



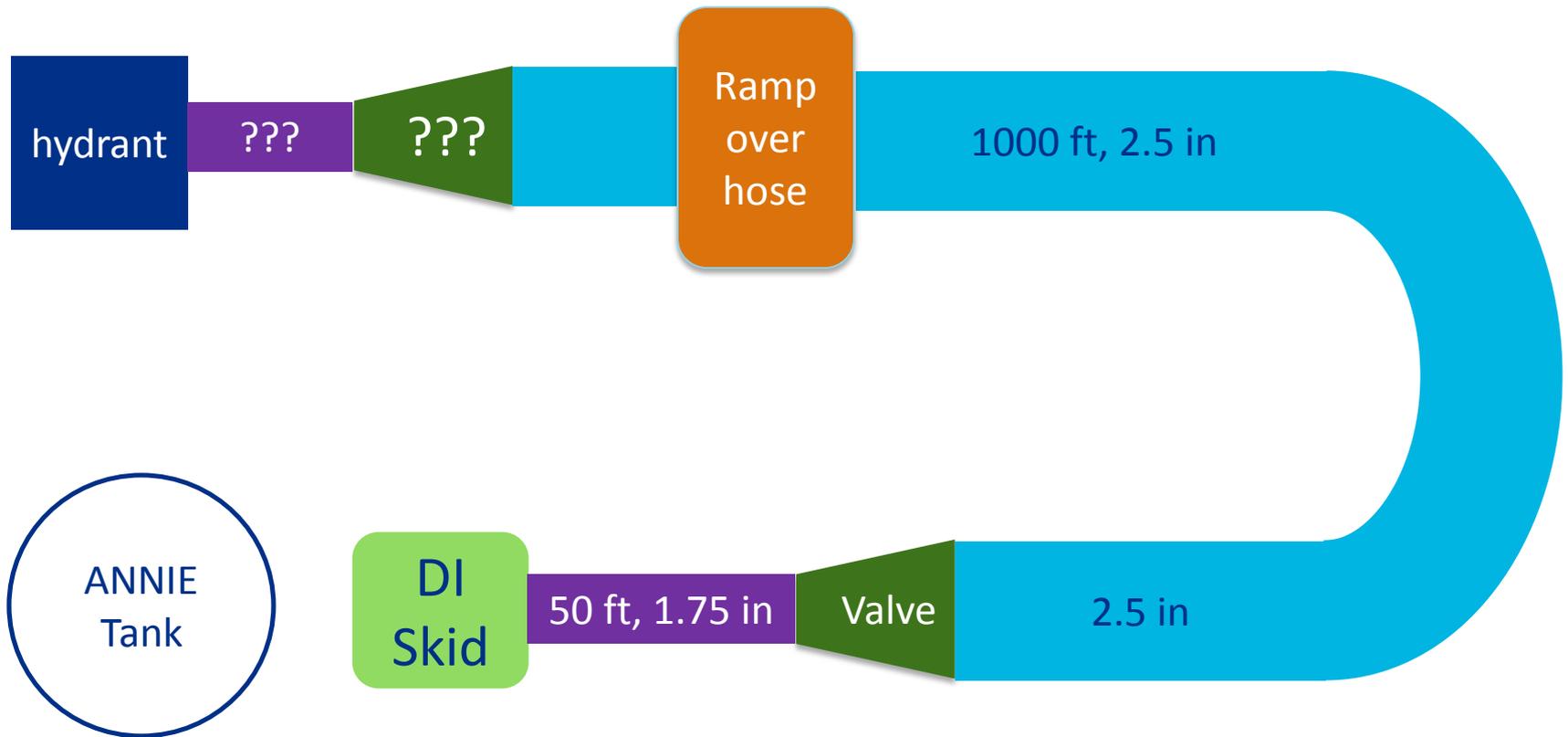
ANNIE Water Tank Fill

Geoff Savage for Bill Lee, ANNIE, and all the additional project participants
April 2016

