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March 15, 1991

Mr. Mark Travers
de maximis
c/o The Mailbox
9041 Executive Park Drive
Suite 601
Knoxville, Tennessee 37923

Re: Response to USEPA's Data Validation Comments; Novak Sanitary Landfill

Dear Mr. Travers:

Enclosed is our response to the Data Validation Comments on the Novak Sanitary Landfill data submittals as relayed in USEPA's February 22,1991 letter. The response consists of the following elements:

1. A listing of each comment and the response action taken and/or discussion, following the format of the itemized comments.

2. A complete set of revised Data Summary tables for the Leachate/Drainageways (First Set) and Soil Borings.

3. A complete set of legible Form I's for inorganics in the Soil Borings in response to Comment No. 32.

4. A reissued laboratory result page for TOC in sample NSL-SB-1-10 in response to Comment No. 34.

5. The following revised pages of the Narrative Summaries:

Leachate/Drainageways (First Set)

Narrative page 8 (Comment No. 3)

Narrative pages 14-17 (Comments Nos. 7 and 18)

Narrative page 22 (Comment No. 11)

Narrative page 23 (Comment Nos. 1 and 2)

Soil Borings

Narrative page 3 (Comment No. 21)

Narrative page 4 (Comment No. 22)

Narrative page 8 (Comment No. 25)

Narrative page 9 (Comment Nos. 25 and 26)

Please call with any questions.

Sincerely,

GERAGHTY & MILLER, INC.

Jaclyn A. Baron
Associate/Project Officer

JAB:es

cc: Lawrence Diamond, Hannoch Weisman

NJ06401-5/031191.com

RESPONSE TO USEPA'S COMMENTS ON THE DATA VALIDATION REPORTS FOR NOVAK SANITARY LANDFILL

LEACHATE/DRAINAGEWAYS (FIRST SET)

1. Silver for soil samples should be qualified "R" (unusable), since the matrix spike recovery is <30%. (Narrative page 22.)

   Response: All soil silver data has been flagged "R" as unusable.

2. Non-detects for silver in water samples should be qualified "R" (unusable), since the matrix spike recovery is <30%. (Narrative page 23.)

   Response: Non-detect silver data has been flagged "R" as unusable in water samples.

3. According to Region III mods, when pesticide linearity check % RSD exceeds the 10% limit only quantitative results are qualified. Qualifier "UJ" should be removed from pesticide soil samples for 4,4'-DDT.

   Response: The "UJ" qualifier has been removed from pesticide soil samples for 4.4'-DDT.

4. Volatile method blanks were evaluated separately for the associated samples. Region III uses the highest blank to qualify all data.

   Response: During data validation it was determined that a total of six separate GC/MS instruments were used to analyze soil and water samples (two for soil and four for water). Analytical runs were accomplished on the separate instruments on separate days. Method blanks were analyzed

in accordance with the CLP Statement of Work, i.e., one method blank for each GC/MS instrument every 12 hours. Each analytical run of samples would therefore be considered an independent event, and the method blank associated with each analytical event was used in qualifying the sample results.

5. Sample NSL-SW-491B [sic] (field blank) should not be qualified "B" for 1,1,1,-trichloroethene and toluene, since this sample has the highest blank value for these compounds.

Response: The "B" qualifier has been removed from 1,1,1-trichloroethane and toluene in Field Blank NSL-SW-401B. However, it is possible that the field blank was contaminated with 1,1,1-trichloroethene and toluene due to laboratory processing since these compounds were present in the method blank analyzed two samples previously.

6. Sample SWTB-1 4/12/90 (trip blank) and its rerun should not be qualified "B" for acetone and 2-butanone, since they have the highest blank value for these compounds. However, they should be flagged as "J" due to surrogate outlier.

Response: The "J" qualifier has been added to the acetone and 2-butanone in samples SWTB-1 4/12/90 and SWTB-1 4/12/90 RE.

7. Region III does not correct sample TICs for contaminants found as TICs in the trip or field blanks. (See narrative page 14.)

Response: Narrative pages 14 through 17 (field and trip blank samples discussions) have been modified to remove references to TICs.

8. NSL-SD-1-01 requires a "B" qualifier for copper.

Response: The "B" qualifier has been added to NSL-SD-1-01.

9. NSL-SD-5-01 remove the "B" qualifier for vanadium.

Response: **The "B" qualifier has been removed from vanadium in NSL-SD-5-01.**

10. NSL-SW-4-01B, copper and sodium results require a "B" qualifier for preparation blank contamination.

Response: **The "B" qualifier has been added to the copper and sodium in NSL-SW-4-01B.**

11. The EPA upper and lower control limit should be used for the soil LCS recovery and not the percent recovery as Geraghty & Miller has used to qualify the data for the LCS outliers. The soil LCS results should be re-evaluated and data qualified accordingly.

Response: **The LCS results were reevaluated using the EPA control limits. Flags were removed from antimony, barium, potassium and sodium that had been erroneously applied for LCS failure. Only silver remains qualified with "K" qualifier since the actual value in LCS found was 43.7 mg/Kg and the EPA QC limits are 15.5 - 29.0 mg/Kg. However, it should be noted that silver in both soil and non-detect water samples has already been flagged "R" as unusable for matrix spike recoveries less than 30 percent.**

12. Two qualifiers are reported for samples NSL-SW-3-01 and NSL-SS-7-01 on the data summary forms. Only the "J" qualifier is required since it supersedes the "K" and "L" qualifiers.

Response: **The "K" and "L" qualifiers have been removed from NSL-SW-3-01 and NSL-SS-7-01 respectively.**

13. Magnesium and sodium for soil samples should be qualified "J" for serial dilution outliers, according to narrative page 25.

Response: **The "J" qualifier has been added to magnesium and sodium in soil samples.**

14. The technical holding time was exceeded for aromatic volatiles in sample NSL-SW-6-01. Volatile aromatics should be qualified "UL" for this sample.

Response: **All water samples collected for volatile analysis were preserved with HCl to pH less than 2. According to EPA Region III QA Directive Bulletin No. OAD007 dated July 11, 1989, preserving the sample extends the holding time for volatile aromatic fractions from 7 to 14 days. The specified holding time in the approved Quality Assurance Project Plan (QAPP) for the Novak Sanitary Landfill project is consistent with the EPA Region III QA Directive. Sample NSL-SW-6-01 was analyzed within 8 days of sample collection. (Reference 40CFR 136.3 Table II Purgeables and footnote 9; also reference EPA Method 624.)**

15. The semivolatile technical extraction holding time was exceeded for the soil samples. Region III applies the water extraction holding time to the soil samples. Soil samples should be qualified "UJ" and "J".

Response: **The approved Quality Assurance Project Plan (QAPP) for the Novak Sanitary Landfill project, states the holding time for semi volatile extractions of solid samples to be 10 days VTSR (Validated Time of Sample Receipt) by the laboratory. All soil samples analyzed for semi volatile organics were extracted within 8 or 9 days of sample collection. This is less than the approved 10 day VTSR in the QAPP**

and is additionally 5 - 6 days less than the 14 day holding time specified in "Test Methods for Solid Waste", EPA SW846 Table 4.0. Therefore, we believe this data should remain unqualified.

16. There are inconsistencies between the narrative and the inorganic Form I's for the outliers (i.e., Hg is qualified for the duplicate outlier on the water Form I's, Zn is not qualified for serial dilution outlier on the soil Form I's...)

Response: **The duplicate outliers on the Form I's for mercury indicate that the duplicate analysis of that sample is not within control limits. There are no validation criteria for qualifying these duplicate data. All the analytical results for mercury were below the instrument detection limits (IDL) except for Sample NSL-SW-4-01 which was only slightly above the IDL but less than the CRDL. At this concentration duplication of quantitative results is very difficult. The results of the RPD for the laboratory duplicates are consistent with results obtained where one sample is at or below the IDL, i.e. RPD = 200. In this instance qualification of the data is not required.**

Zinc is not qualified for serial dilution outlier on the soil Form I's. The laboratory overlooked applying the "E" qualifier code to the Soil Form I's for zinc for the serial dilution failure. However, the data reviewer noted the serial dilution failure. The zinc results have been appropriately qualified as estimated and flagged "J".

17. Result for mercury in sample SW-4-01 requires a [ ].

Response: **The [ ] has been placed around the sample result for mercury in sample NSL-SW-4-01.**

18. The method blank and field blank had a positive result for bis(2-ethylhexyl)phthalate; the reported results for this compound should be qualified "B".

Response: **Review of the raw data indicates that none of the method blanks were contaminated with bis(2-ethylhexyl)phthalate and the field blank was contaminated with 4 ug/L. Concentrations of this compound were not detected in all of the water samples. No "B" qualifier flags were required. In order to compare this value to the soil samples the 4 ug/L has to be converted into ug/Kg units. Since bis(2-ethylhexyl)phthalate is a common laboratory contaminant the value for the field blank used to qualify soil samples is 675 ug/Kg (67.5 ug/Kg x 10). Based on this calculation the samples with less than this value of bis(2-ethylhexyl)phthalate (NSL-SD-2-01, NSL-SD-4-01 and NSL-SD-6-01) are flagged with a "B" qualifier.**

19. Results for the ground water chemistry analyses (alkalinity, chloride...) are not tabulated on data summary forms by Geraghty & Miller. Only the results reported by the lab are included in the Appendix.

Response: **This data summary form, which was inadvertently omitted from the original submittal due to a reproduction error, is provided.**

SOIL BORINGS

20. Antimony for the non-detected soil samples in Group I should be qualified "R", not "UL", because of the matrix spike outlier (<30%). (See page 12 in narrative.)

Response: **The "R" qualifier has been applied to antimony in all Group I samples. Samples affected are: NSL-SB-1-01, NSL-SB-1-08, NSL-SB-1-13, NSL-SB-1-15, NSL-SB-2-01, NSL-SB-2-08.**

21. Narrative, page 3, 3.2.2, typo, detection limit of 10 ug/Kg, not 13 ug/Kg.

Response: **The typo has been corrected.**

22. Narrative, page 4, 4.0 method blanks, should specify less than 5X for uncommon laboratory contaminant and less than 10X for common laboratory contaminant.

Response: **The text of the report has been edited to include 5X "for uncommon laboratory" contaminants and less than 10X "for common laboratory" contaminants. Please note however that evaluation of blanks was according to the applicable guideline.**

23. Volatile method blanks were evaluated separately for the associated samples. Region III uses the highest blank to qualify all data.

Response: **Data is not affected and no action required.**

24. Holding time exceeded for Hg in soil samples. No data was qualified. (See page 7 in narrative.) Correct action was taken according to Region III mods of June 1988. However, the most recent Region III mods of December 1990, requires the application of the water sample holding time to the soil samples.

Response: **Mercury data was properly identified as exceeding holding times, and as the comment indicates, correct action was taken according to Region III mods for June 1988. The sampling, analysis and data validation were conducted prior to publication of the December 1990 Region mods. We do not feel it is appropriate to retroactively apply new guidelines which were published after the date of the report (November 1990).**

25. Narrative, page 8, units should read mg/Kg, not ug/Kg.

Response: Units on pages 8 and 9 have been corrected.

26. Narrative, page 9, typo, sample NSL-SK-2-4 [sic], deleted cobalt 8.1B, cobalt was not detected (8.1U).

Response: Cobalt in sample NSL-SB-2-04 has been deleted from narrative. The data summary table is correct.

