APPENDIX C

TECHNICAL CHANGE ORDERS

ENVIRONMENTAL QUALITY MANAGEMENT, INC.

TECHNICAL CHANGE ORDER

To: V. Deppisch

Subject: RVAAP January 2009 Sampling Event – B12mw-012

File: Contract Number W912QR-04-D-0036

cc: E. Mohr - OEPA
T. Fisher – OEPA
M. Nichter - USACE

One of the wells at the Ravenna Army Ammunition Plant (RVAAP) [Building 1200mw-012)] has always had very little water in the well (<1-foot) and has a very slow recharge rate. During the January 2009 sampling event the measured water in the well was less than 1-inch. We attempted to collect samples but only got three 40-ml VOC bottles filled. As for past events we have returned to the well but are getting less than 100ml recharge per day. At this point it does not appear that we are going to be able to effectively collect any more samples from this well for this event. We will continue to monitor this well during the January 2009 sampling event. If the well continues to have no substantial water necessary to sample, EQM suggests that we wait to resample this well in April 2009.

John M. Miller, CHMM
Project Manager – EQM
513.825.7500

ENVIRONMENTAL QUALITY MANAGEMENT, INC.

TECHNICAL CHANGE ORDER

To: V. Deppisch

Subject: RVAAP January 2009 Sampling Event – LL11mw-009

File: Contract Number W912QR-04-D-0036

cc: E. Mohr - OEPA
T. Fisher – OEPA
R. Nichter - USACE

During the January 2009 sampling event at the Ravenna Army Ammunition Plant (RVAAP) the water in the casing of LL11mw-009 well was frozen (this was the first sampling event for this well). The frozen water in the well was measured at a depth of approximately 2-feet below top of casing which is at ground surface. The well was checked every other day during the entire 3-week period ranging from January 13-29 while Environmental Quality Management, Inc. (EQM) was onsite sampling and taking water levels. The water in the well was frozen the entire time. The air temperature during that timeframe was consistently below freezing with temperatures dipping below zero several times. It should be noted that the freezing of the water in the well did not appear to have damaged or compromised the integrity of the well. The integrity of the well will be checked during the April 2009 sampling event.

EQM suggests that sampling of this well begin during the April 2009 event and continue through the January 2010 event. This will still give 4 consecutive quarters of analytical results. Additionally if the well were to be sampled in late February 2009, there would be no QA/QC sampling associated with the well (duplicate/splits, etc.). If the well is sampled in January 2010 it will be part of the regular sampling event and all associated QA/QC sampling. In order to ensure that the water in the well is not frozen in January 2010, EQM will insulate the outside of the well after the October 2009 sampling event to prevent freezing of the water in the casing.

John M. Miller, CHMM
Project Manager