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Use Page Up/Page Down keys to navigate through file.

SOIL REMEDIATION DOCUMENTATION REPORT

MTD PRODUCTS, INC.
COLUMBIA MANUFACTURING COMPANY
WESTFIELD, MASSACHUSETTS

July 2000

J. Chris Kline
Construction Site Manager

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Senior Construction Manager

Steve Webb, P.E.
Senior Project Manager

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Section 1
Introduction

This report has been prepared by RMT, Inc. (RMT) to describe soil remediation activities conducted by RMT and Nu-Way Industrial Services, Inc. (NIS) at the Columbia Manufacturing Company facility (Site) for MTD Products Inc. (MTD).

1.1 Background

The Site consists of a 23.7-acre parcel located at One Cycle Street at the southeast limit of a heavily developed portion of the city of Westfield, Massachusetts. The location of the Site is shown in Figure 1. The Site is bounded to the north by residential properties on Cleveland, Lozier and Toledo Avenues, to the west by a railroad embankment, and to the south and east by agricultural land currently used primarily for the cultivation of shade tobacco. South Meadow Road parallels the eastern Site property line.

The Little River flows along the edge of these agricultural fields. The direction of flow in the Little River is generally to the east; however, the river bed meanders to the west, south, and east of the Site prior to its confluence with the Westfield River approximately ½ mile to the northeast of the Site.

The buildings constructed on the Site date back to the late 1800s and early 1900s. The Warehouse building, constructed in 1969, is the only building on the Site that is of relatively recent construction. A canal formerly crossed the property along its southwestern border, in the vicinity of the former lagoons and the current location of the Fire Pond. According to information available for examination in the historical collection at the Westfield Public Library, the Hampshire & Hampden Canal was constructed sometime around 1825 for the purpose of transporting cargo. The project extended from Northampton, Massachusetts, and included 18 locks in Westfield and two aqueducts.

In the late 1840s, the development of the canal was abandoned as railroads became a more favorable means of transporting cargo. In many areas the canal was filled and railroad beds were built upon it. The majority of the canal that was formerly on the Site was backfilled during the late 1800s, with the exception of the existing Fire Pond.

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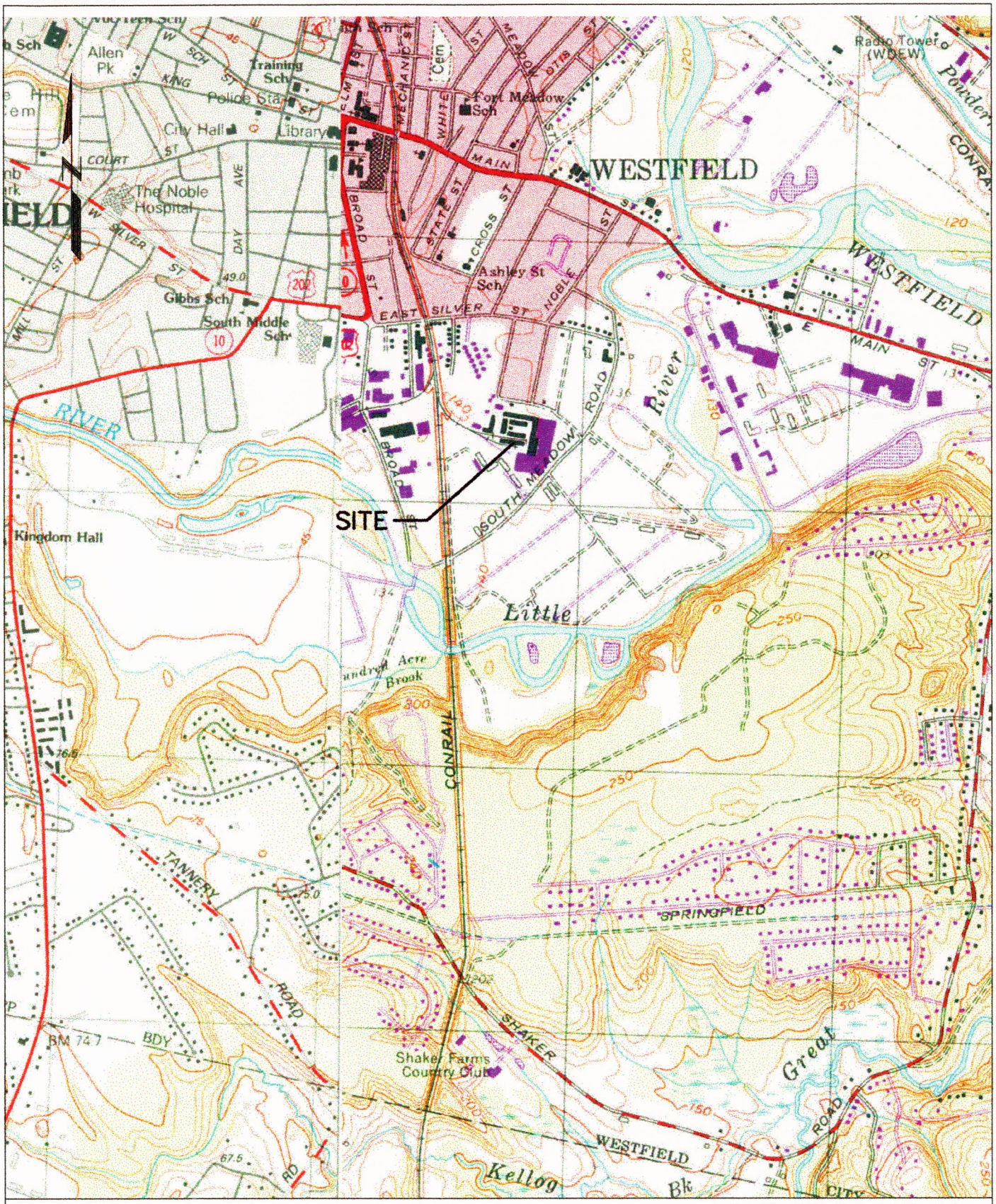

0 2000

SCALE IN FEET

SOUTHWICK 7.5 QUAD AND
WEST SPRINGFIELD 7.5 QUAD

FIGURE NO. 1

SITE LOCATION MAP

RMT INC. 998.39
072000

COLUMBIA MANUNFACTURING COMPANY
WESFIELD, MA

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The products manufactured at the Site have consisted of a variety of metal tube items, including bicycles, mopeds, lawnmowers, motorcycles, munitions (jackets for shells only), school furniture, and other tubing-based products such as exercise equipment and strollers. The primary manufacturing product produced during the history of the Site was bicycles, until their production was discontinued in 1991. Currently, the only manufacturing product is school furniture. With the exception of bicycles, the other items listed above were produced for only short periods of time and were discontinued.

The production of bicycles at the Site began when the original manufacturing buildings were constructed around 1897 by the American Bicycle Company. Between 1902 and 1932, the company operated as the Westfield Manufacturing Company, a subsidiary of the Torrington Company. In 1905, the Pope Manufacturing Company purchased the Site from the American Bicycle Company and continued the manufacture of bicycles. Pope Manufacturing subsequently moved all bicycle manufacturing from their Hartford, Connecticut, location to the Site in 1906. Pope Manufacturing also diversified their product line to include Pope Motorcycles, US Army bicycles, and shell casings for the Russian Government. The manufacture of children's bicycles began in 1919. During World War II, wartime products, including motorcycles and a broadened line of shell casings, were produced for the United States Government. School furniture production began around the mid-1950s.

In 1960, the company incorporated and became the Columbia Manufacturing Company (Columbia). A 1967 merger with MTD of Cleveland, Ohio, transformed Columbia into a division of MTD. In 1987, executives of Columbia purchased the division back from MTD. MTD still retains ownership of property at 1 Cycle Street.

1.2 History of Manufacturing Operations

Four primary process operations have been conducted at the Site:

- Machining of tube metals
- Metal cleaning
- Electroplating
- Painting

These basic process operations have not changed significantly throughout the history of the Site. Different fabrication methods have been used over the years as production improvements have been instituted.

Machining has included bending, welding, cutting, heat treatment, and annealing of the tube metal. Tumbling and annealing of cranks and other small metal parts has also been conducted.

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Metal cleaning was undertaken to remove residual oil in vapor degreasers using either methylene chloride or trichloroethene. Excess flux from welding operations was removed by immersing the welded parts in a phosphoric acid pickling solution. Currently, cleaning of school furniture work pieces is accomplished by immersion in an alkaline solution in the plating area.

Electroplating (cadmium, copper, zinc, nickel, and chromium) of manufactured items has been in active operation at the Site since manufacturing operations began. Different forms of plating have been used during different periods of the Site history. Chromium plating, for example, was initially added in 1929. Chromium is still plated over nickel parts as a part of the production of school furniture. MTD needs to assess and determine if this process is contributing to the ongoing Site contamination.

Non-plated metal items, primarily bicycle frames, were coated with a phosphate solution prior to painting. (This process, known as bonderizing, increases the chipping resistance of the painted finish.) Frames and other items that required paint were then transported to the third floor of Building 1 to be painted. Currently, the school furniture - primarily desk bodies and chairs - are painted and assembled in the southwest corner of the warehouse. Historically, painted items and equipment were stripped with a sodium carbonate solution.

1.3 General Project Approach

RMT excavated and treated the impacted soil on the Site using our patented metals treatment technology (MTT). The treated material was then analyzed by the toxicity characteristic leaching procedure (TCLP) test and was properly disposed of at a variety of Subtitle D landfills as non-hazardous material.

RMT performed the following services during the course of this project:

- Performed a treatability study of representative samples from the Site to determine the optimum dosage rate for the application of RMT's MTT process.
- Mobilized labor, equipment, and chemical to the Site.
- Preformed clearing and grubbing activities at the Reflecting Pond and the Fire Pond.
- Mixed the target amount of treatment chemical into a stockpile of impacted soil. This effort was to verify mixing percentage of chemical and establish mixing time for treatment. The stockpile was estimated to be a 75-ton pile. Based on our estimated mixture of 8 percent, the chemical dosage required to treat impacted soils would be 6 tons of MTT Enviroblend®. The stockpile was split into two halves and was sampled prior to adding chemical. After sampling was completed, chemical was added to one half of the impacted soil stockpile, was mixed for 20 minutes, and was sampled again. This exercise was continued for one hour, four samples were collected of the stockpile with the full target dosage of chemical. After the last of the samples were collected, the other half of the original 75 tons of the

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untreated stockpile was added to the half that was treated. This combined stockpile was mixed at 20-minute intervals and sampled (see Appendix C).

- Following successful completion of the trial run, RMT proceeded to full-scale treatment involving 300-ton stockpiles of impacted soils. Each stockpile was sampled; the analytical results are provided in Appendix E.
- Collected confirmation samples from each of the excavation areas and analyzed for TCLP metals and/or total metals. Analytical results are provided in Appendix F.
- Excavated and loaded 20-cubic-yard dump trailers with the treated soils for off-site disposal at various regional Subtitle D landfills.
- Abandoned two monitoring wells in the former lagoon area.
- Backfilled and restored the Site.
- Prepared this remedial documentation report for submission to United States Environmental Protection Agency (USEPA) Region I.

1.4 Preparation of Site Work Plan

A removal action workplan was prepared and submitted to USEPA Region I in January 2000. This workplan detailed the methods and protocols under which the soil removal, treatment, confirmation sampling activities and disposal would be conducted at the Columbia facility. Upon receiving regulatory approval to proceed, work activities commenced on April 10, 2000, and were concluded on June 10, 2000.

1.5 Soil Remediation Contact List

Table 1 shows the soil remediation contact list that was used during the course of the soil remediation, treatment and disposal activities.

Table 1
Soil Remediation Contact List

Consulting Firm:	RMT, Inc. 100 Verdae Blvd. Greenville, South Carolina 29607-3825 (864) 281-0030 Contact: Steve Webb
Analytical Laboratory:	Spectrum Analytical, Inc. 11 Almgren Drive Agawam, Massachusetts 01001 (413) 789-9018 Contact: Hanibal C. Tayeh

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Table 1
Soil Remediation Contact List

Managing Contractor:	RMT, Inc. 100 Verdae Blvd. Greenville, South Carolina 29607-3825 (864) 281-0030 Contact: James A. Marler / J. Chris Kline
Treatment Subcontractor:	Nu-Way Industrial Services, Inc. 1741 Calks Ferry Road Lexington, South Carolina 29073 (803) 957-9175 Contact: Chris Rabley
Disposal Contractor:	CSI Inc. 3751 Jennings Road Cleveland, OH 44109 (216) 741-9310 Contact: David Weber
Well Abandonment Contractor:	Connecticut Valley Artesian Well Co. 58 Bond Street East Longmeadow, Massachusetts 01028 (413) 525-7656 Contact: Dave Costello
MTD Contact:	Ed Waddles Corporate Environmental Specialist MTD Products, Inc. PO Box 368022 Cleveland, OH 44136-9722 (330) 273-7441
USEPA Region I Contact:	Mr. Frank Battaglia Environmental Protection Agency Region I 1 Congress Street Boston, Massachusetts 02114-2023

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Section 2
Soil Remediation Activities

Environmental investigations were performed at key locations of the property in August 1999 by O'Brien & Gere Engineers, Inc. (OBG). Refer to Appendix A for the OBG summary of the investigations. The areas investigated include the Fire Pond, the Reflecting Pond, and the Former Lagoon Area. Preliminary results indicated that surface and subsurface soils in these three areas exceeded Massachusetts Contingency Plan (MCP) criteria and may require remedial measures.

A treatability study was preformed by RMT regarding the treatment of the impacted soils, excavation and staging of the treated material, confirmation sampling, transportation, and proper disposal of the treated material at an off-site Subtitle D landfill.

2.1 Field Investigation

Field investigation activities included the initial sample collection and analysis of the soils during a January 2000 Site visit. These sample collection activities were performed by RMT with assistance from NIS. Subsequently, a chemical-dose treatability study was conducted by RMT technicians in Madison, Wisconsin.

2.1.1 Initial Sample Collection

During the January 2000 Site visit, representative samples were collected from three areas in the former lagoon area. These samples were sent to RMT's Applied Chemistry Laboratory in Madison, Wisconsin. Samples were analyzed for TCLP metals following addition of the MTT additive. Analytical laboratory results from these initial sample collections indicated an elevated level of metals present in the soils. The analytical testing results provided by RMT and a sample location map are contained in Appendix B. Based upon these analytical results it was determined that chemical treatment was necessary to render the soils non-hazardous.

2.1.2 Treatability Study

A representative sample of sufficient quantity of the affected soils collected by RMT was shipped to RMT's Applied Chemistry Laboratory in Madison, Wisconsin. A treatability study was performed on this sample to evaluate and determine the appropriate chemical blend and dosage necessary to render the impacted soils non-hazardous. The treatment technology relies upon fixation of heavy metals with a phosphate-based

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chemical in combination with an alkaline agent (magnesium oxide) to convert heavy metals into an environmentally-stable insoluble salt that is suitable for land disposal, under both acidic conditions (TCLP) and natural conditions (neutral pH). The use of phosphate and magnesium oxide for treating metals-contaminated materials is covered under US Patent No. 50374779. The blended chemical is available commercially from American Minerals, Inc., King of Prussia, Pennsylvania, under the trade name Enviroblend®.

RMT's treatability study determined that the addition of Enviroblend® at a target dose of 6 to 8 percent would adequately stabilize and render the foreign materials non-hazardous with respect to the characteristic of toxicity. The results of the treatability study are presented in Appendix B.

2.2 Site Preparation

Activities for Site preparation included the completion of vendor arrangements, mobilization of the project team personnel and equipment, and Site clearing and grubbing. Further definition of these activities is provided below.

2.2.1 Contracting

RMT identified all Site activities that would require coordination of subcontractor support. The chemical procurement supplier (American Minerals, Inc.), the on-site treatment and excavation subcontractor (Nu-Way Industrial Services, Inc.), the analytical laboratory (Spectrum Analytical Inc.), and the disposal contractor (CSI Inc.) were all selected prior to mobilization to the Site.

2.2.2 Mobilization

Following the selection of the on-site treatment and excavation subcontractor, RMT mobilized to the Site in January 2000, to collect soil samples for a treatment study to initiate pre-treatment and pre-excavation activities required to efficiently perform the work. On April 10, 2000, mobilization activities were initiated and included the following:

- Subcontractor personnel and equipment mobilization from Columbia, South Carolina
- Designation of temporary treated material staging area
- Designation of a temporary chemical storage area
- Clearing and grubbing activities
- Definition of the work area

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- Health and safety plan orientation with team members

2.2.3 Storm Water Control

Measures were taken to control storm water runon to the Site and runoff from the removal area. Site activities incorporated the following major principles of erosion and sedimentation control:

- Minimize disturbed areas
- Stabilize and protect disturbed areas as soon as feasible
- Keep storm water velocities low, where feasible
- Protect disturbed areas from storm water runoff
- Retain sediment within the removal area, to the extent feasible

Stockpiles of treated material were underlain by 6 mil liner and covered with plastic to prevent sediment migration from the stockpile location. Storm water control measures were periodically inspected by RMT's site construction manager throughout the soil remediation activities.

2.3 Soil Treatment and Excavation

Prior to treatment of impacted soils, RMT implemented the mixing protocol that was established for the Site by adding the full target dosage of MTT chemical to a predetermined amount of soil. Soil was mixed and samples were collected every twenty minutes. Samples were sent off site for analysis to verify adequate treatment. RMT's site construction manager visually verified the lateral and vertical extent of the impacted soils, and the soils were then excavated and homogeneously mixed using a track excavator. The homogeneous mix was then stockpiled adjacent to the excavation on lined staging areas in approximate 300-ton piles.

Stockpiled materials were secured against off-site migration. The 300-ton piles of treated material were sampled, composited, and analyzed for TCLP RCRA 8 metals, inorganics, polychlorinated biphenyls (PCBs), volatile organics, pesticides, herbicides, volatiles, and semivolatiles for disposal characterization. Refer to Appendix E for the supporting TCLP laboratory analytical results.

The analytical results were reviewed by RMT's site construction manager and project manager to confirm effective treatment. After the treated material stockpiles were determined to be non-hazardous, they were loaded, manifested, and transported to various Subtitle D Landfills located in New York State. A total of 11,505 tons of treated soil material were disposed of from the Site. All of this material came from the former reflecting pond area and the former lagoon

areas. Excavation activities in the fire pond were not performed at this time due to the level of the groundwater in this area. Due to only accomplishing limited excavation in the fire pond at MTD's direction, a 6-mil polyethylene material was placed in the bottom of each excavation prior to the area's being backfilled. This action was pre-approved by USEPA Region I as a means of delineating the bottom of the excavation. Refer to Appendix D for the special waste manifest tracking sheets compiled during the project.

2.4 Sampling

Records of sample collections, shipments, and receipt of analytical results were maintained by RMT.

2.4.1 Treated Material

The treated material, stockpiled in approximate 300-ton piles, was sampled and analyzed by the TCLP Resource Conservation and Recovery Act (RCRA) 8 metals test for waste profiling purposes. When the treated material was determined to be non-hazardous, it was loaded and transported to the approved Subtitle D facilities for proper disposal. Refer to Appendix E for the supporting TCLP laboratory analytical certificates.

2.4.2 Confirmation Samples

Following the excavation and treatment activities, confirmation soil samples were collected at different locations throughout the project by RMT's site construction manager. These samples were analyzed for RCRA 8 metals and total metals. Each confirmation sample was collected at the existing soil surface (0-inch to 6-inch depth). For soil confirmation sample results refer to Appendix F.

2.5 Site Restoration

Following the review of the soil confirmation sample results, the Site was graded to promote positive storm water drainage. Under the direction of MTD, fences were reinstalled and the Site was revegetated to include the staging area for backfill in the parking lot and the reflecting pond.

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2.6 Demobilization

Project team personnel and construction equipment were demobilized from the Site on June 10, 2000. The construction equipment was decontaminated prior to exiting the Site.

2.7 Conclusions

The objectives of the soil remediation activities (Subsection 1.2 of this report) for Columbia were satisfied. The proper removal, treatment, and disposal of the impacted soils from the Site were successfully completed. Refer to Appendix H for photographic documentation of Site activities.

2.8 Photographic Documentation

Throughout the project, photographic documentation was conducted on a daily bases. Appendix H contains a compilation of photographs taken during this phase of work.

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Appendix A
O'Brien & Gere Engineers, Inc.
Field Investigation Report

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O'BRIEN & GERE
ENGINEERS, INC.

November 5, 1999

Mr. Ed Waddles
Corporate Environmental Specialist
MTD PRODUCTS, INC.
979 South Conwell Avenue
Willard, OH 44890-9302

Re: Columbia Field Investigations

File: 6378/24072

Dear Ed:

As we discussed on October 22, 1999, O'Brien & Gere Engineers, Inc. (O'Brien & Gere) is providing MTD Products, Inc. (MTD) with this letter report describing soil volume calculations at the Columbia Manufacturing facility (Columbia) located at 1 Cycle Street in Westfield, MA. Environmental investigations were performed in the fire pond, the reflecting pond, and former lagoon area during the week of August 30, 1999. A letter report dated October 5, 1999 indicated that surface and subsurface soils in the fire pond and former lagoons exceed certain MCP criteria and may require remediation. This letter presents volume calculations based on available data of the soils that exceed the MCP criteria.

Reflecting Pond

On August 30, 1999, Seaboard Drilling, Inc. (Seaboard) initiated sub-surface investigations with a portable geoprobe. Fifteen shallow soil samples were collected from depths of 0-8 inches and from 8-36 inches below grade. Sampling locations were marked with wooden stakes on an approximate 25-ft grid as described in the work plan dated August 17, 1999. A sampling location map for this area is provided in Appendix A.

A comparison of the analytical results from the reflecting pond to MCP *"S-2/GW-3"* criteria indicates that no remediation is required. However, MTD has indicated that for cosmetic reasons it may want to improve the drainage in the reflecting pond. One option, that was discussed on August 31, consisted of filling the reflecting pond to grade. The total volume of fill material required to bring the ground elevation to the top of the slopes surrounding the pond is estimated to range from 5,300 yd^3 to 7,000 yd^3, depending on whether fill would be required to an elevation of 86 ft or 87 ft, respectively.

Another option that was discussed consisted of filling the reflecting pond to a depth of approximately 2 ft above existing grade, and installing several catch basins, which would drain to the existing storm sewer. The volume of fill required to implement this option would be approximately 2,000 yd^3.

O'Brien & Gere Engineers, Inc., an O'Brien & Gere company
222 Forbes Road / Suite 400 / Braintree, MA 02184
(781) 849-1311 / FAX (781) 849-2949 • http:// www.obg.com

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The first option discussed would substantially alter site drainage patterns. To implement the first option, it would be necessary to verify the survey contours shown on the site plan in Appendix A, and to obtain some better information concerning the elevation of the berm that surrounds the reflecting pond. It would also be necessary to complete some calculations to evaluate whether sufficient change in grade would exist across the newly filled reflecting pond to allow run-off to sheet flow away from the facility. In addition, it may be necessary to coordinate with the Town concerning the run-off to South Meadow Road.

To implement the second option, it would also be necessary to verify the survey contours shown on the figure included in Appendix A and calculations would be required to design the revised slopes in the reflecting pond. Installing catch basins and french drains may also be required to meet drainage objectives.

It is our understanding that the existing reflecting pond drains by culvert to a concrete collection basin, which overflows via a culvert to a storm drain. It is also our understanding that MTD would like to close and backfill the collection basin. To implement these changes, it will be necessary to survey the culverts, storm drains, and collection basin, including obtaining invert elevations.

Former Lagoon

On August 30, 1999, Seaboard conducted sub-surface drilling in the former lagoon area. The sub-surface investigation was first initiated with the portable geoprobe to a depth of 8 feet below grade (fbg) at the boring locations of LG-1 and LG-2, but had to be abandoned due to the presence of a gravel/cobble layer which prevented deeper drilling. Samples were taken at both boring locations at depths of 1 to 2 ft and 5 to 8 ft below grade. The drilling was completed the next day (August 31,1999) with a larger, truck-mounted, hollow-stem auger (HSA). A total of 8 borings were initially installed, including LG-1 and LG-2, to a depth of 22 fbg. Samples were taken with a 2-ft split spoon at depths of 0-2 ft, 5-7 ft, 10-12 ft, 15-17 ft, and 20-22 ft at locations LG-3 through LG-8. Sampling for LG-1 and LG-2 was continued starting at the 10 to 12 ft depth and continued to depths of 15 to 17 ft and 20 to 22 fbg. A sampling location map is provided in Appendix B.

Volume calculations for the soils exceeding MCP *"S-2/GW-3"* criteria in the former lagoons were computed by transecting the lagoons in both the North-South and East-West directions. Analytical results were then transcribed to the transect lines as presented in Appendix B. Ground surface elevations were estimated based on the previous survey of the area which was included in the Phase I Report by Tighe & Bond.

Once the transects were completed, the impacted volumes were estimated, both above and below the road level. Using this method, approximately 6300 yd^3 to 7,000 yd^3 of soil was estimated to exceed MCP criteria. Approximately 3,000 yd^3 to 3,700 yd^3 of this volume is below surrounding grade. The lower range volume calculation was completed using the vertical mid-point between impacted and non-impacted sample intervals as a limit. The upper range volume estimate was completed using the top of the non-impacted sample interval as a limit.

In the northwesterly (LG-7) and southeasterly (LG-4) directions, the horizontal extent of soil which exceeds MCP *"S-2/GW-3"* criteria appears to be bracketed. However, the southwestern edge (LG-8 and LG-10) and the northeastern edge of contamination (LG-2 and LG-3) have not been entirely delineated. Therefore,

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remediation in these directions may be extended.

Fire Pond

Sampling of the fire pond was conducted on three separate days (August 30, 31, and September 2, 1999) with a hand auger. Samples FP-1 through FP-13 were taken from a depth of 0-8 inches, and were located 5 ft from the pond's embankments along the first 150 linear ft from the southeastern end of the pond. Samples FP-14 through FP-25 were also taken from a depth of 0-8 inches along the pond's embankments, but were taken from the 150-ft to the 300-ft linear marks. Sampling was further continued down the center of the pond beginning in line with FP-4 starting with FP-26 and ending with FP-36. A sampling location map is provided in Appendix C.

Analytical results were compared to risk-based criteria in the MCP. Approximately 560 yd^3 of soil from an area of approximately 15,000 ft^2 to a depth of approximately 1 ft exceed MCP *"S-2/GW-3"* criteria for nickel. In addition, approximately 325 yd^3 of soil from an area of 8,750 ft^2 exceed MCP *"S-2/GW-3"* criteria in the next 2 fbg (i.e. 8,750 ft^2 is a subset of the 15,000 ft^2). These calculations are included in Appendix C.

Please contact us with any questions or comments regarding this latest round of environmental investigation. O'Brien & Gere appreciates the continued opportunity of working with you toward the completion of this project.

Very truly yours,

O'BRIEN & GERE ENGINEERS, INC.

Peter C. Savage, Jr.
Project Engineer

Enclosures

cc:	JM O'Loughlin, PE	O'Brien & Gere Engineers, Inc.
	John Milks	MTD Products Inc.
	Dave Herrington	Wegman, Hessler, Vanderburg & O'Toole

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O'BRIEN & GERE ENGINEERS, INC.

APPENDIX A

SUBJECT	SHEET	BY	DATE	JOB NO.
REFLECTING POND CALCULATIONS				

RAISE LEVEL TO 83':

192 x 72 = 13,824 ft² x 1 ft = 13,824 ft³

RAISE FROM 83' TO 85':

I: 156' x 46' = 7,176 ft²
II: 156' x 78' = 12,168 ft²
III: 125' x 90' = 11,250 ft²
IV: 92' x 56' = 5,152 ft²
V: $\frac{84 \times 120}{2}$ = 5,040 ft²

40,786 ft² x 2'

RAISE FROM 85' TO 86':

I: 186 x 46 = 8,556 ft²
II: 175 x 78 = 13,650 ft²
III: 137 x 90 = 12,330 ft²
IV: 110 x 56 = 6,160 ft²
V: $\frac{102 \times 125}{2}$ = 6,375 ft²

47,071 ft²

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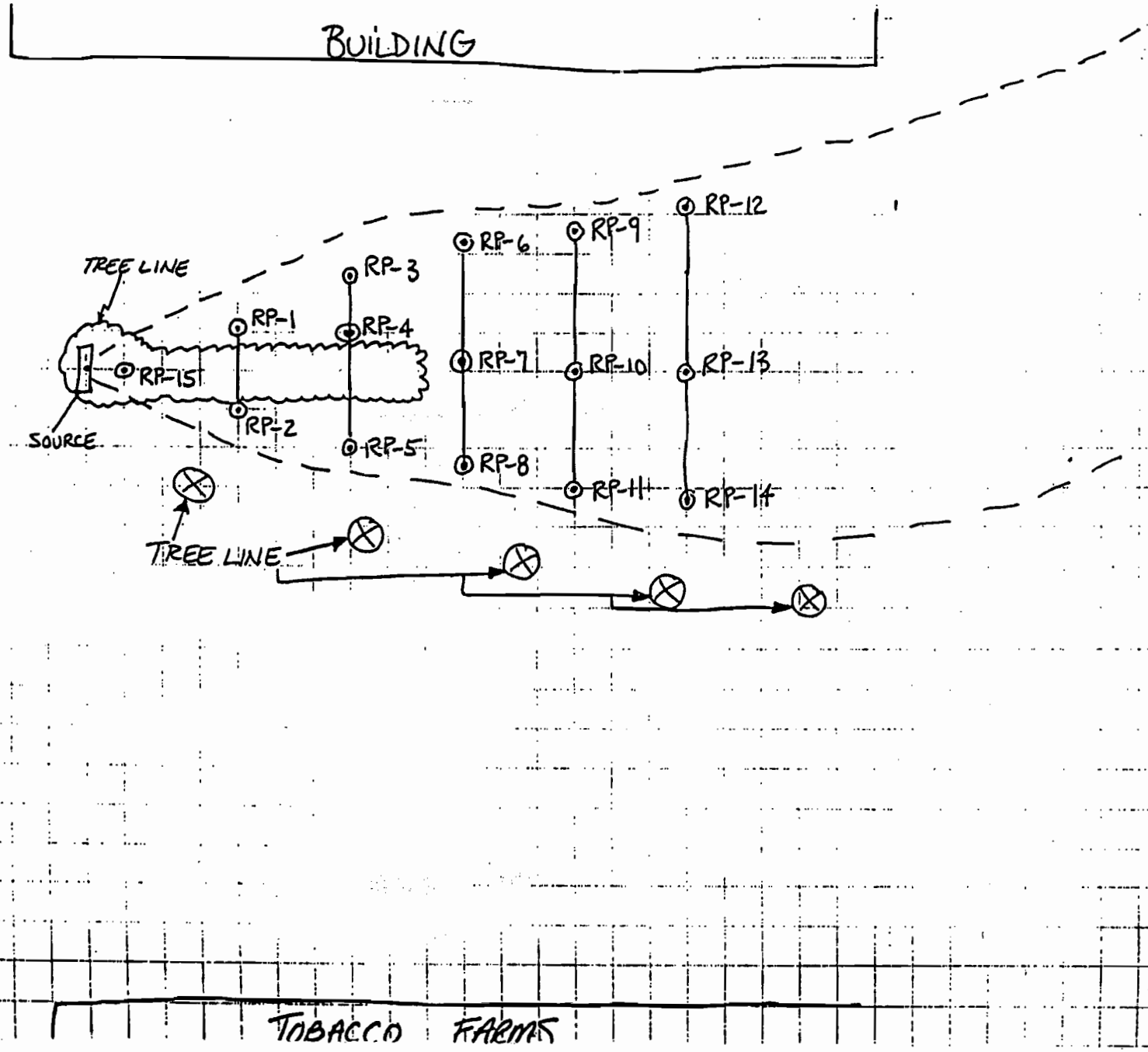
SUBJECT	SHEET	BY	DATE	JOB NO.

13,824	x 1	(to 83')
40,786	x 2	(to 85')
47,021	x 1	(to 86')
142,467 ft^3		

5,277 yd^3 (to 86 ft)

NOTES: Samples collected @ 0-8" and 8"-3' depths.
Samples on embankment taken 5-10' off embankment.



SUBJECT: REFLECTING POND: SAMPLING
PAGE: 2
BY: RRM
DATE: 8/30/19
JOB NUMBER: 24072

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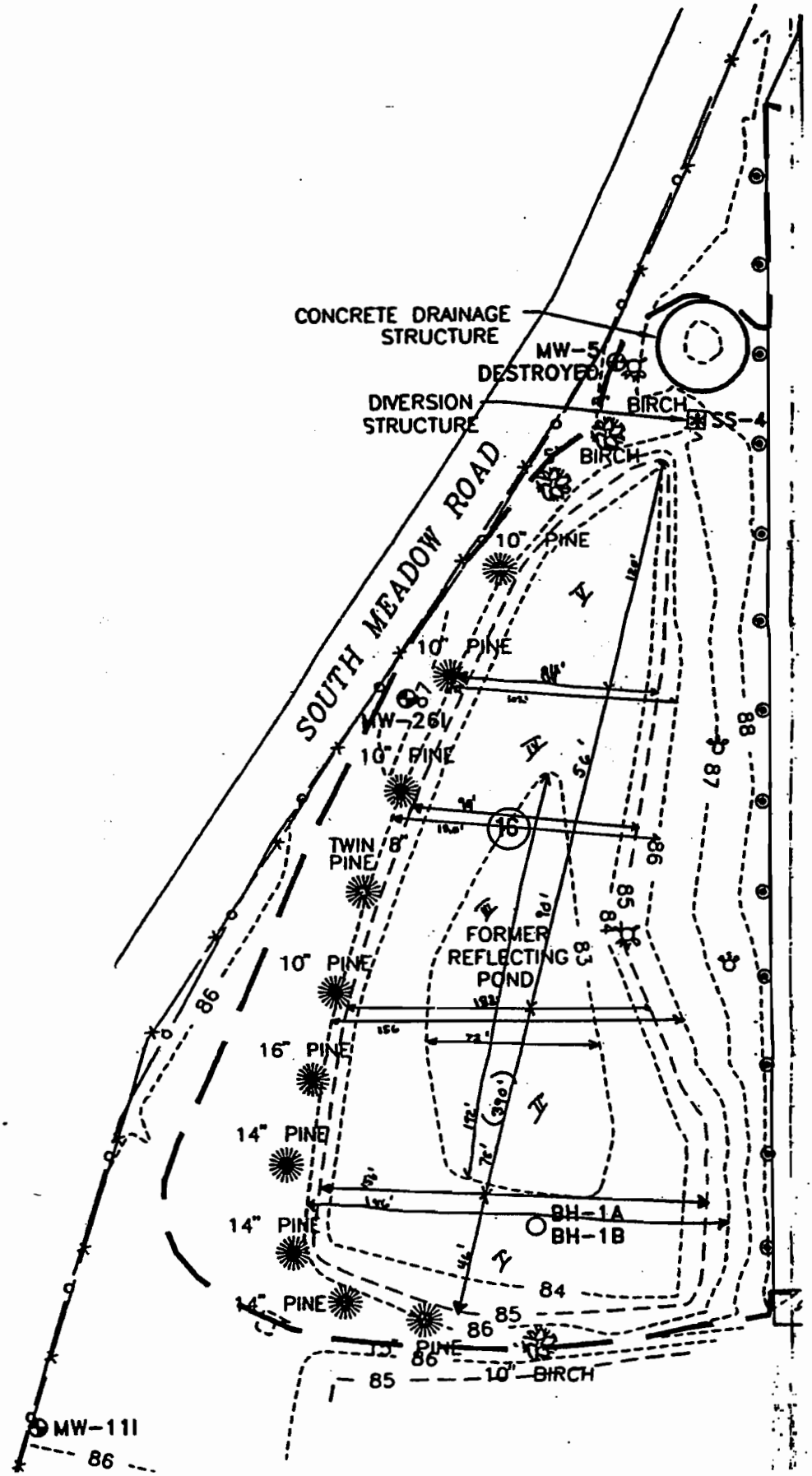
CONCRETE DRAINAGE STRUCTURE
MW-5 DESTROYED
DIVERSION STRUCTURE
BIRCH
SS-4
BIRCH
SOUTH MEADOW ROAD
10" PINE
10" PINE
MW-26V
10" PINE
TWIN PINE 8"
FORMER REFLECTING POND
10" PINE
16" PINE
14" PINE
14" PINE
BH-1A
BH-1B
14" PINE
PINE
10" BIRCH
MW-11I
86
85
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O'BRIEN & GERE ENGINEERS, INC.

APPENDIX B

SUBJECT	SHEET	BY	DATE	JOB NO.
EAST - WEST TRANSECTS (A,B,C)				

TRANSECT A:

① Above grade : 3.5(50) + 4 (105) = 595 ft^2
Below grade : 15.5 (50) + 4.5 (55) = 1022.5 ft^2

② To Next Interval : 1.5 (50) + 1.5 (55) = 157.5 ft^2

① 1617.5 ft^2 * 60 ft = 97,050 ft^3

② 157.5 ft^2 * 60 ft = 9,450 ft^3 → 350 yd^3

TRANSECT B:

③ Above grade : 4.0 (65) + 5.5 (85) = 727.5 ft^2
Below grade : 2.0 (55) + 3.0 (45) = 245 ft^2

④ To Next Interval : 1.5 (55) + 1.5 (45) = 150 ft^2

③ 972.5 ft^2 * 52.5 ft = 51,056.25 ft^3

④ 150 ft^2 * 52.5 ft = 7,875 ft^3 → 291.7 yd^3

TRANSECT C:

⑤ Above grade : 5 (35) + 6.5 (35) = 402.5 ft^2
Below grade : 5 (35) = 175 ft^2

⑥ To Next Interval : 1.5 (35) = 52.5 ft^2

⑤ 577.5 ft^2 * 40 ft = 23,100 ft^3

⑥ 52.5 ft^2 * 40 ft = 2,100 ft^3 → 77.8 yd^3

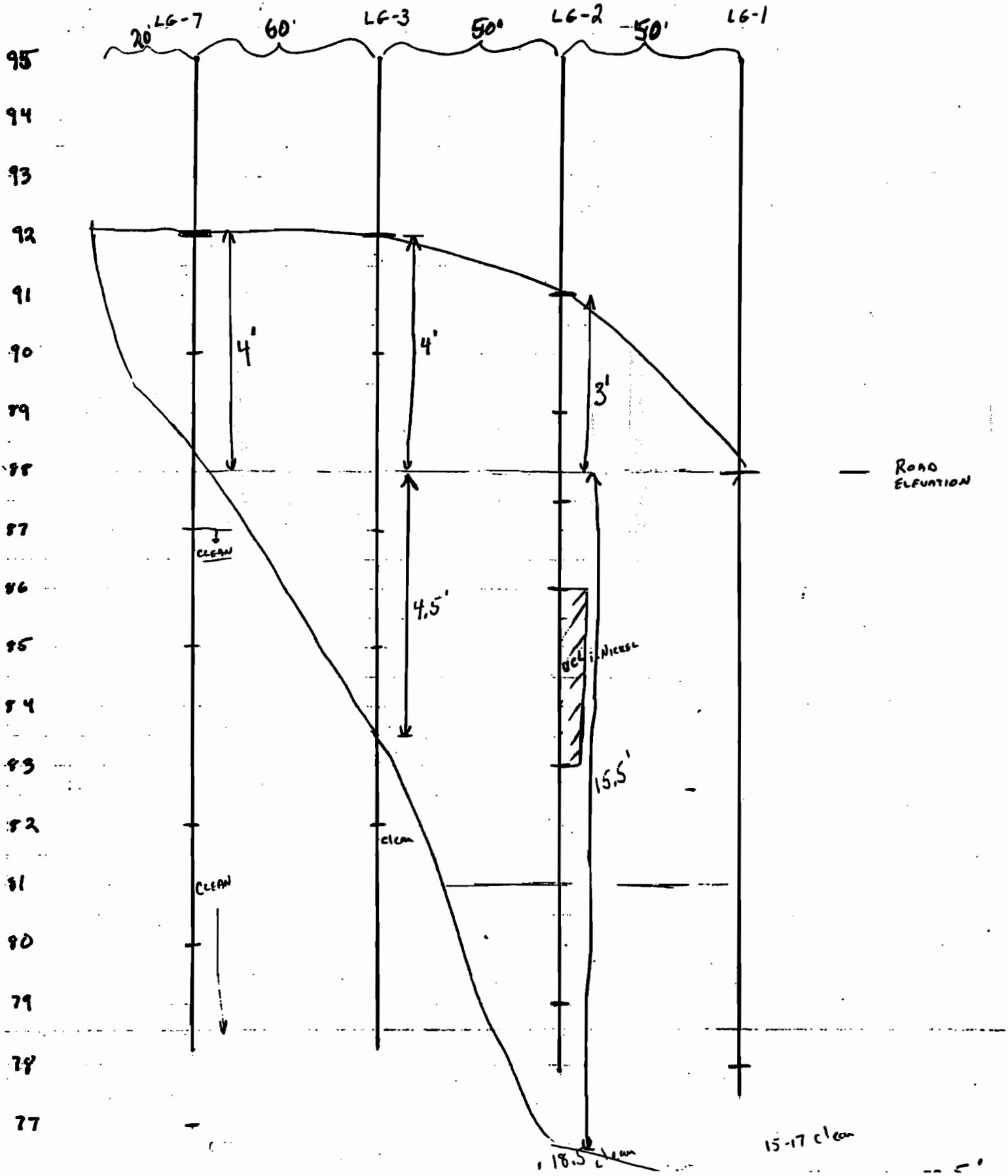
TOTALS : 171,206.25 ft^3 → 6,341 yd^3
719.5 yd^3

Close File

194
- 34
160

O'BRIEN & GERE

SUBJECT	SHEET	BY	DATE	JOB NO.
A				



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O'BRIEN & GERE

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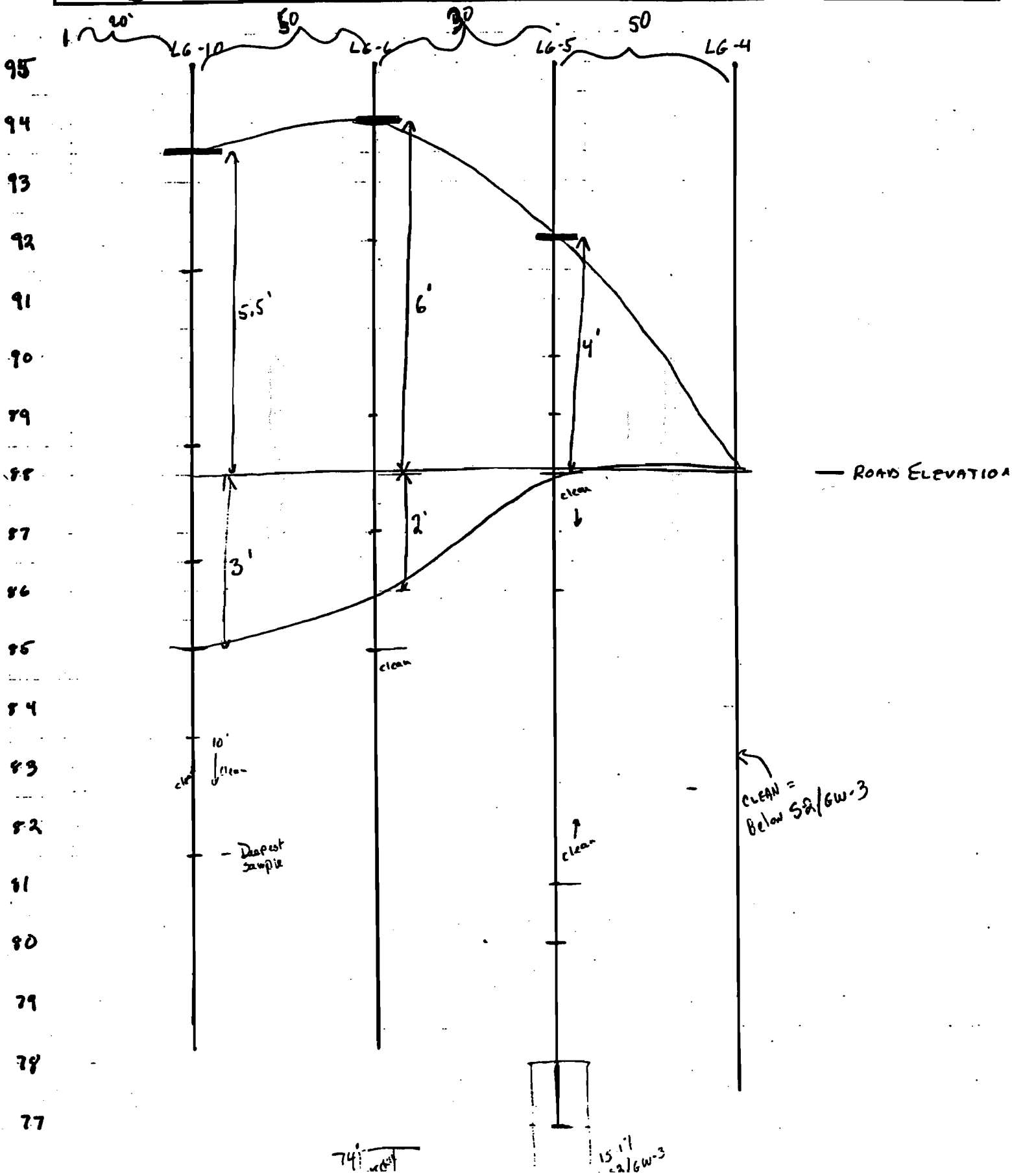

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O'BRIEN & GERE

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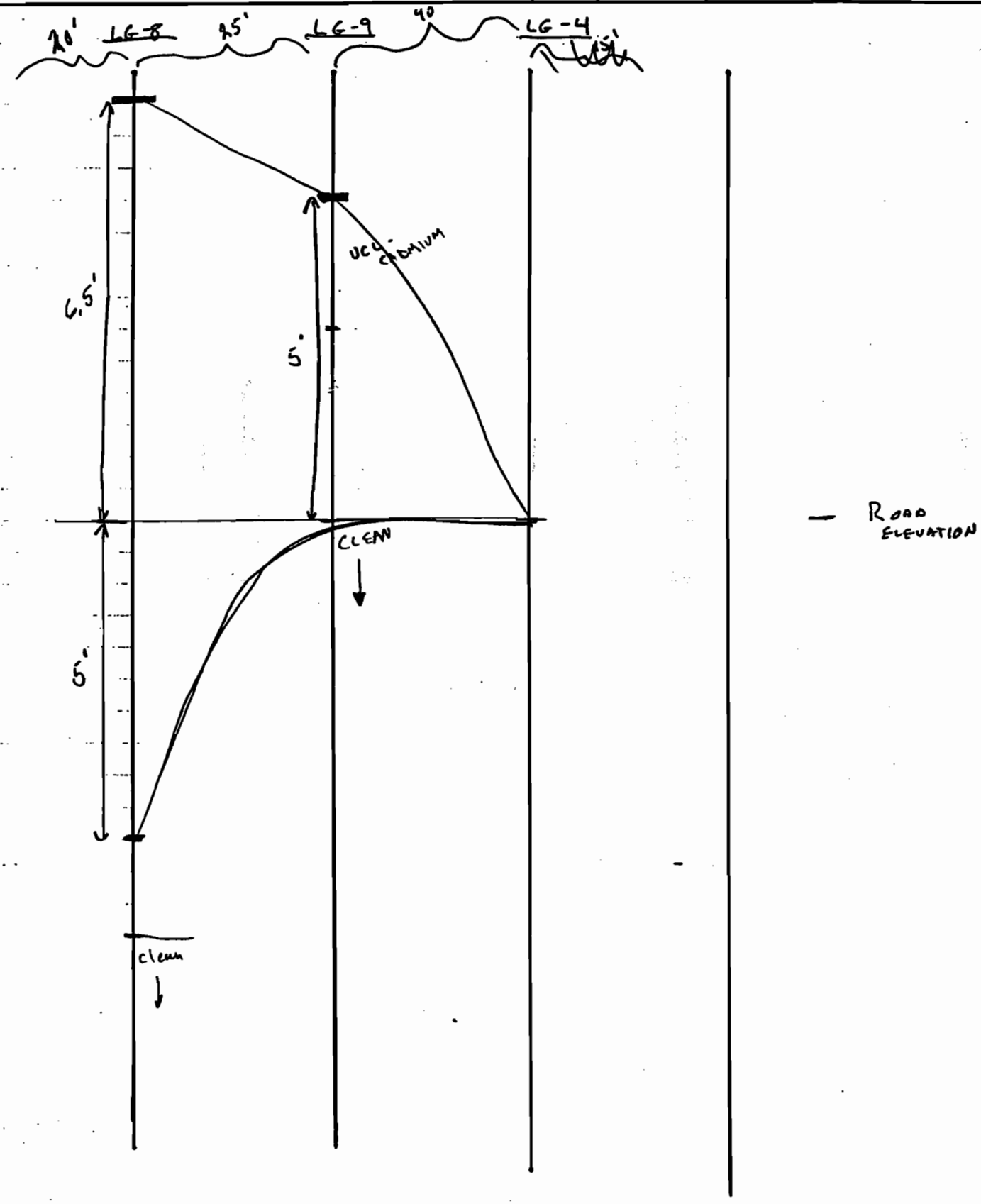

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O'BRIEN & GERE ENGINEERS, INC.