27. Unit should read mg/Kg not ug/Kg on the metals tabulated data summary form.

Response: Units on Data Summary table have been corrected.

28. Due to opposing effects (high matrix spike and low analytical spike recoveries) sample NSL-SB-1-01 should be qualified "J". (See pages 12 and 13 in narrative.)

Response: Only lead is affected. The "J" qualifier has been added to lead in NSL-SB-1-01.

29. Region III qualifies field blanks for duplicate outliers, therefore, sample NSL-SB-3-01B should be qualified "UJ" for cobalt.

Response: The "UJ" qualifier has been added for cobalt in Sample NSL-SB-3-01B.

30. Check the reported results for the field blank sample (NSL-SB-3-01B) for proper units.

Response: **Data Summary table has been corrected to show that the soil sample results are in mg/Kg, and the results for the field blank (NSL-SB-3-01B which is an aqueous sample) are in ug/L.**

31. There are inconsistencies between the narrative and the inorganic Form I's for the outliers (i.e., Group 1 samples, Pb and Mn are not qualified for matrix spike outliers on the Form I's, however, they are by the reviewer, see narrative page 12). Same problem applies for Group II samples for serial dilution and matrix spike outliers.

Response: **The laboratory overlooked indicating the outliers on the Form I's but the reviewer accurately noted the matrix spike outliers for lead and manganese on the Form V (Spike Sample Recovery). No further action is required.**

The laboratory also did not consistently indicate the outliers on the Form I's for the serial dilution and matrix spike outliers for Group II Compounds. However, the reviewer accurately identified the outliers on the raw data summary forms for serial dilution (Form1X-In) and matrix spikes (Form V). No further action required.

32. Illegible Form I's, transcription check could not be done.

Response: **Legible copies of Form I's are provided.**

33. Units for TOC results should read ug/g or mg/Kg, but not ug/Kg.

Response: **Data summary table has been corrected.**

34. The laboratory TOC result for the sample NSL-SB-1-10 is missing.

Response: **The TOC result for sample NSL-SB-1-10 is on an individual page bound immediately preceding the page showing TOC results for the other samples. However, a new page is provided.**

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DATA SUMMARY TABLES

LEACHATE/DRAINAGEWAYS (FIRST SET)

Novak Sanitary Landfill

Leachate/Drainageways - Water
Analytical Data for Metals and Cyanide with Assigned Qualifier Codes
(Results in µg/L)

Parameters	NSL-SW 1-01	NSL-SW 2-01	NSL-SW 3-01	NSL-SW 4-01	NSL-SW 4-01B	NSL-SW 5-01	NSL-SW 6-01	NSL-LH 7-01
Aluminum	277.00	223.00	443.00	208.00	60.00 U	405.00	640.00	1,300.00
Antimony	60.00 U	60.00 U	60.00	60.00 U	60.00 U	60.00 U	60.00 U	60.00 U
Arsenic	4.00 UL	4.00 UL	4.00 U	4.00 U	4.00 U	4.00 UL	4.00 U	4.00 U
Barium	59.50	81.20	32.00 U	790.00	32.00 U	336.00	126.00	1,790.00
Beryllium	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.20
Cadmium	5.00 U	5.00 U	6.00	26.40	5.00 U	9.30	12.80	60.50
Calcium	43,800.00	107,000.00	21,600.00	153,000.00	282.00	57,900.00	118,000.00	201,000.00
Chromium	17.20	10.00 U	10.00 U	20.80	10.00 U	10.00 U	10.00 U	44.50
Cobalt	30.00 U	30.00 U	30.00 U	39.90 B	30.00 U	30.00 U	30.00 U	30.00 U
Copper	16.30 B	15.90 B	78.10	359.00	8.20 B	19.90 B	9.10 B	46.20 B
Iron	784.00 K	462.00 K	713.00 K	92,000.00 K	38.90	3,110.00 K	8,900.00 K	299,000.00 K
Lead	8.00 K	2.80 J	15.50 J	60.10 K	2.00 U	7.40 K	5.20 K	15.60 J
Magnesium	9,940.00	33,100.00	4,260.00	98,000.00	70.00 U	78,400.00	21,200.00	127,000.00
Manganese	65.20	17.90	77.10	3,820.00	3.00 U	2,200.00	540.00	1,450.00
Mercury	0.20 U	0.20 U	0.20 U	[0.32]	0.20 U	0.20 U	0.20 U	0.20 U
Nickel	18.80	16.60	18.00	374.00	15.00 U	36.00	15.00 U	92.80
Potassium	6,990.00	16,800.00	3,550.00	21,400.00	830.00 U	36,400.00	11,200.00	104,000.00
Selenium	2.00 U	2.00 U	2.00 U	2.00 UL	2.00 U	2.00 U	2.00 U	2.00 UL
Silver	8.00 R 1/	8.00 R 1/	8.00 R 1/	8.00 R 1/	8.00 R 1/	8.00 R 1/	8.00 R 1/	8.20 L
Sodium	16,500.00 J	32,400.00 J	9,200.00 B	48,100.00 J	1,910.00 B	71,800.00 J	25,400.00 J	145,000.00 J
Thallium	5.00 UL	5.00 U	5.00 U	5.00 UL	5.00 U	5.00 UL	5.00 U	5.00 UL
Vanadium	11.00 U	11.00 U	11.00 U	13.00	11.00 U	11.00 U	11.00 U	40.50
Zinc	24.50 B	23.20 B	21.90 B	762.00	9.50 B	77.90	21.70 B	142.00
Cyanide	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	13.90	5.00 U	10.00 U

30AUG90 Ba

1/ Non-detects for Silver are flagged "R" as unusable for matrix spike recovery less than 30%.

Novak Sanitary Landfill

Leachate/Drainageways - Soil
Analytical Data for Metals and Cyanide with Assigned Qualifier Codes
(Results in µg/kg)

Parameters	NSL-SD 1-01	NSL-SD 2-01	NSL-SD 3-01	NSL-SD 4-01	NSL-SD 5-01	NSL-SD 6-01	NSL-SS 7-01	NSL-SS 8-01
Aluminum	3,770.00	6,280.00	2,510.00	791.00	16,600.00	9830.00	7,330.00	7,030.00
Antimony	20.30 UL	15.20 UL	17.10 UL	15.90 UL	31.90 J	19.50 UL	109.00 J	14.50 UL
Arsenic	1.40 UL	2.20 K	1.10 J	1.80 K	7.80 K	8.00 K	6.50 K	7.20 K
Barium	40.20	47.60	27.40	13.60	58.40	46.30	636.00	217.00
Beryllium	2.10	1.20 B	0.96 B	0.53 B	1.70	1.70	1.50 B	1.20 B
Cadmium	4.90	4.30	1.60	1.30 U	11.30	6.80	30.80	5.60
Calcium	738.00	3,990.00	844.00	432.00	471.00	832.00	15,900.00	5,790.00
Chromium	11.50	8.30	4.70	3.00	17.80	14.90	20.30	11.00
Cobalt	14.10	11.90	10.80	5.40	26.20	11.60	19.30	9.10
Copper	7.20 B	10.90 B	1.40 U	1.30 U	23.00	11.30 B	9.80 B	9.50 B
Iron	13,900.00	12,200.00	3,280.00	1,730.00	36,000.00	21,100.00	113,000.00	17,600.00
Lead	5.20	23.20	4.60	17.20	13.10	15.80	5.30 J	20.60
Magnesium	364.00 J	1,240.00 J	604.00 J	234.00 J	1,090.00 J	1,050.00 J	2,320.00 J	1,400.00 J
Manganese	905.00 L	411.00 L	475.00 L	81.10 L	807.00 L	106.00 L	392.00 L	429.00 L
Mercury	0.17 U	0.13 U	0.14 U	0.14 U	0.13 U	0.15 U	0.26 U	0.12 U
Nickel	20.60 B	16.20 B	9.60 B	10.00 B	40.80	31.00	56.00	26.70
Potassium	1,280.00 B	1,240.00 B	1,450.00 B	1,160.00 B	2,090.00 B	2,270.00 B	2,790.00 B	1,980.00 B
Selenium	0.68 U	0.51 U	0.56 U	0.54 U	0.51 U	0.65 U	1.00 U	0.48 U
Silver	2.70 R 1/	2.00 R 1/	2.70 R 1/	2.10 R 1/	2.40 R 1/	2.60 R 1/	4.30 R 1/	2.30 R 1/
Sodium	6,870.00 J	5,140.00 J	5,700.00 J	5,460.00 J	4,650.00 J	6,510.00 J	9,980.00 J	4,880.00 J
Thallium	1.70 U	1.30 U	1.40 U	1.40 U	1.30 U	1.60 U	2.60 U	1.20 U
Vanadium	20.90 B	20.10 B	10.00 B	8.00 B	31.60	31.50	35.10	21.10 B
Zinc	44.70 J	58.60 J	10.80 J	8.80 J	86.00 J	71.20 J	95.80 J	49.50 J
Cyanide	2.10 UL	1.60 UL	1.70 UL	1.50 UL	1.50 UL	1.80 UL	2.60 UL	1.20 UL

30AUG90 Ba

1/ Silver is flagged "R" or unusable due to matrix spike recovery less than 30%.

Novak Sanitary Landfill

Leachate/Drainageways - Water
Analytical Data for Pesticides/PCBs
(Results in µg/L)

Parameters	NSL-SW 1-01	NSL-SW 2-01	NSL-SW 3-01	NSL-SW 4-01	NSL-SW 4-01B	NSL-SW 5-01	NSL-SW 6-01	NSL-LH 7-01
alpha-BHC	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U
beta-BHC	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U
delta-BHC	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U
Lindane	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U
Heptachlor	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U
Aldrin	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U
Heptachlor epoxide	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U
Endosulfan I	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U
Dieldrin	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
4,4'-DDE	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
Endrin	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
Endosulfan II	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
4,4'-DDD	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
Endosulfan sulfate	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
4,4'-DDT	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
Methoxychlor	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Endrin ketone	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
alpha-Chlordane	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
gamma-Chlordane	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Toxaphene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Aroclor-1016	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Aroclor-1221	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Aroclor-1232	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Aroclor-1242	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Aroclor-1248	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Aroclor-1254	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Aroclor-1260	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U

17AUG90 Ba

Novak Sanitary Landfill

Leachate/Drainageways - Soil
Analytical Data for Pesticides/PCBs
(Results in µg/kg)

