



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue
Seattle, Washington 98101

February 10, 2011

Reply to: Donald M. Brown
Attn of: OEA-095

MEMORANDUM

Subject: Data Validation Report for the Inorganic Analyses of the Water Samples Collected from the Yakima Basin Nitrate Study Phase 3

From: Donald M. Brown, QA Chemist ^{DMB}
USEPA Region 10, Office of Environmental Assessment, Environmental Services Unit

To: Ginna Grepo-Grove, Regional Quality Assurance Manager
USEPA Region 10, OEA

The quality assurance (QA) review of the analytical data generated from the analysis of forty-nine (49) water samples collected from the Yakima Basin Nitrate Study Phase 3 has been completed. These samples were analyzed for Alkalinity and Mercury by the US EPA Region 10 Laboratory located in Port Orchard, Washington.

This review was conducted for the following samples from the Phase 3 Study:

10154201	10154202	10154203	10154204	10154205	10154206
10154207	10154208	10154211	10154212	10154213	10154214
10154215	10154216	10154217	10154218	10154219	10154220
10154221	10154223	10154224	10154225	10154226	10154227
10154228	10154229	10154251	10154252	10154253	10154254
10154255	10154256	10154257	10154258	10154259	10154271
10154272	10154273	10154274	10164209	10164210	10164222
10164230	10164260	10164261	10164262	10164263	10164264
10164265					

All sample analyses were evaluated following EPA's Stage 4 Data Validation Manual Process (S4VM). The data reviews were conducted and appropriate qualifiers were applied according to the Quality Control Specifications outlined in the Quality Assurance Project Plan for the Yakima Basin Nitrate Study Phase 3 (April 2010) and the laboratory's current Quality Assurance Manual and Standard Operating Procedures (SOPs). The following criteria have been evaluated: Sample Transport and Receipt, Sample Holding Times, Sample Preparation, Initial Calibration and Calibration Verification, Laboratory Control Samples, Blank Analysis, Duplicate Analysis, Matrix Spike/Matrix Spike Duplicate Analysis, and Reporting Limits.

The quality control measures which did not meet QAPP/Laboratory criteria are as follows:

- The laboratory fortified blank (LFB) was outside the recovery acceptance criteria for mercury. Samples 10154251 through 10154259 and 10164263 through 10164265, which were associated with this LFB, were considered estimates and qualified "J" or "UJ".
- The matrix spike and/or matrix spike duplicate were outside the recovery requirements (75-125%) for mercury. Samples 10154251 through 10154259, 10164260 through 10164265, and 10154271 through 10154274 were considered estimates and qualified "J" or "UJ".

Data Qualifiers

Below are the definitions for the codes used qualifying data from these analyses. When more than one quality issue was involved, the most restrictive qualifier has been attached to the data.

- U - The analyte was not detected at or above the reported value.
- J - The identification of the analyte is acceptable; however the reported value is an estimate.
- UJ - The analyte was not detected at or above the reported value. The reported value is an estimate.