SUBJECT	SHEET	BY	DATE	JOB NO.
NORTH · SOUTH TRANSECTS (D, E, F)				

TRANSECT D:

(7) Above grade : 3 (60) + 4 (55) + 5 (45) = 625 ft²
Below grade : 15.5 (60) = 930 ft²

(8) To Next Interval : 1.5 (60) = 90 ft²

(7) 1555 ft² * 55 ft = 85,525 ft³

(8) 90 ft² * 55 ft = 4,950 ft³ → 183.3 yd³

TRANSECT E:

(9) Above grade : 4 (45) + 6 (40) + 6.5 (45) = 712.5 ft²
Below grade : 4.5 (45) + 2 (40) + 5 (45) = 507.5 ft²

(10) To Next Interval : 1.5 (45) + 1.5 (40) + 1.5 (45) = 195 ft²

(9) 1220 ft² * 45 ft = 54,900 ft³

(10) 195 ft² * 45' = 8,775 ft³ → 325 yd³

TRANSECT F:

(11) Above grade : 4 (45) + 5.5 (35) = 372.5 ft²
Below grade : 3.0 (35) = 105 ft²

(12) To Next Interval : 1.5 (35) = 52.5 ft²

(11) 477.5 ft² * 60 ft = 28,650 ft³

(12) 52.5 ft² * 60 ft = 3,150 ft³ → 116.7 yd³

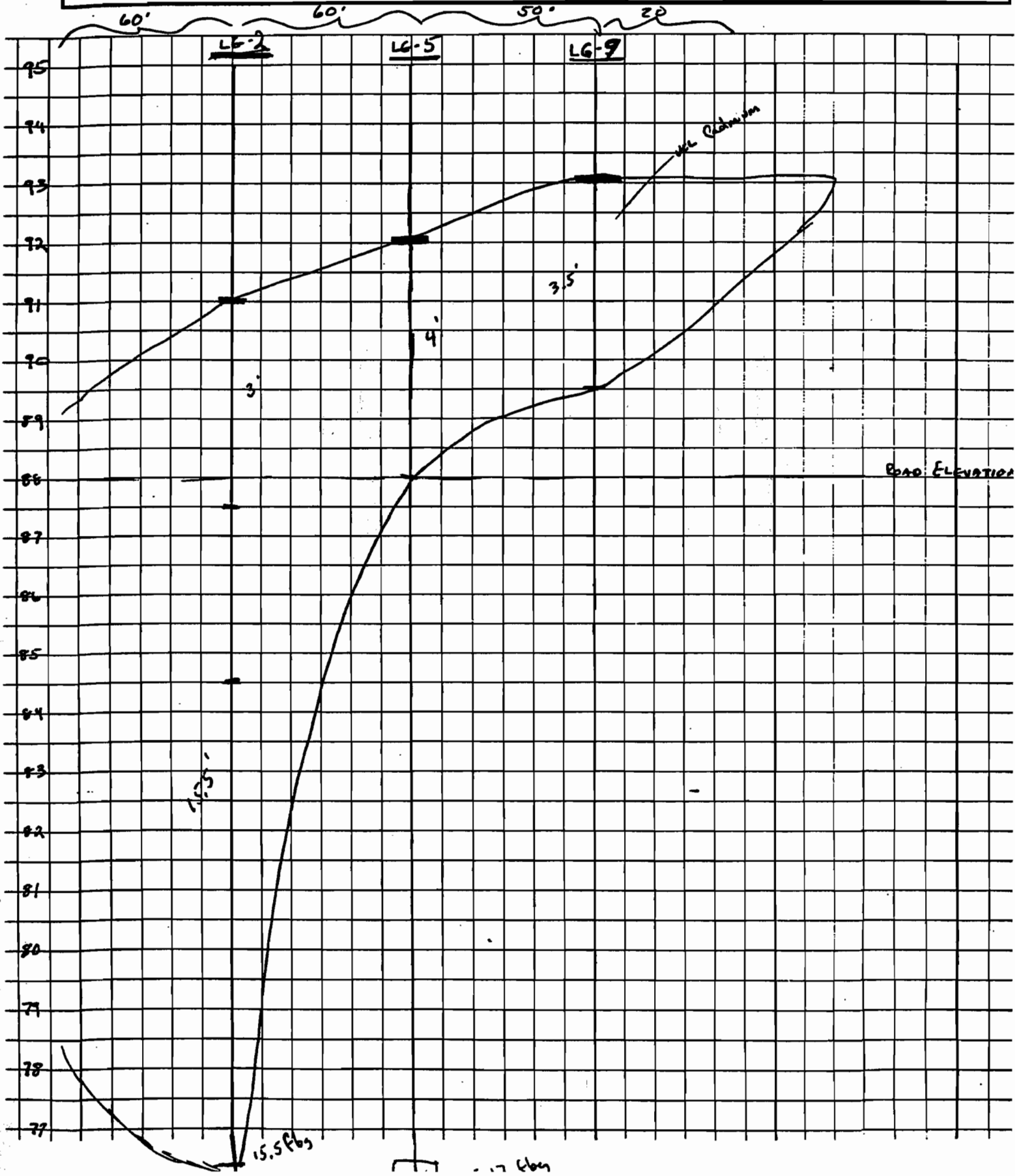
TOTALS : 169,075 ft³ → 6,262 yd³ ~ 6,300 yd³
To Next Interval → 625 yd³

RANGE : 6 300 yd³ → 8800 yd³

Close File

O'BRIEN & GERE ENGINEERS, INC.

SUBJECT	SHEET	BY	DATE	JOB NO.
'D'				



O'BRIEN & GERE ENGINEERS, INC.

SUBJECT	SHEET	BY	DATE	JOB NO.
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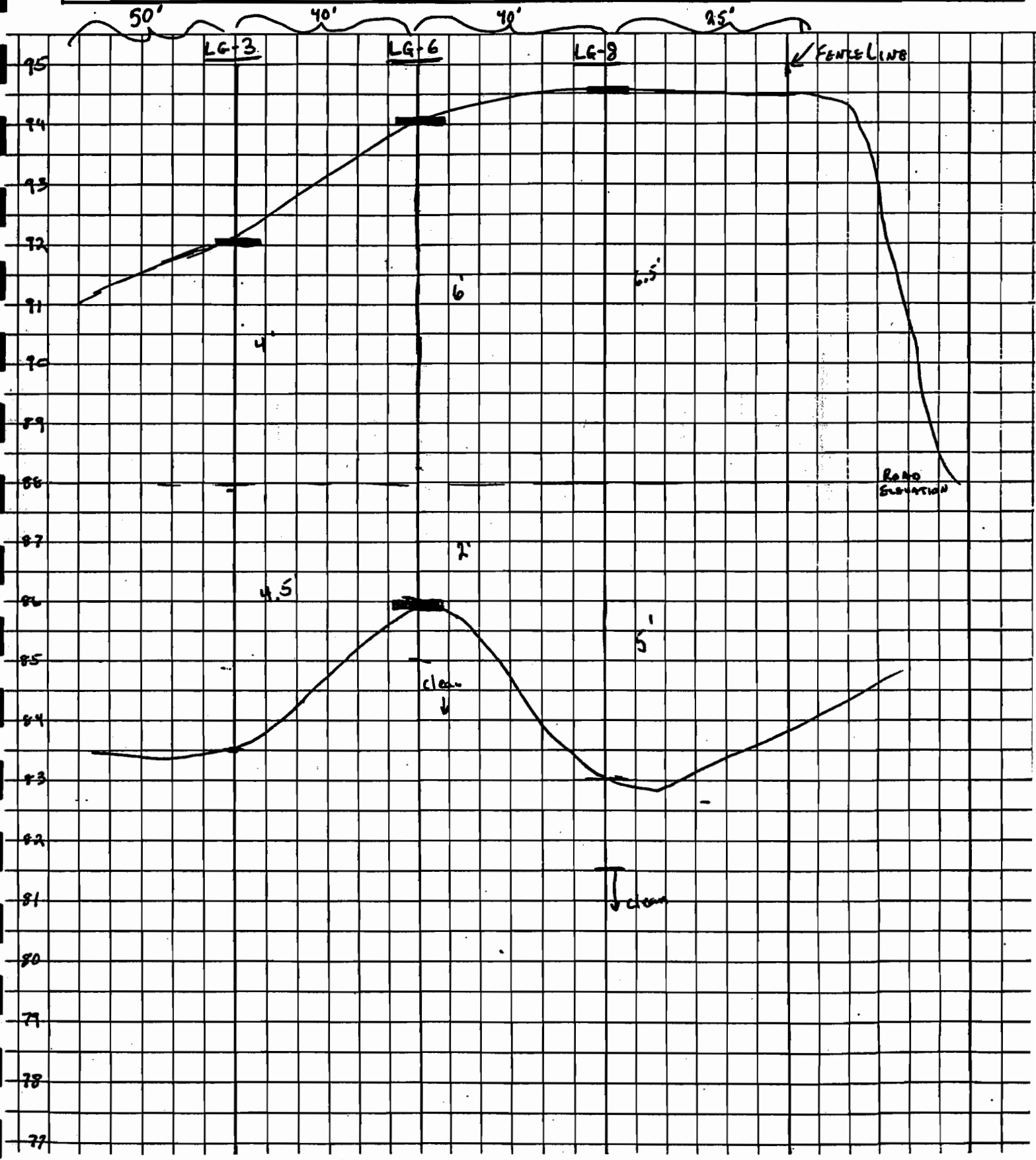

74' –

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O'BRIEN & GERE ENGINEERS, INC.

SUBJECT	SHEET	BY	DATE	JOB NO.
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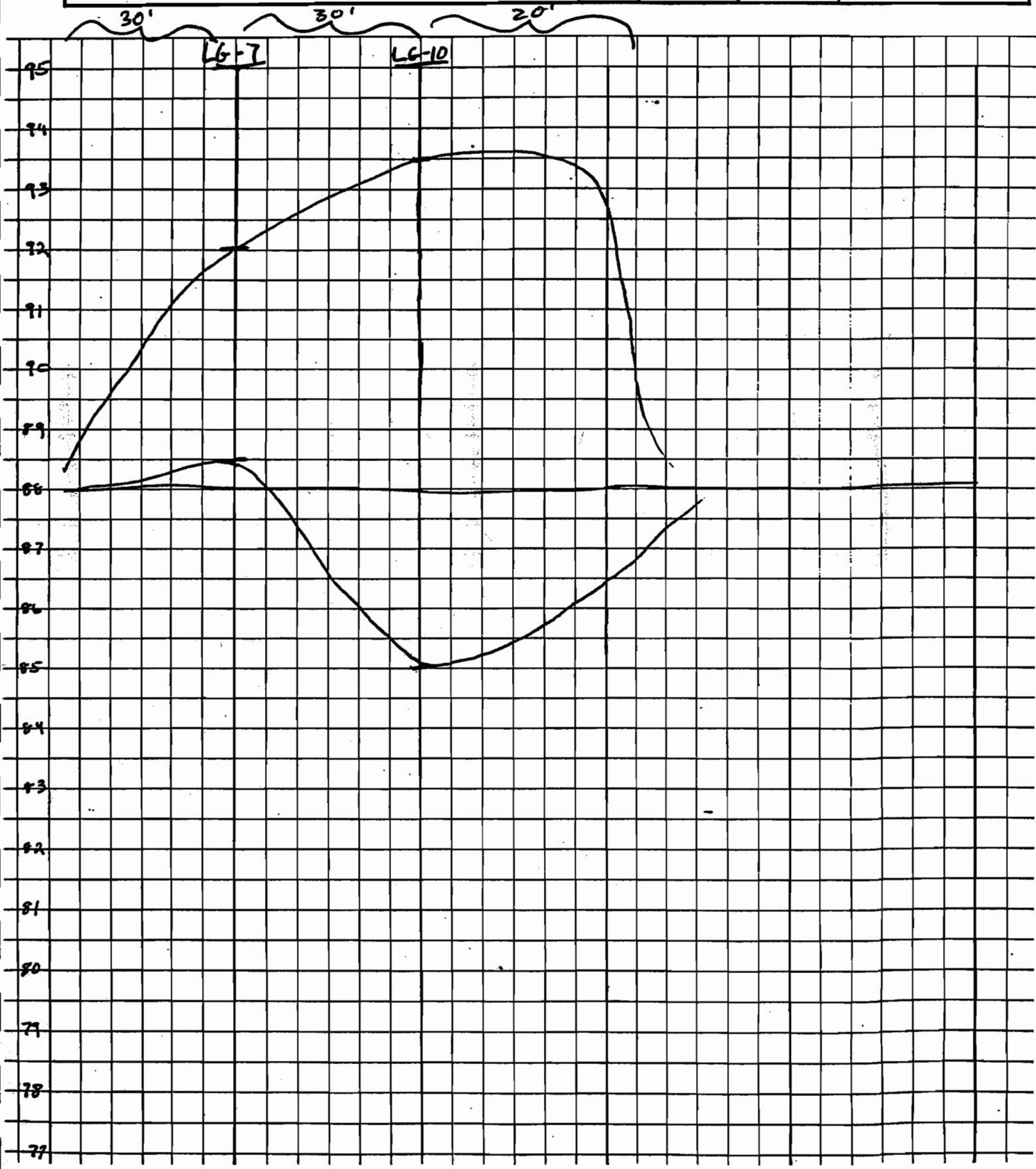

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O'BRIEN & GERE COMPANIES

APPENDIX C

SUBJECT:	PAGE:	BY:	DATE:	JOB NUMBER:
FIRE POND REMEDIATION	1	RRM	9/28/99	24072

1) AREA of Fire pond = 18,750 ft^2 @ approx 6' below grade

2) NEED 112,500 ft^3 (4,166 yd^3) of new backfill req'd for even existing grade

3) Area to be excavated to 1 fbg = 15,000 ft^3 (560 yd^3)

4) Area to be excavated to 3 fbg = 8,750 ft^3 (325 yd^3)

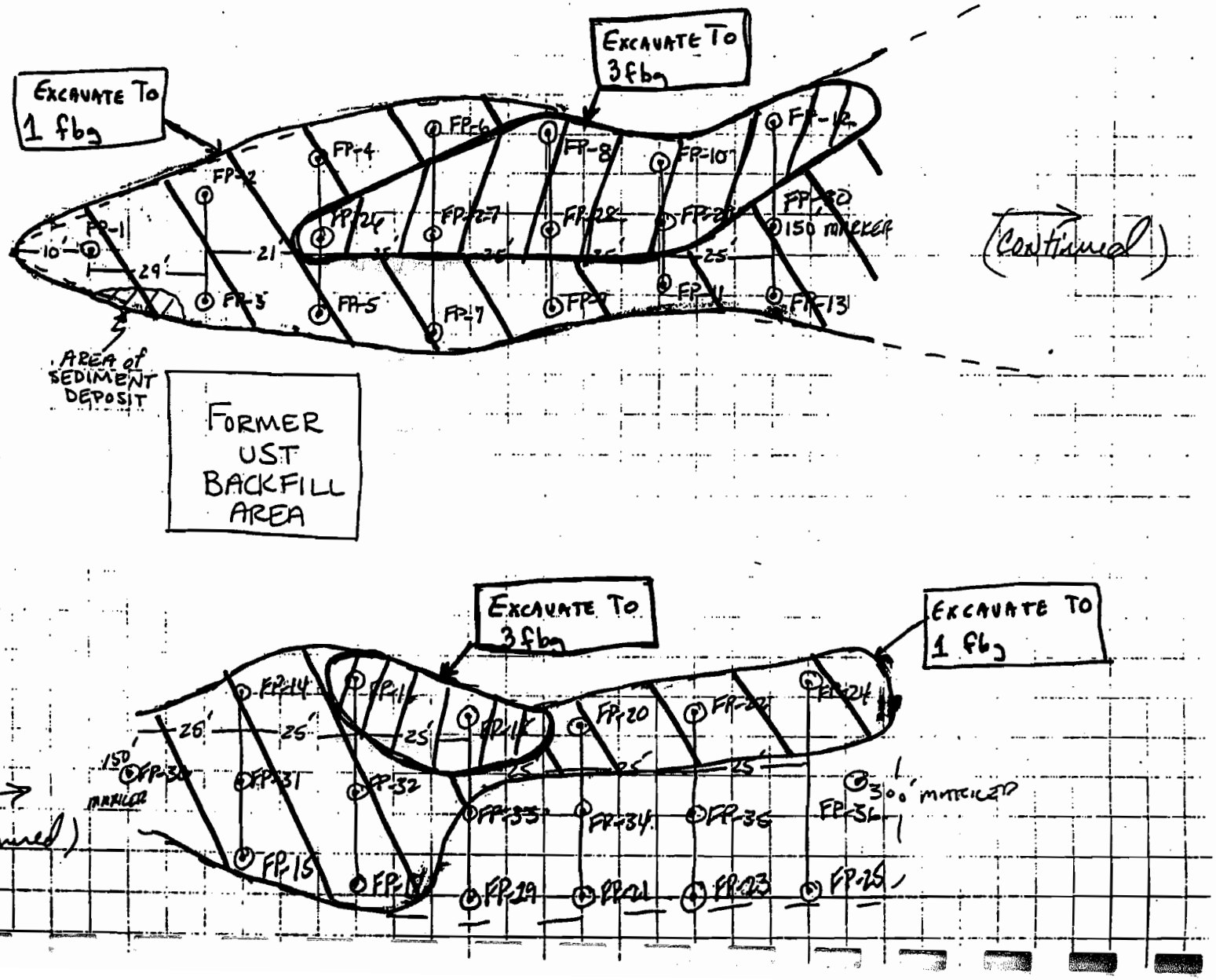
5) TOTAL soil to be removed/stabilized = 23,750 ft^3 (885 yd^3) from excavating
- may require 885 yd^3 of new backfill

Close File

PROJECT:	PAGE:	BY:	DATE:	JOB NUMBER:
FIRE POND SAMPLING	1	RRM	8/30/99	24072

NOTES: Samples taken @ Appeox. 5' off pond embankment.
Samples taken to STL for XRF and metals (Cd, Cr, Ni) analyses.
Samples Collected at (0-6/8) inches below grade

DRAFT



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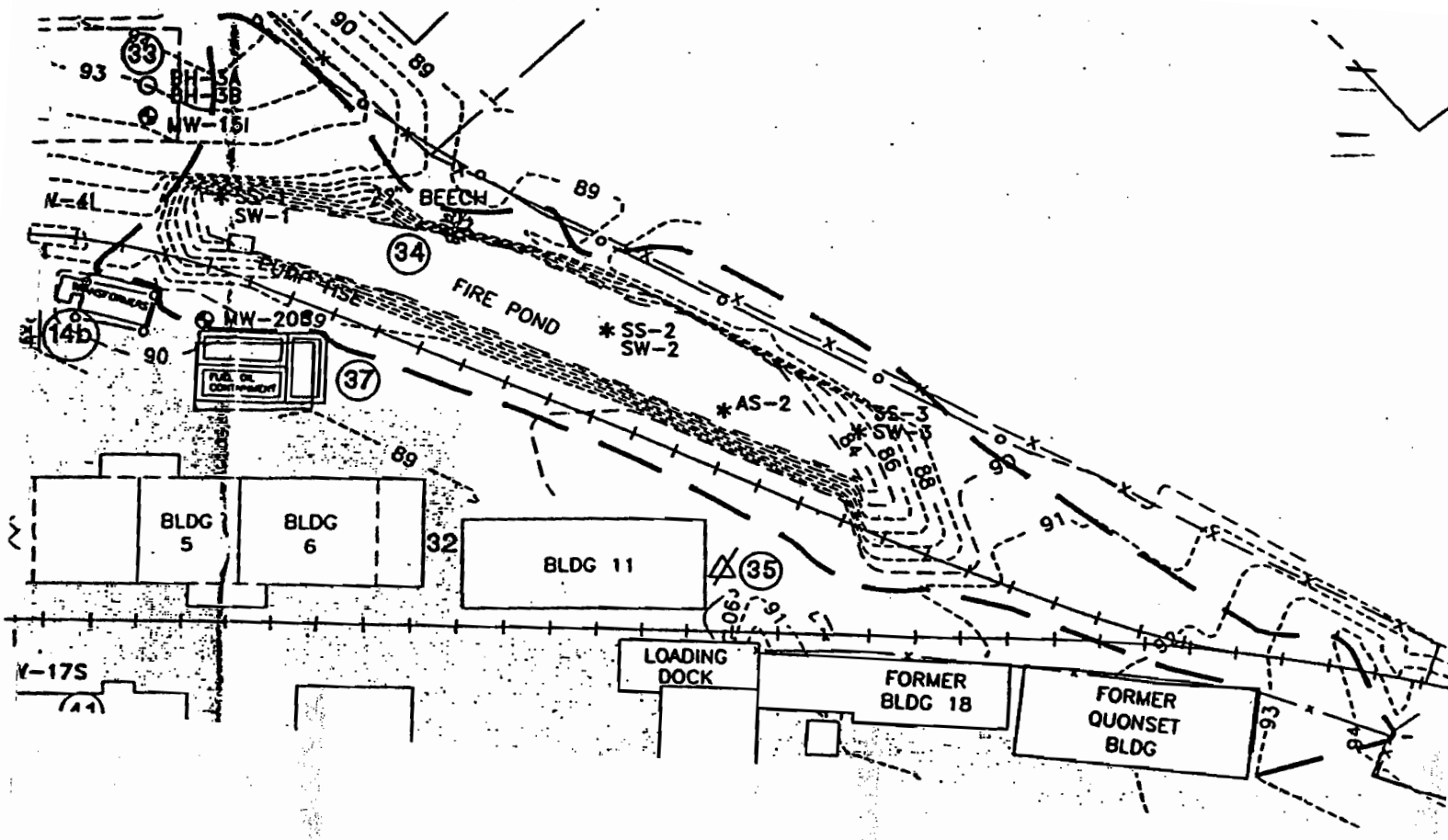

December

7/08/95

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Appendix B
RMT Initial Sample Collection Analytical Results and Sample Locations

Close File

TREATABILITY STUDY REPORT
COLUMBIA MANUFACTURING COMPANY

I. Treatability Testing Summary

A treatability study was performed to determine an effective dose of Enviroblend® for treating soil samples LG-2, LG-7 and LG-10. In the treatability study, RMT created a composite of the three samples. The composite sample was then subjected to the screening TCLP test (see Section III). This screening TCLP test uses the same reagents and liquid/solid ratio as the standard TCLP, but uses one-tenth the sample size (10 grams). In all cases, the samples were extracted with the appropriate TCLP solution, as determined using the TCLP pretest procedure.

Analyses of the TCLP extracts were performed using inductively coupled plasma (ICP) spectrometry. Results of the treatability tests are presented in the following table. In the treatability study, the waste was treated with a range of dosages adequate enough to establish treatment levels that could meet the universal treatment standard (UTS) and TCLP criteria for each metal of concern.

Treatability Study Results of Composite Sample

PARAMETER	UNITS	UTS CRITERION	TCLP CRITERION	ENVIROBLEND® DOSE				
				UNTREATED	5%	6%	7%	8%
Arsenic	mg/L	5	5	<0.005	<0.005	0.006	0.0064	0.011
Barium	mg/L	21	100	1.7	0.34	0.22	0.13	0.14
Cadmium	mg/L	0.11	1	4.5	0.35	0.26	0.11	0.069
Chromium	mg/L	0.6	5	0.22	0.045	0.051	<0.005	0.02
Lead	mg/L	0.75	5	2.3	0.0091	<0.005	<0.005	<0.005
Nickel	mg/L	11	-	3.7	2.2	2	1.5	1.2
Selenium	mg/L	5.7	1	0.025	0.015	<0.01	<0.01	<0.01
Silver	mg/L	0.14	5	<0.001	<0.001	<0.001	<0.001	<0.001

Notes:

A. The use of EnviroBlend® for treating wastes is covered by US Patent 5,037,479.

B. The screening TCLP test is a modified, scaled-down TCLP leaching test that gives results that are similar to those of a standard TCLP test on the waste material.

C. American Minerals, Inc.'s product "Enviroblend®" in the ground form was used in the treatability study. If other products and particle sizes are used, then they should be tested to ensure that they provide comparable results.

Close File

D. The treatability results demonstrate the effect of the treatment on the samples tested. Extrapolation of the results to full-scale processing depends on the representativeness of the sample used.

II. Conclusions

Based on the results of the treatability study, a 5 percent dose of Enviroblend® is adequate to treat to TCLP levels for the metals of concern, and an 8 percent dose is adequate to treat to UTS levels for the metals of concern.

III. Screening TCLP Test Procedure

Background

RMT uses a screening TCLP test for screening possible treatment chemistries for the treatment of hazardous waste. The modified TCLP procedure uses one-tenth of the prescribed sample weight and reagent volume, and uses the same sample preparation guidelines and TCLP solutions as prescribed in USEPA Method 1311. Metals analyses are performed using ICP with no digestion or matrix spikes. The test was designed primarily for use in optimizing dosages of treatment chemicals in treatability studies.

Procedure

Pretest for Determination of the Appropriate TCLP Extraction Solution

1. Weigh 5 g of sample into a beaker.
2. Add 96.5 mL deionized water; cover; stir vigorously for 5 minutes.
3. Measure pH.
4. If pH < 5.0, then use extraction solution #1.
5. If pH > 5.0, then add 3.5 mL 1M HCl, and cover.
6. Heat, with stirring, to 50°C; maintain the temperature at 50°C for 10 minutes.
7. Cool to room temperature.
8. Measure pH.
9. If pH < 5.0, then use extraction solution #1. If pH is greater than *or equal to* 5.0, then use extraction solution #2.

Close File

Leaching Procedure

1. Run the pretest (above) to determine the appropriate extraction solution, unless this is clearly known from prior experience with the waste.
2. Place 10 g of sample in a 250-mL plastic bottle.
3. Add 200 mL of the appropriate TCLP extraction solution (from step 1).
4. Shake on the rotary mixer for 18 $\pm$ 2 hours.
5. Filter the sample through a 0.45-micron pore-size filter.
6. Measure the pH of the filtrate.
7. Acidify the filtrate to pH < 2 with concentrated nitric acid.
8. Record the TCLP solution used, the final pH, and the sample number (AC number) on the "Screening Test Lab Form;" analyze for the metals of interest. All metals are analyzed using ICP spectroscopy except for mercury, which is analyzed using cold vapor atomic absorption spectroscopy (CVAA).

Solution Preparation

1. TCLP Solution #1.
   Add 11.4 mL glacial acetic acid to 1,000 mL deionized water. Add 128.6 mL 1M NaOH to the acetic acid solution, and dilute to 2,000 mL. Solution pH should be in the range of 4.95 $\pm$ 0.05.
2. TCLP Solution #2.
   Dilute 11.4 mL glacial acetic acid to 2,000 mL with deionized water. Solution pH should be in the range of 2.88 $\pm$ 0.05.

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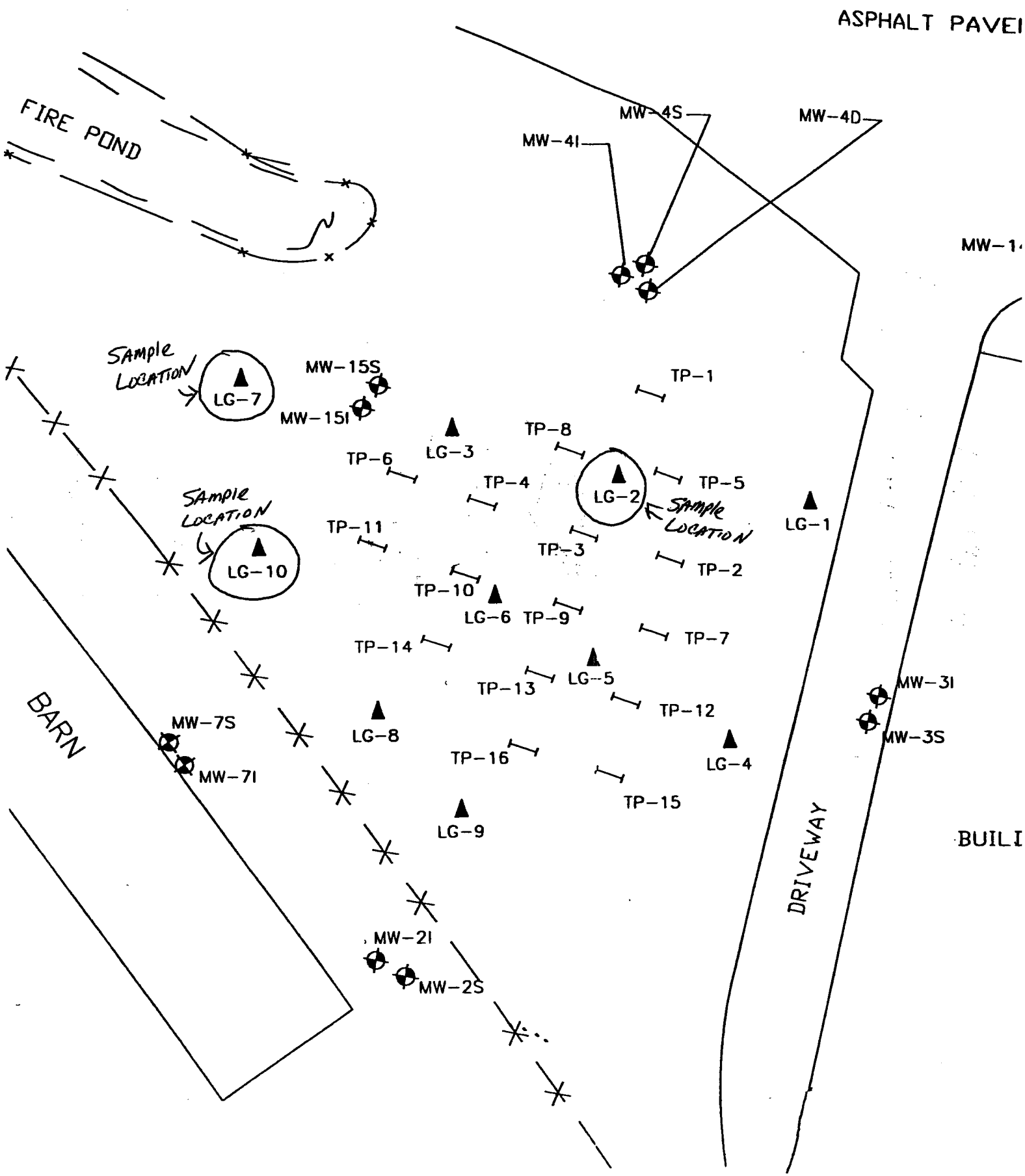

Sample Locations for Treatability Study

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Appendix C
RMT Mixing Protocol for Metals-Impacted Material

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RMT MIXING PROTOCOL FOR METALS-IMPACTED MATERIAL

Overview

RMT has successfully performed mechanical mixing with excavators, or "bucket" mixing, on numerous metals treatment projects. In an effort to eliminate or reduce variability associated with the mixing process, RMT has developed specific mixing protocols for individual projects. Using this mixing protocol provides consistent and homogeneous treatment of the metals-impacted materials, such as those at the Site. This protocol has been established as a guide to assure that each stockpile of impacted material receives thorough and consistent blending of the proper dosage of Enviroblend®.

Mixing Procedures

Treatment

After impacted material has been excavated, RMT will begin treating the stockpile based on the dosage required for that particular waste stream. This dosage is initially based on the treatability study performed during the planning phase of the project. The dosages can be continually optimized by taking pre-treatment and post-treatment samples in order to determine the best blend and addition of Enviroblend®.

The treatment of the stockpiles will be performed using sequential dilutions to provide uniform chemical distribution and a mixing verification procedure to determine the mixing time for each dilution. Both are discussed below. Water can be applied to the stockpiles during treatment and loadout in order to suppress dust. Water addition is not necessary for the Enviroblend® chemistry to work; therefore, no optimum moisture content will need to be determined during treatment.

The sequential dilution procedure will be performed by adding the target dosage of Enviroblend® for an entire stockpile to one half of the stockpile using a front-end loader (thus, the average concentration in the half of the pile with chemical will be twice the target dosage). Once the reagent has been placed on one half of the stockpile, a trackhoe will begin mixing in the reagent in a methodical manner until that half of the stockpile has been completely mixed. (The amount of time necessary to completely mix the reagent throughout half of the stockpile will be determined during the mixing verification procedure discussed in the next section.)

Close File

At this point, the treated half of the stockpile should have twice the target dosage determined for treatment. After the reagent has been thoroughly mixed into one half of the stockpile, the trackhoe will begin mixing the treated half into the untreated half of the stockpile until the treated material has been thoroughly mixed into the untreated portion of the stockpile. The amount of time necessary to complete this mixing will also be determined during the initial mixing verification procedure discussed in the next section. Once this treatment has been completed, RMT will take composite samples from throughout the stockpile, homogenize the samples and, if necessary, split the samples for independent analysis.

Initial Mixing Verification Procedure

Overview

Based on RMT's experience with similar sites, the time needed to adequately mix material varies based on the type of material, the size of the stockpile, the mixing equipment, and the operator. In order to determine the time necessary to achieve adequate mixing of the stockpiles, RMT will use a mixing verification procedure. This procedure will be used to establish adequate mixing, and we expect that doing so will require the described testing of the first and/or second stockpile. The outcome of this procedure will determine the time necessary to achieve adequate mixing of each dilution.

Procedure

RMT will identify untreated test piles for the initial mixing verification procedure. The first stockpile to be treated will be marked in half and the target dosage of Enviroblend®, for the entire stockpile, will be placed on the first half to be treated. The Enviroblend® will be methodically mixed into the designated half of the stockpile, using a trackhoe. A series of three time intervals of 20 minutes will be used to evaluate the efficiency of mixing on the first half of the stockpile. At the end of each time interval, six discrete samples will be taken from the treated half of the stockpile and analyzed for Enviroblend® concentration. The stockpile will continue to be mixed until all three time intervals have elapsed and samples have been taken at the end of each interval.

At the end of the required treatment time, the trackhoe will switch over to the untreated half of the stockpile and will begin mixing the treated half with the untreated half. Discrete sampling will occur at the 20-minute time intervals on the combined stockpile the same as was performed on the first half.

Close File

Untreated samples of stockpiled material will be analyzed throughout the project to determine a target dosage rate for individual piles. This variance from the target dosage rate will provide a buffer for the variance integral to any mixing process.

As the samples are analyzed for Enviroblend® concentration, RMT will calculate the mean and variance of the six discrete samples from each time interval. As the mixing time increases, the variance between the four samples from each interval should decrease. From this analysis, a mixing time can be determined that will provide a 90-percent confidence that all of the material is treated to 100 percent of the target dosage rate. Once this time has been established, all stockpiles will be mixed with this protocol for the established time period. An example graph on the following page demonstrates this evaluation.

Using sequential dilutions to provide process control is a common practice in a variety of industrial applications, and has been used by RMT on previous, similar lead stabilization projects. The proposed mixing verification procedure is also common, and has a solid basis in routine process control statistics. RMT has not combined the two procedures in as formal a manner as is being proposed now, and as such, anticipates that adjustments to the approach may be necessary. Any such adjustments will be communicated and approved prior to their incorporation.

Close File

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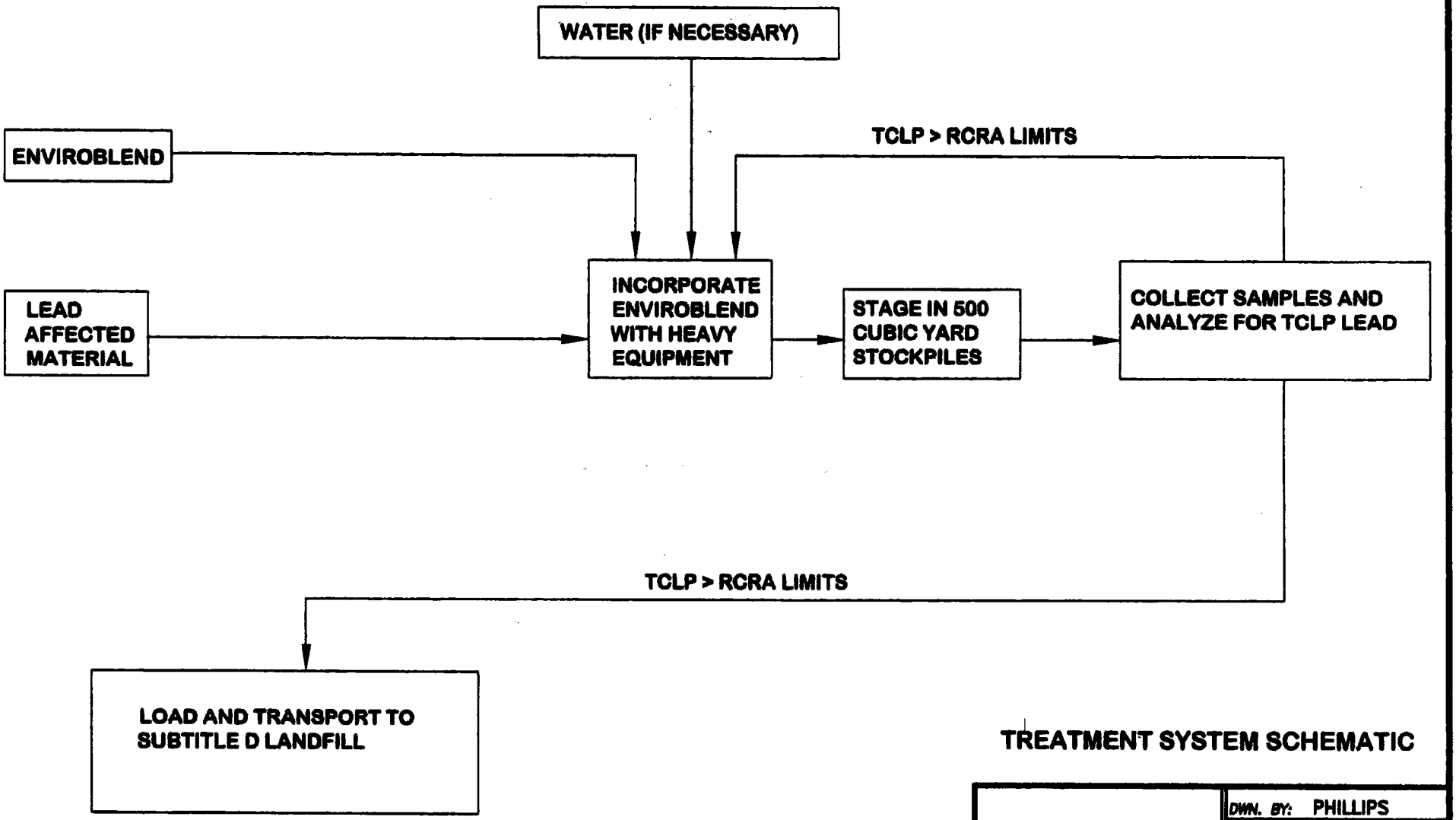

TREATMENT SYSTEM SCHEMATIC

RMT

DWN. BY:	PHILLIPS
APPROVED BY:	
DATE:	MARCH 2000
PROJ. #	988.35
FILE #	53451201.DWG

FIGURE 1

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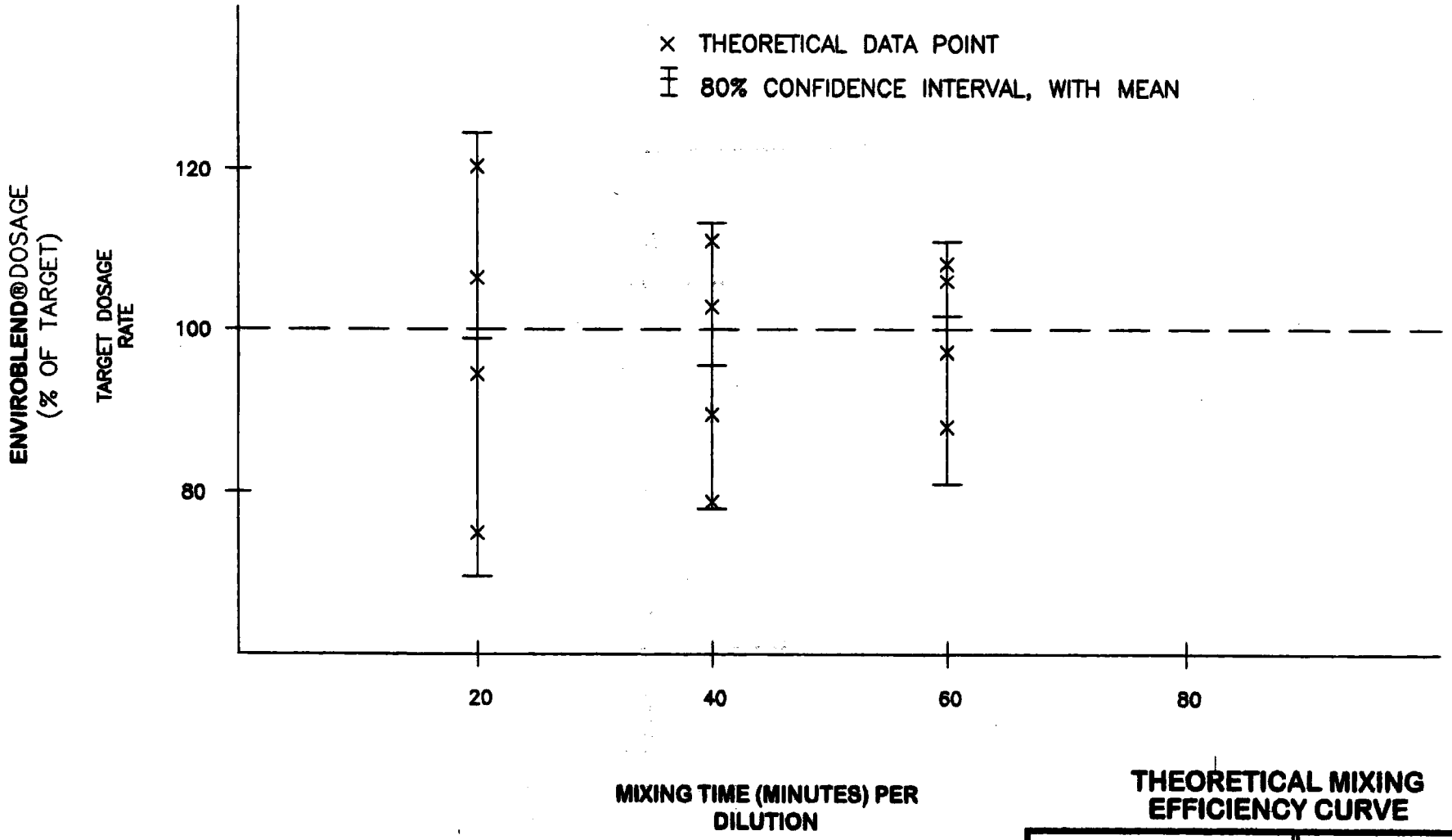

THEORETICAL MIXING EFFICIENCY CURVE

RMT

DWN. BY:	PHILLIPS
APPROVED BY:	
DATE:	FEBRUARY 2000
PROJ. #	988.35
FILE #	53451202.DWG

FIGURE 2

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Appendix D
Special Waste Manifest Tracking Sheet

Close File

2000 RCRA Corrective Measures Implementation

Columbia Manufacturing Co.,Inc.

