**05/21/13 Status Update on NEPA, Projects, and Cultural Resources**

### NEPA Reviews

<table>
<thead>
<tr>
<th>D/S/C</th>
<th>Action/Project</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>PPD</td>
<td>CMS Upgrades</td>
<td>Stefan Gruenendahl submitted a draft Purpose &amp; Need and Project Description. Amber responded with suggestions on 5/9/13. <strong>Awaiting ERF and D/S/C review.</strong></td>
</tr>
<tr>
<td>PPD</td>
<td>Muon g-2</td>
<td>Tom Lackowski sent email on 5/20/13 stating a plan is now in place for cooling water (A0 Pond work). A Project Plan will be submitted in 1+ week. The NEPA addendum will be drafted by Amber based on that with a goal of approval by mid-June. <strong>Awaiting Project Plan from Tom.</strong></td>
</tr>
<tr>
<td>FESS</td>
<td>Various Demolition Projects 2013</td>
<td>Jon Hunt submitted an ERF for numerous demolition projects (37-39 Shabbona, Village Water Tower, T159, Site 50 T&amp;M Barn and Building A. The ERF was reviewed by Rod Walton and determination was made that FSO approval is required. Amber has drafted an EENF. 25-33 Blackhawk has been added to the list of sites slated for demolition. <strong>Awaiting drawings of 25-33 Blackhawk from Jon.</strong></td>
</tr>
<tr>
<td>DIR</td>
<td>Geotechnical Investigation of LBNE Detector Site in South Dakota</td>
<td>Draft EENF sent to FSO for review on 03/18/2013. Final EENF sent to FSO 03/22/2013; approved by FSO on 03/27/13 (see <a href="https://esh-docdb.fnal.gov:440/cgi-bin/ShowDocument?docid=2411">https://esh-docdb.fnal.gov:440/cgi-bin/ShowDocument?docid=2411</a>.</td>
</tr>
<tr>
<td>AD</td>
<td>Design, build, and test downconverter electronics for 3.9GHz SRF module HOM diagnostics for FLASH at DESY.</td>
<td>WFO FRA-2013-0003 information sent from legal on 03/11/2013 and forwarded to AD. The Accelerator Division's Instrumentation Department will be doing this additional work for DESY, and designing, building, and testing beam instruments and diagnostics is routinely conducted by this department. There are no new environmental impacts associated with this work. An ERF has completed.</td>
</tr>
<tr>
<td>DIR</td>
<td>Korea-US Collaboration Center</td>
<td>Moses Chung, R&amp;D Administrator, completed the ERF. These are administrative activities that are covered by 10 CFR 1021 Appendix A and this will be communicated to FSO.</td>
</tr>
<tr>
<td>PPD</td>
<td>Extruded Plastic Scintillator for KEK (accelerator in Japan)</td>
<td>Received WFO info from legal on 01/29/13 and sent this to Eric McHugh. The FNAL/NICADD Extrusion Line Facility located in Laboratory 5 in the Village was not reviewed for NEPA when it was built so we have to submit an EENF for approval to FSO. ERF submitted by PPD; questions and requests for additional info sent to PPD on 02/06/2013, response on 02/08/2013. FSO reviewed preliminary draft, responded 02/12/2013. Final EENF sent to PPD 02/13/2013. Final EENF sent to Jack Anderson for transmittal to FSO on 02/14/2013. FSO approved this on 2/20/2013, sent to ESHQ on 3/01/2013.</td>
</tr>
<tr>
<td>TD</td>
<td>Chemical Polishing and Characterizing of cartridges for Integrated Chemical Processing Apparatus for Single Cell Superconducting RF Cavities approved on</td>
<td>This work is covered by a CX B3.6 approval for Integrated Chemical Processing Apparatus for Single Cell Superconducting RF Cavities approved on</td>
</tr>
<tr>
<td>Project/Department</td>
<td>Principal Investigator</td>
<td>ESH Officer</td>
</tr>
<tr>
<td>--------------------</td>
<td>------------------------</td>
<td>-------------</td>
</tr>
<tr>
<td><strong>AD</strong></td>
<td>Arkadiy Klebaner</td>
<td>Sylvia Wilson</td>
</tr>
<tr>
<td></td>
<td>Steve Holmes</td>
<td>Sylvia Wilson</td>
</tr>
<tr>
<td><strong>CD</strong></td>
<td>Gabriele Garzoglio, PhD</td>
<td>Amy Pavnica</td>
</tr>
<tr>
<td><strong>AD/SRF Electron LINAC Dept</strong></td>
<td>E. Harms</td>
<td>Sylvia Wilson</td>
</tr>
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This has been done.

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<thead>
<tr>
<th>AD/Tritium Working Group</th>
<th>Hydrostatic Relief Action at NuMI</th>
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<tbody>
<tr>
<td>ESH Officer = Mike Andrews</td>
<td>Action to take place during NuMI Shutdown</td>
</tr>
<tr>
<td>LBNE</td>
<td>LBNE Second Site Investigation</td>
</tr>
<tr>
<td>ESH Officer = Mike Andrews</td>
<td></td>
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</tbody>
</table>

Status of Fermilab Projects covered by **DOE Order 413.3**. See Directorate Office of Project Support Services website for updates on all projects at [http://www.fnal.gov/directorate/OPMO/OPMOhome.html](http://www.fnal.gov/directorate/OPMO/OPMOhome.html)

**New info in red.**

   a) NEPA CX approved by FSO on 12/20/2012 (see [1 Muon g-2 NEPA-CX Approval December CY2012](https://esh-docdb.fnal.gov:440/cgi-bin/ShowDocument?docid=2332))
   b) ESH Rep from PPD is Nathan Duff, AD is Ray Lewis, and ESH Coordinator will be the Project Deputy Manager Wyatt Merrit.
   c) Proposed date for transportation of 50 foot superconducting coils from BNL to FNAL is June 2013. New preferred path out of BNL has been chosen (going south) that eliminates the need for tree trimming or remediation of damage from storm Sandy. Transportation vendor contract signatures are imminent and vendor has met with all permit granting authorities. Several public outreach events are planned.
   d) The first shipment of beamline magnets from BNL have arrived.
   e) Planning for a late May CD-1 Directors Review (tentative May 29-31); DOE Review in June/July.

