location: Bechtel Hanford, Inc., - **NEW LOCATION** - Room 2D01 (Badging Required)
Local Call-In Number: (509) 376-7411
Toll Free Call-In Number: (800) 664-0771

MEETING MINUTES:

A Groundwater/Vadose Zone (GW/VZ) Integration Project Open Meeting was held on April 3, 2000 in Richland, Washington, at the Bechtel Hanford, Inc. (BHI) Assembly Room.

PROJECT REPORT:

SX-108 SLANT BOREHOLE DRILLING STATUS (Tony Knepp):

We're on the last three days of our test drilling of the slant borehole south of the SX Tank Farm. This work is to help us test the equipment and practice the techniques before doing the actual work inside the tank farm. We've driven down about 130 feet, and we'll probably finish driving the casing down to the full depth just to demonstrate it can be done. Full depth is about 155 feet down. We have two backup sampling techniques we'd like to work on just in case. We'll do those and then we're out of there. We should be finished this week. We're about two days behind the overall schedule, which really isn't too bad. About 11 a.m. today, we're doing the drilling and sampling in full protective gear just to get used to it. We just want to make sure everyone is trained and knows what to do. We should be doing this same work in the farm for real in about a month.

QUESTION: Have you hit any snags?

ANSWER: Nothing serious. Since it's a new technique with some new technologies, we ran into some wrong pieces and parts, but that's been fixed and everything is working smoothly.

QUESTION: The sampler is working fine?

ANSWER: It's working like a charm. There's a lot of technique associated with it, but we have it down now. We actually have two types of backup sampling techniques, and we'll be trying those over the next couple of days.

QUESTION: The samples you're taking now are cold?

ANSWER: All of the work we're doing right now is cold. However, we're running a mock-up today as if it were hot. All of the drilling we've done with this rig thus far has gone as planned. It's a little scary actually how well things have gone.

COMMENT: Sounds like good news all the way around.

OVERALL INTEGRATED PROJECT SCHEDULE (Michael Graham):

A copy of the Integrated Project Schedule is attached to the meeting agenda. You can see the things we have coming up this month. The System Assessment Capability (SAC) Rev. 0 Design Report is a major deliverable we have in April. An update to the Science and Technology (S&T) Roadmap will be coming out toward the end of the month.

Something that's not on this schedule that I would like to talk about is the National Academy of Sciences (NAS) review happening next week. We tried to plan this for last fall without success. It took longer than anticipated for the NAS to get the committee together.

A detailed Test Plan is in the making for the Vadose Zone Transport Field Study task. That's been drafted and is currently under review. Another item on the schedule is a Conceptual Model White Paper due out later this week. That's where we are as a project from a very high level.

TRITIUM/618-11 BURIAL GROUND UPDATE:

Data Quality Objective Checklist (Jane Borghese):

The Data Quality Objective (DQO) Checklist for Phase II of the 618-11 Burial Ground Investigation has been delivered, and Greg Mitchem and I (Jane Borghese) are in the process of reviewing it now. It consists of the information needed to help form the DQO Report. The DQO Report is in the process of being duplicated, and that should be delivered to Mike Thompson today for review.

Once the document clears the review process, we'll do a road show for the regulators, Tribal Nations, and anyone else that's interested. The intent is that this information has a wide distribution.

QUESTION: Does the DQO include a conflict resolution process?

ANSWER: If we get conflicting advice from the regulatory community, then we'll deal with that when the time comes. We're hoping that they will help us wade through any conflicts.

QUESTION: This doesn't contain much new in the way of data objectives or data quality?

ANSWER: The main goal here is to determine the size and content of the contaminant plume. It doesn't include any corrective actions. It would be premature to even consider those at this point.

Occurrence Reporting Corrective Actions (Stuart Luttrell):

I have a handout here (bulletized below) listing the corrective actions due by the end of April coming out of the 618-11 Burial Ground investigation. These actions are relevant to groundwater reporting.

- Assure that data reports are being prepared in a manner that has all values delineated by commas and the decimals aligned. This will help distinguish relative size of reported data.