Parameters	NSL-SD 1-01	NSL-SD 2-01	NSL-SD 3-01	NSL-SD 4-01	NSL-SD 5-01	NSL-SD 6-01	NSL-SS 7-01	NSL-SS 8-01
alpha-BHC	12 U	11 U	12 U	13 U	13 U	15 U	18 U	110 U
beta-BHC	12 U	11 U	12 U	13 U	13 U	15 U	18 U	110 U
delta-BHC	12 U	11 U	12 U	13 U	13 U	15 U	18 U	110 U
Lindane	12 U	11 U	12 U	13 U	13 U	15 U	18 U	110 U
Heptachlor	12 U	11 U	12 U	13 U	13 U	15 U	18 U	110 U
Aldrin	12 U	11 U	12 U	13 U	13 U	15 U	18 U	110 U
Heptachlor epoxide	12 U	11 U	12 U	13 U	13 U	15 U	18 U	110 U
Endosulfan I	12 U	11 U	12 U	13 U	13 U	15 U	18 U	110 U
Dieldrin	25 U	23 U	25 U	26 U	27 U	29 U	36 U	220 U
4,4'-DDE	25 U	23 U	25 U	26 U	27 U	29 U	36 U	220 U
Endrin	25 U	23 U	25 U	26 U	27 U	29 U	36 U	220 U
Endosulfan II	25 U	23 U	25 U	26 U	27 U	29 U	36 U	220 U
4,4'-DDD	25 U	23 U	25 U	26 U	27 U	29 U	36 U	220 U
Endosulfan sulfate	25 U	23 U	25 U	26 U	27 U	29 U	36 U	220 U
4,4'-DDT	25 U	23 U	25 U	26 U	27 U	29 U	36 U	220 U
Methoxychlor	120 U	110 U	120 U	130 U	130 U	150 U	180 U	1,100 U
Endrin ketone	25 U	23 U	25 U	26 U	27 U	29 U	36 U	220 U
alpha-Chlordane	120 U	110 U	120 U	130 U	130 U	150 U	180 U	1,100 U
gamma-Chlordane	120 U	110 U	120 U	130 U	130 U	150 U	180 U	1,100 U
Toxaphene	250 U	230 U	250 U	260 U	270 U	290 U	360 U	2,200 U
Aroclor-1016	120 U	110 U	120 U	130 U	130 U	150 U	180 U	1,100 U
Aroclor-1221	120 U	110 U	120 U	130 U	130 U	150 U	180 U	1,100 U
Aroclor-1232	120 U	110 U	120 U	130 U	130 U	150 U	180 U	1,100 U
Aroclor-1242	120 U	110 U	120 U	130 U	130 U	150 U	180 U	1,100 U
Aroclor-1248	120 U	110 U	120 U	130 U	130 U	150 U	180 U	1,100 U
Aroclor-1254	250 U	230 U	250 U	260 U	270 U	290 U	360 U	2,200 U
Aroclor-1260	250 U	230 U	250 U	260 U	270 U	290 U	360 U	2,200 U

17AUG90 Ba

Novak Sanitary Landfill

Leachate/Drainageways - Water
Analytical Data for Semivolatile Organics with Assigned Qualifier Codes
(Results in µg/L)

Parameters	NSL-SW 1-01	NSL-SW 2-01	NSL-SW 3-01	NSL-SW 4-01	NSL-SW 4-01B	NSL-SW 5-01	NSL-SW 6-01	NSL-LH 7-01
Phenol	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
bis(2-Chloroethyl)ether	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2-Chlorophenol	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
1,3-Dichlorobenzene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
1,4-Dichlorobenzene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	3 J
Benzyl alcohol	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
1,2-Dichlorobenzene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2-Methylphenol	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
bis(2-Chloroisopropyl)ether	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-Methylphenol	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
N-Nitroso-di-n-propylamine	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Hexachloroethane	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Nitrobenzene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Isophorone	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2-Nitrophenol	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2,4-Dimethylphenol	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzoic acid	50 UJ	50 U	50 U	50 UJ	50 UJ	50 U	50 UJ	50 UJ
bis(2-Chloroethoxy)methane	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2,4-Dichlorophenol	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
1,2,4-Trichlorobenzene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Naphthalene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-Chloroaniline	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Hexachlorobutadiene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-Chloro-3-methylphenol	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2-Methylnaphthalene	10 UJ	10 U	10 UJ	10 UJ	10 UJ	10 UJ	10 U	10 U
Hexachlorocyclopentadiene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2,4,6-Trichlorophenol	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2,4,5-Trichlorophenol	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
2-Chloronaphthalene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2-Nitroaniline	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
Dimethyl phthalate	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Acenaphthylene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2,6-Dinitrotoluene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
3-Nitroaniline	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
Acenaphthene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2,4-Dinitrophenol	50 UJ	50 U	50 UJ	50 UJ	50 UJ	50 UJ	50 UJ	50 UJ
4-Nitrophenol	50 UJ	50 U	50 U	50 UJ	50 UJ	50 U	50 UJ	50 UJ
Dibenzofuran	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2,4-Dinitrotoluene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Diethylphthalate	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-Chlorophenyl-phenylether	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Fluorene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-Nitroaniline	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
4,6-Dinitro-2-methylphenol	50 UJ	50 U	50 U	50 UJ	50 UJ	50 U	50 U	50 U
N-Nitrosodiphenylamine (a)	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-Bromophenyl-phenylether	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Hexachlorobenzene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Pentachlorophenol	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
Phenanthrene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Anthracene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Di-n-Butylphthalate	10 U	10 U	10 U	10 U	10 U	15	10 U	10 U
Fluoranthene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Pyrene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Butylbenzylphthalate	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
3,3'-Dichlorobenzidene	20 U	20 U	20 U	20 U	20 U	20 U	20 UJ	20 UJ
Benzo(a)anthracene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Chrysene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
bis(2-Ethylhexyl)phthalate	10 U	10 U	10 U	10 U	4 J	10 U	10 U	10 U
Di-n-Octyl phthalate	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzo(b)fluoranthene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzo(k)fluoranthene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzo(a)pyrene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Indeno(1,2,3-cd)pyrene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Dibenz(a,h)anthracene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzo(g,h,i)perylene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U

22AUG90 Be

(a) Cannot be separated from Diphenylamine.

Novak Sanitary Landfill

Leachate/Drainageways - Soil

Analytical Data for Semivolatile Organics with Assigned Qualifier Codes

(Results in µg/kg)

Parameters	NSL-SD 1-01	NSL-SD 2-01	NSL-SD 3-01	NSL-SD 4-01	NSL-SD 5-01	NSL-SD 6-01	NSL-SS 7-01	S 8-01
Phenol	520 U	470 U	480 U	540 U	550 U	600 U	750 U	4,800 U
bis(2-Chloroethyl)ether	520 U	470 U	480 U	540 U	550 U	600 U	750 U	4,800 U
2-Chlorophenol	520 U	470 U	480 U	540 U	550 U	600 U	750 U	4,800 U
1,3-Dichlorobenzene	520 U	470 U	480 U	540 U	550 U	600 U	750 U	4,800 U
1,4-Dichlorobenzene	520 U	470 U	480 U	540 U	550 U	600 U	750 U	4,800 U
Benzyl alcohol	520 U	470 U	480 U	540 U	550 U	600 U	750 UJ	4,800 U
1,2-Dichlorobenzene	520 U	470 U	480 U	540 U	550 U	600 U	750 U	4,800 U
2-Methylphenol	520 U	470 U	480 U	540 U	550 U	600 U	750 U	4,800 U
bis(2-Chloroisopropyl)ether	520 U	470 U	480 U	540 U	550 U	600 U	750 U	4,800 U
4-Methylphenol	520 U	470 U	480 U	540 U	550 U	600 U	750 U	4,800 U
N-Nitroso-di-n-propylamine	520 U	470 U	480 U	540 U	550 U	600 U	750 U	4,800 U
Hexachloroethane	520 U	470 U	480 U	540 U	550 U	600 U	750 U	4,800 U
Nitrobenzene	520 U	470 U	480 U	540 U	550 U	600 U	750 U	4,800 U
Isophorone	520 U	470 U	480 U	540 U	550 U	600 U	750 U	4,800 U
2-Nitrophenol	520 U	470 U	480 U	540 U	550 U	600 U	750 U	4,800 U
2,4-Dimethylphenol	520 U	470 U	480 U	540 U	550 U	600 U	750 U	4,800 U
Benzoic acid	2,500 U	2,300 UJ	2,300 UJ	2,600 U	2,700 UJ	2,900 UJ	3,600 UJ	23,000 U
bis(2-Chloroethoxy)methane	520 U	470 U	480 U	540 U	550 U	600 U	750 U	4,800 U
2,4-Dichlorophenol	520 U	470 U	480 U	540 U	550 U	600 U	750 U	4,800 U
1,2,4-Trichlorobenzene	520 U	470 U	480 U	540 U	550 U	600 U	750 U	4,800 U
Naphthalene	520 U	470 U	480 U	540 U	550 U	600 U	750 U	4,800 U
4-Chloroaniline	520 U	470 U	480 U	540 U	550 U	600 U	750 U	4,800 U
Hexachlorobutadiene	520 U	470 U	480 U	540 U	550 U	600 U	750 U	4,800 U
4-Chloro-3-methylphenol	520 U	470 U	480 U	540 U	550 U	600 U	750 U	4,800 U
2-Methylnaphthalene	520 U	470 UJ	480 UJ	540 U	550 U	600 U	750 U	4,800 UJ
Hexachlorocyclopentadiene	520 U	470 U	480 U	540 U	550 U	600 U	750 U	4,800 U
2,4,6-Trichlorophenol	520 U	470 U	480 U	540 U	550 U	600 U	750 U	4,800 U
2,4,5-Trichlorophenol	2,500 U	2,300 U	2,300 U	2,600 U	2,700 U	2,900 U	3,600 U	23,000 U
2-Chloronaphthalene	520 U	470 U	480 U	540 U	550 U	600 U	750 U	4,8[illegible]
2-Nitroaniline	2,500 U	2,300 U	2,300 U	2,600 U	2,700 U	2,900 U	3,600 U	2[illegible]
Dimethyl phthalate	520 U	470 U	480 U	540 U	550 U	600 U	750 U	4[illegible]
Acenaphthylene	520 U	470 U	480 U	540 U	550 U	600 U	750 U	4,800 U
2,6-Dinitrotoluene	520 U	470 U	480 U	540 U	550 U	600 U	750 U	4,800 U
3-Nitroaniline	2,500 U	2,300 U	2,300 U	2,600 U	2,700 U	2,900 U	3,600 U	23,000 U
Acenaphthene	520 U	49 J	480 U	540 U	550 U	600 U	750 U	4,800 U
2,4-Dinitrophenol	2,500 UJ	2,300 UJ	2,300 UJ	2,600 UJ	2,700 UJ	2,900 UJ	3,600 U	23,000 UJ
4-Nitrophenol	2,500 U	2,300 UJ	2,300 UJ	2,600 U	2,700 U	2,900 U	3,600 U	23,000 U
Dibenzofuran	520 U	470 U	480 U	540 U	550 U	600 U	750 U	4,800 U
2,4-Dinitrotoluene	520 U	470 U	480 U	540 U	550 U	600 U	750 U	4,800 U
Diethylphthalate	520 U	470 U	480 U	540 U	550 U	600 U	750 U	4,800 U
4-Chlorophenyl-phenylether	520 U	470 U	480 U	540 U	550 U	600 U	750 U	4,800 U
Fluorene	520 U	470 U	480 U	540 U	550 U	600 U	750 U	4,800 U
4-Nitroaniline	2,500 U	2,300 U	2,300 U	2,600 U	2,700 U	2,900 U	3,600 U	23,000 U
4,6-Dinitro-2-methylphenol	2,500 U	2,300 UJ	2,300 UJ	2,600 U	2,700 UJ	2,900 UJ	3,600 U	23,000 U
N-Nitrosodiphenylamine (a)	520 U	470 U	480 U	540 U	550 U	600 U	750 U	4,800 U
4-Bromophenyl-phenylether	520 U	470 U	480 U	540 U	550 U	600 U	750 U	4,800 U
Hexachlorobenzene	520 U	470 U	480 U	540 U	550 U	600 U	750 U	4,800 U
Pentachlorophenol	2,500 U	2,300 U	2,300 U	2,600 U	2,700 U	2,900 U	3,600 U	23,000 U
Phenanthrene	520 U	300 J	480 U	120 J	550 U	58 J	750 U	1,200 J
Anthracene	520 U	50 J	480 U	540 U	550 U	600 U	750 U	4,800 U
Di-n-Butylphthalate	520 U	470 U	480 U	540 U	550 U	600 U	750 U	4,800 U
Fluoranthene	49 J	740	480 U	210 J	550 U	110 J	750 U	2,300 J
Pyrene	520 U	690	480 U	130 J	550 U	74 J	750 U	1,200 J
Butylbenzylphthalate	520 U	470 U	480 U	540 U	550 U	600 U	750 U	49,000
3,3'-Dichlorobenzidene	1,000 UJ	940 U	960 U	1,100 UJ	1,100 U	1,200 U	1,500 U	9,600 U
Benzo(a)anthracene	520 U	430 J	480 U	110 J	550 U	58 J	750 U	1,100 J
Chrysene	520 U	550	480 U	110 J	550 U	62 J	750 U	1,200 J
bis(2-Ethylhexyl)phthalate	520 U	480 B	480 U	160 B	550 U	76 B	750 J	12,000
Di-n-Octyl phthalate	520 U	470 U	480 U	540 U	550 U	600 U	750 U	4,800 U
Benzo(b)fluoranthene	520 U	780	480 U	82 J	550 U	69 J	750 U	1,300 J
Benzo(k)fluoranthene	520 U	570	480 U	110 J	550 U	600 U	750 U	1,200 J
Benzo(a)pyrene	520 U	660	480 U	540 U	550 U	600 U	750 U	1,[illegible]
Indeno(1,2,3-cd)pyrene	520 U	820	480 U	540 U	550 U	600 U	750 U	
Dibenz(a,h)anthracene	520 U	250 J	480 U	540 U	550 U	600 U	750 U	4,8[illegible]
Benzo(g,h,i)perylene	520 U	620	480 U	540 U	550 U	600 U	750 U	590 J

