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CENTER FOR NUCLEAR WASTE REGULATORY ANALYSES QUALITY ASSURANCE SURVEILLANCE REPORT

PROJECT NO.: 20-1402-861 REPORT NO.: 98-07 PAGE 1 OF 2

SURVEILLANCE SCOPE: Checking the shelf life of chemicals in CNWRA Buildings 57 and 51. Bottled chemicals in both buildings were checked for expiration dates and shelf life dates. If there was such a date and that date was prior to the time frame of this surveillance, then the shelf life was determined to be past.

REFERENCE DOCUMENTS: 1. CNWRA Quality Assurance Manual, Revision 2 Change 11, Section 8, Identification and Control of Items, Software, and Samples, paragraph 8.3.4; 2. QAP-004 Surveillance Control Procedure.

STARTING DATE: 04/30/98 **ENDING DATE:** 05/19/98
QA REPRESENTATIVE: B. Mabrito

PERSONS CONDUCTING ACTIVITY: J. Prikryl, D. Dunn, M. Hill, S. Leppala, S. Brossia

SATISFACTORY FINDINGS:

1. In the Geochemistry Laboratory, Bldg. 57, Room L106, chemicals have been very well sorted in accordance with the color category of their labels matched to "shelf colors" in the room. The industry color code standard is posted in at least two of the CNWRA Labs and is: (i) R - Storage Code Red, flammable, store in area segregated for flammable reagents; (ii) Y - Storage Code Yellow, reactive and oxidizing reagents; may react violently with air, water or other substances; store away from flammable and combustible materials; (iii) B - Storage Code Blue, health hazard; toxic if inhaled, ingested or absorbed through skin, store in secure area; (iv) W - Storage Code White, corrosive, may harm skin, eyes, mucous membranes, store away from red-, yellow- and blue-coded reagents; (v) G - Storage Code Gray, presents no more than moderate hazard in any category, for general chemical storage. In the gray code storage cabinet there were two expired chemical bottles: Ammonium Thiocyanate 0.1N, LabChem Inc., received by CNWRA 5/25/93, expiration date 3/9/95; Silver Nitrate Solution N/10, three bottles with an expiration date of May 1993 were also marked "DO NOT USE-EXPIRED," however the fourth bottle was equally date expired but not so marked. In the white code storage cabinet, the only bottle with an expired date was Ammonium Phosphate 50% W/V, expiration date 3/17/95. In the yellow code storage cabinet there were no expired chemicals. In the blue code storage cabinet, one bottle, Methylene Blue Reagent, APHA (for surfactants), LabChem Inc., was received 4/21/93 and had an expiration date of 4/14/95.
2. In the Corrosion Lab, Bldg. 57, Room L111, chemicals are primarily stored in the bottle/sample plate storage room and there were no bottles identified that are being stored beyond expiration dates. The "earliest" expiration date found in the Corrosion Lab was February 1999.
3. In the Materials Laboratory and the BioHazard Lab, Bldg. 57, Room L113, all chemicals in the cabinets checked out acceptable as far as expiration dates. On the lab bench however, the following expired date items were found: BBL GasPak Plus Anaerobic System envelopes with Palladium catalyst (10 packages), expiration date 1 February 98; Bacto Dickinson Microbiology Systems, BBL Oxidase Reagent Droppers (50 total), expiration date 30 November 96; Bacto Marine Broth 2216, Lot 51401JA, expiration date June 97; LabChem Inc., Rhodanine Indicator 0.02%, Lot 5114-4, expiration date 4/24/97; Bacto Gram Crystal Violet Primary Stain, Lot 90498, expiration date October 97; DIFCO Laboratories Bacto Gram Diluent for Preparing Gram Iodine Mordant, Lot 89656, expiration date Sep 97; DIFCO Laboratories Bacto Gram SAFRANIN Counterstain, Lot 90283, expiration date October 97. After discussions with M. Hill and D. Dunn, it was determined that the entire batch of time-dated items was culled from the BioHazard stock and was being prepared to be properly disposed of in accordance with SwRI requirements.
4. Microbiology/Hydrogeology Laboratory, Bldg. 51, no expired chemical labels on bottles were identified.
5. Although the above expired chemical bottles were identified in two locations in the CNWRA Laboratories, the percentage of expired chemicals of the total number is very small. In each case, it is expected that corrective action to either remove the bottles or clearly label them as "DO NOT USE-EXPIRED" (which is an acceptable approach since the chemicals may need to be retained as a "historical reference") will take place promptly.

UNSATISFACTORY FINDINGS: The above noted items in numbers 1 and 3 need to be addressed.
NONCONFORMANCE REPORT NO.: 98-04 .

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ATTACHMENTS: None.

RECOMMENDATIONS/ACTIONS: None, other than address the nonconforming material.

APPROVED: 
CENTER DIRECTOR OF QUALITY ASSURANCE

DATE: 5/20/98

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