	Manifest #	Date	Disposal Facility	cy	Tons	Remark's	Daily	Estimated
1	1	4/21/00	Mormon Hollow Landfill	20	29.41			
2	2	4/21/00	Mormon Hollow Landfill	20	22.39			
3	3	4/21/00	Mormon Hollow Landfill	20	31.50			
4	4	4/21/00	Mormon Hollow Landfill	20	29.50			
5	5	4/21/00	Mormon Hollow Landfill	20	29.24			
6	6	4/21/00	Mormon Hollow Landfill	20	29.43			
7	7	4/21/00	Mormon Hollow Landfill	20	30.19		**201.66**	
8	1	4/26/00	Rapp Road Landfill	20	30.32			
9	2	4/26/00	Rapp Road Landfill	20	34.37			
10	3	4/26/00	Rapp Road Landfill	20	34.80			
11	4	4/26/00	Rapp Road Landfill	20	31.73			
12	5	4/26/00	Rapp Road Landfill	20	33.23			
13	6	4/26/00	Rapp Road Landfill	20	33.67			
14	7	4/26/00	Rapp Road Landfill	20	36.08			
15	8	4/26/00	Rapp Road Landfill	20	34.18			
16	9	4/26/00	Rapp Road Landfill	20	35.53			
17	10	4/26/00	Rapp Road Landfill	20	34.14		**338.05**	
18	1	4/27/00	Rapp Road Landfill	20	33.50			
19	2	4/27/00	Rapp Road Landfill	20	29.97			
20	3	4/27/00	Rapp Road Landfill	20	26.36			
21	4	4/27/00	Rapp Road Landfill	20	28.74			
22	5	4/27/00	Rapp Road Landfill	20	32.10			
23	6	4/27/00	Rapp Road Landfill	20	31.68			
24	7	4/27/00	Rapp Road Landfill	20	32.43			
25	8	4/27/00	Rapp Road Landfill	20	34.00			
26	9	4/27/00	Rapp Road Landfill	20	33.78			
27	10	4/27/00	Rapp Road Landfill	20	31.53		**314.09**	
28	1	4/28/00	Rapp Road Landfill	20	35.16			
29	2	4/28/00	Rapp Road Landfill	20	31.10			
30	3	4/28/00	Rapp Road Landfill	20	33.00			
31	4	4/28/00	Rapp Road Landfill	20	31.49		**130.75**	
32	1	5/1/00	Rapp Road Landfill	20	33.65			
33	2	5/1/00	Rapp Road Landfill	20	30.79			
34	3	5/1/00	Rapp Road Landfill	20	28.73			
35	4	5/1/00	Rapp Road Landfill	20	30.32			
36	5	5/1/00	Rapp Road Landfill	20	31.19			
37	6	5/1/00	Rapp Road Landfill	20	22.30			
38	7	5/1/00	Rapp Road Landfill	20	28.59			
39	8	5/1/00	Rapp Road Landfill	20	31.93			
40	9	5/1/00	Rapp Road Landfill	20	28.58			
41	10	5/1/00	Rapp Road Landfill	20	31.36		**297.44**	
42	1	5/3/00	Rapp Road Landfill	20	31.95			
43	2	5/3/00	Rapp Road Landfill	20	34.25			
44	3	5/3/00	Rapp Road Landfill	20	29.33			
45	4	5/3/00	Rapp Road Landfill	20	36.77			
46	5	5/3/00	Rapp Road Landfill	20	34.16			
47	6	5/3/00	Rapp Road Landfill	20	41.78		**208.24**	

48	1	5/8/00	Rapp Road Landfill	20	43.97			
49	2	5/8/00	Rapp Road Landfill	20	34.26			
50	3	5/8/00	Rapp Road Landfill	20	38.79			
51	4	5/8/00	Rapp Road Landfill	20	43.28			
52	5	5/8/00	Rapp Road Landfill	20	36.37			
53	6	5/8/00	Rapp Road Landfill	20	36.61			
54	7	5/8/00	Rapp Road Landfill	20	37.05			
55	8	5/8/00	Rapp Road Landfill	20	32.81			
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63	5	5/10/00	Rapp Road Landfill	20	32.92			
64	6	5/10/00	Rapp Road Landfill	20	35.20			
65	7	5/10/00	Rapp Road Landfill	20	34.92			
66	8	5/10/00	Rapp Road Landfill	20	39.21			
67	9	5/10/00	Rapp Road Landfill	20	34.54			
68	10	5/10/00	Rapp Road Landfill	20	36.18			
69	11	5/10/00	Rapp Road Landfill	20	37.58			
70	12	5/10/00	Rapp Road Landfill	20	33.51			
71	13	5/10/00	Rapp Road Landfill	20	32.36		**461.85**	
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75	4	5/11/00	Rapp Road Landfill	20	37.79			
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83	3	5/12/00	Rapp Road Landfill	20	34.08			
84	4	5/12/00	Rapp Road Landfill	20	40.80			
85	5	5/12/00	Rapp Road Landfill	20	33.00			
86	6	5/12/00	Rapp Road Landfill	20	31.92			
87	7	5/12/00	Rapp Road Landfill	20	28.79			
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89	9	5/12/00	Rapp Road Landfill	20	34.27		**308.51**	
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91	2	5/15/00	Rapp Road Landfill	20	33.30			
92	3	5/15/00	Rapp Road Landfill	20	34.31			
93	4	5/15/00	Rapp Road Landfill	20	37.56			
94	5	5/15/00	Rapp Road Landfill	20	34.87			
95	6	5/15/00	Rapp Road Landfill	20	35.67			
96	7	5/15/00	Rapp Road Landfill	20	40.48			
97	8	5/15/00	Rapp Road Landfill	20	36.57			
98	9	5/15/00	Rapp Road Landfill	20	31.07			
99	10	5/15/00	Rapp Road Landfill	20	35.15		**355.91**	

Close File

100	1	5/16/00	Rapp Road Landfill	20	32.65			
101	2	5/16/00	Rapp Road Landfill	20	34.27			
102	3	5/16/00	Rapp Road Landfill	20	37.04			
103	4	5/16/00	Rapp Road Landfill	20	34.84			
104	5	5/16/00	Rapp Road Landfill	20	33.20			
105	6	5/16/00	Rapp Road Landfill	20	35.21			
106	7	5/16/00	Rapp Road Landfill	20	35.76			
107	8	5/16/00	Rapp Road Landfill	20	35.09			
108	9	5/16/00	Rapp Road Landfill	20	33.00			
109	10	5/16/00	Rapp Road Landfill	20	36.30			
110	11	5/16/00	Rapp Road Landfill	20	34.57		**381.93**	
111	1	5/17/00	Rapp Road Landfill	20	26.19			
112	2	5/17/00	Rapp Road Landfill	20	34.91			
113	3	5/17/00	Rapp Road Landfill	20	36.20			
114	4	5/17/00	Rapp Road Landfill	20	35.36			
115	5	5/17/00	Rapp Road Landfill	20	35.04			
116	6	5/17/00	Rapp Road Landfill	20	37.81			
117	7	5/17/00	Rapp Road Landfill	20	37.44			
118	8	5/17/00	Rapp Road Landfill	20	36.53			
119	9	5/17/00	Rapp Road Landfill	20	35.85			
120	10	5/17/00	Rapp Road Landfill	20	36.58			
121	11	5/17/00	Rapp Road Landfill	20	35.48			
122	12	5/17/00	Rapp Road Landfill	20	34.55		**421.94**	
123	1	5/18/00	Rapp Road Landfill	20	25.52			
124	2	5/18/00	Rapp Road Landfill	20	34.96			
125	3	5/18/00	Rapp Road Landfill	20	37.35			
126	4	5/18/00	Rapp Road Landfill	20	42.35			
127	5	5/18/00	Rapp Road Landfill	20	35.46			
128	6	5/18/00	Rapp Road Landfill	20	37.68		**213.32**	
129	1	5/19/00	Rapp Road Landfill	20	38.81			
130	2	5/19/00	Rapp Road Landfill	20	35.46			
131	3	5/19/00	Rapp Road Landfill	20	33.33			
132	4	5/19/00	Rapp Road Landfill	20	35.74			
133	5	5/19/00	Rapp Road Landfill	20	35.00			
134	6	5/19/00	Rapp Road Landfill	20	36.89		**215.23**	
135	1	5/22/00	Rapp Road Landfill	20	35.35			
136	2	5/22/00	Rapp Road Landfill	20	36.13			
137	3	5/22/00	Rapp Road Landfill	20	37.05			
138	4	5/22/00	Rapp Road Landfill	20	36.53			
139	5	5/22/00	Rapp Road Landfill	20	36.23			
140	6	5/22/00	Rapp Road Landfill	20	36.52		**217.81**	
141	1	5/23/00	Rapp Road Landfill	20	39.86			
142	2	5/23/00	Rapp Road Landfill	20	39.38		**79.24**	
143	1	5/24/00	Rapp Road Landfill	20	37.68			
144	2	5/24/00	Rapp Road Landfill	20	38.29			
145	3	5/24/00	Rapp Road Landfill	20	34.38		**110.35**	
146	1	5/25/00	Rapp Road Landfill	20	32.91			
147	2	5/25/00	Rapp Road Landfill	20	35.23			
148	3	5/25/00	Rapp Road Landfill	20	33.98			
149	4	5/25/00	Seneca Meadows	20	35.03			
150	5	5/25/00	Seneca Meadows	20	36.28			
151	6	5/25/00	Seneca Meadows	20	37.89			
152	7	5/25/00	Rapp Road Landfill	20	42.00			
153	8	5/25/00	Rapp Road Landfill	20	31.60			

154	9	5/25/00	Seneca Meadows	20	41.32			
155	10	5/25/00	Seneca Meadows	20	41.50			
156	11	5/25/00	Seneca Meadows	20	41.15			
157	12	5/25/00	Rapp Road Landfill	20	39.39			
158	13	5/25/00	Seneca Meadows	20	38.02		**486.30**	
159	1	5/26/00	Seneca Meadows	20	36.79			
160	2	5/26/00	Seneca Meadows	20	35.82			
161	3	5/26/00	Seneca Meadows	20	39.81			
162	4	5/26/00	Seneca Meadows	20	37.05			
163	5	5/26/00	Seneca Meadows	20	35.24			
164	6	5/26/00	Seneca Meadows	20	37.59			
165	7	5/26/00	Seneca Meadows	20	39.65			
166	8	5/26/00	Seneca Meadows	20	36.87			
167	9	5/26/00	Seneca Meadows	20	39.42			
168	10	5/26/00	Seneca Meadows	20	34.48			
169	11	5/26/00	Seneca Meadows	20	30.01			
170	12	5/26/00	Seneca Meadows	20	38.26			
171	13	5/26/00	Seneca Meadows	20	31.52			
172	14	5/26/00	Seneca Meadows	20	33.60		**506.11**	
173	1	5/30/00	Seneca Meadows	20	35.69			
174	2	5/30/00	Seneca Meadows	20	34.86			
175	3	5/30/00	Rapp Road Landfill	20	34.22			
176	4	5/30/00	Seneca Meadows	20	35.14			
177	5	5/30/00	Seneca Meadows	20	34.64			
178	6	5/30/00	Seneca Meadows	20	39.06			
179	7	5/30/00	Seneca Meadows	20	33.36			
180	8	5/30/00	Seneca Meadows	20	34.07			
181	9	5/30/00	Seneca Meadows	20	37.88			
182	10	5/30/00	Seneca Meadows	20	34.40			
183	11	5/30/00	Seneca Meadows	20	37.31			
184	12	5/30/00	Seneca Meadows	20	33.10			
185	13	5/30/00	Seneca Meadows	20	35.59			
186	14	5/30/00	Rapp Road Landfill	20	38.16			
187	15	5/30/00	Seneca Meadows	20	34.57			
188	16	5/30/00	Seneca Meadows	20	33.91			
189	17	5/30/00	Seneca Meadows	20	34.28			
190	18	5/30/00	Rapp Road Landfill	20	35.78			
191	19	5/30/00	Seneca Meadows	20	35.93			
192	20	5/30/00	Seneca Meadows	20	31.89			
193	21	5/30/00	Seneca Meadows	20	34.40			
194	22	5/30/00	Seneca Meadows	20	29.98			
195	23	5/30/00	Seneca Meadows	20	32.30			
196	24	5/30/00	Seneca Meadows	20	34.52			
197	25	5/30/00	Seneca Meadows	20	34.44			
198	26	5/30/00	Seneca Meadows	20	34.86			
199	27	5/30/00	Rapp Road Landfill	20	32.94			
200	28	5/30/00	Seneca Meadows	20	34.38			
201	29	5/30/00	Seneca Meadows	20	38.91		**1010.57**	
202	1	5/31/00	Seneca Meadows	20	35.10			
203	2	5/31/00	Seneca Meadows	20	37.02			
204	3	5/31/00	Seneca Meadows	20	34.86			
205	4	5/31/00	Seneca Meadows	20	34.27			
206	5	5/31/00	Seneca Meadows	20	38.81			
207	6	5/31/00	Rapp Road Landfill	20	35.90			
208	7	5/31/00	Seneca Meadows	20	33.69			

Close File

209	8	5/31/00	Seneca Meadows	20	34.60			
210	9	5/31/00	Seneca Meadows	20	38.12			
211	10	5/31/00	Seneca Meadows	20	35.39			
212	11	5/31/00	Seneca Meadows	20	32.66			
213	12	5/31/00	Seneca Meadows	20	32.34			
214	13	5/31/00	Seneca Meadows	20	31.72			
215	14	5/31/00	Seneca Meadows	20	32.24			
216	15	5/31/00	Rapp Road Landfill	20	35.69			
217	16	5/31/00	Seneca Meadows	20	33.16			
218	17	5/31/00	Seneca Meadows	20	33.12			
219	18	5/31/00	Seneca Meadows	20	41.51			
220	19	5/31/00	Seneca Meadows	20	31.95			
221	20	5/31/00	Seneca Meadows	20	36.49			
222	21	5/31/00	Seneca Meadows	20	31.13			
223	22	5/31/00	Seneca Meadows	20	35.39			
224	23	5/31/00	Seneca Meadows	20	36.26			
225	24	5/31/00	Rapp Road Landfill	20	35.44		**836.86**	
226	1	6/1/00	Seneca Meadows	20	35.13			
227	2	6/1/00	Seneca Meadows	20	37.01			
228	3	6/1/00	Seneca Meadows	20	41.62			
229	4	6/1/00	Seneca Meadows	20	30.63			
230	5	6/1/00	Seneca Meadows	20	34.14			
231	6	6/1/00	Seneca Meadows	20	34.25			
232	7	6/1/00	Seneca Meadows	20	34.28			
233	8	6/1/00	Seneca Meadows	20	34.52			
234	9	6/1/00	Rapp Road Landfill	20	36.84			
235	10	6/1/00	Seneca Meadows	20	36.09			
236	11	6/1/00	Seneca Meadows	20	35.14			
237	12	6/1/00	Seneca Meadows	20	36.39			
238	13	6/1/00	Seneca Meadows	20	37.67			
239	14	6/1/00	Seneca Meadows	20	32.92			
240	15	6/1/00	Seneca Meadows	20	36.36			
241	16	6/1/00	Seneca Meadows	20	31.15			
242	17	6/1/00	Seneca Meadows	20	34.33			
243	18	6/1/00	Seneca Meadows	20	38.29			
244	19	6/1/00	Seneca Meadows	20	31.43			
245	20	6/1/00	Seneca Meadows	20	36.40			
246	21	6/1/00	Rapp Road Landfill	20	37.15			
247	22	6/1/00	Seneca Meadows	20	40.86		**782.60**	
248	1	6/2/00	Seneca Meadows	20	31.83			
249	2	6/2/00	Seneca Meadows	20	33.87			
250	3	6/2/00	Walton Landfill	20	38.99			
251	4	6/2/00	Walton Landfill	20	33.78			
252	5	6/2/00	Walton Landfill	20	29.07			
253	6	6/2/00	Seneca Meadows	20	38.58			
254	7	6/2/00	Seneca Meadows	20	37.16			
255	8	6/2/00	Seneca Meadows	20	29.48			
256	9	6/2/00	Seneca Meadows	20	32.35			
257	10	6/2/00	Seneca Meadows	20	34.03			
258	11	6/2/00	Seneca Meadows	20	33.91			
259	12	6/2/00	Seneca Meadows	20	29.47			
260	13	6/2/00	Seneca Meadows	20	36.16			
261	14	6/2/00	Seneca Meadows	20	32.17			
262	15	6/2/00	Seneca Meadows	20	36.70			
263	16	6/2/00	Seneca Meadows	20	36.77			
264	17	6/2/00	Seneca Meadows	20	37.04			

265	18	6/2/00	Rapp Road Landfill	20	32.74			
266	19	6/2/00	Seneca Meadows	20	28.23			
267	20	6/2/00	Seneca Meadows	20	37.44			
268	21	6/2/00	Seneca Meadows	20	32.32			
269	22	6/2/00	Seneca Meadows	20	33.30			
270	23	6/2/00	Seneca Meadows	20	36.15			
271	24	6/2/00	Seneca Meadows	20	30.21			
272	25	6/2/00	Seneca Meadows	20	33.42			
273	26	6/2/00	Seneca Meadows	20	32.79			
274	27	6/2/00	Seneca Meadows	20	43.02			
275	28	6/2/00	Seneca Meadows	20	39.21			
276	29	6/2/00	Seneca Meadows	20	37.21		**997.40**	
277	1	6/3/00	Seneca Meadows	20	27.10			
278	2	6/3/00	Seneca Meadows	20	30.62			
279	3	6/3/00	Seneca Meadows	20	38.17			
280	4	6/3/00	Seneca Meadows	20	41.87			
281	5	6/3/00	Seneca Meadows	20	39.51			
282	6	6/3/00	Seneca Meadows	20	39.98			
283	7	6/3/00	Seneca Meadows	20	35.42			
284	8	6/3/00	Seneca Meadows	20	34.55		**287.22**	
285	1	6/5/00	Seneca Meadows	20	35.78			
286	2	6/5/00	Seneca Meadows	20	35.09			
287	3	6/5/00	Rapp Road Landfill	20	32.51			
288	4	6/5/00	Seneca Meadows	20	30.25			
289	5	6/5/00	Seneca Meadows	20	39.17			
290	6	6/5/00	Seneca Meadows	20	33.14			
291	7	6/5/00	Seneca Meadows	20	37.62			
292	8	6/5/00	Seneca Meadows	20	34.08			
293	9	6/5/00	Seneca Meadows	20	36.06			
294	10	6/5/00	Seneca Meadows	20	32.85			
295	11	6/5/00	Seneca Meadows	20	34.93			
296	12	6/5/00	Seneca Meadows	20	35.05			
297	13	6/5/00	Seneca Meadows	20	34.11			
298	14	6/5/00	Seneca Meadows	20	33.82			
299	15	6/5/00	Seneca Meadows	20	34.19			
300	16	6/5/00	Seneca Meadows	20	33.52			
301	17	6/5/00	Seneca Meadows	20	33.18			
302	18	6/5/00	Seneca Meadows	20	33.58			
303	19	6/5/00	Seneca Meadows	20	34.55			
304	20	6/5/00	Seneca Meadows	20	34.67			
305	21	6/5/00	Seneca Meadows	20	34.68			
306	22	6/5/00	Seneca Meadows	20	34.27			
307	23	6/5/00	Seneca Meadows	20	32.17			
308	24	6/5/00	Seneca Meadows	20	35.84			
309	25	6/5/00	Seneca Meadows	20	34.64			
310	26	6/5/00	Seneca Meadows	20	38.30			
311	27	6/5/00	Seneca Meadows	20	37.34			
312	28	6/5/00	Seneca Meadows	20	38.17			
313	29	6/5/00	Seneca Meadows	20	25.15			
314	30	6/5/00	Seneca Meadows	20	36.29			
315	31	6/5/00	Walton Landfill	20	38.19			
316	32	6/5/00	Seneca Meadows	20	37.68			
317	33	6/5/00	Rapp Road Landfill	20	38.98			
318	34	6/5/00	Seneca Meadows	20	36.30			
319	35	6/5/00	Seneca Meadows	20	38.42			
320	36	6/5/00	Seneca Meadows	20	37.08			

Close File

321	37	6/5/00	Seneca Meadows	20	36.24			
322	38	6/5/00	Seneca Meadows	20	33.64			
323	39	6/5/00	Seneca Meadows	20	33.46			
324	40	6/5/00	Seneca Meadows	20	38.83			
325	41	6/5/00	Walton Landfill	20	33.66			
325	42	6/5/00	Walton Landfill	20	42.32			
326	43	6/5/00	Seneca Meadows	20	38.53			
327	44	6/5/00	Seneca Meadows	20	32.93			
328	45	6/5/00	Seneca Meadows	20	29.91			
329	46	6/5/00	Seneca Meadows	20	37.81		**1618.98**	
							11504.44	0.00

Estimated Ton's Shipped 11504.44

BACKFILL DELIVERED 10159.1 Tons
8834.01 cy

11504.44

Close File

Appendix E
Analytical Reports For Treated Materials

Close File

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

Massachusetts Certification # M-MA138
Rhode Island # 98 Maine # MA138
Florida # E87600 / 87562
New Hampshire # 2538
Connecticut # PH-0777
New York # 11393

RMT, Inc
100 Verdae Blvd.
Greenville, SC 29607

4/19/00

Attn: Mark Shoaf

Client Project Number: 998.39 **Location:** MTD Columbia - Westfield, MA

Laboratory ID	Client Sample ID	Analyses Requested
AB82307	LTM-01	TCLP Extraction for Metals Metals Digestion on Leachate Mercury Digestion on Leachate TCLP RCRA8 Metals TCLP Mercury

I attest that all information contained within this report has been reviewed for accuracy and checked against all quality control requirements outlined in each applicable method including any data obtained from a subcontract laboratory.

Authorized by:

Hanibal C. Tayeh
President/Laboratory Director

ENVIRONMENTAL ANALYSES

11 Almgren Drive • Agawam, Massachusetts 01001 • 1-800-789-9115 • 413-789-9018 • Fax 413-789-4076
24 Tobey Road • Bloomfield, Connecticut 06002 • 860-242-6294 • Fax 860-242-4012

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SPECTRUM ANALYTICAL, INC.

Laboratory Report

Location: MTD Columbia - Westfield, MA
Client: RMT
Lab ID No: AB82307
Client Id: LTM-01

Client Project No: 998.39
Submittal Date: 4/14/00
Collection Date: 4/14/00
Matrix: Soil

Parameter	Results	Units	Reporting Limit	Start Date	End Date	Analyst	Method
Metals Preparation							
Mercury Digestion on Leachate	Completed			4/18/00	4/18/00	YV	EPA 245.1
Metals Digestion on Leachate	Completed			4/18/00	4/18/00	YV	EPA 200.7
Metals Analysis							
TCLP Mercury	Below det lim	mg/L	0.0004	4/19/00	4/19/00	JM	1311/245.1
TCLP RCRA8 Metals							
TCLP Arsenic	0.028	mg/L	0.015	4/18/00	4/18/00	NR	1311/200.7
TCLP Barium	0.366	mg/L	0.005	4/18/00	4/18/00	NR	1311/200.7
TCLP Cadmium	Below det lim	mg/L	0.005	4/18/00	4/18/00	NR	1311/200.7
TCLP Chromium	3.58	mg/L	0.005	4/18/00	4/18/00	NR	1311/200.7
TCLP Lead	Below det lim	mg/L	0.015	4/18/00	4/18/00	NR	1311/200.7
TCLP Selenium	Below det lim	mg/L	0.020	4/18/00	4/18/00	NR	1311/200.7
TCLP Silver	Below det lim	mg/L	0.010	4/18/00	4/18/00	NR	1311/200.7
TCLP/SPLP Preparation							
TCLP Extraction for Metals	Completed			4/17/00	4/18/00	JM	SW846 1311

Reviewed by:

DL LB

Quality Service/Quality Assurance Depts.

Validated by:

President/Laboratory Director

4/19/00

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SPECTRUM ANALYTICAL, INC.
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HANIBAL TECHNOLOGY

Laboratory Report Supplement
References

SW 846	Test Methods for Evaluating Solid Waste. Third edition, 1998
40 CFR 136	Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act
40 CFR 141	National Primary Drinking Water Regulations
40 CFR 143	National Secondary Drinking Water Regulations
40 CFR 160	Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), Good Laboratory Practice Standards
APHA-AWWA-WPCF	Standard Methods for the Examination of Water and Wastewater. 19th edition, 1995
ASTM D 3328	Standard Methods for the Comparison of Waterborne Petroleum Oils by Gas Chromatography
EPA 540/G-87/003	Data Quality Objectives for Remediation Response Activities, Development Process
EPA 600/4-79-012	Quality Assurance Handbook for Analytical Quality Control in Water and Wastewater Laboratories
EPA 600/4-79-019	Handbook for Analytical Quality Control in Water and Wastewater Laboratories
EPA 600/4-79-020	Method for the Chemical Analysis of Water and Wastes
EPA 600/4-82-057	Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater
EPA 600/4-85/056	Choosing Cost-Effective QA/QC Programs for Chemical Analysis
EPA 600/4-88/039	Method for the Determination of Organic Compounds in Drinking Water
CT ETPH	Analysis of Extractable Total Petroleum Hydrocarbons (ETPH)
MADEP EPH	Method for the Determination of Extractable Petroleum Hydrocarbons (EPH)
MADEP VPH	Method for the Determination of Volatile Petroleum Hydrocarbons (VPH)
QAMS 004/80	Guidelines and Specifications for Preparing Quality Assurance Program Plans, USEPA Office of Monitoring System and Quality Assurance
GC-D-52-77	Oil Spill Identification System

Acronyms & Abbreviations

AA	Atomic Absorption	MS	Matrix Spike
ASTM	American Society for Testing and Materials	MSD	Matrix Spike Duplicate
BOD	Biological Oxygen Demand	NTU	Nephelometric Turbidity Units
°C	degree(s) Celsius	PAHs	Polynuclear Aromatic Hydrocarbons
COD	Chemical Oxygen Demand	PCBs	Polychlorinated Biphenyls
CMR	Code of Massachusetts Regulations	PID	Photo Ionization Detector
DEP	Department of Environmental Protection	PQL	Practical Quantitation Limit
DI	De-ionized	R	Recovery (%R: Percent Recovery)
DO	Dissolved Oxygen	RSD	Relative Standard Deviation
EPA	Environmental Protection Agency	SM	Standard Method
EPH	Extractable Petroleum Hydrocarbons	SR	Surrogate Recovery (%SR)
FID	Flame Ionization Detector	SW	Solid Waste
GC	Gas Chromatograph	THM	Trihalomethane(s)
GC / MS	Gas Chromatograph / Mass Spectrometer	TOC	Total Organic Carbon
ICP	Inductively Coupled Plasma	TOX	Total Organic Halogen
Id	Identification	TPH	Total Petroleum Hydrocarbons
MCL	Maximum Contaminant Level	VOC	Volatile Organic Compound
MDL	Minimum Detection Limit	VPH	Volatile Petroleum Hydrocarbons

Close File

0414 1151 KJ

SPECTRUM ANALYTICAL, INC.
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CHAIN OF CUSTODY RECORD

Page 1 of 1

Special Handling:
- ☐ Standard TAT - 7 to 10 business days
- ☒ Rush TAT - Date Needed: _____
- All TATs are subject to laboratory approval.
- Min. 24-hour notification is needed for rushes.
- All samples are disposed of after 60 days unless otherwise instructed.

Report To: RMT, INC
100 Verdae Blvd
Greenville SC 29607

Project Mgr.: MARK SHOAF

Invoice To: RMT, INC
100 Verdae Blvd
Greenville, SC 29607

P.O. No.: 998.39 RQN: 2958

Project No.: 998.39
Site Name: MTD / Columbia Mfg.
Location: Westfield State: MA
Sampler(s): C. Kline

1=$Na_2S_2O_3$ 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid
7=CH_3OH 8=$NaHSO_4$ 9=_____ 10=_____

DW=Drinking Water GW=Groundwater WW=Wastewater
SW= Surface Water SO=Soil SL=Sludge O=Oil A=Air
X1=_____ X2=_____ X3=_____

G=Grab C=Composite

Lab Id:	Sample Id:	Date:	Time:	Type	Matrix	Preservative	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic		TCLP Arsenic	TCLP Barium	TCLP Cadmium	TCLP Chromium	TCLP Lead	TCLP Mercury	TCLP Selenium	TCLP Silver	Notes:
AB 82307	LTM-01	4/14/00	1030	C	SO	-		2				X	X	X	X	X	X	X	X	TCLP RCRA 8 METALS
AB																				
AB																				
AB																				
AB																				
AB																				
AB																				
AB																				
AB																				
AB																				

Additional Instructions: Please call Chris Kline @ 312-925-2296 with analysis

☒ Fax results when available to (864) 281-0288

Relinquished By:	Received By:	Date:	Time:
[signature]	[signature]	4/14/00	1030

Close File

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

Massachusetts Certification # M-MA138
Rhode Island # 98 Maine # MA138
Florida # E87600 / 87562
New Hampshire # 2538
Connecticut # PH-0777
New York # 11393

RMT, Inc
100 Verdae Blvd.
Greenville, SC 29607

4/19/00

Attn: Mark Shoaf

Client Project Number: 998.39 **Location:** MTD/Columbia - Westfield, MA

Laboratory ID	Client Sample ID	Analyses Requested
AB82404	LTM-02	TCLP Extraction for Metals Metals Digestion on Leachate Mercury Digestion on Leachate TCLP RCRA8 Metals TCLP Mercury

I attest that all information contained within this report has been reviewed for accuracy and checked against all quality control requirements outlined in each applicable method including any data obtained from a subcontract laboratory.

Authorized by:

Hanibal O. Tayeh
President/Laboratory Director

ENVIRONMENTAL ANALYSES

11 Almgren Drive • Agawam, Massachusetts 01001 • 1-800-789-9115 • 413-789-9018 • Fax 413-789-4076
24 Tobey Road • Bloomfield, Connecticut 06002 • 860-242-6294 • Fax 860-242-4012

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SPECTRUM ANALYTICAL, INC.

Laboratory Report

Location: MTD/Columbia - Westfield, MA
Client: RMT
Lab ID No: AB82404
Client Id: LTM-02

Client Project No: 998.39
Submittal Date: 4/14/00
Collection Date: 4/14/00
Matrix: Soil

Parameter	Results	Units	Reporting Limit	Start Date	End Date	Analyst	Method
Metals Preparation							
Mercury Digestion on Leachate	Completed			4/18/00	4/18/00	YV	EPA 245.1
Metals Digestion on Leachate	Completed			4/18/00	4/18/00	YV	EPA 200.7
Metals Analysis							
TCLP Mercury	Below det lim	mg/L	0.0004	4/19/00	4/19/00	JM	1311/245.1
TCLP RCRA8 Metals							
TCLP Arsenic	Below det lim	mg/L	0.015	4/18/00	4/18/00	NR	1311/200.7
TCLP Barium	0.357	mg/L	0.005	4/18/00	4/18/00	NR	1311/200.7
TCLP Cadmium	Below det lim	mg/L	0.005	4/18/00	4/18/00	NR	1311/200.7
TCLP Chromium	0.392	mg/L	0.005	4/18/00	4/18/00	NR	1311/200.7
TCLP Lead	Below det lim	mg/L	0.010	4/18/00	4/18/00	NR	1311/200.7
TCLP Selenium	Below det lim	mg/L	0.015	4/18/00	4/18/00	NR	1311/200.7
TCLP Silver	Below det lim	mg/L	0.010	4/18/00	4/18/00	NR	1311/200.7
TCLP/SPLP Preparation							
TCLP Extraction for Metals	Completed			4/17/00	4/18/00	JM	SW846 1311

Reviewed by:

Quality Service/Quality Assurance Depts.

Validated by:

President/Laboratory Director

4/19/00

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HANIBAL TECHNOLOGY

Laboratory Report Supplement
References

SW 846	Test Methods for Evaluating Solid Waste. Third edition, 1998
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CT ETPH	Analysis of Extractable Total Petroleum Hydrocarbons (ETPH)
MADEP EPH	Method for the Determination of Extractable Petroleum Hydrocarbons (EPH)
MADEP VPH	Method for the Determination of Volatile Petroleum Hydrocarbons (VPH)
QAMS 004/80	Guidelines and Specifications for Preparing Quality Assurance Program Plans, USEPA Office of Monitoring System and Quality Assurance
GC-D-52-77	Oil Spill Identification System

Acronyms & Abbreviations

AA	Atomic Absorption	MS	Matrix Spike
ASTM	American Society for Testing and Materials	MSD	Matrix Spike Duplicate
BOD	Biological Oxygen Demand	NTU	Nephelometric Turbidity Units
°C	degree(s) Celsius	PAHs	Polynuclear Aromatic Hydrocarbons
COD	Chemical Oxygen Demand	PCBs	Polychlorinated Biphenyls
CMR	Code of Massachusetts Regulations	PID	Photo Ionization Detector
DEP	Department of Environmental Protection	PQL	Practical Quantitation Limit
DI	De-ionized	R	Recovery (%R: Percent Recovery)
DO	Dissolved Oxygen	RSD	Relative Standard Deviation
EPA	Environmental Protection Agency	SM	Standard Method
EPH	Extractable Petroleum Hydrocarbons	SR	Surrogate Recovery (%SR)
FID	Flame Ionization Detector	SW	Solid Waste
GC	Gas Chromatograph	THM	Trihalomethane(s)
GC / MS	Gas Chromatograph / Mass Spectrometer	TOC	Total Organic Carbon
ICP	Inductively Coupled Plasma	TOX	Total Organic Halogen
Id	Identification	TPH	Total Petroleum Hydrocarbons
MCL	Maximum Contaminant Level	VOC	Volatile Organic Compound
MDL	Minimum Detection Limit	VPH	Volatile Petroleum Hydrocarbons

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CHAIN OF CUSTODY RECORD

Page 1 of 1

Special Handling:
- ☐ Standard TAT - 7 to 10 business days
- ☒ Rush TAT - Date Needed: 4/19/00
- All TATs are subject to laboratory approval.
- Min. 24-hour notification is needed for rushes.
- All samples are disposed of after 60 days unless otherwise instructed.

KG

Report To: RMT, INC
100 Verdae Blvd
Greenville, SC 29607

Project Mgr.: MARK SHOAF

Invoice To: RMT, INC
100 Verdae Blvd
Greenville, SC 29607

P.O. No.: 998.39 RQN: 2958

Project No.: 998.39
Site Name: MTD/Columbia MANF.
Location: Westfield State: MA
Sampler(s): C. Kline

1=$Na_2S_2O_3$ 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid
7=CH_3OH 8=$NaHSO_4$ 9=_____ 10=_____

DW=Drinking Water GW=Groundwater WW=Wastewater
SW= Surface Water SO=Soil SL=Sludge O=Oil A=Air
X1=_____ X2=_____ X3=_____

G=Grab C=Composite

Lab Id:	Sample Id:	Date:	Time:	Type	Matrix	Preservative	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic		TCLP ARSENIC	TCLP BARIUM	TCLP CADMIUM	TCLP CHROMIUM	TCLP LEAD	TCLP MERCURY	TCLP SELENIUM	TCLP SILVER	Notes:
AB 82404	LTM-02	4/14/00	1515	C	SO			2				X	X	X	X	X	X	X	X	TCLP RCRA 8 METALS
AB																				
AB																				
AB																				
AB																				
AB																				
AB																				
AB																				
AB																				
AB																				

Additional Instructions: Please Call Chris Kline @ 312-925-2296 With Analysis

☒ Fax results when available to (864) 281-0288

Relinquished By:	Received By:	Date:	Time:
		4/14/00	1545

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Massachusetts Certification # M-MA138
Rhode Island # 98 Maine # MA138
Florida # E87600 / 87562
New Hampshire # 2538
Connecticut # PH-0777
New York # 11393

RMT, Inc
100 Verdae Blvd.
Greenville, SC 29607

4/20/00

Attn: Mark Shoaf

Client Project Number: 998.39 **Location:** MTD - Westfield, MA

Laboratory ID	Client Sample ID	Analyses Requested
AB82565	LTM-03	TCLP Extraction for Metals Metals Digestion on Leachate Mercury Digestion on Leachate TCLP RCRA8 Metals TCLP Mercury

I attest that all information contained within this report has been reviewed for accuracy and checked against all quality control requirements outlined in each applicable method including any data obtained from a subcontract laboratory.

Authorized by:

Hanibal C. Tayeh
President/Laboratory Director

ENVIRONMENTAL ANALYSES

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SPECTRUM ANALYTICAL, INC.

Laboratory Report

Location: MTD - Westfield, MA
Client: RMT
Lab ID No: AB82565
Client Id: LTM-03

Client Project No: 998.39
Submittal Date: 4/15/00
Collection Date: 4/15/00
Matrix: Soil

Parameter	Results	Units	Reporting Limit	Start Date	End Date	Analyst	Method
Metals Preparation							
Mercury Digestion on Leachate	Completed			4/19/00	4/19/00	NR	EPA 245.1
Metals Digestion on Leachate	Completed			4/19/00	4/19/00	NR	EPA 200.7
Metals Analysis							
TCLP Mercury	Below det lim	mg/L	0.0004	4/20/00	4/20/00	JM	1311/245.1
TCLP RCRA8 Metals							
TCLP Arsenic	Below det lim	mg/L	0.015	4/20/00	4/20/00	CR	1311/200.7
TCLP Barium	0.126	mg/L	0.005	4/20/00	4/20/00	CR	1311/200.7
TCLP Cadmium	Below det lim	mg/L	0.005	4/20/00	4/20/00	CR	1311/200.7
TCLP Chromium	0.363	mg/L	0.005	4/20/00	4/20/00	CR	1311/200.7
TCLP Lead	Below det lim	mg/L	0.010	4/20/00	4/20/00	CR	1311/200.7
TCLP Selenium	Below det lim	mg/L	0.015	4/20/00	4/20/00	CR	1311/200.7
TCLP Silver	Below det lim	mg/L	0.010	4/20/00	4/20/00	CR	1311/200.7
TCLP/SPLP Preparation							
TCLP Extraction for Metals	Completed			4/18/00	4/19/00	JM	SW846 1311

Reviewed by:

Quality Service/Quality Assurance Depts.

Validated by:

President/Laboratory Director

4/20/00

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SPECTRUM ANALYTICAL, INC.
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°C	degree(s) Celsius	PAHs	Polynuclear Aromatic Hydrocarbons
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CMR	Code of Massachusetts Regulations	PID	Photo Ionization Detector
DEP	Department of Environmental Protection	PQL	Practical Quantitation Limit
DI	De-ionized	R	Recovery (%R: Percent Recovery)
DO	Dissolved Oxygen	RSD	Relative Standard Deviation
EPA	Environmental Protection Agency	SM	Standard Method
EPH	Extractable Petroleum Hydrocarbons	SR	Surrogate Recovery (%SR)
FID	Flame Ionization Detector	SW	Solid Waste
GC	Gas Chromatograph	THM	Trihalomethane(s)
GC / MS	Gas Chromatograph / Mass Spectrometer	TOC	Total Organic Carbon
ICP	Inductively Coupled Plasma	TOX	Total Organic Halogen
Id	Identification	TPH	Total Petroleum Hydrocarbons
MCL	Maximum Contaminant Level	VOC	Volatile Organic Compound
MDL	Minimum Detection Limit	VPH	Volatile Petroleum Hydrocarbons

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Page 1 of 1

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- ☐ Standard TAT - 7 to 10 business days
- ☒ Rush TAT - Date Needed: 4/20/00
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Report To: RMT, INC
100 Verdae Blvd
Greenville, SC 29607

Project Mgr.: MARK Shoff

Invoice To: RMT, INC

P.O. No.: 998.39 RQN: 2958

Project No.: 998.39
Site Name: MTD
Location: Westfield State MA
Sampler(s): C. Kline

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7=CH_3OH 8=$NaHSO_4$ 9=_____ 10=_____

DW=Drinking Water GW=Groundwater WW=Wastewater
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X1=_____ X2=_____ X3=_____

G=Grab C=Composite

Lab Id:	Sample Id:	Date:	Time:	Type	Matrix	Preservative	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic		TCLP Arsenic	TCLP Barium	TCLP Cadmium	TCLP Chromium	TCLP Lead	TCLP Mercury	TCLP Selenium	TCLP Silver	Notes: TCLP RCRA 8 METALS
AB 87565	LTM-03	4/15/00	1105	C	SO			2												
AB																				
AB																				
AB																				
AB																				
AB																				
AB																				
AB																				
AB																				
AB																				

Additional Instructions: Please Call
Chris Kline @ 312-925-2296
with Analysis

☒ Fax results when available to (864) 281-0288

Relinquished By:	Received By:	Date:	Time:
Chris Kline	Joe Kozik	4/15/00	1145

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Massachusetts Certification # M-MA138
Rhode Island # 98 Maine # MA138
Florida # E87600 / 87562
New Hampshire # 2538
Connecticut # PH-0777
New York # 11393

RMT, Inc
100 Verdae Blvd.
Greenville, SC 29607

4/20/00

Attn: Mark Shoaf

Client Project Number: 998.39 **Location:** MTD - Westfield, MA

Laboratory ID	Client Sample ID	Analyses Requested
AB82802	LCON-01	TCLP Extraction for Metals Metals Digestion on Leachate Mercury Digestion on Leachate TCLP RCRA8 Metals TCLP Mercury
AB82803	LCON-02	TCLP Extraction for Metals Metals Digestion on Leachate Mercury Digestion on Leachate TCLP RCRA8 Metals TCLP Mercury
AB82804	LCON-03	TCLP Extraction for Metals Metals Digestion on Leachate Mercury Digestion on Leachate TCLP RCRA8 Metals TCLP Mercury
AB82805	LTM-04	TCLP Extraction for Metals Metals Digestion on Leachate Mercury Digestion on Leachate TCLP RCRA8 Metals TCLP Mercury

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Client Project Number: 998.39 **Location:** MTD - Westfield, MA

Laboratory ID	Client Sample ID	Analyses Requested

I attest that all information contained within this report has been reviewed for accuracy and checked against all quality control requirements outlined in each applicable method including any data obtained from a subcontract laboratory.

