



**GEOSCIENCES AND ENGINEERING DIVISION
QUALITY ASSURANCE
SURVEILLANCE REPORT**

PROJECT NO.: Various

REPORT No.:2007-08

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SURVEILLANCE SCOPE: Control of GED samples and chemicals.

REFERENCE DOCUMENTS:

TOP-012, *Identification and Control of Samples and Chemical Reagents*

AP-010, *Laboratory Chemical Hygiene Plan*

START DATE:
03/16/07

END DATE:
03/20/07

QA REPRESENTATIVE:
M. Simpson

PERSONS CONDUCTING ACTIVITY (persons contacted):

D. Bannon, X. He, B. Derby (Div 18), D. Dunn (Div. 18), B. Werling, E. Percy (GC Manager).

SATISFACTORY FINDINGS:

With the exception of a likely archival sample control issue (see Unsat. Finding), the GED sample management and chemical control systems appear to be compliant with requirements. Samples and chemicals are appropriately maintained and the systems are considered effective in meeting their intended purposes. Note: three Nonconformance Reports (NCRs) concerning sample management (samples stored outside GED laboratories) initiated in the last six months were identified as an adverse trend, leading to a Corrective Action Report. Corrective action has been completed and the sample management system now appears to be effective in that regard.

Samples

Reviewed samples in the corrosion and radiological laboratories (Building 57) are correctly labeled and traceable to stand-alone sample control logs (i.e., not part of scientific notebooks). The B.57 logs contain all necessary information and, in most cases, additional reference data not specifically required. For discussion of Building 51 samples see Unsat. Finding.

An area of concern was identified: Sample custody logs are identified as QA records in TOP-012 but they apparently have never been copied, scanned, or otherwise duplicated. While not a current procedural violation, such duplication would provide increased records management confidence in the event of a mishap to the logs. Also, it is not clear from the procedure as to how/when these logs are processed as QA records (see Recommendation 1).

In another situation, TOP-012 requires "limited access" to samples but access is not restricted during working hours in B.51 and the corrosion labs in B.57 (other labs in B.57 and storage space in auxiliary Trailer 52 are continually locked, with a limited distribution of keys). Division-wide access controls are currently being upgraded and should eliminate this problem.

While not directly related to sample management, several large, full, yellow plastic bags in T.52 were not labeled or otherwise identified but contain low-level radioactive waste. The bags are stored in T.52 awaiting periodic removal by SwRI radiation waste management personnel. Apparently, during the trailer's reconfiguration for sample storage, segregation barriers and waste identification markers were removed. No requirements were violated but staff took remedial action to label bags and place them in a collection bin for more effective control. It was also discovered during the surveillance that the trailer has a roof leak (large puddle on floor after rain) that could potentially compromise samples. The GC Manager immediately investigated and mitigated the T.52 situation during the course of the surveillance.

Chemicals

Chemical inventories, labeling, expiration segregation, and handling practices appear to be compliant and effective in GED laboratories.

UNSATISFACTORY FINDING:

In contrast to samples stored in the B.57 labs, geological samples stored in B.51 do not appear to be under the same level of control. No coordinator or other designated point-of-contact for B.51 samples has been identified, log books stored in the building do not have an on-site "owner" (and do not appear to be regularly maintained), and many samples do not contain easily traceable labeling or other identification. It is possible that some of the stored materials are not actually intended to be QA-controlled samples, but have (or had) some other non-formal use. But it appears likely that at least some of the materials are actually archival samples lacking proper identification per TOP-012. While there is no current evidence that samples designated in a scientific notebook or log book are not retrievable, the reverse cannot be established; some (many) apparent samples are not readily traceable to a notebook or log. Note: B.57 personnel indicated that their building could also contain some "legacy" material that is not traceable to a notebook or log (although the situation is much less evident than in B51). NCR 2007-08 has been initiated to address archival sample identification. Also see Recommendation 2.

NCR NO.: NCR 2007-08

CAR NO.: None

ATTACHMENTS: None

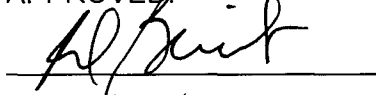
RECOMMENDATIONS/ACTIONS:

1) Sample control logs should be periodically copied or otherwise backed-up to help prevent their loss. Suggest revision of TOP-012 to require this and to specify the process for eventually processing the logs into the QA records system. The need for backup of chemical inventory information in similar logs should also be considered. Note: the corrosion lab technician copied his sample log book during the course of the surveillance.

2) In addition to (or as a part of) the response to NCR 2007-08, suggest a full inventory of materials stored in B.51 be undertaken to assure that archival samples are properly identified and traceable. It is also recommended that non-sample materials be either segregated from the samples (and unambiguously labeled) or disposed of. Samples not needed for archival purposes should also be disposed of. A designated staff member should be identified as the point-of-contact for B.51 samples (similar to the case in B.57). Note: the GLGP technician has been attempting to locate responsible staff for many of the samples in long-term storage. He plans to photograph the samples and circulate descriptions in a further attempt to locate "owners."

3) Laboratory staff are reminded to fill out all blank spaces on forms, even on non-required forms self-developed for specific uses. Staff are also reminded that Form TOP-004, *Sample Custody/Control Log Entry Form*, only becomes a part of the record when it (or its listed information) is included in the log and/or a scientific notebook (i.e., promptly add forms to the log).

APPROVED:



DATE: 3/22/07

DISTRIBUTION:

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