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February 23, 2017

Mike LaFranzo  
Senior Health Physicist  
Region III – Division of Nuclear Materials and Safety  
U.S. Nuclear Regulatory Commission  
2443 Warrenville Road  
Lisle, IL 60532

Re: Additional Information to Control Number 586692 – Remaining Pickard Hall SCP RAIs

Dear Mr. LaFranzo:

Attached are the University of Missouri's responses to the remaining Pickard Hall Site Characterization Plan (SCP) requests for additional information that were not included in the August 30, 2016 letter. Chase Environmental Group requests that the US NRC refrain from posting their procedures publicly through ADAMS. If you have any questions, please do not hesitate to contact me at (573) 882-7018.

Sincerely,

Felicity Beckfield, MS, CHP  
Radiation Safety Officer

cc: Gary Ward  
Silvia Jurisson  
Todd Houts

Enclosure: Remaining Pickard Hall SCP RAIs

Docket No. – 03002278  
NRC RML No. – 24-00513-32  
Mail Control No. – 586692  
Reference ML – ML1506A640

**Remaining University of Missouri, Pickard Hall Site Characterization Plan  
Requests for Additional Information**

- I. RAI #3 in Conversation Record dated 6/30/2016 and Response #15 in letter dated August 30, 2016

Request from the US NRC: Section 10.4 of the Plan states, in part, that the Radiation Control Supervisor is responsible for the implementation of the Radiation Protection Program (RPP). The NRC is requesting a further description and any and all documentation (procedures, policies, directives, etc...) associated with the responsibilities of the Radiation Control Supervisor for implementing the Radiation Protection Program. For example: As defined in Section 13 of the Plan.

Response from the University of Missouri: These procedures will be implemented by the Pickard Radiation Control Supervisor.

Please see Appendix A which includes the Chase Environmental Group's radiation safety procedures for the Pickard Hall Characterization project. Chase Environmental will formally finalize the procedures prior to starting on site work. They do not anticipate significant changes to the procedures. Again, Chase Environmental Group requests that the US NRC refrain from posting their procedures publicly through ADAMS.

Appendix A includes the following procedures:

- RSD-QA-01 – Chain of Custody
- RSD-QA-02 – Corrective Action/Preventative Action Measures
- RSD-QA-03 – Field Services Document Control
- RSD-RI-001 – Radiation Instrument Calibration
- RSD-RI-002 – Instrument Procedure – Ludlum 2241-3 with 44-9
- RSD-RI-003 – Instrument Procedure – Gas Proportional Detectors
- RSD-RI-004 – Instrument Procedure – Ludlum 2929
- RSD-RI-005 – Instrument Procedure – Bicron MicroRem
- RSD-RI-007 – Instrument Procedure – Ludlum 2241 with 44-10
- RSD-RP-01 – Personal Air Samplers
- RSD-RP-02 – General Area Air Samplers
- RSD-RP-03 – Air Sampling
- RSD-RP-04 – External Dosimetry
- RSD-RP-05 – Radiological Work Permits
- RSD-RP-06 – Bioassay
- RSD-RP-10 – Personal Protective Equipment
- RSD-RP-11 – Procedure Waivers and Change Requests
- RSD-RP-12 – Personnel Contamination Events
- RSD-RP-13 – Individual Respiratory Protection Equipment
- RSD-RP-14 – Training Standards for Contractors
- RSD-RP-35 – Radioactive Material Shipping