A note to experts

- This document focuses on coordination and documentation, not on instructions for experts
- As you know, physicists are curious people who enjoy learning new things.
 - This curiosity often comes across as micro-management.
 - Micro-management is not our intent.
- Groups involved (incomplete list of individuals)
 - FESS
 - Fire Department
 - Construction
 - Safety
 - Experiment Installation
 - ANNIE Experiment
 - Neutrino Division
- My expectation is that each group will provide the correct level of job hazard analysis for their contributions to this project
 - For example, attaching a hose to a hydrant is probably a regular activity for FESS and the fire department so I would not expect a written JHA
 - Using the DI filter skid is a singular event so John Voirin has produced a written JHA

Major Water Line Components

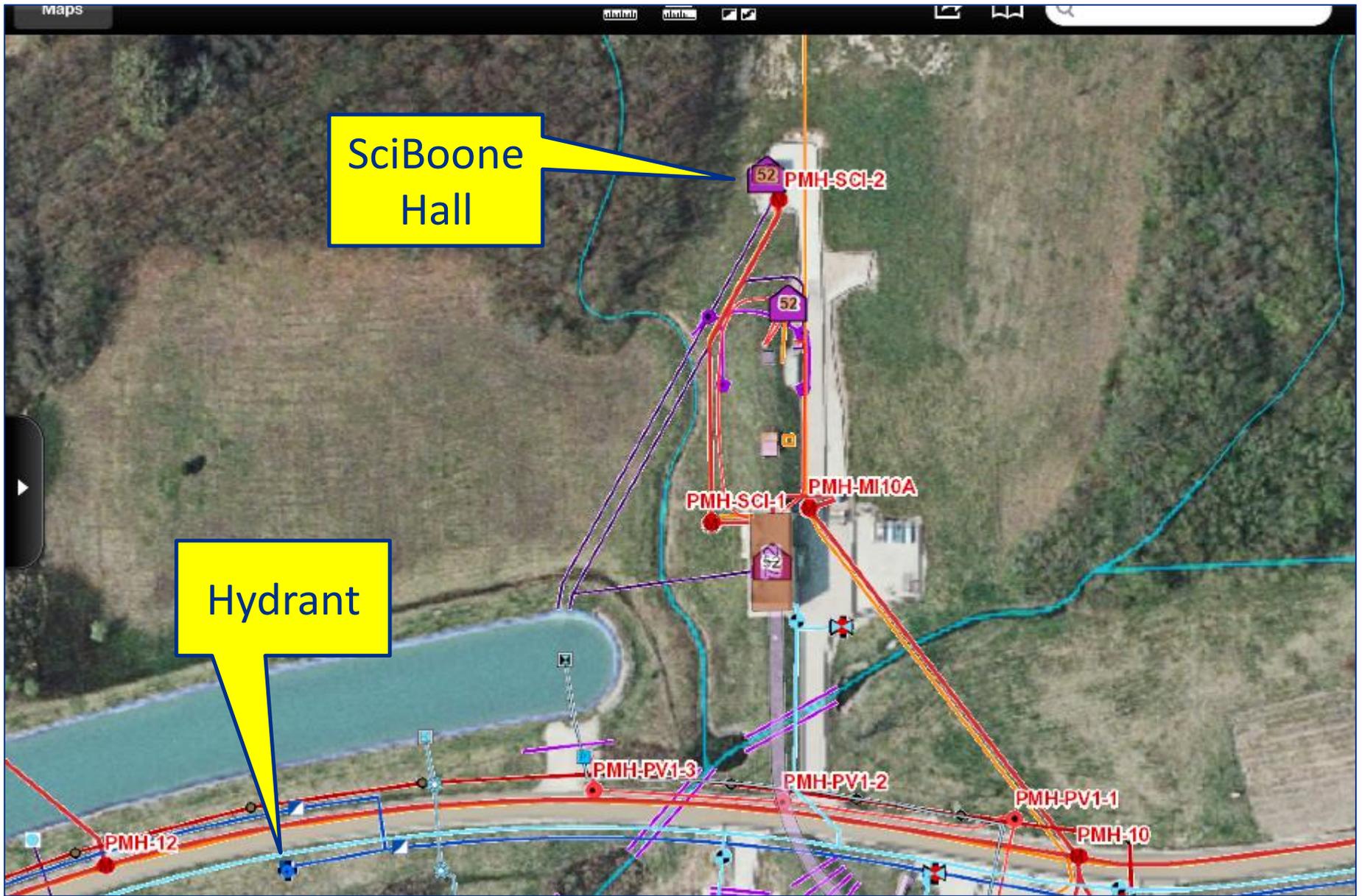


Fire Department provides

- Hose
- Valve
- Safety cones

FESS provides

- Ramp over hose
- Hydrant connection
- Install hose
- Hydrant flush



Schedule

- 4/12 Tuesday - Prep work
 - Performed during normal working hours
 - Hydrant flush
 - Install hose and valves
- 4/13 Wednesday - Fill tank with water
 - Start about 6:30 am
 - Approximately 8 hours to fill

References

- FESS work order number = WO640444
- Fermilab Global Information System
 - <http://fesspsde.fnal.gov:8095/ArcGISPortal/index.xhtml>
 - <http://fesspsde.fnal.gov:8095/FessViewer/index.html>
 - <http://fesspsde.fnal.gov:8095/resources/FERMI Legend.pdf>

Background Information Follows

Input from FESS 1/2

- From Greg Gilbert
- Attached are photos of the connections that will be required to attach the 1,000 feet of 2 1/2" Fire Hose to the inlet of the ANNIE make-up water skid at SciBooNE.
- Photo #1635 is the outlet, a 1 1/2" Stainless NPT Ball Valve, so a 1 1/2" PVC or stainless nipple by 1 1/2" hose fitting (or hose barb fitting) and ~50 feet of hose to reach to their tank. The outlet hose could be a smaller dimension if 1 1/2" hose is unavailable.
- Photo #1636 is the inlet connection, which is a 1 1/2" PVC female glue socket joint. To get to a 2 1/2" Female Fire Hose Connection will require a 1 1/2" PVC nipple X 1 1/2" NPT Thread fitting (either a 1 1/2" female glue socket X 1 1/2" male NPT adapter or a schedule 80 threaded PVC nipple with one end cut off), then a 1 1/2" X 2 1/2" NPT Bushing. We should have 2 1/2" NPT X 2 1/2" NH (Fire Hose Thread) adapters.