21AUG90 Sa

(a) Cannot be separated from Diphenylamine.

Novak Sanitary Landfill

Leachate/Drainageways - Water
Analytical Data for Volatile Organics with Assigned Qualifier Codes
(Results in µg/L)

Parameters	NSL-SW 1-01	NSL-SW 2-01	NSL-SW 3-01	NSL-SW 4-01	NSL-SW 4-01B	NSL-SW 5-01	NSL-SW 6-01	NSL-LH 7-01	SWTB-1 04/12/90	SWTB-1 04/12/90-RE
Chloromethane	10 U	10 U	10 U	10 U	10 U	10 U	10 UJ	10 U	20 UJ	10 U
Bromomethane	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	20 UJ	10 U
Vinyl chloride	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	20 UJ	10 U
Chloroethane	10 U	10 U	10 U	10 U	10 U	10 U	10 U	4 J	20 UJ	10 U
Methylene chloride	5 U	5 U	5 U	5 U	5 U	5 U	1 J	5 U	10 UJ	5 U
Acetone	10 UJ	10 UJ	5 B	10 UJ	150 B	10 U	10 U	10 U	280 J	160 J
Carbon disulfide	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	10 UJ	5 U
1,1-Dichloroethene	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	10 UJ	5 U
1,1-Dichloroethane	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	10 UJ	5 U
1,2-Dichloroethene (total)	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	10 UJ	5 U
Chloroform	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	10 UJ	5 U
1,2-Dichloroethane	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	10 UJ	5 U
2-Butanone	10 U	10 U	R	10 U	230 B	10 U	4 B	10 U	390 J	380 J
1,1,1-Trichloroethane	4 B	5 B	5 U	3 B	5	5 U	5 U	5 U	10 UJ	5 U
Carbon tetrachloride	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	10 UJ	5 U
Vinyl acetate	10 U	10 U	10 UJ	10 U	10 U	10 U	10 U	10 U	20 UJ	10 U
Bromodichloromethane	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	10 UJ	5 U
1,2-Dichloropropane	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	10 UJ	5 U
cis-1,3-Dichloropropene	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	10 UJ	5 U
Trichloroethene	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	10 UJ	5 U
Dibromochloromethane	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	10 UJ	5 U
1,1,2-Trichloroethane	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	10 UJ	5 U
Benzene	5 U	5 U	5 U	5 U	5 U	5 U	5 U	1 J	10 UJ	5 U
trans-1,3-Dichloropropene	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	10 UJ	5 U
Bromoform	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	10 UJ	5 U
4-Methyl-2-pentanone	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	20 UJ	10 U
2-Hexanone	10 U	10 U	10 UJ	10 U	10 U	10 U	10 U	10 U	20 UJ	10 U
Tetrachloroethene	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	10 UJ	5 U
1,1,2,2-Tetrachloroethane	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	10 UJ	5 U
Toluene	3 B	3 B	3 B	3 B	4	3 B	1 B	3 B	3 B	1 B
Chlorobenzene	5 U	5 U	5 U	5 U	5 U	5 U	5 U	11	10 UJ	5 U
Ethylbenzene	5 U	5 U	5 U	5 U	5 U	5 U	5 U	21	10 UJ	5 U
Styrene	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	10 UJ	5 U
Xylenes (total)	5 U	5 U	5 U	5 U	5 U	5 U	5 U	19	10 UJ	5 U

Novak Sanitary Landfill

Leachate/Drainageways - Soil
Analytical Data for Volatile Organics with Assigned Qualifier Codes
(Results in µg/kg)

Parameters	NSL-SD 1-01	NSL-SD 2-01	NSL-SD 3-01	NSL-SD 4-01	NSL-SD 5-01	NSL-SD 6-01	NSL-SS 7-01	NSL-SS 8-01
Chloromethane	16 U	14 U	14 U	16 U	17 U	18 U	23 U	14 U
Bromomethane	16 UJ	14 UJ	14 UJ	16 UJ	17 UJ	18 UJ	23 UJ	14 UJ
Vinyl chloride	16 U	14 U	14 U	16 U	17 U	18 U	23 U	14 U
Chloroethane	16 U	14 U	14 U	16 U	17 U	18 U	23 U	14 U
Methylene chloride	3 B	2 B	1 B	2 B	2 B	3 B	3 B	1 B
Acetone	13 B	14 U	11 B	34 B	17 B	83 B	71 B	7 B
Carbon disulfide	8 U	7 U	7 U	8 U	8 U	9 U	11 U	7 U
1,1-Dichloroethene	7 B	6 B	6 B	9 B	9 B	11 B	14 B	9 B
1,1-Dichloroethane	8 U	7 U	7 U	8 U	8 U	9 U	11 U	7 U
1,2-Dichloroethene (total)	8 U	7 U	7 U	8 U	8 U	9 U	11 U	7 U
Chloroform	8 U	7 U	7 U	8 U	8 UJ	9 UJ	11 UJ	7 UJ
1,2-Dichloroethane	8 U	7 U	7 U	8 U	8 U	9 U	11 U	7 U
2-Butanone	16 U	14 U	4 B	11 B	17 U	23 B	17 B	14 U
1,1,1-Trichloroethane	8 U	3 B	5 B	4 B	5 B	8 B	8 B	7 U
Carbon tetrachloride	8 U	7 U	7 U	8 U	8 U	9 U	11 U	7 U
Vinyl acetate	16 U	14 U	14 U	16 U	17 U	18 U	23 U	14 U
Bromodichloromethane	8 U	7 U	7 U	8 U	8 U	9 U	11 U	7 U
1,2-Dichloropropane	8 U	7 U	7 U	8 U	8 U	9 U	11 U	7 U
cis-1,3-Dichloropropene	8 U	7 U	7 U	8 U	8 U	9 U	11 U	7 U
Trichloroethene	8 U	7 U	7 U	8 U	8 U	9 U	11 U	7 U
Dibromochloromethane	8 U	7 U	7 U	8 U	8 U	9 U	11 U	7 U
1,1,2-Trichloroethane	8 U	7 U	7 U	8 U	8 U	9 U	11 U	7 U
Benzene	8 U	7 U	7 U	8 U	8 UJ	9 UJ	11 UJ	7 UJ
trans-1,3-Dichloropropene	8 U	7 U	7 U	8 U	8 U	9 U	11 U	7 U
Bromoform	8 U	7 U	7 U	8 U	8 U	9 U	11 U	7 U
4-Methyl-2-pentanone	16 U	14 U	14 U	16 U	17 U	18 U	23 U	14 U
2-Hexanone	16 U	14 U	14 U	16 U	17 U	18 U	23 U	14 U
Tetrachloroethene	8 U	7 U	7 U	8 U	8 U	9 U	11 U	7 U
1,1,2,2-Tetrachloroethane	8 U	7 U	7 U	8 U	8 U	9 U	11 U	7 U
Toluene	5 B	3 B	4 B	5 B	5 B	6 B	7 B	4 B
Chlorobenzene	8 U	7 U	7 U	8 U	8 U	4 J	9 J	7 U
Ethylbenzene	8 U	7 U	7 U	8 U	8 U	8 J	6 J	31
Styrene	8 U	7 U	7 U	8 U	8 U	9 U	11 U	7 U
Xylenes (total)	8 U	7 U	7 U	8 U	8 U	11	5 J	130

Novak Sanitary Landfill

Leachate/Drainageways
Analytical Data for Ground-Water Chemistry Parameters

Parameters	Units	NSL-SW 1-01	NSL-SW 2-01	NSL-SW 3-01	NSL-SW 4-01	NSL-SW 4-01B	NSL-SW 5-01	NSL-SW 6-01	NSL-LH 7-01
Alkalinity	mg/L as CACO3	100	190	34	530	4.0	520	250	1,400
Chloride	mg/L	16	34	6.2	17	<0.10	83	25	200
Chemical Oxygen Demand	mg/L	60	39	13	73	8.6	73	47	210
Fluoride	mg/L	0.21	0.61	0.060	0.80	<0.050	1.0	0.47	1.5
Hardness	mg/L as CACO3	150	404	71.4	786	0.99	467	382	1,020
Ammonia	mg/L as N	<0.10	0.56	0.10	1.2	0.27	1.9	4.1	92
Nitrate/Nitrite	mg/L as N	0.20	2.8	<0.010	0.021	<0.010	7.1	0.094	<1.0
Phenols	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	<0.010	0.036
Sulfate	mg/L	37	250	38	64	<0.4	16	110	170
Dissolved Solids	mg/L	220	590	120	730	<5	780	520	1,300
Organic Carbon	mg/L	11	10	3.5	18	1.7	20	11	83
Turbidity	NTU	17	25	76	72	<0.1	14	12	120

17AUG90 Ba

DATA SUMMARY TABLES

SOIL BORINGS

Novak Sanitary Landfill

Soil Borings
Analytical Data for Metals and Cyanide with Assigned Qualifier Codes
(Results in mg/Kg)