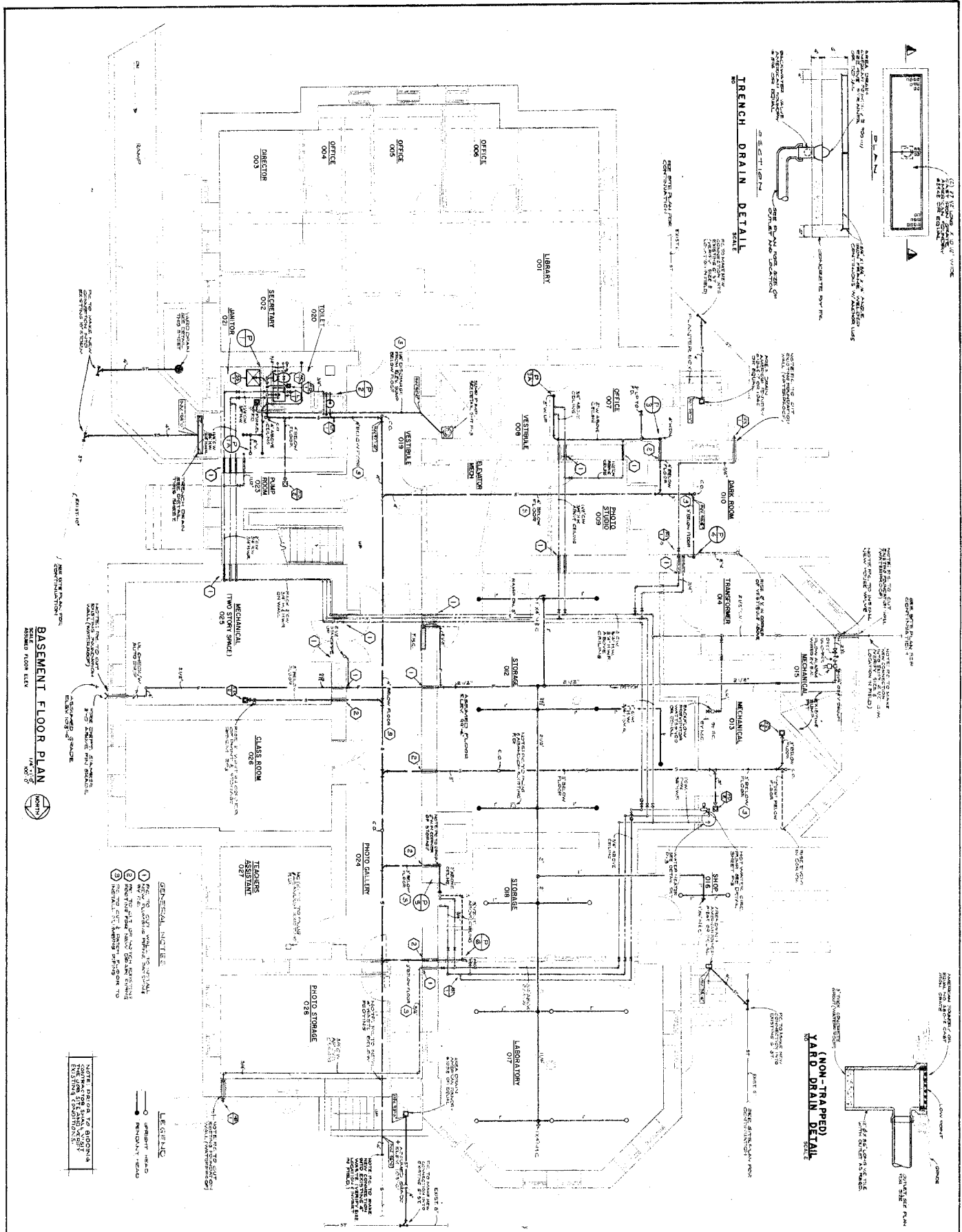
**Remaining University of Missouri, Pickard Hall Site Characterization Plan  
Requests for Additional Information**

- II. RAI #7 in Conversation Record dated 6/30/2016 and Response #19 in letter dated August 30, 2016