Authorized by:

Hanibal C. Tayeh
President/Laboratory Director

ENVIRONMENTAL ANALYSES
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SPECTRUM ANALYTICAL, INC.

Laboratory Report

Location: MTD - Westfield, MA
Client: RMT

Client Project No: 998.39
Submittal Date: 4/17/00

Lab ID No: AB82802 **Client Id:** LCON-01 **Collection Date:** 4/17/00 **Matrix:** Soil

Parameter	Results	Units	Reporting Limit	Start Date	End Date	Analyst	Method
Metals Preparation							
Mercury Digestion on Leachate	Completed			4/19/00	4/19/00	NR	EPA 245.1
Metals Digestion on Leachate	Completed			4/19/00	4/19/00	NR	EPA 200.7
Metals Analysis							
TCLP Mercury	Below det lim	mg/L	0.0004	4/20/00	4/20/00	JM	1311/245.1
TCLP Arsenic	Below det lim	mg/L	0.015	4/20/00	4/20/00	CR	1311/200.7
TCLP Barium	0.325	mg/L	0.005	4/20/00	4/20/00	CR	1311/200.7
TCLP Cadmium	Below det lim	mg/L	0.005	4/20/00	4/20/00	CR	1311/200.7
TCLP Chromium	0.057	mg/L	0.005	4/20/00	4/20/00	CR	1311/200.7
TCLP Lead	Below det lim	mg/L	0.010	4/20/00	4/20/00	CR	1311/200.7
TCLP Selenium	Below det lim	mg/L	0.015	4/20/00	4/20/00	CR	1311/200.7
TCLP Silver	Below det lim	mg/L	0.010	4/20/00	4/20/00	CR	1311/200.7
TCLP/SPLP Preparation							
TCLP Extraction for Metals	Completed			4/18/00	4/19/00	JM	SW846 1311

Lab ID No: AB82803 **Client Id:** LCON-02 **Collection Date:** 4/17/00 **Matrix:** Soil

Parameter	Results	Units	Reporting Limit	Start Date	End Date	Analyst	Method
Metals Preparation							
Mercury Digestion on Leachate	Completed			4/19/00	4/19/00	NR	EPA 245.1
Metals Digestion on Leachate	Completed			4/19/00	4/19/00	NR	EPA 200.7
Metals Analysis							
TCLP Mercury	Below det lim	mg/L	0.0004	4/20/00	4/20/00	JM	1311/245.1
TCLP Arsenic	0.0265	mg/L	0.015	4/20/00	4/20/00	CR	1311/200.7
TCLP Barium	0.455	mg/L	0.005	4/20/00	4/20/00	CR	1311/200.7
TCLP Cadmium	0.0073	mg/L	0.005	4/20/00	4/20/00	CR	1311/200.7
TCLP Chromium	6.47	mg/L	0.005	4/20/00	4/20/00	CR	1311/200.7
TCLP Lead	Below det lim	mg/L	0.010	4/20/00	4/20/00	CR	1311/200.7
TCLP Selenium	Below det lim	mg/L	0.025	4/20/00	4/20/00	CR	1311/200.7
TCLP Silver	Below det lim	mg/L	0.010	4/20/00	4/20/00	CR	1311/200.7
TCLP/SPLP Preparation							
TCLP Extraction for Metals	Completed			4/18/00	4/19/00	JM	SW846 1311

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Lab ID No: AB82804 **Client Id:** LCON-03 **Collection Date:** 4/17/00 **Matrix:** Soil

Parameter	Results	Units	Reporting Limit	Start Date	End Date	Analyst	Method
Metals Preparation							
Mercury Digestion on Leachate	Completed			4/19/00	4/19/00	NR	EPA 245.1
Metals Digestion on Leachate	Completed			4/19/00	4/19/00	NR	EPA 200.7
Metals Analysis							
TCLP Mercury	Below det lim	mg/L	0.0004	4/20/00	4/20/00	JM	1311/245.1
TCLP Arsenic	Below det lim	mg/L	0.015	4/20/00	4/20/00	CR	1311/200.7
TCLP Barium	0.807	mg/L	0.005	4/20/00	4/20/00	CR	1311/200.7
TCLP Cadmium	0.228	mg/L	0.005	4/20/00	4/20/00	CR	1311/200.7
TCLP Chromium	0.022	mg/L	0.005	4/20/00	4/20/00	CR	1311/200.7
TCLP Lead	0.0475	mg/L	0.010	4/20/00	4/20/00	CR	1311/200.7
TCLP Selenium	Below det lim	mg/L	0.015	4/20/00	4/20/00	CR	1311/200.7
TCLP Silver	Below det lim	mg/L	0.010	4/20/00	4/20/00	CR	1311/200.7
TCLP/SPLP Preparation							
TCLP Extraction for Metals	Completed			4/18/00	4/19/00	JM	SW846 1311

Lab ID No: AB82805 **Client Id:** LTM-04 **Collection Date:** 4/17/00 **Matrix:** Soil

Parameter	Results	Units	Reporting Limit	Start Date	End Date	Analyst	Method
Metals Preparation							
Mercury Digestion on Leachate	Completed			4/19/00	4/19/00	NR	EPA 245.1
Metals Digestion on Leachate	Completed			4/19/00	4/19/00	NR	EPA 200.7
Metals Analysis							
TCLP Mercury	Below det lim	mg/L	0.0004	4/20/00	4/20/00	JM	1311/245.1
TCLP Arsenic	Below det lim	mg/L	0.015	4/20/00	4/20/00	CR	1311/200.7
TCLP Barium	0.222	mg/L	0.005	4/20/00	4/20/00	CR	1311/200.7
TCLP Cadmium	Below det lim	mg/L	0.005	4/20/00	4/20/00	CR	1311/200.7
TCLP Chromium	0.265	mg/L	0.005	4/20/00	4/20/00	CR	1311/200.7
TCLP Lead	Below det lim	mg/L	0.010	4/20/00	4/20/00	CR	1311/200.7
TCLP Selenium	Below det lim	mg/L	0.015	4/20/00	4/20/00	CR	1311/200.7
TCLP Silver	Below det lim	mg/L	0.010	4/20/00	4/20/00	CR	1311/200.7
TCLP/SPLP Preparation							
TCLP Extraction for Metals	Completed			4/18/00	4/19/00	JM	SW846 1311

Reviewed by:

Quality Service/Quality Assurance Depts.

Validated by:

President/Laboratory Director

4/20/00

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CMR	Code of Massachusetts Regulations	PID	Photo Ionization Detector
DEP	Department of Environmental Protection	PQL	Practical Quantitation Limit
DI	De-ionized	R	Recovery (%R: Percent Recovery)
DO	Dissolved Oxygen	RSD	Relative Standard Deviation
EPA	Environmental Protection Agency	SM	Standard Method
EPH	Extractable Petroleum Hydrocarbons	SR	Surrogate Recovery (%SR)
FID	Flame Ionization Detector	SW	Solid Waste
GC	Gas Chromatograph	THM	Trihalomethane(s)
GC / MS	Gas Chromatograph / Mass Spectrometer	TOC	Total Organic Carbon
ICP	Inductively Coupled Plasma	TOX	Total Organic Halogen
Id	Identification	TPH	Total Petroleum Hydrocarbons
MCL	Maximum Contaminant Level	VOC	Volatile Organic Compound
MDL	Minimum Detection Limit	VPH	Volatile Petroleum Hydrocarbons

Close File

04171757 (Re)

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

CHAIN OF CUSTODY RECORD

Page 1 of 1

Special Handling:
- ☐ Standard TAT - 7 to 10 business days
- ☐ Rush TAT - Date Needed: 4/20
- All TATs are subject to laboratory approval.
- Min. 24-hour notification is needed for rushes.
- All samples are disposed of after 60 days unless otherwise instructed.

Report To: RMT, INC
100 Verdae Blvd
Greenville, SC

Project Mgr.: MARK Shorff

Invoice To: RMT, INC

P.O. No.: 998.39 RQN: 2958

Project No.: 998.39
Site Name: MTD
Location: Westfield, State: MA
Sampler(s): C. Kline

1=$Na_2S_2O_3$ 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid
7=CH_3OH 8=$NaHSO_4$ 9=_____ 10=_____

DW=Drinking Water GW=Groundwater WW=Wastewater
SW= Surface Water SO=Soil SL=Sludge O=Oil A=Air
X1= _____ X2= _____ X3= _____

G=Grab C=Composite

Lab Id:	Sample Id:	Date:	Time:	Type	Matrix	Preservative	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	TCLP Arsenic	TCLP Barium	TCLP Cadmium	TCLP Chromium	TCLP Lead	TCLP Mercury	TCLP Selenium	TCLP Silver	Notes:
AB 82802	L CON-01	4/17/00	1500	C	SO			2	~~2~~		X	X	X	X	X	X	X	X	TCLP RCRA8 METALS
AB 82803	L CON-02	4/17/00	1540	C	SO			↓	~~2~~		X	X	X	X	X	X	X	X	
AB 82804	L CON-03	4/17/00	1550	C	SO				~~2~~		X	X	X	X	X	X	X	X	
AB 82805	L TM-04	4/17/00	1610	C	SO			↓	~~2~~		X	X	X	X	X	X	X	X	
AB																			
AB																			
AB																			
AB																			
AB																			
AB																			

Additional Instructions: Please Call Chris Kline @ 312-9252296 with Analysis

☒ Fax results when available to (~~[illegible]~~ 864) 281-0288

Relinquished By:	Received By:	Date:	Time:
[signature]	[signature]	4/17/00	1635

11 Almgren Drive • Agawam, Massachusetts 01001 • 413-789-9018 • Fax 413-789-4076

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Featuring
HANIBAL TECHNOLOGY

Massachusetts Certification # M-MA138
Rhode Island # 98 Maine # MA138
Florida # E87600 / 87562
New Hampshire # 2538
Connecticut # PH-0777
New York # 11393

Rmt, Inc
100 Verdae Blvd.
Greenville, SC 29607

4/24/00

Attn: Mark Shoaf

Client Project Number: 998.39 **Location:** MTD/Columbia - Westfield, MA

Laboratory ID	Client Sample ID	Analyses Requested
AB82966	LMT-05	TCLP Extraction for Metals Metals Digestion on Leachate Mercury Digestion on Leachate TCLP RCRA8 Metals TCLP Mercury

I attest that all information contained within this report has been reviewed for accuracy and checked against all quality control requirements outlined in each applicable method including any data obtained from a subcontract laboratory.

Authorized by:

Hanibal G. Tayeh
President/Laboratory Director

ENVIRONMENTAL ANALYSES

11 Almgren Drive • Agawam, Massachusetts 01001 • 1-800-789-9115 • 413-789-9018 • Fax 413-789-4076
24 Tobey Road • Bloomfield, Connecticut 06002 • 860-242-6294 • Fax 860-242-4012

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SPECTRUM ANALYTICAL, INC.

Laboratory Report

Location: MTD/Columbia - Westfield, MA
Client: RMT
Lab ID No: AB82966
Client Id: LMT-05

Client Project No: 998.39
Submittal Date: 4/18/00
Collection Date: 4/18/00
Matrix: Soil

Parameter	Results	Units	Reporting Limit	Start Date	End Date	Analyst	Method
Metals Preparation							
Mercury Digestion on Leachate	Completed			4/20/00	4/20/00	YV	EPA 245.1
Metals Digestion on Leachate	Completed			4/20/00	4/20/00	YV	EPA 200.7
Metals Analysis							
TCLP Mercury	Below det lim	mg/L	0.0004	4/24/00	4/24/00	JM	1311/245.1
TCLP RCRA8 Metals							
TCLP Arsenic	Below det lim	mg/L	0.015	4/23/00	4/24/00	CR	1311/200.7
TCLP Barium	0.0305	mg/L	0.005	4/23/00	4/24/00	CR	1311/200.7
TCLP Cadmium	Below det lim	mg/L	0.005	4/23/00	4/24/00	CR	1311/200.7
TCLP Chromium	0.267	mg/L	0.005	4/23/00	4/24/00	CR	1311/200.7
TCLP Lead	Below det lim	mg/L	0.010	4/23/00	4/24/00	CR	1311/200.7
TCLP Selenium	Below det lim	mg/L	0.015	4/23/00	4/24/00	CR	1311/200.7
TCLP Silver	Below det lim	mg/L	0.010	4/23/00	4/24/00	CR	1311/200.7
TCLP/SPLP Preparation							
TCLP Extraction for Metals	Completed			4/19/00	4/20/00	JM	SW846 1311

Reviewed by:

Quality Service/Quality Assurance Depts.

Validated by:

President/Laboratory Director

4/24/00

Close File

SPECTRUM ANALYTICAL, INC.
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HANIBAL TECHNOLOGY

Laboratory Report Supplement
References

SW 846	Test Methods for Evaluating Solid Waste. Third edition, 1998
40 CFR 136	Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act
40 CFR 141	National Primary Drinking Water Regulations
40 CFR 143	National Secondary Drinking Water Regulations
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EPA 600/4-82-057	Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater
EPA 600/4-85/056	Choosing Cost-Effective QA/QC Programs for Chemical Analysis
EPA 600/4-88/039	Method for the Determination of Organic Compounds in Drinking Water
CT ETPH	Analysis of Extractable Total Petroleum Hydrocarbons (ETPH)
MADEP EPH	Method for the Determination of Extractable Petroleum Hydrocarbons (EPH)
MADEP VPH	Method for the Determination of Volatile Petroleum Hydrocarbons (VPH)
QAMS 004/80	Guidelines and Specifications for Preparing Quality Assurance Program Plans, USEPA Office of Monitoring System and Quality Assurance
GC-D-52-77	Oil Spill Identification System

Acronyms & Abbreviations

AA	Atomic Absorption	MS	Matrix Spike
ASTM	American Society for Testing and Materials	MSD	Matrix Spike Duplicate
BOD	Biological Oxygen Demand	NTU	Nephelometric Turbidity Units
°C	degree(s) Celsius	PAHs	Polynuclear Aromatic Hydrocarbons
COD	Chemical Oxygen Demand	PCBs	Polychlorinated Biphenyls
CMR	Code of Massachusetts Regulations	PID	Photo Ionization Detector
DEP	Department of Environmental Protection	PQL	Practical Quantitation Limit
DI	De-ionized	R	Recovery (%R: Percent Recovery)
DO	Dissolved Oxygen	RSD	Relative Standard Deviation
EPA	Environmental Protection Agency	SM	Standard Method
EPH	Extractable Petroleum Hydrocarbons	SR	Surrogate Recovery (%SR)
FID	Flame Ionization Detector	SW	Solid Waste
GC	Gas Chromatograph	THM	Trihalomethane(s)
GC / MS	Gas Chromatograph / Mass Spectrometer	TOC	Total Organic Carbon
ICP	Inductively Coupled Plasma	TOX	Total Organic Halogen
Id	Identification	TPH	Total Petroleum Hydrocarbons
MCL	Maximum Contaminant Level	VOC	Volatile Organic Compound
MDL	Minimum Detection Limit	VPH	Volatile Petroleum Hydrocarbons

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04181403

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CHAIN OF CUSTODY RECORD

Page 1 of 1

Special Handling:
- ☐ Standard TAT - 7 to 10 business days
- ☒ Rush TAT - Date Needed: 4/24/00
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- Min. 24-hour notification is needed for rushes.
- All samples are disposed of after 60 days unless otherwise instructed.

Report To: RMT, INC
100 Verdae Blvd
Greenville, SC 29607

Project Mgr.: MARK SLOAF

Invoice To: RMT, INC

P.O. No.: 998.39 RQN: 2958

Project No.: 998.39
Site Name: MTD/Columbia Manufacturing
Location: Westfield State: MA
Sampler(s): C. Kline

1=$Na_2S_2O_3$ 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid
7=CH_3OH 8=$NaHSO_4$ 9=_____ 10=_____

DW=Drinking Water GW=Groundwater WW=Wastewater
SW= Surface Water SO=Soil SL=Sludge O=Oil A=Air
X1=_____ X2=_____ X3=_____

G=Grab C=Composite

Lab Id:	Sample Id:	Date:	Time:	Type	Matrix	Preservative	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	TCLP Arsenic	TCLP Barium	TCLP Cadmium	TCLP Chromium	TCLP Lead	TCLP Mercury	TCLP Selenium	TCLP Silver	Notes:
AB 82960	LTM-05	4/18/00	1305	C	SO			2			X	X	X	X	X	X	X	X	TCLP RCRA 8 Metals
AB																			
AB																			
AB																			
AB																			
AB																			
AB																			
AB																			
AB																			
AB																			

Additional Instructions: Please Call Chris Kline @ 312-925-2296 with Analysis

☒ Fax results when available to (864) 281-0288

Relinquished By:	Received By:	Date:	Time:
[signature]	[signature]	4/18/00	1:40

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Massachusetts Certification # M-MA138
Rhode Island # 98 Maine # MA138
Florida # E87600 / 87562
New Hampshire # 2538
Connecticut # PH-0777
New York # 11393

Rmt, Inc
100 Verdae Blvd.
Greenville, SC 29607

4/26/00

Attn: Mark Shoaf

Client Project Number: 998.39 **Location:** MTD Columbia - Westfield, MA

Laboratory ID	Client Sample ID	Analyses Requested
AB83534	LTM-06	TCLP Extraction for Metals Metals Digestion on Leachate Mercury Digestion on Leachate TCLP RCRA8 Metals TCLP Mercury

I attest that all information contained within this report has been reviewed for accuracy and checked against all quality control requirements outlined in each applicable method including any data obtained from a subcontract laboratory.

Authorized by:

Hanibal C. Tayeh
President/Laboratory Director

ENVIRONMENTAL ANALYSES

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SPECTRUM ANALYTICAL, INC.

Laboratory Report

Location: MTD Columbia - Westfield, MA
Client: RMT
Lab ID No: AB83534
Client Id: LTM-06

Client Project No: 998.39
Submittal Date: 4/20/00
Collection Date: 4/20/00
Matrix: Soil

Parameter	Results	Units	Reporting Limit	Start Date	End Date	Analyst	Method
Metals Preparation							
Mercury Digestion on Leachate	Completed			4/25/00	4/25/00	YV	EPA 245.1
Metals Digestion on Leachate	Completed			4/25/00	4/25/00	YV	EPA 200.7
Metals Analysis							
TCLP Mercury	Below det lim	mg/L	0.0004	4/26/00	4/26/00	JM	1311/245.1
TCLP RCRA8 Metals							
TCLP Arsenic	Below det lim	mg/L	0.015	4/26/00	4/26/00	CR	1311/200.7
TCLP Barium	0.0580	mg/L	0.005	4/26/00	4/26/00	CR	1311/200.7
TCLP Cadmium	Below det lim	mg/L	0.005	4/26/00	4/26/00	CR	1311/200.7
TCLP Chromium	0.176	mg/L	0.005	4/26/00	4/26/00	CR	1311/200.7
TCLP Lead	Below det lim	mg/L	0.010	4/26/00	4/26/00	CR	1311/200.7
TCLP Selenium	Below det lim	mg/L	0.015	4/26/00	4/26/00	CR	1311/200.7
TCLP Silver	Below det lim	mg/L	0.010	4/26/00	4/26/00	CR	1311/200.7
TCLP/SPLP Preparation							
TCLP Extraction for Metals	Completed			4/24/00	4/25/00	JM	SW846 1311

Reviewed by:

Quality Service/Quality Assurance Depts.

Validated by:

President/Laboratory Director

4/26/00

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SPECTRUM ANALYTICAL, INC.
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SW 846	Test Methods for Evaluating Solid Waste. Third edition, 1998
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MADEP VPH	Method for the Determination of Volatile Petroleum Hydrocarbons (VPH)
QAMS 004/80	Guidelines and Specifications for Preparing Quality Assurance Program Plans, USEPA Office of Monitoring System and Quality Assurance
GC-D-52-77	Oil Spill Identification System

Acronyms & Abbreviations

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BOD	Biological Oxygen Demand	NTU	Nephelometric Turbidity Units
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Id	Identification	TPH	Total Petroleum Hydrocarbons
MCL	Maximum Contaminant Level	VOC	Volatile Organic Compound
MDL	Minimum Detection Limit	VPH	Volatile Petroleum Hydrocarbons

Close File

Lab ID No: AB84840
Client Id: LTM-07

Collection Date: 4/28/00
Matrix: Soil

Parameter	Results	Units	Reporting Limit	Start Date	End Date	Analyst	Method

Reviewed by:

Quality Service/Quality Assurance Depts.

Validated by:

President/Laboratory Director

5/8/00

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SPECTRUM ANALYTICAL, INC.
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Laboratory Report Supplement
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SW 846	Test Methods for Evaluating Solid Waste. Third edition, 1998
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MADEP VPH	Method for the Determination of Volatile Petroleum Hydrocarbons (VPH)
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ASTM	American Society for Testing and Materials	MSD	Matrix Spike Duplicate
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°C	degree(s) Celsius	PAHs	Polynuclear Aromatic Hydrocarbons
COD	Chemical Oxygen Demand	PCBs	Polychlorinated Biphenyls
CMR	Code of Massachusetts Regulations	PID	Photo Ionization Detector
DEP	Department of Environmental Protection	PQL	Practical Quantitation Limit
DI	De-ionized	R	Recovery (%R: Percent Recovery)
DO	Dissolved Oxygen	RSD	Relative Standard Deviation
EPA	Environmental Protection Agency	SM	Standard Method
EPH	Extractable Petroleum Hydrocarbons	SR	Surrogate Recovery (%SR)
FID	Flame Ionization Detector	SW	Solid Waste
GC	Gas Chromatograph	THM	Trihalomethane(s)
GC / MS	Gas Chromatograph / Mass Spectrometer	TOC	Total Organic Carbon
ICP	Inductively Coupled Plasma	TOX	Total Organic Halogen
Id	Identification	TPH	Total Petroleum Hydrocarbons
MCL	Maximum Contaminant Level	VOC	Volatile Organic Compound
MDL	Minimum Detection Limit	VPH	Volatile Petroleum Hydrocarbons

Close File

SPECTRUM ANALYTICAL, INC.

Laboratory Report

Location: MTD Columbia - Westfield, MA
Client: RMT
Lab ID No: AB84840
Client Id: LTM-07

Client Project No: 998.39
Submittal Date: 4/28/00
Collection Date: 4/28/00
Matrix: Soil

Parameter	Results	Units	Reporting Limit	Start Date	End Date	Analyst	Method
Metals Preparation							
Mercury Digestion	Completed			5/6/00	5/6/00	EP	EPA 245.1
Mercury Digestion on Leachate	Completed			5/2/00	5/2/00	YV	EPA 245.1
Metals Digestion	Completed			5/6/00	5/6/00	EP	EPA 200.7
Metals Digestion on Leachate	Completed			5/2/00	5/2/00	YV	EPA 200.7
Metals Analysis							
TCLP Mercury	Below det lim	mg/L	0.0004	5/2/00	5/2/00	JM	1311/245.1
TCLP RCRA8 Metals							
TCLP Arsenic	Below det lim	mg/L	0.015	5/3/00	5/3/00	CR	1311/200.7
TCLP Barium	0.0385	mg/L	0.005	5/3/00	5/3/00	CR	1311/200.7
TCLP Cadmium	Below det lim	mg/L	0.005	5/3/00	5/3/00	CR	1311/200.7
TCLP Chromium	0.051	mg/L	0.005	5/3/00	5/3/00	CR	1311/200.7
TCLP Lead	Below det lim	mg/L	0.010	5/3/00	5/3/00	CR	1311/200.7
TCLP Selenium	Below det lim	mg/L	0.015	5/3/00	5/3/00	CR	1311/200.7
TCLP Silver	Below det lim	mg/L	0.010	5/3/00	5/3/00	CR	1311/200.7
Total RCRA8 Metals							
Total Arsenic	4.26	mg/Kg	2.84	5/6/00	5/6/00	CR	EPA 200.7
Total Barium	535	mg/Kg	0.947	5/6/00	5/6/00	CR	EPA 200.7
Total Cadmium	107	mg/Kg	0.947	5/6/00	5/6/00	CR	EPA 200.7
Total Chromium	195	mg/Kg	0.947	5/6/00	5/6/00	CR	EPA 200.7
Total Lead	1,050	mg/Kg	1.89	5/6/00	5/6/00	CR	EPA 200.7
Total Selenium	20.7	mg/Kg	2.84	5/6/00	5/6/00	CR	EPA 200.7
Total Silver	3.41	mg/Kg	1.89	5/6/00	5/6/00	CR	EPA 200.7
Total Mercury	0.274	mg/Kg	0.184	5/6/00	5/6/00	YV	EPA 245.1
TCLP/SPLP Preparation							
TCLP Extraction for Metals	Completed			5/1/00	5/1/00	JM	SW846 1311
% Solids	89.1	%		5/6/00	5/6/00	EP	EPA 160.3

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0420 1341

SPECTRUM ANALYTICAL, INC.

CHAIN OF CUSTODY RECORD

Page 1 of 1

Special Handling:
- ☐ Standard TAT - 7 to 10 business days
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Report To: RMT, INC
100 Verdae Blvd
Greenville, SC 29607

Project Mgr.: MARK Shoaf

Invoice To: RMT, INC

P.O. No.: 998.39 RQN: 2958

Project No.: 998.39
Site Name: MTD/Columbia
Location: Westfield State: MA
Sampler(s): C. Kline

1=$Na_2S_2O_3$ 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid
8=CH_3OH 9= $NaHSO_4$ 10= 11=

DW=Drinking Water GW=Groundwater WW=Wastewater
SW= Surface Water SO=Soil SL=Sludge O=Oil A=Air
X1= X2= X3=

G=Grab C=Composite

Lab Id:	Sample Id:	Date:	Time:	Type	Matrix	Preservative	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	TCLP Arsenic	TCLP Barium	TCLP Cadmium	TCLP Chromium	TCLP Lead	TCLP Mercury	TCLP Selenium	TCLP Silver	Notes:
AB 83534	LTM-06	4/20/00	830	C	SO			2			X	X	X	X	X	X	X	X	TCLP RCRA 8 Metals
AB																			
AB																			
AB																			
AB																			
AB																			
AB																			
AB																			
AB																			
AB																			

Containers: # of VOA Vials, # of Amber Glass, # of Clear Glass, # of Plastic

Analyses: TCLP Arsenic, TCLP Barium, TCLP Cadmium, TCLP Chromium, TCLP Lead, TCLP Mercury, TCLP Selenium, TCLP Silver

Additional Instructions: Please Call Chris Kline with Analysis 312-925-2296

☒ Fax results when available to (864) 281-0288

Relinquished By:	Received By:	Date:	Time:
[signature]	[signature]	4/20/00	1255

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Featuring
HANIBAL TECHNOLOGY

Massachusetts Certification # M-MA138
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New Hampshire # 2538
Connecticut # PH-0777
New York # 11393

RMT, Inc.
100 Verdae Blvd.
Greenville, SC 29607

5/8/00

Attn: Mark Shoaf

Client Project Number: 998.39 **Location:** MTD Columbia - Westfield, MA

Laboratory ID	Client Sample ID	Analyses Requested
AB84840	LTM-07	TCLP Extraction for Metals
		Metals Digestion on Leachate
		Mercury Digestion on Leachate
		TCLP RCRA8 Metals
		TCLP Mercury
		Metals Digestion
		Mercury Digestion
		Total RCRA8 Metals
		Total Mercury
		% Solids

I attest that all information contained within this report has been reviewed for accuracy and checked against all quality control requirements outlined in each applicable method including any data obtained from a subcontract laboratory.

Authorized by:

Hanibal C. Tayeh
President/Laboratory Director

ENVIRONMENTAL ANALYSES

11 Almgren Drive • Agawam, Massachusetts 01001 • 1-800-789-9115 • 413-789-9018 • Fax 413-789-4076
24 Tobey Road • Bloomfield, Connecticut 06002 • 860-242-6294 • Fax 860-242-4012

Close File

0928 1830 KG

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

CHAIN OF CUSTODY RECORD

Page 1 of 1

Special Handling:
- ☐ Standard TAT - 7 to 10 business days
- ☒ Rush TAT - Date Needed: 5/2/00
- All TATs are subject to laboratory approval.
- Min. 24-hour notification is needed for rushes.
- All samples are disposed of after 60 days unless otherwise instructed.

Report To: RMT Inc.
100 Verdae Blvd.
Greenville SC 29607

Project Mgr.: Mark Shoaf

Invoice To: RMT, Inc.

P.O. No.: 998.39 RQN: 2958

Project No.: 998.39
Site Name: MTD / Columbia
Location: Westfield State: MA
Sampler(s): H. Jones

1=$Na_2S_2O_3$ 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid
7=CH_3OH 8=$NaHSO_4$ 9=_____ 10=_____

DW=Drinking Water GW=Groundwater WW=Wastewater
SW= Surface Water SO=Soil SL=Sludge O=Oil A=Air
X1=_____ X2=_____ X3=_____

G=Grab C=Composite

Lab Id:	Sample Id:	Date:	Time:	Type	Matrix	Preservative	Containers: # of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic		Analyses: TCLP Arsenic	TCLP Barium	TCLP Cadmium	TCLP Chromium	TCLP LEAD	TCLP MERCURY	TCLP Selenium	TCLP Silver	Notes: TCLP RCRA 8 METALS
AB 84840	LTM-07	4/28/00	4:30	C	SO			2												* Total RCRA 8
AB																				
AB																				
AB																				
AB																				
AB																				
AB																				
AB																				
AB																				
AB																				

Additional Instructions: Please Call
Chris Kline w/ Analysis
312-925-2296
fax to hotel: Room 2312
☒ Fax results when available to (413) 733-8652

Relinquished By:	Received By:	Date:	Time:
[signature]	[signature]	4/28/00	5:25

11 Almgren Drive • Agawam, Massachusetts 01001 • 413-789-9018 • Fax 413-789-4076

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SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

Massachusetts Certification # M-MA138
Rhode Island # 98 Maine # MA138
Florida # E87600 / 87562
New Hampshire # 2538
Connecticut # PH-0777
New York # 11393

RMT, Inc
100 Verdae Blvd.
Greenville, SC 29607

5/5/00

Attn: Mark Shoaf

Client Project Number: 998.39 **Location:** MTD/Columbia-Westfield, MA

Laboratory ID	Client Sample ID	Analyses Requested
AB85051	LTM-08	TCLP Extraction for Metals
		Metals Digestion on Leachate
		Mercury Digestion on Leachate
		TCLP RCRA8 Metals
		TCLP Mercury
		Metals Digestion
		Mercury Digestion
		Total RCRA8 Metals
		Total Mercury
		% Solids

I attest that all information contained within this report has been reviewed for accuracy and checked against all quality control requirements outlined in each applicable method including any data obtained from a subcontract laboratory.

Authorized by:

Hanibal C. Tayeh
President/Laboratory Director

ENVIRONMENTAL ANALYSES

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24 Tobey Road • Bloomfield, Connecticut 06002 • 860-242-6294 • Fax 860-242-4012

Close File

SPECTRUM ANALYTICAL, INC.

Laboratory Report

Location: MTD/Columbia-Westfield, MA
Client: RMT
Lab ID No: AB85051
Client Id: LTM-08

Client Project No: 998.39
Submittal Date: 5/1/00
Collection Date: 5/1/00
Matrix: Soil

Parameter	Results	Units	Reporting Limit	Start Date	End Date	Analyst	Method
Metals Preparation							
Mercury Digestion	Completed			5/6/00	5/6/00	EP	EPA 245.1
Mercury Digestion on Leachate	Completed			5/4/00	5/4/00	YV	EPA 245.1
Metals Digestion	Completed			5/6/00	5/6/00	EP	EPA 200.7
Metals Digestion on Leachate	Completed			5/4/00	5/4/00	YV	EPA 200.7
Metals Analysis							
TCLP Mercury	Below det lim	mg/L	0.0004	5/4/00	5/4/00	JM	1311/245.1
TCLP RCRA8 Metals							
TCLP Arsenic	Below det lim	mg/L	0.015	5/4/00	5/4/00	CR	1311/200.7
TCLP Barium	0.014	mg/L	0.005	5/4/00	5/4/00	CR	1311/200.7
TCLP Cadmium	Below det lim	mg/L	0.005	5/4/00	5/4/00	CR	1311/200.7
TCLP Chromium	0.150	mg/L	0.005	5/4/00	5/4/00	CR	1311/200.7
TCLP Lead	Below det lim	mg/L	0.010	5/4/00	5/4/00	CR	1311/200.7
TCLP Selenium	Below det lim	mg/L	0.015	5/4/00	5/4/00	CR	1311/200.7
TCLP Silver	Below det lim	mg/L	0.010	5/4/00	5/4/00	CR	1311/200.7
Total RCRA8 Metals							
Total Arsenic	8.14	mg/Kg	2.94	5/8/00	5/8/00	CR	EPA 200.7
Total Barium	459	mg/Kg	0.981	5/8/00	5/8/00	CR	EPA 200.7
Total Cadmium	38.3	mg/Kg	0.981	5/8/00	5/8/00	CR	EPA 200.7
Total Chromium	1,510	mg/Kg	0.981	5/8/00	5/8/00	CR	EPA 200.7
Total Lead	688	mg/Kg	1.96	5/8/00	5/8/00	CR	EPA 200.7
Total Selenium	5.79	mg/Kg	2.94	5/8/00	5/8/00	CR	EPA 200.7
Total Silver	2.94	mg/Kg	1.96	5/8/00	5/8/00	CR	EPA 200.7
Total Mercury	Below det lim	mg/Kg	0.2084	5/8/00	5/8/00	JM	EPA 245.1
TCLP/SPLP Preparation							
TCLP Extraction for Metals	Completed			5/2/00	5/3/00	JM	SW846 1311
% Solids	85.9	%		5/6/00	5/8/00	EP	EPA 160.3

Close File

Lab ID No: AB85051
Client Id: LTM-08

Collection Date: 5/1/00
Matrix: Soil

Parameter	Results	Units	Reporting Limit	Start Date	End Date	Analyst	Method

Reviewed by:

Quality Service/Quality Assurance Depts.

Validated by:

President/Laboratory Director

5/8/00

Close File

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

Laboratory Report Supplement
References

SW 846	Test Methods for Evaluating Solid Waste. Third edition, 1998
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MADEP EPH	Method for the Determination of Extractable Petroleum Hydrocarbons (EPH)
MADEP VPH	Method for the Determination of Volatile Petroleum Hydrocarbons (VPH)
QAMS 004/80	Guidelines and Specifications for Preparing Quality Assurance Program Plans, USEPA Office of Monitoring System and Quality Assurance
GC-D-52-77	Oil Spill Identification System

Acronyms & Abbreviations

AA	Atomic Absorption	MS	Matrix Spike
ASTM	American Society for Testing and Materials	MSD	Matrix Spike Duplicate
BOD	Biological Oxygen Demand	NTU	Nephelometric Turbidity Units
°C	degree(s) Celsius	PAHs	Polynuclear Aromatic Hydrocarbons
COD	Chemical Oxygen Demand	PCBs	Polychlorinated Biphenyls
CMR	Code of Massachusetts Regulations	PID	Photo Ionization Detector
DEP	Department of Environmental Protection	PQL	Practical Quantitation Limit
DI	De-ionized	R	Recovery (%R: Percent Recovery)
DO	Dissolved Oxygen	RSD	Relative Standard Deviation
EPA	Environmental Protection Agency	SM	Standard Method
EPH	Extractable Petroleum Hydrocarbons	SR	Surrogate Recovery (%SR)
FID	Flame Ionization Detector	SW	Solid Waste
GC	Gas Chromatograph	THM	Trihalomethane(s)
GC / MS	Gas Chromatograph / Mass Spectrometer	TOC	Total Organic Carbon
ICP	Inductively Coupled Plasma	TOX	Total Organic Halogen
Id	Identification	TPH	Total Petroleum Hydrocarbons
MCL	Maximum Contaminant Level	VOC	Volatile Organic Compound
MDL	Minimum Detection Limit	VPH	Volatile Petroleum Hydrocarbons

Close File

0501530

CHAIN OF CUSTODY RECORD

SPECTRUM ANALYTICAL, INC.

Page 1 of 1

Special Handling:
- ☐ Standard TAT - 7 to 10 business days
- ☒ Rush TAT - Date Needed: 5/4/00
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- Min. 24-hour notification is needed for rushes.
- All samples are disposed of after 60 days unless otherwise instructed.

RQ KG

Report To: RMT Inc
100 Verdae Blvd.
Greenville SC 29607

Project Mgr.: Mark Shoaf

Invoice To: RMT Inc.

P.O. No.: 998.39 RQN: 2958

Project No.: 998.39
Site Name: MTD / Columbia
Location: Westfield State: MA
Sampler(s): H. Jones

1=$Na_2S_2O_3$ 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid
8=CH_3OH 9= $NaHSO_4$ 10= 11=

DW=Drinking Water GW=Groundwater WW=Wastewater
SW= Surface Water SO=Soil SL=Sludge O=Oil A=Air
X1= X2= X3=

G=Grab C=Composite

Lab Id:	Sample Id:	Date:	Time:	Type	Matrix	Preservative	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	TCLP ARSENIC	TCLP BARIUM	TCLP CADMIUM	TCLP CHROMIUM	TCLP LEAD	TCLP MERCURY	TCLP SELENIUM	TCLP SILVER	Total RCRA 8	Notes:
AB 85051	LTM-08	5/1/00	12:00	C	SO			2			X	X	X	X	X	X	X	X	X	TCLP RCRA 8 METALS
AB																				
AB																				
AB																				
AB																				
AB																				
AB																				
AB																				
AB																				
AB																				

Containers: # of VOA Vials, # of Amber Glass, # of Clear Glass, # of Plastic

Analyses: TCLP Arsenic, TCLP Barium, TCLP Cadmium, TCLP Chromium, TCLP Lead, TCLP Mercury, TCLP Selenium, TCLP Silver, Total RCRA 8

Additional Instructions: Please Call
Chris Kline w/ Analysis
312 - 925 - 2296 Total RCRA 8 added
hotel Room 2312 KG
☒ Fax results when available to (413) 733-8652

Relinquished By:	Received By:	Date:	Time:
		5/1/00	3:20

Close File

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

Massachusetts Certification # M-MA138
Rhode Island # 98 Maine # MA138
Florida # E87600 / 87562
New Hampshire # 2538
Connecticut # PH-0777
New York # I1393

RMT, Inc
100 Verdae Blvd.
Greenville, SC 29607

5/9/00

Attn: Mark Shoaf

Client Project Number: 998.39 **Location:** MTD/Columbia - Westfield, MA

Laboratory ID	Client Sample ID	Analyses Requested
AB85382	LTM-09	TCLP Extraction for Metals
		Metals Digestion on Leachate
		Mercury Digestion on Leachate
		TCLP RCRA8 Metals
		TCLP Mercury
		Metals Digestion
		Mercury Digestion
		Total RCRA8 Metals
		Total Mercury
		% Solids

I attest that all information contained within this report has been reviewed for accuracy and checked against all quality control requirements outlined in each applicable method including any data obtained from a subcontract laboratory.

Authorized by:

Hanibal C. Tayeh
President/Laboratory Director

ENVIRONMENTAL ANALYSES

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24 Tobey Road • Bloomfield, Connecticut 06002 • 860-242-6294 • Fax 860-242-4012

Close File

SPECTRUM ANALYTICAL, INC.

Laboratory Report

Location: MTD/Columbia - Westfield, MA
Client: RMT
Lab ID No: AB85382
Client Id: LTM-09

Client Project No: 998.39
Submittal Date: 5/2/00
Collection Date: 5/2/00
Matrix: Soil

Parameter	Results	Units	Reporting Limit	Start Date	End Date	Analyst	Method
Metals Preparation							
Mercury Digestion	Completed			5/6/00	5/6/00	EP	EPA 245.1
Mercury Digestion on Leachate	Completed			5/4/00	5/4/00	NR	EPA 245.1
Metals Digestion	Completed			5/6/00	5/6/00	EP	EPA 200.7
Metals Digestion on Leachate	Completed			5/4/00	5/4/00	NR	EPA 200.7
Metals Analysis							
TCLP Mercury	0.0012	mg/L	0.0004	5/8/00	5/8/00	JM	1311/245.1
TCLP RCRA8 Metals							
TCLP Arsenic	Below det lim	mg/L	0.015	5/8/00	5/8/00	CR	1311/200.7
TCLP Barium	0.0070	mg/L	0.005	5/8/00	5/8/00	CR	1311/200.7
TCLP Cadmium	Below det lim	mg/L	0.005	5/8/00	5/8/00	CR	1311/200.7
TCLP Chromium	0.080	mg/L	0.005	5/8/00	5/8/00	CR	1311/200.7
TCLP Lead	Below det lim	mg/L	0.010	5/8/00	5/8/00	CR	1311/200.7
TCLP Selenium	0.0710	mg/L	0.015	5/8/00	5/8/00	CR	1311/200.7
TCLP Silver	Below det lim	mg/L	0.010	5/8/00	5/8/00	CR	1311/200.7
Total RCRA8 Metals							
Total Arsenic	12.3	mg/Kg	2.96	5/8/00	5/8/00	CR	EPA 200.7
Total Barium	569	mg/Kg	0.986	5/8/00	5/8/00	CR	EPA 200.7
Total Cadmium	806	mg/Kg	0.986	5/8/00	5/8/00	CR	EPA 200.7
Total Chromium	1,190	mg/Kg	0.986	5/8/00	5/8/00	CR	EPA 200.7
Total Lead	1,320	mg/Kg	1.97	5/8/00	5/8/00	CR	EPA 200.7
Total Selenium	17.4	mg/Kg	2.96	5/8/00	5/8/00	CR	EPA 200.7
Total Silver	10.5	mg/Kg	1.97	5/8/00	5/8/00	CR	EPA 200.7
Total Mercury	Below det lim	mg/Kg	0.211	5/5/00	5/5/00	JM	EPA 245.1
TCLP/SPLP Preparation							
TCLP Extraction for Metals	Completed			5/4/00	5/4/00	JM	SW846 1311
% Solids	84.7	%		5/6/00	5/8/00	EP	EPA 160.3

Close File

Lab ID No: AB85382
Client Id: LTM-09

Collection Date: 5/2/00
Matrix: Soil

Parameter	Results	Units	Reporting Limit	Start Date	End Date	Analyst	Method

Reviewed by:

Quality Service/Quality Assurance Depts.

Validated by:

President/Laboratory Director

5/8/00

Close File

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

Laboratory Report Supplement
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QAMS 004/80	Guidelines and Specifications for Preparing Quality Assurance Program Plans, USEPA Office of Monitoring System and Quality Assurance
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Acronyms & Abbreviations

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CMR	Code of Massachusetts Regulations	PID	Photo Ionization Detector
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DO	Dissolved Oxygen	RSD	Relative Standard Deviation
EPA	Environmental Protection Agency	SM	Standard Method
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FID	Flame Ionization Detector	SW	Solid Waste
GC	Gas Chromatograph	THM	Trihalomethane(s)
GC / MS	Gas Chromatograph / Mass Spectrometer	TOC	Total Organic Carbon
ICP	Inductively Coupled Plasma	TOX	Total Organic Halogen
Id	Identification	TPH	Total Petroleum Hydrocarbons
MCL	Maximum Contaminant Level	VOC	Volatile Organic Compound
MDL	Minimum Detection Limit	VPH	Volatile Petroleum Hydrocarbons

Close File

SPECTRUM ANALYTICAL, INC.
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DI	De-ionized	R	Recovery (%R: Percent Recovery)
DO	Dissolved Oxygen	RSD	Relative Standard Deviation
EPA	Environmental Protection Agency	SM	Standard Method
EPH	Extractable Petroleum Hydrocarbons	SR	Surrogate Recovery (%SR)
FID	Flame Ionization Detector	SW	Solid Waste
GC	Gas Chromatograph	THM	Trihalomethane(s)
GC / MS	Gas Chromatograph / Mass Spectrometer	TOC	Total Organic Carbon
ICP	Inductively Coupled Plasma	TOX	Total Organic Halogen
Id	Identification	TPH	Total Petroleum Hydrocarbons
MCL	Maximum Contaminant Level	VOC	Volatile Organic Compound
MDL	Minimum Detection Limit	VPH	Volatile Petroleum Hydrocarbons

Close File

0502-1732

CHAIN OF CUSTODY RECORD

SPECTRUM ANALYTICAL, INC.

