



STATE OF NEVADA

Department of Conservation & Natural Resources

DIVISION OF ENVIRONMENTAL PROTECTION

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February 23, 2007

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Re. **BMI Plant Sites and Common Areas Projects, Henderson, Nevada**
Additional Guidance on Development of Data Validation Summary Reports (DVSRs)

Dear Sirs and Madam:

Based upon some recent submittals by the BMI Companies, the NDEP has noted some topics regarding DVSRs that require additional clarification. In addition, please note that it may be helpful to review the format and content of the DVSRs submitted by Basic Remediation Company (BRC) and the NDEP's comments on these reports. Generally, the format and content of the more recent BRC DVSRs has been acceptable to the NDEP.

In May 2006 the NDEP provided guidance on the Data Validation process as well as the items that are expected to be included in companies Data Validation Summary Reports.

In that memo, the following items were specified:

The output of the data verification and validation process described above should include a detailed Data Validation Summary Report to include the following:

- Introduction with Purpose/Objective/Process.
- Applicable Samples, SDG ID, that correspond to locations, analyses, level of validation.
- Data validation qualifier definition.
- Reason codes that link results in the database to specific qualifier logic.
- Data validation findings for each parameter based on the level of review. When non-conformances are identified they should be linked to the appropriate sample(s) and SDG.
- Evaluation of PARCCS parameters.
- Conclusions/Recommendations.
- References.

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After reviewing a number of DVSRs as well as data usability reports NDEP is providing the following recommendations and additional details on the DVSRs. Each DVSR should include the following, in addition to those items specified above:

- If aqueous samples have been filtered or centrifuged prior to analysis this should be included in the report.
- The DVSRs should include tables that specify when a non-conformance has been identified during the data validation process. These tables should be categorized by issue, for example those samples qualified due to Laboratory Control Sample exceedances should be within the same table. Each table should specify the sample, SDG/lab package (if this is unclear from earlier information in the report), the analyte(s), the data quality indicator and objective (e.g. % Recovery, Limits of 85-115%), the sample result(s) and the data validation qualifier. This information is necessary to both properly evaluate the DVSR and will also facilitate data usability investigations. Each data quality indication, for example percent recovery, percent difference, precision (RPD), area (for internal standards), raw level of blank value that is used to compare with analyte levels in the native samples, cooler temperature, holding time days and exceedance, should be captured in these tables. Since this information is captured during the data validation steps and to minimize duplication of effort, it is recommended that this information be kept in a database (e.g. Excel, Access) to facilitate evaluating the results. However, only tables are required in the DVSR.
- Each DVSR should also be submitted with the original laboratory reports (including Chain-of-Custodies), the database for that set of results, and any data validation reports prepared by a third-party. Make sure the database includes, at a minimum, the sample ID (both field and laboratory), lab package/SDG, type of sample (soil, aqueous, native, QC), start and stop depth (where applicable), sample data, analytical method, chemical name, results, units, all qualifiers and reason codes, detection and reporting limits.

The NDEP would also like to note that if any of the BMI Companies have specific questions a meeting can be arranged between the Companies' data validation team and the NDEP's data validation team. Please contact me with any questions (tel: 702-486-2850 x247; e-mail: brakvica@ndep.nv.gov)

Sincerely,

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