2. **Mu2e PMG** (4/16/13 PMG slides at [http://mu2e.fnal.gov/public/project/reviews/pmg/index.shtml](http://mu2e.fnal.gov/public/project/reviews/pmg/index.shtml) username = mu2epmg; pw = pmgr0up)
   a) NEPA CX Approved in 2012  (see [1 Muon Campus NEPA-CX Approval June CY2012](https://esh-docdb.fnal.gov:440/cgi-bin/ShowDocument?docid=2332))
   b) Will pursue CD-3a in December 2013 (R&D on superconductor) and CD-2/3b in March 2013 (Solenoid designs and; A&E designs for building and prep for early construction)
   c) DOE mini-review on 4/9 successful. Another mini-review suggested for July.
   d) Neutron shielding issue – studies continue, hoping dirt shielding will suffice. Final decision may influence magnet support design.
   e) CHL improvements aim to be finished by spring/summer 2013 for coil testing.
   f) SWPPP issued by IEPA for Muon Campus – will require updating to include a planned settling pond.
   g) Geotechnical study to begin soon.
   h) Key personnel stretched very thin.


   b. NEPA EA document writing and coordination awarded to ARCADIS
   c. Surveys for the Near Site to be done by ARCADIS and Far Site by South Dakota Science and Technology Authority
   d. Public information meetings scheduled – Fermilab (5/23, noon and 6:30); Lead (6/25), Rapid City (6/26).
   e. Draft EA expected in December 2013.

5. **Project X** (1/25/13 PMG slides at [Project Presentation](https://sharepoint.fnal.gov/project/lbne/LBNE%20at%20Work/PMG%20Meeting/default.aspx?InstanceId=20130416&Paged=Next&p_StartTimeUTC=20130122T213000Z&V=7bA1A533D5%2dFC4C%2d4620%2d81E4%2d13D720831205%7d)
   a) Prototype (PXIE) to be built at CMTF
   b) Plan to use prototype as front end of Project X so if technology is proven then they will be ready to construct
c) DOE (Brinkman) wants it run as a program NOT DOE Order 413 Project until R&D is proven and then will want to accelerate through the CD-0 through CD-3 stages. Have developed a reference design.

**Cultural Resources** (find a DOE informational brief, entitled ‘Management of Cultural Resources at DOE Facilities’ at [http://www.hss.doe.gov/sesa/environment/guidance/cultural/culturalresourcemgt.pdf](http://www.hss.doe.gov/sesa/environment/guidance/cultural/culturalresourcemgt.pdf)).

**Task 1, Record all historic properties identified to date**

*Overview of task:* MARS, Inc. recorded 11 historic archaeological sites following the 1990 fieldwork (11-Du-215 through 225), apparently only those historic sites with "good" or "excellent" potential for further research (MARS CRM Report No. 110). MARS, Inc. did not record 17 sites assessed with a "low" or "moderate" potential for further research.

*Update:* MARS, Inc. has completed draft versions of site forms, including sketch maps for all historic properties identified in 1990. After internal review and field corroboration of the data, MARS, Inc. will submit the site forms to the Illinois State Museum along with four site correction forms (11-Du-215, -216, -220 and -224).

**Task 2, Survey Potential Sites identified as “not surveyed” in 1990**

*Overview of task:* MARS CRM Report No. 110 noted that archaeologists did not survey the location of 16 potential historic sites in 1990. Additionally, six farmsteads and the Weston subdivision were not among the properties identified.

*Update:* The list of sites not surveyed is being updated and defined as MARS, Inc. works on Task 3. MARS, Inc. visited and photographed the historic properties at the Fermi Village on Sauk Circle as well as the Weston subdivision and completed preliminary field reconnaissance of the majority of Farm Book locations and Potential Sites identified in 1990.

**Task 3, Review the Farm Book and check of status for remaining Fermi Book farms**

*Overview of task:* Most, if not all, of the 250 buildings and structures (77 farms), present on the parcel when the State of Illinois purchased the individual farms that now comprise Fermi, are 50 years old. Advancements in technology have improved our ability to share images and documents as well.

*Update:* MARS, Inc. continues to tweak the Illustrator maps and the Excel file organizing the historic properties and the recorded archaeological sites within Fermi. The draft Overview of Historic Properties that summaries each of the historic properties, presents pertinent site plans, and lists recommendations is nearing completion. Once completed, MARS, Inc. personnel will discuss the merits of each location and plan additional fieldwork (Task 2).

**Task 4, Update the Fermi Cultural Resource Management Plan (CRMP)**

*Overview of task:* MARS, Inc. will provide an update to the CRMP, dated 13 September 2002. The revised plan will incorporate the new data on historical properties generated as part of the previously detailed tasks as well as update site data such as the radiocarbon assay for the prehistoric Gazebo site (11-Du-38_ and the fieldwork conducted since 2002.

*Update:* Work completed as part of Tasks 1-3 will be summarized and included in the revised CRMP. The information presented by Vida Goldstein and the other documentary evidence collected and reviewed will enable MARS, Inc. to update the CRMP.