Page 1 of 2

Special Handling:
- ☐ Standard TAT - 7 to 10 business days
- ☒ Rush TAT - Date Needed: 5/5/00
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Report To: RMT, INC
100 Verdae Blvd
Greenville, SC

Project Mgr.: Mark Shaff

Invoice To: RMT, INC

P.O. No.: 998.39 RQN: 2958

Project No.: 998.39
Site Name: MTD / Columbia
Location: Westfield State: MA
Sampler(s): C. Kline

1=$Na_2S_2O_3$ 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid
8=CH_3OH 9= $NaHSO_4$ 10= 11=

DW=Drinking Water GW=Groundwater WW=Wastewater
SW= Surface Water SO=Soil SL=Sludge O=Oil A=Air
X1= X2= X3=

G=Grab C=Composite

Lab Id:	Sample Id:	Date:	Time:	Type	Matrix	Preservative	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	TCLP Arsenic	TCLP Barium	TCLP Cadmium	TCLP Chromium	TCLP Lead	TCLP Selenium	TCLP Silver	TCLP Mercury	Total RCRA	Notes: TCLP RCRA 8 METALS
AB 85582	LTM-09	5/2/00	1530	C	S			2											X	
AB																				
AB																				
AB																				
AB																				
AB																				
AB																				
AB																				
AB																				
AB																				

Additional Instructions: Please Call Chris @ 312-925-2296
Total RCRA 8 added 5/4 (KO)

☒ Fax results when available to (847) 281-0288

Relinquished By:	Received By:	Date:	Time:
		5/2/00	1540

Close File

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

Massachusetts Certification # M-MA138
Rhode Island # 98 Maine # MA138
Florida # E87600 / 87562
New Hampshire # 2538
Connecticut # PH-0777
New York # 11393

RMT, Inc
100 Verdae Blvd.
Greenville, SC 29607

5/8/00

Attn: Mark Shoaf

Client Project Number: 998.40 **Location:** MTD Columbia - Westfield, MA

Laboratory ID	Client Sample ID	Analyses Requested
AB85781	LTM-10	TCLP Extraction for Metals
		Metals Digestion on Leachate
		Mercury Digestion on Leachate
		TCLP RCRA8 Metals
		TCLP Mercury
AB85782	LCON-04	TCLP Extraction for Metals
		Metals Digestion on Leachate
		Mercury Digestion on Leachate
		TCLP RCRA8 Metals
		TCLP Mercury

I attest that all information contained within this report has been reviewed for accuracy and checked against all quality control requirements outlined in each applicable method including any data obtained from a subcontract laboratory.

Authorized by:

Hanibal C. Tayeh
President/Laboratory Director

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24 Tobey Road • Bloomfield, Connecticut 06002 • 860-242-6294 • Fax 860-242-4012

Close File

SPECTRUM ANALYTICAL, INC.

Laboratory Report

Location: MTD Columbia - Westfield, MA
Client: RMT
Lab ID No: AB85781
Client Id: LTM-10

Client Project No: 998.40
Submittal Date: 5/4/00
Collection Date: 5/4/00
Matrix: Soil

Parameter	Results	Units	Reporting Limit	Start Date	End Date	Analyst	Method
Metals Preparation							
Mercury Digestion on Leachate	Completed			5/6/00	5/6/00	YV	EPA 245.1
Metals Digestion on Leachate	Completed			5/6/00	5/6/00	YV	EPA 200.7
Metals Analysis							
TCLP Mercury	Below det lim	mg/L	0.0004	5/8/00	5/8/00	JM	1311/245.1
TCLP RCRA8 Metals							
TCLP Arsenic	Below det lim	mg/L	0.015	5/8/00	5/8/00	CR	1311/200.7
TCLP Barium	0.008	mg/L	0.005	5/8/00	5/8/00	CR	1311/200.7
TCLP Cadmium	Below det lim	mg/L	0.005	5/8/00	5/8/00	CR	1311/200.7
TCLP Chromium	1.34	mg/L	0.005	5/8/00	5/8/00	CR	1311/200.7
TCLP Lead	Below det lim	mg/L	0.010	5/8/00	5/8/00	CR	1311/200.7
TCLP Selenium	0.029	mg/L	0.015	5/8/00	5/8/00	CR	1311/200.7
TCLP Silver	Below det lim	mg/L	0.010	5/8/00	5/8/00	CR	1311/200.7
TCLP/SPLP Preparation							
TCLP Extraction for Metals	Completed			5/4/00	5/5/00	JM	SW846 1311

Close File

Lab ID No: AB85782
Client Id: LCON-04

Collection Date: 5/4/00
Matrix: Soil

Parameter	Results	Units	Reporting Limit	Start Date	End Date	Analyst	Method
Metals Preparation							
Mercury Digestion on Leachate	Completed			5/6/00	5/6/00	YV	EPA 245.1
Metals Digestion on Leachate	Completed			5/6/00	5/6/00	YV	EPA 200.7
Metals Analysis							
TCLP Mercury	Below det lim	mg/L	0.0004	5/8/00	5/8/00	JM	1311/245.1
TCLP RCRA8 Metals							
TCLP Arsenic	Below det lim	mg/L	0.015	5/8/00	5/8/00	CR	1311/200.7
TCLP Barium	0.127	mg/L	0.005	5/8/00	5/8/00	CR	1311/200.7
TCLP Cadmium	0.007	mg/L	0.005	5/8/00	5/8/00	CR	1311/200.7
TCLP Chromium	0.008	mg/L	0.005	5/8/00	5/8/00	CR	1311/200.7
TCLP Lead	Below det lim	mg/L	0.010	5/8/00	5/8/00	CR	1311/200.7
TCLP Selenium	Below det lim	mg/L	0.015	5/8/00	5/8/00	CR	1311/200.7
TCLP Silver	Below det lim	mg/L	0.010	5/8/00	5/8/00	CR	1311/200.7
TCLP/SPLP Preparation							
TCLP Extraction for Metals	Completed			5/4/00	5/5/00	JM	SW846 1311

Reviewed by:

Quality Service/Quality Assurance Depts.

Validated by:

President/Laboratory Director

5/8/00

Close File

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

Laboratory Report Supplement
References

SW 846	Test Methods for Evaluating Solid Waste. Third edition, 1998
40 CFR 136	Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act
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EPA 600/4-88/039	Method for the Determination of Organic Compounds in Drinking Water
CT ETPH	Analysis of Extractable Total Petroleum Hydrocarbons (ETPH)
MADEP EPH	Method for the Determination of Extractable Petroleum Hydrocarbons (EPH)
MADEP VPH	Method for the Determination of Volatile Petroleum Hydrocarbons (VPH)
QAMS 004/80	Guidelines and Specifications for Preparing Quality Assurance Program Plans, USEPA Office of Monitoring System and Quality Assurance
GC-D-52-77	Oil Spill Identification System

Acronyms & Abbreviations

AA	Atomic Absorption	MS	Matrix Spike
ASTM	American Society for Testing and Materials	MSD	Matrix Spike Duplicate
BOD	Biological Oxygen Demand	NTU	Nephelometric Turbidity Units
°C	degree(s) Celsius	PAHs	Polynuclear Aromatic Hydrocarbons
COD	Chemical Oxygen Demand	PCBs	Polychlorinated Biphenyls
CMR	Code of Massachusetts Regulations	PID	Photo Ionization Detector
DEP	Department of Environmental Protection	PQL	Practical Quantitation Limit
DI	De-ionized	R	Recovery (%R: Percent Recovery)
DO	Dissolved Oxygen	RSD	Relative Standard Deviation
EPA	Environmental Protection Agency	SM	Standard Method
EPH	Extractable Petroleum Hydrocarbons	SR	Surrogate Recovery (%SR)
FID	Flame Ionization Detector	SW	Solid Waste
GC	Gas Chromatograph	THM	Trihalomethane(s)
GC / MS	Gas Chromatograph / Mass Spectrometer	TOC	Total Organic Carbon
ICP	Inductively Coupled Plasma	TOX	Total Organic Halogen
Id	Identification	TPH	Total Petroleum Hydrocarbons
MCL	Maximum Contaminant Level	VOC	Volatile Organic Compound
MDL	Minimum Detection Limit	VPH	Volatile Petroleum Hydrocarbons

Close File

0504 1324

SPECTRUM ANALYTICAL, INC.

CHAIN OF CUSTODY RECORD

Page 1 of 1

Special Handling:
- ☐ Standard TAT - 7 to 10 business days
- ☒ Rush TAT - Date Needed: 5/8/00
- All TATs are subject to laboratory approval.
- Min. 24-hour notification is needed for rushes.
- All samples are disposed of after 60 days unless otherwise instructed.

Report To: RMT, INC
100 Verdae Blvd
Greenville, SC 29607

Project Mgr.: Steve Webb

Invoice To: RMT, INC

P.O. No.: 998.39 RQN:

Project No.: 998.39
Site Name: MTD / Columbia
Location: Westfield State: MA
Sampler(s): C. Kline

1=$Na_2S_2O_3$ 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid
8=CH_3OH 9= $NaHSO_4$ 10= 11=

DW=Drinking Water GW=Groundwater WW=Wastewater
SW= Surface Water SO=Soil SL=Sludge O=Oil A=Air
X1= X2= X3=

G=Grab C=Composite

Lab Id:	Sample Id:	Date:	Time:	Type	Matrix	Preservative	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	TCLP Arsenic	TCLP Barium	TCLP Cadmium	TCLP Chromium	TCLP Lead	TCLP Selenium	TCLP Silver	TCLP Mercury	Notes:
AB 85781	LTM-10	5/4/00	1035	C	SO			2			X	X	X	X	X	X	X	X	TCLP RCRA 8 METALS
AB 85782	LCON-04	5/4/00	11:07	C	SO			2			X	X	X	X	X	X	X	X	
AB																			
AB																			
AB																			
AB																			
AB																			
AB																			
AB																			
AB																			

Additional Instructions: Please Call
Chris Kline @ 312-925-2296
FAX To Room 2312
☒ Fax results when available to (413) 733-8652

Relinquished By:	Received By:	Date:	Time:
[signature]	[signature]	5/4/00	1155

Close File

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

Massachusetts Certification # M-MA138
Rhode Island # 98 Maine # MA138
Florida # E87600 / 87562
New Hampshire # 2538
Connecticut # PH-0777
New York # 11393

RMT, Inc
100 Verdae Blvd.
Greenville, SC 29607

5/9/00

Attn: Steve Webb

Client Project Number: 998.39 **Location:** MTD Columbia - Westfield, MA

Laboratory ID	Client Sample ID	Analyses Requested
AB86026	LTM-11	TCLP Extraction for Metals Metals Digestion on Leachate Mercury Digestion on Leachate TCLP RCRA8 Metals TCLP Mercury

I attest that all information contained within this report has been reviewed for accuracy and checked against all quality control requirements outlined in each applicable method including any data obtained from a subcontract laboratory.

Authorized by:

Hanibal C. Tayeh
President/Laboratory Director

ENVIRONMENTAL ANALYSES

11 Almgren Drive • Agawam, Massachusetts 01001 • 1-800-789-9115 • 413-789-9018 • Fax 413-789-4076
24 Tobey Road • Bloomfield, Connecticut 06002 • 860-242-6294 • Fax 860-242-4012

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SPECTRUM ANALYTICAL, INC.

Laboratory Report

Location: MTD Columbia - Westfield, MA
Client: RMT
Lab ID No: AB86026
Client Id: LTM-11

Client Project No: 998.39
Submittal Date: 5/5/00
Collection Date: 5/5/00
Matrix: Soil

Parameter	Results	Units	Reporting Limit	Start Date	End Date	Analyst	Method
Metals Preparation							
Mercury Digestion on Leachate	Completed			5/9/00	5/9/00	YV	EPA 245.1
Metals Digestion on Leachate	Completed			5/9/00	5/9/00	YV	EPA 200.7
Metals Analysis							
TCLP Mercury	Below det lim	mg/L	0.0004	5/9/00	5/9/00	JM	1311/245.1
TCLP RCRA8 Metals							
TCLP Arsenic	0.0160	mg/L	0.015	5/9/00	5/9/00	CR	1311/200.7
TCLP Barium	0.0170	mg/L	0.005	5/9/00	5/9/00	CR	1311/200.7
TCLP Cadmium	Below det lim	mg/L	0.005	5/9/00	5/9/00	CR	1311/200.7
TCLP Chromium	0.135	mg/L	0.005	5/9/00	5/9/00	CR	1311/200.7
TCLP Lead	Below det lim	mg/L	0.010	5/9/00	5/9/00	CR	1311/200.7
TCLP Selenium	0.0370	mg/L	0.015	5/9/00	5/9/00	CR	1311/200.7
TCLP Silver	Below det lim	mg/L	0.010	5/9/00	5/9/00	CR	1311/200.7
TCLP/SPLP Preparation							
TCLP Extraction for Metals	Completed			5/8/00	5/9/00	JM	SW846 1311

Reviewed by:

Quality Service/Quality Assurance Depts.

Validated by:

President/Laboratory Director

5/10/00

Close File

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

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References

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MADEP EPH	Method for the Determination of Extractable Petroleum Hydrocarbons (EPH)
MADEP VPH	Method for the Determination of Volatile Petroleum Hydrocarbons (VPH)
QAMS 004/80	Guidelines and Specifications for Preparing Quality Assurance Program Plans, USEPA Office of Monitoring System and Quality Assurance
GC-D-52-77	Oil Spill Identification System

Acronyms & Abbreviations

AA	Atomic Absorption	MS	Matrix Spike
ASTM	American Society for Testing and Materials	MSD	Matrix Spike Duplicate
BOD	Biological Oxygen Demand	NTU	Nephelometric Turbidity Units
°C	degree(s) Celsius	PAHs	Polynuclear Aromatic Hydrocarbons
COD	Chemical Oxygen Demand	PCBs	Polychlorinated Biphenyls
CMR	Code of Massachusetts Regulations	PID	Photo Ionization Detector
DEP	Department of Environmental Protection	PQL	Practical Quantitation Limit
DI	De-ionized	R	Recovery (%R: Percent Recovery)
DO	Dissolved Oxygen	RSD	Relative Standard Deviation
EPA	Environmental Protection Agency	SM	Standard Method
EPH	Extractable Petroleum Hydrocarbons	SR	Surrogate Recovery (%SR)
FID	Flame Ionization Detector	SW	Solid Waste
GC	Gas Chromatograph	THM	Trihalomethane(s)
GC / MS	Gas Chromatograph / Mass Spectrometer	TOC	Total Organic Carbon
ICP	Inductively Coupled Plasma	TOX	Total Organic Halogen
Id	Identification	TPH	Total Petroleum Hydrocarbons
MCL	Maximum Contaminant Level	VOC	Volatile Organic Compound
MDL	Minimum Detection Limit	VPH	Volatile Petroleum Hydrocarbons

Close File

0505 1515 RC

SPECTRUM ANALYTICAL, INC.

CHAIN OF CUSTODY RECORD

Page 1 of 1

Special Handling:
- ☐ Standard TAT - 7 to 10 business days
- ☒ Rush TAT - Date Needed: _____
- All TATs are subject to laboratory approval.
- Min. 24-hour notification is needed for rushes.
- All samples are disposed of after 60 days unless otherwise instructed.

Report To: RMT, INC
100 Verdae Blvd
Greenville, SC

Project Mgr.: Steve Webb

Invoice To: RMT, INC

P.O. No.: 998.39 RQN: _____

Project No.: 998.39
Site Name: MTD / Columbia
Location: Westfield State: MA
Sampler(s): C. Kline

1=$Na_2S_2O_3$ 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid
8=CH_3OH 9= $NaHSO_4$ 10= _____ 11= _____

DW=Drinking Water GW=Groundwater WW=Wastewater
SW= Surface Water SO=Soil SL=Sludge O=Oil A=Air
X1= _____ X2= _____ X3= _____

G=Grab C=Composite

Lab Id:	Sample Id:	Date:	Time:	Type	Matrix	Preservative	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic		TCLP Arsenic	TCLP Barium	TCLP Cadmium	TCLP Chromium	TCLP Lead	TCLP Selenium	TCLP Silver	TCLP Mercury	Notes:
AB 86026	LTM-11	5/5/00	1330	C	SO			2				X	X	X	X	X	X	X	X	TCLP RCRA 8 metals
AB																				
AB																				
AB																				
AB																				
AB																				
AB																				
AB																				
AB																				
AB																				

Additional Instructions: Please Call Chris Kline with Analysis FAX TO Hotel Room 2312

☒ Fax results when available to (413) 733-8652

Relinquished By:	Received By:	Date:	Time:
[signature]	[signature]	5/5/00	1435

Close File

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

Massachusetts Certification # M-MA138
Rhode Island # 98 Maine # MA138
Florida # E87600 / 87562
New Hampshire # 2538
Connecticut # PH-0777
New York # 11393

RMT, Inc
100 Verdae Blvd.
Greenville, SC 29607

5/10/00

Attn: Steve Webb

Client Project Number: 998.39 **Location:** MTD Columbia - Westfield, MA

Laboratory ID	Client Sample ID	Analyses Requested
AB86056	LTM-12	TCLP Extraction for Metals
		Metals Digestion on Leachate
		Mercury Digestion on Leachate
		TCLP RCRA8 Metals
		TCLP Mercury

I attest that all information contained within this report has been reviewed for accuracy and checked against all quality control requirements outlined in each applicable method including any data obtained from a subcontract laboratory.

Authorized by:

Hanibal C. Tayeh
President/Laboratory Director

ENVIRONMENTAL ANALYSES

11 Almgren Drive • Agawam, Massachusetts 01001 • 1-800-789-9115 • 413-789-9018 • Fax 413-789-4076
24 Tobey Road • Bloomfield, Connecticut 06002 • 860-242-6294 • Fax 860-242-4012

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SPECTRUM ANALYTICAL, INC.

Laboratory Report

Location: MTD Columbia - Westfield, MA
Client: RMT
Lab ID No: AB86056
Client Id: LTM-12

Client Project No: 998.39
Submittal Date: 5/6/00
Collection Date: 5/6/00
Matrix: Soil

Parameter	Results	Units	Reporting Limit	Start Date	End Date	Analyst	Method
Metals Preparation							
Mercury Digestion on Leachate	Completed			5/9/00	5/9/00	YV	EPA 245.1
Metals Digestion on Leachate	Completed			5/9/00	5/9/00	YV	EPA 200.7
Metals Analysis							
TCLP Mercury	Below det lim	mg/L	0.0004	5/9/00	5/9/00	JM	1311/245.1
TCLP RCRA8 Metals							
TCLP Arsenic	Below det lim	mg/L	0.015	5/10/00	5/10/00	CR	1311/200.7
TCLP Barium	0.0205	mg/L	0.005	5/10/00	5/10/00	CR	1311/200.7
TCLP Cadmium	Below det lim	mg/L	0.005	5/10/00	5/10/00	CR	1311/200.7
TCLP Chromium	0.0700	mg/L	0.005	5/10/00	5/10/00	CR	1311/200.7
TCLP Lead	Below det lim	mg/L	0.010	5/10/00	5/10/00	CR	1311/200.7
TCLP Selenium	0.0205	mg/L	0.015	5/10/00	5/10/00	CR	1311/200.7
TCLP Silver	Below det lim	mg/L	0.010	5/10/00	5/10/00	CR	1311/200.7
TCLP/SPLP Preparation							
TCLP Extraction for Metals	Completed			5/8/00	5/9/00	JM	SW846 1311

Reviewed by:

Quality Service/Quality Assurance Depts.

Validated by:

President/Laboratory Director

5/10/00

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SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

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SW 846	Test Methods for Evaluating Solid Waste. Third edition, 1998
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EPA 600/4-82-057	Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater
EPA 600/4-85/056	Choosing Cost-Effective QA/QC Programs for Chemical Analysis
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MADEP EPH	Method for the Determination of Extractable Petroleum Hydrocarbons (EPH)
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ASTM	American Society for Testing and Materials	MSD	Matrix Spike Duplicate
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°C	degree(s) Celsius	PAHs	Polynuclear Aromatic Hydrocarbons
COD	Chemical Oxygen Demand	PCBs	Polychlorinated Biphenyls
CMR	Code of Massachusetts Regulations	PID	Photo Ionization Detector
DEP	Department of Environmental Protection	PQL	Practical Quantitation Limit
DI	De-ionized	R	Recovery (%R: Percent Recovery)
DO	Dissolved Oxygen	RSD	Relative Standard Deviation
EPA	Environmental Protection Agency	SM	Standard Method
EPH	Extractable Petroleum Hydrocarbons	SR	Surrogate Recovery (%SR)
FID	Flame Ionization Detector	SW	Solid Waste
GC	Gas Chromatograph	THM	Trihalomethane(s)
GC / MS	Gas Chromatograph / Mass Spectrometer	TOC	Total Organic Carbon
ICP	Inductively Coupled Plasma	TOX	Total Organic Halogen
Id	Identification	TPH	Total Petroleum Hydrocarbons
MCL	Maximum Contaminant Level	VOC	Volatile Organic Compound
MDL	Minimum Detection Limit	VPH	Volatile Petroleum Hydrocarbons

Close File

0508 0719 KG

SPECTRUM ANALYTICAL, INC.

CHAIN OF CUSTODY RECORD

Page 1 of 1

Special Handling:
- ☐ Standard TAT - 7 to 10 business days
- ☒ Rush TAT - Date Needed: 5/16/00
- All TATs are subject to laboratory approval.
- Min. 24-hour notification is needed for rushes.
- All samples are disposed of after 60 days unless otherwise instructed.

Report To: RMT, INC
100 Verdae Blvd
Greenville, SC 29607

Project Mgr.: Steve Webb

Invoice To: RMT INC

P.O. No.: 998.39 RQN: 2958

Project No.: 998.39
Site Name: MTD / Columbia
Location: Westfield State: MA
Sampler(s): C. Kline

1=$Na_2S_2O_3$ 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid
8=CH_3OH 9= $NaHSO_4$ 10= 11=

DW=Drinking Water GW=Groundwater WW=Wastewater
SW= Surface Water SO=Soil SL=Sludge O=Oil A=Air
X1= X2= X3=

G=Grab C=Composite

Lab Id:	Sample Id:	Date:	Time:	Type	Matrix	Preservative	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	TCLP Arsenic	TCLP Barium	TCLP Cadmium	TCLP Chromium	TCLP Lead	TCLP Selenium	TCLP Silver	TCLP Mercury	Notes:
AB 86056	LTM-12	5/6/00	1030	C	SO			2			X	X	X	X	X	X	X	X	TCLP RCRA 8 METALS
AB																			
AB																			
AB																			
AB																			
AB																			
AB																			
AB																			
AB																			
AB																			

Containers: # of VOA Vials, # of Amber Glass, # of Clear Glass, # of Plastic

Analyses: TCLP Arsenic, TCLP Barium, TCLP Cadmium, TCLP Chromium, TCLP Lead, TCLP Selenium, TCLP Silver, TCLP Mercury

Notes: TCLP RCRA 8 METALS

Additional Instructions: Please Call Chris Kline with analysis
FAX TO Hotel ROOM 2312

☒ Fax results when available to (413) 733-8652

Relinquished By:	Received By:	Date:	Time:
[signature]	Christina Ritter	5/6/00	1225

11 Almgren Drive · Agawam, Massachusetts 01001 · 413-789-9018 · Fax 413-789-4076

Close File

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

Massachusetts Certification # M-MA138
Rhode Island # 98 Maine # MA138
Florida # E87600 / 87562
New Hampshire # 2538
Connecticut # PH-0777
New York # 11393

RMT, Inc
100 Verdae Blvd.
Greenville, SC 29607

5/12/00

Attn: Steve Webb

Client Project Number: 998.39 **Location:** MTD Columbia - Westfield, MA

Laboratory ID	Client Sample ID	Analyses Requested
AB86347	LTM-13	TCLP Extraction for Metals
		Metals Digestion on Leachate
		Mercury Digestion on Leachate
		TCLP RCRA8 Metals
		TCLP Mercury

I attest that all information contained within this report has been reviewed for accuracy and checked against all quality control requirements outlined in each applicable method including any data obtained from a subcontract laboratory.

Authorized by:

Hanibal C. Tayeh
President/Laboratory Director

ENVIRONMENTAL ANALYSES

11 Almgren Drive • Agawam, Massachusetts 01001 • 1-800-789-9115 • 413-789-9018 • Fax 413-789-4076
24 Tobey Road • Bloomfield, Connecticut 06002 • 860-242-6294 • Fax 860-242-4012

Close File

SPECTRUM ANALYTICAL, INC.

Laboratory Report

Location: MTD Columbia - Westfield, MA
Client: RMT
Lab ID No: AB86347
Client Id: LTM-13

Client Project No: 998.39
Submittal Date: 5/8/00
Collection Date: 5/8/00
Matrix: Soil

Parameter	Results	Units	Reporting Limit	Start Date	End Date	Analyst	Method
Metals Preparation							
Mercury Digestion on Leachate	Completed			5/10/00	5/10/00	YV	EPA 245.1
Metals Digestion on Leachate	Completed			5/10/00	5/10/00	YV	EPA 200.7
Metals Analysis							
TCLP Mercury	Below det lim	mg/L	0.0004	5/11/00	5/11/00	JM	1311/245.1
TCLP RCRA8 Metals							
TCLP Arsenic	Below det lim	mg/L	0.015	5/12/00	5/12/00	JLC	1311/200.7
TCLP Barium	0.0075	mg/L	0.005	5/12/00	5/12/00	JLC	1311/200.7
TCLP Cadmium	Below det lim	mg/L	0.005	5/12/00	5/12/00	JLC	1311/200.7
TCLP Chromium	0.0895	mg/L	0.005	5/12/00	5/12/00	JLC	1311/200.7
TCLP Lead	Below det lim	mg/L	0.010	5/12/00	5/12/00	JLC	1311/200.7
TCLP Selenium	0.0180	mg/L	0.015	5/12/00	5/12/00	JLC	1311/200.7
TCLP Silver	Below det lim	mg/L	0.010	5/12/00	5/12/00	JLC	1311/200.7
TCLP/SPLP Preparation							
TCLP Extraction for Metals	Completed			5/10/00	5/10/00	JM	SW846 1311

Reviewed by:

Quality Service/Quality Assurance Depts.

Validated by:

President/Laboratory Director

5/12/00

Close File

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

Laboratory Report Supplement
References

SW 846	Test Methods for Evaluating Solid Waste. Third edition, 1998
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MADEP EPH	Method for the Determination of Extractable Petroleum Hydrocarbons (EPH)
MADEP VPH	Method for the Determination of Volatile Petroleum Hydrocarbons (VPH)
QAMS 004/80	Guidelines and Specifications for Preparing Quality Assurance Program Plans, USEPA Office of Monitoring System and Quality Assurance
GC-D-52-77	Oil Spill Identification System

Acronyms & Abbreviations

AA	Atomic Absorption	MS	Matrix Spike
ASTM	American Society for Testing and Materials	MSD	Matrix Spike Duplicate
BOD	Biological Oxygen Demand	NTU	Nephelometric Turbidity Units
°C	degree(s) Celsius	PAHs	Polynuclear Aromatic Hydrocarbons
COD	Chemical Oxygen Demand	PCBs	Polychlorinated Biphenyls
CMR	Code of Massachusetts Regulations	PID	Photo Ionization Detector
DEP	Department of Environmental Protection	PQL	Practical Quantitation Limit
DI	De-ionized	R	Recovery (%R: Percent Recovery)
DO	Dissolved Oxygen	RSD	Relative Standard Deviation
EPA	Environmental Protection Agency	SM	Standard Method
EPH	Extractable Petroleum Hydrocarbons	SR	Surrogate Recovery (%SR)
FID	Flame Ionization Detector	SW	Solid Waste
GC	Gas Chromatograph	THM	Trihalomethane(s)
GC / MS	Gas Chromatograph / Mass Spectrometer	TOC	Total Organic Carbon
ICP	Inductively Coupled Plasma	TOX	Total Organic Halogen
Id	Identification	TPH	Total Petroleum Hydrocarbons
MCL	Maximum Contaminant Level	VOC	Volatile Organic Compound
MDL	Minimum Detection Limit	VPH	Volatile Petroleum Hydrocarbons

Close File

0508173

CHAIN OF CUSTODY RECORD

SPECTRUM ANALYTICAL, INC.

Page 1 of 1

Special Handling:
- ☐ Standard TAT - 7 to 10 business days
- ☒ Rush TAT - Date Needed: 5/12/00
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- Min. 24-hour notification is needed for rushes.
- All samples are disposed of after 60 days unless otherwise instructed.

Report To: RMT, INC
100 Verdae Blvd
Greenville, SC 29607

Project Mgr.: Steve Webb

Invoice To: RMT, INC

P.O. No.: 998.39 RQN: 2958

Project No.: 998.39
Site Name: MTD / Columbia
Location: Westfield State: MA
Sampler(s): C. Kline

1=$Na_2S_2O_3$ 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid
8=CH_3OH 9= $NaHSO_4$ 10= _____ 11= _____

DW=Drinking Water GW=Groundwater WW=Wastewater
SW= Surface Water SO=Soil SL=Sludge O=Oil A=Air
X1= _____ X2= _____ X3= _____

G=Grab C=Composite

Lab Id:	Sample Id:	Date:	Time:	Type	Matrix	Preservative	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	TCLP Barium	TCLP Arsenic	TCLP Cadmium	TCLP Chromium	TCLP Lead	TCLP Selenium	TCLP Silver	TCLP Mercury	Notes:
AB 86317	LTM-13	5/8/00		C	SO			2			X	X	X	X	X	X	X	X	TCLP RCRA 8 Metals
AB																			
AB																			
AB																			
AB																			
AB																			
AB																			
AB																			
AB																			
AB																			

Additional Instructions: Please Call Chris @ 312-925-2296
Fax To Hold Room 2312

☒ Fax results when available to (413) 733-8652

Relinquished By:	Received By:	Date:	Time:
[signature]	[signature]	5/8/00	1610

Close File

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

Massachusetts Certification # M-MA138
Rhode Island # 98 Maine # MA138
Florida # E87600 / 87562
New Hampshire # 2538
Connecticut # PH-0777
New York # 11393

RMT, Inc
100 Verdae Blvd.
Greenville, SC 29607

5/15/00

Attn: Mark Shoaf

Client Project Number: 998.39 **Location:** MTD Columbia - Westfield, MA

Laboratory ID	Client Sample ID	Analyses Requested
AB87084	LTM-14	TCLP Extraction for Metals Metals Digestion on Leachate Mercury Digestion on Leachate TCLP RCRA8 Metals TCLP Mercury

I attest that all information contained within this report has been reviewed for accuracy and checked against all quality control requirements outlined in each applicable method including any data obtained from a subcontract laboratory.

Authorized by:

Hanibal C. Tayeh
President/Laboratory Director

ENVIRONMENTAL ANALYSES
11 Almgren Drive • Agawam, Massachusetts 01001 • 1-800-789-9115 • 413-789-9018 • Fax 413-789-4076
24 Tobey Road • Bloomfield, Connecticut 06002 • 860-242-6294 • Fax 860-242-4012

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SPECTRUM ANALYTICAL, INC.

Laboratory Report

Location: MTD Columbia - Westfield, MA
Client: RMT
Lab ID No: AB87084
Client Id: LTM-14

Client Project No: 998.39
Submittal Date: 5/11/00
Collection Date: 5/11/00
Matrix: Soil

Parameter	Results	Units	Reporting Limit	Start Date	End Date	Analyst	Method
Metals Preparation							
Mercury Digestion on Leachate	Completed			5/13/00	5/13/00	YV	EPA 245.1
Metals Digestion on Leachate	Completed			5/13/00	5/13/00	YV	EPA 200.7
Metals Analysis							
TCLP Mercury	Below det lim	mg/L	0.0004	5/15/00	5/15/00	JM	1311/245.1
TCLP RCRA8 Metals							
TCLP Arsenic	0.0185	mg/L	0.015	5/15/00	5/15/00	CR	1311/200.7
TCLP Barium	Below det lim	mg/L	0.010	5/15/00	5/15/00	CR	1311/200.7
TCLP Cadmium	Below det lim	mg/L	0.005	5/15/00	5/15/00	CR	1311/200.7
TCLP Chromium	0.104	mg/L	0.005	5/15/00	5/15/00	CR	1311/200.7
TCLP Lead	Below det lim	mg/L	0.010	5/15/00	5/15/00	CR	1311/200.7
TCLP Selenium	0.0290	mg/L	0.015	5/15/00	5/15/00	CR	1311/200.7
TCLP Silver	Below det lim	mg/L	0.010	5/15/00	5/15/00	CR	1311/200.7
TCLP/SPLP Preparation							
TCLP Extraction for Metals	Completed			5/12/00	5/12/00	JM	SW846 1311

Reviewed by:

Quality Service/Quality Assurance Depts.

Validated by:

President/Laboratory Director

5/15/00

Close File

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

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References

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EPA 600/4-85/056	Choosing Cost-Effective QA/QC Programs for Chemical Analysis
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MADEP EPH	Method for the Determination of Extractable Petroleum Hydrocarbons (EPH)
MADEP VPH	Method for the Determination of Volatile Petroleum Hydrocarbons (VPH)
QAMS 004/80	Guidelines and Specifications for Preparing Quality Assurance Program Plans, USEPA Office of Monitoring System and Quality Assurance
GC-D-52-77	Oil Spill Identification System

Acronyms & Abbreviations

AA	Atomic Absorption	MS	Matrix Spike
ASTM	American Society for Testing and Materials	MSD	Matrix Spike Duplicate
BOD	Biological Oxygen Demand	NTU	Nephelometric Turbidity Units
°C	degree(s) Celsius	PAHs	Polynuclear Aromatic Hydrocarbons
COD	Chemical Oxygen Demand	PCBs	Polychlorinated Biphenyls
CMR	Code of Massachusetts Regulations	PID	Photo Ionization Detector
DEP	Department of Environmental Protection	PQL	Practical Quantitation Limit
DI	De-ionized	R	Recovery (%R: Percent Recovery)
DO	Dissolved Oxygen	RSD	Relative Standard Deviation
EPA	Environmental Protection Agency	SM	Standard Method
EPH	Extractable Petroleum Hydrocarbons	SR	Surrogate Recovery (%SR)
FID	Flame Ionization Detector	SW	Solid Waste
GC	Gas Chromatograph	THM	Trihalomethane(s)
GC / MS	Gas Chromatograph / Mass Spectrometer	TOC	Total Organic Carbon
ICP	Inductively Coupled Plasma	TOX	Total Organic Halogen
Id	Identification	TPH	Total Petroleum Hydrocarbons
MCL	Maximum Contaminant Level	VOC	Volatile Organic Compound
MDL	Minimum Detection Limit	VPH	Volatile Petroleum Hydrocarbons

Close File

0511 1542 KG

SPECTRUM ANALYTICAL, INC.

CHAIN OF CUSTODY RECORD

Page 1 of 1

Special Handling:
- ☐ Standard TAT - 7 to 10 business days
- ☒ Rush TAT - Date Needed: 5/15/00
- All TATs are subject to laboratory approval.
- Min. 24-hour notification is needed for rushes.
- All samples are disposed of after 60 days unless otherwise instructed.

Report To: RMT, INC
100 Verdae Blvd
Greenville, SC

Project Mgr.: Steve Webb

Invoice To: RMT

P.O. No.: 998.39 RQN: 2958

Project No.: 998.39
Site Name: MTD / Columbia
Location: Westfield State: MA
Sampler(s): C. Kline

1=$Na_2S_2O_3$ 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid
8=CH_3OH 9= $NaHSO_4$ 10= 11=

DW=Drinking Water GW=Groundwater WW=Wastewater
SW= Surface Water SO=Soil SL=Sludge O=Oil A=Air
X1= X2= X3=

G=Grab C=Composite

Lab Id:	Sample Id:	Date:	Time:	Type	Matrix	Preservative	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	TCLP Arsenic	TCLP Barium	TCLP Cadmium	TCLP Chromium	TCLP Lead	TCLP Selenium	TCLP Silver	TCLP Mercury	Notes:
AB 87084	LTM-14	5/11/00	1455	C	SO			X			X	X	X	X	X	X	X	X	TCLP RCRA 8 METALS
AB																			
AB																			
AB																			
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AB																			
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AB																			
AB																			

Containers: | Analyses: | Notes:

Additional Instructions: Please FAX To Hotel Room 2312

☒ Fax results when available to (413) 733-8652

Relinquished By:	Received By:	Date:	Time:
		5/11/00	1537

11 Almgren Drive • Agawam, Massachusetts 01001 • 413-789-9018 • Fax 413-789-4076

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SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

Massachusetts Certification # M-MA138
Rhode Island # 98 Maine # MA138
Florida # E87600 / 87562
New Hampshire # 2538
Connecticut # PH-0777
New York # 11393

RMT, Inc
100 Verdae Blvd.
Greenville, SC 29607

5/18/00

Attn: Mark Shoaf

Client Project Number: 998.39 **Location:** MTD Columbia - Westfield, MA

Laboratory ID	Client Sample ID	Analyses Requested
AB87280	LCON-08	TCLP Extraction for Metals Metals Digestion on Leachate Mercury Digestion on Leachate TCLP RCRA8 Metals TCLP Mercury
AB87281	LTM-15	TCLP Extraction for Metals Metals Digestion on Leachate Mercury Digestion on Leachate TCLP RCRA8 Metals TCLP Mercury

I attest that all information contained within this report has been reviewed for accuracy and checked against all quality control requirements outlined in each applicable method including any data obtained from a subcontract laboratory.

Authorized by:

Hanibal C. Tayeh
President/Laboratory Director

ENVIRONMENTAL ANALYSES

11 Almgren Drive • Agawam, Massachusetts 01001 • 1-800-789-9115 • 413-789-9018 • Fax 413-789-4076
24 Tobey Road • Bloomfield, Connecticut 06002 • 860-242-6294 • Fax 860-242-4012

Close File

SPECTRUM ANALYTICAL, INC.

Laboratory Report

Location: MTD Columbia - Westfield, MA
Client: RMT

Client Project No: 998.39
Submittal Date: 5/12/00

Lab ID No: AB87280 **Client Id:** LCON-08 **Collection Date:** 5/12/00 **Matrix:** Soil

Parameter	Results	Units	Reporting Limit	Start Date	End Date	Analyst	Method
Metals Preparation							
Mercury Digestion on Leachate	Completed			5/15/00	5/15/00	YV	EPA 245.1
Metals Digestion on Leachate	Completed			5/15/00	5/15/00	YV	EPA 200.7
Metals Analysis							
TCLP Mercury	Below det lim	mg/L	0.0004	5/15/00	5/15/00	JM	1311/245.1
TCLP Arsenic	Below det lim	mg/L	0.015	5/15/00	5/15/00	CR	1311/200.7
TCLP Barium	0.254	mg/L	0.005	5/15/00	5/15/00	CR	1311/200.7
TCLP Cadmium	0.0191	mg/L	0.005	5/15/00	5/15/00	CR	1311/200.7
TCLP Chromium	0.0110	mg/L	0.005	5/15/00	5/15/00	CR	1311/200.7
TCLP Lead	Below det lim	mg/L	0.010	5/15/00	5/15/00	CR	1311/200.7
TCLP Selenium	Below det lim	mg/L	0.015	5/15/00	5/15/00	CR	1311/200.7
TCLP Silver	Below det lim	mg/L	0.010	5/15/00	5/15/00	CR	1311/200.7
TCLP/SPLP Preparation							
TCLP Extraction for Metals	Completed			5/12/00	5/13/00	JM	SW846 1311

Lab ID No: AB87281 **Client Id:** LTM-15 **Collection Date:** 5/12/00 **Matrix:** Soil

Parameter	Results	Units	Reporting Limit	Start Date	End Date	Analyst	Method
Metals Preparation							
Mercury Digestion on Leachate	Completed			5/15/00	5/15/00	YV	EPA 245.1
Metals Digestion on Leachate	Completed			5/15/00	5/15/00	YV	EPA 200.7
Metals Analysis							
TCLP Mercury	Below det lim	mg/L	0.0004	5/15/00	5/15/00	JM	1311/245.1
TCLP Arsenic	Below det lim	mg/L	0.015	5/15/00	5/15/00	CR	1311/200.7
TCLP Barium	0.0290	mg/L	0.005	5/15/00	5/15/00	CR	1311/200.7
TCLP Cadmium	Below det lim	mg/L	0.005	5/15/00	5/15/00	CR	1311/200.7
TCLP Chromium	0.0560	mg/L	0.005	5/15/00	5/15/00	CR	1311/200.7
TCLP Lead	Below det lim	mg/L	0.010	5/15/00	5/15/00	CR	1311/200.7
TCLP Selenium	0.0240	mg/L	0.015	5/15/00	5/15/00	CR	1311/200.7
TCLP Silver	Below det lim	mg/L	0.010	5/15/00	5/15/00	CR	1311/200.7
TCLP/SPLP Preparation							
TCLP Extraction for Metals	Completed			5/12/00	5/13/00	JM	SW846 1311

Reviewed by:

Quality Service/Quality Assurance Depts.

Validated by:

President/Laboratory Director

5/18/00

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SPECTRUM ANALYTICAL, INC.
Featuring
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CMR	Code of Massachusetts Regulations	PID	Photo Ionization Detector
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DI	De-ionized	R	Recovery (%R: Percent Recovery)
DO	Dissolved Oxygen	RSD	Relative Standard Deviation
EPA	Environmental Protection Agency	SM	Standard Method
EPH	Extractable Petroleum Hydrocarbons	SR	Surrogate Recovery (%SR)
FID	Flame Ionization Detector	SW	Solid Waste
GC	Gas Chromatograph	THM	Trihalomethane(s)
GC / MS	Gas Chromatograph / Mass Spectrometer	TOC	Total Organic Carbon
ICP	Inductively Coupled Plasma	TOX	Total Organic Halogen
Id	Identification	TPH	Total Petroleum Hydrocarbons
MCL	Maximum Contaminant Level	VOC	Volatile Organic Compound
MDL	Minimum Detection Limit	VPH	Volatile Petroleum Hydrocarbons

Close File

0512 1447

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

CHAIN OF CUSTODY RECORD

Page 1 of 1

Special Handling:
- ☐ Standard TAT - 7 to 10 business days
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- All TATs are subject to laboratory approval.
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Report To: RMT, INC
100 Verdae Blvd
Greenville, SC 29607

Project Mgr.: Steve Webb

Invoice To: RMT, INC

P.O. No.: 998.39 RQN: 2958

Project No.: 998.39
Site Name: MTD / COLUMBIA
Location: Westfield State: MA
Sampler(s): C. Kline

1=$Na_2S_2O_3$ 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid
7=CH_3OH 8=$NaHSO_4$ 9=_____ 10=_____

DW=Drinking Water GW=Groundwater WW=Wastewater
SW= Surface Water SO=Soil SL=Sludge O=Oil A=Air
X1=_____ X2=_____ X3=_____

G=Grab C=Composite

Lab Id:	Sample Id:	Date:	Time:	Type	Matrix	Preservative	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	TCLP Mercury	TCLP Arsenic	TCLP Barium	TCLP Cadmium	TCLP Chromium	TCLP Lead	TCLP Selenium	TCLP Silver	Notes:
AB 87280	LCON-08	5/12/00	1030	C	SO			~~1~~ 2			X	X	X	X	X	X	X	X	TCLP RCRA 8 METALS
AB 87281	LTM-15	5/12/00	1155	C	SO			2			X	X	X	X	X	X	X	X	
AB																			
AB																			
AB																			
AB																			
AB																			
AB																			
AB																			
AB																			

Additional Instructions: Please FAX To Chris @ Hotel

☒ Fax results when available to (413) 733-8652
☐ E-mail results when available to _____

Relinquished By:	Received By:	Date:	Time:
[signature]	Kim [signature]	5/12/00	1430

Close File

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

Massachusetts Certification # M-MA138
Rhode Island # 98 Maine # MA138
Florida # E87600 / 87562
New Hampshire # 2538
Connecticut # PH-0777
New York # 11393

RMT, Inc
100 Verdae Blvd.
Greenville, SC 29607

5/17/00

Attn: Steve Webb

Client Project Number: 998.39 **Location:** MTD Columbia - Westfield, MA

Laboratory ID	Client Sample ID	Analyses Requested
AB87372	LTM-16	TCLP Extraction for Metals Metals Digestion on Leachate Mercury Digestion on Leachate TCLP RCRA8 Metals TCLP Mercury

I attest that all information contained within this report has been reviewed for accuracy and checked against all quality control requirements outlined in each applicable method including any data obtained from a subcontract laboratory.