Parameters	NSL-SB 1-01	NSL-SB 1-08	NSL-SB 1-13	NSL-SB 1-15	NSL-SB 2-01	NSL-SB 2-08	NSL-SB 2-04
Aluminum	18,100.00	19,300.00	2,090.00	1,470.00	6,150.00	22,700.00	11,000.00
Antimony	1.80 R	1.90R	1.50R	1.40R	1.60 R	1.60R	16.20 UL
Arsenic	12.00	9.00	16.70	1.10 J/	18.10	9.81	5.50
Barium	113.00	40.70	19.70 J/	10.50 J/	32.20 J/	69.90	63.60
Beryllium	0.89 J/	1.60	11.90	1.50	0.53 U	0.53 U	0.29 J/
Cadmium	12.40	13.30	9.40	6.50	13.30	10.50	3.70
Calcium	3,470.00 J	390.00 BJ/	253.00 BJ/	194,000.00 J	1,400.00 J	449.00 BJ/	490.00 BJ/
Chromium	27.30	14.60	9.40	9.70	13.70	46.90	14.80
Cobalt	29.30	21.10	12.40 B	10.50 B	15.60	22.00	8.10 U
Copper	18.20	17.30	9.50	5.20 B	13.80	26.90	7.80
Iron	32,600.00	87,400.00	19,300.00	6,450.00	38,200.00	—	19,200.00
Lead	60.60 J	30.70 K	25.80 K	12.00 K	40.20 K	28.30 K	38.30 K
Magnesium	1,600.00	853.00 U	540.00 J/	101,000.00	508.00 J/	672.00 J/	509.00 J/
Manganese	2,310.00 K	668.00 K	585.00 K	246.00 K	199.00 K	201.00 K	247.00 K
Mercury	0.14 U	0.21	0.20	0.11 U	0.13 U	0.34	0.13 U
Nickel	31.50	47.00	47.30	19.70 B	28.40	43.60	12.00
Potassium	1,260.00	963.50 J/	328.07 BJ/	1,590.00	658.00	1,270.00	1,190.00 B
Selenium	0.72 UJ/	0.51 UL	0.49 UL	0.45 UL	0.99 UJ/	0.53 UL	0.54 U
Silver	2.50 J/	2.50 J/	2.20 U	2.00 U	2.40 U	2.40 U	2.20 UL
Sodium	60.20 BJ/	43.20 BJ/	36.60 BJ/	215.00 BJ/	57.50 BJ/	44.90 BJ/	208.00 BJ/
Thallium	1.30 U	1.30 U	1.20 U	1.10 U	1.30 U	1.30 U	1.40 U
Vanadium	40.60	31.50	15.10	10.80	23.10	52.50	15.00
Zinc	172.00 J	110.00 J	167.00 J	35.20 J	79.60 J	70.80 J	21.80 J
Cyanide	1.80 U	1.60 U	1.50 U	1.40 U	1.60 U	1.60 U	1.50 U

21AUG90 Ba

J/ REPORTED VALUE IS LESS THAN THE CRQL BUT GREATER THAN THE IDL

Novak Sanitary Landfill

Soil Borings
Analytical Data for Metals and Cyanide with Assigned Qualifier Codes
(Results in mg/Kg)

Parameters	NSL-SB 2-06	NSL-SB 3-01	NSL-SB 3-01B ug/L	NSL-SB 3-05	NSL-SB 3-10	NSL-SB 3-15
Aluminum	456.00	1,900.00	35.00 U	6,900.00	10,100.00	4,320.00
Antimony	14.00 UL	13.00 UL	6.00 UL	16.70 L	15.50 UL	19.30 UL
Arsenic	0.92 UL	3.10 L	4.00 U	5.70	1.40 J	17.60
Barium	7.50 U	46.20	35.00 U	130.00	45.30	15.50 J
Beryllium	0.23 U	0.22 U	2.00 U	0.99 J	2.50	2.40
Cadmium	1.20 U	1.70	4.00 U	5.40	6.80	5.10
Calcium	154.00 BJ	4,780.00 J	118.00 BJ	851.00 BJ	814.00 BJ	4,870.00 J
Chromium	4.30	9.50	7.00 U	11.00	14.50	8.70
Cobalt	7.00 UJ	6.50 UJ	15.00 UJ	25.90 B	19.40 B	11.80 B
Copper	2.80 BJ	4.60 BJ	13.20 BJ	12.80	22.30	13.50
Iron	1,170.00	4,510.00	65.10 J	21,500.00	31,100.00	19,200.00
Lead	34.40 K	92.40 K	2.40 K	31.20 K	37.80 K	47.20 K
Magnesium	121.00 J	2,190.00	68.80 LJ	504.00 LJ	624.00 LJ	8,090.00
Manganese	7.20 L	24.40 L	3.00 UL	2,410.00 L	537.00 L	741.00 L
Mercury	0.11 U	0.11 U	0.20 U	0.11 U	0.71	0.15 U
Nickel	3.50 U	3.30 U	18.00 U	18.80	45.60	32.20
Potassium	193.00 U	180.00 U	150.00 U	498.00 BJ	660.00 BJ	1,990.00
Selenium	0.46 U	0.43 U	2.00 U	0.48 U	0.52 U	0.64 U
Silver	1.90 UL	1.70 UL	9.00 UL	1.90 UL	2.30 LJ	2.60 UL
Sodium	208.00 BJ	145.00 BJ	830.00	192.00 BJ	206.00 B	194.00 BJ
Thallium	1.20 U	1.10 U	5.00 U	1.20 U	1.30 U	1.60 U
Vanadium	12.40	11.10	13.00 U	16.90	27.80	23.10
Zinc	6.50 B	22.60 J	13.90 B	48.30 J	136.00 J	49.50 J
Cyanide	1.30 U	1.20 U	10.00 U	1.50 U	1.50 U	1.90 U

21AUG90 Ba

Novak Sanitary Landfill

Soil Borings
Analytical Data for Volatile Organics with Assigned Qualifier Codes
(Results in ug/kg)

Parameters	NSL-SB 2-08	NSL-SB 3-01	TRIP BLANK
Chloromethane	13 U	10 U	10 U
Bromomethane	13 U	10 U	10 U
Vinyl chloride	13 U	10 U	10 U
Chloroethane	13 U	10 U	10 U
Methylene chloride	6 B	5 B	4 B
Acetone	4 B	10 U	10 U
Carbon disulfide	7 U	5 U	5 U
1,1-Dichloroethene	7 U	5 U	5 U
1,1-Dichloroethane	7 U	5 U	5 U
1,2-Dichloroethene (total)	7 U	5 U	5 U
Chloroform	7 U	5 U	5 U
1,2-Dichloroethane	7 U	5 U	5 U
2-Butanone	13 UJ	10 R	10 R
1,1,1-Trichloroethane	7 U	5 U	5 U
Carbon tetrachloride	7 U	5 U	5 U
Vinyl acetate	13 U	10 U	10 U
Bromodichloromethane	7 U	5 U	5 U
1,2-Dichloropropane	7 U	5 U	5 U
cis-1,3-Dichloropropene	7 U	5 U	5 U
Trichloroethene	7 U	5 U	5 U
Dibromochloromethane	7 U	5 U	5 U
1,1,2-Trichloroethane	7 U	5 U	5 U
Benzene	7 U	5 U	5 U
trans-1,3-Dichloropropene	7 U	5 U	5 U
Bromoform	7 U	5 U	5 U
4-Methyl-2-pentanone	13 U	10 U	10 U
2-Hexanone	13 U	10 U	10 U
Tetrachloroethene	7 U	5 U	5 U
1,1,2,2-Tetrachloroethane	7 U	5 U	5 U
Toluene	7 U	5 U	5 U
Chlorobenzene	7 U	5 U	5 U
Ethylbenzene	7 U	5 U	5 U
Styrene	7 U	5 U	5 U
Xylenes (total)	7 U	5 U	5 U

8AUG90 Ba

Novak Sanitary Landfill

Soil Borings
Analytical Data for Total Organic Carbon
(Results in mg/Kg)

Parameters	NSL-SB 1-10	NSL-SB 2-07	NSL-SB 3-09
Total Organic Carbon	530	2,200	1,800

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LABORATORY RESULT FOR

TOC IN SAMPLE NSL-SB-1-10

NET Cambridge REPORT
Results by Sample

Work Order # 90-03-035

SAMPLE ID N8L-8B-1-10 SAMPLE # 05 FRACTIONS: A
Date & Time Collected 03/01/90 Category SOIL

TOC	530
	ug/g (dry wt)

AR304404

NET

REVISED NARRATIVE SUMMARY PAGES

LEACHATE/DRAINAGEWAYS (FIRST SET)

Action Taken: The samples associated with this calibration and results (including qualifier codes applied by NET) for 4,4'-DDT are:

Sample	4,4'DDT (µg/Kg)
NSL-SD-1-01	25U
NSL-SD-2-01	23U
NSL-SD-3-01	25U
NSL-SD-4-01	26U
NSL-SD-5-01	27U
NSL-SD-6-01	29U
NSL-SS-7-01	36U
NSL-SS-8-01	220U

No action required.

6. Method Blanks

6.1 VOCs-Contaminants detected in method blanks - compounds are identified below. 5x or 10x guidelines were used to assign data qualifier flags.

Uncorrectable Deficiencies

6.1.1 The method blank VBLK41790D (soil) was reported to contain the following contaminants:

Compound	µg/Kg	Detection Limit (µg/Kg)
Methylene Chloride	1	5
Acetone	10	10
1,1-Dichloroethene	5	5
2-Butanone	5	10
Toluene	3	5

Action Taken: Samples affected and compound results (µg/Kg) (including qualifier codes applied by NET) are:

Compound	NSL-SD 1-01	NSL-SD 2-01	NSL-SD 3-01	NSL-SD 4-01
Methylene Chloride	3BJ	2BJ	1BJ	2BJ
Acetone	13BJ	14U	11B	34B
1,1-Dichloroethene	7BJ	6BJ	6BJ	9B
2-Butanone	16U	14U	4BJ	11BJ
Toluene	5BJ	3BJ	4BJ	5BJ

The following guidelines will be used to qualify data:

Since the sample Tic concentration for NSL-SW-4-01B was within 10x the concentration for the blank (10x 8 µg/L = 80 µg/L Tic RT 6.80), the result will be flagged "B" and a line drawn through the data for emphasis. No action was required for the other samples as the compound was not detected in those samples.

6.3 Pest/PCBs - There was no evidence of contamination detected in the method blanks. All criteria were met.

7. Field Blanks

One field blank was collected and will be used to apply to all samples.

7.1 VOCs - Contaminants were detected in the field blank- compounds are identified below. 5x or 10x guidelines were used to assign data qualifier flags.

Uncorrectable Deficiencies

7.1.1 The field blank NSL-SW-4-01B was reported to contain the following contaminants:

Compound	µg/L	Detection Limit (µg/L)
Acetone	150	10
2-Butanone	230	10
1,1,1-Trichloroethane	5	5
Toluene	4	5

Action Taken: Samples affected and compound results (µg/L or µg/Kg) [including qualifier codes applied by NET and previous qualifier codes applied by data reviewer (in parentheses)] are:

Sample	Acetone	2-Butanone	1,1,1-Trichloroethane	Toluene
Soil:				
NSL-SD-1-01	13(B)	16U	8U	5(B)
NSL-SD-2-01	14U	14U	3J	3(B)
NSL-SD-3-01	11(B)	4(B)	5J	4(B)
NSL-SD-4-01	34(B)	11(B)	4J	5(B)
NSL-SD-5-01	17(B)	17U	5J	5(B)
NSL-SD-6-01	83(B)	23(B)	8J	6(B)
NSL-SS-7-01	71(B)	17(B)	8J	7(B)
NSL-SS-8-01	7(B)	14U	7U	4(B)
Water:				
NSL-SW-1-01	10(UJ)	10U	4(B)	3(B)
NSL-SW-2-01	10(UJ)	10U	5(B)	3(B)
NSL-SW-3-01	5J	(R)	5U	3(B)
NSL-SW-4-01	10(UJ)	10U	3(B)	3(B)
NSL-SW-5-01	10U	10U	5U	3(B)
NSL-SW-6-01	10U	4(B)	5U	1(B)
NSL-LH-7-01	10U	10U	5U	3(B)
SWTB-1-4/12/90	280	390	10U	3(B)
SWTB-1-4/12/90-RE	160(B)	380	5U	1(B)

The following guidelines will be used to qualify data:

Compound	Amount in Blank (µg/L)	5x (µg/L)	10x (µg/L)
Acetone	150	-	1,500
2-Butanone	230	1,150	-
1,1,1-Trichloroethane	5	25	-
Toluene	4	-	40

All positive results will be flagged as "B" (not detected substantially above the level reported in laboratory or field blanks) as all results are below 5x or 10x the amount detected in the blank. No action will be taken when a compound is detected in a blank but not detected in the sample.

