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January 26, 1996

NCDEHNR
Division of Solid Waste Management
401 Oberlin Road
Raleigh, North Carolina 27605

ATTENTION: Mr. Bobby Lutfy

Reference: CMS Landfill V, Cells 2A-2E
Request to Modify the Water Quality Monitoring Program
S&ME Job No. 1356-95-700

Dear Mr. Lutfy:

S&ME, Inc., on behalf of CMS Development Corp (CMS), requests that one monitoring well (MW-14A) be eliminated from the monitoring program for the referenced landfill. Our rationale for the request is discussed below. CMS is conducting the baseline monitoring at this time, and would appreciate a quick response to this request so that unneeded sampling and analysis costs may be saved.

Monitoring well MW-14A is one of three monitoring wells located up-gradient (background) of the landfill. The sand pack intervals below land surface for the three wells are 4 to 15 feet (MW-14), 15 to 23 feet (MW-14A), and 38 to 50 feet (MW-14B). As indicated by the sand pack intervals, the base of MW-14 occurs at the same level as the top of MW-14A, thus the sampling intervals are not completely separate. The top of competent bedrock is approximately 13 feet below land surface. The bedrock consists of a gabbro with very few fractures. The depth to the shallow groundwater is approximately 1.5 feet below land surface.

CMS purged the wells for the initial baseline monitoring on January 22, 1996. After the purging of MW-14A (3.5 gallons), the water level in the well on January 23, 1996 had recovered enough to fill only three 40-ml vials and a portion of one 500 ml sample container. The slow recharge indicates the extremely low yield of the monitored zone of the upper bedrock, which in turn indicates the low permeability (and groundwater flow) of this zone. This slow recharge of MW-14A was known earlier, which prompted CMS to attempt a replacement upper bedrock well near MW-14A. The yield of the replacement well was even less than that of MW-14A, and thus the replacement well was abandoned.

In addition to the slow recharge of MW-14A, the pH (12.26) and conductivity (3470 $\mu\text{mhos/cm}$) indicate grout contamination. The grout contamination in MW-14A could be from one of several sources: 1) the original grouting of MW-14A, 2) the abandonment of the adjacent former observation well (OW-15), 3) the abandonment of the attempted replacement well for MW-14A, or 4) the grouting of the annulus for MW-14B located approximately 8 feet from MW-14A. Well MW-14A is positioned down-gradient from OW-15 and side-gradient from MW-14 and MW-14B.

Wells MW-14 and MW-14B yield sufficient water for monitoring of the saprolite aquifer and the underlying bedrock aquifer, respectively. During purging of these wells, the pH values were 7.05 and 6.98, respectively, and the conductivity values were 376 and 339 $\mu\text{mhos/cm}$, respectively. These results do not indicate grout contamination. Based on the yield, field parameters, and well construction, wells MW-14 and MW-14B are considered adequate monitoring wells for the saprolite and bedrock aquifers at this location, thereby suggesting that MW-14A is redundant and unnecessary.

Due to the conditions discussed above, S&ME requests that monitoring well MW-14A be eliminated from the water quality monitoring program for the landfill. During a phone

**Request to Modify the Water Quality Monitoring Program
CMS Landfill V, Cells 2A-2B**

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conversation between you and Mr. Al Quarles on January 23, 1996, these items were discussed and you indicated that the elimination of MW-14A from the monitoring program would seem reasonable. If you have any questions regarding this request or require additional information concerning our request, please contact us.

Sincerely,

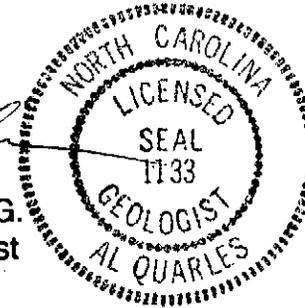
S&ME, Inc.



Dan E. Brewer, P.E.
Project Manager



Al Quarles, L.G.
Senior Hydrogeologist



c: Mr. Bill Crumley - CMS
Mr. Dave Cradduck - CMS

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