



Draper Aden Associates

Engineering ♦ Surveying ♦ Environmental Services

2206 South Main Street
Blacksburg, Virginia 24060
(540) 552-0444 ♦ Fax (540) 552-0291
daa@daa.com ♦ www.daa.com



June 23, 2004

Ms. Wendy Simmons
NCDENR – Solid Waste Section
Winston-Salem Regional Office
585 Waughtown Street
Winston-Salem, NC 27107-2241

**RE: Watauga County Landfill, Permit No. 95-02
DAA JN: 6520-10**

Dear Wendy:

In response to the request contained in the May 11, 2004 Facility Compliance Audit Report, on behalf of Watauga County, we would like present the following summary of the landfill methane gas control measures currently in effect at the Watauga County Landfill facility.

On July 19, 2002, Draper Aden Associates, on behalf of Watauga County, submitted a Gas Remediation Plan (GRP) to the Section. This GRP presented the following actions that the County had undertaken to date to detect and mitigate gas migration from the landfill.

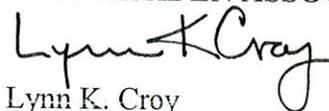
1. Two gas monitoring probes were installed in 1996 along the southern property boundary in order to detect landfill gas migration toward existing residences adjacent to the landfill. Since installation, these probes and all the on-site structures (animal shelter, maintenance facility, transfer station and the scale house) have been monitoring on a quarterly basis.
2. Five houses immediately adjacent to the southern property boundary are monitored semiannually if access can be gained. To date, landfill gas has never been detected in any of these homes.
3. In 1996, 22 passive vents were installed when the landfill was capped. These vents were installed to protect the cap and to help mitigate horizontal gas migration. Each vent is fitted with a solar powered flare for methane destruction and odor control. The County has periodic maintenance performed on these vents and flares to keep them in good working order.

Since the GRP was submitted in 2002, the following additional actions are currently being undertaken.

1. Two new on-site buildings, a transfer station and a new maintenance facility are under construction. The design of these buildings has incorporated measures to monitor for the presence of landfill gas and to vent them should gas be present. Each building will be equipped with a system of vent pipes under its slab and with an automatic methane monitoring and alarm system that has sensors located in critical interior locations.
2. The Blue Ridge Resource Conservation & Development (RC&D) Council has received funding from the North Carolina Energy Office to install an active gas collection system at the landfill. This project will consist of installing a blower flare station, installing an underground gas collection piping system, and connecting the existing 22 vents to the gas collection piping. The grant amount is approximately \$105,000 for the initial phases of the project. The ultimate intent of this project is to use the landfill gas for beneficial purposes; either to provide electricity and heat for the new on-site buildings under construction, or to provide electricity and heat to new small businesses that the Council hopes to attract to the site. The additional benefit of the project is that the active gas system will be used to control landfill gas migration. A copy of the Council's initial Request for Qualifications for the design of the system is attached. Construction is expected to begin sometime in late 2004 or early 2005.

If you have further questions or require additional information, please feel free to contact us.

Sincerely,
DRAPER ADEN ASSOCIATES



Lynn K. Croy
Program Manager

Attachment

cc: Mr. Rocky Nelson, Watauga County Manager
Mr. J.V. Potter, Watauga County Operations Services Director
Mr. Jeff Crate, P.G., Director, Solid Waste Services, DAA
Mr. Mike Cavell, P.E., DAA

540-552-0291

Facsimile Transmittal



Blue Ridge RC&D Council, Inc.

828-297-5805

FAX (828) 297-5928

1081-2 Old US Hwy. #21

Sugar Grove, NC 28671

Date:

6-1-04

Attention:

Jeff Crate

From:

Stan Steury

Number of pages (including this cover): 3

Comment(s):

Jeff,

Here is the RFD letter that we sent out on May 16. Sorry you didn't get yours. More later.

Stan Steury

Reply requested: Yes No

This was a typo.
~~April~~ ^{May} 16, 2004

To: Landfill Gas Design & Development Firms
From: Blue Ridge RC&D Council, Inc.

Subject: Request for Qualifications
Watauga Landfill Gas System -- Design and Construction Supervision

The Blue Ridge Resource Conservation & Development (RC&D) Council has received funding from the North Carolina Energy Office to install a landfill gas collection system in the Watauga County landfill at Boone, North Carolina. To complete this job, we need assistance in design of the system, and in supervision of construction.

The Blue Ridge RC&D Council is a non-profit corporation recognized as a tax exempt (501-c-3) organization by the IRS. The Council operates in Yancey, Mitchell, Avery, Watauga, Wilkes, Ashe and Alleghany Counties or North Carolina.

The Blue Ridge RC&D hereby requests a statement of qualifications for design and supervision of installation of this landfill gas system from those firms interested in contracting for this job. We have tentatively scheduled a site showing for May 27, 2004 at 10:30 a.m. Please call Becky Wallace or Stan Steury at 828-297-5805 by May 25, 2004 to let us know of your interest and whether your representative would be available for this site showing. Statements of qualifications may be hand delivered on the 27th or mailed to reach us no later than June 1, 2004.

Your statement of qualifications should include...

- Name, address, phone, fax, email and website address of firm
- Names and a brief resume of principal staff members of your firm who would be involved in this project.
- Names and a brief resume of any partners or subcontractors your firm would bring with you to this project.
- Narrative of experience your firm, your principal staff and partners or subcontractors have in design and installation of landfill gas systems.
- Listing of rates of pay for each person who would work on this project for you.
- Statements of liability insurance coverage.
- Availability to install this system in summer of 2004.

The Watauga Landfill Gas Project will be based on the following assumptions...

- The gas system will utilize existing gas wells (vents). We will expect no new wells will need to be drilled at this time. Existing wells (vents) will need to have old flares removed, new well heads installed, and many need new well seals.
- The system will require a blower, flare, and condensate control system.
- The collection system will deliver gas to the gas treatment system for a micro-turbine or engine/generator and/or to the new transfer station and maintenance building.

If you have questions, please call Stan Steury at 828-297-5805 or you may contract him by email at ssteury@boone.net.

Sincerely,

Phillip Johnson, Chairman
Blue Ridge RC&D Council, Inc.