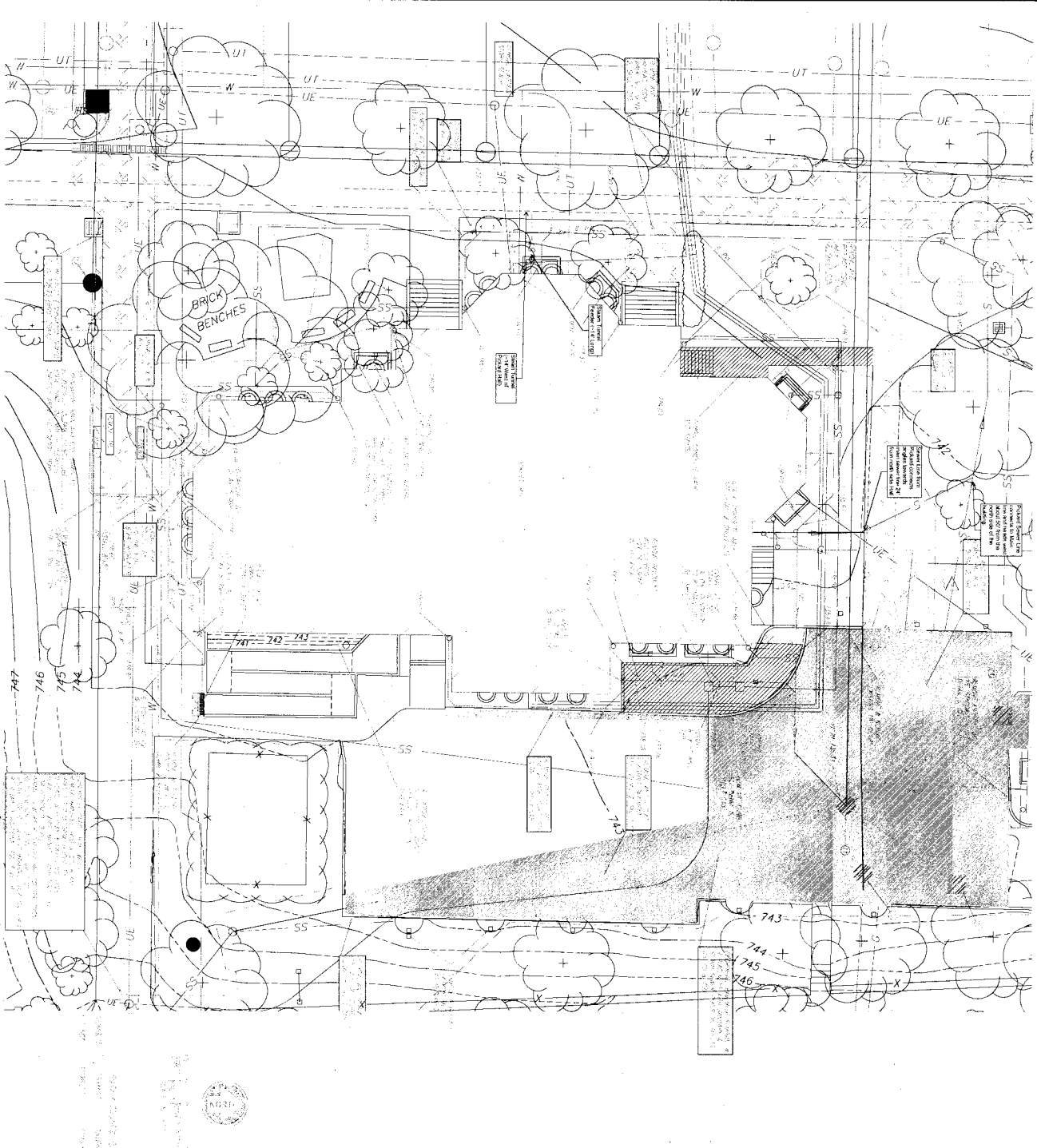
Request from the US NRC: The NRC requested the licensee provide a commitment to scan the entire underground piping associated with radioactive contamination and *submit diagrams of piping which is to include, but not limited to, sanitary drain lines and steam/feeder tunnels.*

Response from the University of Missouri: Please see Appendix B which includes the sewer and underground utility drawings. Drawing 960405-1-C12-Layout1, *Pickard Utility Layout 1997*, has been annotated to show the sewer line exiting Pickard Hall and the Steam Tunnel Feeder Tunnel. The drawing also annotates where the sewer line and Feeder Tunnel connects to their respective main sewer line and steam tunnel.

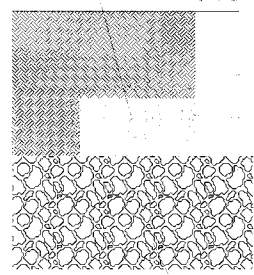
**Appendix B:**  
**Sewer and Underground Utility**  
**Drawings**



<p>DATE: 7-74 JOB NO: 722</p>	<p>CATEGORY: P-2</p>	<p><b>HSA</b> HOFFMANN/BAUR AND ASSOCIATES, INC. ARCHITECTS/ENGINEERS/PLANNERS          777 BONHOMME AVENUE/SUITE 2000 ST. LOUIS, MISSOURI 63105/314-882-6383</p> <p><b>OLD CHEMISTRY BUILDING RENOVATION</b>  <b>UNIVERSITY OF MISSOURI - COLUMBIA</b>          COLUMBIA, MISSOURI          JACK A. SONTAG, CONSULTING ENGINEERS, STRUCTURAL ENGINEER - BANASHEK AND ASSOCIATES, ELECTRICAL AND MECHANICAL ENGINEERS</p>	
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FOUNDATION DRAIN INSTALLATION DETAIL



FOUNDATION DRAIN INSTALLATION DETAIL  
 1. FOUNDATION DRAIN SHALL BE INSTALLED AT THE BASE OF ALL FOUNDATIONS.  
 2. DRAIN SHALL BE 4" DIA. PERFORATED PIPE WITH 1/2" HOLES.  
 3. DRAIN SHALL BE SURROUNDED BY 6" MIN. THICKNESS OF GRAVEL OR CRUSHED STONE.  
 4. DRAIN SHALL BE SLOPED TO EXISTING DRAINAGE SYSTEM.  
 5. SEE NOTES ON SHEET 960405-1 FOR GENERAL NOTES ON FOUNDATION DRAIN INSTALLATION.