This action is complete as demonstrated in the first page attached to the handout. It is a page from the regular biweekly report that is given to the project scientist responsible for that area. If you look under the nitrate heading, in the fifth column from the right you can see how helpful it is to differentiate values with the commas added and the decimals aligned. We didn't have that in earlier reports, so it was harder to see relative values.

- Assure that an additional data report is being prepared in which new wells and constituents are reported. The report will include constituents from wells with three or fewer measurements and trends not readily apparent.
- A DQO-like process will be established to determine a range of expected values prior to new well/constituent sampling.

The action to prepare the report is complete as demonstrated in the second page attached to the handout. This report contains just those wells and constituents with three or fewer entries in the database. It can get pretty lengthy. This report is also produced biweekly.

The second part of the action to establish a determined range prior to sampling is in process. Evan Dresel is currently working on that.

- Assure that periodic data reports are being prepared in which the highest (10 or 15) values for the major constituents, for the time period, are reported in descending order. This will highlight high values across the site for all major constituents.

That action is complete and an example is shown on the last page of the handout. In the example page, you see the highest values for trichloroethane, dichloroethane, dichlorobenzene, and butanone. The values are listed from highest to lowest. I've already reviewed some data reports in the new formats, and I can already tell that the new formats are going to be useful for identifying possible outlying values.

- Assure that on a quarterly basis plume data is being posted and reviewed on the previous year's plume maps. Data will be presented as varying symbols and color with the brightest color applied to the highest concentrations.

There are a few slight modifications in process, but that action is effectively complete. This plate that I brought along as an example shows the fiscal year 1999 (FY99) contours in various colors, depending on the concentration of the constituents. Quarterly, as data is gathered, it will be shown as a dot at that well location with a corresponding color. If that data point falls within the green contour then that dot should be green. It should make it easier to spot outliers that way. If a yellow or red dot pops up within the green contour, it would be a good indicator of an anomaly.

COMMENT: Unless you happen to be colorblind.

RESPONSE: We'll have to take that into consideration.

- Assure that primary data reports (1-3 described above) are being prepared on a biweekly (1 & 2) or monthly (3), rather than quarterly, basis. This will reduce quantity of data being reviewed at any given time.

This last item is also complete. It involves a walk around to check with the person responsible to make sure that the reports are getting to the right people.

QUESTION: Do you have any sense of the efficiencies gained through better organization and more frequent reporting of the data?

ANSWER: It's not really efficiency, it just assures a better quality check. Maybe it will make things more efficient with a little more time, but that wasn't the reason the changes were employed.

QUESTION: Is this everything? Are these all of the corrective actions?

ANSWER: There are still two more to do. One is due by the end of April and one is due in June.

NATIONAL ACADEMY OF SCIENCES REVIEW (Mark Freshley):

Next Tuesday and Wednesday (April 11-12), the National Academy of Sciences (NAS) will hold their first meeting to review the S&T Plan for the Hanford Site. The review committee is actually under the auspices of the Board on Radioactive Waste Management (BRWM). Their charter is to review the technical merit and relevance of the S&T Plan and Roadmap and our implementation of that. Their focus will be on the S&T portion of the Integration Project, but our belief is that in order to do that, they'll have to do a review of other parts of the project as well. They should provide us with excellent advice and technical direction.

This study was requested by the Department of Energy (DOE) Assistant Secretary for Environmental Management (EM) and is being sponsored by the EM Office of Science and Technology (EM-50). One of the cool things is that since this is technically an EM-50 committee and not an Integration Project committee, it saves us from having to handle the administrative details. They take care of that kind of thing themselves.

The plan is for this to be an 18-month study. The committee currently plans to meet six times during those 18 months. The meeting next week is the first of those six. It will be held at the Red Lion Hanford House here in Richland.

The committee has a website where they have posted the project scope, committee roster, and the agenda for the upcoming meeting. Future meeting agendas will also be posted here. The address is <http://www4.national-academies.org/cp.nsf>. This does not take you directly to the page for the committee. All of the links don't seem to be established yet, but things should be more active with time. (Note: A direct link to the committee's page has been established on the Integration Project website at <http://www-bhi-erc.com/vadose>. The link is contained in the Peer Review section of the website.)

The committee chairman is Chris Whipple. I met him at a meeting in review of the early draft of the Washington Advisory Group (WAG) Report. He seems like a very reasonable person. His area of expertise is risk assessment.

