



June 24, 2016

Mr. Dean Bloch
Town Administrator
Town of Charlotte
P.O. Box 119
Charlotte, Vermont 05445
dean@townofcharlotte.com

RE: Fiscal Year 2016 to 2017 Work Plan and Cost Estimate
Plouffe Lane Landfill
Charlotte, Vermont
LAG Project #00109

Dear Mr. Bloch:

Lincoln Applied Geology, Inc. (LAG) is pleased to present the following work plan and cost estimate for performing semiannual monitoring, sampling, and a facility evaluation in accordance with the Solid Waste Management Division (SWMD) requirements. Costs have been provided for Fiscal Year July 1, 2016 through June 30, 2017 on a not-to-exceed basis. Costs are consistent with those for Fiscal Year 2015/2016.

If you have any questions or comments regarding this project, please do not hesitate to contact me. If the estimate meets with your approval please sign and send back the attached authorization form.

Sincerely,
Lincoln Applied Geology, Inc.

Beth Erickson
Senior Geologist

BE/JR:mh
Enclosures

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Fiscal Year 2016 - 2017 Work Plan and Cost Estimate

**Charlotte Landfill
Plouffe Lane
Charlotte, Vermont**

LAG Project #00109

June 24, 2016

Prepared for:

**Town of Charlotte
P.O. Box 119
Charlotte, Vermont 05445**

Prepared by:

**Lincoln Applied Geology, Inc.
163 Revell Drive
Lincoln, Vermont 05443**

**Beth Erickson
Senior Geologist
berickson@lagvt.com**



1.0 INTRODUCTION

This work plan and cost estimate has been prepared to outline environmental services to be provided to the Town of Charlotte for the Plouffe Lane Landfill. Lincoln Applied Geology, Inc. (LAG) will perform groundwater monitoring, sampling, inspection of the landfill cap, erosion control, drainage, gas vent system, and compliance reporting.

2.0 PROPOSED WORK PLAN

2.1 Task 1 – Monitoring, Sampling, and Facility Evaluation

There are three monitoring wells (MW-4, MW-6, and MW-5S) sampled at the site under the current semiannual groundwater monitoring program. LAG will collect groundwater level measurements from each monitoring well with an interface probe.

LAG will perform low flow sampling during each semiannual groundwater monitoring and sampling event. All monitoring wells will be sampled utilizing standard low flow purging techniques in strict conformance with the *USEPA Region I Low Stress Purging and Sampling Procedure for the Collection of Ground Water Samples from Monitoring Wells*. During well purging LAG will collect continuous inorganic field parameter readings with a YSI Multimeter in a flow through cell. Temperature, dissolved oxygen (DO), pH, conductivity, and oxygen reduction potential (ORP), and turbidity measurements will be collected from each well at the site.

All groundwater samples will be submitted to Green Mountain Laboratories, Inc. in Montpelier, Vermont for analysis. Samples will be analyzed for volatile organic compounds (VOCs), chemical oxygen demand (COD), sodium, chloride, and dissolved metals. A chain-of-custody form will provide a record of each individual contacting the sample from point of origin through analysis.

During each semiannual sampling event, LAG will evaluate the landfill vegetated cap, erosion control, drainage, and gas control system in accordance with Condition 10 of the landfill certification.

2.4 Task 2 – Compliance Reporting

LAG will prepare a compliance summary report after each semiannual event. The compliance report will include a discussion and statistical analysis of the hydrogeological data and water quality. It will summarize the facility evaluation, and provide conclusions and recommendations.

3.0 SCHEDULE OF COSTS AND UNIT FEES

A detailed Cost Estimate and authorization form are attached. LAG proposes to complete the work described above for a not-to-exceed Fiscal Year cost of **\$6,190, consistent with costs for the last Fiscal Year**. All work will be billed on a time and materials basis. LAG will not exceed this amount without prior approval from the Town.

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Attachment

Cost Estimate and Authorization Form

**LINCOLN APPLIED GEOLOGY, INC.
WORK SCOPE AUTHORIZATION**

Semiannual Monitoring, Sampling, and Facility Evaluation
Charlotte Landfill
Plouffe Lane
Charlotte, Vermont

Town of Charlotte
P.O. Box 119
Charlotte, Vermont 05445
LAG Project #00109

LAG requires written authorization or Purchase Order prior to proceeding with this phase of the project. Please authorize the scope of work and price structure outlined in the Semiannual Monitoring, Sampling, and Facility Evaluation Work Plan and Cost Estimate for a not-to-exceed 2016/2017 Fiscal Year price of **\$6,190** by returning a signed copy of this authorization page or an authorized Purchase Order.

Terms of payment are Due Upon Receipt. Balances over 30 days bear interest at 1.5% per month.

Authorization Signature

Date

Name (printed)

Phone Number

Title

Company

**Town of Charlotte
Plouffe Lane Landfill
Groundwater Monitoring, Sampling, and Reporting**

July 1, 2016 - June 30, 2017 Fiscal Year Cost Estimate

Task 1 Monitoring, Sampling, and Facility Evaluation

Sr. Field Technician -	9	hr(s) @	\$60.00	per hour	\$	540.00
Interface Probe -	1	day(s) @	\$50.00	per day	\$	50.00
YSI Flow Through Cell -	1	day(s) @	\$80.00	per day	\$	80.00
Turbidity Meter -	1	day(s) @	\$20.00	per day	\$	20.00
Groundwater Sampling Pump -	1	day(s) @	\$65.00	per day	\$	65.00
Generator -	1	day(s) @	\$50.00	per day	\$	50.00
Sampling Materials & Supplies -	1	@	\$150.00	lump sum	\$	150.00
Mileage -	100	mile(s) @	\$0.55	per mile	\$	55.00
Laboratory Analysis -	1	@	\$1,090.00	lump sum	\$	1,090.00

Total per Event \$ 2,100.00

Total per Year Task 1 \$ 4,200.00

Task 2 Compliance Reporting

Senior Hydrogeologist -	2	hr(s) @	\$100.00	per hour	\$	200.00
Hydrogeologist -	8	hr(s) @	\$85.00	per hour	\$	680.00
Draftsperson -	1	hr(s) @	\$55.00	per hour	\$	55.00
Clerical -	1.5	hr(s) @	\$40.00	per hour	\$	60.00

Total per Event \$ 995.00

Total per Year Task 2 \$ 1,990.00

Fiscal Year Grand Total \$ 6,190.00