7.2 BNAs - Contaminants were detected in the field blank - compounds are identified below. 5x or 10x guidelines were used to assign data qualifier flags.

Uncorrectable Deficiencies

7.2.1 The field blank NSL-SW-4-01B was reported to contain the following contaminants:

Compound	ug/L	Detection Limit (ug/L)
bis (2-Ethylhexyl) Phthalate	4*	10

* converts to 67.5 ug/Kg.

Action Taken: Samples affected and compound results (µg/L or µg/Kg) [including qualifier codes applied by NET and previous qualifier codes applied by data reviewer (in parentheses)] are:

Sample	bis (2-Ethylhexyl) Phthalate (ug/KG)
Soil:	
NSL-SD-1-01	520U
NSL-SD-2-01	480
NSL-SD-3-01	480U
NSL-SD-4-01	160J
NSL-SD-5-01	550U
NSL-SD-6-01	76J
NSL-SS-7-01	750J
NSL-SS-8-01	12,000
Water:	
NSL-SW-1-01	10U
NSL-SW-2-01	10U
NSL-SW-3-01	10U
NSL-SW-4-01	10U
NSL-SW-5-01	10U
NSL-SW-6-01	10U
NSL-LH-7-01	10U

All positive results less than 10x the amount of bis (2-Ethylhexyl) Phthalate detected in the blank (67.5 ug/Kg x 10 = 675 ug/KG) will be flagged. No action will be taken when a compound is detected in a blank but not detected in the sample.

7.3 Pest/PCBs - There was no evidence of contamination detected in the method blanks. All criteria were met.

8. Trip Blanks

Contaminants were detected in the trip blank (analyzed for VOCs only) - compounds are identified below. 5X or 10X guidelines were used to assign data qualifier flags. Although only one trip blank was collected, NET analyzed the sample twice and both sets of results are reported as SWTB-1-4/12/90 and SWTB-1-4/12/90-RE.

Uncorrectable Deficiencies

8.1 The trip blank SWTB-1-4/12/90 was reported to contain the following contaminants:

Compound	µg/L	Detection Limit (µg/L)
Acetone	280	10
2-Butanone	390	10
Toluene	3	5

Action Taken: Samples affected and compound results (µg/L or µg/Kg) [including qualifier codes applied by NET and previous qualifier codes applied by data reviewer (in parentheses)] are:

Sample	Acetone	2-Butanone	Toluene
Soil:			
NSL-SD-1-01	13(B)	16U	5(B)
NSL-SD-2-01	14U	14U	3(B)
NSL-SD-3-01	11(B)	4(B)	4(B)
NSL-SD-4-01	34(B)	11(B)	5(B)
NSL-SD-5-01	17(B)	17U	5(B)
NSL-SD-6-01	83(B)	23(B)	6(B)
NSL-SS-7-01	71(B)	17(B)	7(B)
NSL-SS-8-01	7(B)	14U	4(B)
Water:			
NSL-SW-1-01	10(UJ)	10U	3(B)
NSL-SW-2-01	10(UJ)	10U	3(B)
NSL-SW-3-01	5(B)	(R)	3(B)
NSL-SW-4-01	10(UJ)	10U	3(B)
NSL-SW-4-01B	150(B)	230	4(B)
NSL-SW-5-01	10U	10U	3(B)
NSL-SW-6-01	10U	4(B)	1(B)
NSL-LH-7-01	10U	10U	3(B)

The following guidelines will be used to qualify data:

Compound	Amount in Blank (µg/L)	5x (µg/L)	10x (µg/L)
Acetone	280	-	2,800
2-Butanone	390	1,950	-
Toluene	3	-	30

All positive results will be flagged as "B" (or will remain flagged as B) as all results are below 5x or 10x the amount detected in the blank. No action will be taken when a compound is detected in a blank but not detected in the sample.

8.2 The trip blank SWTB-1-4/12/90-RE was reported to contain the following contaminants:

Compound	µg/L	Detection Limit (µg/L)
Acetone	160	10
2-Butanone	380	10
Toluene	1	5

Action Taken: Samples affected and compound results are listed above (see 8.1). All samples have been previously flagged and will not require further qualification.

9. GC/MS Surrogate Recovery

9.1 VOCs - One VOCs surrogate recovery was out of QC limits - data usable as flagged.

Uncorrectable Deficiencies

9.1.1 The following surrogate recovery was out of QC limits:

Sample	Surrogate Recovery	QC Limits
SWTB-1-4/12/90	S1(TOL) 118	88-110

Action Taken: Results for the trip blank for all compounds will be flagged as estimated (J or UJ) unless previously flagged as B.

9.2 BNAs - Only one BNAs surrogate recovery was out of QC limits and all % Recoveries (% R) were greater than 10%. All criteria were met.

Compound	mg/kg	QC Limits (mg/kg)
Silver	43.7	15.5 — 29.0

Action Taken: All soil samples will be qualified as follows, (unless previously qualified as B or R):

Compound	Result >IDL	Result <IDL
Silver	K	-

K = estimated, biased high

Note: All soil samples have been qualified as unusable and flagged "R". (see page 23).

7.2 % R were out of QC limits for LCS (for water) for Silver (% R 73.6, QC limits 80-120).

Action Taken: All positive results for Silver will be flagged "L" (biased low), all NDs will be flagged "UL". Note: All non-detects for silver in water samples have been flagged "R" (unusable). (see page 23).

8. Laboratory Duplicates

All Relative Percent Differences (RPDs) were within QC limits. All criteria were met.

9. Matrix Spike

Some % R were not within QC limits.

Uncorrectable Deficiencies

9.1 Spike sample recoveries (for soil) were not within QC limits for the following compounds:

Compound	% R	QC Limits
Antimony	62.0	75-126
Arsenic	134.0	75-126
Manganese	42.8	75-126
Selenium	413.6	75-126
Silver	25.0	75-126
Thallium	238.3	75-126
Zinc	67.4	75-126
Cyanide	40.8	75-126

Action Taken: All soil samples will be qualified using the following guidelines (unless previously qualified as B):

Compound	Result >IDL	Result <IDL
Antimony	L*	UL
Arsenic	K	-
Manganese	L	UL
Selenium	K	-
Silver	R	R
Thallium	K	-
Zinc	L	UL
Cyanide	L	UL

* Antimony samples will be qualified as estimated (J), since they have been previously qualified as K.

9.2 Spike sample recoveries (for water) were not within QC limits for the following compounds:

Compound	% R	QC Limits
Arsenic	329.8	75-126
Iron	137.0	75-126
Lead	202.8	75-126
Selenium	995.0	75-126
Silver	0	75-126
Thallium	267.0	75-126

Action Taken: All water samples will be qualified using the following guidelines (unless previously qualified as B):

Compound	Result >IDL	Result <IDL
Arsenic	K	-
Iron	K	-
Lead	K	-
Selenium	K	-
Silver	R	R
Thallium	K	-

10 Furnace AA QC A review of the raw data (run logs) for furnace analysis of soil and water samples has revealed that some of the furnace analytes (arsenic, lead, selenium and thallium) should be qualified as shown below. (Note: qualifier codes shown here only pertain to furnace QC failures; other QC failures for these analytes requiring qualifier codes are discussed in other sections of the summary).

REVISED NARRATIVE SUMMARY PAGES

SOIL BORINGS

SUMMARY OF DATA VALIDATION

All quality control parameters have been separately evaluated and summarized on individual "Data Validation Summary Report Forms" (DVRS forms). These DVRS forms are presented along with the pertinent "raw" and "reduced" data provided by the laboratory in subsequent sections of this report. The numerical order of the presentation of the DVRS forms follows the order presented in the discussion below. The following comments are taken from each DVRS form. are separated by parameter and discuss uncorrectable deficiencies:

ORGANICS (Only Volatile Organics were analyzed)

1.0 Holding Times

All samples were analyzed within holding times as established under 40 CFR, Chapter 136.

2.0 GC/MS Tuning and Performance

All ion abundance criteria were met. mass spectra were of good quality; Form V was present for each 12-hour period.

3.0 GC/MS Calibration

3.1 Initial Calibration

Initial calibration on instruments HP597OH, and HP5970K were acceptable.

3.2 Continuing Calibration

3.2.1 Continuing calibration run on 3/8/90 on instrument HP5970H had a % Difference (%D) of greater than 25% for 2-Butanone (27.9%). Only sample NSL-SB-2-8 was affected. The results in this sample were non-detect at a detection limit of 10 ug/Kg.

Action Taken: Non-detect results are flagged "UJ" (non- detect estimated) in accordance with the guidelines and reviewers professional judgement.

3.2.2 Continuing calibration run on 3/9/90 on instrument HP5970K had a Relative Response Factor (RRF) of less than 0.05 for 2-Butanone (0.045). The samples affected are NSL-SB-3-1B and NSL-SB-Trip Blank. The results in these samples were non-detect at a detection limit of 13 ug/Kg.

Action Taken: Non-detect results are flagged as "R", (unusable) in accordance with the guidelines.

3.2.3 Continuing calibration run 3/9/90 on instrument HP5970K had a %D of greater than 25% for 2-Butanone (30.8%).
The samples affected are NSL-SB-3-1B and NSL-SB-Trip Blank.
The results in these samples are both non-detected at a detection limit of 10 ug/L.

Action Taken: These results were previously flagged "R" as unusable (See 3.2.2 above).

4.0 Method Blanks

The contaminants detected in method blanks, i.e. compounds identified in the blanks at concentrations less than 5X (for uncommon laboratory contaminant) or 10X (for common laboratory contaminant) the amount seen in the blanks are qualified according to the Functional Guidelines as shown below.

4.1 Method Blank VBLK030890H

This method blank was reported to contain methylene chloride at 2 ug/L and acetone at 16 ug/L. The sample affected, NSL-SB-2-8, was reported to contain Methylene chloride (6 ug/Kg) and Acetone at (4 ug/Kg).

Action Taken: These results will be flagged as "B" (not detected substantially above the level reported in laboratory or field blanks) as they are below 10X the amount detected in the blank (10 x 6 ug/L = 60 ug/L methylene chloride and 10 x 4 ug/L = 40 ug/L acetone).

4.2 Method Blank VBLK030990K

This method blank was reported to contain methylene chloride 2 ug/L and Acetone 19 ug/L. The samples affected were NSL-SB-3-1B and NSL-SB-Trip Blank, which were reported to contain methylene chloride at 5 ug/L and 4 ug/L respectively. Acetone was not detected in either sample.

Action Taken: Positive results for methylene chloride will be flagged "B" (not detected substantially above the level reported in laboratory or field blanks) as both results are below 10X the amount detected in the blank (10 x 2 ug/L = 20 ug/L methylene chloride). No action is taken when a compound is detected in a blank but not in the sample. Therefore no action was taken for the acetone.