COMMENT: Please run down the entire roster and identify the individual areas of expertise.

The individual areas of expertise are not listed on the official announcement from the NAS (Attachment 1), just the affiliations of the panel members. Those affiliations are as follows:

- Christopher G. Whipple, *Panel Chair*, Environ, Inc.
- D. Wayne Berman, Aeolus, Inc.
- Sue B. Clark, Washington State University
- John C. Fountain, State University of New York at Buffalo
- Lynn W. Gelhar, Massachusetts Institute of Technology
- Lisa C. Green, Lucent Technologies
- Robert O. Hall, University of Wyoming
- Edwin E. Herricks, University of Illinois at Champaign-Urbana
- Bruce D. Honeyman, Colorado School of Mines
- Janet A. Johnson, Shepard Miller, Inc.
- Salomon Levy, Levy and Associates
- James K. Mitchell, Virginia Polytechnic and State University (emeritus)
- Leon T. Silver, California Institute of Technology (emeritus)
- J. Leslie Smith, University of British Columbia
- David. A Stonestrom, U.S. Geological Survey

(Note: The NAS website contains a listing of the panel members and short paragraphs of biographical information on each member, including area of expertise.)

On the NAS website, the committee roster is listed as provisional. That means that a comment period is currently underway. The NAS encourages people to provide comments on the panel makeup. When I checked it this morning, it said that there were still 17 days remaining in the comment period. There's a feedback form on the NAS website if anyone here is interested in making comments.

All of the meetings next week are open to the public. The panel will have a couple of closed sessions on Tuesday morning and Wednesday afternoon that are not listed on the official agenda. These are for the committee to take care of some internal business. They go through an extensive review to make sure there is no conflict of interest among the panel members. This portion of the meeting will be closed to everyone except NAS staff and committee members.

The open session starts on Tuesday afternoon at 1 p.m. Chris Whipple, the committee chair, and Kevin Crowley, the director of the BRWM, will handle the welcome and introductions. Gerald Boyd from EM-50 will participate telephonically and give the committee some background on the Integration Project, why the study was requested, and what his expectations are for the study.

The committee wanted to do a high level overview in the first meeting. As a result, there won't be a whole lot of technical detail discussed. To those of you already familiar with the Integration Project, the majority

of the meeting next week will likely be review. We just wanted to make sure that the committee members were all starting off on the same page.

The remainder of the first day will consist of Roy Gephart from PNNL giving a brief history of the Hanford Site and the associated problems, and Keith Klein from DOE-RL sharing his current vision for Hanford. Klein's portion will include future actions to be taken, decisions to be made, and a description of the biting short- and long-term problems. Before closing on the first day, there is time scheduled on the agenda for comments from the stakeholders, regulators, and Tribal Nations.

The second day will consist of an Integration Project overview from Michael Graham, an overview of the Hanford S&T program from John Zachara or myself (Mark Freshley), and an overview of Integration Project Expert Panel (IPEP) activities from IPEP Chairman Dr. Ed Berkey. There should be some dialogue on the distinction between the IPEP and the NAS committee. At the end of the morning there is another period scheduled for stakeholders, regulators, and Tribal Nations input.

The committee will set their schedule for future meetings during the meeting next week. They anticipate the next meeting happening in the June or July timeframe. Meetings should occur roughly every three months.

COMMENT: This is Shelley Cimon (participating telephonically). I'm quite upset by the NAS committee meeting being scheduled on top of the HAB-ER committee meeting. I'd like you to please explain how that happened, and I'd like an acknowledgement that it will not happen in the future. This is an incredibly important meeting to both committees. There should be some respect paid to the HAB for events like this.

RESPONSE: We apologize for the scheduling, but we can't give you a commitment that it won't happen in the future. There are several reasons. The NAS sets the agenda for these meetings, not us. They determine the dates for these meetings based on the availability of the committee members. These are some pretty high level people, including professors and industry leaders, and the window to be able to get all of them in the same place at the same time is small. Any time you try to get 15 people from around the country together, you're going to have a very small window to work with. We can ask them to take in to account other events that are happening, but they also have to convene when they can all make it. Another thing is that they do not have a contract with us. Their contract is with DOE-HQ, and we have no real power over them. Usually we'd be able to give them direction on what days were and were not available. As a result, it's likely that they'll overlap with something.

COMMENT: If possible in the future, if you could make them aware of when we meet and ask them not to overlap, I'd appreciate it.

RESPONSE: We will work with the committee, and we'll lay out what events are happening when, but ultimately it's their call when they hold the meetings and what the agenda will be. It's simply incredibly difficult to get 15 busy people to the same place at the same time.

COMMENT: I can understand that.

QUESTION: Could you please let us know the dates well in advance so that we can make changes to our meetings dates if necessary?

ANSWER: Kevin Crowley said that he wants to lay out the schedule for the remainder of the meetings during this meeting and get that set. It's a lot easier to work with the schedules of 15 different people when they are all sitting in the same room. We'll all have to work with what dates they set. We will definitely communicate any conflicting dates though.

COMMENT: Something needs to be made really clear here. The NAS sets their own meeting dates and agendas. They do ask our advice, but that's about the end of our influence.

QUESTION: How many others are advised to impose an expert panel on you? This brings the number to two. Why isn't the original IPEP complaining about the NAS taking away some of their clout? The original IPEP is already too big and too narrow. The NAS panel seems to have a little better representation of various areas of expertise, but what were the selection criteria for this panel?

ANSWER: This was a purely NAS selection process. We provided them with a statement of work and scope, and they decided the membership and the expertise needed. It was completely independent of the Integration Project.

COMMENT: There's something very clumsy about bringing in an expert panel in on top of another expert panel.

COMMENT: That's what you get for wanting too much independent oversight. Be careful what you wish for, you just might get it.

QUESTION: Is there a defined scope of work showing what the panel will be looking at?

ANSWER: It's on the NAS website now, but it's even briefer than what is in the project announcement.

COMMENT: It would be nice to know that there aren't panels tripping over panels in this case.

RESPONSE: We've held a lot of meetings with Ed [Berkey] and Kevin [Crowley] and the old Washington Advisory Group (WAG) in order to make sure we're not duplicating work.

QUESTION: It's good to see a risk assessment specialist among the panel members, but is it human type risk with radiation?

ANSWER: I'm unaware of that level of detail yet.

RESPONSE: It's just good to know that there's a person with an expertise in risk. The assumption would have to be that it the combined kind of risk, but we'll know more next week. However, there is a health physicist on the panel as well.

COMMENT: We understand that the amount of time that we spend getting reviewed is becoming extreme, but an NAS review is a big deal. Their reviews of other organizations are nationally

recognized. It's a major credibility point for the Integration Project to have our S&T validated by such a prestigious group.

QUESTION: Then do you really need the IPEP?

COMMENT: I plead the fifth.

ANSWER: Hopefully there will be enough communication that both can be effective and not duplicate effort and review.

COMMENT: Plus this is a free review. The money for this isn't coming from our project budget, but rather from DOE-HQ.

QUESTION: Why not just eliminate the IPEP then and use the money elsewhere?

ANSWER: They are different panels with different focuses.

COMMENT: The focus for the NAS is an 18-month study. The IPEP is an enduring panel. We'll try to manage things for a healthy overlap.

QUESTION: Why did it take so long for the NAS committee to be established?

ANSWER: The NAS wanted to come in during the S&T formative stages. They didn't want to be here when things were just in the planing stages. They wanted to be here when we started looking toward implementing the S&T plans at a time when they could have the most impact. In the early planning stages it is sometimes hard to tell what the true direction is. This review was timed so that the S&T effort here at Hanford had a little bit of momentum.

QUESTION: Has the NAS spoken at any of the Integration Project meetings to this point?

ANSWER: Kevin Crowley was supposed to be at the last IPEP meeting, but he got snowed in.

COMMENT: The possible overlap I see is that part of the NAS review isn't just about the science; it's about relevance. That's part of the IPEP realm. Plus, the IPEP also has said that it wants to keep an eye on the S&T program. I have to agree though that the NAS is a big deal for the Integration Project.

COMMENT: So the NAS isn't here to oversee the S&T effort, but rather to make S&T judgements and recommendations. In order to do that they'd need to understand what the system here is all about.

