

STATE OF NEVADA

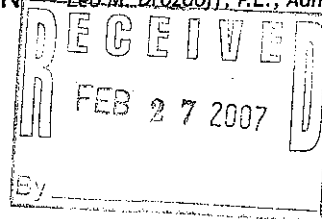
Department of Conservation & Natural Resources

Jim Gibbons, Governor

Allen Biaggi, Director

DIVISION OF ENVIRONMENTAL PROTECTION

Leo M. Drozdoff, P.E., Administrator



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Mr. Mark Paris
Basic Remediation Company
875 West Warm Springs Road
Henderson, NV 89011

Ms. Susan Crowley
Tronox LLC
PO Box 55
Henderson, NV 89009

Mr. Sam Chamberlain
Pioneer Companies, Inc.
700 Louisiana St, Ste 4300
Houston, TX 77002

Mr. Joe Kelly
Montrose Chemical Corp of CA
600 Ericksen Ave NE, Suite 380
Bainbridge Island, WA 98110

Mr. Brian Spiller
Stauffer Management Co LLC
1800 Concord Pike
Wilmington, DE 19850-6438

Mr. Craig Wilkinson
Titanium Metals Corporation
PO Box 2128
Henderson, NV 89009

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.

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,



Brian A Rakvica, P.E.
Supervisor, Special Projects Branch
Bureau of Corrective Actions

BAR:s

CC: Jim Najima, NDEP, BCA, Carson City
Marysia Skorska, NDEP, BCA, Las Vegas
Shannon Harbour, NDEP, BCA, Las Vegas
Barry Conaty, Akin, Gump, Strauss, Hauer & Feld, L.L.P., 1333 New Hampshire Avenue, N.W.,
Washington, D.C. 20036
Brenda Pohlmann, City of Henderson, PO Box 95050, Henderson, NV 89009
Mitch Kaplan, U.S. Environmental Protection Agency, Region 9, mail code: WST-5,
75 Hawthorne Street, San Francisco, CA 94105-3901
Rob Mrowka, Clark County Comprehensive Planning, PO Box 551741, Las Vegas, NV, 89155-
1741
Ranajit Sahu, BRC, 311 North Story Place, Alhambra, CA 91801
Rick Kellogg, BRC, 875 West Warm Springs, Henderson, NV 89011
Kirk Stowers, Broadbent & Associates, 8 West Pacific Avenue, Henderson, Nevada 89015
George Crouse, Syngenta Crop Protection, Inc., 410 Swing Road, Greensboro, NC 27409
Nicholas Pogoncheff, PES Environmental, Inc., 1682 Novato Blvd., Suite 100, Novato, CA
94947-7021
Lee Erickson, Stauffer Management Company LLC, P.O. Box 18890 Golden, CO 80402
Keith Bailey, Tronox, Inc, PO Box 268859, Oklahoma City, Oklahoma 73126-8859
Sally Bilodeau, ENSR, 1220 Avenida Acaso, Camarillo, CA 93012-8727
Chris Sylvia, Pioneer Americas LLC, PO Box 86, Henderson, Nevada 89009
Paul Sundberg, Montrose Chemical Corporation, 3846 Estate Drive, Stockton, California
95209
Joe Kelly, Montrose Chemical Corporation of CA, 600 Ericksen Avenue NE, Suite 380,
Bainbridge Island, WA 98110
Jon Erskine, Northgate Environmental Management, Inc., 300 Frank H. Ogawa Plaza, Suite 510,
Oakland, CA 94612
Deni Chambers, Northgate Environmental Management, Inc., 300 Frank H. Ogawa Plaza, Suite
510, Oakland, CA 94612
Robert Infelise, Cox Castle Nicholson, 555 Montgomery Street, Suite 1500, San Francisco, CA
94111
Michael Ford, Bryan Cave, One Renaissance Square, Two North Central Avenue, Suite 2200,
Phoenix, AZ 85004
Dave Gratson, Neptune and Company, 1505 15th Street, Suite B, Los Alamos, NM 87544