Authorized by:

Hanibal G. Tayeh
President/Laboratory Director

ENVIRONMENTAL ANALYSES
11 Almgren Drive • Agawam, Massachusetts 01001 • 1-800-789-9115 • 413-789-9018 • Fax 413-789-4076
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Close File

SPECTRUM ANALYTICAL, INC.

Laboratory Report

Location: MTD Columbia - Westfield, MA
Client: RMT
Lab ID No: AB87372
Client Id: LTM-16

Client Project No: 998.39
Submittal Date: 5/13/00
Collection Date: 5/13/00
Matrix: Soil

Parameter	Results	Units	Reporting Limit	Start Date	End Date	Analyst	Method
Metals Preparation							
Mercury Digestion on Leachate	Completed			5/16/00	5/16/00	YV	EPA 245.1
Metals Digestion on Leachate	Completed			5/16/00	5/16/00	YV	EPA 200.7
Metals Analysis							
TCLP Mercury	Below det lim	mg/L	0.0004	5/17/00	5/17/00	JM	1311/245.1
TCLP RCRA8 Metals							
TCLP Arsenic	Below det lim	mg/L	0.015	5/16/00	5/17/00	CR	1311/200.7
TCLP Barium	0.040	mg/L	0.005	5/16/00	5/17/00	CR	1311/200.7
TCLP Cadmium	Below det lim	mg/L	0.005	5/16/00	5/17/00	CR	1311/200.7
TCLP Chromium	0.028	mg/L	0.005	5/16/00	5/17/00	CR	1311/200.7
TCLP Lead	Below det lim	mg/L	0.010	5/16/00	5/17/00	CR	1311/200.7
TCLP Selenium	Below det lim	mg/L	0.030	5/16/00	5/17/00	CR	1311/200.7
TCLP Silver	Below det lim	mg/L	0.010	5/16/00	5/17/00	CR	1311/200.7
TCLP/SPLP Preparation							
TCLP Extraction for Metals	Completed			5/16/00	5/16/00	AP	SW846 1311

Reviewed by:

Quality Service/Quality Assurance Depts.

Validated by:

President/Laboratory Director

5/17/00

Close File

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

Laboratory Report Supplement
References

SW 846	Test Methods for Evaluating Solid Waste. Third edition, 1998
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MADEP VPH	Method for the Determination of Volatile Petroleum Hydrocarbons (VPH)
QAMS 004/80	Guidelines and Specifications for Preparing Quality Assurance Program Plans, USEPA Office of Monitoring System and Quality Assurance
GC-D-52-77	Oil Spill Identification System

Acronyms & Abbreviations

AA	Atomic Absorption	MS	Matrix Spike
ASTM	American Society for Testing and Materials	MSD	Matrix Spike Duplicate
BOD	Biological Oxygen Demand	NTU	Nephelometric Turbidity Units
°C	degree(s) Celsius	PAHs	Polynuclear Aromatic Hydrocarbons
COD	Chemical Oxygen Demand	PCBs	Polychlorinated Biphenyls
CMR	Code of Massachusetts Regulations	PID	Photo Ionization Detector
DEP	Department of Environmental Protection	PQL	Practical Quantitation Limit
DI	De-ionized	R	Recovery (%R: Percent Recovery)
DO	Dissolved Oxygen	RSD	Relative Standard Deviation
EPA	Environmental Protection Agency	SM	Standard Method
EPH	Extractable Petroleum Hydrocarbons	SR	Surrogate Recovery (%SR)
FID	Flame Ionization Detector	SW	Solid Waste
GC	Gas Chromatograph	THM	Trihalomethane(s)
GC / MS	Gas Chromatograph / Mass Spectrometer	TOC	Total Organic Carbon
ICP	Inductively Coupled Plasma	TOX	Total Organic Halogen
Id	Identification	TPH	Total Petroleum Hydrocarbons
MCL	Maximum Contaminant Level	VOC	Volatile Organic Compound
MDL	Minimum Detection Limit	VPH	Volatile Petroleum Hydrocarbons

Close File

0515 1032

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

CHAIN OF CUSTODY RECORD

Page 1 of 1

Special Handling:
- ☐ Standard TAT - 7 to 10 business days
- ☒ Rush TAT - Date Needed: 5/17/00
- All TATs are subject to laboratory approval.
- Min. 24-hour notification is needed for rushes.
- All samples are disposed of after 60 days unless otherwise instructed.

Report To: RMT, INC
100 Verdge Blvd
Greenville, SC 29607

Project Mgr.: Steve Webb

Invoice To: RMT, INC

P.O. No.: 998.39 RQN: 2958

Project No.: 998.39
Site Name: MTD/Columbia
Location: Westfield State: MA
Sampler(s): C. Kline

1=$Na_2S_2O_3$ 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid
7=CH_3OH 8=$NaHSO_4$ 9=_____ 10=_____

DW=Drinking Water GW=Groundwater WW=Wastewater
SW= Surface Water SO=Soil SL=Sludge O=Oil A=Air
X1=_____ X2=_____ X3=_____

G=Grab C=Composite

Lab Id:	Sample Id:	Date:	Time:	Type	Matrix	Preservative	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic		TCLP Arsenic	TCLP Barium	TCLP Cadmium	TCLP Chromium	TCLP Lead	TCLP Selenium	TCLP Silver	TCLP Mercury	Notes: TCLP RCRA 8 METALS
AB 87372	LTM-16	5/13/00	1445	C	SO			2												
AB																				
AB																				
AB																				
AB																				
AB																				
AB																				
AB																				
AB																				
AB																				

Additional Instructions: Please Fax Analysis to Chris Kline @ Hotel Room 2312

☒ Fax results when available to (413) 733-8652

☐ E-mail results when available to _____

Relinquished By:	Received By:	Date:	Time:
[signature]	Christina Potter	5/13/00	1515

Close File

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

Massachusetts Certification # M-MA138
Rhode Island # 98 .Maine # MA138
Florida # E87600 / 87562
New Hampshire # 2538
Connecticut # PH-0777
New York # 11393

RMT, Inc
100 Verdae Blvd.
Greenville, SC 29607

5/18/00

Attn: Steve Webb

Client Project Number: 998.39 ✓ **Location:** MTD Columbia - Westfield, MA

Laboratory ID	Client Sample ID	Analyses Requested
AB87515	LMT-17	TCLP Extraction for Metals Metals Digestion on Leachate Mercury Digestion on Leachate TCLP RCRA8 Metals TCLP Mercury

I attest that all information contained within this report has been reviewed for accuracy and checked against all quality control requirements outlined in each applicable method including any data obtained from a subcontract laboratory.

Authorized by:

Hanibal C. Tayeh
President/Laboratory Director

ENVIRONMENTAL ANALYSES

11 Almgren Drive • Agawam, Massachusetts 01001 • 1-800-789-9115 • 413-789-9018 • Fax 413-789-4076
24 Tobey Road • Bloomfield, Connecticut 06002 • 860-242-6294 • Fax 860-242-4012

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SPECTRUM ANALYTICAL, INC.

Laboratory Report

Location: MTD Columbia - Westfield, MA
Client: RMT
Lab ID No: AB87515
Client Id: LMT-17

Client Project No: 998.39
Submittal Date: 5/15/00
Collection Date: 5/15/00
Matrix: Soil

Parameter	Results	Units	Reporting Limit	Start Date	End Date	Analyst	Method
Metals Preparation							
Mercury Digestion on Leachate	Completed			5/17/00	5/17/00	JM	EPA 245.1
Metals Digestion on Leachate	Completed			5/17/00	5/17/00	JM	EPA 200.7
Metals Analysis							
TCLP Mercury	Below det lim	mg/L	0.0004	5/17/00	5/17/00	JM	1311/245.1
TCLP RCRA8 Metals							
TCLP Arsenic	Below det lim	mg/L	0.015	5/17/00	5/17/00	JM	1311/200.7
TCLP Barium	Below det lim	mg/L	0.050	5/17/00	5/17/00	JM	1311/200.7
TCLP Cadmium	Below det lim	mg/L	0.005	5/17/00	5/17/00	JM	1311/200.7
TCLP Chromium	0.041	mg/L	0.005	5/17/00	5/17/00	JM	1311/200.7
TCLP Lead	Below det lim	mg/L	0.010	5/17/00	5/17/00	JM	1311/200.7
TCLP Selenium	Below det lim	mg/L	0.030	5/17/00	5/17/00	JM	1311/200.7
TCLP Silver	Below det lim	mg/L	0.010	5/17/00	5/17/00	JM	1311/200.7
TCLP/SPLP Preparation							
TCLP Extraction for Metals	Completed			5/17/00	5/17/00	JM	SW846 1311

Reviewed by:

Quality Service/Quality Assurance Depts.

Validated by:

President/Laboratory Director

5/18/00

Close File

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

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MADEP VPH	Method for the Determination of Volatile Petroleum Hydrocarbons (VPH)
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CMR	Code of Massachusetts Regulations	PID	Photo Ionization Detector
DEP	Department of Environmental Protection	PQL	Practical Quantitation Limit
DI	De-ionized	R	Recovery (%R: Percent Recovery)
DO	Dissolved Oxygen	RSD	Relative Standard Deviation
EPA	Environmental Protection Agency	SM	Standard Method
EPH	Extractable Petroleum Hydrocarbons	SR	Surrogate Recovery (%SR)
FID	Flame Ionization Detector	SW	Solid Waste
GC	Gas Chromatograph	THM	Trihalomethane(s)
GC / MS	Gas Chromatograph / Mass Spectrometer	TOC	Total Organic Carbon
ICP	Inductively Coupled Plasma	TOX	Total Organic Halogen
Id	Identification	TPH	Total Petroleum Hydrocarbons
MCL	Maximum Contaminant Level	VOC	Volatile Organic Compound
MDL	Minimum Detection Limit	VPH	Volatile Petroleum Hydrocarbons

Close File

0515 1725

SPECTRUM ANALYTICAL, INC.

CHAIN OF CUSTODY RECORD

Page 1 of 1

Special Handling:
- ☐ Standard TAT - 7 to 10 business days
- ☒ Rush TAT - Date Needed: 5/18/03
- All TATs are subject to laboratory approval.
- Min. 24-hour notification is needed for rushes.
- All samples are disposed of after 60 days unless otherwise instructed.

Report To: RMT, INC
100 Verdae Blvd
Greenville SC 29607

Project Mgr.: Steve Webb

Invoice To: RMT, INC

P.O. No.: 998.39 RQN: 2958

Project No.: 998.39
Site Name: MTD / Columbia
Location: Westfield State: MA
Sampler(s): C. Kline

1=$Na_2S_2O_3$ 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid
8=CH_3OH 9= $NaHSO_4$ 10= 11=

DW=Drinking Water GW=Groundwater WW=Wastewater
SW= Surface Water SO=Soil SL=Sludge O=Oil A=Air
X1= X2= X3=

G=Grab C=Composite

Lab Id:	Sample Id:	Date:	Time:	Type	Matrix	Preservative	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	TCLP Arsenic	TCLP Barium	TCLP Cadmium	TCLP Chromium	TCLP Lead	TCLP Selenium	TCLP Silver	TCLP Mercury	Notes:
AB 8215	LTM-17	5/15/03	1645	C	SO			2			X	X	X	X	X	X	X	X	TCLP RCRA & METALS
AB																			
AB																			
AB																			
AB																			
AB																			
AB																			
AB																			
AB																			
AB																			

Additional Instructions: Please Call Chris & FAX ANALYSIS To Hotel Room - 2312

☒ Fax results when available to (413) 7338652

Relinquished By:	Received By:	Date:	Time:
[signature]	V. Knowles	5/15/03	1710

11 Almgren Drive • Agawam, Massachusetts 01001 • 413-789-9018 • Fax 413-789-4076

Close File

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

Massachusetts Certification # M-MA138
Rhode Island # 98 Maine # MA138
Florida # E87600 / 87562
New Hampshire # 2538
Connecticut # PH-0777
New York # 11393

RMT, Inc
100 Verdae Blvd.
Greenville, SC 29607

5/19/00

Attn: Steve Webb

Client Project Number: 998.39 **Location:** MTD Columbia - Westfield, MA

Laboratory ID	Client Sample ID	Analyses Requested
AB87741	LMT-18	TCLP Extraction for Metals Metals Digestion on Leachate Mercury Digestion on Leachate TCLP RCRA8 Metals TCLP Mercury

I attest that all information contained within this report has been reviewed for accuracy and checked against all quality control requirements outlined in each applicable method including any data obtained from a subcontract laboratory.

Authorized by:

Hanibal C. Tayeh
President/Laboratory Director

ENVIRONMENTAL ANALYSES
11 Almgren Drive • Agawam, Massachusetts 01001 • 1-800-789-9115 • 413-789-9018 • Fax 413-789-4076
24 Tobey Road • Bloomfield, Connecticut 06002 • 860-242-6294 • Fax 860-242-4012

Close File

SPECTRUM ANALYTICAL, INC.

Laboratory Report

Location: MTD Columbia - Westfield, MA
Client: RMT
Lab ID No: AB87741
Client Id: LMT-18

Client Project No: 998.39
Submittal Date: 5/16/00
Collection Date: 5/16/00
Matrix: Soil

Parameter	Results	Units	Reporting Limit	Start Date	End Date	Analyst	Method
Metals Preparation							
Mercury Digestion on Leachate	Completed			5/18/00	5/18/00	YV	EPA 245.1
Metals Digestion on Leachate	Completed			5/18/00	5/18/00	YV	EPA 200.7
Metals Analysis							
TCLP Mercury	Below det lim	mg/L	0.0004	5/19/00	5/19/00	JM	1311/245.1
TCLP RCRA8 Metals							
TCLP Arsenic	Below det lim	mg/L	0.015	5/19/00	5/19/00	JLC	1311/200.7
TCLP Barium	Below det lim	mg/L	0.005	5/19/00	5/19/00	JLC	1311/200.7
TCLP Cadmium	Below det lim	mg/L	0.005	5/19/00	5/19/00	JLC	1311/200.7
TCLP Chromium	0.030	mg/L	0.005	5/19/00	5/19/00	JLC	1311/200.7
TCLP Lead	Below det lim	mg/L	0.010	5/19/00	5/19/00	JLC	1311/200.7
TCLP Selenium	Below det lim	mg/L	0.015	5/19/00	5/19/00	JLC	1311/200.7
TCLP Silver	Below det lim	mg/L	0.010	5/19/00	5/19/00	JLC	1311/200.7
TCLP/SPLP Preparation							
TCLP Extraction for Metals	Completed			5/18/00	5/18/00	JM	SW846 1311

Reviewed by:

Quality Service/Quality Assurance Depts.

Validated by:

President/Laboratory Director

5/19/00

Close File

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

Laboratory Report Supplement
References

SW 846	Test Methods for Evaluating Solid Waste. Third edition, 1998
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EPA	Environmental Protection Agency	SM	Standard Method
EPH	Extractable Petroleum Hydrocarbons	SR	Surrogate Recovery (%SR)
FID	Flame Ionization Detector	SW	Solid Waste
GC	Gas Chromatograph	THM	Trihalomethane(s)
GC / MS	Gas Chromatograph / Mass Spectrometer	TOC	Total Organic Carbon
ICP	Inductively Coupled Plasma	TOX	Total Organic Halogen
Id	Identification	TPH	Total Petroleum Hydrocarbons
MCL	Maximum Contaminant Level	VOC	Volatile Organic Compound
MDL	Minimum Detection Limit	VPH	Volatile Petroleum Hydrocarbons

Close File

0516 16006

#40

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

CHAIN OF CUSTODY RECORD

Page 1 of 1

Special Handling:
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- ☒ Rush TAT - Date Needed: 5/19/00
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- All samples are disposed of after 60 days unless otherwise instructed.

Report To: RMT, INC
100 Verdae Blvd
Greenville, SC 29607

Project Mgr.: Steve Webb

Invoice To: RMT, INC

P.O. No.: 998.39 RQN: 2959

Project No.: 998.39
Site Name: MTD / Columbia
Location: Westfield State: MA
Sampler(s): C. Kline

1=$Na_2S_2O_3$ 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid
7=CH_3OH 8=$NaHSO_4$ 9=_____ 10=_____

DW=Drinking Water GW=Groundwater WW=Wastewater
SW= Surface Water SO=Soil SL=Sludge O=Oil A=Air
X1=_____ X2=_____ X3=_____

G=Grab C=Composite

Lab Id:	Sample Id:	Date:	Time:	Type	Matrix	Preservative	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic		TCLP ARSENIC	TCLP BARIUM	TCLP CADMIUM	TCLP CHROMIUM	TCLP LEAD	TCLP SELENIUM	TCLP SILVER	TCLP MERCURY	Notes:
AB 8774	LTM-18	5/16/00	1515	C	SO			2				X	X	X	X	X	X	X	X	TCLP RCRA 8 METALS
AB																				
AB																				
AB																				
AB																				
AB																				
AB																				
AB																				
AB																				
AB																				

Containers: | Analyses:

Additional Instructions: Please FAX ANALYSIS To Chris O Hotel Room 2312

☒ Fax results when available to (413) 733-8652

☐ E-mail results when available to _____

Relinquished By:	Received By:	Date:	Time:
Chris Kline	[illegible]	5/16/00	1545

Close File

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY
Massachusetts Certification # M-MA138
Rhode Island # 98 Maine # MA138
Florida # E87600 / 87562
New Hampshire # 2538
Connecticut # PH-0777
New York # 11393

RMT, Inc
100 Verdae Blvd.
Greenville, SC 29607

5/23/00

Attn: Mark Shoaf

Client Project Number: 998.39 **Location:** MTD Columbia - Westfield, MA

Laboratory ID	Client Sample ID	Analyses Requested
AB88399	LTM-19	TCLP Extraction for Metals Metals Digestion on Leachate Mercury Digestion on Leachate TCLP RCRA8 Metals TCLP Mercury

I attest that all information contained within this report has been reviewed for accuracy and checked against all quality control requirements outlined in each applicable method including any data obtained from a subcontract laboratory.

Authorized by:

Hanibal C. Tayeh
President/Laboratory Director

ENVIRONMENTAL ANALYSES
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24 Tobey Road • Bloomfield, Connecticut 06002 • 860-242-6294 • Fax 860-242-4012

Close File

SPECTRUM ANALYTICAL, INC.

Laboratory Report

Location: MTD Columbia - Westfield, MA
Client: RMT
Lab ID No: AB88399
Client Id: LTM-19

Client Project No: 998.39
Submittal Date: 5/19/00
Collection Date: 5/19/00
Matrix: Soil

Parameter	Results	Units	Reporting Limit	Start Date	End Date	Analyst	Method
Metals Preparation							
Mercury Digestion on Leachate	Completed			5/22/00	5/22/00	JM	EPA 245.1
Metals Digestion on Leachate	Completed			5/22/00	5/22/00	JM	EPA 200.7
Metals Analysis							
TCLP Mercury	Below det lim	mg/L	0.0004	5/22/00	5/22/00	JM	1311/245.1
TCLP RCRA8 Metals							
TCLP Arsenic	Below det lim	mg/L	0.015	5/23/00	5/23/00	JLC	1311/200.7
TCLP Barium	Below det lim	mg/L	0.050	5/23/00	5/23/00	JLC	1311/200.7
TCLP Cadmium	Below det lim	mg/L	0.005	5/23/00	5/23/00	JLC	1311/200.7
TCLP Chromium	0.057	mg/L	0.005	5/23/00	5/23/00	JLC	1311/200.7
TCLP Lead	Below det lim	mg/L	0.010	5/23/00	5/23/00	JLC	1311/200.7
TCLP Selenium	Below det lim	mg/L	0.015	5/23/00	5/23/00	JLC	1311/200.7
TCLP Silver	Below det lim	mg/L	0.010	5/23/00	5/23/00	JLC	1311/200.7
TCLP/SPLP Preparation							
TCLP Extraction for Metals	Completed			5/19/00	5/20/00	JM	SW846 1311

Reviewed by:

DN

Quality Service/Quality Assurance Depts.

Validated by:

President/Laboratory Director

5/23/00

Close File

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

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COD	Chemical Oxygen Demand	PCBs	Polychlorinated Biphenyls
CMR	Code of Massachusetts Regulations	PID	Photo Ionization Detector
DEP	Department of Environmental Protection	PQL	Practical Quantitation Limit
DI	De-ionized	R	Recovery (%R: Percent Recovery)
DO	Dissolved Oxygen	RSD	Relative Standard Deviation
EPA	Environmental Protection Agency	SM	Standard Method
EPH	Extractable Petroleum Hydrocarbons	SR	Surrogate Recovery (%SR)
FID	Flame Ionization Detector	SW	Solid Waste
GC	Gas Chromatograph	THM	Trihalomethane(s)
GC / MS	Gas Chromatograph / Mass Spectrometer	TOC	Total Organic Carbon
ICP	Inductively Coupled Plasma	TOX	Total Organic Halogen
Id	Identification	TPH	Total Petroleum Hydrocarbons
MCL	Maximum Contaminant Level	VOC	Volatile Organic Compound
MDL	Minimum Detection Limit	VPH	Volatile Petroleum Hydrocarbons

Close File

0591344 (KK)

SPECTRUM ANALYTICAL, INC.
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HANIBAL TECHNOLOGY

CHAIN OF CUSTODY RECORD

Page 1 of 1

Special Handling:
- ☐ Standard TAT - 7 to 10 business days
- ☒ Rush TAT - Date Needed: 5/23/00
- All TATs are subject to laboratory approval.
- Min. 24-hour notification is needed for rushes.
- All samples are disposed of after 60 days unless otherwise instructed.

Report To: RMT, INC
100 Verdae Blvd
Greenville, SC 29607

Project Mgr.: Steve Webb

Invoice To: RMT, INC

P.O. No.: 998.39 RQN: 2588

Project No.: 998.39
Site Name: MTD/Columbia
Location: Westfield State: MA
Sampler(s): C. Kline

1=$Na_2S_2O_3$ 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid
7=CH_3OH 8=$NaHSO_4$ 9=_____ 10=_____

DW=Drinking Water GW=Groundwater WW=Wastewater
SW= Surface Water SO=Soil SL=Sludge O=Oil A=Air
X1=_____ X2=_____ X3=_____

G=Grab C=Composite

Lab Id:	Sample Id:	Date:	Time:	Type	Matrix	Preservative	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic		TCLP Arsenic	TCLP Barium	TCLP Cadmium	TCLP Chromium	TCLP Lead	TCLP Selenium	TCLP Silver	TCLP Mercury	Notes:
AB 8839	GM-19	5/19/00	13:00	C	SO			2				X	X	X	X	X	X	X	X	TCLP RCRA & METALS
AB																				
AB																				
AB																				
AB																				
AB																				
AB																				
AB																				
AB																				
AB																				

Additional Instructions: Please FAX Analysis to Chris Kline @ Hotel Room 2312

☒ Fax results when available to (413) 733-8652

☐ E-mail results when available to _____

Relinquished By:	Received By:	Date:	Time:
[signature]	V. Knowles	5/19/00	1330

Close File

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY
Massachusetts Certification # M-MA138
Rhode Island # 98 Maine # MA138
Florida # E87600 / 87562
New Hampshire # 2538
Connecticut # PH-0777
New York # 11393

Approved via E-mail to Tye Cox Inv. Proc. 6-14-00

RMT, Inc
100 Verdae Blvd.
Greenville, SC 29607

5/26/00

Inv # 20051038

Attn: Steve Webb

Client Project Number: 998.39 **Location:** MTD Columbia - Westfield, MA

Laboratory ID	Client Sample ID	Analyses Requested
AB88838	LTM-20	TCLP Extraction for Metals Metals Digestion on Leachate Mercury Digestion on Leachate TCLP RCRA8 Metals TCLP Mercury

I attest that all information contained within this report has been reviewed for accuracy and checked against all quality control requirements outlined in each applicable method including any data obtained from a subcontract laboratory.

Authorized by:

Hanibal C. Tayeh
President/Laboratory Director

ENVIRONMENTAL ANALYSES
11 Almgren Drive • Agawam, Massachusetts 01001 • 1-800-789-9115 • 413-789-9018 • Fax 413-789-4076
24 Tobey Road • Bloomfield, Connecticut 06002 • 860-242-6294 • Fax 860-242-4012

Close File

SPECTRUM ANALYTICAL, INC.

Laboratory Report

Location: MTD Columbia - Westfield, MA
Client: RMT
Lab ID No: AB88838
Client Id: LTM-20

Client Project No: 998.39
Submittal Date: 5/23/00
Collection Date: 5/23/00
Matrix: Soil

Parameter	Results	Units	Reporting Limit	Start Date	End Date	Analyst	Method
Metals Preparation							
Mercury Digestion on Leachate	Completed			5/25/00	5/25/00	YV	EPA 245.1
Metals Digestion on Leachate	Completed			5/25/00	5/25/00	YV	EPA 200.7
Metals Analysis							
TCLP Mercury	Below det lim	mg/L	0.0004	5/26/00	5/26/00	JM	1311/245.1
TCLP RCRA8 Metals							
TCLP Arsenic	Below det lim	mg/L	0.015	5/26/00	5/26/00	NR	1311/200.7
TCLP Barium	Below det lim	mg/L	0.015	5/26/00	5/26/00	NR	1311/200.7
TCLP Cadmium	Below det lim	mg/L	0.005	5/26/00	5/26/00	NR	1311/200.7
TCLP Chromium	0.183	mg/L	0.005	5/26/00	5/26/00	NR	1311/200.7
TCLP Lead	Below det lim	mg/L	0.010	5/26/00	5/26/00	NR	1311/200.7
TCLP Selenium	0.024	mg/L	0.015	5/26/00	5/26/00	NR	1311/200.7
TCLP Silver	Below det lim	mg/L	0.010	5/26/00	5/26/00	NR	1311/200.7
TCLP/SPLP Preparation							
TCLP Extraction for Metals	Completed			5/24/00	5/25/00	JM	SW846 1311

Reviewed by:

Quality Service/Quality Assurance Depts.

Validated by:

President/Laboratory Director

5/26/00

Close File

SPECTRUM ANALYTICAL, INC.
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Laboratory Report Supplement
References

SW 846	Test Methods for Evaluating Solid Waste. Third edition, 1998
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ASTM D 3328	Standard Methods for the Comparison of Waterborne Petroleum Oils by Gas Chromatography
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EPA 600/4-79-012	Quality Assurance Handbook for Analytical Quality Control in Water and Wastewater Laboratories
EPA 600/4-79-019	Handbook for Analytical Quality Control in Water and Wastewater Laboratories
EPA 600/4-79-020	Method for the Chemical Analysis of Water and Wastes
EPA 600/4-82-057	Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater
EPA 600/4-85/056	Choosing Cost-Effective QA/QC Programs for Chemical Analysis
EPA 600/4-88/039	Method for the Determination of Organic Compounds in Drinking Water
CT ETPH	Analysis of Extractable Total Petroleum Hydrocarbons (ETPH)
MADEP EPH	Method for the Determination of Extractable Petroleum Hydrocarbons (EPH)
MADEP VPH	Method for the Determination of Volatile Petroleum Hydrocarbons (VPH)
QAMS 004/80	Guidelines and Specifications for Preparing Quality Assurance Program Plans, USEPA Office of Monitoring System and Quality Assurance
GC-D-52-77	Oil Spill Identification System

Acronyms & Abbreviations

AA	Atomic Absorption	MS	Matrix Spike
ASTM	American Society for Testing and Materials	MSD	Matrix Spike Duplicate
BOD	Biological Oxygen Demand	NTU	Nephelometric Turbidity Units
°C	degree(s) Celsius	PAHs	Polynuclear Aromatic Hydrocarbons
COD	Chemical Oxygen Demand	PCBs	Polychlorinated Biphenyls
CMR	Code of Massachusetts Regulations	PID	Photo Ionization Detector
DEP	Department of Environmental Protection	PQL	Practical Quantitation Limit
DI	De-ionized	R	Recovery (%R: Percent Recovery)
DO	Dissolved Oxygen	RSD	Relative Standard Deviation
EPA	Environmental Protection Agency	SM	Standard Method
EPH	Extractable Petroleum Hydrocarbons	SR	Surrogate Recovery (%SR)
FID	Flame Ionization Detector	SW	Solid Waste
GC	Gas Chromatograph	THM	Trihalomethane(s)
GC / MS	Gas Chromatograph / Mass Spectrometer	TOC	Total Organic Carbon
ICP	Inductively Coupled Plasma	TOX	Total Organic Halogen
Id	Identification	TPH	Total Petroleum Hydrocarbons
MCL	Maximum Contaminant Level	VOC	Volatile Organic Compound
MDL	Minimum Detection Limit	VPH	Volatile Petroleum Hydrocarbons

Close File

OS231709

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Featuring
HANIBAL TECHNOLOGY

CHAIN OF CUSTODY RECORD

Page 1 of 1

Special Handling:
- ☐ Standard TAT - 7 to 10 business days
- ☒ Rush TAT - Date Needed: 5/26/00
- All TATs are subject to laboratory approval.
- Min. 24-hour notification is needed for rushes.
- All samples are disposed of after 60 days unless otherwise instructed.

Report To: RMT, INC
100 Verdae Blvd
Greenville, SC 29607

Project Mgr.: Steve Webb

Invoice To: RMT

P.O. No.: 998.39 RQN: ~~2689~~ 2958

Project No.: 998.39
Site Name: MTD/Columbia
Location: Westfield State: MA
Sampler(s): C. Kline

1=$Na_2S_2O_3$ 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid
7=CH_3OH 8=$NaHSO_4$ 9=_____ 10=_____

DW=Drinking Water GW=Groundwater WW=Wastewater
SW= Surface Water SO=Soil SL=Sludge O=Oil A=Air
X1=_____ X2=_____ X3=_____

G=Grab C=Composite

Lab Id:	Sample Id:	Date:	Time:	Type	Matrix	Preservative	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic		TCLP Arsenic	TCLP Barium	TCLP Cadmium	TCLP Chromium	TCLP Lead	TCLP Selenium	TCLP Silver	TCLP Mercury	Notes: TCLP RCRA 8 METALS
AB 88838	LTM-20	5/23/00	1420	C	SO			2				X	X	X	X	X	X	X	X	
AB																				
AB																				
AB																				
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AB																				
AB																				
AB																				
AB																				

Additional Instructions: Please FAX Analysis to Chris Kline @ Hotel Room 2312

☒ Fax results when available to (413) 7338652

☐ E-mail results when available to _____

Relinquished By:	Received By:	Date:	Time:
[signature]	[signature]	5/23/00	1430

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Appendix F
Analytical Reports
For Confirmation Samples

Close File

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

Massachusetts Certification # M-MA138
Rhode Island # 98 Maine # MA138
Florida # E87600 / 87562
New Hampshire # 2538
Connecticut # PH-0777
New York # 11393

RMT, Inc
100 Verdae Blvd.
Greenville, SC 29607

4/20/00

Attn: Mark Shoaf

Client Project Number: 998.39 **Location:** MTD - Westfield, MA

Laboratory ID	Client Sample ID	Analyses Requested
AB82802	LCON-01	TCLP Extraction for Metals Metals Digestion on Leachate Mercury Digestion on Leachate TCLP RCRA8 Metals TCLP Mercury
AB82803	LCON-02	TCLP Extraction for Metals Metals Digestion on Leachate Mercury Digestion on Leachate TCLP RCRA8 Metals TCLP Mercury
AB82804	LCON-03	TCLP Extraction for Metals Metals Digestion on Leachate Mercury Digestion on Leachate TCLP RCRA8 Metals TCLP Mercury
AB82805	LTM-04	TCLP Extraction for Metals Metals Digestion on Leachate Mercury Digestion on Leachate TCLP RCRA8 Metals TCLP Mercury

ENVIRONMENTAL ANALYSES

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24 Tobey Road • Bloomfield, Connecticut 06002 • 860-242-6294 • Fax 860-242-4012

Close File

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

Client Project Number: 998.39 **Location:** MTD - Westfield, MA

Laboratory ID	Client Sample ID	Analyses Requested

I attest that all information contained within this report has been reviewed for accuracy and checked against all quality control requirements outlined in each applicable method including any data obtained from a subcontract laboratory.

Authorized by:

Hanibal C. Tayeh
President/Laboratory Director

ENVIRONMENTAL ANALYSES
11 Almgren Drive • Agawam, Massachusetts 01001 • 1-800-789-9115 • 413-789-9018 • Fax 413-789-4076
24 Tobey Road • Bloomfield, Connecticut 06002 • 860-242-6294 • Fax 860-242-4012

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SPECTRUM ANALYTICAL, INC.

Laboratory Report

Location: MTD - Westfield, MA
Client: RMT

Client Project No: 998.39
Submittal Date: 4/17/00

Lab ID No: AB82802 **Client Id:** LCON-01 **Collection Date:** 4/17/00 **Matrix:** Soil

Parameter	Results	Units	Reporting Limit	Start Date	End Date	Analyst	Method
Metals Preparation							
Mercury Digestion on Leachate	Completed			4/19/00	4/19/00	NR	EPA 245.1
Metals Digestion on Leachate	Completed			4/19/00	4/19/00	NR	EPA 200.7
Metals Analysis							
TCLP Mercury	Below det lim	mg/L	0.0004	4/20/00	4/20/00	JM	1311/245.1
TCLP Arsenic	Below det lim	mg/L	0.015	4/20/00	4/20/00	CR	1311/200.7
TCLP Barium	0.325	mg/L	0.005	4/20/00	4/20/00	CR	1311/200.7
TCLP Cadmium	Below det lim	mg/L	0.005	4/20/00	4/20/00	CR	1311/200.7
TCLP Chromium	0.057	mg/L	0.005	4/20/00	4/20/00	CR	1311/200.7
TCLP Lead	Below det lim	mg/L	0.010	4/20/00	4/20/00	CR	1311/200.7
TCLP Selenium	Below det lim	mg/L	0.015	4/20/00	4/20/00	CR	1311/200.7
TCLP Silver	Below det lim	mg/L	0.010	4/20/00	4/20/00	CR	1311/200.7
TCLP/SPLP Preparation							
TCLP Extraction for Metals	Completed			4/18/00	4/19/00	JM	SW846 1311

Lab ID No: AB82803 **Client Id:** LCON-02 **Collection Date:** 4/17/00 **Matrix:** Soil

Parameter	Results	Units	Reporting Limit	Start Date	End Date	Analyst	Method
Metals Preparation							
Mercury Digestion on Leachate	Completed			4/19/00	4/19/00	NR	EPA 245.1
Metals Digestion on Leachate	Completed			4/19/00	4/19/00	NR	EPA 200.7
Metals Analysis							
TCLP Mercury	Below det lim	mg/L	0.0004	4/20/00	4/20/00	JM	1311/245.1
TCLP Arsenic	0.0265	mg/L	0.015	4/20/00	4/20/00	CR	1311/200.7
TCLP Barium	0.455	mg/L	0.005	4/20/00	4/20/00	CR	1311/200.7
TCLP Cadmium	0.0073	mg/L	0.005	4/20/00	4/20/00	CR	1311/200.7
TCLP Chromium	6.47	mg/L	0.005	4/20/00	4/20/00	CR	1311/200.7
TCLP Lead	Below det lim	mg/L	0.010	4/20/00	4/20/00	CR	1311/200.7
TCLP Selenium	Below det lim	mg/L	0.025	4/20/00	4/20/00	CR	1311/200.7
TCLP Silver	Below det lim	mg/L	0.010	4/20/00	4/20/00	CR	1311/200.7
TCLP/SPLP Preparation							
TCLP Extraction for Metals	Completed			4/18/00	4/19/00	JM	SW846 1311

Close File

Lab ID No: AB82804 **Client Id:** LCON-03 **Collection Date:** 4/17/00 **Matrix:** Soil

Parameter	Results	Units	Reporting Limit	Start Date	End Date	Analyst	Method
Metals Preparation							
Mercury Digestion on Leachate	Completed			4/19/00	4/19/00	NR	EPA 245.1
Metals Digestion on Leachate	Completed			4/19/00	4/19/00	NR	EPA 200.7
Metals Analysis							
TCLP Mercury	Below det lim	mg/L	0.0004	4/20/00	4/20/00	JM	1311/245.1
TCLP Arsenic	Below det lim	mg/L	0.015	4/20/00	4/20/00	CR	1311/200.7
TCLP Barium	0.807	mg/L	0.005	4/20/00	4/20/00	CR	1311/200.7
TCLP Cadmium	0.228	mg/L	0.005	4/20/00	4/20/00	CR	1311/200.7
TCLP Chromium	0.022	mg/L	0.005	4/20/00	4/20/00	CR	1311/200.7
TCLP Lead	0.0475	mg/L	0.010	4/20/00	4/20/00	CR	1311/200.7
TCLP Selenium	Below det lim	mg/L	0.015	4/20/00	4/20/00	CR	1311/200.7
TCLP Silver	Below det lim	mg/L	0.010	4/20/00	4/20/00	CR	1311/200.7
TCLP/SPLP Preparation							
TCLP Extraction for Metals	Completed			4/18/00	4/19/00	JM	SW846 1311

Lab ID No: AB82805 **Client Id:** LTM-04 **Collection Date:** 4/17/00 **Matrix:** Soil

Parameter	Results	Units	Reporting Limit	Start Date	End Date	Analyst	Method
Metals Preparation							
Mercury Digestion on Leachate	Completed			4/19/00	4/19/00	NR	EPA 245.1
Metals Digestion on Leachate	Completed			4/19/00	4/19/00	NR	EPA 200.7
Metals Analysis							
TCLP Mercury	Below det lim	mg/L	0.0004	4/20/00	4/20/00	JM	1311/245.1
TCLP Arsenic	Below det lim	mg/L	0.015	4/20/00	4/20/00	CR	1311/200.7
TCLP Barium	0.222	mg/L	0.005	4/20/00	4/20/00	CR	1311/200.7
TCLP Cadmium	Below det lim	mg/L	0.005	4/20/00	4/20/00	CR	1311/200.7
TCLP Chromium	0.265	mg/L	0.005	4/20/00	4/20/00	CR	1311/200.7
TCLP Lead	Below det lim	mg/L	0.010	4/20/00	4/20/00	CR	1311/200.7
TCLP Selenium	Below det lim	mg/L	0.015	4/20/00	4/20/00	CR	1311/200.7
TCLP Silver	Below det lim	mg/L	0.010	4/20/00	4/20/00	CR	1311/200.7
TCLP/SPLP Preparation							
TCLP Extraction for Metals	Completed			4/18/00	4/19/00	JM	SW846 1311

Reviewed by:

Quality Service/Quality Assurance Depts.

Validated by:

President/Laboratory Director

4/20/00

Close File

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Laboratory Report Supplement
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MADEP VPH	Method for the Determination of Volatile Petroleum Hydrocarbons (VPH)
QAMS 004/80	Guidelines and Specifications for Preparing Quality Assurance Program Plans, USEPA Office of Monitoring System and Quality Assurance
GC-D-52-77	Oil Spill Identification System

Acronyms & Abbreviations

AA	Atomic Absorption	MS	Matrix Spike
ASTM	American Society for Testing and Materials	MSD	Matrix Spike Duplicate
BOD	Biological Oxygen Demand	NTU	Nephelometric Turbidity Units
°C	degree(s) Celsius	PAHs	Polynuclear Aromatic Hydrocarbons
COD	Chemical Oxygen Demand	PCBs	Polychlorinated Biphenyls
CMR	Code of Massachusetts Regulations	PID	Photo Ionization Detector
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DI	De-ionized	R	Recovery (%R: Percent Recovery)
DO	Dissolved Oxygen	RSD	Relative Standard Deviation
EPA	Environmental Protection Agency	SM	Standard Method
EPH	Extractable Petroleum Hydrocarbons	SR	Surrogate Recovery (%SR)
FID	Flame Ionization Detector	SW	Solid Waste
GC	Gas Chromatograph	THM	Trihalomethane(s)
GC / MS	Gas Chromatograph / Mass Spectrometer	TOC	Total Organic Carbon
ICP	Inductively Coupled Plasma	TOX	Total Organic Halogen
Id	Identification	TPH	Total Petroleum Hydrocarbons
MCL	Maximum Contaminant Level	VOC	Volatile Organic Compound
MDL	Minimum Detection Limit	VPH	Volatile Petroleum Hydrocarbons

Close File

0417 1757 (Re)

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

CHAIN OF CUSTODY RECORD

Page 1 of 1

Special Handling:
- ☐ Standard TAT - 7 to 10 business days
- ☐ Rush TAT - Date Needed: 4/20
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Report To: RMT, INC
100 Verdae Blvd
Greenville, SC

Project Mgr.: MARK Shorff

Invoice To: RMT, INC

P.O. No.: 998.39 RQN: 2958

Project No.: 998.39
Site Name: MTD
Location: Westfield, State: MA
Sampler(s): C. Kline

1=$Na_2S_2O_3$ 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid
7=CH_3OH 8=$NaHSO_4$ 9=_____ 10=_____

DW=Drinking Water GW=Groundwater WW=Wastewater
SW= Surface Water SO=Soil SL=Sludge O=Oil A=Air
X1=_____ X2=_____ X3=_____

G=Grab C=Composite

Lab Id:	Sample Id:	Date:	Time:	Type	Matrix	Preservative	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	TCLP Arsenic	TCLP Barium	TCLP Cadmium	TCLP Chromium	TCLP Lead	TCLP Mercury	TCLP Selenium	TCLP Silver	Notes: TCLP RCRA8 METALS
AB 82802	L CON-01	4/17/00	1500	C	SO			2	2	(4C)	X	X	X	X	X	X	X	X	
AB 82803	L CON-02	4/17/00	1540	C	SO				2		X	X	X	X	X	X	X	X	
AB 82804	L CON-03	4/17/00	1550	C	SO				2		X	X	X	X	X	X	X	X	
AB 82805	L TM-04	4/17/00	1610	C	SO				2		X	X	X	X	X	X	X	X	
AB																			
AB																			
AB																			
AB																			
AB																			
AB																			

Additional Instructions: Please Call Chris Kline @ 312-9252296 with Analysis

☒ Fax results when available to (~~[illegible]~~ 864) 281-0288

Relinquished By:	Received By:	Date:	Time:
[signature]	U. Knowles	4/17/00	1635

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SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

Massachusetts Certification # M-MA138
Rhode Island # 98 Maine # MA138
Florida # E87600 / 87562
New Hampshire # 2538
Connecticut # PH-0777
New York # 11393

Rmt, Inc
100 Verdae Blvd.
Greenville, SC 29607

4/26/00

Attn: Mark Shoaf

Client Project Number: 998.39 **Location:** MTD/Columbia - Westfield, MA

Laboratory ID	Client Sample ID	Analyses Requested
AB83664	LCON-2A-.39	TCLP Extraction for Metals Metals Digestion on Leachate Mercury Digestion on Leachate TCLP RCRA8 Metals TCLP Mercury
AB83665	LCON-05 -.39	TCLP Extraction for Metals Metals Digestion on Leachate Mercury Digestion on Leachate TCLP RCRA8 Metals TCLP Mercury
AB83666	LCON-06 -.39	TCLP Extraction for Metals Metals Digestion on Leachate Mercury Digestion on Leachate TCLP RCRA8 Metals TCLP Mercury
AB83667	LCON-07 -.39	TCLP Extraction for Metals Metals Digestion on Leachate Mercury Digestion on Leachate TCLP RCRA8 Metals TCLP Mercury

ENVIRONMENTAL ANALYSES

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SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

Client Project Number: 998.39 **Location:** MTD/Columbia - Westfield, MA

Laboratory ID	Client Sample ID	Analyses Requested

I attest that all information contained within this report has been reviewed for accuracy and checked against all quality control requirements outlined in each applicable method including any data obtained from a subcontract laboratory.

Authorized by:

Hanibal C. Tayeh
President/Laboratory Director

ENVIRONMENTAL ANALYSES

11 Almgren Drive • Agawam, Massachusetts 01001 • 1-800-789-9115 • 413-789-9018 • Fax 413-789-4076
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SPECTRUM ANALYTICAL, INC.