RESPONSE: That's right.

COMMENT: There needs to be better communication in order to give stakeholders a chance to comment on agendas and the like.

RESPONSE: This agenda and the date for the meeting were only finalized last week. We tried to push things out as fast as we could, but with the date itself only confirmed last week it made things understandably difficult.

RESPONSE: Plus you have to keep in mind that this is an NAS meeting, and not a Hanford or even an Integration Project meeting. We're only playing a supporting role for this one.

COMMENT: It's something we can help them with though. In the future there should be a lot more advanced warning.

RESPONSE: That's why they want to nail down the meeting for the next 18 months in the meeting next week.

QUESTION: The relationships get very complicated. For example, I'd like to lobby to the committee that there's not enough work happening in the dose response area, but is that appropriate? Others have other topics that they'd like to see more focus on. Is that the kind of thing to be brought up during the stakeholder agenda time?

ANSWER: It would be appropriate to bring up any topic of relevance to S&T at Hanford.

QUESTION: Is that the process? You make a case to the NAS. You make a case to the IPEP. You schmooze as many individuals or groups as possible to pay attention to the things you want. Everyone of course has their favorite topics, but is that how it's done?

QUESTION: Did you have any say about it?

RESPONSE: About what?

RESPONSE: The public commenters.

RESPONSE: That's not something that the Integration Project has any role in defining.

COMMENT: This in an open meeting, and there is time on the agenda to hear from stakeholders. We're not exactly sure how the NAS is planning on doing it though. It's their show. There is also a feedback form on their website to provide comments in writing.

QUESTION: It would be valuable information to know what the actual relationship is between this meeting and site cleanup. Is it just peripheral or is it integral? How involved will this committee be in shaping cleanup decisions? Is this a "no-never-mind" or is it something we need to make sure our in-house S&T folks at Ecology are involved with. It needs to be stated whether it may impact decisions or if it's just an extra thing. It's just not clear where this committee fits in the overall scheme of things.

ANSWER: If you want a value judgement, this group will definitely shape decisions here at Hanford. Your organization definitely should participate, even if you as an individual have a conflict.

QUESTION: Will this group be focused on Hanford, or will it be a generic DOE complex-wide S&T review?

ANSWER: It's focused on Hanford.

QUESTION: This group will be providing recommendations and not decisions. Correct?

ANSWER: Yes.

COMMENT: They won't be looking at budget constraints, so they can recommend whatever they'd like. It doesn't mean it will happen.

COMMENT: One of the recommendations I wouldn't be surprised to see come out of this is that not enough money is being funneled to S&T.

COMMENT: Even with the money already there, the priorities are wrong. It's the wrong mix of research.

COMMENT: Even if they recommend spending more on S&T, after an 18 month study it may be too late for your project.

RESPONSE: Even if it didn't effect our project, it would still have an effect elsewhere at Hanford.

COMMENT: One advantage this panel brings, is that members have done work for the vadose zone and know about vadose zone technologies. They've a good grasp of what is out there. They've got a good understanding of what we're applying here at Hanford and a good knowledge of what's out there elsewhere.

COMMENT: It's a good group.

REGULATORY PATH FORWARD WORK GROUP UPDATE (Dru Butler):

The final workshop on 100 Area integration is on the calendar for April 10 from 1-4 p.m. here in this building. The last meeting was on 100 Area groundwater and source units. We'll get stakeholder and regulator reaction and advice, and discuss next steps. The plan is to cover the 200 and 300 Areas this year.

QUESTION: Will you have anything like a final report for the 100 Area groundwater topics?

ANSWER: Yes.

UPCOMING EVENTS AND OPPORTUNITIES FOR PARTICIPATION:

See attached calendar (Attachment 2).

