APPENDIX C. DATA QUALITY REVIEW SUMMARY

Laboratory: California Laboratory Services, Rancho Cordova, California
SDGs: CRB0247, CRB0335, CRB0352, CRB0632, CRB0633 and CRB0634
Site: Corporation Yard Landfill, Folsom, California
Review Date: March 19, 2008
Data Reviewer: Gregory Cole, Project Chemist, Brown and Caldwell

A data quality review was performed on all analytical data from sample delivery groups (SDGs) identified above. Table C-1 outlines the samples and analytical methods reviewed. This review was performed based on the requirements provided in the *Work Plan for Pre-Design Data Collection Activities* and amendment (Brown and Caldwell, 2008a,b) and on guidance provided in the *Contract Laboratory Program National Functional Guidelines for Organic and Inorganic Data Review* (USEPA, 1999 and 2004).

The review included the parameters listed below.

- Sample Documentation
- Sample Holding Times
- Laboratory and Field Blank Review
- Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recovery and Precision
- Field/Laboratory Duplicate Review
- Laboratory Control Sample (LCS) Review
- Sample Quantitation

Overall, the data is acceptable for the intended purposes. No results were rejected. Some results were qualified as estimated (i.e., flagged with a "J") due to matrix spike recoveries outside of control limits and duplicate precision over 50 percent.

Sample Documentation
Laboratory reports provided by the laboratory included all the necessary information to perform the data quality review.

Sample Holding Times
Each sample was prepared and analyzed within the specified holding time.

Laboratory and Field Blank Review
All compounds were reported as not detected in the laboratory blanks.

MS/MSD Recovery and Precision

Matrix spikes were performed on samples SS14, SS16, TPB1A, TPB3A, and TPB4. Matrix spike recoveries were above or below control limits for several metals. The table below provides the affected MS/MSD results and associated qualifications.

MS/MSD Qualifications			
Sample	**Analyte**	**Conc. (mg/kg)**	**Action**
TPB1A	Mercury	<0.1	UJ
TPB3A	Antimony	<2	UJ
	Copper	41	J
	Vanadium	57	J
	Zinc	59	J
TPB4	Lead	15	J
	Nickel	24	J
	Silver	0.4	J
	Antimony	<2	UJ
	Barium	98	J
	Chromium	35	J
	Copper	26	J
	Vanadium	38	J
	Zinc	48	J
SS14	Nickel	52	J
	Antimony	<2	UJ
	Cobalt	13	J
	Copper	34	J
	Vanadium	50	J
	Zinc	38	J
SS16	Antimony	<2	UJ
	Barium	100	J
	Copper	36	J
	Lead	15	J
	Nickel	33	J
	Vanadium	54	J
	Zinc	54	J
	Arsenic	4.1	J
	Mercury	<0.1	UJ

Field/Laboratory Duplicate Review
Three field duplicates were collected for primary samples SS02, SS03, and TPB8. Field duplicates are identified by the addition of "D" to the primary sample name. The field duplicate samples were analyzed for the same parameters as the associated primary samples. In general, duplicate precision was excellent. Two laboratory replicates were also performed on Site samples. All duplicate pairs had a relative percent difference (RPD) of less than 50 percent with the exception of the following results.

Sample Pair	Analyte	Primary Conc. (mg/kg)	Dup. Conc. (mg/kg)	RPD	Action
SS03/SS03D	Lead	<0.87	3.5	---	J
TPB8/TPB8D	Cadmium	0.75	0.34	75	J
TPB8 TPB8D	Sulfate	7.1	4.0	56	J

LCS Review
Each of the criteria is within guidance limits.

Sample Quantitation
Results between the method detection limit (MDL) and the reporting limit (RL) are trace values and are qualified as estimated (i.e., flagged with a "J"). Table C-2 lists trace results and associated qualifications.

Validation Qualifiers
The following validation qualifiers may have been applied to the data, as appropriate.

- J = analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.
- UJ = analyte was not detected above the sample RL and the sample RL is approximate.
- U = analyte was tested, but was not detected above the sample RL.