Laboratory Report

Location: MTD/Columbia - Westfield, MA
Client: RMT
Lab ID No: AB83664
Client Id: LCON-2A

Client Project No: 998.39
Submittal Date: 4/21/00
Collection Date: 4/21/00
Matrix: Soil

Parameter	Results	Units	Reporting Limit	Start Date	End Date	Analyst	Method
Metals Preparation							
Mercury Digestion on Leachate	Completed			4/25/00	4/25/00	YV	EPA 245.1
Metals Digestion on Leachate	Completed			4/25/00	4/25/00	YV	EPA 200.7
Metals Analysis							
TCLP Mercury	Below det lim	mg/L	0.0004	4/26/00	4/26/00	JM	1311/245.1
TCLP RCRA8 Metals							
TCLP Arsenic	Below det lim	mg/L	0.015	4/26/00	4/26/00	CR	1311/200.7
TCLP Barium	0.190	mg/L	0.005	4/26/00	4/26/00	CR	1311/200.7
TCLP Cadmium	Below det lim	mg/L	0.005	4/26/00	4/26/00	CR	1311/200.7
TCLP Chromium	0.423	mg/L	0.005	4/26/00	4/26/00	CR	1311/200.7
TCLP Lead	Below det lim	mg/L	0.010	4/26/00	4/26/00	CR	1311/200.7
TCLP Selenium	Below det lim	mg/L	0.015	4/26/00	4/26/00	CR	1311/200.7
TCLP Silver	Below det lim	mg/L	0.010	4/26/00	4/26/00	CR	1311/200.7
TCLP/SPLP Preparation							
TCLP Extraction for Metals	Completed			4/24/00	4/25/00	JM	SW846 1311

Close File

Lab ID No: AB83665 **Collection Date:** 4/21/00
Client Id: LCON-05 **Matrix:** Soil

Parameter	Results	Units	Reporting Limit	Start Date	End Date	Analyst	Method
Metals Preparation							
Mercury Digestion on Leachate	Completed			4/25/00	4/25/00	YV	EPA 245.1
Metals Digestion on Leachate	Completed			4/25/00	4/25/00	YV	EPA 200.7
Metals Analysis							
TCLP Mercury	Below det lim	mg/L	0.0004	4/26/00	4/26/00	JM	1311/245.1
TCLP RCRA8 Metals							
TCLP Arsenic	Below det lim	mg/L	0.015	4/26/00	4/26/00	CR	1311/200.7
TCLP Barium	0.358	mg/L	0.005	4/26/00	4/26/00	CR	1311/200.7
TCLP Cadmium	0.0139	mg/L	0.005	4/26/00	4/26/00	CR	1311/200.7
TCLP Chromium	0.0190	mg/L	0.005	4/26/00	4/26/00	CR	1311/200.7
TCLP Lead	Below det lim	mg/L	0.010	4/26/00	4/26/00	CR	1311/200.7
TCLP Selenium	Below det lim	mg/L	0.015	4/26/00	4/26/00	CR	1311/200.7
TCLP Silver	Below det lim	mg/L	0.010	4/26/00	4/26/00	CR	1311/200.7
TCLP/SPLP Preparation							
TCLP Extraction for Metals	Completed			4/24/00	4/25/00	JM	SW846 1311

Close File

Lab ID No: AB83666
Client Id: LCON-06

Collection Date: 4/21/00
Matrix: Soil

Parameter	Results	Units	Reporting Limit	Start Date	End Date	Analyst	Method
Metals Preparation							
Mercury Digestion on Leachate	Completed			4/25/00	4/25/00	YV	EPA 245.1
Metals Digestion on Leachate	Completed			4/25/00	4/25/00	YV	EPA 200.7
Metals Analysis							
TCLP Mercury	Below det lim	mg/L	0.0004	4/26/00	4/26/00	JM	1311/245.1
TCLP RCRA8 Metals							
TCLP Arsenic	Below det lim	mg/L	0.015	4/26/00	4/26/00	CR	1311/200.7
TCLP Barium	0.160	mg/L	0.005	4/26/00	4/26/00	CR	1311/200.7
TCLP Cadmium	Below det lim	mg/L	0.005	4/26/00	4/26/00	CR	1311/200.7
TCLP Chromium	0.0105	mg/L	0.005	4/26/00	4/26/00	CR	1311/200.7
TCLP Lead	Below det lim	mg/L	0.010	4/26/00	4/26/00	CR	1311/200.7
TCLP Selenium	Below det lim	mg/L	0.015	4/26/00	4/26/00	CR	1311/200.7
TCLP Silver	Below det lim	mg/L	0.010	4/26/00	4/26/00	CR	1311/200.7
TCLP/SPLP Preparation							
TCLP Extraction for Metals	Completed			4/24/00	4/25/00	JM	SW846 1311

Close File

Lab ID No: AB83667
Client Id: LCON-07

Collection Date: 4/21/00
Matrix: Soil

Parameter	Results	Units	Reporting Limit	Start Date	End Date	Analyst	Method
Metals Preparation							
Mercury Digestion on Leachate	Completed			4/25/00	4/25/00	YV	EPA 245.1
Metals Digestion on Leachate	Completed			4/25/00	4/25/00	YV	EPA 200.7
Metals Analysis							
TCLP Mercury	Below det lim	mg/L	0.0004	4/26/00	4/26/00	JM	1311/245.1
TCLP RCRA8 Metals							
TCLP Arsenic	Below det lim	mg/L	0.015	4/26/00	4/26/00	CR	1311/200.7
TCLP Barium	0.156	mg/L	0.005	4/26/00	4/26/00	CR	1311/200.7
TCLP Cadmium	Below det lim	mg/L	0.005	4/26/00	4/26/00	CR	1311/200.7
TCLP Chromium	0.0150	mg/L	0.005	4/26/00	4/26/00	CR	1311/200.7
TCLP Lead	Below det lim	mg/L	0.010	4/26/00	4/26/00	CR	1311/200.7
TCLP Selenium	Below det lim	mg/L	0.015	4/26/00	4/26/00	CR	1311/200.7
TCLP Silver	Below det lim	mg/L	0.010	4/26/00	4/26/00	CR	1311/200.7
TCLP/SPLP Preparation							
TCLP Extraction for Metals	Completed			4/24/00	4/25/00	JM	SW846 1311

Reviewed by:

Quality Service/Quality Assurance Depts.

Validated by:

President/Laboratory Director

4/26/00

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SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

Laboratory Report Supplement
References

SW 846	Test Methods for Evaluating Solid Waste. Third edition, 1998
40 CFR 136	Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act
40 CFR 141	National Primary Drinking Water Regulations
40 CFR 143	National Secondary Drinking Water Regulations
40 CFR 160	Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), Good Laboratory Practice Standards
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ASTM D 3328	Standard Methods for the Comparison of Waterborne Petroleum Oils by Gas Chromatography
EPA 540/G-87/003	Data Quality Objectives for Remediation Response Activities, Development Process
EPA 600/4-79-012	Quality Assurance Handbook for Analytical Quality Control in Water and Wastewater Laboratories
EPA 600/4-79-019	Handbook for Analytical Quality Control in Water and Wastewater Laboratories
EPA 600/4-79-020	Method for the Chemical Analysis of Water and Wastes
EPA 600/4-82-057	Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater
EPA 600/4-85/056	Choosing Cost-Effective QA/QC Programs for Chemical Analysis
EPA 600/4-88/039	Method for the Determination of Organic Compounds in Drinking Water
CT ETPH	Analysis of Extractable Total Petroleum Hydrocarbons (ETPH)
MADEP EPH	Method for the Determination of Extractable Petroleum Hydrocarbons (EPH)
MADEP VPH	Method for the Determination of Volatile Petroleum Hydrocarbons (VPH)
QAMS 004/80	Guidelines and Specifications for Preparing Quality Assurance Program Plans, USEPA Office of Monitoring System and Quality Assurance
GC-D-52-77	Oil Spill Identification System

Acronyms & Abbreviations

AA	Atomic Absorption	MS	Matrix Spike
ASTM	American Society for Testing and Materials	MSD	Matrix Spike Duplicate
BOD	Biological Oxygen Demand	NTU	Nephelometric Turbidity Units
°C	degree(s) Celsius	PAHs	Polynuclear Aromatic Hydrocarbons
COD	Chemical Oxygen Demand	PCBs	Polychlorinated Biphenyls
CMR	Code of Massachusetts Regulations	PID	Photo Ionization Detector
DEP	Department of Environmental Protection	PQL	Practical Quantitation Limit
DI	De-ionized	R	Recovery (%R: Percent Recovery)
DO	Dissolved Oxygen	RSD	Relative Standard Deviation
EPA	Environmental Protection Agency	SM	Standard Method
EPH	Extractable Petroleum Hydrocarbons	SR	Surrogate Recovery (%SR)
FID	Flame Ionization Detector	SW	Solid Waste
GC	Gas Chromatograph	THM	Trihalomethane(s)
GC / MS	Gas Chromatograph / Mass Spectrometer	TOC	Total Organic Carbon
ICP	Inductively Coupled Plasma	TOX	Total Organic Halogen
Id	Identification	TPH	Total Petroleum Hydrocarbons
MCL	Maximum Contaminant Level	VOC	Volatile Organic Compound
MDL	Minimum Detection Limit	VPH	Volatile Petroleum Hydrocarbons

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SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

CHAIN OF CUSTODY RECORD

Page 1 of 1

Special Handling:
- ☐ Standard TAT - 7 to 10 business days
- ☒ Rush TAT - Date Needed: 4/26/00
- All TATs are subject to laboratory approval.
- Min. 24-hour notification is needed for rushes.
- All samples are disposed of after 60 days unless otherwise instructed.

Report To: RMT, INC
100 Verdae Blvd
Greenville, SC 29607

Project Mgr.: MARK SHOAF

Invoice To: RMT, INC

P.O. No.: 998.39 RQN: 2958

Project No.: MTD / ColumBIA
Site Name: 998.39
Location: Westfield State: MA
Sampler(s): C. Kline

1=$Na_2S_2O_3$ 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid
7=CH_3OH 8=$NaHSO_4$ 9=_____ 10=_____

DW=Drinking Water GW=Groundwater WW=Wastewater
SW= Surface Water SO=Soil SL=Sludge O=Oil A=Air
X1=_____ X2=_____ X3=_____

G=Grab C=Composite

Lab Id:	Sample Id:	Date:	Time:	Type	Matrix	Preservative	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	TCLP Arsenic	TCLP Barium	TCLP Cadmium	TCLP Chromium	TCLP Lead	TCLP Mercury	TCLP Selenium	TCLP Silver	Notes:
AB 83664	LCON-2A	4/21/00	1230	C	SO			2			X	X	X	X	X	X	X	X	TCLP RCRA 8 METALS
AB 83665	LCON-05	4/21/00	1240	C	SO			2			X	X	X	X	X	X	X	X	
AB 83666	LCON-06	4/21/00	1245	C	SO			2			X	X	X	X	X	X	X	X	
AB 83667	LCON-07	4/21/00	1250	C	SO			2			X	X	X	X	X	X	X	X	
AB																			
AB																			
AB																			
AB																			
AB																			
AB																			

Additional Instructions: Please Call Chris Kline @ 312-295-2296 with Analysis

☒ Fax results when available to (864) 281-0288

Relinquished By:	Received By:	Date:	Time:
[signature]	Jennifer Marie Sikra	4/21/00	1430

11 Almgren Drive • Agawam, Massachusetts 01001 • 413-789-9018 • Fax 413-789-4076

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SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

Massachusetts Certification # M-MA138
Rhode Island # 98 Maine # MA138
Florida # E87600 / 87562
New Hampshire # 2538
Connecticut # PH-0777
New York # 11393

RMT, Inc
100 Verdae Blvd.
Greenville, SC 29607

5/8/00

Attn: Mark Shoaf

Client Project Number: 998.40 **Location:** MTD Columbia - Westfield, MA

Laboratory ID	Client Sample ID	Analyses Requested
AB85781	LTM-10	TCLP Extraction for Metals Metals Digestion on Leachate Mercury Digestion on Leachate TCLP RCRA8 Metals TCLP Mercury
AB85782	LCON-04	TCLP Extraction for Metals Metals Digestion on Leachate Mercury Digestion on Leachate TCLP RCRA8 Metals TCLP Mercury

I attest that all information contained within this report has been reviewed for accuracy and checked against all quality control requirements outlined in each applicable method including any data obtained from a subcontract laboratory.

Authorized by:

Hanibal C. Tayeh
President/Laboratory Director

11 Almgren Drive • Agawam, Massachusetts 01001 • 1-800-789-9115 • 413-789-9018 • Fax 413-789-4076
24 Tobey Road • Bloomfield, Connecticut 06002 • 860-242-6294 • Fax 860-242-4012

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SPECTRUM ANALYTICAL, INC.

Laboratory Report

Location: MTD Columbia - Westfield, MA
Client: RMT
Lab ID No: AB85781
Client Id: LTM-10

Client Project No: 998.40
Submittal Date: 5/4/00
Collection Date: 5/4/00
Matrix: Soil

Parameter	Results	Units	Reporting Limit	Start Date	End Date	Analyst	Method
Metals Preparation							
Mercury Digestion on Leachate	Completed			5/6/00	5/6/00	YV	EPA 245.1
Metals Digestion on Leachate	Completed			5/6/00	5/6/00	YV	EPA 200.7
Metals Analysis							
TCLP Mercury	Below det lim	mg/L	0.0004	5/8/00	5/8/00	JM	1311/245.1
TCLP RCRA8 Metals							
TCLP Arsenic	Below det lim	mg/L	0.015	5/8/00	5/8/00	CR	1311/200.7
TCLP Barium	0.008	mg/L	0.005	5/8/00	5/8/00	CR	1311/200.7
TCLP Cadmium	Below det lim	mg/L	0.005	5/8/00	5/8/00	CR	1311/200.7
TCLP Chromium	1.34	mg/L	0.005	5/8/00	5/8/00	CR	1311/200.7
TCLP Lead	Below det lim	mg/L	0.010	5/8/00	5/8/00	CR	1311/200.7
TCLP Selenium	0.029	mg/L	0.015	5/8/00	5/8/00	CR	1311/200.7
TCLP Silver	Below det lim	mg/L	0.010	5/8/00	5/8/00	CR	1311/200.7
TCLP/SPLP Preparation							
TCLP Extraction for Metals	Completed			5/4/00	5/5/00	JM	SW846 1311

Close File

Lab ID No: AB85782 **Collection Date:** 5/4/00
Client Id: LCON-04 **Matrix:** Soil

Parameter	Results	Units	Reporting Limit	Start Date	End Date	Analyst	Method
Metals Preparation							
Mercury Digestion on Leachate	Completed			5/6/00	5/6/00	YV	EPA 245.1
Metals Digestion on Leachate	Completed			5/6/00	5/6/00	YV	EPA 200.7
Metals Analysis							
TCLP Mercury	Below det lim	mg/L	0.0004	5/8/00	5/8/00	JM	1311/245.1
TCLP RCRA8 Metals							
TCLP Arsenic	Below det lim	mg/L	0.015	5/8/00	5/8/00	CR	1311/200.7
TCLP Barium	0.127	mg/L	0.005	5/8/00	5/8/00	CR	1311/200.7
TCLP Cadmium	0.007	mg/L	0.005	5/8/00	5/8/00	CR	1311/200.7
TCLP Chromium	0.008	mg/L	0.005	5/8/00	5/8/00	CR	1311/200.7
TCLP Lead	Below det lim	mg/L	0.010	5/8/00	5/8/00	CR	1311/200.7
TCLP Selenium	Below det lim	mg/L	0.015	5/8/00	5/8/00	CR	1311/200.7
TCLP Silver	Below det lim	mg/L	0.010	5/8/00	5/8/00	CR	1311/200.7
TCLP/SPLP Preparation							
TCLP Extraction for Metals	Completed			5/4/00	5/5/00	JM	SW846 1311

Reviewed by: Validated by:

Quality Service/Quality Assurance Depts. President/Laboratory Director 5/8/00

Close File

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

Laboratory Report Supplement
References

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EPA 600/4-82-057	Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater
EPA 600/4-85/056	Choosing Cost-Effective QA/QC Programs for Chemical Analysis
EPA 600/4-88/039	Method for the Determination of Organic Compounds in Drinking Water
CT ETPH	Analysis of Extractable Total Petroleum Hydrocarbons (ETPH)
MADEP EPH	Method for the Determination of Extractable Petroleum Hydrocarbons (EPH)
MADEP VPH	Method for the Determination of Volatile Petroleum Hydrocarbons (VPH)
QAMS 004/80	Guidelines and Specifications for Preparing Quality Assurance Program Plans, USEPA Office of Monitoring System and Quality Assurance
GC-D-52-77	Oil Spill Identification System

Acronyms & Abbreviations

AA	Atomic Absorption	MS	Matrix Spike
ASTM	American Society for Testing and Materials	MSD	Matrix Spike Duplicate
BOD	Biological Oxygen Demand	NTU	Nephelometric Turbidity Units
°C	degree(s) Celsius	PAHs	Polynuclear Aromatic Hydrocarbons
COD	Chemical Oxygen Demand	PCBs	Polychlorinated Biphenyls
CMR	Code of Massachusetts Regulations	PID	Photo Ionization Detector
DEP	Department of Environmental Protection	PQL	Practical Quantitation Limit
DI	De-ionized	R	Recovery (%R: Percent Recovery)
DO	Dissolved Oxygen	RSD	Relative Standard Deviation
EPA	Environmental Protection Agency	SM	Standard Method
EPH	Extractable Petroleum Hydrocarbons	SR	Surrogate Recovery (%SR)
FID	Flame Ionization Detector	SW	Solid Waste
GC	Gas Chromatograph	THM	Trihalomethane(s)
GC / MS	Gas Chromatograph / Mass Spectrometer	TOC	Total Organic Carbon
ICP	Inductively Coupled Plasma	TOX	Total Organic Halogen
Id	Identification	TPH	Total Petroleum Hydrocarbons
MCL	Maximum Contaminant Level	VOC	Volatile Organic Compound
MDL	Minimum Detection Limit	VPH	Volatile Petroleum Hydrocarbons

Close File

0504 1354

SPECTRUM ANALYTICAL, INC.

CHAIN OF CUSTODY RECORD

Page 1 of 1

Special Handling:

☐ Standard TAT - 7 to 10 business days

☒ Rush TAT - Date Needed: 5/8/00

- All TATs are subject to laboratory approval.
- Min. 24-hour notification is needed for rushes.
- All samples are disposed of after 60 days unless otherwise instructed.

Report To: RMT, INC
100 Verdae Blvd
Greenville, SC 29607

Project Mgr.: Steve Webb

Invoice To: RMT, INC

P.O. No.: 998.39 RQN:

Project No.: 998.39
Site Name: MTD / Columbia
Location: Westfield State: MA
Sampler(s): C. Kline

1=$Na_2S_2O_3$ 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid
8=CH_3OH 9= $NaHSO_4$ 10= 11=

DW=Drinking Water GW=Groundwater WW=Wastewater
SW= Surface Water SO=Soil SL=Sludge O=Oil A=Air
X1= X2= X3=

G=Grab C=Composite

Lab Id:	Sample Id:	Date:	Time:	Type	Matrix	Preservative	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	TCLP Arsenic	TCLP Barium	TCLP Cadmium	TCLP Chromium	TCLP Lead	TCLP Selenium	TCLP Silver	TCLP Mercury	Notes:
AB 85781	LTM-10	5/4/00	1035	C	SO			2			X	X	X	X	X	X	X	X	TCLP RCRA 8 METALS
AB 85782	LCON-04	5/4/00	11:07	C	SO			2			X	X	X	X	X	X	X	X	
AB																			
AB																			
AB																			
AB																			
AB																			
AB																			
AB																			
AB																			

Additional Instructions: Please Call
Chas Kline @ 312-925-2296
FAX To Room 2312

☒ Fax results when available to (413) 733-8652

Relinquished By:	Received By:	Date:	Time:
[signature]	Kim Gillette	5/4/00	1155

Close File

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

Massachusetts Certification # M-MA138
Rhode Island # 98 Maine # MA138
Florida # E87600 / 87562
New Hampshire # 2538
Connecticut # PH-0777
New York # 11393

RMT, Inc
100 Verdae Blvd.
Greenville, SC 29607

5/18/00

Attn: Mark Shoaf

Client Project Number: 998.39 **Location:** MTD Columbia - Westfield, MA

Laboratory ID	Client Sample ID	Analyses Requested
AB87280	LCON-08	TCLP Extraction for Metals Metals Digestion on Leachate Mercury Digestion on Leachate TCLP RCRA8 Metals TCLP Mercury
AB87281	LTM-15	TCLP Extraction for Metals Metals Digestion on Leachate Mercury Digestion on Leachate TCLP RCRA8 Metals TCLP Mercury

I attest that all information contained within this report has been reviewed for accuracy and checked against all quality control requirements outlined in each applicable method including any data obtained from a subcontract laboratory.

Authorized by:

Hanibal C. Tayeh
President/Laboratory Director

ENVIRONMENTAL ANALYSES

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24 Tobey Road • Bloomfield, Connecticut 06002 • 860-242-6294 • Fax 860-242-4012

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SPECTRUM ANALYTICAL, INC.

Laboratory Report

Location: MTD Columbia - Westfield, MA
Client: RMT

Client Project No: 998.39
Submittal Date: 5/12/00

Lab ID No: AB87280 **Client Id:** LCON-08 **Collection Date:** 5/12/00 **Matrix:** Soil

Parameter	Results	Units	Reporting Limit	Start Date	End Date	Analyst	Method
Metals Preparation							
Mercury Digestion on Leachate	Completed			5/15/00	5/15/00	YV	EPA 245.1
Metals Digestion on Leachate	Completed			5/15/00	5/15/00	YV	EPA 200.7
Metals Analysis							
TCLP Mercury	Below det lim	mg/L	0.0004	5/15/00	5/15/00	JM	1311/245.1
TCLP Arsenic	Below det lim	mg/L	0.015	5/15/00	5/15/00	CR	1311/200.7
TCLP Barium	0.254	mg/L	0.005	5/15/00	5/15/00	CR	1311/200.7
TCLP Cadmium	0.0191	mg/L	0.005	5/15/00	5/15/00	CR	1311/200.7
TCLP Chromium	0.0110	mg/L	0.005	5/15/00	5/15/00	CR	1311/200.7
TCLP Lead	Below det lim	mg/L	0.010	5/15/00	5/15/00	CR	1311/200.7
TCLP Selenium	Below det lim	mg/L	0.015	5/15/00	5/15/00	CR	1311/200.7
TCLP Silver	Below det lim	mg/L	0.010	5/15/00	5/15/00	CR	1311/200.7
TCLP/SPLP Preparation							
TCLP Extraction for Metals	Completed			5/12/00	5/13/00	JM	SW846 1311

Lab ID No: AB87281 **Client Id:** LTM-15 **Collection Date:** 5/12/00 **Matrix:** Soil

Parameter	Results	Units	Reporting Limit	Start Date	End Date	Analyst	Method
Metals Preparation							
Mercury Digestion on Leachate	Completed			5/15/00	5/15/00	YV	EPA 245.1
Metals Digestion on Leachate	Completed			5/15/00	5/15/00	YV	EPA 200.7
Metals Analysis							
TCLP Mercury	Below det lim	mg/L	0.0004	5/15/00	5/15/00	JM	1311/245.1
TCLP Arsenic	Below det lim	mg/L	0.015	5/15/00	5/15/00	CR	1311/200.7
TCLP Barium	0.0290	mg/L	0.005	5/15/00	5/15/00	CR	1311/200.7
TCLP Cadmium	Below det lim	mg/L	0.005	5/15/00	5/15/00	CR	1311/200.7
TCLP Chromium	0.0560	mg/L	0.005	5/15/00	5/15/00	CR	1311/200.7
TCLP Lead	Below det lim	mg/L	0.010	5/15/00	5/15/00	CR	1311/200.7
TCLP Selenium	0.0240	mg/L	0.015	5/15/00	5/15/00	CR	1311/200.7
TCLP Silver	Below det lim	mg/L	0.010	5/15/00	5/15/00	CR	1311/200.7
TCLP/SPLP Preparation							
TCLP Extraction for Metals	Completed			5/12/00	5/13/00	JM	SW846 1311

Reviewed by:

Quality Service/Quality Assurance Depts.

Validated by:

President/Laboratory Director

5/18/00

Close File

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

Laboratory Report Supplement
References

SW 846	Test Methods for Evaluating Solid Waste. Third edition, 1998
40 CFR 136	Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act
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MADEP EPH	Method for the Determination of Extractable Petroleum Hydrocarbons (EPH)
MADEP VPH	Method for the Determination of Volatile Petroleum Hydrocarbons (VPH)
QAMS 004/80	Guidelines and Specifications for Preparing Quality Assurance Program Plans, USEPA Office of Monitoring System and Quality Assurance
GC-D-52-77	Oil Spill Identification System

Acronyms & Abbreviations

AA	Atomic Absorption	MS	Matrix Spike
ASTM	American Society for Testing and Materials	MSD	Matrix Spike Duplicate
BOD	Biological Oxygen Demand	NTU	Nephelometric Turbidity Units
°C	degree(s) Celsius	PAHs	Polynuclear Aromatic Hydrocarbons
COD	Chemical Oxygen Demand	PCBs	Polychlorinated Biphenyls
CMR	Code of Massachusetts Regulations	PID	Photo Ionization Detector
DEP	Department of Environmental Protection	PQL	Practical Quantitation Limit
DI	De-ionized	R	Recovery (%R: Percent Recovery)
DO	Dissolved Oxygen	RSD	Relative Standard Deviation
EPA	Environmental Protection Agency	SM	Standard Method
EPH	Extractable Petroleum Hydrocarbons	SR	Surrogate Recovery (%SR)
FID	Flame Ionization Detector	SW	Solid Waste
GC	Gas Chromatograph	THM	Trihalomethane(s)
GC / MS	Gas Chromatograph / Mass Spectrometer	TOC	Total Organic Carbon
ICP	Inductively Coupled Plasma	TOX	Total Organic Halogen
Id	Identification	TPH	Total Petroleum Hydrocarbons
MCL	Maximum Contaminant Level	VOC	Volatile Organic Compound
MDL	Minimum Detection Limit	VPH	Volatile Petroleum Hydrocarbons

Close File

0512 1447

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

CHAIN OF CUSTODY RECORD

Page 1 of 1

Special Handling:
- ☐ Standard TAT - 7 to 10 business days
- ☒ Rush TAT - Date Needed: 5/16/00
- All TATs are subject to laboratory approval.
- Min. 24-hour notification is needed for rushes.
- All samples are disposed of after 60 days unless otherwise instructed.

Report To: RMT, INC
100 Verdae Blvd
Greenville, SC 29607

Project Mgr.: Steve Webb

Invoice To: RMT, INC

P.O. No.: 998.39 RQN: 2958

Project No.: 998.39
Site Name: MTD / COLUMBIA
Location: Westfield State: MA
Sampler(s): C. Kline

1=$Na_2S_2O_3$ 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid
7=CH_3OH 8=$NaHSO_4$ 9=_____ 10=_____

DW=Drinking Water GW=Groundwater WW=Wastewater
SW= Surface Water SO=Soil SL=Sludge O=Oil A=Air
X1=_____ X2=_____ X3=_____

G=Grab C=Composite

Lab Id:	Sample Id:	Date:	Time:	Type	Matrix	Preservative	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic		TCLP Mercury	TCLP Arsenic	TCLP Barium	TCLP Cadmium	TCLP Chromium	TCLP Lead	TCLP Selenium	TCLP Silver	Notes:
AB 87280	LCON-08	5/12/00	1030	C	SO			2				X	X	X	X	X	X	X	X	TCLP RCRA 8 METALS
AB 87281	LTM-15	5/12/00	1155	C	SO			2				X	X	X	X	X	X	X	X	
AB																				
AB																				
AB																				
AB																				
AB																				
AB																				
AB																				
AB																				

Additional Instructions: Please FAX To Chris @ Hotel

☒ Fax results when available to (413) 732-8652
☐ E-mail results when available to _____

Relinquished By:	Received By:	Date:	Time:
[signature]	Kim [signature]	5/12/00	1430

Close File

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

Massachusetts Certification # M-MA138
Rhode Island # 98 Maine # MA138
Florida # E87600 / 87562
New Hampshire # 2538
Connecticut # PH-0777
New York # 11393

RMT, Inc
100 Verdae Blvd.
Greenville, SC 29607

5/16/00

Attn: Steve Webb

Client Project Number: 998.40 **Location:** MTD Columbia - Westfield, MA

Laboratory ID	Client Sample ID	Analyses Requested
AB87282	LCON-08X	% Solids
		Metals Digestion
		Mercury Digestion
		Total RCRA8 Metals
		Total Mercury

I attest that all information contained within this report has been reviewed for accuracy and checked against all quality control requirements outlined in each applicable method including any data obtained from a subcontract laboratory.

Authorized by:

Hanibal C. Tayeh
President/Laboratory Director

ENVIRONMENTAL ANALYSES

11 Almgren Drive • Agawam, Massachusetts 01001 • 1-800-789-9115 • 413-789-9018 • Fax 413-789-4076
24 Tobey Road • Bloomfield, Connecticut 06002 • 860-242-6294 • Fax 860-242-4012

Close File

SPECTRUM ANALYTICAL, INC.

Laboratory Report

Location: MTD Columbia - Westfield, MA
Client: RMT
Lab ID No: AB87282
Client Id: LCON-08X

Client Project No: 998.40
Submittal Date: 5/12/00
Collection Date: 5/12/00
Matrix: Soil

Parameter	Results	Units	Reporting Limit	Start Date	End Date	Analyst	Method
Metals Preparation							
Mercury Digestion	Completed			5/15/00	5/15/00	YV	EPA 245.1
Metals Digestion	Completed			5/15/00	5/15/00	YV	EPA 200.7
Metals Analysis							
Total RCRA8 Metals							
Total Arsenic	Below det lim	mg/Kg	3.13	5/16/00	5/16/00	CR	EPA 200.7
Total Barium	50.6	mg/Kg	1.04	5/16/00	5/16/00	CR	EPA 200.7
Total Cadmium	2.43	mg/Kg	1.04	5/16/00	5/16/00	CR	EPA 200.7
Total Chromium	94.7	mg/Kg	1.04	5/16/00	5/16/00	CR	EPA 200.7
Total Lead	51.5	mg/Kg	2.09	5/16/00	5/16/00	CR	EPA 200.7
Total Selenium	Below det lim	mg/Kg	3.13	5/16/00	5/16/00	CR	EPA 200.7
Total Silver	Below det lim	mg/Kg	2.09	5/16/00	5/16/00	CR	EPA 200.7
Total Mercury	Below det lim	mg/Kg	0.222	5/16/00	5/16/00	JM	EPA 245.1
% Solids	80.6	%		5/16/00	5/16/00	CR	EPA 160.3

Reviewed by:

DR LB

Quality Service/Quality Assurance Depts.

Validated by:

President/Laboratory Director

5/16/00

Close File

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

Laboratory Report Supplement
References

SW 846	Test Methods for Evaluating Solid Waste. Third edition, 1998
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MADEP EPH	Method for the Determination of Extractable Petroleum Hydrocarbons (EPH)
MADEP VPH	Method for the Determination of Volatile Petroleum Hydrocarbons (VPH)
QAMS 004/80	Guidelines and Specifications for Preparing Quality Assurance Program Plans, USEPA Office of Monitoring System and Quality Assurance
GC-D-52-77	Oil Spill Identification System

Acronyms & Abbreviations

AA	Atomic Absorption	MS	Matrix Spike
ASTM	American Society for Testing and Materials	MSD	Matrix Spike Duplicate
BOD	Biological Oxygen Demand	NTU	Nephelometric Turbidity Units
°C	degree(s) Celsius	PAHs	Polynuclear Aromatic Hydrocarbons
COD	Chemical Oxygen Demand	PCBs	Polychlorinated Biphenyls
CMR	Code of Massachusetts Regulations	PID	Photo Ionization Detector
DEP	Department of Environmental Protection	PQL	Practical Quantitation Limit
DI	De-ionized	R	Recovery (%R: Percent Recovery)
DO	Dissolved Oxygen	RSD	Relative Standard Deviation
EPA	Environmental Protection Agency	SM	Standard Method
EPH	Extractable Petroleum Hydrocarbons	SR	Surrogate Recovery (%SR)
FID	Flame Ionization Detector	SW	Solid Waste
GC	Gas Chromatograph	THM	Trihalomethane(s)
GC / MS	Gas Chromatograph / Mass Spectrometer	TOC	Total Organic Carbon
ICP	Inductively Coupled Plasma	TOX	Total Organic Halogen
Id	Identification	TPH	Total Petroleum Hydrocarbons
MCL	Maximum Contaminant Level	VOC	Volatile Organic Compound
MDL	Minimum Detection Limit	VPH	Volatile Petroleum Hydrocarbons

0512 1449

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

CHAIN OF CUSTODY RECORD

Page 1 of 1

Special Handling:
- ☐ Standard TAT - 7 to 10 business days
- ☒ Rush TAT - Date Needed: 5/16/00
- All TATs are subject to laboratory approval.
- Min. 24-hour notification is needed for rushes.
- All samples are disposed of after 60 days unless otherwise instructed.

Report To: RMT, INC
100 Verdae Blvd
Greenville SC 29607

Project Mgr.: Steve Webb

Invoice To: RMT, INC

P.O. No.: 998.40 RQN: 2958

Project No.: 998.40
Site Name: MTD / Columbia
Location: Westfield State: MA
Sampler(s): C. Kline

1=$Na_2S_2O_3$ 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid
7=CH_3OH 8=$NaHSO_4$ 9=_____ 10=_____

DW=Drinking Water GW=Groundwater WW=Wastewater
SW= Surface Water SO=Soil SL=Sludge O=Oil A=Air
X1=_____ X2=_____ X3=_____

G=Grab C=Composite

Lab Id:	Sample Id:	Date:	Time:	Type	Matrix	Preservative	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic		Total Arsenic	Total Cadmium	Total Chromium	Total Lead	Total Mercury	Total Barium	Total Silver	Total Selenium	Notes:
AB 87282	LCON-08X	5/12/00	1030	C	SO			2				X	X	X	X	X	X	X	X	TOTAL RCRA 8 METALS
AB																				
AB																				
AB																				
AB																				
AB																				
AB																				
AB																				
AB																				
AB																				

Containers:

Additional Instructions: Please FAX to Chris Kline @ Hotel

☒ Fax results when available to (413) 733-8652
☐ E-mail results when available to _____

Relinquished By:	Received By:	Date:	Time:
[signature]	[signature]	5/12/00	1430

Close File

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY
Massachusetts Certification # M-MA138
Rhode Island # 98 Maine # MA138
Florida # E87600 / 87562
New Hampshire # 2538
Connecticut # PH-0777
New York # 11393

RMT, Inc
100 Verdae Blvd.
Greenville, SC 29607

5/25/00

Attn: Steve Webb

Client Project Number: 998.40 **Location:** MTD Columbia - Westfield, MA

Laboratory ID	Client Sample ID	Analyses Requested
AB88605	LUM-01	TCLP Extraction for Metals Metals Digestion on Leachate Mercury Digestion on Leachate TCLP RCRA8 Metals TCLP Mercury

I attest that all information contained within this report has been reviewed for accuracy and checked against all quality control requirements outlined in each applicable method including any data obtained from a subcontract laboratory.

Authorized by:

Hanibal C. Tayeh
President/Laboratory Director

ENVIRONMENTAL ANALYSES
11 Almgren Drive • Agawam, Massachusetts 01001 • 1-800-789-9115 • 413-789-9018 • Fax 413-789-4076
24 Tobey Road • Bloomfield, Connecticut 06002 • 860-242-6294 • Fax 860-242-4012

Close File

SPECTRUM ANALYTICAL, INC.

Laboratory Report

Location: MTD Columbia - Westfield, MA
Client: RMT
Lab ID No: AB88605
Client Id: LUM-01

Client Project No: 998.40
Submittal Date: 5/22/00
Collection Date: 5/22/00
Matrix: Soil

Parameter	Results	Units	Reporting Limit	Start Date	End Date	Analyst	Method
Metals Preparation							
Mercury Digestion on Leachate	Completed			5/24/00	5/24/00	YV	EPA 245.1
Metals Digestion on Leachate	Completed			5/24/00	5/24/00	YV	EPA 200.7
Metals Analysis							
TCLP Mercury	Below det lim	mg/L	0.0004	5/25/00	5/25/00	JM	1311/245.1
TCLP RCRA8 Metals							
TCLP Arsenic	Below det lim	mg/L	0.015	5/25/00	5/25/00	JLC	1311/200.7
TCLP Barium	0.132	mg/L	0.050	5/25/00	5/25/00	JLC	1311/200.7
TCLP Cadmium	0.017	mg/L	0.005	5/25/00	5/25/00	JLC	1311/200.7
TCLP Chromium	0.536	mg/L	0.005	5/25/00	5/25/00	JLC	1311/200.7
TCLP Lead	Below det lim	mg/L	0.010	5/25/00	5/25/00	JLC	1311/200.7
TCLP Selenium	Below det lim	mg/L	0.015	5/25/00	5/25/00	JLC	1311/200.7
TCLP Silver	Below det lim	mg/L	0.010	5/25/00	5/25/00	JLC	1311/200.7
TCLP/SPLP Preparation							
TCLP Extraction for Metals	Completed			5/23/00	5/24/00	JM	SW846 1311

Reviewed by:

Quality Service/Quality Assurance Depts.

Validated by:

President/Laboratory Director

5/25/00

Close File

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

Laboratory Report Supplement
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ASTM	American Society for Testing and Materials	MSD	Matrix Spike Duplicate
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CMR	Code of Massachusetts Regulations	PID	Photo Ionization Detector
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DO	Dissolved Oxygen	RSD	Relative Standard Deviation
EPA	Environmental Protection Agency	SM	Standard Method
EPH	Extractable Petroleum Hydrocarbons	SR	Surrogate Recovery (%SR)
FID	Flame Ionization Detector	SW	Solid Waste
GC	Gas Chromatograph	THM	Trihalomethane(s)
GC / MS	Gas Chromatograph / Mass Spectrometer	TOC	Total Organic Carbon
ICP	Inductively Coupled Plasma	TOX	Total Organic Halogen
Id	Identification	TPH	Total Petroleum Hydrocarbons
MCL	Maximum Contaminant Level	VOC	Volatile Organic Compound
MDL	Minimum Detection Limit	VPH	Volatile Petroleum Hydrocarbons

Close File

05221645

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

CHAIN OF CUSTODY RECORD

Page 1 of 1

Special Handling:
- ☐ Standard TAT - 7 to 10 business days
- ☑ Rush TAT - Date Needed: 5/25/00
- All TATs are subject to laboratory approval.
- Min. 24-hour notification is needed for rushes.
- All samples are disposed of after 60 days unless otherwise instructed.

Report To: RMT, INC
100 Verdae Blvd
Greenville, SC 29607

Project Mgr.: Steve Webb

Invoice To: RMT

P.O. No.: 998.40 RQN: 2958

Project No.: 998.40
Site Name: MTD / Columbia
Location: Westfield, MA State: MA
Sampler(s): C. Kline

1=$Na_2S_2O_3$ 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid
7=CH_3OH 8=$NaHSO_4$ 9=_____ 10=_____

DW=Drinking Water GW=Groundwater WW=Wastewater
SW= Surface Water SO=Soil SL=Sludge O=Oil A=Air
X1=_____ X2=_____ X3=_____

G=Grab C=Composite

Lab Id:	Sample Id:	Date:	Time:	Type	Matrix	Preservative	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic		TCLP Arsenic	TCLP Barium	TCLP Cadmium	TCLP Chromium	TCLP Lead	TCLP Selenium	TCLP Silver	TCLP Mercury	Notes:
AB 88605	LUM-B1	5/22/00	1300	G	SO			2				X	X	X	X	X	X	X	X	TCLP RCRA 8 METALS
AB																				
AB																				
AB																				
AB																				
AB																				
AB																				
AB																				
AB																				
AB																				

Additional Instructions: Please Fax To Chris Kline @ Hotel Room 2312

☑ Fax results when available to (413) 733-8652
☐ E-mail results when available to _____

Relinquished By:	Received By:	Date:	Time:
	Kim [illegible]	5/22/00	1480

Close File

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY
Massachusetts Certification # M-MA138
Rhode Island # 98 Maine # MA138
Florida # E87600 / 87562
New Hampshire # 2538
Connecticut # PH-0777
New York # 11393

RMT, Inc
100 Verdae Blvd.
Greenville, SC 29607

5/31/00

Attn: Steve Webb

Client Project Number: 998.40 **Location:** MTD Columbia - Westfield, MA

Laboratory ID	Client Sample ID	Analyses Requested
AB89018	LCON-9X	TCLP Extraction for Metals
		Metals Digestion on Leachate
		Mercury Digestion on Leachate
		TCLP RCRA8 Metals
		TCLP Mercury
		Metals Digestion
		Mercury Digestion
		Total RCRA8 Metals
		Total Mercury
		% Solids

I attest that all information contained within this report has been reviewed for accuracy and checked against all quality control requirements outlined in each applicable method including any data obtained from a subcontract laboratory.

Authorized by:

Hanibal C. Tayeh
President/Laboratory Director

ENVIRONMENTAL ANALYSES
11 Almgren Drive • Agawam, Massachusetts 01001 • 1-800-789-9115 • 413-789-9018 • Fax 413-789-4076
24 Tobey Road • Bloomfield, Connecticut 06002 • 860-242-6294 • Fax 860-242-4012

Close File

SPECTRUM ANALYTICAL, INC.

Laboratory Report

Location: MTD Columbia - Westfield, MA
Client: RMT

Client Project No: 998.40
Submittal Date: 5/24/00

Lab ID No: AB89018 **Client Id:** LCON-9X **Collection Date:** 5/24/00 **Matrix:** Soil

Parameter	Results	Units	Reporting Limit	Start Date	End Date	Analyst	Method
Metals Preparation							
Mercury Digestion	Completed			5/26/00	5/26/00	EP	EPA 245.1
Mercury Digestion on Leachate	Completed			5/26/00	5/26/00	EP	EPA 245.1
Metals Digestion	Completed			5/26/00	5/26/00	EP	EPA 200.7
Metals Digestion on Leachate	Completed			5/26/00	5/26/00	EP	EPA 200.7
Metals Analysis							
TCLP Mercury	Below det lim	mg/L	0.0004	5/30/00	5/30/00	JM	1311/245.1
TCLP Arsenic	Below det lim	mg/L	0.015	5/30/00	5/30/00	NR	1311/200.7
TCLP Barium	0.501	mg/L	0.005	5/30/00	5/30/00	NR	1311/200.7
TCLP Cadmium	0.079	mg/L	0.005	5/30/00	5/30/00	NR	1311/200.7
TCLP Chromium	0.102	mg/L	0.005	5/30/00	5/30/00	NR	1311/200.7
TCLP Lead	Below det lim	mg/L	0.010	5/30/00	5/30/00	NR	1311/200.7
TCLP Selenium	Below det lim	mg/L	0.015	5/30/00	5/30/00	NR	1311/200.7
TCLP Silver	Below det lim	mg/L	0.010	5/30/00	5/30/00	NR	1311/200.7
Total Arsenic	Below det lim	mg/Kg	2.72	5/30/00	5/30/00	NR	EPA 200.7
Total Barium	28.0	mg/Kg	0.906	5/30/00	5/30/00	NR	EPA 200.7
Total Cadmium	4.38	mg/Kg	0.906	5/30/00	5/30/00	NR	EPA 200.7
Total Chromium	187	mg/Kg	0.906	5/30/00	5/30/00	NR	EPA 200.7
Total Lead	23.9	mg/Kg	1.81	5/30/00	5/30/00	NR	EPA 200.7
Total Selenium	Below det lim	mg/Kg	2.72	5/30/00	5/30/00	NR	EPA 200.7
Total Silver	Below det lim	mg/Kg	1.81	5/30/00	5/30/00	NR	EPA 200.7
Total Mercury	Below det lim	mg/Kg	0.194	5/26/00	5/26/00	JM	EPA 245.1
TCLP/SPLP Preparation							
TCLP Extraction for Metals	Completed			5/25/00	5/26/00	JM	SW846 1311
% Solids	92.2	%		5/30/00	5/30/00	CB	EPA 160.3

Reviewed by:

Quality Service/Quality Assurance Depts.