NOTES:

GW/VZ Web Site location: <http://www.bhi-erc.com/vadose>

If you have questions or comments please contact Dru Butler (509-375-4669), Gary Jewell (509-372-9192), or Karen Strickland (509-372-9236)

ATTACHMENTS:

- 1) National Academy of Sciences Project Announcement
- 2) GW/VZ Integration Project Two Month Look Ahead Calendar

ATTENDEES:

Marty Bensky – Tri-Cities Caucus
Jane Borghese – CHI
Amoret Bunn – PNNL
Dru Butler – BHI
Shelley Cimon – HAB
Don Clark – JAI
Mark Freshley – PNNL
Michael Graham – BHI
Mary Harmon – DOE-HQ
Dave Holland – Ecology
Kathy Huss – SAIC

Gary Jewell – BHI
Tony Knepp – CHG
Stuart Luttrell – PNNL
Fred Mann – FFS
Gordon Rogers – HAB
Virginia Rohay – CHI
Steve Sautter – BHI
Dan Tano – DOE-RL
Mike Thompson – DOE-RL

Attachment 1**National Academy of Sciences Project Announcement****Committee on Remediation Science and Technology at the Hanford Site
Board on Radioactive Waste Management**

A National Research Council committee has been formed under the auspices of the Board on Radioactive Waste Management to provide recommendations for improving the technical merit and relevance of the Hanford Site's environmental remediation science and technology plan. The study was requested by the Assistant Secretary for Energy Management (EM) and is being sponsored by EM's Office of Science and Technology. The provisional committee roster is given below. Additional information on the committee and study can be found on the National Academies website (<http://www4.national-academies.org/cp.nsf>).

The committee will meet approximately six times during this 18-month study and will produce at least one National Research Council report. The committee's first meeting will be held on April 11-12, 2000 at the Red Lion Hanford House, which is located at 802 George Washington way in Richland, Washington. Agendas for this meeting and further meetings will be posted on the National Academies website (address given above) or can be obtained by contacting Angela Taylor at (202) 334-3066 or, via e-mail, at ataylor@nas.edu.

The provisional* committee roster follows.

- Christopher G. Whipple, *Chair*, Environ, Inc.
- D. Wayne Berman, Aeolus, Inc.
- Sue B. Clark, Washington State University
- John C. Fountain, State University of New York at Buffalo
- Lynn W. Gelhar, Massachusetts Institute of Technology
- Lisa C. Green, Lucent Technologies
- Robert O. Hall, University of Wyoming
- Edwin E. Herricks, University of Illinois at Champaign-Urbana
- Bruce D. Honeyman, Colorado School of Mines
- Janet A. Johnson, Shepard Miller, Inc.
- Salomon Levy, Levy and Associates
- James K. Mitchell, Virginia Polytechnic and State University (emeritus)
- Leon T. Silver, California Institute of Technology (emeritus)
- J. Leslie Smith, University of British Columbia
- David. A Stonestrom, U.S. Geological Survey

* Pending completion of National Academies bias and conflict procedures.

Attachment 2

GW/VZ INTEGRATION PROJECT
APRIL 17 – JUNE 19, 2000
 TWO MONTH LOOK AHEAD CALENDAR

April 17	GW/VZ Open Project Team Meeting *NEW LOCATION* BHI Room 2D01 – 1-3 p.m. (Contact: Dru Butler)
May 1	GW/VZ Open Project Team Meeting BHI Assembly Room – 1-3 p.m. (Contact: Dru Butler)
<i>Early May</i>	<i>GW/VZ discussion with IPEP representatives on SAC Rev. 0 Design Report Richland, WA (Contact: Bob Bryce)</i>
May 9	HAB Environmental Restoration Committee Meeting Richland - Federal Building, Room 142 – 8 a.m.-4 p.m.
May 15	GW/VZ Open Project Team Meeting BHI Assembly Room – 1-3 p.m. (Contact: Dru Butler)
May 24-26	Integration Project Expert Panel (IPEP) Meeting BHI Assembly Room (Contact: Virginia Rohay)
May 31	HAB Public Involvement Committee Meeting LaGrande, OR
June 1-2	Hanford Advisory Board Meeting LaGrande, OR
June 5	GW/VZ Open Project Team Meeting BHI Assembly Room – 1-3 p.m. (Contact: Dru Butler)
June 6	HAB Environmental Restoration Committee Meeting BHI Assembly Room – 8 a.m.-4 p.m.
June 19	GW/VZ Open Project Team Meeting BHI Assembly Room – 1-3 p.m. (Contact: Dru Butler)

(Note: Italics denote tentative event schedules)