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Subject: Blue Alert- Excavation Permits and Surveys

**Title: Blue Alert-Underground Cables Damaged during Excavation Work**

Identifier 2000-LA-LANL-ESH7-0001 Date 01/07/00

**LESSONS LEARNED-** Utility survey maps should be included with excavation permit paperwork to ensure that heavy equipment operators are aware of the exact areas included in the survey. Duplicate or triplicate excavation permit forms that generate exact copies should also be considered when multiple copies of the permit are needed in the field.

**DISCUSSION-** Two incidents involving utility or communication cables being damaged occurred at a construction site. In one incident, a backhoe operator inadvertently snagged a power line and two communication lines during excavation work. A few days later, a backhoe operator caught an abandoned direct burial electrical cable while excavating rock rip-rap in a drainage swale. A review of the excavation permit showed that the work was performed outside the area where the utility location had been conducted. Investigators determined that there were construction drawings available showing the location of lines that were not identified on the older maps used by the utility locator crew. Additionally, multiple copies of the excavation permit were found in the field that were not consistent with each other.

**RECOMMENDATIONS/ACTIONS-** The Laboratory subsequently issued an excavation and soil disturbance permit procedure that requires a new excavation permit be issued if the scope of work is changed and revalidation of the permit if boundaries are increased or the utility field making are no longer in place, if the project coordinator changes, if ten working days have elapsed from the utility locate, or if an underground utility is unexpectedly found. Additionally, utility personnel will be provided with copies of maps submitted with excavation requests, and utility locate crews will be provided with the latest as-built drawings for the excavation area. The utilities department will also implement a duplicate or triplicate excavation permit form to prevent confusion caused by inconsistent copies, and utility survey maps will be included in the permit paperwork to ensure that workers are aware of exactly which areas were included in the survey.

ORIGINATOR Los Alamos National Laboratory

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DOE FUNCTIONAL CATEGORY Work Planning

WORK ACTIVITY Construction

HAZARDS Excavation and trenching

KEYWORDS survey, permit, excavation

REFERENCES ALO-LA-LANL-ACCCOMPLEX-1998-0006

**FOLLOW-UP ACTIONS-** Information in this report is accurate to the best of our knowledge. As a means of measuring the effectiveness of this report, please contact the originator of significant action(s) taken as a result of this report or of any technical inaccuracies you find. Your feedback is appreciated.