- As we discussed, FESS and the Fire Dept. will be providing, laying and (and re-rolling) the 1,000 foot hose run from DWS Flushing Hydrant DHUF903 South of MI10. Also per our discussion, the current schedule date for this work is Wednesday, April 13th. The FESS Work Order for this job is WO640444.

Input from FESS 2/2



Photo #1635 is the outlet, a 1 1/2" Stainless NPT Ball Valve, so a 1 1/2" PVC or stainless nipple by 1 1/2" hose fitting (or hose barb fitting) and ~ 50 feet of hose to reach to their tank.



Photo #1636 is the inlet connection, which is a 1 1/2" PVC female glue socket joint.

Bill Lee 1/1

- Will you please make the adaptations needed below. First the adapter from the firehose to the 1 1/2' PVC female glue socket joint? Second the hose that will run from the 1 1/2" Stainless NPT Ball Valve to the hose that will run to the tank. Since this will be our pure water, we should have new hose. you can use the ANNIE task code to get hose from the stockroom.
- If there are fittings that you do not have, we should see if we can borrow them from the water group.
- The skids and fittings are in MI8, if you need to see them.
- We will also need you to bring the skid and polisher bottles to SciBooNE the day of the fill.
- I have attached the skid layout and discussed with Greg Gilbert.

Questions and answers 1/

- Q: Is it possible to do this over 2 days? IF not then preparations need to be made to cover overtime for some people. (John Voirin)
- A: Two days is better for everyone. Prep day followed by fill day.

- Do we have any worry about the pressure in the hoses if we shut off flow at the skid?
- I assume that we are providing a valve on the input of the skid? The only valve I saw was on the output side.

Q&A 2/

- As far as shutting off we were told (to be confirmed): we can shut off the flow at the skid and then go (ourselves or John Violin's group to be determined) and shut down the valve that will be at the place where the hose goes from 2.5" to 1.75". This valve must be closed slowly. As soon as we see the light come on the skid we will want to close the valve within a minute.
- A: