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April 21, 1992

TWP XIII

Mr. Larry Campbell
6381 N. Main Street
Roswell, NM 88202-1717

RE: **Roswell compressor station site cleanup**
"Shallow subsurface investigation . . . " Metric 12/91 Report

Dear Mr. Campbell:

The Hazardous and Radioactive Materials Bureau (**HRMB**) has received and reviewed the subject report, and has the following comments and questions:

1. What is the history of site disposal practices? The report finds location SG86, for example, to be a highly contaminated location, yet this location is not in one of the pits. As further examples, what accounts for the lack of volatile constituent contamination at sites BH8 and BH7? What accounts for the high TPH at BH9? A knowledge of past practices of the site would help in understanding the distribution of contaminants found there and may well impact further assessment/remediation decisions.

2. Transwestern still has not provided HRMB with a contact in the water users association which owns or operates the production well near the compressor station site.

3. The vertical limit of contamination has not been determined. HRMB defines the vertical limit of contamination as a horizontal plane underlying the site at which no hazardous constituent exceeds background levels (for heavy metals) or exceeds the Method Detection Limit (**MDL**) (for organic constituents). The MDL is defined as the estimated concentration at which the signal generated by a known constituent is three standard deviations above the signal generated by a blank, and represents the 99% confidence level that the constituent does exist in the sample.

4. Insufficient Quality control/Quality assurance data (**QA/QC**) have been provided. I attach to this letter a summary of HRMB required QA/QC.

5. Transwestern has not demonstrated that existing aquifers underlying the perched aquifer are not also contaminated.

If you have any questions regarding this matter, please contact Dr. Bruce Swanton of my staff at (505) 827-4300.

Sincerely,

Edward Horst, RCRA Programs Manager
Hazardous and Radioactive Materials Bureau

cc: Bruce Swanton, Technical Group Supervisor
Bill Olsen, Oil Conservation Division
Garrison McCaslin, NMED District IV
SQG File 1656

Components of an Adequate Laboratory Quality Assurance/Quality Control Plan

New Mexico Hazardous and Radioactive Materials Bureau
Technical Support Group
(505) 827-4300

The Hazardous and Radioactive Materials Bureau (**HRMB**) requires that analytical QA/QC meet the following minimum standards:

1. All constituents identified above the MDL must be reported.

   The Method Detection Limit is defined as the estimated concentration at which the signal generated by a known constituent is three standard deviations above the signal generated by a blank, and represents the 99% confidence level that the constituent does exist in the sample.

2. The "tune" of the GC/MS for volatile organic constituents must be checked and adjusted (if necessary) each twelve (12) hour shift by purging 50 ng of a of a 4-bromofluorobenzene (BFB) standard. The resultant mass spectra must meet the criteria given in Table 1 before sample analysis proceeds.

3. The "tune" of the GC/MS for semi-volatile organic constituents must be checked and adjusted (if necessary) each twelve (12) hour shift by injecting 50 ng of a Decafluorotriphenylphosphine (DFTPP) standard. The resultant mass spectra must meet the criteria given in Table 2 before analysis proceeds.

4. For every 20 samples perform and report:

   A) Duplicate spike for organics.

   B) Duplicate sample analysis or matrix spike for inorganics.

   C) Reagent blank, results provided for organic work.

   D) One check sample at or near the Practical Quantitation Limit for a subset of the parameters.

5. Analytical results must not be "blank corrected."

6. Any deviation from EPA-approved methodology must have a Written Standard Operating Procedure and NMED approval.

7. Detection limits must be generally in line with those listed in Appendix IX to §264.

8. The laboratory must document:

   A. That all samples were extracted, distilled, digested, or prepared (if appropriate) and analyzed within specified holding times.

   B. That if a sample for volatile analysis is received with headspace, this is reported.

   C. The date of sample receipt, extraction and analysis for each sample.

   D. Any problems or anomalies with the analysis should be documented.

   E. That all solids were analyzed dry and that the reported results are corrected to reflect a dry weight basis.

9. The name and signature of the lab manager must appear on each report.

10. The reported surrogate and spike recoveries must fall within: 1. the historical (statistically based) acceptance limits, generated at the laboratory or 2. the limits tabulated by the appropriate method from the current edition of SW-846, whichever limit is narrower. The actual historical recoveries must be submitted to HRMB with the analysis.

TABLE 1

BFB KEY IONS AND ABUNDANCE CRITERIA

Mass	Ion Abundance Criteria
50	15.0 - 40.0 percent of the base peak
75	30.0 - 60.0 percent of the base peak
95	base peak, 100 percent relative abundance
96	5.0 - 9.0 percent of the base peak
173	less than 2.0 percent of mass 174
174	greater than 50.0 percent of the base peak
175	5.0 - 9.0 percent of mass 174
176	greater than 95.0 percent but less than 101.0 percent of mass 174
177	5.0 - 9.0 percent of mass 176

TABLE 2

BFB KEY IONS AND ABUNDANCE CRITERIA

Mass	Ion Abundance Criteria
51	30.0 - 60.0 percent of mass 198
68	less than 2.0 percent of mass 69
70	less than 2.0 percent of mass 69
127	40.0 - 60.0 percent of mass 198
197	less than 1.0 percent of mass 198
198	base peak, 100 percent relative abundance
199	5.0 - 9.0 percent of mass 198
275	10.0 - 30.0 percent of mass 198
365	greater than 1.00 percent of mass 198
441	present but less than mass 443
442	greater than 40.0 percent of mass 198
443	17.0 - 23.0 percent of mass 442