5.0 Field Blanks

One field blank (Field Blank NSL-SB-3-1B) was collected and applies to all samples. The contaminants detected in field blanks, i.e. compounds identified in the blanks at concentrations less than 5X or 10X the amount seen in the blanks, are qualified according to the Functional

Group I

Analyte	5X Concentration mg/Kg
Aluminum	90.1
Antimony	8.2
Cadmium	4.2
Calcium	283.5
Cobalt	15.4
Copper	8.6
Magnesium	83.7
Manganese	7.4
Nickel	34.4
Potassium	470.5
Sodium	121.4
Zinc	18.1

Each sample of Group I that have concentrations of these analytes above the IDL but less than the amounts presented above are flagged with a "B" as non-detected. The analytes flagged for each sample in Group I are as follows:

NSL-SB-1-1	
Antimony	1.8 B
Sodium	60.2 B

NSL-SB-1-8	
Antimony	1.4 B
Sodium	43.2 B

NSL-SB-1-13	
Calcium	253.0 B
Cobalt	12.4 B
Potassium	328.7 B
Sodium	36.6 B

NSL-SB-1-15	
Cobalt	10.5 B
Copper	5.2
Nickel	19.9 B

NSL-SB-2-1	
Sodium	57.5 B

NSL-SB-2-8	
Sodium	44.9 B

Group II

Analyte	5X Concentration mg/Kg
Calcium	195.7
Cobalt	33.8
Copper	7.7
Potassium	1470.0
Sodium	712.5
Zinc	14.8

Each sample of Group II that have concentrations of these analytes above the IDL but less than the amounts presented above are flagged with a "B" as non-detected. The analytes flagged for each sample in Group II are as follows:

NSL-SB-2-4	
Potassium	1190.0 B
Sodium	208.0 B

NSL-SB-2-6	
Calcium	154.0 B
Copper	2.8 B
Sodium	208.0 B
Zinc	6.5 B

NSL-SB-3-1	
Copper	4.6 B
Sodium	145.0 B

NSL-SB-3-01B	
Calcium	118.0 B
Copper	13.2 B
Zinc	13.9 B

NSL-SB-3-5	
Cobalt	25.9 B
Potassium	498.0 B
Sodium	192.0 B

NSL-SB-3-10	
Cobalt	19.4 B
Potassium	660.0 B
Sodium	206.0 B

NSL-SB-3-15	
Cobalt	11.8 B
Sodium	194.0 B

5.0 Field Blank

One field blank (NSL-SB-3-01B) was collected and applies to all samples. Seven contaminants were present in the field blank and are shown listed below. Three of these analytes (calcium, copper, and zinc) appear to be a direct result of contaminants in the analytical system and are therefore flagged "B" in the field blank sample. These analytes also have already been qualified in samples as appropriate. These three analytes are disqualified from qualifying any samples.

ORIGINAL
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FORM I-IN's

SOIL BORINGS

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

NSLSB11

00002

Lab Name: NET-CAMBRIDGE DIVISION Contract:

NSL-SB-1-1

Lab Code: CAMBRG Case No.: NOVAK SAS No.: SDG No.: 03035

Matrix (soil/water): SOIL Lab Sample ID: 03035-016

Level (low/med): LOW Date Received: 03/03/90

% Solids: 74.5

Concentration Units (ug/L or mg/Kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	18100.00		*	P
7440-36-0	Antimony	1.80	B	NW	F
7440-38-2	Arsenic	12.00	B	S	F
7440-39-3	Barium	113.00			P
7440-41-7	Beryllium	0.89	B		P
7440-41-7	Cadmium	12.40			P
7440-70-2	Calcium	3470.00		E	P
7440-47-3	Chromium	27.30			P
7440-48-4	Cobalt	29.30			P
7440-50-8	Copper	18.20			P
7439-89-6	Iron	32600.00			P
7439-92-1	Lead	60.60		*	F
7439-95-4	Magnesium	1600.00			P
7439-96-5	Manganese	2310.00			P
7439-97-6	Mercury	0.14	U		CV
7440-02-0	Nickel	31.50			P
7440-09-7	Potassium	1260.00	B		NR
7782-49-2	Selenium	0.72	B	N	F
7440-22-4	Silver	2.50	B		P
7440-23-5	Sodium	60.20	B		P
7440-28-0	Thallium	1.30	U		F
7440-62-2	Vanadium	40.60			P
7440-66-6	Zinc	172.00		E	P
	Cyanide	1.80	U		C

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: CLEAR Artifacts: N

Comments:

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

NSL-SB-1

Lab Name: NET-CAMBRIDGE DIVISION Contract:

Lab Code: CAMBRG Case No.: NOVAK SoSAS No.: SDG No.: 03035

Matrix (soil/water): SOIL Lab Sample ID: 03035-02S

Level (low/med): LOW Date Received: 03/03/90

% Solids: 78.9

Concentration Units (ug/L or mg/Kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	19300.00		*	P
7440-36-0	Antimony	1.90	B	NW	F
7440-38-2	Arsenic	9.00			F
7440-39-3	Barium	40.70	B		P
7440-41-7	Beryllium	1.60			P
7440-41-7	Cadmium	13.30			P
7440-70-2	Calcium	390.00	B	E	P
7440-47-3	Chromium	14.60			P
7440-48-4	Cobalt	21.10			P
7440-50-8	Copper	17.30			P
7439-89-6	Iron	37400.00			P
7439-92-1	Lead	30.70		S	F
7439-95-4	Magnesium	853.00	B		P
7439-96-5	Manganese	668.00			P
7439-97-6	Mercury	0.21			CV
7440-02-0	Nickel	47.00			P
7440-09-7	Potassium	963.50	B		P
7782-49-2	Selenium	0.51	U	N	F
7440-22-4	Silver	2.50	B		P
7440-23-5	Sodium	43.20	B		P
7440-28-0	Thallium	1.30	U		F
7440-62-2	Vanadium	31.50			P
7440-66-6	Zinc	110.00		E	P
	Cyanide	1.60	U		C

Color Before: BROWN/GRE Clarity Before: Texture: COARSE

Color After: COLORLESS Clarity After: CLEAR Artifacts: N

Comments:

U.S. EPA - CLP

00004

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

NSL-SB-1-

Lab Name: NET-CAMBRIDGE DIVISION Contract:

Lab Code: CAMBRG. Case No.: NOVAK SoSAS No.: SDG No.: 03035

Matrix (soil/water): SOIL Lab Sample ID: 03035-03S

Level (low/med): LOW Date Received: 03/03/90

% Solids: 82.3

Concentration Units (ug/L or mg/Kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	2090.00		*	P
7440-36-0	Antimony	1.50	U	N	P
7440-38-2	Arsenic	16.70			P
7440-39-3	Barium	19.70	B		P
7440-41-7	Beryllium	11.90			P
7440-41-7	Cadmium	9.40			P
7440-70-2	Calcium	253.00	B	E	P
7440-47-3	Chromium	9.40			P
7440-48-4	Cobalt	12.40			P
7440-50-8	Copper	9.50			P
7439-89-6	Iron	19300.00			P
7439-92-1	Lead	25.80		S	P
7439-95-4	Magnesium	540.00	B		P
7439-96-5	Manganese	585.00			P
7439-97-6	Mercury	0.20			CV
7440-02-0	Nickel	47.30			P
7440-09-7	Potassium	328.07	B		P
7782-49-2	Selenium	0.49	U	N	P
7440-22-4	Silver	2.20	U		P
7440-23-5	Sodium	36.60	B		P
7440-28-0	Thallium	1.20	U		P
7440-62-2	Vanadium	15.10			P
7440-66-6	Zinc	167.00		E	P
	Cyanide	1.50	U		C

Color Before: BROWN Clarity Before: Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

FORM I - IN

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1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

NSL-SB-1

Lab Name: NET-CAMBRIDGE DIVISION Contract:

Lab Code: CAMBRG Case No.: NOVAK SoSAS No.: SDG No.: 03035

Matrix (soil/water): SOIL Lab Sample ID: 03035-043

Level (low/med): LOW Date Received: 03/03/90

% Solids: 88.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	1470.00		*	P
7440-36-0	Antimony	1.40	U	NW	F
7440-38-2	Arsenic	1.10	B		F
7440-39-3	Barium	10.50	B		P
7440-41-7	Beryllium	1.50			P
7440-41-7	Cadmium	6.50			P
7440-70-2	Calcium	194000.00		E	P
7440-47-3	Chromium	9.70			P
7440-48-4	Cobalt	10.50	B		P
7440-50-8	Copper	5.20	B		P
7439-89-6	Iron	6450.00			P
7439-92-1	Lead	12.00			F
7439-95-4	Magnesium	101000.00			P
7439-96-5	Manganese	246.00			P
7439-97-6	Mercury	0.11	U		CV
7440-02-0	Nickel	19.70			P
7440-09-7	Potassium	1590.00			P
7782-49-2	Selenium	0.45	U	N	F
7440-22-4	Silver	2.00	U		P
7440-23-5	Sodium	215.00	B		P
7440-28-0	Thallium	1.10	U		F
7440-62-2	Vanadium	10.80	B		P
7440-66-6	Zinc	35.20		E	P
	Cyanide	1.40	U		C

Color Before: BROWN Clarit. Before: Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

NSL-SB-2

Lab Name: NET-CAMBRIDGE DIVISION Contract:

Lab Code: CAMBRG Case No.: NOVAK SoSAS No.: SDG No.: 03035

Matrix (soil/water): SOIL Lab Sample ID: 03035-065

Level (low/med): LOW Date Received: 03/03/90

% Solids: 76.1

Concentration Units (ug/L or mg/Kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	6150.00		*	P
7440-36-0	Antimony	1.60	U	NW	P
7440-38-2	Arsenic	18.10			P
7440-39-3	Barium	32.20	B		P
7440-41-7	Beryllium	0.53	U		P
7440-41-7	Cadmium	13.30			P
7440-70-2	Calcium	1400.00		E	P
7440-47-3	Chromium	13.70			P
7440-48-4	Cobalt	15.60			P
7440-50-8	Copper	13.80			P
7439-89-6	Iron	38200.00			P
7439-92-1	Lead	40.20		S	P
7439-95-4	Magnesium	508.00	B		P
7439-96-5	Manganese	199.00			P
7439-97-6	Mercury	0.13	U		CV
7440-02-0	Nickel	28.40			P
7440-09-7	Potassium	658.00	B		P
7782-49-2	Selenium	0.99	B	N	P
7440-22-4	Silver	2.40	U		P
7440-23-5	Sodium	57.50	B		P
7440-28-0	Thallium	1.30	U	W	P
7440-62-2	Vanadium	23.10			P
7440-66-6	Zinc	79.60		E	P
	Cyanide	1.60	U		C

Color Before: BROWN Clarity Before: Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

U.S. EPA - CLP

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

NSL-SB-2-P

Lab Name: NET-CAMBRIDGE DIVISION Contract:

Lab Code: CAMBRG Case No.: NOVAK SoSAS No.: SDG No.: 03035

Matrix (soil/water): SOIL Lab Sample ID: 03035-07S

Level (low/med): LOW Date Received: 03/03/90

% Solids: 75.6

Concentration Units (ug/L or mg/Kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	22700.00		*	P
7440-36-0	Antimony	1.60	U	N	F
7440-38-2	Arsenic	9.81 ~~12.90~~	B	~~S~~	F
7440-39-3	Barium	69.90			P
7440-41-7	Beryllium	0.53	U		P
7440-41-7	Cadmium	40.50			P
7440-70-2	Calcium	449.00	B	E	P
7440-47-3	Chromium	46.90			P
7440-48-4	Cobalt	22.00			P
7440-50-8	Copper	26.90			P
7439-89-6	Iron				NR
7439-92-1	Lead	28.30 ~~34.40~~		~~PS~~	F
7439-95-4	Magnesium	672.00	B		P
7439-96-5	Manganese	201.00			P
7439-97-6	Mercury	0.34			CV
7440-02-0	Nickel	43.60			P
7440-09-7	Potassium	1270.00	B		~~P~~ NR
7782-49-2	Selenium	0.53	U	N	F
7440-22-4	Silver	2.40	U		P
7440-23-5	Sodium	44.90	B		P
7440-28-0	Thallium	1.30	U		F
7440-62-2	Vanadium	52.50			P
7440-66-6	Zinc	70.30		E	P
	Cyanide	1.60	U		C

Color Before: BROWN Clarity Before: Texture: COARSE

Color After: COLORLESS Clarity After: CLEAR Artifacts: N

Comments:

FORM I - IN

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U.S. EPA - CLP

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

NSL-SB-2-4

Lab Name: NET-CAMBRIDGE DIVISION Contract:

Lab Code: CAMBRG Case No.: NOVAK SAS No.: SDG No.: 1442CS

Matrix (soil/water): SOIL Lab Sample ID: 03070-01S

Level (low/med): LOW Date Received: 03/07/90

% Solids: 74.0

Concentration Units (ug/L or mg/Kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	11000.00			P
7440-36-0	Antimony	16.20	U	N	P
7440-38-2	Arsenic	5.50			F
7440-39-3	Barium	63.60			P
7440-41-7	Beryllium	0.29	B		P
7440-41-7	Cadmium	3.70			P
7440-70-2	Calcium	490.00	B	E	P
7440-47-3	Chromium	14.80			P
7440-48-4	Cobalt	8.10	U		P
7440-50-8	Copper	7.80			P
7439-89-6	Iron	19200.00			P
7439-92-1	Lead	38.30			F
7439-95-4	Magnesium	509.00	B		P
7439-96-5	Manganese	247.00		*	P
7439-97-6	Mercury	0.13	U		CV
7440-02-0	Nickel	12.00			P
7440-09-7	Potassium	1190.00	B		P
7782-49-2	Selenium	0.54	U		F
7440-22-4	Silver	2.20	U	N	P
7440-23-5	Sodium	208.00	B		P
7440-28-0	Thallium	1.40	U		F
7440-62-2	Vanadium	15.00			P
7440-66-6	Zinc	21.80			P
	Cyanide	1.50	U		C

Color Before: BROWN Clarity Before: Texture: FINE

Color After: COLORLESS Clarity After: Artifacts:

Comments:

U.S. EPA - CLP

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MSL - SB - 2-6

Lab Name: NET-CAMBRIDGE DIVISION Contract:

Lab Code: CAMBRG Case No.: NOVAK SAS No.: SDG No.: 1442CS

Matrix (soil/water): SOIL Lab Sample ID: 03070-02S

Level (low/med): LOW Date Received: 03/07/90

% Solids: 85.8

Concentration Units (ug/L or mg/Kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	456.00			P	
7440-36-0	Antimony	14.00	U	N	P	
7440-38-2	Arsenic	0.92	U		F	
7440-39-3	Barium	7.50	U		P	
7440-41-7	Beryllium	0.23	U		P	
7440-41-7	Cadmium	1.20	U		P	
7440-70-2	Calcium	154.00	B	E	P	
7440-47-3	Chromium	4.30			P	
7440-48-4	Cobalt	7.00	U		P	
7440-50-8	Copper	2.80	B		P	
7439-89-6	Iron	1170.00			P	
7439-92-1	Lead	24.89		S	F	see slope
7439-95-4	Magnesium	121.00	B		P	
7439-96-5	Manganese	7.20		*	P	
7439-97-6	Mercury	0.11	U		CV	
7440-02-0	Nickel	3.50	U		P	
7440-09-7	Potassium	193.00	U		P	
7782-49-2	Selenium	0.46	U		F	
7440-22-4	Silver	1.90	U	N	P	
7440-23-5	Sodium	208.00	B		P	
7440-28-0	Thallium	1.20	U		F	
7440-62-2	Vanadium	12.40			P	
7440-66-6	Zinc	6.50			P	
	Cyanide	1.30	U		C	

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: Artifacts:

Comments:

U.S. EPA - CLP

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

NSL-SB-3-1

Lab Name: NET-CAMBRIDGE DIVISION Contract:

Lab Code: CAMBRG Case No.: NOVAK SAS No.: SDG No.: 1442CS

Matrix (soil/water): SOIL Lab Sample ID: 03070-03S

Level (low/med): LOW Date Received: 03/07/90

% Solids: 92.9

Concentration Units (ug/L or mg/Kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	1900.00			P	
7440-36-0	Antimony	13.00	U	N	P	
7440-38-2	Arsenic	3.10		S	F	
7440-39-3	Barium	46.20			P	
7440-41-7	Beryllium	0.22	U		P	
7440-41-7	Cadmium	1.70			P	
7440-70-2	Calcium	4780.00		E	P	
7440-47-3	Chromium	9.50			P	
7440-48-4	Cobalt	6.50	U		P	
7440-50-8	Copper	4.60	B		P	
7439-89-6	Iron	4510.00			P	
7439-92-1	Lead	92.40		E	F	remsl9/9*
7439-95-4	Magnesium	2190.00			P	
7439-96-5	Manganese	24.40		*	P	
7439-97-6	Mercury	0.11	U		CV	
7440-02-0	Nickel	3.30	U		P	
7440-09-7	Potassium	180.00	U		P	
7782-49-2	Selenium	0.43	U		F	
7440-22-4	Silver	1.70	U	N	P	
7440-23-5	Sodium	145.00	B		P	
7440-28-0	Thallium	1.10	U		F	
7440-62-2	Vanadium	11.10			P	
7440-66-6	Zinc	22.60			P	
	Cyanide	1.20	U		C	

Color Before: BROWN Clarity Before: Texture: COARSE

Color After: COLORLESS Clarity After: Artifacts: YES

Comments:

The sample had rocks as artifacts.

U.S. EPA - CLP

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MSL - SB- 3-5

Lab Name: NET-CAMBRIDGE DIVISION Contract:

Lab Code: CAMBRG Case No.: NOVAK SAS No.: SDG No.: 1442CS

Matrix (soil/water): SOIL

Lab Sample ID: 03070-04S

Level (low/med): LOW

Date Received: 03/07/90

% Solids: 83.1

Concentration Units (ug/L or mg/Kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	6900.00			P
7440-36-0	Antimony	16.70		N	P
7440-38-2	Arsenic	5.70			F
7440-39-3	Barium	130.00			P
7440-41-7	Beryllium	0.99	B		P
7440-41-7	Cadmium	5.40			P
7440-70-2	Calcium	851.00	B	E	P
7440-47-3	Chromium	11.00			P
7440-48-4	Cobalt	25.90			P
7440-50-8	Copper	12.80			P
7439-89-6	Iron	21500.00			P
7439-92-1	Lead	31.20			F
7439-95-4	Magnesium	504.00	B		P
7439-96-5	Manganese	2410.00		*	P
7439-97-6	Mercury	0.11	U		CV
7440-02-0	Nickel	18.80			P
7440-09-7	Potassium	498.00	B		P
7782-49-2	Selenium	0.48	U		F
7440-22-4	Silver	1.90	U	N	P
7440-23-5	Sodium	192.00	B		P
7440-28-0	Thallium	1.20	U	W	F
7440-62-2	Vanadium	16.90			P
7440-66-6	Zinc	48.30			P
	Cyanide	1.50	U		C

Color Before: BROWN Clarity Before: Texture: FINE

Color After: COLORLESS Clarity After: Artifacts: YES

Comments:

The sample had rocks as artifacts.

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

NSL-SB-8-10

NSL-SB-3-10

Lab Name: NET-CAMBRIDGE DIVISION Contract:

Lab Code: CAMBRG Case No.: NOVAK SAS No.: SDG No.: 1442CS

Matrix (soil/water): SOIL Lab Sample ID: 03070-05S

Level (low/med): LOW Date Received: 03/07/90

% Solids: 77.2

Concentration Units (ug/L or mg/Kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	10100.00			P
7440-36-0	Antimony	15.50	U	N	P
7440-38-2	Arsenic	1.40	B		F
7440-39-3	Barium	45.30	B		P
7440-41-7	Beryllium	2.50			P
7440-41-7	Cadmium	6.80			P
7440-70-2	Calcium	814.00	B	E	P
7440-47-3	Chromium	14.50			P
7440-48-4	Cobalt	19.40			P
7440-50-8	Copper	22.30			P
7439-89-6	Iron	31100.00			P
7439-92-1	Lead	37.80			F
7439-95-4	Magnesium	624.00	B		P
7439-96-5	Manganese	537.00		*	P
7439-97-6	Mercury	0.71			CV
7440-02-0	Nickel	45.60			P
7440-09-7	Potassium	660.00	B		P
7782-49-2	Selenium	0.52	U		F
7440-22-4	Silver	2.30	B	N	P
7440-23-5	Sodium	206.00	B		P
7440-28-0	Thallium	1.30	U		F
7440-62-2	Vanadium	27.80			P
7440-66-6	Zinc	136.00			P
	Cyanide	1.50	U		C

Color Before: BROWN Clarity Before: Texture: FINE

Color After: COLORLESS Clarity After: Artifacts: YES

Comments:

The sample had rocks as artifacts.

U.S. EPA - CLP

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

NSL-
SB-3-15

Lab Name: NET-CAMBRIDGE DIVISION Contract:

Lab Code: CAMBRG Case No.: NOVAK SAS No.: SDG No.: 1442CS

Matrix (soil/water): SOIL Lab Sample ID: 03070-06S

Level (low/med): LOW Date Received: 03/07/90

% Solids: 62.3

Concentration Units (ug/L or mg/Kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	4320.00			P
7440-36-0	Antimony	19.30	U	N	P
7440-38-2	Arsenic	17.60		S	F
7440-39-3	Barium	15.50	B		P
7440-41-7	Beryllium	2.40			P
7440-41-7	Cadmium	5.10			P
7440-70-2	Calcium	4870.00		E	P
7440-47-3	Chromium	8.70			P
7440-48-4	Cobalt	11.80	B		P
7440-50-8	Copper	13.50			P
7439-89-6	Iron	19200.00			P
7439-92-1	Lead	93.20		S	F
7439-95-4	Magnesium	8090.00			P
7439-96-5	Manganese	741.00		*	P
7439-97-6	Mercury	0.15	U		CV
7440-02-0	Nickel	32.20			P
7440-09-7	Potassium	1990.00			P
7782-49-2	Selenium	0.64	U		F
7440-22-4	Silver	2.60	U	N	P
7440-23-5	Sodium	194.00	B		P
7440-28-0	Thallium	1.60	U		F
7440-62-2	Vanadium	23.10			P
7440-66-6	Zinc	49.50			P
	Cyanide	1.90	U		C

Color Before: BROWN Clarity Before: Texture: FINE

Color After: COLORLESS Clarity After: Artifacts: YES

Comments:

The sample had rocks as artifacts.