Validated by:

President/Laboratory Director

5/31/00

Close File

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

Laboratory Report Supplement
References

SW 846	Test Methods for Evaluating Solid Waste. Third edition, 1998
40 CFR 136	Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act
40 CFR 141	National Primary Drinking Water Regulations
40 CFR 143	National Secondary Drinking Water Regulations
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EPA 600/4-85/056	Choosing Cost-Effective QA/QC Programs for Chemical Analysis
EPA 600/4-88/039	Method for the Determination of Organic Compounds in Drinking Water
CT ETPH	Analysis of Extractable Total Petroleum Hydrocarbons (ETPH)
MADEP EPH	Method for the Determination of Extractable Petroleum Hydrocarbons (EPH)
MADEP VPH	Method for the Determination of Volatile Petroleum Hydrocarbons (VPH)
QAMS 004/80	Guidelines and Specifications for Preparing Quality Assurance Program Plans, USEPA Office of Monitoring System and Quality Assurance
GC-D-52-77	Oil Spill Identification System

Acronyms & Abbreviations

AA	Atomic Absorption	MS	Matrix Spike
ASTM	American Society for Testing and Materials	MSD	Matrix Spike Duplicate
BOD	Biological Oxygen Demand	NTU	Nephelometric Turbidity Units
°C	degree(s) Celsius	PAHs	Polynuclear Aromatic Hydrocarbons
COD	Chemical Oxygen Demand	PCBs	Polychlorinated Biphenyls
CMR	Code of Massachusetts Regulations	PID	Photo Ionization Detector
DEP	Department of Environmental Protection	PQL	Practical Quantitation Limit
DI	De-ionized	R	Recovery (%R: Percent Recovery)
DO	Dissolved Oxygen	RSD	Relative Standard Deviation
EPA	Environmental Protection Agency	SM	Standard Method
EPH	Extractable Petroleum Hydrocarbons	SR	Surrogate Recovery (%SR)
FID	Flame Ionization Detector	SW	Solid Waste
GC	Gas Chromatograph	THM	Trihalomethane(s)
GC / MS	Gas Chromatograph / Mass Spectrometer	TOC	Total Organic Carbon
ICP	Inductively Coupled Plasma	TOX	Total Organic Halogen
Id	Identification	TPH	Total Petroleum Hydrocarbons
MCL	Maximum Contaminant Level	VOC	Volatile Organic Compound
MDL	Minimum Detection Limit	VPH	Volatile Petroleum Hydrocarbons

0524 1431 KC

SPECTRUM ANALYTICAL, INC.
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CHAIN OF CUSTODY RECORD

Page 1 of 1

Special Handling:
- ☐ Standard TAT - 7 to 10 business days
- ☑ Rush TAT - Date Needed: 5/30/00
- All TATs are subject to laboratory approval.
- Min. 24-hour notification is needed for rushes.
- All samples are disposed of after 60 days unless otherwise instructed.

Report To: RMT, INC
100 Verdae Blvd
Greenville, SC 29607

Project Mgr.: Steve Webb

Invoice To: RMT, INC

P.O. No.: 998.40 RQN: 2958

Project No.: 998.40
Site Name: MTD/Columbia
Location: Westfield State: MA
Sampler(s): C Kline

1=$Na_2S_2O_3$ 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid
7=CH_3OH 8=$NaHSO_4$ 9=_____ 10=_____

DW=Drinking Water GW=Groundwater WW=Wastewater
SW= Surface Water SO=Soil SL=Sludge O=Oil A=Air
X1=_____ X2=_____ X3=_____

G=Grab C=Composite

Lab Id:	Sample Id:	Date:	Time:	Type	Matrix	Preservative	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic		TCLP Mercury / Total Mercury	TCLP Arsenic / Total Arsenic	TCLP Barium / Total Barium	TCLP Cadmium / Total Cadmium	TCLP Chromium / Total Chromium	TCLP Lead / Total Lead	TCLP Selenium / Total Selenium	TCLP Silver / Total Silver	Notes:
AB 89018	LCON-4X	5/24/00	935	C	S			2												TCLP & TOTAL RCRA & METALS
AB																				
AB																				
AB																				
AB																				
AB																				
AB																				
AB																				
AB																				
AB																				

Additional Instructions: Please fax Analysis to Chris Kline @ Hotel Room 2312

☑ Fax results when available to (417) 733-8658

☐ E-mail results when available to _____

Relinquished By:	Received By:	Date:	Time:
[signature]	[signature]	5/24/00	1325

Close File

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

Massachusetts Certification # M-MA138
Rhode Island # 98 Maine # MA138
Florida # E87600 / 87562
New Hampshire # 2538
Connecticut # PH-0777
New York # 11393

RMT, Inc
100 Verdae Blvd.
Greenville, SC 29607

4/14/00

Attn: Mark Shoaf

Client Project Number: 998.38 **Location:** MTD/Columbia-Westfield, MA

Laboratory ID	Client Sample ID	Analyses Requested
AB81623	RP-01	TCLP Extraction for Metals
		Metals Digestion on Leachate
		Mercury Digestion on Leachate
		TCLP RCRA8 Metals
		TCLP Mercury
AB81624	SP-01	TCLP Extraction for Metals
		Metals Digestion on Leachate
		Mercury Digestion on Leachate
		TCLP RCRA8 Metals
		TCLP Mercury

I attest that all information contained within this report has been reviewed for accuracy and checked against all quality control requirements outlined in each applicable method including any data obtained from a subcontract laboratory.

Authorized by:

Hanibal C. Payeh
President/Laboratory Director

ENVIRONMENTAL ANALYSES

11 Almgren Drive • Agawam, Massachusetts 01001 • 1-800-789-9115 • 413-789-9018 • Fax 413-789-4076
24 Tobey Road • Bloomfield, Connecticut 06002 • 860-242-6294 • Fax 860-242-4012

Close File

SPECTRUM ANALYTICAL, INC.

Laboratory Report

Location: MTD/Columbia-Westfield, MA
Client: RMT

Client Project No: 998.38
Submittal Date: 4/11/00

Lab ID No: AB81623 **Client Id:** RP-01 **Collection Date:** 4/11/00 **Matrix:** Soil

Parameter	Results	Units	Reporting Limit	Start Date	End Date	Analyst	Method
Metals Preparation							
Mercury Digestion on Leachate	Completed			4/13/00	4/13/00	JM	EPA 245.1
Metals Digestion on Leachate	Completed			4/13/00	4/13/00	JM	EPA 200.7
Metals Analysis							
TCLP Mercury	Below det lim	mg/L	0.0004	4/14/00	4/14/00	JM	1311/245.1
TCLP Arsenic	Below det lim	mg/L	0.015	4/14/00	4/14/00	CR	1311/200.7
TCLP Barium	0.147	mg/L	0.005	4/14/00	4/14/00	CR	1311/200.7
TCLP Cadmium	Below det lim	mg/L	0.005	4/14/00	4/14/00	CR	1311/200.7
TCLP Chromium	Below det lim	mg/L	0.005	4/14/00	4/14/00	CR	1311/200.7
TCLP Lead	Below det lim	mg/L	0.010	4/14/00	4/14/00	CR	1311/200.7
TCLP Selenium	Below det lim	mg/L	0.015	4/14/00	4/14/00	CR	1311/200.7
TCLP Silver	Below det lim	mg/L	0.010	4/14/00	4/14/00	CR	1311/200.7
TCLP/SPLP Preparation							
TCLP Extraction for Metals	Completed			4/12/00	4/13/00	JM	SW846 1311

Lab ID No: AB81624 **Client Id:** SP-01 **Collection Date:** 4/11/00 **Matrix:** Soil

Parameter	Results	Units	Reporting Limit	Start Date	End Date	Analyst	Method
Metals Preparation							
Mercury Digestion on Leachate	Completed			4/13/00	4/13/00	JM	EPA 245.1
Metals Digestion on Leachate	Completed			4/13/00	4/13/00	JM	EPA 200.7
Metals Analysis							
TCLP Mercury	Below det lim	mg/L	0.0004	4/14/00	4/14/00	JM	1311/245.1
TCLP Arsenic	Below det lim	mg/L	0.015	4/14/00	4/14/00	CR	1311/200.7
TCLP Barium	0.209	mg/L	0.005	4/14/00	4/14/00	CR	1311/200.7
TCLP Cadmium	Below det lim	mg/L	0.005	4/14/00	4/14/00	CR	1311/200.7
TCLP Chromium	Below det lim	mg/L	0.005	4/14/00	4/14/00	CR	1311/200.7
TCLP Lead	Below det lim	mg/L	0.010	4/14/00	4/14/00	CR	1311/200.7
TCLP Selenium	Below det lim	mg/L	0.015	4/14/00	4/14/00	CR	1311/200.7
TCLP Silver	Below det lim	mg/L	0.010	4/14/00	4/14/00	CR	1311/200.7
TCLP/SPLP Preparation							
TCLP Extraction for Metals	Completed			4/12/00	4/13/00	JM	SW846 1311

Reviewed by:

Quality Service/Quality Assurance Depts.

Validated by:

President/Laboratory Director

4/14/00

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SPECTRUM ANALYTICAL, INC.
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Laboratory Report Supplement
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MADEP VPH	Method for the Determination of Volatile Petroleum Hydrocarbons (VPH)
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Acronyms & Abbreviations

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°C	degree(s) Celsius	PAHs	Polynuclear Aromatic Hydrocarbons
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FID	Flame Ionization Detector	SW	Solid Waste
GC	Gas Chromatograph	THM	Trihalomethane(s)
GC / MS	Gas Chromatograph / Mass Spectrometer	TOC	Total Organic Carbon
ICP	Inductively Coupled Plasma	TOX	Total Organic Halogen
Id	Identification	TPH	Total Petroleum Hydrocarbons
MCL	Maximum Contaminant Level	VOC	Volatile Organic Compound
MDL	Minimum Detection Limit	VPH	Volatile Petroleum Hydrocarbons

Close File

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SPECTRUM ANALYTICAL, INC.
Featuring
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CHAIN OF CUSTODY RECORD

Page 1 of 1

Special Handling:
- ☐ Standard TAT - 7 to 10 business days
- ☒ Rush TAT - Date Needed: _____
- All TATs are subject to laboratory approval.
- Min. 24-hour notification is needed for rushes.
- All samples are disposed of after 60 days unless otherwise instructed.

Report To: RMT, INC
864-234-9472
Project Mgr.: MARK SHOAF

Invoice To: RMT, INC
100 Verdae Blvd
Greenville, SC 29607
P.O. No.: 998.38 RQN: 2958

Project No.: 998.38
Site Name: MTD Columbia Manufacturing
Location: Westfield State: MA
Sampler(s): C. Kline

1=$Na_2S_2O_3$ 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid
7=CH_3OH 8=$NaHSO_4$ 9=_____ 10=_____

DW=Drinking Water GW=Groundwater WW=Wastewater
SW= Surface Water SO=Soil SL=Sludge O=Oil A=Air
X1= _____ X2= _____ X3= _____

G=Grab C=Composite

Lab Id:	Sample Id:	Date:	Time:	Type	Matrix	Preservative	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	TCLP PCBs/Metals								Notes:
AB 81623	RP-01	4/11/00	1430	C	SO	N/A		2			X								
AB 81624	SP-01	4/11/00	1505	C	SO	N/A		2			X								
AB																			
AB																			
AB																			
AB																			
AB																			
AB																			
AB																			
AB																			

Additional Instructions: RUSH TURN
CALL Chris Kline
312-925-2296

☒ Fax results when available to (864) 281-0288

Relinquished By:	Received By:	Date:	Time:
		4/11/00	1545
	K King	4/11/00	1545

11 Almgren Drive • Agawam, Massachusetts 01001 • 413-789-9018 • Fax 413-789-4076

Close File

Appendix G
Fire Pond Water Analysis

Close File

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

Massachusetts Certification # M-MA138
Rhode Island # 98 Maine # MA138
Florida # E87600 / 87562
New Hampshire # 2538
Connecticut # PH-0777
New York # 11393

Rmt, Inc
100 Verdae Blvd.
Greenville, SC 29607

4/19/00

Attn: Mark Shoaf

Client Project Number: 998.39 **Location:** MTD - Westfield, MA

Laboratory ID	Client Sample ID	Analyses Requested
AB81321	FPW-01	B.O.D./5 day
		COD
		Total Suspended Solids
		Oil and Grease (gravimetric)
		Separatory Funnel Extraction
		Total Cyanide
		Purgeables
		Base/Neutrals and Acids
		Separatory Funnel Extraction
		Chromium, Hexavalent
		Total Phosphorus
		Ammonia
		Polychlorinated Biphenyls by GC
		Organochlorine Pesticides by GC
		Metals Digestion
		Mercury Digestion
		Total Metals
		Total Mercury
		Total Silver
		Total Copper
		Total Nickel
		Total Zinc
		Total Beryllium
		Total Thallium
		Total Antimony
		Total Barium
		Total Boron

11 Almgren Drive • Agawam, Massachusetts 01001 • 1-800-789-9115 • 413-789-9018 • Fax 413-789-4076
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SPECTRUM ANALYTICAL, INC.
Featuring
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Client Project Number: 998.39 **Location:** MTD - Westfield, MA

Laboratory ID	Client Sample ID	Analyses Requested
AB81321	FPW-01	Total Manganese Total Iron Total Titanium

I attest that all information contained within this report has been reviewed for accuracy and checked against all quality control requirements outlined in each applicable method including any data obtained from a subcontract laboratory.

Authorized by:

Hanibal C. Tayeh
President/Laboratory Director

11 Almgren Drive • Agawam, Massachusetts 01001 • 1-800-789-9115 • 413-789-9018 • Fax 413-789-4076
24 Tobey Road • Bloomfield, Connecticut 06002 • 860-242-6294 • Fax 860-242-4012

Close File

SPECTRUM ANALYTICAL, INC.

Laboratory Report

Location: MTD - Westfield, MA
Client: RMT
Lab ID No: AB81321
Client Id: FPW-01

Client Project No: 998.39
Submittal Date: 4/10/00
Collection Date: 4/10/00
Matrix: Water

Parameter	Results	Units	Reporting Limit	Start Date	End Date	Analyst	Method
Volatile Organic Compounds							
Purgeables							
Acetone	Not detected	ug/L	100.0	4/12/00	4/12/00	CH	EPA 624
Benzene	Not detected	ug/L	1.0	4/12/00	4/12/00	CH	EPA 624
Bromodichloromethane	Not detected	ug/L	1.0	4/12/00	4/12/00	CH	EPA 624
Bromoform	Not detected	ug/L	1.0	4/12/00	4/12/00	CH	EPA 624
Bromomethane	Not detected	ug/L	2.0	4/12/00	4/12/00	CH	EPA 624
2-Butanone (MEK)	Not detected	ug/L	50.0	4/12/00	4/12/00	CH	EPA 624
Carbon tetrachloride	Not detected	ug/L	1.0	4/12/00	4/12/00	CH	EPA 624
Chlorobenzene	Not detected	ug/L	1.0	4/12/00	4/12/00	CH	EPA 624
Chloroethane	Not detected	ug/L	2.0	4/12/00	4/12/00	CH	EPA 624
Chloroform	Not detected	ug/L	1.0	4/12/00	4/12/00	CH	EPA 624
Chloromethane	Not detected	ug/L	2.0	4/12/00	4/12/00	CH	EPA 624
Dibromochloromethane	Not detected	ug/L	1.0	4/12/00	4/12/00	CH	EPA 624
1,2-Dichlorobenzene	Not detected	ug/L	1.0	4/12/00	4/12/00	CH	EPA 624
1,3-Dichlorobenzene	Not detected	ug/L	1.0	4/12/00	4/12/00	CH	EPA 624
1,4-Dichlorobenzene	Not detected	ug/L	1.0	4/12/00	4/12/00	CH	EPA 624
1,1-Dichloroethane	Not detected	ug/L	1.0	4/12/00	4/12/00	CH	EPA 624
1,2-Dichloroethane	Not detected	ug/L	1.0	4/12/00	4/12/00	CH	EPA 624
1,1-Dichloroethene	Not detected	ug/L	1.0	4/12/00	4/12/00	CH	EPA 624
cis-1,2-Dichloroethene	Not detected	ug/L	1.0	4/12/00	4/12/00	CH	EPA 624
trans-1,2-Dichloroethene	Not detected	ug/L	1.0	4/12/00	4/12/00	CH	EPA 624
1,2-Dichloropropane	Not detected	ug/L	1.0	4/12/00	4/12/00	CH	EPA 624
cis-1,3-Dichloropropene	Not detected	ug/L	1.0	4/12/00	4/12/00	CH	EPA 624
trans-1,3-Dichloropropene	Not detected	ug/L	1.0	4/12/00	4/12/00	CH	EPA 624
Ethylbenzene	Not detected	ug/L	1.0	4/12/00	4/12/00	CH	EPA 624
2-Hexanone (MBK)	Not detected	ug/L	100.0	4/12/00	4/12/00	CH	EPA 624
Methyl-tert-butyl ether (MTBE)	Not detected	ug/L	1.0	4/12/00	4/12/00	CH	EPA 624
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	20.0	4/12/00	4/12/00	CH	EPA 624
Methylene chloride	Not detected	ug/L	1.0	4/12/00	4/12/00	CH	EPA 624
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1.0	4/12/00	4/12/00	CH	EPA 624
Tetrachloroethene (PCE)	Not detected	ug/L	1.0	4/12/00	4/12/00	CH	EPA 624
Toluene	Not detected	ug/L	1.0	4/12/00	4/12/00	CH	EPA 624
1,1,1-Trichloroethane	Not detected	ug/L	1.0	4/12/00	4/12/00	CH	EPA 624
1,1,2-Trichloroethane	Not detected	ug/L	1.0	4/12/00	4/12/00	CH	EPA 624
Trichloroethene (TCE)	Not detected	ug/L	1.0	4/12/00	4/12/00	CH	EPA 624

Close File

Lab ID No: AB81321 **Collection Date:** 4/10/00
Client Id: FPW-01 **Matrix:** Water

Parameter	Results	Units	Reporting Limit	Start Date	End Date	Analyst	Method
Trichlorofluoromethane	Not detected	ug/L	1.0	4/12/00	4/12/00	CH	EPA 624
Vinyl chloride	Not detected	ug/L	2.0	4/12/00	4/12/00	CH	EPA 624
m,p-Xylenes	Not detected	ug/L	2.0	4/12/00	4/12/00	CH	EPA 624
o-Xylene	Not detected	ug/L	1.0	4/12/00	4/12/00	CH	EPA 624
4-Bromofluorobenzene (%SR)	76	ug/L		4/12/00	4/12/00	CH	EPA 624
1,4-Difluorobenzene (%SR)	106	ug/L		4/12/00	4/12/00	CH	EPA 624
Chlorobenzene-d5 (%SR)	90	ug/L		4/12/00	4/12/00	CH	EPA 624
TPH Preparation							
Separatory Funnel Extraction	Completed			4/13/00	4/13/00	DS	SW846 3510C
Petroleum Hydrocarbon Analysis							
Oil and Grease (gravimetric)	Below det lim	mg/L	5.0	4/13/00	4/14/00	DS	EPA 413.1
SVOC Preparation							
Separatory Funnel Extraction	Completed			4/12/00	4/12/00	EP	SW846 3510C
Semivolatile Organic Compounds							
Base/Neutrals and Acids							
Pyridine	Not detected	ug/L	5.0	4/13/00	4/13/00	MSL	EPA 625
n-Nitrosodimethylamine	Not detected	ug/L	5.0	4/13/00	4/13/00	MSL	EPA 625
Aniline	Not detected	ug/L	5.0	4/13/00	4/13/00	MSL	EPA 625
Bis (2-chloroethyl) ether	Not detected	ug/L	5.0	4/13/00	4/13/00	MSL	EPA 625
Phenol	Not detected	ug/L	5.0	4/13/00	4/13/00	MSL	EPA 625
2-Chlorophenol	Not detected	ug/L	5.0	4/13/00	4/13/00	MSL	EPA 625
1,3-Dichlorobenzene	Not detected	ug/L	5.0	4/13/00	4/13/00	MSL	EPA 625
1,4-Dichlorobenzene	Not detected	ug/L	5.0	4/13/00	4/13/00	MSL	EPA 625
1,2-Dichlorobenzene	Not detected	ug/L	5.0	4/13/00	4/13/00	MSL	EPA 625
Benzyl alcohol	Not detected	ug/L	5.0	4/13/00	4/13/00	MSL	EPA 625
Bis (2-chloroisopropyl) ether	Not detected	ug/L	5.0	4/13/00	4/13/00	MSL	EPA 625
2-Methylphenol (o-cresol)	Not detected	ug/L	5.0	4/13/00	4/13/00	MSL	EPA 625
Hexachloroethane	Not detected	ug/L	5.0	4/13/00	4/13/00	MSL	EPA 625
n-Nitroso-di-n-propylamine	Not detected	ug/L	5.0	4/13/00	4/13/00	MSL	EPA 625
3-Methylphenol (m-cresol)	Not detected	ug/L	5.0	4/13/00	4/13/00	MSL	EPA 625
4-Methylphenol (p-cresol)	Not detected	ug/L	5.0	4/13/00	4/13/00	MSL	EPA 625
Nitrobenzene	Not detected	ug/L	5.0	4/13/00	4/13/00	MSL	EPA 625
Isophorone	Not detected	ug/L	5.0	4/13/00	4/13/00	MSL	EPA 625
2-Nitrophenol	Not detected	ug/L	5.0	4/13/00	4/13/00	MSL	EPA 625
2,4-Dimethylphenol	Not detected	ug/L	5.0	4/13/00	4/13/00	MSL	EPA 625
Bis (2-chloroethoxy) methane	Not detected	ug/L	5.0	4/13/00	4/13/00	MSL	EPA 625
2,4-Dichlorophenol	Not detected	ug/L	5.0	4/13/00	4/13/00	MSL	EPA 625
1,2,4-Trichlorobenzene	Not detected	ug/L	5.0	4/13/00	4/13/00	MSL	EPA 625
Benzoic acid	Not detected	ug/L	5.0	4/13/00	4/13/00	MSL	EPA 625

Close File

Lab ID No: AB81321 **Collection Date:** 4/10/00
Client Id: FPW-01 **Matrix:** Water

Parameter	Results	Units	Reporting Limit	Start Date	End Date	Analyst	Method
Naphthalene	Not detected	ug/L	5.0	4/13/00	4/13/00	MSL	EPA 625
4-Chloroaniline	Not detected	ug/L	5.0	4/13/00	4/13/00	MSL	EPA 625
Hexachlorobutadiene	Not detected	ug/L	5.0	4/13/00	4/13/00	MSL	EPA 625
4-Chloro-3-methylphenol	Not detected	ug/L	5.0	4/13/00	4/13/00	MSL	EPA 625
2-Methylnaphthalene	Not detected	ug/L	5.0	4/13/00	4/13/00	MSL	EPA 625
Hexachlorocyclopentadiene	Not detected	ug/L	5.0	4/13/00	4/13/00	MSL	EPA 625
2,4,6-Trichlorophenol	Not detected	ug/L	5.0	4/13/00	4/13/00	MSL	EPA 625
2,4,5-Trichlorophenol	Not detected	ug/L	5.0	4/13/00	4/13/00	MSL	EPA 625
2-Chloronaphthalene	Not detected	ug/L	5.0	4/13/00	4/13/00	MSL	EPA 625
2-Nitroaniline	Not detected	ug/L	5.0	4/13/00	4/13/00	MSL	EPA 625
Acenaphthylene	Not detected	ug/L	5.0	4/13/00	4/13/00	MSL	EPA 625
Dimethylphthalate	Not detected	ug/L	5.0	4/13/00	4/13/00	MSL	EPA 625
2,6-Dinitrotoluene	Not detected	ug/L	5.0	4/13/00	4/13/00	MSL	EPA 625
Acenaphthene	Not detected	ug/L	5.0	4/13/00	4/13/00	MSL	EPA 625
3-Nitroaniline	Not detected	ug/L	5.0	4/13/00	4/13/00	MSL	EPA 625
2,4-Dinitrophenol	Not detected	ug/L	5.0	4/13/00	4/13/00	MSL	EPA 625
Dibenzofuran	Not detected	ug/L	5.0	4/13/00	4/13/00	MSL	EPA 625
2,4-Dinitrotoluene	Not detected	ug/L	5.0	4/13/00	4/13/00	MSL	EPA 625
4-Nitrophenol	Not detected	ug/L	5.0	4/13/00	4/13/00	MSL	EPA 625
Fluorene	Not detected	ug/L	5.0	4/13/00	4/13/00	MSL	EPA 625
4-Chlorophenyl phenyl ether	Not detected	ug/L	5.0	4/13/00	4/13/00	MSL	EPA 625
Diethyl phthalate	Not detected	ug/L	5.0	4/13/00	4/13/00	MSL	EPA 625
4-Nitroaniline	Not detected	ug/L	5.0	4/13/00	4/13/00	MSL	EPA 625
4,6-Dinitro-2-methylphenol	Not detected	ug/L	5.0	4/13/00	4/13/00	MSL	EPA 625
n-Nitrosodiphenylamine	Not detected	ug/L	5.0	4/13/00	4/13/00	MSL	EPA 625
Azobenzene/Diphenyldiazine	Not detected	ug/L	5.0	4/13/00	4/13/00	MSL	EPA 625
4-Bromophenyl phenyl ether	Not detected	ug/L	5.0	4/13/00	4/13/00	MSL	EPA 625
Hexachlorobenzene	Not detected	ug/L	5.0	4/13/00	4/13/00	MSL	EPA 625
Pentachlorophenol	Not detected	ug/L	5.0	4/13/00	4/13/00	MSL	EPA 625
Phenanthrene	Not detected	ug/L	5.0	4/13/00	4/13/00	MSL	EPA 625
Anthracene	Not detected	ug/L	5.0	4/13/00	4/13/00	MSL	EPA 625
Di-n-butylphthalate	Not detected	ug/L	5.0	4/13/00	4/13/00	MSL	EPA 625
Fluoranthene	Not detected	ug/L	5.0	4/13/00	4/13/00	MSL	EPA 625
Benzidine	Not detected	ug/L	5.0	4/13/00	4/13/00	MSL	EPA 625
Pyrene	Not detected	ug/L	5.0	4/13/00	4/13/00	MSL	EPA 625
Butyl benzyl phthalate	Not detected	ug/L	5.0	4/13/00	4/13/00	MSL	EPA 625
3,3'-Dichlorobenzidine	Not detected	ug/L	5.0	4/13/00	4/13/00	MSL	EPA 625
Benzo (a) anthracene	Not detected	ug/L	5.0	4/13/00	4/13/00	MSL	EPA 625
Chrysene	Not detected	ug/L	5.0	4/13/00	4/13/00	MSL	EPA 625
Bis (2-ethylhexyl) phthalate	6.7	ug/L	5.0	4/13/00	4/13/00	MSL	EPA 625
Di-n-octylphthalate	Not detected	ug/L	5.0	4/13/00	4/13/00	MSL	EPA 625
Benzo (b) fluoranthene	Not detected	ug/L	5.0	4/13/00	4/13/00	MSL	EPA 625

Close File

Lab ID No: AB81321 **Collection Date:** 4/10/00
Client Id: FPW-01 **Matrix:** Water

Parameter	Results	Units	Reporting Limit	Start Date	End Date	Analyst	Method
Benzo (k) fluoranthene	Not detected	ug/L	5.0	4/13/00	4/13/00	MSL	EPA 625
Benzo (a) pyrene	Not detected	ug/L	5.0	4/13/00	4/13/00	MSL	EPA 625
Indeno (1,2,3-cd) pyrene	Not detected	ug/L	5.0	4/13/00	4/13/00	MSL	EPA 625
Dibenz (a,h) anthracene	Not detected	ug/L	5.0	4/13/00	4/13/00	MSL	EPA 625
Benzo (g,h,i) perylene	Not detected	ug/L	5.0	4/13/00	4/13/00	MSL	EPA 625
2-Fluorobiphenyl (%SR)	62	ug/L	0.	4/13/00	4/13/00	MSL	EPA 625
2-Fluorophenol (%SR)	112	ug/L	0.	4/13/00	4/13/00	MSL	EPA 625
Nitrobenzene-d5 (%SR)	63	ug/L	0.	4/13/00	4/13/00	MSL	EPA 625
Phenol-d5 (%SR)	116	ug/L	0.	4/13/00	4/13/00	MSL	EPA 625
Terphenyl-d14 (%SR)	89	ug/L	0.	4/13/00	4/13/00	MSL	EPA 625
2,4,6-Tribromophenol (%SR)	60	ug/L	0.	4/13/00	4/13/00	MSL	EPA 625
Semivolatile Organic Compounds							
Organochlorine Pesticides by GC							
Aldrin	Not detected	ug/L	0.051	4/13/00	4/13/00	TG	EPA 608
alpha-BHC	Not detected	ug/L	0.051	4/13/00	4/13/00	TG	EPA 608
beta-BHC	Not detected	ug/L	0.051	4/13/00	4/13/00	TG	EPA 608
delta-BHC	Not detected	ug/L	0.051	4/13/00	4/13/00	TG	EPA 608
gamma-BHC (Lindane)	Not detected	ug/L	0.051	4/13/00	4/13/00	TG	EPA 608
Chlordane	Not detected	ug/L	0.2	4/13/00	4/13/00	TG	EPA 608
4,4'-DDD	Not detected	ug/L	0.051	4/13/00	4/13/00	TG	EPA 608
4,4'-DDE	Not detected	ug/L	0.051	4/13/00	4/13/00	TG	EPA 608
4,4'-DDT	Not detected	ug/L	0.051	4/13/00	4/13/00	TG	EPA 608
Dieldrin	Not detected	ug/L	0.051	4/13/00	4/13/00	TG	EPA 608
Endosulfan I	Not detected	ug/L	0.051	4/13/00	4/13/00	TG	EPA 608
Endosulfan II	Not detected	ug/L	0.051	4/13/00	4/13/00	TG	EPA 608
Endosulfan sulfate	Not detected	ug/L	0.051	4/13/00	4/13/00	TG	EPA 608
Endrin	Not detected	ug/L	0.051	4/13/00	4/13/00	TG	EPA 608
Endrin aldehyde	Not detected	ug/L	0.051	4/13/00	4/13/00	TG	EPA 608
Heptachlor	Not detected	ug/L	0.051	4/13/00	4/13/00	TG	EPA 608
Methoxychlor	Not detected	ug/L	0.051	4/13/00	4/13/00	TG	EPA 608
Heptachlor epoxide	Not detected	ug/L	0.051	4/13/00	4/13/00	TG	EPA 608
Toxaphene	Not detected	ug/L	0.051	4/13/00	4/13/00	TG	EPA 608
Decachlorobiphenyl (%SR)	56	ug/L	0.	4/13/00	4/13/00	TG	EPA 608
Polychlorinated Biphenyls by GC							
PCB-1016	Not detected	ug/L	0.2	4/13/00	4/13/00	TG	EPA 608
PCB-1221	Not detected	ug/L	0.2	4/13/00	4/13/00	TG	EPA 608
PCB-1232	Not detected	ug/L	0.2	4/13/00	4/13/00	TG	EPA 608
PCB-1242	Not detected	ug/L	0.2	4/13/00	4/13/00	TG	EPA 608
PCB-1248	Not detected	ug/L	0.2	4/13/00	4/13/00	TG	EPA 608
PCB-1254	Not detected	ug/L	0.2	4/13/00	4/13/00	TG	EPA 608
PCB-1260	Not detected	ug/L	0.2	4/13/00	4/13/00	TG	EPA 608

Close File

Lab ID No: AB81321 **Collection Date:** 4/10/00
Client Id: FPW-01 **Matrix:** Water

Parameter	Results	Units	Reporting Limit	Start Date	End Date	Analyst	Method
Decachlorobiphenyl (%SR)	56	ug/L	0.	4/13/00	4/13/00	TG	EPA 608
Metals Preparation							
Mercury Digestion	Completed			4/15/00	4/15/00	YV	EPA 245.1
Metals Digestion	Completed			4/15/00	4/15/00	YV	EPA 200.7
Metals Analysis							
Total Metals							
Total Arsenic	Below det lim	mg/L	0.015	4/17/00	4/17/00	CR	EPA 200.7
Total Cadmium	Below det lim	mg/L	0.005	4/17/00	4/17/00	CR	EPA 200.7
Total Chromium	Below det lim	mg/L	0.005	4/17/00	4/17/00	CR	EPA 200.7
Total Lead	Below det lim	mg/L	0.010	4/17/00	4/17/00	CR	EPA 200.7
Total Antimony	Below det lim	mg/L	0.015	4/17/00	4/18/00	CR	EPA 200.7
Total Barium	0.020	mg/L	0.005	4/17/00	4/17/00	CR	EPA 200.7
Total Beryllium	Below det lim	mg/L	0.005	4/17/00	4/18/00	CR	EPA 200.7
Total Boron	0.308	mg/L	0.010	4/17/00	4/18/00	CR	EPA 200.7
Total Copper	0.0065	mg/L	0.0050	4/17/00	4/18/00	CR	EPA 200.7
Total Iron	0.374	mg/L	0.010	4/17/00	4/19/00	CR	EPA 200.7
Total Manganese	0.0048	mg/L	0.0020	4/17/00	4/19/00	CR	EPA 200.7
Total Mercury	Below det lim	mg/L	0.0004	4/17/00	4/17/00	JM	EPA 245.1
Total Nickel	0.049	mg/L	0.005	4/17/00	4/18/00	CR	EPA 200.7
Total Silver	Below det lim	mg/L	0.010	4/17/00	4/17/00	CR	EPA 200.7
Total Thallium	Below det lim	mg/L	0.015	4/17/00	4/18/00	CR	EPA 200.7
Total Zinc	0.0080	mg/L	0.0050	4/17/00	4/18/00	CR	EPA 200.7
General Chemistry							
B.O.D./5 day	Below det lim	mg/L	3.0	4/12/00	4/17/00	SS	EPA 405.1
Chromium, Hexavalent	Below det lim	mg/L	0.10	4/11/00	4/11/00	DMM	SM3500-CrD
COD	22	mg/L	5.0	4/13/00	4/13/00	DMM	EPA 410.4
Total Cyanide	Below det lim	mg/L	0.01	4/12/00	4/12/00	DMM	EPA 335.2
Total Phosphorus	0.12	mg/L	0.015	4/12/00	4/12/00	DMM	EPA 365.2
Total Suspended Solids	6.0	mg/L	5.0	4/13/00	4/14/00	SS	EPA 160.2
Subcontracted Analyses							
Ammonia	0.04	mg/L	0.02	4/17/00	4/17/00	PX	350.1/4500H
Total Titanium	Below det lim	mg/L	0.01	4/11/00	4/13/00	PX	EPA 200.7

Close File

Lab ID No: AB81321
Client Id: FPW-01

Collection Date: 4/10/00
Matrix: Water

Parameter	Results	Units	Reporting Limit	Start Date	End Date	Analyst	Method

Reviewed by:

Quality Service/Quality Assurance Depts.

Validated by:

President/Laboratory Director

4/19/00

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Laboratory Report Supplement
References

SW 846	Test Methods for Evaluating Solid Waste. Third edition, 1998
40 CFR 136	Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act
40 CFR 141	National Primary Drinking Water Regulations
40 CFR 143	National Secondary Drinking Water Regulations
40 CFR 160	Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), Good Laboratory Practice Standards
APHA-AWWA-WPCF	Standard Methods for the Examination of Water and Wastewater. 19th edition, 1995
ASTM D 3328	Standard Methods for the Comparison of Waterborne Petroleum Oils by Gas Chromatography
EPA 540/G-87/003	Data Quality Objectives for Remediation Response Activities, Development Process
EPA 600/4-79-012	Quality Assurance Handbook for Analytical Quality Control in Water and Wastewater Laboratories
EPA 600/4-79-019	Handbook for Analytical Quality Control in Water and Wastewater Laboratories
EPA 600/4-79-020	Method for the Chemical Analysis of Water and Wastes
EPA 600/4-82-057	Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater
EPA 600/4-85/056	Choosing Cost-Effective QA/QC Programs for Chemical Analysis
EPA 600/4-88/039	Method for the Determination of Organic Compounds in Drinking Water
CT ETPH	Analysis of Extractable Total Petroleum Hydrocarbons (ETPH)
MADEP EPH	Method for the Determination of Extractable Petroleum Hydrocarbons (EPH)
MADEP VPH	Method for the Determination of Volatile Petroleum Hydrocarbons (VPH)
QAMS 004/80	Guidelines and Specifications for Preparing Quality Assurance Program Plans, USEPA Office of Monitoring System and Quality Assurance
GC-D-52-77	Oil Spill Identification System

Acronyms & Abbreviations

AA	Atomic Absorption	MS	Matrix Spike
ASTM	American Society for Testing and Materials	MSD	Matrix Spike Duplicate
BOD	Biological Oxygen Demand	NTU	Nephelometric Turbidity Units
°C	degree(s) Celsius	PAHs	Polynuclear Aromatic Hydrocarbons
COD	Chemical Oxygen Demand	PCBs	Polychlorinated Biphenyls
CMR	Code of Massachusetts Regulations	PID	Photo Ionization Detector
DEP	Department of Environmental Protection	PQL	Practical Quantitation Limit
DI	De-ionized	R	Recovery (%R: Percent Recovery)
DO	Dissolved Oxygen	RSD	Relative Standard Deviation
EPA	Environmental Protection Agency	SM	Standard Method
EPH	Extractable Petroleum Hydrocarbons	SR	Surrogate Recovery (%SR)
FID	Flame Ionization Detector	SW	Solid Waste
GC	Gas Chromatograph	THM	Trihalomethane(s)
GC / MS	Gas Chromatograph / Mass Spectrometer	TOC	Total Organic Carbon
ICP	Inductively Coupled Plasma	TOX	Total Organic Halogen
Id	Identification	TPH	Total Petroleum Hydrocarbons
MCL	Maximum Contaminant Level	VOC	Volatile Organic Compound
MDL	Minimum Detection Limit	VPH	Volatile Petroleum Hydrocarbons

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CHAIN OF CUSTODY RECORD

Page 1 of 1

Special Handling:
- ☐ Standard TAT - 7 to 10 business days
- ☐ Rush TAT - Date Needed: _____
- All TATs are subject to laboratory approval.
- Min. 24-hour notification is needed for rushes.
- All samples are disposed of after 60 days unless otherwise instructed.

Report To: RMT, INC
100 Verdae Blvd
Greenville SC 29607
Project Mgr.: MARK SHOAF

Invoice To: RMT, INC
100 Verdae Blvd
Greenville, SC 29607
P.O. No.: 998.39 RQN: _____

Project No.: 998.39
Site Name: MTD / Cleveland Mag.
Location: Westfield Stat: MA
Sampler(s): C. Kline

1=$Na_2S_2O_3$ 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid
7=CH_3OH 8=$NaHSO_4$ 9=_____ 10=_____

DW=Drinking Water GW=Groundwater WW=Wastewater
SW= Surface Water SO=Soil SL=Sludge O=Oil A=Air
X1= _____ X2= _____ X3= _____

G=Grab C=Composite

Lab Id:	Sample Id:	Date:	Time:	Type	Matrix	Preservative	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic		BOD, COD, TSS	Foc H13.1	Oil & Grease	T. Cyanide	Cr+6	Phosphorus	Ammonia	Total metals*	Low PCB + Pest	Notes:
AB 81321	FPW-01	4/10/00	1650	G	W	Y	2	3		6		✓	✓	✓	✓	✓	✓	✓	✓		*Ag, As, Cd, Cr, Cu, Hg, Ni, Pb, Zn, Be, Tl, Sb, Al, Ba, B, Mn, Fe, Ti, Sn, Ca, Mg, Mo
AB																					
AB																					
AB																					
AB																					
AB																					
AB																					
AB																					
AB																					
AB																					

Additional Instructions: Rush
Call Chris Kline ✓

☐ Fax results when available to (312) 925-2296

Relinquished By:	Received By:	Date:	Time:
[signature]	[signature]	4/10/00	1715

Close File

Appendix H
Photographic Documentation

Close File

PHOTOGRAPH 1 – Fire pond prior to initiation of work.

PHOTOGRAPH 2 – Former lagoon area prior to initiation of work.

Close File

PHOTOGRAPH 3 – Reflecting pond area.

PHOTOGRAPH 4 – Clearing and grubbing at reflecting pond.

Close File

PHOTOGRAPH 5 – Clearing and grubbing at fire pond.

PHOTOGRAPH 6 – Excavation activities in former lagoon area.

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PHOTOGRAPH 7 – Excavation in former lagoon area.

PHOTOGRAPH 8 – Excavation in former lagoon area.

Close File

PHOTOGRAPH 9 – Excavation in former lagoon area.

PHOTOGRAPH 10 – Excavation of impacted soil in former lagoon area.

Close File

PHOTOGRAPH 11 – Soils treatment and staging of treated materials.

PHOTOGRAPH 12 – Treated soils loadout.

Close File

PHOTOGRAPH 13 – Well abandonment of MW-155 and MW-15I.

PHOTOGRAPH 14 – Completed excavation area awaiting conformation analysis.

Close File

PHOTOGRAPH 15 – Metals treatment in action.

PHOTOGRAPH 16 – Material management - treated soil staging area.

Close File

PHOTOGRAPH 17 – Excavation and treatment of impacted soils.

PHOTOGRAPH 18 – Excavation in former lagoon area.

Close File

PHOTOGRAPH 19 – Excavated material from former lagoon area.

PHOTOGRAPH 20 – Excavation in former lagoon area.

Close File

PHOTOGRAPH 21 – Treated material soil loadout.

PHOTOGRAPH 22 – Backfilling and grading activities.

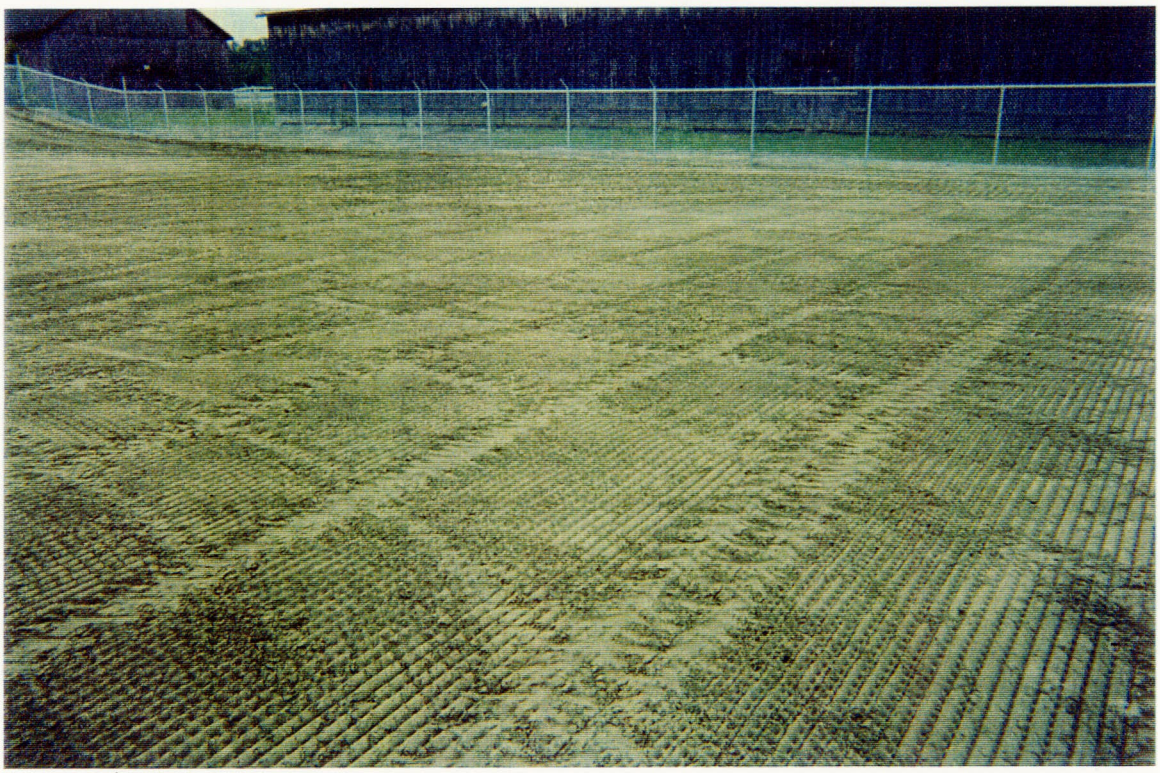
Close File

PHOTOGRAPH 23 – Grading off former lagoon area.

PHOTOGRAPH 24 – Final grade of old fire pond area.

Close File

PHOTOGRAPH 27 – Completed fire pond area prior to demob.



PHOTOGRAPH 28 – Completed former lagoon area prior to demob.

Close File

PHOTOGRAPH 25 – Final grade at former lagoon area.

PHOTOGRAPH 26 – Seeding and fence installation at former lagoon area.